

APPENDIX D

Biological Resources Report

DRAFT

Biological Technical Report for the Etiwanda Heights Neighborhood and Conservation Plan Rancho Cucamonga, California

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1 INTRODUCTION

The City of Rancho Cucamonga (City), as well as other neighboring communities, occurs as a series east-west band along the foothills of the San Gabriel Mountains. The Etiwanda Heights Neighborhood and Conservation Plan (EHNCP) Area occurs in both the development band, known as the Foothill Neighborhood Band, and the northerly band called the Sphere of Influence Band. The Foothill Neighborhood Band extends from Banyan Street to the predominant northerly City limit line, and is comprised exclusively of lower density, single-family residences. Currently, there is one large gap near the center of these residential developments. This gap is still part of the unincorporated County and the City's Sphere of Influence, and was historically required for flood control facilities at the confluence of the Day Creek Canyon and Deer Creek Canyon washes. However, the area is no longer required for flood control facilities. The Sphere of Influence Band is a 1-mile wide band of County unincorporated land and extends from the City limit line to the Angeles National Forest to the north. The easterly portion of this area, along with the gap in the Foothill Neighborhood Band (described above), comprise the North Eastern Sphere of Influence Area and is the focus of this Biological Technical Report.

1.1 EHNCP Location and Description

The approximately 4,393-acre EHNCP Area is located along the northeastern edge of the City of Rancho Cucamonga at the base of the San Gabriel Mountains. The City is located in San Bernardino County and bordered by the cities of Upland to the west, Ontario to the south, and Fontana to the east (Figure 1, EHNCP Location). The San Gabriel Mountains are located to the north. The EHNCP site is located west of the Interstate (I) 15 freeway, north of the I-210 freeway, south of the San Gabriel Mountains, and north of residential development located within the City of Rancho Cucamonga (Figure 1, EHNCP Location). Only a small portion (approximately 306 acres) of the EHNCP occurs within the City; the majority of the EHNCP Area occurs within the City's Sphere of Influence, which is located within the unincorporated area of the County of San Bernardino (Figure 1, EHNCP Location).

The EHNCP Area is divided into two planning areas: the Rural/Conservation Area (RCA) and the Neighborhood Area (NA). The approximately 3,565-acre RCA is located at the base of the San Gabriel Mountains, bordered to the south by the City and the NA, as well as the San Gabriel Mountains to the east, west, and north. A portion of the RCA to the east extends from the San Gabriel Mountains south to Wilson Avenue. The approximately 828-acre NA is located north of the I-210 freeway and bordered by the City to the east, south, and west, and the RCA to the north.

The NA is within the Cucamonga Peak U.S. Geological Survey (USGS) 7.5-minute quadrangle map, Township 1N, Range 6W, 7W and Sections 13, 17, 18, 19, 20, 24, 25, 29 and 30 (Figure 1, EHNCP

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Location). The RCA is within the Cucamonga Peak and Devore USGS 7.5-minute quadrangle maps, Township 1N, Range 6W, 7W and Sections 13, 15, 16, 17, 18, and 22 (Figure 1, EHNCP Location).

The City has identified the primary objectives for the EHNCP, which include the following: annex the planning areas (RCA and NA); conserve the natural resources located on the RCA, including the establishment of the Etiwanda Heights Preserve; and develop the NA.

1.1.1 Climate/Geology

The EHNCP is located within the San Bernardino Mountains ecoregion of California (Baldwin et al. 2012). Average annual temperatures range from 47.2°F to 91.7°F. The average annual precipitation is 22.28 inches (Western Regional Climate Center 2016).

The EHNCP rests in along the alluvial fan foothills of the San Bernardino Mountains. The mountains surrounding the EHNCP Area include Mt. Baldy approximately 7.5 miles to the northwest within the San Gabriel Mountains to the north (USGS 2016).

1.1.2 Topography/Soils

Elevations on the NA range from about 1,504 feet above mean sea level in the southeastern portion of the survey area to approximately 2,220 feet above mean sea level in the northwestern portion of the survey area. Elevations on the RCA range from about 1,504 feet above mean sea level in the southeastern portion to approximately 3,300 feet above mean sea level in the northwestern mountain ranges.

The topography of the RCA land is highly diverse. The NA generally slopes to the south in gentle fashion, while the RCA includes this same gentle sloping, but transitions along the northern boundary into more complex, steep topography associated with the San Gabriel Mountain foothills including with a number of ridges. Slopes within the RCA range between 5% to 75%. Together the slopes and moderate-to-steep elevation changes within the site provide for a highly diverse representation of physical and environmental conditions throughout the site.

Soils within the NA consist of Cieneba-rock outcrop complex, Tujunga gravelly loamy sand; Soboba stony loamy sand; psamments and fluvents; Ramona sandy loam; Hanford coarse sandy loam; Cieneba sandy loam; water; riverwash; Trigo family-lithic xerorthents; Soboba-Hanford families association; Riverwash-Soboba families association, Soboba gravelly loamy sand; Grangeville fine sandy loam; and Greenfield fine sandy loam (USDA 2016a). Soils on the RCA consists of Cieneba-rock outcrop complex, Tujunga gravelly loamy sand; Soboba stony loamy sand; psamments and fluvents; Ramona sandy loam; Hanford coarse sandy loam; Cieneba sandy loam; water; riverwash; Trigo family-lithic xerorthents; Soboba-Hanford families association; and Riverwash-Soboba families association (USDA 2016a).

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1.1.3 Land Uses

The EHNCP Area is generally surrounded by the San Gabriel Mountains to the north, and a number of residential uses, as well as vacant sites, to the east, west, and south. The RCA is bordered by undeveloped, conserved land to the north, west, and east, and residential uses and undeveloped parcels to the south. The NA is largely surrounded by single-family residential neighborhoods. The Day Creek Neighborhood borders the EHNCP Area to the east; the Caryn Neighborhood borders the EHNCP Area to the south; and the Deer Creek and Haven View Estates Neighborhoods border the EHNCP Area to the west. Los Osos High School borders the Neighborhood Area to the south. Undeveloped land that is part of the RCA borders the NA to the north, northwest, and northeast.

1.1.4 Watersheds and Hydrology

The EHNCP Area is located immediately south of the San Gabriel Mountains and part of the Chino Creek and Middle Santa Ana River Watersheds within the Cucamonga Creek and East Etiwanda Creek-Santa Ana River sub-watersheds (Figure 2, Watersheds). Historically, the EHNCP Area used to be an active alluvial fan primarily fed by the flows from Deer Creek and Day Creek. At the base of the foothills, the alluvial fan extended for miles to the south and co-mingled these flows creating a dynamic system of braided streams. The fan included diverse assemblages of scrub and chaparral communities that included natural water flows and a sediment transport process, which created a network of braided channels, alluvial terraces, and benches, which in turn resulted in diverse, multi-age vegetation communities that supported many species that are now rare or locally extinct. As development occurred within the lower plain and valley, the need to control floods that flushed timber and boulders from the mountains, unchecked stream course meanderings, and sand deposition, led to the creation of a system of berms and storm detention basins. These berms and basins ultimately interrupted the sediment transport system that provided a fresh source of sand to habitat areas. Over the past 40 years, flood control projects within both the Day and Deer Creek watersheds have greatly diminished the amount of flow and sediment feeding into the alluvial fan.

Several flood control projects were implemented since 1980 that effectively eliminated debris and flood hazards for the protection of the developments downstream. In 1980, the U.S. Army Corps of Engineers constructed a debris basin and channel system to contain most of the flows within Deer Creek. In 1990, the San Bernardino County Flood Control District (SBCFCD), which provides flood hazard protection for the residents within the County, constructed a debris basin, channel system, and levee within the Day Creek drainage system. The existing structures (i.e., basins, channel, and levee) were constructed to alleviate the flood risks for the downstream and drainage facilities and properties. The levee system is approximately 5,000 feet downstream of the Day Creek dam and consists of five small in-line debris basins that run along the upstream side of the levee. Each basin spills over into the next until they reach the Day Creek channel. These

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improvements cut off the majority of flow and sediment to the existing alluvial fan. The basins are equipped with a 36-inch riser, connected to a 24-inch reinforced concrete outlet pipe. These outlets divert minor flows through the levee, where they proceed south through the EHNCP Area. These flood control facilities have cut off all flow and debris potential from the lower reach of the alluvial fan (below levee) and most of the flow and debris from the upper reach. The results of the hydrology modeling, conducted specifically for the NA, show that a very small amount of runoff was identified entering the NA below the levee along the west EHNCP boundary, adjacent to the Deer Creek channel. Almost all of the flow below or south of the levee was a result of direct rainfall (i.e., all flows above the levee were captured by the levee). As a result, the historical biological and fluvial conditions of the EHNCP Area have been altered.

1.1.5 Fire History

The fire burn history within the NA and RCA includes the following fires: Archibald (1985), Morse (1957), Etiwanda (1964), East (1952), Foxborough (2008), Summit (1980), Texas (1988), Grand Prix (2003), and Etiwanda (2014). The most recent fires were the Grid Prix (2003) and Etiwanda (2014), both of which burned the majority of the NA and RCA sites, indicating that some areas have been recovering for approximately 16 years and other areas for approximately 5 years (Figure 3, Fire History).

During the most recent Etiwanda fire, which occurred in spring of 2014 and substantially changed the characteristics of the vegetation communities present within the EHNCP Area, approximately 2,143 acres burned from April 30 to May 5, 2014. The fire extended outside the RCA to the north into Day Canyon and resulted in a much higher dominance of sparser and shorter vegetation. Due to the fire, vegetation characteristics are expected to transition rapidly over the next several years. The rate of vegetation recovery will depend on a variety of factors, such as the ability of the plants to re-sprout. A slower recovery is expected if the fire was of high intensity, which would kill a broad spectrum of shrubs regardless of re-sprouting abilities.

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2 REGULATORY SETTING

2.1 Federal

Federal Endangered Species Act

The federal Endangered Species Act of 1973 (16 USC 1531 et seq.), as amended, is administered by the U.S. Fish and Wildlife Service (USFWS), National Oceanic and Atmospheric Administration, and National Marine Fisheries Service. This legislation is intended to provide a means to conserve the ecosystems upon which endangered and threatened species depend and provide programs for the conservation of those species, thus preventing extinction of plants and wildlife. Under provisions of Section 9(a)(1)(B) of the federal Endangered Species Act, it is unlawful to “take” any listed species. “Take” is defined in Section 3(19) as, “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Additionally, Section 7(a)(2) directs federal agencies to consult with the USFWS for any actions that “may affect” listed species.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act prohibits the take of any migratory bird or any part, nest, or eggs of any such bird. Under the Migratory Bird Treaty Act, “take” is defined as pursue, hunt, shoot, wound, kill trap, capture, or collect, or any attempt to carry out these activities (16 USC 703 et seq.). Additionally, Executive Order 13186, “Responsibilities of Federal Agencies to Protect Migratory Birds,” requires that any project with federal involvement address impacts of federal actions on migratory birds with the purpose of promoting conservation of migratory bird populations (66 FR 3853–3856). The Executive Order requires federal agencies to work with USFWS to develop a memorandum of understanding. USFWS reviews actions that might affect these species.

Currently, birds are considered to be nesting under the Migratory Bird Treaty Act only when there are eggs or chicks, which are dependent on the nest.

U.S. Army Corps of Engineers

Pursuant to Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers (ACOE) regulates the discharge of dredged and/or fill material into “waters of the United States.” The term “wetlands” (a subset of waters) is defined in 33 Code of Federal Regulations (CFR) 328.3(b) as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.” In the absence of wetlands, the limits of ACOE jurisdiction in

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non-tidal waters, such as intermittent streams, extend to the “ordinary high water mark,” which is defined in 33 CFR 328.3(e).

Section 320.4(b)(2) of the ACOE General Regulatory Policies (33 CFR 320–330) list criteria for consideration when evaluating wetland functions and values. These include wildlife habitat (spawning, nesting, rearing, and resting), food chain productivity, water quality, groundwater recharge, and areas for the protection from storm and floodwaters.

2.2 State

California Environmental Quality Act

The California Environmental Quality Act (CEQA) requires identification of a project’s potentially significant impacts on biological resources and feasible mitigation measures and alternatives that could avoid or reduce significant impacts. CEQA Guidelines Section 15380(b)(1) defines endangered animals or plants as species or subspecies whose “survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors” (14 CCR 15000 et seq.). A rare animal or plant is defined in CEQA Guidelines Section 15380(b)(2) as a species that, although not presently threatened with extinction, exists “in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or ... [t]he species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered ‘threatened’ as that term is used in the federal Endangered Species Act.” Additionally, an animal or plant may be presumed to be endangered, rare, or threatened if it meets the criteria for listing, as defined further in CEQA Guidelines Section 15380(c). CEQA also requires identification of a project’s potentially significant impacts on riparian habitats (such as wetlands, bays, estuaries, and marshes) and other sensitive natural communities, including habitats occupied by endangered, rare, and threatened species.

California Endangered Species Act

The California Department of Fish and Wildlife (CDFW) administers the California Endangered Species Act (California Fish and Game Code, Section 2050 et seq.), which prohibits the “take” of plant and animal species designated by the Fish and Game Commission as endangered or threatened in the State of California. Under the California Endangered Species Act Section 86, take is defined as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” Section 2053 stipulates that state agencies may not approve projects that will “jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat essential to

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the continued existence of those species, if there are reasonable and prudent alternatives available consistent with conserving the species or its habitat which would prevent jeopardy.”

Sections 2080 through 2085 address the taking of threatened, endangered, or candidate species as follows: “No person shall import into this state, export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the Commission determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided in this chapter, the Native Plant Protection Act (Fish and Game Code, Sections 1900–1913), or the California Desert Native Plants Act (Food and Agricultural Code, Section 80001).”

California Fish and Game Code

According to Sections 3511 and 4700 of the Fish and Game Code, which regulate birds and mammals, respectively, a “fully protected” species may not be taken or possessed without a permit from the Fish and Game Commission, and “incidental takes” of these species are not authorized.

According to Section 3503, 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. 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 except as otherwise provided by this code or any regulation adopted pursuant thereto. Finally, Section 3513 states that it is unlawful to take or possess any migratory nongame bird as designated in the Migratory Bird Treaty Act or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Bird Treaty Act.

For the purposes of these state regulations, CDFW currently defines an active nest as one that is under construction or in use and includes existing nests that are being modified. For example, if a hawk is adding to or maintaining an existing stick nest in a transmission tower, then it would be considered to be active and covered under these Fish and Game Code Sections.

CDFW Streambed and Riparian Habitat

Pursuant to Section 1602 of the Fish and Game Code, CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife. A Streambed Alteration Agreement is required for impacts to jurisdictional wetlands in accordance with Section 1602 of the California Fish and Game Code.

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State and Regional Water Quality Control Board

The intent of the Porter–Cologne Water Quality Control Act is to protect water quality and the beneficial uses of water, and it applies to both surface water and groundwater. Under this law, the State Water Resources Control Board develops statewide water quality plans, and the Regional Water Quality Control Boards (RWQCB) develop basin plans that identify beneficial uses, water quality objectives, and implementation plans. The RWQCBs have the primary responsibility to implement the provisions of both statewide and basin plans. Waters regulated under the Porter–Cologne Water Quality Control Act include isolated waters that are no longer regulated by the ACOE. Developments with impact to jurisdictional waters must demonstrate compliance with the goals of the act by developing stormwater pollution prevention plans, standard urban stormwater mitigation plans, and other measures to obtain a Clean Water Act Section 401 certification.

2.3 Regional

San Bernardino County General Plan and Development Code

The County of San Bernardino General Plan contains the goals and policies that guide future development within San Bernardino County (County of San Bernardino 2007a). San Bernardino County is broken into three distinct geographic planning regions: the Valley, the Mountains, and the Desert. The EHNCP Area occurs within the Valley Planning Region within the County. The San Bernardino Development Code (County of San Bernardino 2007b) implements the goals and policies of the General Plan. The approximate 4,088-acre area of the EHNCP, which is currently in the County of San Bernardino, will be annexed into the City of Rancho Cucamonga upon the adoption of the EHNCP and approval of the annexation by the Local Agency Formation Commission for San Bernardino County. Therefore, when implemented, the EHNCP would not need to comply with the San Bernardino County Development Code.

City of Rancho Cucamonga General Plan, Environmental Impact Report, Municipal Code

The City of Rancho Cucamonga certified the Rancho Cucamonga General Plan and the General Plan Environmental Impact Report (EIR) in May 2010. The General Plan and EIR identify resources within the plan area and guide the future development within the City (City of Rancho Cucamonga 2010a and 2010b). The EHNCP would need to be consistent with, and implement, the goals, policies, and programs of the City’s General Plan and EIR.

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The City of Rancho Cucamonga Tree Preservation Ordinance (Title 17 Development Code, Article IV Site Development Provisions, Chapter 17.80) provides regulations and guidelines for the protection of existing trees within the City's limits. All "heritage" trees, including trees, shrubs, or plants, are protected under the City's ordinance if they meet the following criteria:

- All eucalyptus windrows;
- All woody plants in excess of 30 feet in height and having a single trunk circumference of 20 inches or more, as measured 4.5 feet from ground;
- Multi-trunk trees having a total circumference of 30 inches or more, as measured 24 inches from ground level;
- A strand of trees the nature of which makes each dependent upon the others for survival;
- Any other tree as may be deemed historically or culturally significant by the Planning Director because of size, condition, location, or aesthetic qualities.

All heritage trees require a permit from the City Planning Department prior to removal, and implementation of the EHNCP would need to comply with this ordinance.

North Etiwanda Preserve Management Plan

The North Etiwanda Preserve Management Plan was developed in 2010 by the USFWS and CDFW (then the California Department of Fish and Game), in cooperation with the San Bernardino County Special Districts Department and the North Etiwanda Preserve Board of Directors, to manage and protect the North Etiwanda Preserve (USFWS and CDFG 2010). The North Etiwanda Preserve functions as a conservation area for the protection of wildlife habitat, and public access is allowed where compatible with the habitat conservation goals established by the North Etiwanda Preserve. The North Etiwanda Preserve was created in 1998 when the San Bernardino County Board of Supervisors accepted the approximate 760-acre conservation area as mitigation land from the San Bernardino Associated Governments in response to the potential impacts of the Foothill Freeway (I-210) EHNCP on the rare and threatened alluvial fan sage scrub.

A key component of the EHNCP is the selection of a qualified conservation entity (e.g., Inland Empire Resource Conservation District) to be the land manager for the RCA conservation properties. The selected conservation entity would manage the North Etiwanda Preserve pursuant to the terms of the North Etiwanda Preserve Management Plan. The Conservation Management Plan required to be established under the EHNCP would integrate the management of all conservation lands in the EHNCP. It is expected that the Land Manager would propose updating the management plan to include a restoration program for the North Etiwanda Preserve. Funds for these and other restoration would come from NA development.

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3 METHODS

3.1 Literature Review

A literature review was conducted to evaluate the environmental setting of the study area and identify potential special-status biological resources that may be found on the site. The review included the following:

- California Natural Diversity Database (CNDDDB) (CDFW 2017a)
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS 2017) for the Cucamonga Peak and surrounding 7.5-minute USGS quadrangles
- USFWS Carlsbad database of threatened and endangered plants and wildlife was also queried for the study area (USFWS 2017)
- Additional potential data sources reviewed included the Rancho Cucamonga General Plan and associated EIR (City of Rancho Cucamonga 2010a and 2010b)
- San Bernardino County Museum special-status species occurrence records
- eBird (2015) for the North Etiwanda Preserve “hotspot”
- North Etiwanda Preserve Management Plan (USFWS and CDFG 2010)
- Conservation Plan for the Etiwanda-Day Canyon Drainage System (Safford and Quinn 1998)
- U.S. Department of Agriculture (USDA) Natural Resources Conservation Service Web Soil Survey (USDA 2016a) was evaluated for the potential to support rare vegetation communities, plants, and/or wildlife.

3.2 Field Reconnaissance

In June 2015, Dudek biologists conducted vegetation mapping and a jurisdictional delineation on the NA and the portion of the RCA included in the Etiwanda Heights Preserve. Vegetation mapping of the RCA, within the portion of the RCA north of the Etiwanda Heights Preserve, was conducted in 2016 by aerial imagery provided by a drone flight, geographic information system (GIS) interpretation, and through field verification. Small mammal trapping was conducted on the NA and in the Etiwanda Heights Preserve in 2016. Dudek also conducted botanical surveys and coastal California gnatcatcher (*Polioptila californica californica*) surveys on the NA and in the Etiwanda Heights Preserve in 2017. Table 1 lists the dates, conditions, and focus for each survey.

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Table 1
Schedule of Field Surveys

Date	Personnel	Survey Area	Survey Hours	Weather
Vegetation Mapping				
6/24/2015	Michelle Balk	NA/RCA: Etiwanda Heights Preserve	10:40 AM–5:00 PM	89°F–96°F; 0% cc; 0-2 to 2-5 mph winds
6/25/2015	Michelle Balk	NA/RCA: Etiwanda Heights Preserve	8:50 AM–5:09 PM	76°F–100°F; 0% cc; 0-1 mph winds
6/26/2015	Michelle Balk	NA/RCA: Etiwanda Heights Preserve	8:50 AM–4:48 PM	77°F–96°F; 5%–25% cc; 0-1 to 4-8 mph winds
6/29/2015	Michelle Balk	NA/RCA: Etiwanda Heights Preserve	1:00 PM–7:30 PM	88°F–93°F; 5%–75% cc; 0-4 to 1-3 mph winds
6/4/2016	Drone Flight	RCA-aerial interpretation mapping	NR	NR
June – August 2016	Andrew Greis	RCA-GIS analysis of aerial interpretation mapping	NR	NR
8/24/2016	Britney Strittmater, Katie Dayton	RCA-field verification of aerial interpretation mapping	7:00 AM–4:05 PM	66°F–90°F, 0% cc, 1–3 mph winds
Jurisdictional Delineation				
6/23/2015	Britney Strittmater, Laura Burris	NA/RCA: Etiwanda Heights Preserve	8:30 AM–5:10 PM	75°F–88°F; 0% cc; 0-1 mph winds
6/24/2015	Britney Strittmater, Laura Burris	NA/RCA: Etiwanda Heights Preserve	7:00 AM–4:10 PM	72°F–90°F; 0% cc; 0-1 and 1-3 mph winds
6/25/2015	Britney Strittmater, Danielle Mullen, Katie Dayton, Laura Burris	NA/RCA: Etiwanda Heights Preserve	8:00 AM–4:00 PM	73°F–95°F; 0% cc; 0 to 2-4 mph winds
6/26/2015	Danielle Mullen, Katie Dayton	NA/RCA: Etiwanda Heights Preserve	6:30 AM–4:30 PM	68°F–93°F; 50% cc; 1 to 3-5 mph winds
6/29/2015	Danielle Mullen, Katie Dayton	NA/RCA: Etiwanda Heights Preserve	8:00 AM–4:30 PM	83°F–97°F; 50%–70% cc; 1-2 to 3-5 mph winds
6/30/2015	Britney Strittmater, Danielle Mullen, Katie Dayton	NA/RCA: Etiwanda Heights Preserve	6:00 AM–1:40 PM	73°F–93°F; 40% cc; 1-2 mph winds
8/5/2015-8/10/2015	Linda Archer	NA/RCA	NR, desktop review and QA/QC of all jurisdictional delineation field work.	
Small Mammal Trapping				
11/17/2015-11/22/2015	Mikael Romich, Anna Cassady	NA; Sites 1-6	150 traps/5 nights	54°F–67°F, 0% cc, 0-3 mph winds
12/5/2015-12/10/2015	Phil Brylski	NA; Sites 7-12	150 traps/5 nights	55°F–62°F, 0%-50% cc, 0-2 mph winds
12/6/2015-12/11/2015	Mikael Romich, Anna Cassady	NA; Sites 13-17	150 traps/5 nights	47°F–59°F, 0% cc, 0–3 mph winds

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Table 1
Schedule of Field Surveys

Date	Personnel	Survey Area	Survey Hours	Weather
2/6/2016-2/10/2016	Phil Brylski	NA/RCA: Etiwanda Heights Preserve; Sites 18-23	150 traps/5 nights	47°F -60°F, 0%-25% cc, 0–2 mph winds
3/2/2016-3/10/2016¹	Phil Brylski	NA/RCA: Etiwanda Heights Preserve; Sites 24-29	150 traps/5 nights	49°F -55°F, 0%-100% cc, 0–3 mph winds
3/2/2016-3/6/2016	Mikael Romich, Camilla Estes	NA; Sites 30-35	150 traps/5 nights	47°F–57°F, 0% cc, 0–5 mph winds
3/16/2016-3/20/2016	Dana McLaughlin	NA/RCA: Etiwanda Heights Preserve; Sites 36-41	150 traps/5 nights	54°F–62°F, 0%-40% cc, 0–1 to 0–2 mph winds
Coastal California Gnatcatcher Surveys				
May – July 2017	Brock Ortega, Karen Mullen, Crysta Dickson, Karen Carter, Garrett Huffman, Brian Lohstroh, Tara Baxter, Anita Hayworth, Alicia Hill, Travis Cooper	NA/RCA: Etiwanda Heights Preserve	See Appendix A for survey report.	
Botanical Surveys				
5/8/2017	Britney Strittmater, Katie Dayton	NA/RCA: Etiwanda Heights Preserve	9:45 AM–4:40 PM	57°F–72°F; 30% cc; 3–12 mph wind
5/9/2017	Britney Strittmater, Janice Wondolleck, Kathleen Dayton	NA/RCA: Etiwanda Heights Preserve	7:35 AM–3:55 PM	55°F–70°F; 0–30% cc; 1–15 mph wind
5/10/2017	Britney Strittmater, Janice Wondolleck, Kathleen Dayton, Megan Enright	NA/RCA: Etiwanda Heights Preserve	7:27 AM–4:16 PM	56°F–65°F; 100% cc; 0–10 mph wind
5/11/2017	Janice Wondolleck, Megan Enright	NA/RCA: Etiwanda Heights Preserve	7:30 AM–3:00 PM	57°F–76°F; 0%–10% cc; 0–4 mph wind
5/15/2017	Britney Strittmater, Callie Ford, Laura Burris	NA/RCA: Etiwanda Heights Preserve	8:05 AM–2:56 PM	53°F–56°F; 100% cc; 0–3 mph wind
5/16/2017	Britney Strittmater, Callie Ford, Laura Burris	NA/RCA: Etiwanda Heights Preserve	7:19 AM–4:40 PM	52°F–61°F; 90–100% cc; 1–3 mph wind
5/17/2017	Britney Strittmater, Callie Ford, Kathleen Dayton, Laura Burris	NA/RCA: Etiwanda Heights Preserve	7:19 AM–4:25 PM	52°F–62°F; 100% cc; 1–7 mph wind
5/18/2017	Kathleen Dayton, Laura Burris	NA/RCA: Etiwanda Heights Preserve	7:21 AM–4:45 PM	52°F–75°F; 0% cc; 1–12 mph wind
5/19/2017	Britney Strittmater, Kathleen Dayton	NA/RCA: Etiwanda Heights Preserve	7:18 AM–4:35 PM	64°F–84°F; 0% cc; 0–8 mph wind
5/25/2017	Janice Wondolleck, Kathleen Dayton	NA/RCA: Etiwanda Heights Preserve	8:40 AM–3:50 PM	57°F–69°F; 0%–100% cc; 5–15 mph wind
6/5/2017	Britney Strittmater, Kathleen Dayton, Monique O'Conner	NA/RCA: Etiwanda Heights Preserve	7:45 AM–4:45 PM	63°F–84°F; 0% cc; 1–11 mph wind

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Table 1
Schedule of Field Surveys

Date	Personnel	Survey Area	Survey Hours	Weather
6/6/2017	Britney Strittmater, Monique O'Conner	NA/RCA: Etiwanda Heights Preserve	6:54 AM–2:00 PM	59°F–80°F; 10%–100% cc; 0–5 mph wind
8/7/2017	Britney Strittmater, Monique O'Conner	NA/RCA: Etiwanda Heights Preserve	7:20 AM–3:03 PM	67°F–90°F; 0% cc; 1–6 mph wind
8/8/2017	Britney Strittmater, Monique O'Conner	NA/RCA: Etiwanda Heights Preserve	7:30 AM–3:02 PM	67°F–90°F; 0% cc; 0–8 mph wind
8/9/2017	Britney Strittmater, Callie Ford, Monique O'Conner	NA/RCA: Etiwanda Heights Preserve	6:45 AM–3:09 PM	69°F–95°F; 0% cc; 0–7 mph wind
8/10/2017	Britney Strittmater, Callie Ford, Kathleen Dayton, Monique O'Conner	NA/RCA: Etiwanda Heights Preserve	6:18 AM–2:26 PM	68°F–94°F; 0% cc; 0–5 mph wind
8/11/2017	Callie Ford, Janice Wondolleck, Kathleen Dayton	NA/RCA: Etiwanda Heights Preserve	6:00 AM–2:20 PM	68°F–93°F; 0% cc; 0–12 mph wind
8/15/2017	Janice Wondolleck, Kathleen Dayton	NA/RCA: Etiwanda Heights Preserve	6:00 AM–12:15 PM	69°F–91°F; 0% cc; 0–8 mph wind
8/16/2017	Kathleen Dayton, Mackenzie Forgey	NA/RCA: Etiwanda Heights Preserve	8:23 AM–2:59 PM	63°F–76°F; 30%–100% cc; 1–8 mph wind

Notes:

NA = Neighborhood Area; RCA = Rural/Conservation Area; °F = degrees Fahrenheit; cc = cloud cover; mph = miles per hour; NR = not recorded.

¹ Trapping was suspended from 3/6/2016 to 3/9/2016 due to rainy weather.

Plants and Wildlife

The plant species detected during the field surveys on the NA and RCA were identified to subspecies or variety, if applicable and feasible, to determine sensitivity status. Latin and common names for plant species with a California Rare Plant Rank (CRPR; formerly CNPS List) follow the *California Native Plant Society On-Line Inventory of Rare, Threatened, and Endangered Plants of California* (CNPS 2017). For plant species without a CRPR, Latin names follow the Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California (Jepson Flora Project 2016) and common names follow the List of Vegetation Alliances and Associations (CDFG 2010a) or the USDA Natural Resources Conservation Service Plants Database (USDA 2016b).

Wildlife species detected during the field survey by sight, calls, tracks, scat, or other signs were recorded directly onto a field notebook. Binoculars were used to aid in the identification of wildlife. In addition to species actually detected during the surveys, expected wildlife use of the site was determined by known habitat preferences of local species and knowledge of their relative distributions in the area. Latin and common names of wildlife follow Crother (2012) for reptiles and amphibians, American Ornithologists' Union (AOU 2016) for birds, Wilson and Reeder

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(2005) for mammals, North American Butterfly Association (NABA 2001) or San Diego Natural History Museum (SDNHM 2002) for butterflies, and Moyle (2002) for fish.

3.3 Vegetation Community and Land Cover Mapping

3.3.1 Neighborhood Area/Etiwanda Heights Preserve

Dudek conducted vegetation mapping on the NA and in the RCA within the Etiwanda Heights Preserve in 2015 according to the *Vegetation Alliances and Associations: Natural Communities List Arranged Alphabetically by Life Form* (Natural Communities List; CDFG 2010b) based on the *Manual of California Vegetation*, second edition (Sawyer et al. 2009), which is the California expression of the National Vegetation Classification Standard, Version 2 (FGDC 2008). These classification systems focus on a quantified, hierarchical approach that includes both floristic (plant species) and physiognomic (community structure and form) factors as currently observed (as opposed to predicting climax or successional stages). Each natural community was mapped to the alliance level and, where feasible, to the association level. The scale broom scrub alliance was only mapped to alliance level because all of their associations are considered special status.

Vegetation mapping was conducted on NA and in the RCA within the Etiwanda Heights Preserve by biologists in the field. A 200-scale (i.e., 200 feet = 1 inch) aerial photograph map (Google Earth 2015) with an overlay of the NA boundary was used to map vegetation communities.

Vegetation communities were classified based on site factors, descriptions, distribution, and characteristic species present within an area. Information was recorded, including dominant species and associated cover classes, aspect, canopy height, and visible disturbance factors. In some areas, the vegetation communities observed in the field did not match those described in Sawyer et al. (2009). In these instances, Dudek generated additional site-specific vegetation community or land cover classifications, where necessary.

Minimum mapping units were established at 2.2 acres (1 hectare) for communities not considered to be high priority for inventory in the CNDDB; 1 acre for communities that are considered high priority for inventory; and 2–5 acres for non-floristic breaks, such as disturbance. Visible disturbance factors were also noted during vegetation mapping.

Following completion of the fieldwork, Dudek GIS analysts digitized the vegetation boundaries as delineated by the field biologists and created a GIS coverage for vegetation communities.

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3.3.2 Rural/Conservation Area

Vegetation community and land cover mapping on the RCA included the portions outside the Etiwanda Heights Preserve and was accomplished via a combination of aerial photograph interpretation and field-checking for accuracy. With a few exceptions, vegetation communities and land covers follow the *List of Vegetation Alliances and Associations: Natural Communities List Arranged Alphabetically by Life Form* (Natural Communities List; CDFG 2010b) based on *A Manual of California Vegetation, 2nd edition* (Sawyer et al. 2009), which is the California expression of the *National Vegetation Classification Standard, Version 2* (FGDC 2008).

The mapping effort was conducted in three phases: (1) aerial photograph interpretation and delineation of vegetation community and land cover boundaries, (2) field-checking, and (3) quality assurance/quality control. These methods are described in more detail in the following text.

Aerial Photography Review

Dudek biologists conducted aerial interpretation of vegetation communities and land covers to make preliminary determinations on vegetation communities and land covers that encompassed the RCA site. Area-specific GIS files were created using ArcGIS software using drone aerial photography flown in 2016 with approximately 1 inch per pixel resolution. Dudek GIS Technician Andrew Greis incorporated the existing, available vegetation community and land cover data including vegetation community and land cover mapping conducted in June 2015 for the NA and RCA Etiwanda Heights Preserve, located immediately south of the RCA, and then compiled into a program-specific GIS layer.

Areas were reviewed in the office using GIS software in ArcGIS. The study area was divided into 106 grid cells (each covering approximately 40 acres), each of which was assigned to a Dudek biologist to map. Vegetation communities and land cover signatures and boundaries were reviewed, and changes or edits were digitized using ArcGIS tools. Biologists focused on updating/correcting within the datasets based on the aerial signatures of the previous coarser-scale vegetation community and land cover mapping for the study area conducted in 2015. During the aerial interpretation review, if errors and discrepancies with current conditions warranted edits to these older datasets, obvious errors and/or omissions (e.g., disturbed land uses mapped as natural vegetation communities) were corrected and mapped to *A Manual of California Vegetation* (Sawyer et al. 2009) and the Natural Communities List (CDFG 2010b).

Field Verification

Dudek biologists conducted field verification of the aerial interpretation mapping efforts to verify the aerial interpretations and accurately distinguish the various habitat subtypes. Dudek Biologists Britney Strittmater and Kathleen Dayton conducted the field verification on August 24, 2016.

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Biologists visited areas of concern or areas that were difficult to identify during the aerial photographic review and focused on areas along accessible roads and high vantage points. All mapping was done directly in the field onto the 200-foot-scale (1 inch = 200 feet) aerial photographic base that was used during the aerial interpretation. Dominant plant species were used to determine the appropriate vegetation community or land cover. Dudek biologists then updated the delineated vegetation community boundaries from field maps to create a base vegetation layer using ArcGIS with review by GIS Technician Andrew Greis.

Quality Assurance/Quality Control

Once the aerial interpretation and field-checking was complete, Dudek biologists reviewed the aerial interpretation mapping previously conducted and updated/corrected line work as needed in ArcGIS based on the results of the field-checks. Biologists then assigned the vegetation communities and land uses code attributes that followed *A Manual of California Vegetation* (Sawyer et al. 2009) and CDFW guidance (CDFG 2010b). Dudek GIS Technician Andrew Greis confirmed the accuracy of the vegetation communities and performed a spatial join to link the vegetation polygons with the vegetation code attribution. All map grids were then combined into one GIS layer.

An in-depth GIS analysis was performed on the dataset for quality assurance/quality control. Duplicate and overlapping polygons were corrected. Vegetation community and land cover attributes were rechecked and corrected as appropriate. The GIS analysis also included verifying name and code attributes and merging adjacent polygons with the same attribution between grid sheets.

3.4 Jurisdictional Resources Evaluation

Jurisdictional Delineation

A delineation of jurisdictional waters was conducted within the NA and the RCA Etiwanda Heights Preserve by Dudek Biologists Britney Strittmater, Danielle Mullen, Laura Burris, and Katie Dayton from June 23 to June 26 and June 29 to 30, 2015 (Table 1). The entire NA and RCA Etiwanda Heights Preserve was evaluated and was surveyed on foot for the following types of features:

- Waters of the United States, including wetlands, under the jurisdiction of ACOE, pursuant to Section 404 of the federal Clean Water Act
- Waters of the state under the jurisdiction of the California RWQCB, pursuant to Section 401 of the federal Clean Water Act and the Porter–Cologne Water Quality Control Act as wetlands or drainages
- Streambeds under the jurisdiction of CDFW, pursuant to Section 1602 of the California Fish and Game Code.

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Non-wetland waters of the United States are delineated based on the presence of an ordinary high water mark (OHWM) as determined utilizing the methodology in *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (ACOE 2008). First, one transect was walked from east to west across the alluvial fan within the NA and the RCA Etiwanda Heights Preserve and characteristics of the low flow channel, low terrace, and active floodplain were noted. Transects were then walked from east to west and west to east at approximately 200 foot intervals throughout the NA and the RCA Etiwanda Heights Preserve. A Trimble GeoXT GPS unit or Avenza (a mobile map app that uses the device's built-in GPS to track location on any uploaded map) was used to mark the locations of low flow channels, low terraces, and active floodplains along each transect. After collection of field data, GIS software ArcMap 10.0 was used to overlay the GPS data on an aerial photograph and the 2-foot interval topographic map. The field data, aerial photograph, and topography were assessed collectively to determine the active floodplain and the boundary of jurisdictional waters.

All surface flows are waters of the state and are delineated at the OHWM, at outer limits of hydrophytic vegetation, or at outer rim of depressional features if relevant.

In accordance with California Fish and Game Code, streambeds are determined based on the presence of a definable bed and bank and are delineated from top of bank to top of bank or the extent of associated riparian vegetation. On alluvial fans, the width of streambed is often the same as the extent of waters of the United States. For shallow drainages and washes that do not support riparian vegetation, the top of bank measurement may be the same as the OHWM measurement.

Hydrology Modeling

Dudek prepared a separate hydrology analysis to support the jurisdictional delineation process, as it pertains to identifying the OHWM. In conjunction with the field biological survey, these results can be used to supplement the data to refine the locations where flows still exist after the implementation of major flood control structures within the area. To identify what impacts the flood control facilities have on the current alluvial system, Dudek prepared an advanced hydrologic and hydraulic analysis using a 2-dimensional (2D) model of the entire site. Since the existing system consists of numerous small braids, instead of large conveyance channels, the traditional hydrologic/hydraulic modeling methods would not realistically show the movement of rainfall runoff through the system. Traditional models constitute calculating flows for large areas (or subareas), and dumping the entire storm on one location, or node, within the surface or area. These methods would show flows spilling over the braids and diverting into adjacent systems.

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The method used by Dudek involves a rain-on-grid, where rainfall is evenly distributed over the entire 3-dimensional surface (as in an actual storm) for the area below the foothills. The model allows the flows to move through the surface based on the topographic relief or path of least resistance.

Dudek prepared three studies using Flo2D; 2-year, 5-year, and 25-year storm events based on NOAA Atlas 14 rainfall data. As stated above, the ACOE jurisdictional limits is delineated by the OHWM, which corresponds to more common storms ranging from 2-year to 10-year; however, the 25-year storm event was included to provide a more conservative range of storm event intervals. All loss rates were calculated based on the SBCFCD Hydrology Manual. Transmission losses, or losses due to infiltration as flows travel in alluvial stream beds, were calculated based on the Green and Ampt method.

Flows from the mountainous area, upstream of the alluvial fan were calculated using traditional SBCFCD Unit Hydrograph methodology, since the flows could be introduced into the surface at the canyon mouths (just above the alluvial fan). The Advanced Engineering Software was used for the mountainous areas to identify unit hydrographs for each area. These flow hydrographs for the various design storms were added to the 2D surface above the alluvial fan, whereas the hydrology for the alluvial fan area, below the mountains, was prepared using the rain-on-grid. By combining these methods, a comprehensive model was created and used for this analysis.

3.5 Botanical Surveys

Reference Population Check

Plant species bloom at slightly different times each year depending on temperature, rainfall patterns, elevation, and other environmental factors. Reference population checks involve locating known special-status plant species populations during a time-frame when they are known to be blooming or exhibit other phenological characteristics that allow for species identification. Observations of reference populations during peak phenology provide assurance that these species would be identifiable if they were present in the study area.

On May 8, 2017, Dudek conducted reference population checks for federally and state-listed special-status plant species that had a potential to occur on site, including slender-horned spinyflower (*Dodecahema leptoceras*) and Santa Ana River woollystar (*Eriastrum densifolium* ssp. *sanctorum*). Data gathered from the reference population checks were used to confirm the appropriate time to begin field surveys. Nevin's barberry (*Berberis nevinii*), a federally and state-listed endangered species, was determined to have a potential to occur on site. However, this is a perennial evergreen shrub that would have been identifiable outside of the blooming period; therefore, reference population checks were not conducted for this species. Slender-horned

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spineflower, CNDDDB occurrence number 39, was observed in bloom along an alluvial bench of Cajon Wash adjacent to Cajon Boulevard, approximately 8 miles northeast of the EHNCP Area. Santa Ana River woollystar, CNDDDB occurrence number 33, was observed within Cajon Wash immediately north of Institution Road, approximately 9 miles east of the EHNCP Area; however, this perennial herb was not in bloom but was identifiable in the vegetative form. An additional occurrence was later observed in bloom on May 23, 2017, south of Greenspot Road and east of Orange Street within the City of Highland, approximately 25 miles east of the EHNCP Area.

Additional reference population checks were conducted for some CRPR 1 and 2 species and were confirmed to be in bloom including Parry's spineflower (*Chorizanthe parryi* var. *parryi*) and white-bracted spineflower (*Chorizanthe xanti* var. *leucotheca*). White-bracted spineflower was observed on May 8, 2017, CNDDDB occurrence number 49, within Cajon Wash immediately west of Keenbrook Road. Parry's spineflower was observed along alluvial terraces adjacent to Oak Glen Creek and Wilson Creek on April 19, 2016, and again on June 12, 2017, in the City of Yucaipa, southwest of the intersection of Oak Glen Road and Bryant Street.

Field Survey

Focused plant surveys were floristic in nature and conformed to the *CNPS Botanical Survey Guidelines* (CNPS 2001), *Protocols for Surveying and Evaluating Impacts to Special Status Native Populations and Natural Communities* (CDFG 2009), and the *General Rare Plant Survey Guidelines* (Cypher 2002). The plant species detected during the field surveys were identified to subspecies or variety, if applicable and feasible, to determine sensitivity status. Latin and common names for plant species with a CRPR (formerly CNPS List) follow the *California Native Plant Society On-Line Inventory of Rare, Threatened, and Endangered Plants of California* (CNPS 2017). For plant species without a CRPR, Latin names follow the Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California (Jepson Flora Project 2016) and common names follow the List of Vegetation Alliances and Associations (CDFG 2010a) or the USDA Natural Resources Conservation Service Plants Database (USDA 2016b).

Botanical surveys were conducted by Dudek staff biologists during two survey passes in May/June and August 2017. All surveys were conducted on foot by walking 30-meter transects running east–west throughout the entire NA and RCA Etiwanda Heights Preserve to detect special-status plant species. The 30-meter transects were imported into ESRI Collector application and digital devices were used in the field to navigate along the survey transect lines. Special-status plant species observed were mapped in the field using the ESRI Collector application.

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3.6 Coastal California Gnatcatcher Protocol-Level Surveys

Focused surveys for coastal California gnatcatcher were performed within the NA and RCA Etiwanda Heights Preserve between May 11 and July 1, 2017, by Dudek's permitted biologists and independent investigators (Appendix A). The surveys were conducted following the currently accepted USFWS coastal California gnatcatcher presence/absence survey protocol (USFWS 1997), using the breeding season survey methods. One survey was conducted outside of the breeding season on July 1, 2017. An email was sent to Stacey Love on June 28, 2017, stating that one survey would be conducted just outside the breeding season, as defined in the protocol (USFWS 1997).

Survey routes completely covered all areas of suitable coastal California gnatcatcher habitat within the NA and RCA Etiwanda Heights Preserve (survey routes are shown on Figures 3A–3B in Appendix A). Appropriate birding binoculars (7x35 to 10x50 power) were used to aid in detecting and identifying bird species. The survey conditions were within protocol limits, as shown in Table 3 in Appendix A. A recording of vocalizations was used frequently to elicit a response from the species. The recording was played approximately every 50 to 100 feet.

The NA and RCA Etiwanda Heights Preserve was divided into 10 survey areas (shown on Figures 3A–3B in Appendix A), each representing a single-day survey effort of approximately 80 acres (i.e., in accordance with USFWS protocol for non-natural community conservation plan enrolled areas) resulting in 60 person-days of effort (i.e., a total of six passes per survey area). The permitted biologists were provided with digital aerial maps of each survey polygon, used for mapping coastal California gnatcatcher if observed.

It should be noted that Appendix A incorrectly states that the Day Creek Preserve is a 200-acre conservation area set aside through a conservation easement to the SBCFCD (City of Rancho Cucamonga 2010a). To clarify, the 200-acre area is subject to an Open Space Easement (not a conservation easement), which reserves the rights to use this property for “flood control, water conservation, and recreational purposes” improvements for these uses are permitted. Recreational uses allowed under the easement include, but are not limited to, sport parks, golf courses, and equestrian centers. See Section 6.1 for details regarding the proposed permanent conservation of this area.

3.7 Small Mammal Trapping

Focused small mammal trapping was conducted between November 2015 and March 2016 for the federally endangered San Bernardino kangaroo rat (*Dipodomys merriami parvus*) within the NA and within the Etiwanda Heights Preserve portion of the RCA (Appendix B). All trapping work was performed by biologists Mikael Romich (TE-068799-4), Phil Brylski (TE-148555-1), and

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Dana McLaughlin (TE-43597A-1), permitted for San Bernardino kangaroo rat by USFWS with the assistance of biologists Anna Cassady and Camilla Estes.

A habitat assessment was conducted in October 2015 to determine the locations of the small mammal traps. The trapping occurred within suitable habitat (i.e., flat areas containing friable sandy soils with low shrub cover) present within the NA and the Etiwanda Heights Preserve portion of the RCA (Figure 4, San Bernardino Kangaroo Rat Trapping Locations). The trapping focused on areas that appeared to be the most suitable for San Bernardino kangaroo rat; however, trapping also occurred in areas judged by the biologists to have very marginal potential to corroborate the expectation that San Bernardino kangaroo rat are not present. Surveys were conducted in 41 areas, totaling 4,500 trap nights. Trapping grids were set at approximately 7-meter spacing between traps. Traps were run safely for five consecutive nights at each site. Modified Sherman collapsible live-traps were used in each survey, and traps were set at dusk each day and baited with a mixture of birdseed. Traps were initially checked for captures near midnight and then checked again and closed the following morning. All animals were identified to species and released. Appendix B includes all data collected during the trapping effort.

3.8 Survey Limitations

Limited biological surveys were conducted on the RCA, specifically the portion outside the Etiwanda Heights Preserve, because of a lack of access to most of the privately owned properties. It is assumed, to the extent practical, that the resources present within the NA would also be present in the RCA due to the proximity of the two sites.

Surveys for special-status plant species were conducted in May/June and August 2017 within the NA and in the Etiwanda Heights Preserve. However, target species did not include CRPR 3 and 4 species and instead focused on special-status species that are federally or state listed or CRPR 1 or 2 species. All special-status species, including CRPR 3 and 4 species, were mapped if observed. The timing of the surveys coincided with the blooming period for all target species.

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4 RESULTS

4.1 Vegetation Communities, Land Covers, and Floral Diversity

Vegetation mapping of the NA was originally conducted by Dudek in 2015. A total of 13 different vegetation communities and land cover types occur within the NA. Vegetation acreages are presented in Table 2. Vegetation mapping of the RCA was conducted in 2016 by aerial interpretation, GIS analysis, and field verification. A total of 30 different vegetation communities and land cover types occur within the RCA and their acreages are presented in Table 3. An overview of the NA and RCA is shown on Figure 5, Vegetation Communities and Land Cover Mapping Overview. The spatial distribution of the vegetation communities and land covers on both the NA and RCA are presented on Figures 5A through 5F, Vegetation Communities and Land Cover Types.

Table 2
Vegetation Communities and Land Cover Types within the Neighborhood Area

General Physiognomic Location	General Habitat	Habitat Types/Vegetation Communities ¹	Alliance	Association	Total Acreage
Scrub and chaparral	Coastal scrub	California buckwheat scrub	<i>Eriogonum fasciculatum</i>	(NA)	12.45
		California buckwheat-white sage scrub	<i>Eriogonum fasciculatum</i> – <i>Salvia apiana</i>	(NA)	2.77
		California sagebrush scrub	<i>Artemisia californica</i>	(NA)	60.16
		California sagebrush-California buckwheat	<i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i>	(NA)	35.14
		California sagebrush-California buckwheat-white sage	<i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i>	<i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> – <i>Salvia apiana</i>	31.42
		Scale broom scrub (includes disturbed) ²	<i>Lepidospartum squamatum</i>	(NA)	373.20
		White sage scrub ²	<i>Salvia apiana</i>	(NA)	3.01
	Undifferentiated Chaparral scrub	Chamise chaparral	<i>Adenostoma fasciculatum</i>	(NA)	15.74
		Hoary leaf ceanothus–chamise	<i>Ceanothus crassifolius</i>	<i>Ceanothus crassifolius</i> – <i>Adenostoma fasciculatum</i>	119.56

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Table 2
Vegetation Communities and Land Cover Types within the Neighborhood Area

General Physiognomic Location	General Habitat	Habitat Types/Vegetation Communities ¹	Alliance	Association	Total Acreage
	Mountain mahogany woodlands and scrubs	Birch leaf mountain mahogany chaparral	<i>Cercocarpus montanus</i>	(NA)	4.97
Scrub and chaparral subtotal ³					658.41
Disturbed and developed	Disturbed and developed	Urban/Developed	(NA)	(NA)	39.15
		Disturbed Habitat	(NA)	(NA)	130.25
Disturbed and developed subtotal ³					169.40
Total ³					827.82

Notes: (NA) = not applicable (i.e., not mapped at this level of detail or not described by CDFW (CDFG 2010b)).

¹ CDFW (CDFG 2010b)).

² Considered special status by CDFW (CDFG 2010b)).

³ May not total due to rounding.

Table 3
Vegetation Communities and Land Covers within the Rural/Conservation Area

General Physiognomic Location	General Habitat	Vegetation Community or Land Cover Type ¹	Alliance	Association	Total Acres
Scrub and chaparral	Coastal scrub	California buckwheat scrub	<i>Eriogonum fasciculatum</i>	(NA)	72.46
		California buckwheat–white sage scrub	<i>Eriogonum fasciculatum–Salvia apiana</i>	(NA)	111.84
		California sagebrush scrub	<i>Artemisia californica</i>	(NA)	137.80
		California sagebrush–California buckwheat	<i>Artemisia californica–Eriogonum fasciculatum</i>	(NA)	312.15
		California sagebrush–California buckwheat–white sage	<i>Artemisia californica–Eriogonum fasciculatum</i>	<i>Artemisia californica–Eriogonum fasciculatum–Salvia apiana</i>	88.80
		Deer weed scrub	<i>Lotus scoparius</i>	(NA)	41.35
		Hairy yerba santa scrub	(NA)	(NA)	7.59
		Hairy yerba santa–white sage scrub	(NA)	(NA)	71.08
		Pinebush scrub	(NA)	(NA)	9.04

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Table 3
Vegetation Communities and Land Covers within the Rural/Conservation Area

General Physiognomic Location	General Habitat	Vegetation Community or Land Cover Type ¹	Alliance	Association	Total Acres
		Scale broom scrub ²	<i>Lepidospartum squamatum</i>	(NA)	541.62
		White sage scrub ²	<i>Salvia apiana</i>	(NA)	52.94
		White sage–California sagebrush ²	<i>Salvia apiana</i>	<i>Salvia apiana</i> - <i>Artemisia californica</i>	16.75
		White sage–California buckwheat ²	(NA)	(NA)	179.47
	Undifferentiated Chaparral scrub	Chamise chaparral	<i>Adenostoma fasciculatum</i>	(NA)	135.05
		Chamise–California buckwheat	<i>Adenostoma fasciculatum</i>	<i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i>	542.76
		Chamise–California buckwheat–white sage	<i>Adenostoma fasciculatum</i> – <i>Salvia apiana</i>	<i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> – <i>Salvia apiana</i>	92.00
		Chamise–white sage	<i>Adenostoma fasciculatum</i> – <i>Salvia apiana</i>	<i>Adenostoma fasciculatum</i> – <i>Salvia apiana</i>	4.81
		Chaparral whitethorn chaparral	<i>Ceanothus leucodermis</i>	(NA)	64.33
		Hoaryleaf ceanothus chaparral (disturbed)	<i>Ceanothus leucodermis</i>	(NA)	0.77
		Hoaryleaf ceanothus–chamise	<i>Ceanothus crassifolius</i>	<i>Ceanothus crassifolius</i> – <i>Adenostoma fasciculatum</i>	373.82
		Mountain mahogany woodlands and scrubs	Birchleaf mountain mahogany chaparral	<i>Cercocarpus montanus</i>	(NA)
	Birchleaf mountain mahogany–chamise		<i>Cercocarpus montanus</i>	<i>Cercocarpus montanus</i> – <i>Adenostoma fasciculatum</i>	62.05
	Birchleaf mountain mahogany–California buckwheat		<i>Cercocarpus montanus</i>	<i>Cercocarpus montanus</i> – <i>Eriogonum fasciculatum</i>	60.25
Scrub and chaparral subtotal					2,983.90

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Table 3
Vegetation Communities and Land Covers within the Rural/Conservation Area

General Physiognomic Location	General Habitat	Vegetation Community or Land Cover Type¹	Alliance	Association	Total Acres
Grass- and herb-dominated communities	Non-native grassland	Mediterranean California naturalized annual and perennial grassland	(NA)	(NA)	187.57
Grass- and herb-dominated communities subtotal					187.57
Broadleaved upland tree dominated	Eucalyptus naturalized forest	Eucalyptus groves	Eucalyptus (globulus, camaldulensis)	(NA)	2.82
Broadleaved upland tree dominated subtotal					2.82
Riparian and bottomland habitat	Riparian forest and woodland	California sycamore woodlands²	Platanus racemosa	(NA)	188.28
		California sycamore–coast live oak²	Platanus racemosa	Platanus _racemosa–Quercus agrifolia	9.96
Riparian and bottomland habitat subtotal					198.24
Disturbed and developed	Disturbed and developed	Disturbed habitat	(NA)	(NA)	164.76
		Urban/developed	(NA)	(NA)	20.18
	Ruderal	Ruderal	(NA)	(NA)	8.06
Disturbed and developed subtotal					193.00
Total³					3,565.54

Notes: (NA) = not applicable (i.e., not mapped at this level of detail or not described by CDFW (CDFG 2010b)).

¹ CDFW (CDFG 2010b)).

² Considered special status by CDFW (CDFG 2010b)).

³ May not total due to rounding.

In September 2010, CDFW published the Natural Communities List (CDFG 2010b), which uses the scientific name of the dominant species in that alliance as the alliance name and includes a global and state rarity rank based on the NatureServe Standard Heritage Program methodology (NatureServe 2016). The conservation status of a vegetation community is designated by a number from 1 to 5 preceded by a letter reflecting the appropriate geographic scale of the assessment (G = global, N = national, and S = subnational). The numbers have the following meaning (NatureServe 2015):

1 = critically imperiled

2 = imperiled

3 = vulnerable to extirpation or extinction

4 = apparently secure

5 = demonstrably widespread, abundant, and secure

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For example, a rank of G1 would indicate that a vegetation community is critically imperiled across its entire range (i.e., globally). A rank of S3 would indicate the vegetation community is vulnerable and at moderate risk within a particular state or province, although it may be more secure elsewhere (NatureServe 2015). Because NatureServe ranks vegetation communities at the global level, they have few rankings at the state or province level available. However, the Natural Communities List (CDFG 2010b) includes state-level rarity rankings (i.e., the subnational (S) rank) for vegetation communities. The Natural Communities List (CDFG 2010b) is considered the authority for ranking the conservation status of vegetation communities in California.

CDFW's guidelines for determining high-priority vegetation types include considering any communities listed with a ranking of S1 to S3 and ascertaining whether the specific stands of the community type within the study area are "considered as high-quality occurrences of a given community" (CDFW 2017a). The consideration of stand quality includes cover of non-native invasive species, human-caused disturbance, reproductive viability, and insect or disease damage (CDFW 2017a).

A Manual of California Vegetation (2nd edition) (Sawyer et al. 2009) was used as an additional reference to help determine characteristics (such as percentage of species cover) of various classifications. Vegetation communities considered special status are those with an "S" ranking of 1, 2, or 3 (CDFG 2010b).

Within the NA, the following communities are considered sensitive by CDFW (CDFG 2010b): scale broom scrub and white sage scrub. Communities considered sensitive by CDFW within the RCA include scale broom scrub, white sage scrub, white sage–California sagebrush, white sage–California buckwheat, chamise-white sage, California sycamore woodlands, and California sycamore–coast live oak (CDFG 2010b). Scale broom scrub alliance is ranked by CDFW as a G3S3 alliance; white sage scrub alliance and its associations are ranked by CDFW as a G4S3 alliance; chamise-white sage alliance is ranked by CDFW as a G3S3 alliance; and California sycamore woodlands and its associations are ranked by CDFW as G3S3 (CDFG 2010b). Therefore, these alliances meet the definition of a sensitive natural community under the CEQA Guidelines (14 CCR 15000 et seq.). A summary of the vegetation communities within the EHNCAP Area is provided in the following text.

4.1.1 Coastal Scrub

California Buckwheat Scrub Alliance (32.040.00)

The California buckwheat scrub or *Eriogonum fasciculatum* alliance is recognized by the Natural Communities List and is ranked as a G5S5 alliance (CDFG 2010b). California buckwheat scrub alliance communities include California buckwheat (*Eriogonum fasciculatum*) as the dominant or

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codominant shrub in the canopy. California buckwheat scrub has a continuous or intermittent shrub canopy less than 2 meters (7 feet) in height with a variable ground layer that may be grassy (Sawyer et al. 2009). The California buckwheat scrub alliance occurs on dry slopes, washes, and canyons as well as coastal bluffs. The alliance occurs on relatively gentle, south-facing lower slopes and toe-slopes. The California buckwheat scrub alliance occupies mostly shallow and moderately deep, well-drained and somewhat excessively drained soils.

On-site species associated with the California buckwheat scrub alliance include California sagebrush (*Artemisia californica*), deer weed (*Acmispon glaber*), and white sage (*Salvia apiana*) (Sawyer et al. 2009). California buckwheat scrub occurs in a total of 12.45 acres in multiple areas throughout the NA but mainly within the southwestern parcel. A total of 72.46 acres of California buckwheat scrub occurs within the RCA.

California Buckwheat–White Sage Scrub Alliance (32.100.00)

The California buckwheat–white sage scrub alliance is recognized by the Natural Communities List and is ranked as a G4S4 alliance (CDFG 2010b). California buckwheat–white sage scrub alliance communities include California buckwheat and white sage as codominant shrubs in the canopy. California buckwheat–white sage scrub has an intermittent shrub canopy less than 2.5 meters (8 feet) in height with a variable ground layer that may be grassy (Sawyer et al. 2009).

On-site species associated with the California buckwheat–white sage scrub alliance include California buckwheat, white sage, pinebush (*Ericameria pinifolia*), and California croton (*Croton californicus*). California buckwheat–white sage scrub occurs mainly within the northeastern corner of NA, with one area centrally located for a total of 2.77 acres. A total of 111.84 acres of California buckwheat–white sage scrub alliance occurs within the RCA.

California Sagebrush Scrub Alliance (32.010.00)

The California sagebrush scrub alliance is recognized by the Natural Communities List and is ranked as a G5S5 alliance (CDFG 2010b). California sagebrush scrub alliance communities include California sagebrush as the dominant or codominant shrub in the canopy. California sagebrush scrub has a continuous or intermittent shrub canopy less than 2 meters (7 feet) in height with a variable ground layer (Sawyer et al. 2009). The California sagebrush scrub alliance often occurs on steep, north-facing slopes and rarely flooded low-gradient deposits along streams in shallow alluvial or colluvial-derived soils (Sawyer et al. 2009).

On-site species associated with the California sagebrush scrub alliance include hairy yerba santa (*Eriodictyon trichocalyx*), chamise (*Adenostoma fasciculatum*), white sage, and scale broom (*Lepidospartum squamatum*). California sagebrush scrub is the most dominant vegetation community

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totaling 60.16 acres in the southeastern portion of the NA with two smaller areas along the northern boundary. A total of 137.80 acres of California sagebrush scrub alliance occurs within the RCA.

California Sagebrush–California Buckwheat Scrub Alliance (32.110.00)

The California sagebrush–California buckwheat scrub alliance is recognized by the Natural Communities List and is ranked as a G4S4 alliance (CDFG 2010b). California sagebrush–California buckwheat scrub alliance communities include California sagebrush and California buckwheat as codominant shrubs in the canopy. California sagebrush–California buckwheat scrub has a two-tiered continuous or intermittent shrub canopy with most shrubs less than 2 meters (7 feet) in height while others reach up to 5 meters (16 feet) in height. This alliance has a seasonally present herbaceous layer (Sawyer et al. 2009).

On-site species associated with the California sagebrush–California buckwheat scrub alliance include pinebush, hairy yerba santa, and white sage. California sagebrush–California buckwheat scrub comprises 35.14 acres and occurs along the southern boundary of the NA. A total of 312.15 acres of California sagebrush–California buckwheat scrub alliance occurs within the RCA.

California Sagebrush–California Buckwheat-White Sage Association (32.110.02)

The California sagebrush–California buckwheat-white sage association is recognized by the Natural Communities List and is ranked as a G4S4 within the California sagebrush–California buckwheat alliance (CDFG 2010b). California sagebrush–California buckwheat–white sage scrub association communities include California sagebrush, California buckwheat, and white sage as codominant shrubs in the canopy. California sagebrush–California buckwheat–white sage scrub occurs on slopes that are steep south-facing, sometimes boulder, as well as intermittently flooded channels and washes, and rarely flooded low-gradient deposits (Sawyer et al. 2009).

On-site species associated with the California sagebrush–California buckwheat–white sage scrub alliance include California sagebrush, California buckwheat, white sage, chaparral yucca (*Hesperoyucca whipplei*), deer weed, birch leaf mountain mahogany (*Cercocarpus betuloides*), and scale broom. California sagebrush–California buckwheat–white sage scrub comprises 31.42 acres and occurs in three separate areas located centrally within the NA. A total of 88.80 acres of California sagebrush–California buckwheat–white sage association occurs within the RCA.

Deer Weed Scrub Alliance (52.240.00)

The deer weed scrub alliance is not recognized by the List of Terrestrial Natural Communities (CDFG 2003) but is included on the Natural Communities List and is ranked as a G5S5 alliance (CDFG 2010b). Deer weed scrub alliance communities include common deer weed as dominant

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or codominant in the canopy. Deer weed scrub has a two-tiered open to intermittent shrub canopy less than 2 meters (7 feet) in height with a sparse ground layer (Sawyer et al. 2009). The deer weed scrub alliance occurs throughout most of the western portion of California from 25 to 1,500 meters (82 to 4,921 feet above mean sea level). This alliance occurs in areas that have recently been disturbed by clearing, fire, intermittent flooding, or other disturbances (Sawyer et al. 2009).

Some species associated with the deer weed scrub alliance include chamise, California sagebrush, coyote brush (*Baccharis pilularis*), California brittle bush (*Encelia californica*), California buckwheat, and white sage (Sawyer et al. 2009). A total of 41.35 acres of deer weed scrub alliance occurs within the RCA.

Hairy Yerba Santa Scrub

Hairy yerba santa scrub is not recognized by *A Manual of California Vegetation* (Sawyer et al. 2009) or by CDFW (CDFG 2010b). Hairy yerba santa scrub occurs mainly within the central portions of the RCA within the North Etiwanda Preserve. This early successional community is the result of the 2014 Etiwanda Fire. A total of 7.59 acres of hairy yerba santa scrub occurs within the RCA.

Hairy Yerba Santa–White Sage Scrub

Hairy yerba santa–white sage scrub is not recognized by *A Manual of California Vegetation* (Sawyer et al. 2009) or by CDFW (CDFG 2010b). Hairy yerba santa–white sage scrub is dominated by shrubs, hairy yerba santa, and white sage, and occurs mainly within the central portion of the RCA within the North Etiwanda Preserve. This early successional community is the result of the 2014 Etiwanda Fire. A total of 71.08 acres of hairy yerba santa–white sage scrub occurs within the RCA.

Pinebush Scrub

Pinebush scrub is not recognized by *A Manual of California Vegetation* (Sawyer et al. 2009) or by CDFW (CDFG 2010b). This community is dominated by the pinebush. This community occurs in two small patches within the central portion of the North Etiwanda Preserve, within the RCA, totaling only 9.04 acres.

Scale Broom Scrub Alliance (32.070.00)

Scale broom scrub or *Lepidospartum squamatum* alliance is recognized by the Natural Communities List and is ranked as a G3S3 alliance (CDFG 2010b). Scale broom scrub alliance communities typically include at least 1% cover of scale broom. Scale broom scrub has an open to continuous shrub canopy of less than 2 meters, in two different strata. Scale broom scrub is found on alluvial terraces, flats, sand bars, intermittently flooded drainages, and floodplains with sandy

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soils, boulders, and cobbles. Intermittent flooding is necessary to recharge ground water and maintain soil moisture, and scale broom scrub is restricted to these areas. This association is ranked as a high priority for inventory and is therefore considered sensitive by CDFW (CDFG 2010b).

On-site species associated with the scalebroom scrub alliance include chamise, hoaryleaf ceanothus (*Ceanothus crassifolius*), California buckwheat, birch leaf mountain mahogany, chaparral whitethorn (*Ceanothus leucodermis*), chaparral yucca, spiny redberry (*Rhamnus crocea*), hairy yerba santa, white sage, and California sagebrush. Scalebroom scrub occurs throughout much of the site and is the most dominant vegetation community in the NA, representing 373.20 acres. A total of 541.62 acres of scalebroom scrub occurs within the RCA.

White Sage Scrub Alliance (32.030.00)

White sage scrub alliance is recognized by the Natural Communities List and is ranked as a G4S3 alliance (CDFG 2010b). White sage scrub alliance communities typically include white sage as a dominant or codominant shrubs in the canopy. White sage scrub has an intermittent to continuous shrub canopy of less than 2 meters (sometimes less than 0.5 meters), in two different strata. White sage scrub is found on dry slopes, benches, and rarely flooded low-gradient deposits along streams. This association is ranked as a high priority for inventory and is therefore considered sensitive by CDFW (CDFG 2010b).

On-site species associated with the white sage scrub alliance include chamise, spiny redberry, and hairy yerba santa. White sage scrub represents one of the smallest vegetation communities on site and occurs only in one area within the southwestern portion of the NA, totaling 3.01 acres. A total of 52.94 acres of white sage scrub alliance occurs within the RCA.

White Sage Scrub–California Sagebrush Association (32.030.01)

White sage scrub–California Sagebrush association is recognized by the Natural Communities List and is ranked G4S3 within the white sage scrub alliance (CDFG 2010b). White sage scrub–California Sagebrush alliance communities typically include white sage and California sagebrush as codominant shrubs in the canopy. This association is ranked as a high priority for inventory and is therefore considered sensitive by CDFW (CDFG 2010b).

A total of 16.75 acres of white sage scrub-California sagebrush association occurs within the RCA.

White Sage Scrub–California Buckwheat Association (32.100.00)

The white sage scrub-California buckwheat association is ranked as G4S3 and is an association of the white sage scrub alliance. The white sage–California buckwheat association is not recognized

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by CDFG (2010); however, it is mentioned in *A Manual of California Vegetation* (Sawyer et al. 2009). This association is ranked as a high priority for inventory and is therefore considered sensitive by CDFW (CDFG 2010b).

A total of 179.47 acres of white sage scrub–California buckwheat association occurs within the RCA.

4.1.2 Undifferentiated Chaparral Scrub

Chamise Chaparral Alliance (37.101.00)

The chamise chaparral or *Adenostoma fasciculatum* alliance is recognized by the Natural Communities List and is ranked as a G5S5 alliance (CDFG 2010b). This alliance is dominated by chamise and has an intermittent to continuous shrub canopy less than 4 meters (13 feet) in height and a sparse to intermittent herbaceous layer (Sawyer et al. 2009). The alliance occurs mostly on moderately xeric, upper and middle slopes with east-, south-, or west-facing exposures of varied steepness. The alliance is found mostly on shallow or deep sandy loams and loamy sands over fractured bedrock, colluvium, and sometimes shale.

Chamise chaparral is dense with a very sparse understory (Cheng 2004) and has an average chamise cover of 77% with many co-occurring species, including deer weed, chaparral yucca, chaparral whitethorn, California buckwheat, and California sagebrush. Chamise chaparral comprises 15.74 acres and occurs in multiple areas throughout the NA. A total of 135.05 acres of chamise chaparral alliance occurs within the RCA.

Chamise–California Buckwheat Association (37.101.14)

Chamise–California buckwheat is an association of the chamise chaparral alliance. Chamise and California buckwheat occurs at higher elevations within the foothills throughout the RCA. A total of 542.76 acres of chamise–California buckwheat association occurs within the RCA.

Chamise–California Buckwheat–White Sage Association (37.103.03)

Chamise–California buckwheat–white sage association is recognized by the Natural Communities List and is ranked as a G3S3 within the chamise-white sage alliance. This community occurs within the burned areas of the North Etiwanda Preserve, within the RCA, and totals 92.00 acres.

Chamise–White Sage Alliance (37.103.00)

The chamise–white sage alliance is recognized by the Natural Communities List and is ranked as a G3S3 alliance (CDFG 2010b). This alliance is dominated by chamise and white sage in the shrub canopy and is less than 3 meters in height. The canopy is open to continuous that includes 30% to

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60% relative cover (Sawyer et al. 2009). This association is ranked as a high priority for inventory and is therefore considered sensitive by CDFW (CDFG 2010b).

A total of 4.81 acres of chamise–white sage alliance occurs within the RCA.

Chaparral Whitethorn Chaparral Alliance (37.205.00)

The chaparral whitethorn chaparral or *Ceanothus leucodermis* alliance is recognized by the Natural Communities List and is ranked as a G4S4 alliance (CDFG 2010b). This alliance is dominated by chaparral whitethorn.

Chaparral whitethorn chaparral has an average chaparral whitethorn cover of 25% to 50% with many co-occurring species, including pinebush, California buckwheat, spiny redberry, hairy yerba santa, white sage, and California sagebrush. A total of 63.33 acres of chaparral whitethorn chaparral alliance occurs within the RCA.

Hoary Leaf Ceanothus Chaparral Alliance (37.208.00)

The hoary leaf ceanothus chaparral or *Ceanothus crassifolius* alliance is recognized by the Natural Communities List and is ranked as a G4S4 alliance (CDFG 2010b). This alliance is dominated by hoary leaf ceanothus and has an intermittent to continuous canopy layer with an open ground layer.

A total of 0.77 acres of disturbed hoary leaf ceanothus chaparral alliance occurs within the RCA.

Hoary Leaf Ceanothus–Chamise Association (37.208.02)

The hoary leaf ceanothus–chamise chaparral association is recognized by the Natural Communities List and is ranked as a G4S4 within the hoaryleaf ceanothus alliance (CDFG 2010b). Hoary leaf ceanothus–chamise chaparral association communities typically include chamise and hoaryleaf ceanothus as codominant shrubs in the canopy. Hoaryleaf ceanothus–chamise chaparral has an intermittent to continuous shrub canopy in two different strata, one up to 2 meters (7 feet) in height and the other up to 5 meters (16 feet) in height, with an open ground layer.

On-site species associated with the hoaryleaf ceanothus–chamise chaparral association include chamise, hoaryleaf ceanothus, California buckwheat, birch leaf mountain mahogany, spiny redberry, hairy yerba santa, white sage, and California sagebrush. Hoaryleaf ceanothus–chamise chaparral is comprised of 119.56 acres and occurs throughout much of western half of the NA. A total of 373.82 acres of hoaryleaf ceanothus–chamise association occurs within the RCA.

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4.1.3 Mountain Mahogany Woodlands and Scrubs

Birch Leaf Mountain Mahogany Chaparral Alliance (76.100.00)

The birch leaf mountain mahogany chaparral or *Cercocarpus betuloides* alliance is recognized by the Natural Communities List and is ranked as a G5S4 alliance (CDFG 2010b). Birch leaf mountain mahogany alliance communities include birch leaf mountain mahogany as the dominant or codominant with other shrubs including California buckwheat, chamise, and bigberry manzanita (*Arctostaphylos glauca*). Birch leaf mountain mahogany occurs on all aspects of upper slopes, rocky alluvium, ridges, and rarely flooded, rocky outcrops.

On-site species associated with the birch leaf mountain mahogany chaparral include chamise, white sage, and California buckwheat. Birch leaf mountain mahogany occurs in only one area within the southwestern corner of the NA and is comprised of 4.97 acres. A total of 5.13 acres of birch leaf mountain mahogany chaparral alliance occurs within the RCA.

Birch Leaf Mountain Mahogany–Chamise Association (76.100.06)

The birch leaf mountain mahogany–chamise association is recognized by the Natural Communities List and is ranked as a G5S4 within the birchleaf mountain mahogany alliance (CDFG 2010b). This association is dominated by birch leaf mountain mahogany and chamise.

A total of 62.05 acres of birch leaf mountain mahogany–chamise association occurs within the RCA.

Birch Leaf Mountain Mahogany–California Buckwheat Association (37.600.01)

The birch leaf mountain mahogany–California buckwheat association is recognized by the Natural Communities List and is ranked as a G5S4 within the birch leaf mountain mahogany alliance (CDFG 2010b). This association is dominated by birch leaf mountain mahogany and California buckwheat.

A total of 60.25 acres of birch leaf mountain mahogany–California buckwheat association occurs within the RCA.

4.1.4 Non-native Grassland

Mediterranean California Naturalized Annual and Perennial Grassland (42.024.00)

The Mediterranean California naturalized annual and perennial grassland alliance is recognized by the Natural Communities List and is not ranked (CDFG 2010b). This vegetation community is dominated by red brome (*Bromus madritensis* ssp. *rubens*), Arabian schismus (*Schismus*

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arabicus), and/or common Mediterranean grass (*Schismus barbatus*) with an intermittent to continuous cover. The herb cover is less than 75 centimeters in height and more than 80% in cover.

This vegetation community occurs primarily within the eastern portions of the RCA, with a few smaller patches occurring along the northern boundary within the higher elevations of the foothills. A total of 187.57 acres of Mediterranean California naturalized annual and perennial grassland occurs within the RCA. This seminatural stand¹ is not considered a sensitive biological resource by CDFW under CEQA (CDFG 2010b).

4.1.5 Eucalyptus Naturalized Forest

Eucalyptus Groves Alliance (79.100.00)

The eucalyptus grove alliance is recognized by the Natural Communities List and is not ranked (CDFG 2010b). This alliance is dominated by river redgum (*Eucalyptus camaldulensis*), Tasmanian bluegum (*Eucalyptus globulus*), or other *Eucalyptus* sp. Eucalyptus species are more than 80% relative cover in the tree layer and have an intermittent to continuous cover (Sawyer et al. 2009). The tree layer is less than 50 meters in height and includes a sparse to intermittent shrub and herbaceous layer.

A total of 2.82 acres of eucalyptus grove alliance occurs within the RCA.

4.1.6 Riparian Forest and Woodland

California Sycamore Woodlands Alliance (61.310.00)

The California sycamore woodlands or *Platanus racemosa* alliance is recognized by both the List of Terrestrial Natural Communities (CDFG 2003) and the Natural Communities List and is ranked as a G3S3 alliance (CDFG 2010b). Within the alliance, there are 15 associations that include California sycamore (*Platanus racemosa*) as the dominant or codominant tree in the canopy. This alliance forms an open-to-intermittent tree canopy less than 35 meters (115 feet) with an open-to-intermittent shrub layer and sparse or grassy ground layer (Sawyer et al. 2009). The alliance is found in a variety of wetland and riparian locations, including gullies, intermittent streams, springs, stream and river banks, and seeps. It can also be found on terraces next to floodplains that are subject to high-intensity flooding (Sawyer et al. 2009). Communities occur in soils that are permanently saturated with freshwater at depth. Soils are typically cobbly alluvium or rocky (Sawyer et al. 2009). This association is ranked as a high priority for inventory and is therefore considered sensitive by CDFW (CDFG 2010b).

¹ Seminatural stands are invasive naturalized plant groups in which “plants are sufficiently dominant to have replaced most of the natives, and, in many situations, the associates are themselves non-native species” (Sawyer et al. 2009).

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The following species are associated with the California sycamore woodlands alliance: western white alder (*Alnus rhombifolia*), California walnut (*Juglans californica*), coast live oak (*Quercus agrifolia*), valley oak (*Quercus lobata*), Fremont cottonwood (*Populus fremontii* ssp. *fremontii*), California bay (*Umbellularia californica*), arroyo willow (*Salix lasiolepis*), Goodding's black willow (*Salix gooddingii*), and red willow (*Salix laevigata*) (Sawyer et al. 2009; NatureServe 2009; Holland 1986). A total of 188.28 acres of California sycamore woodland alliance occurs within the foothills the RCA.

California Sycamore–Coast Live Oak Association (61.321.01)

The California sycamore–coast live oak association is recognized by the Natural Communities List and is ranked as a G3S3 within the California sycamore woodlands alliance (CDFG 2010b). This association is dominated by California sycamores and coast live oaks. This association is ranked as a high priority for inventory and is therefore considered sensitive by CDFW (CDFG 2010b).

California sycamore woodlands occur throughout the riparian areas within the foothills on the RCA site. This association covers 9.96 acres within the eastern portion of the RCA site.

4.1.7 Disturbed and Developed

Disturbed Habitat

Although not recognized by the Natural Communities List (CDFG 2010b) disturbed habitats are areas that have been physically disturbed and are no longer recognizable as native or naturalized vegetation associations. These areas may continue to retail soil substrate. If vegetation is present, it is almost entirely composed of non-native vegetation, such as ornamentals or ruderal exotic species. Within the NA, disturbed habitat occurs centrally within an area that previously functioned as a mine, totaling 130.25 acres. A total of 164.76 acres of disturbed habitat occurs within the RCA.

Urban/Developed

Although not recognized by the Natural Communities List (CDFG 2010b) urban/developed refers to areas that have been constructed upon or disturbed so severely that native vegetation is no longer supported. Developed land includes areas with permanent or semi-permanent structures, pavement or hardscape, landscaped areas, and areas with a large amount of debris or other materials. On site, urban/developed land occurs throughout the NA and RCA site as existing roadways or buildings.

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4.1.8 Ruderal

Ruderal

Ruderal occurs in areas dominated by non-native vegetation, such as tree tobacco (*Nicotiana glauca*). Ruderal has no ranking but would not be considered special status since it is not a natural vegetation community. A total of 8.06 acres of ruderal lands occur within the RCA.

4.2 Jurisdictional Resources

As described in Section 3.4, Dudek conducted a hydrology analysis in conjunction with the jurisdictional delineation field survey to refine the locations where flows still exist after the implementation of major flood control structures (levee) within the area. During the jurisdictional delineation field survey, both low flow channels and active flood plain areas were mapped, but it is likely that these active flood plain areas are historic or relic indicators from prior to the implementation of the levee. The results of the hydrology analysis efforts match closely with the low flow channels identified during the jurisdictional delineation field survey. Therefore, for the purposes of this analysis, the hydrology results shall be used to reflect the current conditions of the EHNCP Area with the major flood control structures (Deer Creek and Day Creek) and the levee in place.

The results of the hydrology modeling show that a very small amount of runoff was identified entering the NA below the levee along the west EHNCP boundary, adjacent to the Deer Creek channel. Almost all of the flow below or south of the levee was a result of direct rainfall (i.e., all flows above the levee were captured by the levee). The results revealed much less runoff in the braided systems below the levee than what was mapped during the jurisdictional delineation field survey. Hydrologically speaking, much of the alluvial braids seen in aerial photographs are considered relic or no longer active due to the construction of the levee.

The modeling analysis included three different storm events using various maximum depths of runoff at each given grid or location within the model. It is not a snapshot of the depths at the storm peak, but rather multiple snapshots of all the peaks at each given site within the model. This yields the worst-case scenario depth for each braid within the system during a storm event. The modeling analysis looked at depths greater than 0.2 feet and also greater than 0.5 feet to aid in the mapping of the OHWM for each braid. Design storms were selected in a range to help show a pattern of flooding from the 2- to 25-year storms. The 25-year storm results, being the most conservative, are used within the NA to show how the larger storm events may break out of the braids and combine with other adjacent flows (Figure 6, Jurisdictional Resources).

According to the hydrology modeling, the NA contains a total of 71.22 acres non-wetland waters or streambed based on ACOE, CDFW, and RWQCB definitions and 0.16 acres of streambed under

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CDFW-only jurisdiction (Figure 6, Jurisdictional Resources). Table 4 summarizes the features on the NA, and the features are displayed on Figure 6, Jurisdictional Resources.

Table 4
Jurisdictional Resources in the Neighborhood Area (Acres)

Jurisdictional Resource	ACOE/RWQCB/CDFW	CDFW-only	Total Acreage
Non-wetland Waters/Streambed	71.22	0.16	71.38
Total jurisdictional area¹	71.22	0.16	71.38

Note:

¹ Modeling based on 4% annual chance (25-year) floodplain with a minimum depth threshold of 0.2 feet.

A total of 343.65 acres of non-wetland waters under ACOE, RWQCB, and CDFW jurisdiction and 169.50 acres of CDFW-only jurisdiction were identified on the RCA site during the jurisdictional delineation. Hydrology modeling was not used for the RCA, with the exception of the Etiwanda Heights Preserve. Hydrology modeling was used for the Etiwanda Heights Preserve portion of the RCA since it occurs below the levee and jurisdictional resources within the Etiwanda Heights Preserve total 51.62 acres. The RCA (except for the Etiwanda Heights Preserve portion) was not covered during the field surveys; instead a desktop review occurred over the site connecting jurisdictional areas observed within the NA to the RCA. Table 5 summarizes the features on the RCA site, and the features are displayed on Figure 6, Jurisdictional Resources.

Table 5
Jurisdictional Resources in the Rural/Conservation Area (Acres)

Jurisdictional Resource	ACOE/RWQCB/CDFW	CDFW-only	Total Acreage
<i>Non-wetland Waters/Streambed</i>			
Alluvial Fan	269.08	—	269.08
Basin	3.76	—	3.76
Concrete-lined Channel	0.15	—	0.15
Dam	12.15	—	12.15
Ephemeral Drainage	23.41	—	23.41
Non-wetland Waters/Streambed	28.30	21.23	49.53
<i>Non-wetland Waters/Streambed Subtotal</i>	<i>343.65</i>	<i>21.23</i>	<i>364.88</i>
<i>Wetland/Riparian Areas</i>			
California sycamore woodland (<i>Platanus racemosa</i>)	—	139.68 ²	139.68
California sycamore-coast live oak	—	8.59 ²	8.59
<i>Wetland/Riparian Subtotal</i>	<i>—</i>	<i>148.27</i>	<i>148.27</i>
Total jurisdictional area¹	343.65	169.50	513.15

Notes:

¹ Acreage may not total due to rounding.

² This total does not match the vegetation acreage total for this community. To prevent double counting, the overlap between non-wetland-waters and wetlands was only accounted for once.

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4.3 Plants and Wildlife

A total of 222 species of vascular plants—166 native species (75%) and 56 non-native species (25%)—were recorded during surveys on the NA and within the Etiwanda Heights Preserve in the RCA. All plant species observed during field surveys on the NA and within the Etiwanda Heights Preserve are listed in Appendix C.

A total of 68 birds, 6 reptiles, 9 invertebrate, and 17 mammals were audibly detected or observed during surveys on the NA and within the Etiwanda Heights Preserve. Common bird species detected or observed include the native, red-tailed hawk (*Buteo jamaicensis*), northern mocking bird (*Mimus polyglottos*), California scrub-jay (*Aphelocoma californica*), California towhee (*Melospiza crissalis*), and common raven (*Corvus corax*). The site provides ample burrowing and foraging habitat for lizards and snakes; common reptiles observed during field surveys included common side-blotched lizard (*Uta stansburiana*) and western fence lizard (*Sceloporus occidentalis*). Common invertebrates observed during field surveys included western pygmy-blue (*Brephidium exile*) butterfly and Bernardino square-spotted blue (*Euphilotes battoides Bernardino*). A total of 11 rodent species were captured during the small mammal trapping surveys. Mammals observed during other field surveys included California ground squirrel (*Spermophilus (Otospermophilus) beecheyi*) and desert cottontail (*Sylvilagus audubonii*). All wildlife species observed during field surveys on the NA and RCA sites are listed in Appendix D.

4.4 Special-Status/Regulated Resources

The following resources are discussed in this section: (1) plant and animal species present or potentially present on the EHNCP Area that are given special recognition by federal, state, or local resource agencies and environmental organizations owing to declining, limited, or threatened populations, that are the result, in most cases, of habitat reduction; (2) habitat areas that are unique, of relatively limited distribution, or of particular value to wildlife; and (3) vegetation communities that are unique, of relatively limited distribution, or of particular value to wildlife.

Sources used for determination of special-status biological resources are as follows:

- State- and federally listed plant species (CDFW 2017b)
- CRPR 1B, 2, 3, and 4 species (CNPS 2017)
- Special Vascular Plants, Bryophytes, and Lichens List (CDFW 2017c)
- CDFW Natural Communities (CDFG 2010b)
- Special Animals List (CDFW 2017b)
- CNDDDB (CDFW 2017a)

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4.4.1 Special-Status Plant Species

Plant species are considered special-status if they have been listed or proposed for listing by the federal or state government as rare, endangered, or threatened (“listed species”) or have a CRPR of 1–4. Special-status plants are assigned to one of six CRPR categories.

CRPR 1A:	Plants presumed extirpated in California and either rare or extinct elsewhere
CRPR 1B:	Plants rare, threatened, or endangered in California and elsewhere
CRPR 2A:	Plants presumed extirpated in California, but common elsewhere
CRPR 2B:	Plants rare, threatened, or endangered in California, but more common elsewhere
CRPR 3:	Plants about which more information is needed – a review list
CRPR 4:	Plants of limited distribution – a watch list)

In addition to the CRPR, CNPS assigns threat categories to the lists as follows:

0.1—Seriously threatened in California (more than 80% of occurrences threatened/high degree and immediacy of threat) (e.g., 1B.1 would be a plant rare, threatened, or endangered in California and elsewhere and more than 80% of the occurrences threatened or with a high degree of threat).

0.2—Moderately threatened in California (20% to 80% occurrences threatened/moderate degree and immediacy of threat)

0.3—Not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known)

It should be noted that the CNPS rarely assigns a threat category of 0.1 to CRPR 4 plants because they generally have large enough populations to not be significantly threatened in California.

Four special-status plant species were detected within the NA or the RCA Etiwanda Heights Preserve in 2017, including Parry’s spineflower (*Chorizanthe parryi* var. *parryi*; CRPR 1B.1), intermediate mariposa lily (*Calochortus weedii* var. *intermedius*; CRPR 1B.2), Plummer’s mariposa lily (*Calochortus plummerae*; CRPR 4.2), and California walnut (*Juglans californica*; CRPR 4.2) (Table 6). Figure 7, Special-Status Species, shows the results of the 2017 survey for special-status plants and descriptions of each species are include below.

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Table 6
Special-Status Plant Species Observed within the Neighborhood Area and RCA
Etiwanda Heights Preserve

Common Name (Scientific Name)	Status (Federal/State/CRPR)	Total Acreage	Total Individuals
Intermediate mariposa lily (<i>Calochortus weedii</i> var. <i>intermedius</i>)	None/None/1B.2	0.07	73
Parry's spineflower (<i>Chorizanthe parryi</i> var. <i>parryi</i>)	None/None/1B.1	1.20	18,883
Plummer's mariposa lily (<i>Calochortus plummerae</i>)	None/None/4.2	<0.01	9
California walnut (<i>Juglans californica</i>)	None/None/4.2	0.01	6
Total		1.29	18,970

Parry's Spineflower

Parry's spineflower is a CRPR 1B.1 species, indicating that it is rare or endangered in California and elsewhere and seriously endangered in California. Parry's spineflower occurs from Los Angeles County southeast to San Bernardino and Riverside Counties (CNPS 2017). This annual herb blooms from April to June and occurs in rocky or sandy opening within chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland from 275 to 1,220 meters above mean sea level (902 to 4,002 feet) (CNPS 2017). Approximately 18,883 individuals of Parry's spineflower were identified in 2017. Parry's spineflower populations were located along the alluvial benches within scale broom scrub, California sagebrush–California buckwheat scrub, California sagebrush–California buckwheat–white sage, and hoary leaf ceanothus–chamise (Figure 7, Special-Status Species). This species was observed in 145 separate occurrences ranging in size from 1 individual to approximately 8,000 individuals.

Intermediate Mariposa Lily

Intermediate mariposa lily is a CRPR 1B.2 species, indicating that it is fairly endangered in California but not federally or state-listed. Intermediate mariposa lily occurs from Los Angeles and Orange Counties east to Riverside and San Bernardino Counties (CNPS 2017). This bulbiferous herb blooms from May to July and occurs in rocky and calcareous soils in chaparral, coastal scrub, and valley and foothill grasslands from 105 to 855 meters above mean sea level (344 to 2,805 feet) (CNPS 2017). Approximately 73 individuals of Intermediate mariposa lily were identified in 2017. These were primarily located within openings of hoary leaf ceanothus–chamise; however, populations were also located within scale broom scrub and California sagebrush scrub (Figure 7, Special-Status Species). This species was observed in 60 separate occurrences ranging

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in size from 1 to 7 individuals. It is assumed hybrids between intermediate mariposa lily and Plummer's lily were observed in a few places on site.

Plummer's Mariposa Lily

Plummer's mariposa lily is a CRPR 4.2 species, indicating that it has a limited distribution in California. Plummer's mariposa lily occurs from Ventura County south to Los Angeles and Orange Counties and east to San Bernardino and Riverside Counties (CNPS 2017). This bulbiferous herb blooms from May to July and occurs in granitic, rocky soils in chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, and valley and foothill grasslands from 100 to 1,700 meters above mean sea level (328 to 5,577 feet) (CNPS 2017). Approximately nine individuals of Plummer's mariposa were identified in 2017 within scale broom scrub, California sagebrush scrub, and hoary leaf ceanothus–chamise (Figure 7, Special-Status Species). It is assumed hybrids between intermediate mariposa lily and Plummer's lily were observed in a few places on site.

California Walnut

California walnut is a CRPR 4.2 species, indicating that it has a limited distribution in California. California walnut occurs from Santa Barbara County south to San Diego County (CNPS 2017). This perennial deciduous tree blooms from March to August and occurs in alluvial habits in chaparral, cismontane woodland, coastal scrub, and riparian woodlands from 50 to 900 meters above mean sea level (164 to 2,952 feet) (CNPS 2017). Approximately six individuals of California walnut were identified in 2017 within California sagebrush scrub located in the southeastern portion of the study area, south of Banyan Street (Figure 7, Special-Status Species).

No other species have potential to occur within the NA or within the RCA Etiwanda Heights Preserve (Appendix E). However, there are 38 special-status plant species with moderate or high potential to occur within the RCA, in areas outside the Etiwanda Heights Preserve. Appendix E provides an analysis of special-status plant species potential to occur on site based on geography, topography, vegetation communities, soils, and survey results.

There is no USFWS critical habitat for special-status plants mapped within or adjacent to the EHNCP Area (USFWS 2017).

4.4.2 Special-Status Wildlife Species

Special-status wildlife species are those listed as federal/state endangered or threatened, proposed for listing, fully protected by CDFW, California Watch List (WL), or California Species of Special Concern (SSC). Protocol-level surveys were conducted for coastal California gnatcatcher and San Bernardino kangaroo rat within the NA and within the RCA Etiwanda Heights Preserve.

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All special-status wildlife species that were observed or for which focused surveys were conducted in the EHNCP Area are described below, and sightings are shown on Figure 7, Special-Status Species. For special-status species with potential to occur within the NA and RCA sites, see Appendix F.

Coastal California Gnatcatcher (*Poliophtila californica californica*), FT/SSC

The coastal California gnatcatcher is federally listed as threatened (FT), and a California SSC. This species occurs in coastal Southern California and Baja California year round, where it depends on a variety of arid scrub habitats. The coastal California gnatcatcher occurs mainly on cismontane slopes (coastal side of the mountains) in Southern California, ranging from Ventura and northern Los Angeles counties south through the Palos Verdes Peninsula to Orange, Riverside, San Bernardino, and San Diego Counties. The species' range continues south to El Rosario, Mexico.

Coastal California gnatcatcher typically occurs in or near coastal scrub vegetation that is composed of relatively low growing, dry season deciduous and succulent plants. Characteristic plants of this community include coastal sagebrush, various species of sage, California buckwheat, lemonade sumac (*Rhus integrifolia*), California brittlebush, and cactus (e.g., *Opuntia* spp.). During the 2017 survey effort, approximately 800 acres of suitable habitat was surveyed within the NA and the RCA Etiwanda Heights Preserve, and no coastal California gnatcatchers were detected (Appendix A).

San Bernardino Kangaroo Rat (*Dipodomys merriami parvus*), FE/SSC

The San Bernardino kangaroo rat is federally listed as endangered (FE), and a California SSC. This species occurs in the San Bernardino Valley in San Bernardino County to the Meniffee Valley in Riverside County (Hall and Kelson 1959; Lidicker 1960). The San Bernardino kangaroo rat occupies alluvial sage scrub, coastal sage scrub, and chaparral vegetation types (Braden and McKernan 2000). In addition to alluvial fans, this species is typically found in habitat consisting of relatively flat masses of loose rock, gravel, and sand deposited by a stream, including areas such as floodplains, washes, areas with braided channels, and in adjacent upland areas (USFWS 2007).

During the habitat assessment for the San Bernardino kangaroo rat trapping, the most suitable areas (but still considered low quality) occur in the southern portion of the NA, particularly west and north of Los Osos High School. The areas within the NA are considered low quality for the following reasons: disconnected from active alluvial processes; habitat is mature (most areas dominated by chamise), with shrub cover greater than the preferred range; in areas that lack shrub cover, soils have a high degree of loam, allowing for the establishment of near 100% cover of forbs and non-native grasses; high degree of boulders and cobble in existing channels and a general lack of sandy substrate; and site lacks proximity to a source population with suitable habitat (i.e., there are no substantial high quality habitat areas nearby).

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Trapping did occur at the very southern edge of the RCA; however, this area is generally not suitable for San Bernardino kangaroo rat for the following reasons: site contains steep slopes and uneven terrain that do not allow the formation of some of the sandy benches/terraces that comprise high quality habitat; the topography promotes deposition of boulder and cobble with transport downstream of sands; substrate is very rocky and imbedded with a predominance of boulder and cobble, not friable sandy soils that are preferred by the species; in areas that lack shrub cover, soils contain a finer substrate material allowing for the establishment of near 100% cover of forbs and non-native grasses; and site lacks proximity to a source population with suitable habitat (i.e., there are no substantial high quality habitat areas nearby).

No San Bernardino kangaroo rats were observed during any of the small mammal trapping surveys within the EHNCP Area. There are approximately 758 acres of USFWS Critical Habitat for San Bernardino kangaroo rat present within the NA, covering the majority of the site (Figure 4). Within the RCA site, there are 2,056 acres of USFWS Critical Habitat for San Bernardino kangaroo rat present, located within the southern half of the site (Figure 4). A summary of the small mammal trapping results is presented in Table 7 and shown on Figure 4, San Bernardino Kangaroo Rat Trapping. Appendix B gives the full trapping results.

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Table 7
Summary of Small Mammal Trapping Captures

Trap Site	Date	Species Captured ¹										
		NWPM	DUKR	HOMO	BRWO	DEWO	BEWO	BRDM	CCDM	NBDM	NADM	WHMO
1–6	11/17–22/2015	49	13			7			37		40	
7–12	12/5–10/2015	198			11					164	56	
13–17	12/6–11/2015	25	12			3			29		41	
18–23	2/6–10/2016	74			6					190	127	
24–29	3/2–10/2016	62	11	1	4		5	4		110	18	
30–35	3/2–6/2016	30	4			2			35		39	2
36–41	3/16–20/2016	99	12		3					216	48	
Total²		537	52	1	24	12	5	4	101	680	369	2

Notes:

- ¹ NWPM = northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*)
 DUKR = Dulzura kangaroo rat (*Dipodomys simulans*)
 HOMO = house mouse (*Mus musculus*)
 BRWO = Bryant's woodrat (*Neotoma bryanti*)
 DEWO = desert woodrat (*Neotoma lepida*)
 BEWO = big-eared woodrat (*Neotoma macrotis*)
 BRDM = brush deermouse (*Peromyscus boylii*)
 CCDM = cactus deermouse (*Peromyscus eremicus*)
 NBDM = Northern Baja deermouse (*Peromyscus fraterculus*)
 NADM = North American deermouse (*Peromyscus maniculatus*)
 WHMO = western harvest mouse (*Reithrodontomys megalotis*)

- ² Totals do not account for individuals trapped more than once.

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Burrowing Owl (*Athene cunicularia*), SSC

The burrowing owl is a California SSC. It occurs throughout North and Central America west of the eastern edge of the Great Plains south to Panama (County of Riverside 2008). In California, burrowing owls are yearlong residents of flat, open, dry grassland and desert habitats at lower elevations (Bates 2006). They can inhabit annual and perennial grasslands and scrublands characterized by low growing vegetation. They may be found in areas that include trees and shrubs if the cover is less than 30% (Bates 2006); however, they prefer treeless grasslands. Although burrowing owls prefer large, contiguous areas of treeless grasslands, they have also been known to occupy fallow agriculture fields, golf courses, cemeteries, road allowances, airports, vacant lots in residential areas and university campuses, and fairgrounds when nest burrows are present (Bates 2006). They typically require burrows made by fossorial mammals, such as California ground squirrels.

No focused surveys for burrowing owl were conducted on either the NA or RCA sites, and no burrowing owls were observed incidentally during other surveys. However, there is potential for this species to occur on site in open areas where burrows are present. Because burrowing owls prefer open areas, it is assumed that there are approximately 185.53 acres of land that might be suitable for them within the NA and the RCA Etiwanda Heights Preserve. This includes the disturbed and developed land covers, but not the sage scrub and chaparral vegetation communities. Within this acreage, only those areas that support appropriately sized burrow resources (e.g., greater than 11 centimeters in diameter), would be suitable.

Loggerhead Shrike (*Lanius ludovicianus*), BCC/SSC

The loggerhead shrike is a USFWS Bird of Conservation Concern (BCC) and a California SSC. It is widespread throughout the United States, Mexico, and portions of Canada (Humple 2008). The species is a yearlong resident in most of the United States, including from California east to Virginia and south to Florida, and in Mexico. In California, while shrikes are widespread at the lower elevations in the state, the largest breeding populations are located in portions of the Central Valley, the Coast Ranges, and the southeastern deserts (Humple 2008).

Preferred habitats for loggerhead shrikes are open areas that include scattered shrubs, trees, posts, fences, utility lines, or other structures that provide hunting perches with views of open ground, as well as nearby spiny vegetation or man-made structures (such as the top of chain-link fences or barbed wire) that provide a location to impale prey items for storage or manipulation (Humple 2008). Loggerhead shrikes occur most frequently in riparian areas along the woodland edge, grasslands with sufficient perch and butcher sites, scrublands, and open canopied woodlands, although they can be quite common in agricultural and grazing areas, and can sometimes be found in mowed roadsides, cemeteries, and golf courses. Loggerhead shrikes occur only rarely in heavily

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urbanized areas. For nesting, the height of shrubs and presence of canopy cover are most important (Yosef 1996). Loggerhead shrikes were observed during field surveys within northwestern and northeastern portions of the NA (Figure 7, Special-Status Species). There are 979.14 acres of suitable foraging and nesting habitat for loggerhead shrikes within the NA and the RCA Etiwanda Heights Preserve.

Prairie Falcon (*Falco mexicanus*), WL/BCC

Prairie falcon is a BCC and CDFW WL species. Prairie falcons occur in a wide variety of habitats including grassland, savanna, rangeland, agriculture, desert scrub, alpine meadows. This species typically nests on cliffs or bluffs. Suitable foraging habitat for this species is present within the EHNCP Area. This species was observed in the northwestern portion of the NA within scale broom scrub (Figure 7, Special-Status Species). It is likely that the individual was using areas within the NA for foraging and potential nesting habitat could occur within the RCA. There are 979.14 acres of suitable foraging habitat for prairie falcon within the NA and the RCA Etiwanda Heights Preserve.

Cooper's Hawk (*Accipiter cooperii*), WL

The Cooper's hawk is a WL species. This species is found throughout California in wooded areas. This species inhabits live oak, riparian, deciduous, or other forest habitats near water. Nesting and foraging usually occur near open water or riparian vegetation. Nests are built in dense stands with moderate crown depths, usually in second-growth conifer or deciduous riparian areas. Cooper's hawks use patchy woodlands and edges with snags for perching while they are hunting for prey such as small birds, small mammals, reptiles, and amphibians within broken woodland and habitat edges (Zeiner et al. 1990). This species was observed in multiple locations throughout the NA (Figure 7, Special-Status Species). There are 979.14 acres of suitable foraging habitat for Cooper's hawk within the NA and the RCA Etiwanda Heights Preserve.

Southern California Rufous-Crowned Sparrow (*Aimophila ruficeps canescens*), WL

The Southern California rufous-crowned sparrow is a WL species. The current distribution of the Southern California rufous-crowned sparrow is restricted to a narrow belt of semiarid coastal sage scrub and sparse chaparral from Santa Barbara south to the northwestern corner of Baja California (Todd 1922; Grinnell 1926; Grinnell and Miller 1944; Bent 1968; Zeiner et al. 1990; Unitt 1984; Collins 1999). The subspecies has also been found on San Martin Island. The Southern California rufous-crowned sparrow is considered a resident throughout its range. No true migratory movements have been recorded, though limited movements to lower elevations in some areas have been reported during especially severe winters (Collins 1999). This species was observed in multiple locations throughout the NA, with the majority along the eastern boundary within scale broom scrub and California sagebrush scrub (Figure 7, Special-

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Status Species). There are 979.14 acres of suitable nesting habitat for Southern California rufous-crowned sparrow within the NA and the RCA Etiwanda Heights Preserve.

Northern Harrier (*Circus cyaneus*), SSC

The northern harrier is an SSC species. Northern harriers use a wide variety of open habitats in California including deserts, coastal sand dunes, pasturelands, croplands, dry plains, grasslands, estuaries, flood plains, and marshes (Macwhirter and Bildstein 2011). This species can also forage over coastal sage scrub or other open scrub communities. Nesting areas are associated with marshes, pastures, grasslands, prairies, croplands, desert shrub-steppe, and riparian woodland (Macwhirter and Bildstein 2011). Winter habitats similarly include a variety of open habitats dominated by herbaceous cover. Northern harrier populations are most concentrated in areas with low vegetation. This species was observed in two locations, including the northwestern and southeastern portion of the NA within scale broom scrub and disturbed habitat (Figure 7, Special-Status Species). There are 979.14 acres of suitable foraging habitat for northern harrier within the NA and the RCA Etiwanda Heights Preserve.

Rufous Hummingbird (*Selasphorus rufus*), BCC

The rufous hummingbird is a BCC species. Rufous hummingbirds use a wide variety of nectar-producing flower habitats, including valley foothill hardwood, valley foothill hardwood-conifer, riparian, chaparral, and montane riparian, aspen, and high mountain meadows (Zeiner et al. 1990). This species seasonally migrates south to Southern California. Rufous hummingbirds build open cup nests on sloping branches near the group (Harrison 1978). Habitat for this species also includes gardens and orchards. This species was observed in two locations within the NA, including the southeastern and southwestern corners (Figure 7, Special-Status Species). There are 979.14 acres of suitable nesting habitat for rufous hummingbird within the NA and the RCA Etiwanda Heights Preserve.

Costa's Hummingbird (*Calypte costae*), BCC

The Costa's hummingbird is a BCC species. Costa's hummingbirds occurring in arid habitats in California, including desert wash, edges of desert riparian and valley foothill riparian, coastal scrub, desert scrub, desert succulent shrub, lower-elevation chaparral, and palm oasis (Zeiner et al. 1990). This species nests at a height of approximately 1.5 meters (5 feet) in a variety of trees, cacti, shrubs, woody forbs, and vines (Woods 1927; Bent 1940). Costa's hummingbird migrates and is most common and widespread in Southern California. This species was observed in one location in the northeastern corner of the NA within scale broom scrub (Figure 7, Special-Status Species). There are 979.14 acres of suitable nesting habitat for Costa's hummingbird within the NA and the RCA Etiwanda Heights Preserve.

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Lawrence's Goldfinch (*Spinus lawrencei*), BCC

The Lawrence's goldfinch is a BCC species. Lawrence's goldfinch occurs in valley foothill hardwood, valley foothill hardwood-conifer, desert riparian, palm oasis, pinyon-juniper, and lower montane habitats (Zeiner et al. 1990). The species breeds in open oak or other arid woodland and chaparral near water and builds a nest in dense foliage (Zeiner et al. 1990; Grinnell and Miller 1944). Lawrence's goldfinch seasonally migrates through California and winters in southwestern states and northern Mexico (Zeiner et al. 1990). This species was observed in one location in the southeastern corner of the NA within disturbed habitat (Figure 7, Special-Status Species). There are 979.14 acres of suitable nesting habitat for Lawrence's goldfinch within the NA and the RCA Etiwanda Heights Preserve.

Northwestern San Diego Pocket Mouse (*Chaetodipus fallax fallax*), SSC

The northwestern San Diego pocket mouse is an SSC species. Northwestern San Diego pocket mouse occurs in coastal scrub, chamise-redshank chaparral, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon-juniper, and annual grassland (Zeiner et al. 1990). This species ranges in San Diego County within arid coastal and desert border areas, as well as Riverside and San Bernardino Counties. The elevation range for northwestern San Diego pocket mouse is from sea level to 4,500 feet (1,350 meters) and is a common resident of sandy herbaceous areas (Zeiner et al. 1990). This species was observed during small mammal trapping surveys in all 41 trapping sites throughout the NA and the southern portion of the RCA (Figure 7, Special-Status Species). There are 979.14 acres of suitable habitat for northwestern San Diego pocket mouse within the NA and the RCA Etiwanda Heights Preserve.

San Diegan Tiger Whiptail (*Aspidoscelis tigris stejnegeri*), SSC

The San Diegan tiger whiptail is an SSC species. This species is found in coastal Southern California, mostly west of the Peninsular Ranges and south of the Transverse Ranges, north into Ventura County, and south into Baja California, Mexico (Lowe et al. 1970; Stebbins 2003).

The tiger whiptail (*A. tigris*) is found in a variety of habitats, primarily in areas where plants are sparse and there are open areas for running. According to Stebbins (2003), the species ranges from deserts to montane pine forests where it prefers warmer and drier areas. The species is also found in woodland and streamside growth, and it avoids dense grassland and thick shrub growth. This species was observed in multiple locations along the eastern boundary and within the southwestern portion of the NA (Figure 7, Special-Status Species). There are 979.14 acres of suitable habitat for San Diegan tiger whiptail within the NA and the RCA Etiwanda Heights Preserve.

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Blainville's Horned Lizard (*Phrynosoma blainvillii*), SSC

Blainville's horned lizard is an SSC species. This species inhabits valley-foothill hardwood, conifer and riparian habitats, pine-cypress, juniper, and annual grassland habitats (Zeiner et al. 1988). This species occurs in Sierra Nevada foothills and throughout the central and Southern California coast, and forages on the ground in open areas between shrubs. The species' elevation range extends from sea level to 6,000 feet in the mountains of Southern California. This species was observed in the southern portion of the NA (Figure 7, Special-Status Species). There are 979.14 acres of suitable habitat for Blainville's horned lizard within the NA and the RCA Etiwanda Heights Preserve.

4.5 Wildlife Corridors and Movement

Wildlife corridors are linear landscape elements that provide for wildlife species movement and dispersal between two or more habitats (City of Rancho Cucamonga 2010a). Wildlife corridors contribute to population viability by assuring continual exchange of genes between populations, providing access to adjacent habitat areas for foraging and mating, and providing routes for recolonization of habitat after local extirpation or ecological catastrophes (e.g., fires). Wildlife corridors are usually bound by development or areas unsuitable for wildlife, but contain enough food, cover, and/or water to facilitate wildlife movement between habitat patches and prevent isolation of populations (City of Rancho Cucamonga 2010a). Travel routes are landscape features (i.e., ridgelines, drainages, canyons, or riparian areas) that are used by wildlife to gain access to essential resources (City of Rancho Cucamonga 2010a).

Both the NA and the RCA contain large blocks of open space that offer suitable habitat for wildlife movement and life history needs (Figure 8, Wildlife Corridors and Linkages). However, neither the NA nor RCA functions as a corridor due to both areas lacking physical constraints that would prevent wildlife movement. The NA is surrounded on three sides by development, so the only wildlife movement that could occur through the site would be from the RCA. The RCA contains a contiguous bloc of conservation areas identified in Chapter 6 of the Rancho Cucamonga General Plan (City of Rancho Cucamonga 2010a), the North Etiwanda Preserve Management Plan (USFWS and CDFG 2010) and various mitigation lands (Figure 8, Wildlife Corridors and Linkages). However, once open space areas become constrained by development, the remaining features can become wildlife corridors as long as they provide resources and do not contain obstacles that would prevent wildlife movement (City of Rancho Cucamonga 2010a). The NA has been sited adjacent to existing development to allow for the concentration of habitat within the RCA Etiwanda Heights Preserve into one large habitat block and to maintain the characteristics that are preferred by wildlife to allow for movement through the site (i.e., connectivity to the RCA).

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Additionally, the EHNCP Area is within the San Gabriel–San Bernardino Connection as identified by the South Coast Missing Linkages project (Penrod et. al 2006) (Figure 8, Wildlife Corridors and Linkages). This broad-scale linkage is important for regional wildlife connectivity between two expansive areas of the Angeles and San Bernardino National Forests and provides live-in and move-through habitat for a number of species occurring in the area (Penrod et. al 2006). Habitat linkages join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation. Habitat linkages provide a potential route for gene flow and long-term dispersal of plants and animals. They may also serve as primary habitat for smaller animals, such as reptiles and amphibians. Habitat linkages may be continuous habitat or discrete habitat islands that function as stepping stones for dispersal.

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5 IMPACT ANALYSIS

This Biological Technical Report analyzes the significance of impacts occurring within the NA and on privately owned lands located within the RCA to sensitive vegetation communities, jurisdictional resources, special-status plant species, special-status wildlife species, wildlife corridors, and regional resource planning. For planning purposes, this analysis assumes that the potential impacts will occur within the NA, which concentrates and places the impacts within lower quality habitat, and on privately owned lands located within the RCA, although exact impact locations and amounts are unknown at this time. However, this is not the final design plan and impacts may change slightly. Although the impacts may be refined during the final design, the mitigation measures outlined below would still apply to reduce impacts to less than significant.

5.1 Definition of Impacts

This section defines the types of impacts that would occur as are result of project implementation, including direct permanent impacts and indirect impacts.

Direct permanent impacts refer to the absolute and permanent physical loss of a biological resource due to project construction activities, such as clearing and grading, and through the fuel modification zone. This Biological Technical Report analyzes direct permanent impacts in four ways: (1) permanent loss of vegetation communities, land covers, and general wildlife and their habitat; (2) permanent loss of or harm to individuals of special-status plant and wildlife species; (3) permanent loss of suitable habitat for special-status species; and (4) permanent loss of wildlife movement and habitat connectivity in the project area.

Indirect impacts are reasonably foreseeable effects caused by project implementation on remaining or adjacent biological resources outside the direct construction disturbance zone. Indirect impacts may occur during construction (i.e., short-term construction related indirect impacts) or later in time as a result of the development (i.e., long-term, or operational, indirect impacts). Indirect impacts may affect areas within the defined project area but outside the construction disturbance zone, including open space and areas outside the project area, such as downstream effects. Indirect impacts include short-term effects immediately related to construction activities and long term or chronic effects related to the human occupation of developed areas (i.e., development-related long-term effects).

Cumulative impacts refer to the combined environmental effects of the Project and other relevant projects. In some cases, the impact from a single project may not be significant, but when combined with other projects, the cumulative impact may be significant. Analysis of cumulative impacts is based on past, present, and reasonably foreseeable future projects that may be constructed or commence operation during the period of activity associated with the Project.

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For each of the following impact sections, direct and indirect impacts for biological resources are identified and a significance determination is made for each impact. For each significant impact, mitigation measures that would reduce the impact to less than significant are proposed. The full descriptions of the proposed mitigation measures are provided in Section 6 below.

5.2 Explanation of Findings of Significance

The following guidelines for determining significance of impacts are based on Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.). A significant impact on biological resources would occur if the proposed project would result in any of the following conditions:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service (**BIO-1 Threshold**).
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service (**BIO-2 Threshold**).
- Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means (**BIO-3 Threshold**).
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites (**BIO-4 Threshold**).
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (**BIO-5 Threshold**).
- Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan (**BIO-6 Threshold**).

Impacts to special-status vegetation communities, plants, wildlife species, and jurisdictional resources, including wetlands and waters, must be quantified and analyzed to determine whether such impacts are significant under CEQA. CEQA Guidelines Section 15064(b) states that an ironclad definition of “significant” effect is not possible because the significance of an activity may vary with the setting. Appendix G of the CEQA Guidelines, however, provides “examples of consequences which may be deemed to be a significant effect on the environment” (CEQA Guidelines, Section 15064[e]). These effects include substantial effects on rare or endangered

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species of animals or plants or the habitat of the species. CEQA Guidelines Section 15065(a) is also helpful in defining whether a project may have “a significant effect on the environment.”

The significance of impacts to biological resources was assessed by comparing the potential changes resulting from the proposed project to the significance thresholds. An evaluation of whether or not an effect on biological resources would be “substantial” with respect to the significance thresholds generally considers the following:

- amount and/or extent of the resource (numbers, acres, etc.) to be affected;
- the relative biological value (rarity, functions, and values) and/or sensitivity status of the resource and its relevance within a specified geographical area;
- the type and severity of impact, (i.e., would the project adversely affect wildlife through mortality, injury, displacement, or habitat loss, or adversely impact vegetation through destruction of a sensitive plant population?);
- timing of the impact, (i.e., would the impact occur at a critical time in the life cycle of a special-status plant or animal, such as breeding, nesting, or flowering periods?);
- duration of the impact, (i.e., whether the impact is temporary or permanent); and
- project design attributes or other applicant-proposed measures included as part of the overall proposed project that would avoid or minimize potential impacts on biological resources.

Mitigation measures for impacts to biological resources were developed by reviewing the type of impacts identified (direct versus indirect) and the timing of actions that would result in an impact to biological resources.

5.3 Neighborhood Area Impacts

5.3.1 Vegetation Communities

5.3.1.1 *Direct Impacts*

Permanent direct impacts to vegetation communities in the NA are summarized in Table 8 and shown on Figure 9, Impacts to Biological Resources. A total of 827.82 acres will be impacted on the NA site, including 658.41 acres of scrub and chaparral habitat and 169.40 acres of disturbed and developed lands. As stated above, CDFW state rankings of 1, 2, or 3 are considered high priority for inventory or sensitive, and impacts to these communities typically require mitigation. Within the NA, two of the vegetation communities (scale broom scrub (including disturbed) and white sage scrub) are considered sensitive; therefore, impacts to 376.21 acres with NA implementation would be significant under CEQA and would require mitigation at a 2:1 ratio for

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scale broom scrub (including disturbed) and a 2:1 ratio for white sage scrub, subject to agency approval. A total of 752.42 acres would be required for mitigation.

Mitigation for significant impacts to sensitive vegetation communities would occur through the acquisition of lands within the RCA (mitigation measure (MM-) BIO-1). EHNCP recommends that creation of a new 337-acre preserve—the Etiwanda Heights Preserve within the RCA. This 337-acre area is a portion of the surplus property that the County proposes to sell to a developer of the NA and is located immediately north of the NA. The proposed Etiwanda Heights Preserve is composed of two areas: a) 200 acres of property currently encumbered with an Open Space Easement as noted in Section 3.6, which allows intense recreational uses such as sport parks, golf courses, and equestrian centers, and the EHNCP recommends that this 200 acres be permanently conserved as habitat, rather than subject to any number of “recreational uses” that would remove existing habitat; and b) 137-acres of adjoining area directly to the west, which the EHNCP recommends that this adjacent area also be permanently conserved as a habitat. A total of 217.61 acres of scale broom scrub would be conserved within the RCA Etiwanda Heights Preserve with project implementation.

Table 8
Impacts to Vegetation Communities and Land Cover Types within the
Neighborhood Area

Habitat Types/ Vegetation Communities	Alliance	Association	Total Impacts ¹ (Acres)
California buckwheat scrub	<i>Eriogonum fasciculatum</i>	(NA)	12.45
California buckwheat–white sage scrub	<i>Eriogonum fasciculatum</i> – <i>Salvia apiana</i>	(NA)	2.77
California sagebrush scrub	<i>Artemisia californica</i>	(NA)	60.16
California sagebrush–California buckwheat	<i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i>	(NA)	35.14
California sagebrush–California buckwheat– white sage	<i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i>	<i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> – <i>Salvia apiana</i>	31.42
Deer weed scrub	<i>Lotus scoparius</i>	(NA)	–
Hairy yerba santa scrub	(NA)	(NA)	–
Scale broom scrub (includes disturbed)	<i>Lepidospartum squamatum</i>	(NA)	373.20
White sage scrub	<i>Salvia apiana</i>	(NA)	3.01
Chamise chaparral	<i>Adenostoma fasciculatum</i>	(NA)	15.74
Chaparral whitethorn chaparral	<i>Ceanothus leucodermis</i>	(NA)	–
Hoary leaf ceanothus–chamise	<i>Ceanothus crassifolius</i>	<i>Ceanothus crassifolius</i> – <i>Adenostoma fasciculatum</i>	119.56

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Table 8
**Impacts to Vegetation Communities and Land Cover Types within the
Neighborhood Area**

Habitat Types/ Vegetation Communities	Alliance	Association	Total Impacts ¹ (Acres)
Birch leaf mountain mahogany chaparral	<i>Cercocarpus montanus</i>	(NA)	4.97
Birch leaf mountain mahogany–California buckwheat	<i>Cercocarpus montanus</i>	<i>Cercocarpus montanus</i> – <i>Eriogonum fasciculatum</i>	–
<i>Scrub and chaparral subtotal</i>			658.41
Urban/Developed	(NA)	(NA)	39.15
Disturbed Habitat	(NA)	(NA)	130.25
<i>Disturbed and developed subtotal</i>			169.40
Total			827.82

Notes:

¹ Impacts are considered permanent and includes the fuel modification zone.

5.3.1.2 Indirect Impacts

Short-term indirect impacts to vegetation communities would primarily result from construction-related dust, which could disrupt plant vitality in the short term, as well as soil erosion and runoff. Long-term indirect impacts on vegetation communities would most likely occur as a result of trampling of vegetation by humans and domestic pets, invasion by exotic species, alteration of the natural fire regime, and exposure to urban pollutants (e.g., fertilizers, pesticides, herbicides, and other hazardous materials). Indirect impacts to vegetation communities would be significant absent mitigation and would be avoided with the implementation of mitigation measure MM-BIO-9, which would require impacts to occur only within the disturbance limits, use of best management practices (BMPs) and erosion control, control of invasive weeds, and avoiding the use of toxic substances that could affect plant life.

5.3.2 Jurisdictional Resources

5.3.2.1 Direct Impacts

There would be permanent impacts to 71.38 acres of non-wetland waters or streambeds under ACOE, RWQCB, and/or CDFW jurisdiction within the NA site. Impacts to jurisdictional resources would be considered significant absent mitigation and would require obtaining the appropriate agency permits, as stated in Project Requirement (PR) PR-BIO-1. Direct impacts to these jurisdictional resources would be reduced to less than significant through MM-BIO-2, which would require conservation and restoration of jurisdictional resources at a minimum 1:1 ratio (ratio may increase through permitting discussions with the ACOE/RWQCB/CDFW) within the RCA

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or elsewhere. Table 9 summarizes the impacts to non-wetland waters and/or streambeds within the NA, and the features are displayed on Figure 9, Impacts to Biological Resources.

Table 9
Impacts to Jurisdictional Resources within the Neighborhood Area

Jurisdictional Resource	Total Impacts ¹ (Acres)
<i>ACOE/RWQCB/CDFW</i>	
Non-wetland Waters/Streambed	71.22
<i>CDFW-only</i>	
Streambed	0.16
Total jurisdictional acreage¹	71.38

Notes:

¹ Modeling based on 4% annual chance (25-year) floodplain with a minimum depth threshold of 0.2 feet.

5.3.2.2 Indirect Impacts

The EHNCP supports jurisdictional resources regulated by the ACOE, RWQCB, and CDFW. Jurisdictional aquatic resources are typically affected in the short term by dust and construction-related soil erosion and runoff. Indirect impacts to jurisdictional resources would be significant absent mitigation and would be avoided with the implementation of mitigation measure MM-BIO-9, which would require impacts to occur only within the disturbance limits, use of BMPs and erosion control, and avoiding the use of toxic substances that could affect waterways.

5.3.3 Special-Status Plant Species

5.3.3.1 Direct Impacts

Four special-status plant species were observed within the impact areas of the NA. Table 10 summarizes the impacts to the special-status plant species observed, and those impacts are displayed on Figure 9, Impacts to Biological Resources.

Table 10
Impacts to Special-Status Plant Species within the Neighborhood Area

Common Name (Scientific Name)	Status (Federal/State/CRPR)	Individuals/Acreage	
		Total Impacts ¹ (Acreage)	Total Impacts ¹ (Individuals)
Intermediate mariposa lily (<i>Calochortus weedii</i> var. <i>intermedius</i>)	None/None/1B.2	0.07	72
Parry's spineflower (<i>Chorizanthe parryi</i> var. <i>parryi</i>)	None/None/1B.1	1.04	17,491

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Table 10
Impacts to Special-Status Plant Species within the Neighborhood Area

Common Name (Scientific Name)	Status (Federal/State/CRPR)	Individuals/Acreage	
		Total Impacts ¹ (Acreage)	Total Impacts ¹ (Individuals)
Plummer's mariposa lily (<i>Calochortus plummerae</i>)	None/None/4.2	<0.01	8
California walnut (<i>Juglans californica</i>)	None/None/4.2	0.01	6
Total		1.13	17,577

Note:

¹ Impacts are considered permanent and includes the FMZ.

Direct impacts to CRPR 1B.1 and 1B.2 species, including intermediate mariposa lily and Parry's spineflower, would be considered significant because these species are considered rare, threatened, or endangered in California. Impacts to these species would be reduced to less than significant through conservation of lands within the RCA Etiwanda Heights Preserve (containing 1 intermediate mariposa lily individual and 1,391 Parry's spineflower individuals), acquisition of lands within the RCA (MM-BIO-1) and through translocation of these two species as directed by MM-BIO-3.

Direct impacts to CRPR 4 species, including Plummer's mariposa lily and California walnut, are not considered significant because these species are of low sensitivity, and the on-site populations are not significant in terms of the ability for this species to persist (i.e., CRPR 4 species are not considered "rare" from a statewide perspective). In addition, the species do not occur within the impact area in a population that is considered regionally significant and/or are common in the study area. However, acquisition of lands within the RCA (MM-BIO-1) would provide suitable habitat for these species.

5.3.3.2 Indirect Impacts

Most of the indirect impacts to vegetation communities cited above can also affect sensitive plants. During construction of the NA, indirect effects may include dust, which could disrupt plant vitality in the short term, or construction-related soil erosion and runoff. Long-term edge effects could include intrusions by humans and possible trampling of individual plants, invasion by exotic plant and wildlife species, exposure to urban pollutants (fertilizers, pesticides, herbicides, and other hazardous materials), soil erosion, litter, fire, and hydrologic changes (e.g., surface and groundwater level and quality). Indirect impacts to special-status plants would be significant absent mitigation and would be avoided with the implementation of mitigation measure MM-BIO-9, which would require impacts to occur only within the disturbance limits, use of BMPs and erosion control, control of invasive weeds, and avoidance of toxic substances that could affect plant life.

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5.3.4 Special-Status Wildlife Species

5.3.4.1 Direct Impacts

There are 20 special-status wildlife species occurring or have potential to occur within the NA: coastal California gnatcatcher, San Bernardino kangaroo rat, burrowing owl, loggerhead shrike, prairie falcon, Cooper's hawk, southern California rufous-crowned sparrow, Bell's sage sparrow (*Artemisiospiza belli belli*), northern harrier, rufous hummingbird, Costa's hummingbird, Lawrence's goldfinch, northwestern San Diego pocket mouse, pallid bat (*Antrozous pallidus*), American badger (*Taxidea taxus*), Los Angeles pocket mouse (*Perognathus longimembris brevinasus*), San Diegan tiger whiptail, southern California legless lizard (*Anniella stebbinsi*), California glossy snake (*Arizona elegans occidentalis*), and Blainville's horned lizard. Impacts to each special-status wildlife species are discussed below and displayed on Figure 9, Impacts to Biological Resources.

Coastal California Gnatcatcher

The NA and a portion of the RCA containing the Etiwanda Heights Preserve was surveyed for coastal California gnatcatchers during the 2017 Dudek focused surveys (Appendix A). There were no coastal California gnatcatcher observations within the NA. Therefore, impacts to coastal California gnatcatcher are not anticipated. However, because the NA site supports coastal sage scrub communities and other sensitive habitats, a pre-construction survey would be completed to reduce potential impacts to less than significant (MM-BIO-4). Permanent impacts to suitable habitat for coastal California gnatcatcher would be mitigated through MM-BIO-1, which would acquire suitable habitat for coastal California gnatcatcher within the RCA. Additionally, if found during pre-construction surveys, consultation with the USFWS would be required.

San Bernardino Kangaroo Rat

San Bernardino kangaroo rat was not observed during the trapping efforts within the NA and within the very southern portion of the RCA. However, there is potential for this species to occur on site, and approximately 2,813 acres of USFWS Critical Habitat is present within both the NA and RCA. Since the habitat within the NA is considered low quality, as described in Section 4.4.2, the compensatory mitigation ratio for San Bernardino kangaroo rat shall be 1:1, subject to approval by USFWS. Therefore, impacts to 658.41 acres of potentially suitable habitat in the NA, although low quality, would be considered significant absent mitigation. Permanent impacts to suitable habitat for San Bernardino kangaroo rat would be mitigated through MM-BIO-1, which would acquire suitable habitat for San Bernardino kangaroo rat within the RCA. Other possible mitigation opportunities could include future reintroduction of San Bernardino kangaroo rat into conservation areas. All efforts concerning reintroduction would be conducted in consultation with USFWS.

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Separate from, but inclusive of, impacts to suitable habitat as discussed above, impacts to 757.53 acres of unoccupied USFWS Critical Habitat for San Bernardino kangaroo rat would be significant absent the mitigation provided in MM-BIO-1, which would require acquisition of lands containing Critical Habitat for San Bernardino kangaroo rat.

Burrowing Owl

Although no burrowing owls were observed within the NA, there is moderate potential for this species to occur. If present, NA construction would result in 169.40 acres of direct impacts to nesting and foraging habitat for burrowing owl and could directly affect individuals, including their nests, eggs, and young. Therefore, mitigation measure MM-BIO-5, which requires pre-construction surveys for burrowing owl, would be implemented to reduce potential impacts to less than significant. Additionally, potential impacts to burrowing owl would be further reduced through acquisition of lands within the RCA (MM-BIO-1).

Nesting/Foraging Birds

The NA would impact 658.41 acres of suitable nesting and foraging habitat for loggerhead shrike, Cooper's hawk, southern California rufous-crowned sparrow, Costa's hummingbird, rufous hummingbird, Bell's sage sparrow, and Lawrence's goldfinch. Individual adults of these species are unlikely to be directly killed or injured during construction activities because they are highly mobile and would likely leave the area during construction. However, nesting activities could be disrupted if construction occurs during the breeding season as a result of nest abandonment or reduced reproductive success. Nests, eggs, and young could be directly affected by vegetation clearing and grading. These impacts can be reduced to less-than-significant levels through the implementation of MM-BIO-6, which would require pre-construction nesting bird surveys. Additionally, impacts to these species would be further reduced through acquisition of lands within the RCA (MM-BIO-1).

Foraging Raptors

Although prairie falcon and northern harrier are not likely to nest on site due to lack of suitable nesting habitat, the NA would impact 658.41 acres of suitable foraging habitat. Raptor species could forage virtually anywhere on site where prey is available. Permanent impacts to foraging habitat for these species would be significant and would require implementation of MM-BIO-1, which would acquire lands containing suitable foraging habitat and potential nesting habitat within the RCA.

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Small Mammals

The NA would impact 658.41 acres of suitable habitat for pallid bat, American badger, Los Angeles pocket mouse, northwestern San Diego pocket mouse and San Diego desert woodrat (*Neotoma lepida intermedia*).

Pallid bat was not observed but has moderate potential to forage and roost on site. Because the pallid bat may roost on site, roosting activities could be disrupted, especially during the breeding season for pallid bat if maternity roosts were established on site; however, the potential for maternity roosts likely is low because this species tends to establish maternity roosts in cliffs, crevices, and buildings. NA construction could result in direct impacts to foraging and roosting habitat for pallid bat and could directly affect individuals at roost sites. Individual adults foraging on site are unlikely to be directly killed or injured during construction activities because they are highly mobile and only active at night. However, individuals could be killed or harmed if active roost sites were removed, either causing direct mortality or more likely causing abandonment during the day. Direct impacts to foraging habitat would be reduced through the acquisition of lands within the RCA (MM-BIO-1). Direct impacts to individuals, including young, at roost sites, as a result of construction activities would also be significant and would be reduced through MM-BIO-7a, which would require pre-construction surveys for active bat roosts.

American badger was not observed but has moderate potential to occur on site. Individual adults are unlikely to be directly killed or injured during construction activities because they are fairly mobile and should be able to escape from construction areas. The greatest potential for direct impacts to badgers would be mortality of young in a natal den and potentially the mother, which fiercely defends the natal den. While adults are highly mobile and can usually escape human disturbances, young in natal dens and females defending natal dens would be highly vulnerable to injury and mortality during construction. Direct impacts to individuals would be significant absent mitigation provided in MM-BIO-7b, which would require pre-construction surveys for American badgers. Additionally, impacts to these species would be further reduced through acquisition of lands within the RCA (MM-BIO-1).

Northwestern San Diego pocket mouse was observed within all 41 small mammal trapping sites, indicating an abundance of individuals. Los Angeles pocket mouse was not observed during the trapping efforts but has moderate potential to occur due to suitable habitat present on site. San Diego desert woodrat was observed during the small mammal trapping, and woodrat middens were observed throughout the site. These species could be killed or injured during vegetation clearing and grading. Individuals may escape direct impacts but unless they were able to move into adjacent habitat, their chance of survival upon being flushed from a burrow or midden would be low. Therefore, both adults and young dependent on the nest would be highly vulnerable to injury and

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mortality during construction. Direct impacts to northwestern San Diego pocket mouse and Los Angeles pocket mouse individuals would be significant absent the mitigation proposed in MM-BIO-7c, which would require pre-construction trapping surveys. Direct impacts to San Diego desert woodrat individuals would be significant absent mitigation proposed in MM-BIO-7d, which would require pre-construction clearance surveys. Additionally, impacts to these species would be further reduced through acquisition of lands within the RCA (MM-BIO-1).

Reptiles

The NA would result in impacts to 658.41 acres of suitable habitat for San Diego tiger whiptail, southern California legless lizard, California glossy snake, and Blainville's horned lizard. Although some individuals can move quickly over short distances in short bursts, they do not move far, and other individuals are cryptic and slow moving on the surface or are otherwise underground. Therefore, these species are all highly vulnerable to injury and mortality during construction. Impacts to special-status reptiles would be reduced to less than significant by the following measures: MM-BIO-1, which would acquire lands containing suitable habitat within the RCA; MM-BIO-8, which would require pre-construction clearance surveys; and MM-BIO-9, which would require worker awareness training by a qualified biologist for all construction personnel.

5.3.4.2 *Indirect Impacts*

Indirect impacts to special-status wildlife species may include both habitat degradation and effects on individuals. Habitat degradation may occur in the same manner as discussed above for vegetation communities. However, it should be noted that over the long term, indirect impacts on wildlife are expected to be limited along the open space–urban interface because most of the NA is bordered by existing and future development, and there will be a relatively small amount of interface (or “edge”) between development and open space. Dust can impact vegetation surrounding the NA, resulting in changes in the community structure and function. These changes could result in impacts to suitable habitat for special-status wildlife species. Wildlife may also be indirectly affected in the short term and long term by construction-related noise, which can disrupt normal activities, cause lasting stress, and subject wildlife to higher predation risks. Trash and garbage from NA-related activities could attract invasive predators such as ravens, gulls, crows, opossums, skunks, and raccoons that could impact the native wildlife species within the adjacent RCA Etiwanda Heights Preserve. Accidental spills of hazardous chemicals could contaminate surface waters and indirectly impact wildlife species through direct or secondary poisoning and other sub-lethal effects (e.g., endocrine impacts), reduced prey availability, or altering suitable habitat. Indirect impacts to wildlife would be significant absent mitigation and would be avoided with the implementation of mitigation measure MM-BIO-9, which would require impacts to occur only within the disturbance limits, use of BMPs and erosion control, minimizing noise, worker awareness training, trash removal, and avoidance of toxic substances.

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5.3.5 Impacts to Wildlife Corridors and Movement

There are no wildlife corridors within the NA, but activities proposed within the NA would impact areas identified as the San Gabriel–San Bernardino Connection as shown on Figure 9, Impacts to Biological Resources. The EHNCP recommends the conservation of up to 2,463 acres of habitat for wildlife use under permanent conservation management within the RCA. This includes the 337-acre RCA Etiwanda Heights Preserve, and two additional recommended preserve areas, which total approximately 749 acres. These areas have the potential to be directly connected into national forest lands located to the north, thus being potentially directly connected to very large blocks of contiguous habitat through on-going conservation expansion. Therefore, no significant impacts to wildlife corridors or habitat linkages are anticipated. It should be noted that the NA has been sited adjacent to existing development, which adds the RCA Etiwanda Heights Preserve into one large habitat block, no narrower than 1,000 feet, and allows for the continuation of wildlife movement by maintaining connectivity to the RCA.

5.4 Rural/Conservation Area Impacts

In recognition of the pre-existing property rights based on existing County zoning, adoption of the EHNCP would cap development (i.e., permitted development would exclude areas with greater than 30% slope and those occurring within the fault zone) on privately owned lands within the RCA. A maximum of 100 homes and up to an estimated 630 acres of habitat could potentially be impacted by new rural development. The number of potential rural residencies and the acres of habitat impact per residence would be far less than allowed under existing County zoning. This section addresses, qualitatively, the direct and indirect impacts associated with the potential rural development on privately owned lands within the RCA.

5.4.1 Vegetation Communities

5.4.1.1 Direct Impacts

There are a total of 1,252.84 acres of privately owned lands located within the RCA. Of this total, permanent direct impacts to vegetation communities are estimated to total up to 630 acres. Vegetation communities on privately owned lands located within the RCA are summarized in Table 11 and shown on Figure 10A, Vegetation Communities on Privately Owned Lands within the RCA.

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Table 11
**Vegetation Communities and Land Covers within Private Lands Located within the
Rural/Conservation Area**

General Physiognomic Location	General Habitat	Vegetation Community or Land Cover Type ¹	Alliance	Association	Total Acres
Scrub and chaparral	Coastal scrub	California buckwheat scrub	<i>Eriogonum fasciculatum</i>	(NA)	3.98
		California buckwheat– white sage scrub	<i>Eriogonum fasciculatum– Salvia apiana</i>	(NA)	1.06
		California sagebrush scrub	<i>Artemisia californica</i>	(NA)	91.25
		California sagebrush– California buckwheat	<i>Artemisia californica– Eriogonum fasciculatum</i>	(NA)	153.20
		California sagebrush– California buckwheat– white sage	<i>Artemisia californica– Eriogonum fasciculatum</i>	<i>Artemisia californica– Eriogonum fasciculatum– Salvia apiana</i>	30.05
		Deer weed scrub	<i>Lotus scoparius</i>	(NA)	15.89
		Hairy yerba santa– white sage scrub	(NA)	(NA)	22.75
		Scale broom scrub ²	<i>Lepidospartum squamatum</i>	(NA)	80.11
		White sage scrub ²	<i>Salvia apiana</i>	(NA)	16.19
		White sage–California sagebrush ²	<i>Salvia apiana</i>	<i>Salvia apiana– Artemisia californica</i>	16.74
		White sage–California buckwheat ²	(NA)	(NA)	11.34
	Undifferentiated Chaparral scrub	Chamise chaparral	<i>Adenostoma fasciculatum</i>	(NA)	46.49
		Chamise–California buckwheat	<i>Adenostoma fasciculatum</i>	<i>Adenostoma fasciculatum– Eriogonum fasciculatum</i>	157.51
		Chamise–white sage	<i>Adenostoma fasciculatum– Salvia apiana</i>	<i>Adenostoma fasciculatum– Salvia apiana</i>	2.65
		Chaparral whitethorn chaparral	<i>Ceanothus leucodermis</i>	(NA)	19.83

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Table 11
**Vegetation Communities and Land Covers within Private Lands Located within the
Rural/Conservation Area**

General Physiognomic Location	General Habitat	Vegetation Community or Land Cover Type ¹	Alliance	Association	Total Acres
	Mountain mahogany woodlands and scrubs	Hoaryleaf ceanothus–chamise	<i>Ceanothus crassifolius</i>	<i>Ceanothus crassifolius–Adenostoma fasciculatum</i>	268.62
		Birchleaf mountain mahogany chaparral	<i>Cercocarpus montanus</i>	(NA)	0.76
		Birchleaf mountain mahogany–chamise	<i>Cercocarpus montanus</i>	<i>Cercocarpus montanus–Adenostoma fasciculatum</i>	1.54
		Birchleaf mountain mahogany–California buckwheat	<i>Cercocarpus montanus</i>	<i>Cercocarpus montanus–Eriogonum fasciculatum</i>	1.94
Scrub and chaparral subtotal					941.91
Grass- and herb-dominated communities	Non-native grassland	Mediterranean California naturalized annual and perennial grassland	(NA)	(NA)	153.53
Grass- and herb-dominated communities subtotal					153.53
Broadleaved upland tree dominated	Eucalyptus naturalized forest	Eucalyptus groves	Eucalyptus (<i>globulus</i> , <i>camaldulensis</i>)	(NA)	2.82
Broadleaved upland tree dominated subtotal					2.82
Riparian and bottomland habitat	Riparian forest and woodland	California sycamore woodlands ²	<i>Platanus racemosa</i>	(NA)	101.00
		California sycamore–coast live oak ²	<i>Platanus racemosa</i>	<i>Platanus _racemosa–Quercus agrifolia</i>	3.05
Riparian and bottomland habitat subtotal					104.06
Disturbed and developed	Disturbed and developed	Disturbed habitat	(NA)	(NA)	50.52
Disturbed and developed subtotal					50.52
Total ³					1,252.84

Notes: (NA) = not applicable (i.e., not mapped at this level of detail or not described by CDFW (CDFG 2010b)).

¹ CDFW (CDFG 2010b)).

² Considered special status by CDFW (CDFG 2010b)).

³ May not total due to rounding.

As stated above, CDFW state rankings of 1, 2, or 3 are considered high priority for inventory or sensitive, and impacts to these communities typically require mitigation. Although the exact location

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and amount of impacts on privately owned lands located within the RCA site is unknown, six vegetation communities (scale broom scrub, white sage scrub, white sage-California buckwheat, white sage-California sagebrush, California sycamore woodlands, and California sycamore-coast live oak) are considered sensitive. Any impacts to these communities would be significant under CEQA and would require mitigation. Mitigation for significant impacts to sensitive vegetation communities on private properties located within the RCA would be implemented according to the mitigation ratios and measures determined on a case-by-case basis through a separate review process by the EHNCP.

5.4.1.2 Indirect Impacts

Short-term indirect impacts to vegetation communities are similar to those occurring within the NA summarized in Section 5.3.2, and would primarily result from construction-related dust, which could disrupt plant vitality in the short term, as well as soil erosion and runoff. Long-term indirect impacts on vegetation communities would most likely occur as a result of trampling of vegetation by humans and domestic pets, invasion by exotic species, alteration of the natural fire regime, and exposure to urban pollutants (e.g., fertilizers, pesticides, herbicides, and other hazardous materials). Over the long term, indirect impacts on vegetation communities within the RCA would increase the amount of interface (or “edge”) between development and open space. Indirect impacts to vegetation communities would be significant absent mitigation and would be avoided with the implementation of mitigation measure MM-BIO-9, which would require impacts to occur only within the disturbance limits, use of BMPs and erosion control, control of invasive weeds, and avoiding the use of toxic substances that could affect plant life.

5.4.2 Jurisdictional Resources

5.4.2.1 Direct Impacts

There is an estimated 34 acres of jurisdictional resources regulated under ACOE, RWQCB, and/or CDFW on privately owned lands located within the RCA as shown on Figure 10B, Jurisdictional Resources on Privately Owned Lands within the RCA. Although the exact location and amount of impacts on privately owned lands located within the RCA site is unknown, impacts to jurisdictional resources regulated by ACOE, RWQCB, and/or CDFW would be significant under CEQA and would require mitigation. Mitigation for significant impacts to jurisdictional resources on private properties located within the RCA would be implemented according to the mitigation ratios and measures determined through a separate review and approval by regulatory agencies.

5.4.2.2 Indirect Impacts

The EHNCP supports jurisdictional resources regulated by the ACOE, RWQCB, and CDFW. Jurisdictional aquatic resources are typically affected in the short term by dust and construction-

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related soil erosion and runoff. Indirect impacts to jurisdictional resources would be significant absent mitigation and would be avoided with the implementation of mitigation measure MM-BIO-9, which would require impacts to occur only within the disturbance limits, use of BMPs and erosion control, and avoiding the use of toxic substances that could affect waterways.

5.4.3 Special-Status Plant Species

5.4.3.1 Direct Impacts

No botanical surveys were conducted on the privately owned lands located within the RCA. Based on geography, topography, vegetation communities, and soils occurring within the RCA, there are 38 special-status plant species with moderate or high potential to occur. Appendix E provides an analysis of special-status plant species potential to occur within the RCA. Although the exact location and amount of impacts on privately owned lands located within the RCA site is unknown, impacts to special-status plant species would be significant under CEQA and would require mitigation.

5.4.3.2 Indirect Impacts

Most of the indirect impacts to vegetation communities cited above can also affect sensitive plants. If development were to occur on the privately owned lands located within the RCA, indirect effects may include dust, which could disrupt plant vitality in the short term, or construction-related soil erosion and runoff. Long-term edge effects could include intrusions by humans and possible trampling of individual plants, invasion by exotic plant and wildlife species, exposure to urban pollutants (fertilizers, pesticides, herbicides, and other hazardous materials), soil erosion, litter, fire, and hydrologic changes (e.g., surface and groundwater level and quality). Indirect impacts to special-status plants would be significant absent mitigation and would be avoided with the implementation of mitigation measure MM-BIO-9, which would require impacts to occur only within the disturbance limits, use of BMPs and erosion control, control of invasive weeds, and avoidance of toxic substances that could affect plant life.

5.4.4 Special-Status Wildlife Species

5.4.4.1 Direct Impacts

No focused surveys for special-status wildlife surveys were conducted on the privately owned lands located within the RCA. Based on geography, topography, vegetation communities, and soils occurring within the RCA, there are 27 special-status wildlife species with moderate or high potential to occur. Appendix F provides an analysis of special-status wildlife species with potential to occur within the RCA. Although the exact location and amount of impacts on privately owned

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lands located within the RCA site is unknown, impacts to special-status wildlife species would be significant under CEQA and would require mitigation.

5.4.4.2 Indirect Impacts

Indirect impacts to special-status wildlife species may include both habitat degradation and effects on individuals. Habitat degradation may occur in the same manner as discussed above for vegetation communities. Over the long term, indirect impacts to wildlife habitat within the RCA would increase the amount of interface (or “edge”) between development and open space. Dust can impact vegetation surrounding the privately owned lands located within the RCA, resulting in changes in the community structure and function. These changes could result in impacts to suitable habitat for special-status wildlife species. Wildlife may also be indirectly affected in the short term and long term by construction-related noise, which can disrupt normal activities, cause lasting stress, and subject wildlife to higher predation risks. Trash and garbage from development-related activities within the RCA could attract invasive predators such as ravens, gulls, crows, opossums, skunks, and raccoons that could impact the native wildlife species within the adjacent open space preserves. Accidental spills of hazardous chemicals could contaminate surface waters and indirectly impact wildlife species through direct or secondary poisoning and other sub-lethal effects (e.g., endocrine impacts), reduced prey availability, or altering suitable habitat. Indirect impacts to wildlife would be significant absent mitigation and would be avoided with the implementation of mitigation measure MM-BIO-9, which would require impacts to occur only within the disturbance limits, use of BMPs and erosion control, minimizing noise, worker awareness training, trash removal, and avoidance of toxic substances.

5.4.5 Impacts to Wildlife Corridors and Movement

The RCA is entirely within the San Gabriel–San Bernardino Connection as shown on Figure 8, Wildlife Corridors and Linkages. The RCA contains large blocks of existing open space that offer suitable habitat for wildlife movement and life history needs (Figure 8, Wildlife Corridors and Linkages). However, the RCA does not function as a corridor due to the lack of physical constraints that would prevent wildlife movement. Instead, it functions as an intact large block of habitat for a variety of species – providing all of the necessary life-history needs for these species.

As shown on Figures 10A and 10B, the privately owned lands are dispersed throughout the RCA and are located adjacent to the recommended preserve areas and existing conservation lands, including the North Etiwanda Preserve. Therefore, development on privately owned lands within the RCA could prevent connectivity between the large blocks of existing and proposed conservation areas and would increase the amount of interface (or “edge”) between development and open space. However, the adoption of the EHNCP would limit the amount of development to 100 homes, approximately 630 acres, on privately owned lands within the RCA.

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The number of potential rural residences and the acres of habitat impact per residence would be far less than allowed under existing County zoning. Additionally, the EHNCP includes policies, programs, and significant financial incentives to encourage private property owners within the RCA to sell their development rights to the developer of the NA and to designate their land for permanent conservation.

5.4.6 Standard Conditions

Standard Conditions of Approval within the Existing General Plan Update (2010) address biological resource issues. Implementation of these Conditions of Approval would help reduce impacts to existing biological resources within the developed portions of the RCA. Applicable goals and related policies are identified below in italics. Each policy is followed by an implementation action which identifies the programs and procedures that will be used to put General Plan goals and policies into action.

5.4.6.1 Standard Condition 1

Special status plant and wildlife species have the potential to occur within the proposed General Plan Update Study Area. Any CEQA project that involves the removal of habitat must consider if any special status species (e.g., Threatened or Endangered species, CNPS List 1B and 2 plants, or species protected under Section 15380 of CEQA) are potentially present on the project site and if the project impacts could be considered significant by the City. If potential habitat is present in an area, focused surveys shall be conducted prior to construction activities in order to document the presence or absence of a species on the project site. Botanical surveys shall be conducted during the appropriate blooming period for a species. If no special status species are found on the project site, no additional action is warranted. If special status species are found, appropriate mitigation would be required in coordination with the City.

5.4.6.2 Standard Condition 2

Any project within the proposed General Plan Update Study Area that impacts a Federally listed species shall be required to secure take authorization through Section 7 or Section 10 of the Federal Endangered Species Act (FESA) prior to project implementation. Compensation for impacts to the listed species and their habitat shall be mitigated at a ratio no less than one to one (one acre restored for every acre impacted). Project applicants shall be required to plan, implement, monitor, and maintain the mitigated habitat according to the requirements of the Biological Opinion (Section 7) or Habitat Conservation Plan (Section 10) for the project. Prior to issuance of the first action and/or permit which would allow for site disturbance (e.g., grading permit), a detailed mitigation plan shall be prepared by a qualified biologist for approval by the City of Rancho Cucamonga and the USFWS, and shall include:

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(1) the responsibilities and qualifications of the personnel to implement and supervise the plan; (2) site selection; (3) site preparation and planting implementation; (4) a schedule; (5) maintenance plan/guidelines; (6) a monitoring plan; and (7) long-term preservation requirements.

5.4.6.3 *Standard Condition 3*

Any project within the proposed General Plan Update Study Area that impacts a State-listed Threatened or Endangered species shall be required to obtain take authorization (through an Incidental Take Permit) pursuant to the California Endangered Species Act (CESA) and Section 2081 of the California Fish and Game Code. If the species is also listed under the FESA, a consistency finding per Section 2080.1 of CESA is issued when a project receives the USFWS Biological Opinion. Compensation for impacts to the listed species and their habitat shall be mitigated at a ratio no less than one to one (one acre restored for every acre impacted). Project applicants shall be required to plan, implement, monitor, and maintain the mitigated habitat according to the requirements of the 2080 CEQA process. Prior to issuance of the first action and/or permit which would allow for site disturbance (e.g., grading permit), a detailed Mitigation Plan shall be prepared by a qualified Biologist for approval by the City of Rancho Cucamonga and the California Department of Fish and Game (CDFG), and shall include: (1) the responsibilities and qualifications of the personnel to implement and supervise the plan; (2) site selection; (3) site preparation and planting implementation; (4) a schedule; (5) a maintenance plan/guidelines; (6) a monitoring plan; and (7) long-term preservation requirements.

5.4.6.4 *Standard Condition 4*

To avoid conflicts with Migratory Bird Treaty Act and Bald/Golden Eagle Protection Act, construction activities involving vegetation removal shall be conducted between September 16 and March 14. If construction occurs inside the peak nesting season (between March 15 and September 15), a pre-construction survey (or possibly multiple surveys) by a qualified biologist are recommended prior to construction activities to identify any active nesting locations. If the biologist does not find any active nests within the project site, the construction work shall be allowed to proceed. If the biologist finds an active nest within the project site and determines that the nest may be impacted, the biologist shall delineate an appropriate buffer zone around the nest; the size of the buffer zone shall depend on the affected species and the type of construction activity. Any active nests observed during the survey shall be mapped on an aerial photograph. Only construction activities (if any) that have been approved by a biological monitor shall take place within the buffer zone until the nest is vacated. The biologist shall serve as a construction monitor when construction activities take place near active nest areas to ensure that no inadvertent impacts on these nests occur. Results of the pre-construction survey and any subsequent monitoring shall be provided to the CDFG and the City.

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5.4.6.5 *Standard Condition 5*

To avoid conflict with Sections 3503, 3503.5, and 3513 of the California Fish and Game Code, the Standard Condition outlined above for the Migratory Bird Treaty Act (SC 4.4-4) shall be implemented. The Migratory Bird Treaty Act mirrors the requirements for CDFG code relative to the protection of migratory birds and prohibits taking and possession of any migratory nongame bird, as designated in the Migratory Bird Treaty Act.

5.4.6.6 *Standard Condition 6*

A jurisdictional delineation shall be conducted if a project will impact jurisdictional resources. Permits from the U.S. Army Corps of Engineers (USACE) and Regional Water Quality Control Board (RWQCB) shall be required for impacts on areas within these agencies' jurisdiction. Acquisition and implementation of the permits may require mitigation. Compensation for impacts to jurisdictional resources shall be mitigated at a ratio no less than one to one (one acre restored for every acre impacted). Project applicants shall be required to plan, implement, monitor, and maintain the mitigated jurisdictional resource according to the requirements of USACE and RWQCB approval requirements. Prior to issuance of the first action and/or permit that would allow for site disturbance (e.g., grading permit), a detailed mitigation plan shall be prepared by a qualified Biologist for approval by the City of Rancho Cucamonga and the appropriate resource agencies, and shall include: (1) the responsibilities and qualifications of the personnel to implement and supervise the plan; (2) site selection; (3) site preparation and planting implementation; (4) a schedule; (5) maintenance plan/guidelines; (6) a monitoring plan; and (7) long-term preservation requirements.

5.4.6.7 *Standard Condition 7*

The Porter-Cologne Act and Sections 1600–1616 of the California Fish and Game Code protect “Waters of the State”. Agreements (Streambed Alteration Agreements) from the CDFG shall be required for impacts on areas within the CDFG jurisdiction. Acquisition and implementation of the agreement may require mitigation. Compensation for impacts to CDFG resources shall be mitigated at a ratio no less than one to one (one acre restored for every acre impacted). Project applicants shall be required to plan, implement, monitor, and maintain the mitigation areas according to CDFG requirements. Prior to issuance of the first action and/or permit which would allow for site disturbance (e.g., grading permit), a detailed mitigation plan shall be prepared by a qualified biologist for approval -by the City of Rancho Cucamonga and CDFG, and shall include: (1) the responsibilities and qualifications of the personnel to implement and supervise the plan; (2) site selection; (3) site preparation and planting implementation; (4) a schedule; (5) maintenance plan/guidelines; (6) a monitoring plan; and (7) long-term preservation requirements.

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5.4.6.8 Standard Condition 8

The County of San Bernardino's Code of Ordinances (Title 8, Division 8, Chapter 88.01 – Plant Protection and Management) provides regulations and guidelines for the management of plant resources in the unincorporated areas of the County on property or combinations of property under private or public ownership. Prior to the removal of a protected tree or plant within the unincorporated SOI, a removal permit shall be obtained.

5.4.6.9 Standard Condition 9

The City's Tree Preservation Municipal Code (Title 19, Environmental Protection – Chapter 19.08) states that eucalyptus, palm, oak, sycamore, pine and other trees growing within the City are a natural aesthetic resource and are worthy of protection. Prior to removal of a Heritage Tree within the City limits, a Tree Removal Permit shall be obtained from the Planning Director and replacement trees may be required consistent with the City code.

5.5 Compliance with Regional Resource Planning

Activities occurring within the NA and those occurring on privately owned lands located within the RCA would be consistent with, and implement, the goals, policies, and programs of the City's General Plan and EIR. Additionally, by implementing the mitigation measures provided in Section 6, impacts to biological resources would be reduced or eliminated, and compliance with the City's General Plan and EIR would be achieved.

To comply with the City of Rancho Cucamonga Tree Preservation Ordinance, the project applicant would be required to obtain a permit from the City before impacting any trees, shrubs, or plants that meet the heritage tree criteria, as stated in PR-BIO-2.

Since the EHNCP proposes to designate the North RCA Etiwanda Preserve as Open Space – Conservation (OS-C) (i.e., permanent open space), and there would be no impacts occurring within the North Etiwanda Preserve, the EHNCP would comply with the North Etiwanda Preserve Management Plan. The EHNCP does not conflict with any provisions from an adopted habitat conservation plan (HCP), natural community conservation plan, or other approved local, regional, or state HCP. Therefore, the EHNCP is within compliance with regional resource planning. Furthermore, the Conservation Plan and Conservation Implementation Strategy in the EHNCP recommend and provide programs for creating new preserves, linking them to the North Etiwanda Preserve, and providing adequately funded, permanent, unified management of all conservation lands. As stated in Section 2.3 above, the EHNCP would select a qualified conservation entity (e.g., Inland Empire Resource Conservation District) to be the land manager for all the RCA conservation properties and the Conservation Management Plan required to be established under

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the EHNCP would integrate the management of all conservation lands in the EHNCP. The selected conservation entity would manage the North Etiwanda Preserve pursuant to the terms of the North Etiwanda Preserve Management Plan.

5.6 Cumulative Impacts

The NA is predominantly surrounded by suburban development to the south, east, and west. Future projects within these areas would occur within areas that do not contain significant biological resources. The RCA is largely undeveloped open space bordered by lands under the jurisdiction of the U.S. Forest Service (USFS). Pursuant to the USFS mission of sustaining the health, diversity, and productivity of the nation's forests and grasslands, development is limited within this area. Further, the EHNCP implements the City's General Plan in the RCA and supplements the City's existing hillside development regulations by limiting the number of homes permitted in the RCA and defining additional development standards. Development in the RCA would be no more than 100 residences, although, this number could be less, given the inclusion of a transfer of development rights program with the goal of moving development to the NA. Regardless, development of these residences would be subject to the guidelines and independent environmental review and mitigation in accordance with the EHNCP. Implementation of the NA and RCA are considered in this document so do not doubly contribute to cumulative impacts. As stated above, all other projects and impacts are within the developed portions of Rancho Cucamonga so additional cumulative impacts are not anticipated. Impacts associated with habitat modification, species identified as a candidate, sensitive, or special-status, and jurisdictional aquatic resources within the NA are considered potentially significant if mitigation within the RCA is not feasible. All other impacts on biological resources would be less than significant.

Similarly, impacts related to buildout of the City's Planning Area and Sphere of Influence are anticipated to be less than significant assuming compliance with General Plan policies and existing standard conditions. Additionally, any removal of vegetation or trees as part of the Plan and any future development in the City would be required to comply with existing regulations for the protection of biological resources (e.g., the MBTA, and the City's Tree Preservation Ordinance, and Tree Removal Permit requirements).

As previously discussed, biological resource impacts of the EHNCP associated with development of the NA have been evaluated above and were found to be less than significant, with compliance with the existing regulations, mitigation measures BIO-1 through BIO-9, preservation of open space, development standards and the provisions outlined in the Specific Plan. In consideration of the preceding factors, the EHNCP contribution to cumulative biological resources impacts would be less than significant.

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5.7 Biology Threshold Analysis Summary

5.7.1 BIO-1 Threshold

Neighborhood Area

Impacts to 3 special-status plants species and 20 special-status wildlife occurring or have potential to occur within the NA would be considered **potentially significant**. With implementation of mitigation measures, impacts would be reduced to less than significant.

Rural/Conservation Area

Although the exact location and amount of impacts on privately owned lands located within the RCA site is unknown, impacts to special-status plants and wildlife would be considered **potentially significant**. With implementation of mitigation measures, impacts would be reduced to less than significant.

5.7.2 BIO-2 Threshold

Neighborhood Area

Impacts to 376.21 acres of sensitive vegetation communities (i.e., scale broom scrub (including disturbed) and white sage scrub) would be considered **potentially significant**. With implementation of mitigation measures, impacts would be reduced to less than significant.

Rural/Conservation Area

Although the exact location and amount of impacts on privately owned lands located within the RCA site is unknown, impacts to riparian habitat and sensitive vegetation communities (scale broom scrub, white sage scrub, white sage-California buckwheat, white sage-California sagebrush, California sycamore woodlands, and California sycamore-coast live oak) on privately owned lands within the RCA would be considered **potentially significant**. With implementation of mitigation measures, impacts would be reduced to less than significant.

5.7.3 BIO-3 Threshold

Neighborhood Area

Impacts to 71.38 acres of non-wetland waters or streambeds under ACOE, RWQCB, and/or CDFW jurisdiction within the NA site would be considered **potentially significant**. With implementation of mitigation measures, impacts would be reduced to less than significant.

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Rural/Conservation Area

Although the exact location and amount of impacts on privately owned lands located within the RCA site is unknown, impacts to jurisdictional resources on privately owned lands within the RCA would be considered **potentially significant**. With implementation of mitigation measures, impacts would be reduced to less than significant.

5.7.4 BIO-4 Threshold

Neighborhood Area

Impacts to wildlife movement and corridors within the NA site would be considered **less than significant**.

Rural/Conservation Area

Impacts to wildlife movement and corridors on privately owned lands within the RCA site would be considered **potentially significant**. With implementation of mitigation measures, impacts would be reduced to less than significant.

5.7.5 BIO-5 Threshold

Neighborhood Area

Impacts to any trees, shrubs, or plants that meet the heritage tree criteria, as defined by the City of Rancho Cucamonga Tree Preservation Ordinance, within the NA site would be considered **potentially significant**. With implementation of mitigation measures, impacts would be reduced to less than significant.

Activities occurring within the NA would be consistent with, and implement, the goals, policies, and programs of the City's General Plan and EIR as well as the North Etiwanda Preserve Management Plan. Therefore, impacts associated with potential conflicts to the City's General Plan and EIR, and the North Etiwanda Preserve Management Plan are **less than significant**.

Rural/Conservation Area

Impacts to any trees, shrubs, or plants that meet the heritage tree criteria, as defined by the City of Rancho Cucamonga Tree Preservation Ordinance, on privately owned lands within the RCA would be considered **potentially significant**. With implementation of mitigation measures, impacts would be reduced to less than significant.

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Activities occurring on privately owned lands located within the RCA would be consistent with, and implement, the goals, policies, and programs of the City's General Plan and EIR as well as the North Etiwanda Preserve Management Plan. Therefore, impacts associated with potential conflicts to the City's General Plan and EIR, and the North Etiwanda Preserve Management Plan are **less than significant**.

5.7.6 BIO-6 Threshold

The EHNCP does not conflict with any provisions from an adopted HCP, natural community conservation plan, or other approved local, regional, or state HCP. This would be considered **less than significant impact**.

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6 MITIGATION MEASURES

This section describes proposed mitigation measures that would mitigate significant impacts to biological resources resulting from the NA. The following mitigation measures address the NA's significant direct and indirect effects on sensitive vegetation, jurisdictional resources, and special-status species. With implementation of the proposed measures, the identified direct and indirect impacts would be reduced to less than significant.

6.1 Sensitive Upland Vegetation

A minimum of 752.42 acres would be required for impacts occurring within the NA to sensitive upland vegetation communities, as summarized in Table 12 below.

Table 12
Minimum Mitigation Required for Impacts to Sensitive Upland Vegetation Communities

Vegetation Community	Permanent Impacts – NA (acres)	Mitigation Ratio¹	Mitigation Required² (acres)
Scale Broom Scrub	373.20	2:1	746.39
White Sage Scrub	3.01	2:1	6.02
Total	376.21	—	752.42

Notes:

¹ Mitigation ratio subject to agency approval.

² Mitigation lands may include other vegetation communities in addition to scale broom and white sage scrub.

In order to mitigate for impacts to sensitive upland vegetation communities, lands within the RCA would be acquired for conservation and long-term management. As shown on Figure 11, RCA Lands Available for Acquisition, the EHNCP recommends the following areas be acquired for conservation within the RCA: the 337-acre Etiwanda Heights Preserve; a 200-acre SBCFCD-owned parcel located in the northwestern portion of the RCA; and a 212-acre area, including a parcel owned by the City of Rancho Cucamonga and two smaller parcels owned by the Inland Empire Resource Conservation District, located in the northeastern corner of the RCA. These areas, which total 749.04 acres, make up the Recommended Preserve displayed on Figure 11 and summarized in Table 13. To fully mitigate for impacts within the NA, additional lands would be acquired within the RCA. There are a total of 1,713.71 acres of lands available for acquisition within the RCA (Table 13). Therefore, mitigation of impacts through acquisition would be feasible.

The RCA also contains lands that are both conserved and actively managed (i.e., North Etiwanda Preserve) and those that are conserved but not managed (Table 13). The EHNCP will prioritize the conservation of the areas separating the North Etiwanda Preserve and the two recommended preserves, RCA Etiwanda Heights Preserve and the SBCFCD parcel, by providing a transfer of development rights program to encourage and enable expanded conservation to link the three

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preserves into one. There is an additive value to preserving lands surrounding the existing North Etiwanda Preserve, which is discussed in detail below.

Table 13
Potential Conservation Lands within the Rural/Conservation Area

Land Designation	Conserved (Not Managed)	Recommended Preserve	Available for Acquisition (Conservation and Management)	Conserved and Managed
North Etiwanda Preserve	–	–	–	652.45
RCA Etiwanda Heights Preserve ¹	–	336.85	–	–
San Bernardino County Flood Control District (SBCFCD)	11.23	200.24	–	–
U.S. Forest Service ²	77.23	–	–	–
City of Rancho Cucamonga		159.78		
Inland Empire Resource Conservation District		52.18		
Private	87.66	–	1,252.84	–
Public	274.22	–	460.86	–
Total³	450.34	749.04	1,713.71	652.45

Notes:

- ¹ These lands will be conveyed into the RCA Etiwanda Heights Preserve for conservation and management with project implementation.
- ² These lands are managed by the U.S. Forest Service; however, there is no formal management plan.
- ³ Totals may not sum due to rounding.

The proposed acquisition approach for mitigation will provide the following benefits: (1) reduce the risk of development within the RCA, (2) provide a large habitat block with connectivity to existing preserve areas for the protection of sensitive habitat used by special-status species, (3) allow for enhancement of distressed or disturbed vegetation communities within the conserved area, (4) allow for type conversion (restoration) of disturbed or non-native land covers to native communities, (5) include a comprehensive Preserve Management and Monitoring Plan to direct management of the entire contiguous block of land, and (6) include a financial source to pay for management of the entire preserve area. There are areas within the RCA currently designated by the County of San Bernardino General Plan (County of San Bernardino 2007a) as Special Development Residential, Hillside Residential and Rural Living, where residential and commercial development are allowed. Under the EHNCP, these rights are retained, allowing limited rural residential development on privately owned property in the RCA. By acquiring lands within the RCA for purposes of mitigation, these areas would be managed in perpetuity as preserve areas, therefore reducing the amount of available lands slated for future development within the RCA. Without a comprehensive acquisition and management plan, large portions of the existing area would be available for development.

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Under the EHNCP, in recognition of the pre-existing property rights based on existing County zoning, up to an estimated 630 acres of habitat could potentially be impacted by new rural development. The number of potential rural residences and the acres of habitat impact per residence would be far less than allowed under existing County zoning. Furthermore, the EHNCP includes policies, programs, and significant financial incentives to encourage private property owners within the RCA to sell their development rights to the developer of the NA and to designate their land for permanent conservation.

Due to the adjacency of the NA and the RCA, there is an overlap in the type of sensitive resources present within both sites. However, the NA contains areas of higher disturbance than the RCA, and the NA is surrounded on three sides by development. The RCA is less disturbed and contains a contiguous bloc of conservation areas identified in Chapter 6 of the Rancho Cucamonga General Plan (City of Rancho Cucamonga 2010a), the North Etiwanda Preserve Management Plan (USFWS and CDFG 2010) and various mitigation lands, making it a more appropriate place for mitigation to occur.

MM-BIO-1 Management Plan

A total of 752.42 acres shall be mitigated through preservation of the Etiwanda Heights Preserve and through acquired lands within the RCA for impacts occurring within the NA. Upon adoption of the EHNCP, all lands within the RCA will be subject to a comprehensive Preserve Management and Monitoring Plan to direct management of the entire contiguous block of land, which will include a financial source to pay for management of the entire preserve area. An easement or deed restriction that precludes development will be recorded on the acquired areas within the RCA. A Conservation Management Plan will be prepared that specifically identifies required resource management activities and the entities that will be responsible for managing those activities in perpetuity.

Acquired lands within the RCA will include areas containing suitable habitat specifically for coastal California gnatcatcher and San Bernardino kangaroo rat among all other species with potential to occur within the NA. Specifically, lands acquired within the RCA would provide approximately 658 acres of suitable habitat for the San Bernardino kangaroo rat as well as conservation of USFWS Critical Habitat for this species. Since the habitat within the NA is considered low quality, as described in Section 4.4.2, the compensatory mitigation ratio for San Bernardino kangaroo rat shall be 1:1, subject to approval by USFWS. A total of 757.53 acres of impacts to USFWS Critical Habitat for San Bernardino kangaroo rat would occur within the NA. The Recommended Preserve would conserve approximately 550.67 acres of Critical Habitat for San Bernardino kangaroo rat, and there are approximately 833 acres of Critical Habitat for this species available for acquisition within the RCA. Therefore, impacts within the NA would be fully mitigated through acquisition of lands designated as Critical Habitat for San Bernardino kangaroo rat within the RCA.

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6.2 Jurisdictional Resources

MM-BIO-2 Jurisdictional Resource Conveyance

Prior to the issuance of any land development permits that impact jurisdictional resources, including clearing and grubbing or grading permits, sufficient acreage within the RCA or elsewhere shall be conserved, enhanced, or restored to cover all impacts to waters of the United States and CDFW-only areas at a 1:1 ratio (additional mitigation may be required to satisfy agency requirements). An easement or deed restriction that precludes development will be recorded on the conservation areas. Prior to dedication of the conservation area, a Conservation Management Plan will be prepared that specifically identifies required resource management activities and the entities that will be responsible for managing those activities.

A total of 71.38 acres of mitigation would be required for impacts to jurisdictional resources within the NA. A total of 51.62 acres of non-wetland waters or streambeds within the RCA Etiwanda Heights Preserve would be conserved with project implementation. Therefore, in order to mitigate for impacts to jurisdictional resources, a minimum of 19.76 acres would be acquired within the RCA for conservation and management. As stated in Section 4.2 and shown on Figure 6, there are approximately 461.53 acres of jurisdictional resources within the RCA. It should be noted that this total does not include the RCA Etiwanda Heights Preserve since these jurisdictional resources are already accounted for in Table 14. Therefore, acquisition of lands within the RCA to mitigate impacts to jurisdictional resources would be feasible even with slight changes to the impact footprint. Table 14 summarizes the mitigation required for impacts to jurisdictional resources.

Table 14
Minimum Mitigation Required for Impacts to Jurisdictional Resources

Jurisdictional Resource ¹	Permanent Impacts within NA (acres)	Mitigation Ratio ²	Mitigation Required (acres)	RCA Etiwanda Heights Preserve (acres)	Other RCA Mitigation Lands (acres)
ACOE/RWQCB/CDFW	71.22	1:1	71.22	46.57	-24.65
CDFW-only	0.16	1:1	0.16	5.05	+4.89
Total	71.38	--	71.38	51.62	19.76

Notes:

¹ Modeling based on 4% annual chance (25-year) floodplain with a minimum depth threshold of 0.2 feet.

² Mitigation ratio subject to agency approval.

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6.3 Special-Status Species

MM-BIO-3 Special-Status Plant Species Monitoring Plan

For species federally and/or state-listed as threatened or endangered, prior to construction activities occurring within occupied habitat, a mitigation and monitoring plan shall be submitted to and approved by the USFWS (for federally listed plants) and/or CDFW (for state-listed plants). Regulatory agency approval is required prior to implementation of the Plan. Prior to Plan implementation, a translocation plan shall be developed and implemented for non-listed plant species, prior to construction activities occurring within occupied habitat for that species.

Based on the current impacts within the NA, two special-status plant species (intermediate mariposa lily and Parry's spineflower) would require translocation of individuals. The mitigation and monitoring plan for the transplanted special-status plant(s) shall describe the following as needed based on plant species: (1) the location of feasible mitigation sites; (2) site preparation measures as needed such as topsoil treatment, soil decompaction, erosion control, temporary irrigation systems, and removal of non-native species; (3) a schedule and action plan to maintain and monitor the mitigation areas; (4) adaptive management measures such as replanting, weed control, or erosion control to be implemented if habitat improvement/restoration efforts are not successful; (5) the source of all plant propagules (seed, potted nursery stock, etc.) and the quantity and species of seed or potted stock of all plants to be introduced or planted into the restoration/enhancement areas; (6) a schedule and action plan to maintain and monitor the enhancement/restoration areas, to include at minimum, qualitative annual monitoring for revegetation success and site degradation due to erosion, trespass, or animal damage for a period no less than two years; (7) as needed where sites are near trails or other access points, measures such as fencing, signage, or security patrols to exclude unauthorized entry into the restoration/enhancement areas; and (8) contingency measures such as replanting, weed control, or erosion control to be implemented if habitat improvement/restoration efforts are not successful.

Take of any listed species, or collection and transplantation of any individuals and populations of any listed species, will require approval by the USFWS and/or CDFW and issuance of an Incidental Take Permit.

MM-BIO-4 Coastal California Gnatcatcher Surveys

No clearing, grubbing, grading, or other construction activities shall occur during the coastal California gnatcatcher (*Poliophtila californica californica*) breeding season (March 1 to August 15). If construction activities cannot be completed outside coastal California gnatcatcher breeding season, then a pre-construction survey shall be conducted in all areas of suitable habitat, by a qualified biologist

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(possessing a valid Endangered Species Act Section 10(a)(1)(a) Recovery Permit). If found during pre-construction surveys, a 500-foot buffer would be required around the nest site. If this cannot occur or if occupied habitat will be impacted, then, consultation with the USFWS would be required. Any additional measures associated with that consultation would also be required.

For potential impacts associated with construction noise, presence or absence of coastal California gnatcatcher would be determined by pre-construction surveys conducted by a qualified biologist adjacent to the NA. Coastal sage scrub outside of the impact area would be flagged to protect it from construction equipment as directed by the biologist. Between March 1 and August 15, no noise-generating construction activities that exceed ambient noise levels would occur in close proximity to occupied habitat. If necessary, other measures shall be implemented in consultation with the biologist as necessary, to reduce noise levels. Measures may include, but are not limited to, limitations on the placement of construction equipment and the simultaneous use of equipment.

MM-BIO-5 Burrowing Owl Surveys

Prior to issuance of any land development permits, including clearing, grubbing, and grading permits, the project applicant shall retain an approved biologist to conduct focused pre-construction surveys for burrowing owl (*Athene cunicularia*). The surveys shall be performed no earlier than 30 days prior to the commencement of any clearing, grubbing, or grading activities. If occupied burrows are detected, the approved biologist shall prepare a passive relocation mitigation plan that outlines appropriate buffering distances and timing, and stipulates the passive relocation process. Any impacted occupied burrows would be replaced at a minimum 2:1 ratio proximate to the location of impact. The plan would be subject to review and approval by the wildlife agencies and the City, including any subsequent burrowing owl relocation plans to avoid impacts from construction-related activities.

MM-BIO-6 Nesting Bird Surveys

Construction activities involving vegetation removal shall be avoided during nesting bird season, from approximately March 15 through September 15, as directed by Section 4.4 of the City of Rancho Cucamonga General Plan (City of Rancho Cucamonga 2010a). If construction activities cannot be completed outside the nesting bird season, a pre-construction nesting bird survey shall be conducted. Special attention shall be given during surveys for ground-nesting birds (e.g., killdeer (*Charadrius vociferus*), lesser nighthawks (*Chordeiles acutipennis*), northern harriers (*Circus cyaneus*)) due to the amount of nests observed during field surveys. Surveys shall be conducted within 500 feet of disturbance areas no earlier than 3 days prior to the commencement of disturbance. If construction activities are delayed, then additional pre-construction surveys shall be conducted such that no more than 3 days will have elapsed between the survey and ground-disturbance activities.

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If active nests are found, clearing and construction shall be postponed or halted within a buffer area, established by the qualified biologist, that is suitable to the particular bird species and location of the nest, until the nest is vacated and juveniles have fledged, as determined by the biologist. The construction avoidance area shall be clearly demarcated in the field with highly visible construction fencing or flagging, and construction personnel shall be instructed on the sensitivity of nest areas. A biologist shall serve as a construction monitor during those periods when construction activities will occur near active nest areas to ensure that no inadvertent impacts on these nests occur. The results of the surveys, including graphics showing the locations of any active nests detected, and documentation of any avoidance measures taken, shall be submitted to CDFW and the City within 14 days of completion of the pre-construction surveys or construction monitoring to document compliance with applicable state and federal laws pertaining to the protection of native birds.

MM-BIO-7 Small Mammal Trapping and Clearance Surveys

Thirty days prior to construction activities in suitable habitat, a qualified biologist shall conduct a survey within the proposed construction disturbance zone and within 200 feet of the disturbance zone for pallid bat (*Antrozous pallidus*), American badger (*Taxidea taxus*), northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), Los Angeles pocket mouse (*Perognathus longimembris brevinasus*), and San Diego desert woodrat (*Neotoma lepida intermedia*).

MM-BIO-7a. No earlier than 30 days prior to the commencement of construction activities, a pre-construction survey shall be conducted by a qualified biologist to determine if active roosts of bats are present on or within 300 feet of the NA disturbance boundaries. Should an active maternity roost be identified (in California, the breeding season of native bat species is generally from April 1 through August 31), the roost shall not be disturbed, and construction within 300 feet shall be postponed or halted, until the roost is vacated and juveniles have fledged. Surveys shall include rocky outcrops, caves, structures, and large trees (particularly trees 12 inches in diameter or greater at 4.5 feet above grade with loose bark or other cavities). Trees and rocky outcrops shall be surveyed by a qualified bat biologist (i.e., a biologist holding a CDFW collection permit and a Memorandum of Understanding with CDFW allowing the biologist to handle bats). If active maternity roosts or hibernacula are found, the rock outcrop or tree occupied by the roost shall be avoided (i.e., not removed) by the NA. If avoidance of the maternity roost must occur, the bat biologist shall survey (through the use of radio telemetry or other CDFW approved methods) for nearby alternative maternity colony sites. If the bat biologist determines in consultation with and with the approval of CDFW that there are alternative roost sites used by the maternity colony and young are not present then no further action is required.

If a maternity roost will be impacted by the activities proposed within the NA, and no alternative maternity roosts are in use near the site, substitute roosting habitat for the maternity colony shall

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be provided on, or in close proximity to, the NA no less than 3 months prior to the eviction of the colony. Large concrete walls (e.g., on bridges) on south or southwestern slopes that are retrofitted with slots and cavities are an example of structures that may provide alternative potential roosting habitat appropriate for maternity colonies. Alternative roost sites must be of comparable size and proximal in location to the impacted colony. CDFW shall also be notified of any hibernacula or active nurseries within the construction zone.

If non-breeding bat hibernacula are found in trees scheduled to be removed or in crevices in rock outcrops within the grading footprint, the individuals shall be safely evicted, under the direction of a qualified bat biologist, by opening the roosting area to allow airflow through the cavity or other means determined appropriate by the bat biologist (e.g., installation of one-way doors). In situations requiring one-way doors, a minimum of 1 week shall pass after doors are installed and temperatures should be sufficiently warm for bats to exit the roost because bats do not typically leave their roost daily during winter months in southern coastal California. This action should allow all bats to leave during the course of 1 week. Roosts that need to be removed in situations where the use of one-way doors is not necessary in the judgment of the qualified bat biologist in consultation with CDFW shall first be disturbed by various means at the direction of the bat biologist at dusk to allow bats to escape during the darker hours, and the roost tree shall be removed or the grading shall occur the next day (i.e., there shall be no less or more than one night between initial disturbance and the grading or tree removal). These actions should allow bats to leave during nighttime hours, thus increasing their chance of finding new roosts with a minimum of potential predation during daylight.

If an active maternity roost is located on the NA, and alternative roosting habitat is available, the demolition of the roost site must commence before maternity colonies form (i.e., prior to March 1) or after young are flying (i.e., after July 31) using the exclusion techniques described above.

MM-BIO-7b. Thirty days prior to construction activities in scrub and chaparral habitats, or other suitable habitat a qualified biologist shall conduct a survey within the proposed construction disturbance zone and within 200 feet of the disturbance zone for American badger.

If American badgers are present, occupied habitat shall be flagged and ground-disturbing activities avoided within 50 feet of the occupied den. Maternity dens shall be avoided during the pup-rearing season (February 15 through July 1) and a minimum 200-foot buffer established. This buffer may be reduced based on the location of the den upon consultation with CDFW. Maternity dens shall be flagged for avoidance, identified on construction maps, and a qualified biologist shall be present during construction. If avoidance of a non-maternity den is not feasible, badgers shall be relocated either by trapping or by slowly excavating the burrow (either by hand or mechanized equipment under the direct supervision of the biologist, removing no more than 4 inches at a time) before or after the rearing season (February 15

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through July 1). Any relocation of badgers shall occur only after consultation with CDFW. A written report documenting the badger removal shall be provided to CDFW within 30 days of relocation.

Collection and relocation of animals shall only occur with the proper scientific collection and handling permits.

MM-BIO-7c. Trapping and relocation for northwestern San Diego pocket mouse and Los Angeles pocket mouse will occur in all areas of soil disturbance and construction, if required by CDFW.

MM-BIO-7d. If active San Diego desert woodrat nests (stick houses) are identified within the disturbance zone or within 100 feet of the disturbance zone, a fence shall be erected around the nest site adequate to provide the woodrat sufficient foraging habitat at the discretion of the qualified biologist in consultation with CDFW. Clearing and construction within the fenced area will be postponed or halted until young have left the nest. The biologist shall serve as a construction monitor during those periods when disturbance activities will occur near active nest areas to ensure that no inadvertent impacts to these nests will occur. If avoidance is not possible, the applicant will take the following sequential steps: (1) all understory vegetation will be cleared in the area immediately surrounding active nests, followed by a period of one night without further disturbance to allow woodrats to vacate the nest; (2) each occupied nest will then be disturbed by a qualified wildlife biologist until all woodrats leave the nest and seek refuge off site; and (3) the nest sticks shall be removed from the NA and piled at the base of a nearby hardwood tree (preferably a coast live oak or California walnut). Relocated nests shall not be spaced closer than 100 feet apart, unless a qualified wildlife biologist has determined that a specific habitat can support a higher density of nests. The applicant shall document all woodrat nests moved and provide a written report to CDFW. All woodrat relocation shall be conducted by a qualified biologist in possession of a scientific collecting permit.

MM-BIO-8 Reptile Clearance Surveys

A qualified biologist will be present during construction activities immediately adjacent to or within habitat that supports populations of special-status reptile species. Clearance surveys for special-status reptiles shall be conducted by the qualified biologist prior to the initiation of construction each day. Results of the surveys and relocation efforts shall be provided to CDFW in the annual mitigation status report. Collection and relocation of animals shall only occur with the proper scientific collection and handling permits.

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6.4 Indirect Impacts

MM-BIO-9 Indirect Impacts to Special-Status Resources

The following best management practices shall be implemented to minimize indirect impacts to special-status resources:

1. **Biological Monitor.** Prior to issuance of land development permits, including clearing, grubbing, grading, and/or construction permits, the project applicant shall provide written confirmation that a qualified biologist has been retained to implement the NA's biological monitoring program. The letter shall include the names and contact information of all persons involved in the biological monitoring of the NA. The biological monitor shall attend all pre-construction meetings and be present during the removal of any vegetation to ensure that the approved limits of disturbance are not exceeded and provide periodic monitoring of the impact area including, but not limited to, trenches, stockpiles, storage areas, and protective fencing. The biological monitor shall be authorized to halt all associated NA activities that may be in violation of any permits issued by agencies having jurisdictional authority over the NA.

Before construction activities occur in areas containing sensitive biological resources, all workers shall be educated by the qualified biologist to recognize and avoid those areas that have been marked as sensitive biological resources.

2. **Worker Environmental Awareness Program (WEAP).** Prior to grading and construction activities, a qualified biologist shall be retained to conduct a Worker Environmental Awareness Program (WEAP) for all construction/contractor personnel. A list of construction personnel who have completed training prior to the start of construction shall be maintained on site, and this list shall be updated as required when new personnel start work. No construction worker may work in the field for more than 5 days without participating in the WEAP. The qualified biologist shall provide ongoing guidance to construction personnel and contractors to ensure compliance with environmental/permit regulations and mitigation measures. The qualified biologist shall perform the following:
 - Provide training materials and briefings to all personnel working on site. The material shall include but not be limited to the identification and status of plant and wildlife species, significant natural plant community habitats (e.g., riparian), fire protection measures, and review of mitigation requirements.
 - A discussion of the federal and state Endangered Species Acts, Migratory Bird Treaty Act, other state or federal permit requirements and the legal consequences of non-compliance with these acts;

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- Attend the pre-construction meeting to ensure that timing/location of construction activities do not conflict with other mitigation requirements (e.g., seasonal surveys for nesting birds, pre-construction surveys, or relocation efforts);
 - Conduct meetings with the contractor and other key construction personnel describing the importance of restricting work to designated areas. Maps showing the location of special-status wildlife or populations of rare plants, exclusion areas, or other construction limitations (e.g., limitations on nighttime work) will be provided to the environmental monitors and construction crews prior to ground disturbance. This applies to pre-construction activities, such as site surveying and staking, natural resources surveying or reconnaissance, establishment of water quality best management practices, and geotechnical or hydrological investigations;
 - Discuss procedures for minimizing harm to or harassment of wildlife encountered during construction and provide a contact person in the event of the discovery of dead or injured wildlife;
 - Ensure that haul roads, access roads, and on-site staging and storage areas are sited within grading areas to minimize degradation of vegetation communities adjacent to these areas (if activities outside these limits are necessary, they shall be evaluated by the biologist to ensure that no special-status species habitats will be affected);
 - Conduct a field review of the staking (to be set by the surveyor) designating the limits of all construction activity;
 - Ensure and document that required pre-construction surveys and/or relocation efforts have been implemented;
 - Be present during initial vegetation clearing and grading; and
 - Submit to CDFW an immediate report (within 72 hours) of any conflicts or errors resulting in impacts to special status biological resources.
3. **Construction Fencing.** The construction limits shall be flagged prior to ground-disturbance activities, and all construction activities, including equipment staging and maintenance, shall be conducted within the flagged disturbance limits. Fencing shall remain in place during all construction activities. Prior to release of grading and/or improvement bonds, a qualified biologist shall provide evidence that work was conducted as authorized under the approved land development permit and associated plans.
4. **Toxic Substances.** Prior to the issuance of grading permits, the project applicant shall submit evidence that the use of chemicals or the generation of by-products such as pesticides, herbicides, and animal waste, and other substances that are potentially toxic or

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impactive to native habitats/flora/fauna (including water) shall incorporate measures to reduce impacts caused by the application and/or drainage of such materials into the conservation area within the NA. No trash, oil, parking, or other construction/development-related material/activities shall be allowed outside any approved construction limits. All construction-related activity that may have potential for leakage or intrusion shall be monitored by the qualified biologist.

5. **Worker Guidelines.** All trash and food-related waste shall be placed in self-closing containers and removed regularly from the site to prevent overflow. Workers shall not feed wildlife or bring pets to the NA.
6. **Best Management Practices/Erosion/Runoff.** The NA will incorporate methods to control runoff, including a stormwater pollution prevention plan to meet National Pollutant Discharge Elimination System (NPDES) regulations. Implementation of stormwater regulations are expected to substantially control adverse edge effects (e.g., erosion, sedimentation, habitat conversion) during and following construction both adjacent and downstream from the study area. Typical construction best management practices specifically related to reducing impacts from dust, erosion, and runoff generated by construction activities would be implemented. During construction, material stockpiles shall be placed such that they cause minimal interference with on-site drainage patterns. This will protect sensitive vegetation from being inundated with sediment-laden runoff. Dewatering shall be conducted in accordance with standard regulations of the Regional Water Quality Control Board (RWQCB). An NPDES permit, issued by RWQCB to discharge water from dewatering activities, shall be required prior to start of dewatering. This will minimize erosion, siltation, and pollution within sensitive vegetation communities.
7. **Noise.** To minimize disturbance to wildlife nesting or breeding activities in surrounding habitat, loud construction activities (e.g., pile driving) shall be avoided to the extent feasible from February 1 to August 31. Loud construction activities may be permitted outside of this period from August 31 to February 1.
8. **Invasive Weeds.** The spread of invasive weeds shall be minimized through landscape plans to ensure that the proposed plant palette is consistent with the native species on site. The landscape plan shall also incorporate a manual weeding program for areas adjacent to the conservation areas of the NA. The manual weeding program shall describe, at a minimum, the entity responsible for controlling invasive species, the maintenance activities and methods required to control invasive species, and a maintenance/ monitoring schedule.

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7 PROJECT REQUIREMENTS

7.1 Jurisdictional Resources

PR-BIO-1 Regulatory Permits

The owner/permittee shall provide evidence that all required regulatory permits, such as those required under Section 404 of the federal Clean Water Act, Section 1600 of the California Fish and Game Code, and the Porter–Cologne Water Quality Control Act, have been obtained.

7.2 Compliance with Regional Resource Planning

PR-BIO-2 Tree Preservation Permit

To comply with the City of Rancho Cucamonga Tree Preservation Ordinance, the project applicant shall provide evidence that the required Tree Preservation Permit has been obtained before impacting any trees, shrubs, or plants that meet the heritage tree criteria.

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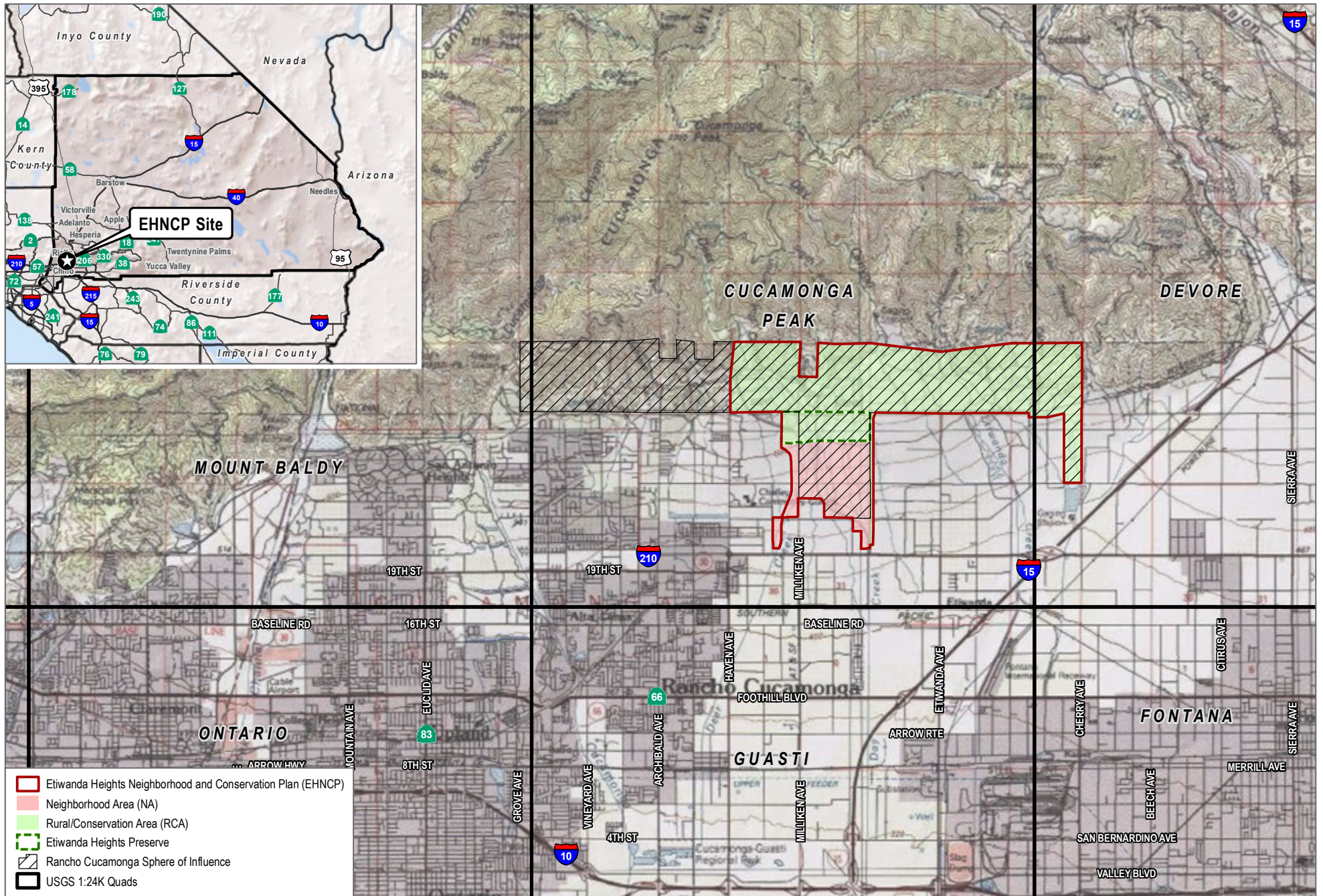
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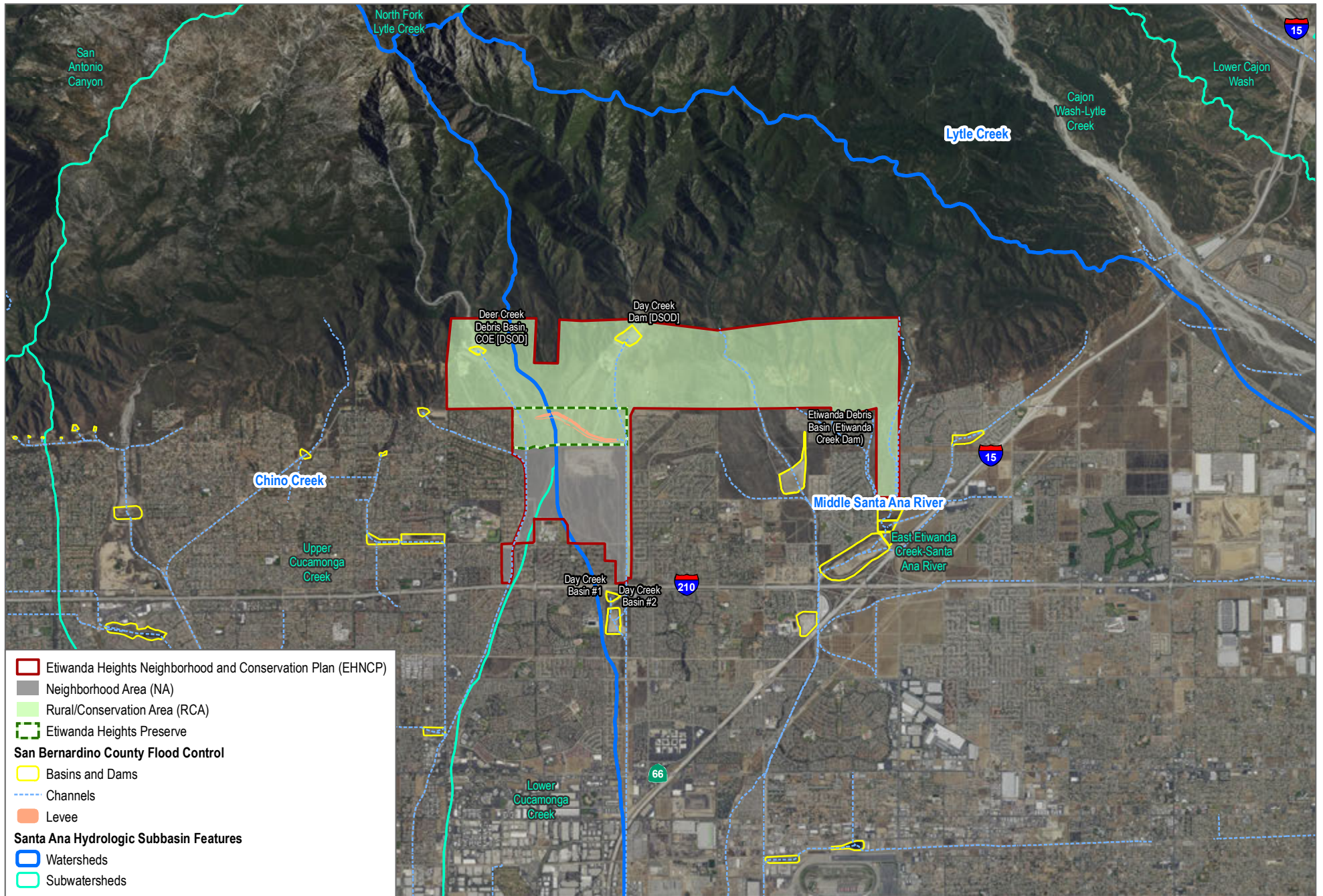
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SOURCE: Sargent Town Planning, 2019; USGS 7.5-Minute Series Cucamonga Peak, Devore, Mount Baldy Quadrangles

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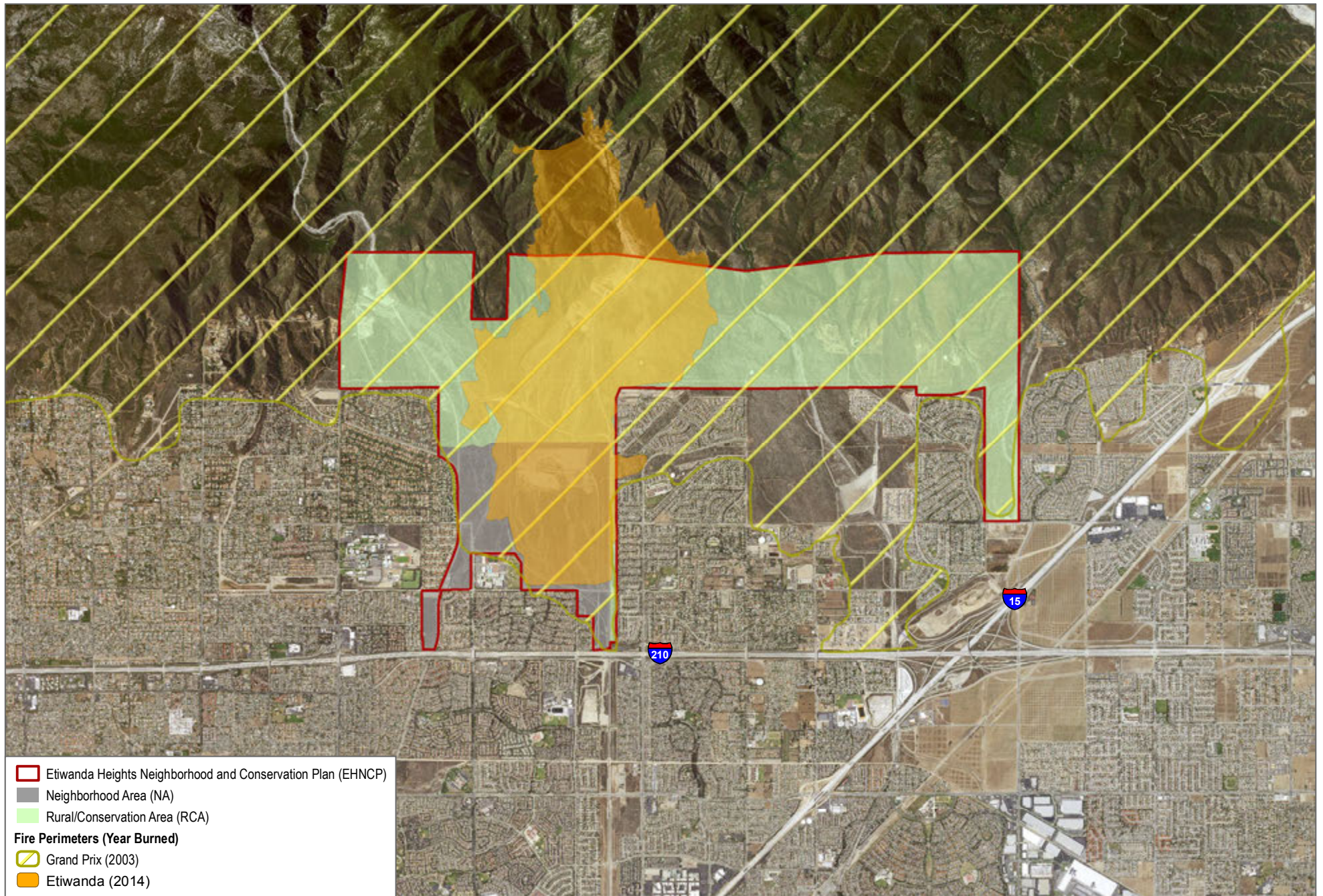
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SOURCE: Sargent Town Planning, 2019; San Bernardino County Dept. Public Works 2018; USGS 2019; USDA 2017

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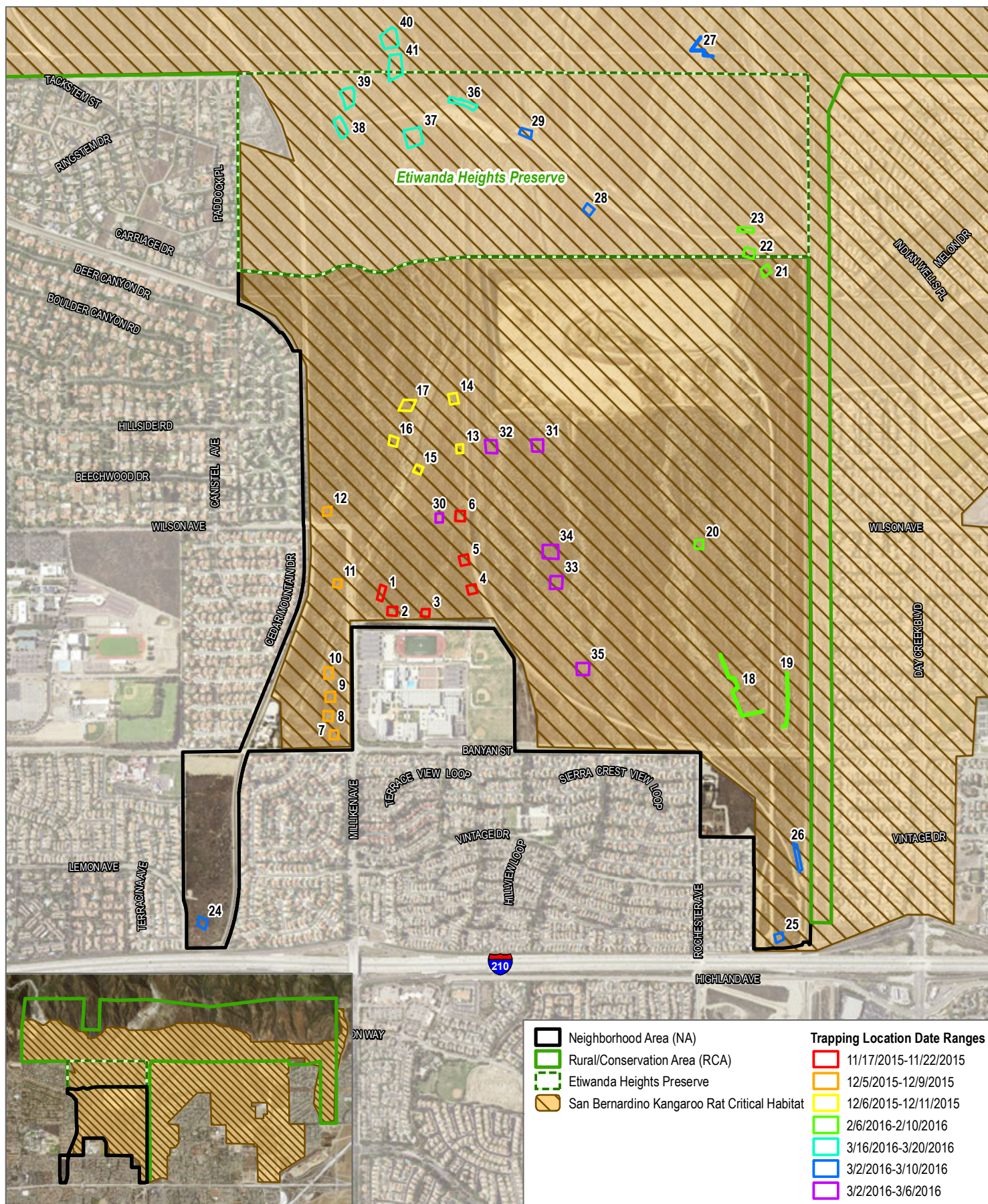
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SOURCE: Sargent Town Planning, 2019; CalFire/FRAP Mapping 2017; NAIP, 2016

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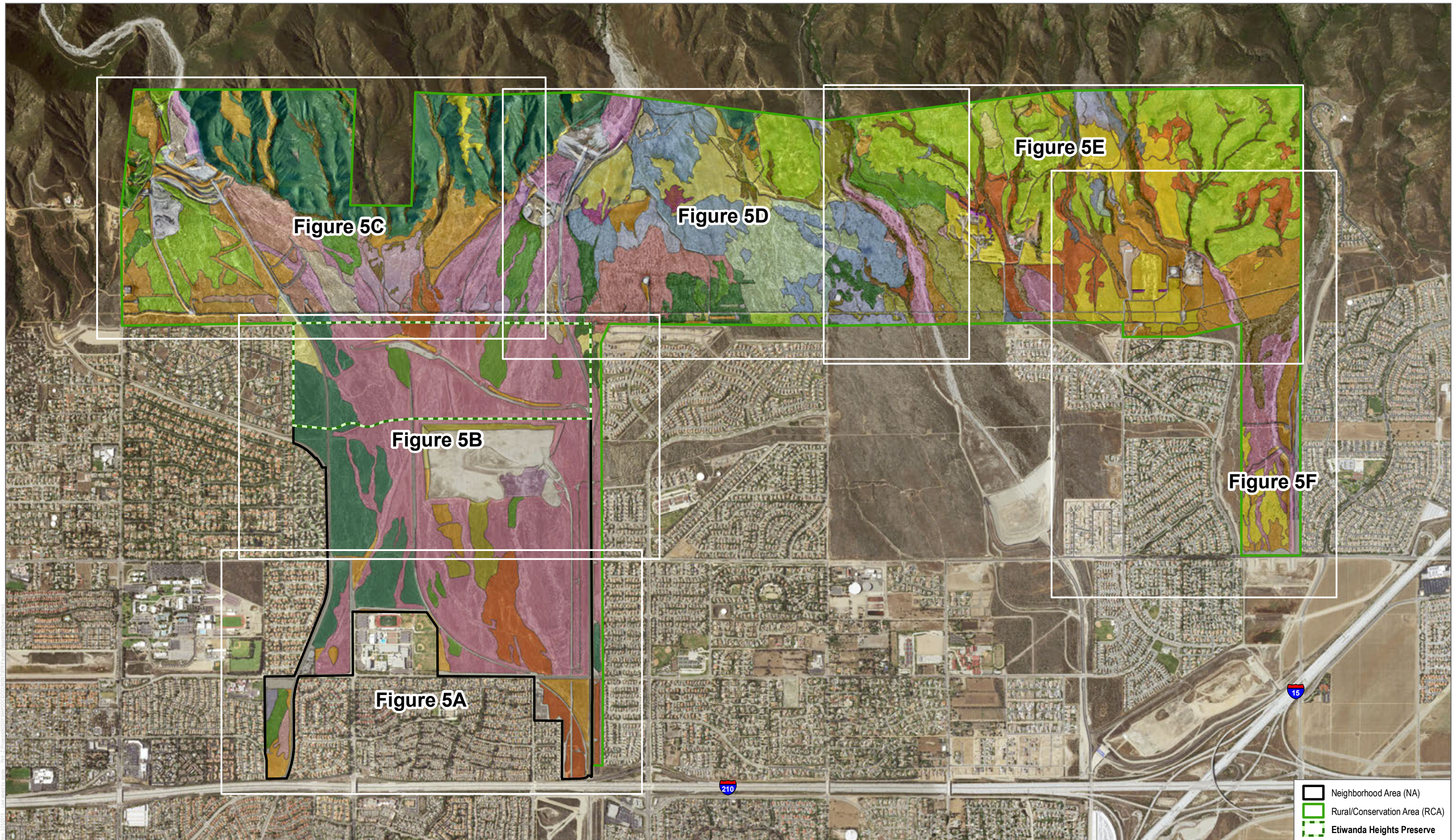
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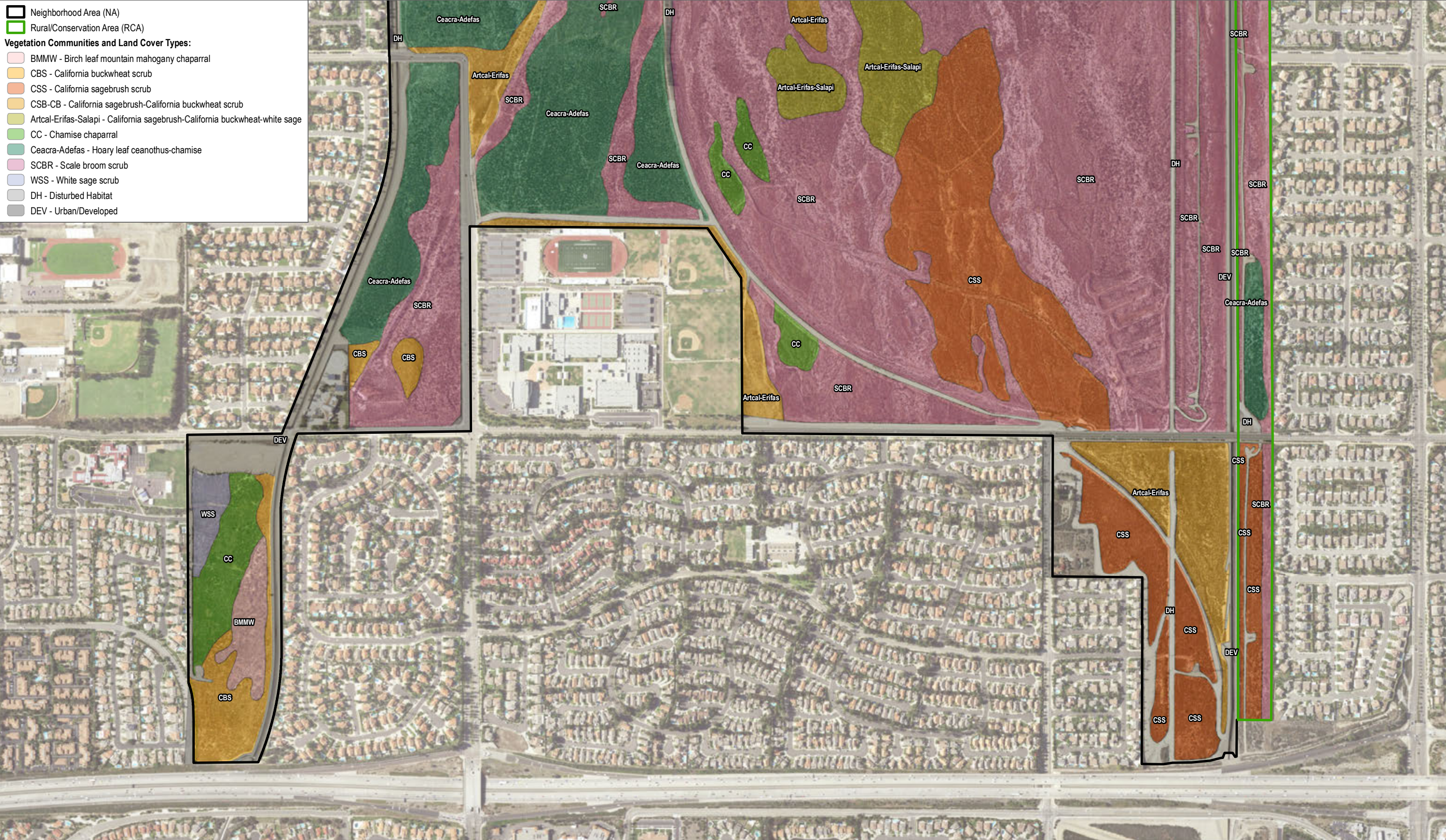
SOURCE: Sargent Town Planning, 2019; Skyscene 2016; USDA 2016

FIGURE 5

Vegetation Communities and Land Cover Mapping Overview

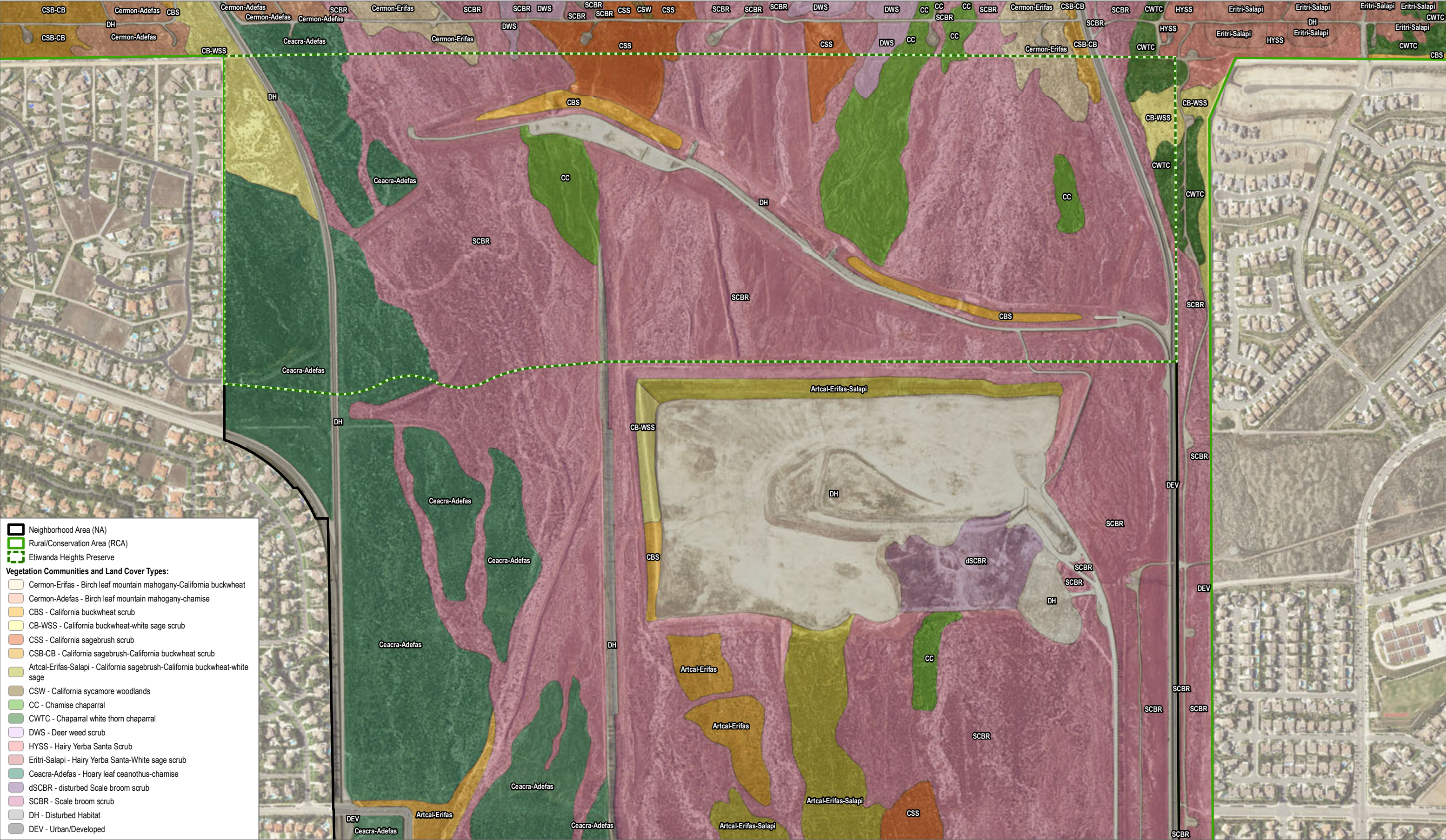
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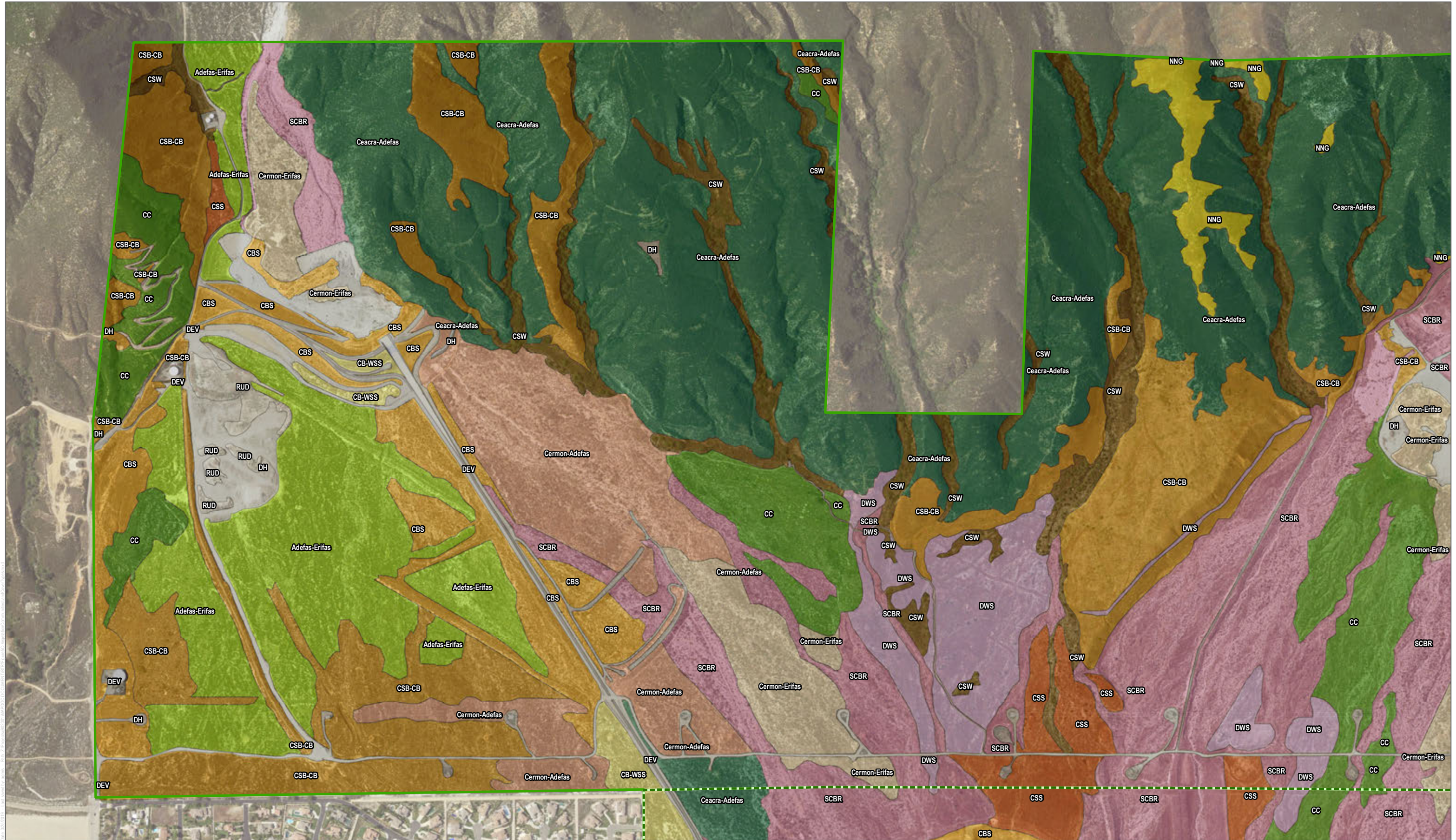
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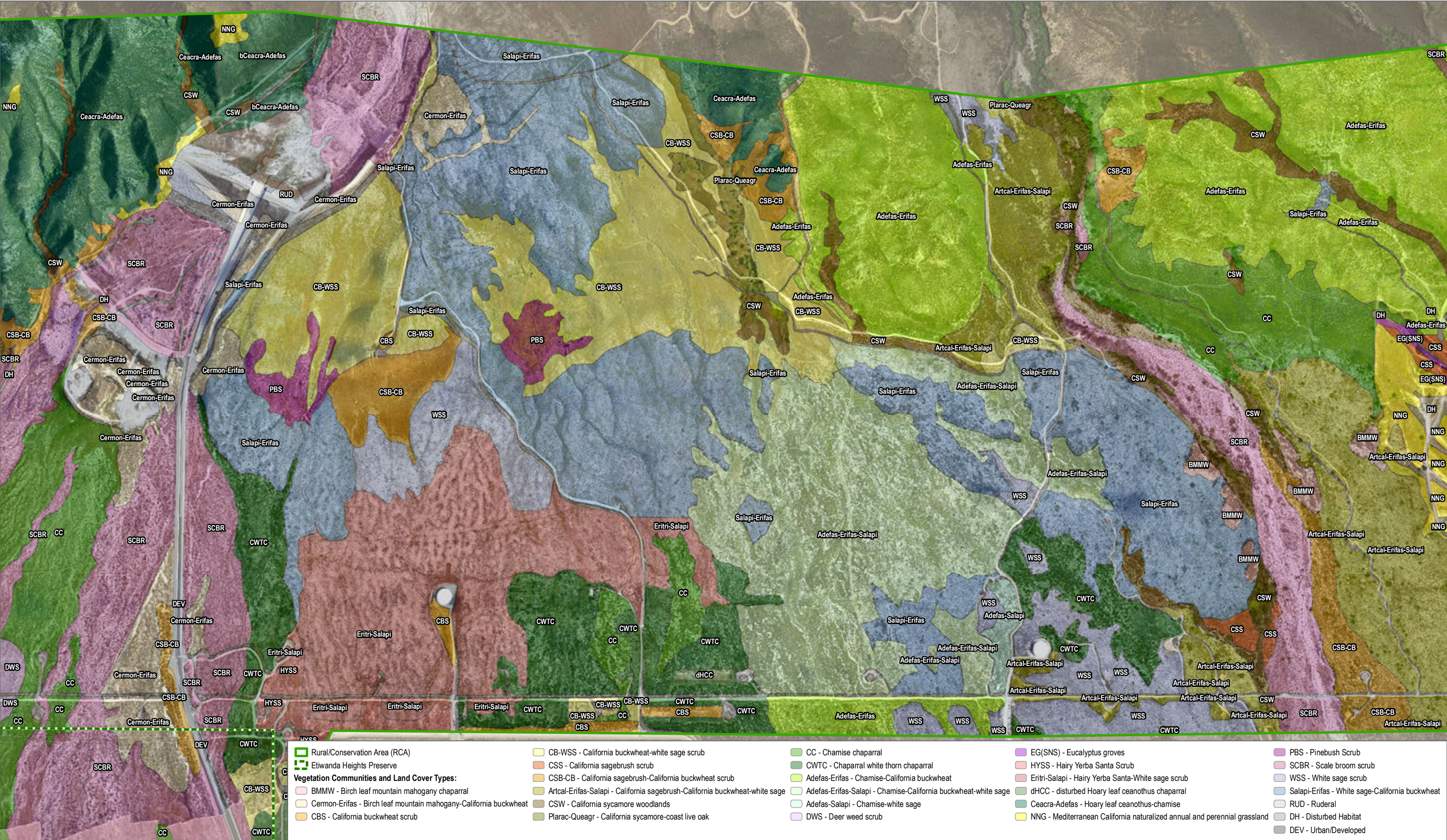
- | |
|---|
| <ul style="list-style-type: none"> ■ Rural/Conservation Area (RCA) ■ Etiwanda Heights Preserve <p>Vegetation Communities and Land Cover Types:</p> <ul style="list-style-type: none"> ■ Cermon-Erifas - Birch leaf mountain mahogany-California buckwheat ■ Cermon-Adefas - Birch leaf mountain mahogany-chamise ■ CBS - California buckwheat scrub ■ CB-WSS - California buckwheat-white sage scrub ■ CSS - California sagebrush scrub ■ CSB-CB - California sagebrush-California buckwheat scrub ■ CSW - California sycamore woodlands ■ CC - Chamise chaparral ■ Adefas-Erifas - Chamise-California buckwheat ■ DWS - Deer weed scrub ■ Ceacra-Adefas - Hoary leaf ceanothus-chamise ■ NNG - Mediterranean California naturalized annual and perennial grassland ■ SCBR - Scale broom scrub ■ RUD - Ruderal ■ DH - Disturbed Habitat ■ DEV - Urban/Developed |
|---|

FIGURE 5C

Vegetation Communities and Land Cover Types

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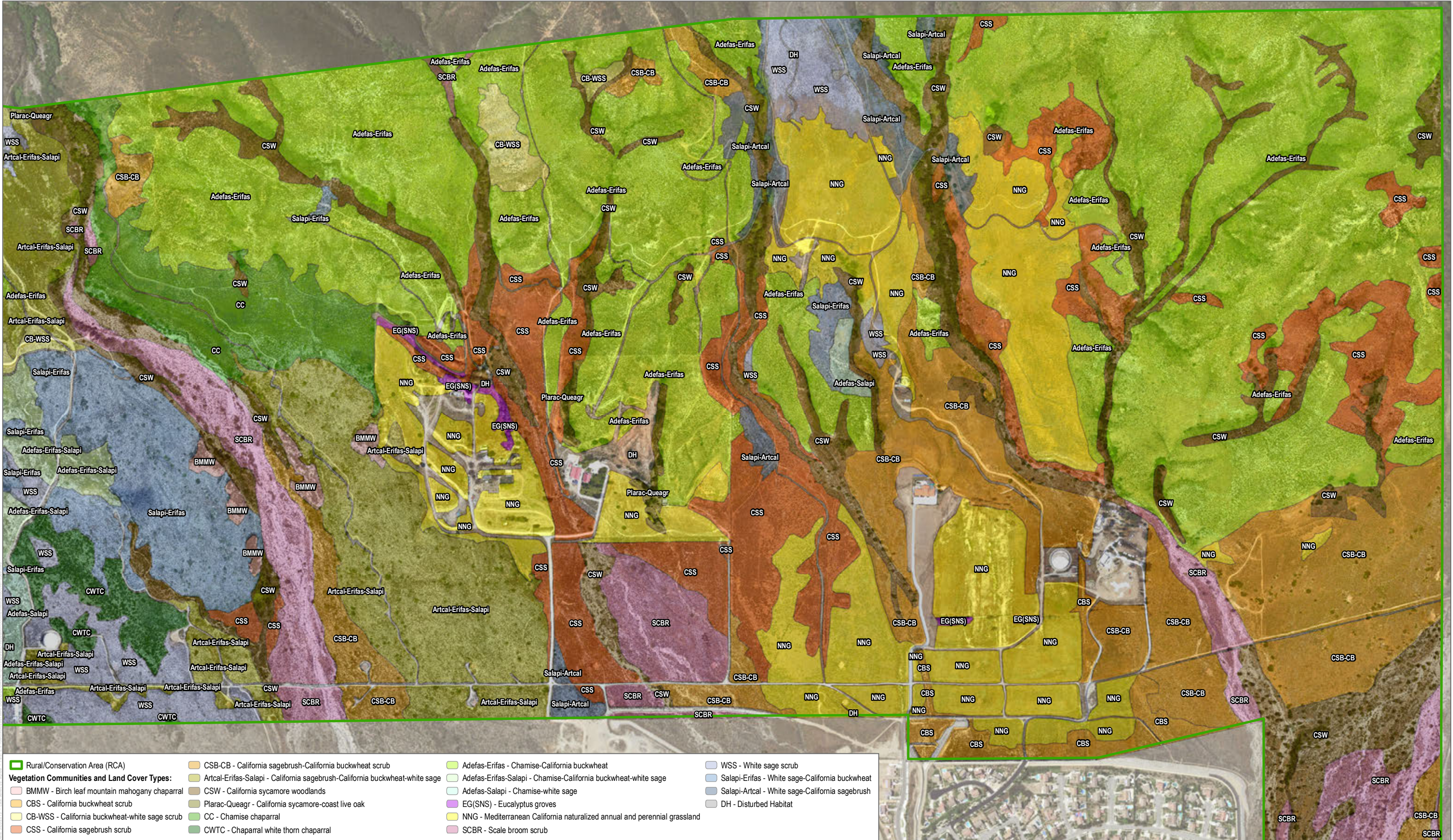
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SOURCE: Sargent Town Planning, 2019; Skyscene 2016; USDA 2016

FIGURE 5D
Vegetation Communities and Land Cover Types
Biological Technical Report for the Etiwanda Heights Neighborhood and Conservation Plan

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SOURCE: Sargent Town Planning, 2019; Skyscene, 2016; USDA 2016

FIGURE 5E
Vegetation Communities and Land Cover Types
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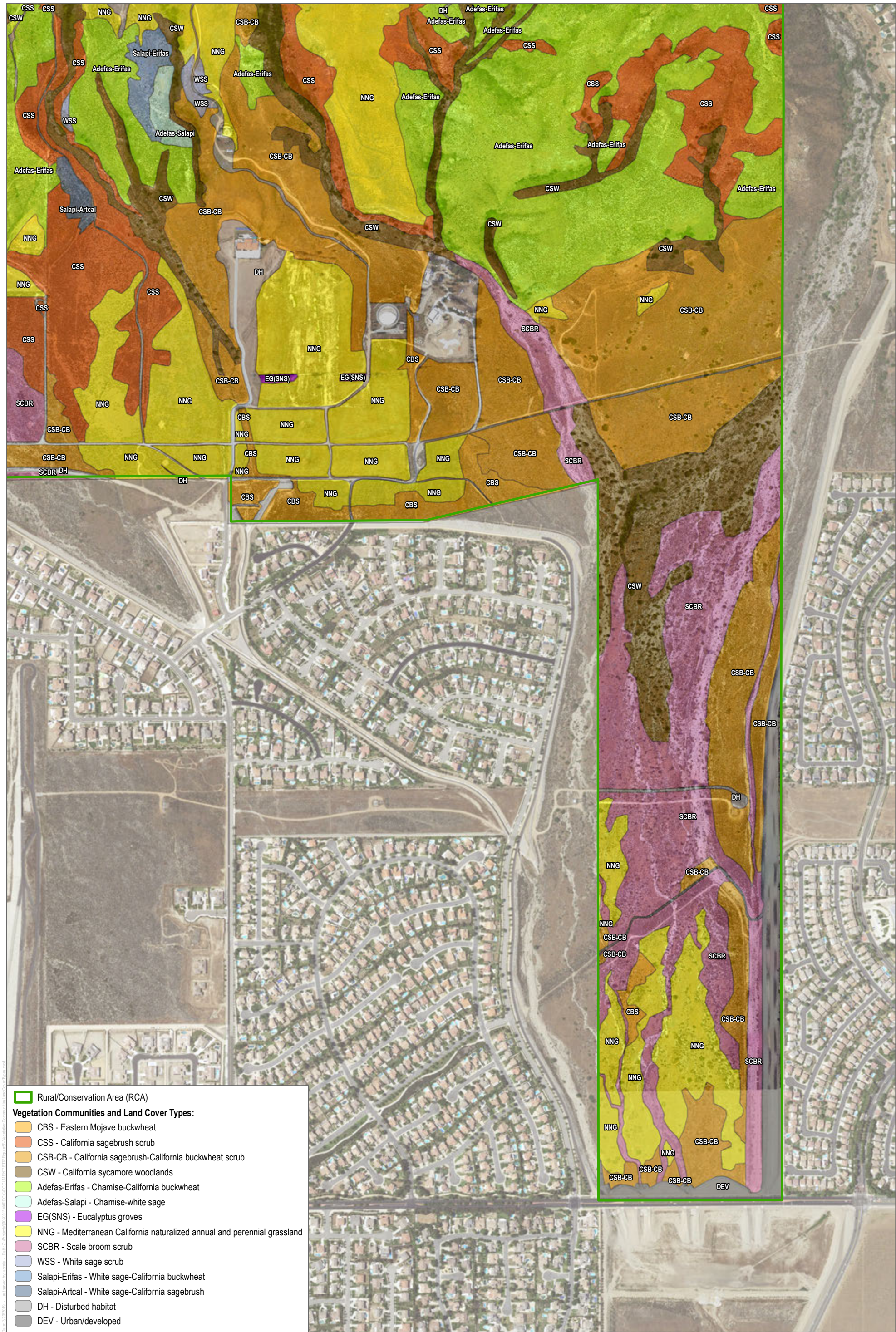
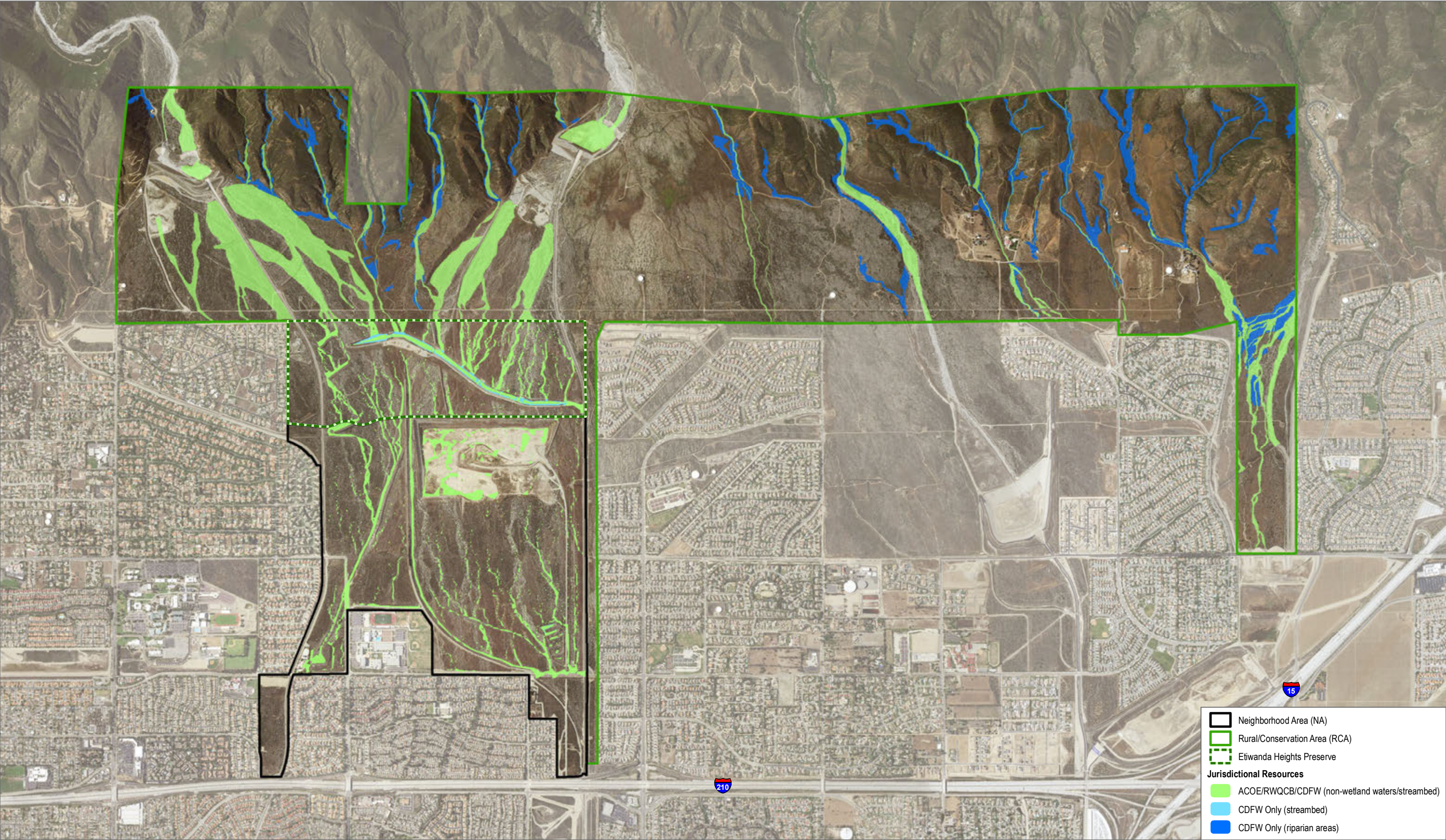


FIGURE 5F

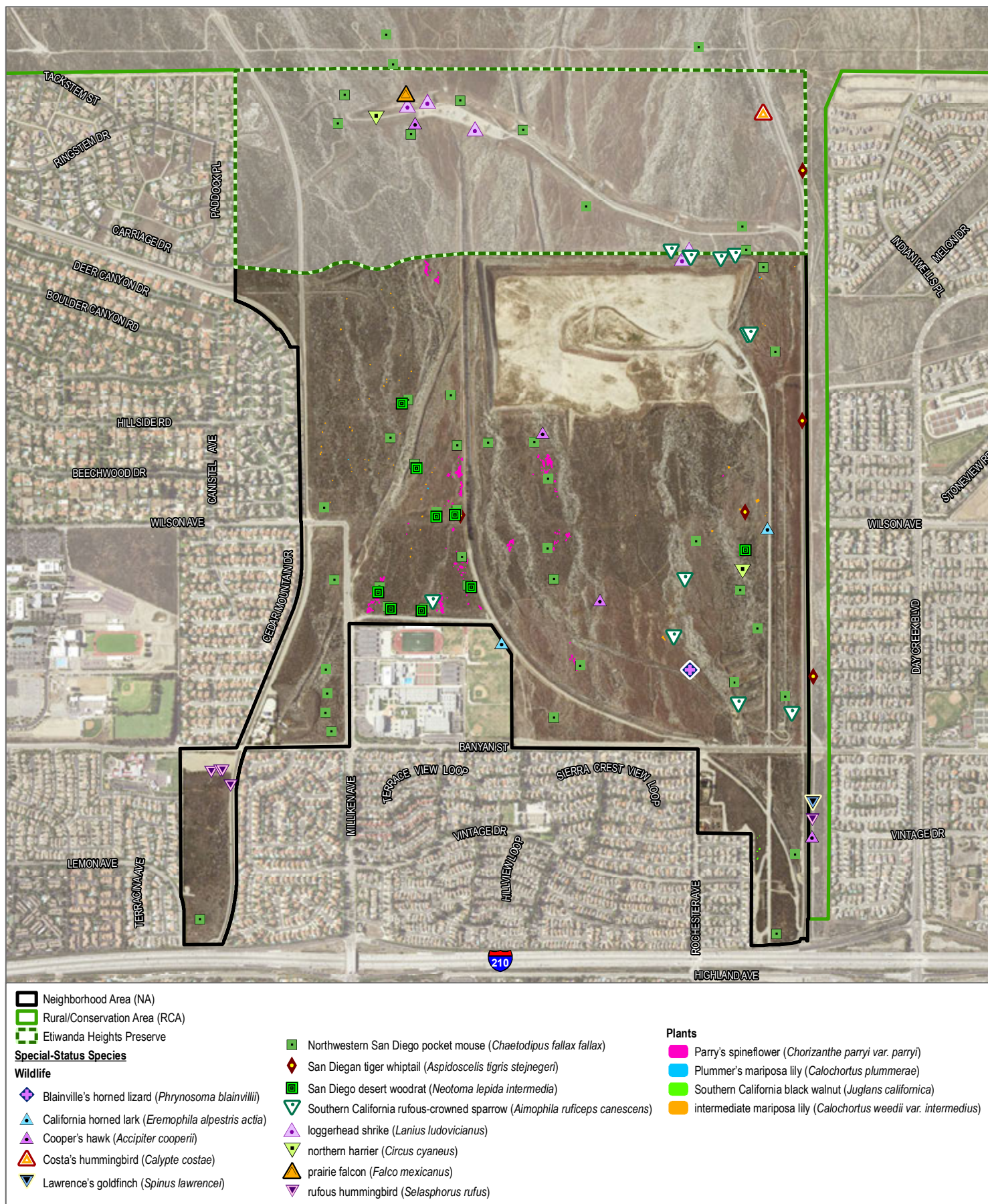
Vegetation Communities and Land Cover Types

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SOURCE: Sargent Town Planning, 2019; USDA 2016

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SOURCE: Sargent Town Planning, 2019; USDA 2016

DUDEK



0 750 1,500 Feet

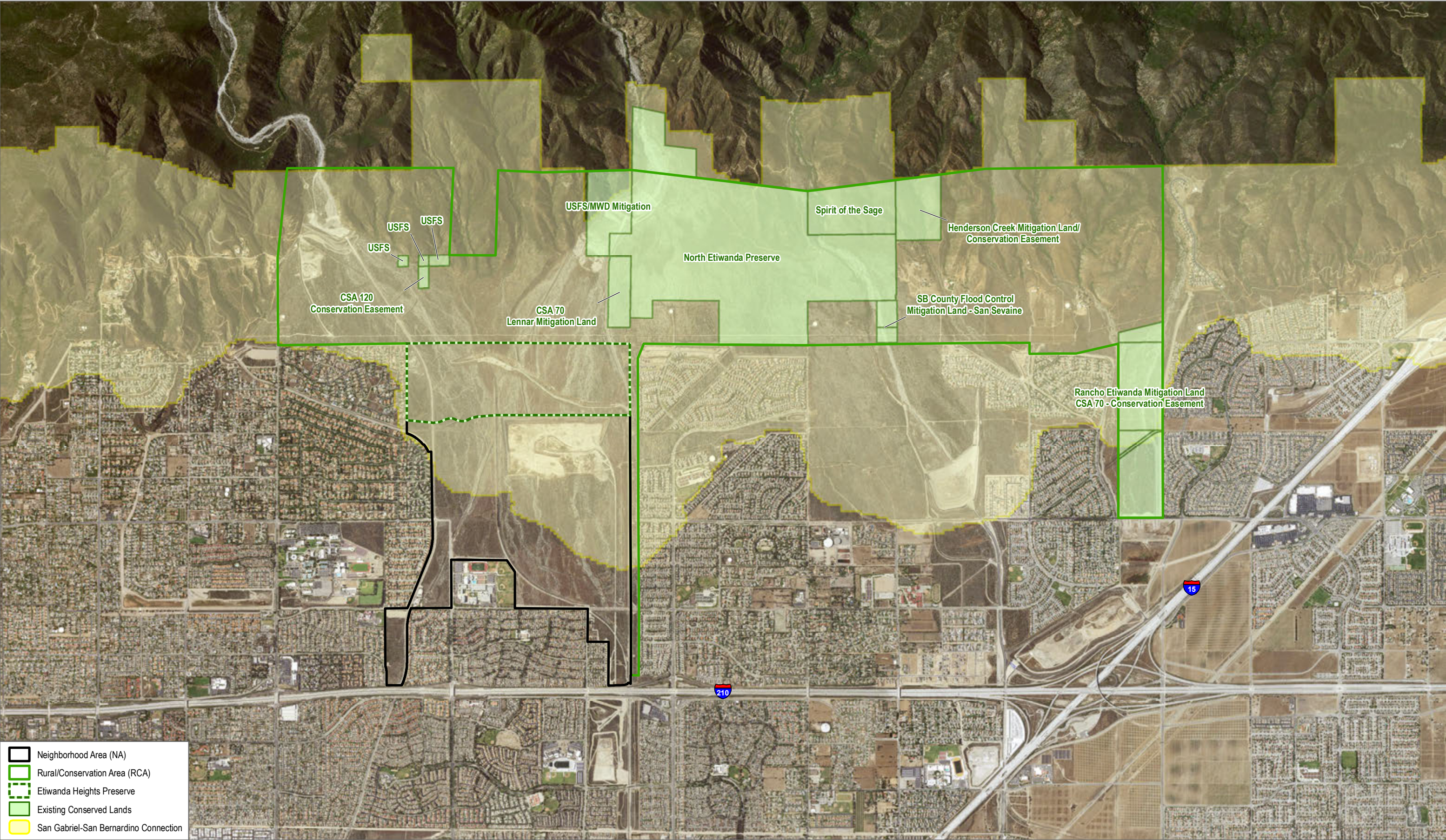
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FIGURE 7

Special-Status Species

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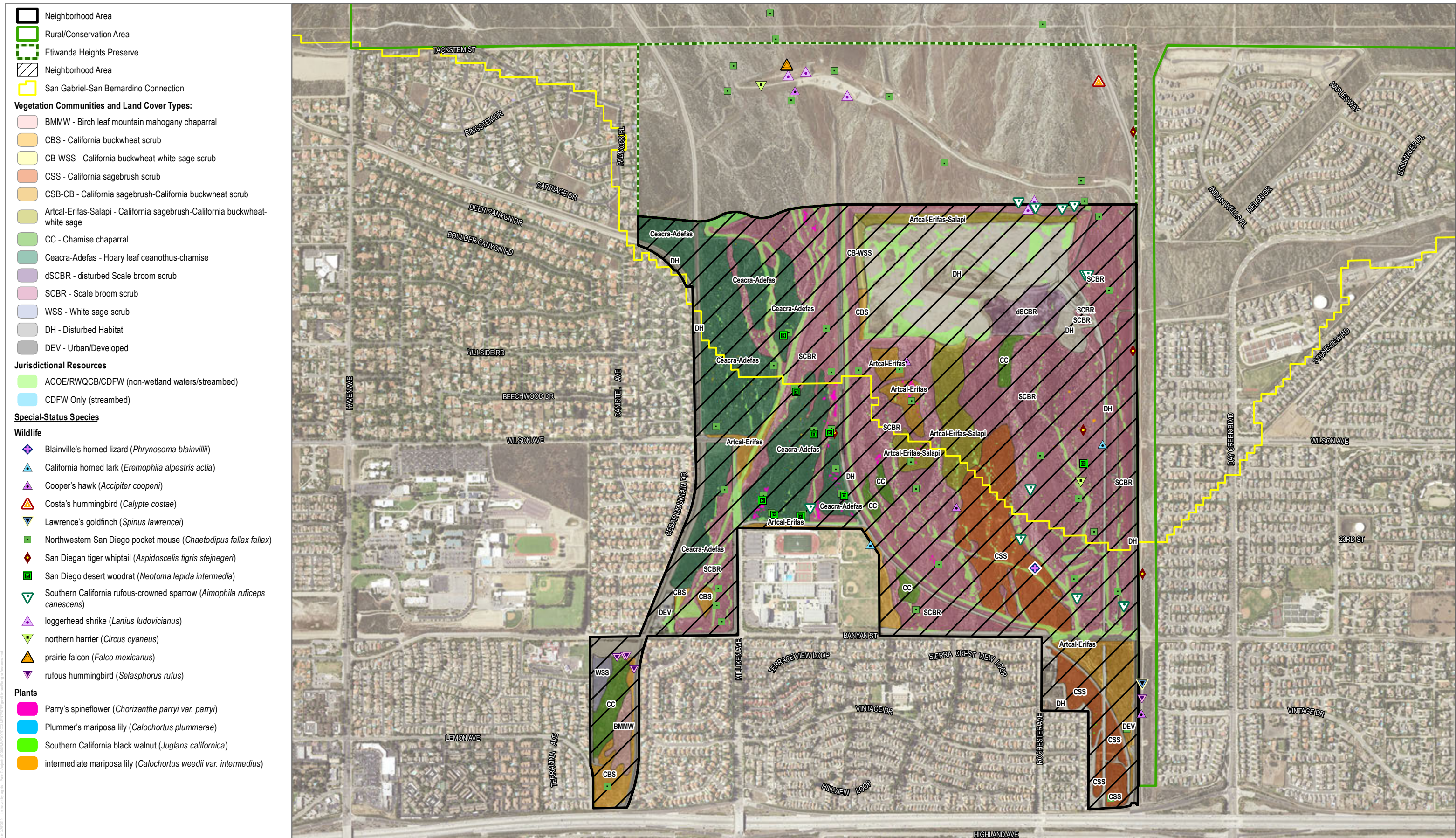


SOURCE: Sargent Town Planning, 2019; SC Wildlands; USDA 2016

FIGURE 8

Wildlife Corridors and Linkages

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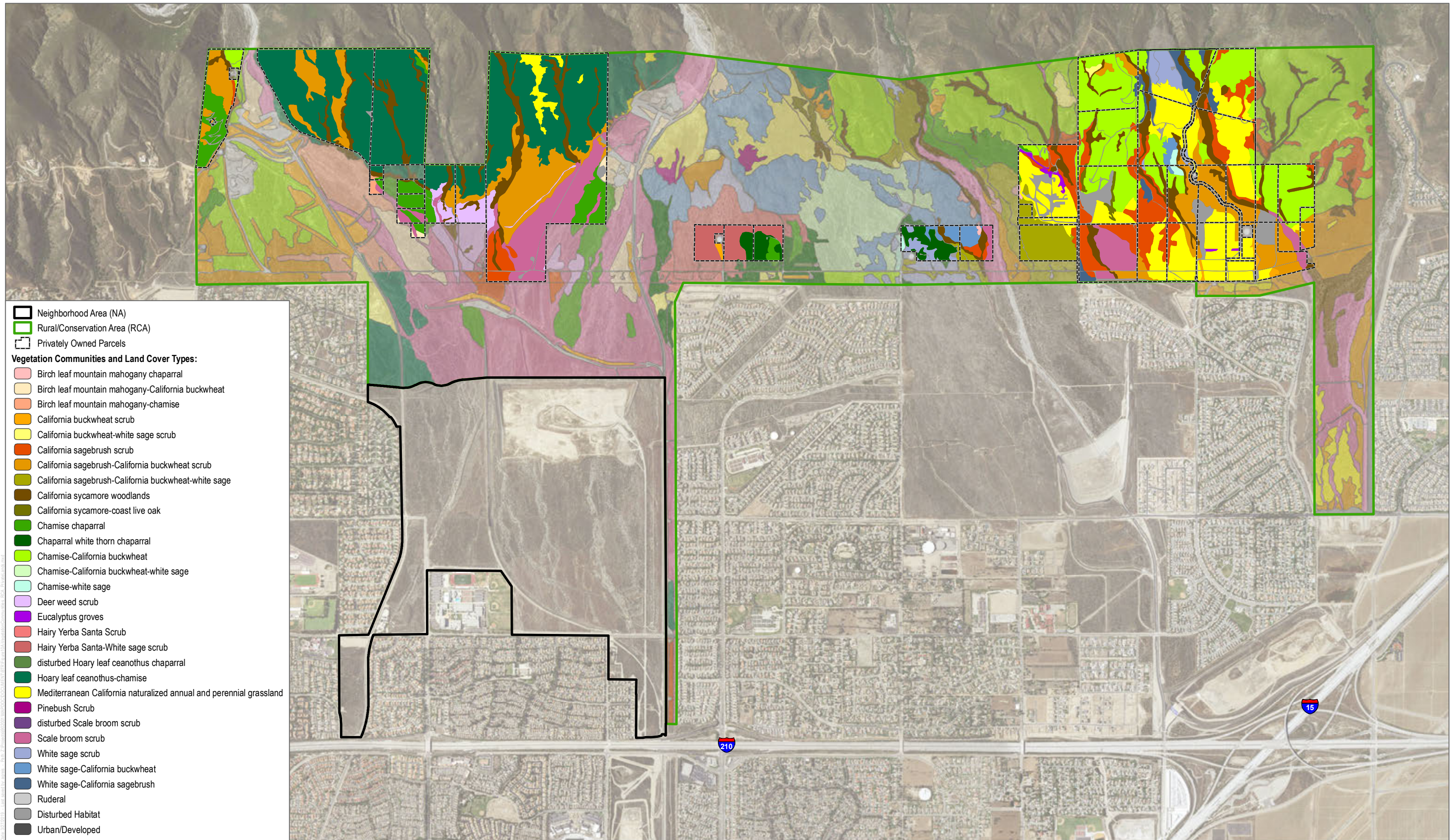
SOURCE: Sargent Town Planning, 2019; Skyscene, NAIP 2016

FIGURE 9

Impacts to Biological Resources

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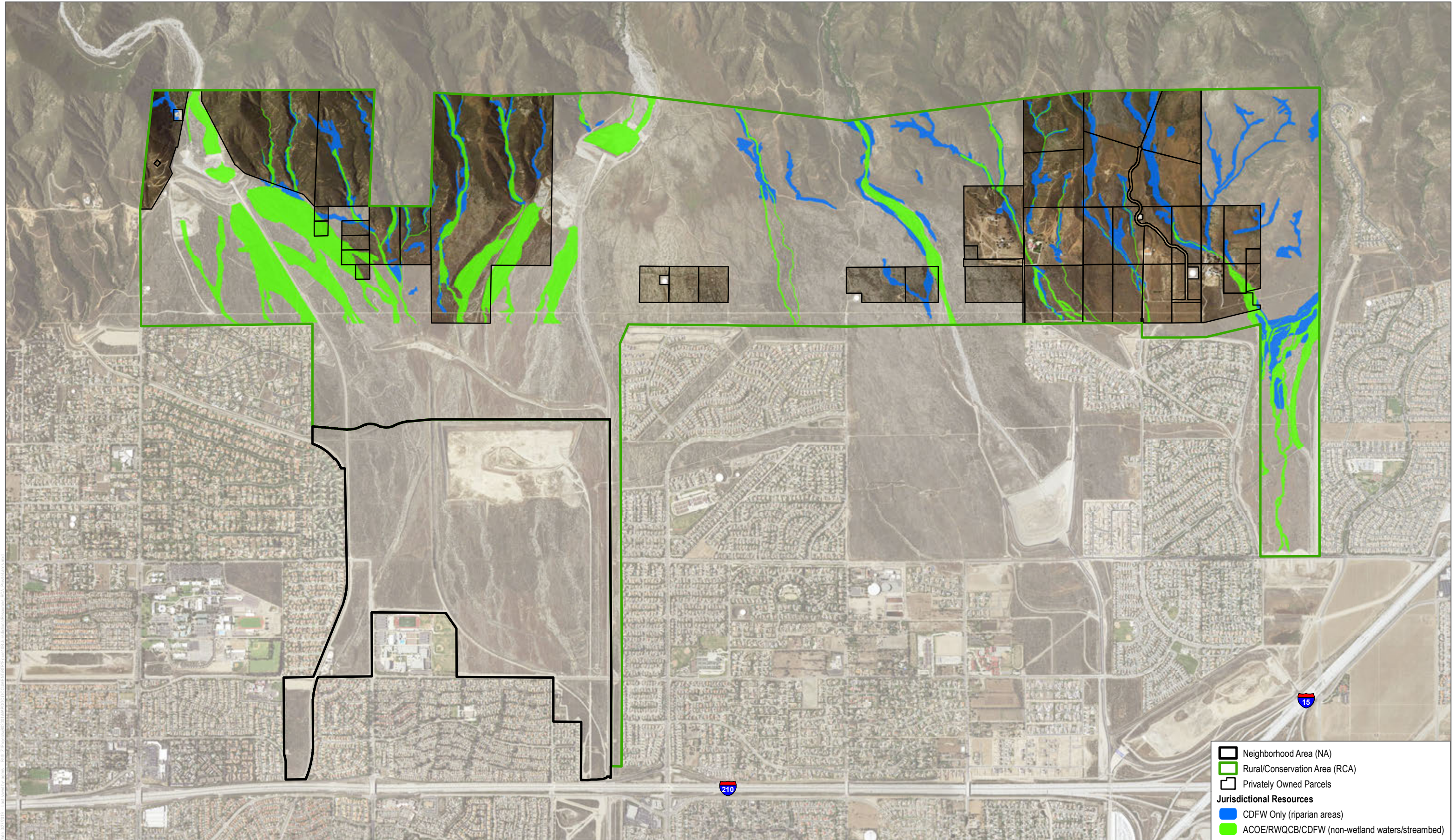
SOURCE: Sargent Town Planning, 2019; Skyscene, 2016; NAIP 2017

FIGURE 10A

Vegetation Communities and Land Cover Types on Privately Owned Lands within the RCA

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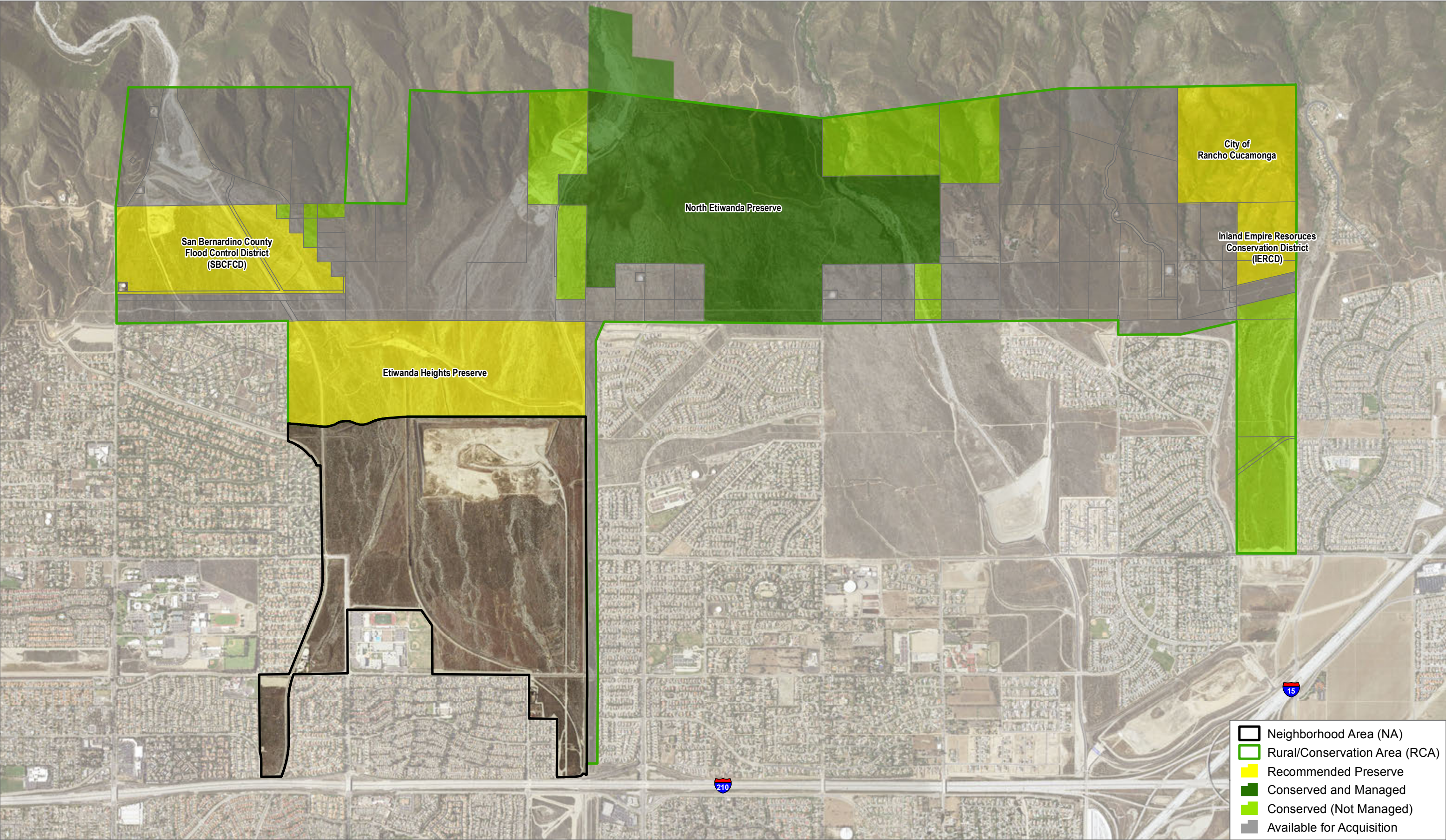
SOURCE: Sargent Town Planning, 2019; Skyscene, 2016; NAIP 2017

FIGURE 10B

Jurisdictional Resources on Privately Owned Lands within the RCA

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SOURCE: Sargent Town Planning, 2019; Skyscene, 2016; NAIP 2017

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APPENDIX A

Coastal California Gnatcatcher Report

July 30, 2017

9020

Stacey Love
Recovery Permit Coordinator
U.S. Fish and Wildlife Service
2177 Salk Avenue, Suite 250
Carlsbad, California 92008

Subject: 2017 Focused Coastal California Gnatcatcher Survey Report for the Rancho Cucamonga North Eastern Sphere Annexation Area Project, County of San Bernardino, California

Dear Ms. Love:

This report documents the results of protocol-level presence/absence surveys for the federally listed threatened coastal California gnatcatcher (*Polioptila californica californica*) (CAGN). The surveys were conducted in support of the Rancho Cucamonga North Eastern Sphere Annexation Area project (project), located in San Bernardino County, California. The surveys were conducted in all areas of suitable CAGN habitat located within the proposed project footprint (survey area).

CAGN is a federally listed threatened species and a California Department of Fish and Wildlife (CDFW) Species of Special Concern. It is closely associated with coastal sage scrub habitat and is thereby threatened primarily by loss, degradation, and fragmentation of this habitat. CAGN typically occurs below 820 feet above mean sea level within 22 miles of the coast and 1,640 feet above mean sea level for inland regions (Atwood and Bolsinger 1992). Studies have suggested that CAGN avoids nesting on very steep slopes (greater than 40%) (Bontrager 1991). CAGN is also impacted by brown-headed cowbird (*Molothrus ater*) nest parasitism (Braden et al. 1997).

LOCATION AND EXISTING CONDITIONS

The approximately 1,200-acre survey area is within the foothills of the eastern portion of the San Gabriel Mountains in unincorporated San Bernardino County (Figure 1). The study area is largely undeveloped and occurs within the Day Canyon and Deer Canyon drainages. San Bernardino County has designated the majority of the study area as County Service Area (CSA) 120 - Open Space District-1 (Figure 2). The Day Creek Preserve, a 200-acre conservation area set aside through a conservation easement to the San Bernardino County Flood Control District (Rancho Cucamonga General Plan 2010), overlaps the northeastern portion of the study area. One large heavily disturbed mining area occurs in the central portion of the study area.

Undeveloped land occurs to the north, northwest, and northeast of the study area, which makes up the broader Etiwanda Fan area and includes Day Canyon and Deer Canyon. Two isolated San Bernardino National Forest parcels abut the north end of the study area, with the continuous San Bernardino National Forest boundary further to the north. Developed areas of the City of Rancho Cucamonga abut the south, east, and west ends of the study area. Existing conservation areas surrounding the study area include the North Etiwanda Preserve (Unit 1 and Unit 2), the 137-acre San Sevaine Spreading Grounds, the 880-acre U.S. Forest Service Conservation Area, and a 35-acre conservation area that was purchased as mitigation for a housing development and set aside through a conservation easement to the San Bernardino County Flood Control District (Rancho Cucamonga General Plan 2010).

The survey area is within the Cucamonga Peak U.S. Geological Survey 7.5-minute quadrangle map, Township 1N, Range 6W, 7W and Sections 13, 17, 18, 19, 20, 24, 25, 29 and 30 (Figure 2).

Elevations range from about 1,504 feet above mean sea level in the southeastern portion of the survey area to approximately 2,220 feet above mean sea level in the northwestern portion of the survey area.

Soils within the study area consist of Cieneba-rock outcrop complex, Tujunga gravelly loamy sand; Soboba stony loamy sand; psammments and fluvents; Ramona sandy loam; Hanford coarse sandy loam; Cieneba sandy loam; water; riverwash; Trigo family-lithic xerorthents; Soboba-Hanford families association; Riverwash-Soboba families association, Soboba gravelly loamy sand; Grangeville fine sandy loam; and Greenfield fine sandy loam (Natural Resources Conservation Service 2016).

VEGETATION COMMUNITIES

Vegetation mapping of the survey area was originally conducted by Dudek in 2015. A total of 16 different vegetation communities and land cover types were observed within the study area. Vegetation acreages are presented in Table 1, and primary constituent element habitats suitable for CAGN are described following the table. Approximately 800 acres of the study area had suitable habitat for CAGN.

Table 1
Vegetation Communities and Land Cover Types Within the Study Area

Habitat Types/Vegetation Communities	Total Acreage
<i>Upland Communities</i>	
Birch leaf mountain mahogany chaparral	4.97
Birch leaf mountain mahogany-California buckwheat	3.39

Table 1
Vegetation Communities and Land Cover Types Within the Study Area

Habitat Types/Vegetation Communities	Total Acreage
California buckwheat scrub	18.49
California buckwheat-white sage scrub	16.67
California sagebrush scrub	71.50
California sagebrush-California buckwheat	36.00
California sagebrush-California buckwheat-white sage	31.42
Chamise chaparral	39.91
Chaparral white thorn chaparral	6.84
Hoary leaf ceanothus-chamise	168.52
Deer weed scrub	1.08
Scale broom scrub (includes disturbed)	622.00
White sage scrub	3.01
Hairy Yerba Santa scrub	1.15
<i>Subtotal</i>	<i>1024.21</i>
<i>Non-Sensitive Communities and Land Covers</i>	
Urban/Developed	38.96
Disturbed Habitat	149.28
<i>Subtotal</i>	<i>188.24</i>
Total	1212.45

Coastal Sage Scrub Communities

Coastal sage scrub vegetation on site is dominated by California sagebrush (*Artemisia californica*) and California buckwheat (*Eriogonum fasciculatum*), with laurel sumac (*Malosma laurina*), white sage (*Salvia apiana*), chamise (*Adenostoma fasciculatum*), pine bush (*Ericameria pinifolia*), and little desert buckwheat (*Eriogonum trichopes*) as lesser components. This community supports a diverse understory of native herbs and forbs, including cryptantha species (*Cryptantha* spp.), Mediterranean grass (*Schismus barbatus*), wild mustard (*Hirschfeldia incana*), and several species of grasses, both native and introduced. The primary introduced grass is foxtail chess (*Bromus madritensis*).

California buckwheat scrub occurs in multiple areas throughout the study area but mainly within the southwestern parcel. California buckwheat-white sage scrub occurs mainly within the northeastern corner of study area with one area centrally located. California sagebrush scrub is the most dominant vegetation community in the southeastern portion of the study area with two smaller areas along the northern boundary. California sagebrush-California buckwheat scrub

comprises 36 acres and occurs along the southern boundary of the study area. California sagebrush–California buckwheat–white sage scrub comprises 31.42 acres and occurs in three separate areas located centrally within the study area occurs. White sage scrub represents the smallest coastal sage scrub vegetation community on site and occurs only in one area within the southwestern portion of the study area.

Coastal sage scrub is recognized as a sensitive plant community by local, state, and federal wildlife agencies. It supports a rich diversity of sensitive plants and animals, and it is estimated that it has been reduced by 75% to 80% of its historical coverage throughout Southern California. It is the focus of the current State of California Natural Community Conservation Planning program in Southern California.

Deer Weed Scrub

Deer weed scrub covers approximately 1 acre within the study area. Deer weed scrub alliance communities include common deerweed (*Acmispon glaber*) as dominant or co-dominant in the canopy. Deer weed scrub has a two-tiered open to intermittent shrub canopy less than 2 meters (7 feet) in height with a sparse ground layer (Sawyer et al. 2009).

Some species associated with the deer weed scrub alliance include chamise, California sagebrush, coyote brush (*Baccharis pilularis*), California brittle bush (*Encelia californica*), California buckwheat, and white sage (Sawyer et al. 2009).

Scale Broom Scrub (includes disturbed)

Scale broom scrub occurs throughout much of the study area and is the most dominant vegetation community in the study area representing 622 acres. Scale broom scrub includes scale broom (*Lepidospartum squartum*) as dominant or co-dominant in the shrub canopy. Scale broom scrub has a two-tiered open to continuous shrub canopy less than 2 meters (7 feet) in height. The herbaceous layer is variable and may be grassy.

Some species associated with the scale broom scrub alliance include cheesebush (*Ambrosia salsola*), California sagebrush, mulefat (*Baccharis salicifolia*), bladderpod (*Peritoma arborea*), California buckwheat, and California cholla (*Cylindropuntia californica*) (Sawyer et al. 2009).

METHODS

Focused surveys for CAGN were performed within the project site between May 11 and July 1, 2017, by permitted biologists Brock Ortega, Karen Mullen, Crysta Dickson, Karen Carter, Garrett Huffman, Brian Lohstroh, Tara Baxter, Anita Hayworth, Alicia Hill, and Travis Cooper (Table 3). The surveys were conducted following the currently accepted U.S. Fish and Wildlife Service (USFWS) CAGN presence/absence survey protocol (USFWS 1997), using the breeding season survey methods. One survey was conducted outside of the breeding season on July 1, 2017. An email was sent to Stacey Love on June 28, 2017 stating that one survey would be conducted just outside the breeding season, as defined in USFWS (1997). Survey routes are shown on Figures 3A–3B.

Survey routes completely covered all areas of suitable CAGN habitat within the survey area. Appropriate birding binoculars (7x35 to 10x50 power) were used to aid in detecting and identifying bird species. The survey conditions were within protocol limits, as shown in Table 2. A recording of vocalizations was used frequently to elicit a response from the species. The recording was played approximately every 50 to 100 feet.

The site was divided into 10 survey area (shown on Figures 3A–3B), each representing a single-day survey effort of approximately 80 acres (i.e., in accordance with USFWS protocol for non-natural community conservation plan (NCCP) enrolled areas) resulting in 60 person-days of effort (see Table 2). These survey areas were numbered and assigned to Dudek’s permitted biologists and independent investigators. The biologists were provided with digital aerial maps of each survey polygon, used for mapping CAGN if observed. Table 3 provides a list of survey dates and survey conditions.

Table 2
2017 California Gnatcatcher Survey Areas

Survey Area	Acreage of Survey Area
1	79.71
2	79.58
3	79.93
4	79.70
5	79.64
6	79.88
7	79.90
8	80.52
9	80.10
10	80.17

Ms. Stacey Love

Subject: 2017 Focused Coastal California Gnatcatcher Survey Report for the Rancho Cucamonga
North Eastern Sphere Annexation Area Project, County of San Bernardino, California

Table 3
Survey Conditions

Survey Pass	Survey Area	Date	Time	Personnel	Conditions
1	1	2017-05-15	6:00 a.m.–12:00 p.m.	GH	55–59°F; 80–100% cloud cover; 2–6 mph wind
1	2	2017-05-17	6:31 a.m.–11:35 a.m.	CD	55–57°F; 100% cloud cover; 0–3 mph wind
1	3	2017-05-19	6:00 a.m.–12:00 p.m.	BL	65–90°F; 0% cloud cover; 0–2 mph wind
1	4	2017-05-18	06:35 a.m.–12:15 p.m.	TB	56–77°F; 0% cloud cover; 0–5 mph wind
1	5	2017-05-24	06:00 a.m.–12:00 p.m.	GH	64–83°F; 30–40% cloud cover; 2–7 mph wind
1	6	2017-05-16	6:00 a.m.–12:00 p.m.	GH	53–56°F; 80–100% cloud cover; 2–5 mph wind
1	7	2017-05-11	6:00 a.m.–11:10 a.m.	BO	50–70°F; 50–100% cloud cover; 0–5 mph wind
1	8	2017-05-21	6:00 a.m.–12:00 p.m.	GH	68–90°F; 0% cloud cover; 2–6 mph wind
1	9	2017-05-15	6:00 a.m.–11:45 a.m.	KC	56°F; cloudy; 1–2 mph wind
1	10	2017-05-18	6:10 a.m.–11:50 a.m.	BO	55–75°F; 0% cloud cover; 0–3 mph wind
2	1	2017-05-21	6:00 a.m.–11:30 a.m.	BO	53–87°F; 0% cloud cover; 0–3 mph wind
2	2	2017-05-27	6:15 a.m.–11:50 a.m.	BO	54–67°F; 20–50% cloud cover; 2–5 mph wind
2	3	2017-05-30	6:00 a.m.–12:00 p.m.	BL	62–74°F; 30–100% cloud cover; 0–5 mph wind
2	4	2017-05-25	6:00 a.m.–11:56 a.m.	TB	55–65°F; 80–100% cloud cover; 3–5 mph wind
2	5	2017-05-31	6:15 a.m.–11:15 a.m.	TB	60–66°F; 100% cloud cover; 0–3 mph wind
2	6	2017-05-24	6:01 a.m.–11:05 a.m.	CD	63–77°F; 10–40% cloud cover; 0–3 mph wind
2	7	2017-05-18	6:59 a.m.–11:53 a.m.	CD	58°F; 0% cloud cover; 0–1 mph wind
2	8	2017-05-30	6:12 a.m.–11:06 a.m.	CD	57–69°F; 0–100% cloud cover; 0–1 mph wind
2	9	2017-05-22	6:00 a.m.–11:57 a.m.	AMH	63–88°F; 0% cloud cover; 1–5 mph wind
2	10	2017-05-25	6:00 a.m.–12:00 p.m.	GH	55–66°F; 100% cloud cover; 0–6 mph wind
3	1	2017-05-30	6:00 a.m.–12:00 p.m.	GH	59–80°F; 30–100% cloud cover; 0–5 mph wind
3	2	2017-06-05	6:00 a.m.–12:00 p.m.	GH	60–83°F; 0–100% cloud cover; 0–6 mph wind
3	3	2017-06-06	6:05 a.m.–11:55 a.m.	BL	62–76°F; 20–100% cloud cover; 0–4 mph wind
3	4	2017-06-04	6:10 a.m.–11:50 a.m.	AH	64–84°F; 0% cloud cover; 0–3 mph wind
3	5	2017-06-08	6:00 a.m.–12:00 p.m.	TB	60–70°F; 70–100% cloud cover; 1–5 mph wind
3	6	2017-05-31	7:00 a.m.–12:08 p.m.	KM	58–72°F; 100% cloud cover; 0–3 mph wind
3	7	2017-06-04	6:10 a.m.–11:50 a.m.	TC	64–84°F; 0% cloud cover; 0–3 mph wind
3	8	2017-06-07	6:23 a.m.–10:00 a.m.	CD	63–70°F; 10–100% cloud cover; 0–1 mph wind
3	9	2017-05-29	6:10 a.m.–11:30 a.m.	BO	60–80°F; 10–80% cloud cover; 0–3 mph wind
3	10	2017-06-06	6:00 a.m.–12:00 p.m.	GH	55–75°F; 10–100% cloud cover; 1–6 mph wind
4	1	2017-06-07	6:00 a.m.–12:00 p.m.	GH	62–79°F; 10–100% cloud cover; 0–6 mph wind
4	2	2017-06-12	6:00 a.m.–12:00 p.m.	GH	53–69°F; 30–90% cloud cover; 2–5 mph wind
4	3	2017-06-13	6:03 a.m.–11:58 a.m.	BL	59–82°F; 0% cloud cover; 0–5 mph wind
4	4	2017-06-13	8:32 a.m.–12:30 a.m.	KM	63–78°F; 0% cloud cover; 1–3 mph wind
4	5	2017-06-16	6:03 a.m.–11:45 a.m.	AMH	67–94°F; 0% cloud cover; 1–7 mph wind
4	6	2017-06-07	7:00 a.m.–12:26 p.m.	KM	63–76°F; 0–5 mph wind
4	7	2017-06-11	6:00 a.m.–12:00 p.m.	GH	58–67°F; 100% cloud cover; 1–8 mph wind

Table 3
Survey Conditions

Survey Pass	Survey Area	Date	Time	Personnel	Conditions
4	8	2017-06-14	6:43 a.m–10:21 a.m.	CD	63–83°F; 0% cloud cover; 0–1 mph wind
4	9	2017-06-08	6:00 a.m–12:00 p.m.	GH	58–67°F; 100% cloud cover; 1–8 mph wind
4	10	2017-06-14	8:32 a.m–12:30 p.m.	KM	72–87°F; 0% cloud cover; 0–3 mph wind
5	1	2017-06-17	6:20 a.m–11:50 a.m.	AH	66–89°F; 0% cloud cover; 0–2 mph wind
5	2	2017-06-22	8:20 a.m–12:25 p.m.	KM	75–85°F; 0% cloud cover; 0–3 mph wind
5	3	2017-06-20	6:08 a.m–12:00 p.m.	BL	73–95°F; 0% cloud cover; 0–3 mph wind
5	4	2017-06-20	6:00 a.m–12:00 p.m.	GH	70–98°F; 0% cloud cover; 1–3 mph wind
5	5	2017-06-23	6:00 a.m–12:00 p.m.	GH	61–85°F; 1–4 mph wind
5	6	2017-06-14	6:10 a.m–12:00 p.m.	AH	62–91°F; 0% cloud cover; 0–4 mph wind
5	7	2017-06-21	5:55 a.m–10:00 a.m.	CD	71–83°F; 0% cloud cover; 0–1 mph wind
5	8	2017-06-20	6:00 a.m–12:00 p.m.	GH	65–83°F; 0% cloud cover; 1–4 mph wind
5	9	2017-06-19	6:00 a.m–12:00 p.m.	GH	54–93°F; 1–3 mph wind
5	10	2017-06-21	8:30 a.m–12:20 p.m.	KM	82–87°F; 0% cloud cover; 0–3 mph wind
6	1	2017-06-25	6:00 a.m–12:00 p.m.	GH	72–92°F; 0% cloud cover; 1–4 mph wind
6	2	2017-06-29	6:00 a.m–12:00 p.m.	GH	66–81°F; 0% cloud cover; 1–3 mph wind
6	3	2017-06-28	6:30 a.m–12:00 p.m.	TC	64–86°F; 0% cloud cover; 0–3 mph wind
6	4	2017-06-28	6:00 a.m–11:00 a.m.	TB	72–93°F; 0% cloud cover; 0–3 mph wind
6	5	2017-06-30	6:00 a.m–12:00 p.m.	GH	63–80°F; 0% cloud cover; 2–4 mph wind
6	6	2017-06-28	6:30 a.m–12:00 p.m.	AH	64–85°F; 0% cloud cover; 0–2 mph wind
6	7	2017-06-28	6:35 a.m–11:10 a.m.	CD	66–78°F; 0% cloud cover; 0–3 mph wind
6	8	2017-07-01	6:00 a.m–12:00 p.m.	GH	62–80°F; 0% cloud cover; 2–6 mph wind
6	9	2017-06-28	9:00 a.m–12:30 p.m.	KM	74–82°F; 0% cloud cover; 1–3 mph wind
6	10	2017-06-28	6:00 a.m–12:00 p.m.	GH	61–86°F; 0% cloud cover; 1–3 mph wind

Notes: BO= Brock Ortega; KM = Karen Mullen; CD = Crysta Dickson; KC = Karen Carter; TB = Tara Baxter; TC = Travis Cooper; AMH = Anita Hayworth; AH = Anita Hill; GH = Garrett Huffman ; BL = Brian Lohstroh ; cc = cloud cover; mph = miles per hour ; °F = degrees Fahrenheit.

RESULTS


During the 2017 survey effort, no CAGN were detected throughout the entire survey area. Brown-headed cowbird (*Molothrus ater*) individuals were observed on 6 separate occasions; 5 times within Survey Area 3 and on one occasion in Survey Area 7. In all, 86 wildlife species were recorded during this survey effort. Species observed included 67 birds, 5 mammals, 5 reptile, and 9 insects. A full list of species is included in Appendix A. The 15-day pre-survey notification letter sent to the U.S. Fish and Wildlife Service on May 1, 2016, is included in Appendix B.


Ms. Stacey Love

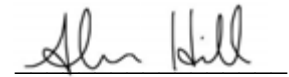
Subject: 2017 Focused Coastal California Gnatcatcher Survey Report for the Rancho Cucamonga
North Eastern Sphere Annexation Area Project, County of San Bernardino, California

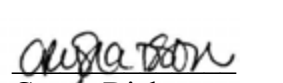
We certify that the information in this survey report and attachments fully and accurately represent our work. Please contact Brock Ortega (bortega@dudek.com) with questions or if you require additional information.

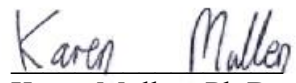
Sincerely,

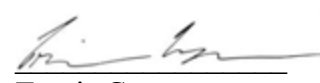

Brock Ortega
Permit #TE813545-6

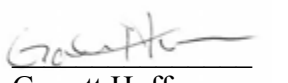

Karen Carter
Permit #TE24603A-1

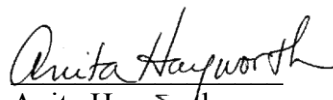

Alicia Cooper Hill
Permit #TE06145B-1



Crysta Dickson
Permit #TE067347-4

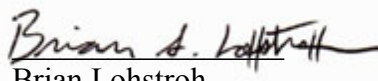

Karen Mullen, Ph.D.
Permit # TE85771B-0


Travis Cooper
Permit #TE170389-6


Garrett Huffman
Permit #TE20186A-1


Anita Hayworth
Permit #TE781084-9.1


Tara Baxter
Permit #TE87004B-0


Brian Lohstroh
Permit #TE063608-5

Att: Figure 1: Regional Map

Figure 2: Vicinity Map

Figure 3A–3B: Survey Routes

Appendix A: Cumulative List of Wildlife Species Observed or Detected within the Study Area

Appendix B: 15-Day Pre-Survey Notification Letter

REFERENCES

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Ms. Stacey Love

Subject: 2017 Focused Coastal California Gnatcatcher Survey Report for the Rancho Cucamonga North Eastern Sphere Annexation Area Project, County of San Bernardino, California

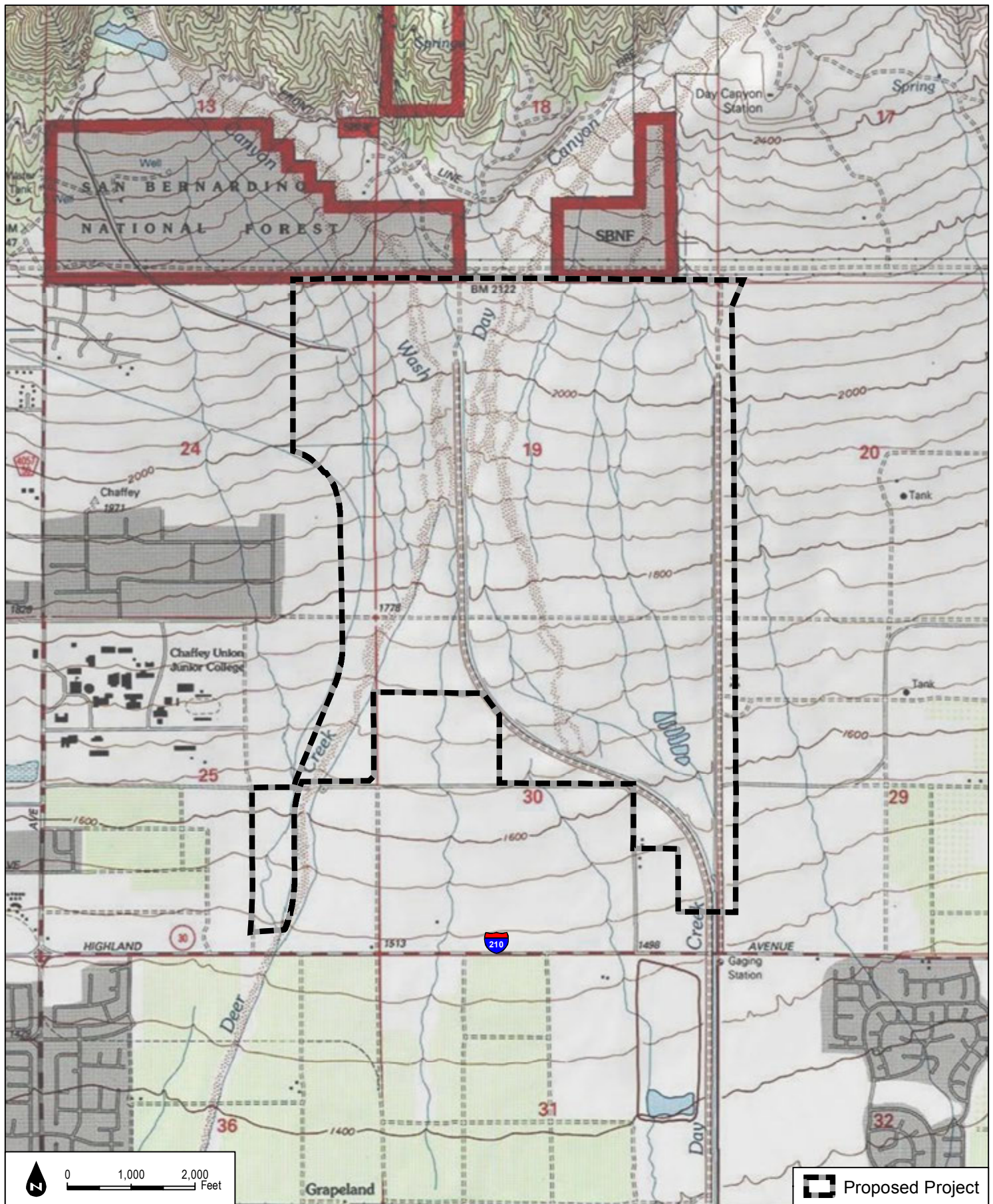
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SOURCE: USGS 7.5-Minute Series Cucamonga Peak Quadrangle

FIGURE 2
Vicinity Map

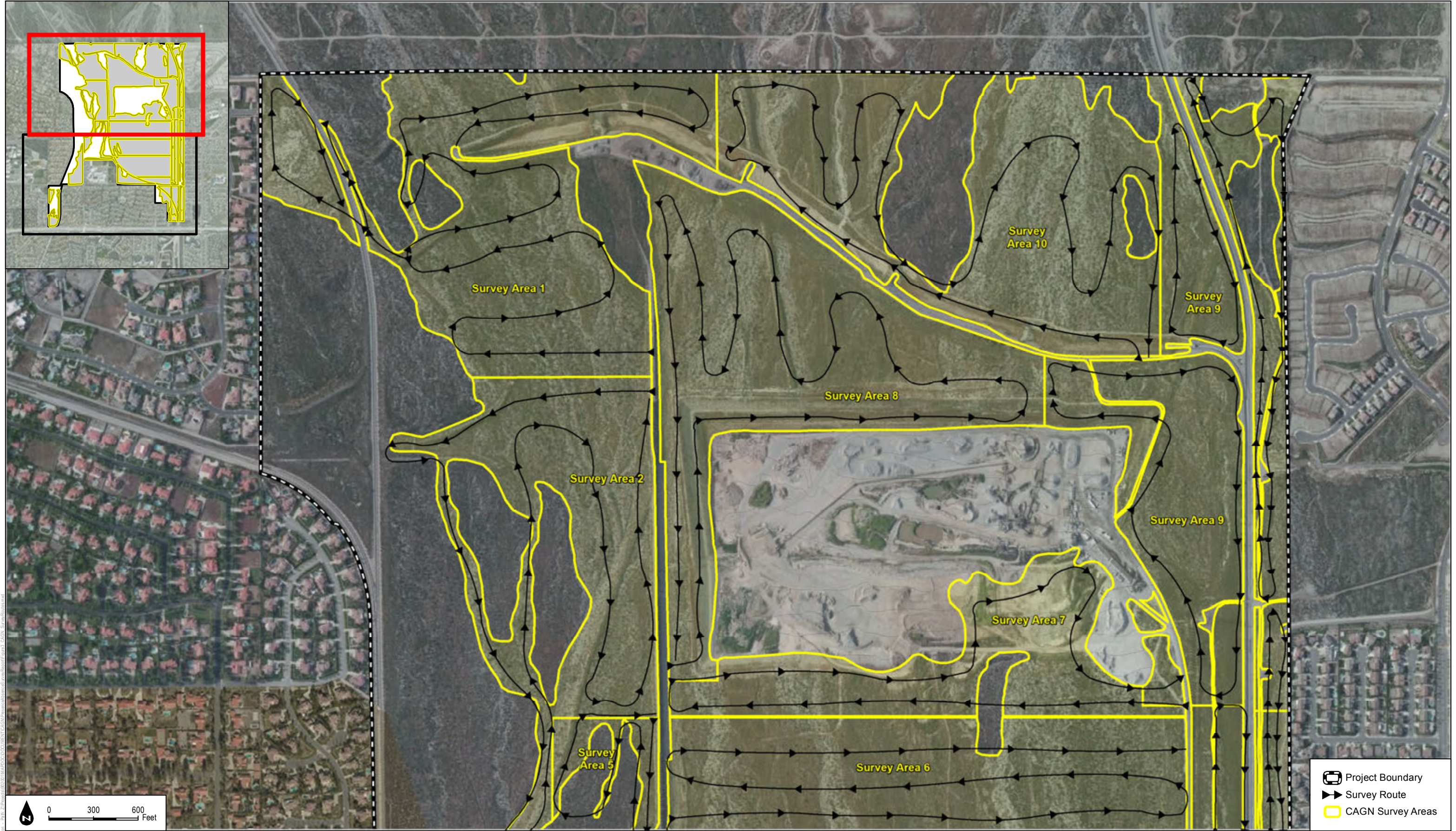
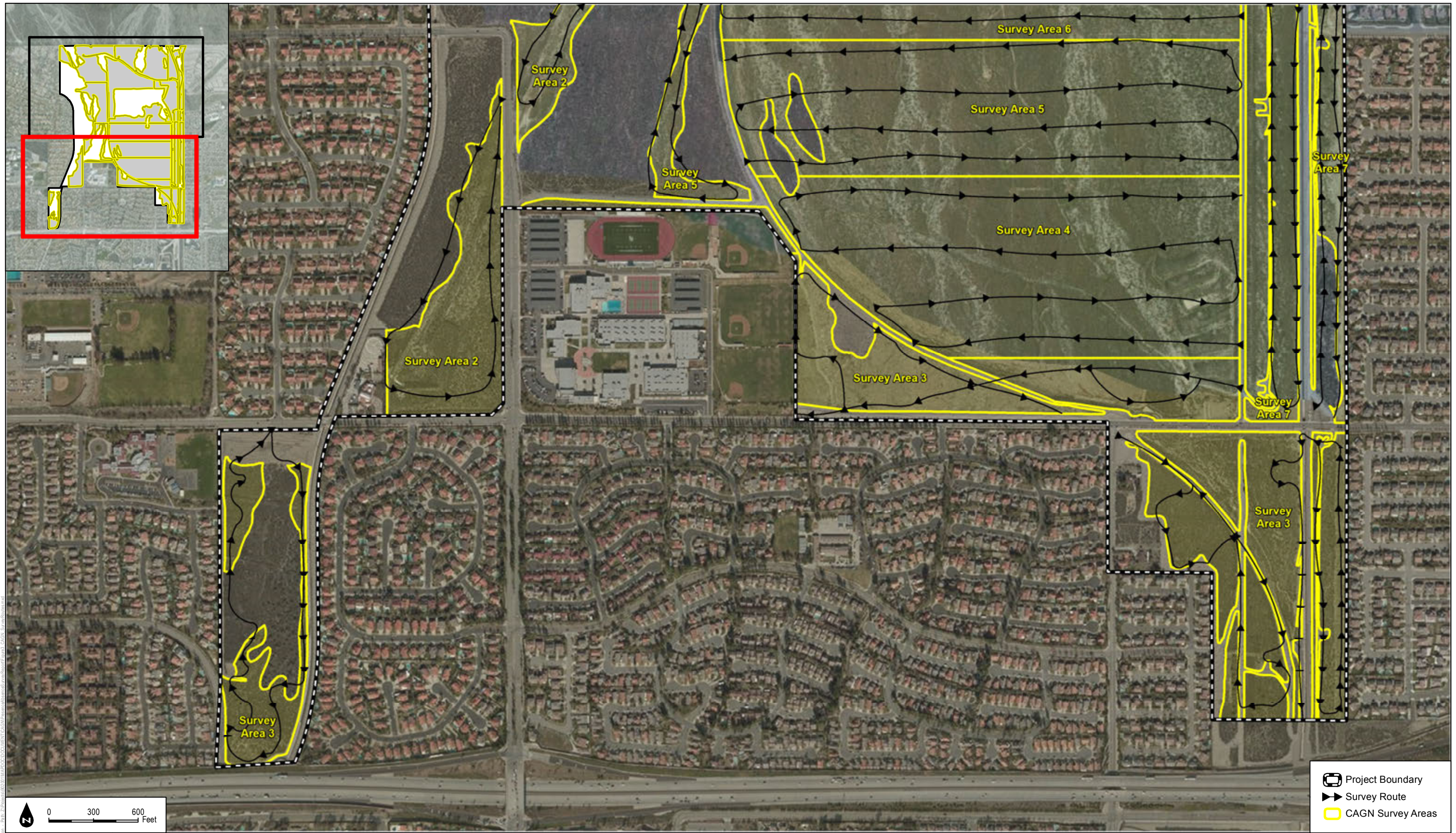


FIGURE 3a
CAGN Survey Routes



- Project Boundary
- Survey Route
- CAGN Survey Areas

FIGURE 3b
CAGN Survey Routes

0 300 600
Feet

DUDEK

SOURCE: BING 2017

2017 Focused California Gnatcatcher Survey Report for the Rancho Cucamonga North Eastern Sphere Annexation Area Project, County of San Bernardino, California

APPENDIX A

*Cumulative List of Wildlife Species Observed or
Detected within the Study Area*

APPENDIX A

Cumulative List of Wildlife Species Observed or Detected within the Study Area

MAMMALS

Spermophilus (Otospermophilus) beecheyi – California ground squirrel
Sylvilagus bachmani – brush rabbit
Canis latrans – coyote
Sylvilagus audubonii – desert cottontail
Odocoileus hemionus – mule deer

REPTILES

Sceloporus occidentalis – western fence lizard
Elgaria multicarinata – southern alligator lizard
Uta stansburiana – common side-blotched lizard
Aspidoscelis tigris – tiger whiptail
Aspidoscelis tigris stejnegeri – San Diegan tiger whiptail

BIRD

Selasphorus rufus – rufous hummingbird
Charadrius vociferous – killdeer
Corvus brachyrhynchos – American crow
Aimophila ruficeps canescens – Southern California rufous-crowned sparrow
Archilochus alexandri – black-chinned hummingbird
Patagioenas fasciata – band-tailed pigeon
Troglodytes aedon – house wren
Stelgidopteryx serripennis – northern rough-winged swallow
Picoides pubescens – downy woodpecker
Columba livia – rock pigeon (rock dove)
Sturnus vulgaris – European starling
Spinus lawrencei – Lawrence's goldfinch
Chondestes grammacus – lark sparrow
Melospiza melodia – song sparrow
Circus cyaneus – northern harrier
Anas platyrhynchos – mallard
Passerina caerulea – blue grosbeak

INSECTS

Colias harfordii – Harford's sulphur

APPENDIX A (Continued)

Limenitis lorquini – Lorquin's admiral

Brephidium exile – western pygmy-blue

Erynnis funeralis – funereal duskywing

Pyrgus albescens – white checkered-skipper

Apodemia mormo virgulti – Behr's metalmark

Pontia sisymbrii – spring white

Papilio zelicaon – anise swallowtail

Euphilotes battoides Bernardino – Bernardino square-spotted blue

APPENDIX B

15-Day Pre-Survey Notification Letter

May 1, 2017

9020

U.S. Fish and Wildlife Service
Attention: Recovery Permit Coordinator
2177 Salk Avenue, Suite 250
Carlsbad, California 92008

Subject: Notification of Presence/Absence Survey for the Coastal California Gnatcatcher, Rancho Cucamonga North Eastern Sphere Annexation Area Project, County of San Bernardino, California

Dear Recovery Permit Coordinator:

Dudek will be conducting a protocol presence/absence survey for the coastal California gnatcatcher (*Polioptila californica californica*) within approximately 803 acres of suitable habitat within the Rancho Cucamonga North Eastern Sphere Annexation Area Project Site (Figures 1 and 2). The survey will cover those areas that support suitable habitat for the coastal California gnatcatcher.

Surveys will be conducted by biologists holding current Recovery Permits listed here:

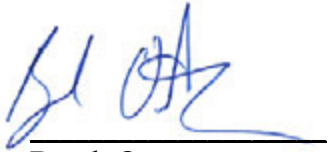
Brock Ortega TE813545-6
Anita Hayworth TE781084-9.1
Paul Lemons TE051248-5
Erin Bergman TE813545-5
Tricia Wotipka TE840619-3
Thomas Liddicoat TE139634-2
Jeff Priest TE840619-3
Crysta Dickson TE067347-4
Karen Mullen TE85771B-0
John Konecny TE837308-6

Surveys will conform to the currently accepted protocol of the U.S. Fish and Wildlife Service (USFWS) Coastal California Gnatcatcher (*Polioptila californica californica*) Presence/Absence Survey Protocol (USFWS 1997). The survey area occurs outside of a Natural Communities Conservation Plan (NCCP) enrolled area, therefore, six visits per 80 acres of suitable habitat will be conducted during the breeding season (March 15 through June 30), at a minimum interval of 7 days between visits.

Dudek requests to begin focused surveys prior to the 15-day notification period. If Dudek does not receive permission from USFWS to commence survey prior to the 15 day notification period, then surveys will begin after at least 15 days of the USFWS' receipt of this notification.

Please contact me at 760-479-4254 if there are any questions concerning this survey.

Thank you,

A handwritten signature in blue ink, appearing to read 'B. Ortega', is positioned above a horizontal line.

Brock Ortega
Principal/ Senior Wildlife Biologist

Att: Project Regional and Vicinity maps

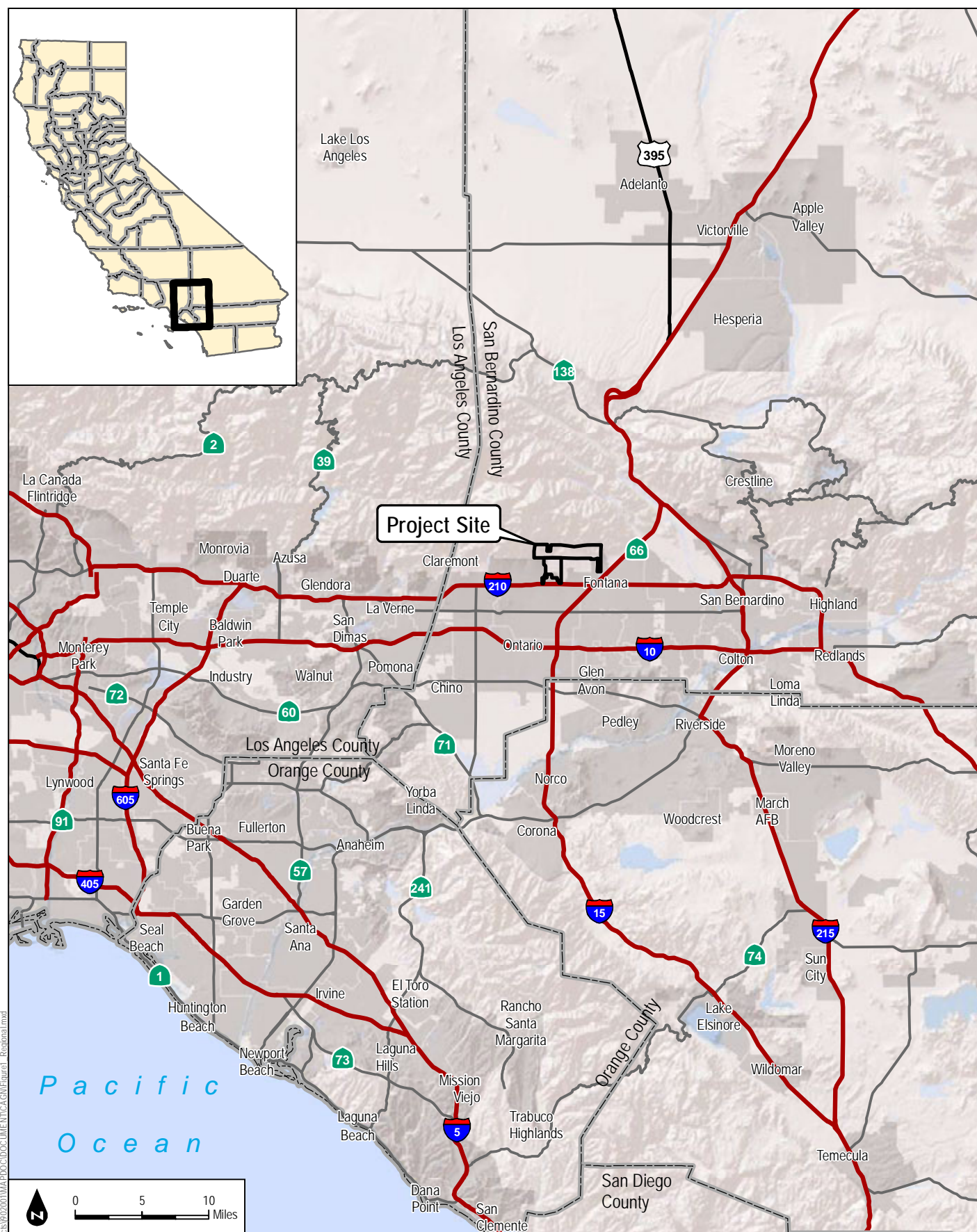


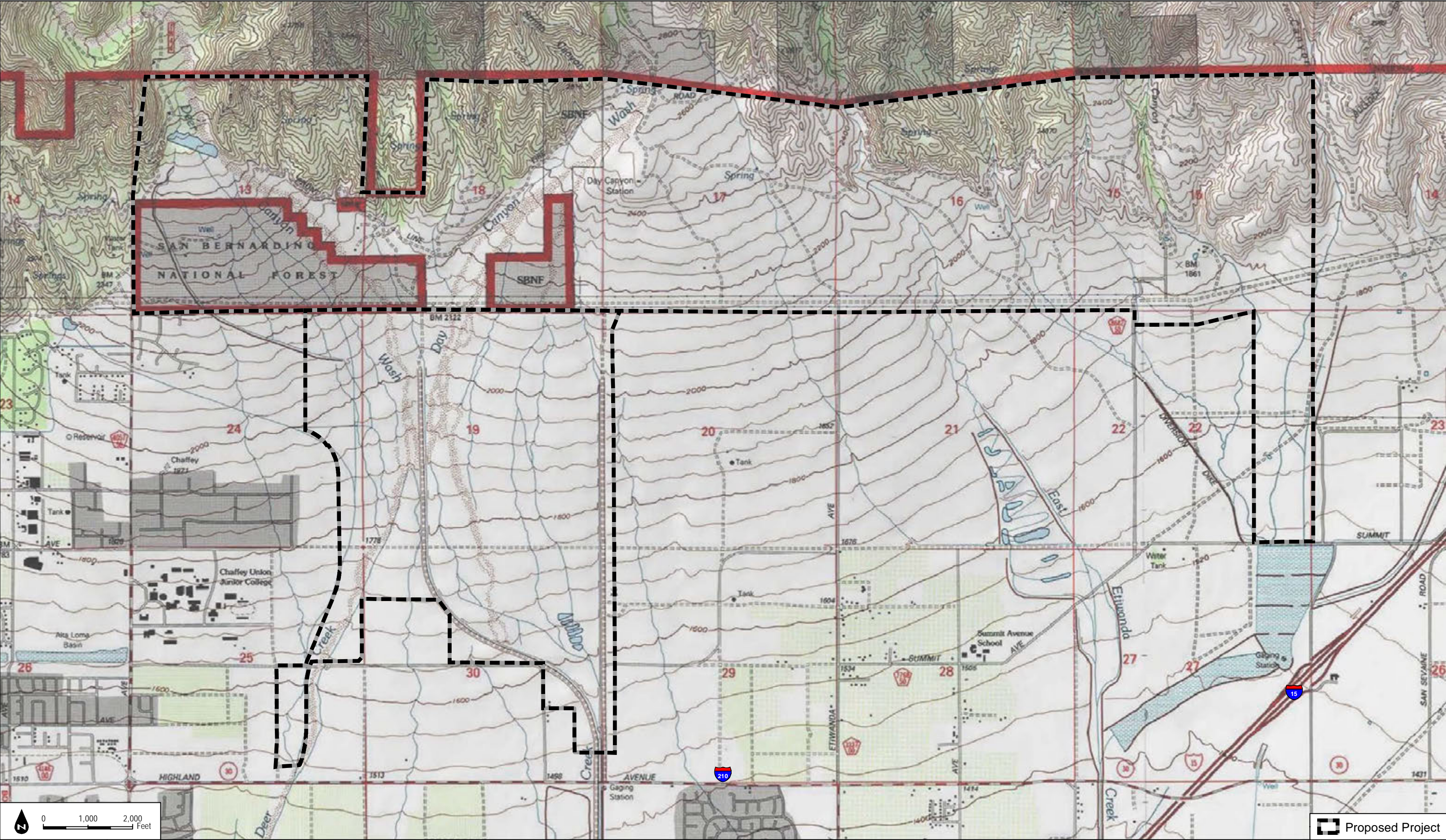
FIGURE 1
Regional Map

SOURCE: ESRI Shaded Relief Basemap 2016

2017 Notification of Focused Presence/Absence Surveys for Coastal California Gnatcatcher for the Rancho Cucamonga North Eastern Sphere Annexation Area Project

DUDEK

Author: mwatson - Path: Z:\Projects\902001\MAPDOC\IMFNTCAGN\Figure1_Regional.mxd



SOURCE: USGS 7.5-Minute Series Cucamonga Peak Quadrangle

DUDEK

2017 Notification of Focused Presence/Absence Surveys for Coastal California Gnatcatcher for the Rancho Cucamonga North Eastern Sphere Annexation Area Project

FIGURE 2
Vicinity Map

APPENDIX B

San Bernardino Kangaroo Rat Reports

MEMORANDUM

To: David Sargent – Sargent Town Planning
From: Mikael Romich, Senior Biologist
Subject: Etiwanda Heights Neighborhood and Conservation Plan Area SBKR Summary
Date: March 16, 2016
cc: Brock Ortega – Dudek
Ruta Thomas - Dudek
Attachment(s): Figure 1

Dudek has prepared this memorandum to update the project team on the results of the habitat assessments and focused trapping efforts for the federally endangered San Bernardino kangaroo rat (*Dipodomys merriami parvus*) (SBKR) for the Etiwanda Heights Neighborhood and Conservation Plan Area (including sphere of influence to the north of the proposed neighborhood area) (project area). All work presented below has been performed by biologists permitted for SBKR by the U.S. Fish and Wildlife Service (FWS), and include Dudek biologists Mikael Romich and Phil Brylski.

HABITAT ASSESSMENTS

Ongoing habitat assessments of the project area initiated in October have found the following:

1. Generally, the most suitable areas (but still considered low quality) occur in the southern portion of the project area, particularly west and north of Los Osos High School. These areas were considered of low quality for SBKR for the following reasons:
 - a. Disconnected from active alluvial processes
 - b. Habitat is mature (most areas dominated by chamise), with shrub cover greater than the preferred range
 - c. Soils with a high degree of loam allowing the establishment of near 100% cover of forbs and non-native grasses in areas that are lacking in shrub cover.
 - d. High degree of boulders and cobble in existing channels and a general lack of sandy substrate.

- e. Proximity to a source population. There are no substantial high quality habitat areas nearby.
- 2. The more northern areas of the project area (potential neighborhood area and sphere) are generally not judged to be suitable for SBKR for the following reasons:
 - a. Topography. There are a lot of steep slopes and uneven terrain that do not allow the formation of some of the sandy benches/terraces you see in high quality habitat. The topography promotes deposition of boulder and cobble with transport downstream of sands.
 - b. Substrate. The substrate is very rocky and imbedded with a predominance of boulder and cobble, not friable sandy soils that are preferred by the species.
 - c. Non-native grasses. In the isolated situations where you find a small flat area or bench with reduced shrub cover and some finer substrate materials, there is a near 100% ground cover that includes a large component of non-native grasses.
 - d. Isolation. There are no substantial areas that appear suitable to SBKR. Even in the instance of a habitat sliver that be might be considered low quality, it is isolated from any similar such areas by unsuitable habitat. This is not conducive for the long-term survival of SBKR.
 - e. Proximity to a source population. There are no substantial high quality habitat areas nearby.

The conclusion of the habitat assessment is that SBKR have very limited areas in which they can currently occur within the project area. The most suitable area with some evidence of sand deposition is located west of Los Osos High School. As outlined below, this area was trapped with negative results.

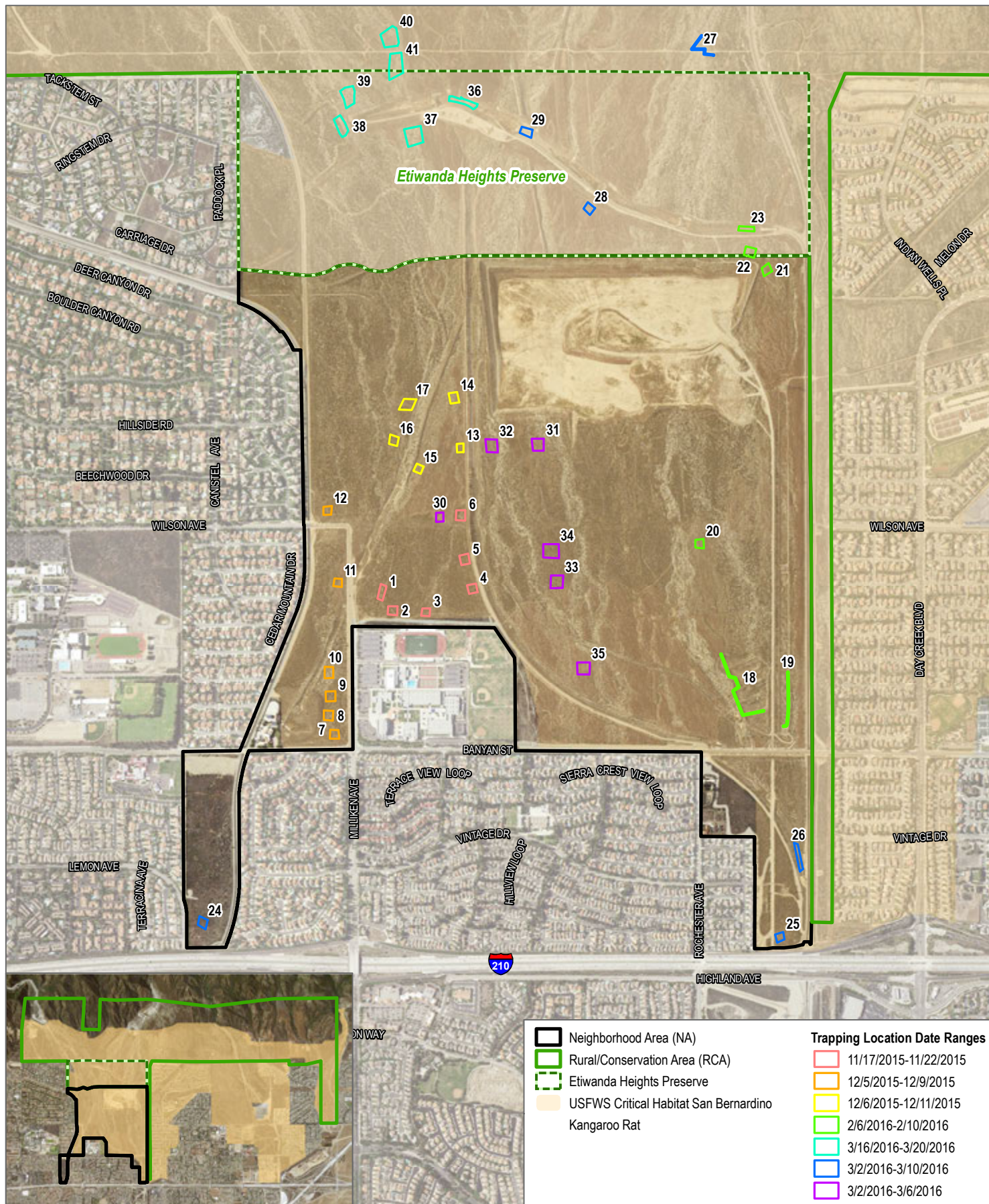
FOCUSED TRAPPING

A total of 35 areas (Figure 1) have been trapped since November 2015, totaling 4,500 trap nights. This trapping has been focused on areas that appear to be the most suitable for SBKR in the project area, but for reasons mentioned in the section above, are still considered of low potential. Some trapping has been conducted in areas judged by the SBKR biologists to have very marginal potential to corroborate the expectation that SBKR are not present. No SBKR have been trapped as a result of this effort.

Memorandum

Subject: Etiwanda Heights Neighborhood and Conservation Plan Area SBKR Summary

A trapping effort of 6 more areas is occurring during the week of March 14, 2016 (bright yellow on Figure 1).



SOURCE: Sargent Town Planning, 2017; USDA 2016

DUDEK



0 750 1,500 Feet

FIGURE 1
San Bernardino Kangaroo Rat Trapping Locations

SoCal Biological Consulting

April 11, 2015

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Subject: Results of a live-trapping survey for the federally endangered San Bernardino Kangaroo Rat (*Dipodomys merriami parvus*, SBKR), located in Rancho Cucamonga, CA. The SBKR property to be trapped is a large parcel of undeveloped land managed for San Bernardino Flood Control and is adjacent to Day Creek in Rancho Cucamonga. The Day Creek parcel is located within USFWS (U.S. Fish and Wildlife Service) designated SBKR critical habitat, Unit 4 (Figure 1).

Dear Mr. Mikael Romich:

This summary report presents results of a five day, 15-20 March 2016, trapping survey for the federally endangered San Bernardino kangaroo rat (SBKR) at the Day Creek Flood Control parcel, Rancho Cucamonga, CA.

INTRODUCTION

The San Bernardino Kangaroo Rat is facing increased pressure due to human activity throughout the range of SBKR habitat, as a result critical habitat was designated to help preserve this endangered species (Figure 1, USFWS 1998a, 2009). The Day Creek project site is located in Unit 4 of USFWS SBKR critical habitat and is adjacent to historical SBKR capture locations (McKernan 1997). Trapping that occurred during the 5 day session was part of a larger trapping effort. All areas of interest assigned to SoCal Biological Consulting were trapped to maintain compliance with USFWS mandates.

Traps for the Day Creek SBKR survey were placed within 6 designated polygons which were located in the northwestern area of Day Creek (Figure 1, 2). Multiple areas of interest were mapped by DUDEK and 25 traps were placed in a grid arrangement in six areas containing suitable SBKR habitat, a total of 150 traps were checked, closed and baited daily during the survey. The six sites were surveyed in the northwestern area of Day Creek by SoCal Biological Consulting.

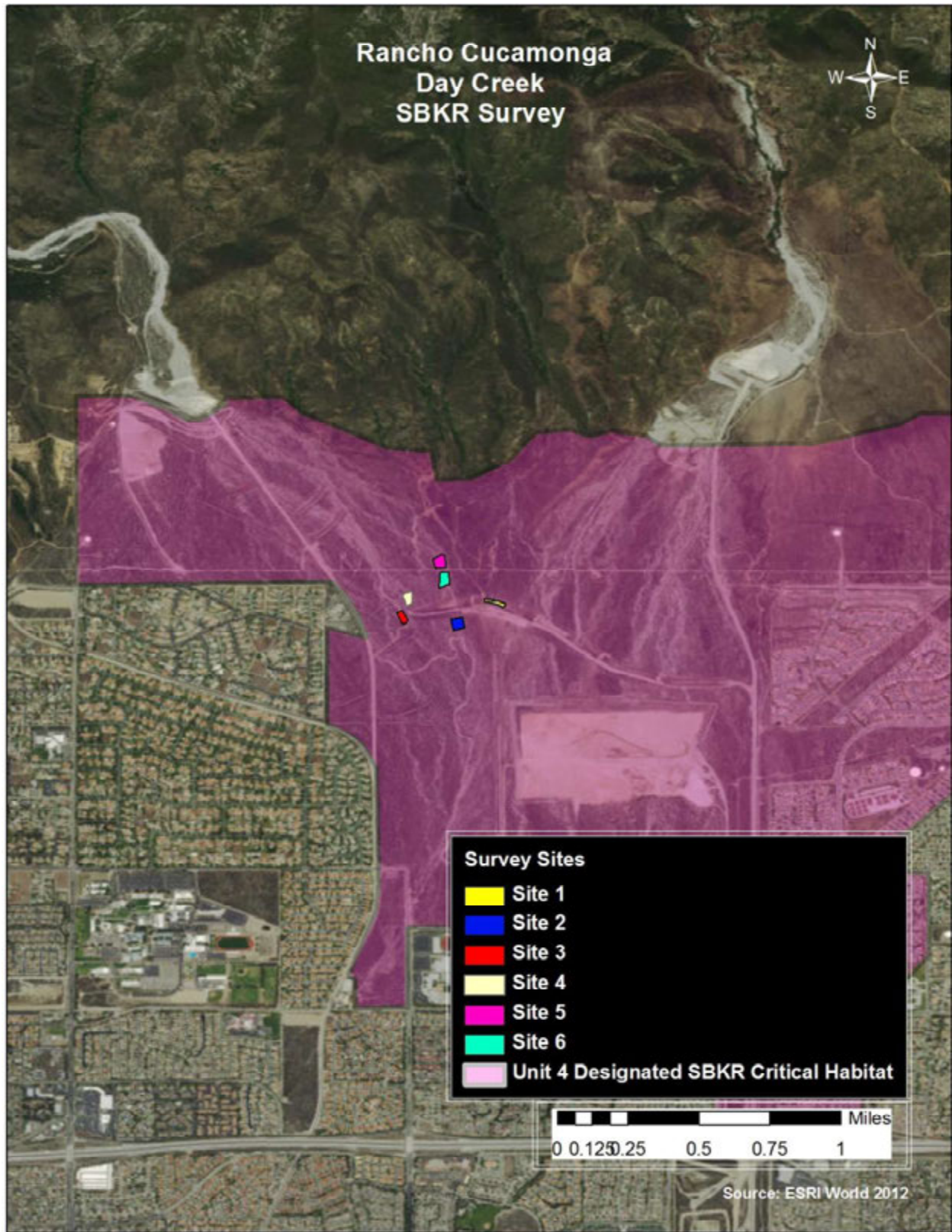


Figure 1. USFWS designated San Bernardino Kangaroo Rat Critical Habitat and survey sites within the Day Creek parcel, Rancho Cucamonga, California.

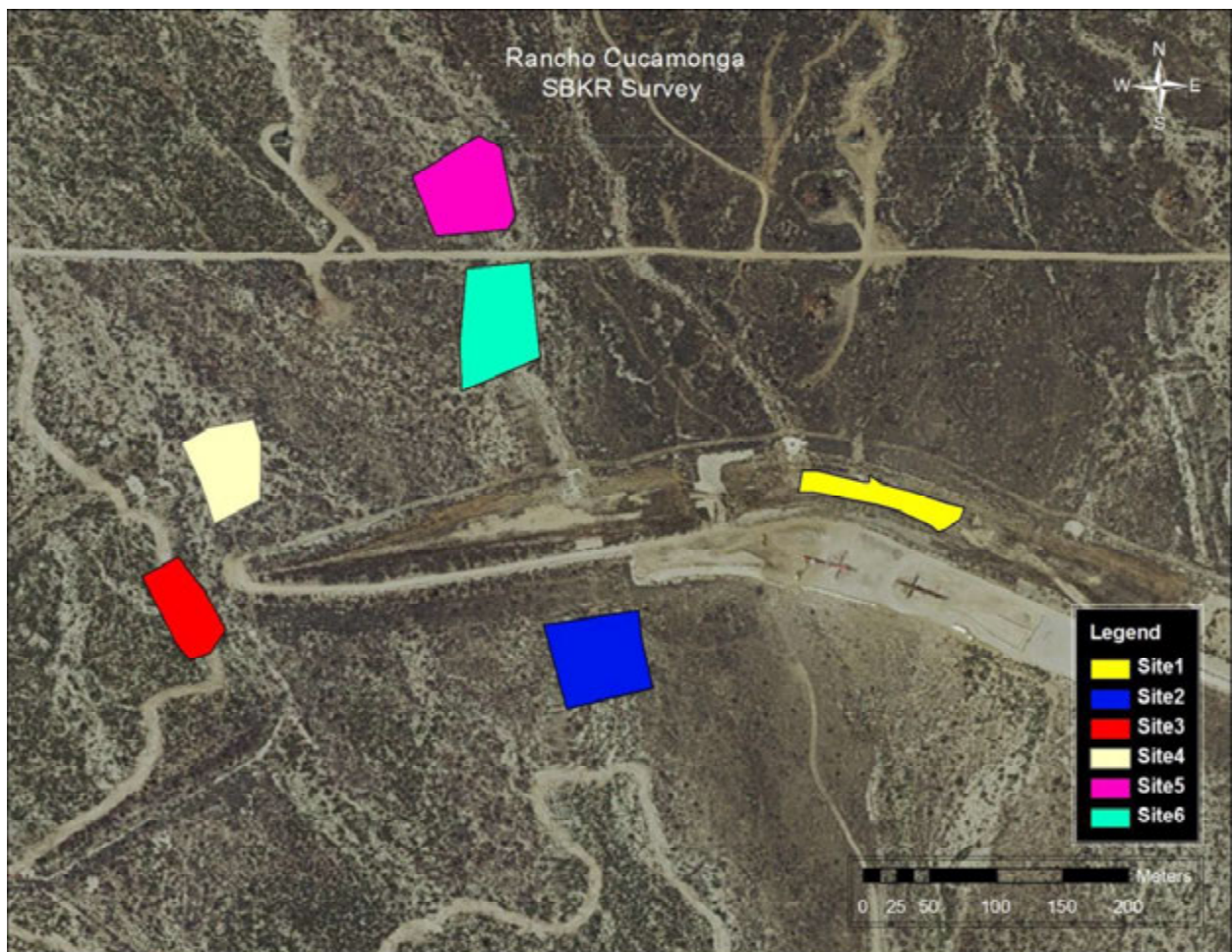


Figure 2. Day Creek SBKR trapping grids (1-6), Rancho Cucamonga, California.



Figure 2. Potential SBKR survey locations in the Day Creek Flood Control Parcel, Rancho Cucamonga, CA.

SITE DESCRIPTION

The Day Creek flood control parcel was burned in the 2003 Grand Prix Fire, shrub regrowth was clearly evident throughout the area. Shrub canopy and regrowth is dense in a few areas (Photo 3). The Day Creek flood control parcel shows signs of rock and earth movement over the years, probably due to the creation and routine maintenance of the flood control basins. Silt and sand were minimal in many of the washes, which may be due to a lack of sand deposition during rain events and flood control diversions. Many areas throughout Day Creek were covered by a gravel-rock substrate which in turn could limit kangaroo rat burrowing habitat (USFWS 2009). Refugia sandy-loam benches were present or adjacent to all survey sites.

Site 1 was the most easterly site trapped and was located in a flood control basin. Shrub cover was concentrated along the western edge of the trapping area. Dominate shrubs present in the trapping area were deer weed (*Acmispon glaber* (previously *Lotus scoparius*)) and CA buckwheat (*Eriogonum fasciculatum*, Photo 1). Soils were compacted and shrub cover was low. Traps were arranged in 3 rows (8/8/9 traps per row) which allowed a good stretch of the basin to be surveyed.

Site 2 contained a sandy wash along the western edge and contained multiple open sandy soil patches intermixed with rocky substrate (Photo 2). The eastern edge of the trapping area was densely covered with 1-3 year post-fire shrub canopy (Photo3). Traps were arranged in a 5x5 grid.

Site 3 was situated along a disturbed rocky road (Photo 4). The western edge of the trap site contained a chaparral bench and loamy sandy soils with minimal rock. Along the eastern edge sandy soils were intermixed with unburned scrub. Traps were arranged in 6 rows (4/4/5/4/4/4 traps per row).

Site 4 was rocky for the most part, although open sandy areas were found along the eastern edge of the site (Photo 5). Traps were arranged in a 5x5 grid.

Site 5 contained a sandy loamy wash along the western edge (photo 6) and a rocky wash along the eastern edge. Between the washes was a loamy grass bench. Traps were arranged in a 5x5 grid.

Site 6 was placed in the middle of a sandy wash, sandwiched between loamy benches. Traps were arranged in three rows (Photo 7, 8/9/8 traps per row).



Photo 1. Site 1 was located at the bottom of a flood control basin.



Photo 2. Site 2 western washes were open and contained sandy loamy soils.



Photo 3. Site 2 sandy soils along the eastern edge of were hidden by a thick cover of deer weed and post-fire shrub regrowth.



Photo 4. The central trap area of Site 3 was a rocky disturbed pathway bordered on the east by a chaparral terrace which consisted of loamy sandy soils.



Photo 5. Site 4 contained open patches with a rocky substrate. Patches of loamy sand were contained to the eastern edge of the trap site.



Photo 6. Site 5 contained a sandy wash along the western edge. Soils along the western edge were a mixture of sand and loam. The vegetation canopy was generally open with areas of dense shrub cover regrowth.



Photo 7. Site six was set in a wash between two elevated sandy loam benches. Grass and forb cover was dense along the top of the western bench and the eastern bench contained a fair amount of rock/cobble.



Photo 7. Man-made access road traversing trapping Site 3. The earth movement scars, which may be caused by historic site maintenance, are evident throughout the Day Creek Flood Control system.

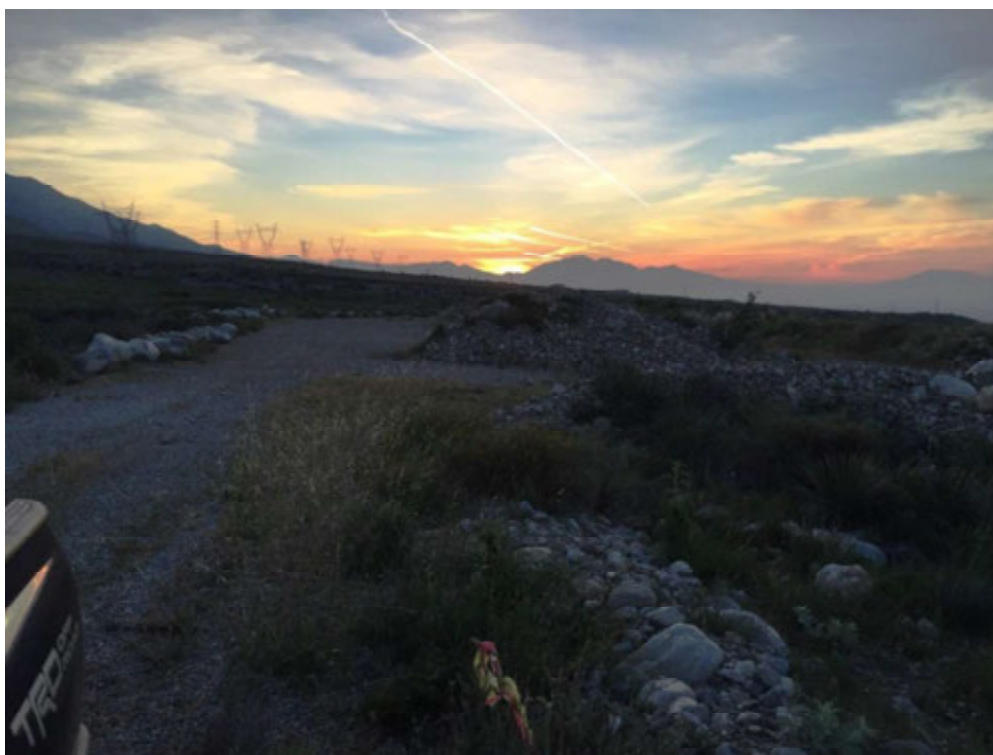


Photo 8. Access road and soil storage area adjacent to trapping site 2. Historic ground modification, to maintain flood control, and site maintenance has fragmented the SBKR habitat onsite.



Photo 9. Many washes are covered by rock and boulder. Sandy soils in the wash are absent or covered by rock in many of the natural washes on site. Control of upstream silt and water flow may eventually deplete natural soil levels in downstream washes.



Photo 10. Potential future survey location (Figure 3 “good spot to trap”).



Photo 10. Potential future survey location (Figure 3 “grid and transect”).

METHODS

Trapping was conducted by Dana McLaughlin (USFWS) SBKR permit (TE43597A-1), following the basic protocols established for SBKR and the B.O. This protocol included 5 consecutive nights of trapping, during relatively mild weather conditions (Table 1). SBKR trapping commenced on 15 March 2016 and continued through the morning of 20 March 2016 (Table 2, 3, Figure 2).

Day Creek trapping grids were set at approximately 7-meter spacing between traps. Traps were placed in suitable habitat areas. A total of 150 traps were placed in six locations where SBKR capture was likely. Traps were run safely for five consecutive nights.

All traps were placed in microhabitats considered to be those most likely to yield SBKR. Care was taken to place traps in relatively open areas exhibiting Alluvial fan scrub, sandy to sandy-loam substrates and minimal rock/vegetative duff component (Photos 1-7). Only 12-inch modified Sherman collapsible live-traps were used in this survey. Traps were set at dusk each day and baited with a mixture of bird seed. Traps were initially checked for captures near midnight and then checked again and closed the following morning.

All animals were identified to species and released. Notes and photographs were taken to document habitat conditions where traps were placed. Representative weather conditions at the time of the trapping survey were noted (Table 1).

RESULTS AND DISCUSSION

Weather conditions during the trapping survey were generally mild and suitable for small mammal trapping. Data collected included air temperatures (which ranged from 50-63° F), cloud cover (between 90% -0%) and wind speeds (Table 1). The moon was waxing, approaching a full moon phase during the survey.

A total of five rodent species were captured during the five consecutive nights of trapping (Table 2). Suitable SBKR habitat exists throughout the Day Creek Flood Control parcel, although no individual SBKR were captured during the survey (Table 2, 3, Photo 1). In addition, a total of 12 DKR were captured during the trapping survey, unique individuals were not tracked (Table 3).

Date	Temperature (F)	Cloud Cover %	Wind (mph)
3/16/2016	62	0	0-2
3/17/2016	60	0	0-1
3/18/2016	54	0	0-2
3/19/2016	55	40	0-1
3/20/2016	55	0	0-1

Table 1. Representative weather conditions during the March 2016 trapping survey.

Date	Trap Site	Species Captured				
		DKR	CFAL	PEMA	PFRA	NEBY
March 16-20, 2016	1	1	6	22	1	0
March 16-20, 2016	2	7	17	5	34	0
March 16-20, 2016	3	0	20	1	44	3
March 16-20, 2016	4	0	18	1	65	0
March 16-20, 2016	5	0	18	12	32	0
March 16-20, 2016	6	4	20	7	40	0
Total captured species		12	99	48	216	3
DKR = Dulzura kangaroo rat (<i>Dipodomys simulans</i>) CFAL = San Diego pocket mouse (<i>Chaetodipus fallax fallax</i>) PEMA = Deer mouse (<i>Peromyscus maniculatus</i>) PFRA = Northern Baja deer mouse (<i>Peromyscus fraterculus</i>) NEBY = Bryant's woodrat (<i>Neotoma bryanti</i>)						

Table 2. Species captured during a 5 night survey, Rancho Cucamonga, CA, Day Creek parcel.

DKR were captured on three of the six sites and most were captured along refugia benches which were adjacent to sandy/rocky washes or in loamy-sandy soil patches. Most of the refugia sandy-loam benches at each site contained suitable SBKR burrowing habitat.

The most abundant small mammal captured during the 5 night survey was the Northern Baja deer mouse (PFRA). The San Diego pocket mouse, deer mouse and Bryant's woodrat were also captured in good numbers (Table 2). The Bryant's woodrat was only detected on site 3, within the western refugia bench and chaparral.

Date	Site	Species Captured				
		DKR	CFAL	PEMA	PFRA	NEBY
3/16/2016	1	1		2		
3/17/2016			1	5		
3/18/2016			2	5		
3/19/2016			1	6	1	
3/20/2016			2	4		
3/16/2016	2	1	5	1	9	
3/17/2016		3	2	1	6	
3/18/2016		1	5		5	
3/19/2016		1	1	3	6	
3/20/2016		1	4		8	
3/16/2016	3		6		8	1
3/17/2016			2		9	1
3/18/2016			7		12	
3/19/2016			4	1	9	1
3/20/2016			1		6	
3/16/2016	4		5		13	
3/17/2016			4		13	
3/18/2016			1		13	
3/19/2016			4		14	
3/20/2016			4	1	12	
3/16/2016	5		5	2	5	
3/17/2016			4	1	6	
3/18/2016			2	3	8	
3/19/2016			2	5	6	
3/20/2016			5	1	7	
3/16/2016	6	1	2	2	8	
3/17/2016		1	7	2	6	
3/18/2016		1	2	2	10	
3/19/2016		1	3	1	8	
3/20/2016			6		8	
DKR = Dulzura kangaroo rat (<i>Dipodomys simulans</i>)						
CFAL = San Diego pocket mouse (<i>Chaetodipus fallax fallax</i>)						
PEMA = Deer mouse (<i>Peromyscus maniculatus</i>)						
PFRA = Northern Baja deer mouse (<i>Peromyscus fraterculus</i>)						
NEBY = Bryant's woodrat (<i>Neotoma bryanti</i>)						

Table 3. Daily results of a small mammal trapping survey for SBKR, March 2016.

DISCUSSION


The lack of SBKR in this area is not surprising. SBKR absence in this area may be due to compounding issues (USFWS 2009) such habitat fragmentation and displacement during historical soil disturbance. Massive amounts of soil and rock were moved to construct the extensive man-made catch-basin system. Native soils were also impacted during construction of site access roads and potential soil disturbance during routine maintenance has left the Day Creek Flood Control parcel fragmented (Photo 7, 8, 9). Habitat fragmentation and lack of suitable burrowing habitat hinders SBKR survival (USFWS 2009) and as such the likelihood of detecting SBKR in the Day Creek Flood Control property might be restricted to discovery within suitable refugia soil benches on site.

One task performed prior to leaving the trapping site on day 5 was to scout future areas of interest. A few locations contained suitable SBKR habitat for future SBKR surveys (Photos 10, 11, Figure 3).

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April 11, 2016

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



Dana McLaughlin
TE 43597A-1

Literature cited

McKernan, R.L., 1997. The Status and Known Distribution of the San Bernardino Kangaroo Rat (*Dipodomys merriami parvus*): Field surveys conducted between 1987 and 1996. Report prepared for the U.S. Fish and Wildlife Service, Carlsbad Field Office.

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Small Mammal Trapping Results

Trap Site	Date	Species Captured ¹										
		NWPM	DUKR	HOMO	BRWO	DEWO	BEWO	BRDM	CCDM	NBDM	NADM	WHMO
1	11/17/2015-11/22/2015	7	5	–	–	2	–	–	9	–	4	–
2	11/17/2015-11/22/2015	8	2	–	–	1	–	–	6	–	4	–
3	11/17/2015-11/22/2015	8	1	–	–	1	–	–	9	–	5	–
4	11/17/2015-11/22/2015	8	4	–	–	2	–	–	6	–	6	–
5	11/17/2015-11/22/2015	9	–	–	–	–	–	–	4	–	8	–
6	11/17/2015-11/22/2015	9	1	–	–	1	–	–	3	–	13	–
7	12/6/2015	5	–	–	–	–	–	–	–	6	1	–
	12/7/2015	7	–	–	–	–	–	–	–	5	–	–
	12/8/2015	9	–	–	1	–	–	–	–	7	–	–
	12/9/2015	11	–	–	–	–	–	–	–	4	2	–
	12/10/2015	10	–	–	–	–	–	–	–	7	–	–
8	12/6/2015	4	–	–	1	–	–	–	–	6	3	–
	12/7/2015	3	–	–	–	–	–	–	–	6	3	–
	12/8/2015	6	–	–	1	–	–	–	–	4	4	–
	12/9/2015	7	–	–	–	–	–	–	–	4	2	–
	12/10/2015	6	–	–	–	–	–	–	–	6	1	–
9	12/6/2015	6	–	–	–	–	–	–	–	6	2	–
	12/7/2015	6	–	–	–	–	–	–	–	7	2	–
	12/8/2015	9	–	–	–	–	–	–	–	10	3	–
	12/9/2015	10	–	–	–	–	–	–	–	7	2	–
	12/10/2015	8	–	–	–	–	–	–	–	5	1	–
10	12/6/2015	2	–	–	–	–	–	–	–	14	–	–
	12/7/2015	2	–	–	1	–	–	–	–	12	1	–
	12/8/2015	4	–	–	–	–	–	–	–	10	1	–
10	12/9/2015	4	–	–	–	–	–	–	–	8	–	–

Small Mammal Trapping Results (Continued)

Trap Site	Date	Species Captured ¹										
		NWPM	DUKR	HOMO	BRWO	DEWO	BEWO	BRDM	CCDM	NBDM	NADM	WHMO
	12/10/2015	5	–	–	–	–	–	–	–	5	1	–
11	12/6/2015	5	–	–	–	–	–	–	–	1	2	–
	12/7/2015	9	–	–	–	–	–	–	–	1	3	–
	12/8/2015	9	–	–	–	–	–	–	–	2	1	–
	12/9/2015	8	–	–	–	–	–	–	–	3	1	–
	12/10/2015	5	–	–	–	–	–	–	–	2	3	–
12	12/6/2015	7	–	–	1	–	–	–	–	3	5	–
	12/7/2015	8	–	–	2	–	–	–	–	3	2	–
	12/8/2015	9	–	–	1	–	–	–	–	4	2	–
	12/9/2015	9	–	–	–	–	–	–	–	4	4	–
	12/10/2015	5	–	–	3	–	–	–	–	2	4	–
13	12/6/2015- 12/11/2015	7	3	–	–	–	–	–	7	–	7	–
14	12/6/2015- 12/11/2015	2	–	–	–	–	–	–	5	–	10	–
15	12/6/2015- 12/11/2015	5	2	–	–	2	–	–	6	–	10	–
16	12/6/2015- 12/11/2015	4	4	–	–	–	–	–	7	–	5	–
17	12/6/2015- 12/11/2015	7	3	–	–	1	–	–	4	–	9	–
18	2/6/2016	–	–	–	–	–	–	–	–	13	7	–
	2/7/2016	1	–	–	–	–	–	–	–	10	4	–
	2/8/2016	2	–	–	–	–	–	–	–	8	3	–
	2/9/2016	5	–	–	1	–	–	–	–	7	1	–
	2/10/2016	3	–	–	–	–	–	–	–	10	4	–
19	2/6/2016	–	–	–	–	–	–	–	–	10	3	–
	2/7/2016	2	–	–	–	–	–	–	–	12	3	–
	2/8/2016	2	–	–	–	–	–	–	–	6	3	–
19	2/9/2016	4	–	–	1	–	–	–	–	8	2	–

Small Mammal Trapping Results (Continued)

Trap Site	Date	Species Captured ¹										
		NWPM	DUKR	HOMO	BRWO	DEWO	BEWO	BRDM	CCDM	NBDM	NADM	WHMO
20	2/10/2016	4	–	–	–	–	–	–	–	11	4	–
	2/6/2016	3	–	–	–	–	–	–	–	6	1	–
	2/7/2016	3	–	–	–	–	–	–	–	2	3	–
	2/8/2016	1	–	–	–	–	–	–	–	5	2	–
	2/9/2016	4	–	–	–	–	–	–	–	2	5	–
	2/10/2016	2	–	–	–	–	–	–	–	7	2	–
21	2/6/2016	–	–	–	1	–	–	–	–	6	4	–
	2/7/2016	4	–	–	1	–	–	–	–	7	7	–
	2/8/2016	5	–	–	1	–	–	–	–	6	1	–
	2/9/2016	4	–	–	1	–	–	–	–	4	3	–
	2/10/2016	3	–	–	–	–	–	–	–	4	2	–
22	2/6/2016	1	–	–	–	–	–	–	–	11	7	–
	2/7/2016	3	–	–	–	–	–	–	–	7	8	–
	2/8/2016	2	–	–	–	–	–	–	–	9	2	–
	2/9/2016	4	–	–	–	–	–	–	–	4	4	–
	2/10/2016	1	–	–	–	–	–	–	–	8	6	–
23	2/6/2016	3	–	–	–	–	–	–	–	1	7	–
	2/7/2016	2	–	–	–	–	–	–	–	3	7	–
	2/8/2016	4	–	–	–	–	–	–	–	–	6	–
	2/9/2016	1	–	–	–	–	–	–	–	1	8	–
	2/10/2016	1	–	–	–	–	–	–	–	2	8	–
24	3/2/2016	1	1	–	–	–	2	–	–	–	–	–
	3/3/2016	1	2	–	–	–	–	–	–	2	–	–
	3/4/2016	1	1	–	–	–	2	–	–	–	–	–
	3/5/2016	1	1	1	–	–	1	–	–	–	–	–
	3/10/2016	2	1	–	–	–	–	–	–	1	–	–
25	3/2/2016	–	–	–	–	–	–	–	–	–	–	–
	3/3/2016	1	–	–	–	–	–	–	–	2	–	–
25	3/4/2016	–	–	–	–	–	–	–	–	3	–	–

Small Mammal Trapping Results (Continued)

Trap Site	Date	Species Captured ¹										
		NWPM	DUKR	HOMO	BRWO	DEWO	BEWO	BRDM	CCDM	NBDM	NADM	WHMO
26	3/5/2016	2	–	–	1	–	–	–	–	2	1	–
	3/10/2016	2	–	–	–	–	–	–	–	5	–	–
	3/2/2016	3	–	–	1	–	–	–	–	7	2	–
	3/3/2016	3	–	–	–	–	–	–	–	7	–	–
	3/4/2016	3	–	–	–	–	–	1	–	6	–	–
	3/5/2016	–	–	–	1	–	–	2	–	6	–	–
	3/10/2016	2	–	–	–	–	–	–	–	5	1	–
27	3/2/2016	1	–	–	–	–	–	–	–	4	–	–
	3/3/2016	2	–	–	–	–	–	–	–	6	–	–
	3/4/2016	3	–	–	–	–	–	–	–	6	–	–
	3/5/2016	3	–	–	–	–	–	1	–	4	1	–
	3/10/2016	3	–	–	–	–	–	–	–	7	–	–
28	3/2/2016	2	–	–	–	–	–	–	–	2	1	–
	3/3/2016	3	1	–	–	–	–	–	–	2	1	–
	3/4/2016	–	1	–	1	–	–	–	–	5	2	–
	3/5/2016	3	2	–	–	–	–	–	–	4	1	–
	3/10/2016	4	1	–	–	–	–	–	–	3	2	–
29	3/2/2016	2	–	–	–	–	–	–	–	3	1	–
	3/3/2016	3	–	–	–	–	–	–	–	6	1	–
	3/4/2016	3	–	–	–	–	–	–	–	5	1	–
	3/5/2016	3	–	–	–	–	–	–	–	4	–	–
	3/10/2016	5	–	–	–	–	–	–	–	3	3	–
30	3/2/2016-3/6/2016	3	4	–	–	1	–	–	1	–	12	–
31	3/2/2016-3/6/2016	7	–	–	–	–	–	–	4	–	8	–
32	3/2/2016-3/6/2016	6	–	–	–	1	–	–	7	–	8	1
33	3/2/2016-3/6/2016	8	–	–	–	–	–	–	6	–	2	–
34	3/2/2016-3/6/2016	4	–	–	–	–	–	–	10	–	3	1
35	3/2/2016-3/6/2016	2	–	–	–	–	–	–	7	–	6	–
36	3/16/2016	–	1	–	–	–	–	–	–	–	2	–

Small Mammal Trapping Results (Continued)

Trap Site	Date	Species Captured ¹										
		NWPM	DUKR	HOMO	BRWO	DEWO	BEWO	BRDM	CCDM	NBDM	NADM	WHMO
	3/17/2016	1	–	–	–	–	–	–	–	–	5	–
	3/18/2016	2	–	–	–	–	–	–	–	–	5	–
	3/19/2016	1	–	–	–	–	–	–	–	1	6	–
	3/20/2016	2	–	–	–	–	–	–	–	–	4	–
37	3/16/2016	5	1	–	–	–	–	–	–	9	1	–
	3/17/2016	2	3	–	–	–	–	–	–	6	1	–
	3/18/2016	5	1	–	–	–	–	–	–	5	–	–
	3/19/2016	1	1	–	–	–	–	–	–	6	3	–
	3/20/2016	4	1	–	–	–	–	–	–	8	–	–
38	3/16/2016	6	–	–	1	–	–	–	–	8	–	–
	3/17/2016	2	–	–	1	–	–	–	–	9	–	–
	3/18/2016	7	–	–	–	–	–	–	–	12	–	–
	3/19/2016	4	–	–	1	–	–	–	–	9	1	–
	3/20/2016	1	–	–	–	–	–	–	–	6	–	–
39	3/16/2016	5	–	–	–	–	–	–	–	13	–	–
	3/17/2016	4	–	–	–	–	–	–	–	13	–	–
	3/18/2016	1	–	–	–	–	–	–	–	13	–	–
	3/19/2016	4	–	–	–	–	–	–	–	14	–	–
	3/20/2016	4	–	–	–	–	–	–	–	12	1	–
40	3/16/2016	5	–	–	–	–	–	–	–	5	2	–
	3/17/2016	4	–	–	–	–	–	–	–	6	1	–
	3/18/2016	2	–	–	–	–	–	–	–	8	3	–
	3/19/2016	2	–	–	–	–	–	–	–	6	5	–
	3/20/2016	5	–	–	–	–	–	–	–	7	1	–
41	3/16/2016	2	1	–	–	–	–	–	–	8	2	–
	3/17/2016	7	1	–	–	–	–	–	–	6	2	–
	3/18/2016	2	1	–	–	–	–	–	–	10	2	–
	3/19/2016	3	1	–	–	–	–	–	–	8	1	–
41	3/20/2016	6	–	–	–	–	–	–	–	8	–	–

Small Mammal Trapping Results (Continued)

Trap Site	Date	Species Captured ¹										
		NWPM	DUKR	HOMO	BRWO	DEWO	BEWO	BRDM	CCDM	NBDM	NADM	WHMO
Total ²		537	52	1	24	12	5	4	101	680	369	2

Notes:

¹ NWPM = northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*)

DUKR = Dulzura kangaroo rat (*Dipodomys simulans*)

HOMO = house mouse (*Mus musculus*)

BRWO = Bryant's woodrat (*Neotoma bryanti*)

DEWO = desert woodrat (*Neotoma lepida*)

BEWO = big-eared woodrat (*Neotoma macrotis*)

BRDM = brush deer mouse (*Peromyscus boylii*)

CCDM = cactus deer mouse (*Peromyscus eremicus*)

NBDM = Northern Baja deer mouse (*Peromyscus fraterculus*)

NADM = North American deer mouse (*Peromyscus maniculatus*)

WHMO = western harvest mouse (*Reithrodontomys megalotis*)

² The totals do not account for individuals trapped more than once.

APPENDIX C

Plant Compendium

APPENDIX C

Plant Compendium

VASCULAR SPECIES

FERNS AND FERN ALLIES

PTERIDACEAE—BRAKE FAMILY

Pellaea mucronata var. *californica*—California cliffbrake

Pellaea mucronata var. *mucronata*—birdfoot cliffbrake

Pellaea mucronata—birdfoot cliffbrake

Pentagramma triangularis ssp. *triangularis*—goldback fern

SELAGINELLACEAE—SPIKE-MOSS FAMILY

Selaginella bigelovii—bushy spikemoss

MONOCOTS

AGAVACEAE—AGAVE FAMILY

Hesperoyucca whipplei—chaparral yucca

ARECACEAE—PALM FAMILY

* *Washingtonia robusta*—Washington fan palm

CYPERACEAE—Sedge Family

Cyperus eragrostis—tall flatsedge

LILIACEAE—LILY FAMILY

Calochortus plummerae—Plummer's mariposa lily

Calochortus splendens—splendid mariposa lily

Calochortus weedii var. *intermedius*—intermediate mariposa lily

POACEAE—GRASS FAMILY

* *Avena barbata*—slender oat

* *Ehrharta erecta*—panic veldtgrass

Festuca octoflora—sixweeks fescue

Melica imperfecta—smallflower melicgrass

Stipa coronata—giant ricegrass

* *Bromus diandrus*—ripgut brome

* *Bromus hordeaceus*—soft brome

* *Bromus madritensis*—compact brome

* *Bromus madritensis* ssp. *rubens*—red brome

* *Bromus tectorum*—cheatgrass

* *Cortaderia jubata*—purple pampas grass

* *Cynodon dactylon*—Bermudagrass

* *Festuca myuros*—rat-tail fescue

* *Lamarckia aurea*—goldentop grass

* *Polypogon monspeliensis*—annual rabbitsfoot grass

APPENDIX C (Continued)

- * *Schismus barbatus*—common Mediterranean grass
 - * *Stipa miliacea*—no common name
 - * *Stipa miliacea* var. *miliacea*—smilgrass
 - * *Pennisetum setaceum*—fountain grass swards
- Elymus condensatus*—giant wild rye

THEMIDACEAE—BRODIAEA FAMILY

Dichelostemma capitatum ssp. *capitatum*—bluedicks
Muilla maritima—sea muilla

EUDICOTS

ADOXACEAE—MUSKROOT FAMILY

Sambucus nigra ssp. *caerulea*—blue elderberry
Sambucus nigra—blue elderberry

ANACARDIACEAE—SUMAC OR CASHEW FAMILY

Malosma laurina—laurel sumac

- * *Schinus molle*—Peruvian peppertree
- * *Schinus terebinthifolius*—Brazilian peppertree

Rhus aromatica—basket bush
Rhus integrifolia—lemonade berry
Toxicodendron diversilobum—poison oak

APIACEAE—CARROT FAMILY

Daucus pusillus—American wild carrot
Tauschia arguta—southern umbrellawort

APOCYNACEAE—DOGBANE FAMILY

Asclepias californica—California milkweed
Funastrum cynanchoides var. *hartwegii*—Hartweg's twinevine

- * *Nerium oleander*—oleander

ASTERACEAE—SUNFLOWER FAMILY

- * *Sonchus oleraceus*—common sowthistle

Ambrosia acanthicarpa—flatspine bur ragweed
Brickellia californica—California brickellbush
Chaenactis glabriuscula var. *glabriuscula*—yellow pincushion
Chaenactis glabriuscula—yellow pincushion
Cirsium occidentale—cobwebby thistle
Corethrogyne filaginifolia—common sandaster
Ericameria parishii var. *parishii*—Parish's rabbitbrush
Ericameria pinifolia—pinebush
Erigeron canadensis—Canadian horseweed
Erigeron foliosus—leafy fleabane
Eriophyllum confertiflorum var. *confertiflorum*—golden-yarrow

APPENDIX C (Continued)

Eriophyllum confertiflorum—golden-yarrow
Euthamia occidentalis—western goldentop
Helianthus annuus—common sunflower
Helianthus gracilentus—slender sunflower
Heterotheca grandiflora—telegraphweed
Heterotheca sessiliflora ssp. *echioides*—sessileflower false goldenaster
Heterotheca sessiliflora—sessileflower false goldenaster
Heterotheca villosa—hairy false goldenaster
Holocarpha virgata ssp. *virgata*—yellowflower tarweed
Isocoma menziesii var. *menziesii*—Menzies' goldenbush
Laennecia coulteri—Coulter's horseweed
Lessingia glandulifera var. *glandulifera*—valley lessingia
Lessingia glandulifera—valley lessingia
Logfia filaginoides—California cottonrose
Pseudognaphalium biolettii—two-color rabbit-tobacco
Pseudognaphalium californicum—ladies' tobacco
Pseudognaphalium canescens—Wright's cudweed
Pseudognaphalium microcephalum—Wright's cudweed
Rafinesquia californica—California plumeseed
Senecio flaccidus var. *douglasii*—Douglas' ragwort
Stephanomeria exigua—small wirelettuce
Stephanomeria virgata ssp. *pleurocarpa*—wand wirelettuce
Stephanomeria virgata—rod wirelettuce
Tetradymia stenolepis—Mojave cottonthorn
Uropappus lindleyi—Lindley's silverpuffs
Ericameria parishii—Parish's rabbitbrush
* *Carduus pycnocephalus*—Italian plumeless thistle
* *Carduus pycnocephalus* ssp. *pycnocephalus*—Italian plumeless thistle
* *Centaurea melitensis*—Maltese star-thistle
* *Cirsium vulgare*—bull thistle
* *Lactuca serriola*—prickly lettuce
* *Logfia gallica*—narrowleaf cottonrose
* *Sonchus asper* ssp. *asper*—spiny sowthistle
Encelia farinosa—brittle bush
Artemisia californica—California sagebrush
Isocoma menziesii—Menzies's golden bush
Baccharis salicifolia—mulefat
Hazardia squarrosa—sawtooth golden bush
Lepidospartum squamatum—scale broom
Artemisia dracunculus—wild tarragon

BORAGINACEAE—BORAGE FAMILY

Amsinckia intermedia—common fiddleneck
Cryptantha intermedia var. *intermedia*—Clearwater cryptantha
Cryptantha intermedia—Clearwater cryptantha
Cryptantha muricata var. *denticulata*—pointed cryptantha

APPENDIX C (Continued)

Emmenanthe penduliflora—whisperingbells
Eriodictyon trichocalyx—hairy yerba santa
Eucrypta chrysanthemifolia—spotted hideseed
Phacelia brachyloba—shortlobe phacelia
Phacelia cicutaria—caterpillar phacelia
Phacelia minor—wild canterbury bells
Phacelia ramosissima—branching phacelia
Phacelia tanacetifolia—lacy phacelia
Eriodictyon parryi—poodle-dog bush

BRASSICACEAE—MUSTARD FAMILY

Boechera californica—California rockcress
Descurainia pinnata—western tansymustard
Lepidium nitidum—shining pepperweed
* *Brassica nigra*—black mustard
* *Brassica tournefortii*—Asian mustard
* *Hirschfeldia incana*—shortpod mustard
* *Sisymbrium altissimum*—tall tumbledmustard
* *Sisymbrium orientale*—Indian hedgemustard

CACTACEAE—CACTUS FAMILY

Cylindropuntia californica—California cholla
Opuntia littoralis—coast prickly pear

CARYOPHYLLACEAE—PINK FAMILY

* *Polycarpon tetraphyllum*—fourleaf manyseed
* *Stellaria media*—common chickweed

CHENOPODIACEAE—GOOSEFOOT FAMILY

* *Dysphania botrys*—Jerusalem oak goosefoot
Chenopodium californicum—California goosefoot
* *Chenopodium album*—lambsquarters
* *Salsola tragus*—prickly Russian thistle

CISTACEAE—ROCK-ROSE FAMILY

Crocanthemum scoparium—no common name

CONVOLVULACEAE—MORNING-GLORY FAMILY

Calystegia macrostegia—island false bindweed
Cuscuta californica—chaparral dodder
* *Convolvulus arvensis*—field bindweed

CRASSULACEAE—STONECROP FAMILY

Crassula connata—sand pygmyweed
Dudleya lanceolata—lanceleaf liveforever

APPENDIX C (Continued)

CUCURBITACEAE—GOURD FAMILY

Marah macrocarpa—Cucamonga manroot

ERICACEAE—HEATH FAMILY

Arctostaphylos glauca—bigberry manzanita

EUPHORBIACEAE—SPURGE FAMILY

Croton californicus—California croton

Stillingia linearifolia—queen's-root

Euphorbia micromera—Sonoran sandmat

Croton setiger—dove weed

* *Euphorbia maculata*—spotted sandmat

* *Ricinus communis*—castorbean

FABACEAE—LEGUME FAMILY

Acmispon glaber var. *glaber*—common deerweed

Acmispon strigosus—strigose bird's-foot trefoil

Astragalus pomonensis—Pomona milkvetch

Lupinus bicolor—miniature lupine

Lupinus hirsutissimus—stinging annual lupine

Lupinus truncatus—collared annual lupine

* *Acacia longifolia*—Sydney golden wattle

* *Melilotus albus*—yellow sweetclover

* *Melilotus indicus*—annual yellow sweetclover

Acmispon glaber—deer weed

FAGACEAE—OAK FAMILY

Quercus chrysolepis—Canyon live oak

GERANIACEAE—GERANIUM FAMILY

* *Erodium cicutarium*—redstem stork's bill

* *Erodium botrys*—longbeak stork's bill

GROSSULARIACEAE—GOOSEBERRY FAMILY

Ribes aureum—golden currant

Ribes malvaceum var. *viridifolium*—chaparral currant

Ribes malvaceum—chaparral currant

JUGLANDACEAE—WALNUT FAMILY

Juglans californica—California walnut

LAMIACEAE—MINT FAMILY

Salvia apiana—white sage

Salvia columbariae—chia

Salvia mellifera—black sage

* *Marrubium vulgare*—horehound

APPENDIX C (Continued)

MALVACEAE—MALLOW FAMILY

- * *Malva parviflora*—cheeseweed mallow
- Malacothamnus fasciculatus*—bush mallow

MONTIACEAE—MONTIA FAMILY

- Calyptridium monandrum*—common pussypaws

MORACEAE—MULBERRY FAMILY

- * *Ficus carica*—edible fig

MYRSINACEAE—MYRSINE FAMILY

- * *Lysimachia arvensis*—scarlet pimpernel

ONAGRACEAE—EVENING PRIMROSE FAMILY

- Camissonia strigulosa*—sandysoil suncup
- Camissoniopsis bistorta*—southern suncup
- Camissoniopsis hirtella*—Santa Cruz Island suncup
- Camissoniopsis robusta*—robust suncup
- Epilobium canum*—hummingbird trumpet
- Eulobus californicus*—California suncup

PAEONIACEAE—PEONY FAMILY

- Paeonia californica*—California peony

PAPAVERACEAE—POPPY FAMILY

- Ehrendorferia chrysantha*—golden eardrops

PHRYMACEAE—LOPSEED FAMILY

- Mimulus aurantiacus*—bush monkeyflower

PLANTAGINACEAE—PLANTAIN FAMILY

- Antirrhinum multiflorum*—Sierra snapdragon
- Keckiella cordifolia*—heartleaf keckiella
- Penstemon centranthifolius*—scarlet bugler
- Penstemon spectabilis*—showy penstemon

PLATANACEAE—PLANE TREE, SYCAMORE FAMILY

- Platanus racemosa*—California sycamores

POLEMONIACEAE—PHLOX FAMILY

- Allophyllum glutinosum*—sticky false gilyflower
- Eriastrum sapphirinum*—sapphire woollystar
- Linanthus californicus*—California prickly phlox
- Navarretia hamata* ssp. *leptantha*—hooked pincushionplant
- Navarretia hamata*—hooked pincushionplant

APPENDIX C (Continued)

POLYGONACEAE—BUCKWHEAT FAMILY

- Chorizanthe brevicornu*—brittle spineflower
Chorizanthe staticoides—turkish rugging
Eriogonum elongatum var. *elongatum*—longstem buckwheat
Eriogonum fasciculatum var. *foliolosum*—Eastern Mojave buckwheat
Eriogonum gracile var. *incultum*—slender woolly buckwheat
Eriogonum gracile—slender woolly buckwheat
Eriogonum thurberi—Thurber's buckwheat
Lastarriaea coriacea—leather spineflower
Pterostegia drymarioides—woodland pterostegia
* *Polygonum aviculare* ssp. *depressum*—prostrate knotweed
* *Rumex crispus*—curly dock
Chorizanthe parryi var. *parryi*—Parry's spineflower
Eriogonum fasciculatum—California buckwheat

RANUNCULACEAE—BUTTERCUP FAMILY

- Clematis pauciflora*—ropevine clematis
Delphinium cardinale—scarlet larkspur
Delphinium parryi ssp. *parryi*—San Bernardino larkspur

RHAMNACEAE—BUCKTHORN FAMILY

- Ceanothus crassifolius* var. *crassifolius*—no common name
Rhamnus crocea—redberry buckthorn
Rhamnus ilicifolia—hollyleaf redberry
Ceanothus leucodermis—chaparral white thorn
Ceanothus crassifolius—hoary leaf ceanothus

ROSACEAE—ROSE FAMILY

- Adenostoma fasciculatum*—chamise
Cercocarpus betuloides var. *betuloides*—birchleaf mountain mahogany
Heteromeles arbutifolia—toyon
Prunus ilicifolia ssp. *ilicifolia*—hollyleaf cherry
Cercocarpus betuloides—birch leaf mountain mahogany
Prunus ilicifolia—holly leaf cherry

RUBIACEAE—MADDER FAMILY

- Galium angustifolium*—narrowleaf bedstraw

SCROPHULARIACEAE—FIGWORT FAMILY

- Scrophularia californica*—California figwort

SIMAROUBACEAE—QUASSIA OR SIMAROUBA FAMILY

- * *Ailanthus altissima*—tree of heaven

APPENDIX C (Continued)

SOLANACEAE—NIGHTSHADE FAMILY

Datura wrightii—sacred thorn-apple

Nicotiana quadrivalvis—Indian tobacco

Solanum xanti—chaparral nightshade

* *Nicotiana glauca*—tree tobacco

TAMARICACEAE—TAMARISK FAMILY

* *Tamarix ramosissima*—saltcedar

URTICACEAE—NETTLE FAMILY

* *Urtica urens*—dwarf nettle

* Non-native species

APPENDIX D

Wildlife Compendium

APPENDIX D

Wildlife Compendium

BIRD

BLACKBIRDS, ORIOLES & ALLIES

ICTERIDAE—BLACKBIRDS

Euphagus cyanocephalus—Brewer's blackbird

Icterus bullockii—Bullock's oriole

Icterus cucullatus—hooded oriole

Sturnella neglecta—western meadowlark

* *Molothrus ater*—brown-headed cowbird

BUSHTITS

AEGITHALIDAE—LONG-TAILED TITS & BUSHTITS

Psaltiriparus minimus—bushtit

CARDINALS, GROSBEAKS & ALLIES

CARDINALIDAE—CARDINALS & ALLIES

Passerina caerulea—blue grosbeak

FALCONS

FALCONIDAE—CARACARAS & FALCONS

Falco mexicanus—prairie falcon

Falco sparverius—American kestrel

FINCHES

FRINGILLIDAE—FRINGILLINE & CARDUELINE FINCHES & ALLIES

Haemorhous mexicanus—house finch

Spinus lawrencei—Lawrence's goldfinch

Spinus psaltria—lesser goldfinch

FLYCATCHERS

TYRANNIDAE—TYRANT FLYCATCHERS

Myiarchus cinerascens—ash-throated flycatcher

Sayornis nigricans—black phoebe

Sayornis saya—Say's phoebe

Tyrannus verticalis—western kingbird

Tyrannus vociferans—Cassin's kingbird

APPENDIX D (Continued)

GOATSUCKERS

CAPRIMULGIDAE—GOATSUCKERS

Chordeiles acutipennis—lesser nighthawk

Phalaenoptilus nuttallii—common poorwill

HAWKS

ACCIPITRIDAE—HAWKS, KITES, EAGLES, & ALLIES

Accipiter cooperii—Cooper's hawk

Buteo jamaicensis—red-tailed hawk

Circus hudsonius—northern harrier

HUMMINGBIRDS

TROCHILIDAE—HUMMINGBIRDS

Archilochus alexandri—black-chinned hummingbird

Calypte anna—Anna's hummingbird

Calypte costae—Costa's hummingbird

Selasphorus rufus—rufous hummingbird

Selasphorus sasin—Allen's hummingbird

Selasphorus sp.—Allen's/rufous hummingbird

JAYS, MAGPIES & CROWS

CORVIDAE—CROWS & JAYS

Aphelocoma californica—California scrub-jay

Corvus brachyrhynchos—American crow

Corvus corax—common raven

LARKS

ALAUDIDAE—LARKS

Eremophila alpestris—horned lark

MOCKINGBIRDS & THRASHERS

MIMIDAE—MOCKINGBIRDS & THRASHERS

Mimus polyglottos—northern mockingbird

Toxostoma redivivum—California thrasher

APPENDIX D (Continued)

NEW WORLD QUAIL

ODONTOPHORIDAE—NEW WORLD QUAIL

Callipepla californica—California quail

NEW WORLD VULTURES

CATHARTIDAE—CARDINALS & ALLIES

Cathartes aura—turkey vulture

OLD WORLD SPARROWS

PASSERIDAE—OLD WORLD SPARROWS

* *Passer domesticus*—house sparrow

OLD WORLD WARBLERS & GNATCATCHERS

SYLVIIDAE—SYLVIID WARBLERS

Polioptila caerulea—blue-gray gnatcatcher

PIGEONS & DOVES

COLUMBIDAE—PIGEONS & DOVES

Patagioenas fasciata—band-tailed pigeon

Zenaida macroura—mourning dove

* *Columba livia*—rock pigeon (rock dove)

* *Streptopelia decaocto*—Eurasian collared-dove

SHOREBIRDS

CHARADRIIDAE—LAPWINGS & PLOVERS

Charadrius vociferus—killdeer

SHRIKES

LANIIDAE—SHRIKES

Lanius ludovicianus—loggerhead shrike

SILKY FLYCATCHERS

PTILOGONATIDAE—SILKY-FLYCATCHERS

Phainopepla nitens—phainopepla

APPENDIX D (Continued)

STARLINGS & ALLIES

STURNIDAE—STARLINGS

* *Sturnus vulgaris*—European starling

SWALLOWS

HIRUNDINIDAE—SWALLOWS

Hirundo rustica—barn swallow

Petrochelidon pyrrhonota—cliff swallow

Stelgidopteryx serripennis—northern rough-winged swallow

SWIFTS

APODIDAE—SWIFTS

Aeronautes saxatalis—white-throated swift

THRUSHES

TURDIDAE—THRUSHES

Sialia mexicana—western bluebird

Turdus migratorius—American robin

WATERFOWL

ANATIDAE—DUCKS, GEESE, & SWANS

Anas platyrhynchos—mallard

WAXWINGS

BOMBYCILLIDAE—WAXWINGS

Bombycilla cedrorum—cedar waxwing

WOODPECKERS

PICIDAE—WOODPECKERS & ALLIES

Picoides nuttallii—Nuttall's woodpecker

Picoides pubescens—downy woodpecker

WRENS

TROGLODYTIDAE—WRENS

Salpinctes obsoletus—rock wren

Thryomanes bewickii—Bewick's wren

Troglodytes aedon—house wren

WRENTITS

TIMALIIDAE—BABBLERS

Chamaea fasciata—wrentit

NEW WORLD SPARROWS

PASSERELLIDAE—NEW WORLD SPARROWS

Aimophila ruficeps canescens—Southern California rufous-crowned sparrow

Aimophila ruficeps—rufous-crowned sparrow

Artemisiospiza belli—Bell's sparrow

Artemisiospiza nevadensis—sagebrush sparrow

Chondestes grammacus—lark sparrow

Melospiza melodia—song sparrow

Melospiza crissalis—California towhee

Pipilo maculatus—spotted towhee

INVERTEBRATE

BUTTERFLIES

LYCAENIDAE—BLUES, HAIRSTREAKS, & COPPERS

Brephidium exile—western pygmy-blue

Euphilotes battoides bernardino—Bernardino square-spotted blue

NYMPHALIDAE—BRUSH-FOOTED BUTTERFLIES

Limenitis lorquini—Lorquin's admiral

RIODINIDAE—METALMARKS

Apodemia mormo virgulti—Behr's metalmark

HESPERIIDAE—SKIPPERS

Erynnis funeralis—funereal duskywing

Pyrgus albescens—white checkered-skipper

PAPILIONIDAE—SWALLOWTAILS

Papilio zelicaon—anise swallowtail

PIERIDAE—WHITES & SULFURS

Colias harfordii—Harford's sulphur

Pontia sisymbrii—spring white

APPENDIX D (Continued)

MAMMAL

CANIDS

CANIDAE—WOLVES & FOXES

Canis latrans—coyote

HARES & RABBITS

LEPORIDAE—HARES & RABBITS

Sylvilagus audubonii—desert cottontail

Sylvilagus bachmani—brush rabbit

KANGAROO RATS

HETEROMYIDAE—POCKET MICE & KANGAROO RATS

Dipodomys simulans—Dulzura kangaroo rat

POCKET MICE

HETEROMYIDAE—POCKET MICE & KANGAROO RATS

¹ *Chaetodipus fallax fallax*—northwestern San Diego pocket mouse

SQUIRRELS

SCIURIDAE—SQUIRRELS

Spermophilus (Otospermophilus) beecheyi—California ground squirrel

UNGULATES

CERVIDAE—DEERS

Odocoileus hemionus—mule deer

RATS, MICE, & VOLES

CRICETIDAE—RATS, MICE, & VOLES

Peromyscus boylii—brush deermouse

Peromyscus maniculatus—North American deermouse

Reithrodontomys megalotis—western harvest mouse

Neotoma macrotis—big-eared woodrat

Neotoma sp.—woodrat

Neotoma bryanti—Bryant's woodrat

Peromyscus fraterculus—Northern Baja deermouse

APPENDIX D (Continued)

MURIDAE—RATS, MICE, & VOLES

- * *Mus musculus*—house mouse

REPTILE

LIZARDS

PHRYNOSOMATIDAE—IGUANID LIZARDS

Sceloporus occidentalis—western fence lizard

Uta stansburiana—common side-blotched lizard

ANGUIDAE—ALLIGATOR LIZARDS

Elgaria multicarinata—southern alligator lizard

TEIIDAE—WHIPTAIL LIZARDS

Aspidoscelis tigris stejnegeri—San Diegan tiger whiptail

Aspidoscelis tigris—tiger whiptail

SNAKES

COLUBRIDAE—COLUBRID SNAKES

Coluber lateralis—striped racer

* Non-native species.

¹ This species, northwestern San Diego pocket mouse, was also observed within the CPA.

APPENDIX D (Continued)

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APPENDIX E

Special-Status Plant Species Potential to Occur Table

APPENDIX E

Special-Status Plant Species Potential to Occur within the EHNCP Area

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur	
				Neighborhood Area (NA)/Etiwanda Heights Preserve	Rural/Conservation Area (RCA)
<i>Acanthoscyphus parishii</i> var. <i>parishii</i>	Parish's oxytheca	None/None/4.2	Chaparral, lower montane coniferous forest; sandy or gravelly/annual herb/June–Sep/4,003–8,530	Not expected to occur. The EHNCP is outside of the species' known elevation range.	
<i>Amaranthus watsonii</i>	Watson's amaranth	None/None/4.3	Mojavean desert scrub, Sonoran desert scrub/annual herb/Apr–Sep/66–5,577	Not expected to occur. No suitable vegetation present.	
<i>Ambrosia monogyra</i>	singlewhorl burrobrush	None/None/2B.2	Chaparral, Sonoran desert scrub; sandy/perennial shrub/Aug–Nov/33–1,640	Not expected to occur. Conspicuous perennial shrub would have been detected if present. Focused surveys negative.	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA.
<i>Arctostaphylos glandulosa</i> ssp. <i>gabrielensis</i>	San Gabriel manzanita	None/None/1B.2	Chaparral (rocky)/perennial evergreen shrub/Mar/1,952–4,921	Not expected to occur. Conspicuous perennial evergreen shrub would have been detected if present. Focused surveys negative.	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA.
<i>Arenaria paludicola</i>	marsh sandwort	FE/SE/1B.1	Marshes and swamps (freshwater or brackish); sandy, openings/perennial stoloniferous herb/May–Aug/10–558	Not expected to occur. The EHNCP Area is outside of the species' known elevation range, and there is no suitable vegetation present.	
<i>Asclepias nyctaginifolia</i>	Mojave milkweed	None/None/2B.1	Mojavean desert scrub, pinyon and juniper woodland/perennial herb/May–June/2,871–5,577	Not expected to occur. The NA and Etiwanda Heights Preserve are outside of the species' known elevation range, and there is no suitable vegetation present.	Not expected to occur. There is no suitable vegetation present.

APPENDIX E (Continued)

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur	
				Neighborhood Area (NA)/Etiwanda Heights Preserve	Rural/Conservation Area (RCA)
<i>Asplenium vespertinum</i>	western spleenwort	None/None/4.2	Chaparral, cismontane woodland, coastal scrub; rocky/perennial rhizomatous herb/Feb–June/591–3,281	Low potential to occur. There is suitable habitat; however, focused surveys were negative.	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA.
<i>Astragalus bicristatus</i>	crested milk- vetch	None/None/4.3	Lower montane coniferous forest, upper montane coniferous forest; sandy or rocky, mostly carbonate/perennial herb/May–Aug/5,577–9,006	Not expected to occur. The EHNCP Area is outside of the species' known elevation range, and there is no suitable vegetation present.	
<i>Astragalus lentiginosus</i> var. <i>antonius</i>	San Antonio milk-vetch	None/None/1B.3	Lower montane coniferous forest, upper montane coniferous forest/perennial herb/Apr–July/4,921–8,530	Not expected to occur. The EHNCP Area is outside of the species' known elevation range, and there is no suitable vegetation present.	
<i>Astragalus leucolobus</i>	Big Bear Valley woollypod	None/None/1B.2	Lower montane coniferous forest, pebble plain, pinyon and juniper woodland, upper montane coniferous forest; rocky/perennial herb/May–July/3,609–9,465	Not expected to occur. The EHNCP Area is outside of the species' known elevation range, and there is no suitable vegetation present.	
<i>Berberis nevinii</i>	Nevin's barberry	FE/SE/1B.1	Chaparral, cismontane woodland, coastal scrub, riparian scrub; sandy or gravelly/perennial evergreen shrub/Mar–June/230–2,707	Not expected to occur. Conspicuous perennial evergreen shrub would have been detected if present. Focused surveys negative.	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA.
<i>Botrychium crenulatum</i>	scalloped moonwort	None/None/2B.2	Bogs and fens, lower montane coniferous forest, meadows and seeps, marshes and swamps (freshwater), upper montane coniferous forest/perennial rhizomatous herb/June–Sep/4,160–10,761	Not expected to occur. The EHNCP Area is outside of the species' known elevation range, and there is no suitable vegetation present.	

APPENDIX E (Continued)

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur	
				Neighborhood Area (NA)/Etiwanda Heights Preserve	Rural/Conservation Area (RCA)
<i>Botrychium minganense</i>	Mingan moonwort	None/None/2B.2	Bogs and fens, lower montane coniferous forest, upper montane coniferous forest; mesic/perennial rhizomatous herb/July–Sep/4,774–7,152	Not expected to occur. The EHNCP Area is outside of the species' known elevation range, and there is no suitable vegetation present.	
<i>Calochortus catalinae</i>	Catalina mariposa lily	None/None/4.2	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland/perennial bulbiferous herb/(Feb) Mar–June/49–2,297	Low potential to occur. There is suitable habitat; however, focused surveys were negative.	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA.
<i>Calochortus clavatus</i> var. <i>gracilis</i>	slender mariposa lily	None/None/1B.2	Chaparral, coastal scrub, valley and foothill grassland/perennial bulbiferous herb/Mar–June/1,050–3,281	Low potential to occur. There is suitable habitat; however, focused surveys were negative.	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA.
<i>Calochortus palmeri</i> var. <i>palmeri</i>	Palmer's mariposa lily	None/None/1B.2	Chaparral, lower montane coniferous forest, meadows and seeps; mesic/perennial bulbiferous herb/Apr–July/2,329–7,841	Not expected to occur. The NA and the Etiwanda Heights Preserve are outside of the species' known elevation range.	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA.
<i>Calochortus plummerae</i>	Plummer's mariposa lily	None/None/4.2	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, valley and foothill grassland; granitic, rocky/perennial bulbiferous herb/May–July/328–5,577	Observed during 2017 focused surveys. Approximately 10 individuals were observed throughout the NA and the Etiwanda Heights Preserve.	High potential to occur. There is suitable habitat; however, no focused surveys were conducted in the RCA.

APPENDIX E (Continued)

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur	
				Neighborhood Area (NA)/Etiwanda Heights Preserve	Rural/Conservation Area (RCA)
<i>Calochortus weedii</i> var. <i>intermedius</i>	intermediate mariposa lily	None/None/1B.2	Chaparral, coastal scrub, valley and foothill grassland; rocky, calcareous/perennial bulbiferous herb/May–July/344–2,805	Observed during 2017 focused surveys. Approximately 73 individuals were observed throughout the NA and the Etiwanda Heights Preserve.	High potential to occur. There is suitable habitat; however, no focused surveys were conducted in the RCA.
<i>Calystegia felix</i>	lucky morning- glory	None/None/3.1	Meadows and seeps (sometimes alkaline), riparian scrub (alluvial); historically associated with wetland and marshy places, but possibly in drier situations as well; possibly silty loam and alkaline/annual rhizomatous herb/Mar– Sep/98–705	Not expected to occur. The EHNCP Area is outside of the species' known elevation range, and there is no suitable vegetation present.	
<i>Canbya candida</i>	white pygmy- poppy	None/None/4.2	Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodland; gravelly, sandy, granitic/annual herb/Mar–June/1,969– 4,790	Not expected to occur. No suitable vegetation present.	
<i>Carex occidentalis</i>	western sedge	None/None/2B.3	Lower montane coniferous forest, meadows and seeps/perennial rhizomatous herb/June– Aug/5,397–10,285	Not expected to occur. The EHNCP Area is outside of the species' known elevation range, and there is no suitable vegetation present.	
<i>Castilleja plagiotoma</i>	Mojave paintbrush	None/None/4.3	Great Basin scrub (alluvial), Joshua tree woodland, lower montane coniferous forest, pinyon and juniper woodland/perennial herb (hemiparasitic)/Apr–June/984–8,202	Not expected to occur. No suitable vegetation present.	
<i>Centromadia pungens</i> ssp. <i>laevis</i>	smooth tarplant	None/None/1B.1	Chenopod scrub, meadows and seeps, playas, riparian woodland, valley and foothill grassland; alkaline/annual herb/Apr–Sep/0– 2,100	Low potential to occur. There is suitable habitat; however, focused surveys were negative.	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA.

APPENDIX E (Continued)

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur	
				Neighborhood Area (NA)/Etiwanda Heights Preserve	Rural/Conservation Area (RCA)
<i>Chloropyron maritimum</i> ssp. <i>maritimum</i>	salt marsh bird's-beak	FE/SE/1B.2	Coastal dunes, marshes and swamps (coastal salt)/annual herb (hemiparasitic)/May–Oct/0–98	Not expected to occur. The EHNCP Area is outside of the species' known elevation range, and there is no suitable vegetation present.	
<i>Chorizanthe leptotheca</i>	Peninsular spineflower	None/None/4.2	Chaparral, coastal scrub, lower montane coniferous forest; alluvial fan, granitic/annual herb/May–Aug/984–6,,234	Low potential to occur. There is suitable habitat; however, focused surveys were negative.	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA.
<i>Chorizanthe parryi</i> var. <i>parryi</i>	Parry's spineflower	None/None/1B.1	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland; sandy or rocky, openings/annual herb/Apr–June/902– 4,003	Observed during 2017 focused surveys. Approximately 18,884 individuals were observed throughout the alluvial benches of the NA and the Etiwanda Heights Preserve.	High potential to occur. There is suitable habitat; however, no focused surveys were conducted in the RCA.
<i>Chorizanthe xanti</i> var. <i>leucotheca</i>	white-bracted spineflower	None/None/1B.2	Coastal scrub (alluvial fans), Mojavean desert scrub, pinyon and juniper woodland; sandy or gravelly/annual herb/Apr–June/984–3,937	Low potential to occur. There is suitable habitat; however, focused surveys were negative.	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA.
<i>Cladium californicum</i>	California sawgrass	None/None/2B.2	Meadows and seeps, marshes and swamps; alkaline or freshwater/perennial rhizomatous herb/June–Sep/197–5,249	Not expected to occur. No suitable vegetation present.	
<i>Claytonia lanceolata</i> var. <i>peirsonii</i>	Peirson's spring beauty	None/None/3.1	Subalpine coniferous forest, upper montane coniferous forest; scree/perennial herb/(Mar) May–June/4954–9006	Not expected to occur. The EHNCP Area is outside of the species' known elevation range, and there is no suitable vegetation present.	
<i>Deinandra paniculata</i>	paniculate tarplant	None/None/4.2	Coastal scrub, valley and foothill grassland, vernal pools; usually vernal mesic,	Low potential to occur. There is suitable	Moderate potential to occur. There is

APPENDIX E (Continued)

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur	
				Neighborhood Area (NA)/Etiwanda Heights Preserve	Rural/Conservation Area (RCA)
			sometimes sandy/annual herb/Apr–Nov/82–3,084	habitat; however, focused surveys were negative.	suitable habitat; however, there were no focused surveys within the RCA.
<i>Diplacus johnstonii</i>	Johnston's monkeyflower	None/None/4.3	Lower montane coniferous forest (scree, disturbed areas, rocky or gravelly, roadside)/annual herb/May–Aug/3,199–9,580	Not expected to occur. The EHNCP Area is outside of the species' known elevation range, and there is no suitable vegetation present.	
<i>Dodecahema leptoceras</i>	slender-horned spineflower	FE/SE/1B.1	Chaparral, cismontane woodland, coastal scrub (alluvial fan); sandy/annual herb/Apr–June/656–2,493	Low potential to occur. There is suitable habitat; however, focused surveys were negative.	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA.
<i>Dudleya multicaulis</i>	many-stemmed dudleya	None/None/1B.2	Chaparral, coastal scrub, valley and foothill grassland; often clay/perennial herb/Apr–July/49–2,592	Low potential to occur. Focused surveys were negative.	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA.
<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>	Santa Ana River woollystar	FE/SE/1B.1	Chaparral, coastal scrub (alluvial fan); sandy or gravelly/perennial herb/Apr–Sep/299–2,001	Low potential to occur. There is suitable habitat; however, focused surveys were negative.	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA.
<i>Erigeron breweri</i> var. <i>jacintus</i>	San Jacinto Mountains daisy	None/None/4.3	Subalpine coniferous forest, upper montane coniferous forest; rocky/perennial rhizomatous herb/June–Sep/8,858–9,514	Not expected to occur. The EHNCP Area is outside of the species' known elevation range, and there is no suitable vegetation present.	
<i>Eriogonum kennedyi</i> var. <i>alpigenum</i>	southern alpine buckwheat	None/None/1B.3	Alpine boulder and rock field, subalpine coniferous forest; granitic, gravelly/perennial herb/July–Sep/8,530–11,483	Not expected to occur. The EHNCP Area is outside of the species' known elevation range, and there is no suitable vegetation present.	

APPENDIX E (Continued)

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur	
				Neighborhood Area (NA)/Etiwanda Heights Preserve	Rural/Conservation Area (RCA)
<i>Eriogonum microthecum</i> var. <i>alpinum</i>	northern limestone buckwheat	None/None/4.3	Alpine dwarf scrub, Great Basin scrub; sometimes rocky or gravelly/perennial herb/July–Sep/8,202–10,827	Not expected to occur. The EHNCP Area is outside of the species' known elevation range.	
<i>Eriogonum microthecum</i> var. <i>johnstonii</i>	Johnston's buckwheat	None/None/1B.3	Subalpine coniferous forest, upper montane coniferous forest; rocky/perennial deciduous shrub/July–Sep/6,001–9,600	Not expected to occur. The EHNCP Area is outside of the species' known elevation range, and there is no suitable vegetation present.	
<i>Eriogonum umbellatum</i> var. <i>minus</i>	alpine sulfur-flowered buckwheat	None/None/4.3	Subalpine coniferous forest, upper montane coniferous forest; gravelly/perennial herb/June–Sep/5,906–10,066	Not expected to occur. The EHNCP Area is outside of the species' known elevation range, and there is no suitable vegetation present.	
<i>Galium angustifolium</i> ssp. <i>gabrielense</i>	San Antonio Canyon bedstraw	None/None/4.3	Chaparral, lower montane coniferous forest; granitic, sandy or rocky/perennial herb/Apr–Aug/3,937–8,694	Not expected to occur. The EHNCP Area is outside of the species' known elevation range.	
<i>Galium johnstonii</i>	Johnston's bedstraw	None/None/4.3	Chaparral, lower montane coniferous forest, pinyon and juniper woodland, riparian woodland/perennial herb/June–July/4,003–7,546	Not expected to occur. The EHNCP Area is outside of the species' known elevation range.	
<i>Helianthus nuttallii</i> ssp. <i>parishii</i>	Los Angeles sunflower	None/None/1A	Marshes and swamps (coastal salt and freshwater)/perennial rhizomatous herb/Aug–Oct/33–5,495	Not expected to occur. No suitable vegetation present.	
<i>Heuchera abramsii</i>	Abrams' alumroot	None/None/4.3	Upper montane coniferous forest (rocky)/perennial rhizomatous herb/July–Aug/9,186–11,483	Not expected to occur. The EHNCP Area is outside of the species' known elevation range, and there is no suitable vegetation present.	
<i>Heuchera caespitosa</i>	urn-flowered alumroot	None/None/4.3	Cismontane woodland, lower montane coniferous forest, riparian forest (montane), upper montane coniferous forest; rocky/perennial rhizomatous herb/May–Aug/3,789–8,694	Not expected to occur. The EHNCP Area is outside of the species' known elevation range, and there is no suitable vegetation present.	
<i>Heuchera parishii</i>	Parish's alumroot	None/None/1B.3	Alpine boulder and rock field, lower montane coniferous forest, subalpine coniferous forest, upper montane coniferous forest; rocky, sometimes carbonate/perennial rhizomatous herb/June–Aug/4,921–12,467	Not expected to occur. The EHNCP Area is outside of the species' known elevation range, and there is no suitable vegetation present.	

APPENDIX E (Continued)

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur	
				Neighborhood Area (NA)/Etiwanda Heights Preserve	Rural/Conservation Area (RCA)
<i>Horkelia cuneata</i> var. <i>puberula</i>	mesa horkelia	None/None/1B.1	Chaparral (maritime), cismontane woodland, coastal scrub; sandy or gravelly/perennial herb/Feb–July (Sep)/230–2,657	Low potential to occur. There is suitable habitat; however, focused surveys were negative.	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA.
<i>Hulsea vestita</i> ssp. <i>gabrielensis</i>	San Gabriel Mountains sunflower	None/None/4.3	Lower montane coniferous forest, upper montane coniferous forest; rocky/perennial herb/May–July/4,921–8,202	Not expected to occur. The EHNCP Area is outside of the species' known elevation range, and there is no suitable vegetation present.	
<i>Juglans californica</i>	Southern California black walnut	None/None/4.2	Chaparral, cismontane woodland, coastal scrub; alluvial/perennial deciduous tree/Mar–Aug/164–2,953	Observed during 2017 focused surveys. Six individuals were observed within the southeastern portion of the NA, south of Banyan Street.	High potential to occur. There is suitable habitat; however, no focused surveys were conducted in the RCA.
<i>Juncus duranii</i>	Duran's rush	None/None/4.3	Lower montane coniferous forest, meadows and seeps, upper montane coniferous forest; mesic/perennial rhizomatous herb/July–Aug/5,801–9,199	Not expected to occur. The EHNCP Area is outside of the species' known elevation range, and there is no suitable vegetation present.	
<i>Juncus nodosus</i>	knotted rush	None/None/2B.3	Meadows and seeps (mesic), marshes and swamps (lake margins)/perennial rhizomatous herb/July–Sep/98–6,496	Not expected to occur. No suitable vegetation present.	
<i>Lepechinia fragrans</i>	fragrant pitcher sage	None/None/4.2	Chaparral/perennial shrub/Mar–Oct/66–4,298	Low potential to occur. There is suitable habitat; however, focused surveys were negative.	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA.

APPENDIX E (Continued)

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur	
				Neighborhood Area (NA)/Etiwanda Heights Preserve	Rural/Conservation Area (RCA)
<i>Lepidium virginicum</i> var. <i>robinsonii</i>	Robinson's pepper-grass	None/None/4.3	Chaparral, coastal scrub/annual herb/Jan– July/3–2,904	Low potential to occur. There is suitable habitat; however, focused surveys were negative.	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA.
<i>Lewisia brachycalyx</i>	short-sepaed lewisia	None/None/2B.2	Lower montane coniferous forest, meadows and seeps; mesic/perennial herb/Feb–June (July)/4,495–7,546	Not expected to occur. The EHNCP Area is outside of the species' known elevation range, and there is no suitable vegetation present.	
<i>Lilium humboldtii</i> ssp. <i>ocellatum</i>	ocellated Humboldt lily	None/None/4.2	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, riparian woodland; openings/perennial bulbiferous herb/Mar–July (Aug)/98–5,906	Low potential to occur. There is suitable habitat; however, focused surveys were negative.	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA.
<i>Lilium parryi</i>	lemon lily	None/None/1B.2	Lower montane coniferous forest, meadows and seeps, riparian forest, upper montane coniferous forest; mesic/perennial bulbiferous herb/July–Aug/4,003–9,006	Not expected to occur. The EHNCP Area is outside of the species' known elevation range, and there is no suitable vegetation present.	
<i>Linanthus</i> <i>concinus</i>	San Gabriel linanthus	None/None/1B.2	Chaparral, lower montane coniferous forest, upper montane coniferous forest; rocky, openings/annual herb/Apr–July/4,987–9,186	Not expected to occur. The EHNCP Area is outside of the species' known elevation range.	
<i>Lupinus peirsonii</i>	Peirson's lupine	None/None/1B.3	Joshua tree woodland, lower montane coniferous forest, pinyon and juniper woodland, upper montane coniferous forest; gravelly or rocky/perennial herb/Apr– June/3,281–8,202	Not expected to occur. The NA and the Etiwanda Heights Preserve are outside of the species' known elevation range, and there is no suitable vegetation present.	Not expected to occur. There is no suitable vegetation present.

APPENDIX E (Continued)

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur	
				Neighborhood Area (NA)/Etiwanda Heights Preserve	Rural/Conservation Area (RCA)
<i>Lycium parishii</i>	Parish's desert-thorn	None/None/2B.3	Coastal scrub, Sonoran desert scrub/perennial shrub/Mar–Apr/443–3,281	Not expected to occur. Conspicuous perennial shrub would have been detected if present. Focused surveys were negative.	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA.
<i>Malacothamnus parishii</i>	Parish's bush-mallow	None/None/1A	Chaparral, coastal scrub/perennial deciduous shrub/June–July/1,001–1,493	Not expected to occur. Conspicuous perennial shrub would have been detected if present. Species is presumed extirpated in California (CNPS 2017). Focused surveys negative.	Low potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA. Species is presumed extirpated in California (CNPS 2017).
<i>Monardella australis</i> ssp. <i>cinerea</i>	gray monardella	None/None/4.3	Lower montane coniferous forest, subalpine coniferous forest, upper montane coniferous forest/perennial rhizomatous herb/July–Aug/5,906–10,007	Not expected to occur. The EHNCP Area is outside of the species' known elevation range, and there is no suitable vegetation present.	
<i>Monardella australis</i> ssp. <i>jokerstii</i>	Jokerst's monardella	None/None/1B.1	Chaparral, lower montane coniferous forest; steep scree or talus slopes between breccia, secondary alluvial benches along drainages and washes/perennial rhizomatous herb/July–Sep/4,429–5,741	Not expected to occur. The EHNCP Area is outside of the species' known elevation range.	

APPENDIX E (Continued)

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur	
				Neighborhood Area (NA)/Etiwanda Heights Preserve	Rural/Conservation Area (RCA)
<i>Monardella macrantha</i> ssp. <i>hallii</i>	Hall's monardella	None/None/1B.3	Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland/perennial rhizomatous herb/June– Oct/2,395–7,201	Not expected to occur. The NA and the Etiwanda Heights Preserve are outside of the species' known elevation range.	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA.
<i>Monardella pringlei</i>	Pringle's monardella	None/None/1A	Coastal scrub (sandy)/annual herb/May– June/984–1,312	Not expected to occur. The EHNCP Area is outside of the species' known elevation range.	
<i>Monardella saxicola</i>	rock monardella	None/None/4.2	Closed-cone coniferous forest, chaparral, lower montane coniferous forest; rocky, usually serpentinite/perennial rhizomatous herb/June–Sep/1,640–5,906	Low potential to occur. There is suitable habitat; however, focused surveys were negative.	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA.
<i>Muhlenbergia californica</i>	California muhly	None/None/4.3	Chaparral, coastal scrub, lower montane coniferous forest, meadows and seeps; mesic, seeps and streambanks/perennial rhizomatous herb/June–Sep/328–6,562	Low potential to occur. There is suitable habitat; however, focused surveys were negative.	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA.
<i>Navarretia prostrata</i>	prostrate vernal pool navarretia	None/None/1B.1	Coastal scrub, meadows and seeps, valley and foothill grassland (alkaline), vernal pools; mesic/annual herb/Apr–July/10–3,970	Not expected to occur. No suitable vernal pools present.	
<i>Nemacladus secundiflorus</i> var. <i>robbinsii</i>	Robbins' nemacladus	None/None/1B.2	Chaparral, valley and foothill grassland; openings/annual herb/Apr–June/1,148–5,577	Low potential to occur. There is suitable habitat; however, focused surveys were negative.	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA.

APPENDIX E (Continued)

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur	
				Neighborhood Area (NA)/Etiwanda Heights Preserve	Rural/Conservation Area (RCA)
<i>Opuntia basilaris</i> var. <i>brachyclada</i>	short-joint beavertail	None/None/1B.2	Chaparral, Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodland/perennial stem succulent/Apr–June (Aug)/1,394–5,906	Not expected to occur. Conspicuous perennial stem succulent would have been detected if present. Focused surveys were negative.	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA.
<i>Oreonana vestita</i>	woolly mountain- parsley	None/None/1B.3	Lower montane coniferous forest, subalpine coniferous forest, upper montane coniferous forest; gravel or talus/perennial herb/Mar– Sep/5,299–11,483	Not expected to occur. The EHNCP Area is outside of the species' known elevation range, and there is no suitable vegetation present.	
<i>Orobanche valida</i> ssp. <i>valida</i>	Rock Creek broomrape	None/None/1B.2	Chaparral, pinyon and juniper woodland; granitic/perennial herb (parasitic)/May– Sep/4,101–6,562	Not expected to occur. The EHNCP Area is outside of the species' known elevation range.	
<i>Oxytropis oreophila</i> var. <i>oreophila</i>	rock-loving oxytrope	None/None/2B.3	Alpine boulder and rock field, subalpine coniferous forest; gravelly or rocky/perennial herb/June–Sep/11,155–12,467	Not expected to occur. The EHNCP Area is outside of the species' known elevation range, and there is no suitable vegetation present.	
<i>Parnassia cirrata</i> var. <i>cirrata</i>	San Bernardino grass-of- Parnassus	None/None/1B.3	Lower montane coniferous forest, meadows and seeps, upper montane coniferous forest; mesic, streamsides, sometimes calcareous/perennial herb/Aug–Sep/4,101– 8,005	Not expected to occur. The EHNCP Area is outside of the species' known elevation range, and there is no suitable vegetation present.	
<i>Phacelia mohavensis</i>	Mojave phacelia	None/None/4.3	Cismontane woodland, lower montane coniferous forest, meadows and seeps, pinyon and juniper woodland; sandy or gravelly/annual herb/Apr–Aug/4,593–8,202	Not expected to occur. The EHNCP Area is outside of the species' known elevation range, and there is no suitable vegetation present.	
<i>Phacelia stellaris</i>	Brand's star phacelia	None/None/1B.1	Coastal dunes, coastal scrub/annual herb/Mar–June/3–1,312	Not expected to occur. The EHNCP Area is outside of the species' known elevation range.	

APPENDIX E (Continued)

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur	
				Neighborhood Area (NA)/Etiwanda Heights Preserve	Rural/Conservation Area (RCA)
<i>Pseudognaphalium leucocephalum</i>	white rabbit-tobacco	None/None/2B.2	Chaparral, cismontane woodland, coastal scrub, riparian woodland; sandy, gravelly/perennial herb/(July) Aug–Nov (Dec)/0–6,890	Low potential to occur. There is suitable habitat; however, focused surveys were negative.	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA.
<i>Quercus durata</i> var. <i>gabrielensis</i>	San Gabriel oak	None/None/4.2	Chaparral, cismontane woodland/perennial evergreen shrub/Apr–May/1,476–3,281	Not expected to occur. Conspicuous perennial evergreen shrub would have been detected if present. Focused surveys negative.	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA.
<i>Sagittaria sanfordii</i>	Sanford's arrowhead	None/None/1B.2	Marshes and swamps (assorted shallow freshwater)/perennial rhizomatous herb/May–Oct (Nov)/0–2,133	Not expected to occur. No suitable vegetation present.	
<i>Schoenus nigricans</i>	black bog-rush	None/None/2B.2	Marshes and swamps (often alkaline)/perennial herb/Aug–Sep/492–6,562	Not expected to occur. No suitable vegetation present.	
<i>Senecio aphanactis</i>	chaparral ragwort	None/None/2B.2	Chaparral, cismontane woodland, coastal scrub; sometimes alkaline/annual herb/Jan–Apr/49–2,625	Low potential to occur. There is suitable habitat; however, focused surveys were negative.	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA.
<i>Senecio astephanus</i>	San Gabriel ragwort	None/None/4.3	Coastal bluff scrub, chaparral; rocky slopes/perennial herb/May–July/1,312–4,921	Low potential to occur. There is suitable habitat; however, focused surveys were negative.	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA.

APPENDIX E (Continued)

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur	
				Neighborhood Area (NA)/Etiwanda Heights Preserve	Rural/Conservation Area (RCA)
<i>Sidalcea neomexicana</i>	salt spring checkerbloom	None/None/2B.2	Chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub, playas; alkaline, mesic/perennial herb/Mar– June/49–5,020	Low potential to occur. There is suitable habitat; however, focused surveys were negative.	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA.
<i>Sidothea caryophylloides</i>	chickweed oxytheca	None/None/4.3	Lower montane coniferous forest (sandy)/annual herb/July–Sep/3,655–8,530	Not expected to occur. The EHNCP Area is outside of the species' known elevation range, and there is no suitable vegetation present.	
<i>Sphenopholis obtusata</i>	prairie wedge grass	None/None/2B.2	Cismontane woodland, meadows and seeps; mesic/perennial herb/Apr–July/984–6,562	Not expected to occur. No suitable vegetation present.	
<i>Streptanthus bernardinus</i>	Laguna Mountains jewelflower	None/None/4.3	Chaparral, lower montane coniferous forest/perennial herb/May–Aug/2,198–8,202	Low potential to occur. There is suitable habitat; however, focused surveys were negative.	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA.
<i>Symphyotrichum defoliatum</i>	San Bernardino aster	None/None/1B.2	Cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, valley and foothill grassland (vernally mesic); near ditches, streams, springs/perennial rhizomatous herb/July–Nov/7–6,693	Low potential to occur. There is suitable habitat; however focused surveys were negative.	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA.
<i>Symphyotrichum greatae</i>	Greata's aster	None/None/1B.3	Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, riparian woodland; mesic/perennial rhizomatous herb/June– Oct/984–6,594	Low potential to occur. There is suitable habitat; however focused surveys were negative.	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA.

APPENDIX E (Continued)

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur	
				Neighborhood Area (NA)/Etiwanda Heights Preserve	Rural/Conservation Area (RCA)
<i>Syntrichopappus lemmonii</i>	Lemmon's syntrichopappus	None/None/4.3	Chaparral, Joshua tree woodland, pinyon and juniper woodland; sandy or gravelly/annual herb/Apr–May (June)/1,640–6,004	Low potential to occur. There is suitable habitat; however focused surveys were negative.	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA.
<i>Thysanocarpus rigidus</i>	rigid fringepod	None/None/1B.2	Pinyon and juniper woodland; Dry rocky slopes/annual herb/Feb–May/1,969–7,218	Not expected to occur. No suitable vegetation present.	
<i>Viola pinetorum</i> var. <i>grisea</i>	grey-leaved violet	None/None/1B.3	Meadows and seeps, subalpine coniferous forest, upper montane coniferous forest/perennial herb/Apr–July/4,921–11,155	Not expected to occur. The EHNCP Area is outside of the species' known elevation range, and there is no suitable vegetation present.	
<i>Viola purpurea</i> ssp. <i>aurea</i>	golden violet	None/None/2B.2	Great Basin scrub, pinyon and juniper woodland; sandy/perennial herb/Apr– June/3,281–8,202	Not expected to occur. The NA and the Etiwanda Heights Preserve are outside of the species' known elevation range.	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA.

Status Legend:

Federal

FT = Federally listed as threatened

FE = Federally listed as endangered

StateCE = state endangered

CRPR = California Rare Plant Rank

1A: Plants presumed extirpated in California and either rare or extinct elsewhere

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

2A: Plants presumed extirpated in California, but more common elsewhere

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

3: Plants about which more information is needed – a review list

4: Plants of limited distribution – a watch list

0.1 Seriously threatened in California (more than 80% of occurrences threatened/high degree and immediacy of threat)

0.2 Moderately threatened in California (20%–80% occurrences threatened/moderate degree and immediacy of threat)

0.3 Not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known)

APPENDIX E (Continued)

References

CNPS (California Native Plant Society. 2017. *Inventory of Rare, Threatened, and Endangered Plants of California* (online edition, v8-03). Sacramento, California: CNPS, Rare Plant Program. <http://www.rareplants.cnps.org>.

APPENDIX F

Special-Status Wildlife Species Potential to Occur Table

APPENDIX F

Special-Status Wildlife Species Potential to Occur within the EHNCP Area

Scientific Name	Common Name	Status (Federal/State/ Other)	Habitat	Potential to Occur	
				Neighborhood Area (NA)/RCA: Etiwanda Heights Preserve	Rural/Conservation Area (RCA)
Amphibians					
Anaxyrus californicus	arroyo toad	FE/SSC/None	Semi-arid areas near washes, sandy riverbanks, riparian areas, palm oasis, Joshua tree, mixed chaparral and sagebrush; stream channels for breeding (typically third order); adjacent stream terraces and uplands for foraging and wintering	Not expected to occur. No suitable habitat present.	
Batrachoseps gabrieli	San Gabriel slender salamander	None/None/None	Talus slopes in forested areas, often near streams	Not expected to occur. No suitable habitat present. This species is known to occur within the vicinity ¹ of the NA and RCA (CDFW 2017).	
Rana muscosa	mountain yellow-legged frog	FE/SE, WL/None	Lakes, ponds, meadow streams, isolated pools, and open riverbanks; rocky canyons in narrow canyons and in chaparral	Not expected to occur. The site is outside of the species' known geographic range and there is no suitable habitat present. This species is known to occur within the vicinity ¹ of the NA and RCA (CDFW 2017).	
Taricha torosa (Monterey Co. south only)	California newt	None/SSC/None	Wet forests, oak forests, chaparral, and rolling grassland	Not expected to occur. No suitable habitat present.	Moderate potential to occur. There is suitable vegetation and habitat present within the RCA.
Reptiles					
Anniella stebbinsi	southern California legless lizard	None/SCC/None	Coastal dunes, stabilized dunes, beaches, dry washes, valley–foothill, chaparral, and scrubs; pine, oak, and riparian woodlands; associated with sparse vegetation and sandy or loose, loamy soils	Moderate potential to occur. There is suitable scrub and chaparral habitat containing sandy soil. This species is known to occur within the vicinity ¹ of the NA and the Etiwanda Heights Preserve (CDFW 2017).	Moderate potential to occur. There is suitable scrub and chaparral habitat, however there were no focused surveys within the RCA. This species is known to occur within the vicinity ¹ of the RCA (CDFW 2017).

APPENDIX F (Continued)

Scientific Name	Common Name	Status (Federal/State/ Other)	Habitat	Potential to Occur	
				Neighborhood Area (NA)/RCA: Etiwanda Heights Preserve	Rural/Conservation Area (RCA)
<i>Arizona elegans occidentalis</i>	California glossy snake	None/SSC/None	Commonly occurs in desert regions throughout Southern California. Prefers open sandy areas with scattered brush. Also found in rocky areas.	Moderate potential to occur. There is suitable open habitat, containing sandy and rocky areas. This species is known to occur within the vicinity ¹ of the NA and the Etiwanda Heights Preserve (CDFW 2017).	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA. This species is known to occur within the vicinity ¹ of the RCA (CDFW 2017).
<i>Aspidoscelis tigris stejnegeri</i>	San Diegan tiger whiptail	None/SSC/None	Hot and dry areas with sparse foliage, including chaparral, woodland, and riparian areas.	Observed within the NA and the Etiwanda Heights Preserve.	High potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA.
<i>Lampropeltis zonata (parvirubra)</i>	California mountain kingsnake (San Bernardino population)	None/WL/None	Wide range of habitats including conifer forest, oak–pine woodlands, riparian woodland, chaparral, manzanita, and coastal scrub	Low potential to occur. There is suitable scrub and chaparral habitat, but the species typically occurs in higher elevation sites. This species is known to occur within the vicinity ¹ of the NA and the Etiwanda Heights Preserve (CDFW 2017).	Low potential to occur. There is suitable habitat; however, they typically occur in higher elevation sites. There were no focused surveys within the RCA. This species is known to occur within the vicinity ¹ of the RCA (CDFW 2017).

APPENDIX F (Continued)

Scientific Name	Common Name	Status (Federal/State/ Other)	Habitat	Potential to Occur	
				Neighborhood Area (NA)/RCA: Etiwanda Heights Preserve	Rural/Conservation Area (RCA)
<i>Phrynosoma blainvillii</i>	Blainville's horned lizard	None/SSC/None	Open areas of sandy soil in valleys, foothills, and semi-arid mountains including coastal scrub, chaparral, valley-foothill hardwood, conifer, riparian, pine-cypress, juniper, and annual grassland habitats	Observed. There is suitable scrub and chaparral habitat containing sandy soil and prey species. This species is known to occur within the vicinity ¹ of the NA and the Etiwanda Heights Preserve (CDFW 2017).	High potential to occur. There is suitable habitat and prey species; however, there were no focused surveys within the RCA. This species is known to occur within the vicinity ¹ of the RCA (CDFW 2017).
<i>Thamnophis hammondi</i>	two-striped gartersnake	None/SSC/None	Streams, creeks, pools, streams with rocky beds, ponds, lakes, vernal pools	Not expected to occur. No suitable vegetation present. This species is known to occur within the vicinity ¹ of the NA and RCA (CDFW 2017).	Moderate potential to occur. There are suitable creeks and ponds present. This species is known to occur within the vicinity ¹ of the NA and RCA (CDFW 2017).
<i>Birds</i>					
<i>Accipiter cooperii</i> (nesting)	Cooper's hawk	None/WL/None	Nests and forages in dense stands of live oak, riparian woodlands, or other woodland habitats often near water	Observed.	Moderate potential to occur. There are suitable coast live oak and riparian woodland.
<i>Agelaius tricolor</i> (nesting colony)	tricolored blackbird	BCC/SCE, SSC/None	Nests near freshwater, emergent wetland with cattails or tules, but also in Himalayan blackberry; forages in grasslands, woodland, and agriculture	Not expected to occur. No suitable vegetation present.	
<i>Aimophila ruficeps canescens</i>	Southern California rufous- crowned sparrow	None/WL/None	Nests and forages in open coastal scrub and chaparral with low cover of scattered scrub interspersed with rocky and grassy patches	Observed.	High potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA.

APPENDIX F (Continued)

Scientific Name	Common Name	Status (Federal/State/ Other)	Habitat	Potential to Occur	
				Neighborhood Area (NA)/RCA: Etiwanda Heights Preserve	Rural/Conservation Area (RCA)
<i>Artemisospiza belli belli</i>	Bell's sage sparrow	BCC/WL/None	Nests and forages in coastal scrub and dry chaparral; typically in large, unfragmented patches dominated by chamise; nests in more dense patches but uses more open habitat in winter	Moderate potential to occur. There is suitable scrub and chaparral habitat with chamise.	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA. This species is known to occur within the vicinity ¹ of the RCA (CDFW 2017).
<i>Asio otus</i> (nesting)	long-eared owl	None/SSC/None	Nests in riparian habitat, live oak thickets, other dense stands of trees, edges of coniferous forest; forages in nearby open habitats	Not expected to nest. There is no suitable habitat.	Low to moderate potential to nest. There is suitable habitat; however, there were no focused surveys within the RCA.
<i>Athene cunicularia</i> (burrow sites & some wintering sites)	burrowing owl	BCC/SSC/None	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the NA or within the Etiwanda Heights Preserve and this species was not incidentally observed.	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA. This species is known to occur within the vicinity ¹ of the RCA (CDFW 2017).
<i>Buteo swainsoni</i> (nesting)	Swainson's hawk	BCC/ST/None	Nests in open woodland and savanna, riparian, and in isolated large trees; forages in nearby grasslands and agricultural areas such as wheat and alfalfa fields and pasture	Not expected to occur. No suitable vegetation present. This site is outside of known breeding range.	

APPENDIX F (Continued)

Scientific Name	Common Name	Status (Federal/State/ Other)	Habitat	Potential to Occur	
				Neighborhood Area (NA)/RCA: Etiwanda Heights Preserve	Rural/Conservation Area (RCA)
<i>Calypte costae</i> (nesting)	Costa's hummingbird	BCC/None/None	Nests and forages in desert wash, edges of riparian and valley-foothill riparian, coastal scrub, desert scrub, desert succulent scrub, lower-elevation chaparral, and palm oasis	Observed.	High potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA.
<i>Circus cyaneus</i> (nesting)	northern harrier	None/SSC/None	Nests in open wetlands (marshy meadows, wet lightly-grazed pastures, old fields, freshwater and brackish marshes); also in drier habitats (grassland and grain fields); forages in grassland, scrubs, rangelands, emergent wetlands, and other open habitats	Observed foraging. Not likely to nest on site.	Moderate potential to forage. Not likely to nest due to lack of open wetlands or meadows within the RCA.
<i>Cypseloides niger</i> (nesting)	black swift	BCC/SSC/None	Nests in moist crevices, caves, and cliffs behind or adjacent to waterfalls in deep canyons; forages over a wide range of habitats	Not expected to occur. No suitable vegetation present.	Low potential to occur. There is potentially suitable habitat; however, there were no focused surveys within the RCA and is not known from the vicinity
<i>Empidonax traillii extimus</i> (nesting)	southwestern willow flycatcher	FE/SE/None	Nests in dense riparian habitats along streams, reservoirs, or wetlands; uses variety of riparian and shrubland habitats during migration	Not expected to occur. No suitable vegetation present.	Moderate potential to occur. RCA site contains riparian woodlands but not containing dense willow thickets.

APPENDIX F (Continued)

Scientific Name	Common Name	Status (Federal/State/ Other)	Habitat	Potential to Occur	
				Neighborhood Area (NA)/RCA: Etiwanda Heights Preserve	Rural/Conservation Area (RCA)
<i>Falco mexicanus</i> (nesting)	prairie falcon	BCC/WL/None	Forages in grassland, savanna, rangeland, agriculture, desert scrub, alpine meadows; nest on cliffs or bluffs	Observed foraging. Not likely to nest due to lack cliffs or bluffs within the NA and the Etiwanda Heights Preserve.	Low potential to nest. There is potentially suitable habitat; however, they are not known to nest in this area. There were no focused surveys within the RCA.
<i>Lanius ludovicianus</i> (nesting)	loggerhead shrike	BCC/SSC/None	Nests and forages in open habitats with scattered shrubs, trees, or other perches	Observed.	High potential to occur. There is suitable vegetation present.
<i>Laterallus jamaicensis coturniculus</i>	California black rail	BCC/ST, FP/None	Tidal marshes, shallow freshwater margins, wet meadows, and flooded grassy vegetation; suitable habitats are often supplied by canal leakage in Sierra Nevada foothill populations	Not expected to occur. No suitable vegetation present.	
<i>Poliophtila californica californica</i>	coastal California gnatcatcher	FT/SSC/None	Nests and forages in various sage scrub communities, often dominated by California sagebrush and buckwheat; generally avoids nesting in areas with a slope of greater than 40%; majority of nesting at less than 1,000 feet above mean sea level	Moderate potential to occur. Focused surveys were negative; however, suitable habitat is present. This species is known to occur within the vicinity ¹ of the NA and the Etiwanda Heights Preserve (CDFW 2017).	Moderate potential to nest. There is suitable habitat; however, there were no focused surveys within the RCA. This species is known to occur within the vicinity ¹ of the RCA (CDFW 2017).
<i>Selasphorus rufus</i> (nesting)	rufous hummingbird	BCC/None/None	Does not nest in California; migrates through a wide variety of habitats including coastal scrub, valley–foothill hardwood, and valley–foothill riparian habitats, and residential areas with feeders	Observed.	High potential to occur. There is suitable vegetation present.

APPENDIX F (Continued)

Scientific Name	Common Name	Status (Federal/State/ Other)	Habitat	Potential to Occur	
				Neighborhood Area (NA)/RCA: Etiwanda Heights Preserve	Rural/Conservation Area (RCA)
<i>Setophaga petechia</i> (nesting)	yellow warbler	BCC/SSC/None	Nests and forages in riparian and oak woodlands, montane chaparral, open ponderosa pine, and mixed-conifer habitats	Not expected to occur. No suitable vegetation present.	Moderate potential to occur. There are riparian woodlands present.
<i>Spinus lawrencei</i> (nesting)	Lawrence's goldfinch	BCC/None/None	Nests and forages in open oak, arid woodlands, and chaparral near water	Observed. Not expected to nest due to lack of water source on site.	High potential to occur. There is suitable vegetation present
<i>Vireo bellii pusillus</i> (nesting)	least Bell's vireo	FE/SE/None	Nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams; forages in riparian and adjacent shrubland late in nesting season	Not expected to occur. No suitable vegetation present.	Moderate potential to occur. RCA site contains riparian woodlands but not containing dense willow thickets. This species is known to occur within the vicinity ¹ of the RCA (CDFW 2017).
<i>Fishes</i>					
<i>Catostomus santaanae</i>	Santa Ana sucker	FT/None/None	Small, shallow, cool, clear streams less than 7 meters (23 feet) in width and a few centimeters to more than a meter (1.5 inches to more than 3 feet) in depth; substrates are generally coarse gravel, rubble, and boulder	Not expected to occur. No suitable waters present.	
<i>Gila orcuttii</i>	arroyo chub	None/SSC/None	Warm, fluctuating streams with slow-moving or backwater sections of warm to cool streams at depths >40 centimeters (16 inches); substrates of sand or mud	Not expected to occur. No suitable waters present.	
<i>Rhinichthys osculus</i> ssp. 3	Santa Ana speckled dace	None/SSC/None	Headwaters of the Santa Ana and San Gabriel Rivers; may be extirpated from the Los Angeles River system	Not expected to occur. No suitable waters present. This species is known to occur within the vicinity ¹ of the RCA (CDFW 2017).	
<i>Siphateles</i>	Mohave tui	FE/SE, FP/None	Lacustrine ponds or pools; 4 feet minimum water	Not expected to occur. The site is outside of the	

APPENDIX F (Continued)

Scientific Name	Common Name	Status (Federal/State/ Other)	Habitat	Potential to Occur	
				Neighborhood Area (NA)/RCA: Etiwanda Heights Preserve	Rural/Conservation Area (RCA)
<i>bicolor mohavensis</i>	chub		depth; freshwater flow; mineralized and alkaline environment; habitat for aquatic invertebrate prey and egg attachment substrate; <i>Ruppia maritima</i> preferred for egg attachment and thermal refuge in summer months	species' known geographic range, and there is no suitable waters present.	
Mammals					
<i>Antrozous pallidus</i>	pallid bat	None/SSC/WBWG:H	Grasslands, shrublands, woodlands, forests; most common in open, dry habitats with rocky outcrops for roosting, but also roosts in man-made structures and trees	Moderate potential to occur. There is suitable open, shrubland habitat.	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA.
<i>Chaetodipus fallax fallax</i>	northwestern San Diego pocket mouse	None/SSC/None	Coastal scrub, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon–juniper, and annual grassland	Observed during small-mammal trapping surveys. This species is known to occur within the vicinity ¹ of the NA and the Etiwanda Heights Preserve (CDFW 2017).	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA. This species is known to occur within the vicinity ¹ of the RCA (CDFW 2017).
<i>Chaetodipus fallax pallidus</i>	pallid San Diego pocket mouse	None/SSC/None	Desert wash, desert scrub, desert succulent scrub, and pinyon–juniper woodland	Not expected to occur. No suitable vegetation present and not observed during small mammal surveys. This species is known to occur within the vicinity ¹ of the RCA (CDFW 2017).	

APPENDIX F (Continued)

Scientific Name	Common Name	Status (Federal/State/ Other)	Habitat	Potential to Occur	
				Neighborhood Area (NA)/RCA: Etiwanda Heights Preserve	Rural/Conservation Area (RCA)
<i>Dipodomys merriami parvus</i>	San Bernardino kangaroo rat	FE/SSC/None	Sparse scrub habitat, alluvial scrub/coastal scrub habitats on gravelly and sandy soils near river and stream terraces	Low potential to occur. Focused surveys negative. This species is known to occur within the vicinity ¹ of the NA and the Etiwanda Heights Preserve (CDFW 2017). In 2000, this species was recorded 1.5 miles east from the NA boundary (CDFW 2017). This site is considered low quality habitat due soils and vegetation as a result of long-term flood control upstream (Appendix A).	Low potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA. This species is known to occur within the vicinity ¹ of the RCA (CDFW 2017).
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	FE/ST/None	Annual and perennial grassland habitats, coastal scrub or sagebrush with sparse canopy cover, or in disturbed areas	Not expected to occur. The site is outside of the species' known geographic range, and there is no suitable habitat present. Focused surveys negative.	
<i>Eumops perotis californicus</i>	western mastiff bat	None/SSC/WBWG:H	Chaparral, coastal and desert scrub, coniferous and deciduous forest and woodland; roosts in crevices in rocky canyons and cliffs where the canyon or cliff is vertical or nearly vertical, trees, and tunnels	Low potential to occur. There is suitable scrub and chaparral habitat; however, the site lacks rocky canyons or cliffs. This species is known to occur within the vicinity ¹ of the NA and the Etiwanda Heights Preserve (CDFW 2017).	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA. This species is known to occur within the vicinity ¹ of the RCA (CDFW 2017).

APPENDIX F (Continued)

Scientific Name	Common Name	Status (Federal/State/ Other)	Habitat	Potential to Occur	
				Neighborhood Area (NA)/RCA: Etiwanda Heights Preserve	Rural/Conservation Area (RCA)
<i>Lasiurus cinereus</i>	hoary bat	None/None/WBWG:M	Forest, woodland riparian, and wetland habitats; also juniper scrub, riparian forest, and desert scrub in arid areas; roosts in tree foliage and sometimes cavities, such as woodpecker holes	Not expected to roost or occur. No suitable vegetation present.	
<i>Lasiurus xanthinus</i>	western yellow bat	None/SSC/WBWG:H	Valley–foothill riparian, desert riparian, desert wash, and palm oasis habitats; below 2,000 feet above mean sea level; roosts in riparian and palms	Not expected to roost or occur. No suitable vegetation present. This species is known to occur within the vicinity ¹ of the NA and RCA (CDFW 2017).	
<i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit	None/SSC/None	Arid habitats with open ground; grasslands, coastal scrub, agriculture, disturbed areas, and rangelands	Low potential to occur. There is suitable open scrub habitat. This species is known to occur within the vicinity ¹ of the NA and the Etiwanda Heights Preserve (CDFW 2017).	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA. This species is known to occur within the vicinity ¹ of the RCA (CDFW 2017).
<i>Microtus californicus stephensi</i>	south coast marsh vole	None/SSC/None	Tidal marshes	Not expected to occur. No suitable vegetation present.	
<i>Neotamias speciosus speciosus</i>	lodgepole chipmunk	None/None/None	Lodgepole pine forests	Not expected to occur. No suitable vegetation present.	

APPENDIX F (Continued)

Scientific Name	Common Name	Status (Federal/State/ Other)	Habitat	Potential to Occur	
				Neighborhood Area (NA)/RCA: Etiwanda Heights Preserve	Rural/Conservation Area (RCA)
<i>Neotoma lepida intermedia</i>	San Diego desert woodrat	None/SSC/None	Coastal scrub, desert scrub, chaparral, cacti, rocky areas	Observed during small mammal trapping surveys. There is suitable habitat present, and woodrat middens were observed during surveys. This species is known to occur within the vicinity ¹ of the NA and the Etiwanda Heights Preserve (CDFW 2017).	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA. This species is known to occur within the vicinity ¹ of the RCA (CDFW 2017).
<i>Nyctinomops femorosaccus</i>	pocketed free-tailed bat	None/SSC/WBWG:M	Pinyon-juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oases; roosts in high cliffs or rock outcrops with drop-offs, caverns, and buildings	Not expected to roost or occur. No suitable vegetation present. This species is known to occur within the vicinity ¹ of the RCA (CDFW 2017).	
<i>Nyctinomops macrotis</i>	big free-tailed bat	None/SSC/WBWG:MH	Rocky areas; roosts in caves, holes in trees, buildings, and crevices on cliffs and rocky outcrops; forages over water	Not expected to occur. No suitable roosting habitat present.	
<i>Ovis canadensis nelsoni</i>	Nelson's bighorn sheep	None/FP/None	Steep slopes and cliffs, rough and rocky topography, sparse vegetation; also canyons, washes, and alluvial fans	Not expected to occur. The site is outside of the species' known geographic range. This species is known to occur within the vicinity ¹ of the NA and RCA (CDFW 2017).	
<i>Perognathus longimembris brevinasus</i>	Los Angeles pocket mouse	None/SSC/None	Lower-elevation grassland, alluvial sage scrub, and coastal scrub	Moderate potential to occur. There is suitable sandy washes and drainages, and scrub habitat. This species is known to occur within	Moderate potential to occur. There is suitable sandy washes and drainages at the lower elevation foothills, and scrub

APPENDIX F (Continued)

Scientific Name	Common Name	Status (Federal/State/ Other)	Habitat	Potential to Occur	
				Neighborhood Area (NA)/RCA: Etiwanda Heights Preserve	Rural/Conservation Area (RCA)
				the vicinity ¹ of the NA and the Etiwanda Heights Preserve (CDFW 2017).	habitat. This species is known to occur within the vicinity ¹ of the RCA (CDFW 2017).
<i>Taxidea taxus</i>	American badger	None/SSC/None	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils	Moderate potential to occur. There is suitable open, treeless and scrub habitat.	Moderate potential to occur. There is suitable habitat; however, there were no focused surveys within the RCA.
<i>Invertebrates</i>					
<i>Bombus occidentalis</i>	western bumble bee	None/None/None	Once common and widespread, species has declined precipitously from central California to southern British Columbia, perhaps from disease	Not expected to occur. No suitable vegetation present.	
<i>Callophrys mossii hidakupa</i>	San Gabriel Mountains elfin butterfly	None/None/None	Endemic to San Gabriel and San Bernardino Mountains at elevations of 3,000 to 5,000 feet above mean sea level; southern mixed evergreen forest; foodplant is broadleaf stonecrop (<i>Sedum spathulifolium</i>)	Not expected to occur. No suitable vegetation present. The site is outside of species range.	
<i>Cicindela tranquebarica viridissima</i>	greenest tiger beetle	None/None/None	Inhabits the woodlands adjacent to the Santa Ana River basin	Not expected to occur. No suitable vegetation present.	
<i>Diplectrona californica</i>	California diplectronan caddisfly	None/None/None	Inhabits fast-flowing, cool streams	Not expected to occur. No suitable vegetation present.	
<i>Plebejus saepiolus aureolus</i>	San Gabriel Mountains blue butterfly	None/None/None	Wet meadow seep in yellow pine forest	Not expected to occur. No suitable vegetation present. The site is outside of species range.	

APPENDIX F (Continued)

Scientific Name	Common Name	Status (Federal/State/ Other)	Habitat	Potential to Occur	
				Neighborhood Area (NA)/RCA: Etiwanda Heights Preserve	Rural/Conservation Area (RCA)
<i>Rhaphiomidas terminatus abdominalis</i>	Delhi Sands flower-loving fly	FE/None/None	Delhi fine sandy soils and dunes, scrub and ruderal vegetation in the sand verbena series with less than 50% cover	Not expected to occur. No suitable vegetation and soils present. The site is outside of range of species.	

Status Legend:

Federal

BCC: U.S. Fish and Wildlife Service Bird of Conservation Concern

FE: Federally listed as endangered

FT: Federally listed as threatened

State

FP: CDFW Fully Protected Species

SE: State listed as endangered

ST: State listed as threatened

SSC: California Species of Special Concern

WL: California Watch List Species

WBWG: Western Bat Working Group

WBWG: H—High Priority

WBWG: M—Medium Priority

Note:

¹ Vicinity includes Cucamonga Peak 7.5 U.S. Geological Survey quadrangle for NA and Cucamonga Peak and Devore for RCA.

References

CDFW (California Department of Fish and Wildlife). 2017. California Natural Diversity Database (CNDDDB). RareFind, Version 5.1.1 (Commercial Subscription). Sacramento, California: CDFW, Biogeographic Data Branch.
<http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp>.