Biological Resources Report Addendum for the Central Village Specific Plan

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1.0 INTRODUCTION

The City of San Diego certified a Final Environmental Impact Report for the Otay Mesa Community Plan Update in 2014 (FEIR; City of San Diego [City] 2014) The Final EIR disclosed biological resource impacts that would result from implementing the Otay Mesa Community Plan Update and presented mitigation measures to reduce those impacts to below levels of significance. The Otay Mesa Community Plan Update requires the City to adopt a Specific Plan for the Central Village portion of the community. The purpose of this report is to evaluate the currently proposed Central Village Specific Plan (CVSP) and determine if the impacts to biological resources associated with its implementation fall within the scope of impacts disclosed in the FEIR and whether any additional mitigation measures beyond those presented in the FEIR are warranted. As such, this report serves as an addendum to the biological resources report prepared for the Otay Mesa Community Plan Update FEIR.

Adoption of the proposed CVSP would develop up to 4,485 multi-family homes, 139,700 square feet (sf) of commercial space, a 13.1-acre combined school/recreation site, 16.1 acres of population-based park land uses, 15.9 acres of open space, and approximately 24.1 acres of major roadways within the 229.2-acre CVSP Area (SPA) (T&B Planning, Inc. 2017). The Project includes the adoption of the CVSP as an amendment to the Otay Mesa Community Plan and a rezoning program to implement the designated land uses. The land uses proposed by the CVSP are generally in conformance with the land uses analyzed in the FEIR for the SPA, which assumed up to ~~5,246~~ 4,768 multi-family homes and up to 32,700 sf of commercial uses arranged as a predominately residential community with core areas of mixed uses and public spaces sited along Airway Road.

This addendum report focuses on the 222.9-acre SPA and compares the biological resources conditions for the SPA as reported in the FEIR with currently known biological resources conditions (as recently assessed by Alden Environmental Inc. [Alden]). This addendum report also compares the impacts to biological resources reported in the FEIR for the SPA with the potential impacts to biological resources that could occur from adoption of the proposed CVSP based on current conditions. Finally, this addendum report presents applicable mitigation measures from the FEIR that would be required to reduce significant impacts to biological resources resulting from approval of the proposed CVSP.

2.0 METHODS

2.1 VEGETATION MAPPING/LAND COVER TYPE MAPPING

Mapping for this addendum report began with a review of the FEIR vegetation community/land cover type mapping.[1] Then, vegetation community/land cover type mapping on properties owned or controlled by Davisson and ColRich (which comprise a majority of the SPA area) was updated in the field by Alden concurrent with other surveys conducted on the ColRich properties in 2014 and 2015. The remainder of the SPA (where Alden had no legal access to conduct surveys) was mapped by Alden using 2012 SanGIS vegetation data. Alden updated the 2012

[1] The FEIR utilized 1995 vegetation data that was updated by interpretation of 2012 aerial photography. FEIR updates to the 1995 vegetation map included areas that were mapped as native vegetation or agricultural but showed as developed on the 2012 aerial photo (RECON Environmental, Inc. 2013).

SanGIS data for use in this report where more recent online aerial imagery showed agricultural land as urban/developed land.

2.2 QUINO CHECKERSPOT BUTTERFLY

Presence/absence of the Quino checkerspot butterfly (*Euphydryas editha quino*; QCB) on the ColRich property was determined when Alden conducted U.S. Fish and Wildlife Service (USFWS) protocol-level surveys (USFWS 2014) for the butterfly in 2015 and 2016 (Alden 2015a, 2016a; Appendix A). A previous survey on the ColRich property was conducted in 2004 by Glenn Lukos Associates. No field survey was conducted by Alden for the QCB on the Davisson property or on any other property in the SPA.

2.3 COASTAL CALIFORNIA GNATCATCHER

Presence/absence of the coastal California gnatcatcher (*Polioptila californica californica*; CAGN) on the Davisson property was determined when Alden conducted a USFWS protocol-level survey (USFWS 1997) for the species in 2015 (Alden 2015b; Appendix B). No field survey for the CAGN was conducted by Alden on the ColRich property or any other property in the SPA.

2.4 BURROWING OWL

Surveys for the burrowing owl (*Athene cunicularia*; BUOW) were conducted by Alden on the ColRich property in 2014 (Alden 2014), 2015 (Alden 2015c), and 2016 (Alden 2016b) and on the Davisson property in 2015 (Alden 2015d). See Appendix C for the burrowing owl survey reports. All of the surveys were conducted according to the methods in the Staff Report on Burrowing Owl Mitigation (California Department of Fish and Wildlife [CDFW] 2012). No field survey for the BUOW was conducted by Alden on other properties in the SPA.

2.5 SENSITIVE PLANT SPECIES

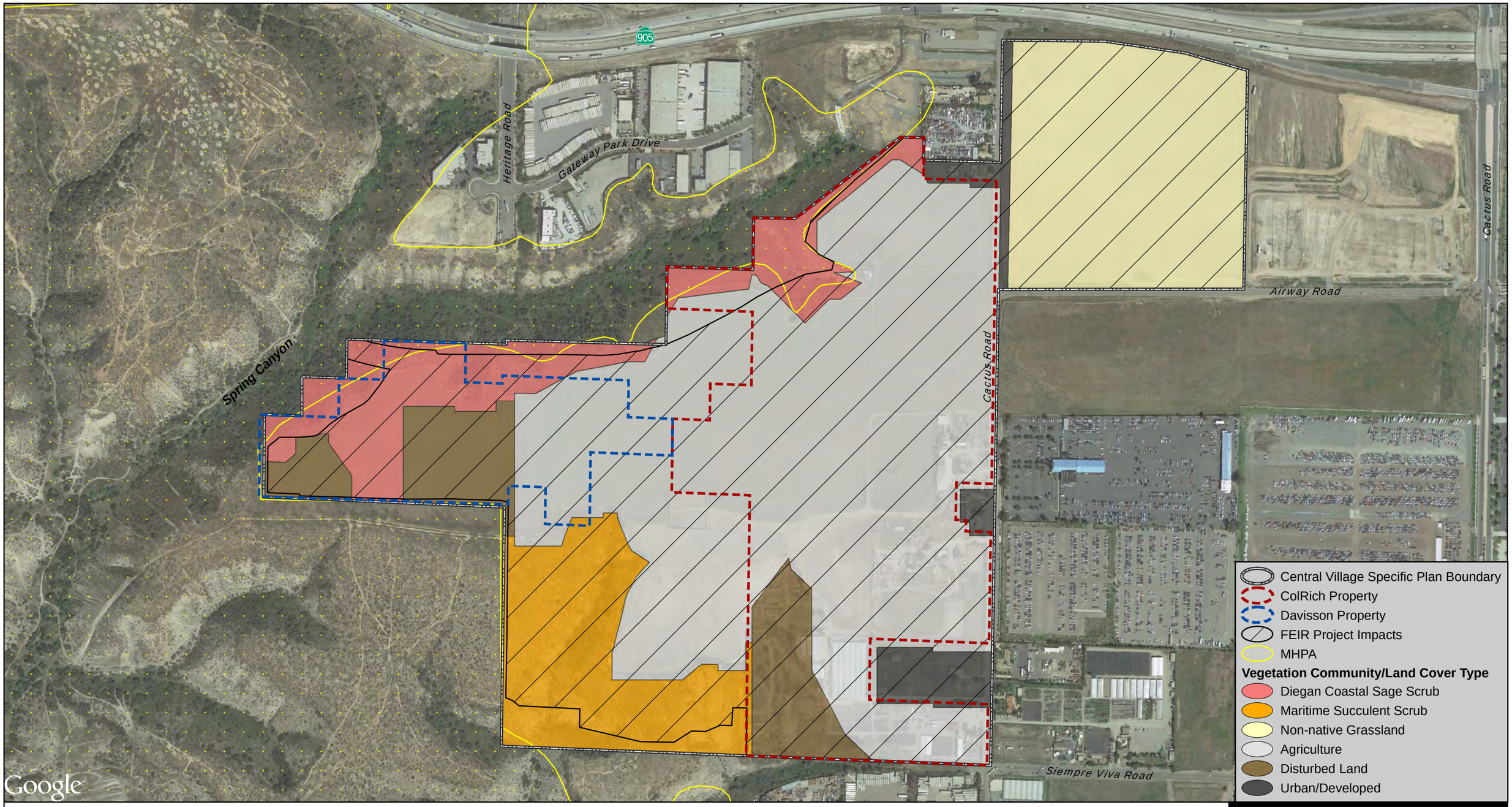
Spring and/or summer surveys for sensitive plant species, particularly Otay tarplant (*Deinandra conjugens*), were conducted by Alden on the ColRich property in 2014 (April and June) and 2016 (July; Appendix D) and on the Davisson property in 2015 (April and May). No field survey for sensitive plant species was conducted by Alden on other properties in the SPA.

3.0 SURVEY RESULTS

3.1 VEGETATION COMMUNITIES/LAND COVER TYPES

The Otay Mesa Community Plan Update FEIR reported that six vegetation communities/land cover types are located in the SPA (Figure 1).[2] Each of these communities is still present in the SPA (Figure 2), although the extent of their current coverage is somewhat different from what was reported in the FEIR. In addition, the current coverage data collected by Alden indicates that

[2] Figure 1 also shows FEIR mapping outside the SPA boundaries to present equal mapping coverage to that shown on Figure 2 where Airway Road construction would occur outside the SPA under the proposed CVSP.



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ALDEN ENVIRONMENTAL, INC

Figure 1

FEIR Vegetation Communities and Land Cover Types/Impacts

CENTRAL VILLAGE SPECIFIC PLAN PROJECT

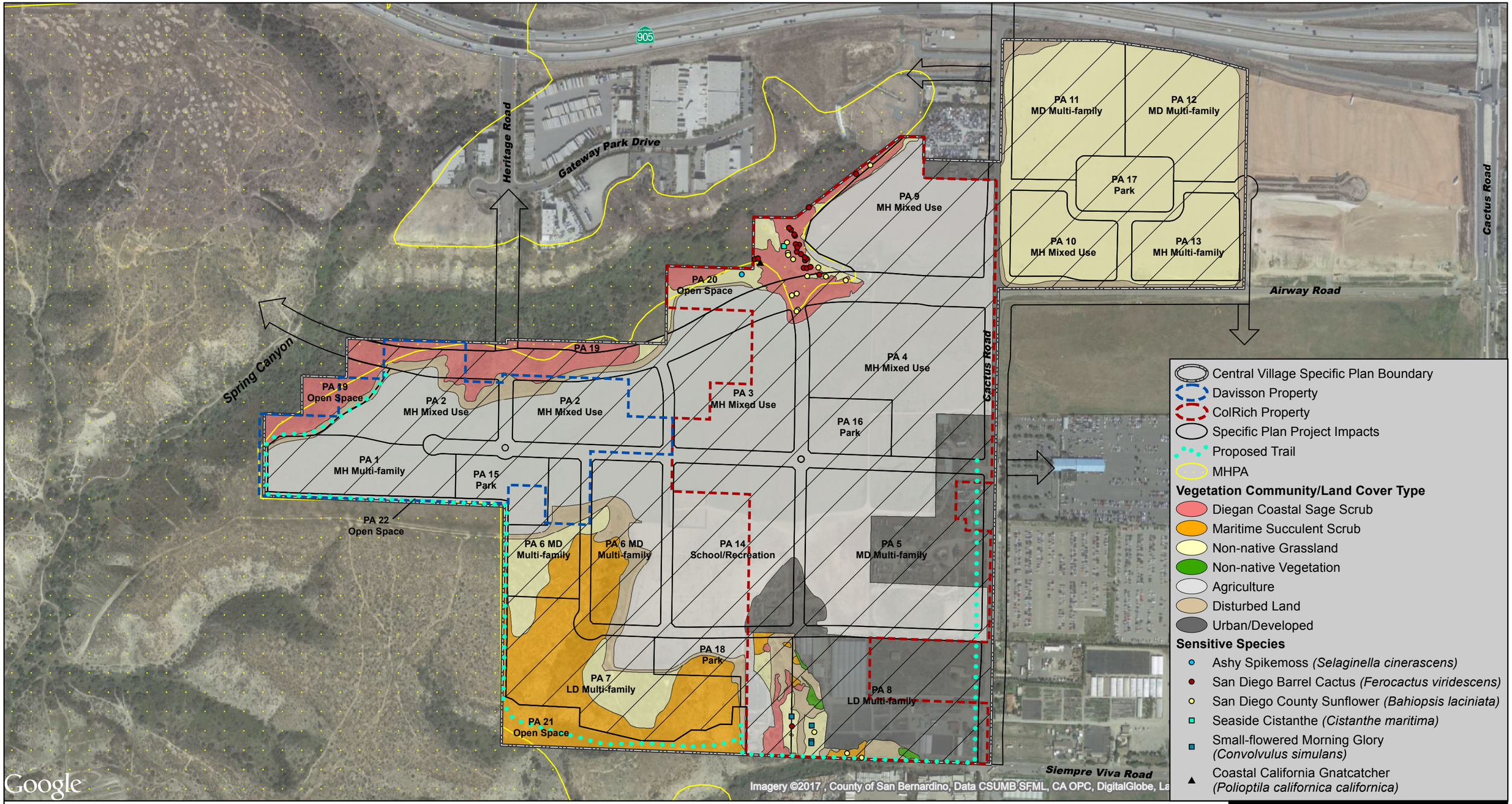

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Figure 2

CVSP Vegetation Communities, Land Cover Types, and Sensitive Species/Impacts

CENTRAL VILLAGE SPECIFIC PLAN PROJECT

one additional vegetation community is present (i.e., non-native vegetation). The differences are the result of using more current mapping for this addendum report and changes in the actual field conditions (see Section 2.1 of this addendum report for more information on data collection methods). The greatest change is in the reported amount of maritime succulent scrub (refer to Table 1); the FEIR reported a much greater extent of coverage for this vegetation community than is actually present under existing conditions.

Table 1
Existing Vegetation Communities/
Land Cover Types in the SPA[1]

Vegetation Community/ Land Cover Type	Tier	FEIR Acreage	Current Acreage
Maritime succulent scrub	I	24.4	0.5
Diegan coastal sage scrub	II	24.3	31.4
Non-native grassland	IIIB	37.8	46.0
Non-native vegetation	IV	--	0.3
Agriculture	IV	115.6	111.5
Disturbed land	IV	18.9	11.5
Urban/Developed	NA	8.2	28.0
TOTAL	**--**	**229.2**	**229.2**

[1]Acreage rounded to the nearest tenth.

Based on updated data collected by Alden, the area of maritime succulent scrub (Tier I) mapped in the FEIR (Figure 1) was largely re-mapped as Diegan coastal sage scrub (Tier II) and non-native grassland (Tier IIIB) for SanGIS in 2012 (Figure 2). A comparison of the acreages for each of the vegetation communities/land cover types as reported in the FEIR and as they currently stand in the SPA is provided in Table 1.

3.2 QUINO CHECKERSPOT BUTTERFLY

The FEIR assumed potential presence of QCB. Within the SPA, potential QCB habitat (Diegan coastal sage scrub and maritime succulent scrub) occurs on the ColRich property, the Davisson property, and other properties in the southwestern portion of the SPA. The QCB was not observed during multiple USFWS protocol-level surveys conducted on the ColRich property. The QCB has moderate potential to occur in the SPA in potential QCB habitat.

3.3 COASTAL CALIFORNIA GNATCATCHER

The FEIR assumed potential presence of CAGN. Within the SPA, potential CAGN habitat (Diegan coastal sage scrub and maritime succulent scrub) occurs on the Davisson property, in the northern and southern portions of the ColRich property, and on other properties in the southwestern portion of the SPA. The CAGN was not observed during the 2015 survey on the Davisson property; however, the CAGN was observed in Diegan coastal sage scrub just north of the property in the Multi-Habitat Planning Area (MHPA) outside the SPA. Since the habitat where the birds were observed is contiguous with the SPA, all Diegan coastal sage scrub on the Davisson property (which is also in the MHPA) is considered to be occupied by the CAGN. Similarly, a single CAGN was observed in Diegan coastal sage scrub in the northern portion of

the ColRich property in the MHPA during the QCB survey in 2015 (Figure 2). It is assumed, therefore, that all of the Diegan coastal sage scrub in the SPA, within the MHPA, is occupied by the CAGN.

3.4 BURROWING OWL

The FEIR assumed potential presence of BUOW. Within the SPA, the BUOW was not found on the ColRich property during any of the surveys conducted in 2014, 2015, and 2016. The BUOW also was not found on the Davisson property during a survey conducted in 2015.

According to the FEIR, the BUOW occupies open areas including native and non-native grassland, sparsely vegetated shrubland, agricultural land, and disturbed land. In addition to the ColRich and Davisson properties, these open areas occur throughout most of the remainder of the SPA. The BUOW has moderate potential to occur in these habitats in the SPA.

3.5 SENSITIVE PLANT SPECIES

The FEIR concluded that implementation of the Otay Mesa Community Plan Update would have the potential to impact sensitive plants. Within the SPA, five sensitive plant species were found on the ColRich property during the sensitive plant survey conducted in 2014: ashy spikemoss (*Selaginella cinerascens*), San Diego barrel cactus (*Ferocactus viridescens*), San Diego County sunflower (*Bahiopsis* [*Viguiera*] *laciniata*), seaside cistanthe (*Cistanthe maritima*), and small-flowered morning glory (*Convolvulus simulans*; Figure 2). No sensitive plants were found in 2016 on the ColRich property (i.e., on the two parcels added to the property since 2014; Appendix D). No sensitive plant species were found on the Davisson property during the 2015 survey.

Table 2 includes a list of sensitive plant species (alphabetized by common name) observed or analyzed for potential to occur in the SPA.

Table 2 Sensitive Plant Species Present or with Potential to Occur in the SPA[1]				
Common Name **(Scientific Name)**	**Listing or Sensitivity[2]** **Federal/State** **CNPS** **City**	**Habitat(s)/ Distribution**	**Bloom Period**	**Presence or Potential to Occur**
Ashy spike-moss (*Selaginella cinerascens*)	--/-- 4.1 --	Found on flat mesas in coastal sage scrub and chaparral in Orange and San Diego counties and northwestern Baja California, Mexico.	--	Present
California adolphia (*Adolphia californica*)	--/-- 2B.1 --	Occurs in chaparral, valley grassland, and coastal sage scrub in Los Angeles and San Diego counties.	December to May	Low. A perennial shrub that would have been observed if present.
California Orcutt grass (*Orcuttia californica*)	FT/SE 1B.1 Not Presently Covered[3]	Occurs within and adjacent to vernal pools in Riverside, San Diego, Ventura, and Los Angeles counties, as well as Baja California, Mexico.	April to August	Very low. Potential habitat is not present.
Cliff spurge (*Euphorbia misera*)	--/-- 2B.2 --	Occurs on sea bluffs in maritime sage scrub. Occurs from Corona Del Mar south to Baja California, Mexico.	December to October	Low. A perennial shrub that would have been observed if present.
Decumbent goldenbush (*Isocoma menziesii* var. *decumbens*)	--/-- 1B.2 --	Occurs in chaparral and coastal scrub, often in sandy, disturbed areas. Found in Orange and San Diego counties; Baja California, Mexico; and San Clemente and Santa Catalina islands.	April to November	Low. A perennial shrub that would have been observed if present.
Golden-spined cereus (*Bergerocactus emoryi*)	--/-- 2B.2 --	Occurs in sandy soils and dry bluffs along the coast in association with maritime succulent scrub in coastal San Diego County; Baja California, Mexico; and San Clemente and Catalina islands.	May to June	Low. A perennial stem succulent that would have been observed if present.

Table 2 (cont.) **Sensitive Plant Species Present or with Potential to Occur in the SPA[1]**				
Little mousetail (*Myosurus minimus* ssp. *apus*)	--/-- 3.1 --	Vernal pools and alkaline marshes in Riverside, San Bernardino, San Diego, and additional central California counties; Oregon; and Baja California, Mexico.	March to June	Very low. Potential habitat is not present.
Nuttall's scrub oak (*Quercus dumosa*)	--/-- 1B.1 --	Occurs in coastal southern California from near Point Conception in Santa Barbara County south into northern Baja California, Mexico.	February to August	Low. A perennial shrub that would have been observed if present.
Orcutt's bird's-beak (*Dicranostegia orcuttiana* [*Cordylanthus orcuttianus*])	--/-- 2B.1 Covered	Found in coastal scrub in southwestern San Diego County near Otay, Chula Vista, and Imperial Beach. Also found in Baja California, Mexico.	March to September	Low. Sensitive plant species surveys were conducted during the bloom period for this species, and it was not observed.
Orcutt's brodiaea (*Brodiaea orcuttii*)	--/-- 1B.1 Covered	Occurs in vernal pools and ephemeral streams and seeps, usually associated with clay soils. Found in Riverside and San Bernardino counties south to Baja California, Mexico.	May to July	Very low. Potential habitat is not present.
Otay mesa mint (*Pogogyne nudiuscula*)	FE/SE 1B.1 Not Presently Covered[3]	Occurs within and adjacent to vernal pools on Otay Mesa.	May to July	Very low. Potential habitat is not present.
Otay tarplant (*Deinandra conjugens*)	FT/SE 1B.1 Covered, NE	Occurs in disturbed areas and patches of coastal sage scrub in the Otay Mesa area.	April to June	Low. This species was the primary focus of the sensitive plant species surveys conducted from 2014 through 2016, and it was not observed.

Table 2 (cont.) **Sensitive Plant Species Present or with Potential to Occur in the SPA[1]**				
San Diego ambrosia (*Ambrosia pumila*)	FE/-- 1B.1 Covered, NE	Found in disturbed areas within chaparral, coastal sage scrub, and grasslands. Its range includes San Diego and Riverside counties south to Baja California, Mexico.	April to October	Low. Sensitive plant species surveys were conducted during the bloom period of this species from 2014 through 2016, and it was not observed.
San Diego barrel cactus (*Ferocactus viridescens*)	--/-- 2B.1 Covered	Associated with coastal sage scrub and chaparral habitats in San Diego County and Baja California, Mexico.	May to June	Present
San Diego bur-sage (*Ambrosia chenopodiifolia*)	--/-- 2B.1 --	Generally found in arid, low-growing, fairly open Diegan coastal sage scrub in southwestern San Diego County, Arizona, and Mexico below 600 feet in elevation.	April to June	Low. A perennial shrub that would have been observed if present.
San Diego button-celery (*Eryngium aristulatum* var. *parishii*)	FE/SE 1B.1 Not Presently Covered[3]	Occurs in vernal pools or mima mound areas with vernally moist conditions in San Diego and Riverside counties and Baja California, Mexico.	April to June	Very low. Potential habitat is not present.
San Diego County sunflower (*Bahiopsis* [*Viguiera*] *laciniata*)	--/-- 4.2 --	Found in coastal sage scrub in San Diego and Orange counties and Baja California, Mexico.	February to August	Present
San Diego goldenstar (*Bloomeria* [*Muilla*] *clevelandii*)	--/-- 1B.1 Covered	Found on clay soils in chaparral, coastal scrub, vernal pools, and valley and foothill grassland in Riverside and San Diego counties.	May	Low. Sensitive plant species surveys were conducted during the bloom period of this species from 2014 through 2016, and it was not observed.

Table 2 (cont.) **Sensitive Plant Species Present or with Potential to Occur in the SPA[1]**				
San Diego thornmint (*Acanthomintha ilicifolia*)	FT/SE 1B.1 Covered, NE	Occurs on clay lenses in grassy openings in chaparral or sage scrub. Prefers friable or broken, clay soils. Range limited to coastal areas of San Diego County and Baja California, Mexico.	April to June	Low. Sensitive plant species surveys were conducted during the bloom period of this species from 2014 through 2016, and it was not observed.
Seaside cistanthe (*Cistanthe maritima*)	--/-- 4.2 --	Generally occurs on sandy bluffs near the beach and sandy openings in coastal sage scrub in Santa Barbara County south to Baja California, Mexico. Also found on the Channel Islands.	February to August	Present
Small-flowered morning-glory (*Convolvulus simulans*)	--/-- 4.2 --	Found in clay areas in openings of coastal chaparral, sage scrub, and grasslands at scattered locations from the foothills to the coast in southern California and Baja California, Mexico.	March to July	Present
Small-leaved rose (*Rosa minutifolia*)	--/SE 2B.1 Covered	Habitat includes chaparral and coastal scrub. Presently known in California from only one occurrence on Otay Mesa.	January to June	Low. A perennial shrub that would have been observed if present.
Snake cholla (*Cylindropuntia californica* var. *californica*)	--/-- 1B.1 Covered, NE	Found in open patches in coastal sage scrub, primarily in southern portion of San Diego County and in Florida Canyon.	April to May	Low. A perennial stem succulent that would have been observed if present.
South coast saltscale (*Atriplex pacifica*)	--/-- 1B.2 --	Coastal bluff scrub, coastal dunes, coastal scrub, and playas in California, Arizona, and Baja California and Sonora, Mexico.	March to October	Low. Sensitive plant species surveys were conducted during the bloom period of this species from 2014 through 2016, and it was not observed.

Table 2 (cont.) **Sensitive Plant Species Present or with Potential to Occur in the SPA[1]**				
Spreading navarretia (*Navarretia fossalis*)	FT/-- 1B.1 Not Presently Covered[3]	Occurs in marshes and swamps (assorted freshwater habitats), playas, and vernal pools in western Riverside and southwestern San Diego counties, as well as northwestern Baja California, Mexico.	April to June	Very low. Potential habitat is not present.
Variegated dudleya (*Dudleya variegata*)	--/-- 1B.2 Covered, NE	Occurs on dry hillsides and mesas in chaparral, coastal sage scrub, grasslands, and near vernal pools. Ranges from San Diego County south to Baja California, Mexico.	April to June	Low. Sensitive plant species surveys were conducted during the bloom period of this species from 2014 through 2016, and it was not observed.

[1] List based on Table 3, *Sensitive Plant Species Known or with the Potential to Occur in the CPU Area*, in RECON Environmental, Inc. 2013 and field work for this addendum.

[2] **Federal**
FE – Federally listed endangered
FT – Federally listed threatened

State
SE – State listed endangered

CNPS (California Native Plant Society) Rare Plant Rank
1B – Rare, threatened, or endangered in California and elsewhere
2B – Rare, threatened, or endangered in California but more common elsewhere
3 – More information is needed – a review list
4 – Limited distribution – a watch list
.1 – Seriously threatened in California (over 80 percent of occurrences threatened/high degree and immediacy of threat)
0.2 – Moderately threatened in California (20 to 80 percent of occurrences threatened/moderate degree and immediacy of threat

City
Covered – Species for which the City has take authorization under its Multiple Species Conservation Program (MSCP) Subarea Plan (City 1997). For species listed as "Not Presently Covered," see footnote 3.
NE - Some native species (primarily plants with restricted geographic distributions, soil affinities, and/or habitats) are referred to as a Narrow Endemic species. The City specifies measures in its MSCP Subarea Plan to ensure that impacts to Narrow Endemics are avoided to the maximum extent practicable.

[3] Based on a 2006 federal district court ruling that the City's MSCP Subarea Plan does not provide adequate protection for Riverside fairy shrimp (*Streptocephalus woottoni*), the City surrendered permit coverage for seven vernal pool species on April 20, 2010 (City 2010). The seven species include San Diego fairy shrimp (*Branchinecta sandiegonensis*), Riverside fairy shrimp, Otay Mesa mint, San Diego mesa mint (*Pogogyne abramsii*), California Orcutt grass, San Diego button-celery, and spreading navarretia. The USFWS subsequently cancelled the permit as it applied to those seven species on May 14, 2010 (USFWS 2011). Development involving take of any of the seven vernal pool species, therefore, requires authorization from the USFWS through the federal incidental take process until the City completes a new Vernal Pool Habitat Conservation Plan and enters into another Implementing Agreement for a new federal Incidental Take Permit for those species.

4.0 IMPACT ANALYSIS

This section compares the potential impacts to biological resources in the SPA reported by the FEIR with potential impacts that would result from adoption of the proposed CVSP based on the current conditions.

4.1 VEGETATION COMMUNITIES/LAND COVER TYPES

The FEIR anticipated physical impacts to 211.6 acres of vegetation communities/land cover types within the SPA (Figure 1). In comparison, adoption of the proposed CVSP would result in 212.6 acres of physical impact. The slight differences in physical disturbance area and 1.0 acre of additional impact are due to proposed changes in the alignment of future Airway Road, a City Mobility Element roadway (which is planned to connect to a future extension of this roadway to the west of the SPA) and the inclusion of a 1.0-acre parcel within Planning Area 2 covered with non-native grassland that was previously identified for open space land uses but is now proposed for development within the Davisson property (Table 3; Figures 1 and 2). As shown in Table 3, adoption of the CVSP would result in a decrease in impacts to Tier I habitats by approximately 19.1 acres as compared to what was disclosed for the SPA by the FEIR, while impacts to Tier II habitats would increase by 5.6 acres. Tier I and II habitat types are the most sensitive habitat types; in total, impacts to Tier I and II habitats would be reduced by 13.5 acres with adoption of the CVSP. Impacts to non-native grassland (Tier IIIB) would increase by 6.6 acres; impacts to non-native vegetation, agriculture, and disturbed land (Tier IV) would decrease 12.2 acres, and impacts to urban/developed (not sensitive and not assigned a tier), would increase by 19.8 acres. Impacts to these vegetation communities/land cover types were previously addressed in the FEIR, and the FEIR presented mitigation measures to reduce impacts to below levels of significance. Although the CVSP's extent of physical disturbance would slightly change and increase by 1.0 acre, its adoption would result in fewer acres of impact to high-sensitivity (i.e., Tier I and II) habitats overall and would not impact any sensitive vegetation community that was not already addressed by the FEIR. Therefore, adoption of the CVSP would not introduce a new impact or more severe impact to vegetation communities/land cover types beyond what was evaluated and disclosed by the FEIR.

Table 3
Anticipated Impacts to Vegetation Communities/Land Cover Types[1]

Vegetation Community/ Land Cover Type	Tier	Acreage Impacted in the FEIR	Proposed Impacted Acreage
Maritime succulent scrub	I	19.6	0.5
Diegan coastal sage scrub	II	14.4	20.0
Non-native grassland	IIIB	37.8	44.4[2]
Non-native vegetation[3]	IV	--	0.3
Agriculture	IV	113.7	108.9
Disturbed land	IV	18.0	10.6[2]
Urban/Developed	NA	8.1	27.9
TOTAL	**--**	**211.6**	**212.6**

[1]Acreage rounded to the nearest tenth.
[2]Includes <0.1 acre of impact outside the SPA to facilitate a connection of Airway Road to the west.
[3]The FEIR did not identify non-native grassland in the SPA, but the FEIR did identify non-native grassland elsewhere in the Otay Mesa Community Plan Update area to be impacted.

4.2 QUINO CHECKERSPOT BUTTERFLY

The FEIR states that implementation of the Otay Mesa Community Plan Update has the potential to impact the QCB. Therefore, adoption of the proposed CVSP with its potential to affect the QCB would not represent a new impact.

4.3 COASTAL CALIFORNIA GNATCATCHER

As explained in Section 3.3 of this addendum report, all Diegan coastal sage scrub on the Davisson property (which is also in the MHPA) is considered to be occupied by the CAGN. It is also assumed that all of the Diegan coastal sage scrub in the northern portion of the ColRich property within the MHPA is occupied by the CAGN. Potential CAGN habitat (Diegan coastal sage scrub and maritime succulent scrub) also occurs in the southern portion of the ColRich property and on other properties in the southwestern portion of the SPA. Direct impacts to CAGN habitat outside of the MHPA would occur under the CVSP; however, none of the direct impacts would be inside the MHPA, although some direct impacts would occur adjacent to the MHPA, which was anticipated by the FEIR.

Consistent with the conclusions reached by the FEIR, direct impacts to CAGN-occupied habitat outside of the MHPA and potential indirect impacts to the CAGN in the MHPA during construction within the SPA's adjacent development areas could occur (Figure 2).

The FEIR states that direct impacts to CAGN-occupied habitat in the MHPA could occur from implementing the Otay Mesa Community Plan Update land use plan. The FEIR also states that indirect impacts (temporary construction noise) may occur to this species if construction occurs during the breeding season. Therefore, adoption of the proposed CVSP with its potential to directly and indirectly affect the CAGN would not represent a new impact.

4.4 BURROWING OWL

The BUOW has moderate potential to occur in open areas of the SPA including non-native grassland, agricultural land, and disturbed land. Consistent with the conclusion reached by the FEIR, the CVSP proposes development in and adjacent to areas that could support BUOW, resulting in potential direct and indirect impacts to BUOW. The FEIR states that impacts to BUOW would include direct impacts to individuals, nests, and suitable nesting habitat, and indirect impacts from 'eradication of host burrowers; changes in vegetation management (i.e., grazing); use of pesticides and rodenticides; destruction, conversion or degradation of nesting, foraging, over-wintering or other habitats; destruction of natural burrows and burrow surrogates; and disturbance which may result in the harassment of owls at occupied burrows' (CDFW 2012 *in* City 2014). The same types of impacts could occur from implementation of the CVSP. Therefore, adoption of the proposed CVSP with its potential to affect the BUOW would not represent a new impact.

4.5 SENSITIVE PLANT SPECIES

The FEIR concluded that implementation of the Otay Mesa Community Plan Update land use plan would have the potential to directly impact sensitive plants. The FEIR assumed potential impacts to 23 different sensitive plant species, of which mapping indicated the potential presence of San Diego barrel cactus and San Diego County sunflower in the SPA.

As stated in the FEIR, however, "due to the fact that portions of the biological resource assessment [used for the FEIR] are based on secondary source information rather than site-specific field surveys, the impacts [disclosed in the FEIR] would be refined for individual projects." As anticipated by this statement in the FEIR, and based on more recent field survey work, five sensitive plant species were found on the ColRich property during a sensitive plant survey conducted in 2014: ashy spikemoss, San Diego barrel cactus, San Diego County sunflower, seaside cistanthe, and small-flowered morning glory (Figure 2). No sensitive plant species were found in 2016 on the ColRich property (i.e., on the two parcels added to the property since 2014; Appendix D). No sensitive plant species were found on the Davisson property during the 2015 survey. No sensitive plant species surveys were conducted on other properties in the SPA.

Ashy spikemoss, seaside cistanthe, and small-flowered morning glory (found on the ColRich property in 2014) were not noted by the FEIR as known or considered to have potential to occur in the Otay Mesa Community Plan Update area. However, ashy spikemoss, seaside cistanthe, and small-flowered morning glory have a California Rare Plant Rank of 4 in the *Inventory of Rare and Endangered Plants* (CNPS 2016), and the FEIR did disclose the potential presence of and impacts to Rare Plant Rank 4 species in the Otay Mesa Community Plan Update area. According to the FEIR, Rare Plant Rank 4 species are considered sensitive plant species because they are considered "noteworthy" species "by local conservation organizations." Further, the CNPS "strongly recommend[s] that California Rare Plant Rank 4 plants be evaluated for impact significance during preparation of environmental documents relating to CEQA" (CNPS 2016).

Assuming that the five sensitive plant species found on the ColRich property in 2014 are present, adoption of the proposed CVSP would result in impacts to known locations of small-flowered morning glory on the ColRich property. No impacts would occur to ashy spikemoss and seaside cistanthe in their 2014 identified locations because planned development in the SPA would avoid those species' identified locations (Figure 2).

Small-flowered morning glory, which would potentially be impacted in its 2014 identified locations, occurs in clay soils and serpentinite seeps in chaparral openings, coastal scrub, and valley and foothill grassland habitats (CNPS 2016). There is potential habitat for the species to also occur in the southwestern portion of the SPA (i.e., in non-native grassland and Diegan coastal sage scrub with gravelly clay loam soils [United States Department of Agriculture Natural Resources Conservation Service {USDA NRCS}2015]).

Ashy spikemoss is a perennial rhizomatous herb that occurs in chaparral and coastal scrub habitats (CNPS 2016). This species was found in non-native grassland on the ColRich property in 2014. However, its more typical habitat, Diegan coastal sage scrub, occurs along the northern border and in the southwestern portion of the SPA within the SPA's impact footprint.

Seaside cistanthe is an annual herb that blooms from February to August and occurs in sandy soils in coastal bluff scrub, coastal scrub, and valley and foothill grassland habitats (CNPS 2016). While there are no sandy soils in the SPA, this species was found in Diegan coastal sage scrub on cobbly loam soil (USDA NRCS 2015). Therefore, there is potential habitat for the species in the western and southwestern portions of the SPA within the SPA's impact footprint (i.e., non-native grassland and Diegan coastal sage scrub with cobbly loam soil [USDA NRCS 2015]).

Even though the FEIR did not specifically call out potential impacts to these three species, the FEIR did identify the loss of San Diego County sunflower (also a Rare Plant Rank 4 species) which was found in the SPA in 2014 on the ColRich property. Because the FEIR acknowledged that additional species beyond those reported in the FEIR could be found during site-specific field work, and mitigation for the loss of sensitive plant species regardless of the species type is provided by the FEIR to reduce impacts to less than significant levels, the potential loss of Rare Plant Rank 4 species in the SPA that were not specifically called out by their common or scientific names in the FEIR does not constitute a new impact. Consistent with the conclusion reached by the FEIR, adoption of the proposed CVSP would have a "substantial adverse impact, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status" (City 2011). Adoption of the proposed CVSP with its potential to directly affect Rare Plant Rank 4 plant species would not represent a new impact.

5.0 MSCP CONSISTENCY

The FEIR concluded that the Otay Mesa Community Plan Update would be consistent with the MSCP but acknowledged that MHPA adjacency impacts and potential MHPA boundary adjustments would be addressed as part of implementing projects. The proposed CVSP does not propose an MHPA boundary adjustment. Therefore, the analysis below focuses on potential MHPA adjacency impacts associated with the proposed CVSP and other MSCP Subarea Plan policies for which conditionally compatible uses and development proposals at the project level in the SPA must comply.

5.1 COMPATIBLE LAND USES AND GENERAL PLANNING POLICIES AND DESIGN GUIDELINES

Section 1.4.1 of the City's MSCP Subarea Plan states that the following land uses are conditionally compatible with the biological objectives of the MSCP and will be allowed within the MHPA:

- Passive recreation
- Utility lines and roads in compliance with policies in Section 1.4.2 (below)
- Limited water facilities and other essential public facilities
- Limited low density residential uses
- Brush Management (Zone 2)
- Limited agriculture

Consistent with the Otay Mesa Community Plan Update and its evaluation in the FEIR, the proposed CVSP includes a segment of Airway Road, a City Mobility Element Roadway, in the MHPA.

Section 1.4.2 of the City's MSCP Subarea Plan includes general planning policies and design guidelines (listed below) that are applied in the review and approval of development projects within or adjacent to the MHPA.

Roads and Utilities – Construction and Maintenance Policies

This section of the Subarea Plan includes eight guidelines/policies. The only road in the proposed CVSP in the MHPA is a segment of Airway Road. No water or sewer utilities are proposed in or adjacent to the MHPA by the proposed CVSP.

1. All proposed utility lines should be designed to avoid or minimize intrusion into the MHPA.

   The CVSP does not propose any utility lines in the MHPA other than utility lines that would occur beneath Airway Road. Airway Road, a City Mobility Element Roadway, is a permitted use in the MHPA.

2. All new development for utilities and facilities within or crossing the MHPA shall be planned, designed, located, and constructed to minimize environmental impacts. If avoidance is infeasible, mitigation would be required.

   The MHPA would be unavoidably impacted by construction of Airway Road. The segment of Airway Road located in the CVSP and that would occur in the MHPA was planned in this location by the Otay Mesa Community Plan Update and evaluated in the FEIR. As called for by the FEIR, impacts to the MHPA due to the construction of Airway Road would be mitigated in accordance with the methods and ratios provided in the City's Biology Guidelines. See FEIR Mitigation Measure BIO-1, *Mitigation for Impacts to Sensitive Upland Habitats,* which is repeated in Section 6.0 of this addendum report.

3. Temporary construction areas and roads, staging areas, or permanent access roads must not disturb existing habitat unless determined to be unavoidable.

4. Construction and maintenance activities in wildlife corridors must avoid significant disruption of corridor usage.

   One of the objectives of the MHPA in the MSCP is to delineate core corridors targeted for conservation while acknowledging that limited development may occur (City 1997). As disclosed in biological resources report appended to the FEIR, Dennery and Spring canyons, connected by the Otay Mesa Road culvert and State Route 905 wildlife crossing, function as the primary north-south wildlife movement corridor in western Otay Mesa (RECON Environmental, Inc. 2013). Spring Canyon, which is in the MHPA, occurs to the north and west of the SPA and within the SPA along its northern border (Figure 2). Consistent with the conclusion reached by the FEIR, construction of Airway Road is the only feature of the CVSP that would unavoidably impact the MHPA, consisting of a portion of the upper slopes of Spring Canyon; the remainder of the canyon would not be impacted, so Airway Road construction (and maintenance) would avoid significant disruption of corridor usage. Airway Road is "considered conditionally compatible with the biological objectives of the MSCP" (City 1997).

5. Roads in the MHPA will be limited to those identified in Community Plan Circulation Elements, essential collector streets, and necessary maintenance/emergency access roads.

   Airway Road is City Mobility Element Roadway and is an essential public facility in that it has been identified in the Otay Mesa Community Plan Update as a major east-west transportation corridor on Otay Mesa; it is planned to serve as the principal community transportation and activity corridor (City 2015). Airway Road is the only road that will occur in the MHPA within the SPA.

6. Development of roads in canyon bottoms should be avoided whenever feasible. If an alternative location outside the MHPA is not feasible, then the road must be designed to cross the shortest length possible, and if a road crosses the MHPA, it should provide for fully-functional wildlife movement capability.

   Airway Road is the only road that will occur in the MHPA within the SPA. Airway Road would not be constructed in a canyon bottom, and it would not disrupt wildlife movement capability (see number 4 above).

7. Where possible, roads within the MHPA should be narrowed from existing design standards to minimize habitat fragmentation and disruption of wildlife movement and breeding areas. Roads must be located in lower quality habitat or disturbed areas to the extent possible.

   Airway Road is the only road that will occur in the MHPA within the SPA. The segment of this roadway that is planned to pass through the SPA was designed to connect to extensions of Airway Road to the east and to the west. Therefore, Airway Road has a defined alignment because of the potential fixed end points of the roadway and engineering requirements. The placement and design of the road along edge of the MHPA would not result, however, in habitat fragmentation or disruption of wildlife movement (see number 4 above).

8. Existing roads and utility lines are usually considered a compatible use in the MHPA.

   There are no existing roads or utility lines in the MHPA identified in the proposed CVSP.

Fencing, Lighting, and Signage

This section of the City's MSCP Subarea Plan includes three guidelines/policies. Each is summarized below.

1. Fencing or other barriers will be used where it is determined to be the best method to achieve conservation goals and adjacent to land uses incompatible with the MHPA.

   As called for by the Otay Mesa Community Plan Update, the SPA is proposed to be developed as a predominately residential community with core areas of mixed uses and public spaces. There are no incompatible land uses proposed adjacent to the MHPA associated with the proposed CVSP. In addition, the proposed CVSP includes the following design standard to protect the MHPA:

   Design Standard 2.4-7: "Where residential uses [in this case, both multi-family and mixed use areas] abut the San Diego MSCP Sub-Area Plan Multi-Habitat Planning Areas MHPA, appropriate buffers and/or barriers (walls, fencing, etc.) shall be provided in conjunction with implementing development at the edge between developed areas and natural areas in order to preclude intrusion into these areas by people and domestic animals."

2. Lighting shall be designed to avoid intrusion in the MHPA.

   As called for by the Otay Mesa Community Plan Update, the SPA is proposed to be developed as a predominately residential community with core areas of mixed uses and

public spaces. Lighting levels would be typical of these types of uses, which were assumed by the FEIR. The proposed CVSP includes a policy and a design standard that address lighting and would ensure compliance with the MHPA Land Use Adjacency Guidelines (LUAG) for lighting.

Policy 2.5-4: "To minimize light pollution and reduce energy use, developments should limit the amount of nighttime light that is projected upward and beyond the site and should direct light into high-traffic areas of the development. Arrange lighting in parking areas to prevent direct glare into adjacent dwelling units and onto neighboring uses/properties."

Design Standard 2.5-13: "All lighting adjacent to natural open space shall comply with Multiple Species Conservation Program (MSCP) adjacency guidelines."

3. Signage will be limited to access, litter control, and educational purposes.

   The CVSP calls out the potential locations of trailheads and specifies policies for trails and associated signage as follows:

   Policy 2.3-15: "Design trails within the Multi-Habitat Planning Area (MHPA) to be consistent with the MSCP and trail standards and design policies of the City's Park and Recreation Department's Consultant's Guide to Park Design and Development."

   Policy 2.3-20: "Design trail amenities to minimize their impact on adjacent environmentally sensitive areas."

   Policy 2.4-24: "Trails may be accommodated in open space areas as part of implementing projects. Such trail development would be subject to any restrictions that may be associated with the Multi-Species Habitat Planning Areas (MHPA) and evaluated pursuant to applicable CEQA requirements in conjunction with the implementing development."

Materials Storage

The City's MSCP Subarea Plan states that storage of materials (e.g., hazardous or toxic chemicals, equipment, etc.) will not be located within the MHPA, and proper storage of such materials is required per applicable regulations in any areas that may impact the MHPA, especially due to potential leakage.

Section 2.6.2.1 "Drainage Design Standards" of the CVSP includes basic design standards that summarily: 1) satisfy the requirements of the City's Storm Water Standards Manual, 2) comply with the appropriate National Pollutant Discharge Elimination System construction permit, and 3) incorporate Best Management Practices as part of site-specific hydrology and water quality studies. Therefore, the proposed CVSP is consistent with the LUAG for drainage and toxics.

Additionally, avoidable disturbance to the MHPA would be prevented through implementation of Mitigation Measure LU-2 from the FEIR, which is repeated in Section 6.0 of this addendum report.

5.2 LAND USE ADJACENCY GUIDELINES

Section 1.4.3 of the City's MSCP Subarea Plan includes LUAG for the management of planned or existing land uses adjacent to the MHPA to ensure minimal impacts to the MHPA. The proposed CVSP follows the LUAG as described below. In addition, FEIR Mitigation Measure Framework LU-2 requires compliance with the LUAG and is repeated in Section 6.0 of this addendum report.

Drainage and Toxics

The LUAG require that all new parking lots and developed areas in and adjacent to the MHPA not drain directly into the MHPA. All developed and paved areas must prevent the release of toxins, chemicals, petroleum products, exotic plant materials, and other elements that might degrade or harm the natural environment or ecosystems processes.

Section 2.6.2.1 "Drainage Design Standards" of the CVSP includes several design standards that summarily: 1) reduce post-development peak flows, 2) ensure erosion potential is not increased downstream, 3) conform with the City's "Drainage Design Manual," 4) satisfy the requirements of the City's Storm Water Standards Manual, 5) comply with the appropriate National Pollutant Discharge Elimination System construction permit, and 6) require the incorporation of Best Management Practices as part of site-specific hydrology and water quality studies. Therefore, the CVSP is consistent with the LUAG for drainage and toxics.

Lighting

The LUAG require that all developed areas adjacent to the MHPA direct lighting away from the MHPA.

Section 2.5.3.7 of the CVSP includes Design Standard 2.5-13 that requires compliance with the LUAG for lighting as follows:

Design Standard 2.5-13: "All lighting adjacent to natural open space shall comply with Multiple Species Conservation Program (MSCP) adjacency guidelines."

Noise

The LUAG require that uses in or adjacent to the MHPA be designed to minimize noise impacts that could impact or interfere with wildlife utilization of the MHPA.

Airway Road is an essential public facility and is, therefore, "considered conditionally compatible with the biological objectives of the MSCP and allowed within the City's MHPA" (City 1997). Therefore, roadway noise from this facility is also allowed within the MHPA. According to the traffic study prepared for the CVSP (Chen Ryan 2017), the CVSP would generate less traffic than was assumed to be generated by land uses in the SPA by the FEIR. Therefore, less vehicular noise would occur along Airway Road as a result of the CVSP.

The CVSP includes a 6.0-acre park, Trails Park (PA 18 Park on Figure 2), adjacent to the MHPA in the south-central portion of the SPA. Trails Park would provide recreational uses, such as children play areas, multi-purpose fields that could be programmed for leagues use, and walking tracks. Recreational uses and walking tracks would not create noise at levels that would impact

or interfere with wildlife utilization of the MHPA. League uses could create such noise levels; however, the multi-purpose field that would be used (i.e., open field turf area shown on Figure 2.4-5 of the CVSP) is proposed to be located adjacent to multi-family housing—not the MHPA. That is, the housing would be located between the field and the MHPA, so noise impacts to the MHPA caused by activity at the field is expected to be less than significant. Parks and trails, however, will be the subject of specific development plans at the time they are built and will be subject to subsequent CEQA review, which will include preparation of site-specific biology reports to determine how to best implement mitigation related to the LUAG. FEIR Mitigation Measure LU-2, however, repeated in Section 6.0 of this addendum report, is expected to reduce noise to less-than-significant levels.

The CVSP includes another, 3.5-acre park, Vista Park (PA 15 Park on Figure 2), along the western edge of the SPA that is adjacent to the MHPA. Vista Park is planned for recreational activities which may include interpretive signs, shaded areas for sitting and relaxing, multi-purpose fields for pick-up games and sport activities, and exercise courses. The sport activities could have potential to create noise at levels that would impact or interfere with wildlife utilization of the MHPA. As indicated above for Trails Park, Vista Park will be subject to subsequent CEQA review to determine how best to implement mitigation related to the LUAG. FEIR Mitigation Measure LU-2, however, repeated in Section 6.0 of this addendum report, is expected to reduce noise to less-than-significant levels.

Residential and mixed uses planned adjacent to the MHPA and trails planned adjacent to and within the MHPA (as shown on Figure 2.4-1, *Parks and Open Space Plan*, in the CVSP) would not create noise levels in excess of levels assumed by the FEIR. In addition, noise levels from residential and mixed use areas are not expected to create noise levels at levels that would impact or interfere with wildlife utilization of the MHPA. Regardless, residential and mixed-use development in the SPA is subject to this LUAG, and implementation of Mitigation Measure LU-2 from the FEIR (repeated in Section 6.0 of this addendum) is required to reduce noise to less-than-significant levels.

Barriers

The LUAG state that new development adjacent to the MHPA may be required to provide barriers along the MHPA boundaries to direct public access to appropriate locations and to reduce domestic animal predation.

The proposed CVSP includes the following policies and design standard to direct public access and reduce domestic animal predation:

> Policy 2.3-15: “Design trails within the Multi-Habitat Planning Area (MHPA) of the CVSP to be consistent with the MSCP and trail standards and design policies of the City’s Park and Recreation Department’s Consultant’s Guide to Park Design and Development.”
>
> Policy 2.3-20: “Design trail amenities to minimize their impact on adjacent environmentally sensitive areas.”
>
> Policy 2.4-24: “Trails may be accommodated in open space areas as part of implementing projects. Such trail development would be subject to any restrictions that may be associated with the Multi-Species Habitat Planning Areas (MHPA) and evaluated pursuant to applicable CEQA requirements in conjunction with the implementing development.”

> Design Standard 2.4-7: "Where residential uses [in this case, both multi-family and mixed use areas] abut the San Diego MSCP Sub-Area Plan Multi-Habitat Planning Areas (MHPA), appropriate buffers and/or barriers (walls, fencing, etc.) shall be provided in conjunction with implementing development at the edge between developed areas and natural areas in order to preclude intrusion into these areas by people and domestic animals."

Invasives

The LUAG require that no invasive, non-native plant species be introduced into areas adjacent to the MHPA.

The proposed CVSP includes the following policies and design standard consistent with the LUAG for invasives:

> Policy 2.5-161: "Landscaping plantings for external slopes should include a combination of hydro-seeding and container planting of native plant species…."

> Design Standard 2.5-3: "Prohibited and invasive plant species shall not be knowingly used within Central Village. Prohibited plants are those which do not satisfy the minimum performance standards for the site area per the City's Land Development Code, Chapter 14, Article 2, Division 4, *Landscape Regulations*."

Brush Management

The LUAG require that new development located adjacent to and topographically above the MHPA (e.g., along canyon edges) be set back from slope edges to incorporate Zone 1 brush management areas on the development pad and outside the existing MHPA, while Zone 2 is considered "impact neutral" within the MHPA.

According to Section 2.5.3.5 "Brush Management Zones" of the CVSP, brush management zones, where required, would be provided in a manner consistent with the provisions of City Land Development Code §142.0412.

Grading/Land Development

The LUAG require that manufactured slopes associated with development be included within the development footprint within or adjacent to the MHPA.

Engineering requirements necessitate that construction of Airway Road within the SPA extend into the MHPA. However, as stated in Section 5.1 of this addendum report, Airway Road is an essential public facility planned as part of the Otay Mesa Community Plan Update and is, therefore, "considered conditionally compatible with the biological objectives of the MSCP and allowed within the City's MHPA" (City 1997).

As shown on the CVSP Land Use Plan (Figure 2), mixed use and multi-family uses adjacent to the MHPA avoid the MHPA, which is consistent with the LUAG for grading/land development. Analysis of the grading/land development LUAG would also occur at the project level, to further ensure that future development proposals in the SPA are consistent with this LUAG.

5.3 GENERAL MANAGEMENT DIRECTIVES

The City's MSCP Subarea Plan general management directives are summarized for the CVSP below. Future development in the SPA will comply with these directives at the project level.

1. Mitigation shall be performed in accordance with Environmentally Sensitive Lands (ESL) Ordinance and Biology Guidelines.

   Applicable mitigation measures from the FEIR, which are repeated in Section 6.0 of this addendum report, satisfy the requirements of the ESL Ordinance and Biology Guidelines.

2. Restoration or revegetation undertaken in the MHPA shall be performed in a manner acceptable to the City.

   Applicable FEIR mitigation measures repeated in Section 6.0 of this addendum report require that any restoration or revegetation undertaken in the MHPA would satisfy the requirements of the ESL Ordinance and Biology Guidelines and, therefore, be acceptable to the City.

3. Public Access, Trails, and Recreation. This directive includes requirements for trail signage, type, location, design, and use.

   Policy 2.3-15 of the CVSP is to design trails within the MHPA to be consistent with the MSCP and trail standards and design policies of the City of San Diego's Park and Recreation Department's Consultant's Guide to Park Design and Development. This policy would meet this general management directive.

4. Litter/Trash and Materials Storage. This directive includes requirements for trash removal and permanent materials storage in the MHPA.

   Such avoidable disturbance to the MHPA would be prevented through implementation of FEIR Mitigation Measure LU-2, which is repeated in Section 6.0 of this addendum report.

5. Adjacency Management Issues. This directive includes: 1) enforcing, preventing, and removing illegal intrusions into the MHPA at least annually; 2) disseminating educational information to residents about MHPA adjacency issues [particularly illegal intrusion and invasive plants]; and 3) installing barriers and/or signage where necessary to direct public access.

   Design Standard 2.4-7 of the proposed CVSP states that where residential uses [in this case, both multi-family and mixed use areas] abut the MHPA, appropriate buffers and/or barriers (walls, fencing, etc.) shall be provided in conjunction with implementing development at the edge between developed areas and natural areas to prevent intrusion into these areas by people and domestic animals. This design standard would prevent illegal intrusions into the MHPA. Enforcing and removing illegal intrusions would be the responsibility of the City that manages the MHPA.

   Design Standard 2.5-3: "Prohibited and invasive plant species shall not be knowingly used within Central Village. Prohibited plants are those which do not satisfy the

minimum performance standards for the site area per the City's Land Development Code, Chapter 14, Article 2, Division 4, *Landscape Regulations*."

5.4 AREA SPECIFIC MANAGEMENT DIRECTIVES

Special conditions apply to City MSCP Subarea Plan Covered species that would be potentially impacted within the SPA—including designing the impact footprint to avoid impacts to Covered species in the MHPA where feasible. The extent of the impact footprint of the CVSP is the same as the impact footprint assumed for the SPA by the Otay Mesa Community Plan Update and FEIR, with the exception of 1.0 additional acre which was added to facilitate a connection of Airway Road to the west and would not pose a conflict with the Area Specific Management Directives. Future development in the SPA must incorporate measures (Area Specific Management Directives; ASMDs) at the project level for the protection of Covered species as identified in Appendix A of the City's MSCP Subarea Plan. The following Covered species are present (CAGN and San Diego barrel cactus) or have moderate potential to occur (BUOW) in the SPA.

Coastal California Gnatcatcher

ASMDs for the CAGN must include measures to reduce edge effects and minimize disturbance during the nesting period, fire protection measures to reduce the potential for habitat degradation due to unplanned fire, and management measures to maintain or improve habitat quality including vegetation structure. No cleaning of occupied habitat within the cities' MHPA may occur between March 1 and August 15.

Burrowing Owl

According to FEIR Mitigation Measure BIO-1, during the environmental analysis of future proposed projects implementing the Otay Mesa Community Plan Update and CVSP, BUOW surveys (using appropriate protocols) must be conducted in suitable habitat to determine if this species is present and the location of active burrows. If burrowing owls are detected, the following mitigation measures must be implemented in accordance with the MSCP: within the MHPA, impacts must be avoided; outside of the MHPA, impacts to the species must be avoided to the maximum extent practicable; any impacted individuals must be relocated out of the impact area using passive or active methodologies approved by the wildlife agencies; mitigation for impacts to occupied habitat (at the Subarea Plan specified ratio) must be through the conservation of occupied burrowing owl habitat or conservation of lands appropriate for restoration, management and enhancement of burrowing owl nesting and foraging requirements.

Management plans/directives for the BUOW must include: enhancement of known, historical and potential burrowing owl habitat and management for ground squirrels (the primary excavator of burrowing owl burrows). Enhancement measures may include creation of artificial burrows and vegetation management to enhance foraging habitat. Management plans must also include: monitoring of burrowing owl nest sites to determine use and nesting success; predator control; and establishing a 300 foot-wide impact avoidance area (within the preserve) around occupied burrows.

San Diego Barrel Cactus

ASMDs for San Diego barrel cactus must include measures to protect this species from edge effects, unauthorized collection, and include appropriate fire management/control practices to protect against a too frequent fire cycle. Impacts to this species in the SPA would be mitigated to less-than-significant levels through FEIR Mitigation Measure BIO-1, which is repeated in Section 6.0 of this addendum report.

6.0 MITIGATION FRAMEWORK

No mitigation measures are required in addition to those presented in the FEIR. In addition to compliance with the MSCP consistency guidelines listed in Section 5.0 of this addendum report, future development projects proposed in the SPA shall implement the following mitigation measures from the FEIR, as applicable, to reduce potentially significant impacts to below a level of significance. The following mitigation measures are presented verbatim from the FEIR, although it is recognized that some of the provisions of these mitigation measures are not applicable to the CVSP or to future projects that would implement the CVSP.

BIO-1: To reduce potentially significant impacts that would cause a reduction in the number of unique, rare, endangered, sensitive, or fully protected species of plants or animals, if present within the Community Plan Update (CPU; [CVSP]) area, all subsequent projects implemented in accordance with the CPU (CVSP) shall be analyzed in accordance with the CEQA Significance Thresholds, which require that site-specific biological resources surveys be conducted in accordance with City Biology Guidelines (2012). The locations of any sensitive plant species, including listed, rare, and narrow endemic species, as well as the potential for occurrence of any listed or rare wildlife species shall be recorded and presented in a biological resources report. Based on available habitat within CPU (CVSP) area, focused presence/absence surveys shall be conducted in accordance with the Biology Guidelines and applicable resource agency survey protocols to determine the potential for impacts resulting from the future projects on these species. Engineering design specifications based on project-level grading and site plans shall be incorporated into the design of future projects to minimize or eliminate direct impacts on sensitive plant and wildlife species consistent with the Federal Endangered Species Act (FESA), Migratory Bird Treaty Act (MBTA), Bald and Golden Eagle Protection Act, California Endangered Species Act, MSCP Subarea Plan, and Environmentally Sensitive Lands (ESL) Regulations.

In addition to the requirements detailed above, specific measures shall be implemented when the biological survey results in the identification of BUOW on the project site. Future projects shall be required to conduct a habitat assessment to determine whether or not protocol surveys are needed. Should BUOW habitat or sign be encountered on or within 150 meters of the project site, breeding season surveys shall be conducted. If occupancy is determined, site-specific avoidance and mitigation measures shall be developed in accordance with the protocol established in the Staff Report on Burrowing Owl Mitigation (CDFW 2012). Measures to avoid and minimize impacts to BUOW shall be included in a Conceptual Burrowing Owl Mitigation Plan which includes take avoidance (preconstruction) surveys, site surveillance, and the use of buffers, screens, or other measures to minimize construction-related impacts.

Mitigation for Impacts to Sensitive Upland Habitats. Future projects implemented in accordance with the CPU (CVSP) resulting in impacts to sensitive upland Tier I, II, IIIA, or IIIB habitats shall implement avoidance and minimization measures consistent with the Biology Guidelines and MSCP Subarea Plan and provide suitable mitigation in accordance with the Biology Guidelines and MSCP Subarea Plan. Future project-level grading and site plans shall incorporate project design features to minimize direct impacts on sensitive vegetation communities including but not limited to riparian habitats, wetlands, oak woodlands, coastal sage scrub, and consistent with Federal, State, and City guidelines. Any required mitigation for impacts on sensitive vegetation communities shall be outlined in a conceptual mitigation plan following the outline provided in the Biology Guidelines.

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

Mitigation for impacts to sensitive upland habitats shall occur in accordance with the MSCP mitigation ratios as specified within the Biology Guidelines. These mitigation ratios are based on Tier level of the vegetation community, the location of the impact and the location of the mitigation site(s). If final engineering requirements for Airway Road impact existing conserved lands, an additional 1:1 ratio shall be added to the City-required mitigation ratio in order to replace the lands that were previously preserved as open space. Mitigation lands purchased to compensate for impacts to areas within conserved lands shall be located in the Otay Mesa area if feasible.

Mitigation for Short-term Impacts to Sensitive Species from Project Construction. Specific measures necessary for reducing potential construction-related noise impacts to the CAGN, least Bell's vireo, BUOW, and the cactus wren are further detailed in BIO-2 and LU-2.

BIO-2: Mitigation for future projects to reduce potentially significant impacts that would interfere with the nesting, foraging, or movement of wildlife species within the CPU (CVSP) area, shall be identified in site-specific biological resources surveys prepared in accordance with the Biology Guidelines as further detailed in BIO-1 during the discretionary review process. The biological resources report shall include results of protocol surveys and recommendations for additional measures to be implemented during construction-related activities; shall identify the limits of any identified local-scale wildlife corridors or habitat linkages and analyze potential impacts in relation to local fauna, and the effects of conversion of vegetation communities (e.g., non-native grassland to riparian or agricultural to developed land) to minimize direct impacts on sensitive wildlife species and to provide for continued wildlife movement through the corridor.

Measures that shall be incorporated into project-level construction documents to minimize direct impacts on wildlife movement, nesting or foraging activities shall be addressed in the biological resources report and shall include recommendations for preconstruction protocol surveys to be conducted during established breeding seasons, construction noise monitoring and implementation of any species specific mitigation

plans (such as a Burrowing Owl Mitigation Plan) in order to comply with the FESA,

MBTA, Bald and Golden Eagle Protection Act, California Fish and Game Code, and/or the ESL Regulations.

LU-2: All subsequent development projects that are implemented in accordance with the CPU (CVSP) which is adjacent to designated MHPA areas shall comply with the Land Use Adjacency Guidelines of the MSCP in terms of land use, drainage, access, toxic substances in runoff, lighting, noise, invasive plant species, grading, and brush management requirements. Mitigation measures include, but are not limited to: sufficient buffers and design features, barriers (rocks, boulders, signage, fencing, and appropriate vegetation) where necessary, lighting directed away from the MHPA, and berms or walls adjacent to commercial or industrial areas and any other use that may introduce construction noise or noise from future development that could impact or interfere with wildlife utilization of the MHPA. The project biologist for each proposed project would identify specific mitigation measures needed to reduce impacts to below a level of significance. Subsequent environmental review would be required to determine the significance of impacts from land use adjacency and compliance with the Land Use Adjacency Guidelines of the MSCP. Prior to approval of any subsequent development project in an area adjacent to a designated MHPA, the City shall identify specific conditions of approval in order to avoid or to reduce potential impacts to adjacent the MHPA.

Specific requirements shall include:

• Prior to the issuance of occupancy permits, development areas shall be permanently fenced where development is adjacent to the MHPA to deter the intrusion of people and/or pets into the MHPA open space areas. Signage may be installed as an additional deterrent to human intrusion as required by the City.

• The use of structural and nonstructural best management practices (BMPs), including sediment catchment devices, shall be required to reduce the potential indirect impacts associated with construction to drainage and water quality. Drainage shall be directed away from the MHPA or, if not possible, must not drain directly into the MHPA. Instead, runoff shall flow into sedimentation basins, grassy swales, or mechanical trapping devices prior to draining into the MHPA. Drainage shall be shown on the site plan and reviewed satisfactory to the City Engineer.

• All outdoor lighting adjacent to open space areas shall be shielded to prevent light over-spill off-site. Shielding shall consist of the installation of fixtures that physically direct light away from the outer edges of the road or landscaping, berms, or other barriers at the edge of development that prevent light over-spill.

• The landscape plan for the project shall contain no exotic plant/invasive species and shall include an appropriate mix of native species which shall be used adjacent to the MHPA.

• All manufactured slopes must be included within the development footprint and outside the MHPA.

• All brush management areas shall be shown on the site plan and reviewed and approved by the Environmental Designee. Zone 1 brush management areas shall be included within the development footprint and outside the MHPA. Brush management Zone 2 may be permitted within the MHPA (considered impact neutral) but cannot be used as mitigation. Vegetation clearing shall be done consistent with City standards and shall avoid/minimize impacts to covered species to the maximum extent possible. For all new development, regardless of the ownership, the brush management in the Zone 2 area shall be the responsibility of a homeowners association or other private party.

• Access to the MHPA, if any, shall be directed to minimize impacts and shall be shown on the site plan and reviewed and approved by the Environmental Designee.

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

7.0 CONCLUSION

As demonstrated in this addendum report, no new or more severe impacts to biological resources would occur from adoption of the CVSP as compared to the biological resource impacts disclosed in the FEIR for the SPA. Mitigation Measures LU-2, BIO-1, and BIO-2 from the FEIR are applicable, and no additional mitigation measures are required to reduce impacts to less-than-significant levels.

8.0 REFERENCES

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2015b. 2015 Report U.S. Fish and Wildlife Service Protocol Level Presence/Absence Surveys for the Coastal California Gnatcatcher (*Polioptila californica californica*). June 4.

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1997. Coastal California Gnatcatcher (*Polioptila californica californica*) Presence/Absence Survey Protocol.

Appendix A

Quino Checkerspot
Butterfly Survey Reports

2015 Report
U.S. Fish and Wildlife Service Protocol Level Presence/Absence Surveys for the Quino Checkerspot Butterfly (*Euphydryas editha quino*)

Prepared for:

ColRich

Prepared by:

Alden Environmental, Inc.
3245 University Ave., #1188
San Diego, CA 92104

June 10, 2015

I certify that the information in this survey report and attached exhibits fully and accurately represent my work.

Brian Lohstroh (TE063608-5)

Lee Ripma (TE-221290-3.1)

Garrett Huffman (TE-20168A-0)

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INTRODUCTION

This report documents the results of a focused survey conducted for the federally listed as endangered quino checkerspot butterfly (QCB; *Euphydryas editha quino*) on the Otay Canyon Ranch project site. The site consists of 6 parcels located south of State Route (SR) 905, west of Cactus Road, between Airway Road and Siempre Viva Road in the City of San Diego's (City's) Otay Mesa Community (Figures 1 and 2).

Surrounding land uses include industrial, agricultural and automobile salvage yards. Cactus Road borders the site to the east. Elevation on site ranges from 425 to 510 feet above mean sea level. Soil on site consists of Stockpen gravelly clay loam (0 to 2 percent slopes and 2 to 5 percent slopes) and Olivenhain cobbly loam (30 to 50 percent slopes; Bowman 1973). A small portion of the City MSCP's Multi-habitat Planning Area (MHPA) occurs at the northwest corner of the property, within the northern canyon.

METHODS

The surveys were performed in accordance with the Year 2014 Survey Protocol Information (USFWS 2014a) and Survey Guidelines (USFWS 2014b) by USFWS permitted biologists Lee Ripma (TE221290-3.1), Garrett Huffman (TE20168A-0), and Brian Lohstroh (TE063608-5). A total of 12 protocol survey visits were conducted on site. All surveys were conducted between February 20 and May 5, 2015. Dates, times, and weather conditions at the start and end of each survey are presented in Appendix A. The surveys were conducted by slowly walking (approximately 10 -12 acres per hour) transects across the site and noting butterflies and/or potential QCB resources present. The entire Project site was surveyed, and no areas were excluded. Copies of field notes from each survey are presented in Appendix B. Lists of butterflies observed during each survey are presented in Appendix C.

RESULTS

No QCB were observed. The site is predominantly an active agricultural site with several structures and out buildings. Overall, the habitat quality for the QCB is low, with the only suitable habitat occurring at the northern and southern ends of the site, outside of the active agricultural and developed areas (Figures 3 and 4). The suitable QCB habitat components occur within and adjacent to the canyons on the north and south ends of the site. The only host plant observed was a single patch dot-seed plantain (*Plantago erecta*) at the northern end (Figures 3 and 4). Based on this and previous surveys, the QCB is not anticipated to occur on site.

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2014b. Quino Checkerspot Butterfly 2014 Survey Recommendations. February.

N
W E
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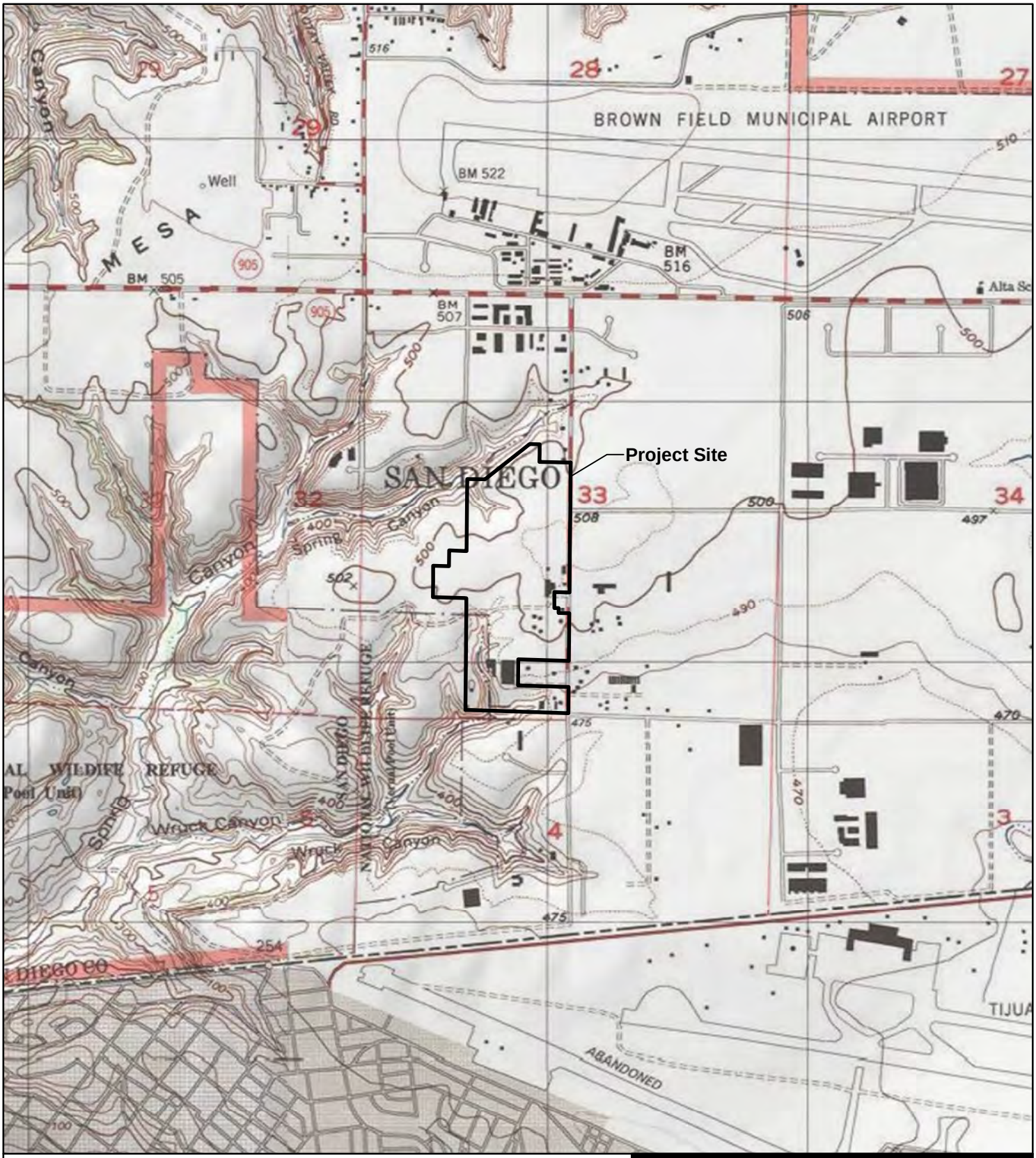
0 2 4 Miles

ALDEN ENVIRONMENTAL, INC

Figure 1

Regional Location

OTAY CANYON RANCH
QUINO CHECKERSPOT BUTTERFLY SURVEY



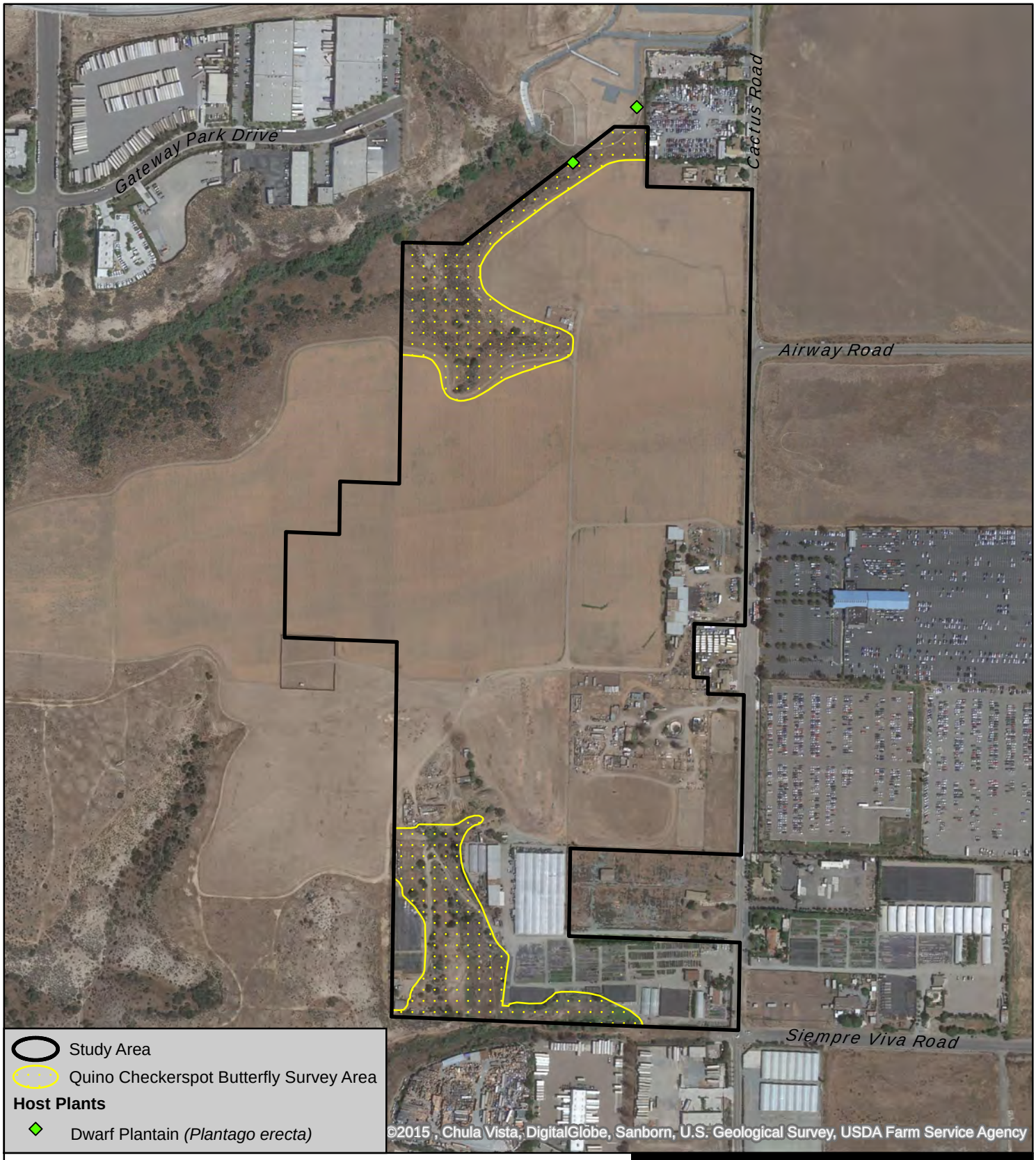
Source: USGS Quadrangles (Otay Mesa, Imperial Beach);
Copyright:© 2013 National Geographic Society, i-cubed

Figure 2

Project Location

OTAY CANYON RANCH
QUINO CHECKERSPOT BUTTERFLY SURVEY

ALDEN ENVIRONMENTAL, INC



Source: Google

N
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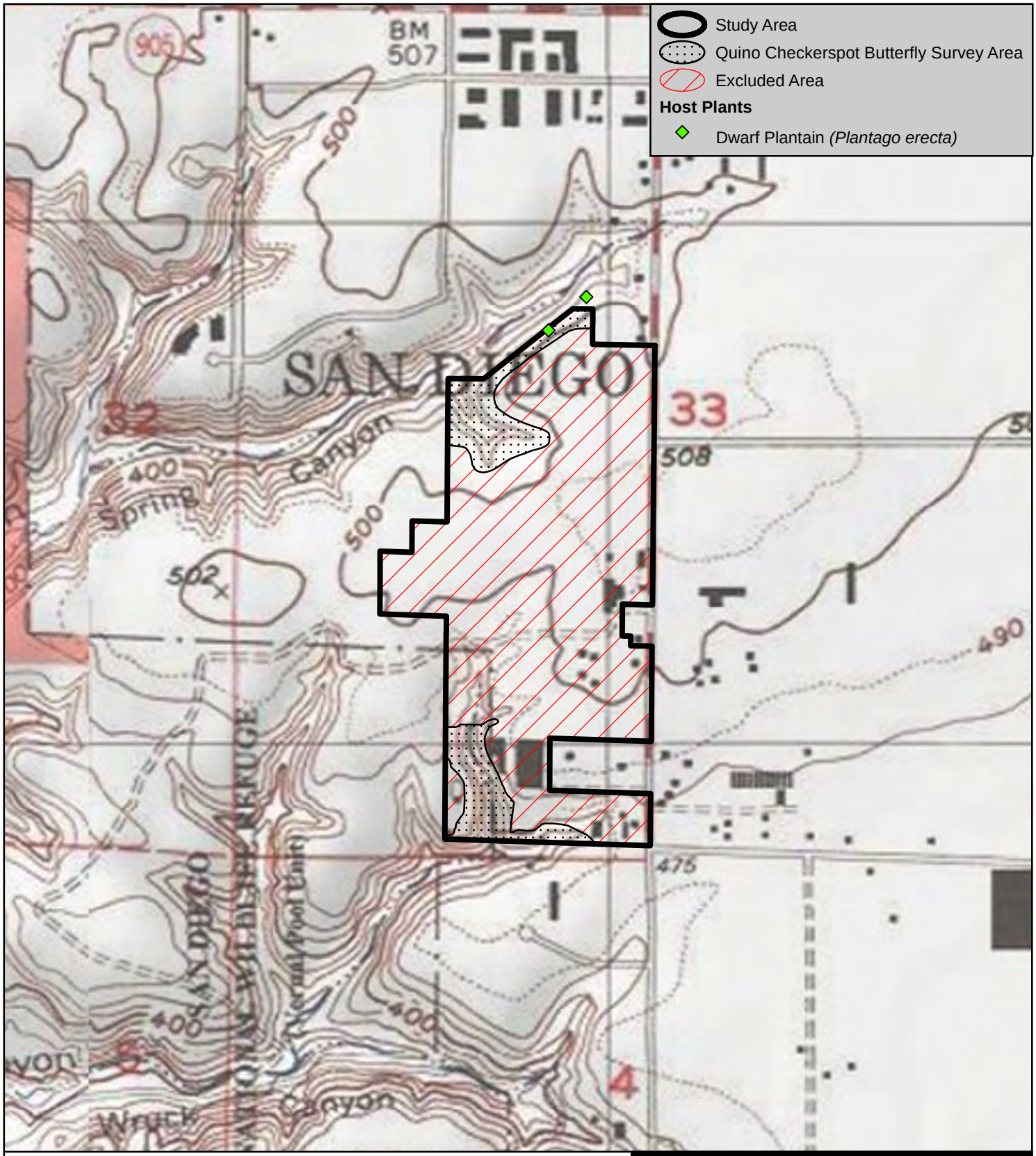
0 250 500 Feet

ALDEN ENVIRONMENTAL, INC

Figure 3

Survey Area

OTAY CANYON RANCH
QUINO CHECKERSPOT BUTTERFLY SURVEY



Source: USGS Quadrangles (Otay Mesa, Imperial Beach);
Copyright:© 2013 National Geographic Society, i-cubed

Figure 4

QCB Site Assessment

OTAY CANYON RANCH
QUINO CHECKERSPOT BUTTERFLY SURVEY

ALDEN ENVIRONMENTAL, INC

SUMMARY OF FIELD SURVEY CONDITIONS

Survey	Date	Biologist	Survey Times (start/stop)	Weather Conditions (start/stop)[1]
1	2/17/15	Lee Ripma	955/1150	0%, 68.2°F, wind 0-2 mph/ 0%, 76.3°F, wind 1-3 mph
2	2/24/15	Lee Ripma	1050/1230	0%, 71.9°F, wind 3-7 mph/ 0%, 77.1°F, wind 2-5(8) mph
3	3/3/15	Garrett Huffman	1100/1330	40%, 65°F, wind 1-3 mph/ 30%, 68°F, wind 2-5 mph
4	3/11/15	Brian Lohstroh	1045/1315	70%, 72°F, wind 0-2 mph/ 80%, 75°F, wind 1-4 mph
5	3/19/15	Garrett Huffman	1150/1350	55%, 82°F, wind 0-2 mph/ 10%, 83°F, wind 2-6 mph
6	3/28/15	Garrett Huffman	1445/1645	20%, 82°F, wind 3-5 mph/ 10%, 78°F, wind 3-7 mph
7	4/4/15	Garrett Huffman	1115/1315	30%, 88°F, wind 3-4 mph/ 30%, 92°F, wind 2-5 mph
8	4/12/15	Garrett Huffman	0945/1115	0%, 70°F, wind 2-3 mph/ 0%, 72°F, wind 2-4 mph
9	4/16/15	Garrett Huffman	0830/1015	0%, 73°F, wind 0 mph/ 0%, 79°F, wind 0 mph
10	4/26/15	Garrett Huffman	1600/1730	20%,77°F, wind 3-8 mph/ 5%, 72°F, wind 4-10 mph
11	5/1/15	Garrett Huffman	1300/1430	5%, 91°F, wind 3-9 mph/ 0%, 90°F, wind 4-8 mph
12	5/5/15	Garrett Huffman	1430/1600	40%, 68°F, wind 5-9 mph/ 30%, 67°F, wind 3-6 mph

[1]Temperature was taken on the ground in the shade. Percentages indicate cloud cover.

ROCKS BIOLOGICAL CONSULTING

Project: Otay Parcel Greg Mason Spring Valley Ranch

Surveyor Name: Lee Ripma

Date: 2/17/15 Survey #: 1

	Time	Temp (°F)	Cloud Cover (%)	Wind Speed (avg. mph)
Start	9:55	68.2	0%	0-2
End	11:50	76.3	0%	1-3

Nymphalidae (Brush Footed Butterflies)	
	Euphydras editha quino (Quino Checkerspot)
	Euphydras chalcedona (Chalcedon Checkspot)
	Charidryas gabbii (Gabb's Checkerspot)
	Phycoides mylitta (Mylitta Crescent)
	Thessalia leanira (Leanira Checkerspot)
	Nymphalis antiopa (Mourning Cloak)
	Basilarchia lorquini (Lorquin's Admiral)
	Junonia coenia (Common Buckeye)
	Vanessa annabella (West Coast Lady)
✓	*Vanessa cardui* (Painted Lady) ~~IIII~~ ~~IIII~~ II
	Vanessa virginiensis (American Lady)
	Vanessa atalanta (Red Admiral)
Danaidae	
	Danaus gilippus (Queen)
	Danaus plexippus (Monarch)
Hesperidae	
	Heliopetes ericetorum (Northern White-Skipper)
	Hylephila phyleus (Fiery Skipper)
✓	*Pyrgus albescens* (White Checkered-Skipper) II
	Erynnis funeralis (Funereal Duskywing)
	Erynnis tristis (Mournful Duskywing)
	Erynnis propertius (Propertius Duskywing)
	Ochlodes agricola (Rural Skipper)

✓ ~~white checkered skipper? Check~~ correct, ♀

Lycaenidae (Hairstreaks)	
	Atlides halesus (Great Purple Hairstreak)
	Incisalia augustinus (Western Brown Elfin)
	Callophrys perplexa (Perplexing Hairstreak)
	Strymon melinus (Gray Hairstreak)
	Glaucopsyche lygdamus (Silvery Blue)
	Icarcia acmon (Acmon Blue)
	Celastrina ladon (Echo Blue)
	Leptotes marina (Marine Blue)
	Philotes sonorensis (Sonoran Blue)
	Plebejus melissa (Melissa Blue)
	Everes amyntula (Western Tailed-Blue)
✓	*Brephidium exilis* (Western Pygmy-Blue) II
Riodinidae (Metalmarks)	
	Apodemia mormo virgulti (Behr's Metalmark)
Papilionidae (Swallowtails)	
	Papilio eurymedon (Pale Swallowtail)
	Papilio rutulus (Western Tiger Swallowtail)
	Papilio zelicaon (Anise Swallowtail)
Pieridae (Whites and Orangetips)	
	Anthocharis cethura (Desert Orangetip)
	Anthocharis sara (Sara's Orangetip)
	Pieris rapae (Cabbage White)
	Pontia protodice (Checkered White)
	Colias eurytheme (Orange Sulphur)
	Colias harfordii (Harford's Sulphur)
	Eurema nicippe (Sleepy Orange)
	Nathalis iole (Dainty Sulphur)
Satyridae (Satyrids)	
	Coenonympha californica (Common California Ringlet)
Others	

List nectar sources and plant communities observed

Lathsenia cal.	NNG NSS-D DCSS Ag
Glebionus (NN)	Gilia
Dichelostima cap.	Mirabilis laevis
Acmispon glaber	Red maids
Plagio collinus	Encelia cal.
Allium ~~haematochiton~~ praecox	Shooting star ~~primulaceae~~

(painted ladies very fresh & nectar on Allium)

List notes and GPS point names here, please write UTMs or Lat/Longs as backup:
GPS all QCB occurrences
GPS all potential host plant locations (*Plantago erecta, Plantago patagonica, Antirrhinum coulterianum, Cordylanthus rigidus, Castilleja exserta, and Collinsia heterophylla)*
Format: plant name_diameter of occurrence_density (low >20% cover per sq foot, medium 20-50%, high >50%)_date_observer

Northern portion of parcel one 8 ft diameter Pl. erecta patch w/ medium density. No QCB caterpillars observed in patch. Several woolly bear moth caterpillars in area, some eating Plantago.

No Pl. erecta patches on southern portion of site, very dry NNG slopes.

ROCKS
BIOLOGICAL CONSULTING

Project Spring canon Ranch Otay Parcel for Greg

Surveyor Name: Lee Ripma

Date 2/24/15 Survey # 2

	Time	Temp (°F)	Cloud Cover (%)	Wind Speed (avg. mph)
Start	1050	71.9	0	3-7
End	1230	77.1	0	2-5(8)

Nymphalidae (Brush Footed Butterflies)	
	Euphydras editha quino (Quino Checkerspot)
	Euphydras chalcedona (Chalcedon Checkspot)
	Charidryas gabbii (Gabb's Checkerspot)
	Phycoides mylitta (Mylitta Crescent)
	Thessalia leanira (Leanira Checkerspot)
	Nymphalis antiopa (Mourning Cloak)
	Basilarchia lorquini (Lorquin's Admiral)
	Junonia coenia (Common Buckeye)
	Vanessa annabella (West Coast Lady)
✓	*Vanessa cardui* (Painted Lady) ~~IIII~~ ~~IIII~~ I
	Vanessa virginiensis (American Lady)
	Vanessa atalanta (Red Admiral)
Danaidae	
	Danaus gilippus (Queen)
	Danaus plexippus (Monarch)
Hesperidae	
	Heliopetes ericetorum (Northern White-Skipper)
	Hylephila phyleus (Fiery Skipper)
	Pyrgus albescens (White Checkered-Skipper)
	Erynnis funeralis (Funereal Duskywing)
	Erynnis tristis (Mournful Duskywing)
	Erynnis propertius (Propertius Duskywing)
	Ochlodes agricola (Rural Skipper)

Lycaenidae (Hairstreaks)	
	Atlides halesus (Great Purple Hairstreak)
	Incisalia augustinus (Western Brown Elfin)
	Callophrys perplexa (Perplexing Hairstreak)
	Strymon melinus (Gray Hairstreak)
	Glaucopsyche lygdamus (Silvery Blue)
	Icarcia acmon (Acmon Blue)
	Celastrina ladon (Echo Blue)
	Leptotes marina (Marine Blue)
	Philotes sonorensis (Sonoran Blue)
	Plebejus melissa (Melissa Blue)
	Everes amyntula (Western Tailed-Blue)
	Brephidium exilis (Western Pygmy-Blue)
Riodinidae (Metalmarks)	
	Apodemia mormo virgulti (Behr's Metalmark)
Papilionidae (Swallowtails)	
	Papilio eurymedon (Pale Swallowtail)
	Papilio rutulus (Western Tiger Swallowtail)
	Papilio zelicaon (Anise Swallowtail)
Pieridae (Whites and Orangetips)	
	Anthocharis cethura (Desert Orangetip)
	Anthocharis sara (Sara's Orangetip)
	Pieris rapae (Cabbage White)
	Pontia protodice (Checkered White)
	Colias eurytheme (Orange Sulphur)
	Colias harfordii (Harford's Sulphur)
	Eurema nicippe (Sleepy Orange)
	Nathalis iole (Dainty Sulphur)
Satyridae (Satyrids)	
	Coenonympha californica (Common California Ringlet)
Others	

List nectar sources and plant communities observed

Blue dicks Encelia cal

Allium praecox

Isomeris

Gilia

Dudleya

Castroniia

List notes and GPS point names here, please write UTMs or Lat/Longs as backup:
GPS all QCB occurrences
GPS all potential host plant locations (*Plantago erecta, Plantago patagonica, Antirrhinum coulterianum,*
Cordylanthus rigidus, Castilleja exserta, and Collinsia heterophylla)
Format: plant name_diameter of occurrence_density (low >20% cover per sq foot, medium 20-50%, high >50%)_date_observer

A bit windy @ times during survey but many painted ladies observed did not appear to be battling wind. Protocol conditions for duration of survey

ROCKS
BIOLOGICAL CONSULTING

SPRING CANYON

SDG&E Natural Gas System Potential Upgrades

Surveyor Name: GARRETT HUFFMAN

Date 3/3/15 Survey # 3

	Time	Temp (°F)	Cloud Cover (%)	Wind Speed (avg. mph)
Start	1100	65	40	1-3
End	1330	67	30	2-5

Nymphalidae (Brush Footed Butterflies)	
	Euphydras editha quino (Quino Checkerspot)
	Euphydras chalcedona (Chalcedon Checkspct)
	Charidryas gabbii (Gabb's Checkerspot)
	Phycoides mylitta (Mylitta Crescent)
	Thessalia leanira (Leanira Checkerspot)
	Nymphalis antiopa (Mourning Cloak)
	Basilarchia lorquini (Lorquin's Admiral)
	Junonia coenia (Common Buckeye)
II	*Vanessa annabella* (West Coast Lady)
HHII	*Vanessa cardui* (Painted Lady)
	Vanessa virginiensis (American Lady)
I	*Vanessa atalanta* (Red Admiral)
Danaidae	
	Danaus gilippus (Queen)
	Danaus plexippus (Monarch)
Hesperidae	
	Heliopetes ericetorum (Northern White-Skipper)
	Hylephila phyleus (Fiery Skipper)
	Pyrgus albescens (White Checkered-Skipper)
I	*Erynnis funeralis* (Funereal Duskywing)
	Erynnis tristis (Mournful Duskywing)
	Erynnis propertius (Propertius Duskywing)
	Ochlodes agricola (Rural Skipper)

Lycaenidae (Hairstreaks)	
	Atlides halesus (Great Purple Hairstreak)
	Incisalia augustinus (Western Brown Elfin)
	Callophrys perplexa (Perplexing Hairstreak)
	Strymon melinus (Gray Hairstreak)
	Glaucopsyche lygdamus (Silvery Blue)
	Icarcia acmon (Acmon Blue)
	Celastrina ladon (Echo Blue)
	Leptotes marina (Marine Blue)
	Philotes sonorensis (Sonoran Blue)
	Plebejus melissa (Melissa Blue)
	Everes amyntula (Western Tailed-Blue)
	Brephidium exilis (Western Pygmy-Blue)
Riodinidae (Metalmarks)	
	Apodemia mormo virgulti (Behr's Metalmark)
Papilionidae (Swallowtails)	
	Papilio eurymedon (Pale Swallowtail)
	Papilio rutulus (Western Tiger Swallowtail)
	Papilio zelicaon (Anise Swallowtail)
Pieridae (Whites and Orangetips)	
	Anthocharis cethura (Desert Orangetip)
	Anthocharis sara (Sara's Orangetip)
	Pieris rapae (Cabbage White)
	Pontia protodice (Checkered White)
	Colias eurytheme (Orange Sulphur)
	Colias harfordii (Harford's Sulphur)
I	*Eurema nicippe* (Sleepy Orange)
	Nathalis iole (Dainty Sulphur)
Satyridae (Satyrids)	
	Coenonympha californica (Common California Ringlet)
Others	

List nectar sources and plant communities observed

CSS; NON-NATIVE GRASSLAND
ENCELIA CALIFORNICA, RIBES SPECIOSUM,
ERERONIS CORONARIA, ALLIUM SP.,
OXALIS CALIFORNICA, RAPHANUS SATIVUS,
SIDALCEA MALVIFLORA.

List notes and GPS point names here, please write UTMs or Lat/Longs as backup:
GPS all QCB occurrences
GPS all potential host plant locations (*Plantago erecta, Plantago patagonica, Antirrhinum coulterianum, Cordylanthus rigidus, Castilleja exserta, and Collinsia heterophylla*)
Format: plant name_diameter of occurrence_density (low >20% cover per sq foot, medium 20-50%, high >50%)_date_observer

PLANTAGO-ERECTA-10ft_MEDIUM

AVIAN SPECIES OBSERVED:
ANHU, CAKI, HOFI, SAPH,
OCWA, BGGN, BUSH, CATO,
RODO, HOLA, WCSP, NOMO,

ROCKS BIOLOGICAL CONSULTING

SCR QCB

~~SDG&E Natural Gas System Potential Upgrades~~

Surveyor Name: B. Lohstroh

Date 3/11/15 Survey # _____

	Time	Temp (°F)	Cloud Cover (%)	Wind Speed (avg. mph)
Start	1045	72	70%	0-2
End	1315	75	80% (thin)	1-4

Nymphalidae (Brush Footed Butterflies)	
	Euphydras editha quino (Quino Checkerspot)
	Euphydras chalcedona (Chalcedon Checkspot)
	Charidryas gabbii (Gabb's Checkerspot)
	Phycoides mylitta (Mylitta Crescent)
	Thessalia leanira (Leanira Checkerspot)
	Nymphalis antiopa (Mourning Cloak)
	Basilarchia lorquini (Lorquin's Admiral)
	Junonia coenia (Common Buckeye)
IIII III	Vanessa annabella (West Coast Lady)
IIII	Vanessa cardui (Painted Lady)
	Vanessa virginiensis (American Lady)
II	Vanessa atalanta (Red Admiral)
Danaidae	
	Danaus gilippus (Queen)
	Danaus plexippus (Monarch)
Hesperidae	
	Heliopetes ericetorum (Northern White-Skipper)
	Hylephila phyleus (Fiery Skipper)
	Pyrgus albescens (White Checkered-Skipper)
IIII	Erynnis funeralis (Funereal Duskywing)
	Erynnis tristis (Mournful Duskywing)
	Erynnis propertius (Propertius Duskywing)
	Ochlodes agricola (Rural Skipper)

Lycaenidae (Hairstreaks)	
	Atlides halesus (Great Purple Hairstreak)
	Incisalia augustinus (Western Brown Elfin)
	Callophrys perplexa (Perplexing Hairstreak)
I	Strymon melinus (Gray Hairstreak)
	Glaucopsyche lygdamus (Silvery Blue)
	Icarcia acmon (Acmon Blue)
	Celastrina ladon (Echo Blue)
	Leptotes marina (Marine Blue)
	Philotes sonorensis (Sonoran Blue)
	Plebejus melissa (Melissa Blue)
	Everes amyntula (Western Tailed-Blue)
IIII	Brephidium exilis (Western Pygmy-Blue)
Riodinidae (Metalmarks)	
	Apodemia mormo virgulti (Behr's Metalmark)
Papilionidae (Swallowtails)	
	Papilio eurymedon (Pale Swallowtail)
	Papilio rutulus (Western Tiger Swallowtail)
	Papilio zelicaon (Anise Swallowtail)
Pieridae (Whites and Orangetips)	
	Anthocharis cethura (Desert Orangetip)
	Anthocharis sara (Sara's Orangetip)
	Pieris rapae (Cabbage White)
	Pontia protodice (Checkered White)
	Colias eurytheme (Orange Sulphur)
	Colias harfordii (Harford's Sulphur)
	Eurema nicippe (Sleepy Orange)
	Nathalis iole (Dainty Sulphur)
Satyridae (Satyrids)	
I	Coenonympha californica (Common California Ringlet)
Others	

List nectar sources and plant communities observed Layia Plat Glebiomus cor, Lasthenia Dich cap, erodium silene gall, pectocarya Ise orb, Allium sp, gilia, Ribes spec medicago poly Zig., Sonchus, Hirch. laevis, Rah. vis, Raph. sat. Hypoc. glabs., sisalcea malv, Eucalypta, cal. mac. Nic glau, claytonia, foe vul., Hir inc, Sanicula arg. oxalis p-c, Sysimbrio, malva parv., Emm. pend. Mam. dic., Lepidium, calen. cil, Rhus Int.

List notes and GPS point names here, please write UTMs or Lat/Longs as backup:
GPS all QCB occurrences
GPS all potential host plant locations (Plantago erecta, Plantago patagonica, Antirrhinum coulterianum, Cordylanthus rigidus, Castilleja exserta, and Collinsia heterophylla)
Format: plant name_diameter of occurrence_density (low >20% cover per sq foot, medium 20-50%, high >50%)_date_observer

Belding's orangethroat whiptail.
Asbestingi: 32.56147, -116.99184

ROCKS
BIOLOGICAL CONSULTING

SDG&E Natural Gas System Potential Upgrades

Surveyor Name: GARRET HUFFMAN / SHANNON WALSH

Date 3/19/15 Survey # 5

	Time	Temp (°F)	Cloud Cover (%)	Wind Speed (avg. mph)
Start	1150	83	0-2	5-5
End	1350	82	2-6	7-10

Nymphalidae (Brush Footed Butterflies)	
	Euphydras editha quino (Quino Checkerspot)
	Euphydras chalcedona (Chalcedon Checkspot)
	Charidryas gabbii (Gabb's Checkerspot)
	Phycoides mylitta (Mylitta Crescent)
	Thessalia leanira (Leanira Checkerspot)
	Nymphalis antiopa (Mourning Cloak)
	Basilarchia lorquini (Lorquin's Admiral)
	Junonia coenia (Common Buckeye)
11	*Vanessa annabella* (West Coast Lady)
7	*Vanessa cardui* (Painted Lady)
	Vanessa virginiensis (American Lady)
	Vanessa atalanta (Red Admiral)
Danaidae	
	Danaus gilippus (Queen)
	Danaus plexippus (Monarch)
Hesperidae	
2	*Heliopetes ericetorum* (Northern White-Skipper)
	Hylephila phyleus (Fiery Skipper)
	Pyrgus albescens (White Checkered-Skipper)
6	*Erynnis funeralis* (Funereal Duskywing)
	Erynnis tristis (Mournful Duskywing)
	Erynnis propertius (Propertius Duskywing)
	Ochlodes agricola (Rural Skipper)

Lycaenidae (Hairstreaks)	
	Atlides halesus (Great Purple Hairstreak)
	Incisalia augustinus (Western Brown Elfin)
	Callophrys perplexa (Perplexing Hairstreak)
	Strymon melinus (Gray Hairstreak)
	Glaucopsyche lygdamus (Silvery Blue)
	Icarcia acmon (Acmon Blue)
	Celastrina ladon (Echo Blue)
	Leptotes marina (Marine Blue)
	Philotes sonorensis (Sonoran Blue)
	Plebejus melissa (Melissa Blue)
	Everes amyntula (Western Tailed-Blue)
1	*Brephidium exilis* (Western Pygmy-Blue)
Riodinidae (Metalmarks)	
	Apodemia mormo virgulti (Behr's Metalmark)
Papilionidae (Swallowtails)	
	Papilio eurymedon (Pale Swallowtail)
	Papilio rutulus (Western Tiger Swallowtail)
	Papilio zelicaon (Anise Swallowtail)
Pieridae (Whites and Orangetips)	
	Anthocharis cethura (Desert Orangetip)
3	*Anthocharis sara* (Sara's Orangetip)
	Pieris rapae (Cabbage White)
	Pontia protodice (Checkered White)
	Colias eurytheme (Orange Sulphur)
	Colias harfordii (Harford's Sulphur)
	Eurema nicippe (Sleepy Orange)
	Nathalis iole (Dainty Sulphur)
Satyridae (Satyrids)	
	Coenonympha californica (Common California Ringlet)
Others	

List nectar sources and plant communities observed CSS

Peritoma arborea, Dichelostemma capitatum, Acmispon glaber, Encelia californica, Ribes speciosum, Raphanus sativus, Glebionis coronaria.

List notes and GPS point names here, please write UTMs or Lat/Longs as backup:
GPS all QCB occurrences
GPS all potential host plant locations (*Plantago erecta, Plantago patagonica, Antirrhinum coulterianum,*
Cordylanthus rigidus, Castilleja exserta, and Collinsia heterophylla)
Format: plant name_diameter of occurrence_density (low >20% cover per sq foot, medium 20-50%, high >50%)_date_observer

AVIAN LIST: BUFF, WISP, NRWS, RTHA, CORA, HOFI, MODO, HOSP, BUSH, SOSP, LEGO, VRWA, TUVU, NOMO, HOLA, BEWR, ANHU, CASO, EUCO, CAKI, KILL.

ROCKS
BIOLOGICAL CONSULTING

SPRING CANYON

~~SDG&E Natural Gas System Potential Upgrades~~

Surveyor Name: GARRETT HUFFMAN

Date 03/23/15 Survey # 6

	Time	Temp (°F)	Cloud Cover (%)	Wind Speed (avg. mph)
Start	1005	82	20	3-5
End	1045	78	10	3-7

Nymphalidae (Brush Footed Butterflies)	
	Euphydryas editha quino (Quino Checkerspot)
	Euphydryas chalcedona (Chalcedon Checkspot)
	Chlosyne gabbii (Gabb's Checkerspot)
	Phyciodes mylitta (Mylitta Crescent)
	Thessalia leanira (Leanira Checkerspot)
	Nymphalis antiopa (Mourning Cloak)
	Basilarchia lorquini (Lorquin's Admiral)
	Junonia coenia (Common Buckeye)
1	*Vanessa annabella* (West Coast Lady)
3	*Vanessa cardui* (Painted Lady)
	Vanessa virginiensis (American Lady)
	Vanessa atalanta (Red Admiral)
Danaidae	
	Danaus gilippus (Queen)
	Danaus plexippus (Monarch)
Hesperidae	
	Hellopetes ericetorum (Northern White-Skipper)
	Hylephila phyleus (Fiery Skipper)
4	*Pyrgus albescens* (White Checkered-Skipper)
	Erynnis funeralis (Funereal Duskywing)
	Erynnis tristis (Mournful Duskywing)
	Erynnis propertius (Propertius Duskywing)
	Ochlodes agricola (Rural Skipper)

Lycaenidae (Hairstreaks)	
	Atlides halesus (Great Purple Hairstreak)
	Incisalia augustinus (Western Brown Elfin)
	Callophrys perplexa (Perplexing Hairstreak)
1	*Strymon melinus* (Gray Hairstreak)
	Glaucopsyche lygdamus (Silvery Blue)
	Icaricia acmon (Acmon Blue)
	Celastrina ladon (Echo Blue)
	Leptotes marina (Marine Blue)
	Philotes sonorensis (Sonoran Blue)
	Plebejus melissa (Melissa Blue)
	Everes amyntula (Western Tailed-Blue)
9	*Brephidium exilis* (Western Pygmy-Blue)
Riodinidae (Metalmarks)	
	Apodemia mormo virgulti (Behr's Metalmark)
Papilionidae (Swallowtails)	
	Papilio eurymedon (Pale Swallowtail)
	Papilio rutulus (Western Tiger Swallowtail)
	Papilio zelicaon (Anise Swallowtail)
Pieridae (Whites and Orangetips)	
	Anthocharis cethura (Desert Orangetip)
2	*Anthocharis sara* (Sara's Orangetip)
	Pieris rapae (Cabbage White)
4	Pontia protodice (Checkered White)
	Colias eurytheme (Orange Sulphur)
	Colias harfordii (Harford's Sulphur)
	Eurema nicippe (Sleepy Orange)
	Nathalis iole (Dainty Sulphur)
Satyridae (Satyrids)	
	Coenonympha californica (Common California Ringlet)
Others	

List nectar sources and plant communities observed CSS

BAHIOPSIS LACINIATA, PERITOMA ARBOREA, DICHONDRA CAROLINENSE, AMSINCKIA GRANDIFLORA, ENCELIA CALIFORNICA, RIBES SPECIOSUM, RAPHANUS SATIVUS

List notes and GPS point names here, please write UTMs or Lat/Longs as backup:
GPS all QCB occurrences
GPS all potential host plant locations (*Plantago erecta, Plantago patagonica, Antirrhinum coulterianum,*
Cordylanthus rigidus, Castilleja exserta, and Collinsia heterophylla)
Format: plant name_diameter of occurrence_density (low >20% cover per sq foot, medium 20-50% high >50%)_date_observer

AVIAN LIST: HUFI, BUSH, LEGO, CATO, CATH, SOSP, CORA, HOLA, RTHA, NOMO, WTSW, BLPH, KILL, ANHU, MODO, RODO, AMCR, WISP, EUCD

ROCKS
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SPRING CANYON

~~SDG&E Natural Gas System Potential Upgrades~~

Surveyor Name: GARRETT HUFFMAN / LUCAS ROGERS

Date 4/4/15 Survey # 7

	Time	Temp (°F)	Cloud Cover (%)	Wind Speed (avg. mph)
Start	1115	88	30	3-4
End	1315	92	30	2-5

Nymphalidae (Brush Footed Butterflies)	
	Euphydras editha quino (Quino Checkerspot)
	Euphydras chalcedona (Chalcedon Checkspot)
	Charidryas gabbii (Gabb's Checkerspot)
	Phycoides mylitta (Mylitta Crescent)
	Thessalia leanira (Leanira Checkerspot)
	Nymphalis antiopa (Mourning Cloak)
1	*Basilarchia lorquini* (Lorquin's Admiral)
	Junonia coenia (Common Buckeye)
2	*Vanessa annabella* (West Coast Lady)
	Vanessa cardui (Painted Lady)
	Vanessa virginiensis (American Lady)
	Vanessa atalanta (Red Admiral)
Danaidae	
	Danaus gilippus (Queen)
	Danaus plexippus (Monarch)
Hesperidae	
	Heliopetes ericetorum (Northern White-Skipper)
	Hylephila phyleus (Fiery Skipper)
2	*Pyrgus albescens* (White Checkered-Skipper)
2	*Erynnis funeralis* (Funereal Duskywing)
	Erynnis tristis (Mournful Duskywing)
	Erynnis propertius (Propertius Duskywing)
	Ochlodes agricola (Rural Skipper)

Lycaenidae (Hairstreaks)	
	Atlides halesus (Great Purple Hairstreak)
	Incisalia augustinus (Western Brown Elfin)
	Callophrys perplexa (Perplexing Hairstreak)
11	*Strymon melinus* (Gray Hairstreak)
	Glaucopsyche lygdamus (Silvery Blue)
	Icarcia acmon (Acmon Blue)
	Celastrina ladon (Echo Blue)
	Leptotes marina (Marine Blue)
	Philotes sonorensis (Sonoran Blue)
	Plebejus melissa (Melissa Blue)
	Everes amyntula (Western Tailed-Blue)
7	*Brephidium exilis* (Western Pygmy-Blue)
Riodinidae (Metalmarks)	
	Apodemia mormo virguli (Behr's Metalmark)
Papilionidae (Swallowtails)	
	Papilio eurymedon (Pale Swallowtail)
	Papilio rutulus (Western Tiger Swallowtail)
	Papilio zelicaon (Anise Swallowtail)
Pieridae (Whites and Orangetips)	
	Anthocharis cethura (Desert Orangetip)
3	*Anthocharis sara* (Sara's Orangetip)
	Pieris rapae (Cabbage White)
1	Pontia protodice (Checkered White)
	Colias eurytheme (Orange Sulphur)
	Colias harfordii (Harford's Sulphur)
	Eurema nicippe (Sleepy Orange)
	Nathalis iole (Dainty Sulphur)
Satyridae (Satyrids)	
1	*Coenonympha californica* (Common California Ringlet)
Others	

List nectar sources and plant communities observed CSS

BAHIOPSIS, DICHONOSTEMMA, ACMISPON, ENCELIA, RIBES, CRYPTANTHA

List notes and GPS point names here, please write UTMs or Lat/Longs as backup:
GPS all QCB occurrences
GPS all potential host plant locations (*Plantago erecta, Plantago patagonica. Antirrhinum coulterianum,*
Cordylanthus rigidus, Castilleja exserta, and Collinsia heterophylla)
Format: plant name_diameter of occurrence_density (low >20% cover per sq foot, medium 20-50%, high >50%)_date_observer

AVIAN LIST: CAGN, WCSP, ANHM, CAQH, CAJO, WREN, SOSP, BUSH, HOWO, NOMO, MOCK, HOFI, RTHA,

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SDG&E Natural Gas System Potential Upgrades

Surveyor Name: GARRETT HUFFMAN

Date 4/12/15 Survey # 8

	Time	Temp (°F)	Cloud Cover (%)	Wind Speed (avg. mph)
Start	0945	70	0	2-3
End	1115	72	0	2-4

Nymphalidae (Brush Footed Butterflies)	
	Euphydras editha quino (Quino Checkerspot)
	Euphydras chalcedona (Chalcedon Checkspot)
	Charidryas gabbii (Gabb's Checkerspot)
	Phycoides mylitta (Mylitta Crescent)
	Thessalia leanira (Leanira Checkerspot)
	Nymphalis antiopa (Mourning Cloak)
	Basilarchia lorquini (Lorquin's Admiral)
	Junonia coenia (Common Buckeye)
2	*Vanessa annabella* (West Coast Lady)
	Vanessa cardui (Painted Lady)
	Vanessa virginiensis (American Lady)
	Vanessa atalanta (Red Admiral)
Danaidae	
	Danaus gilippus (Queen)
	Danaus plexippus (Monarch)
Hesperidae	
	Heliopetes ericetorum (Northern White-Skipper)
	Hylephila phyleus (Fiery Skipper)
5	*Pyrgus albescens* (White Checkered-Skipper)
	Erynnis funeralis (Funereal Duskywing)
	Erynnis tristis (Mournful Duskywing)
	Erynnis propertius (Propertius Duskywing)
	Ochlodes agricola (Rural Skipper)

Lycaenidae (Hairstreaks)	
	Atlides halesus (Great Purple Hairstreak)
	Incisalia augustinus (Western Brown Elfin)
	Callophrys perplexa (Perplexing Hairstreak)
7	*Strymon melinus* (Gray Hairstreak)
	Glaucopsyche lygdamus (Silvery Blue)
	Icarcia acmon (Acmon Blue)
	Celastrina ladon (Echo Blue)
	Leptotes marina (Marine Blue)
	Philotes sonorensis (Sonoran Blue)
	Plebejus melissa (Melissa Blue)
	Everes amyntula (Western Tailed-Blue)
13	*Brephidium exilis* (Western Pygmy-Blue)
Riodinidae (Metalmarks)	
	Apodemia mormo virguli (Behr's Metalmark)
Papilionidae (Swallowtails)	
	Papilio eurymedon (Pale Swallowtail)
	Papilio rutulus (Western Tiger Swallowtail)
	Papilio zelicaon (Anise Swallowtail)
Pieridae (Whites and Orangetips)	
	Anthocharis cethura (Desert Orangetip)
	Anthocharis sara (Sara's Orangetip)
1	*Pieris rapae* (Cabbage White)
5	Pontia protodice (Checkered White)
	Colias eurytheme (Orange Sulphur)
	Colias harfordii (Harford's Sulphur)
	Eurema nicippe (Sleepy Orange)
	Nathalis iole (Dainty Sulphur)
Satyridae (Satyrids)	
	Coenonympha californica (Common California Ringlet)
Others	

List nectar sources and plant communities observed CSS

DEINANDRA, BAHIOPSIS, GLEBIONIS, CALOCHORTUS MARRUBIUM

List notes and GPS point names here, please write UTMs or Lat/Longs as backup:
GPS all QCB occurrences
GPS all potential host plant locations (*Plantago erecta, Plantago patagonica, Antirrhinum coulterianum, Cordylanthus rigidus, Castilleja exserta, and Collinsia heterophylla*)
Format: plant name_diameter of occurrence_density (low >20% cover per sq foot, medium 20-50%, high >50%)_date_observer

AVIAN SPECIES: BEWR, HOFI, CATH, CATO, CLSW, MODO, WCSP, BUSH, SOSP, EUCD, NOMO, SOPH

ROCKS
BIOLOGICAL CONSULTING

SDG&E Natural Gas System Potential Upgrades

Surveyor Name: GARRETT HUFFMAN

Date 4/16/15 Survey # 9

	Time	Temp (°F)	Cloud Cover (%)	Wind Speed (avg. mph)
Start	0830	73	0	6-13
End	1015	79	0	2-6

Nymphalidae (Brush Footed Butterflies)	
	Euphydras editha quino (Quino Checkerspot)
	Euphydras chalcedona (Chalcedon Checkspot)
	Charidryas gabbii (Gabb's Checkerspot)
	Phycoides mylitta (Mylitta Crescent)
	Thessalia leanira (Leanira Checkerspot)
	Nymphalis antiopa (Mourning Cloak)
	Basilarchia lorquini (Lorquin's Admiral)
	Junonia coenia (Common Buckeye)
	Vanessa annabella (West Coast Lady)
	Vanessa cardui (Painted Lady)
	Vanessa virginiensis (American Lady)
	Vanessa atalanta (Red Admiral)
Danaidae	
	Danaus gilippus (Queen)
	Danaus plexippus (Monarch)
Hesperidae	
	Heliopetes ericetorum (Northern White-Skipper)
	Hylephila phyleus (Fiery Skipper)
1	*Pyrgus albescens* (White Checkered-Skipper)
	Erynnis funeralis (Funereal Duskywing)
	Erynnis tristis (Mournful Duskywing)
	Erynnis propertius (Propertius Duskywing)
	Ochlodes agricola (Rural Skipper)

Lycaenidae (Hairstreaks)	
	Atlides halesus (Great Purple Hairstreak)
	Incisalia augustinus (Western Brown Elfin)
	Callophrys perplexa (Perplexing Hairstreak)
4	*Strymon melinus* (Gray Hairstreak)
	Glaucopsyche lygdamus (Silvery Blue)
	Icarcia acmon (Acmon Blue)
	Celastrina ladon (Echo Blue)
	Leptotes marina (Marine Blue)
	Philotes sonorensis (Sonoran Blue)
	Plebejus melissa (Melissa Blue)
	Everes amyntula (Western Tailed-Blue)
16	*Brephidium exilis* (Western Pygmy-Blue)
Riodinidae (Metalmarks)	
	Apodemia mormo virgulti (Behr's Metalmark)
Papilionidae (Swallowtails)	
	Papilio eurymedon (Pale Swallowtail)
	Papilio rutulus (Western Tiger Swallowtail)
	Papilio zelicaon (Anise Swallowtail)
Pieridae (Whites and Orangetips)	
	Anthocharis cethura (Desert Orangetip)
	Anthocharis sara (Sara's Orangetip)
4	*Pieris rapae* (Cabbage White)
4	Pontia protodice (Checkered White)
	Colias eurytheme (Orange Sulphur)
	Colias harfordii (Harford's Sulphur)
	Eurema nicippe (Sleepy Orange)
	Nathalis iole (Dainty Sulphur)
Satyridae (Satyrids)	
	Coenonympha californica (Common California Ringlet)
Others	

List nectar sources and plant communities observed CSS

DEINANDRA, ERIOGONUM, CALOCHORTUS, BAHIOPSIS

GILIA, DICHONDRA

List notes and GPS point names here, please write UTMs or Lat/Longs as backup:
GPS all QCB occurrences
GPS all potential host plant locations (*Plantago erecta, Plantago patagonica, Antirrhinum coulterianum, Cordylanthus rigidus, Castilleja exserta, and Collinsia heterophylla*)
Format: plant name_diameter of occurrence_density (low >20% cover per sq foot, medium 20-50%, high >50%)_date_observer

AVIAN LIST:

HOFI, TUVU, SAPH, NOMO, LEGO, ANHU, CATH, CORA, BUSH, SOSP, CATO, BEWR, EUST, GRRO

ROCKS
BIOLOGICAL CONSULTING

SPRING CANYON

SDG&E Natural ~~Gas System~~ Potential Upgrades

Surveyor Name: GARRETT HUFFMAN

Date 04/26/15 Survey # 10

	Time	Temp (°F)	Cloud Cover (%)	Wind Speed (avg. mph)
Start	1600	77	20	3-8
End	1730	72	5	4-10

Nymphalidae (Brush Footed Butterflies)	
	Euphydras editha quino (Quino Checkerspot)
	Euphydras chalcedona (Chalcedon Checkerspot)
	Charidryas gabbii (Gabb's Checkerspot)
	Phycoides mylitta (Mylitta Crescent)
	Thessalia leanira (Leanira Checkerspot)
	Nymphalis antiopa (Mourning Cloak)
	Basilarchia lorquini (Lorquin's Admiral)
	Junonia coenia (Common Buckeye)
	Vanessa annabella (West Coast Lady)
	Vanessa cardui (Painted Lady)
	Vanessa virginiensis (American Lady)
	Vanessa atalanta (Red Admiral)
Danaidae	
	Danaus gilippus (Queen)
	Danaus plexippus (Monarch)
Hesperidae	
3	*Heliopetes ericetorum* (Northern White-Skipper)
	Hylephila phyleus (Fiery Skipper)
	Pyrgus albescens (White Checkered-Skipper)
	Erynnis funeralis (Funereal Duskywing)
	Erynnis tristis (Mournful Duskywing)
	Erynnis propertius (Propertius Duskywing)
	Ochlodes agricola (Rural Skipper)

Lycaenidae (Hairstreaks)	
	Atlides halesus (Great Purple Hairstreak)
	Incisalia augustinus (Western Brown Elfin)
	Callophrys perplexa (Perplexing Hairstreak)
	Strymon melinus (Gray Hairstreak)
	Glaucopsyche lygdamus (Silvery Blue)
	Icaricia acmon (Acmon Blue)
	Celastrina ladon (Echo Blue)
	Leptotes marina (Marine Blue)
	Philotes sonorensis (Sonoran Blue)
	Plebejus melissa (Melissa Blue)
	Everes amyntula (Western Tailed-Blue)
3	*Brephidium exilis* (Western Pygmy-Blue)
Riodinidae (Metalmarks)	
	Apodemia mormo virgulti (Behr's Metalmark)
Papilionidae (Swallowtails)	
	Papilio eurymedon (Pale Swallowtail)
	Papilio rutulus (Western Tiger Swallowtail)
	Papilio zelicaon (Anise Swallowtail)
Pieridae (Whites and Orangetips)	
	Anthocharis cethura (Desert Orangetip)
	Anthocharis sara (Sara's Orangetip)
	Pieris rapae (Cabbage White)
1	*Pontia protodice* (Checkered White)
	Colias eurytheme (Orange Sulphur)
	Colias harfordii (Harford's Sulphur)
	Eurema nicippe (Sleepy Orange)
	Nathalis iole (Dainty Sulphur)
Satyridae (Satyrids)	
	Coenonympha californica (Common California Ringlet)
Others	

List nectar sources and plant communities observed CSS, ~~GRASSLAND~~

BAHIOPSIS, ENCELIA, GLEBIONIS

List notes and GPS point names here, please write UTMs or Lat/Longs as backup:
GPS all QCB occurrences
GPS all potential host plant locations (*Plantago erecta, Plantago patagonica, Antirrhinum coulterianum, Cordylanthus rigidus, Castilleja exserta, and Collinsia heterophylla)*
Format: plant name_diameter of occurrence_density (low >20% cover per sq foot, medium 20-50%, high >50%)_date_observer

AVIAN SPECIES:

CWRA, MODO, RTHA, HOLA, NOMO, SOSP, HAFI, CAQU

ROCKS
BIOLOGICAL CONSULTING

SDG&E Natural Gas System Potential Upgrades

Surveyor Name: GARRETT HUFFMAN

Date 5/1/15 Survey # 11

	Time	Temp (°F)	Cloud Cover (%)	Wind Speed (avg. mph)
Start	1300	91	5	3-9
End	1430	90	0	4-8

Nymphalidae (Brush Footed Butterflies)	
	Euphydras editha quino (Quino Checkerspot)
	Euphydras chalcedona (Chalcedon Checkspot)
	Charidryas gabbii (Gabb's Checkerspot)
	Phycoides mylitta (Mylitta Crescent)
	Thessalia leanira (Leanira Checkerspot)
	Nymphalis antiopa (Mourning Cloak)
	Basilarchia lorquini (Lorquin's Admiral)
	Junonia coenia (Common Buckeye)
	Vanessa annabella (West Coast Lady)
	Vanessa cardui (Painted Lady)
	Vanessa virginiensis (American Lady)
	Vanessa atalanta (Red Admiral)
Danaidae	
	Danaus gilippus (Queen)
	Danaus plexippus (Monarch)
Hesperidae	
	Heliopetes ericetorum (Northern White-Skipper)
	Hylephila phyleus (Fiery Skipper)
	Pyrgus albescens (White Checkered-Skipper)
	Erynnis funeralis (Funereal Duskywing)
	Erynnis tristis (Mournful Duskywing)
	Erynnis propertius (Propertius Duskywing)
	Ochlodes agricola (Rural Skipper)

Lycaenidae (Hairstreaks)	
	Atlides halesus (Great Purple Hairstreak)
	Incisalia augustinus (Western Brown Elfin)
	Callophrys perplexa (Perplexing Hairstreak)
3	*Strymon melinus* (Gray Hairstreak)
	Glaucopsyche lygdamus (Silvery Blue)
	Icaricia acmon (Acmon Blue)
	Celastrina ladon (Echo Blue)
	Leptotes marina (Marine Blue)
	Philotes sonorensis (Sonoran Blue)
	Plebejus melissa (Melissa Blue)
	Everes amyntula (Western Tailed-Blue)
6	*Brephidium exilis* (Western Pygmy-Blue)
Riodinidae (Metalmarks)	
	Apodemia mormo virgulti (Behr's Metalmark)
Papilionidae (Swallowtails)	
	Papilio eurymedon (Pale Swallowtail)
	Papilio rutulus (Western Tiger Swallowtail)
	Papilio zelicaon (Anise Swallowtail)
Pieridae (Whites and Orangetips)	
	Anthocharis cethura (Desert Orangetip)
	Anthocharis sara (Sara's Orangetip)
	Pieris rapae (Cabbage White)
3	*Pontia protodice* (Checkered White)
	Colias eurytheme (Orange Sulphur)
	Colias harfordii (Harford's Sulphur)
	Eurema nicippe (Sleepy Orange)
	Nathalis iole (Dainty Sulphur)
Satyridae (Satyrids)	
	Coenonympha californica (Common California Ringlet)
Others	

List nectar sources and plant communities observed CSS

DUDLEYA, BAHIOPSIS

List notes and GPS point names here, please write UTMs or Lat/Longs as backup:
GPS all QCB occurrences
GPS all potential host plant locations (*Plantago erecta, Plantago patagonica, Antirrhinum coulterianum, Cordylanthus rigidus, Castilleja exserta, and Collinsia heterophylla*)
Format: plant name_diameter of occurrence_density (low >20% cover per sq foot, medium 20-50%, high >50%)_date_observer

AVIAN LIST; MOMO, RTHA, HOLA, CLSW, LEGO, RODO

ROCKS
BIOLOGICAL CONSULTING

SPRING CANYON

~~SDG&E Natural Gas System Potential Upgrades~~

Surveyor Name: GARRETT HUFFMAN

Date 5/5/12 Survey # 12

	Time	Temp (°F)	Cloud Cover (%)	Wind Speed (avg. mph)
Start	1430	66	40	5-9
End	1600	67	30	3-4

Nymphalidae (Brush Footed Butterflies)	
	Euphydras editha quino (Quino Checkerspot)
	Euphydras chalcedona (Chalcedon Checkspot)
	Charidryas gabbii (Gabb's Checkerspot)
	Phycoides mylitta (Mylitta Crescent)
	Thessalia leanira (Leanira Checkerspot)
	Nymphalis antiopa (Mourning Cloak)
	Basilarchia lorquini (Lorquin's Admiral)
	Junonia coenia (Common Buckeye)
1	*Vanessa annabella* (West Coast Lady)
	Vanessa cardui (Painted Lady)
	Vanessa virginiensis (American Lady)
	Vanessa atalanta (Red Admiral)
Danaidae	
	Danaus gilippus (Queen)
	Danaus plexippus (Monarch)
Hesperidae	
	Heliopetes ericetorum (Northern White-Skipper)
	Hylephila phyleus (Fiery Skipper)
	Pyrgus albescens (White Checkered-Skipper)
	Erynnis funeralis (Funereal Duskywing)
	Erynnis tristis (Mournful Duskywing)
	Erynnis propertius (Propertius Duskywing)
	Ochlodes agricola (Rural Skipper)

Lycaenidae (Hairstreaks)	
	Atlides halesus (Great Purple Hairstreak)
	Incisalia augustinus (Western Brown Elfin)
	Callophrys perplexa (Perplexing Hairstreak)
1	*Strymon melinus* (Gray Hairstreak)
	Glaucopsyche lygdamus (Silvery Blue)
	Icarcia acmon (Acmon Blue)
	Celastrina ladon (Echo Blue)
	Leptotes marina (Marine Blue)
	Philotes sonorensis (Sonoran Blue)
	Plebejus melissa (Melissa Blue)
	Everes amyntula (Western Tailed-Blue)
3	*Brephidium exilis* (Western Pygmy-Blue)
Riodinidae (Metalmarks)	
	Apodemia mormo virgulti (Behr's Metalmark)
Papilionidae (Swallowtails)	
	Papilio eurymedon (Pale Swallowtail)
	Papilio rutulus (Western Tiger Swallowtail)
	Papilio zelicaon (Anise Swallowtail)
Pieridae (Whites and Orangetips)	
	Anthocharis cethura (Desert Orangetip)
	Anthocharis sara (Sara's Orangetip)
1	*Pieris rapae* (Cabbage White)
3	Pontia protodice (Checkered White)
	Colias eurytheme (Orange Sulphur)
	Colias harfordii (Harford's Sulphur)
	Eurema nicippe (Sleepy Orange)
	Nathalis iole (Dainty Sulphur)
Satyridae (Satyrids)	
	Coenonympha californica (Common California Ringlet)
Others	

List nectar sources and plant communities observed

CSS

DRYMARIA, BATHIOPSIS

List notes and GPS point names here, please write UTMs or Lat/Longs as backup:
GPS all QCB occurrences
GPS all potential host plant locations (*Plantago erecta, Plantago patagonica, Antirrhinum coulterianum, Cordylanthus rigidus, Castilleja exserta, and Collinsia heterophylla)*
Format: plant name_diameter of occurrence_density (low >20% cover per sq foot, medium 20-50%, high >50%)_date_observer

AVIAN SPECIES:

CLSW, HOLA, WREN, NUMO, ANHU, RTOO, BUFI

LISTS OF BUTTERFLIES OBSERVED DURING EACH SURVEY

Survey Number	Date	Species	Number Observed
1	**February 17, 2015**	Painted lady (*Vanessa cardui*)	12
		White checkered-skipper (*Pyrgus albescens)*	2
		Western pygmy-blue (*Brephidium exilis)*	2
2	**February 4, 2015**	Painted lady (*Vanessa cardui*)	11
3	**March 3, 2015**	West coast lady (*Vanessa annabella*)	2
		Painted lady (*Vanessa cardui*)	7
		Red admiral (*Vanessa atalanta)*	1
		Funereal duskywing *(Erynnis funeralis)*	1
		Sleepy orange (*Eurema niciope)*	1
4	**March 11, 2015**	West coast lady (*Vanessa annabella*)	10
		Painted lady (*Vanessa cardui*)	4
		Red admiral (*Vanessa atalanta)*	2
		Funereal duskywing *(Erynnis funeralis)*	5
		Gray hairstreak (*Strymon melinus)*	1
		Western pygmy-blue (*Brephidium exilis)*	6
		Common california ringlet (*Coenonymphia california)*	1
5	**March 19, 2015**	West coast lady (*Vanessa annabella*)	11
		Painted lady (*Vanessa cardui*)	7
		Northern white-skipper (*Heliopetes ericetorum)*	2
		Funereal duskywing *(Erynnis funeralis)*	6
		Western pygmy-blue (*Brephidium exilis)*	1
		Sara's orangetip (*Anthocharis sara*)	3
6	**March 28, 2015**	West coast lady (*Vanessa annabella*)	1
		Painted lady (*Vanessa cardui*)	3
		White checkered-skipper (*Pyrgus albescens)*	4
		Gray hairstreak (*Strymon melinus)*	1
		Western pygmy-blue (*Brephidium exilis)*	9
		Sara's orangetip (*Anthocharis sara*)	2
		Checkered white (*Pontia protodice)*	4

Survey Number	Date	Species	Number Observed
7	**April 4, 2015**	Lorquin's admiral (*Basilarchia torquini)*	1
		West coast lady (*Vanessa annabella*)	2
		White checkered-skipper (*Pyrgus albescens)*	2
		Funereal duskywing (*Erynnis funeralis*)	2
		Gray hairstreak (*Strymon melinus)*	11
		Western pygmy-blue (*Brephidium exilis)*	7
		Sara's orangetip (*Anthocharis sara*)	3
		Checkered white (*Pontia protodice)*	1
		Common california ringlet (*Coenonymphia california)*	1
8	**April 12, 2015**	West coast lady (*Vanessa annabella*)	2
		White checkered-skipper (*Pyrgus albescens)*	5
		Gray hairstreak (*Strymon melinus)*	7
		Western pygmy-blue (*Brephidium exilis)*	13
		Cabbage white (*Pieris rapae)*	1
		Checkered white (*Pontia protodice)*	5
9	**April 16, 2015**	White checkered-skipper (*Pyrgus albescens)*	1
		Gray hairstreak (*Strymon melinus)*	4
		Western pygmy-blue (*Brephidium exilis)*	16
		Cabbage white (*Pieris rapae)*	4
		Checkered white (*Pontia protodice)*	4
10	**April 26, 2015**	Northern white-skipper (*Heliopates ericetorum)*	3
		Western pygmy-blue (*Brephidium exilis)*	3
		Checkered white (*Pontia protodice)*	1
11	**May 1, 2015**	Gray hairstreak (*Strymon melinus)*	3
		Western pygmy-blue (*Brephidium exilis)*	6
		Checkered white (*Pontia protodice)*	3
12	**May 5, 2015**	West coast lady (*Vanessa annabella*)	1
		Gray hairstreak (*Strymon melinus)*	1
		Western pygmy-blue (*Brephidium exilis)*	3
		Cabbage white (*Pieris rapae)*	1
		Checkered white (*Pontia protodice)*	3

2016 Report
U.S. Fish and Wildlife Service Protocol Level Presence/Absence Surveys for the Quino Checkerspot Butterfly (*Euphydryas editha quino*)

Prepared for:

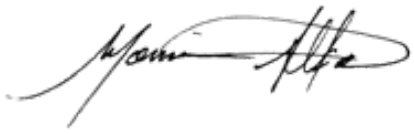
ColRich

Prepared by:

Alden Environmental, Inc.
3245 University Ave., #1188
San Diego, CA 92104

June 23, 2016

I certify that the information in this survey report and attached exhibits fully and accurately represent my work.



Monica Alfaro (TE-05124-2)

Garrett Huffman (TE-20168A-0)

TABLE OF CONTENTS

LIST OF APPENDICES

LIST OF FIGURES

INTRODUCTION

This report documents the results of a focused survey conducted for the federally listed as endangered quino checkerspot butterfly (QCB; *Euphydryas editha quino*) on the Otay Canyon Ranch project site. The site consists of 8 parcels located south of State Route (SR) 905, west of Cactus Road, between Airway Road and Siempre Viva Road in the City of San Diego's (City's) Otay Mesa Community (Figures 1 and 2).

Surrounding land uses include industrial, agricultural and automobile salvage yards. Cactus Road borders the site to the east. Elevation on site ranges from 425 to 510 feet above mean sea level. Soil on site consists of Stockpen gravelly clay loam (0 to 2 percent slopes and 2 to 5 percent slopes) and Olivenhain cobbly loam (30 to 50 percent slopes; Bowman 1973). A small portion of the City MSCP's Multi-habitat Planning Area (MHPA) occurs at the northwest corner of the property, within the northern canyon.

METHODS

The surveys were performed in accordance with the Year 2014 Survey Guidelines (USFWS 2014b) by USFWS permitted biologists Monica Alfaro (TE-05124-2) and Garrett Huffman (TE20168A-0). A total of 13 protocol survey visits were conducted on site. All surveys were conducted between February 19 and May 9, 2016. Dates, times, and weather conditions at the start and end of each survey are presented in Appendix A. The surveys were conducted by slowly walking (approximately 5 - 10 acres per hour) transects across the site and noting butterflies and/or potential QCB resources present. The entire Project site was surveyed, and no areas were excluded. Copies of field notes from each survey are presented in Appendix B. Lists of butterflies observed during each survey are presented in Appendix C.

RESULTS

No QCB were observed. The site is predominantly an active agricultural site with several structures and out buildings. Overall, the habitat quality for the QCB is low, with the only suitable habitat occurring at the northern and southern ends of the site, outside of the active agricultural and developed areas (Figures 3 and 4). The suitable QCB habitat components occur within and adjacent to the canyons on the north and south ends of the site. The only host plant observed was a single patch dot-seed plantain (*Plantago erecta*) at the northern end (Figures 3 and 4). Based on this and previous surveys, the QCB is not anticipated to occur on site.

REFERENCES

Bowman, R. 1973. Soil Survey of the San Diego Area. USDA in cooperation with USDI, UC Agricultural Experiment Station, Bureau of Indian Affairs, Department of the Navy, and the U.S. Marine Corps.

U.S. Fish and Wildlife Service (USFWS). 2014. Quino Checkerspot Butterfly (*Euphydryas editha quino*) 2014 Survey Guidelines. December.

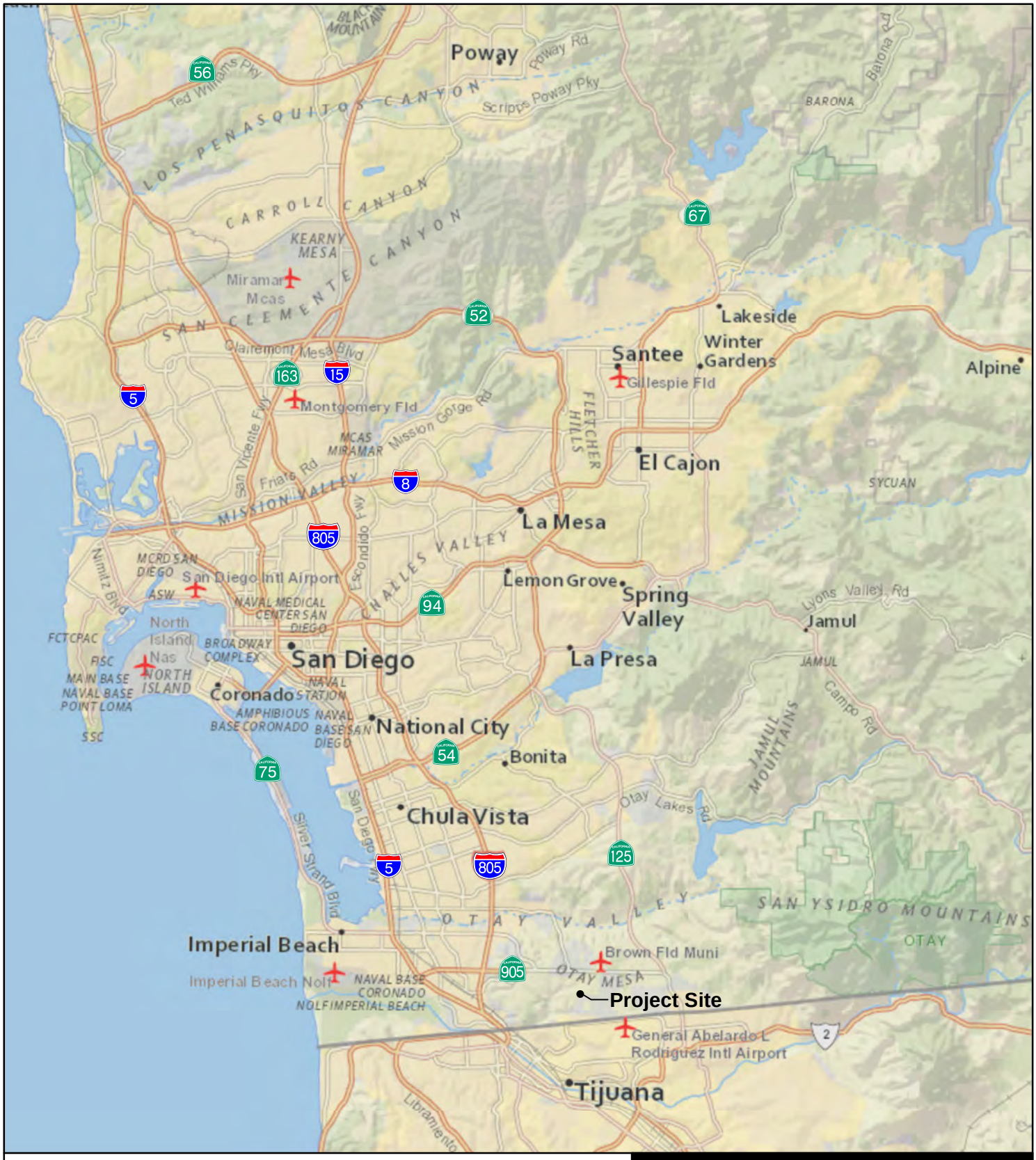


Figure 1

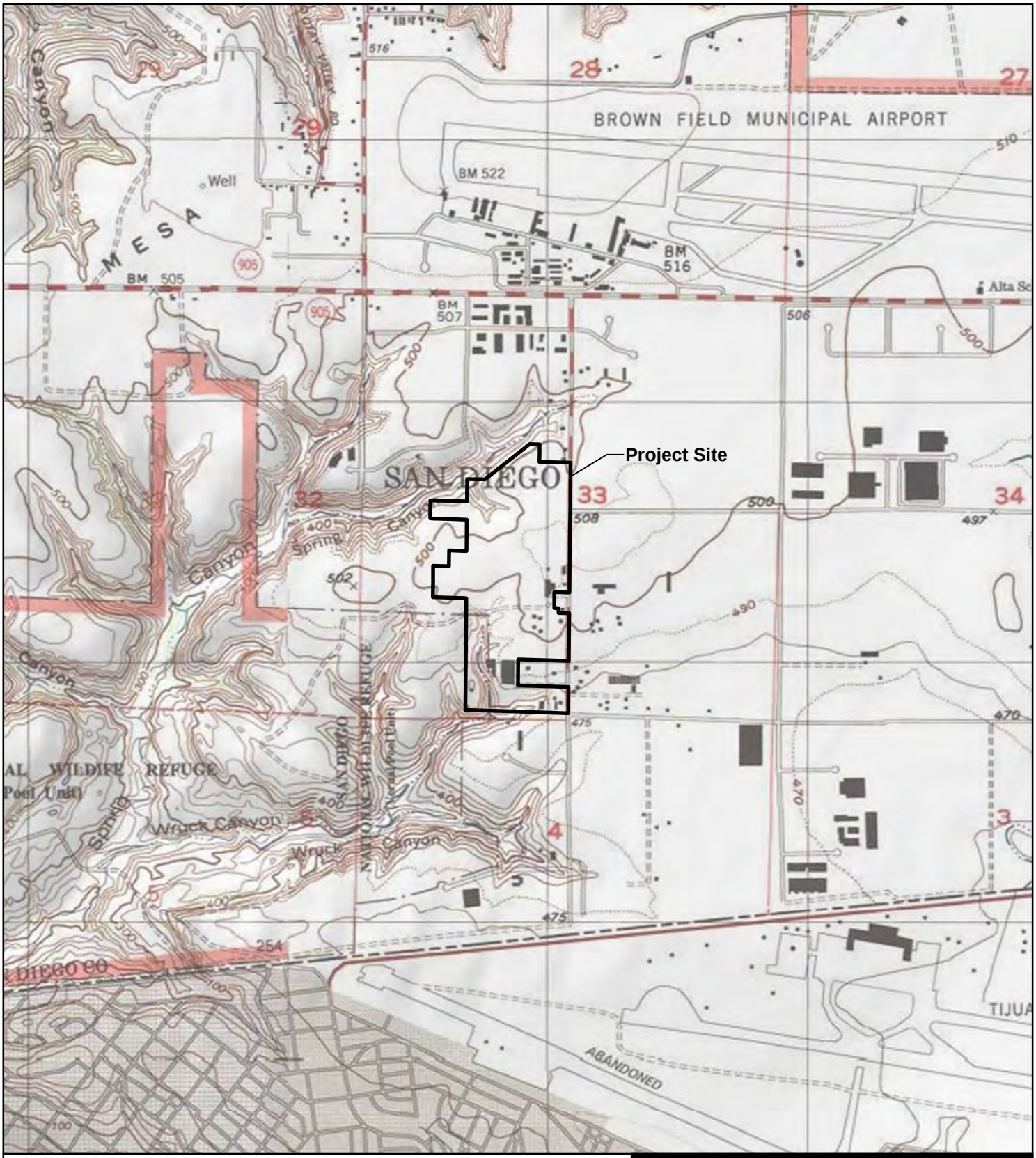
Regional Location

OTAY CANYON RANCH
QUINO CHECKERSPOT BUTTERFLY SURVEY

N
W E
S

0 2 4 Miles

ALDEN ENVIRONMENTAL, INC



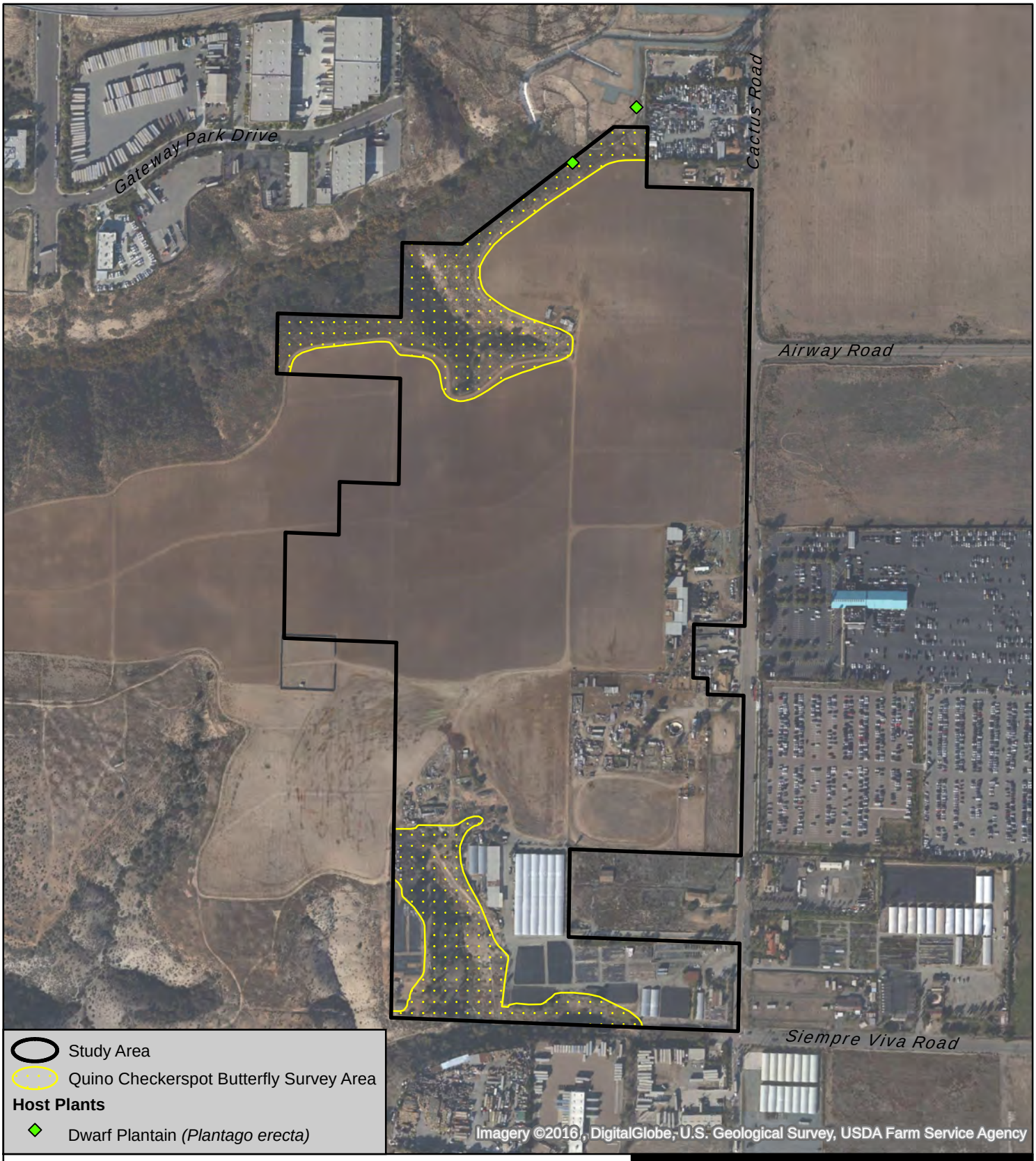
Source: USGS Quadrangles (Otay Mesa, Imperial Beach);
Copyright:© 2013 National Geographic Society, i-cubed

ALDEN ENVIRONMENTAL, INC

Figure 2

Project Location

OTAY CANYON RANCH
QUINO CHECKERSPOT BUTTERFLY SURVEY



Source: Google

N
W E
S

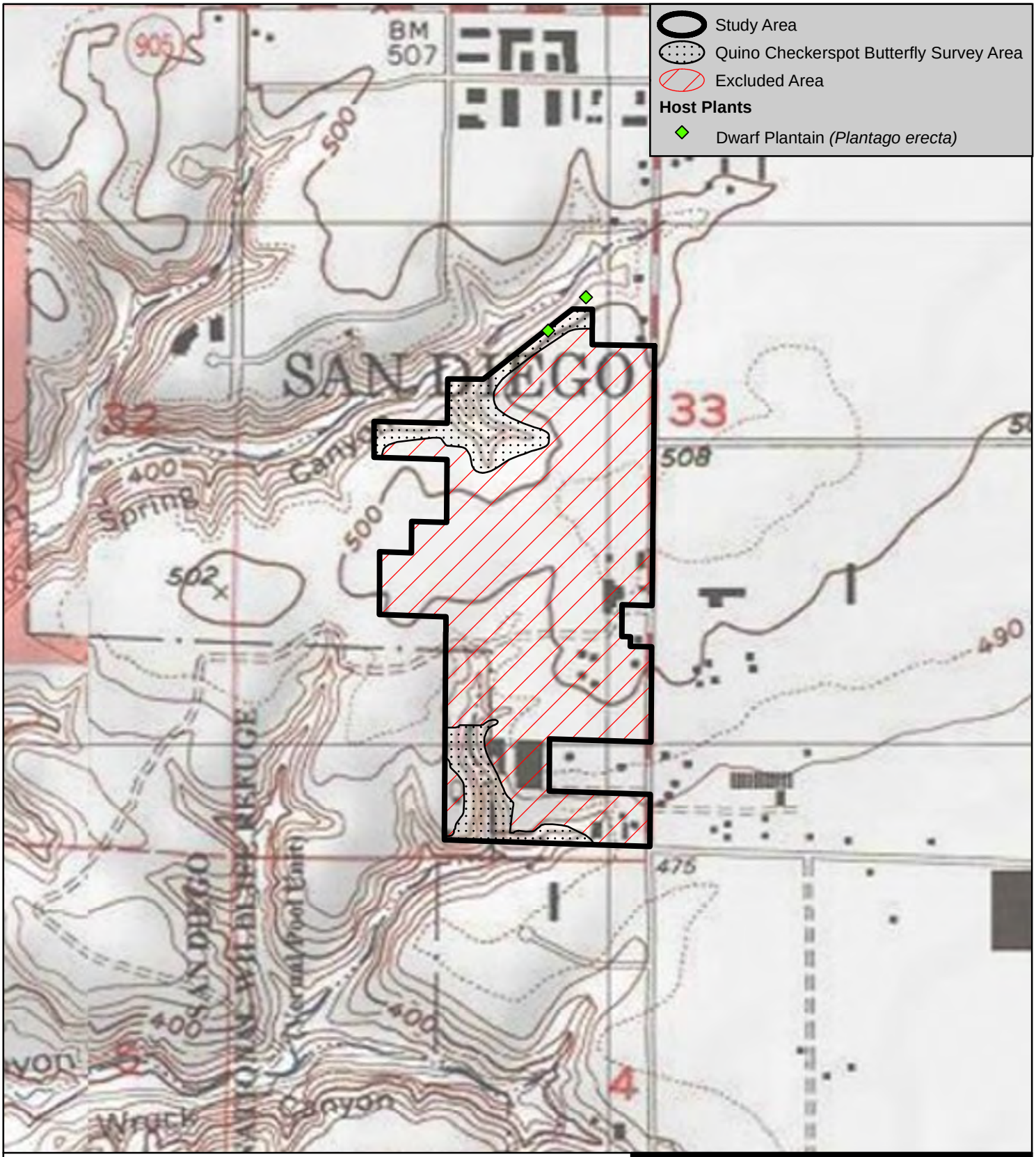
0 250 500 Feet

ALDEN ENVIRONMENTAL, INC

Figure 3

Survey Area

OTAY CANYON RANCH
QUINO CHECKERSPOT BUTTERFLY SURVEY



Source: USGS Quadrangles (Otay Mesa, Imperial Beach); Copyright:© 2013 National Geographic Society, i-cubed

Figure 4

QCB Site Assessment

OTAY CANYON RANCH
QUINO CHECKERSPOT BUTTERFLY SURVEY

ALDEN ENVIRONMENTAL, INC

SUMMARY OF FIELD SURVEY CONDITIONS

Survey	Date	Biologist	Survey Times (start/stop)	Weather Conditions (start/stop)[1]
1	2/19/16	Garrett Huffman	0900-1045	15%, 61°F, wind 2-5 mph/ 20%, 68°F, wind 3-6 mph
2	2/25/16	Monica Alfaro	0925-155	0%, 71 °F, wind 1-2 mph/ 0%, 86°F, wind 1-2 mph
3	3/2/16	Monica Alfaro	0945-1200	80%, 73°F, wind 1-2 mph/ 80%, 76°F, wind 3-5 mph
4	3/9/16	Monica Alfaro	0955-1200	0%, 64°F, wind 0-2 mph/ 0%, 75°F, wind 2-5 mph
5	3/16/16	Monica Alfaro	1025-1240	0%, 76°F, wind 2-4 mph/ 0%, 77°F, wind 4-6 mph
6	3/24/16	Monica Alfaro	1005-1155	0%, 74°F, wind 2-3 mph/ 0%, 81°F, wind 2-3 mph
7	3/31/16	Monica Alfaro	0950-1145	0%, 62°F, wind 3-7 mph/ 0%, 68°F, wind 3-6 mph
8	4/4/16	Monica Alfaro	0950-1145	0%, 71°F, wind 2-3 mph/ 0%, 76°F, wind 5-8 mph
9	4/12/16	Monica Alfaro	1135-1325	25%, 71°F, wind 3-5 mph/ 15%, 75°F, wind 3-6 mph
10	4/18/16	Monica Alfaro	1120-1310	0%, 89°F, wind 5-8 mph/ 0%, 95°F, wind 6-10 mph
11	4/29/16	Monica Alfaro	1225-1420	0%, 68°F, wind 5-10 mph/ 5%, 68°F, wind 5-13mph
12	5/4/16	Monica Alfaro	1120-1320	100%, 68°F, wind 5-10 mph/ 55%, 72°F, wind 5-10 mph
13	5/9/16	Monica Alfaro	1245-1445	100%, 68°F, wind 5-10 mph/ 35%, 71°F, wind 5-12 mph

[1]Temperature was taken on the ground in the shade. Percentages indicate cloud cover.

ROCKS BIOLOGICAL CONSULTING

SPRING CANYON

~~SDG&E Natural Gas System Potential Upgrades~~

Surveyor Name: GARRETT HUFFMAN

Date 2/19/16 Survey # 1

	Time	Temp (°F)	Cloud Cover (%)	Wind Speed (avg. mph)
Start	0900	61	15	2-5
End	1045	68	10	3-6

Nymphalidae (Brush Footed Butterflies)	
	Euphydras editha quino (Quino Checkerspot)
	Euphydras chalcedona (Chalcedon Checkspot)
	Charidryas gabbii (Gabb's Checkerspot)
	Phycoides mylitta (Mylitta Crescent)
	Thessalia leanira (Leanira Checkerspot)
	Nymphalis antiopa (Mourning Cloak)
	Basilarchia lorquini (Lorquin's Admiral)
	Junonia coenia (Common Buckeye)
	Vanessa annabella (West Coast Lady)
1	*Vanessa cardui* (Painted Lady)
	Vanessa virginiensis (American Lady)
	Vanessa atalanta (Red Admiral)
Danaidae	
	Danaus gilippus (Queen)
	Danaus plexippus (Monarch)
Hesperidae	
	Heliopetes ericetorum (Northern White-Skipper)
	Hylephila phyleus (Fiery Skipper)
1	*Pyrgus albescens* (White Checkered-Skipper)
	Erynnis funeralis (Funereal Duskywing)
	Erynnis tristis (Mournful Duskywing)
	Erynnis propertius (Propertius Duskywing)
	Ochlodes agricola (Rural Skipper)

Lycaenidae (Hairstreaks)	
	Atlides halesus (Great Purple Hairstreak)
	Incisalia augustinus (Western Brown Elfin)
	Callophrys perplexa (Perplexing Hairstreak)
2	*Strymon melinus* (Gray Hairstreak)
	Glaucopsyche lygdamus (Silvery Blue)
	Icarcia acmon (Acmon Blue)
	Celastrina ladon (Echo Blue)
	Leptotes marina (Marine Blue)
	Philotes sonorensis (Sonoran Blue)
	Plebejus melissa (Melissa Blue)
	Everes amyntula (Western Tailed-Blue)
3	*Brephidium exilis* (Western Pygmy-Blue)
Riodinidae (Metalmarks)	
	Apodemia mormo virgulti (Behr's Metalmark)
Papilionidae (Swallowtails)	
	Papilio eurymedon (Pale Swallowtail)
	Papilio rutulus (Western Tiger Swallowtail)
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Pieridae (Whites and Orangetips)	
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	Nathalis iole (Dainty Sulphur)
Satyridae (Satyrids)	
	Coenonympha californica (Common California Ringlet)
Others	

CSS ; NON-NATIVE GRASSLAND

List nectar sources and plant communities observed

DICHELOSTEMMA CAPITATUM
ALMISPON GLABER
PLANTAGO ERECTA
ALLIUM SP.
RIBES SPECIOSUM
PENTSTEMON ARBOREA
ENGELIA CALIFORNICA
BAHIOPSIS LANCINIATA
DODECATHEON CLEVELANDII

List notes and GPS point names here, please write UTMs or Lat/Longs as backup:
GPS all QCB occurrences
GPS all potential host plant locations (*Plantago erecta, Plantago patagonica, Antirrhinum coulterianum, Cordylanthus rigidus, Castilleja exserta, and Collinsia heterophylla)*
Format: plant name_diameter of occurrence_density (low >20% cover per sq foot, medium 20-50%, high >50%)_date_observer

AVIAN :
SAPH
CAQU
BUSH
ROPI
CATO
CALN
BEWR
ANHU
CORA
BGGN
NOMO
HOFI
HOSP
HUST
RTHA
HOLA
WCSP
LEGO
HOWR
COTA
SOSP
NOHA

ERIOGONUM FASCICULATUM
MARAH MACROCARPUS
ERODIUM SP.

ROCKS
BIOLOGICAL CONSULTING

roject Otay Canyon Ranch

urveyor Name: Monica Alfaro

ate 2/25/16 Survey # 2

	Time	Temp (°F)	Cloud Cover (%)	Wind Speed (avg. mph)
tart	9:25	70.7	0	1-2 mph
nd	11:55	86	0	1-2 mph

	ymphalidae (Brush Footed Butterflies)
	Euphydras editha quino (Quino Checkerspot)
	Euphydras chalcedona (Chalcedon Checkspot)
	Charidryas gabbii (Gabb's Checkerspot)
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	Satyridae (Satyrids)
	Coenonympha californica (Common California Ringlet)
	Others

List nectar sources and plant communities observed

wild hyacynth, erodium

List notes and GPS point names here, please write UTMs or Lat/Longs as backup:
GPS all QCB occurrences
GPS all potential host plant locations (*Plantago erecta, Plantago patagonica, Antirrhinum coulterianum, Cordylanthus rigidus, Castilleja exserta, and Collinsia heterophylla)*
Format: plant name_diameter of occurrence_density (low >20% cover per sq foot, medium 20-50%, high >50%)_date_observer

ROCKS
BIOLOGICAL CONSULTING

Project Otay Canyon Ranch

Surveyor Name: Monica Alfaro

Date 3/2/16 Survey # 3

	Time	Temp (°F)	Cloud Cover (%)	Wind Speed (avg. mph)
Start	9:45 (11:00am)	on ground 73°	thin haze 80%	1-2 mph
End	20 11:[illegible]am	76° on ground	thin haze 80%	3-5
	11:58	76° air temp	11	3-5

Nymphalidae (Brush Footed Butterflies)	
	Euphydras editha quino (Quino Checkerspot)
	Euphydras chalcedona (Chalcedon Checkspot)
	Charidryas gabbii (Gabb's Checkerspot)
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Papilionidae (Swallowtails)	
	Papilio eurymedon (Pale Swallowtail)
	Papilio rutulus (Western Tiger Swallowtail)
	Papilio zelicaon (Anise Swallowtail)
Pieridae (Whites and Orangetips)	
	Anthocharis cethura (Desert Orangetip)
	Anthocharis sara (Sara's Orangetip)
	Pieris rapae (Cabbage White)
	Pontia protodice (Checkered White)
	Colias eurytheme (Orange Sulphur)
	Colias harfordii (Harford's Sulphur)
	Eurema nicippe (Sleepy Orange)
	Nathalis iole (Dainty Sulphur)
Satyridae (Satyrids)	
	Coenonympha californica (Common California Ringlet)
Others	

List nectar sources and plant communities observed

Baileopsis, wild hyacynth

List notes and GPS point names here, please write UTMs or Lat/Longs as backup:
GPS all QCB occurrences
GPS all potential host plant locations (*Plantago erecta, Plantago patagonica, Antirrhinum coulterianum,*
Cordylanthus rigidus, Castilleja exserta, and Collinsia heterophylla)
Format: plant name_diameter of occurrence_density (low >20% cover per sq foot, medium 20-50%, high >50%)_date_observer

ROCKS
BIOLOGICAL CONSULTING

Project Otay Canyon Ranch

Surveyor Name: Monica Alfaro

Date 3/9/16 Survey # 4

	Time	Temp (°F)	Cloud Cover (%)	Wind Speed (avg. mph)
Start	9:55	65 ground 64 air	0	0-2
End	~~11:05~~ 11:05	80 ground 71 air	0	2-5
	11:28	"	"	"
	12:00	85/75 air	0	2-5

Nymphalidae (Brush Footed Butterflies)	
	Euphydras editha quino (Quino Checkerspot)
	Euphydras chalcedona (Chalcedon Checkspot)
	Charidryas gabbii (Gabb's Checkerspot)
	Phycoides mylitta (Mylitta Crescent)
	Thessalia leanira (Leanira Checkerspot)
	Nymphalis antiopa (Mourning Cloak)
	Basilarchia lorquini (Lorquin's Admiral)
	Junonia coenia (Common Buckeye)
	Vanessa annabella (West Coast Lady)
	Vanessa cardui (Painted Lady)
	Vanessa virginiensis (American Lady)
	Vanessa atalanta (Red Admiral)
Danaidae	
	Danaus gilippus (Queen)
	Danaus plexippus (Monarch)
Hesperidae	
	Heliopetes ericetorum (Northern White-Skipper)
	Hylephila phyleus (Fiery Skipper)
	Pyrgus albescens (White Checkered-Skipper)
	Erynnis funeralis (Funereal Duskywing)
	Erynnis tristis (Mournful Duskywing)
	Erynnis propertius (Propertius Duskywing)
	Ochlodes agricola (Rural Skipper)

Lycaenidae (Hairstreaks)	
	Atlides halesus (Great Purple Hairstreak)
	Incisalia augustinus (Western Brown Elfin)
	Callophrys perplexa (Perplexing Hairstreak)
	Strymon melinus (Gray Hairstreak)
	Glaucopsyche lygdamus (Silvery Blue)
	Icarcia acmon (Acmon Blue)
	Celastrina ladon (Echo Blue)
	Leptotes marina (Marine Blue)
	Philotes sonorensis (Sonoran Blue)
	Plebejus melissa (Melissa Blue)
	Everes amyntula (Western Tailed-Blue)
1+3	*Brephidium exilis* (Western Pygmy-Blue)
Riodinidae (Metalmarks)	
	Apodemia mormo virgulti (Behr's Metalmark)
Papilionidae (Swallowtails)	
	Papilio eurymedon (Pale Swallowtail)
	Papilio rutulus (Western Tiger Swallowtail)
	Papilio zelicaon (Anise Swallowtail)
Pieridae (Whites and Orangetips)	
	Anthocharis cethura (Desert Orangetip)
	Anthocharis sara (Sara's Orangetip)
	Pieris rapae (Cabbage White)
	Pontia protodice (Checkered White)
	Colias eurytheme (Orange Sulphur)
	Colias harfordii (Harford's Sulphur)
	Eurema nicippe (Sleepy Orange)
	Nathalis iole (Dainty Sulphur)
Satyridae (Satyrids)	
	Coenonympha californica (Common California Ringlet)
Others	

List nectar sources and plant communities observed

Onion, lasthenia
wild hyacynth
SD sunflower

List notes and GPS point names here, please write UTMs or Lat/Longs as backup:
GPS all QCB occurrences
GPS all potential host plant locations (*Plantago erecta, Plantago patagonica, Antirrhinum coulterianum, Cordylanthus rigidus, Castilleja exserta, and Collinsia heterophylla)*
Format: plant name_diameter of occurrence_density (low >20% cover per sq foot, medium 20-50%, high >50%)_date_observer

ROCKS
BIOLOGICAL CONSULTING

Project Otay Canyon Ranch

Surveyor Name: Monica Alfaro

Date 3/16/16 Survey # 5

	Time	Temp (°F)	Cloud Cover (%)	Wind Speed (avg. mph)
Start	76 91° 80 grad	10:25	0	2-4
End	77 85 grad	11:38	0	4-6
	77 air/85 grad	11:55	same as before	
		12:40	0	4-6

Nymphalidae (Brush Footed Butterflies)	
	Euphydras editha quino (Quino Checkerspot)
	Euphydras chalcedona (Chalcedon Checkspot)
	Charidryas gabbii (Gabb's Checkerspot)
	Phycoides mylitta (Mylitta Crescent)
	Thessalia leanira (Leanira Checkerspot)
	Nymphalis antiopa (Mourning Cloak)
	Basilarchia lorquini (Lorquin's Admiral)
	Junonia coenia (Common Buckeye)
	Vanessa annabella (West Coast Lady)
	Vanessa cardui (Painted Lady)
	Vanessa virginiensis (American Lady)
	Vanessa atalanta (Red Admiral)
Danaidae	
	Danaus gilippus (Queen)
	Danaus plexippus (Monarch)
Hesperidae	
	Heliopetes ericetorum (Northern White-Skipper)
	Hylephila phyleus (Fiery Skipper)
12	*Pyrgus albescens* (White Checkered-Skipper)
1	*Erynnis funeralis* (Funereal Duskywing)
	Erynnis tristis (Mournful Duskywing)
	Erynnis propertius (Propertius Duskywing)
	Ochlodes agricola (Rural Skipper)

Lycaenidae (Hairstreaks)	
	Atlides halesus (Great Purple Hairstreak)
	Incisalia augustinus (Western Brown Elfin)
	Callophrys perplexa (Perplexing Hairstreak)
	Strymon melinus (Gray Hairstreak)
	Glaucopsyche lygdamus (Silvery Blue)
	Icarcia acmon (Acmon Blue)
	Celastrina ladon (Echo Blue)
	Leptotes marina (Marine Blue)
	Philotes sonorensis (Sonoran Blue)
	Plebejus melissa (Melissa Blue)
	Everes amyntula (Western Tailed-Blue)
2	*Brephidium exilis* (Western Pygmy-Blue)
Riodinidae (Metalmarks)	
	Apodemia mormo virgulti (Behr's Metalmark)
Papilionidae (Swallowtails)	
	Papilio eurymedon (Pale Swallowtail)
	Papilio rutulus (Western Tiger Swallowtail)
	Papilio zelicaon (Anise Swallowtail)
Pieridae (Whites and Orangetips)	
	Anthocharis cethura (Desert Orangetip)
	Anthocharis sara (Sara's Orangetip)
	Pieris rapae (Cabbage White)
	Pontia protodice (Checkered White)
	Colias eurytheme (Orange Sulphur)
	Colias harfordii (Harford's Sulphur)
	Eurema nicippe (Sleepy Orange)
	Nathalis iole (Dainty Sulphur)
Satyridae (Satyrids)	
	Coenonympha californica (Common California Ringlet)
Others	

List nectar sources and plant communities observed

CSS, Disturbed, NNG
Isthmia, SD sunflower, bladderpod
wild hyacynth, onion, erodium

List notes and GPS point names here, please write UTMs or Lat/Longs as backup:
GPS all QCB occurrences
GPS all potential host plant locations (*Plantago erecta, Plantago patagonica, Antirrhinum coulterianum, Cordylanthus rigidus, Castilleja exserta, and Collinsia heterophylla)*
Format: plant name_diameter of occurrence_density (low >20% cover per sq foot, medium 20-50%, high >50%)_date_observer

ROCKS
BIOLOGICAL CONSULTING

Project Otay Canyon Ranch

Surveyor Name: Monica

Date 3/24/16 Survey # 6

	Time	Temp (°F)	Cloud Cover (%)	Wind Speed (avg. mph)
Start	10:05	74 air / 79 ground	0%	~~3~~ 2-3
End	11:05	79 air 88 ground	0	2-3
	11:15	81 air	0	2-3
	11:55			

Nymphalidae (Brush Footed Butterflies)	
	Euphydras editha quino (Quino Checkerspot)
	Euphydras chalcedona (Chalcedon Checkspot)
	Charidryas gabbii (Gabb's Checkerspot)
	Phycoides mylitta (Mylitta Crescent)
	Thessalia leanira (Leanira Checkerspot)
	Nymphalis antiopa (Mourning Cloak)
	Basilarchia lorquini (Lorquin's Admiral)
	Junonia coenia (Common Buckeye)
1	*Vanessa annabella* (West Coast Lady)
2	*Vanessa cardui* (Painted Lady)
	Vanessa virginiensis (American Lady)
	Vanessa atalanta (Red Admiral)
Danaidae	
	Danaus gilippus (Queen)
	Danaus plexippus (Monarch)
Hesperidae	
	Heliopetes ericetorum (Northern White-Skipper)
	Hylephila phyleus (Fiery Skipper)
5	*Pyrgus albescens* (White Checkered-Skipper)
	Erynnis funeralis (Funereal Duskywing)
	Erynnis tristis (Mournful Duskywing)
	Erynnis propertius (Propertius Duskywing)
	Ochlodes agricola (Rural Skipper)

Lycaenidae (Hairstreaks)	
	Atlides halesus (Great Purple Hairstreak)
	Incisalia augustinus (Western Brown Elfin)
	Callophrys perplexa (Perplexing Hairstreak)
	Strymon melinus (Gray Hairstreak)
	Glaucopsyche lygdamus (Silvery Blue)
	Icarcia acmon (Acmon Blue)
	Celastrina ladon (Echo Blue)
	Leptotes marina (Marine Blue)
	Philotes sonorensis (Sonoran Blue)
	Plebejus melissa (Melissa Blue)
	Everes amyntula (Western Tailed-Blue)
2	*Brephidium exilis* (Western Pygmy-Blue)
Riodinidae (Metalmarks)	
	Apodemia mormo virgulti (Behr's Metalmark)
Papilionidae (Swallowtails)	
	Papilio eurymedon (Pale Swallowtail)
	Papilio rutulus (Western Tiger Swallowtail)
	Papilio zelicaon (Anise Swallowtail)
Pieridae (Whites and Orangetips)	
	Anthocharis cethura (Desert Orangetip)
2	*Anthocharis sara* (Sara's Orangetip)
	Pieris rapae (Cabbage White)
	Pontia protodice (Checkered White)
	Colias eurytheme (Orange Sulphur)
	Colias harfordii (Harford's Sulphur)
	Eurema nicippe (Sleepy Orange)
	Nathalis iole (Dainty Sulphur)
Satyridae (Satyrids)	
	Coenonympha californica (Common California Ringlet)
Others	
3	White

List nectar sources and plant communities observed

List notes and GPS point names here, please write UTMs or Lat/Longs as backup:
GPS all QCB occurrences
GPS all potential host plant locations (*Plantago erecta, Plantago patagonica, Antirrhinum coulterianum,*
Cordylanthus rigidus, Castilleja exserta, and Collinsia heterophylla)
Format: plant name_diameter of occurrence_density (low >20% cover per sq foot, medium 20-50%, high >50%)_date_observer

ROCKS
BIOLOGICAL CONSULTING

Project Otay Canyon Ranch

Surveyor Name: Monica

Date 3/3/16 Survey # 7

	Time	Temp (°F)	Cloud Cover (%)	Wind Speed (avg. mph)
Start	9:50	62 air / 67 ground	0%	3-7
End	10:54	67 / 74	0	3-5
start	11:08	"	0	3-6
end	11:45	68 air		

Nymphalidae (Brush Footed Butterflies)	
	Euphydras editha quino (Quino Checkerspot)
	Euphydras chalcedona (Chalcedon Checkspot)
	Charidryas gabbii (Gabb's Checkerspot)
	Phycoides mylitta (Mylitta Crescent)
	Thessalia leanira (Leanira Checkerspot)
	Nymphalis antiopa (Mourning Cloak)
	Basilarchia lorquini (Lorquin's Admiral)
	Junonia coenia (Common Buckeye)
	Vanessa annabella (West Coast Lady)
1	*Vanessa cardui* (Painted Lady)
	Vanessa virginiensis (American Lady)
	Vanessa atalanta (Red Admiral)
Danaidae	
	Danaus gilippus (Queen)
	Danaus plexippus (Monarch)
Hesperidae	
	Heliopetes ericetorum (Northern White-Skipper)
	Hylephila phyleus (Fiery Skipper)
	Pyrgus albescens (White Checkered-Skipper)
	Erynnis funeralis (Funereal Duskywing)
	Erynnis tristis (Mournful Duskywing)
	Erynnis propertius (Propertius Duskywing)
	Ochlodes agricola (Rural Skipper)

Lycaenidae (Hairstreaks)	
	Atlides halesus (Great Purple Hairstreak)
	Incisalia augustinus (Western Brown Elfin)
	Callophrys perplexa (Perplexing Hairstreak)
	Strymon melinus (Gray Hairstreak)
	Glaucopsyche lygdamus (Silvery Blue)
	Icarcia acmon (Acmon Blue)
	Celastrina ladon (Echo Blue)
	Leptotes marina (Marine Blue)
	Philotes sonorensis (Sonoran Blue)
	Plebejus melissa (Melissa Blue)
	Everes amyntula (Western Tailed-Blue)
2	*Brephidium exilis* (Western Pygmy-Blue)
Riodinidae (Metalmarks)	
	Apodemia mormo virgulti (Behr's Metalmark)
Papilionidae (Swallowtails)	
	Papilio eurymedon (Pale Swallowtail)
	Papilio rutulus (Western Tiger Swallowtail)
	Papilio zelicaon (Anise Swallowtail)
Pieridae (Whites and Orangetips)	
	Anthocharis cethura (Desert Orangetip)
1+4	*Anthocharis sara* (Sara's Orangetip)
	Pieris rapae (Cabbage White)
2+5	Pontia protodice (Checkered White)
	Colias eurytheme (Orange Sulphur)
	Colias harfordii (Harford's Sulphur)
	Eurema nicippe (Sleepy Orange)
	Nathalis iole (Dainty Sulphur)
Satyridae (Satyrids)	
	Coenonympha californica (Common California Ringlet)
Others	
1	Lorquin's Admiral

List nectar sources and plant communities observed

SD viguiera
Mariposa lilly
popcorn
blue dicks

List notes and GPS point names here, please write UTMs or Lat/Longs as backup:
GPS all QCB occurrences
GPS all potential host plant locations (*Plantago erecta, Plantago patagonica, Antirrhinum coulterianum, Cordylanthus rigidus, Castilleja exserta, and Collinsia heterophylla)*
Format: plant name_diameter of occurrence_density (low >20% cover per sq foot, medium 20-50%, high >50%)_date_observer

ROCKS BIOLOGICAL CONSULTING

Project Otay Canyon Ranch

Surveyor Name: Monica Alfaro

Date 04/04/16 Survey # 8

	Time	Temp (°F)	Cloud Cover (%)	Wind Speed (avg. mph)
Start	9:50	71 air / 75	0%	2-3
End	10:50	76 air	"	5-9

start 11:05 76 air 0% 5-8
end 11:45 76 air / 85 ground 0% 5-8

Nymphalidae (Brush Footed Butterflies)	
	Euphydras editha quino (Quino Checkerspot)
	Euphydras chalcedona (Chalcedon Checkspot)
	Charidryas gabbii (Gabb's Checkerspot)
	Phycoides mylitta (Mylitta Crescent)
	Thessalia leanira (Leanira Checkerspot)
	Nymphalis antiopa (Mourning Cloak)
	Basilarchia lorquini (Lorquin's Admiral)
	Junonia coenia (Common Buckeye)
2+4	*Vanessa annabella* (West Coast Lady)
	Vanessa cardui (Painted Lady)
	Vanessa virginiensis (American Lady)
	Vanessa atalanta (Red Admiral)
Danaidae	
	Danaus gilippus (Queen)
	Danaus plexippus (Monarch)
Hesperidae	
2+3	*Heliopetes ericetorum* (Northern White-Skipper)
	Hylephila phyleus (Fiery Skipper)
	Pyrgus albescens (White Checkered-Skipper)
1	*Erynnis funeralis* (Funereal Duskywing)
	Erynnis tristis (Mournful Duskywing)
	Erynnis propertius (Propertius Duskywing)
	Ochlodes agricola (Rural Skipper)

Lycaenidae (Hairstreaks)	
	Atlides halesus (Great Purple Hairstreak)
	Incisalia augustinus (Western Brown Elfin)
	Callophrys perplexa (Perplexing Hairstreak)
[7]	*Strymon melinus* (Gray Hairstreak)
	Glaucopsyche lygdamus (Silvery Blue)
	Icarcia acmon (Acmon Blue)
	Celastrina ladon (Echo Blue)
1	*Leptotes marina* (Marine Blue)
	Philotes sonorensis (Sonoran Blue)
	Plebejus melissa (Melissa Blue)
	Everes amyntula (Western Tailed-Blue)
2+3+7	*Brephidium exilis* (Western Pygmy-Blue)
Riodinidae (Metalmarks)	
	Apodemia mormo virgulti (Behr's Metalmark)
Papilionidae (Swallowtails)	
	Papilio eurymedon (Pale Swallowtail)
	Papilio rutulus (Western Tiger Swallowtail)
	Papilio zelicaon (Anise Swallowtail)
Pieridae (Whites and Orangetips)	
	Anthocharis cethura (Desert Orangetip)
3	*Anthocharis sara* (Sara's Orangetip)
	Pieris rapae (Cabbage White)
1+4	Pontia protodice (Checkered White)
	Colias eurytheme (Orange Sulphur)
	Colias harfordii (Harford's Sulphur)
	Eurema nicippe (Sleepy Orange)
	Nathalis iole (Dainty Sulphur)
Satyridae (Satyrids)	
	Coenonympha californica (Common California Ringlet)
Others	
2	white

List nectar sources and plant communities observed

~~SD goldi~~

~~SD vigie~~

SD viguiera

List notes and GPS point names here, please write UTMs or Lat/Longs as backup:
GPS all QCB occurrences
GPS all potential host plant locations (*Plantago erecta, Plantago patagonica, Antirrhinum coulterianum, Cordylanthus rigidus, Castilleja exserta, and Collinsia heterophylla)*
Format: plant name_diameter of occurrence_density (low >20% cover per sq foot, medium 20-50%, high >50%)_date_observer

ROCKS
BIOLOGICAL CONSULTING

Project Otay Canyon Ranch

Surveyor Name: Monica Alfaro

Date 4/12/16 Survey # 9

	Time	Temp (°F)	Cloud Cover (%)	Wind Speed (avg. mph)
Start	11:35	71° / 78 gr.	25%	3-5
End	12:30	72 / 78	15%	3-5
	12:45	"	"	"
	1:25	75° / 81 gr.	"	3-6

Nymphalidae (Brush Footed Butterflies)	
	Euphydras editha quino (Quino Checkerspot)
	Euphydras chalcedona (Chalcedon Checkspot)
	Charidryas gabbii (Gabb's Checkerspot)
	Phycoides mylitta (Mylitta Crescent)
	Thessalia leanira (Leanira Checkerspot)
	Nymphalis antiopa (Mourning Cloak)
	Basilarchia lorquini (Lorquin's Admiral)
	Junonia coenia (Common Buckeye)
2	*Vanessa annabella* (West Coast Lady)
	Vanessa cardui (Painted Lady)
4	*Vanessa virginiensis* (American Lady)
1	*Vanessa atalanta* (Red Admiral)
Danaidae	
	Danaus gilippus (Queen)
	Danaus plexippus (Monarch)
Hesperidae	
	Heliopetes ericetorum (Northern White-Skipper)
	Hylephila phyleus (Fiery Skipper)
2	*Pyrgus albescens* (White Checkered-Skipper)
	Erynnis funeralis (Funereal Duskywing)
	Erynnis tristis (Mournful Duskywing)
	Erynnis propertius (Propertius Duskywing)
	Ochlodes agricola (Rural Skipper)

Lycaenidae (Hairstreaks)	
	Atlides halesus (Great Purple Hairstreak)
	Incisalia augustinus (Western Brown Elfin)
	Callophrys perplexa (Perplexing Hairstreak)
1+1	*Strymon melinus* (Gray Hairstreak)
	Glaucopsyche lygdamus (Silvery Blue)
	Icarcia acmon (Acmon Blue)
	Celastrina ladon (Echo Blue)
	Leptotes marina (Marine Blue)
	Philotes sonorensis (Sonoran Blue)
	Plebejus melissa (Melissa Blue)
	Everes amyntula (Western Tailed-Blue)
3+1	*Brephidium exilis* (Western Pygmy-Blue)
Riodinidae (Metalmarks)	
	Apodemia mormo virgulti (Behr's Metalmark)
Papilionidae (Swallowtails)	
	Papilio eurymedon (Pale Swallowtail)
	Papilio rutulus (Western Tiger Swallowtail)
	Papilio zelicaon (Anise Swallowtail)
Pieridae (Whites and Orangetips)	
3	*Anthocharis cethura* (Desert Orangetip)
	Anthocharis sara (Sara's Orangetip)
	Pieris rapae (Cabbage White)
2+1	Pontia protodice (Checkered White)
	Colias eurytheme (Orange Sulphur)
	Colias harfordii (Harford's Sulphur)
	Eurema nicippe (Sleepy Orange)
	Nathalis iole (Dainty Sulphur)
Satyridae (Satyrids)	
	Coenonympha californica (Common California Ringlet)
Others	

List nectar sources and plant communities observed

SD viguiera
Buckwheat
Mariposa lily

List notes and GPS point names here, please write UTMs or Lat/Longs as backup:
GPS all QCB occurrences
GPS all potential host plant locations (*Plantago erecta, Plantago patagonica, Antirrhinum coulterianum, Cordylanthus rigidus, Castilleja exserta, and Collinsia heterophylla)*
Format: plant name_diameter of occurrence_density (low >20% cover per sq foot, medium 20-50%, high >50%)_date_observer

ROCKS
BIOLOGICAL CONSULTING

Project Otay Canyon Ranch

Surveyor Name: Monica Alfaro

Date 4/18/16 Survey # 10

	Time	Temp (°F)	Cloud Cover (%)	Wind Speed (avg. mph)
Start	11:20	89° air	0%	5-8
End	12:15	"	"	"
	12:30	91°	0%	6-10
end	1:10	95	"	"

Nymphalidae (Brush Footed Butterflies)	
	Euphydras editha quino (Quino Checkerspot)
	Euphydras chalcedona (Chalcedon Checkspot)
	Charidryas gabbii (Gabb's Checkerspot)
	Phycoides mylitta (Mylitta Crescent)
	Thessalia leanira (Leanira Checkerspot)
2	*Nymphalis antiopa* (Mourning Cloak)
	Basilarchia lorquini (Lorquin's Admiral)
	Junonia coenia (Common Buckeye)
	Vanessa annabella (West Coast Lady)
	Vanessa cardui (Painted Lady)
1	*Vanessa virginiensis* (American Lady)
	Vanessa atalanta (Red Admiral)
Danaidae	
	Danaus gilippus (Queen)
	Danaus plexippus (Monarch)
Hesperidae	
	Heliopetes ericetorum (Northern White-Skipper)
	Hylephila phyleus (Fiery Skipper)
	Pyrgus albescens (White Checkered-Skipper)
	Erynnis funeralis (Funereal Duskywing)
	Erynnis tristis (Mournful Duskywing)
	Erynnis propertius (Propertius Duskywing)
	Ochlodes agricola (Rural Skipper)

Lycaenidae (Hairstreaks)	
	Atlides halesus (Great Purple Hairstreak)
	Incisalia augustinus (Western Brown Elfin)
	Callophrys perplexa (Perplexing Hairstreak)
273	*Strymon melinus* (Gray Hairstreak)
	Glaucopsyche lygdamus (Silvery Blue)
	Icarcia acmon (Acmon Blue)
	Celastrina ladon (Echo Blue)
	Leptotes marina (Marine Blue)
	Philotes sonorensis (Sonoran Blue)
	Plebejus melissa (Melissa Blue)
	Everes amyntula (Western Tailed-Blue)
4	*Brephidium exilis* (Western Pygmy-Blue)
Riodinidae (Metalmarks)	
	Apodemia mormo virgulti (Behr's Metalmark)
Papilionidae (Swallowtails)	
	Papilio eurymedon (Pale Swallowtail)
2	*Papilio rutulus* (Western Tiger Swallowtail)
	Papilio zelicaon (Anise Swallowtail)
Pieridae (Whites and Orangetips)	
	Anthocharis cethura (Desert Orangetip)
	Anthocharis sara (Sara's Orangetip)
2	*Pieris rapae* (Cabbage White)
2+5	Pontia protodice (Checkered White)
	Colias eurytheme (Orange Sulphur)
	Colias harfordii (Harford's Sulphur)
	Eurema nicippe (Sleepy Orange)
	Nathalis iole (Dainty Sulphur)
Satyridae (Satyrids)	
	Coenonympha californica (Common California Ringlet)
Others	
1	Vanessa sp.

List nectar sources and plant communities observed

Deinandra
SD vigvera - flowers almost all gone to seed.

List notes and GPS point names here, please write UTMs or Lat/Longs as backup:
GPS all QCB occurrences
GPS all potential host plant locations (*Plantago erecta, Plantago patagonica, Antirrhinum coulterianum, Cordylanthus rigidus, Castilleja exserta, and Collinsia heterophylla)*
Format: plant name_diameter of occurrence_density (low >20% cover per sq foot, medium 20-50%, high >50%)_date_observer

ROCKS
BIOLOGICAL CONSULTING

Project Otay Canyon Ranch

Surveyor Name: M. Alfaro

Date 4/29/16 Survey # 11

	Time	Temp (°F)	Cloud Cover (%)	Wind Speed (avg. mph)
Start	12:25	68 air / 60 gr	0	5-10 mph
End	1:25	"	"	"

Start - 1:40 68 " 0 " 5-13 "
end 2:20 69 " 5 " "

Nymphalidae (Brush Footed Butterflies)	
	Euphydras editha quino (Quino Checkerspot)
	Euphydras chalcedona (Chalcedon Checkspot)
	Charidryas gabbii (Gabb's Checkerspot)
	Phycoides mylitta (Mylitta Crescent)
	Thessalia leanira (Leanira Checkerspot)
3	*Nymphalis antiopa* (Mourning Cloak)
	Basilarchia lorquini (Lorquin's Admiral)
	Junonia coenia (Common Buckeye)
	Vanessa annabella (West Coast Lady)
	Vanessa cardui (Painted Lady)
	Vanessa virginiensis (American Lady)
	Vanessa atalanta (Red Admiral)
Danaidae	
	Danaus gilippus (Queen)
	Danaus plexippus (Monarch)
Hesperidae	
	Heliopetes ericetorum (Northern White-Skipper)
	Hylephila phyleus (Fiery Skipper)
	Pyrgus albescens (White Checkered-Skipper)
1	*Erynnis funeralis* (Funereal Duskywing)
	Erynnis tristis (Mournful Duskywing)
	Erynnis propertius (Propertius Duskywing)
	Ochlodes agricola (Rural Skipper)

Lycaenidae (Hairstreaks)	
	Atlides halesus (Great Purple Hairstreak)
	Incisalia augustinus (Western Brown Elfin)
	Callophrys perplexa (Perplexing Hairstreak)
5	*Strymon melinus* (Gray Hairstreak)
	Glaucopsyche lygdamus (Silvery Blue)
	Icarcia acmon (Acmon Blue)
	Celastrina ladon (Echo Blue)
	Leptotes marina (Marine Blue)
	Philotes sonorensis (Sonoran Blue)
	Plebejus melissa (Melissa Blue)
	Everes amyntula (Western Tailed-Blue)
3	*Brephidium exilis* (Western Pygmy-Blue)
Riodinidae (Metalmarks)	
	Apodemia mormo virgulti (Behr's Metalmark)
Papilionidae (Swallowtails)	
	Papilio eurymedon (Pale Swallowtail)
	Papilio rutulus (Western Tiger Swallowtail)
	Papilio zelicaon (Anise Swallowtail)
Pieridae (Whites and Orangetips)	
	Anthocharis cethura (Desert Orangetip)
2	*Anthocharis sara* (Sara's Orangetip)
4	*Pieris rapae* (Cabbage White)
	Pontia protodice (Checkered White)
	Colias eurytheme (Orange Sulphur)
	Colias harfordii (Harford's Sulphur)
	Eurema nicippe (Sleepy Orange)
	Nathalis iole (Dainty Sulphur)
Satyridae (Satyrids)	
	Coenonympha californica (Common California Ringlet)
Others	

List nectar sources and plant communities observed

Deinandra fas?

List notes and GPS point names here, please write UTMs or Lat/Longs as backup:
GPS all QCB occurrences
GPS all potential host plant locations (*Plantago erecta, Plantago patagonica, Antirrhinum coulterianum, Cordylanthus rigidus, Castilleja exserta, and Collinsia heterophylla)*
Format: plant name_diameter of occurrence_density (low >20% cover per sq foot, medium 20-50%, high >50%)_date_observer

ROCKS
BIOLOGICAL CONSULTING

Project Otay Canyon Ranch

Surveyor Name: M. Alfaro

Date 5/4/16 Survey # 12.

	Time	Temp (°F)	Cloud Cover (%)	Wind Speed (avg. mph)
Start	11:20	69 cur / 75 gr	100%	5-10
End	12:15		70%	5-10 mph

12:30 69° 70% 5-10 mph
1:20 72° 55% 5-10 mph

Nymphalidae (Brush Footed Butterflies)	
	Euphydras editha quino (Quino Checkerspot)
	Euphydras chalcedona (Chalcedon Checkspot)
	Charidryas gabbii (Gabb's Checkerspot)
	Phycoides mylitta (Mylitta Crescent)
	Thessalia leanira (Leanira Checkerspot)
3	*Nymphalis antiopa* (Mourning Cloak)
	Basilarchia lorquini (Lorquin's Admiral)
	Junonia coenia (Common Buckeye)
6	*Vanessa annabella* (West Coast Lady)
	Vanessa cardui (Painted Lady)
	Vanessa virginiensis (American Lady)
	Vanessa atalanta (Red Admiral)
Danaidae	
	Danaus gilippus (Queen)
	Danaus plexippus (Monarch)
Hesperidae	
	Heliopetes ericetorum (Northern White-Skipper)
	Hylephila phyleus (Fiery Skipper)
6	*Pyrgus albescens* (White Checkered-Skipper)
2	*Erynnis funeralis* (Funereal Duskywing)
	Erynnis tristis (Mournful Duskywing)
	Erynnis propertius (Propertius Duskywing)
	Ochlodes agricola (Rural Skipper)

Lycaenidae (Hairstreaks)	
	Atlides halesus (Great Purple Hairstreak)
	Incisalia augustinus (Western Brown Elfin)
	Callophrys perplexa (Perplexing Hairstreak)
2+4+1	*Strymon melinus* (Gray Hairstreak)
	Glaucopsyche lygdamus (Silvery Blue)
	Icarcia acmon (Acmon Blue)
	Celastrina ladon (Echo Blue)
	Leptotes marina (Marine Blue)
	Philotes sonorensis (Sonoran Blue)
	Plebejus melissa (Melissa Blue)
	Everes amyntula (Western Tailed-Blue)
5+2	*Brephidium exilis* (Western Pygmy-Blue)
Riodinidae (Metalmarks)	
	Apodemia mormo virgulti (Behr's Metalmark)
Papilionidae (Swallowtails)	
	Papilio eurymedon (Pale Swallowtail)
1	*Papilio rutulus* (Western Tiger Swallowtail)
	Papilio zelicaon (Anise Swallowtail)
Pieridae (Whites and Orangetips)	
	Anthocharis cethura (Desert Orangetip)
	Anthocharis sara (Sara's Orangetip)
4	*Pieris rapae* (Cabbage White)
10	Pontia protodice (Checkered White)
	Colias eurytheme (Orange Sulphur)
	Colias harfordii (Harford's Sulphur)
	Eurema nicippe (Sleepy Orange)
	Nathalis iole (Dainty Sulphur)
Satyridae (Satyrids)	
	Coenonympha californica (Common California Ringlet)
Others	

List nectar sources and plant communities observed

some eriodictyon still w/ flowers

List notes and GPS point names here, please write UTMs or Lat/Longs as backup:
GPS all QCB occurrences
GPS all potential host plant locations (*Plantago erecta, Plantago patagonica, Antirrhinum coulterianum, Cordylanthus rigidus, Castilleja exserta, and Collinsia heterophylla)*
Format: plant name_diameter of occurrence_density (low >20% cover per sq foot, medium 20-50%, high >50%)_date_observer

ROCKS
BIOLOGICAL CONSULTING

Project B Otay Canyon Rabbit

Surveyor Name: Monica Hilaire

Date 5/9/16 Survey # 13

	Time	Temp (°F)	Cloud Cover (%)	Wind Speed (avg. mph)
Start	12:45	69° 77 ground	100%	5-10
End	1:45	70°	90%	5-10
	2:00	"	"	"
	2:45	71/83 ground	35%	5-12

Nymphalidae (Brush Footed Butterflies)	
	Euphydras editha quino (Quino Checkerspot)
	Euphydras chalcedona (Chalcedon Checkspot)
	Charidryas gabbii (Gabb's Checkerspot)
	Phycoides mylitta (Mylitta Crescent)
	Thessalia leanira (Leanira Checkerspot)
	Nymphalis antiopa (Mourning Cloak)
	Basilarchia lorquini (Lorquin's Admiral)
	Junonia coenia (Common Buckeye)
2	*Vanessa annabella* (West Coast Lady)
	Vanessa cardui (Painted Lady)
1	*Vanessa virginiensis* (American Lady)
2	*Vanessa atalanta* (Red Admiral)
Danaidae	
	Danaus gilippus (Queen)
	Danaus plexippus (Monarch)
Hesperidae	
	Heliopetes ericetorum (Northern White-Skipper)
	Hylephila phyleus (Fiery Skipper)
12	*Pyrgus albescens* (White Checkered-Skipper)
	Erynnis funeralis (Funereal Duskywing)
	Erynnis tristis (Mournful Duskywing)
	Erynnis propertius (Propertius Duskywing)
	Ochlodes agricola (Rural Skipper)

Lycaenidae (Hairstreaks)	
	Atlides halesus (Great Purple Hairstreak)
	Incisalia augustinus (Western Brown Elfin)
	Callophrys perplexa (Perplexing Hairstreak)
3	*Strymon melinus* (Gray Hairstreak)
	Glaucopsyche lygdamus (Silvery Blue)
	Icarcia acmon (Acmon Blue)
	Celastrina ladon (Echo Blue)
	Leptotes marina (Marine Blue)
	Philotes sonorensis (Sonoran Blue)
	Plebejus melissa (Melissa Blue)
	Everes amyntula (Western Tailed-Blue)
4	*Brephidium exilis* (Western Pygmy-Blue)
Riodinidae (Metalmarks)	
	Apodemia mormo virgulti (Behr's Metalmark)
Papilionidae (Swallowtails)	
	Papilio eurymedon (Pale Swallowtail)
	Papilio rutulus (Western Tiger Swallowtail)
	Papilio zelicaon (Anise Swallowtail)
Pieridae (Whites and Orangetips)	
	Anthocharis cethura (Desert Orangetip)
	Anthocharis sara (Sara's Orangetip)
3	*Pieris rapae* (Cabbage White)
1	Pontia protodice (Checkered White)
	Colias eurytheme (Orange Sulphur)
	Colias harfordii (Harford's Sulphur)
	Eurema nicippe (Sleepy Orange)
	Nathalis iole (Dainty Sulphur)
Satyridae (Satyrids)	
	Coenonympha californica (Common California Ringlet)
Others	

List nectar sources and plant communities observed

Deinandra still in bloom
buckwheat still in bloom but going to seed.
Site supports few buckwheat plants

List notes and GPS point names here, please write UTMs or Lat/Longs as backup:
GPS all QCB occurrences
GPS all potential host plant locations (*Plantago erecta, Plantago patagonica, Antirrhinum coulterianum, Cordylanthus rigidus, Castilleja exserta, and Collinsia heterophylla)*
Format: plant name_diameter of occurrence_density (low >20% cover per sq foot, medium 20-50%, high >50%)_date_observer

LISTS OF BUTTERFLIES OBSERVED DURING EACH SURVEY

Survey Number	Date	Species	Number Observed
1	**February 19, 2016**	Painted lady (*Vanessa cardui*)	11
		White checkered-skipper (*Pyrgus albescens*)	1
		Western pygmy-blue (*Brephidium exilis*)	3
		Gray Hairstreak (*Strymon melinus*)	2
		Sara's Orangetip (*Anthocharis sara*)	4
2	**February 25, 2016**	Painted lady (*Vanessa cardui*)	2
		Red Admiral (*Vanessa atalanta*)	2
		Western pygmy-blue (*Brephidium exilis*)	1
3	**March 2, 2016**	Western pygmy-blue (*Brephidium exilis*)	8
4	**March 9, 2016**	Red admiral (*Vanessa atalanta)*	1
		Western pygmy-blue (*Brephidium exilis)*	4
5	**March 16, 2016**	White checkered-skipper (*Pyrgus albescens)*	3
		Funereal duskywing (*Pyrgus albescens*)	1
		Western pygmy-blue (*Brephidium exilis*)	2
6	**March 24, 2016**	West coast lady (*Vanessa annabella*)	1
		Painted lady (*Vanessa cardui*)	2
		White checkered-skipper (*Pyrgus albescens*)	5
		Western pygmy-blue (*Brephidium exilis*)	2
		Sara's orangetip (*Anthocharis sara*)	2
		Checkered white (*Pontia protodice)*	3
9	**April 12, 2016**	West coast lady (*Vanessa annabella*)	2
		Red Admiral (*Vanessa atalanta*)	1
		White checkered-skipper (*Pyrgus albescens*)	2
		Gray hairstreak (*Strymon melinus)*	2
		Western pygmy-blue (*Brephidium exilis)*	7
		Desert Orangetip (*Anthocharis cethura*)	3
		Checkered white (*Pontia protodice)*	3
10	**April 18, 2016**	Mourning Cloak (*Nmphalis antiopa*)	2
		American Lady (*Vanessa virginiensis*)	1
		Gray hairstreak (*Strymon melinus)*	5
		Western pygmy-blue (*Brephidium exilis)*	4
		Western tiger swallowtail (*Papilio rutulus*)	2
		Cabbage white (*Pieris rapae)*	2
		Checkered white (*Pontia protodice)*	7
		Unidentified lady (*Vanessa sp*)	1

Survey Number	Date	Species	Number Observed
11	**April 29, 2016**	Mourning Cloak (*Nmphalis antiopa*)	3
		Funereal duskywing (*Pyrgus albescens*)	1
		Gray hairstreak (*Strymon melinus)*	5
		Western pygmy-blue (*Brephidium exilis)*	3
		Sara's orangetip (*Anthocharis sara*)	2
		Cabbage white (*Pieris rapae)*	5
12	**May 4, 2016**	Mourning Cloak (*Nmphalis antiopa*)	3
		West coast lady (*Vanessa annabella*)	6
		White checkered-skipper (*Pyrgus albescens)*	6
		Funereal duskywing (*Pyrgus albescens*)	2
		Gray hairstreak (*Strymon melinus)*	7
		Western pygmy-blue (*Brephidium exilis)*	7
		Western tiger swallowtail (*Papilio rutulus*)	1
		Cabbage white (*Pieris rapae)*	4
		Checkered white (*Pontia protodice)*	10
13	**May 9, 2016**	West coast lady (*Vanessa annabella*)	2
		American lady (*Vanessa virginiensis*)	1
		Red Admiral (*Vanessa atalanta*)	2
		White checkered-skipper (*Pyrgus albescens)*	12
		Gray hairstreak (*Strymon melinus)*	3
		Western pygmy-blue (*Brephidium exilis)*	4
		Cabbage white (*Pieris rapae)*	3
		Checkered white (*Pontia protodice)*	1

Appendix B

Coastal California Gnatcatcher Survey Report

2015 Report
U.S. Fish and Wildlife Service Protocol Level Presence/Absence Surveys for the Coastal California Gnatcatcher (*Polioptila californica californica*)

Prepared for:

Davisson Enterprises

Prepared by:

Alden Environmental, Inc.
3245 University Ave., #1188
San Diego, CA 92104

June 4, 2015

I certify that the information in this survey report and attached exhibits fully and accurately represent my work.

Garrett Huffman (TE20168A-0)

ALDEN ENVIRONMENTAL, INC

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INTRODUCTION

This report documents the results of a focused survey conducted for the coastal California gnatcatcher (*Polioptila californica californica*; CAGN) on the Otay Davisson project site located in the City of San Diego on Otay Mesa (Figures 1 and 2).

The approximately 40-acre study area consists primarily of a flat field that has been used for agricultural uses. Small portions of the study area extend into into the Spring Canyon complex on the northern site boundary, outside of the agricultural area. Elevations on site range between approximately 405 feet above mean sea level (AMSL) in the canyon and 495 feet AMSL on the mesa top. Soil on site is mapped as Stockpen gravelly clay loam (2 to 5 percent slopes) and Olivenhain cobbly loan (30 to 50 percent slopes; Bowman 1973).

The parcels are undeveloped and surrounded on all sides by undeveloped land. The canyon portion on the northern side supports native sage scrub habitat. The mesa portion of the parcels supports active agricultural uses.

METHODS

The surveys were performed in accordance with the Year 1997 Survey Protocol Information (USFWS 1997) by US Fish & Wildlife Service (USFWS) permitted biologist Garrett Huffman (TE20168A-0). The survey visits were conducted between April 2 and April 24, 2015. Each survey covered the suitable habitat on site. Suitable habitat on site consists of approximately 2.5 acres of Diegan coastal sage scrub located along the project's northern perimeter, on the edge of Spring Canyon.

Dates, times, and weather conditions at the start and end of each survey are presented in Appendix A. The survey was conducted by walking through, and adjacent to, suitable CAGN habitat on site. Birds were viewed with the aid of binoculars, where necessary. Recorded CAGN vocalizations ("mew calls") were broadcast for approximate 5-second durations at approximately 50-yard increments along the survey route, or as needed to adequately cover each suitable habitat patch. Recorded vocalizations were only broadcast to initially detect the possible presence of CAGNs. Copies of field notes from each survey are presented in Appendix B.

VEGETATION COMMUNITIES

One sensitive vegetation community occurs on site: Diegan coastal sage scrub.

Diegan Coastal Sage Scrub

Diegan sage scrub occupies xeric (dry) sites characterized by shallow soils. This habitat is dominated by subshrubs whose leaves abscise during the summer and may be replaced by a lesser amount of small leaves. This adaptation allows these species to better withstand the prolonged dry period in the summer and fall. Diegan sage scrub occurs throughout the majority of the study area (Figure 3). Predominant plant species in this community on site include California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*),

and lemonadeberry (*Rhus integrifolia*). Approximately 2.5 acres of this habitat occurs on site.

SURVEY RESULTS

An adult pair was observed utilizing the sage scrub habitat on the north side on the site. A single male also was observed. The sitings were technically outside of the project footprint; however, the habitat is contiguous with the habitat on site. No nests were observed during the site visits. Following the CAGN survey, all of the Diegan coastal sage scrub habitat (2.5 acres) on site is considered occupied by the CAGN.

REFERENCES

Bowman, R. 1973. Soil Survey of the San Diego Area. USDA in cooperation with the USDI, UC Agricultural Experiment Station, Bureau of Indian Affairs, Department of the Navy, and the U.S. Marine Corps.

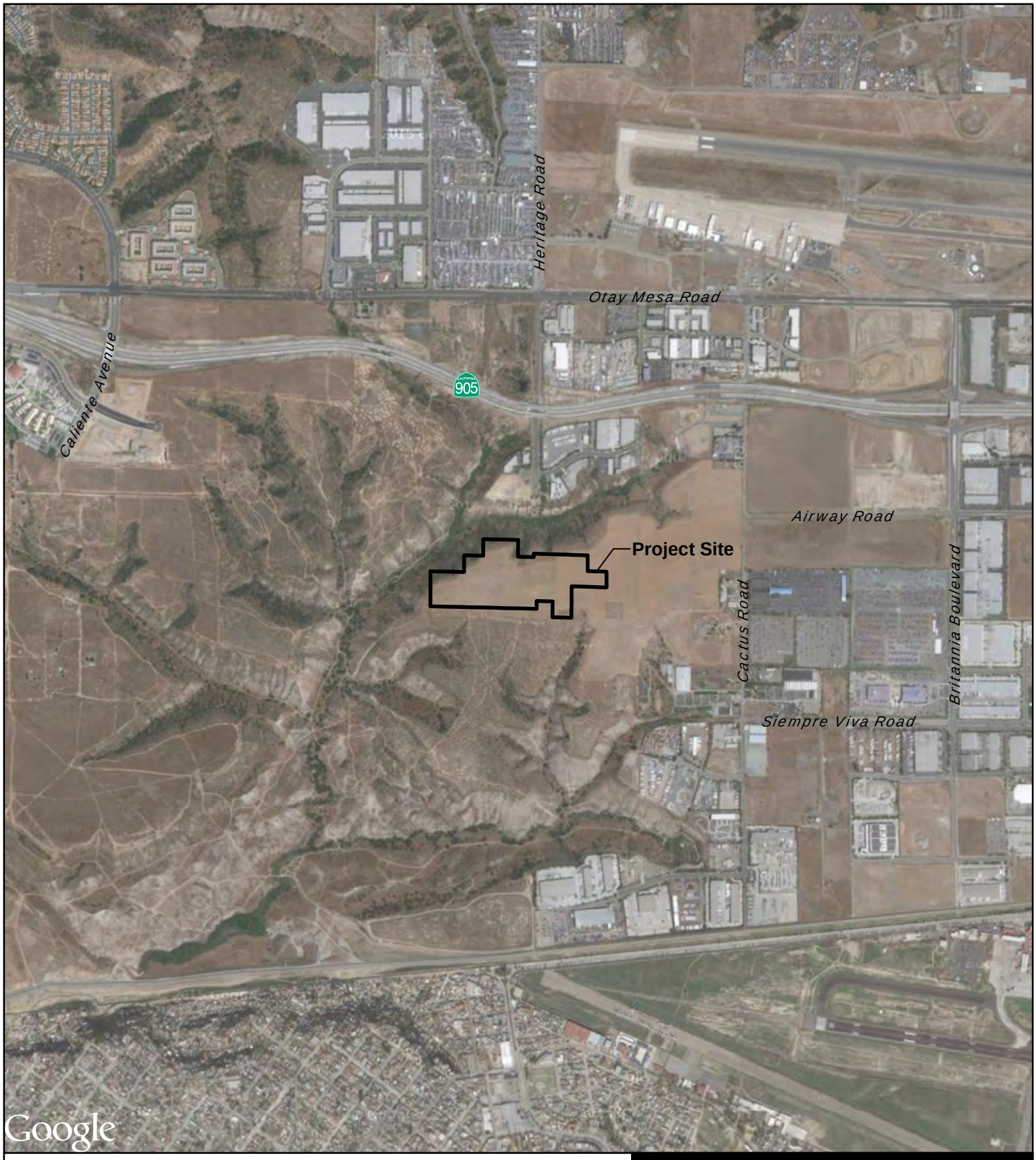
USFWS. 1997. Coastal California Gnatcatcher (*Polioptila californica californica*) Presence/Absence Survey Guidelines. February 28.

ALDEN ENVIRONMENTAL, INC

Figure 1

Regional Location

OTAY DAVISSON



Source: Imagery ©2015 , DigitalGlobe, U.S. Geological Survey

N
W E
S

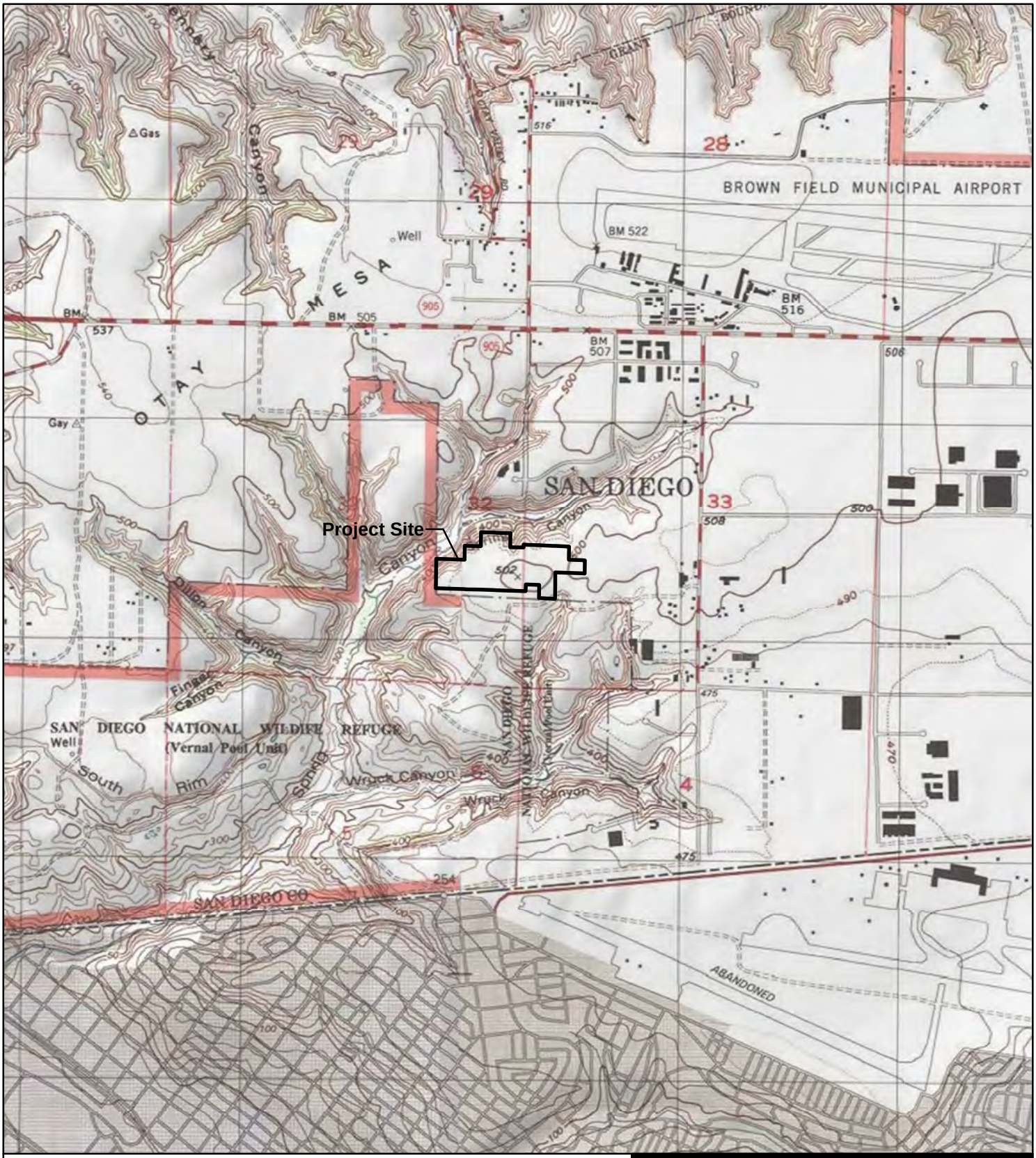
0 1,000 2,000 Feet

ALDEN ENVIRONMENTAL, INC

Figure 2

Project Location

OTAY DAVISSON



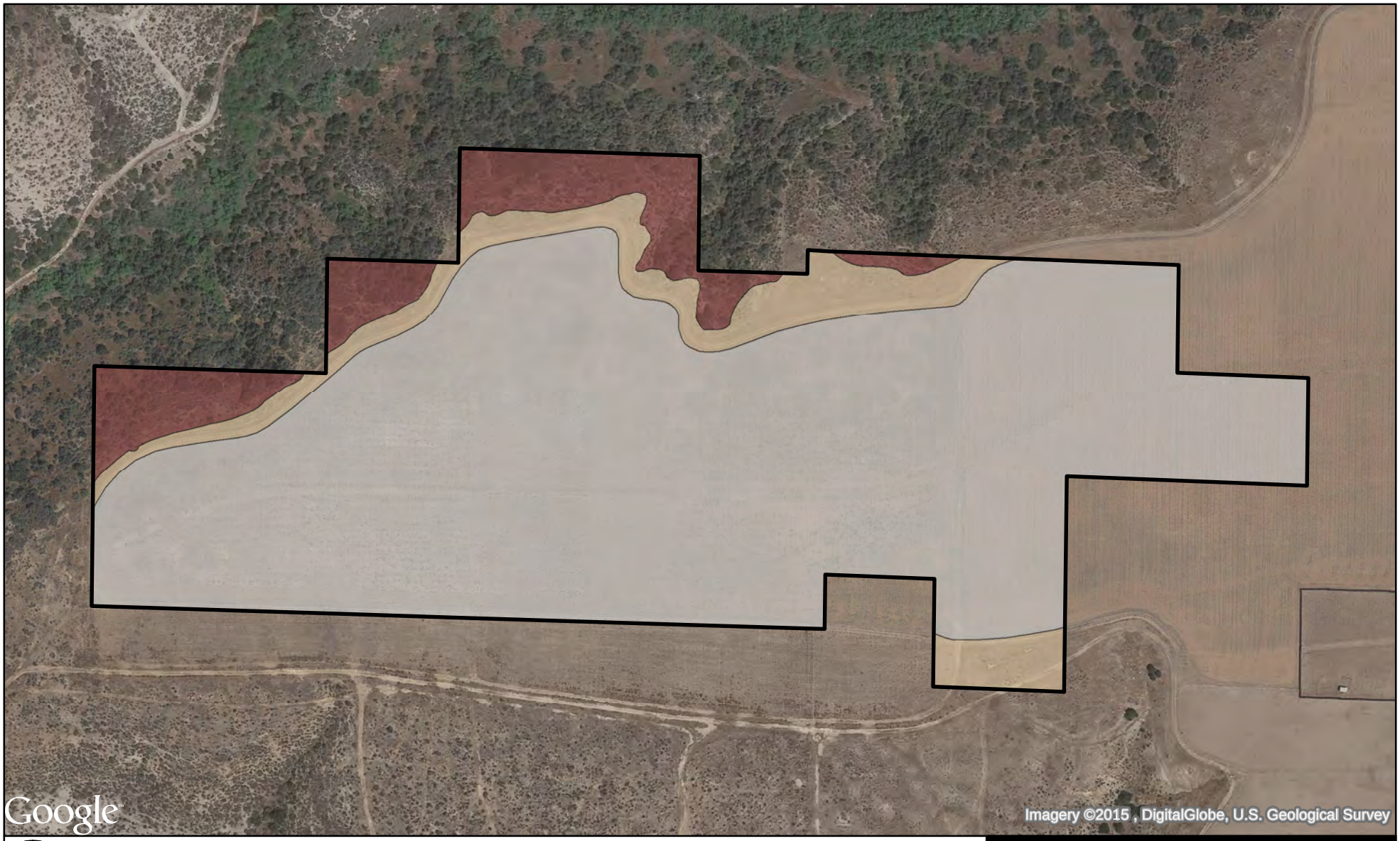
Source: USGS Quadrangles (Imperial Beach, Otay Mesa);
Copyright:© 2013 National Geographic Society, i-cubed

Figure 3

USGS Topographic Map

OTAY DAVISSON

ALDEN ENVIRONMENTAL, INC



Project Boundary
Diegan Coastal Sage Scrub
Agriculture
Disturbed Habitat

N
W E
S
0 125 250
Feet

ALDEN ENVIRONMENTAL, INC

Figure 4

Survey Results

OTAY DAVISSON

SUMMARY OF FIELD SURVEY CONDITIONS

Survey	Date	Biologist	Survey Times (start/stop)	Weather Conditions (start/stop)
1	4/4/15	Garrett Huffman	0745/1115	0% cloud cover, 67°F, wind 2-3mph/ 30%, 88°F, wind 3-4 mph
2	4/12/15	Garrett Huffman	0630/0945	0%, 58°F, wind 2-5 mph/ 0%, 70°F, wind 3-7 mph
3	4/24/15	Garrett Huffman	0800/1100	100%, 63°F, wind 2-5 mph/ 100%, 65°F, wind 3-7 mph

ROCKS
BIOLOGICAL CONSULTING

Project Name: DAVISSON

Surveyor Name: GARRETT HUFFMAN, WENDY ROWERS

Date: 4/4/15 Survey # 1

	Time	Temp (°F)	Cloud Cover (%)	Wind Speed (avg. mph)
Start	0745	67	0	2-3
End	1115	88	30	3-4

General Habitat Description:
COASTAL SAGE SCRUB (CSS)

CAGN observations and notes:
0845 - 0945 : CAGN HEARD VOCALIZING ACROSS CANYON. FROM SURVEY AREA. ONE MALE COULD BE OBSERVED MOVING WITH A DENSE PATCH OF CSS PRIMARILY REMAINING OBSCURED FROM VIEW, BUT CONSISTENTLY VOCALIZING. INDIVIDUAL DID NOT COME WITHIN 400 FT OF SURVEY POLYGON.
1040 - 1110 : PAIR OF CAGN WAS OBSERVED WITHIN SURVEY AREA FORAGING. NO NESTING BEHAVIOR DETECTED.

Wildlife Species Observed:
AVIAN SPECIES: HOFI, WEME, CALT, CATO, BEWR, SPTO, SOSP, CATH, LEGO, CORA, WREN, ANHU, WCSP, BUSH, COYE, WEST, MODO, NOMO, AMKE, TUVU

General Habitat Description:
COASTAL SAGE SCRUB

ROCKS BIOLOGICAL CONSULTING

Project Name: DANISSON

Surveyor Name: GARRETT HUFFMAN

Date: 4/12/15 Survey # 2

	Time	Temp (°F)	Cloud Cover (%)	Wind Speed (avg. mph)
Start	0630	58	Ø	0-1
End	0945	70	Ø	0-3

CAGN observations and notes:

0900 - 0945: CAGN UNRESPONSIVE TO AUDIO PLAYBACK. CAGN PAIR DETECTED BY PHYSICAL TRANSECT METHODOLOGY. PAIR WAS MONITORED FOR 45 MINUTES WHILE THEY FORAGED AND FAINTLY VOCALIZED TO EACH OTHER PERIODICALLY. NO NESTING/ NEST BUILDING BEHAVIOR OBSERVED. LOCATION OF PAIR CONSISTENT WITH RESULTS ~~OF~~ FROM SURVEY #1

Wildlife Species Observed:

AVIAN SPECIES: HOSP, MODO, WCSP, HOFI, BLPH, COYE, WEKI, SOSP, ANHU, WREN, SPTO, BUSH, HOLA, BEWR, ~~SPTO, BUSH~~, CATH, CAKI, BHCO, SAPH, WCSP, LABU, CLSW, NRWS, LEGO

General Habitat Description:

COASTAL SAGE SCRUB

CAGN observations and notes:

1030 - PAIR DETECTED AND HEARD VOCALIZING. PAIR FORAGED TOGETHER DURING OBSERVATION. 1ST OBSERVATION OF 1 PAIR HAS BEEN CONSISTENT IN THIS SURVEY AREA DURING ALL 3 SURVEY VISITS

ROCKS BIOLOGICAL CONSULTING

Project Name: DAVISSON

Surveyor Name: GARRETT HUFFMAN

Date: 10/24/15 Survey # 3

	Time	Temp (°F)	Cloud Cover (%)	Wind Speed (avg. mph)
Start	0800	63	100	2-5
End	1100	65	100	3-7

Wildlife Species Observed:

AVIAN SPECIES: SAPH, VEGO, CATO, CLSW, BEWR, SOTO, SOSP, CATH, BUSH, WREN, ANHU, MODO, HOLA, CAKI, WTSW, COYE, OCWA, RCSP, CORA.

Appendix C

Burrowing Owl
Survey Reports

ALDEN ENVIRONMENTAL, INC
3245 University Ave, #1188 | San Diego, CA 92104 | **Phone/Fax:** 619.284.3815

August 11, 2014 COL-02

Ms. Rita Mahoney
Colrich
444 West Beech Street, Suite 300
San Diego, CA 92101

Subject: Burrowing Owl Survey Report for Spring Canyon Ranch

Dear Ms. Mahoney:

This letter presents the results of the 2014 nesting season survey for the burrowing owl (*Athene cunicularia*) conducted on the Spring Canyon Ranch project.

LOCATION AND SITE DESCRIPTION

The site consists of 6 parcels located south of State Route (SR) 905, west of Cactus Road, between Airway Road and Siempre Viva Road in the City of San Diego's (City's) Otay Mesa Community (Figures 1 through 3). Surrounding land uses include industrial, agricultural and automobile salvage yards. Cactus Road borders the site to the east. Elevation on site ranges from 425 to 510 feet above mean sea level. Soil on site consists of Stockpen gravelly clay loam (0 to 2 percent slopes and 2 to 5 percent slopes) and Olivenhain cobbly loam (30 to 50 percent slopes; Bowman 1973). A small portion of the City MSCP's Multi-habitat Planning Area (MHPA) occurs at the northwest corner of the property, within the northern canyon.

METHODS

The 2014 survey consisted of 4 site visits on separate days (Table 1) according to the survey methods in the Staff Report on Burrowing Owl Mitigation (CDFG 2012), which supersedes the survey, avoidance, minimization and mitigation recommendations in the 1995 Staff Report (CDFG 1995), and takes into account the Burrowing Owl Survey Protocol and Mitigation Guidelines (California Burrowing Owl Consortium 1993).

Burrowing owl habitat was examined by walking transects across the site. The area was surveyed for burrowing owls and potential burrows or perches that could be used by the owl. Burrowing owls are known to occupy California ground squirrel (*Spermophilus beecheyi*) burrows; therefore, particular attention was paid to any areas along fence lines, or other locations where squirrel activity has been observed in the past, was observed presently, or was likely to occur. Dirt piles, drainages, and culverts were also carefully examined as these sites can often provide cavities that can support the species. The determination of owl presence was made by direct owl observation or by owl signs such as, but not necessarily limited to, excavated soil, whitewash (excrement), castings (pellets), and/or feathers. Representative photographs are presented as Attachment A.

Table 1 Burrowing Owl Survey Information				
Survey Number	**Date**	**Biologist**	**Time**	**Weather Conditions** (start/stop)
1	4/14/14	Lee Ripma, Jim Rocks, Shannon Walsh	0610-1000	Hazy (10% cover), 57°F, wind 0-2 mph/clear, 78°F, wind 0-4 mph
2	5/8/14	Lee Ripma, Anabelle Bernabe	0550-1002	Partly cloudy (60% cover), 55°F, wind 0-2 mph/high thin clouds (25% cover), 74°F, wind 1-3 mph
3	5/30/14	Lee Ripma, Shannon Walsh	0530-0915	Hazy cloud (80% cover), 64°F, wind 0-2 mph/clear, 70°F, wind 1-3 mph
4	6/23/14	Lee Ripma, Shannon Walsh	0626-0950	Cloudy (100% cover), 66°F, wind 0-2 mph/sunny and humid (15% cover), 72°F, wind 1-4 mph

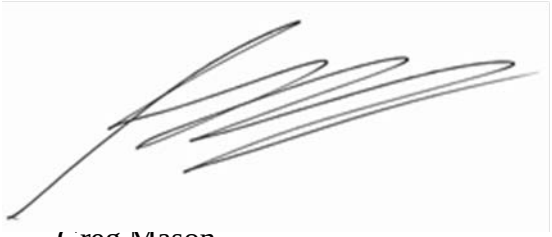
SURVEY RESULTS

The site supports Diegan Coastal Sage Scrub (including disturbed), Maritime Succulent Scrub Disturbed, non-native grassland, and disturbed habitat (Figure 4). The site also supports developed and active agricultural areas.

Suitable habitat for the burrowing owl occurs throughout most of the site. Only the developed areas were excluded from the owl surveys. Evidence of a previously occupied burrowing owl burrow was observed within the survey buffer approximately 200 feet to the west of the project site (Figure 4). Several squirrel burrows occur on the site; however, each squirrel burrow was checked for evidence of owl presence and none were found to be supporting burrowing owls. Based on the results of the field survey, the site does not support the burrowing owl.

Please contact me if you have any questions.

Sincerely,



Greg Mason
Senior Biologist

Enclosures:

Figure 1	Regional Location Map
Figure 2	Project Location Map
Figure 3	USGS Topographic Map
Figure 4	Survey Results
Attachment A	Representative Photographs

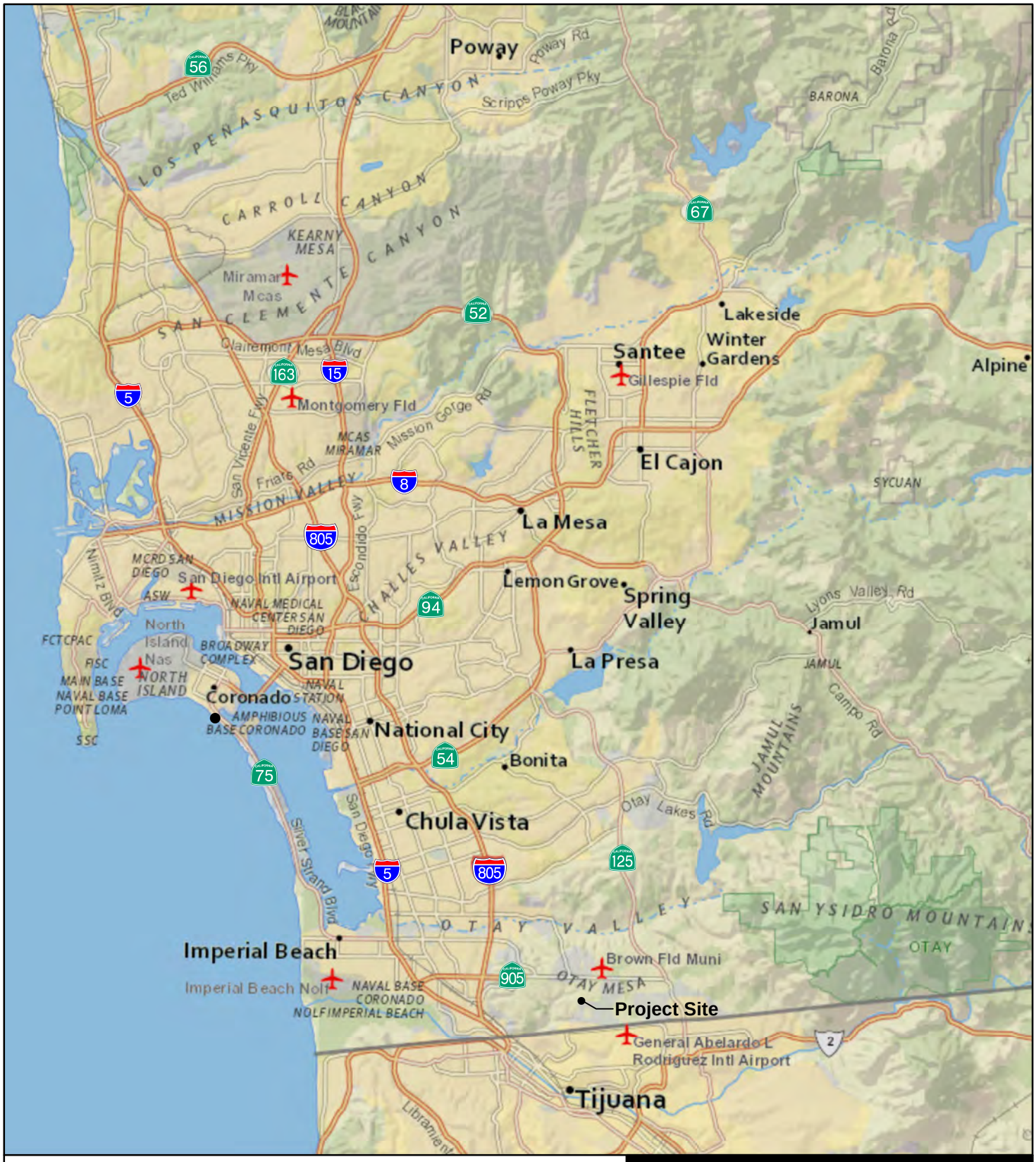
References:

Bowman, R. 1973. Soil Survey of the San Diego Area. USDA in cooperation with USDI, UC Agricultural Experiment Station, Bureau of Indian Affairs, Department of the Navy, and the U.S. Marine Corps.

California Department of Fish and Game (CDFG). 2012. Staff Report on Burrowing Owl Mitigation. March 17.

1995. Environmental Services Division. Staff Report on Burrowing Owl Mitigation. October 17. 8pp. plus attachments.

California Burrowing Owl Consortium. 1993. Burrowing Owl Survey Protocol and Mitigation Guidelines. April.



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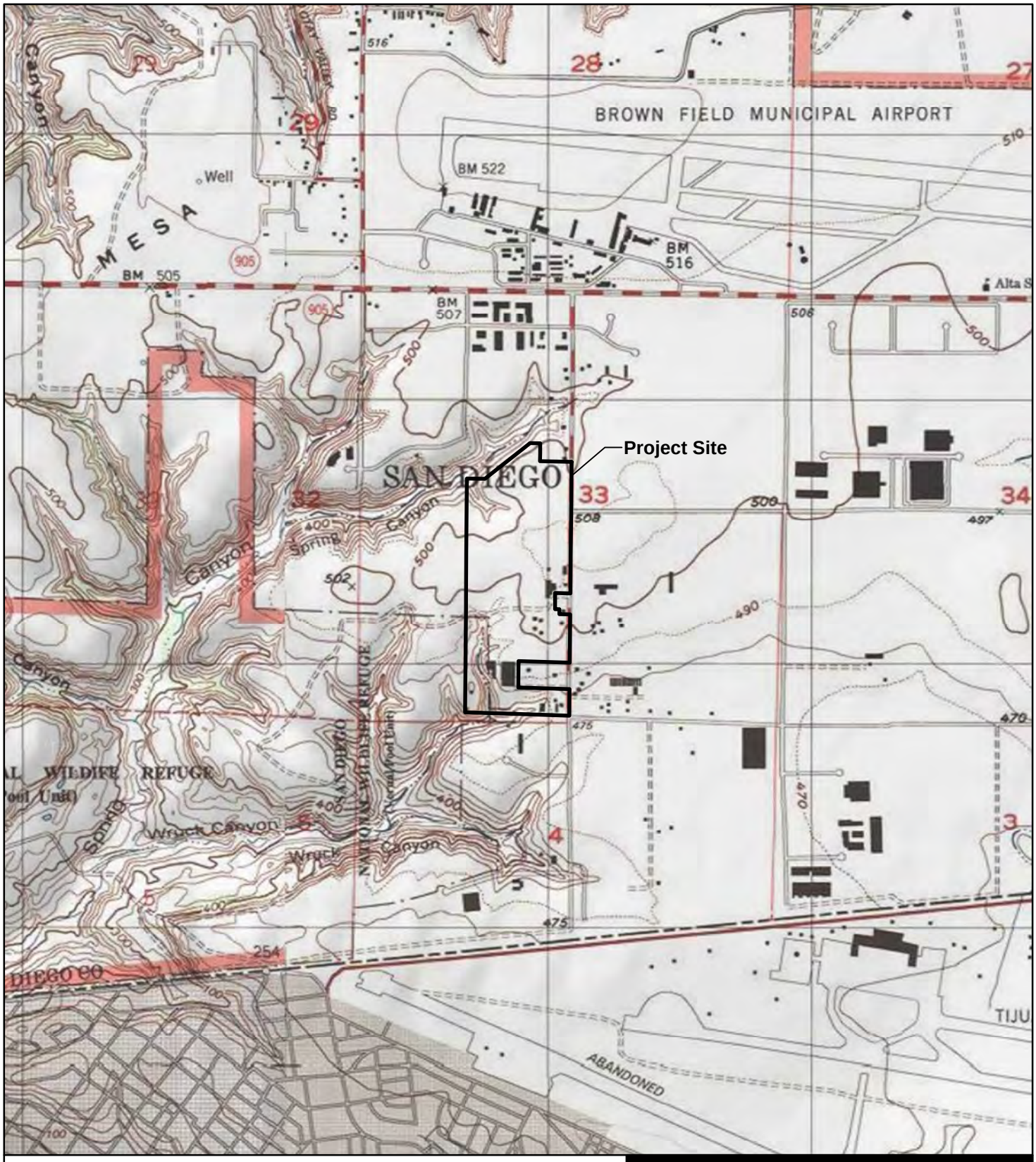
ALDEN ENVIRONMENTAL, INC

Figure 1

Regional Location

SPRING CANYON RANCH
BURROWING OWL SURVEY



Source: USGS Quadrangles (Otay Mesa, Imperial Beach);
Copyright:© 2013 National Geographic Society, i-cubed

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ALDEN
ENVIRONMENTAL, INC

Figure 3

USGS Topographic Map

SPRING CANYON RANCH
BURROWING OWL SURVEY

Source: Imagery ©2014 , DigitalGlobe, U.S. Geological Survey, USDA Farm Service Agency

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ALDEN ENVIRONMENTAL, INC

Figure 2

Project Location

SPRING CANYON RANCH
BURROWING OWL SURVEY

Service Layer Credits: Imagery ©2014 , Chula Vista, Cnes/Spot Image, DigitalGlobe, Landsat, Sanborn, U.S. Geological Survey, USDA Farm Service Agency

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ALDEN ENVIRONMENTAL, INC

Figure 4

Survey Results

SPRING CANYON RANCH
BURROWING OWL SURVEY

REPRESENTATIVE PHOTOGRAPHS

Westward view across northern portion of site.

Eastward view across northern portion of site.

Northward view from northern portion of site.

Southward view from northern portion of site.

View of active agricultural area.

View of sage scrub habitat in southern portion of site.

View of canyon in northern portion of site.

View of canyon in southern portion of site.

Northward view from southern portion of site.

View of off-site evidence of owl presence.

ALDEN ENVIRONMENTAL, INC
3245 University Ave, #1188 | San Diego, CA 92104 | **Phone/Fax:** 619.284.3815

July 09, 2015

Ms. Rita Mahoney
Colrich
444 West Beech Street, Suite 300
San Diego, CA 92101

Subject: Burrowing Owl Survey Report for Otay Canyon Ranch

Dear Ms. Mahoney:

This letter presents the results of the 2015 nesting season survey for the burrowing owl (*Athene cunicularia*) conducted on the Otay Canyon Ranch project.

LOCATION AND SITE DESCRIPTION

The site consists of 6 parcels located south of State Route (SR) 905, west of Cactus Road, between Airway Road and Siempre Viva Road in the City of San Diego's (City's) Otay Mesa Community (Figures 1 through 3). Surrounding land uses include industrial, agricultural and automobile salvage yards. Cactus Road borders the site to the east. Elevation on site ranges from 425 to 510 feet above mean sea level. Soil on site consists of Stockpen gravelly clay loam (0 to 2 percent slopes and 2 to 5 percent slopes) and Olivenhain cobbly loam (30 to 50 percent slopes; Bowman 1973). A small portion of the City MSCP's Multi-habitat Planning Area (MHPA) occurs at the northwest corner of the property, within the northern canyon.

METHODS

A previous Burrowing Owl survey, consisting of 4 separate site visits, was conducted in 2014 with negative results. The 2015 survey consisted of 4 site visits on separate days (Table 1) according to the survey methods in the Staff Report on Burrowing Owl Mitigation (CDFG 2012), which supersedes the survey, avoidance, minimization and mitigation recommendations in the 1995 Staff Report (CDFG 1995), and takes into account the Burrowing Owl Survey Protocol and Mitigation Guidelines (California Burrowing Owl Consortium 1993).

Burrowing owl habitat was examined by walking transects across the site. The area was surveyed for burrowing owls and potential burrows or perches that could be used by the owl. Burrowing owls are known to occupy California ground squirrel (*Spermophilus beecheyi*) burrows; therefore, particular attention was paid to any areas along fence lines, or other locations where squirrel activity has been observed in the past, was observed presently, or was likely to occur. Dirt piles, drainages, and culverts were also carefully examined as these sites can often provide cavities that can support the species. The determination of owl presence was made by direct owl observation or by owl signs such as, but not necessarily limited to, excavated soil, whitewash (excrement), castings (pellets), and/or feathers. Representative photographs are presented as Attachment A.

Table 1 Burrowing Owl Survey Information				
Survey Number	**Date**	**Biologist**	**Time**	**Weather Conditions** (start/stop)
1	3/19/15	Garrett Huffman, Shannon Walsh	0645-0815	100% 63°F, wind 0-2 mph/ 10%, 67°F, wind 0-1 mph
2	5/14/2015	Garrett Huffman, Shannon Walsh	0600-0930	25%, 63°F, wind 3-5mph/ 40%, 67°F, wind 3-8mph
3	6/8/2015	Garrett Huffman, Shannon Walsh	0530-0845	30%, 64°F, wind 0-2 mph/ 0%, 73°F, wind 0 mph
4	6/30/2015	Garrett Huffman, Shannon Walsh	0515-0815	5%, 68°F, wind 0-1 mph/ 35%, 73°F, wind 0-1 mph

SURVEY RESULTS

The site supports Diegan Coastal Sage Scrub (including disturbed), Maritime Succulent Scrub Disturbed, non-native grassland, and disturbed habitat (Figure 4). The site also supports developed and active agricultural areas.

Suitable habitat for the burrowing owl occurs throughout most of the site. Only the developed areas were excluded from the owl surveys. Several squirrel burrows occur on the site; however, each squirrel burrow was checked for evidence of owl presence and none were found to be supporting burrowing owls. Based on the negative results of the 2015 field surveys, in addition to the previous surveys conducted in 2014, the site does not support the burrowing owl.

Please contact me if you have any questions.

Sincerely,

Greg Mason
Senior Biologist

Enclosures:

Figure 1	Regional Location Map
Figure 2	Project Location Map
Figure 3	USGS Topographic Map
Figure 4	Survey Results
Attachment A	Representative Photographs

References:

Bowman, R. 1973. Soil Survey of the San Diego Area. USDA in cooperation with USDI, UC Agricultural Experiment Station, Bureau of Indian Affairs, Department of the Navy, and the U.S. Marine Corps.

California Department of Fish and Game (CDFG). 2012. Staff Report on Burrowing Owl Mitigation. March 17.

1995. Environmental Services Division. Staff Report on Burrowing Owl Mitigation. October 17. 8pp. plus attachments.

California Burrowing Owl Consortium. 1993. Burrowing Owl Survey Protocol and Mitigation Guidelines. April.

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ALDEN ENVIRONMENTAL, INC

Figure 1

Regional Location

OTAY CANYON RANCH
2015 BURROWING OWL SURVEY

Source: Imagery ©2015 , DigitalGlobe, U.S. Geological Survey, USDA Farm Service Agency

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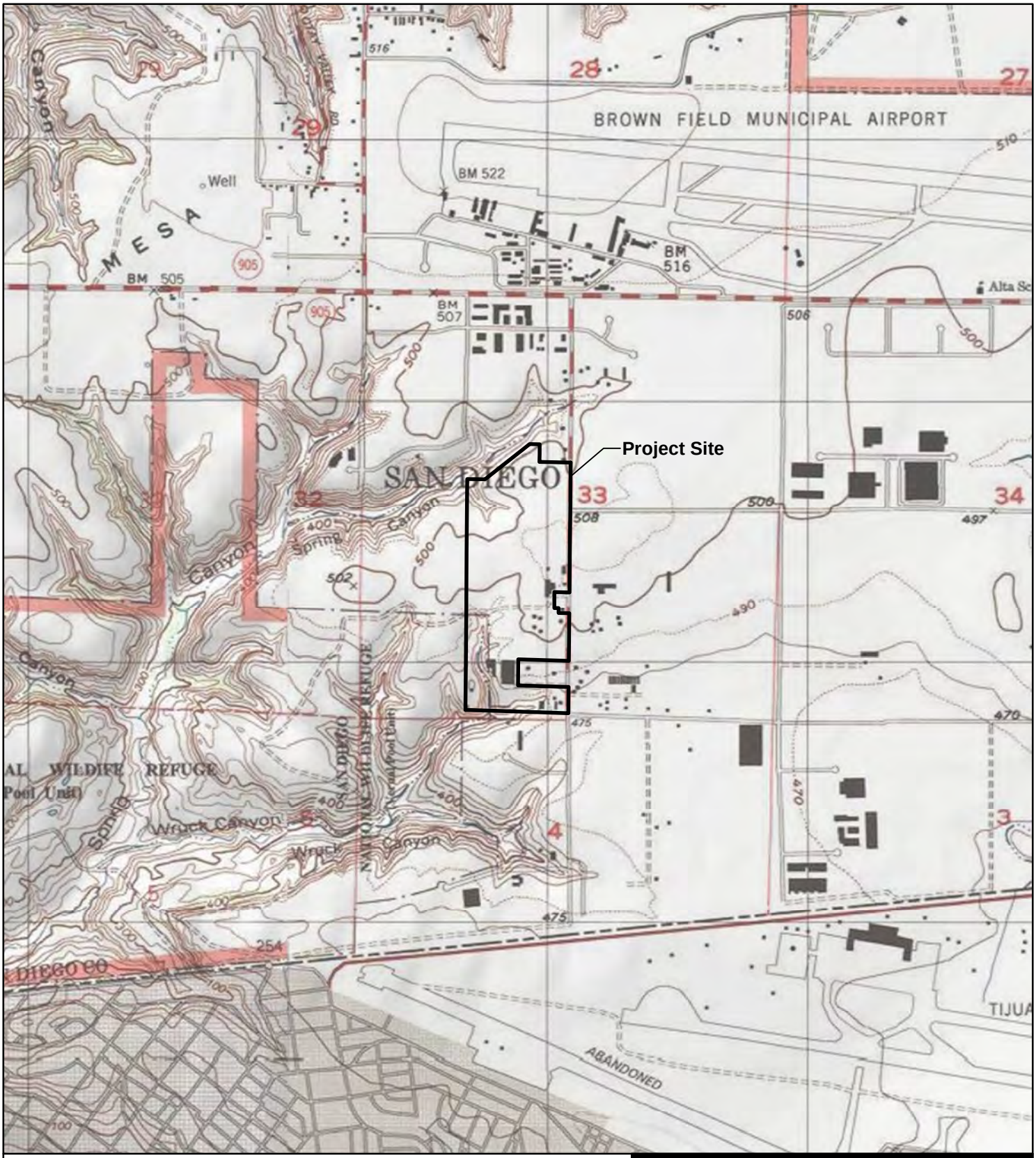
ALDEN ENVIRONMENTAL, INC

Figure 2

Project Location

OTAY CANYON RANCH
2015 BURROWING OWL SURVEY



Source: USGS Quadrangles (Otay Mesa, Imperial Beach);
Copyright:© 2013 National Geographic Society, i-cubed

Figure 3

USGS Topographic Map

OTAY CANYON RANCH
2015 BURROWING OWL SURVEY

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ALDEN ENVIRONMENTAL, INC

Figure 4

Survey Results

OTAY CANYON RANCH
2015 BURROWING OWL SURVEY

REPRESENTATIVE PHOTOGRAPHS

Eastward view across northern portion of site.

Southward view across southeast portion of site.

Westward view from center of site.

ALDEN ENVIRONMENTAL, INC
3245 University Ave, #1188 | San Diego, CA 92104 | **Phone/Fax:** 619.284.3815

July 10, 2015

Mr. Mark Freed
Davisson Enterprises
5755 Amarillo Avenue
La Mesa, CA 91941

Dear Mr. Freed:

This letter presents the results of the 2015 nesting season survey for the burrowing owl (*Athene cunicularia*) conducted on the Otay Davisson project.

LOCATION AND SITE DESCRIPTION

The approximately 40-acre study area consists primarily of a flat field that has been used for agricultural uses. Small portions of the study area extend into the Spring Canyon complex on the northern site boundary, outside of the agricultural area. Elevations on site range between approximately 405 feet above mean sea level (AMSL) in the canyon and 495 feet AMSL on the mesa top. Soil on site is mapped as Stockpen gravelly clay loam (2 to 5 percent slopes) and Olivenhain cobbly loan (30 to 50 percent slopes; Bowman 1973).

The parcels are undeveloped and surrounded on all sides by undeveloped land. The canyon portion on the northern side supports native sage scrub habitat. The mesa portion of the parcels supports active agricultural uses.

METHODS

The survey consisted of 4 site visits on separate days (Table 1) according to the survey methods in the Staff Report on Burrowing Owl Mitigation (CDFG 2012), which supersedes the survey, avoidance, minimization and mitigation recommendations in the 1995 Staff Report (CDFG 1995), and takes into account the Burrowing Owl Survey Protocol and Mitigation Guidelines (California Burrowing Owl Consortium 1993).

All of the flat portion of the site, outside of Spring Canyon, was considered to be suitable habitat and was surveyed for the owl. The sage scrub habitat in the canyon is not considered suitable burrowing owl habitat. Suitable burrowing owl habitat was examined by walking transects across the site. The area was surveyed for burrowing owls and potential burrows or perches that could be used by the owl. Burrowing owls are known to occupy California ground squirrel (*Spermophilus beecheyi*) burrows; therefore, particular attention was paid to any areas along fence lines, or other locations where squirrel activity has been observed in the past, was observed presently, or was likely to occur. The determination of owl presence was made by direct owl observation or by owl signs such as, but not necessarily limited to, excavated soil, whitewash (excrement), castings (pellets), and/or feathers.

Table 1 Burrowing Owl Survey Information				
Survey Number	**Date**	**Biologist**	**Time**	**Weather Conditions** (start/stop)
1	3/19/15	Garrett Huffman, Shannon Walsh	1005-1100	10% 67.5°F, wind 0-1 mph/ 20%, 74.5°F, wind 3-6 mph
2	5/14/2015	Garrett Huffman, Shannon Walsh	0930-1100	40%, 67°F, wind 3-8mph/ 40%, 73°F, wind 4-7mph
3	6/8/2015	Garrett Huffman, Shannon Walsh	0845-1000	0%, 73°F, wind 0 mph/ 0%, 81°F, wind 0-2 mph
4	6/30/2015	Garrett Huffman, Shannon Walsh	0815-1000	35%, 73°F, wind 0-1 mph/ 10%, 80.3°F, wind 0-2 mph

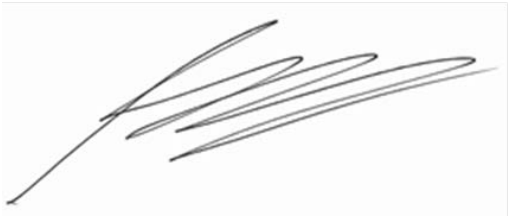
SURVEY RESULTS

The majority of the site supports agricultural and disturbed land that is considered suitable habitat for the burrowing owl (Figure 4). The site also supports some sage scrub habitat within Spring Canyon that is not considered suitable burrowing owl habitat.

No burrowing owl or sign of burrowing owl was detected on site. Based on the negative results of these surveys, the site does not support the burrowing owl.

Please contact me if you have any questions.

Sincerely,



Greg Mason
Senior Biologist

Enclosures:

Figure 1	Regional Location Map
Figure 2	Project Location Map
Figure 3	USGS Topographic Map
Figure 4	Survey Results

References:

Bowman, R. 1973. Soil Survey of the San Diego Area. USDA in cooperation with USDI, UC Agricultural Experiment Station, Bureau of Indian Affairs, Department of the Navy, and the U.S. Marine Corps.

California Department of Fish and Game (CDFG). 2012. Staff Report on Burrowing Owl Mitigation. March 17.

1995. Environmental Services Division. Staff Report on Burrowing Owl Mitigation. October 17. 8pp. plus attachments.

California Burrowing Owl Consortium. 1993. Burrowing Owl Survey Protocol and Mitigation Guidelines. April.

Figure 1

Regional Location

OTAY DAVISSON

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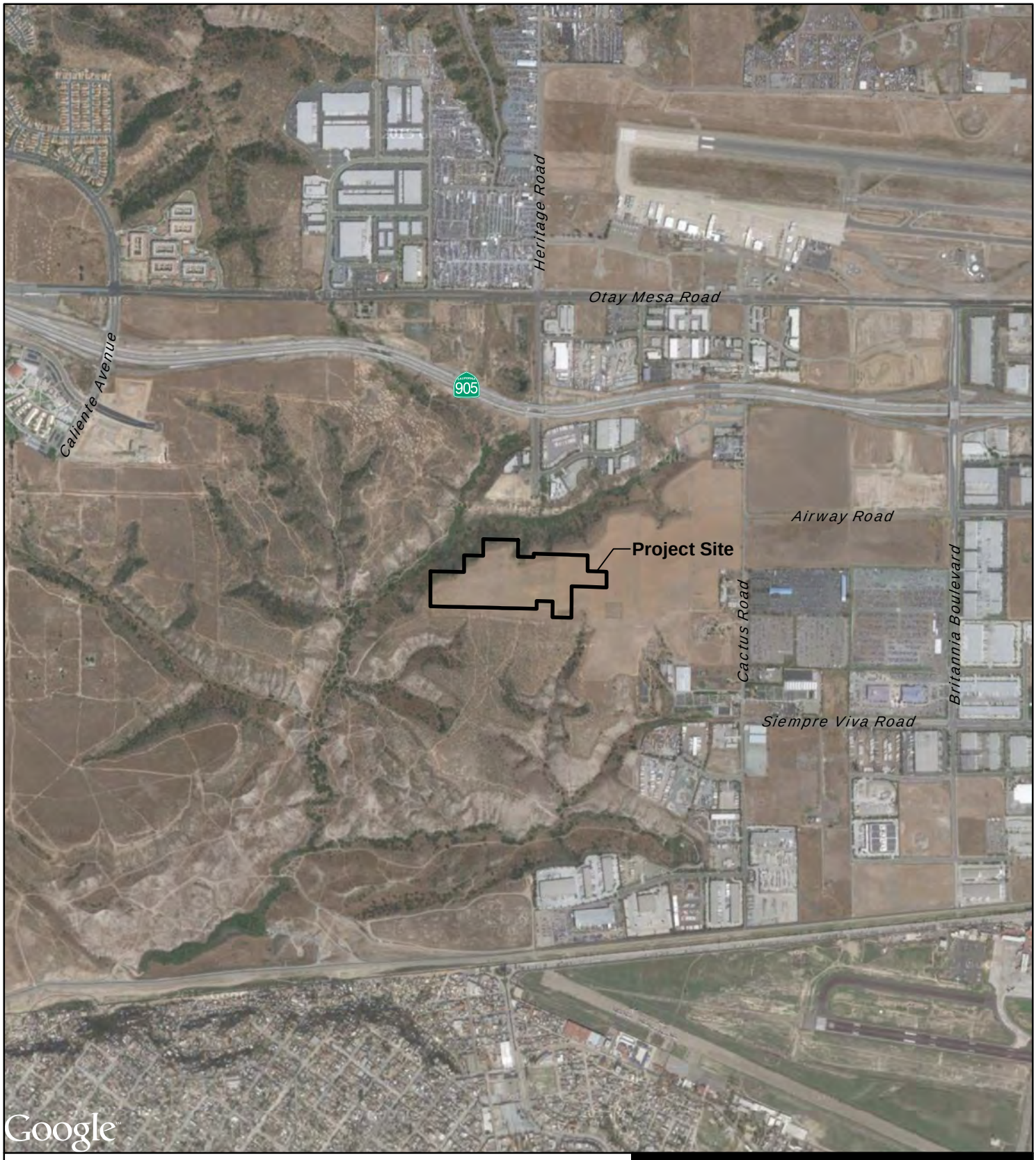
ALDEN ENVIRONMENTAL, INC



Source: Imagery ©2015 , DigitalGlobe, U.S. Geological Survey

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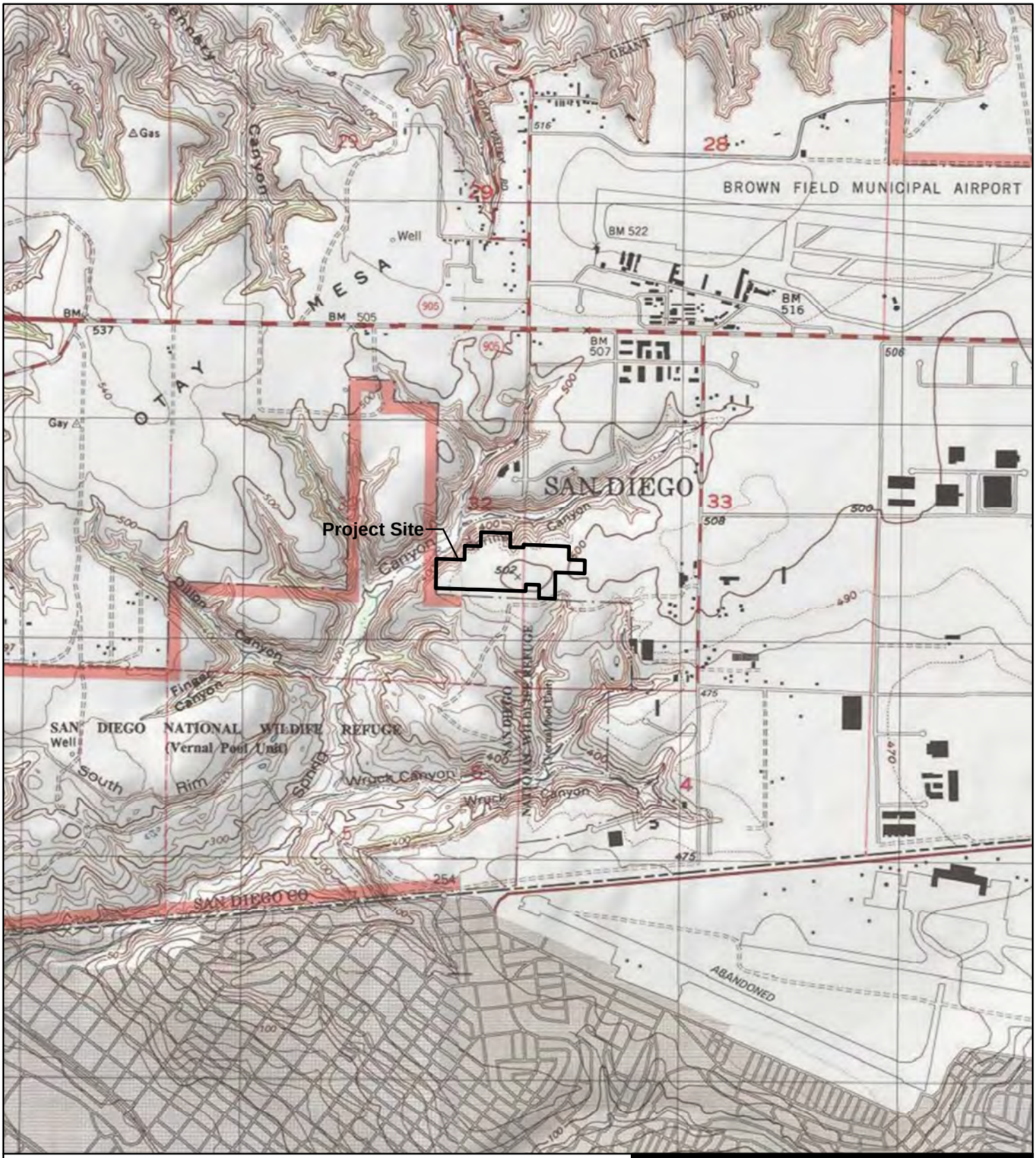
ALDEN ENVIRONMENTAL, INC

Figure 2

Project Location

OTAY DAVISSON



Source: USGS Quadrangles (Imperial Beach, Otay Mesa);
Copyright:© 2013 National Geographic Society, i-cubed

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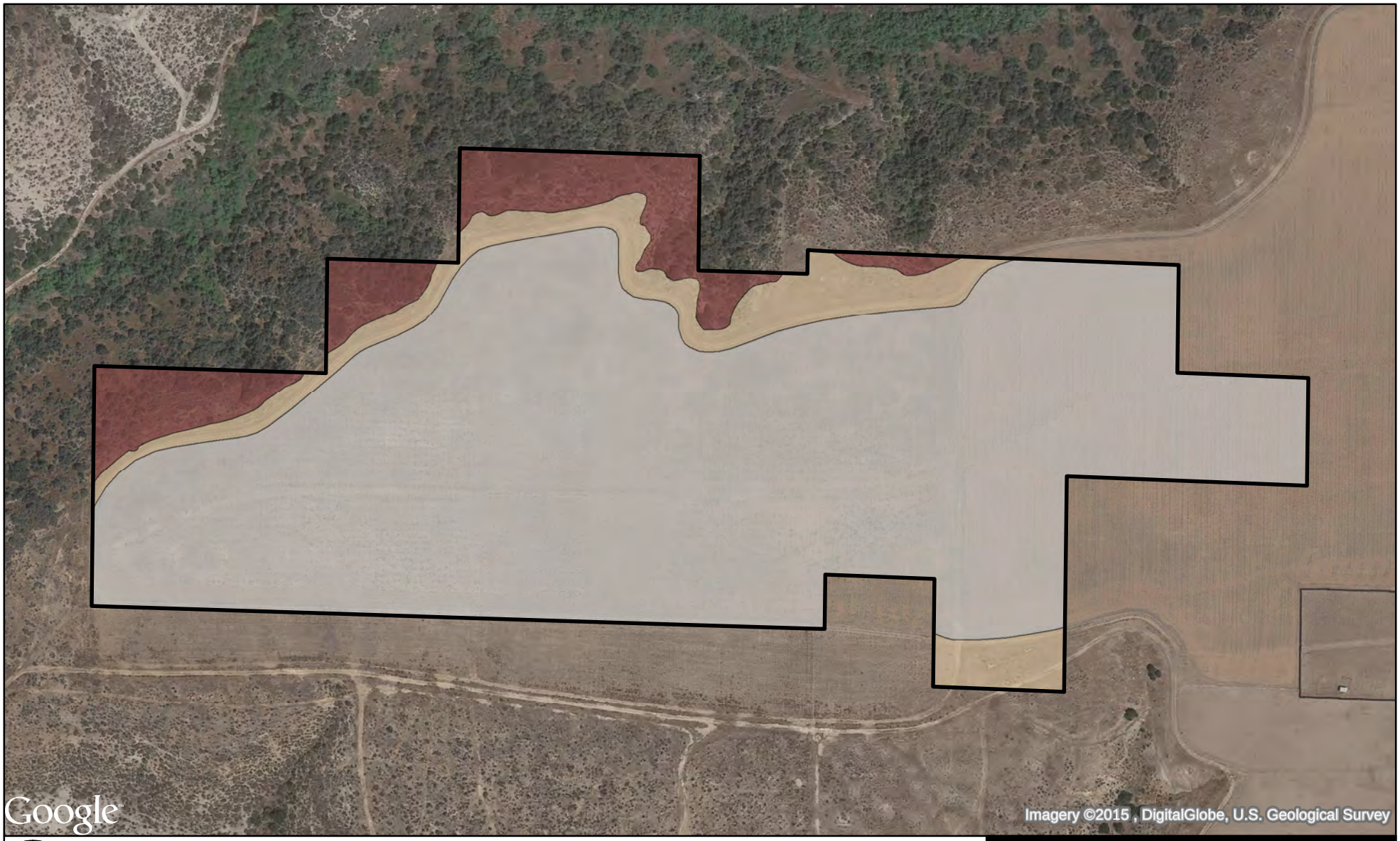
ALDEN
ENVIRONMENTAL, INC

Figure 3

USGS Topographic Map

OTAY DAVISSON



Project Boundary
Diegan Coastal Sage Scrub
Agriculture
Disturbed Habitat

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ALDEN
ENVIRONMENTAL, INC

Figure 4

Survey Results

OTAY DAVISSON

ALDEN ENVIRONMENTAL, INC
3245 University Ave, #1188 | San Diego, CA 92104 | **Phone/Fax:** 619.284.3815

June 30, 2016

Ms. Rita Mahoney
Colrich
444 West Beech Street, Suite 300
San Diego, CA 92101

Subject: Burrowing Owl Survey Report for Otay Canyon Ranch

Dear Ms. Mahoney:

This letter presents the results of the 2016 nesting season survey for the burrowing owl (*Athene cunicularia*) conducted on 2 parcels that were added to the Otay Canyon Ranch project since the previous burrowing owl survey conducted in 2015 for the entire site.

LOCATION AND SITE DESCRIPTION

The survey area consists of 2 parcels located south of State Route (SR) 905, west of Cactus Road, between Airway Road and Siempre Viva Road in the City of San Diego's (City's) Otay Mesa Community (Figures 1 through 3). These parcels are new to the site since it was last surveyed in 2015.

Surrounding land uses include industrial, agricultural and automobile salvage yards. Cactus Road borders the site to the east. Elevation on site ranges from 425 to 510 feet above mean sea level. Soil on site consists of Stockpen gravelly clay loam (0 to 2 percent slopes and 2 to 5 percent slopes) and Olivenhain cobbly loam (30 to 50 percent slopes; Bowman 1973). The City MSCP's Multi-habitat Planning Area (MHPA) occurs along the northern boundary of the parcels, within the northern canyon.

METHODS

A previous Burrowing Owl survey, consisting of 4 separate site visits, was conducted on the adjacent parcels in 2015 with negative results. The 2016 survey consisted of 4 site visits on separate days (Table 1) according to the survey methods in the Staff Report on Burrowing Owl Mitigation (CDFG 2012), which supersedes the survey, avoidance, minimization and mitigation recommendations in the 1995 Staff Report (CDFG 1995), and takes into account the Burrowing Owl Survey Protocol and Mitigation Guidelines (California Burrowing Owl Consortium 1993).

Burrowing owl habitat was examined by walking transects across the site. The area was surveyed for burrowing owls and potential burrows or perches that could be used by the owl. Burrowing owls are known to occupy California ground squirrel (*Spermophilus beecheyi*) burrows; therefore, particular attention was paid to any areas along fence lines, or other locations where squirrel activity has been observed in the past, was observed presently, or was likely to occur. Dirt piles, drainages, and culverts were also carefully examined as these sites can often provide cavities that can support the species. The determination of owl presence was made by direct owl observation or by owl signs such as, but not necessarily limited to, excavated soil, whitewash

(excrement), castings (pellets), and/or feathers. Representative photographs are presented as Attachment A.

Table 1
Burrowing Owl Survey Information

Survey Number	Date	Biologist	Time	Weather Conditions (start/stop)
1	3/30/16	Greg Mason	0716-0810	Mostly cloudy, 50°F, wind 0-1 mph/ Mostly cloudy, 50°F, wind 0-1 mph
2	4/18/16	Tara Baxter	0715-0900	5% cloud cover, 65°F, wind 3-7mph/ 0% cloud cover, 76°F, wind 2-4 mph
3	5/16/16	Tara Baxter	0700-0900	100% cloud cover, 61°F, wind 2-4 mph/ 95% cloud cover, 65°F, wind 2-4 mph
4	6/24/16	Tara Baxter	0645-0900	100% cloud cover, 64°F, wind 1-3 mph/ 0% cloud cover, 70°F, wind 0-2 mph

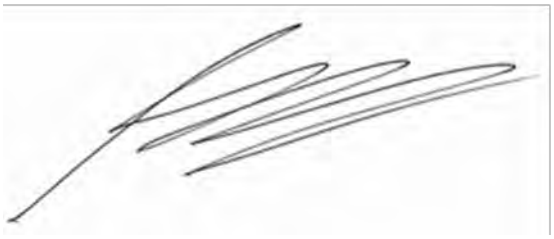
SURVEY RESULTS

The 2 parcels surveyed support Diegan Coastal Sage Scrub and non-native grassland (Figure 4). The site also supports disturbed and active agricultural areas.

Suitable foraging habitat for the burrowing owl occurs throughout most of the 2 parcels; however, no burrowing owls or potential owl burrows were observed. Based on the negative results of the 2015 field surveys and the current additional parcel survey, the burrowing owl is not anticipated to occur on the site.

Please contact me if you have any questions.

Sincerely,



Greg Mason
Senior Biologist

Enclosures:

Figure 1	Regional Location Map
Figure 2	Project Location Map
Figure 3	USGS Topographic Map
Figure 4	Survey Results
Attachment A	Representative Photographs

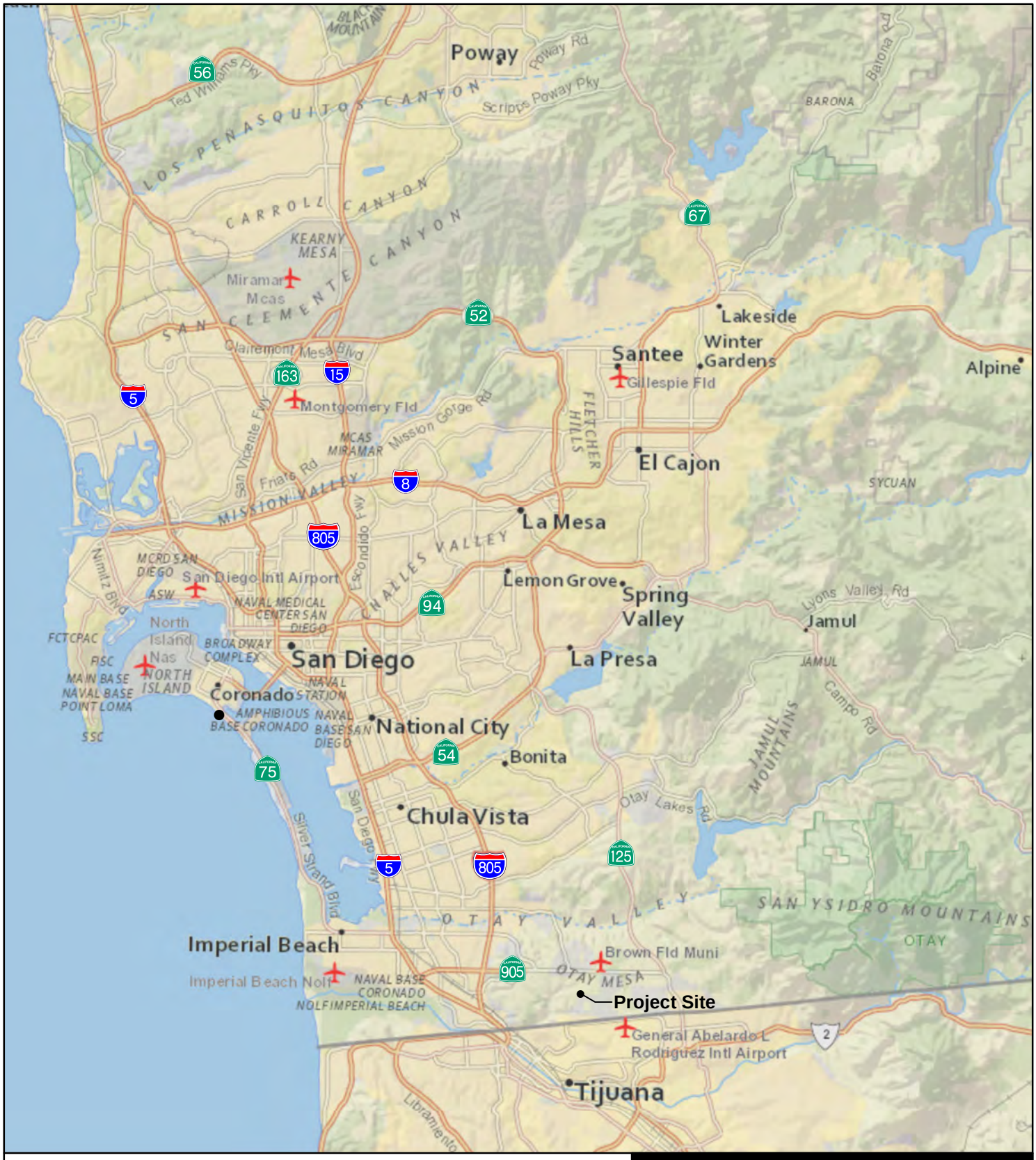
References:

Bowman, R. 1973. Soil Survey of the San Diego Area. USDA in cooperation with USDI, UC Agricultural Experiment Station, Bureau of Indian Affairs, Department of the Navy, and the U.S. Marine Corps.

California Department of Fish and Game (CDFG). 2012. Staff Report on Burrowing Owl Mitigation. March 17.

1995. Environmental Services Division. Staff Report on Burrowing Owl Mitigation. October 17. 8pp. plus attachments.

California Burrowing Owl Consortium. 1993. Burrowing Owl Survey Protocol and Mitigation Guidelines. April.



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ALDEN ENVIRONMENTAL, INC

Figure 1

Regional Location

OTAY CANYON RANCH
2016 BURROWING OWL SURVEY

Figure 2

Project Location

OTAY CANYON RANCH
2016 BURROWING OWL SURVEY

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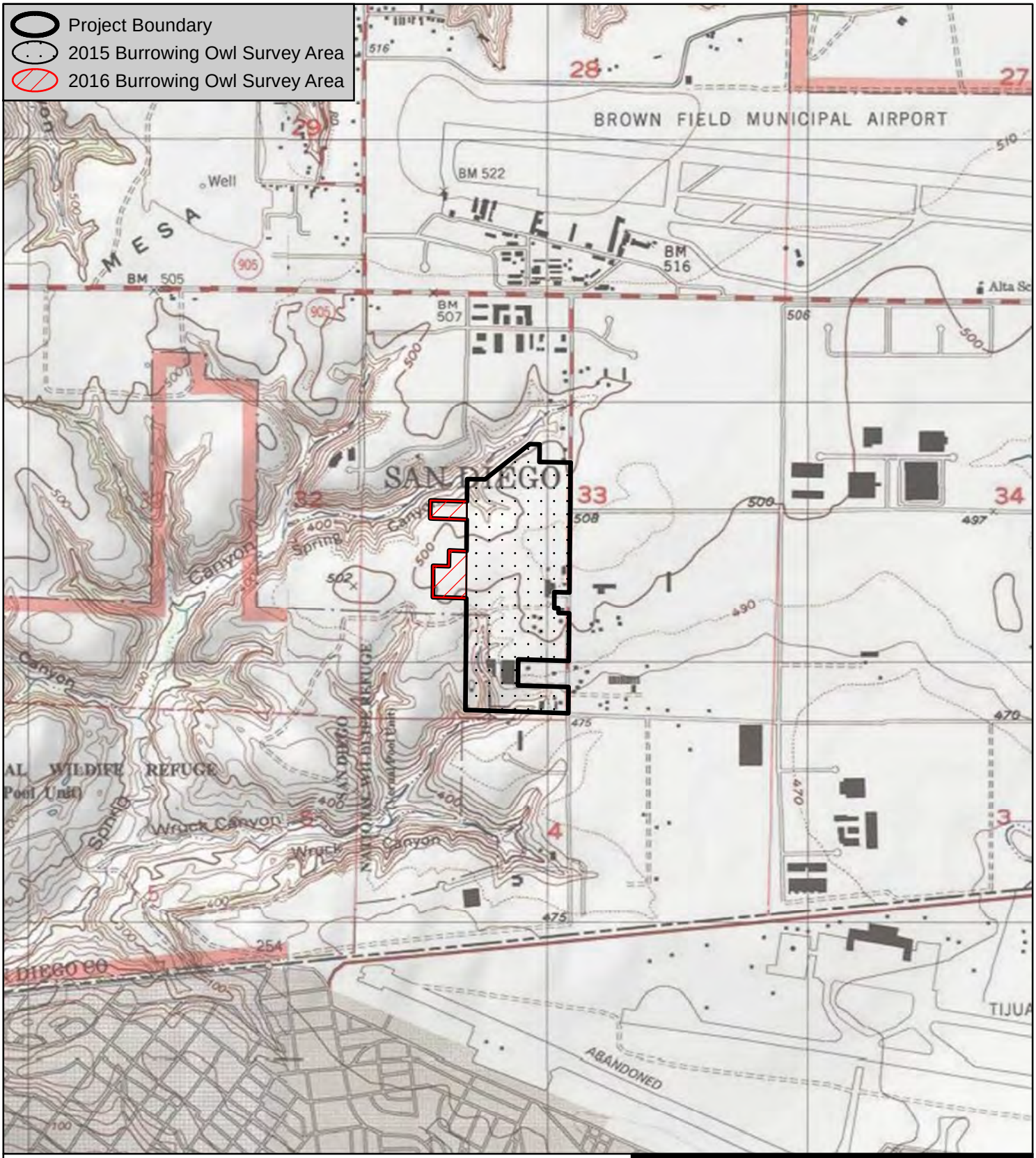
ALDEN ENVIRONMENTAL, INC



Source: USGS Quadrangles (Otay Mesa, Imperial Beach);
Copyright:© 2013 National Geographic Society, i-cubed

Figure 3

USGS Topographic Map

OTAY CANYON RANCH
2016 BURROWING OWL SURVEY

ALDEN ENVIRONMENTAL, INC

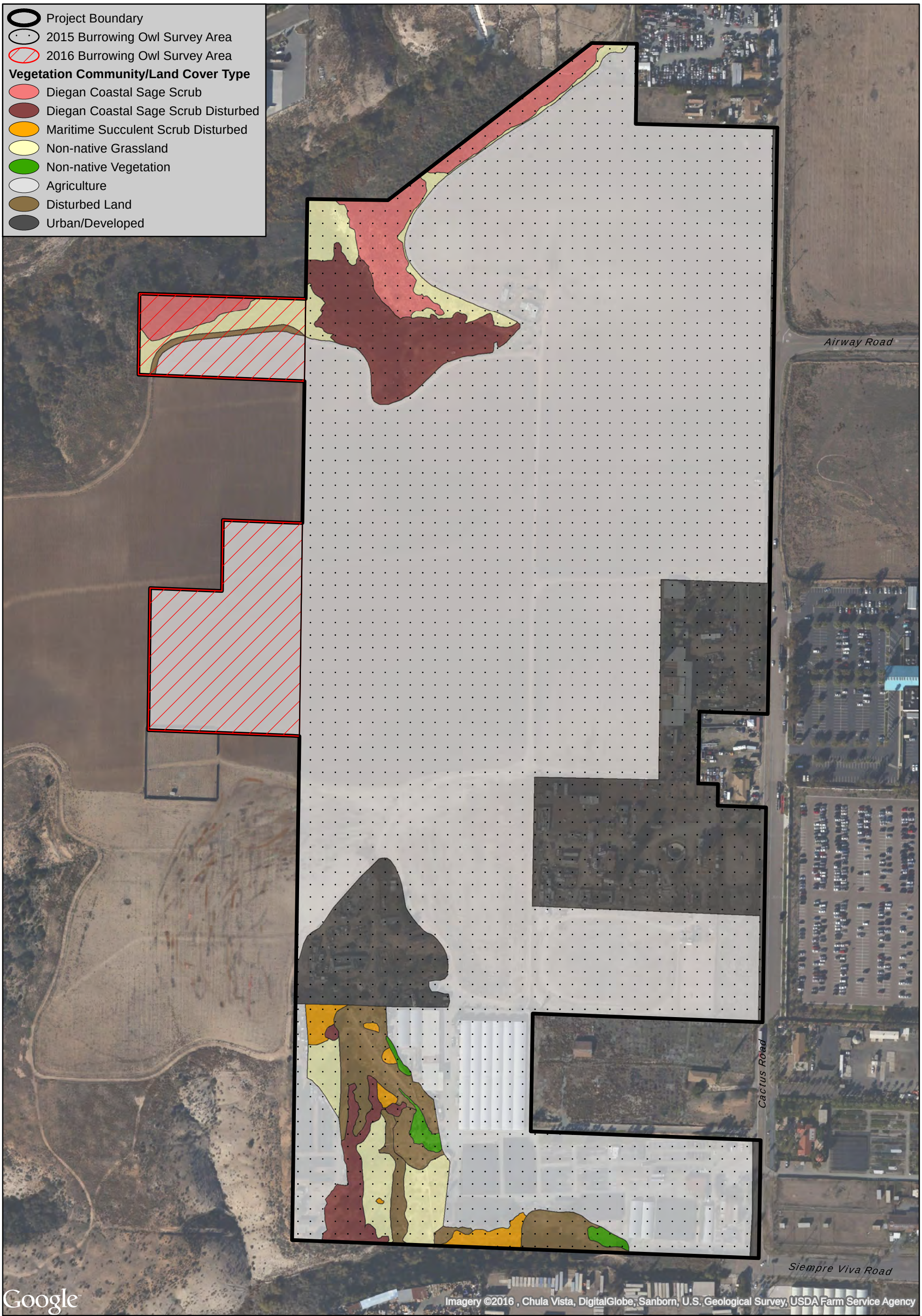


Figure 4

Survey Results

OTAY CANYON RANCH
2016 BURROWING OWL SURVEY

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ALDEN ENVIRONMENTAL, INC

Attachment A
REPRESENTATIVE PHOTOGRAPHS

Westward view across the parcels.

Eastward view across the parcels.

Appendix D

Sensitive Plant Species Survey Report

ALDEN ENVIRONMENTAL, INC
3245 University Ave, #1188 | San Diego, CA 92104 | **Phone/Fax:** 619.284.3815

July 13, 2016

Ms. Rita Mahoney, AICP
ColRich
444 West Beech Street
Suite 300
San Diego, CA 92101

Subject: Otay Canyon Ranch-Summer 2016 Rare Plant Survey

Dear Ms. Mahoney,

This letter report presents the results of a summer season rare plant survey conducted on the Otay Canyon Ranch project site. The survey area consists of 2 new parcels that were added to the project since the previous rare plant surveys that were conducted previously. The parcels are located south of State Route (SR) 905, west of Cactus Road, between Airway Road and Siempre Viva Road in the City of San Diego's (City's) Otay Mesa Community (Figures 1 and 2).

Methods

Prior to visiting the site, available maps and existing conditions material for the site were reviewed. The survey was conducted mainly to determine if the federal and state listed Otay tarplant (*Deinandra conjugens*) occurs on the site. Biologist Tara Baxter conducted a site visit on July 11, 2016 to search for the Otay tarplant and other sensitive plants that could be visible during the summer season. The survey was conducted on foot by walking transects through the project site.

Results

No Otay tarplant or other sensitive plant species were observed on site during the survey. Based on the current survey results, previous survey results, and the disturbed nature of the site, no sensitive plant species are expected to occur within the 2 additional parcels.

Please contact me if you have any questions regarding this letter report.

Sincerely,

Greg Mason
Senior Biologist

Enclosures: Figure 1 - Regional Location Map
Figure 2 - Project Location Map

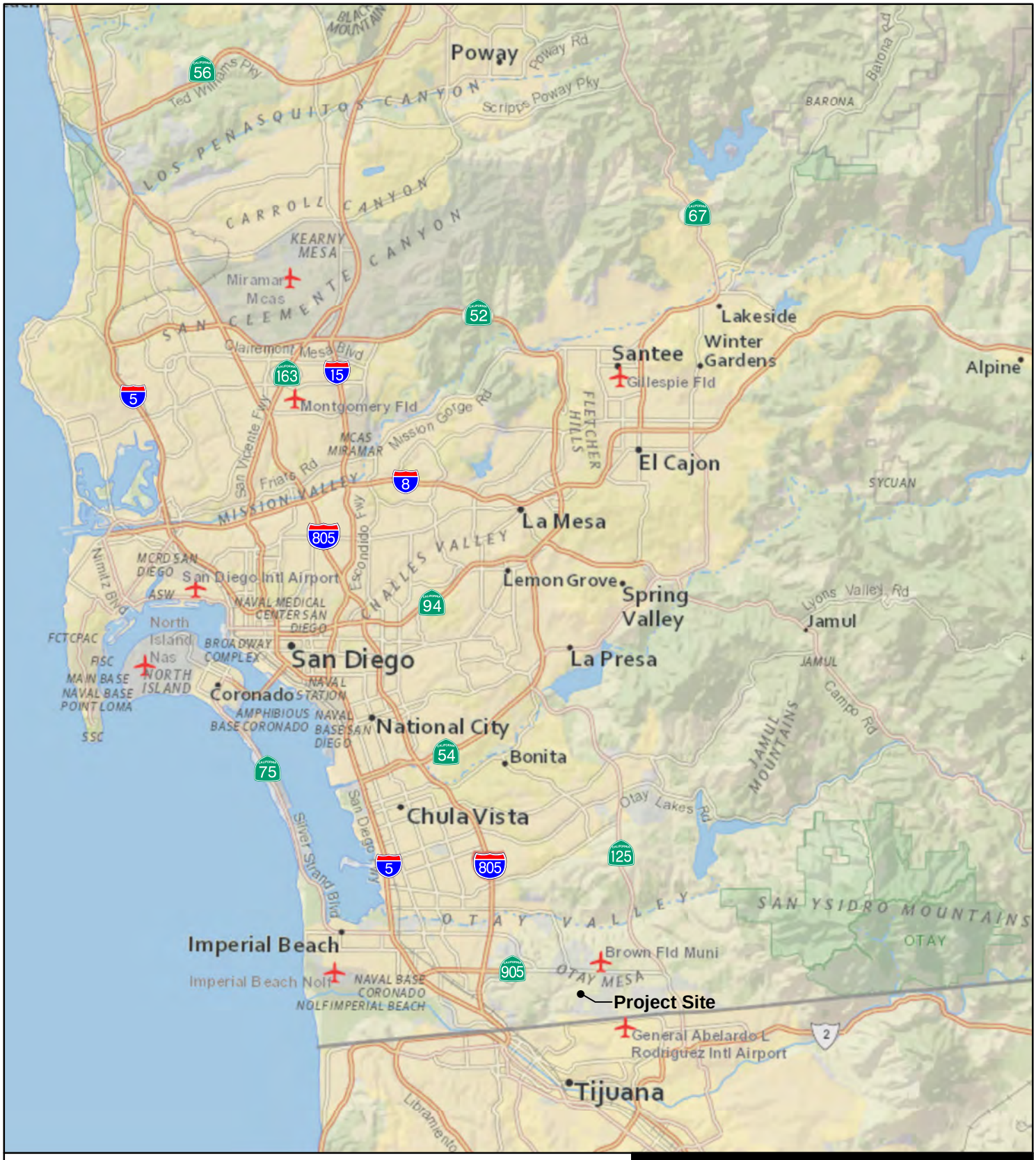
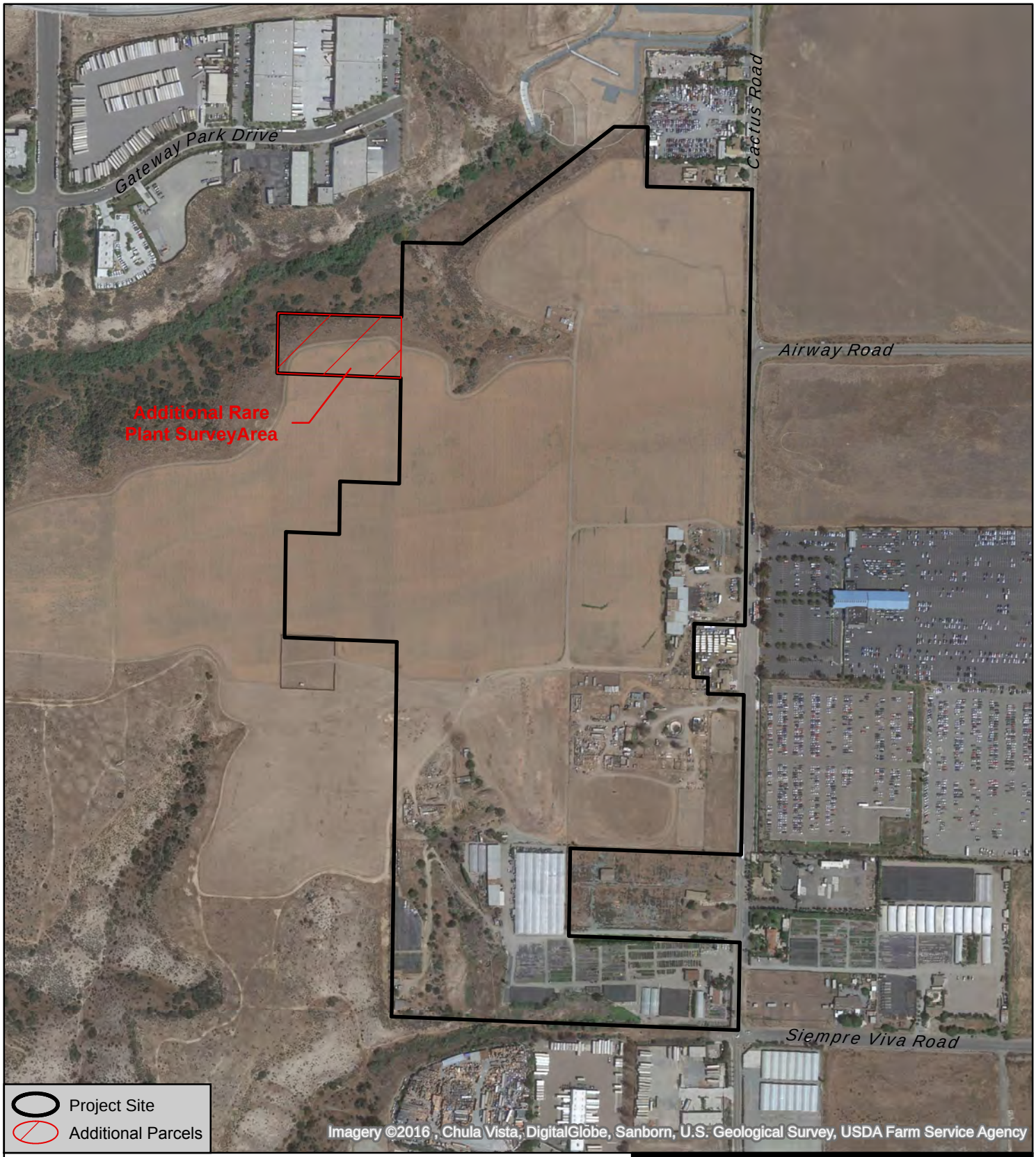


Figure 1

Regional Location

OTAY CANYON RANCH
2016 RARE PLANT SURVEY

ALDEN ENVIRONMENTAL, INC



Source: Google

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ALDEN ENVIRONMENTAL, INC

Figure 2

Project Location

OTAY CANYON RANCH
2016 RARE PLANT SURVEY