



**Biological Resources Report
Ashwood Street Corridor
Improvements Project
San Diego County, California
Project Number 1018734**

Lead Agency

County of San Diego
Department of Public Works
5510 Overland Avenue, Suite 410
San Diego, CA 92123

Prepared by

A handwritten signature in black ink, appearing to read "B. Parker", written over a horizontal line.

Brian Parker
County-Approved Preparer

RECON Environmental, Inc.
1927 Fifth Avenue
San Diego, CA 92101
P 619.308.9333

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List of Acronyms

ACOE	U.S. Army Corps of Engineers
BMO	Biological Mitigation Ordinance
BRCA	Biological Resource Core Area
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFGF	California Fish and Game Code
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
County	County of San Diego
CWA	Clean Water Act
°F	degrees Fahrenheit
HCP	Habitat Conservation Plan
MBTA	Federal Migratory Bird Treaty Act
mph	miles per hour
MSCP	Multiple Species Conservation Program
NCCP	Natural Community Conservation Planning
OHWM	ordinary high water mark
PAMA	Pre-Approved Mitigation Area
project	Ashwood Street Corridor Improvements Project
RPO	Resource Protection Ordinance
RWQCB	Regional Water Quality Control Board
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

Summary

This biological resource report was prepared for the County of San Diego (County) Ashwood Street Corridor Improvements Project (project) to (1) document existing biological resources within the project site; (2) evaluate the project site and the vicinity for the potential to support sensitive biological resources; (3) assess direct, indirect, and cumulative impacts to these biological resources; and (4) recommend measures to avoid, minimize, and/or mitigate significant impacts.

Project Location and Description

The project is located in the unincorporated community of Lakeside in the southwestern portion of San Diego County. It is situated along Ashwood Street and Wildcat Canyon Road, extending onto portions of Maplevue Street and Willow Road.

The County Department of Public Works is proposing to make improvements to a 1.3-mile segment of the Ashwood Street corridor. Specifically, Maplevue Street would be improved by installing an additional left-turn lane for vehicles traveling eastbound turning north onto Ashwood Street. As motorists travel north, Ashwood Street would be widened to include an additional travel lane only for vehicles entering El Capitan High School. To enhance turning movements into and out of El Capitan High School, a traffic signal system would be installed at the school's entrance; however, the primary northbound travel lane on Ashwood Street would remain unsignalized. A raised median would be installed to separate through-traffic from vehicles entering the school. To accommodate the roadway widening near El Capitan High School, a soil nail retaining wall and a soldier pile wall would be installed along the east and west sides of Ashwood Street, respectively, due to the proximity of steep slopes.

To improve pedestrian access, a sidewalk would be installed on the west side of Ashwood Street between El Capitan School and Cactus Park. A dedicated left-turn lane would also be installed for vehicles entering Cactus Park's western property. At the intersection of Ashwood Street and Willow Road, the existing all-way stop would be signalized with Americans with Disabilities Act-compliant pedestrian ramps and crosswalk pavement markings, and a dedicated left-turn lane would be added in each direction.

The project would relocate existing storm drain facilities and install concrete brow ditches to adequately convey and capture stormwater runoff along Ashwood Street. Storm water runoff would either be conveyed to proposed biofiltration basins for treatment or directed to curb inlets to reduce the volume of runoff discharged from the site. The project would not alter or modify the existing culvert system that conveys flows from the San Diego River underneath Ashwood Street.

Methods

RECON Environmental, Inc. biologists Brian Parker, Beth Procsal, Andrew Smisek, Alex Fromer, and Mandy Weston, and Blackhawk Environmental biologists Ryan Quilley and

Ian Maunsell conducted biological field investigations for the project, including a general biological survey, plant and animal inventories, and focused surveys for Quino checkerspot butterfly (*Euphydryas editha quino*), coastal California gnatcatcher (*Polioptila californica californica*), and least Bell's vireo (*Vireo bellii pusillus*). A supplemental site visit was also conducted to identify potential jurisdictional boundaries in specific locations where the impact area occurred in close proximity to potential jurisdictional areas along the San Diego River.

For the general biological survey, plant and animal inventories, Quino checkerspot butterfly, and coastal California gnatcatcher surveys, the survey area was defined as the project site (based on current plans at the time) plus a 300-foot buffer. The survey area for the least Bell's vireo surveys extended to include suitable habitat in which vireos were heard calling approximately 700 to 900 feet from the project site. For the purposes of this report, the term, "survey area," refers to the project site plus the 300-foot buffer.

Biological Resources

A total of 11 vegetation communities occur within the survey area: southern riparian scrub, mule fat scrub, southern riparian woodland, coast live oak woodland, Diegan coastal sage scrub (including disturbed), non-native grassland, non-native woodland, eucalyptus woodland, disturbed habitat, agriculture, and urban/developed land. Six of these vegetation communities are considered sensitive by the County: southern riparian scrub, mule fat scrub, southern riparian woodland, coast live oak woodland, Diegan coastal sage scrub (including disturbed), and non-native grassland.

A total of 154 plants and 70 animal species were detected during the biological investigations. Four sensitive plant species were observed: delicate clarkia (*Clarkia delicata*), San Diego sagewort (*Artemisia palmeri*), San Diego marsh-elder (*Iva hayesiana*), and San Diego viguiera (*Bahiopsis laciniata*). Nine sensitive wildlife species were observed within the survey area: Belding's orange-throated whiptail (*Aspidoscelis hyperythra beldingi*), turkey vulture (*Cathartes aura*), red-shouldered hawk (*Buteo lineatus*), Cooper's hawk (*Accipiter cooperii*), least Bell's vireo, and coastal California gnatcatcher, western bluebird (*Sialia mexicana*), yellow warbler (*Setophaga petechia*), and yellow-breasted chat (*Icteria virens*). In addition, 16 other sensitive wildlife species have moderate or high potential to occur within the survey area: western spadefoot toad (*Spea hammondi*), Blainville's horned lizard (*Phrynosoma blainvillii*), Coronado skink (*Eumeces skiltonianus interparietalis*), San Diego legless lizard (*Anniella stebbinsi*), San Diego banded gecko (*Coleonyx variegatus abbotti*), California glossy snake (*Arizona elegans occidentalis*), rosy boa (*Lichanura orcutti*), coast patch-nosed snake (*Salvadora hexalepis virgulata*), red diamond rattlesnake (*Crotalus ruber*), white-tailed kite (*Elanus leucurus*), common barn owl (*Tyto alba pratincola*), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), San Diego desert woodrat (*Neotoma lepida intermedia*), and southern mule deer (*Odocoileus hemionus fuliginata*).

Project Effects and Mitigation

Special Status Species

The project has potential to impact occupied habitat for one federally threatened species: coastal California gnatcatcher. Direct impacts and indirect noise impacts to nesting coastal California gnatcatchers may occur if vegetation clearing, grubbing, grading, or construction is conducted during this species' breeding season (March 1 to August 15). These impacts would be considered significant.

The project has potential to impact the following species identified as a California Department of Fish and Wildlife (CDFW) species of special concern or County Group 1 or 2 species: Blainville's horned lizard, San Diego banded gecko, California glossy snake, rosy boa, coast patch-nosed snake, red diamond rattlesnake, Cooper's hawk, white-tailed kite, common barn owl, western bluebird, southern California rufous-crowned sparrow, San Diego black-tailed jackrabbit, northwestern San Diego pocket mouse, San Diego desert woodrat, and southern mule deer. Most of these impacts would be temporary, and permanent impacts would be relatively small, linear, and occur adjacent to an existing roadway. As a result, they are not expected to affect local long-term survival and this impact would be considered less than significant.

Cooper's hawk, white-tailed kite, common barn owl, and western bluebird are not expected to nest within the temporary or permanent impact areas, but may nest within 300 feet. The project has potential to cause indirect impacts from construction noise if construction occurs within 300 feet of an active nest for these species. Southern California rufous-crowned sparrow has potential to be directly impacted if vegetation clearing would occur during the general bird breeding season (February 15 to August 15). These impacts would be considered significant and require implementation of avoidance or minimization measures.

Belding's orange-throated whiptail, Blainville's horned lizard, San Diego banded gecko, California glossy snake, rosy boa, coast patch-nosed snake, red diamond rattlesnake, red-shouldered hawk, common barn owl, western bluebird, northwestern San Diego pocket mouse, and San Diego desert woodrat have potential to occur within and adjacent to the impact area. Vegetation removal and construction noise has potential to impact these species; however, the impacts are not expected to affect local long-term survival and would be considered less than significant.

To prevent impacts to sensitive bird species, grading, brush clearing, and all other construction should be conducted outside the general breeding season of February 15 to August 15 for upland birds (inclusive of coastal California gnatcatcher), and January 15 to July 15 for tree-nesting raptors. If construction must occur during this period, the following actions would be required:

A qualified biologist shall conduct a pre-construction clearance survey for nesting birds within suitable habitat to determine whether coastal California gnatcatcher, other upland or migratory avian species, or raptors are nesting within 300 feet of the

construction area. The pre-construction nesting bird surveys must be conducted prior to the commencement of construction activities.

If the aforementioned birds are not observed nesting within 300 feet of construction, no grading or construction restrictions would be required.

If nesting birds are found, nests will be noted, and an avoidance area will be established such that no grading or clearing shall occur within 300 feet of the active nest. Monitoring will occur to ensure that no nest is removed or disturbed until the young have fledged or the nest is no longer active.

If construction must occur within 300 feet of an active nest temporary sound barriers may be required or construction may be restricted near the nest site to reduce noise levels below an hourly average of 60 A-weighted decibels (dB[A] L_{eq}) or ambient, whichever is greater. Any temporary sound barriers must be placed within the impact area and not in the habitat.

Impacts to sensitive reptiles and mammals would be considered less than significant as habitat-based mitigation would be used to mitigate project impacts to these species by providing in-kind foraging and nesting habitat.

Riparian Habitat or Sensitive Natural Community

The project would cause temporary and permanent impacts to sensitive vegetation communities, including coast live oak woodland, Diegan coastal sage scrub, and non-native grassland. The proposed project would not impact any jurisdictional wetlands and/or riparian habitats as defined by U.S. Army Corps of Engineers (ACOE), CDFW, or Regional Water Quality Control Board (RWQCB)

Temporary impacts to sensitive vegetation communities would be mitigated in-kind with on-site revegetation of the impacted areas following construction. Permanent impacts to sensitive vegetation communities would be mitigated in accordance with the Biological Mitigation Ordinance in the form of either enhancement, restoration, and/or creation of habitat; deduction of credits from a County-approved mitigation area; or other off-site preservation.

Jurisdictional Wetlands and Waterways

The project would not impact jurisdictional wetlands or waters as defined by the ACOE, CDFW, or RWQCB. Therefore, no mitigation would be required.

Wildlife Movement and Nursery Sites

The project would not substantially alter or impede wildlife corridors, linkages, or nursery sites; it would not create any artificial corridors; and construction lighting and noise would not prevent wildlife use of the corridor. Therefore, there would be no impact to wildlife movement or nursery sites and no mitigation would be required.

Local Policies, Ordinances, and Adopted Plans

The project has potential to impact migratory birds, their nests, or eggs. Coastal California gnatcatcher, Cooper's hawk, red-shouldered hawk, white-tailed kite, common barn owl, western bluebird, southern California rufous-crowned sparrow, and other birds protected by the California Fish and Game Code have potential to be impacted if any vegetation clearing occurs during the breeding season of January 15 to July 15 for tree-nesting raptors, March 1 to August 15 for coastal California gnatcatcher, and February 15 to August 15 for other migratory birds. These impacts would be mitigated through the proposed avoidance measures described above for special status species, as well as the habitat-based mitigation (revegetation and off-site preservation) described for sensitive vegetation communities.

1.0 Introduction

This biological resources report was prepared for the County of San Diego (County) Ashwood Street Corridor Improvements Project (project).

1.1 Purpose of the Report

RECON Environmental Inc. (RECON) prepared this biological resources report to (1) document existing biological resources within the project site; (2) evaluate the project site and the vicinity for the potential to support sensitive biological resources; (3) assess direct, indirect, and cumulative impacts to these biological resources; and (4) recommend measures to avoid, minimize, and/or mitigate significant impacts consistent with federal, state, and local regulations and ordinances (including California Environmental Quality Act [CEQA], the County of San Diego Multiple Species Conservation Program [MSCP] Subarea Plan (1997), and Biological Mitigation Ordinance [BMO]). The report has been prepared according to the County of San Diego Report Format and Content Requirements for biological resources (County of San Diego 2010a).

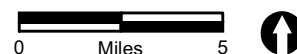
1.2 Project Location and Description

1.2.1 Project Location

The project is located in the unincorporated community of Lakeside in the southwestern portion of San Diego County (Figures 1 and 2). The project site is situated along Ashwood Street and Wildcat Canyon Road, extending onto portions of Maplevue Street and Willow Road. The southern portion of the project site extends approximately 900 feet west and 275 feet east along Maplevue Street from the intersection with Ashwood Street. It runs north along the entire length of Ashwood Street to Willow Road (where Ashwood Street becomes Wildcat Canyon Road), including the adjacent hillside east of Ashwood Street and a small area within El Capitan High School west of Ashwood Street (Figure 3). The northern portion of the project site extends approximately 1,000 feet north along Wildcat Canyon Road, and 550 feet east and 300 feet west along Willow Road (see Figure 3).

1.2.2 Project Description

The County Department of Public Works is proposing to make improvements to a 1.3-mile segment of the Ashwood Street corridor. Specifically, Maplevue Street would be improved by installing an additional left-turn lane for vehicles traveling eastbound turning north onto Ashwood Street. As motorists travel north, Ashwood Street would be widened to include an additional travel lane only for vehicles entering El Capitan High School. To enhance turning movements into and out of El Capitan High School, a traffic signal system would be installed at the school's entrance; however, the primary northbound travel lane on Ashwood Street would remain unsignalized. A raised median would be installed to separate through-traffic from vehicles entering the school. To accommodate the roadway widening near El Capitan High School, a soil nail retaining wall and a soldier pile wall would be installed along the east and west sides of Ashwood Street, respectively, due to the proximity of steep slopes.



✱ Project Location

FIGURE 1
Regional Location
Ashwood Street Corridor Improvements Project

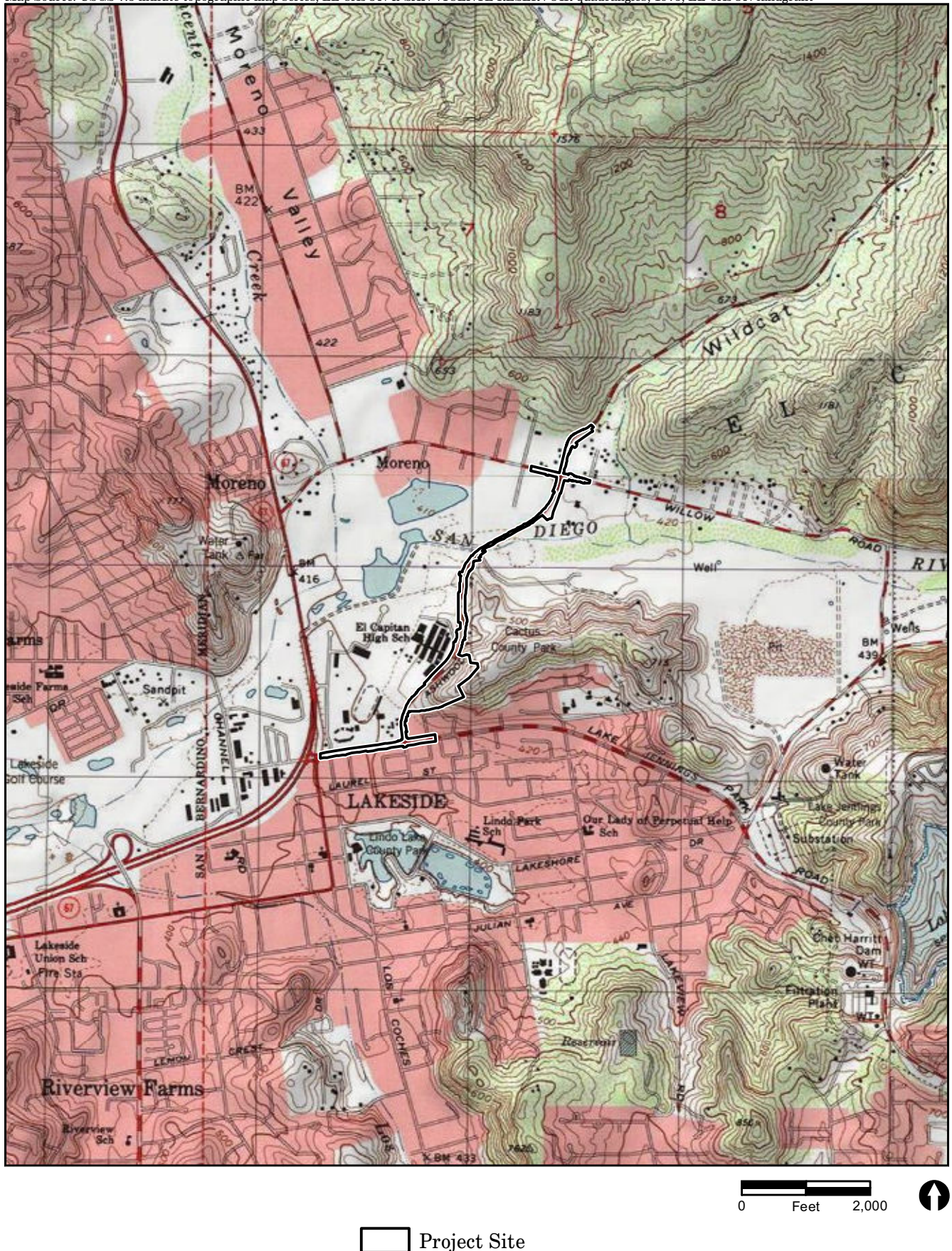


FIGURE 2

Project Location on USGS Map
Ashwood Street Corridor Improvements Project



0 Feet 1,000



Project Site

FIGURE 3

Project Location on Aerial Photograph
Ashwood Street Corridor Improvements Project

To improve pedestrian access, a sidewalk would be installed on the west side of Ashwood Street between El Capitan School and Cactus Park. A dedicated left-turn lane would also be installed for vehicles entering Cactus Park's western property. At the intersection of Ashwood Street and Willow Road, the existing all-way stop would be signalized with Americans with Disabilities Act-compliant pedestrian ramps and crosswalk pavement markings, and a dedicated left-turn lane would be added in each direction.

Regarding drainage improvements, the project includes the relocation of existing storm drain facilities as well as the installation of concrete brow ditches to adequately convey and capture storm water runoff along Ashwood Street. Storm water runoff would either be conveyed to proposed biofiltration basins for treatment or directed to curb inlets to reduce the volume of runoff discharged from the site. The project would not alter or modify the existing culvert system that conveys flows from the San Diego River underneath Ashwood Street.

1.3 Survey Methodologies

1.3.1 Literature Review

RECON conducted a review of existing biological data for the project site, including a database query for sensitive plant and animal species reported within one mile of the project site, and a review of the site's physical characteristics (e.g., location, elevation, soils/substrate, topography). Sources included the California Natural Diversity Database (CNDDB; California Department of Fish and Wildlife [CDFW] 2019a), the All Species Occurrences Database (U.S. Fish and Wildlife Service [USFWS] 2019), the California Native Plant Society Online database (CNPS 2019), and the U.S. Department of Agriculture (USDA) Soil Conservation Service maps and descriptions (USDA 1973 and 2017).

1.3.2 General Biological Resource Survey

RECON biologists Andrew Smisek and Brian Parker conducted a general biological survey on Wednesday, April 19, 2017 between 8:30 a.m. and 2:30 p.m. within the project site and a 300-foot buffer (survey area). Most portions of the survey area were covered on foot. However, small portions that were difficult to access due to steep slopes or dense vegetation were observed using binoculars. The biologists mapped vegetation communities, recorded vegetation and habitat characteristics, and noted wildlife and plant species apparent at the time of the survey. A supplemental site visit was conducted on February 15, 2019 by Brian Parker to refine the vegetation map and survey additional habitat within the San Diego River channel. Table 1 shows the survey dates, times, and weather conditions.

All plant and animal species apparent at the time of the survey were recorded. Plants were visually identified in the field, and wildlife species were identified visually with the aid of binoculars or aurally based on identification of calls. Mammals were identified by direct visual observation or observation of scat, tracks, or burrows. Nomenclature in this report follows the Jepson Online Interchange (Jepson Flora Project 2019) and Rebman and Simpson (2014), for common plants, Sunset Western Garden Book (Brenzel 2001) for

ornamental species, CNDDDB (CDFW 2019a) for sensitive plant species, San Diego Natural History Museum (2002) for moths and butterflies, Crother et al. (2017) for amphibians and reptiles, American Ornithological Society (2019) and Unitt (2004) for birds, and Bradley et al. (2014) and Baker et al. (2003) for mammals.

Table 1 Survey Dates, Personnel, Times, and Weather Conditions				
Date	Survey Description	Surveyor	Beginning Time and Conditions	Ending Time and Conditions
General Biological Survey				
04/19/2017	Vegetation Mapping, Plant and Animal Inventory	Brian Parker Andrew Smisek	08:30 a.m.; 71°F; winds 0–1 mph; 85% cloud cover	2:30 p.m.; 81°F; winds 3–5 mph; 60% cloud cover
02/15/2019	Supplemental Vegetation Mapping*	Brian Parker Andrew Smisek	11:00 a.m.; 65°F; winds 0–2 mph; 85% cloud cover	2:00 p.m.; 68°F; wind 0–2 mph; 85% cloud cover
Coastal California Gnatcatcher Surveys				
02/13/2019	Survey 1, Area A	Mandy Weston	6:30 a.m.; 48°F; winds 0–2 mph; 100% cloud cover	9:15 a.m.; 60°F; winds 0–2 mph; 100% cloud cover
02/22/2019	Survey 1, Area B	Mandy Weston	9:00 a.m.; 48°F; winds 1–2 mph; 0% cloud cover	10:00 a.m.; 49°F; winds 1–2 mph; 0% cloud cover
02/22/2019	Survey 2, Area A	Mandy Weston	6:30 a.m.; 36°F; winds 1–2 mph; 0% cloud cover	8:45 a.m.; 48°F; winds 1–2 mph; 0% cloud cover
03/05/2019	Survey 2, Area B	Beth Procsal	7:45 a.m.; 48°F; winds 0–1 mph; 0% cloud cover	10:00 a.m.; 60°F; winds 0–1 mph; 0% cloud cover
03/05/2019	Survey 3, Area A	Beth Procsal	10:00 a.m.; 60°F; winds 0–1 mph; 0% cloud cover	10:15 a.m.; 61°F; winds 0–1 mph; 0% cloud cover
3/14/2019	Survey 3, Area B	Mandy Weston	9:30 a.m.; 60°F; winds 0–2 mph; 0% cloud cover	10:30 a.m.; 62°F; winds 0–2 mph; 0% cloud cover
Quino Checkerspot Butterfly Surveys				
02/15/2019	Habitat Assessment*	Brian Parker	11:00 a.m.; 65°F; winds 0–2 mph; 85% cloud cover	2:00 p.m.; 68°F; winds 0–2 mph; 85% cloud cover
02/24/2019	Survey 1	Brian Parker Andrew Smisek	11:20 a.m.; 64°F; winds 0–1 mph; 5% cloud cover	2:30 p.m.; 68°F; winds 1–3 mph; 0% cloud cover
02/28/2019	Survey 2	Brian Parker	12:10 p.m.; 74°F; winds 0–2mph; 65% cloud cover	2:50 p.m.; 75°F; winds 2–4 mph; 40% cloud cover
03/05/2019	Survey 3	Brian Parker	11:15 a.m.; 75°F; winds 2–5 mph; 50% cloud cover	1:50 p.m.; 79°F; winds 4–6 mph; 70% cloud cover
03/14/2019	Survey 4	Brian Parker	12:10 p.m.; 69°F; winds 2–4 mph; 0% cloud cover	2:50 p.m.; 75°F; winds 3–5 mph; 0% cloud cover
03/19/2019	Survey 5	Brian Parker	11:00 a.m.; 66°F; winds 1–2 mph; 5% cloud cover	1:45 p.m.; 74°F; winds 6–8 mph; 1% cloud cover
03/26/2019	Survey 6	Alex Fromer	11:30 a.m.; 73°F; winds 1–2 mph; 100% cloud cover	2:20 p.m.; 82°F; winds 0–2 mph; 90% cloud cover

Table 1
Survey Dates, Personnel, Times, and Weather Conditions

Date	Survey Description	Surveyor	Beginning Time and Conditions	Ending Time and Conditions
04/02/2019	Survey 7	Brian Parker	11:30 a.m.; 70°F; winds 3–6 mph; 10% cloud cover	2:00 p.m.; 76°F; winds 4–6 mph; 0% cloud cover
04/09/2019	Survey 8	Brian Parker	11:30 a.m.; 76°F; winds 0–2 mph; 20% cloud cover	2:00 p.m.; 79°F; winds 4–6 mph; 30% cloud cover
04/19/2019	Survey 9	Brian Parker	10:30 a.m.; 78°F; winds 2–4 mph; 50% cloud cover	1:00 p.m.; 85°F; winds 2–4 mph; 10% cloud cover
04/23/2019	Survey 10	Brian Parker	10:00 a.m.; 67°F; winds 0–2 mph; 10% cloud cover	12:40 p.m.; 82°F; winds 4–6 mph; 0% cloud cover
05/01/2019	Survey 11	Brian Parker	11:00 a.m.; 66°F; winds 3–5 mph; 5% cloud cover	1:30 p.m.; 72°F; winds 0–2 mph; 5% cloud cover
05/07/2019	Survey 12a	Brian Parker	1145 a.m.; 70°F; winds 0–1 mph; 100% cloud cover	1:30 p.m.; 69°F; winds 0–2 mph; 100% cloud cover**
05/10/2019	Survey 12b	Brian Parker	11:35 a.m.; 70°F; winds 0–2 mph; 95% cloud cover	12:35 p.m.; 70°F; winds 1–3 mph; 90% cloud cover
Least Bell's Vireo Surveys†				
05/02/2019	Survey 1	Ryan Quilley	7:15 a.m.– 9:35 a.m.; 57–63°F; winds 1–4 mph; 70–100% cloud cover; no precipitation	
05/17/2019	Survey 2	Ryan Quilley	7:15 a.m.– 9:35 a.m.; 56–61°F; winds 0–3 mph; 80% cloud cover; no precipitation	
05/28/2019	Survey 3	Ryan Quilley	7:15 a.m.– 9:35 a.m.; 57–60°F; winds 0–1 mph; 0% cloud cover; no precipitation	
06/07/2019	Survey 4	Ian Maunsell	7:15 a.m.– 9:35 a.m.; 63–65°F; winds 0–1 mph; 100% cloud cover; no precipitation	
06/18/2019	Survey 5	Ian Maunsell	7:15 a.m.– 9:35 a.m.; 65–70°F; winds 0–3 mph; 20–85% cloud cover; no precipitation	
07/02/2019	Survey 6	Ian Maunsell	7:15 a.m.– 9:35 a.m.; 62–72°F; winds 0–2 mph; 0–75% cloud cover; no precipitation	
07/12/2019	Survey 7	Ian Maunsell	7:15 a.m.– 9:35 a.m.; 62–72°F; winds 0–4 mph; 0% cloud cover; no precipitation	
07/23/2019	Survey 8	Seth Reimers	7:15 a.m.– 9:35 a.m.; 70–76°F; winds 1–3 mph; 60–90% cloud cover; no precipitation	
°F = degrees Fahrenheit; mph = miles per hour; % = percent				
*Supplemental vegetation mapping and Quino checkerspot butterfly habitat assessment were conducted concurrently				
**Survey 12a terminated at 1:30 p.m. when temperature dropped below 70°F.				
†Weather conditions from Blackhawk's least Bell's vireo surveys report (Blackhawk 2019) were presented as a range, without start/end parameters.				

1.3.3 Quino Checkerspot Butterfly Surveys

RECON biologist Brian Parker (USFWS Permit TE-797665) conducted a habitat assessment of the project site on February 15, 2019 to identify suitable habitat for the Quino checkerspot butterfly (*Euphydryas editha quino*; QCB), as defined in the USFWS survey guidelines and the QCB Recovery Plan (USFWS 2014 and 2003, respectively). Based

on the habitat assessment, 22.52 acres were determined potentially suitable for QCB and were surveyed weekly in accordance with the QCB Survey Guidelines (USFWS 2014), beginning the third week of February and ending the second Saturday in May. Table 1 shows the dates, times, and weather conditions for each of the surveys. Additional details on the survey methods are presented in the QCB survey report (RECON 2019a; Attachment 5).

1.3.4 Coastal California Gnatcatcher Surveys

RECON biologists Mandy Weston and Beth Procsal conducted focused surveys for the coastal California gnatcatcher (*Polioptila californica californica*) under USFWS 10(a)(1)(A) permit TE-797665 in accordance with USFWS presence/absence survey protocol for the species (1997). All bird species observed during the surveys were noted. Each survey area was surveyed no sooner than seven days after the previous survey. Survey dates, personnel, times, weather conditions, and acres surveyed per hour are provided in Table 1. Additional details of the survey methods are presented in the protocol survey report (RECON 2019b; Attachment 6).

1.3.5 Least Bell's Vireo Surveys

Focused least Bell's vireo surveys were performed by Blackhawk Environmental (Blackhawk) biologists Ryan Quilley, Ian Maunsell, and Seth Reimers between May 1 and July 23, 2019. Survey methods followed the latest accepted protocols of the USFWS (2001), as detailed in the protocol survey report (Blackhawk 2019; Attachment 7).

1.4 Environmental Setting

The project site consists primarily of existing roadways, single- and multi-family residential developments, a high school, a public park and BMX track, several private ranches, as well as undeveloped areas along the San Diego River channel and adjacent hillsides. Elevations range from 400 feet above mean sea level just south of the San Diego River channel to 680 feet above mean sea level on the hill in the southern portion of the site. The project site occurs in a largely developed area, with a high school, public park and BMX track, and equestrian facilities to the west; single-family residences, a County Department of Public Works maintenance facility and a horse ranch to the east; and multi-family residential and small commercial developments to the south. Small patches of undeveloped land occur along the hill in the eastern portion of the project site and a large expanse of undeveloped land extends north and east from the northern portion of the project site.

Seven soil series are mapped within the project site: Cienega very rocky coarse sandy loam, Fallbrook-Vista sandy loams, Grangeville fine sandy loam, Ramona sandy loam, Riverwash, Tujunga sand, and Visalia sandy loam (Figure 4; U.S. Department of Agriculture 1973).

Much of the project site has been developed or previously graded. Small access roads appear to have been previously graded along the west-facing slope for accessing orchard trees.



Soil Types

- 1 - Cienega very rocky coarse sandy loam, 30 to 75 percent slopes
- 2 - Fallbrook-Vista sandy loams, 15 to 30 percent slopes
- 3 - Grangeville fine sandy loam, 0 to 2 percent slopes

- 4 - Ramona sandy loam, 5 to 9 percent slopes
- 5 - Riverwash
- 6 - Tujunga sand, 0 to 5 percent slopes
- 7 - Visalia sandy loam, 0 to 2 percent slopes
- Project Site

FIGURE 4
Soil Types
Ashwood Street Corridor Improvements Project

1.4.1 Regional Context

The project occurs within the Lakeside Community Plan area and the Metro-Lakeside-Jamul segment within the South County subarea of the County MSCP (County of San Diego 1997). The County prepared the MSCP Subarea Plan to guide implementation of the MSCP Plan in the South County, including the area of this project. Under the MSCP, the project site contains portions that have been mapped as Pre-Approved Mitigation Areas (PAMAs) and portions of the site meet criteria as a Biological Resource Core Area (BRCA), as defined in the BMO (County of San Diego 2010b; Figure 5). A description of the BRCA mapping for this project is provided in Section 1.5.3.

In addition to these MSCP designations, a majority of the site is identified by the USFWS as Quino checkerspot butterfly recommended survey area (USFWS 2014) and the portion along San Diego River is arroyo toad (*Anaxyrus californicus*) final critical habitat (USFWS 2011). The San Diego River channel crosses the survey area north of Cactus County Park. The river channel would be considered jurisdictional by the U.S. Army Corps of Engineers (ACOE), Regional Water Quality Control Board (RWQCB), and CDFW.

1.4.2 Habitat Types/Vegetation Communities

A total of 11 vegetation communities occur within the survey area (Table 2, see Figures 6a–6c). A brief description of each community, including the dominant plant species observed, is provided below. The acreage of each community within the project site and the survey area (project site plus 300 feet) is summarized in Table 2.

Table 2 Vegetation Communities within the Survey Area (acres)*			
Vegetation Community (Holland Code as modified by Oberbauer et al. 2008)	BRCA	Non- BRCA	Total
Tier I			
Southern Riparian Scrub (63300)	1.08	--	1.08
Mule Fat Scrub (63320)	0.40	0.01	0.41
Southern Riparian Woodland (62500)	3.22	--	3.22
Coast Live Oak Woodland (71160)	0.13	0.21	0.34
Tier II			
Diegan Coastal Sage Scrub (32500)	25.42	2.05	27.47
Tier III			
Non-native Grassland (42200)	0.85	--	0.85
Tier IV			
Non-Native Woodland (79000)	0.03	0.05	0.08
Eucalyptus Woodland (79100)	0.67	2.09	2.76
Disturbed Habitat (11300)	14.44	8.00	22.44
Agriculture (18200)	--	20.02	20.02
Urban/Developed (12000)	4.31	89.85	94.16
Total	50.55	122.28	172.83
BRCA = biological resource core area *Numbers subject to rounding			

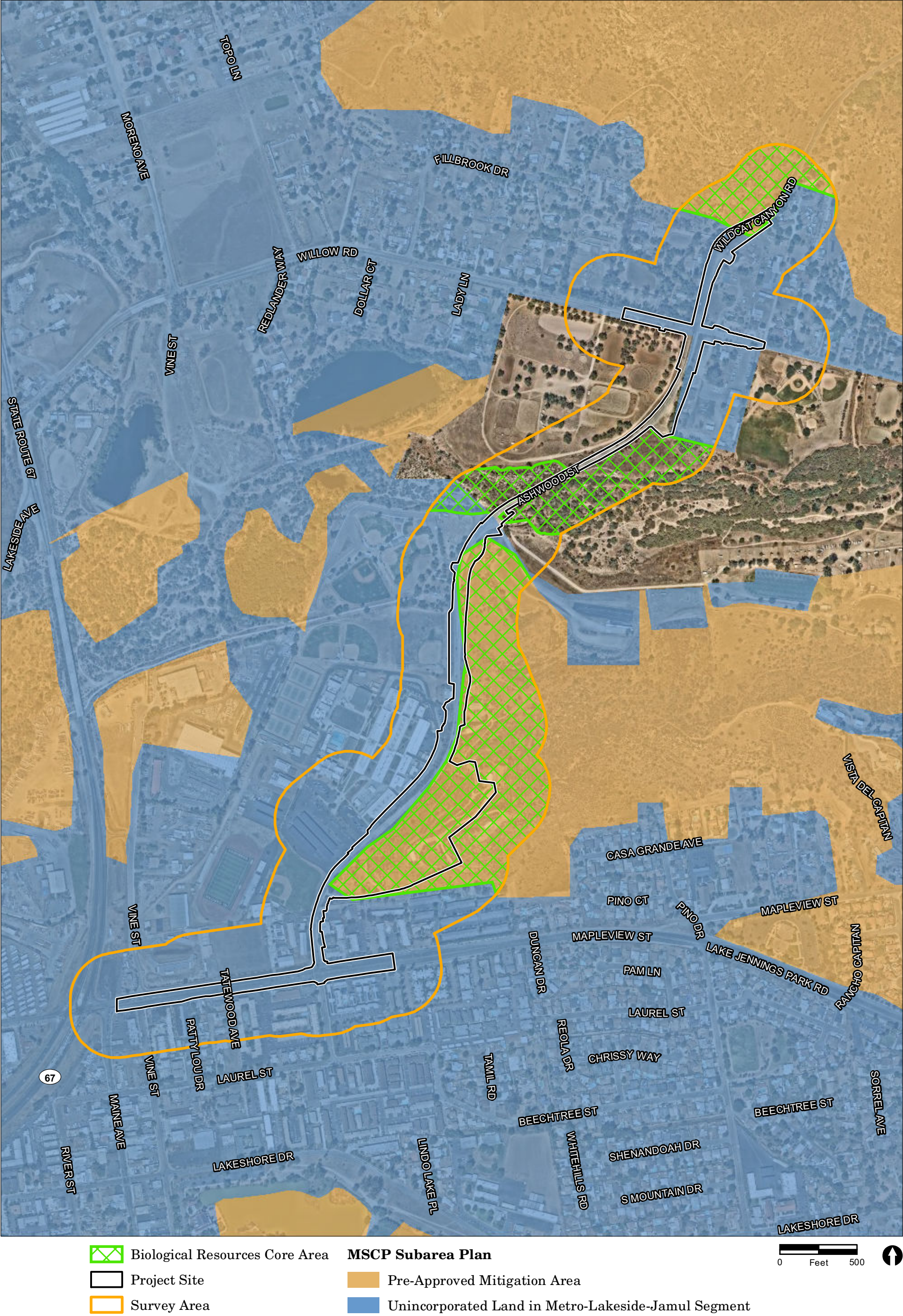
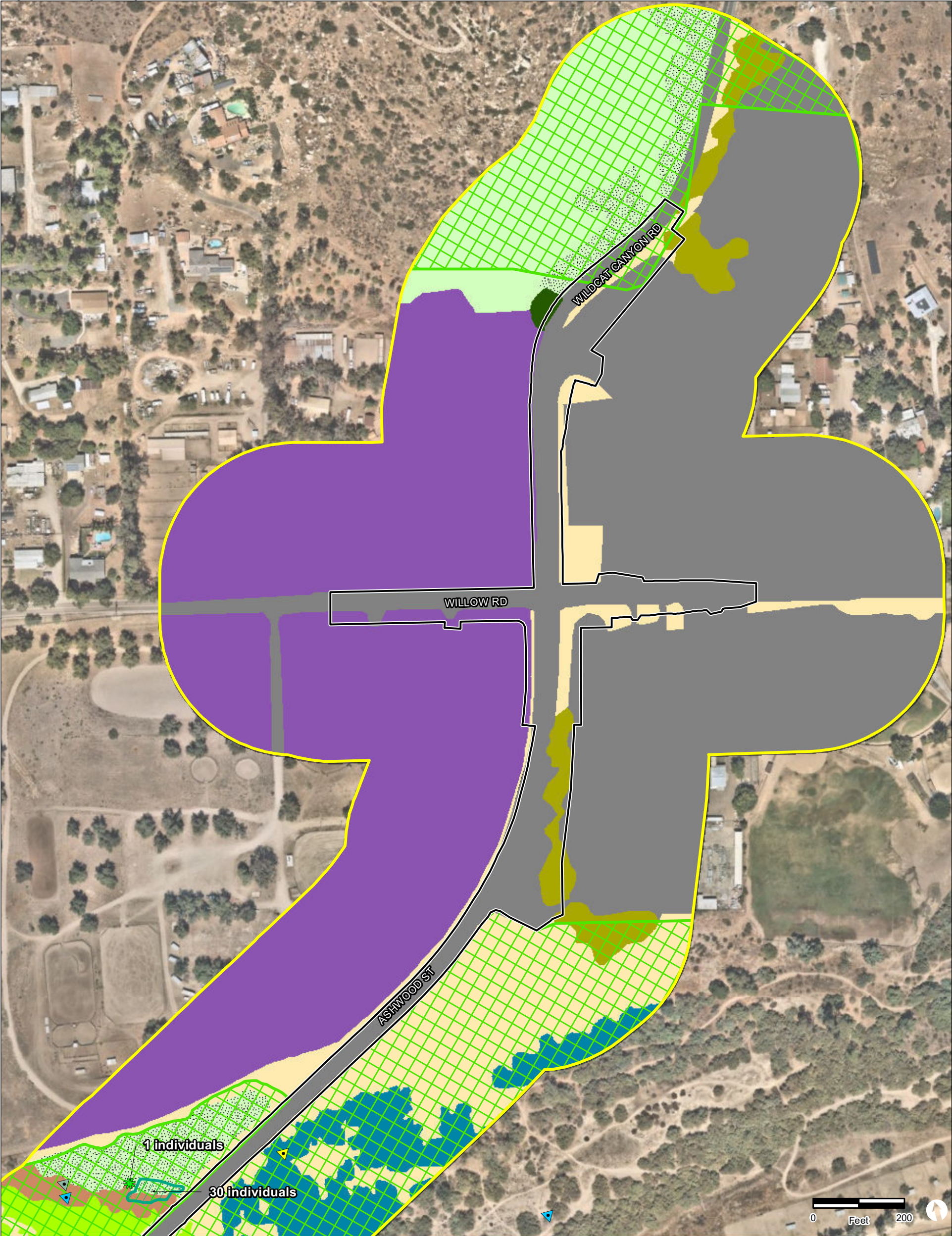


FIGURE 5
MSCP Preserve Area
Ashwood Street Corridor Improvements Project

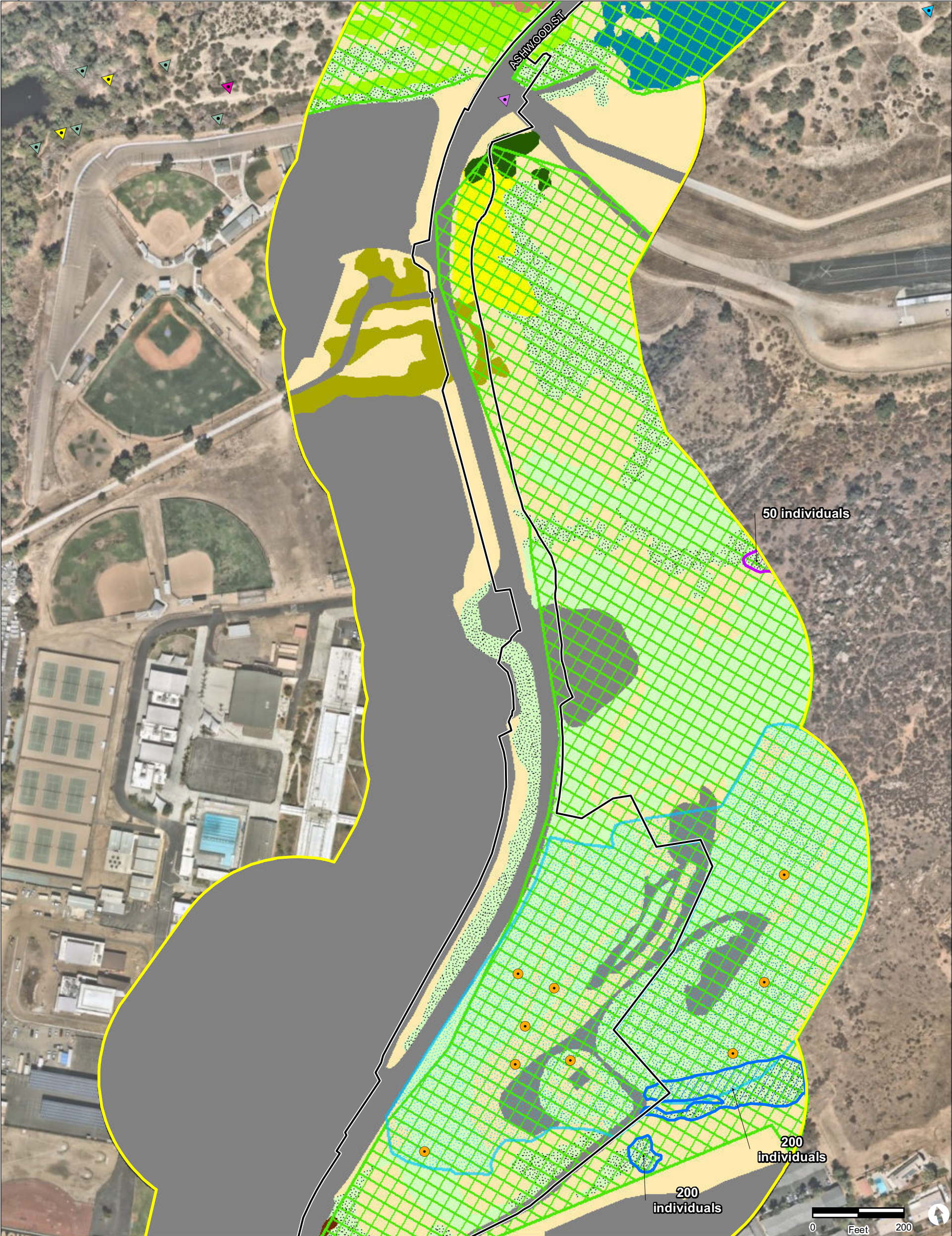


- Project Site
- Survey Area
- Biological Resource Core Area
- Species Observations***
- Least Bell's Vireo
- Western Bluebird
- Yellow Warbler

- Vegetation Communities**
- Agriculture
- Coast Live Oak Woodland
- Diegan Coastal Sage Scrub
- Diegan Coastal Sage Scrub - Disturbed
- Disturbed Habitat
- Mule Fat Scrub
- Non-native Woodland
- Southern Riparian Scrub
- Southern Riparian Woodland
- Urban/Developed

- Sensitive Species**
- San Diego Sagewort
(*Artemisia palmeri*)
- San Diego Marsh-elder
(*Iva haresiana*)

FIGURE 6a
Existing Biological Resources
Ashwood Street Corridor Improvements Project



- Project Site
- Survey Area
- Biological Resource Core Area
- Species Observations*
- Cooper's Hawk
- Least Bell's Vireo
- Turkey Vulture
- Western Bluebird
- Yellow Warbler

- Vegetation Communities
- Coast Live Oak Woodland
- Diegan Coastal Sage Scrub
- Diegan Coastal Sage Scrub - Disturbed
- Disturbed Habitat
- Eucalyptus Woodland
- Mule Fat Scrub
- Non-native Grassland
- Non-native Woodland
- Southern Riparian Scrub
- Southern Riparian Woodland
- Urban/Developed

- Sensitive Species
- Coastal California Gnatcatcher
(*Polioptila californica californica*)
- Coastal California Gnatcatcher Use Area
- Delicate Clarkia
(*Clarkia delicata*)
- San Diego County Viguiera
(*Bahiopsis laciniata*)

*Surveyed by Blackhawk Environmental

FIGURE 6b

Existing Biological Resources

Ashwood Street Corridor Improvements Project



- Project Site
- Survey Area
- Biological Resource Core Area

- Vegetation Communities**
- Diegan Coastal Sage Scrub
 - Diegan Coastal Sage Scrub - Disturbed
 - Disturbed Habitat
 - Eucalyptus Woodland
 - Mule Fat Scrub
 - Urban/Developed

- Sensitive Species**
- Coastal California Gnatcatcher (*Polioptila californica californica*)
 - Coastal California Gnatcatcher Use Area
 - San Diego County Viguiera (*Bahiopsis laciniata*)

FIGURE 6c
Existing Biological Resources
Ashwood Street Corridor Improvements Project

Southern Riparian Scrub

Southern riparian scrub is a dense riparian community dominated by broad-leaved, winter-deciduous willow (*Salix* spp.) and other wetland-associated shrubs. This plant community is typically found along drainages, in loose, sandy, or fine gravelly alluvium. This community often experiences repeated flooding or other disturbance, which prevents succession to riparian woodland (Oberbauer 2008). Southern riparian scrub is considered an MSCP Tier I vegetation community (County of San Diego 1997). Within the survey area, this vegetation community occurs within the San Diego River, with the majority occurring on the west side of Ashwood Street, and a small patch on the east side of Ashwood Street (see Figures 6a and 6b). This vegetation community is dominated by Goodding's black willow (*Salix gooddingii*), arroyo willow (*Salix lasiolepis*), blue elderberry (*Sambucus nigra*), mule fat (*Baccharis salicifolia*), poison oak (*Toxicodendron diversilobum*), and Peruvian pepper tree (*Schinus molle*).

Mule Fat Scrub

Mule fat scrub is a tall herbaceous riparian scrub dominated by mule fat. Similar to southern riparian scrub, this vegetation community is maintained by repeated flooding or other disturbance to prevent succession to riparian woodland (Oberbauer 2008). Mule fat scrub is considered an MSCP Tier I vegetation community (County of San Diego 1997). Within the survey area, mule fat scrub occurs primarily within the San Diego River, adjacent to the southern riparian scrub (see Figure 6b). In addition to mule fat, this vegetation community also contains a number of San Diego marsh-elder (*Iva hayesiana*) in the understory. A patch also occurs toward the southern end of the survey area as a small patch of mule fat adjacent to Ashwood Street (see Figures 6a-6c).

Southern Riparian Woodland

Southern riparian woodland is a moderately dense riparian woodland community that contains a majority of small trees and shrubs with a sparse density of tall, riparian trees (Oberbauer et al. 2008). This community typically occurs in larger river and tributary systems throughout southern California, often in areas with moderate levels of flooding or scour. Southern riparian woodland is considered an MSCP Tier I vegetation community (County of San Diego 1997). Within the survey area, southern riparian woodland occurs within the 300-foot buffer east of Ashwood Street, within the San Diego River (see Figures 6a and 6b). It is composed of a combination of native trees including Fremont cottonwood (*Populus fremontii*), western sycamore (*Platanus racemosa*), and Goodding's black willow, and contains a mix of native and non-native shrubs and herbaceous species in the understory. Southern riparian scrub extends northeast beyond the survey area up the San Diego River.

Coast Live Oak Woodland

Coast live oak woodland occurs on the coastal slopes of southern California, and in San Diego it is typically found on north-facing slopes and shaded ravines below 4,000 feet

(Holland 1986). It is dominated by mature coast live oak (*Quercus agrifolia*), often with a poorly developed shrub understory. Coast live oak woodland is considered an MSCP Tier I vegetation community (County of San Diego 1997). Within the survey area, coast live oak woodland occurs as a patch of five mature coast live oaks just south of the entrance to the Ron Smith Memorial RC Park, on the east side of Ashwood Street. The understory in this area is characterized by non-native grasses and forbs (see Figures 6a and 6b).

Diegan Coastal Sage Scrub

Diegan coastal sage scrub consists of low-growing, aromatic, drought-deciduous soft-woody shrubs that have an average height of up to four feet. Diegan coastal sage scrub is found in coastal areas from Los Angeles County south into Baja California, Mexico (Oberbauer et al. 2008). Diegan coastal sage scrub is considered an MSCP Tier II vegetation community (County of San Diego 1997).

The Diegan coastal sage scrub on the large hill in the southern portion of the survey area is characterized by California sagebrush (*Artemisia californica*) and California buckwheat (*Eriogonum fasciculatum*), with scattered deerweed (*Acmispon glaber*), laurel sumac (*Malosma laurina*) and blue elderberry. The understory in this area supports an abundance of native wildflowers such as cryptantha (*Cryptantha* sp.), popcorn flower (*Plagiobothrys* sp.), sun cups (*Camissoniopsis* sp.), common fiddleneck (*Amsinckia menziesii*), and farinose ground pink (*Linanthus dianthiflorus*; see Figures 6b and 6c).

The Diegan coastal sage scrub on the hill in the northern portion of the survey area consists of scattered laurel sumac, California buckwheat, and San Diego viguiera, with approximately 70 percent cover by non-native grasses, including slender wild oat (*Avena barbata*), ripgut grass (*Bromus diandrus*), crimson fountain grass (*Pennisetum setaceum*), and Sahara mustard (*Brassica tournefortii*). As a result of the high proportion of non-native species, the Diegan coastal sage scrub in this area is characterized as disturbed (see Figure 6a).

Diegan coastal sage scrub also occurs on the low-lying areas outside the main channel of the San Diego River on both sides of Ashwood Street in the central portion of the survey area. The Diegan coastal sage scrub on the west side of Ashwood Street consists of several open patches of broom baccharis (*Baccharis sarothroides*), California buckwheat, laurel sumac, and mule fat, with abundant non-native annuals in the openings between shrubs. Non-natives in this area include red brome (*Bromus madritensis* ssp. *rubens*), rattail sixweeks grass (*Festuca myuros*), and tocalote (*Centaurea melitensis*). On the east side of Ashwood Street, most of the Diegan coastal sage scrub occurs in what appears to be a historically graded area associated with an old road alignment and historic bridge over the river. As a result of the high proportion of non-natives and historic disturbance, the Diegan coastal sage scrub in these areas is characterized as disturbed (see Figure 6b).

A narrow strip of Diegan coastal sage scrub occurs between the west side of Ashwood Street and developed portions of the high school. This area supports native shrubs like broom baccharis and California buckwheat, as well as abundant non-native species such as tree

tobacco (*Nicotiana glauca*), fountain grass, short-pod mustard (*Hirschfeldia incana*), and Russian thistle (*Salsola tragus*). As this narrow strip of vegetation is surrounded by development and has a high proportion of non-native species, it is characterized as disturbed Diegan coastal sage scrub (see Figures 6b and 6c).

Non-native Grassland

Non-native grassland is characterized by a sparse to dense cover of annual grasses reaching up to three feet in height. Typically, non-native grasses comprise at least 50 percent of the herbaceous layer, often intermixed with other native or non-native annual forbs. Generally, vegetation in non-native grasslands is dead through the summer and fall (Oberbauer et al. 2008). Although it is dominated by non-native species, this vegetation community is considered a sensitive MSCP Tier III habitat (County of San Diego 1997), because it can be potential habitat for numerous native wildlife invertebrates, reptiles, and mammals, and can provide foraging habitat for raptors. Non-native grassland occurs on a west-facing slope just east of Ashwood Street and south of the coast live oak woodland described above (see Figure 6b). It is dominated by non-native grasses such as slender wild oat and bromes (*Bromus* sp.).

Non-native Woodland

Non-native woodland is dominated by exotic trees, which may have been intentionally planted but do not require maintenance or artificial irrigation (Oberbauer et al. 2008). Although characterized by exotic species, this community can include trees that provide suitable nesting habitat for raptors and other birds. Non-native woodland would be considered an MSCP Tier IV vegetation community because it does not support native vegetation (County of San Diego 1997). Within the survey area, this vegetation community occurs on both sides of Ashwood Street in association with, and adjacent to, Cactus County Park where it is dominated by Peruvian pepper tree. It also occurs in association with the residences within the northern portion of the survey area where it is composed of a variety of non-native trees (see Figures 6a and 6b).

Eucalyptus Woodland

Eucalyptus woodland is characterized by tall, exotic, gum trees (*Eucalyptus* sp.) that originated in Australia. It is common in urban areas and the coastal plains. It often forms monotypic stands with little or no shrubby understory due to the frequent shedding of bark and large amounts of leaf litter, which have chemical characteristics that can limit growth of other plants in the understory (Oberbauer et al. 2008). Naturalized eucalyptus woodland can be harmful to native vegetation because it can displace native species. Eucalyptus woodland would be considered an MSCP Tier IV vegetation community because it does not support native vegetation (County of San Diego 1997). Within the survey area, two very small patches of eucalyptus woodland occur in association with private land in the southern portion along Ashwood Street (see Figures 6b and 6c).

Disturbed Habitat

Disturbed habitat consists of areas that have been previously disturbed by human activities and no longer function as a native or naturalized vegetation community. Such areas include previously graded lands such as fire breaks, off-road vehicle trails, and construction staging sites (Oberbauer et al. 2008). Vegetation in such areas is typically dominated by opportunistic non-native species. Disturbed habitat is considered an MSCP Tier IV species (County of San Diego 1997). Within the survey area, this vegetation community occurs in strips and patches that have been previously graded for access roads and building pads, respectively (see Figures 6a–6c). It also occurs in areas where non-native annual species, such as mustards (*Hirschfeldia incana* and *Brassica* sp.) and filaree (*Erodium* sp.), dominate.

Agriculture

Areas mapped as agriculture within the survey area include the ranches and equestrian facilities near the intersection of Willow Road and Ashwood Street (see Figure 6a). These areas have been compacted through years of use and consist of bare areas used for horse pens, paddocks and training areas, mixed with sparsely vegetated areas of ruderal plants. The agricultural areas are also planted with a number of gum and Peruvian pepper trees. Dominant ruderal species in the agricultural areas include Russian thistle, filaree, and non-native grasses.

Urban/Developed Land

Urban/developed land covers over half of the survey area and is mapped where there are paved roads, buildings, or maintained, ornamental, or landscaped vegetation. Within the survey area, this includes numerous paved roads, El Capitan High School and associated facilities, numerous single- and multi-family residences, the off-road bicycle track and ballfields at Cactus County Park and the Matt La Chappa Field, a County Department of Public Works maintenance facility, as well as landscaping associated with these facilities. Urban/developed land occurs throughout the survey area (see Figures 6a–6c).

1.4.3 Flora

A total of 154 plant species were recorded within the survey area, including 93 native species and 61 non-native species. The flora within the survey area includes a mix of ruderal and ornamental species typical in developed or agricultural land uses, as well as native annual shrubs, trees, and wildflowers typical of intact native habitats. The overall floral diversity of the project site is high, which would be expected given the mix of developed and agricultural land uses mixed with rugged hillsides and the San Diego River. A list of all plant species observed within the survey area is included as Attachment 1.

1.4.4 Fauna

A total of 70 animal species were observed or detected within the survey area, including 19 invertebrate, 5 reptile, 42 bird, and 4 mammal species. The majority of the native

species recorded were found in either the Diegan coastal sage scrub or southern riparian woodland habitats. No large mammals were detected during the surveys; however, southern mule deer is expected to occur in the surrounding areas and may be an infrequent visitor within the coastal sage scrub or southern riparian woodland habitats within the survey area. The site also provides nesting and foraging habitat for migratory birds and raptors. A list of all animal species detected within the survey area is included as Attachment 2.

1.4.5 Sensitive Plant Species

Four sensitive plant species were observed during the general biological survey: delicate clarkia (*Clarkia delicata*), San Diego sagewort (*Artemisia palmeri*), San Diego marsh-elder, and San Diego viguiera (*Bahiopsis laciniata*). These and five additional sensitive plant species have been historically recorded within one mile of the site (CDFW 2019a) and are discussed in Attachment 3.

- Delicate clarkia – Approximately 50 delicate clarkia plants were observed in Diegan coastal sage scrub on the large hillside east of Ashwood Street. None were observed within the project site.
- San Diego sagewort – One individual was observed within mule fat scrub in the San Diego River channel to the west of Ashwood Street, outside the project site.
- San Diego marsh-elder – Approximately 30 individuals were observed within mule fat scrub and Diegan coastal sage scrub in the San Diego River channel to the west of Ashwood Street, outside the project site.
- San Diego viguiera – Approximately 200 San Diego viguiera shrubs were observed in Diegan coastal sage scrub on the large hill east of Ashwood Street within the 300-foot buffer and within a small portion of the project site. The locations of these observations are depicted in Figures 6b–6c.

1.4.6 Sensitive Animal Species

Nine sensitive wildlife species were observed within the survey during: Belding's orange-throated whiptail (*Aspidoscelis hyperythra beldingi*), turkey vulture (*Cathartes aura*), red-shouldered hawk (*Buteo lineatus*), Cooper's hawk (*Accipiter cooperii*), least Bell's vireo, coastal California gnatcatcher, western bluebird (*Sialia mexicana*), yellow warbler (*Setophaga petechia*), and yellow-breasted chat (*Icteria virens*). The following 16 other sensitive wildlife species have moderate or high potential to occur within the survey area: western spadefoot toad (*Spea hammondi*), Blainville's horned lizard (*Phrynosoma blainvillii*), Coronado skink (*Eumeces skiltonianus interparietalis*), San Diego legless lizard (*Anniella stebbinsi*), San Diego banded gecko (*Coleonyx variegatus abbotti*), California glossy snake (*Arizona elegans occidentalis*), rosy boa (*Lichanura orcutti*), coast patch-nosed snake (*Salvadora hexalepis virgulata*), red-diamond rattlesnake (*Crotalus ruber*), white-tailed kite (*Elanus leucurus*), common barn owl (*Tyto alba pratincola*), southern California

rufous-crowned sparrow (*Aimophila ruficeps canescens*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), San Diego desert woodrat (*Neotoma lepida intermedia*), and southern mule deer (*Odocoileus hemionus fuliginata*). Each of these species is discussed individually, below. Two sensitive bird species—double-crested cormorant (*Phalacrocorax auritus albociliatus*) and American white pelican (*Pelecanus erythrorhynchos*)—were detected flying over the project site, but are not expected to use habitat within the survey area. These two species are only addressed in Attachment 4.

Species Observed

Belding's orange-throated whiptail. Belding's orange-throated whiptail is a CDFW species of special concern and a County Group 2 species (CDFW 2019b; County of San Diego 2010c). This species ranges from the coast to the Peninsular mountain ranges from Orange and southwestern San Bernardino counties to the tip of Baja California, Mexico (Stebbins 2003). It occurs in a variety of habitats and is most common in sandy areas of low, open sage scrub or chaparral, particularly where there is California buckwheat, sage (*Salvia* spp.), or chamise (*Adenostoma fasciculatum*; Lemm 2006). This species feeds primarily on termites (*Reticulitermes* sp.), which comprises 86 percent or more of the lizard's diet (Bostic 1966). It is active during spring and summer, but is largely dormant during the fall and winter, when temperatures drop (Jennings and Hayes 1994). Breeding occurs from May through July. This species was observed multiple times within the Diegan coastal sage scrub on the large hill east of Ashwood Street. It is assumed present throughout the sage scrub within the survey area, including within the project site.

Turkey vulture. Turkey vulture is a County Group 2 species, but has no state or federal listing status (County of San Diego 2010c). It is a widespread species that occurs from southern Canada to southernmost South America (Kirk 1998). It is almost exclusively a scavenger and is a mostly solitary forager. It forages primarily over farmland, pasture, grassland, and other open habitats with abundant carrion close to woodlands areas (Kirk 1998). Nesting occurs in large rock outcrops, on cliff ledges, in hollow trees, and in abandoned buildings (Kirk 1998). Threats include collisions, electrocution, shooting, and the ingestion of lead shot and pesticides from their food.

Turkey vulture was observed flying over the survey area several times during biological surveys. It is likely to forage over the equestrian facilities and ranch, as well as the disturbed habitat, non-native grassland, and openings in Diegan coastal sage scrub throughout the survey area, including within the project site; however, it is not expected to nest within the survey area.

Red-shouldered hawk. Red-shouldered hawk is a County Group 2 species, but has no state or federal listing status (County of San Diego 2010c). In western North America, it occurs primarily on the coast, from southern Oregon south into Baja California, Mexico (Dykstra et al. 2008). It occurs mostly in oak and riparian woodland habitats, but is also found in eucalyptus groves and suburban areas (Dykstra et al. 2008). It feeds on a variety of prey, including small mammals, frogs, and snakes.

Red-shouldered hawk was observed flying over the site, but did not land. There is suitable foraging habitat within open coastal sage scrub, grassland, and disturbed areas throughout the survey area and project site. Moderately suitable trees for nesting are present along the San Diego River, particularly in trees situated further away from Ashwood Street.

Cooper's hawk (nesting). Cooper's hawk is a CDFW Watch List species (nesting) and is a County Group 1 species (CDFW 2019b; County of San Diego 2010c). The Cooper's hawk's year-round range extends throughout most of the United States. Its wintering range extends south to Central America, and its breeding range extends north to southern Canada (Rosenfeld and Bielefeldt 1993). Breeding birds are widespread over San Diego County's coastal slope and most abundant in lowland and foothill canyons and in urban areas. It is a common breeder in both oak and willow riparian woodlands and urban environments, with eucalyptus trees used nearly as often as oaks (Unitt 2004). Additionally, this species has been known to nest within planted trees including pine, redwood, and avocado (Unitt 2004). Breeding occurs from March to June, and nests are typically located high in the tree but under the canopy. This hawk forages primarily on medium-sized birds but is also known to eat small mammals such as chipmunks and other rodents (Rosenfeld and Bielefeldt 1993). Although urbanization and loss of habitat have contributed to the decline of this species, the Cooper's hawk acclimation to city living has generously increased their numbers (Unitt 2004).

One Cooper's hawk was detected during the least Bell's vireo surveys (Blackhawk 2019; see Figure 6b and Attachment 7). While nesting activity was not observed, there is suitable nesting habitat in the large trees throughout the southern riparian woodland along the San Diego River. Foraging likely occurs within the Diegan coastal sage scrub, non-native grassland, and agricultural areas. It is not expected to nest in the eucalyptus woodland, which is located immediately adjacent to Ashwood Street in the southern portion of the survey area, as this location is subject to frequent disturbance from adjacent vehicular and pedestrian activity.

Least Bell's vireo. The least Bell's vireo is federally and state listed as endangered, an MSCP covered species, and a County Group 1 species (CDFW 2019c; County of San Diego 2010c). Its historical breeding range once extended from northwestern Baja California, Mexico, to interior northern California, as far north as Red Bluff in Tehama County, California (Franzreb 1989). The species is exclusively found in riparian habitats, including cottonwood–willow woodlands and forests, oak woodlands, and mule fat scrub, and requires dense canopy for foraging and a dense understory for nesting (Unitt 2004; USFWS 1998). Least Bell's vireos migrate to breed in San Diego County, arriving in mid-March and remaining until September or October. Populations are concentrated in the coastal lowlands of the County and are scattered within the foothills (Unitt 2004). Populations of least Bell's vireo have declined due to loss of riparian habitat from urban development, flood control, spread of invasive plant species such as giant reed (*Arundo donax*) and saltcedar (*Tamarix ramosissima*), and nest parasitism by brown-headed cowbird (*Molothrus ater*; USFWS 2009).

One least Bell's vireo breeding pair was detected and the breeding territory was mapped within 500 feet west of the project site based on observations made during focused surveys (Blackhawk 2019; see Figures 6a and 6b and Attachment 7). The pair formed one successful nest approximately 900 feet west of the project site, and later formed an unsuccessful nest approximately 700 feet west of the project site. One juvenile vireo was detected inside the 300-foot survey area, within open southern riparian scrub to the west of Ashwood Street. This juvenile was a dispersing individual and no breeding or courting behavior was observed. Although no least Bell's vireo nests or nesting behavior were detected within the 300-foot survey area, the patches of southern riparian scrub within about 50 to 100 feet on either side of Ashwood Street have sufficient dense, willow-dominated structure to provide somewhat suitable breeding habitat for the species. However, these patches are small and quality is reduced by proximity to the busy roadway. Based on these results, least Bell's vireos are likely dispersed through, but have low potential to nest within the survey area.

Coastal California gnatcatcher. The coastal California gnatcatcher is federally listed as threatened, a CDFW species of special concern, an MSCP covered species, and a County Group 1 species (CDFW 2019b, 2019c; County of San Diego 2010c). The coastal California gnatcatcher is a non-migratory, resident species found on the coastal slopes of southern California ranging from Ventura County southward through Los Angeles, Orange, Riverside, and San Diego counties into Baja California, Mexico (Atwood and Bontrager 2001; USFWS 2010). Coastal California gnatcatchers typically occur in or near mature coastal sage scrub habitat (Atwood and Bontrager 2001). This vegetation generally comprises low (less than 3 feet) shrub and sub-shrub species. This species' most commonly nests in California sagebrush, but also uses California buckwheat, California encelia (*Encelia californica*), and broom baccharis (Unitt 2004). Other habitats used by coastal California gnatcatcher include chaparral, grassland, and riparian scrub; disturbed habitats are used where they occur adjacent to sage scrub (Atwood and Bontrager 2001). The primary cause of decline in the coastal California gnatcatcher population is habitat loss from urban and agricultural development.

One breeding pair of coastal California gnatcatcher was observed in the coastal sage scrub on the large hill east of Ashwood Street during each of the three protocol survey visits (see Figures 6b-6c and Attachment 6). During each survey, coastal California gnatcatchers were observed foraging or quietly calling. Although nesting behavior was not specifically observed, the repeated observations of a single male and female indicate the presence of one breeding pair. The use area shown on Figure 6b was extrapolated from the sum of the mapped coastal California gnatcatcher observation points and includes 9.11 acres of Diegan coastal sage scrub within the project site and survey area, the majority of the coastal sage scrub habitat on the large hill east of Ashwood Street.

Western bluebird. The western bluebird is an MSCP covered species and a County Group 2 species (County of San Diego of San Diego 2010c). This species occurs throughout the year in foothills and mountains of San Diego County and is a resident of the inland parts of the coastal lowland (Unitt 2004). The western bluebird breeds in open woodlands of oaks, riparian deciduous trees, or conifers with herbaceous understory and, in winter, uses more open habitats (Unitt 2004). Nesting can occur from late March through late July and

generally occurs in cavities of trees or snags (Unitt 2004). Feeds primarily on insects, but may switch to fruits and seeds in the winter (Guinan et al. 2008). Threats include competition for nesting cavities from non-native European starlings (*Sturnus vulgaris*) and house sparrows (*Passer domesticus*), as well as brood parasitism from brown-headed cowbirds (Zeiner et al. 1988-1990; Truan 2003). Other threats to this species include loss of nesting habitat due to logging, fire suppression, and urbanization (Guinan et al. 2008).

A western bluebird nest was detected in a Fremont cottonwood tree in southern riparian scrub along the San Diego River approximately 150 feet west of Ashwood Street (see Figure 6a). Additional suitable nesting habitat is present within the southern riparian woodland to the east of Ashwood Street. An individual was also heard within riparian woodland along the San Diego River approximately 500 feet east of Ashwood Street, outside the survey area.

Yellow warbler. Yellow warbler is a CDFW species of special concern and a County of San Diego Group 2 species (CDFW 2019b; County of San Diego 2010c). It commonly breeds in San Diego County and is considered to be a rare winter visitor (Unitt 2004). This species is an obligate riparian species, nesting and foraging almost exclusively in mature riparian corridors on the coastal slopes and within the desert in San Felipe Valley (Unitt 2004). Shuford and Gardali (2008) describe yellow warblers as showing a high degree of site fidelity, with 60 to 64.5 percent of males and 32 to 44 percent of females returning to their previous year's territory. They are often observed in riparian habitat where surface water is evident, although it is not necessary. Nesting occurs from April (Unitt 2004) through early August, and nests are typically three to five feet from the ground (Lowther et al. 1999). This species is declining due to the loss of riparian habitat and as a result of nest parasitism by brown-headed cowbirds (Unitt 2004; Zeiner et al. 1988-1990).

Yellow warbler was observed during least Bell's vireo surveys (Blackhawk 2019; Attachment 7). One yellow warbler observation was made in the southern riparian woodland just east of Ashwood Street, and two observations were made outside the survey area, within riparian woodland approximately 800 to 900 feet west of Ashwood Street (see Figures 6a and 6b). Although nesting or breeding activities were not detected, this species is expected to nest within the habitat 800 to 900 feet west of Ashwood Street. It is not expected to nest within the survey area.

Yellow-breasted chat. Yellow-breasted chat is a CDFW species of special concern and a County of San Diego Group 1 species (CDFW 2019b; County of San Diego 2010c). Yellow-breasted chats arrive in San Diego County to breed in March and April, and leave as early as August, with most departing in September (Unitt 2004). Breeding occurs within dense brush or scrub along streams or marshy areas with dense riparian woodlands (Eckerle and Thompson 2001) particularly in the shrubby understory (Shuford and Gardali 2008). They are typically found on the coastal slope below 1,500 feet in elevation (Unitt 2004), as well as on the desert slope along large creeks such as Coyote Creek and San Felipe Creek (Unitt 2004). Destruction of riparian woodlands by development, other human activities, and brown-headed cowbird parasitism have contributed to the decline of the species (Shuford

and Gardali 2008). Due to this species' preference to use the understory for its breeding grounds, the chat is also susceptible to grazing impacts.

One yellow-breasted chat was detected during least Bell's vireo surveys in the open southern riparian scrub outside the survey area, approximately 450 feet west of Ashwood Street (Blackhawk 2019; see Attachment 7).

Species with Moderate or High Potential to Occur

Western spadefoot toad. The western spadefoot is a CDFW species of special concern and a County of San Diego Group 2 species (CDFW 2019b; County of San Diego 2010c). This species ranges from central northern California through the Coast Ranges from San Francisco south into Baja California, Mexico, at elevations from sea level to 4,500 feet (Stebbins 2003; Zeiner et al. 1988-1990). Habitat for the western spadefoot includes lowlands, washes, floodplains of rivers, alluvial fans, alkali flats, temporary ponds, and vernal pools. Although this species is generally found in areas of open vegetation with sandy or gravelly soil (Stebbins 2003), it has been observed in vernal pools containing clay soils on Otay Mesa. Surface activity can occur from October through April depending on rainfall, and oviposition occurs between late February and May (Jennings and Hayes 1994). The western spadefoot diet consists of crickets, butterflies, ants, flies, and earthworms (Morey and Gullin, as cited in Jennings and Hayes 1994). Decline in western spadefoot populations is primarily due to habitat loss and fragmentation, and possibly pesticide use. This species has moderate potential to occur in the sandy areas along the San Diego River channel, as well as the adjacent upland habitats within the survey area and project site.

Blainville's horned lizard. Blainville's horned lizard is a CDFW species of special concern, an MSCP covered species, and a County Group 2 species (CDFW 2019b; County of San Diego 2010c). This lizard occurs at elevations between 30 and 7,030 feet (Jennings and Hayes 1994) from coastal southern California to the desert foothills and into Baja California, Mexico. Blainville's horned lizard is often associated with open (20 to 40 percent bare ground) coastal sage scrub (Fisher et al. 2002), especially in areas of moderate topography and loose or sandy soil (Mills 1991). This lizard relies strongly on native harvester ants (*Pogonomyrmex* sp.), which were found within the survey area (Pianka and Parker 1975), but rarely eats invasive Argentine ants (*Linepithema humile*; Jennings and Hayes 1994). Populations along the coast and inland have been severely reduced by loss of habitat. The gently sloping areas of coastal sage scrub southern riparian woodland along the San Diego River appear highly suitable for Blainville's horned lizard. While this species was not detected during any of the biological surveys of the site it has moderate potential to occur within more gently sloping portions of the coastal sage scrub and southern riparian woodland along the San Diego River, both within the project site and larger survey area.

Coronado skink. The Coronado skink is a CDFW species of special concern and a County Group 2 species. The Coronado skink ranges from central Riverside County south to Baja California, Mexico (Jennings and Hayes 1994). In San Diego County, it is found in a variety of plant communities including grassland, open woodland, forest, and broken chaparral habitats and is often associated with mesic areas. The Coronado skink is diurnal and most

active from early spring until fall; breeding occurs in June or July (Jennings and Hayes 1994). The diet of the Coronado skink consists of moths, beetles, crickets, grasshoppers, and leafhoppers. This species is threatened by habitat loss and fragmentation resulting from urbanization and agriculture. This species has moderate potential to occur in the riparian woodland along the San Diego River, as well as some of the more mesic areas of coastal sage scrub in the project site and larger survey area.

San Diego legless lizard. The San Diego legless lizard was formerly the southern sub-population of the northern legless lizard (*Anniella pulchra*), but was recently split as a distinct species (Crother 2017). This is a CDFW species of special concern and a County Group 2 species (CDFW 2019b; County of San Diego 2010c). This is a nocturnal species that occurs in coastal scrub, chaparral, and open riparian habitats, where it tends to be found in leaf litter and loose soil with a relatively higher moisture level (Zeiner et al. 1988-1990). It uses sandy washes and beach dunes for burrowing and logs and leaf litter for cover and feeding. Breeding occurs between early spring and July. The San Diego legless lizard is insectivorous and its diet consists of larval insects, adult beetles, termites (*Reticulitermes* sp.), and spiders. Threats to this species include urbanization, agricultural and pesticide use, livestock grazing, and recreational activities in habitat. This species has moderate potential to occur in the project site and larger survey areas, where it may occur in areas of leaf litter and loose soil, such as the riparian habitat along the San Diego River. This species is not expected to range far outside the channel.

San Diego banded gecko. The San Diego banded gecko is a CDFW species of special concern and a County of San Diego Group 1 species. It occurs in coastal southern California, extending south into northern Baja California. It occurs in coastal sage scrub and chaparral, and requires rocky areas or areas with substantial rock outcrops. This species has been found by U.S. Geological Survey biologists in El Monte Valley east of the Hanson Pond approximately one mile east of the project site. Large rock outcrops are present within the project site, particularly within the Diegan coastal sage scrub on the large hills east of Ashwood Street and west of Wildcat Canyon Road. Given the nearby observations and presence of suitable habitat, this species has moderate potential to occur in the project site and larger survey area.

California glossy snake. California glossy snake is a CDFW species of special concern. It ranges from the San Francisco Bay Area south to northwestern Baja California. It is most common in desert habitats but also occurs in chaparral, sage scrub, grasslands, and woodlands. It uses mammal burrows and rock outcrops, and occasionally seeks refuge under flat rocks or vegetation. This species has been reported in El Monte Valley approximately one mile east of the project site. Potentially suitable habitat is present within portions of the survey area along the San Diego River, including within the survey area. If this species is present within the river channel, it would be expected to occasionally warm itself on or attempt to cross Ashwood Street, within the project site.

Rosy boa. The rosy boa is a County of San Diego Group 2 species. It ranges from eastern Los Angeles and Orange Counties, east across the southern portion of California, and into southwestern Arizona and northwestern Baja California, Mexico (Stebbins 2003). This

species occurs in a variety of habitats from sea level to a 5,000-foot elevation including coastal sage scrub; pine, oak, and juniper woodlands; and chaparral and desert habitats (Lemm 2006). The rosy boa is primarily crepuscular and is most active from February to October, but in the desert portion of its range tends to be nocturnal (Stebbins 2003; Lemm 2006). Its diet is primarily composed of rodents and small birds, but coastal rosy boas may occasionally consume small lizards (Zeiner et al. 1988-1990). The rosy boa faces threats from development, habitat loss, collection for the pet trade, and predation by introduced species. This species has moderate potential to occur in the coastal sage scrub throughout the project site and larger survey area, as well as within the riparian woodland along the San Diego River outside the project site.

Coast patch-nosed snake. The coast patch-nosed snake is a CDFW species of special concern and County Group 2 species (CDFW 2019b; County of San Diego 2010c). This species occurs in coastal California from San Luis Obispo County south into northwestern Baja California, Mexico, from sea level to 7,000 feet (Jennings and Hayes 1994; Stebbins 2003). The coast patch-nosed snake inhabits sandy and rocky areas on the lower slopes of mountains within grassland, chaparral, sage scrub, and desert scrub habitats. This snake is diurnal and peak activity occurs in May and June, although it can be active year round provided mild, warm weather (Zeiner et al. 1988-1990; Sweet, as cited in Jennings and Hayes 1994). The major prey of the coast patch-nosed snake is whiptail lizards. Habitat loss and fragmentation from urbanization and conversion to agriculture are the main threats to this species. This species has moderate potential to occur in the coastal sage scrub habitat and grassland within the project site and survey area.

Red diamond rattlesnake. The red diamond rattlesnake is a CDFW species of special concern and a County Group 2 species (CDFW 2019b; County of San Diego 2010c). This species occurs from sea level to about 4,000 to 5,000 feet on both sides of the Peninsular Ranges from southern San Bernardino County south through western Riverside and San Diego counties to Baja California, Mexico (Jennings and Hayes 1994). It inhabits coastal sage scrub, chaparral, and pinyon–juniper woodland particularly where there are abundant rock outcrops (Jennings and Hayes 1994; Lemm 2006). This species is active year-round with peak activity occurring in April and May, and breeding from February through September (Jennings and Hayes 1994). Its diet consists principally of small mammals, lizards, birds, and other snakes. Population declines of the red diamond rattlesnake are generally attributable to a reduction of habitat in the snake's restricted range due to urbanization and agriculture. This species has been reported within one mile of the project site (CDFW 2019a) and suitable coastal sage scrub with rock outcrops is present throughout much of the survey area. Thus, this species has high potential to occur within the project site and survey area.

White-tailed kite. The white-tailed kite (nesting) is a California fully protected species and a County Group 1 species (CDFW 2019b; County of San Diego 2010c). It is widespread within the coastal region of San Diego County, and nests in riparian woodlands, particularly those bordering grassland or open fields. It also often uses non-native trees, including citrus orchards (Unitt 2004). Nesting sites may vary from isolated trees to large stands of trees to shrubs three meters in height (Dunk 1995). It often roosts in large

communal groups, and these roosts are very sensitive to human disturbance (Unitt 2004, Dunk 1995). White-tailed kite's nests are generally more successful in natural vegetation than in developed environments. Foraging occurs over open areas and grasslands, with the species feeding primarily on small rodents, particularly the California vole (*Microtus californicus*) or meadow vole (*Microtus pennsylvanicus*). The white-tailed kite's population size fluctuates with rain and rodent numbers and the shifting of roosting sites (Unitt 2004). The most significant threat to the white-tailed kite populations in southern California is loss of nesting and foraging habitat due to urbanization (Unitt 2004).

White-tailed kite has moderate potential to nest in the southern riparian woodland along the San Diego River within the survey area. This habitat is adjacent to disturbed Diegan coastal sage scrub and open fields mapped as disturbed habitat, and is near a patch of non-native grassland for foraging.

Common Barn Owl. Common barn owl is an uncommon permanent resident species and County Group 2 species (County of San Diego 2010c). The barn owl is a very widespread bird species, occurring throughout most of the continental U.S., Mexico, and Central America, as well as Europe (Marti et al. 2005). It is a cavity nester, roosting commonly in riparian and oak woodlands as well as urban and man-made structures (Unitt 2004). Nest cavity locations are generally chosen in proximity to areas with high numbers of small mammals, including voles, its primary prey. Potential nesting habitat is present within the riparian woodland along the San Diego River, as well as any disused out-buildings within the agricultural areas. Suitable foraging habitat is present within disturbed Diegan coastal sage scrub, openings in the intact Diegan coastal sage scrub, disturbed habitat, and non-native grassland. Common barn owl has moderate potential to nest and forage within the survey area; however, it has low potential to nest within the project site.

Southern California rufous-crowned sparrow. The southern California rufous-crowned sparrow is a CDFW watch list species, an MSCP covered species, and a County Group 1 species (CDFW 2019b; County of San Diego 2010c). It is a San Diego County resident and ranges throughout southern California from Los Angeles County to Baja California (Collins 1999). Southern California rufous-crowned sparrows are found in sage scrub, burned chaparral, and grasslands with scattered shrubs. The species exhibits a strong preference for moderate to steep, south-facing, dry, rocky slopes with a 50 percent cover of low shrubs (Unitt 2004; Collins 1999). Breeding occurs from March through June, and pair-bonds are formed that may last year-round (Collins 1999). Loss of habitat due to urbanization and habitat fragmentation has decreased the amount of suitable habitat for southern California rufous-crowned sparrows (Unitt 2004).

Southern California rufous-crowned sparrow was not observed during any of the biological surveys for the project, although good quality habitat is present within the Diegan coastal sage scrub throughout the survey area. Thus, this species has moderate potential to forage and nest within the survey area, including within the temporary impact area; however, it is not likely to nest within the permanent impact area.

San Diego black-tailed jackrabbit. The San Diego black-tailed jackrabbit is a CDFW species of special concern, an MSCP covered species and is a County Group 2 species

(CDFW 2019b; County of San Diego 2010c). It ranges from near Mt. Pinos (at the Kern-Ventura county line) southward and west of the Peninsular Range into Baja California (Hall 1981). This species can be found throughout southern California, with the exception of the high-altitude mountains. It occupies open or semi-open habitats, such as coastal sage scrub and sparse chaparral, although forests and thick chaparral are not suitable (Bond 1977). The San Diego black-tailed jackrabbit breeds throughout the year, with a peak in April and May. It is strictly herbivorous, preferring habitat with ample forage such as grasses and forbs. Declines in San Diego black-tailed jackrabbit populations are due to habitat loss as a result of urban development.

Although not detected during surveys, there is suitable habitat in the Diegan coastal sage scrub, non-native grassland, and some areas of disturbed habitat. Thus, it has moderate potential to occur within the survey area, including within the project site.

Northwestern San Diego pocket mouse. The northwestern San Diego pocket mouse is a California species of special concern and is a County Group 2 species (CDFW 2019c; County of San Diego 2010c). It ranges from Los Angeles County and extreme southern San Bernardino County southward into west-central Baja California, Mexico (Hall 1981). In San Diego County, the northwestern San Diego pocket mouse is known from Del Mar, Dulzura, Jacumba, Lake Hodges, Pala, San Diego, and San Marcos (Bond 1977). Habitat for this species is found in sparse or disturbed coastal sage scrub or grasslands on moderate to steep slopes with rocky, gravelly, or sandy soils. It burrows in crevices among and between rock outcrops (Tremor et al. 2017). Breeding occurs from March to May. The northwestern San Diego pocket mouse diet consists of seeds from forbs, shrubs, and grasses (Tremor et al. 2017). Threats to this species include degradation of habitat and loss of habitat from development.

The coastal sage scrub on the hills to the east of Ashwood Street and west of Wildcat Canyon Road both have openings and numerous rock outcrops that can provide suitable habitat for this species. Although there are no CNDDDB records within 1 mile of the site (CDFW 2019a), Tremor et al (2017) shows records within El Monte Valley between 3 and 4 miles to the east. Thus, the species has moderate potential to occur in the survey area, including within the project site.

San Diego desert woodrat. The San Diego desert woodrat is a CDFW species of special concern and is a County Group 2 species (CDFW 2019b; County of San Diego 2010c). Its range extends through coastal areas from San Luis Obispo well into Baja California, inland to the San Bernardino Mountains and Julian (Hall 1981). Tremor et al. (2017) notes that the San Diego populations of this species have been reclassified as Bryant's woodrat (*Neotoma bryanti*). This species is found primarily in chaparral and dense coastal sage scrub with succulent vegetation and rock outcrops. It creates middens (nests) under ledges, crevices, rock outcrops, and cactus thickets (Tremor et al. 2017). These middens can be occupied by multiple generations and have been documented as old as 200 to 400 years of age. The breeding season for the San Diego desert woodrat is from October to May. This species is herbivorous and can eat a large variety of plants, with cacti often being consumed

as an important source of water (Tremor et al. 2017). Threats to this species include habitat degradation and loss of habitat.

Although San Diego desert woodrat was not directly observed, suitable woodrat middens were observed in the understory of large laurel sumac shrubs in the Diegan coastal sage scrub east of Ashwood Street, within the project site. It was not clear if these middens were currently occupied, but the habitat is suitable. Thus, there is a moderate potential for this species to occur within the project site and survey area.

Southern mule deer. The southern mule deer is an MSCP covered species and is a County Group 2 species (County of San Diego 2010c). Southern mule deer are presently widespread throughout undeveloped portions of San Diego County, ranging from Camp Pendleton to the Laguna Mountains, Sweetwater River, and Otay Lakes at elevations of 400 to 3,600 feet (Bleich and Holl 1982). Resident and migratory populations are present throughout California. This species requires relatively large, undisturbed tracts of chaparral, coastal sage scrub, and mixed grassland/shrub habitats. Breeding usually occurs between November and February, with the fawning period between June and August. The diet of the southern mule deer consists of forbs, grasses, and nuts. Although the species is not threatened with extinction within its range, urbanization and habitat fragmentation could result in local extirpation without appropriate conservation measures.

Southern mule deer was not observed within the survey area; however, there is suitable habitat throughout much of the undeveloped areas, including the Diegan coastal sage scrub and southern riparian woodland. The project site likely lies at the southwestern edge of suitable habitat for this species in the vicinity, with abundant high quality habitat extending far to the north and east. Thus, while there is higher quality habitat present to the north and east, this species has moderate potential to occur within the project site and survey area.

1.4.7 Jurisdictional Wetlands and Waterways

A formal delineation of potential jurisdictional wetlands and waters was not conducted for the project. Potentially jurisdictional features within the survey area occur along the San Diego River, including the river itself and the associated southern riparian woodland and southern riparian scrub.

The project was designed to avoid these potentially jurisdictional areas, and project activities in the vicinity of the San Diego River would be limited to replacement of asphalt within the existing limits of Ashwood Street. There would be no work within the San Diego River channel and no impacts to jurisdictional wetlands or waterways.

1.4.8 Habitat Connectivity and Wildlife Corridors

Wildlife movement corridors are areas that connect wildlife habitat areas in a region otherwise fragmented by rugged terrain, changes in vegetation, or human disturbance. Natural features such as canyon drainages, ridgelines, or areas with vegetation cover provide corridors for wildlife travel. Wildlife movement corridors are important, because

they provide access to mates, food, and water; allow the dispersal of individuals away from high population density areas; and facilitate the exchange of genetic traits between populations (Beier and Loe 1992). Wildlife movement corridors are considered sensitive by resource and conservation agencies.

The project site is located at the eastern end of the main urbanized area of San Diego County. To the east and north of the project site, the land is largely undeveloped and provides few constraints on wildlife movement. Conversely, to the west and south, the land is primarily developed and provides few opportunities for wildlife movement. The San Diego River represents a regional wildlife corridor through the project area. The river, which crosses Ashwood Street within the project site from east to west, passes through the communities of Lakeside and Santee, ultimately connects with preserve lands in Mission Trails Regional Park. The river is dammed at El Capitan Reservoir approximately 6 miles to the east of the project site, and there is rarely surface flow in the channel as it passes through the project site. Nonetheless, the trees and other vegetation, as well as the recessed topography, within the river channel provide an avenue for wildlife movement through the project site. As surface water becomes more consistent about 1.5 miles to the west, the river continues to pass through developed communities, thereby connecting large areas of intact habitat and creating a regional wildlife corridor. The corridor is somewhat constrained by roadways. At the project site, the river crosses under Ashwood Street through corrugated metal pipes; but State Route 67 further to the west is fully elevated and the river channel passes intact beneath the highway.

1.5 Applicable Regulations

1.5.1 Federal Regulations

Endangered Species Act

The federal Endangered Species Act provides the legal framework for the listing and protection of species (and their habitats) identified as being endangered or threatened with extinction. Actions that jeopardize endangered or threatened species and the habitats upon which they rely are considered a “take” under the Endangered Species Act. Take of a federally listed threatened or endangered species is prohibited without a special permit. The Endangered Species Act allows for take of a threatened or endangered species incidental to development activities once a habitat conservation plan has been prepared to the satisfaction of the USFWS and an incidental take permit has been issued. The Endangered Species Act also allows for the take of threatened or endangered species after consultation has deemed that development activities will not jeopardize the continued existence of the species. The federal Endangered Species Act also provides for a Section 7 Consultation when a federal permit is required, such as a Clean Water Act (CWA) Section 404 permit.

“Critical Habitat” is a term within the federal Endangered Species Act designed to guide actions by federal agencies (as opposed to state, local, or other agency actions) and defined as: “an area occupied by a species listed as threatened or endangered within which are found

physical or geographical features essential to the conservation of the species, or an area not currently occupied by the species which is itself essential to the conservation of the species.”

Section 404 Clean Water Act Regulations

The CWA provides wetland regulation at the federal level and is administered by the ACOE. The purpose of the CWA is to restore and maintain the chemical, physical, and biological integrity of all Waters of the U.S. Permitting is required for filling waters of the U.S. (including wetlands). Permits may be issued on an individual basis or may be covered under approved nationwide permits. As mentioned above, the project has been designed to avoid impacts to potential jurisdictional areas, so permits subsequent to CWA Section 404 would not be required.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA; 16 United States Code 703 et seq.) is a federal statute that implements treaties with several countries on the conservation and protection of migratory birds. The number of bird species covered by the MBTA is extensive and is listed at 50 Code of Federal Regulations (CFR) 10.13. The regulatory definition of “migratory bird” is broad and includes any mutation or hybrid of a listed species and any part, egg, or nest of such birds (50 CFR 10.12). Migratory birds are not necessarily federally listed endangered or threatened birds under the Endangered Species Act. The MBTA, which is enforced by USFWS, makes it unlawful “by any means or in any manner, to pursue, hunt, take, capture, [or] kill” any migratory bird, or attempt such actions, except as permitted by regulation. The take, possession, import, export, transport, sale, purchase, barter, or offering of these activities is prohibited, except under a valid permit or as permitted in the implementing regulations (50 CFR 21.11).

Pursuant to U.S. Department of the Interior Memorandum M-37050, the federal MBTA is no longer interpreted to cover incidental take of migratory birds (U.S. Department of the Interior 2017). Therefore, impacts that are incidental to implementation of an otherwise lawful project would not be considered significant.

1.5.2 State of California

California Environmental Quality Act

The CEQA requires that biological resources be considered when assessing the environmental impacts that are the result of proposed actions. The lead agencies determine the scope of what is considered an impact and what constitutes an “adverse effect” on a biological resource.

California Fish and Game Code

The California Fish and Game Code (CFGF) regulates the taking or possession of birds, mammals, fish, amphibians, and reptiles, as well as natural resources such as wetlands

and Waters of the State. It includes the California Endangered Species Act, Streambed Alteration Agreement regulations, and California Native Plant Protection Act. CFGC Section 3503 states that “it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto,” and Section 3503.5 states that “it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird” unless authorized.

California Endangered Species Act

The California Endangered Species Act, similar to the federal Endangered Species Act, contains a process for listing of species and regulating potential impacts to listed species. State threatened and endangered species include both plants and wildlife but do not include invertebrates. The designation “rare species” applies only to California native plants. State threatened and endangered plant species are regulated largely under the Native Plant Preservation Act in conjunction with the California Endangered Species Act. State threatened and endangered animal species are legally protected against “take.” The California Endangered Species Act authorizes CDFW to enter into a memorandum of agreement for take of listed species to issue an incidental take permit for a state-listed threatened and endangered species only if specific criteria are met.

Streambed Alteration Agreement Regulations

The CFGC (Sections 1600 through 1603) requires a Streambed Alteration Agreement with CDFW for projects affecting riparian, wetland habitats, and all other Waters of the State. As mentioned above, the project has been designed such that it would not require a Streambed Alteration Agreement.

California Native Plant Protection Act

Section 1900-1913 of the CFGC contains the regulations of the Native Plant Protection Act of 1977. The intent of this act is to help conserve and protect rare and endangered plants in the state.

Section 401 Clean Water Act and Porter-Cologne Act

The RWQCB regulates water quality in Waters of the U.S. under Section 401 of the CWA, and also regulates the isolated waters under the state Porter-Cologne Act utilizing a Waste Discharge Requirement. Discharge of fill material into Waters of the State not subject to the jurisdiction of the ACOE pursuant to Section 404 of the CWA may require authorization pursuant to the Porter-Cologne Act through application for waste discharge requirements or through waiver of waste discharge requirements, despite the lack of a clear regulatory imperative. As mentioned above, the project has been designed such that it would not require permits under CWA Section 401 or a Waste Discharge Permit.

Natural Community Conservation Planning Act of 1991

The Natural Community Conservation Planning (NCCP) Act is designed to conserve natural communities at the ecosystem scale while accommodating compatible land use. CDFW is the primary state agency that implements the NCCP. The NCCP plan provides for the comprehensive management and conservation of multiple wildlife species. It identifies and provides for regional protection of natural wildlife diversity while allowing for compatible and appropriate development and growth.

1.5.3 County of San Diego

Multiple Species Conservation Program and Biological Mitigation Ordinance

The County's MSCP Subarea Plan is designed to identify lands that would conserve habitat for federal and state endangered, threatened, or sensitive species. It provides a process for the local issuance of permits under the federal and state Endangered Species Acts for impacts to threatened and endangered species. Also included in the MSCP are implementation strategies, preserve design, and management guidelines.

BRCA lands are those that have been included within the County's MSCP Subarea Plan for habitat conservation. These lands have been determined to provide the necessary habitat quality, quantity, and connectivity to sustain the unique biodiversity of the San Diego region. The BRCA is considered by the County to be a sensitive biological resource. The BRCA used in this report is mapped based on the criteria presented in the BMO. Each of these is addressed below.

i) The land is shown as preapproved mitigation area on the wildlife agencies' preapproved mitigation map.

Based on this criterion, the BRCA used in this report incorporates all areas included in the County's PAMA map.

ii) The land is located within an area of habitat which contains biological resources that support or contribute to the long-term survival of Sensitive Species, which determination is based upon a biological analysis approved by the Director, and is adjacent or contiguous to preserved habitat that is within the preapproved mitigation area on the wildlife agencies' preapproved mitigation map.

Within the survey area, all contiguous patches of sensitive vegetation communities are anticipated to support or contribute to the long-term survival of sensitive species. This criterion excludes isolated patches of habitat, such as the strips of Diegan coastal sage scrub within El Capitan High School. Disturbed habitat, while not generally considered sensitive, is included in the BRCA for this report when they occur intermixed with native vegetation as these areas provide foraging opportunities and for wildlife.

iii) The land is part of a regional linkage/corridor.

As discussed in Section 1.4.8, the San Diego River represents a regional wildlife corridor through the project area. As such, this area is included within the BRCA, regardless of vegetation community.

iv) The land is shown on the Habitat Evaluation Map as Very High or High and links significant blocks of habitat, except that land which is isolated or links small, isolated patches of habitat and land that has been affected by existing development to create adverse edge effects shall not qualify as Biological Resource Core Area;

All areas identified as Very High or High on the Habitat Evaluation Map are included in the BRCA for this analysis.

v) The land consists of or is within a block of habitat greater than 500 acres in area of diverse and undisturbed habitat that contributes to the conservation of Sensitive Species;

The habitat along the San Diego River and the Diegan coastal sage scrub on the hill east of Ashwood Street and west of Wildcat Canyon Road are part of blocks of habitat greater than 500 acres that contribute to the conservation of sensitive species. Accordingly, these areas are included in the BRCA in this analysis.

vi) The land contains a high number of Sensitive Species and is adjacent or contiguous to surrounding undisturbed habitats, or contains soil derived from the following geologic formations which are known to support Sensitive Species: gabbroic rock, metavolcanic rock, clay, or coastal sandstone.

The habitat along the San Diego River and the Diegan coastal sage scrub on the hill east of Ashwood Street and west of Wildcat Canyon Road support or have potential to support sensitive species and are included in the BRCA for this analysis. No gabbroic rock, metavolcanic rock, clay, or coastal sandstone soils are present within the survey area.

The MSCP generally does not designate an exact preserve boundary, but instead designates large PAMAs within which conservation efforts are to be concentrated and a preserve will be assembled. The MSCP generally provides incentives for development to occur outside a PAMA. The majority of the project site to the east of Ashwood Street and the hill west of Wildcat Canyon Road are within a PAMA.

The BMO provides criteria for the avoidance of impacts to BRCAs and sensitive biological resources, and establishes mitigation requirements for projects requiring discretionary permits. It generally directs preservation of biological resources toward land that can be combined with larger areas of contiguous habitat or linkages (County of San Diego 2010b).

2.0 Project Effects

This section of the report discusses the direct, indirect, and cumulative impacts to biological resources from the project.

Direct Impacts

Direct impacts are incurred when project activities, such as grading or vegetation clearing, result in the loss of biological resources. Direct impacts are classified as temporary or permanent. Permanent impacts occur when project features, such as a new road alignment, asphalt, detention basins, stormwater conveyance, or other structures, would be installed and would permanently affect biological resources. Project activities that would not include installation of permanent features, such as clearing for construction access, staging, and other effects activities are considered temporary impacts. These areas would be revegetated following construction.

This report incorporates the following breeding season dates for nesting birds, based on the County Guidelines for Determining Significance (County of San Diego 2010c) for all species except coastal California gnatcatcher, which is per the BMO (County of San Diego 2010b):

<u>Species</u>	<u>Breeding Season</u>
• Coastal California gnatcatcher	• March 1 – August 15
• Least Bell’s vireo	• March 15 – September 15
• Tree-nesting raptors	• January 15 – July 15
• General migratory birds, including upland species and western bluebird	• February 15 – August 15

As discussed in Section 1.4.6, coastal California gnatcatcher, tree-nesting raptors, and general migratory birds are known to nest or potentially nest within the survey area. A least Bell’s vireo juvenile was observed 200 feet west of the project site and a breeding pair was observed as close as 500 feet west of the project site (Blackhawk 2019; see Attachment 7). Based on these observations, this report references a combined migratory bird breeding season of February 15 to August 15. This has been revised from the breeding season recommended in Section 4.5 (K) of the County Guidelines for Determining Significance (County of San Diego 2010c) in order to reflect the species breeding or potentially breeding on-site.

Indirect Impacts

Indirect impacts are effects on vegetation communities or species from actions that may be separated temporally or spatially from primary construction activities. The project was designed to minimize indirect impacts to the degree feasible. Examples of indirect impacts are discussed below.

Increased Human Activity: Increased human activity could lead to increase trampling of vegetation and soil compaction outside the project site, and could affect the viability of

plant communities and the suitability of habitat for wildlife species. Trampling can damage individual native plants, including special-status species; create gaps in native vegetation, leading to an increase in soil erosion; and introduce or spread non-native, invasive plant species. Trampling may also affect the rate of rainfall interception and evapotranspiration, soil moisture, water penetration pathways, and surface flows. Increased human presence increases the risk for the collection of and damage to plant species, and thus the risk of damage to suitable habitat for wildlife species. In addition, increased human activity can deter wildlife from using habitat areas in the project vicinity. The proposed project would not increase human access to surrounding habitat, and indirect impacts from increased human activity are not anticipated.

Invasive species: Invasive species have the potential to displace and dominate native species, hybridize with native plant species, provide food and habitat for invasive animal species, and disturb normal ecosystem functions such as nutrient cycling, wetland hydrology, sedimentation, fire frequency, and erosion (Brossard et al. 2000). Disturbances adjacent to natural open space, such as grading and vegetation management, create opportunities for non-native species to invade and establish themselves. As a road improvement project, the proposed project would not increase invasive species access to surrounding habitat, and indirect impacts from invasive species are not anticipated.

Hydrology alteration: Hydrologic alterations include changes in water levels, flow rates, and patterns in waterways and dewatering, each of which may affect resources and vegetation communities within and adjacent to the lake basins. Adverse water-quality impacts include chemical-compound pollution (discussed below), erosion, increased turbidity, and excessive sedimentation. Removal of native vegetation and increased runoff from roads and other paved surfaces can result in increased erosion and transport of surface matter into areas that support sensitive biological resources. Altered erosion, increased surface flows, and underground seepage can allow for the establishment of non-native plants. Changed hydrologic conditions can also alter seed bank characteristics and modify habitat for ground-dwelling fauna that may disperse seed. While storm drains are included in the proposed project, they would not substantially affect hydrology in the project vicinity.

Chemical and particulate pollution: The release of fuels, oils, sediment, and other construction related chemicals into adjacent areas has the potential to impact downstream sensitive natural resources. Accidental spills of hazardous chemicals could contaminate the lake water and groundwater and indirectly affect wildlife species through poisoning or alteration of suitable habitat. The proposed project would be subject to pollution control standards and is not anticipated to result in chemical or particulate pollution.

Noise: Noise can have a variety of indirect impacts on wildlife species. These indirect impacts may include increased stress and weakened immune systems, altered foraging behavior, interference with adult birds communicating with fledglings, displacement due to startle, degraded communication with conspecifics, and increased vulnerability to predators (Lovich and Ennen 2011; Brattstrom and Bondello 1983, as cited in Lovich and Ennen 2011). Construction noise from the proposed project has potential to affect wildlife breeding within the project site and the surrounding habitats. These impacts are addressed below.

Nighttime Lighting: Nighttime lighting can disrupt wildlife behavior and can attract certain species while deterring others. Additionally, nighttime lighting can improve visibility, attracting or assisting predators. Construction is planned to occur during daylight hours, so no nighttime lighting is anticipated. The project does not propose any new lighting along the roadways.

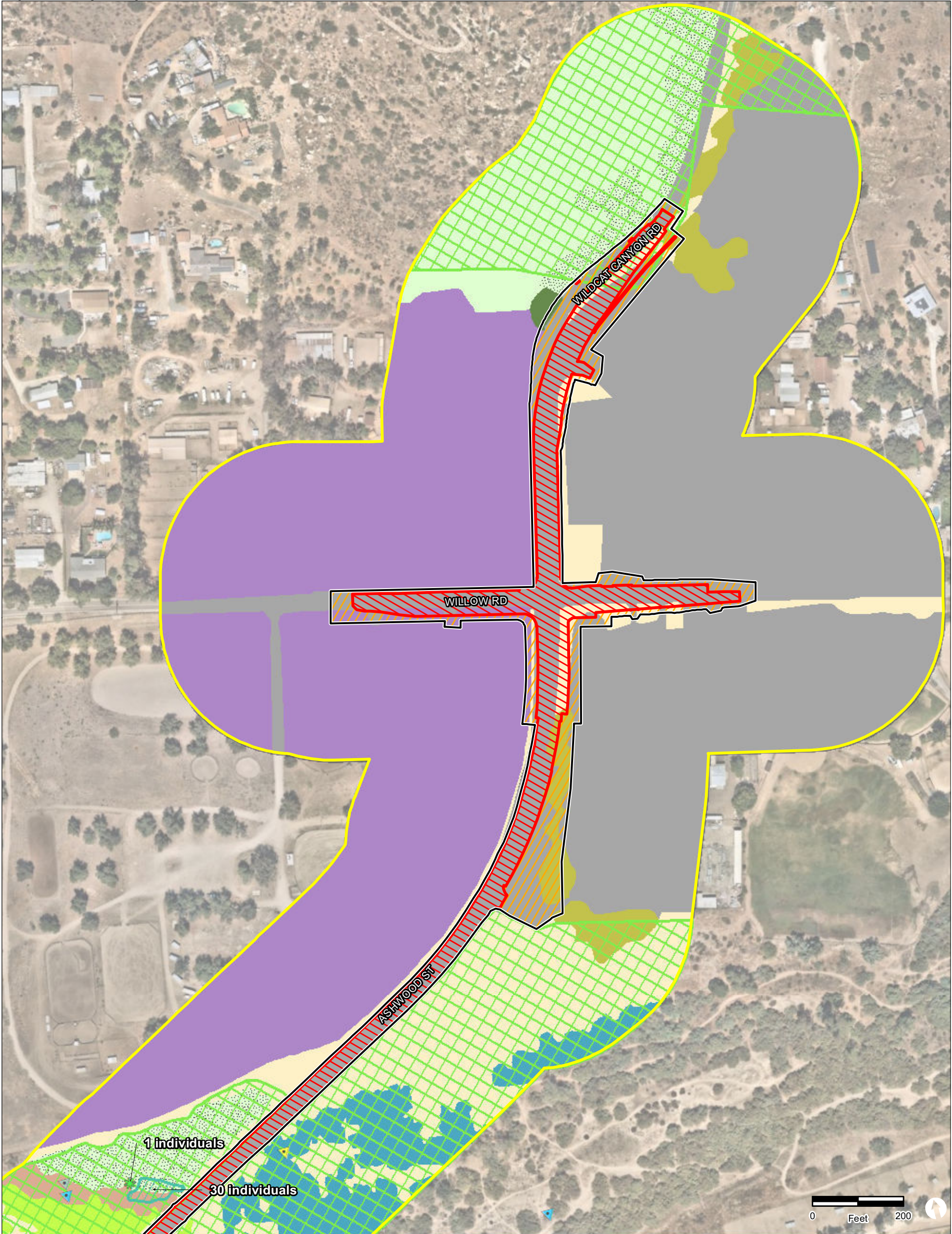
Cumulative Impacts

Cumulative impacts are those that may occur at a landscape or regional level as a result of past, current, and foreseeable projects within the cumulative study area. While impacts from one project may not be significant, when analyzed in concert with multiple projects in the area, impacts may compound and reach a level of significance. The project was designed to minimize permanent impacts to the degree feasible and revegetate temporary impact areas. Potential impacts to sensitive habitats and species would be mitigated to below a level of significance. The project would avoid work within the San Diego River channel. Therefore, when considered in conjunction with past and present projects located in the vicinity of the project, the project would not contribute to a cumulatively considerable impact.

2.1 Impacts to Habitats and Vegetation Communities

As shown on Figures 7a–7c, impacts would be limited to the existing roadways and some immediately adjacent areas of habitat. Impact acreages are presented in Table 3.

Table 3 Impacts to Vegetation Communities							
Vegetation Community	Impacts ¹						
	Temporary			Permanent			Total Impacts
	BRCA	Non-BRCA	Subtotal	BRCA	Non-BRCA	Subtotal	
Tier I							
Southern Riparian Scrub	--	--	--	--	--	--	--
Mule Fat Scrub	--	--	--	--	--	--	--
Southern Riparian Woodland	--	--	--	--	--	--	--
Coast Live Oak Woodland	0.03	0.03	0.06	0.01	0.02	0.03	0.09
Tier II							
Diegan Coastal Sage Scrub	4.85	0.71	5.56	0.70	0.43	1.13	6.69
Tier III							
Non-native Grassland	0.22	--	0.22	0.10	--	0.10	0.32
Tier IV							
Non-Native Woodland	0.08	0.37	0.45	0.06	0.06	0.12	0.57
Eucalyptus Woodland	0.01	0.02	0.03	0.02	0.03	0.05	0.08
Disturbed Habitat	2.60	0.94	3.54	0.35	0.73	1.08	4.62
Agriculture	--	0.30	0.30	--	0.12	0.12	0.42
Urban/Developed	1.65	5.00	6.65	0.42	6.94	7.36	14.01
Total	9.44	7.37	16.81	1.66	8.33	9.99	26.80
BRCA = Biological Resource Core Area; sf = square feet							
¹ Areas are presented in acres, rounded to the nearest 0.01.							



- Project Site**
- Project Site
 - Survey Area
 - Biological Resource Core Area
- Impact**
- Permanent Impact
 - Temporary Impact
- Species Observations***
- Least Bell's Vireo
 - Western Bluebird
 - Yellow Warbler

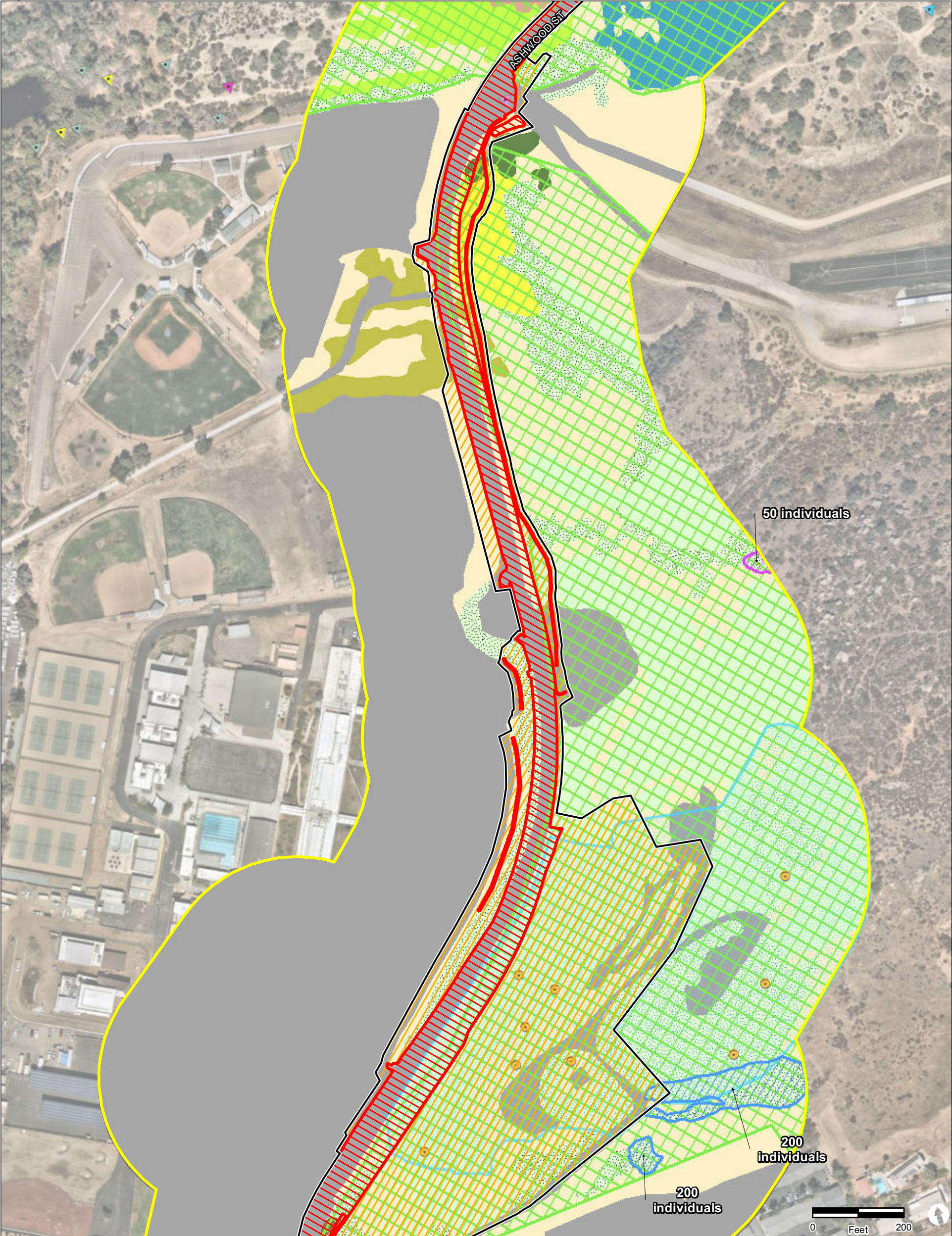
- Vegetation Communities**
- Agriculture
 - Coast Live Oak Woodland
 - Diegan Coastal Sage Scrub
 - Diegan Coastal Sage Scrub - Disturbed
 - Disturbed Habitat
 - Mule Fat Scrub
 - Non-native Woodland
 - Southern Riparian Scrub
 - Southern Riparian Woodland
 - Urban/Developed

- Sensitive Species**
- San Diego Sagewort (*Artemisia palmeri*)
 - San Diego Marsh-elder (*Iva hayesiana*)

FIGURE 7a

Impacts to Biological Resources
Ashwood Street Corridor Improvements Project

*Surveyed by Blackhawk Environmental



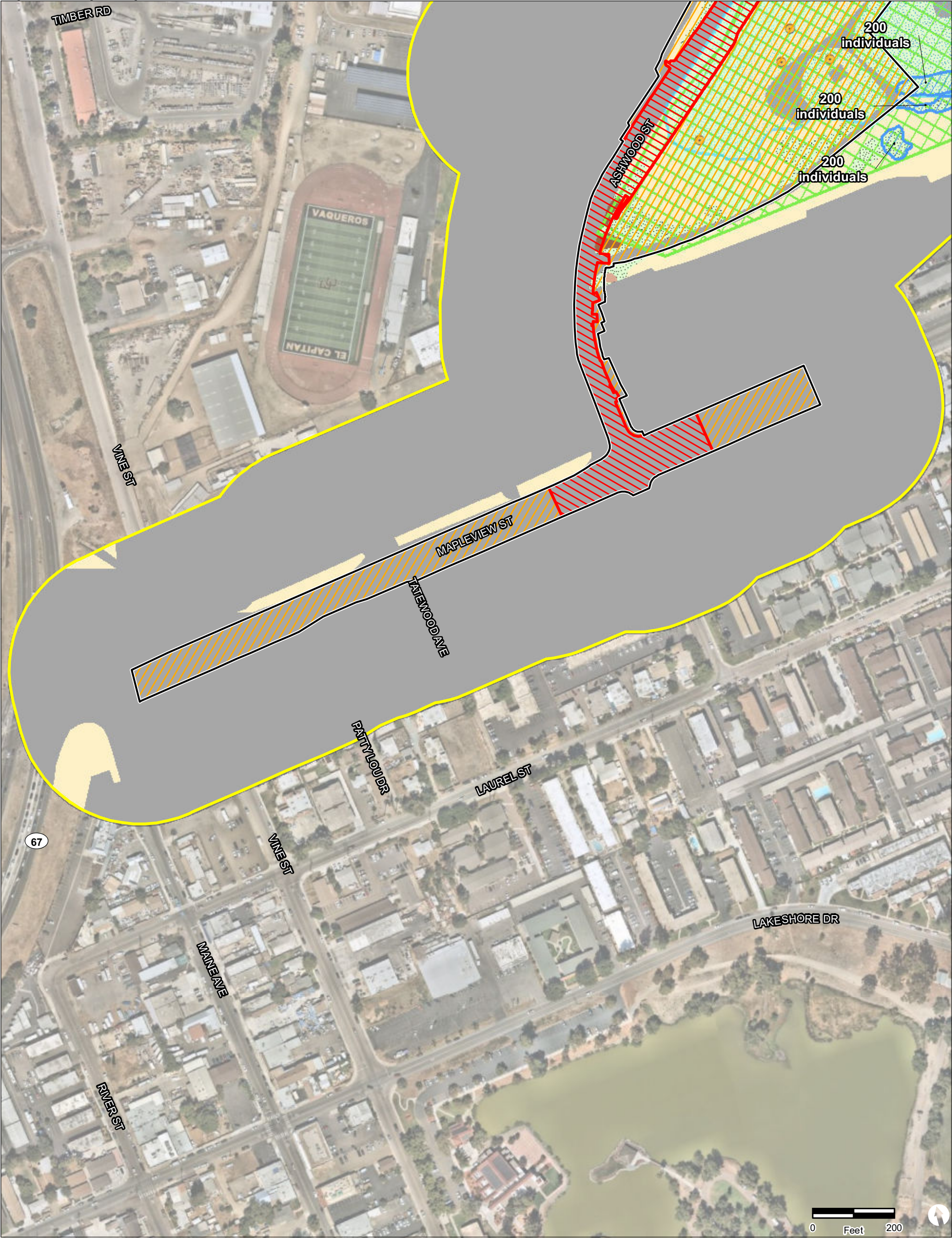
- Project Site**
- Project Site
 - Survey Area
 - Biological Resource Core Area
- Impact**
- Permanent Impact
 - Temporary Impact
- Species Observations***
- Cooper's Hawk
 - Least Bell's Vireo
 - Turkey Vulture
 - Western Bluebird
 - Yellow Warbler

- Vegetation Communities**
- Coast Live Oak Woodland
 - Diegan Coastal Sage Scrub
 - Diegan Coastal Sage Scrub - Disturbed
 - Disturbed Habitat
 - Eucalyptus Woodland
 - Mule Fat Scrub
 - Non-native Grassland
 - Non-native Woodland
 - Southern Riparian Scrub
 - Southern Riparian Woodland
 - Urban/Developed

- Sensitive Species**
- Coastal California Gnatcatcher (*Polioptila californica californica*)
 - Coastal California Gnatcatcher Use Area
 - Delicate Clarkia (*Clarkia delicata*)
 - San Diego County Viguiera (*Bahiopsis laciniata*)

*Surveyed by Blackhawk Environmental

FIGURE 7b
Impacts to Biological Resources
Ashwood Street Corridor Improvements Project



- Project Site
- Survey Area
- Biological Resource Core Area
- Impact**
- Permanent Impact
- Temporary Impact

- Vegetation Communities**
- Diegan Coastal Sage Scrub
- Diegan Coastal Sage Scrub - Disturbed
- Disturbed Habitat
- Eucalyptus Woodland
- Mule Fat Scrub
- Urban/Developed

- Sensitive Species**
- Coastal California Gnatcatcher
(*Polioptila californica californica*)
- Coastal California Gnatcatcher Use Area
- San Diego County Viguiera
(*Bahiopsis laciniata*)

FIGURE 7c

Impacts to Biological Resources

Ashwood Street Corridor Improvements Project

2.2 Impacts to Jurisdictional Wetlands and Waterways

As discussed in Section 1.4.7, the project was designed to avoid work within the San Diego River, so there would be no impacts to jurisdictional wetlands or waterways.

2.3 Impacts to Sensitive Species

This section discusses the direct and indirect impacts the project would have on sensitive species that are present or have a high potential to occur on-site. Impacts to sensitive plants and sensitive wildlife are discussed separately below.

2.3.1 Impacts to Sensitive Plants

Delicate clarkia, San Diego sagewort, San Diego marsh-elder, and San Diego viguiera were all observed outside the project site; therefore, no impacts to sensitive plant species would occur from project implementation.

2.3.2 Impacts to Sensitive Wildlife

As discussed in Section 1.4.6, nine sensitive wildlife species were detected and an additional 16 have high or moderate potential to occur within the survey area. Potential impacts to each of these are discussed below, and a significance determination is provided in Section 3.2.

Belding's orange-throated whiptail. This species was observed multiple times within the Diegan coastal sage scrub on the large hill east of Ashwood Street and is assumed present throughout the Diegan coastal sage scrub within the survey area. Construction activities, including vegetation clearing and grading have potential to cause direct mortality to this species. Additionally, this species would be impacted by temporary and permanent impacts to Diegan coastal sage scrub and non-native grassland.

Turkey vulture. This species was observed flying over the survey area and is expected to forage within the Diegan coastal sage scrub, non-native grassland, disturbed habitat, and agricultural areas, but is not expected to nest within the survey area. The project is not expected to result in direct mortality to this species, and loss of foraging habitat would be minimal and primarily temporary. Therefore, impacts to turkey vulture would be less than significant.

Red-shouldered hawk. This species was observed flying over the survey area and is expected to forage within the Diegan coastal sage scrub, non-native grassland, disturbed habitat, and agricultural areas. Nesting is not expected in the temporary or permanent impact areas, but could occur in the riparian woodland in the vicinity. The project is not expected to result in direct mortality to this species, and loss of foraging habitat would be minimal and primarily temporary; however, if construction occurs during the tree-nesting raptor breeding season (January 15 to July 15), construction noise could cause indirect impacts to red-shouldered hawk if this species is determined to be nesting in trees within 300 feet of construction.

Cooper's hawk (nesting). Cooper's hawk has moderate potential to nest within the southern riparian woodland along the San Diego River. The project would avoid work within the San Diego River channel, and would not impact any southern riparian woodland or any trees suitable for nesting. The project is expected to result in impacts to Cooper's hawk foraging habitat; however, the permanent loss of foraging habitat would be minor, and the vast majority would be temporary. If construction occurs during the tree-nesting raptor breeding season (January 15 to July 15), construction noise could cause indirect impacts to Cooper's hawk if this species is determined to be nesting in trees within 300 feet of construction.

Least Bell's vireo. Although least Bell's vireo was detected during the focused surveys, the observed nests were mapped approximately 700 and 900 feet outside the project footprint and the breeding pair was mapped approximately 500 feet outside the project footprint. A juvenile was detected within the survey area on one occasion and was assumed to be a dispersing individual, rather than a resident. Nesting is not expected to occur within the survey area. Therefore, the project is not expected to cause direct or indirect impacts to least Bell's vireo.

Coastal California gnatcatcher. The project would cause temporary and permanent impacts to Diegan coastal sage scrub occupied by the coastal California gnatcatcher. The majority of the impacts to occupied habitat impacts would be temporary, and would be associated with temporary access for construction along the edge of Ashwood Street. Permanent impacts would be limited to areas planned for retaining walls along the eastern edge of Ashwood Street. This area is sparsely vegetated and very rocky, consisting of steep slopes cut through the rock to create the existing roadway. Thus, while the project would cause both permanent and temporary impacts to occupied habitat, the permanently impacted areas are of lower quality for coastal California gnatcatcher.

Additionally, if construction occurs during the breeding season (March 1 to August 15), it would have potential to disrupt breeding gnatcatchers within the Diegan coastal sage scrub on the large hill east of Ashwood Street.

Western bluebird. Western bluebird was observed nesting in the southern riparian scrub within the San Diego River channel about 150 feet west the impact area. The project was designed to avoid riparian habitat so this species would not be directly impacted. Construction noise could cause indirect impacts to western bluebird if construction occurs during the general migratory bird breeding season (February 15 to August 15) and this species is determined to be nesting in trees within 300 feet of construction.

Yellow warbler. This species was observed in the southern riparian scrub just east of Ashwood Street. The project was designed to avoid riparian habitat, so this species would not be directly impacted. Construction noise could cause indirect impacts to yellow warbler if construction occurs during the general migratory bird breeding season (February 15 to August 15) and this species is determined to be nesting within 300 feet of construction.

Yellow-breasted chat. This species was detected in southern riparian scrub within the San Diego River channel about 400 feet west of Ashwood Street. The project was designed

to avoid riparian habitat so this species would not be directly impacted. Construction noise could cause indirect impacts to yellow-breasted chat if construction occurs during the general migratory bird breeding season (February 15 to August 15) and this species is determined to be nesting in trees within 300 feet of construction.

Western spadefoot toad. Western spadefoot toad has moderate potential to occur within the San Diego River channel, and the adjacent disturbed habitat and Diegan coastal sage scrub. The project was designed to avoid work within the San Diego River, which would minimize impacts to this species. Thus, the project is not expected to impact western spadefoot toad.

Blainville's horned lizard. Blainville's horned lizard has moderate potential to occur within the coastal sage scrub on the hills to the east of Ashwood Street and to the west of Wildcat Canyon Road in the northern portion of the site, as well as the southern riparian woodland along the San Diego River. The southern riparian woodland would be avoided, but potentially occupied Diegan coastal sage scrub would be impacted. Thus, the project has potential to impact this species.

Coronado skink. Coronado skink has moderate potential to occur in the riparian woodland along the San Diego River, as well as some of the more mesic areas of coastal sage scrub. The project was designed to avoid impacts along the San Diego River. Permanent impacts to coastal sage scrub would largely occur on the steep exposed cut slope just east of Ashwood Street, which is not suitable for this species. Thus, this species is not expected to be impacted.

San Diego legless lizard. San Diego legless lizard has moderate potential to occur in the San Diego River channel, but is not expected to occur much outside the channel. The project was designed to avoid impacts along the San Diego River, so this species is not expected to be impacted.

San Diego banded gecko. This species has moderate potential to occur within the Diegan coastal sage scrub, including within the project site. Clearing of vegetation within those communities has potential to impact this species.

California glossy snake. California glossy snake has moderate potential to occur in the sandy areas along the San Diego River channel, and could occasionally warm itself on the surface of Ashwood Street within the project site. Impacts within the river channel would be avoided, and the project is not expected to increase traffic on the roads, so vehicle impacts to individuals warming themselves on the roadways in the evenings would not increase.

Rosy boa. Rosy boa has moderate potential to occur in the coastal sage scrub throughout the project site and within the riparian woodland along the San Diego River. Impacts along the San Diego River would be avoided, but construction within the coastal sage scrub, particularly on the hill to the east of Ashwood Street has potential to impact this species. The project is not expected to increase traffic on the road, so vehicle impacts to individuals warming themselves on the roadways in the evenings would not increase.

Coast patch-nosed snake. Coast patch-nosed snake has moderate potential to occur in the coastal sage scrub habitat and grassland within the survey area, including within the project site. Clearing of vegetation within those communities has potential to impact this species. The project is not expected to increase traffic on the road, so vehicle impacts to individuals warming themselves on the roadways in the evenings would not increase.

Red diamond rattlesnake. Red diamond rattlesnake has high potential to occur within the Diegan coastal sage scrub throughout the survey area. Thus, vegetation clearing of Diegan coastal sage scrub has potential to impact this species. The project is not expected to increase traffic on the road, so vehicle impacts to individuals warming themselves on the roadways in the evenings would not increase.

White-tailed kite. White-tailed kite has moderate potential to nest in the southern riparian woodland along the San Diego River and forage within the adjacent Diegan coastal sage scrub and disturbed habitat. The project would avoid work within the San Diego River channel, and would not impact any southern riparian woodland or any trees suitable for nesting; however the project would impact suitable foraging habitat. Permanent loss of foraging habitat would be minor, and the vast majority would be temporary. If construction occurs during the tree-nesting raptor breeding season (January 15 to July 15), construction noise could cause indirect impacts to white-tailed kite if this species is determined to be nesting in trees within 300 feet of construction.

Common barn owl. Common barn owl has moderate potential to nest in the riparian woodland along the San Diego River and forage within coastal sage scrub, non-native grassland, and disturbed habitat. Common barn owl is not expected to nest within the project site, so no direct impacts to nesting owls are expected. The project would result in impacts to foraging habitat; however, permanent loss of foraging habitat would be minor, and the vast majority would be temporary. Construction noise could cause indirect impacts to common barn owl if construction occurs during the raptor breeding season (January 15 to July 15) and this species is determined to be nesting in trees within 300 feet of construction.

Southern California rufous-crowned sparrow. Southern California rufous-crowned sparrow has moderate potential to occur within the Diegan coastal sage scrub throughout the survey area. If vegetation removal would occur within Diegan coastal sage scrub during the general bird breeding season (February 15 to August 15) the project would have potential to cause direct impacts to southern California rufous-crowned sparrow.

San Diego black-tailed jackrabbit. San Diego black-tailed jackrabbit has moderate potential to occur in the Diegan coastal sage scrub, non-native grassland, and some areas of disturbed habitat. The project would cause temporary and permanent impacts to these vegetation communities and therefore has potential to impact this species through loss of habitat. Individual jackrabbits are highly mobile and are generally expected to be able to avoid construction equipment. Thus no direct impacts to San Diego black-tailed jackrabbit are anticipated.

Northwestern San Diego pocket mouse. Northwestern San Diego pocket mouse has moderate potential to occur in the larger patches of coastal sage scrub throughout the

survey area. The areas of Diegan coastal sage scrub that would be permanently impacted are largely adjacent to existing roadways, including on the steep rocky cut slopes east of Ashwood Street and within the El Capitan High School property. These areas are largely unsuitable for northwestern San Diego pocket mouse. Temporary project activities would occur over a larger area of suitable Diegan coastal sage scrub to the east of Ashwood Street. Thus, the impacts to suitable habitat for this species would largely be temporary.

San Diego desert woodrat. San Diego desert woodrat has moderate potential to occur within the Diegan coastal sage scrub on the hills east of Ashwood Street in the southern portion of the survey area and west of Wildcat Canyon Road in the northern portion of the survey area. The areas of Diegan coastal sage scrub that would be permanently impacted include the steep rocky cut slopes east of Ashwood Street and within the El Capitan High School property. These areas are largely unsuitable for San Diego desert woodrat. Thus, the impacts to suitable habitat for this species would largely be temporary.

Southern mule deer. Southern mule deer has moderate potential to occur throughout much of the undeveloped areas, including the Diegan coastal sage scrub and southern riparian woodland. This species is very mobile and there are open areas available for dispersal adjacent to the project area. This species is generally expected to be able to avoid construction equipment, so no direct impacts are anticipated.

2.4 Impacts to Habitat Connectivity and Wildlife Corridors

As discussed in Section 1.4.8, the San Diego River represents a regional wildlife corridor through the project area, connecting undeveloped habitat to the east of the project site with habitat in Lakeside, Santee, and the City of San Diego. The project was designed to avoid impacts to the San Diego River and its channel. Thus, there would be no impacts to habitat linkages or corridors.

3.0 Special Status Species

This section addresses project impacts to sensitive plant and animal species.

3.1 Guidelines for the Determination of Significance

The project would have a substantial adverse effect, either directly or through habitat modifications, on one or more species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS if any of the following conditions are met:

- A. The project would impact one or more individuals of a species listed as federally or state endangered or threatened.

- B. The project would impact an on-site population of County List A or B plant species, or a County Group 1 animal species, or a species listed as a state Species of Special Concern. Impacts to these species are considered significant; however, impacts of less than five percent of the individual plants or of the sensitive species' habitat on a project site may be considered less than significant if a biologically-based determination can be made that the project would not have a substantial adverse effect on the local long-term survival of that plant or animal taxon.
- C. The project would impact the local long-term survival of a County List C or D plant species or a County Group 2 animal species.
- D. The project may impact arroyo toad aestivation, foraging, or breeding habitat. Any alteration of suitable habitat within one kilometer (3,280 feet) in any direction of occupied breeding habitat or suitable stream segments (unless very steep slopes or other barriers constrain movement) could only be considered less than significant if a biologically-based determination can be made that the project would not impact the aestivation or breeding behavior of arroyo toads.
- E. The project would impact golden eagle (*Aquila chrysaetos*) habitat. Any alteration of habitat within 4,000 feet of an active golden eagle nest could only be considered less than significant if a biologically-based determination can be made that the project would not have a substantial adverse effect on the long-term survival of the identified pair of golden eagles.
- F. The project would result in a loss of functional foraging habitat for raptors. Impacts to raptor foraging habitat is considered significant; however, impacts of less than five percent of the raptor foraging habitat on a project site may be considered less than significant if a biologically-based determination can be made that the project would not have a substantial adverse effect on the local long-term survival of any raptor species.
- G. The project would impact the viability of a core wildlife area, defined as a large block of habitat (typically 500 acres or more not limited to project boundaries, though smaller areas with particularly valuable resources may also be considered a core wildlife area) that supports a viable population of a sensitive wildlife species or supports multiple wildlife species. Alteration of any portion of a core habitat could only be considered less than significant if a biologically-based determination can be made that the project would not have a substantial adverse effect on the core areas and the species it supports.

- H. The project would cause indirect impacts, particularly at the edge of proposed development adjacent to proposed or existing open space or other natural habitat areas, to levels that would likely harm sensitive species over the long term. The following issues should be addressed in determining the significance of indirect impacts:
- Increasing human access;
 - Increasing predation or competition from domestic animals, pests, or exotic species;
 - Altering natural drainage; and
 - Increasing noise and/or nighttime lighting to a level above ambient that has been shown to adversely affect sensitive species.
- I. The project would impact occupied burrowing owl habitat.
- J. The project would impact occupied cactus wren habitat, or formerly occupied coastal cactus wren habitat that has been burned by wildfire.
- K. The project would impact occupied Hermes copper habitat.
- L. The project would impact nesting success of specific sensitive bird species (as listed in the Guidelines for Determining Significance) through grading, clearing, fire fuel modification, and/or noise generating activities such as construction.

3.2 Analysis of Project Effects

The project may result in impacts under the following conditions for the reasons discussed below. Each letter listed below corresponds to the specific condition listed in Section 3.1.

- A. As discussed in Section 2.3.2, the project has potential to impact occupied habitat for the federally threatened coastal California gnatcatcher. Direct impacts and indirect noise impacts to nesting coastal California gnatcatchers may occur if vegetation clearing, grubbing, grading, or construction is conducted during this species breeding season (March 1 to August 15). These impacts to breeding coastal California gnatcatcher would be significant. Least Bell's vireo is not expected to breed within the project footprint and is therefore not expected to be impacted.
- B. The project has the potential to impact six County Group 1 wildlife species or CDFW species of special concern: San Diego banded gecko, California glossy snake, Cooper's hawk, white-tailed kite, southern California rufous-crowned sparrow, and yellow-breasted chat. With the exception of Cooper's hawk and yellow-breasted chat, these species were not observed; they have potential to occur due to the location, elevation, and habitat present within the survey area. A discussion of these species and their potential to be impacted is presented below.

San Diego banded gecko has potential to be directly impacted by vegetation removal and construction within the Diegan coastal sage scrub. However, these impacts are

not expected to affect local long-term survival of the species. Therefore this impact would be considered less than significant.

California glossy snake has highest potential to occur in the San Diego River channel, which would not be impacted. This species has potential to be impacted by construction vehicle strikes, along the road adjacent to the San Diego River, but such impacts are not expected to substantially increase during construction activities, as the project site lies within a roadway with high vehicle use. Impacts to this species would therefore be less than significant.

Cooper's hawk and white-tailed kite are not expected to nest within the temporary or permanent impact areas but may nest within 300 feet. Thus, they have potential to be indirectly impacted by construction noise if construction occurs within 300 feet of an active Cooper's hawk or white-tailed kite nest during the tree-nesting breeding season (January 15 to July 15). These impacts would be considered significant and require implementation of avoidance measures.

Southern California rufous-crowned sparrow has potential to nest in Diegan coastal sage scrub within the project site, as well as in the surrounding habitat within 300 feet. Thus it has potential to be directly or indirectly impacted if vegetation clearing would occur during the general bird breeding season (February 15 to August 15). Yellow-breasted chat is not expected to nest within the project site, but may nest within 300 feet. Thus, it has potential to be indirectly impacted by construction noise if construction occurs within 300 feet of an active yellow-breasted chat nest during the general bird breeding season (January 15 to July 15). These impacts would be considered significant and require implementation of avoidance measures.

- C. No County List C or D plant species are expected to be impacted. However, 11 County Group 2 wildlife species have potential to be impacted by the project: Belding's orange-throated whiptail, Blainville's horned lizard, rosy boa, coast patch-nosed snake, red diamond rattlesnake, red-shouldered hawk, common barn owl, western bluebird, yellow warbler, northwestern San Diego pocket mouse, and San Diego desert woodrat. Although most of these species were not observed, they have potential to occur due to the location, elevation, and habitat present within the survey area.

While vegetation removal and construction noise has potential to impact these species, the impacts are small, linear, and occur adjacent to an existing roadway. As a result, they are not expected to affect local long-term survival and this impact would be considered less than significant.

- L. As discussed in Section 2.3.2, the project has potential to temporarily affect the nesting success of sensitive bird species. Direct impacts and indirect noise impacts would potentially occur to sensitive migratory birds (coastal California gnatcatcher, western bluebird, and southern California rufous-crowned sparrow) and raptors (Cooper's hawk, white-tailed kite, red-shouldered hawk, and barn owl) if vegetation clearing, grubbing, grading, or construction is conducted during these groups

respective breeding seasons: February 15 to August 15 for migratory birds (inclusive of the coastal California gnatcatcher breeding season), and January 15 to July 15 for tree-nesting raptors.

The project would not result in significant impacts under the following conditions for the reasons discussed below.

- D. There are no records of arroyo toad within two miles of the project site (CDFW 2019a, USFWS 2019), and no habitat suitable habitat occurs within the survey area. Therefore, the project would not impact arroyo toad.
- E. Golden eagle was not detected within the survey area, and there are no records of this species within two miles of the project site (CDFW 2019a). Therefore, the project would not impact golden eagle.
- F. While the project would permanently impact 2.43 acres of potential raptor foraging habitat (Diegan coastal sage scrub, non-native grassland, disturbed habitat, and agriculture), all of these permanent impacts would occur immediately adjacent to existing roadways, primarily along the steep rocky cut slope east of Ashwood Street. This area is only marginally suitable as raptor foraging habitat, and higher quality foraging habitat occurs in the flatter or gently sloping areas further from the road. The impact is only approximately 1.4 percent of the total foraging habitat within the survey area, is linear, and consists of improvements to an existing roadway, and is not expected to negatively affect the local long-term survival of any raptor species. Therefore, impacts to raptor foraging habitat would be considered less than significant.
- G. While the project would cause permanent impacts to 1.66 acres of habitat that qualifies as BRCA (see Table 3; Figures 7a–7c), over half of this impact would occur to non-sensitive vegetation communities, including eucalyptus woodland, non-native woodland, disturbed habitat, and urban/developed. The permanently impacted sensitive vegetation communities within the BRCA (coast live oak woodland, Diegan coastal sage scrub, and non-native grassland) occur in a linear strip along the steep rocky cut slope immediately adjacent to Ashwood Street. This area generally has lower vegetation cover and is of lower value for wildlife than more intact areas further from the road. As a result, the project would not impact the viability of any core wildlife areas.
- H. The project would cause direct impacts to habitat mapped as PAMA (comprising most of the areas designated as BRCA). As discussed in Item G above, most of this impact would occur to non-sensitive vegetation communities, and the sensitive vegetation communities that would be permanently impacted occur in a linear strip along the steep rocky cut slope immediately adjacent to Ashwood Street. This area generally has lower vegetation cover and is of lower quality than more intact areas further from the road. Additionally, the project is not expected to result in significant indirect impacts from human access, predation from domestic animals, pests, or exotic species, natural drainage, or increase noise or nighttime lighting.

- I. No burrowing owls occur or are expected to occur within the project site due to a lack of suitable habitat, so no impacts would occur to this species.
- J. No coastal cactus wrens occur or are expected to occur within the project site due to a lack of suitable habitat, so no impacts would occur to this species.
- K. No Hermes copper butterflies occur or are expected to occur within the project site due to a lack of suitable habitat, so no impacts would occur to this species.

3.3 Cumulative Impact Analysis

Cumulative impacts from the project are evaluated with regard to past, present, and future projects within the project vicinity. While there would be some permanent loss of habitat for special status wildlife species, the impacts would be minimal and are not expected to contribute to cumulative loss of habitat for these species.

3.4 Mitigation Measures and Design Considerations

Mitigation measures recommended to reduce significant impacts to sensitive species to below a level of significance are presented in this section of the report.

3.4.1 Plant Species

As discussed above, no sensitive plant species would be impacted by the project; therefore, no mitigation would be required.

3.4.2 Animal Species

The following avoidance measures would be implemented by the County to prevent direct impacts to sensitive bird species, including coastal California gnatcatcher (Impact 3.2-A), County Group 1 birds (Impact 3.2-B), and County Group 2 birds (3.2-C), and to reduce indirect impacts to all three categories (Impact 3.2-L) to below a level of significance.

Coastal California Gnatcatcher

- Based on the 2019 focused surveys, approximately 9.11 acres of Diegan coastal sage scrub within the survey area (of which 0.70 acre is within the permanent impact boundary) is considered occupied habitat (i.e., use area) by the coastal California gnatcatcher. In accordance with the species' conditions for coverage under the MSCP, this direct impact would be fully mitigated to below a level of significance through habitat-based compensation for the impact to Diegan coastal sage scrub in accordance with the BMO (see Section 4.4).
- To mitigate direct impacts (e.g., vegetation removal): no grubbing or clearing of vegetation shall occur of occupied Diegan coastal sage scrub during the breeding

season of the coastal California gnatcatcher (March 1 – August 15). All grading plans, improvement plans, and the final map shall state the same. If clearing or grading would occur during the coastal California gnatcatcher breeding season, a pre-construction survey shall be conducted to determine whether gnatcatchers occur within the impact area(s). If no nesting coastal California gnatcatchers (includes nest building or other breeding/nesting behavior) are detected within that area, grading and clearing shall be allowed to proceed. If coastal California gnatcatchers are observed, but no nesting or breeding behaviors are noted, additional surveys for breeding/nesting behaviors shall be conducted weekly. If any gnatcatchers are observed nesting or displaying breeding/nesting behavior during the pre-construction survey or additional weekly surveys within the area, construction within 300 feet of any location at which birds have been observed shall be postponed until all nesting (or breeding/nesting behavior) has ceased or until after August 15.

- To mitigate indirect impacts (e.g., construction noise): if operation of construction equipment occurs during the breeding season for the coastal California gnatcatcher (March 1 – August 15), pre-construction survey(s) shall be conducted by a qualified biologist as appropriate to determine whether the species occurs within areas potentially impacted by noise. If it is determined at the completion of pre-construction surveys that active nests belonging to this species are absent from the potential impact area, construction shall be allowed to proceed. If pre-construction surveys determine the presence of active nests belonging to this species, then construction shall: (1) be postponed until a qualified biologist determines the nest(s) is no longer active or until after the respective breeding season; or (2) not occur until a temporary noise barrier or berm is constructed at the edge of the development footprint and/or around the piece of equipment such that noise levels within occupied habitat are reduced to below 60 dB(A) or ambient, whichever is greater. Decibel output will be confirmed by a County-approved noise specialist and intermittent monitoring by a qualified biologist to ensure that conditions have not changed will be required. All grading permits, improvement plans, and the final map shall state the same.

Other Sensitive Species

To avoid impacts to upland migratory birds, grading, brush clearing, and all other construction within or adjacent to upland vegetation should be conducted outside the general migratory bird breeding season of February 15 to August 15 (inclusive of coastal California gnatcatcher). To avoid impacts to tree-nesting raptors, construction within or adjacent to riparian habitat should occur outside the tree-nesting raptor breeding season of January 15 to July 15. If construction must occur during these periods, the following actions would be required:

A qualified biologist shall conduct a pre-construction clearance survey for nesting birds within suitable habitat to determine whether coastal California gnatcatcher, other upland or migratory avian species, or raptors are nesting

within 300 feet of the construction area. The pre-construction nesting bird surveys must be conducted prior to the commencement of construction activities.

If the aforementioned birds are not observed nesting within 300 feet of construction, no grading or construction restrictions would be required.

If nesting birds are found, nests will be noted, and no grading or clearing shall occur within 300 feet of the active nest. Monitoring will occur to ensure that no nest is removed or disturbed until the young have fledged or the nest is no longer active.

If construction must occur within 300 feet of an active nest, temporary sound barriers may be required or construction may be restricted near the nest site to reduce noise levels below an hourly average of 60 A-weighted decibels (dB[A] L_{eq}) or ambient, whichever is greater. Any temporary sound barriers must be placed within the impact areas and not in the adjacent habitat.

As described above in Section 3.2, impacts to sensitive reptiles and mammals would be considered less than significant. Habitat-based mitigation described in Section 4.4 would be used to mitigate project impacts to these species by providing in-kind foraging and nesting habitat.

3.5 Conclusions

With the proposed measures described above, Impacts 3.2-A, B, C, and L would be either avoided or mitigated to below a level of significance.

4.0 Riparian Habitat or Sensitive Natural Community

As discussed in Section 2.1, project implementation would result in temporary and permanent impacts to sensitive vegetation communities (see Table 3).

4.1 Guidelines for the Determination of Significance

An adverse effect on any riparian habitat or other sensitive natural community is considered significant if any of the following conditions are met:

- A. Project-related construction, grading, clearing, or other activities would temporarily or permanently remove sensitive native or naturalized habitat on or off the project site.
- B. Any of the following will occur to or within jurisdictional wetlands and/or riparian habitats as defined by ACOE, CDFW, and the County: removal of vegetation;

grading; obstruction or diversion of water flow; adverse change in velocity, siltation, volume of flow, or runoff rate; placement of fill; placement of structures; construction of a road crossing; placement of culverts or other underground piping; any disturbance of the substratum; and/or any activity that may cause an adverse change in native species composition, diversity, and abundance.

- C. The project would draw down the groundwater table to the detriment of groundwater-dependent habitat, typically a drop of three feet or more from historical low groundwater levels.
- D. The project would cause indirect impacts, particularly at the edge of proposed development adjacent to proposed or existing open space or other natural habitat areas, to levels that would likely harm sensitive habitats over the long term. The following issues should be addressed in determining the significance of indirect impacts: increasing human access; increasing predation or competition from domestic animals, pests, or exotic species; altering natural drainage; and increasing noise and/or nighttime lighting to a level above ambient that has been shown by the best available science to adversely affect the functioning of sensitive habitats.
- E. The project does not include a wetland buffer adequate to protect the functions and values of existing wetlands. If the project is subject to the Resource Protection Ordinance (RPO), buffers of a minimum of 50 feet and a maximum of 200 feet to protect wetlands are required based on the best available science available to the County at the time of adoption of the ordinance.

4.2 Analysis of Project Effects

The project may result in impacts under the following conditions for the reasons discussed below. Each letter listed below corresponds to the specific condition listed in Section 4.1.

- A. As discussed in Section 2.1 and shown in Table 3, the project would cause temporary and permanent impacts to sensitive vegetation communities, including coast live oak woodland, Diegan coastal sage scrub, and non-native grassland.

The project would not result in significant impacts under the following conditions for the reasons discussed below.

- B. The project would not impact wetlands as defined by ACOE, CDFW, RWQCB or the County RPO.
- C. The project would consist of improvements to existing roadways and would avoid impacts within the San Diego River. It would have no impact on groundwater levels.
- D. As the project consists of improvements to existing roadways, it would not substantially change the nature of the surrounding habitat. Therefore, it is not expected to result in indirect impacts from increased human access; increased predation or competition from domestic animals, pests, or exotic species.

Project improvements would not alter natural drainage patterns.

Indirect impacts from construction noise would be prevented through implementation of the avoidance measures described in Section 3.4.2. Following construction, operational noise levels (i.e. from traffic) are expected to be similar to the current noise levels, so there would be no impacts from construction or operational noise.

Construction activities are expected to occur during the day, so no construction lighting is anticipated. The project does not propose any new lighting along the roadways. Therefore, there would be no impact from nighttime lighting.

- E. The project was designed to avoid work within the San Diego River and would not substantially alter the land use in the vicinity of the river, and would not alter any existing wetland buffers. Thus, there would be no impact to wetland buffers.

4.3 Cumulative Impact Analysis

The proposed project would avoid impacts to riparian habitats but would cause temporary and permanent impacts to sensitive upland vegetation communities. These impacts would be minimal and are not expected to contribute to any cumulative loss of habitat.

4.4 Mitigation Measures and Design Considerations

Impacts to sensitive natural communities (Impact 4.2-A) would be considered significant. The following mitigation measures would be required to reduce this impact to below a level of significance.

- A. Temporary impacts to sensitive vegetation communities would be mitigated in-kind with on-site revegetation of the impacted areas following construction. Permanent impacts to sensitive vegetation communities would be mitigated in accordance with the BMO in the form of enhancement, restoration, and/or creation of habitat; deduction of credits from a County-approved mitigation area; or other off-site preservation (Table 4).

4.5 Conclusions

Project implementation would result in temporary and permanent impacts to sensitive native or naturalized habitat. All temporary impacts would be mitigated with in-kind revegetation of the impacted areas on site. Permanent impacts would be mitigated in accordance with the BMO in the form of enhancement, restoration, and/or creation of habitat; deduction of credits from a County-approved mitigation area; or other off-site preservation at a location that meets the criteria for a BRCA. With these mitigation measures, project impacts to sensitive native or naturalized habitats would be reduced to below a level of significance.

Table 4 Mitigation for Impacts to Vegetation Communities ¹										
Vegetation Community	Temporary Impacts/Mitigation			Permanent Impacts/Mitigation ³						
	BRCA	Non-BRCA	Revegetation ²	BRCA			Non-BRCA			Total Mitigation
				Impact	Ratio	Mitigation	Impact	Ratio	Mitigation	
Tier I										
Coast live oak woodland	0.03	0.03	0.06	0.01	2:1	0.02	0.02	1:1	0.02	0.04
Tier II										
Diegan coastal sage scrub	4.85	0.71	5.56	0.70	1.5:1	1.05	0.43	1:1	0.43	1.48
Tier III										
Non-native grassland	0.22	--	0.22	0.10	1:1	0.10	--	0.5:1	--	0.10
Tier IV										
Non-native woodland	0.08	0.37	--	0.06	--	--	0.06	--	--	--
Eucalyptus woodland	0.01	0.02	--	0.02	--	--	0.03	--	--	--
Disturbed habitat	2.60	0.94	--	0.35	--	--	0.73	--	--	--
Agriculture	--	0.30	--	--	--	--	0.12	--	--	--
Urban/developed	1.65	5.00	--	0.42	--	--	6.94	--	--	--
TOTAL	9.44	7.37	5.84	1.66	--	1.17	8.33	--	0.45	1.62
BRCA = Biological Resource Core Area										
¹ All areas are presented in acres, rounded to the nearest 0.01. Impacts of less than 0.01 acre are also presented in square feet (sf).										
² Mitigation for temporary impacts would occur on site with in-kind revegetation of the impacted vegetation community.										
³ Ratios were determined based on the BMO Attachment M. Mitigation would occur in the form of either enhancement, restoration, and/or creation of habitat; deduction of credits from a County-approved mitigation area; or other off-site preservation at a location that meets the criteria for a BRCA.										

5.0 Jurisdictional Wetlands and Waterways

The project was designed to avoid the San Diego River and impacts to jurisdictional waters and waterways.

5.1 Guidelines for the Determination of Significance

The project would have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the federal CWA (including, but not limited to, marsh, vernal pool, coastal, and so on) through direct removal, filling, hydrological interruption, or other means. These criteria correspond to Criteria B, C, and E in Section 4.2, above:

- A. Any of the following will occur to or within jurisdictional wetlands and/or riparian habitats as defined by ACOE, CDFW, and the County: removal of vegetation; grading; obstruction or diversion of water flow; adverse change in velocity, siltation, volume of flow, or runoff rate; placement of fill; placement of structures; construction of a road crossing; placement of culverts or other underground piping; any disturbance of the substratum; and/or any activity that may cause an adverse change in native species composition, diversity, and abundance.
- B. The project draws down the groundwater table to the detriment of groundwater-dependent habitat, typically a drop of three feet or more from historical low groundwater levels.
- C. The project does not include a wetland buffer adequate to protect the functions and values of existing wetlands.

5.2 Analysis of Project Effects

The project would not result in significant impacts under the following conditions for the reasons discussed below.

- A. The proposed project would not impact any jurisdictional wetlands and/or riparian habitats as defined by ACOE, CDFW, or RWQCB.
- B. The project would not affect groundwater levels or draw down the water table to the detriment of groundwater-dependent habitat.
- C. The proposed road improvements would remain within the existing footprint of Ashwood Street in the vicinity of the San Diego River and does not include any permanent structures or other project features that would encroach on existing wetland buffers. Thus, there would be no impact to wetland buffers.

5.3 Cumulative Impact Analysis

There would be no impacts to wetlands or waters. Therefore, the project would not contribute to any cumulative loss of jurisdictional wetlands or waters.

5.4 Mitigation Measures and Design Considerations

The proposed project would not cause impacts to jurisdictional waters as defined by the ACOE, CDFW, or RWQCB. Therefore, no mitigation would be required.

5.5 Conclusions

Project implementation would not result in impacts to ACOE, CDFW, and RWQCB jurisdictional wetlands. Therefore, no mitigation would be required.

6.0 Wildlife Movement and Nursery Sites

This section addresses potential project impacts to wildlife movement, corridors, and nursery sites.

6.1 Guidelines for the Determination of Significance

Project-related interference with the movement of any native resident, migratory fish, or wildlife species, with established native resident or migratory wildlife corridors, or with the use of native wildlife nursery sites would be considered significant if any of the following conditions are met:

- A. The project would impede wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their reproduction.
- B. The project would substantially interfere with connectivity between blocks of habitat, or would potentially block or substantially interfere with a local or regional wildlife corridor or linkage.
- C. The project would create artificial wildlife corridors that do not follow natural movement patterns.
- D. The project would increase noise and/or nighttime lighting in a wildlife corridor or linkage to levels proven to affect the behavior of the animals identified in a site-specific analysis of wildlife movement.
- E. The project does not maintain an adequate width for an existing wildlife corridor or linkage and/or would further constrain an already narrow corridor through activities

such as (but not limited to) reduction of corridor width, removal of available vegetative cover, placement of incompatible uses adjacent to it, and placement of barriers in the movement path.

- F. The project does not maintain adequate visual continuity (i.e., long lines-of-sight) within wildlife corridors or linkage.

6.2 Analysis of Project Effects

The project would not result in significant impacts under the following conditions for the reasons discussed below.

- A. The San Diego River represents a regional wildlife corridor through the project area, though the project would not cause impacts within the river channel or substantially alter or impede wildlife use of the corridor. Additionally, while the project would cause temporary and permanent impacts to Diegan coastal sage scrub and other upland vegetation communities that provide breeding habitat for native birds and other wildlife, this habitat is not located within the wildlife corridor. Therefore, the project would not impede wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their reproduction.
- B. The project area itself does not connect large blocks of habitat and project implementation will not interfere with habitat connectivity. The San Diego River, which crosses through the project area, is a larger regional wildlife corridor connecting undeveloped habitat to the east of the project site with habitat in Lakeside, Santee, and the City of San Diego. The project avoids impacts to the San Diego River and its channel. Thus, the project would not substantially interfere with habitat connectivity or interfere with a local or regional wildlife corridor or linkage.
- C. The project would not create any artificial wildlife corridors.
- D. Neither the operational phase nor the construction phase of the project would include new night lighting. Noise levels during the operational phase of the project would not be substantially different from current noise levels. While construction noise has potential to impact bird species breeding within the San Diego River corridor, the impact is not expected to prevent their overall use of the corridor. Construction would occur during the daytime, whereas most movement by medium- and large-sized wildlife species, such as southern mule deer, coyote (*Canis latrans*), and bobcat (*Lynx rufus*), is expected to occur in the evenings and/or early morning. Thus, construction would not be expected to affect occurring while wildlife movement through the corridor. Thus, this impact would be considered less than significant.
- E. The project would not affect the width of the wildlife corridor along the San Diego River. While there would be a small area of temporary impacts along the edge of the corridor, this area would be revegetated following construction. The remainder of the

project would remain outside of the San Diego River, so there would be no change of the width of the existing corridor.

- F. The project would not affect visual continuity within the wildlife corridor. While there would be a small area of temporary impacts along the edge of the corridor, this area would be revegetated following construction so the overall visual continuity along the corridor would not be impacted.

6.3 Cumulative Impact Analysis

The project would not alter the width, continuity, or accessibility of the wildlife corridor along the San Diego River. As a result, there would be no cumulative impact.

6.4 Mitigation Measures and Design Considerations

Project effects on wildlife movement and nursery sites would be considered less than significant and no mitigation measures would be required.

6.5 Conclusions

Project effects on wildlife movement and nursery sites would be considered less than significant and no mitigation measures would be required.

7.0 Local Policies, Ordinances, and Adopted Plans

This section addresses project compliance with local policies, ordinances, and adopted plans.

7.1 Guidelines for the Determination of Significance

If this project conflicts with any local policies or ordinances protecting biological resources or with the provisions of an adopted habitat conservation plan (HCP), NCCP, or other approved local, regional, or state habitat conservation plan, any of the following conditions would be considered significant:

- A. For lands outside of the MSCP, the project would impact coastal sage scrub vegetation in excess of the County's 5 percent habitat loss threshold as defined by the Southern California Coastal Sage Scrub NCCP Process Guidelines.

- B. The project would preclude or prevent the preparation of the subregional NCCP Process. For example, the project proposes development within areas that have been identified by the County or resource agencies as critical to future habitat preserves.
- C. The project will impact any amount of sensitive habitat lands as outlined in the RPO.
- D. The project would not minimize and/or mitigate coastal sage scrub habitat loss in accordance with Section 4.3 of the NCCP Process Guidelines.
- E. The project does not conform to the goals and requirements as outlined in any applicable HCP, Habitat Management Plan, Special Area Management Plan, Watershed Plan, or similar regional planning effort.
- F. For lands within the MSCP, the project would not minimize impacts to BRCAs as defined in the BMO.
- G. The project would preclude connectivity between areas of high habitat values, as defined by the Southern California Coastal Sage Scrub NCCP Process Guidelines.
- H. The project does not maintain existing movement corridors and/or habitat linkages as defined by the BMO.
- I. The project does not avoid impacts to MSCP narrow endemic species and would impact core populations of narrow endemics.
- J. The project would reduce the likelihood of survival and recovery of listed species in the wild.
- K. The project would result in the killing of migratory birds or destruction of active migratory bird nests and/or eggs (MBTA).
- L. The project would result in the take of eagles, eagle eggs, or any part of an eagle (Bald and Golden Eagle Protection Act).

7.2 Analysis of Project Effects

The project may result in impacts under the following conditions for the reasons discussed below.

- K. The project has potential to impact coastal California gnatcatcher, Cooper's hawk, red-shouldered hawk, white-tailed kite, common barn owl, western bluebird, southern California rufous-crowned sparrow, and other birds protected by the CFGC if any vegetation clearing occurs during the breeding season of January 15 to July 15 for tree-nesting raptors, March 1 to August 15 for coastal California gnatcatcher, and February 15 to August 15 for other migratory birds. Although the MBTA is no longer interpreted to protect migratory birds and raptors from incidental take (U.S.

Department of the Interior 2017), CFGC 3503 and 3503.5 still provide such protections. Therefore, any impacts to nesting birds would be considered significant and mitigation would be required.

The project would not result in significant impacts under the following conditions for the reasons discussed below.

- A. The project site is located within the County's MSCP boundary. Therefore, this guideline does not apply.
- B. The project would comply with the County's MSCP Subarea Plan, Biology Guidelines, and BMO (County of San Diego 1997, 2010a, 2010b, respectively). Thus, the project would not affect the subregional NCCP Process or hinder the value of the site as a preserve.
- C. The project does not fall under any of the categories of discretionary action subject to the RPO (per Section 86.603 in County of San Diego 1991), so the RPO is not applicable. Consequently, this criterion does not apply.
- D. The project would avoid impact to Diegan coastal sage scrub to the degree feasible, and would mitigate unavoidable impacts in compliance with the County's MSCP Subarea Plan and BMO (County of San Diego 1997 and 2010b, respectively). As a result the project would comply with Section 4.3 of the NCCP Process Guidelines.
- E. The project would comply with the regulations under the County's MSCP Subarea Plan (County of San Diego 1997), and no other HCP, Habitat Management Plan, Special Area Management Plan, Watershed Plan, or similar regional planning effort would apply.
- F. The project footprint would impact within a BRCA as identified in the MSCP Subarea Plan (County of San Diego 1997). Impacts to sensitive biological resources have been minimized to the degree possible, and the majority of the impacts would be temporary, with impacted areas revegetated after construction. Permanent impacts would be mitigated in compliance with the BMO. Therefore, the project would comply with the BMO, and no significant impact would occur.
- G. The project would not preclude connectivity between areas of high value habitat. Therefore, no significant impact would occur.
- H. The project would not affect connectivity of habitat within the corridor along the San Diego River. Therefore, no significant impact would occur.
- I. Implementation of the project would not result in impacts to narrow endemic species. Therefore, no significant impact would occur.
- J. One federally listed species occurs within the areas that would be affected by the project: coastal California gnatcatcher. A least Bell's vireo breeding pair was

observed as close as 500 feet west of the project site and juvenile was observed approximately 200 feet west of the project site during protocol surveys, but is not expected to be impacted by the project. Impacts to coastal California gnatcatcher would be avoided through implementation of the measures described in Section 3.4.2. Therefore, no significant impact would occur.

- L. No bald or golden eagles were observed or are expected to occur within the project site. Therefore, no impacts to these species would occur.

7.3 Cumulative Impact Analysis

Through project design and project-specific mitigation measures, the project would comply with local policies, ordinances, and adopted plans to ensure that impacts to biological resources are avoided, minimized, and mitigated according to guidelines established by these regulations. Potential impacts to migratory bird species (Impact 7.2-K) would be avoided through the measures discussed below and in Section 3.4.2. Thus, there would be no cumulative impact.

7.4 Mitigation Measures and Design Considerations

The avoidance measures described in Sections 3.4.2 and 4.4 would be implemented to prevent direct impacts and reduce indirect impacts to migratory bird species (Impact 7.2-K) to below a level of significance.

7.5 Conclusions

With implementation of the avoidance and mitigation measures described in Sections 3.4.2 and 4.4, the project would be consistent with local policies, ordinances, and adopted plans.

8.0 Summary of Project Impacts and Mitigation

8.1 Special Status Species

The project has potential to cause impacts to coastal California gnatcatcher (Impact 3.2-A), County Group 1 birds (Impact 3.2-B), and County Group 2 birds (3.2-C), and indirect impacts to all three categories (Impact 3.2-L). The following measures would be implemented to reduce this impact to below a level of significance:

Grading, brush clearing, and all other construction should be conducted outside the general bird breeding season of February 15 to August 15 for upland birds (inclusive of coastal California gnatcatcher), and January 15 to July 15 for tree-nesting

raptors. If construction must occur during this period, the following actions would be required:

A qualified biologist shall conduct a pre-construction clearance survey for nesting birds within suitable habitat to determine whether coastal California gnatcatcher, other upland or migratory avian species, or raptors are nesting within 300 feet of the construction area. The pre-construction nesting bird surveys must be conducted prior to the commencement of construction activities.

If the aforementioned birds are not observed nesting within 300 feet of construction, no grading or construction restrictions would be required.

If nesting birds are found, nests will be noted, and no grading or clearing shall occur within 300 feet of the active nest. Monitoring will occur to ensure that no nest is removed or disturbed until the young have fledged or the nest is no longer active.

If construction must occur within 300 feet of an active nest temporary sound barriers may be required or construction may be restricted near the nest site to reduce noise levels below an hourly average of 60 A-weighted decibels (dB[A] L_{eq}) or ambient, whichever is greater. Any temporary sound barriers must be placed within the impact area and not in the adjacent habitat.

8.2 Riparian Habitat or Sensitive Natural Community

The project would cause impacts to sensitive natural communities (Impact 4.2-A). The following mitigation measures would be required to reduce these impacts to below a level of significance.

- A. Temporary impacts to sensitive vegetation communities would be mitigated in-kind with on-site revegetation of the impacted areas following construction. Permanent impacts to sensitive vegetation communities would be mitigated in accordance with the BMO in the form of enhancement, restoration, and/or creation of habitat; deduction of credits from a County-approved mitigation area; or other off-site preservation.

8.3 Jurisdictional Wetlands and Waterways

The project would not impact jurisdictional wetlands or waterways, so no mitigation would be required.

8.4 Wildlife Movement and Nursery Sites

The project would impact potential bird breeding and foraging habitat (Impact 6.2-A). This impact would be mitigated through the proposed avoidance measures described in Section 3.4.2, as well as the habitat-based mitigation described in Section 4.4.

8.5 Local Policies, Ordinances, and Adopted Plans

The project has potential to cause direct and indirect impacts to migratory bird species (Impact 7.2-K). The avoidance measures described in Sections 3.4.2 and 4.4 would be implemented to prevent and reduce these impacts to below a level of significance.

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10.0 List of Preparers

Brian Parker	Associate Project Manager, County CEQA Consultant List for Biological Resources
Anna Leavitt	Associate Project Manager
Beth Procsal	Associate Biologist
Wendy Loeffler	Senior Biologist, County CEQA Consultant List for Biological Resources
Andrew Smisek	Biologist
Alex Fromer	Biologist
Mandy Weston	Biologist
Benjamin Arp	GIS Analyst
Jennifer Gutierrez	Production Specialist

ATTACHMENTS

ATTACHMENT 1

Plant Species Observed

Attachment 1
Plant Species Observed

Scientific Name	Common Name	Habitat	Origin
GYMNOSPERMS			
PINACEAE	PINE FAMILY		
<i>Pinus halepensis</i> Mill.	Aleppo pine	NNW	I
<i>Pinus pinea</i> L.	Italian stone pine	DEV	I
ANGIOSPERMS: MONOCOTS			
AGAVACEAE	AGAVE FAMILY		
<i>Agave attenuata</i> Salm.	lion's tail, foxtail, swan's neck	DEV	I
<i>Yucca guatemalensis</i> Baker	bluestem yucca	DEV	I
<i>Yucca schidigera</i> Ortgies	Mojave yucca	DH	N
ARECACEAE	PALM FAMILY		
<i>Phoenix canariensis</i> Chabaud	Canary Island palm	NNW	I
<i>Syagrus romanzoffiana</i> (Cham.) Glassman	queen palm	DEV	I
<i>Washingtonia robusta</i> H. Wendl.	Mexican fan palm	DCSS	I
POACEAE (GRAMINEAE)	GRASS FAMILY		
<i>Arundo donax</i> L.	giant reed	SRS	I
<i>Avena barbata</i> Pott ex Link	slender wild oat	DH, NNG, SRS. SRW, DCSS	I
<i>Brachypodium distachyon</i> (L.) P. Beauv.	purple falsebrome	DH, DEV	I
<i>Bromus diandrus</i> Roth	ripgut grass	DCSS, NNG, CLOW, SRW	I
<i>Bromus hordeaceus</i> L.	soft chess	DCSS	I
<i>Bromus madritensis</i> L. ssp. <i>rubens</i> (L.) Husn.	red brome	DH, SRS, DCSS	I
<i>Cortaderia selloana</i> (Schult. & Schult. f.) Asch. & Graebn.	pampas grass	DEV	I
<i>Cynodon dactylon</i> (L.) Pers.	Bermuda grass	DH	I
<i>Festuca</i> [= <i>Vulpia</i>] <i>myuros</i> L.	rattail sixweeks grass	MFS, SRS, DCSS	I
<i>Pennisetum setaceum</i> (Forssk.) Chiov.	crimson fountain grass	DCSS, DH, AG	I
<i>Polypogon monspeliensis</i> (L.) Desf.	annual beard grass, rabbitfoot grass	DEV	I
<i>Schismus barbatus</i> (L.) Thell.	Mediterranean schismus	DH, AG	I
THEMIDACEAE	BRODIAEA FAMILY		
<i>Dichelostemma capitatum</i> (Benth.) Alph. Wood	blue dicks	DCSS	N

**Attachment 1
Plant Species Observed**

Scientific Name	Common Name	Habitat	Origin
ANGIOSPERMS: DICOTS			
ADOXACEAE	ADOXA FAMILY		
<i>Sambucus nigra</i> L. ssp. <i>caerulea</i> (Raf.) Bolli	blue elderberry	MFS, SRW, SRS, DCSS	N
AIZOACEAE	FIG-MARIGOLD FAMILY		
<i>Oscularia deltoides</i>	pink iceplant	DEV, AG	I
ANACARDIACEAE	SUMAC OR CASHEW FAMILY		
<i>Malosma laurina</i> Nutt. ex Abrams	laurel sumac	DCSS	N
<i>Schinus molle</i> L.	Peruvian pepper tree	DEV, AG, MFS, SRS	I
<i>Toxicodendron diversilobum</i> (Torr. & A. Gray) Greene	western poison oak	CLOW, SRS	N
APIACEAE (UMBELLIFERAE)	CARROT FAMILY		
<i>Apiastrum angustifolium</i> Nutt.	mock-parsley	CLOW, DCSS, SRW, SRS	N
<i>Daucus pusillus</i> Michx.	rattlesnake weed	DCSS	N
APOCYNACEAE	DOGBANE FAMILY		
<i>Funastrum cynanchoides</i> (Decne.) Schltr. var. <i>hartwegii</i> (Vail) Krings	climbing milkweed	DCSS	N
ASTERACEAE	SUNFLOWER FAMILY		
<i>Artemisia californica</i> Less.	California sagebrush	DH, DCSS	N
<i>Artemisia douglasiana</i> Besser	mugwort	SRS, SRW	N
<i>Artemisia palmeri</i> A. Gray	San Diego sagewort, Palmer sagewort, Palmer's sage*	MFS	N
<i>Baccharis salicifolia</i> (Ruiz & Pav.) Pers. ssp. <i>salicifolia</i>	mule fat, seep-willow	MFS, SRS, DCSS	N
<i>Baccharis sarothroides</i> A. Gray	broom baccharis	MFS, DCSS, DH	N
<i>Bahiopsis</i> [= <i>Viguiera</i>] <i>laciniata</i> (A. Gray) E.E. Schilling & Panero	San Diego viguiera, San Diego County viguiera	DCSS	N
<i>Bebbia juncea</i> (Benth.) Greene var. <i>aspera</i> Greene	rush sweetbush	DCSS	N
<i>Brickellia californica</i> (Torr. & A. Gray) A. Gray	California brickellbush	DCSS	N
<i>Carduus pycnocephalus</i> L.	Italian thistle	CLOW, DCSS	I
<i>Centaurea melitensis</i> L.	tocalote, Maltese star-thistle	DCSS, DH	I
<i>Chaenactis artemisiifolia</i> (Harv. & A. Gray) A. Gray	white pincushion	DCSS	N
<i>Dimorphotheca fruticosa</i> (L.) DC.	trailing African daisy	DH	I

**Attachment 1
Plant Species Observed**

Scientific Name	Common Name	Habitat	Origin
<i>Encelia farinosa</i> A. Gray ex Torr.	brittlebush, incienso	DCSS	(I)
<i>Erigeron</i> [= <i>Conyza</i>] <i>canadensis</i> L.	horseweed	DCSS	N
<i>Eriophyllum confertiflorum</i> (DC.) A. Gray var. <i>confertiflorum</i>	long-stem golden-yarrow	DCSS	N
<i>Glebionis coronaria</i> (L.) Spach [= <i>Chrysanthemum coronarium</i>]	garland, crown daisy	DH	I
<i>Gnaphalium</i> sp.	cudweed, everlasting	DCSS	N
<i>Hazardia squarrosa</i> (Hook. & Arn.) Greene	saw-toothed goldenbush	DCSS	N
<i>Hedypnois cretica</i> (L.) Dum. Cours.	crete weed	DCSS	I
<i>Heterotheca grandiflora</i> Nutt.	telegraph weed	DH	N
<i>Hypochaeris glabra</i> L.	smooth cat's-ear	DCSS, DH	I
<i>Isocoma menziesii</i> (Hook. & Arn.) G.L. Nesom	coastal goldenbush	MFS	N
<i>Iva hayesiana</i> A. Gray	San Diego marsh-elder	MFS, DCSS	N
<i>Lasthenia coronaria</i> (Nutt.) Ornduff	crowned goldfields, royal goldfields	DCSS	N
<i>Logfia</i> [= <i>Filago</i>] <i>gallica</i> (L.) Coss. & Germ.	daggerleaf cottonrose	DH	I
<i>Pseudognaphalium biolettii</i> Anderb. [= <i>Gnaphalium bicolor</i>]	bicolor cudweed	DCSS	N
<i>Pseudognaphalium californicum</i> (DC.) Anderb.	California everlasting	MFS	N
<i>Pseudognaphalium canescens</i> (DC.) Anderb.	everlasting cudweed	DCSS	N
<i>Psilocarphus tenellus</i> Nutt.	slender woolly-marbles	DCSS	N
<i>Rafinesquia californica</i> Nutt.	California chicory	DCSS	N
<i>Sonchus asper</i> (L.) Hill ssp. <i>asper</i>	prickly sow thistle	CLOW, DCSS	I
<i>Sonchus oleraceus</i> L.	common sow thistle	DH, CLOW	I
<i>Stylocline gnaphaloides</i> Nutt.	everlasting neststraw	DCSS	N
<i>Uropappus lindleyi</i> (DC.) Nutt.	silver puffs	DCSS	N
BIGNONIACEAE	BIGNONIA FAMILY		
<i>Tecoma capensis</i> (Thunb.) Lindl.	cape honeysuckle	DEV	I
BORAGINACEAE	BORAGE FAMILY		
<i>Amsinckia menziesii</i> (Lehm.) A. Nelson & J.F. Macbr.	common fiddleneck,	DH, DCSS	N
<i>Cryptantha</i> sp.	cryptantha	DCSS	N
<i>Nemophila menziesii</i> Hook. & Arn. var. <i>menziesii</i>	Menzies' baby blue-eyes	DCSS	N
<i>Pectocarya</i> sp.	pectocarya	DCSS	N
<i>Phacelia</i> sp.	phacelia	MFS, DCSS	N
<i>Phacelia cicutaria</i> Greene var. <i>hispida</i> (A. Gray) J.T. Howell	caterpillar phacelia	DCSS	N
<i>Phacelia parryi</i> Torr.	Parry's phacelia	DCSS	N
<i>Pholistoma auritum</i> (Lindl.) Lilja var. <i>auritum</i>	fiesta flower	DCSS	N
<i>Plagiobothrys</i> sp.	popcornflower	DCSS, DH	N

**Attachment 1
Plant Species Observed**

Scientific Name	Common Name	Habitat	Origin
BRASSICACEAE (CRUCIFERAE)	MUSTARD FAMILY		
<i>Brassica nigra</i> (L.) W.D.J. Koch	black mustard	SRS	I
<i>Brassica tournefortii</i> Gouan	Sahara mustard	DCSS	I
<i>Hirschfeldia incana</i> (L.) Lagr.-Fossat	short-pod mustard	DH, MFS, SRS, DCSS	I
<i>Lepidium nitidum</i> Nutt.	shining peppergrass	DCSS	N
<i>Raphanus sativus</i> L.	radish	DH	I
<i>Sisymbrium altissimum</i> L.	tumble mustard, Jim Hill mustard	DEV, DCSS	I
<i>Sisymbrium officinale</i> (L.) Scop.	hedge mustard	CLOW	I
CACTACEAE	CACTUS FAMILY		
<i>Opuntia ficus-indica</i> (L.) Mill.	mission prickly-pear, Indian fig	DCSS	I
<i>Opuntia littoralis</i> (Engelm.) Cockerell.	coast prickly-pear, shore cactus	DH	N
CARYOPHYLLACEAE	PINK FAMILY		
<i>Silene gallica</i> L.	small-flower catchfly, windmill pink	DCSS, DH	I
<i>Stellaria media</i> (L.) Vill.	common chickweed	DCSS	I
<i>Salsola tragus</i> L.	Russian thistle, tumbleweed	DH, AG	I
CONVOLVULACEAE	MORNING-GLORY FAMILY		
<i>Calystegia macrostegia</i> (Greene) Brummitt	morning-glory	DCSS	N
<i>Cuscuta</i> sp.	dodder	DCSS	N
<i>Ipomoea purpurea</i> (L.) Roth.	common morning-glory	DEV	I
CRASSULACEAE	STONECROP FAMILY		
<i>Crassula connata</i> (Ruiz & Pav.) A. Berger	pygmy-weed	DH, MFS	N
<i>Dudleya pulverulenta</i> (Nutt.) Britton & Rose	chalk lettuce, chalk dudleya	DCSS	N
CUCURBITACEAE	GOURD FAMILY		
<i>Marah macrocarpa</i> (Greene) Greene	wild cucumber	SRS, DCSS	N
EUPHORBIACEAE	SPURGE FAMILY		
<i>Croton californicus</i> Müll. Arg.	California croton	MFS	N
<i>Croton</i> [=Eremocarpus] <i>setiger</i> Hook.	turkey-mullein, dove weed	DH, AG	N
<i>Euphorbia</i> [=Chamaesyce] <i>albomarginata</i> Torr. & A. Gray	rattlesnake sandmat	DH	N
FABACEAE (LEGUMINOSAE)	LEGUME FAMILY		
<i>Acmispon glaber</i> (Vogel) Brouillet [=Lotus scoparius]	deerweed, California broom	DH, DCSS	N
<i>Acmispon strigosus</i> (Nutt.) Brouillet [=Lotus strigosus]	bishop's lotus, strigose lotus	DCSS, DH	N
<i>Lupinus hirsutissimus</i> Benth.	stinging lupine	DCSS	N

**Attachment 1
Plant Species Observed**

Scientific Name	Common Name	Habitat	Origin
<i>Lupinus succulentus</i> Douglas ex K. Koch	arroyo lupine	DCSS	N
<i>Lupinus truncatus</i> Nutt.	collar lupine	DCSS	N
<i>Parkinsonia aculeata</i> L.	Mexican palo verde	SRS, DCSS	I
<i>Vicia villosa</i> Roth ssp. <i>varia</i> (Host) Corb.	hairy vetch	DH	I
FAGACEAE	OAK FAMILY		
<i>Quercus agrifolia</i> Née	coast live oak, encina	CLOW, DCSS	N
GENTIANACEAE	GENTIAN FAMILY		
<i>Zeltnera [=Centaurium] venusta</i> (A. Gray) G. Mans.	California centaury, charming centaury	DCSS	N
GERANIACEAE	GERANIUM FAMILY		
<i>Erodium botrys</i> (Cav.) Bertol.	long-beak filaree	DCSS, DH	I
<i>Erodium cicutarium</i> (L.) L'Hér. ex Aiton	redstem filaree	DH, NNG, AG	I
LAMIACEAE	MINT FAMILY		
<i>Pogogyne nudiuscula</i> A. Gray	Otay mesa mint	DCSS	N
<i>Salvia apiana</i> Jeps.	white sage	DCSS	N
<i>Salvia columbariae</i> Benth.	chia	DCSS	N
<i>Salvia mellifera</i> Greene	black sage	DCSS	N
LYTHRACEAE	LOOSESTRIFE FAMILY		
<i>Punica granatum</i> L.	pomegranate	DEV	I
MALVACEAE	MALLOW FAMILY		
<i>Malva parviflora</i> L.	cheeseweed, little mallow	DCSS	I
MONTIACEAE	MONTIA FAMILY		
<i>Calandrinia menziesii</i> [replaced <i>C. ciliata</i>] (Hook.) Torr. & A. Gray	red maids	DCSS	N
<i>Claytonia perfoliata</i> Donn ex Willd.	miner's lettuce	DCSS	N
MORACEAE	MULBERRY FAMILY		
<i>Ficus</i> sp.	fig	NNW	I
MYRTACEAE	MYRTLE FAMILY		
<i>Eucalyptus</i> sp.	gum tree	AG, NNW, SRS, SRW	I
MYRSINACEAE	MYRSINE FAMILY		
<i>Lysimachia [=Anagallis] arvensis</i> (L.) U. Manns & Anderb.	scarlet pimpernel	DH	I
NYCTAGINACEAE	FOUR O'CLOCK FAMILY		
<i>Bougainvillea</i> sp. Comm. ex Juss.	bougainvillea	NNW	I

Attachment 1
Plant Species Observed

Scientific Name	Common Name	Habitat	Origin
<i>Mirabilis laevis</i> (Benth.) Curran var. <i>crassifolia</i> (Choisy) Spellenb.	wishbone bush	DCSS	N
OLEACEAE	OLIVE FAMILY		
<i>Fraxinus uhdei</i> (Wenz.) Lingelsh.	shamel ash	SRW	I
ONAGRACEAE	EVENING-PRIMROSE FAMILY		
<i>Camissoniopsis</i> sp. [= <i>Camissonia</i> sp.]	sun cup	DH	N
<i>Clarkia delicata</i> (Abrams) A. Nelson & J.F. Macbr.	delicate clarkia, Campo clarkia	DCSS	N
<i>Clarkia epilobioides</i> (Nutt. ex Torr. & A. Gray) A. Nelson & J.F. Macbr.	canyon godetia, willow herb clarkia, canyon clarkia	DCSS	N
<i>Clarkia purpurea</i> (Curtis) A. Nelson & J.F. Macbr. ssp. <i>quadrivulnera</i> (Douglas ex Lindl.) H. Lewis & M. Lewis	four-spot	DCSS	N
<i>Eulobus californicus</i> Torr. & A. Gray [= <i>Camissonia californica</i>]	false-mustard	DCSS	N
OROBANCHACEAE	BROOM-RAPE FAMILY		
<i>Castilleja exserta</i> (A.A. Heller) T.I. Chuang & Heckard ssp. <i>exserta</i>	purple owl's-clover	DCSS	N
PAPAVERACEAE	POPPY FAMILY		
<i>Platystemon californicus</i> Benth.	cream cups	DCSS	N
PHRYMACEAE [=SCROPHULARIACEAE]	HOPSEED FAMILY		
<i>Mimulus aurantiacus</i> Curtis	bush monkey-flower	DCSS	N
PLANTAGINACEAE	PLANTAIN FAMILY		
<i>Antirrhinum nuttallianum</i> Benth. ex A. DC.	Nuttall's snapdragon	CLOW, DCSS	N
<i>Keckiella antirrhinoides</i> (Benth.) Straw var. <i>antirrhinoides</i>	yellow bush penstemon	DCSS	N
<i>Nuttallanthus texanus</i> (Scheele) D.A. Sutton [= <i>Linaria canadensis</i>]	blue toadflax	DCSS	N
PLATANACEAE	PLANE TREE OR SYCAMORE FAMILY		
<i>Platanus racemosa</i> Nutt.	western sycamore	SRW	N
POLEMONIACEAE	PHLOX FAMILY		
<i>Eriastrum sapphirinum</i> (Eastw.) H. Mason.	sapphire woolly-star	DH	N
<i>Gilia angelensis</i> V.E. Grant	chaparral gilia	DCSS	N
<i>Linanthus dianthiflorus</i> (Benth.) Greene	farinose ground pink	DCSS	N
POLYGONACEAE	BUCKWHEAT FAMILY		
<i>Chorizanthe fimbriata</i> Nutt.	fringed spineflower	DCSS	N
<i>Chorizanthe procumbens</i> Nutt.	prostrate spineflower	DCSS	N
<i>Eriogonum fasciculatum</i> Benth.	California buckwheat	DCSS	N

**Attachment 1
Plant Species Observed**

Scientific Name	Common Name	Habitat	Origin
RANUNCULACEAE	BUTTERCUP FAMILY		
<i>Delphinium parryi</i> A. Gray	blue larkspur	DCSS	N
RHAMNACEAE	BUCKTHORN FAMILY		
<i>Rhamnus pilosa</i> (Trel. ex Curran) Abrams	hairy-leaf redberry	DCSS	N
RUBIACEAE	MADDER FAMILY		
<i>Galium angustifolium</i> Nutt. ex A. Gray ssp. <i>angustifolium</i>	narrow-leaf bedstraw	DCSS	N
RUTACEAE	RUE FAMILY		
<i>Citrus</i> spp.	citrus	DCSS, DH, DEV	I
SALICACEAE	WILLOW FAMILY		
<i>Populus fremontii</i> S. Watson ssp. <i>fremontii</i>	Fremont cottonwood, alamo	SRW	N
<i>Salix gooddingii</i> C.R. Ball.	Goodding's black willow	SRS, SRW	N
<i>Salix lasiolepis</i> Benth.	arroyo willow	MFS, SRS, SRW	N
SCROPHULARIACEAE	FIGWORT FAMILY		
<i>Scrophularia californica</i> Cham. & Schltdl.	California figwort	DCSS	N
SOLANACEAE	NIGHTSHADE FAMILY		
<i>Datura wrightii</i> Regel	western Jimson weed	DH	N
<i>Nicotiana glauca</i> Graham	tree tobacco	DCSS, DH, AG	I
<i>Solanum americanum</i> Mill.	white nightshade	DCSS	N
TAMARICACEAE	TAMARISK FAMILY		
<i>Tamarix</i> sp.	tamarisk	DH, SRW	I
URTICACEAE	NETTLE FAMILY		
<i>Urtica urens</i> L.	dwarf nettle	DH, CLOW, DCSS	I
VERBENACEAE	VERVAIN FAMILY		
<i>Lantana camara</i> L.	lantana	DEV	I
<i>Verbena menthifolia</i> Benth.	mint-leaf vervain	DCSS	N
VITACEAE	GRAPE FAMILY		
<i>Vitis vinifera</i> L.	cultivated grape, wine grape	DEV	I
ZYGOPHYLLACEAE	CALTROP FAMILY		
<i>Tribulus terrestris</i> L.	puncture vine	DEV	I

Attachment 1
Plant Species Observed

Scientific Name	Common Name	Habitat	Origin
<p><i>Notes:</i> Scientific and common names were primarily derived from the Jepson Online Interchange (Jepson Flora Project 2019). In instances where common names were not provided in this resource, common names were obtained from Rebman and Simpson (2014). Additional common names were obtained from the USDA maintained database (USDA 2013) or the Sunset Western Garden Book (Brenzel 2001) for ornamental/horticultural plants. Common names denoted with * are from County of San Diego 2010.</p>			
Habitats		Origin	
AG	=	Agriculture	N = Native to survey area
CLOW	=	Coast live oak woodland	I = Species introduced to survey area
DCSS	=	Coastal sage scrub	(I) = Native to San Diego County but introduced to survey area
DEV	=	Urban/developed land	
DH	=	Disturbed habitat	
MFS	=	Mule fat scrub	
NNG	=	Non-native grassland	
NNW	=	Non-native woodland	
SRS	=	Sourthenr riparian scrub	
SRW	=	Southern riparian woodland	

ATTACHMENT 2

Wildlife Species Observed

Attachment 2 Wildlife Species Observed			
Scientific Name	Common Name	Occupied Habitat	Evidence of Occurrence
INVERTEBRATES			
FORMICIDAE	ANTS		
<i>Pogonomyrmex californicus</i>	California harvester ant	DH, DCSS	O
HESPERIIDAE	SKIPPERS		
<i>Erynnis funeralis</i>	funereal duskywing	DCSS, DH, NNG	O
<i>Pyrgus communis</i>	common checkered skipper	DCSS, DH	O
PAPILIONIDAE	PARNASSIANS & SWALLOWTAILS		
<i>Papilio rutulus</i>	western tiger swallowtail	DCSS, UD	O
<i>Papilio</i> sp.	Unidentified swallowtail	DCSS	O
PIERIDAE	WHITES & SULPHURS		
<i>Anthocharis sara sara</i>	Pacific Sara orangetip	DH, DCSS	O
<i>Pieris rapae</i>	cabbage white (I)	DCSS, DH, UD	O
LYCAENIDAE	BLUES, COPPERS, & HAIRSTREAKS		
<i>Brephidium exile</i>	western pygmy-blue	DCSS, DH	O
<i>Callophrys augustinus</i>	brown elfin		
<i>Icaricia acmon</i>	Acmon blue	DCSS, DH	O
<i>Leptotes marina</i>	marine blue	DCSS	O
<i>Strymon melinus pudica</i>	gray hairstreak	DCSS	O
RIODINIDAE	METALMARKS		
<i>Apodemia mormo virgulti</i>	Behr's metalmark	DH, DCSS	O
NYMPHALIDAE	BRUSH-FOOTED BUTTERFLIES		
<i>Agraulis vanillae incarnata</i>	gulf fritillary	DCSS	O
<i>Junonia coenia grisea</i>	common buckeye	DCSS	O
<i>Nymphalis antiopa</i>	mourning cloak	DCSS	O
<i>Vanessa annabella</i>	west coast lady	DCSS	O
<i>Vanessa atalanta rubria</i>	red admiral	DCSS	O
<i>Vanessa cardui</i>	painted lady	DCSS, SRS, SRW, DH, UD	O

Attachment 2 Wildlife Species Observed			
Scientific Name	Common Name	Occupied Habitat	Evidence of Occurrence
REPTILES			
PHRYNOSOMATIDAE	SPINY LIZARDS		
<i>Sceloporus occidentalis</i>	western fence lizard	DCSS, DH	O
<i>Sceloporus orcutti</i>	granite spiny lizard	DCSS	O
<i>Uta stansburiana</i>	common side-blotched lizard	DCSS, DH, UD	O
TEIIDAE	WHIPTAIL LIZARDS		
<i>Aspidoscelis hyperythra beldingi</i>	Belding's orange-throated whiptail	DCSS	O
CROTALIDAE	RATTLESNAKES		
<i>Crotalus oreganus helleri</i>	southern Pacific rattlesnake	DCSS	O
BIRDS			
ODONTOPHORIDAE	NEW WORLD QUAIL		
<i>Callipepla californica californica</i>	California quail	DCSS	O, V
PHASIANIDAE	PHEASANTS & GROUSE		
<i>Pavo cristatus</i>	Indian peafowl (I)	AG	V
PELECANIDAE	PELICANS		
<i>Pelecanus erythrorhynchos</i>	American white pelican	F	O
PHALACROCORACIDAE	CORMORANTS		
<i>Phalacrocorax auritus albociliatus</i>	double-crested cormorant	F	O
ARDEIDAE	HERONS & BITTERNS		
<i>Ardea herodias</i>	great blue heron	F	O
CATHARTIDAE	NEW WORLD VULTURES		
<i>Cathartes aura</i>	turkey vulture	F	O
ACCIPITRIDAE	HAWKS, KITES, & EAGLES		
<i>Accipiter cooperii</i>	Cooper's hawk	F	O, V
<i>Buteo jamaicensis</i>	red-tailed hawk	F	O
<i>Buteo lineatus elegans</i>	red-shouldered hawk	F	O
LARIDAE	GULLS, TERNS, & SKIMMERS		
<i>Larus delawarensis</i>	ring-billed gull	F	O

Attachment 2 Wildlife Species Observed			
Scientific Name	Common Name	Occupied Habitat	Evidence of Occurrence
COLUMBIDAE	PIGEONS & DOVES		
<i>Columba livia</i>	rock dove (I)	DCSS, DH, UD	O, V
<i>Zenaida macroura marginella</i>	mourning dove	DCSS, DH	O
CUCULIDAE	CUCKOOS & ROADRUNNERS		
<i>Geococcyx californianus</i>	greater roadrunner	DCSS	O
TROCHILIDAE	HUMMINGBIRDS		
<i>Calypte anna</i>	Anna's hummingbird	DCSS	O, V
PICIDAE	WOODPECKERS & SAPSUCKERS		
<i>Colaptes auratus</i>	northern flicker	SRW	V
TYRANNIDAE	TYRANT FLYCATCHERS		
<i>Sayornis nigricans semiatra</i>	black phoebe	DCSS, DH, AG, UD	O, V
<i>Tyrannus vociferans vociferans</i>	Cassin's kingbird	DH, DCSS, SRW	O, V
VIREONIDAE	VIREOS		
<i>Vireo bellii pusillus</i>	least Bell's vireo	SRS	O, V, N*
CORVIDAE	CROWS, JAYS, & MAGPIES		
<i>Aphelocoma californica</i>	California scrub-jay	DCSS	O, V
<i>Corvus brachyrhynchos hesperis</i>	American crow	F, DH, AG, UD	O, V
<i>Corvus corax clarionensis</i>	common raven	DCSS, AG, F	O
AEGITHALIDAE	BUSHTIT		
<i>Psaltiriparus minimus melanurus</i>	bushtit	DCSS	O, V
TROGLODYTIDAE	WRENS		
<i>Thryomanes bewickii</i>	Bewick's wren	DCSS	O, V
SYLVIIDAE	GNATCATCHERS		
<i>Polioptila californica californica</i>	coastal California gnatcatcher	DCSS	O, V
TURDIDAE	THRUSHES		
<i>Sialia mexicana occidentalis</i>	western bluebird	SRW	V, N
TIMALIIDAE	BABBLERS		
<i>Chamaea fasciata henshawi</i>	wrentit	DCSS	O, V

Attachment 2 Wildlife Species Observed			
Scientific Name	Common Name	Occupied Habitat	Evidence of Occurrence
MIMIDAE	MOCKINGBIRDS & THRASHERS		
<i>Mimus polyglottos polyglottos</i>	northern mockingbird	UD, NNW	V
<i>Toxostoma redivivum redivivum</i>	California thrasher	DCSS	V
STURNIDAE	STARLINGS & MYNAS		
<i>Sturnus vulgaris</i>	European starling (I)	UD, DH	O
MOTACILLIDAE	WAGTAILS & PIPITS		
<i>Anthus rubescens pacificus</i>	American pipit	SRW	V
BOMBYCILLIDAE	WAXWINGS		
<i>Bombycilla cedrorum</i>	cedar waxwing	SRW	V
PARULIDAE	WOOD WARBLERS		
<i>Setophaga coronata</i>	yellow-rumped warbler	SRW	V
<i>Setophaga petechia</i>	yellow warbler	SRS	V, O*
<i>Icteria virens</i>	yellow-breasted chat	SRS	V*
EMBERIZIDAE	EMBERIZIDS		
<i>Melospiza melodia</i>	song sparrow	DCSS	V
<i>Melospiza crissalis</i>	California towhee	DCSS	V
<i>Pipilo maculatus</i>	spotted towhee	DCSS	V
<i>Zonotrichia leucophrys</i>	white-crowned sparrow	SRW, DCSS	V
ICTERIDAE	BLACKBIRDS & NEW WORLD ORIOLES		
<i>Icterus cucullatus nelsoni</i>	hooded oriole	UD	O
<i>Quiscalus mexicanus</i>	great-tailed grackle	SRW	O, V
FRINGILLIDAE	FINCHES		
<i>Spinus [=Carduelis] psaltria hesperophilus</i>	lesser goldfinch	UD, DCSS, SRW	V
<i>Haemorhous [=Carpodacus] mexicanus frontalis</i>	house finch	UD, SRW	O, V
MAMMALS			
LEPORIDAE	RABBITS & HARES		
<i>Sylvilagus bachmani</i>	brush rabbit	DCSS	S
SCIURIDAE	SQUIRRELS & CHIPMUNKS		
<i>Spermophilus beecheyi</i>	California ground squirrel	DH	O

Attachment 2 Wildlife Species Observed			
Scientific Name	Common Name	Occupied Habitat	Evidence of Occurrence
EQUIDAE	HORSES & ASSES		
<i>Equus ferus caballus</i>	domestic horse (I)	AG	O
BOVIDAE	BOVIDS		
<i>Bos sp.</i>	domesticated cattle (I)	AG	O
<div> <div> (I) = Introduced species * = Detected outside the 300' survey area HABITATS AG = Agriculture DCSS = Diegan coastal sage scrub DH = Disturbed habitat F = Flying overhead NNG = Non-native grassland NNW = Non-native woodland SRW = Southern riparian woodlands SRS = Southern riparian scrub UD = Urban/Developed </div> <div> EVIDENCE OF OCCURRENCE N = Nest O = Observed S = Scat V = Vocalization </div> </div>			

ATTACHMENT 3

Sensitive Plant Species Observed or with the Potential to Occur

Attachment 3						
Sensitive Plant Species Observed or with the Potential to Occur						
Species' <i>Scientific Name</i> Common Name	State/Federal Status	CNPS Rank	County of San Diego	Habitat/ Preference/ Requirements/Blooming Period	Observed?	Basis for Determination of Occurrence Potential
LYCOPODS						
ANGIOSPERMS: DICOTS						
ASTERACEAE SUNFLOWER FAMILY						
<i>Ambrosia pumila</i> San Diego ambrosia	–/FE	1B.1	MSCP; NE; List A	Perennial herb (rhizomatous); chaparral, coastal sage scrub, valley and foothill grasslands, creek beds, vernal pools, often in disturbed areas; blooms May–September; elevation less than 1,400 feet. Many occurrences extirpated in San Diego County.	No	Low potential. Although the CNDDB (CDFW 2019a) has a 1936 record of this species in the San Diego river floodplain within the survey area, it notes that subsequent surveys have been unable to locate the species. This species would likely have been detected during biological surveys if present.
<i>Artemisia palmeri</i> San Diego sagewort	–/–	4.2	List D	Perennial deciduous shrub; coastal sage scrub, chaparral, riparian, mesic, sandy areas; blooms May–September; elevation less than 3,000 feet.	Yes	One individual was observed in disturbed Diegan coastal sage scrub within the San Diego River west of Ashwood Street.
<i>Bahiopsis laciniata</i> San Diego viguiera	–/–	4.3	List D	Perennial shrub; chaparral, coastal sage scrub; blooms February–June; elevation less than 2,500 feet.	Yes	This species was a co-dominant shrub on the south-facing slope of the large hill east of Ashwood Street.
<i>Ericameria palmeri</i> var. <i>palmeri</i> Palmer's goldenbush	–/–	1B.1	MSCP; NE; List B	Perennial evergreen shrub; chaparral coastal sage scrub, typically in mesic areas; blooms July–November; elevation less than 2,000 feet. Known in California from sixteen occurrences all of which are in San Diego County. Additional populations in Baja California, Mexico.	No	Low potential. The CNDDB (CDFW 2019a) has a record of this species in Louis Stelzer County Park approximately 0.75 mile northeast of the project site. Potentially suitable habitat is present, but this is a perennial species and would likely have been detected if present on-site.

Attachment 3 Sensitive Plant Species Observed or with the Potential to Occur						
Species' Scientific Name Common Name	State/Federal Status	CNPS Rank	County of San Diego	Habitat/ Preference/ Requirements/Blooming Period	Observed?	Basis for Determination of Occurrence Potential
<i>Isocoma menziesii</i> var. <i>decumbens</i> decumbent goldenbush	—/—	1B.2	List A	Perennial shrub; chaparral, coastal sage scrub; sandy soils, often in disturbed areas; blooms April–November; elevation less than 500 feet.	No	Low potential. The CNDDB (CDFW 2019a) has a record of this species in Louis Stelzer County Park approximately 0.5 mile northeast of the project site. Potentially suitable habitat is present, but this perennial species would likely have been detected if present on-site.
<i>Iva hayesiana</i> San Diego marsh-elder	—/—	2B.2	List B	Perennial herb; marshes and swamps, playas, riparian areas; blooms April–September; elevation below 1,700 feet.	Yes	Approximately 30 individuals were observed within disturbed Diegan coastal sage scrub and mule fat scrub along the north edge of the San Diego River, east of Ashwood Street.
ONAGRACEAE EVENING-PRIMROSE FAMILY						
<i>Clarkia delicata</i> delicate clarkia	—/—	1B.2	List A	Annual herb; cismontane woodland; blooms April–June; elevation 780–3,300 feet.	Yes	Approximately 50 individuals were observed within disturbed Diegan coastal sage scrub on the large hill east of Ashwood Street.
RHAMNACEAE BUCKTHORN FAMILY						
<i>Adolphia californica</i> California adolphia	—/—	2B.1	List B	Perennial deciduous shrub; Diegan coastal sage scrub and chaparral; clay soils; blooms December–May; elevation 100–2,500 feet.	No	Not expected. Reported on west-facing slopes of preserved land approximately 2 miles north of the project site (CDFW 2019a). Although Diegan coastal sage scrub on-site is suitable, this perennial shrub would have been detected if present.

Attachment 3						
Sensitive Plant Species Observed or with the Potential to Occur						
Species' Scientific Name Common Name	State/Federal Status	CNPS Rank	County of San Diego	Habitat/ Preference/ Requirements/Blooming Period	Observed?	Basis for Determination of Occurrence Potential
<i>Ceanothus cyaneus</i> Lakeside ceanothus	—/—	1B.2	MSCP; NE; List A	Perennial evergreen shrub; closed- cone coniferous forest, chaparral; blooms April–June; elevation 800– 2,500 feet.	No	Not expected. The CNDDDB (CDFW 2019a) has several records of this species on the hills north of the project site, with the closest being approximately 2.75 miles north. No chaparral occurs on-site. This is a large shrub that would have been detected if present.
FEDERAL LISTED PLANTS FE = Federally listed endangered CALIFORNIA NATIVE PLANT SOCIETY (CNPS): CALIFORNIA RARE PLANT RANKS (CRPR) 1B = Species rare, threatened, or endangered in California and elsewhere. These species are eligible for state listing. 2B = Species rare, threatened, or endangered in California but more common elsewhere. These species are eligible for state listing. 4 = A watch list of species of limited distribution. These species need to be monitored for changes in the status of their populations. .1 = Species seriously threatened in California (over 80% of occurrences threatened; high degree and immediacy of threat). .2 = Species fairly threatened in California (20-80% occurrences threatened; moderate degree and immediacy of threat). .3 = Species not very threatened in California (<20% of occurrences threatened; low degree and immediacy of threat or no current threats known). COUNTY OF SAN DIEGO MSCP = County MSCP Covered Species NE = Narrow Endemic species List A = Plants rare, threatened or endangered in California and elsewhere List B = Plants rare, threatened or endangered in California but more common elsewhere List D = Plants of limited distribution and are uncommon, but not presently rare or endangered						

ATTACHMENT 4

Sensitive Wildlife Species Occurring or with the Potential to Occur

Attachment 4
Sensitive Wildlife Species Occurring or with the Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site?	Basis for Determination of Occurrence Potential
INVERTEBRATES (Nomenclature from Eriksen and Belk 1999; San Diego Natural History Museum 2002)					
HESPERIIDAE SKIPPERS					
Coastal giant skipper <i>Megathymus yuccae harbisoni</i>	County Group 2	Chaparral and scrub on west side of mountains where host plant, <i>Yucca schidigera</i> , is found.	No	Low	Although the host plant for this species, <i>Yucca schidigera</i> , was found on site, it was not abundant.
LYCAENIDAE BLUES, COPPERS, & HAIRSTREAKS					
Hermes copper <i>Lycaena hermes</i>	FC, County Group 1	Chaparral and coastal sage scrub where host plant <i>Rhamnus crocea</i> occurs. Adult emergence late May to July.	No	Low	Very few <i>Rhamnus crocea</i> individuals were observed in coastal sage scrub on site making it only marginally suitable habitat for this species.
NYMPHALIDAE BRUSH-FOOTED BUTTERFLIES					
Quino checkerspot <i>Euphydryas editha quino</i>	FE, County Group 1	Open, dry areas in foothills, mesas, lake margins. Larval host plant <i>Plantago erecta</i> . Adult emergence mid-January through April.	No	Not expected	Coastal sage scrub occurs in the survey area, and there are occasional openings with farinose ground pink (<i>Linanthus dianthiflorus</i>) and other nectar plants. No dot-seed plantain (<i>Plantago erecta</i>), and only a small number of purple owl's clover (<i>Castilleja exserta</i>) present. Negative protocol surveys in 2019 with above average rainfall and suitable weather conditions.

Attachment 4
Sensitive Wildlife Species Occurring or with the Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site?	Basis for Determination of Occurrence Potential
Monarch <i>Danaus plexippus</i>	County Group 2	Many open habitats including fields, meadows, weedy areas, marshes, and roadsides. Aggregates in eucalyptus stands or other trees that provide shelter, and adequate sunlight. Requires a source of water and nectar plants.	No	Low	There are no records of this species within two miles of the project site (CDFW 2019a), and no individuals were detected during protocol surveys for Quino checkerspot butterfly. Although there are eucalyptus trees that are potentially suitable for roosting, no large groves are present.
AMPHIBIANS (Nomenclature from Crother et al. 2008)					
SALAMANDRIDAE NEWTS					
Coast range newt <i>Taricha torosa torosa</i>	CSC, County Group 2	Under rocks, in or under logs, in rodent burrows. In or near streams, ponds, and reservoirs.	No	Low	Although the 300-foot buffer contains portions of the San Diego River, the river does not have surface water in this location. This species may be found in scrub and woodland habitats associated with the river but more likely would occur upriver near perennially wet areas such as Hanson-El Monte Pond or Lake Jennings.
PELOBATIDAE SPADEFOOT TOADS					
Western spadefoot <i>Spea hammondi</i>	CSC, County Group 2	Vernal pools, floodplains, and alkali flats within areas of open vegetation.	No	Moderate	Suitable habitat present in sandy areas along the San Diego River floodplain.

Attachment 4
Sensitive Wildlife Species Occurring or with the Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site?	Basis for Determination of Occurrence Potential
BUFONIDAE TRUE TOADS					
Arroyo toad <i>Anaxyrus californicus</i>	FE, CSC, MSCP, County Group 1	Open streamside sand/gravel flats. Low- gradient streams and with slow-moving braided channels and adjacent upland terraces. Breeds in shallow pools along stream edges. Nocturnal except during breeding season (March–July).	No	Not expected	Although Final Critical Habitat and riparian woodland occurs in the survey area, suitable habitat conditions are not present. Flow management at El Capitan Dam prevents the flooding and scour required to create and maintain suitable arroyo toad habitat.
REPTILES (Nomenclature from Crother et al. 2008)					
San Diego banded gecko <i>Coleonyx variegatus abbotti</i>	County Group 1	Granite and rocky outcrops in coastal sage scrub and chaparral.	No	Moderate	This species has been reported within El Monte Valley approximately 1 mile east of the project site. Suitable coastal sage scrub with rocky outcrops is present.
IGUANIDAE IGUANID LIZARDS					
Blainville's horned lizard <i>Phrynosoma blainvillii</i> [= <i>P. coronatum</i> coastal population]	CSC, MSCP, County Group 2	Chaparral, coastal sage scrub with fine, loose soil. Partially dependent on harvester ants for forage.	No	High	Suitable habitat occurs within the survey area in the abundant coastal sage scrub, and the southern riparian woodland along the San Diego River. Additionally, multiple harvester ant colonies were observed.

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Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site?	Basis for Determination of Occurrence Potential
SCINCIDAE SKINKS					
Coronado skink <i>Eumeces skiltonianus interparietalis</i>	CSC, County Group 2	Grasslands, open woodlands and forest, broken chaparral. Rocky habitats near streams.	No	Moderate	The non-native grassland, riparian woodland, and mesic areas of coastal sage scrub east of Ashwood Street are suitable for this species.
TEIIDAE WHIPTAIL LIZARDS					
Belding's orange-throated whiptail <i>Aspidoscelis hyperythra beldingi</i>	CSC, MSCP, County Group 2	Chaparral, coastal sage scrub with coarse sandy soils and scattered brush.	Yes	Observed	Frequently observed within coastal sage scrub within the survey area east of Ashwood Street. This species is likely present throughout Diegan coastal sage scrub and adjacent disturbed habitat.
Coastal whiptail <i>Aspidoscelis tigris stejnegeri</i>	CSC, County Group 2	Coastal sage scrub, chaparral, woodlands, and streamsides where plants are sparsely distributed.	No	Low	Although suitable habitat is present, this species was not detected during any of the biological surveys conducted during an appropriate time of year.
ANNIELLIDAE LEGLESS LIZARDS					
San Diego legless lizard <i>Anniella stebbensi</i>	CSC, County Group 1	Herbaceous layers with loose soil in coastal scrub, chaparral, and open riparian. Prefers dunes and sandy washes near moist soil.	No	Moderate	Suitable riparian habitat with leaf litter and loose soil occurs along the San Diego River. There is a low potential for this species elsewhere.

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BOIDAE BOAS					
Rosy boa <i>Lichanura orcutti</i>	County Group 2	Coastal sage scrub, chaparral in inland and desert locales with rocky soils.	No	Moderate	Suitable coastal sage scrub occurs throughout the project site, and riparian woodland associated with the San Diego River could also provide adequate habitat.
COLUBRIDAE COLUBRID SNAKES					
California glossy snake <i>Arizona elegans occidentalis</i>	CSC	Most common in desert habitats but also occurs in chaparral, sage scrub, grasslands, and woodlands. Refuges in mammal burrows and rock outcrops, and occasionally under flat rocks or vegetation.	No	Moderate	There have been recent reports of this species in El Monte Valley to the east of the project site. Potentially suitable habitat is present within the portions of the survey area along the San Diego River.
San Diego ring-necked snake <i>Diadophis punctatus similis</i>	County Group 2	Rocky areas in wet locales, such as swamps, damp forests, or riparian woodlands.	No	Low	Although the San Diego River crosses the site, there is no permanent water source to create sufficiently wet habitats for this species.
Coast patch-nosed snake <i>Salvadora hexalepis virgultea</i>	CSC, County Group 2	Grasslands, chaparral, sagebrush, desert scrub. Found in sandy and rocky areas.	No	Moderate	The site contains suitably sandy and rocky areas in grassland and coastal sage scrub habitat.

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Sensitive Wildlife Species Occurring or with the Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site?	Basis for Determination of Occurrence Potential
Two-striped gartersnake <i>Thamnophis hammondi</i>	CSC, County Group 1	Permanent freshwater streams with rocky bottoms. Mesic areas.	No	Low	Although the San Diego River crosses the project site, there is no surface water, likely as a result of flood control measures at El Capitan Dam, approximately 6 miles to the east. This species is more likely to remain near permanent water such as nearby Hanson–El Monte Pond.
California red-sided gartersnake (south coast garter snake) <i>Thamnophis sirtalis infernalis</i>	County Group 2	Variety of habitats including forests, mixed woodlands, grassland, chaparral, farmlands. Often near ponds, marshes, or streams	No	Low	Although the San Diego River crosses the project site, there is no surface water, likely as a result of flood control measures at El Capitan Dam, approximately 6 miles to the east. This species is more likely to remain near permanent water such as nearby Hanson–El Monte Pond.
CROTALIDAE RATTLESNAKES					
Red diamond rattlesnake <i>Crotalus ruber</i>	CSC, County Group 2	Desert scrub and riparian, coastal sage scrub, open chaparral, grassland, and agricultural fields.	No	High	Suitable coastal sage scrub occurs on site as a large area east of Ashwood Street. Additionally, this species has been recorded within 1 mile of the site (CDFW 2019a).

Attachment 4
Sensitive Wildlife Species Occurring or with the Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site?	Basis for Determination of Occurrence Potential
BIRDS (Nomenclature from American Ornithological Society 2019 and Unitt 2004)					
PELECANIDAE PELICANS					
American white pelican (nesting colony) <i>Pelecanus erythrorhynchos</i>	CSC, County Group 2	Lagoons, bays, estuaries, freshwater ponds; inland lakes during spring migration. Migrant and winter visitor.	Yes	Observed; not expected to forage or nest	Although this species was observed flying over the site, no suitable aquatic habitat is present within the survey area. This species is not expected to forage or breed in the survey area.
PHALACROCORACIDAE CORMORANTS					
Double-crested cormorant (rookery site) <i>Phalacrocorax auritus albociliatus</i>	WL, County Group 2	Bays, lagoons, estuaries. Non-breeding year-round visitor.	Yes	Observed; not expected to forage or nest	Observed flying over the site. No suitable foraging or nesting habitat occurs in the survey area.
CATHARTIDAE NEW WORLD VULTURES					
Turkey vulture <i>Cathartes aura</i>	County Group 1	Many habitats, open areas. Nest sites are in sheltered areas, such as inside hollow trees or logs, in crevices in cliffs, under rocks, inside dense thickets, or in old buildings.	Yes	Observed; likely to forage, not expected to nest	This species may forage over much of the site; however suitable rock crevices or dense thickets for nesting would be scarce, and not sufficiently secluded within the survey area.

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Sensitive Wildlife Species Occurring or with the Potential to Occur

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ACCIPITRIDAE HAWKS, KITES, & EAGLES					
Cooper's hawk (nesting) <i>Accipiter cooperii</i>	WL, MSCP, County Group 1	Mature forest, open woodlands, wood edges, and river groves. Parks and residential areas.	Yes	Observed; moderate to nest	Observed within riparian habitat 400 feet west of the project site. Southern riparian woodland, non-native woodland, and eucalyptus woodland on site also provide suitably tall trees for nesting.
Sharp-shinned hawk (nesting) <i>Accipiter striatus velox</i>	WL, County Group 1	Open deciduous woodlands, forests, edges, parks, residential areas. Migrant and winter visitor.	No	Low to forage or nest	Although southern riparian woodland occurs within the 300-foot buffer, it is fragmented and likely not as dense as would be preferred by this species. Other woodland habitats within the site would not be suitable for this species as they are not associated with a riparian.
Red-shouldered hawk <i>Buteo lineatus</i>	County Group 1	Primarily nests in riparian and oak woodlands, but will also use eucalyptus and palm trees. Known from rural ranches and, increasingly, urban parks and neighborhoods.	Yes	Observed	Observed flying over the site. Suitable open coastal sage scrub, grassland, and disturbed areas present for foraging. Moderately suitable trees for nesting are present along the San Diego River.
Northern harrier (nesting) <i>Circus cyaneus hudsonius</i>	CSC, MSCP, County Group 1	Coastal lowland, marshes, grassland, agricultural fields. Migrant and winter resident, rare summer resident.	No	Low to forage or nest	No marsh or agricultural fields are present. Patch of non-native grassland is too limited in area and occurs adjacent to a busy road.

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White-tailed kite (nesting) <i>Elanus leucurus</i>	CFP, County Group 1	Nest in riparian woodland, oaks, sycamores. Forage in open, grassy areas. Year-round resident.	No	Moderate to forage or nest	Although fragmented, the southern riparian woodland and coast live oak woodland on site provide moderately suitable nesting sites due to their adjacency to grassland areas for foraging.
FALCONIDAE FALCONS & CARACARAS					
Merlin <i>Falco columbarius</i>	WL, County Group 2	Rare winter visitor. Grasslands, agricultural fields, occasionally mud flats.	No	Low to forage	The non-native grassland on site is only marginally suitable for this species due to its small size and lack of connectivity to large shrubby areas.
Prairie falcon (nesting) <i>Falco mexicanus</i>	WL, County Group 1	Grassland, agricultural fields, desert scrub. Uncommon winter resident. Rare breeding resident.	No	Low to forage or nest	Although the site contains grassland habitat, it is isolated between other habitat types and not as large as preferred by this species.
CUCULIDAE CUCKOOS & ROADRUNNERS					
Western yellow-billed cuckoo (breeding) <i>Coccyzus americanus occidentalis</i>	FT, CE, County Group 1	Riparian woodlands. Summer resident. Very localized breeding.	No	Not expected to forage or nest	Although riparian woodland occurs on site, the site is outside of the known current range for this species.
STRIGIDAE TYPICAL OWLS					
Western burrowing owl (burrow sites) <i>Athene cunicularia hypugaea</i>	CSC, MSCP, County Group 1	Grassland, agricultural land, coastal dunes. Require rodent burrows. Declining resident.	No	Not expected to forage or nest	Although grassland habitat occurs on site, it occurs on a sloped hillside and is small in extent which is not preferred by this species.

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TYTONIDAE BARN OWLS					
Common barn owl <i>Tyto alba pratincola</i>	County Group 2	Agricultural land, marshes, brushy habitat, urban areas. Nests in cavities in riparian trees, as well as barns or other structures.	No	Moderate to forage or nest	May nest in the riparian woodland along the San Diego River, as well as less used buildings within the agricultural areas. Although the site lacks large crop fields or marshes, this species may forage in the open coastal sage scrub, disturbed habitat, and non- native grassland.
TYRANNIDAE TYRANT FLYCATCHERS					
Southwestern willow flycatcher <i>Empidonax traillii extimus</i>	FE, CE, MSCP, County Group 1	Nesting restricted to willow thickets. Also occupies other woodlands. Rare spring and fall migrant, rare summer resident. Extremely localized breeding.	No	Not expected to forage or nest	No suitably dense willow thickets occur within the site or the 300-foot buffer.
LANIIDAE SHRIKES					
Loggerhead shrike <i>Lanius ludovicianus</i>	CSC, County Group 1	Open foraging areas near scattered bushes and low trees.	No	Low to forage or nest	Although suitably open foraging areas occur on site, this species is more common in desert habitats.

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VIREONIDAE VIREOS					
Least Bell's vireo (nesting) <i>Vireo bellii pusillus</i>	FE, CE, MSCP, County Group 1	Willow riparian woodlands. Summer resident.	Yes	Observed	This species was observed nesting in riparian habitat approximately 800 feet west of the project site during least Bell's vireo focused surveys. A dispersing juvenile was observed once within southern riparian scrub within 150 feet west of the project site. Additionally, CNDDDB has records of Least Bell's vireo 1 mile of the site at Hanson-El Monte Pond (CDFW 2019a).
ALAUDIDAE LARKS					
California horned lark <i>Eremophila alpestris actia</i>	WL, County Group 2	Sandy shores, mesas, disturbed areas, grasslands, agricultural lands, sparse creosote bush scrub.	No	Low to forage or nest	Most of the habitat on site is too heavily vegetated to support this species. The agricultural areas may be sufficiently open; however these areas are somewhat heavily used and subject to vegetation maintenance. Areas of disturbed habitat east of Ashwood Street are limited in size and vegetation in these areas may be too tall. This species has not been reported within 1 mile of the project site (CDFW 2019a)

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SYLVIIDAE GNATCATCHERS					
Coastal California gnatcatcher <i>Polioptila californica californica</i>	FT, CSC, MSCP, County Group 1	Coastal sage scrub, maritime succulent scrub. Resident.	Yes	Observed	One breeding pair was observed in coastal sage scrub on the hill to the east of Ashwood Street.
TURDIDAE THRUSHES					
Western bluebird <i>Sialia mexicana occidentalis</i>	MSCP, County Group 2	Open woodlands, farmlands, orchards.	Yes	Observed	Nesting observed within southern riparian scrub along San Diego river 150 feet west of the project site. Suitable southern riparian woodland and coast live oak woodland is also present within the survey area, particularly within the San Diego River floodplain to the east of Ashwood Street. Suitable habitat is scarce within the project footprint.
PARULIDAE WOOD WARBLERS					
Yellow warbler (nesting) <i>Setophaga [=Dendroica] petechia</i>	CSC, County Group 2	Breeding restricted to riparian woodland. Spring and fall migrant, localized summer resident, rare winter visitor.	Yes	Observed; low to nest	The riparian woodland along the San Diego River is likely too sparse to support this species.
Yellow-breasted chat (nesting) <i>Icteria virens auricollis</i>	CSC, County Group 1	Dense riparian woodland. Localized summer resident.	Yes	Observed; low to nest	Although southern riparian woodland occurs adjacent to the site within the 300-foot buffer, it is fragmented and likely not as dense as is preferred by this species.

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EMBERIZIDAE EMBERIZIDS					
Southern California rufous-crowned sparrow <i>Aimophila ruficeps canescens</i>	WL, MSCP, County Group 1	Coastal sage scrub, chaparral, grassland. Resident.	No	Moderate to forage or nest	This species was not observed during numerous biological surveys; however suitable habitat is present within the Diegan coastal sage scrub throughout the survey area.
Grasshopper sparrow (nesting) <i>Ammodramus savannarum perpallidus</i>	CSC, County Group 1	Tall grass areas. Localized summer resident, rare in winter.	No	Low to forage or nest	Although the site contains non-native grassland, it is small in extent and adjacent to a busy road, Ashwood Street. Suitably grassy areas within coastal sage scrub are limited on site.
Bell's sage sparrow <i>Artemisiospiza [=Amphispiza] belli belli</i>	WL, County Group 1	Chaparral, coastal sage scrub. Localized resident.	No	Low to forage or nest	Coastal sage scrub on the south-facing hillside east of Ashwood street may be suitable for this species due to the shorter height of shrubs and open understory. However, this area is small in extent.

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MAMMALS (Nomenclature from Jones et al. 1997 and Hall 1981)					
PHYLLOSTOMIDAE NEW WORLD LEAF-NOSED BATS					
Mexican long-tongued bat <i>Choeronycteris mexicana</i>	CSC, County Group 2	Desert scrub, grassland, oak and pine woodlands. Feeds on nectar of night- blooming agave and large cactus. Occasionally attracted to urban areas by ornamental species and hummingbird feeders.	No	Low to forage or roost	Marginally suitable woodland habitat is present along the San Diego River. Potentially suitable nectar plants are present, but scarce, in the survey area.
VESPERTILIONIDAE VESPER BATS					
Pallid bat <i>Antrozous pallidus</i>	CSC, County Group 2	Arid deserts and grasslands. Day and night roosts in crevices in rock outcrops, caves, mines, and tree cavities. Especially near water. Colonial. Feeds on large arthropods and lizards	No	Low to forage or roost	This species was recorded within 1 mile of the site (CDFW 2019a). Rock outcrops are present and riparian trees occur along the San Diego River; however, higher quality roosting opportunities are present in the mountains to the north and in El Monte Valley to the east. Riparian habitats along the San Diego River are only marginally suitable for foraging due to the lack of regular surface water to attract prey species.

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Townsend's western big-eared bat <i>Corynorhinus townsendii townsendii</i>	CSC, County Group 2	Caves, mines, buildings. Found in a variety of habitats, arid and mesic. Individual or colonial. Extremely sensitive to disturbance.	No	Low to forage, not expected to roost	The site lacks caves or mines for roosting. Buildings throughout the site are only marginally suitable. There are likely better roosting opportunities in the mountains to the north and east of the project site. Riparian habitats along the San Diego River are only marginally suitable for foraging due to the lack of regular surface water to attract prey species.
Spotted bat <i>Euderma maculatum</i>	CSC, County Group 2	Wide variety of habitats. Caves, crevices, trees. Audible echolocation signal.	No	Low to forage, not expected to roost	This species is unlikely to roost on site due to the lack of suitably high rock outcrops or cliffs. Riparian habitats along the San Diego River are only marginally suitable for foraging due to the lack of regular surface water to attract prey species.
Fringed myotis <i>Myotis thysanodes thysanodes</i>	County Group 2	Dry woodlands, including pinyon-juniper, oak, and ponderosa pine. Also occurs in desert scrub coniferous forest, and grasslands. Roosts in crevices in rock faces, mines, and structures.	No	Low to forage or roost	Oak and riparian woodland and non-native grassland on site are too small in extent to support this species. Desert habitats are preferred by this species but do not occur on site. Abandoned bridge structure adjacent to the San Diego River may provide marginal roosting crevices.

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Western small-footed myotis <i>Myotis ciliolabrum</i>	County Group 2	Deserts, chaparral, riparian areas, and coniferous forests. Roosts alone or in small groups in rock crevices, buildings, bridge crevices, caves, and mines.	No	Low to forage or roost	Rock outcrops and structures are present within the survey area for roosting; however riparian habitats along the San Diego River is only marginally suitable for foraging due to the lack of regular surface water to attract prey species.
Yuma myotis <i>Myotis yumanensis</i>	County Group 2	Riparian, scrublands, deserts, and forests, where there is a permanent water source.	No	Not expected to forage or roost	Riparian habitats along the San Diego River are only marginally suitable for foraging due to the lack permanent surface water. Nearby Hanson-El Monte Pond, El Capitan Reservoir, and Lake Jennings provide better habitat for this species.
Western red bat <i>Lasiurus blossevillii</i>	CSC, County Group 2	Generally associated with riparian habitats, especially willows, cottonwoods, and sycamores. Roosts alone in foliage of trees and large shrubs in habitats bordering forests, rivers, cultivated fields, and urban areas.	No	Low to forage or roost	Although potentially suitable riparian trees are present along the San Diego River, there these areas are only marginally suitable due to the lack of regular surface water to attract prey species.

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Western yellow bat <i>Lasiurus xanthinus</i>	CSC	Primarily occurs in desert riparian and thorny scrub habitats. Often in palm oases. Roosts alone in tree foliage, especially in palms and cottonwoods.	No	Low to forage or roost	Although this species has been recorded within 1 mile of the site (CDFW 2019a), the riparian habitat along the San Diego River provides marginally suitable habitat for this species, and no native palm trees are present. Habitat is only marginally suitable due to the lack of regular surface water to attract prey species.
MOLOSSIDAE FREE-TAILED BATS					
Western mastiff bat <i>Eumops perotis californicus</i>	CSC, County Group 2	Woodlands, rocky habitat, arid and semiarid lowlands. Requires cliffs and other significant rock features for roosting	No	Low to forage, not expected to roost	This species is unlikely to roost on site due to the lack of suitably high rocks or cliffs. Habitat is only marginally suitable due to the lack of regular surface water to attract prey species.
Pocketed free-tailed bat <i>Nyctinomops femorosaccus</i>	CSC, County Group 2	Roosts primarily in rock crevices in cliffs and high rock outcrops; occasionally in buildings and caves. Forages for arthropods over ponds and water sources.	No	Low to forage, not expected to roost	This species was recorded within 1 mile of the site (CDFW 2019a). No high rock outcrops or cliffs are present for roosting. Habitat is only marginally suitable due to the lack of regular surface water to attract prey species.

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Big free-tailed bat <i>Nyctinomops macrotis</i>	CSC, County Group2	Rugged, rocky terrain. Roost primarily in Roosts most common in rock crevices in cliffs; occasionally in buildings, caves, tree holes. Very few records in California.	No	Not expected to forage or roost	This species was recorded within 1 mile of the site (CDFW 2019a); however, no suitable cliffs present for roosting, and only marginally suitable foraging habitat present due to the lack of regular surface water to attract prey species.
LEPORIDAE RABBITS & HARES					
San Diego black-tailed jackrabbit <i>Lepus californicus bennettii</i>	CSC, County Group 2	Open areas of scrub, grasslands, agricultural fields.	No	Moderate	The site contains open coastal sage scrub and non- native grassland with open areas and ample amounts of forbs and grasses for foraging. Most of these areas are on steep slopes, which reduce habitat quality for this species somewhat.
HETEROMYIDAE POCKET MICE & KANGAROO RATS					
Dulzura pocket mouse <i>Chaetodipus californicus femoralis</i>	CSC, County Group 2	Occurs in transitional habitats, such as at the interface of grassland with chaparral or oak woodlands, primarily in areas with gravelly substrates Found in the foothills and mountains in San Diego County.	No	Low	Grassland/shrubland interface is limited within the survey area, and no chaparral is present. Coastal sage scrub is marginally suitable.

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Northwestern San Diego pocket mouse <i>Chaetodipus fallax fallax</i>	CSC, County Group2	Occurs in rocky, shrubby habitats on moderate to steep slopes with rocky, gravelly, or sandy soils. Burrows in crevices among and between rock outcrops. Occurs throughout San Diego County west of mountains.	No	Moderate	The site contains many areas with coastal sage scrub and rock outcrops. Although there are no CNDDB records within 1 mile of the site (CDFW 2019a), Tremor et al (2017) shows records within El Monte Valley between 3 and 4 miles to the east.
MURIDAE OLD WORLD MICE & RATS (I)					
San Diego desert woodrat <i>Neotoma lepida intermedia</i>	CSC, County Group 2	Coastal sage scrub and chaparral.	No	Moderate	Woodrat middens were observed during the survey, but no individual woodrats were detected, so a positive identification was not possible. There is suitable Diegan coastal sage scrub habitat within the survey area, especially where vegetation cover is high on the west-facing hillside east of Ashwood Street s.
Southern grasshopper mouse <i>Onychomys torridus ramona</i>	CSC County Group 2	Typically found in open habitats on gentle slopes, including grasslands and open sage scrub.	No	Low	A mix of grassland and open coastal sage scrub is present. However, the grassland is limited, and most of the sage scrub occurs on steep slopes. There are no CNDDB records of this species within 1 mile of the project site.

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PROCYONIDAE PROCYONIDS					
Ringtail <i>Bassariscus astutus</i>	CFP, County Group 2	Occurs in chaparral, oak woodland, and riparian habitats, especially where there are vertical rock surfaces or trees for climbing. Generally found within 0.5 -1 mile of permanent water.	No	Low	No large vertical rock faces are present in the survey area, there are abundant trees along the San Diego River. There are no CNDDDB records of this species within 1 mile of the project site (CDFW 2019a), but Tremor et al (2017) show several records of this species within El Monte Valley between 1 and 2 miles east of the site. There is a permanent pond approximately 0.75 mile east of the site. This species likely occurs in the vicinity; however would only be expected to use the habitat in the survey area infrequently due to frequent human activities.
MUSTELIDAE WEASELS, OTTERS, & BADGERS					
American badger <i>Taxidea taxus</i>	CSC, MSCP, County Group 2	Grasslands, Sonoran desert scrub.	No	Low	Although this species has been recorded within 1 mile of the site (CDFW 2019a), no signs (burrows, scat, prints) were observed during the survey. Also, much of the site occurs near developed areas which this species would likely avoid.

Attachment 4
Sensitive Wildlife Species Occurring or with the Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site?	Basis for Determination of Occurrence Potential
FELIDAE CATS					
Mountain lion <i>Puma concolor</i>	CFP, MSCP, County Group 2	Many habitats.	No	Low	This species may use areas associated to the San Diego River as a travel corridor but it is unlikely this species would occur frequently within other portions of the survey area due to the generally low stature of the vegetation and adjacency to large areas of development.
CERVIDAE DEER					
Southern mule deer <i>Odocoileus hemionus fuliginata</i>	MSCP, County Group 2	Many habitats.	No	Moderate	This species may occur in many habitats throughout the site but would more likely occur within habitats associated with the San Diego River. It is unlikely to be a frequent visitor to the project site due to the site's adjacency to developed areas.

Attachment 4
Sensitive Wildlife Species Occurring or with the Potential to Occur

(I) = Introduced species

STATUS CODES

Listed/Proposed

FE = Listed as endangered by the federal government

FT = Listed as threatened by the federal government

CE = Listed as endangered by the state of California

Other

CFP = California fully protected species

CSC = California Department of Fish and Wildlife species of special concern

FC = Federal candidate for listing (taxa for which the U.S. Fish and Wildlife Service has on file sufficient information on biological vulnerability and threat(s) to support proposals to list as endangered or threatened; development and publication of proposed rules for these taxa are anticipated)

WL = California Department of Fish and Wildlife watch list species

MSCP = City and County of San Diego Multiple Species Conservation Program covered species

ATTACHMENT 5

Quino Checkerspot Butterfly Survey Report



**Ashwood Street Corridor
Improvements Project:
2019 Quino Checkerspot Butterfly
Survey Report
San Diego, California**

Prepared for
County of San Diego
Department of Public Works
Environmental Services Unit MS-O-332
5510 Overland Avenue, Suite 410
San Diego, CA 92123

Prepared by
RECON Environmental, Inc.
1927 Fifth Avenue
San Diego, CA 92101
P 619.308.9333

RECON Number 8661
May 22, 2019

A handwritten signature in black ink, appearing to read "B Parker", written over a horizontal line.

Brian Parker, Biologist, Associate Project Manager

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ATTACHMENT

1: Field Notes	
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List of Acronyms and Abbreviations

°F	degree Fahrenheit
mph	miles per hour
project	Ashwood Street Corridor Improvements Project
QCB	Quino checkerspot butterfly
RECON	RECON Environmental, Inc.
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

1.0 Summary

RECON Environmental, Inc. (RECON) conducted surveys for the federally listed endangered Quino checkerspot butterfly (*Euphydryas editha quino*; QCB) for the Ashwood Street Corridor Improvements Project (project) in the unincorporated community of Lakeside in western San Diego County. This report was prepared to provide distributional data for QCB habitat management. The surveys were conducted in association with proposed roadway improvements.

One potential larval host plant species was observed: purple owl's clover (*Castilleja exserta*), and numerous potential nectar plant species were present, including farinose ground-pink (*Linanthus dianthiflorus*), common fiddleneck (*Amsinckia menziesii*), Cryptantha (*Cryptantha* sp.), and popcornflower (*Plagiobothrys* sp.). Nectar plants were abundant in the openings in coastal sage scrub, and along the edges of disturbed areas. No QCB were observed.

2.0 Introduction

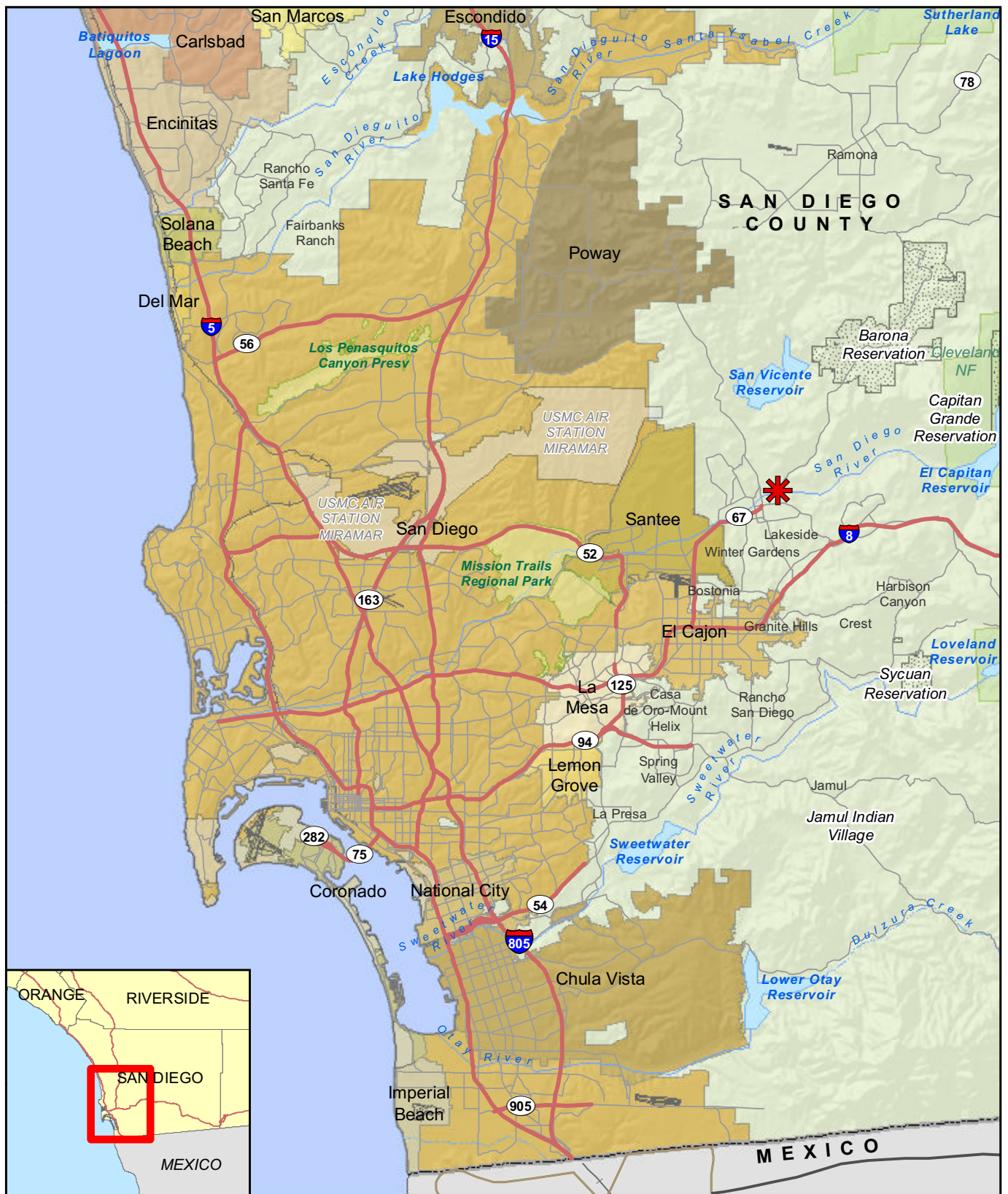
The project site is located in the unincorporated community of Lakeside in western San Diego County (Figure 1) within the Recommended Quino Survey Area as identified in the 2014 Quino Checkerspot Butterfly Survey Guidelines (USFWS 2014). The project area occurs within Township 15 South, Range 1 East, in unsectioned portions of the El Cajon land grant of the U.S. Geological Survey (USGS) 7.5-minute topographic map series, El Cajon and San Vicente Reservoir quadrangles (1975a and b; Figure 2).

The project occurs within all or portions of the following assessor's parcel numbers:

39448043, 39213046, 76014102, 39205031, 39205037, 39403318, 39448017, 39448050, 39205046, 39448002, 39212037, 76014166, 39205008, 39205045, 77392120, 76014111, 76014114, 39213044, 76014126, 39205047, 76014116, 39213043, 39448042, 77392120, 39205020, 76014130, 76014153, 76014112, 39212027, 39204030, 39205025, 39205026, 39205027, 39205028, 39205030, 39205034, 39205036, 39212036, 39218045, 39403310, 39403404, 39406119, 39406120, 39406123, 39406124, 39406125, 39406126, 39406129, 39406131, 39406133, 39406134, 39406135, 39406137, 39406203, 39406209, 39406210, 39448006, 39448020, 39448038, 39448039, 39448044, 39448047, 39448049

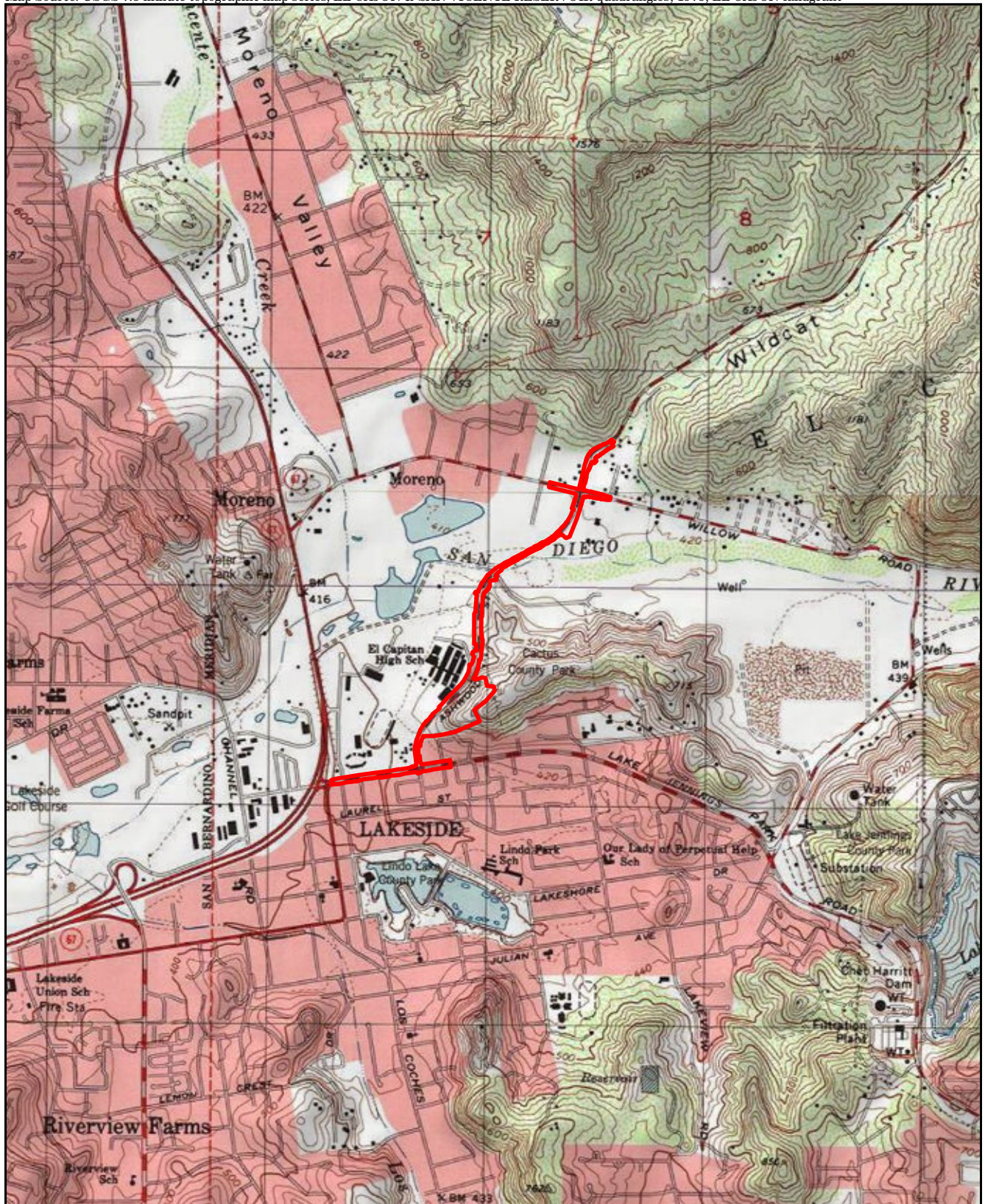
RECON conducted QCB surveys on 22.52 acres of suitable habitat adjacent to Ashwood Street between Mapleview Street and approximately 0.25 mile north of the intersection with Willow Road, where Ashwood Street transitions into Wildcat Canyon Road (Figure 3).

The survey area is dominated by a large, west-facing hill dominated by Diegan coastal sage scrub on the east side of Ashwood Street, as well several smaller strips of Diegan coastal sage scrub, non-native grassland, and disturbed habitat on either side of Ashwood Street and Wildcat Canyon Road. Human land uses within or adjacent to the survey area include El Capitan High School, several single-family and multi-family residences, a private horse ranch, Cactus County Park, and a County of San Diego maintenance yard.



✱ Project Location

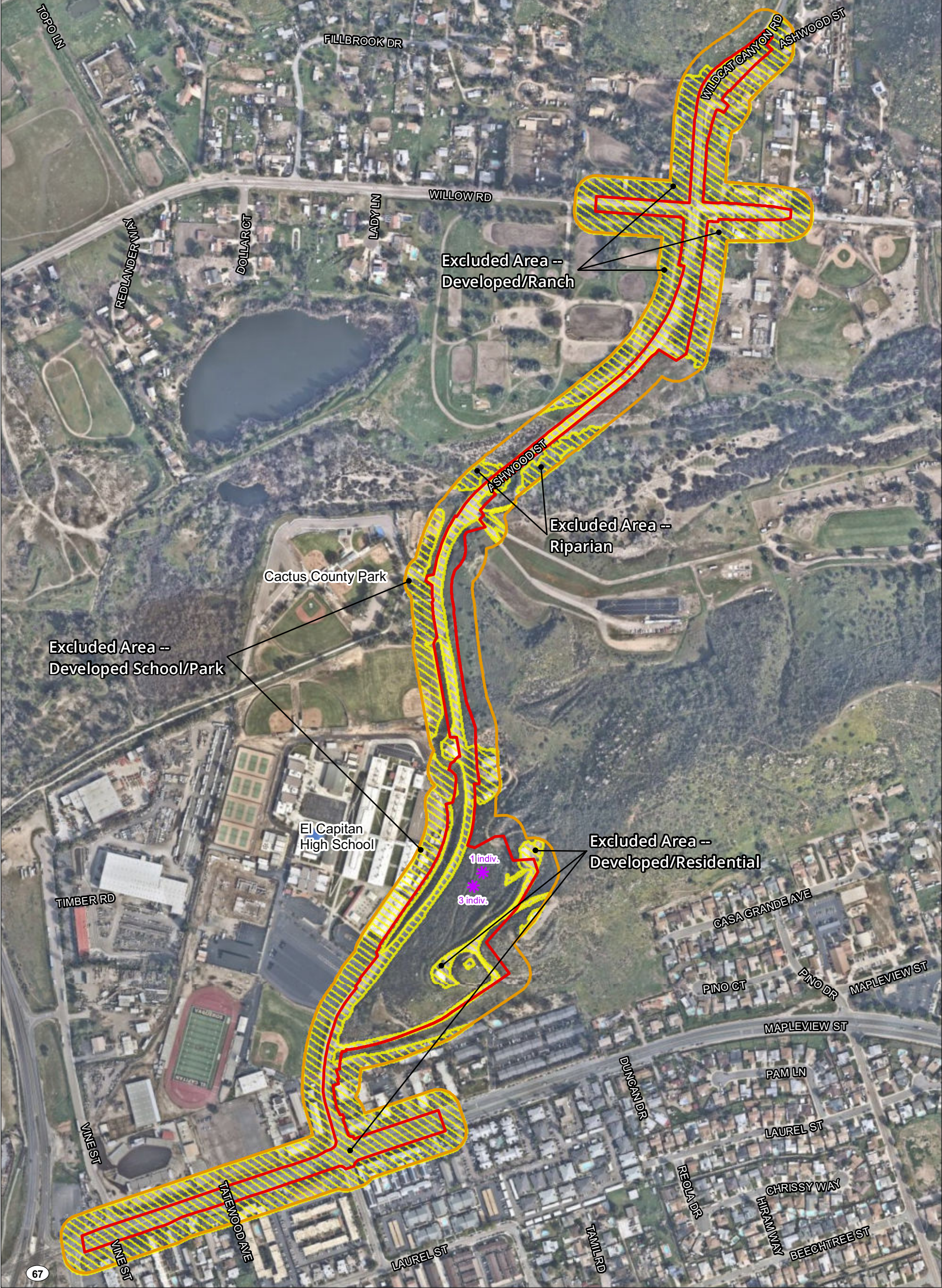
FIGURE 1
Regional Location
Ashwood Street Corridor Improvements Project



Project Boundary

FIGURE 2

Project Location on USGS Map
Ashwood Street Corridor Improvements Project



- Project Boundary
- QCB Survey Area
- Excluded Area
- Purple Owl's Clover (*Castilleja exserta*)



FIGURE 3
Habitat Assessment and Survey Area
Ashwood Street Corridor Improvements Project

The San Diego River crosses the project site approximately 0.25 mile south of Willow Road. Elevations range from 400 feet above mean sea level in the San Diego River channel to 680 feet above mean sea level on the large hill on the east side of Ashwood Street in the southern portion of the survey area.

3.0 Quino Checkerspot Butterfly Biology

QCB, a member the brush-footed butterfly family (Nymphalidae), was federally listed as endangered in January 1997 (USFWS 1997). It is one of 26 subspecies of *Euphydryas editha*, and was formerly known as *E. e. wrightii* (Faulkner and Klein 2012).

3.1 Distribution

Historically, QCB ranged from Los Angeles and western San Bernardino counties; south through Orange, western Riverside, and San Diego counties; and into northern Baja California, Mexico. Currently, QCB only occurs in southwestern Riverside County, southern San Diego County, and northern Baja California (Mattoni et al. 1997). QCB's range has been negatively affected by development, invasive non-native vegetation, overgrazing, fire, drought, over-collection by enthusiasts, and off-road vehicle use (USFWS 1997).

3.2 Habitat

In coastal San Diego County, the distribution of QCB is determined by its primary larval host plant, dot-seed plantain (*Plantago erecta*). Later stage larvae can also feed on purple owl's clover, which serves as a secondary host plant. At inland and higher elevation sites, QCB larvae also feed on woolly plantain (*Plantago patagonica*), white snapdragon (*Antirrhinum coulterianum*), and thread-leaved bird's-beak (*Cordylanthus rigidus* ssp. *setigerus*) (USFWS 2014). Southern Chinese houses (*Collinsia concolor*) are also used by QCB larvae at higher elevation sites up to 5,000 feet (Pratt and Pierce 2010).

Adult QCB will nectar on a variety of wildflower species, including (but not limited to) goldfields (*Lasthenia* spp.) and other members of Asteraceae, cryptantha popcornflower, farinose ground-pink, chia (*Salvia columbariae*), wild onion (*Allium* spp.), goldenstar (*Muilla* spp.), common fiddleneck, and California buckwheat (*Eriogonum fasciculatum*; USFWS 2002; Faulkner and Klein 2012). QCB will use a variety of sparsely vegetated habitats, including open coastal sage scrub and chaparral, vernal pool complexes, oak woodland, grasslands, and desert pinyon-juniper woodland. The thermoregulatory needs of QCB make heavily shaded, and thus, densely vegetated, areas largely unsuitable (Mattoni et al. 1997; Osborne and Redak 2000; USFWS 2002).

3.3 Life Cycle

QCB typically has one full generation per year, with a four- to six-week flight period between late February and May (Emmel and Emmel 1973), depending on rainfall and temperature, which can be affected by elevation.

Gravid females typically oviposit on dot-seed plantain (or other host plant), and eggs hatch in several weeks. Larvae feed on the host plant until it dries up, typically by May, when the larvae enter diapause. Larvae exit diapause following winter rains in the following January or February, and feed on the new crop of host plant. After several weeks, the larvae will pupate, and adults will emerge in 10 to 14 days. If the primary host plant dries before the post-diapause larvae pupate, they may feed on purple owl's clover.

Adult life span averages 10 to 14 days and emergence is staggered (USFWS 2002). Adult QCBs balance their time between searching for mates, feeding on nectar, defending territories, and searching for host plants on which to oviposit (USFWS 2002).

4.0 Methods

Biological analyses conducted by RECON in 2019 included a habitat assessment and weekly focused surveys. Butterfly nomenclature used in this report conforms to the Checklist of Butterflies of San Diego (San Diego Natural History Museum 2002).

4.1 Habitat Assessment

RECON biologist Brian Parker (USFWS Permit TE-797665) conducted a habitat assessment of the project site on February 15, 2019 to identify suitable QCB survey areas, as defined in the USFWS survey guidelines and the QCB Recovery Plan (USFWS 2014 and 2003, respectively). Mr. Parker assessed habitat suitability and inspected the survey area for larval host plant. Based on the habitat assessment, 22.52 acres were determined potentially suitable for QCB; areas excluded from the survey include developed areas, isolated patches of disturbed habitat within developed areas, active agriculture, and a corridor of riparian woodland on the San Diego River (see Figure 3). These excluded areas have no potential to support suitable QCB habitat.

4.2 Focused Surveys

Presence/absence adult flight season surveys (focused surveys) for QCB were conducted weekly in accordance with the QCB Survey Guidelines (USFWS 2014), beginning the third week of February and ending the second Saturday in May. Due to unsuitable weather conditions, Survey 1 was delayed until the third week of February (February 24), with Survey 2 conducted four days later (February 28). The remaining surveys were conducted weekly through the end of the survey period.

Surveys were conducted by RECON permitted biologists Brian Parker, Andrew Smisek, and Alex Fromer under USFWS Permit TE-797665.

During the focused surveys, the surveyors walked slowly through suitable habitat, searching for QCB and other butterflies, as well as host plants, and potential nectar plants. All surveys were conducted with ground temperatures of at least 60 degrees Fahrenheit (°F) on sunny days or 70°F during overcast conditions, with sustained wind speeds below

15 miles per hour. Surveyors recorded all butterflies and potential nectar plants observed during the surveys, and mapped host plant locations and patch size, when detected. All suitable habitat within the survey area was surveyed during each focused survey. A summary of surveyors; survey dates, times, and weather conditions; and acres surveyed per hour are presented in Table 1. Data sheets for each survey of are included as Attachment 1.

Table 1 Survey Dates, Personnel, Times, Conditions, and Acres Surveyed per Hour					
Date	Survey Number	Personnel	Beginning Time and Conditions	Ending Time and Conditions	Acres/ Hour
02/15/19	Habitat Assessment	Brian Parker	11:00 a.m.; 65°F; winds 0–2 mph; 85% cloud cover	14:00 p.m.; 68°F; winds 0–2 mph; 85% cloud cover	n/a
02/24/19	1	Brian Parker Andrew Smisek	11:20 a.m.; 64°F; winds 0–1 mph; 5% cloud cover	14:30 p.m.; 68°F; winds 1–3 mph; 0% cloud cover	3.6
02/28/19	2	Brian Parker	12:10 p.m.; 74°F; winds 0–2mph; 65% cloud cover	14:50 p.m.; 75°F; winds 2–4 mph; 40% cloud cover	7.1
03/05/19	3	Brian Parker	11:15 a.m.; 75°F; winds 2–5 mph; 50% cloud cover	13:50 p.m.; 79°F; winds 4–6 mph; 70% cloud cover	8.7
03/14/19	4	Brian Parker	12:10 p.m.; 69°F; winds 2–4 mph; 0% cloud cover	14:50 p.m.; 75°F; winds 3–5 mph; 0% cloud cover	8.5
03/19/19	5	Brian Parker	11:00 a.m.; 66°F; winds 1–2 mph; 5% cloud cover	13:45 p.m.; 74°F; winds 6–8 mph; 1% cloud cover	8.2
03/26/19	6	Alex Fromer	11:30 a.m.; 73°F; winds 1–2 mph; 100% cloud cover	14:20 p.m.; 82°F; winds 0–2 mph; 90% cloud cover	8.0
04/02/19	7	Brian Parker	11:30 a.m.; 70°F; winds 3–6 mph; 10% cloud cover	14:00 p.m.; 76°F; winds 4–6 mph; 0% cloud cover	9.0
04/09/19	8	Brian Parker	11:30 a.m.; 76°F; winds 0–2 mph; 20% cloud cover	14:00 p.m.; 79°F; winds 4–6 mph; 30% cloud cover	9.0
04/19/19	9	Brian Parker	10:30 a.m.; 78°F; winds 2–4 mph; 50% cloud cover	13:00 p.m.; 85°F; winds 2–4 mph; 10% cloud cover	9.0
04/23/19	10	Brian Parker	10:00 a.m.; 67°F; winds 0–2 mph; 10% cloud cover	12:40 p.m.; 82°F; winds 4–6 mph; 0% cloud cover	8.5
05/01/19	11	Brian Parker	11:00 a.m.; 66°F; winds 3–5 mph; 5% cloud cover	13:30 p.m.; 72°F; winds 0–2 mph; 5% cloud cover	9.0
05/07/19*	12a	Brian Parker	11:45 a.m.; 70°F; winds 0–1 mph; 100% cloud cover	13:30 p.m.; 69°F; winds 0–2 mph; 100% cloud cover	7.7
05/10/19*	12b	Brian Parker	11:35 a.m.; 70°F; winds 0–2 mph; 95% cloud cover	12:45 p.m.; 70°F; winds 1–3 mph; 90% cloud cover	
°F = degrees Fahrenheit at ground level; mph = miles per hour; % = percent					
* The first part of Survey 12 was terminated when air temperature at ground level dropped below 70°F; second part of survey completed on May 10, 2019.					

5.0 Results

5.1 Habitat Assessment Results

A total of 22.52 acres was determined to be potentially suitable for QCB. Excluded areas that were determined to be unsuitable included developed roads, El Capitan High School and associated ballfields, several residential properties, the County of San Diego Department of Public Works maintenance yard, active horse ranches, and the riparian scrub and woodland along the San Diego River. Suitable habitat occurred in several areas (see Figure 3):

- The large hill east of Ashwood Street, north of Maplevue Street, and east of El Capitan High School. This hill contains Diegan coastal sage scrub dominated by California sagebrush (*Artemisia californica*), and California buckwheat (*Eriogonum fasciculatum*). Openings within the Diegan coastal sage scrub support abundant native annual flowers, including ground pink, cryptantha, popcornflower, common fiddleneck, California centaury (*Zeltnera venusta*), and red maids (*Calandrinia menziesii*). The Diegan coastal sage scrub is interrupted by areas of disturbed habitat and driveways servicing three single-family residences. There are several historically graded dirt roads lined with citrus trees that do not appear to be used by vehicles and have been overgrown with a mix of native and non-native annuals, including the potential nectar plants described above.
- The San Diego River floodplain. To the west of Ashwood Street, this area consists of open Diegan coastal sage scrub and disturbed land. The Diegan coastal sage scrub in this area is dominated by broom baccharis (*Baccharis sarothroides*), with inclusions of California buckwheat, laurel sumac (*Malosma laurina*), and mule fat (*Baccharis salicifolia*). To the east of Ashwood Street, this area is characterized by mostly by disturbed land with a small amount of Diegan coastal sage scrub and non-native grassland. The soil in these areas is very sandy and there are few annual flowers present. Potential nectar sources are limited to sun cups (*Camissoniopsis* sp.) and non-native annuals.
- The hill west of Wildcat Canyon Road, north of Willow Road. This area contains disturbed Diegan coastal sage scrub, and consists of scattered laurel sumac, California buckwheat, and San Diego viguiera (*Bahiopsis laciniata*) with over 50 percent cover of non-native grasses.
- The narrow strip of habitat between Ashwood Street and the high school. This area is located to the west of Ashwood Street and contains coastal sage scrub and disturbed habitat with native shrubs like broom baccharis and California buckwheat, as well as abundant non-native species such as tree tobacco (*Nicotiana glauca*), fountain grass (*Pennisetum* sp.), short-pod mustard (*Hirschfeldia incana*), and Russian thistle (*Salsola tragus*).

No primary host plants, dot-seed plantain, were detected during the habitat assessment, though two small patches of a secondary host plant, purple owl's clover (one individual and three individuals) were observed within the Diegan coastal sage scrub during the later portion of the survey period.

5.2 Focused Survey Results

One larval host plant species, purple owl's clover, was observed in two small patches (one individual and three individuals) within the Diegan coastal sage scrub on the large west-facing slope on the east side of Ashwood Street (see Figure 3). These patches occur in grassy openings between native shrubs, just outside the overgrown dirt roads. No dot-seed plantain, the primary QCB host plant, was observed.

Potential nectar species were abundant throughout the survey area. Known QCB nectar sources that were observed include: farinose ground-pink, common fiddleneck, cryptantha, blue dicks (*Dichelostemma capitatum*), California buckwheat, chaparral gilia (*Gilia angelensis*), and popcornflower. Many of these species were observed in clusters of dozens to thousands of individuals, and were commonly found in openings between shrubs and along the overgrown dirt roads on the large hill to the east of Ashwood Street. A list of flowering plants observed during the focused surveys is presented in Table 2.

Table 2 Flowering Plants within the Survey Area	
Scientific Name	Common Name
<i>Acmispon glaber</i>	deerweed
<i>Acmispon strigosus</i>	Bishop's lotus
<i>Amsinckia menziesii</i>	common fiddleneck
<i>Baccharis salicifolia</i>	mule fat
<i>Baccharis sarothroides</i>	broom baccharis
<i>Bahiopsis laciniata</i>	San Diego viguiera
<i>Bougainvillea</i> sp.	Bougainvillea
<i>Brassica tournefortii</i>	Sahara mustard
<i>Calandrinia menziesii</i>	red maids
<i>Calystegia macrostegia</i>	morning-glory
<i>Camissoniopsis</i> sp.	sun cups
<i>Centaurea melitensis</i>	tocalote
<i>Chaenactis glabriuscula</i>	yellow pincushion
<i>Chorizanthe fimbriata</i>	fringed spineflower
<i>Claytonia perfoliata</i>	miner's lettuce
<i>Croton californicus</i>	California croton
<i>Cryptantha</i> sp.	cryptantha
<i>Daucus pusillus</i>	rattlesnake weed
<i>Deinandra fasciculata</i>	fascicled tarweed
<i>Dichelostemma capitatum</i>	blue dicks
<i>Diplacus aurantiacus</i>	bush monkey-flower
<i>Encelia farinosa</i>	brittlebush
<i>Eriogonum fasciculatum</i>	California buckwheat
<i>Erodium botrys</i>	long-beak filaree
<i>Erodium cicutarium</i>	redstem filaree

Table 2 Flowering Plants within the Survey Area	
Scientific Name	Common Name
<i>Eschscholzia californica</i>	California poppy
<i>Euphorbia</i> sp.	spurge
<i>Gilia angelensis</i>	chaparral gilia
<i>Glebionis coronaria</i>	crown daisy
<i>Hedypnois cretica</i>	Crete weed
<i>Heterotheca grandiflora</i>	telegraph weed
<i>Hirschfeldia incana</i>	short-pod mustard
<i>Hypochaeris glabra</i>	smooth cat's-ear
<i>Keckiella antirrhinoides</i>	yellow-bush penstemon
<i>Lasthenia gracilis</i>	common goldfields
<i>Linanthus dianthiflorus</i>	farinose ground pink
<i>Logfia gallica</i>	daggerleaf cottonrose
<i>Lupinus concinnus</i>	bajada lupine
<i>Lupinus hirsutissimus</i>	stinging lupine
<i>Lupinus succulentus</i>	arroyo lupine
<i>Lysimachia arvensis</i>	scarlet pimpernel
<i>Marah macrocarpa</i>	wild cucumber
<i>Melilotus indicus</i>	sourclover
<i>Mesembryanthemum crystallinum</i>	crystalline iceplant
<i>Mirabilis laevis</i>	wishbone bush
<i>Nemophila menziesii</i> var. <i>menziesii</i>	Menzies' baby blue-eyes
<i>Nicotiana</i> sp.	tobacco
<i>Nuttallanthus texanus</i>	blue toadflax
<i>Pectocarya</i> sp.	pectocarya
<i>Phacelia cicutaria</i>	caterpillar phacelia
<i>Phacelia parryi</i>	Parry's phacelia
<i>Pholistoma</i> sp.	fiesta flower
<i>Plagiobothrys</i> sp.	popcornflower
<i>Pseudognaphalium californicum</i>	California everlasting
<i>Pseudognaphalium</i> sp.	cudweed
<i>Psilocarphus tenellus</i>	slender woolly-marbles
<i>Raphanus sativus</i>	radish
<i>Salsola tragus</i>	Russian thistle
<i>Salvia apiana</i>	white sage
<i>Salvia columbariae</i>	chia
<i>Salvia mellifera</i>	black sage
<i>Sambucus nigra</i>	blue elderberry
<i>Silene gallica</i>	small-flower catchfly
<i>Solanum parishii</i>	Parish's nightshade
<i>Sonchus asper</i>	prickly sow thistle
<i>Thysanocarpus</i> sp.	fringepod
<i>Zeltnera venusta</i>	California centaury

A total of 1,182 butterfly observations, representing a minimum of 17 butterfly species, were recorded during the 2019 focused surveys; however, QCB was not detected (Table 3). Habitat within the study area was moderately suitable for QCB, although no host plant species were present for most of the survey period, and only low numbers were observed once purple owl's clover did emerge.

Table 3
Butterflies Observed within the Survey Area

Scientific Name	Common Name	Number of Observations by Survey Number											
		1	2	3	4	5	6	7	8	9	10	11	12
<i>Vanessa cardui</i>	Painted Lady	47	35	53	600*	35	45	8	5	2	2	8	
<i>Anthocharis sara sara</i>	Pacific Sara orangetip	1	1	2			4	2	4	3	5	2	
<i>Apodemia mormo virgulti</i>	Behr's metalmark	1	1	2			3	4	15	26	17	24	9
<i>Brephidium exile</i>	western pygmy-blue			2							1		
<i>Strymon melinus pudica</i>	gray hairstreak	1				1			1			6	
<i>Erynnis funeralis</i>	funereal duskywing				4	4		5	3	1	2	1	
<i>Icaricia acmon</i>	Acmon blue	3	2		2				1				
<i>Agraulis vanillae incarnata</i>	Gulf fritillary	1											
<i>Junonia coenia grisea</i>	common buckeye										1		
<i>Papilio rutulus</i>	western tiger swallowtail										1		
<i>Papilio</i> sp.	unidentified swallowtail	1											
<i>Leptotes marina</i>	marine blue					2				2	9	2	2
<i>Nymphalis antiopa</i>	mourning cloak										1	1	
<i>Pieris rapae</i>	cabbage white		8	5	2	4		3	7	24	40	31	8
<i>Vanessa atalanta rubria</i>	red admiral									1			2
<i>Vanessa anabella</i>	west coast lady												4
<i>Pyrgus communis</i>	common checkered skipper												4
N/A	unidentified white						1						
N/A	unidentified duskywing	1					3						
N/A	unidentified sulphur					3	1				1		
TOTAL		56	47	64	608	49	57	22	36	59	80	75	29

NOTE: Nomenclature was derived from the San Diego Natural History Museum's Butterflies of San Diego County (2002).

* Number of painted lady observations for Week 4 is an estimate.

Painted lady (*Vanessa cardui*) was the most common butterfly species observed. It was particularly common during the early portion of the survey period, and peaking during Week 4 at the height of the species' migration. Cabbage white (*Pieris rapae*) and Behr's metalmark (*Apodemia mormo virgulti*) were also notably common, and both generally increased in numbers as the season progressed. Other species that were observed during a majority of the surveys include Pacific Sara orangetip (*Anthocharis sara sara*), funereal duskywing (*Erynnis funeralis*), and marine blue (*Leptotes marina*). During the final week of the survey period, the number of butterfly observations was low, and there was indication of turnover in species composition, as no painted ladies were detected and two new species—west coast lady (*Vanessa annabella*) and common checkered skipper (*Pyrgus communis*)—were detected for the first time.

The number of butterfly observations and overall diversity were moderate to high, as may be expected given the substantial number of nectar plants present and above average rainfall (125–135 percent normal) for the San Diego region (National Oceanic and Atmospheric Administration 2019). With the exception of the painted lady migration in Week 4, the majority of the butterfly observations were made in the Diegan coastal sage scrub on the large hill east of Ashwood Street. This portion of the survey area had the most intact native habitat, and the highest number and density of potential nectar plants.

6.0 Certification

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


Date: May 22, 2019

Signed: _____

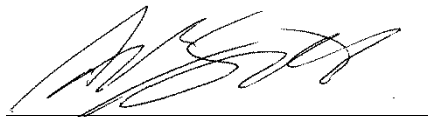


Brian Parker
USFWS Permit TE-797665
Report Author and Surveyor

Other Surveyors:



Alex Fromer
USFWS Permit TE-797665



Andrew Smisek
USFWS Permit TE-797665

7.0 References Cited

Emmel, T. C., and J. F. Emmel

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1975a El Cajon, California Quadrangle 7.5-Minute Topographic Map.

1975b San Vicente Reservoir, California Quadrangle 7.5-Minute Topographic Map.

ATTACHMENT 1

Field Notes

Ashwood Street Corridor Improvements (JN 8661)

QCB Focused Surveys 2019

Name: Brian Parker + ~~Alex H. H. H.~~ Andrew Smisek

Date: 2-24-18

Survey Week #: 1

Starting conditions: Time: 1120 Temp (oF): 64 Cloud Cover: 50% Wind Speed: 0-1

Ending Conditions: Time: 1430 Temp (oF): 68 Cloud Cover: 00% Wind Speed: 1-3

GRAY
H.S.

Butterflies Observed	# Obs (general tally)	Host & Potential Nectar Plants	Phenology* (Host Plants)
PAINTED LADY	47 47	<i>Plantago erecta</i> (Observed: Y / N)	
FRITILLARY	1	<i>Castilleja exserta</i> (Observed: Y / N)	
LOEBER PAVLOV BLUES	1	<i>Plantago patag.</i> (Observed: Y / N)	
SARA ORANGESTIP	1	<i>Antirrhinum coul.</i> (Observed: Y / N)	
REAR'S METAMARK	1	<i>Cordylanthus rig.</i> (Observed: Y / N)	
ACMON BLUES	3	<i>Collinsia heter.</i> (Observed: Y / N)	
Swallowtail SP	1	<i>Lasthenia gracilis</i> (Observed: Y / N)	
Duskywing SP	1	<i>Layia sp.</i> (Observed: Y / N)	
		<i>Cryptantha sp.</i> (Observed: Y / N)	SB
		<i>Allium sp.</i> (Observed: Y / N)	
		<i>Linanthus dianth.</i> (Observed: Y / N)	FB
		<i>Camissoniopsis</i>	
		<i>Erodium cicut.</i>	
		<i>Hieracium</i>	
		<i>Eriogonum fasciculatum</i>	
		<i>Acmispon glaber</i>	
		<i>Lupinus succulentus</i>	
		<i>Phacelia parryi</i>	
		<i>Chamaesyce sp.</i>	
		<i>Mirabilis laevis</i>	
		<i>Pseudognaphalium cal.</i>	
		<i>Encelia californica farinosa</i>	
		<i>Dichostemma capitatum</i>	
		<i>Plagiobothrys sp.</i>	
		<i>Zeltnera venusta</i>	
		<i>Amsinckia menziesii</i>	
		<i>Heteranthera grandiflora</i>	
		<i>Salvia columbariae</i>	
		<i>Bougainvillea</i>	
		<i>Senecio</i>	
		<i>Cal. Cal.</i>	
		<i>Solanum sp.</i>	
Esc cal		<i>Sam nig</i>	
Lep nit.		<i>Man mac</i>	
Acn str.		<i>Thysanocarpus sp</i>	
Bra tou		<i>Pholistoma</i>	
Lup hir		<i>Cro cal</i>	

*Notes regarding if vegetative (V), starting to bloom (SB), full bloom (FB), fruits and flowers (FF), post-bloom (PB), dessicated (D)

General Notes (include any details on QCB observed and photographs taken as appropriate):

CSS starting to look good. Several open areas on top of large slope on east side. Good # of Lin Dis and Cryptantha developing.

Ashwood Street Corridor Improvements (JN 8661)
QCB Focused Surveys 2019

Name: Brian Parker

Date: 2-28-2019

Survey Week #: 2

Starting conditions: Time: 1210 Temp (oF): 74 Cloud Cover: 65% Wind Speed: 0-2

Ending Conditions: Time: 1450 Temp (oF): 75 Cloud Cover: 40% Wind Speed: 2-4

Butterflies Observed	# Obs (general tally)	Host & Potential Nectar Plants	Phenology* (Host Plants)
		<i>Plantago erecta</i> (Observed: Y / N)	
Painted lady	35	<i>Castilleja exserta</i> (Observed: Y / N)	
Cabbage white	8	<i>Plantago patag.</i> (Observed: Y / N)	
Santa orange tip	1	<i>Antirrhinum coul.</i> (Observed: Y / N)	
Behr's metalmark	1	<i>Cordylanthus rig.</i> (Observed: Y / N)	
Common blue	7	<i>Collinsia heter.</i> (Observed: Y / N)	
		<i>Lasthenia gracilis</i> (Observed: Y / N)	
		<i>Layia sp.</i> (Observed: Y / N)	
		<i>Cryptantha sp.</i> (Observed: Y / N)	FB
		<i>Allium sp.</i> (Observed: Y / N)	
		<i>Linanthus dianth.</i> (Observed: Y / N)	FB
		<i>Comissoniopsis</i>	
		ERM PAS	
		PSE CAL	
		PSE SP. SP.	
		Chamaesyce	
		GRD BOT	
		GRD CIC	
		HIR INC	
		ACM GLA	
		LUP SOC	
		PHA PAR	
		PLAGOBOTHRYS	SB, FB
		MIR LAG	
		HETB GRA	
		ENC FAR	
		DIC CAP	
		RAC SAC	
		ZEL VEN	
		AMS MEN	
		SAC COL	
		BAH LAC	
		MEB CRY	
		SAL MEL	
		PECTOCARPA	FB

*Notes regarding if vegetative (V), starting to bloom (SB), full bloom (FB), fruits and flowers (FF), post-bloom (PB), dessicated (D)

General Notes (include any details on QCB observed and photographs taken as appropriate):

Ashwood Street Corridor Improvements (JN 8661)
QCB Focused Surveys 2019

Name: Brian Parker

Date: 3-5-2019

Survey Week #: 3

Starting conditions: Time: 1115 Temp (oF): 75 Cloud Cover: 50% Wind Speed: 2-5
Ending Conditions: Time: 1350 Temp (oF): 79 Cloud Cover: 70% Wind Speed: 4-6

Butterflies Observed	# Obs (general tally)	Host & Potential Nectar Plants	Phenology* (Host Plants)
		<i>Plantago erecta</i> (Observed: Y / N)	
PAINTED LADY	53	<i>Castilleja exserta</i> (Observed: Y / N)	
CABBAGE WHITE	5	<i>Plantago patag.</i> (Observed: Y / N)	
Pygmy Blue	2	<i>Antirrhinum coul.</i> (Observed: Y / N)	
BEARS METAMARK	2	<i>Cordylanthus rig.</i> (Observed: Y / N)	
SIERRA ORANGOTIP	2	<i>Collinsia heter.</i> (Observed: Y / N)	
		<i>Lasthenia gracilis</i> (Observed: Y / N)	
		<i>Layia sp.</i> (Observed: Y / N)	
		<i>Cryptantha sp.</i> (Observed: <input checked="" type="checkbox"/> / N)	FB
		<i>Allium sp.</i> (Observed: Y / N)	
		<i>Linanthus dianth.</i> (Observed: <input checked="" type="checkbox"/> / N)	FB
		CLAYTONIA	
		HIRINC	
		EROCIC	
		ERIPAS	
		CAMISSONIOPSIS	
		AMS MED	
		EROBOT	
		HET GRA	
		PEROCARYA	FB, FF
		ACMGRA	
		BACSAL	
		PHA CIC	
		PHA PAR	
		LUP CON	
		SAZ COL	
		MIR LAB	
		DIC CAP	
		BATH LAC	
		ZEL VEN	
		MES CRY	
		NEMOPHILA	
		SAL MEL	
		LUP HIR	

*Notes regarding if vegetative (V), starting to bloom (SB), full bloom (FB), fruits and flowers (FF), post-bloom (PB), dessicated (D)

General Notes (include any details on QCB observed and photographs taken as appropriate):

NO Host Plant obs. Nectar plants developing well.

Name: Brian Parker
Date: 3-14-2019
Survey Week #: 4

[illegible]

too many Painted lads to get accurate count. All flying east to
WEST ACROSS SITE + TOWARD EHS.

Ashwood Street Corridor Improvements (JN 8661)
QCB Focused Surveys 2019

Name: Brian Parker
Date: 3-19-2019
Survey Week #: 5

Starting conditions: Time: 1100 Temp (oF): 66 Cloud Cover: 50% Wind Speed: 1-2
Ending Conditions: Time: 1345 Temp (oF): 74 Cloud Cover: 10% Wind Speed: 6-8

Butterflies Observed	# Obs (general tally)	Host & Potential Nectar Plants	Phenology* (Host Plants)
		<i>Plantago erecta</i> (Observed: Y / N)	
Painted lady	35	<i>Castilleja exserta</i> (Observed: Y / N)	
unidentified Sulfur	3	<i>Plantago patag.</i> (Observed: Y / N)	
Funereal duskywing	4	<i>Antirrhinum coult.</i> (Observed: Y / N)	
Cabbage white	4	<i>Cordylanthus rig.</i> (Observed: Y / N)	
Marine blue	2	<i>Collinsia heter.</i> (Observed: Y / N)	
WPAWTAADANNA	0	<i>Lasthenia gracilis</i> (Observed: Y / N)	
Gray hairstreaks	1	<i>Layia sp.</i> (Observed: Y / N)	
		<i>Cryptantha sp.</i> (Observed: <input checked="" type="checkbox"/> Y / N)	PB
		<i>Allium sp.</i> (Observed: Y / N)	
		<i>Linanthus dianth.</i> (Observed: Y / N)	FB
		<i>Camissoniopsis</i>	
		<i>Pectocarya</i>	SB
		<i>Ero cix</i>	
		<i>Mel ind</i>	
		<i>Chamaesyce</i>	
		<i>ERI Fas</i>	
		<i>Acn gla</i>	
		<i>Lup hir</i>	
		<i>Pha Hir ing</i>	
		<i>Pha par</i>	
		<i>Nic gla</i>	
		<i>Enc far</i>	
		<i>Cal mac</i>	
		<i>Boh lac</i>	
		<i>Cla per</i>	
		<i>Ans men</i>	
		<i>Alys arv</i>	
		<i>Pha cic</i>	
		<i>Mim arv</i>	
		<i>Nem men</i>	
		<i>Cal mac</i>	
		<i>Zel rn</i>	
		<i>Hed ces</i>	
		<i>Lup con</i>	
		<i>annual Acmspon</i>	

*Notes regarding if vegetative (V), starting to bloom (SB), full bloom (FB), fruits and flowers (FF), post-bloom (PB), dessicated (D)

General Notes (include any details on QCB observed and photographs taken as appropriate):

Ashwood Street Corridor Improvements (JN 8661)
QCB Focused Surveys 2019

Name: Alex Fromer

Date: 3-26-2019

Survey Week #: 6

Starting conditions: Time: 1130 Temp (oF): 73 Cloud Cover: 100% Wind Speed: 1-2

Ending Conditions: Time: 1420 Temp (oF): 82 Cloud Cover: 90% Wind Speed: 0-2

Butterflies Observed	# Obs (general tally)	Host & Potential Nectar Plants	Phenology* (Host Plants)
		<i>Plantago erecta</i> (Observed: Y / N)	
PAINTED LADY	45	<i>Castilleja exserta</i> (Observed: Y / N)	
SARAH ORANGESTIP	4	<i>Plantago patag.</i> (Observed: Y / N)	
DUSKY WING	3	<i>Antirrhinum coul.</i> (Observed: Y / N)	
BEHR'S METALMARK	3	<i>Cordylanthus rig.</i> (Observed: Y / N)	
UNIDENTIFIED WHITE	1	<i>Collinsia heter.</i> (Observed: Y / N)	
SULFUR	1	<i>Lasthenia gracilis</i> (Observed: Y / N)	
		<i>Layia sp.</i> (Observed: Y / N)	
		<i>Cryptantha sp.</i> (Observed: Y / N)	FB
		<i>Allium sp.</i> (Observed: Y / N)	
		<i>Linanthus dianth.</i> (Observed: Y / N)	
		ERI PAR	
		HIR INC	
		ERD CL	
		AMISSONIOPSIS	
		PECTOCARYA	FB
		ACM GLA	
		SOU ASP	
		PLAGIOBOTRYX	FB
		LUPINUS SP.	
		PSE PAL	
		ENC PAR	
		AMSINCKIA	
		ANT NUT	
		CALANDRINIA	
		ANT COL	
		ACM STR	
		PHA PAR	
		DIC CAP	
		MIR LAB	
		CLAYTONIA	
		NIC GLA	
		DIMORPHOTHESA SW.	

*Notes regarding if vegetative (V), starting to bloom (SB), full bloom (FB), fruits and flowers (FF), post-bloom (PB), dessicated (D)

General Notes (include any details on QCB observed and photographs taken as appropriate):

QCB Focused Surveys 2019

Name: Brian Parker

Date: April 2 2019

Survey Week #: 7

Starting conditions: Time: 1130 Temp (oF): 70 Cloud Cover: 10% Wind Speed: 3-6

Ending Conditions: Time: 1400 Temp (oF): 76 Cloud Cover: 0% Wind Speed: 4-6

[illegible]

*Notes regarding if vegetative (V), starting to bloom (SB), full bloom (FB), fruits and flowers (FF), post-bloom (PB), dessicated (D)

General Notes (include any details on QCB observed and photographs taken as appropriate):

Ashwood Street Corridor Improvements (JN 8661)
QCB Focused Surveys 2019

Name: Brian Parker
Date: 4-9-2019
Survey Week #: 8

Starting conditions: Time: 1130 Temp (oF): 76 Cloud Cover: 20% Wind Speed: 0-2
Ending Conditions: Time: 1400 Temp (oF): 75 Cloud Cover: 30% Wind Speed: 4-6

Butterflies Observed	# Obs (general tally)	Host & Potential Nectar Plants	Phenology* (Host Plants)
		<i>Plantago erecta</i> (Observed: Y / N)	
Cabbage White	7	<i>Castilleja exserta</i> (Observed: Y / N)	FB
Behr's Metalmark	15	<i>Plantago patag.</i> (Observed: Y / N)	
Painted Lady	5	<i>Antirrhinum coul.</i> (Observed: Y / N)	
Santa Cruz Orange-tip	4	<i>Cordylanthus rig.</i> (Observed: Y / N)	
Western Metalmark	10	<i>Collinsia heter.</i> (Observed: Y / N)	
Funeral D. Skewing	3	<i>Lasthenia gracilis</i> (Observed: Y / N)	
Acmon blue	1	<i>Layia sp.</i> (Observed: Y / N)	
Gray Hairstreak	1	<i>Cryptantha sp.</i> (Observed: Y / N)	FB, FF
		<i>Allium sp.</i> (Observed: Y / N)	
		<i>Linanthus dianth.</i> (Observed: Y / N)	FB
		<i>Gnaphalium</i>	
		<i>Pectocarya</i>	FF
		<i>Acm. gla</i>	
		<i>Er. fas</i>	
		<i>Hir inc</i>	
		<i>Lys arv</i>	
		<i>Erod. c</i>	
		<i>Cal mac</i>	
		<i>Lup hir</i>	
		<i>ENC CAP</i>	
		<i>Bah lac</i>	
		<i>Log gal</i>	
		<i>Dir cap</i>	
		<i>SIL GAR</i>	
		<i>Plagiobothrys</i>	
		<i>Zel. ven</i>	
		<i>Acm str</i>	
		<i>Chamaesyce</i>	
		<i>PSI ten</i>	
		<i>PSI VAMP SR.</i>	
		<i>SON ASP</i>	
		<i>PHA CIC</i>	
HOT GRA		<i>MIM AUR</i>	
LUP CON		<i>ERD BOT</i>	
GLS CAP		<i>CLA PER</i>	
HED CRE		<i>MIR LAS</i>	

*Notes regarding if vegetative (V), starting to bloom (SB), full bloom (FB), fruits and flowers (FF), post-bloom (PB), dessicated (D)

General Notes (include any details on QCB observed and photographs taken as appropriate):

Ashwood Street Corridor Improvements (JN 8661)
QCB Focused Surveys 2019

Name: Brian Parker

Date: 4-19-2019

Survey Week #: 9

Starting conditions: Time: 1030 Temp (oF): 78 Cloud Cover: 50% Wind Speed: 2-4
Ending Conditions: Time: 1300 Temp (oF): 85 Cloud Cover: 10% Wind Speed: 2-4

Butterflies Observed	# Obs (general tally)	Host & Potential Nectar Plants	Phenology* (Host Plants)
		<i>Plantago erecta</i> (Observed: Y / N)	
Marine Blue	2	<i>Castilleja exserta</i> (Observed: <u>Y</u> / N)	FB
Cabbage White	24	<i>Plantago patag.</i> (Observed: Y / N)	
Behr's Metalmark	26	<i>Antirrhinum coult.</i> (Observed: Y / N)	
Red admiral	1	<i>Cordylanthus rig.</i> (Observed: Y / N)	
Sora Orange-tip	3	<i>Collinsia heter.</i> (Observed: Y / N)	
Funereal duskywing	1	<i>Lasthenia gracilis</i> (Observed: Y / N)	
Painted lady	2	<i>Layia sp.</i> (Observed: Y / N)	
		<i>Cryptantha sp.</i> (Observed: <u>Y</u> / N)	FB, FP
		<i>Allium sp.</i> (Observed: Y / N)	
		<i>Linanthus dianth.</i> (Observed: <u>Y</u> / N)	FB
		<i>Chaenactis</i>	
		NUT TEX	
		ERI CON	
		ENC FAR	
		<i>Comissonia psis</i>	
		PSE LAPPA SP.	
		PSE CAC	
		LOG GAL	
		HIR INC	
		<i>Pectocarya</i>	
		ERI FAS	
		HYP GLA	
		<i>Chamaesyce</i>	
		<i>GRASSLEUM FIL</i>	
		PHA PAR	
		MIR LAG	
		DEL PAR	
		CAC MAC	
		CLA PAR	
		ZEL VEN	
		LYS ARE	
		MEL CRY	
		ERO BOT	
		ACM GLA	
Plagiobothrys	FP	DAU POS	
SAC API		ERO CIC	

*Notes regarding if vegetative (V), starting to bloom (SB), full bloom (FB), fruits and flowers (FF), post-bloom (PB), dessicated (D)

General Notes (include any details on QCB observed and photographs taken as appropriate):

Ashwood Street Corridor Improvements (JN 8661)
QCB Focused Surveys 2019

Name: Brian Parker
Date: 4-23-2019
Survey Week #: 10

Starting conditions: Time: 1000 Temp (oF): 67 Cloud Cover: 10% Wind Speed: 6-2
Ending Conditions: Time: 1240 Temp (oF): 82 Cloud Cover: 0% Wind Speed: 4-6

Butterflies Observed	# Obs (general tally)	Host & Potential Nectar Plants	Phenology* (Host Plants)
		<i>Plantago erecta</i> (Observed: Y / N)	
Behr's metalmark	17	<i>Castilleja exserta</i> (Observed: Y / N)	
Painted lady	2	<i>Plantago patag.</i> (Observed: Y / N)	
Pygmy blue	1	<i>Antirrhinum coul.</i> (Observed: Y / N)	
Cabbage white	40	<i>Cordylanthus rig.</i> (Observed: Y / N)	
Funereal duskywing	2	<i>Collinsia heter.</i> (Observed: Y / N)	
Buckeye	1	<i>Lasthenia gracilis</i> (Observed: Y / N)	
Sara Orange-tip	5	<i>Layia sp.</i> (Observed: Y / N)	
Marine blue	9	<i>Cryptantha sp.</i> (Observed: <u>Y</u> / N)	FF
Sulfur sp.	1	<i>Allium sp.</i> (Observed: Y / N)	
Western Tiger Swallowtail	1	<i>Linanthus dianth.</i> (Observed: Y / N)	
Mourning cloak	1		
		<i>Pamissonopsis</i>	
		HIR INC	
		LOG GAL	
		ERI FAS	
		ERI FIL	
		ERO CIC	
		LUP HIR	
		<i>Pharosia co.</i>	
		ACM GLA	
		DAH PUS	
		HYD GLA	
		SIL GAL	
		PJE WMA SR	
		ERO BOT	
		PLAGIOBOTARYS	FF
GEO COR		PHA CIC	
HYD GLA		SON ASP	
CAC MAC		DIC CAP	
REL VEN		<i>Pectocarya</i>	FF
MES CRY		GIL ANG	
KEE ANT		AMS MEN	
SAM NIG		CLA PER	
SAL MOR		ERI CON	
ACM GLA		PHA CAL	
BAH LAC		<i>Psilocarphus</i>	
CAC FAR		CYS ARV	

*Notes regarding if vegetative (V), starting to bloom (SB), full bloom (FB), fruits and flowers (FF), post-bloom (PB), dessicated (D)

General Notes (include any details on QCB observed and photographs taken as appropriate):

Annuals continue to develop - more plants in flower - Annuals starting to dry.

Name: BRIAN PARKER
Date: 5-1-2019
Survey Week #: 11

Butterflies Observed	# Obs (general tally)	Host & Potential Nectar Plants	Phenology* (Host Plants)
		<i>Plantago erecta</i> (Observed: Y / N)	
CABBAGE WHITE	31	<i>Castilleja exserta</i> (Observed: <input checked="" type="checkbox"/> N)	FB
BEHR'S METAMARK	24	<i>Plantago patag.</i> (Observed: Y / N)	
GRAY HAIRSTREAK	6	<i>Antirrhinum coul.</i> (Observed: Y / N)	
MOURNING CLOAK	1	<i>Cordylanthus rig.</i> (Observed: Y / N)	
MARINE BLUE	2	<i>Collinsia heter.</i> (Observed: Y / N)	
PAINTED LADY	8	<i>Lasthenia gracilis</i> (Observed: Y / N)	
FUNERAL DUSKYWING	1	<i>Layia sp.</i> (Observed: Y / N)	
SARA ORANGESTIP	2	<i>Cryptantha sp.</i> (Observed: <input checked="" type="checkbox"/> N)	FR / FF
		<i>Allium sp.</i> (Observed: Y / N)	
		<i>Linanthus dianth.</i> (Observed: <input checked="" type="checkbox"/> N)	FB
		PAMISONIOPSIS	
		ERI FIL	
		ERI PAS	
		HIR INC	
		LOG GAL	
		ERD CIC	
		ERD BOT	
		PSB LABA SP.	
		HYP GLA	
		AMS MEN FF, PB	
		DAU PUS	
		ZUL VON	
		ACM GLA	
		ACM STR	
	-	PLAGIOBOTRYS FF, PB	
		SIL GAL	
		CEN MOL	
		SAMNIA	
		LYS ARV	
		GIL ANK	
		CHA GLA	
		PHA PAR	
BAH LAC		DOL PAR	
PSB CAR		EXC FAR	
CLAYTONIA		CAL MAC	

General Notes (include any details on QCB observed and photographs taken as appropriate):

Non-native Annuals getting larger + filling in gaps b/t NATIVE shrubs. HIRING + CEN MOR 2-4' TALL. MOST CRIFAS IS IN Bloom now.

Ashwood Street Corridor Improvements (JN 8661)
QCB Focused Surveys 2019

Name: Brian Parker
Date: 5-7-2019
Survey Week #: 12A

Starting conditions: Time: 1145 Temp (oF): 70 Cloud Cover: 100% Wind Speed: 0-1
Ending Conditions: Time: 1330 Temp (oF): 69* Cloud Cover: 100% Wind Speed: 0-2

Butterflies Observed	# Obs (general tally)	Host & Potential Nectar Plants	Phenology* (Host Plants)
		<i>Plantago erecta</i> (Observed: Y / N)	
CABBAGE WHITE	6	<i>Castilleja exserta</i> (Observed: <input checked="" type="checkbox"/> / N)	FF
BEATRIS METALMARK	7	<i>Plantago patag.</i> (Observed: Y / N)	
COMMON CHECKERED SKIPPER	4	<i>Antirrhinum coul.</i> (Observed: Y / N)	
RED ADMIRAL	1	<i>Cordylanthus rig.</i> (Observed: Y / N)	
MARINE BLUE	2	<i>Collinsia heter.</i> (Observed: Y / N)	
WEST COAST LADY	4	<i>Lasthenia gracilis</i> (Observed: Y / N)	
		<i>Layia sp.</i> (Observed: Y / N)	
		<i>Cryptantha sp.</i> (Observed: <input checked="" type="checkbox"/> / N)	FF, PB
		<i>Allium sp.</i> (Observed: Y / N)	
		<i>Linanthus dianth.</i> (Observed: <input checked="" type="checkbox"/> / N)	FB
		HIR INC	
		CHAMAECYCE	
		ERI FAS	
		ERO CIC	
		CAMISSONIOPSIS	
		ACM GLA	
		ERO BOT	
		CEN MEL	
		LUP HIR	
		ENC FAR	
		NIC GLA	
		CAL MAC	
		BAH LAC	
		PSO CAL	
		ERI FIL	
		CHO. FIM	
CHO PRO		LOG GAR	
CHO CAL		PAV PLUS	
GUS COR		LIN DIA	
ANT NOT		GLA	
ACM STR		ERI CON	
ZER VEN		PHA CIC	
LYS ARV		PECTOCARYA	
MES CPY		AMS MON	
HED CRB		PSI TEN	
HYP GLA		SAL MOL	

*Notes regarding if vegetative (V), starting to bloom (SB), full bloom (FB), fruits and flowers (FF), post-bloom (PB), dessicated (D)

General Notes (include any details on QCB observed and photographs taken as appropriate):

ANNUALS LOOK MUCH DRIER THAN PREVIOUS WEEKS. MOST APPEAR IN SEED.
CONDITIONS BORDERLINE + DECREASED W/TEMP BELOW 70°F AT 13:30PM.
BUTTERFLY HS LOW + SEEM TO BE SHOWING TRANSITION → CHECKERED SKIPPER
+ WEST COAST LADY PRESENT BUT NO PAINTED LADY OR SARA ORANGESTR.

Name: Brian Parker
Date: 5-10-2015
Survey Week #: 12B

Starting conditions: Time: 1135 Temp (oF): 70 Cloud Cover: 100 Wind Speed: 0-1
Ending Conditions: Time: 1245 Temp (oF): 70 Cloud Cover: 95 Wind Speed: 0-2

[illegible]

General Notes (include any details on QCB observed and photographs taken as appropriate):

Survey focused on NAG + CSS near SD River floodplain. Area very open with many trails + signs ~~to~~ of homeless encampments. ~~Not~~ No host plant in this area, and fewer nectar resources.

ATTACHMENT 6

Results of 2019 Coastal California Gnatcatcher Presence/Absence Surveys



An Employee-Owned Company

May 9, 2019

Ms. Stacey Love
U.S. Fish and Wildlife Service
Carlsbad Field Office
2177 Salk Avenue, Suite 250
Carlsbad, CA 92008

Reference: Results of 2019 Coastal California Gnatcatcher Presence/Absence Surveys for the Ashwood Street Corridor Improvements Project (RECON Number 8661)

Dear Ms. Love:

This letter describes the results of the protocol presence/absence surveys for the federally threatened coastal California gnatcatcher (*Polioptila californica californica*; CAGN) conducted for the Ashwood Street Corridor Improvements Project (project). CAGN was detected within the project survey area during the 2019 surveys, and the survey methods, survey area conditions, and survey results are discussed in detail below.

Survey Area Location

The project is located in the unincorporated community of Lakeside in eastern San Diego County (Figure 1). The project area is situated along Ashwood Street and Wildcat Canyon Road, extending onto portions of Maplevue Street and Willow Road, and is within the El Cajon land grant on U.S. Geological Survey (USGS) 7.5-minute topographic map El Cajon and San Vicente Reservoir quadrangles (Figure 2; USGS 1975). The 2019 CAGN survey area consists of potentially suitable CAGN habitat within the project development footprint and surrounding 300-foot buffer. The CAGN survey area is divided into two sections—Survey Area A (29.18 acres) and Survey Area B (4.47 acres)—which total 33.65 acres of potentially suitable CAGN habitat (Figure 3).

Methods

The CAGN survey area included all Diegan coastal sage scrub within the 300-foot buffer of the project footprint. These areas were determined based on biological surveys conducted for the project site on April 19, 2017 and February 13, 2019.

RECON biologists Mandy Weston and Beth Procsal conducted the focused surveys under U.S. Fish and Wildlife Service (USFWS) 10(a)(1)(A) permit TE-797665 in accordance with USFWS presence/absence survey protocol for the species (1997). All bird species observed during the surveys were noted. Each survey area was surveyed no sooner than seven days after the previous survey. Survey dates, personnel, times, weather conditions, and acres surveyed per hour are provided in Table 1.

Table 1 2019 Coastal California Gnatcatcher Protocol Survey Effort and Conditions						
Date	Survey Area*	Survey Number	Surveyor	Beginning Conditions	Ending Conditions	Acres per Hour
2/13/2019	A	1	M. Weston	6:30 a.m.; 48°F; winds 0–2 mph; 100% cloud cover	9:15 a.m.; 60°F; winds 0–2 mph; 100% cloud cover	10.6
2/22/2019	B	1	M. Weston	9:00 a.m.; 48°F; winds 1–2 mph; 0% cloud cover	10:00 a.m.; 49°F; winds 1–2 mph; 0% cloud cover	4.5
2/22/2019	A	2	M. Weston	6:30 a.m.; 36°F; winds 1–2 mph; 0% cloud cover	8:45 a.m.; 48°F; winds 1–2 mph; 0% cloud cover	13.0
3/5/2019	B	2	B. Procsal	7:45 a.m.; 48°F; winds 0–1 mph; 0% cloud cover	10:00 a.m.; 60°F; winds 0–1 mph; 0% cloud cover	13.0
3/5/2019	A	3	B. Procsal	10:00 a.m.; 60°F; winds 0–1 mph; 0% cloud cover	10:15 a.m.; 61°F; winds 0–1 mph; 0% cloud cover	17.9
3/14/2019	B	3	M. Weston	9:30 a.m.; 60°F; winds 0–2 mph; 0% cloud cover	10:30 a.m.; 62°F; winds 0–2 mph; 0% cloud cover	4.5
% = percent; °F = degrees Fahrenheit; mph = miles per hour *See Figure 3 for locations of Survey Areas A and B.						

Existing Conditions

The pre-survey notification letter (RECON 2019) listed the potentially suitable habitat within the survey area as 28 acres; however, the final survey area includes a total of 33.65 acres of potentially suitable habitat. The suitable habitat consists of coastal sage scrub dominated by California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), broom baccharis (*Baccharis sarothroides*), deerweed (*Acmispon glaber*), and laurel sumac (*Malosma laurina*). These plant species are typical within CAGN foraging and nesting habitat. Most of the suitable CAGN habitat was moderately dense, consisting of 35 and 75 percent cover by native shrubs with an average height of between 3 and 4 feet. The intervening space consisted of a mix of non-native grasses and forbs, and native wildflowers.

Survey Results

One pair of CAGN, consisting of one male in breeding plumage (i.e., exhibiting a black cap) and one adult CAGN without a black cap (assumed female), was observed in Survey Area A during each of the three survey visits (see Figure 3). During the first survey, CAGN call playback was used and elicited the initial response from the male. Call playback was not used subsequently or in the other areas due to the proximity of nest predators such as northern mockingbird (*Mimus polyglottos polyglottos*) and common raven (*Corvus corax clarionensis*). During each survey, CAGN were observed foraging or quietly calling. Although nesting behavior was not specifically observed, the repeated observations of a single male and female indicate the presence of one CAGN breeding pair. The “use area” shown on Figure 3 is extrapolated from the sum of the mapped CAGN observation points. Data for the CAGN observations will be submitted to the California Natural Diversity Database within two weeks of submittal of this report.

Birds commonly observed during the surveys included Anna’s hummingbird (*Calypte anna*), California towhee (*Melospiza [=Pipilo] crissalis*), spotted towhee (*Pipilo maculatus*), northern mockingbird, Bewick’s wren (*Thyromanes bewickii*), bushtit (*Psaltiriparus minimus melanurus*), and lesser goldfinch (*Spinus [=Carduelis] psaltria hesperophilus*).

Ms. Stacey Love
Page 3
May 9, 2019

If you have any questions concerning the contents of this letter, please contact me at 619-308-9333 extension 111 or bprocsal@reconenvironmental.com).

Sincerely,



Beth Procsal
Associate Biologist

cc: Jeff Kashak, County of San Diego
Kim Jones, County of San Diego

References Cited

RECON Environmental, Inc. (RECON)

2019 Pre-Survey Notification of 2019 Coastal California Gnatcatcher Presence/Absence Surveys for the Ashwood Street Corridor Improvements Project (RECON Number 8661). January 22.

U.S. Fish and Wildlife Service (USFWS)

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

U.S. Geological Survey (USGS)

1975 El Cajon Quadrangle CA 7.5-minute series topographic map.

1975 San Vicente Reservoir CA 7.5-minute series topographic map.

Ms. Stacey Love
Page 4
May 9, 2019

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



Beth Procsal
Permit Number TE-797665

May 9, 2019

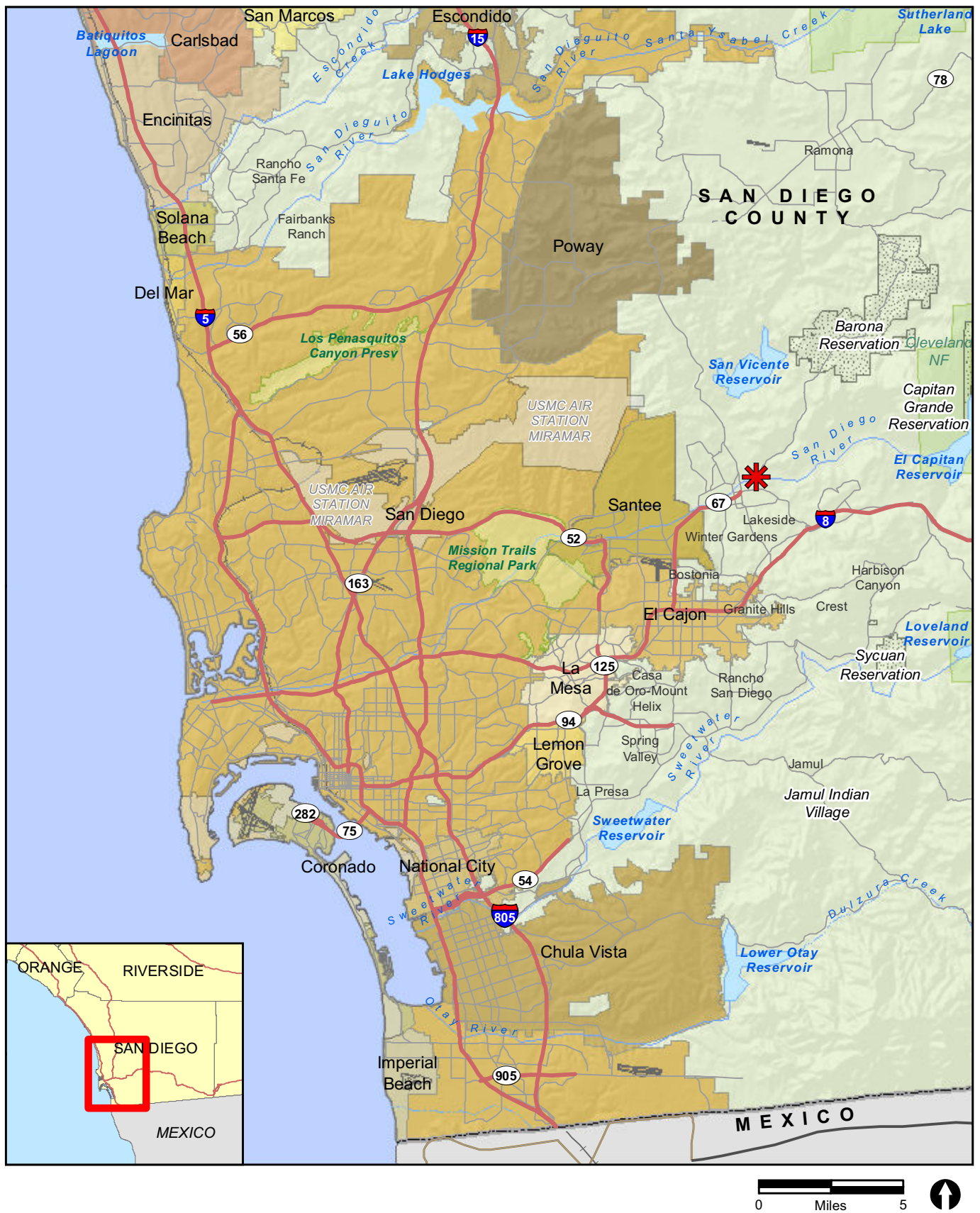
Date



Mandy Weston
Permit Number TE-797665

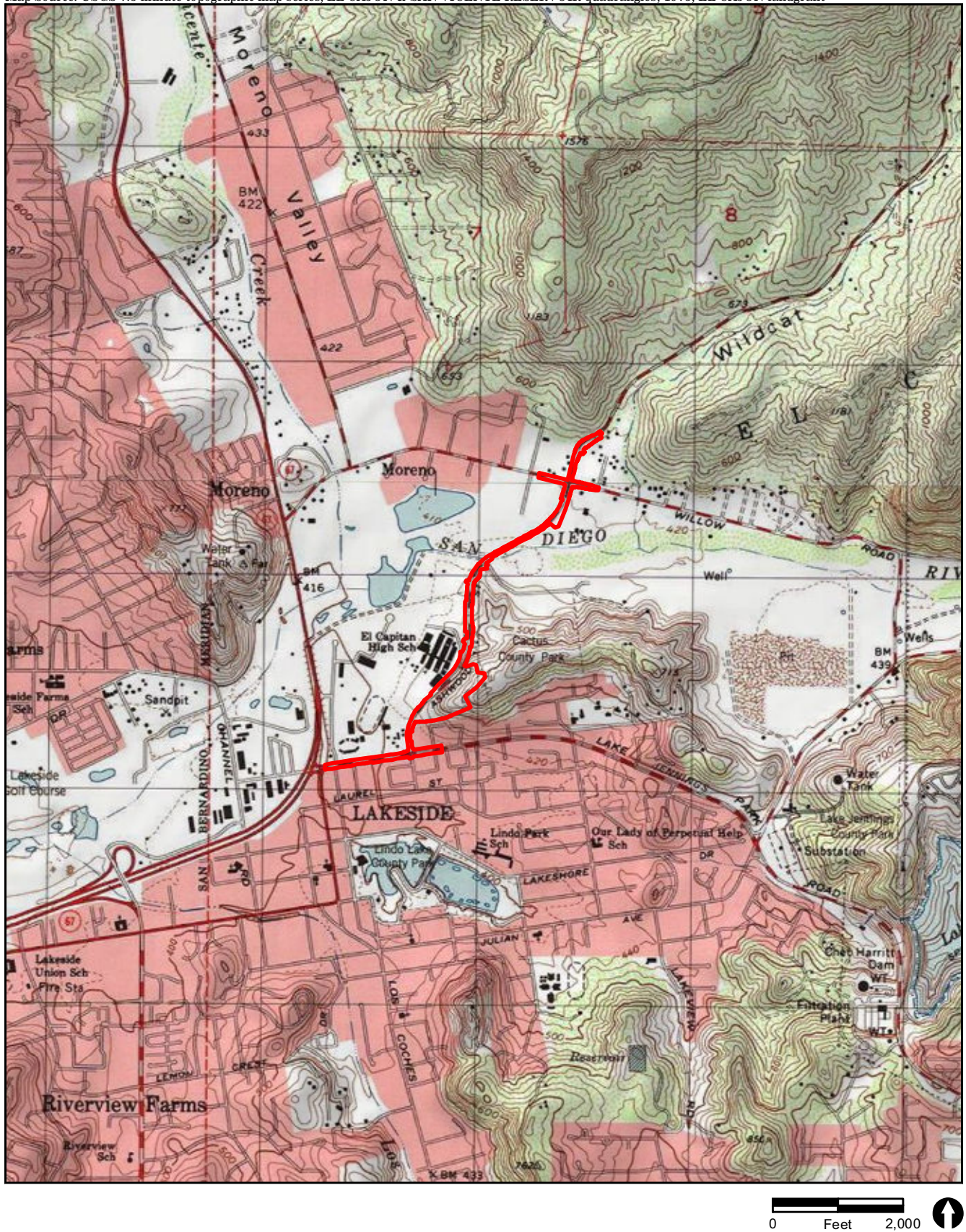
May 9, 2019

Date



✱ Project Location

FIGURE 1
Regional Location
Ashwood Street Corridor Improvements Project









 Project Boundary

FIGURE 2

Project Location on USGS Map
Ashwood Street Corridor Improvements Project



- | | |
|--|---|
|  Coastal California Gnatcatcher Sightings |  Survey Area A (29.18 acres) |
|  Coastal California Gnatcatcher Use Area |  Survey Area B (4.47 acres) |
|  Project Boundary |  300' Survey Area Boundary |

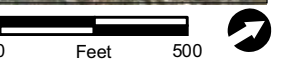


FIGURE 3
2019 Coastal California Gnatcatcher Survey Area and Results
Ashwood Street Corridor Improvements Project

ATTACHMENT 7

2019 Least Bell's Vireo Survey Results



1720 Midvale Drive
San Diego, CA, 92105
Phone: 619.972.7932
Phone: 619.972.8714
www.blackhawkenv.com

August 13, 2019

Mr. Brian Parker
Associate Project Manager
RECON Environmental Inc.
Email: bparker@reconenvironmental.com
Office: 619-308-9333

2019 Least Bell's Vireo Survey Results:

San Diego County Department of Public Works Ashwood Street Corridor Improvements Project San Diego County, California

Dear Mr. Parker:

Blackhawk Environmental Inc. (Blackhawk) was contracted through RECON Environmental Inc. (RECON) to complete protocol least Bell's vireo (*Vireo bellii pusillus*; LBVI) presence/absence surveys for the proposed San Diego County Department of Public Works Ashwood Street Corridor Improvements Project (Project) in the unincorporated community of Lakeside in San Diego County, California. All LBVI surveys were conducted by Blackhawk Biologists Ian Maunsell, Seth Reimers, and Ryan Quilley from May 2, 2019 through July 23, 2019 per the United States Fish & Wildlife Service (USFWS) Least Bell's Vireo Survey Guidelines (January 19, 2001).

INTRODUCTION

The Project area consists of an existing public roadway corridor, which is proposed to be improved by the San Diego County Department of Public Works.

The dominant land use type within the Project area is developed, consisting largely of paved road surfaces, parking lots, commercial units, and schools. The survey area used for this project is defined as a 300-foot buffer around the Project area. Habitat suitable for LBVI within the survey area is restricted to the San Diego River, which bisects the Project area approximately 0.28 mile south of the intersection of Ashwood Street and Willow Road. Suitable habitat within the survey area is characterized by southern riparian scrub, southern riparian woodland, and mule fat scrub habitats fringed by narrow strips of coastal sage scrub along the river margins. Hiking trails traverse the habitat within the survey area, showing occasional signs of illegal dumping, camping, or trespass.

The Project area and LBVI survey area are located on the El Cajon Land Grant within United States Geological Survey (USGS) 7.5-minute quadrangles of *El Cajon* (Figure 1). All LBVI surveys were conducted in one continuous stretch of riparian habitat along the San Diego River, northeast and southwest of Ashwood Street. The LBVI survey area included all suitable riparian habitats within 300 feet of the Project, at elevations from 393 to 419 feet above mean sea level (Figures 2 and 3). In cases where potential LBVI were detected aurally outside the survey area, the biologist extended the survey area to verify the observation and determine the limits of the occupied habitat. Special-status

bird species observed within the extended survey area were also recorded and are included in this report to further refine the data and characterize the survey area.

This report includes species accounts, survey methods, survey results, discussion, recommendations and conclusion sections. Attachments include Project vicinity, location and survey results maps (Attachment A), photo pages (Attachment B), and an observed/detected wildlife species list (Attachment C).

LEAST BELL'S VIREO SPECIES ACCOUNT

The LBVI is a State and Federal-endangered subspecies of Bell's vireo (*Vireo belli*) that breeds along the coastal slope of southern California and winters in southern Baja California, Mexico. Its breeding range extends north to the Sacramento area and south into northern Baja California, Mexico. On its breeding grounds, it typically associates with willow-dominated riparian environments characterized by well-developed canopies of large shrubs and trees, lush green foliage and dense understories, but may also occur in dense weedy or shrubby habitats adjacent or near riparian habitats, such as those dominated by tall black mustard (*Brassica nigra*), lemonade berry (*Rhus integrifolia*) and/or laurel sumac (*Malosma laurina*). Its preferred breeding habitats are typically southern willow scrub composed of arroyo willow (*Salix lasiolepis*), mulefat (*Baccharis salicifolia*), sandbar willow (*S. exigua*), red willow (*S. laevigata*), Fremont's cottonwood (*Populus fremontii*), and/or Goodding's black willow (*S. gooddingii*). A substantial understory may also be present that may include stinging nettle (*Urtica dioica*), California blackberry (*Rubus ursinus*), wild grape (*Vitis girdiniana*), poison oak (*Toxicodendron diversilobum*), California wild rose (*Rosa californica*) and/or California mugwort (*Artemisia douglasiana*), among other native and non-native plant species.

Prior to its listing in 1986, LBVI was extirpated from most of its historic range, with an estimated 300 pairs statewide (Kus 2002); all those locations were south of Santa Barbara County, with most occurring along the Santa Margarita River on Marine Corps Base Camp Pendleton in San Diego County. Upon protection and implementation of widespread brown-headed cowbird (*Molothrus ater*; BHCO) control programs, the LBVI population began to exponentially increase, numbering approximately 2,000 pairs by 1998. By 2006, there were 3,000 estimated LBVI territories in California (USFWS 2006). Today, the population is likely marginally above 3,000 estimated territories, but the species has yet to recolonize the northern portion of its former range. Causes of decline included BHCO nest parasitism, habitat loss and degradation, and the spread of invasive plant species such as giant reed (*Arundo donax*) and tamarisk (*Tamarix ramosissima*) into breeding grounds.

LBVI is typically 4.75 to five inches long with a wingspan of about seven inches and weight of less than 0.5 ounce. The general appearance of LBVI includes a grayish/olive back with faint wing bars, faint eye ring, and an unmarked, whitish underside. Its emphatic, persistent and diagnostic male song is a repetitive "question and answer" call type, phonetically written as "chee-cheedle-chee-cheedle-chee-chee? Chee-cheedle-chee-cheedle-chee-chew!" Both the males and females, as well as juveniles, will also scold and call.

Breeding locations are of monogamous pairs. Males typically arrive at breeding locations by mid-April, a week or two ahead of the females, to begin defending their preferred breeding territory from other LBVI males. The nest is built by both the male and the female, usually within a week or two of pair formation. Nest locations are usually in dense areas of vegetation and about three to four feet above ground level. The nest form is woven as a suspended cup of plant down and fibers supported

by two twigs on the outer edges. Nest substrates may include a number of native and non-native shrub, forb, vine, and tree species, provided that the selected site has adequate cover and twig structure. Three to five white, sparsely marked eggs are laid in the nest; one egg is laid per day. Once a full clutch is laid, the male and female share incubating duties for 14 days until hatching. Once hatched and before fledging, the young remain in the nest for approximately 10-12 days while they are fed by both adults. Fledglings then stay with the parents for at least two weeks while being fed by both adults. Eventually, the young are driven out of their natal territories by the territorial adults but will remain in the general vicinity until the fall migration.

Egg-laying occurs primarily from late April through early July, followed by nestling presence through August. Most breeding territories will attempt one brood per season; however, double brooding can occur if sufficient time remains in the breeding season. Adults and juveniles remain in and/or near their nesting territories until they begin to migrate south in late summer/early fall to Baja California.

SURVEY METHODS

Blackhawk Biologists Ian Maunsell (IM), Seth Reimers (SR), and Ryan Quilley (RQ) conducted all LBVI assessments and surveys for this Project (Table 1).

LBVI survey methods followed the latest accepted protocols of the USFWS (2001). The LBVI methodology stipulates that eight surveys are to occur between April 10 and July 31 in suitable habitats and should be at least ten days apart. Surveys were conducted without using recorded vocalization playbacks, with the biologist actively looking and listening for LBVI. The surveying biologist was familiar with the songs, calls and scolds of adult and juvenile LBVI, as well as plumage characteristics in relation to other vireo species. When LBVI were detected, detailed notation was collected that included: the number of individuals; specific locations using Global Positioning System (GPS) coordinates and/or territory mapping; sex; age; pairing status; nesting status; presence/absence of leg bands and if present, color combinations; the presence of other sensitive bird species; and BHCO presence. Representative photographs were collected throughout the survey area to accurately capture current LBVI site conditions (Attachment B).

LBVI territories were mapped during each survey referencing high resolution aerial imagery on data enabled tablets and/or smartphones with the Esri Data Collector Application. Collected data was published to ArcGIS Online for review and reference on subsequent surveys. Territories were mapped by observing where paired LBVI were directly observed and/or aurally detected, in conjunction with neighboring territories that were also frequently and simultaneously vocal. In cases where potential LBVI were detected aurally outside the survey area, the biologist extended the survey area to verify the observation and determine the limits of the occupied habitat. Polygons encompassing occupied areas were then drawn to include all areas of detection for each survey. At the end of the surveys, all polygons were interlaid to form a comprehensive observed LBVI territories the entire season (Figure 4).

LBVI surveys were conducted during favorable weather conditions between dawn and 11:00 AM on May 2, 17, and 28; June 7 and 18; and July 2, 12, and 23, 2019. The surveys were done by walking slowly through and/or adjacent to LBVI-suitable habitats, looking and listening for LBVI presence throughout the survey durations, using binoculars and/or the naked eye, as appropriate. The biologist listened for any and all LBVI calls, as well as all other bird species. All LBVI-relevant data and wildlife species were recorded in the field notes of the biologist for inclusion in this report. The complete list of wildlife species detected during the surveys is provided as Attachment C. Avian species

nomenclature in the biologist's field notes and this report is consistent with those published in the American Ornithologists' Society Online Checklist of North American Birds (AOS 2019). Survey conditions are presented in Table 1.

Table 1. Survey Conditions

Date	Personnel	Time	Conditions
5/2/2019	RQ	0715-0935	57-63°, wind 1-4 mph, clouds 70-100% cover, no precipitation
5/17/2019	RQ	0716-0946	56-61°, wind 0-3 mph, clouds 80% cover, no precipitation
5/28/2019	RQ	0750-1014	57-60°, wind 0-1 mph, clouds 0% cover, no precipitation
6/7/2019	IM	0646-0845	63-65°, wind 0-1 mph, clouds 100% cover, no precipitation
6/18/2019	IM	0650-0900	65-70°, wind 0-3 mph, clouds 20-85% cover, no precipitation
7/2/2019	IM	0700-1000	62-72°, wind 0-2 mph, clouds 0-75% cover, no precipitation
7/12/2019	IM	0620-0935	62-72°, wind 0-4 mph, clouds 0% cover, no precipitation
7/23/2019	SR	0616-0900	70-76°, wind 1-3 mph, clouds 60-90% cover, no precipitation

Conditions: ° = degrees Fahrenheit. mph = miles per hour.

SURVEY RESULTS

Blackhawk observed one LBVI breeding territory adjacent but outside of the survey area. No breeding territories were recorded within the survey area. Furthermore, no LBVI observations occurred within the Project impact footprint. All LBVI observations were mapped as shown in Figure 4. Table 2 lists the approximate GPS center points of each territory and provides brief comments about the territories and observations. No LBVI were observed with leg bands. The BHCO, a brood parasite of LBVI, and many other passerines, was detected flying over or perched in the survey area on every survey. Approximately six to 10 individual BHCO were detected on each survey, utilizing the entire survey area, but primarily concentrated southwest of Ashwood Street.

LBVI-suitable habitat within the survey area west of Ashwood Street is best described as southern riparian scrub (Holland 1986) dominated by red willow (*Salix laevigata*), Goodding's black willow (*Salix gooddingii*), Fremont cottonwood (*Populus fremontii*), and mulfat (*Baccharis salicifolia*) with an understory of nonnative annual species including short-pod mustard (*Hirschfeldia incana*), red brome grass (*Bromus madritensis*), and ripgut brome (*Bromus diandrus*) with occasional natives such as caterpillar phacelia (*Phacelia cicutaria*). Sandbar willow (*Salix exigua*) occasionally occurs in the margins of the streambed. Vegetation cover within this habitat was up to 90%. Habitat quickly transitions to upland on north and south side of the riverbed into disturbed Diegan coastal sage scrub dominated by chaparral broom (*Baccharis sarothroides*), California sagebrush (*Artemisia californica*), and marsh fleabane (*Pluchea odorata*). Total shrub cover within this habitat was estimated at 60% and absolute vegetative cover was estimated at 80% (including annual cover).

Habitat east of Ashwood Street consists of a mosaic of southern riparian woodland, with small areas of southern riparian scrub. The southern riparian woodland supports a mix of willows, tamarisk, and Fremont cottonwood, with tamarisk becoming more abundant further to the east. This area has an understory dominated primarily by nonnatives including black mustard (*Brassica nigra*), ripgut brome,

poison hemlock (*Conium maculatum*), stinging nettle (*Urtica dioica*) and rancher's fiddleneck (*Amsinckia* sp.). Estimated total shrub/tree cover is 80%, with absolute vegetative cover exceeding 100% when including annuals. Tree/shrub density generally decreases toward the east.

The single observed LBVI territory (Territory 1) occurred outside the survey area west of Ashwood Street. Observations of the breeding pair associated with Territory 1 included singing, courtship flights, nest building, post-fledging family groups, and juvenile dispersal. One observation of a dispersing LBVI juvenile was observed within the 300-foot survey area, presumably from Territory 1, but located outside of the project impact area during the final survey on July 23rd. In addition to the riparian habitats described above, Territory 1 included adjacent coastal sage scrub dominated by chaparral broom, California sagebrush, and marsh fleabane.

Table 2. LBVI Observations

Territory	Date	Observations / Comments	Territory GPS Coordinates
1	5/2/2019	Solitary male singing approximately 350 feet west of Ashwood Street. No female or nesting behavior observed.	32.872244, -116.916688
	5/17/2019	Male singing with paired female. Female observed nest building (Nest 1) approximately 4 feet above ground in Fremont cottonwood at 32.87231, -116.91645. One fledged juvenile observed accompanying pair.	
	5/28/2019	Pair observed with two fledglings capable of strong independent flight. Adult male observed chasing fledglings to east edge of territory, indicating likely dispersal in near future. No activity observed at Nest 1, likely abandoned.	
	6/7/2019	Adult pair observed foraging throughout territory. Male singing from high in canopy. No activity observed at Nest 1. No nesting behavior observed.	
	6/18/2019	Adult observed carrying fine nest lining material to nearly complete nest (Nest 2) located approximately 200 feet west of previously abandoned Nest 1 at 32.872411, -116.91703. The nest was observed to be approximately three feet above ground in a dense thicket of mulefat and black willow, bordered by cattail, at the edge of standing water/pond.	
	7/2/2019	Adult pair observed foraging together at southern extent of riparian habitat, occasionally foraging into upland and non-native vegetation. Pair observed briefly visiting the area of Nest 2 but did not visit the nest site itself. Male briefly detected singing high in canopy near nest site on two occasions. No activity associated with Nest 2 observed.	
	7/12/2019	Adult male intermittently vocal, singing from various locations of the territory for approximate 15-30 minute intervals, indicating possible nest exchanges. The pair	

		was not detected during this survey.	
	7/23/2019	Adult male remained vocal, often scolding and singing, throughout much of the survey period. Adult female not observed. No nests or nesting behaviors were observed during the survey. One dispersing juvenile observed foraging in mulefat scrub within survey area for approximately 30 minutes.	

OTHER SENSITIVE SPECIES

Additional sensitive species observed during the surveys included several California Species of Special Concern (SSC), County of San Diego Multiple Species Conservation Program (MSCP) covered and/or County of San Diego sensitive: yellow-breasted chat (*Icteria virens*; SSC, Group 1), Cooper's hawk (*Accipiter cooperii*; MSCP-covered, Group 1), western bluebird (*Sialia mexicana*; MSCP-covered, Group 2), turkey vulture (*Cathartes aura*; Group 1) and yellow warbler (*Setophaga petechia*; SSC).

Most of these species have the potential to nest, or were documented nesting, within the survey area, but there is no suitable nesting habitat for turkey vulture in the survey area. Yellow warbler and yellow-breasted chat are presumed to be nesting within the same riparian habitat occupied by LBVI. Cooper's hawks are presumed to nest in the large trees found throughout the southern riparian woodland. A complete list of bird species observed during the surveys is included in Attachment C.

CONCLUSION

I certify this report to be a complete and accurate account of the findings and conclusions of surveys for LBVI conducted for the Project during the 2019 breeding season. If you have any questions regarding this report, please feel free to call me at 206-920-3266 or e-mail me at ian@blackhawkenv.com, and I will address all questions and concerns.

Sincerely,



Ian Maunsell
Senior Biologist



ATTACHMENTS

A: Figures

B: Photo Pages

C: Observed/Detected Wildlife Species List

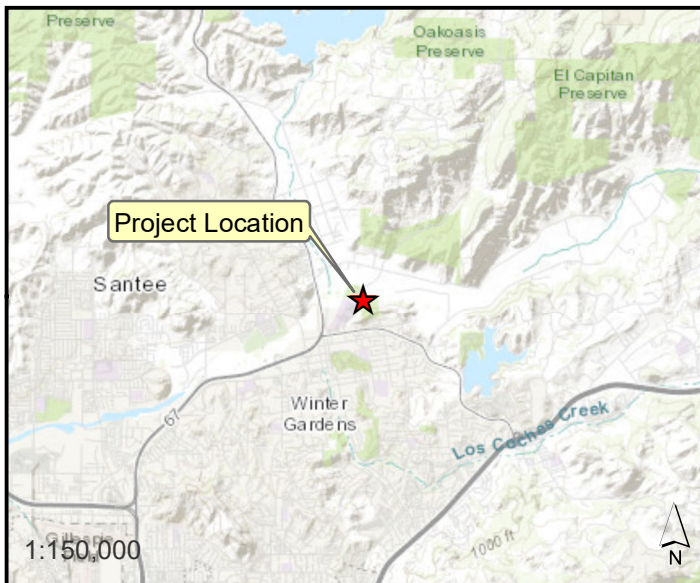
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- US Geological Service. 1975. 7.5-minute quadrangles: *El Cajon, California*.

ATTACHMENT A

Figures





Legend

Project Boundary

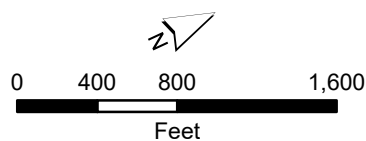


Figure 1
Project Location & Vicinity Map

Figure 2
300ft Survey Area

Legend




- Project Boundary
- Survey Area



0 300 600 1,200
Feet

Figure 3
Least Bell's Vireo
Suitable Habitat

Legend

-  Project Boundary
-  Survey Area
-  least Bell's vireo
Suitable Habitat

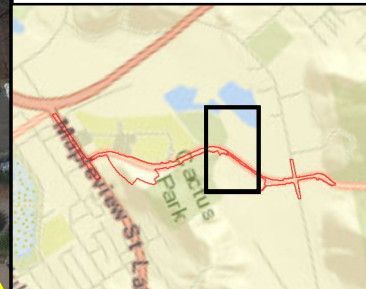
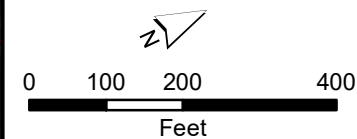
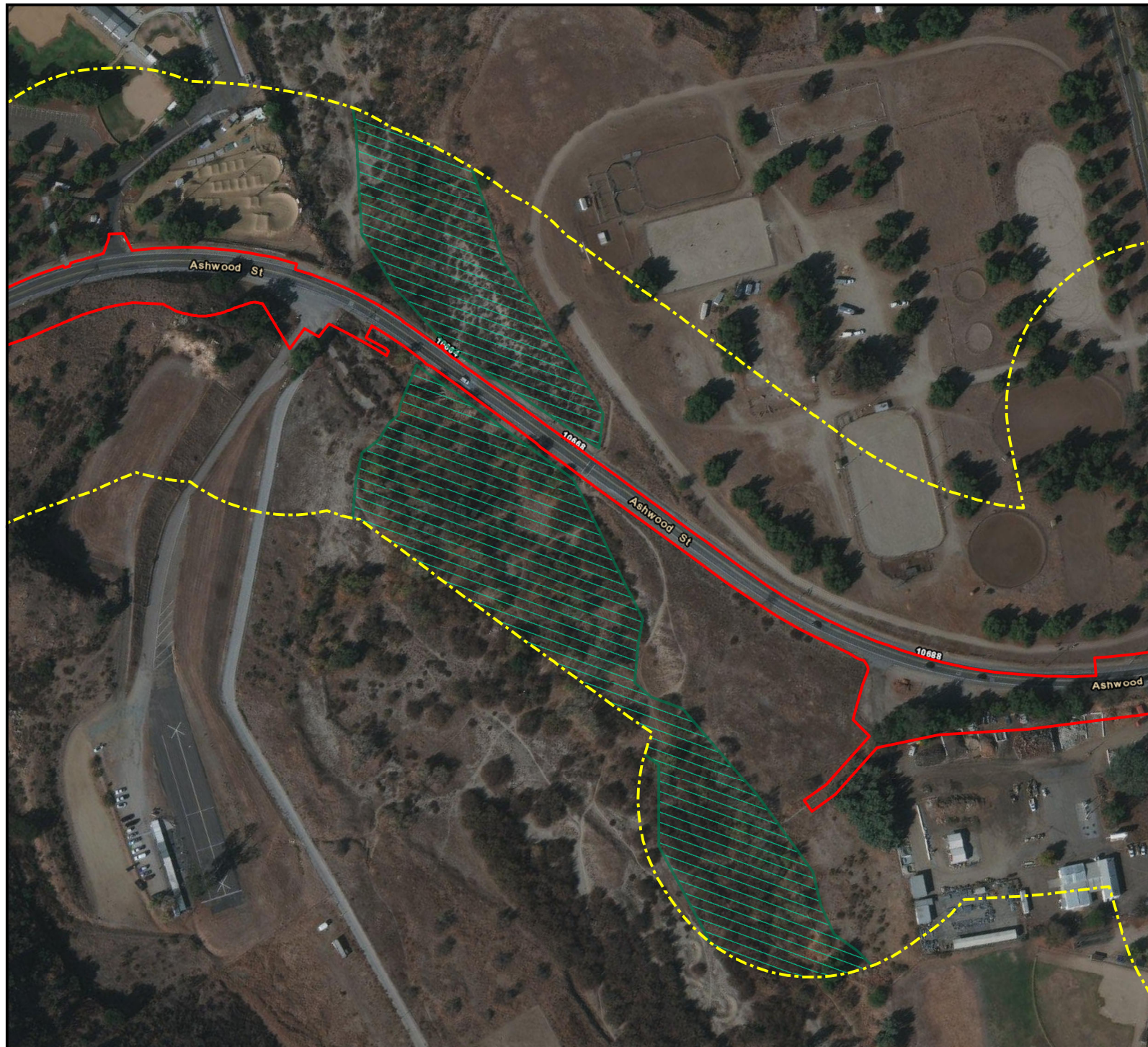


Figure 4

Species Observations/Territory

Legend

- Project Boundary
- Survey Area
- least Bell's vireo Territory

Species Observations

Nests

- least Bell's vireo
- western bluebird

Juveniles

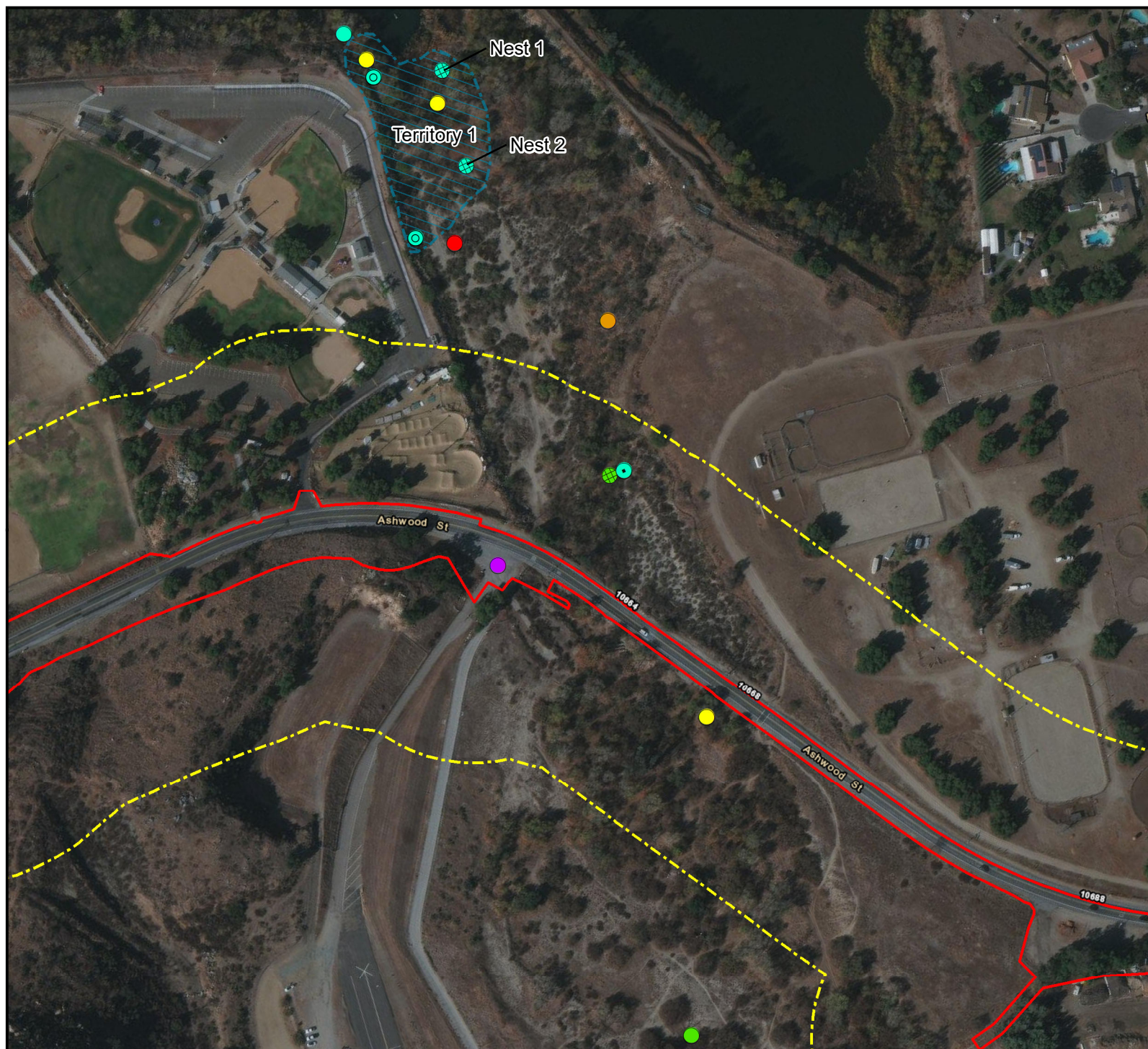
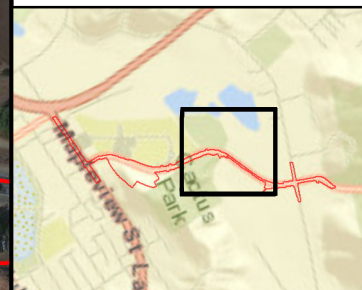
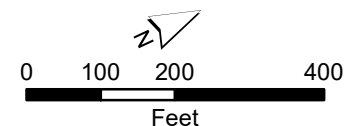
- least Bell's vireo

Pairs

- least Bell's vireo

Individuals

- Cooper's hawk
- least Bell's vireo
- western bluebird
- yellow warbler
- turkey vulture
- yellow-breasted chat



ATTACHMENT B

Photo Pages



San Diego County Department of Public Works Ashwood Street Corridor
Improvement Project

Photo Pages



Photo 1. Representative photo of southern riparian scrub habitat within survey area west of Ashwood Street.



Photo 2. Representative photo of disturbed southern riparian woodland occurring within the survey area east of Ashwood Street. Habitat becomes more tamarisk-dominated further to the east.



Photo 3. Representative photo of tamarisk-dominated southern riparian woodland occurring along the eastern boundary of the survey area east of Ashwood Street.



Photo 4. Female LBVI from Territory 1 adding material to Nest 1 and shaping the inside of the nest. Photo taken during the May 17, 2019 survey.



Photo 5. Yellow-breasted chat, a County Group 1 species, observed within the survey area west of Ashwood Street.

ATTACHMENT C

Observed/Detected Wildlife Species List



**San Diego County Department of Public Works Ashwood Street Corridor
Improvement Project**

Observed/Detected Wildlife Species List

AVES	BIRDS
ACCIPITRIDAE	Hawks & eagles
<i>Accipiter cooperii</i>	Cooper's Hawk
<i>Buteo lineatus</i>	red-shouldered hawk
<i>Buteo jamaicensis</i>	red-tailed hawk
AEGITHALIDAE	Long-tailed tits
<i>Psaltirparus minimus</i>	bushtit
CARDINALIDAE	Cardinals & allies
<i>Passerina amoena</i>	lazuli bunting
<i>Passerina caerulea</i>	blue grosbeak
<i>Pheucticus melanocephalus</i>	black-headed grosbeak
CATHARTIDAE	New World vultures
<i>Cathartes aura</i>	turkey vulture
COLUMBIDAE	Pigeons & doves
* <i>Columba livia</i>	rock pigeon
* <i>Streptopelia decaocto</i>	Eurasian collared-dove
<i>Zenaida macroura</i>	mourning dove
CORVIDAE	Crows & jays
<i>Aphelecoma californica</i>	California scrub-jay
<i>Corvus brachyrhynchos</i>	American crow
<i>Corvus corax</i>	common raven
CUCULIDAE	Cuckoos
<i>Geococcyx californianus</i>	greater roadrunner
EMBERIZIDAE	Sparrows & allies
<i>Melospiza melodia</i>	song sparrow
<i>Melospiza crissalis</i>	California towhee
<i>Pipilo maculatus</i>	spotted towhee
FALCONIDAE	Falcons
<i>Falco sparverius</i>	American kestrel
HIRUNDINIDAE	Swallows
<i>Stelgidopteryx serripennis</i>	northern rough-winged swallow
FRINGILLIDAE	Finches & allies
<i>Haemorhous mexicanus</i>	house finch
<i>Spinus psaltria</i>	lesser goldfinch
<i>Spinus lawrencei</i>	Lawrence's goldfinch
ICTERIDAE	New World blackbirds, orioles & allies
<i>Agelaius phoeniceus</i>	red-winged blackbird
<i>Euphagus cyanocephalus</i>	Brewer's blackbird
<i>Icterus bullockii</i>	Bullock's oriole
<i>Icterus cucullatus</i>	hooded oriole
<i>Molothrus ater</i>	brown-headed cowbird
MIMIDAE	Mockingbirds & thrashers
<i>Mimus polyglottos</i>	northern mockingbird

<i>Toxostoma redivivum</i>	California thrasher
ODONTOPHORIDAE	New World quails
<i>Callipepla californica</i>	California quail
PARULIDAE	Wood warblers & relatives
<i>Geothlypis trichas</i>	common yellowthroat
<i>Setophaga townsendi</i>	Townsend's warbler
<i>Icteria virens</i>	yellow-breasted chat
<i>Oreothlypis celata</i>	orange-crowned warbler
<i>Cardellina pusilla</i>	Wilson's warbler
<i>Setophaga petechia</i>	yellow warbler
PICIDAE	Woodpeckers & allies
<i>Picoides nuttallii</i>	Nuttall's woodpecker
<i>Picoides pubescens</i>	Downy woodpecker
PTILIOGONATIDAE	Silky flycatchers
<i>Phainopepla nitens</i>	phainopepla
STURNIDAE	Starlings & allies
* <i>Sturnus vulgaris</i>	European starling
SYLVIIDAE	True warblers & parrotbills
<i>Chamaea fasciata</i>	wren
APODIDAE	Swifts and allies
<i>Aeronautes saxatalis</i>	white-throated swift
TROCHILIDAE	Hummingbirds
<i>Archilochus alexandri</i>	black-chinned hummingbird
<i>Calypte anna</i>	Anna's hummingbird
<i>Calypte costae</i>	Costa's hummingbird
<i>Selasphorus sasin</i>	Allen's hummingbird
TROGLODYTIDAE	Wrens
<i>Thryomanes bewickii</i>	Bewick's wren
<i>Troglodytes aedon</i>	house wren
TURDIDAE	Thrushes & allies
<i>Catharus ustulatus</i>	western bluebird
TYRANNIDAE	Tyrant flycatchers
<i>Contopus sordidulus</i>	western wood-peewee
<i>Empidonax difficilis</i>	Pacific-slope flycatcher
<i>Myiarchus cinerascens</i>	ash-throated flycatcher
<i>Tyrannus verticalis</i>	western kingbird
<i>Tyrannus vociferans</i>	Cassin's kingbird
VIREONIDAE	Vireos
<i>Vireo bellii pusillus</i>	least Bell's vireo

REPTILIA	REPTILES
ANGUIDAE	Alligator lizards & allies
<i>Elgaria multicarinata webbia</i>	San Diego alligator lizard
PHRYNOSOMATIDAE	Zebra-tailed, earless, fringe-toed, spiny, tree, side-blotched & horned lizards
<i>Sceloporus occidentalis longipes</i>	Great Basin fence lizard
<i>Uta stansburiana elegans</i>	western side-blotched lizard

MAMMALIA	MAMMALS
CANIDAE	Foxes, wolves & allies
<i>Canis latrans</i>	coyote
CRICETIDAE	New World rats and mice & allies
<i>Neotoma fuscipes</i>	dusky-footed woodrat
FELIDAE	Cats
<i>Lynx rufus</i>	bobcat
GEOMYIDAE	Gophers
<i>Thomomys bottae</i>	Botta's pocket gopher
LEPORIDAE	Rabbits & hares
<i>Sylvilagus audobonii</i>	desert cottontail
PROCYONIDAE	Raccoons & allies
<i>Procyon lotor</i>	raccoon
SCIURIDAE	Squirrels
<i>Otospermophilus beecheyi</i>	California ground squirrel

* Non-native species