Updated Final

# TARGETED MONITORING PLAN
# RESOURCE-SPECIFIC MONITORING

## 2025 Annual Report

Prepared for
Department of Parks and Recreation
County of San Diego
5500 Overland Avenue, Suite 410
San Diego, CA 92123
Contact: Ms. Jennifer Price

February 2026



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February 2026

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ESA

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# ACRONYMS AND OTHER ABBREVIATIONS

| Acronym or Abbreviation | Definition |
|---|---|
| Blackhawk | Blackhawk Environmental, Inc. |
| Cal-IPC | California Invasive Plant Council |
| CBI | Conservation Biology Institute |
| CDFW | California Department of Fish and Wildlife (2013 and after) |
| County | County of San Diego |
| DPR | Department of Parks and Recreation |
| ESA | Environmental Science Associates |
| Field Maps | ArcGIS Field Maps mobile application |
| GPS | Global Positioning System |
| HDS | Harbison's dun skipper |
| MSCP | Multiple Species Conservation Program |
| MSP | Management and Monitoring Strategic Plan |
| NCCP | Natural Community Conservation Plan |
| ROE | Right-of-Entry |
| SANDAG | San Diego Association of Governments |
| SDMMP | San Diego Management and Monitoring Program |
| SKR | Stephens' kangaroo rat |
| SR | State Route |
| TMP | Targeted Monitoring Plan |
| USFWS | U.S. Fish and Wildlife Service |
| USGS | U.S. Geological Survey |
| Wildlife Agencies | CDFW and USFWS |

# EXECUTIVE SUMMARY

The County of San Diego (County) monitors and adaptively manages habitats and species covered by the Multiple Species Conservation Program (MSCP) to ensure MSCP biological conservation goals and conditions for species coverage are being met, as a requirement of the MSCP and the adopted South County MSCP Subarea Plan. The monitoring and adaptive management program is guided by the Targeted Monitoring Plan (TMP) (ESA and ICF 2015) and its subsequent updates (ESA and ICF 2022; ESA 2024).

The TMP and subsequent updates were prepared by the County Department of Parks and Recreation (DPR), with review and input by the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife (collectively known as the Wildlife Agencies), along with review and input from the U.S. Geological Survey (USGS) and San Diego Management and Monitoring Program resources experts. The TMP includes focused goals and objectives for target resources and detailed monitoring protocols, and it is intended to achieve the management directives for species per the adopted South County MSCP Subarea Plan Framework Management Plan (County of San Diego 2001). The TMP addresses monitoring and adaptive management within 31 parks and preserves for 23 plant and wildlife species and two habitat types, located in the South County Subarea Plan and draft North County MSCP Plan Areas.

TMP implementation in 2025 included resource-specific monitoring following the monitoring frequencies in the TMP (ESA 2024). Resource-specific monitoring was conducted in 15 parks and preserves: San Luis Rey River Park, Tijuana River Valley Regional Park, and Boulder Oaks, Del Dios Highlands, Dictionary Hill, Hellhole Canyon, Iron Mountain, Lakeside Linkage, Lusardi Creek, Mount Olympus, Ramona Grasslands, Sage Hill, Simon, Sycamore Canyon/Goodan Ranch, and Wilderness Gardens County Preserves.

Monitoring was conducted by Environmental Science Associates (ESA) for the following thirteen MSCP and nine draft North County MSCP-covered species in 2025 (**Table ES-1**).

Golden eagle (*Aquila chrysaetos*) and bald eagle (*Haliaeetus leucocephalus*) monitoring also occurred in 2025 consistent with the TMP. Results are included under separate cover in the *Raptor Foraging Surveys & Nest Monitoring 2024–2025 Summary Report* (ESA 2025a).

**Table ES-2** provides a summary of 2025 TMP monitoring results.

**TABLE ES-1**
**TMP SPECIES MONITORED IN 2025**

| TMP Species/Habitat | Covered by | |
|---|---|---|
| | MSCP | Draft North County MSCP |
| San Diego thornmint (*Acanthomintha ilicifolia*) | ✓ | ✓ |
| Encinitas baccharis (*Baccharis vanessae*) | ✓ | ✓ |
| Orcutt's brodiaea (*Brodiaea orcuttii*) | ✓ | |
| San Miguel savory (*Clinopodium chandleri*) | ✓ | |
| Orcutt's bird's-beak (*Dicranostegia orcuttiana*) | ✓ | |
| Variegated dudleya (*Dudleya variegata*) | ✓ | |
| Heart-leaved pitcher sage (*Lepechinia cardiophylla*) | ✓ | |
| Willowy monardella (*Monardella viminea*) | ✓ | |
| Harbison's dun skipper (*Euphyes vestris harbisoni*) | | |
| Burrowing owl (*Athene cunicularia*) | ✓ | |
| Coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*) | ✓ | ✓ |
| Northern harrier (*Circus hudsonius*) | ✓ | ✓ |
| Southwestern willow flycatcher (*Empidonax traillii extimus*) | ✓ | ✓ |
| Least Bell's vireo (*Vireo bellii pusillus*) | ✓ | ✓ |
| Pallid bat (*Antrozous pallidus*) | | ✓ |
| Townsend's big-eared bat (*Corynorhinus townsendii*) | | ✓ |
| Stephens' kangaroo rat (*Dipodomys stephensi*) | | ✓ |

**TABLE ES-2**
**2025 TMP MONITORING RESULTS**

| Species | County Park/Preserve | Monitoring Results |
|---|---|---|
| San Diego thornmint | Sycamore Canyon/Goodan Ranch[a] | IMG plots: 5,321 individuals<br>Total On-site Population: 9,736 individuals |
| | Simon | IMG plot: 2,144 individuals<br>Total On-site Population: 2,144 individuals |
| Encinitas baccharis[b] | Del Dios Highlands 1 | IMG plots: 69 individuals<br>Total On-site Population: 236 individuals |
| | Del Dios Highlands 2 | IMG plot: 13 individuals<br>Total On-site Population: 28 individuals |
| Orcutt's brodiaea | Boulder Oaks | IMG plot: 466 individuals<br>Total On-site Population: 1,026 individuals |
| | Escondido Creek[c] | (IMG plot: 2 individuals<br>Total On-site Population: 98 individuals) |
| | Simon[c] | (IMG plot: 34 individuals<br>Total On-site Population: 3,500 individuals) |
| | Mount Olympus[c] | (IMG plot: 21 individuals<br>Total On-site Population: 1,933 individuals) |

| Species | County Park/Preserve | Monitoring Results |
|---|---|---|
| San Miguel savory | Boulder Oaks | IMG plots: 197 individuals<br>Total On-site Population: 478 individuals |
| Otay tarplant[d] | Furby-North 1 | (IMG plot: 610 individuals<br>Total On-site Population: 783 individuals) |
| | Furby-North 2 | (IMG plot: 123 individuals<br>Total On-site Population: 300 individuals) |
| Orcutt's bird's beak[e] | Tijuana River Valley Regional Park 1 | IMG plots: 9 individuals<br>Total On-site Population: 23 individuals |
| | Tijuana River Valley Regional Park 2 | IMG plots: 98 individuals<br>Total On-site Population: 573 individuals |
| | Tijuana River Valley Regional Park 3 | IMG plot: 14 individuals<br>Total On-site Population: 14 individuals |
| Variegated dudleya | Sycamore Canyon/Goodan Ranch | IMG plots: 88 individuals<br>Total On-site Population: 156 individuals |
| | Lusardi Creek | IMG plot: 1 individual<br>Total On-site Population: 15 individuals |
| | Dictionary Hill | IMG plot: 1,590 individuals<br>Total On-site Population: 4,756 individuals |
| Heart-leaved pitcher sage | Iron Mountain | IMG plot: 10 individuals<br>Total On-site Population: 55 individuals |
| Willowy monardella[f] | Sycamore Canyon/Goodan Ranch 1 | IMG plot: 41 individuals<br>Total On-site Population: 408 individuals |
| | Sycamore Canyon/Goodan Ranch 2 | IMG plot: 0 individuals<br>Total On-site Population: 1 individual |
| | Sycamore Canyon/Goodan Ranch 3 | IMG plot: 9 individuals<br>Total On-site Population: 65 individuals |
| Harbison's dun skipper | Hellhole Canyon | Total HDS individuals: 5 adults<br>(33 larvae and 2 adults)[g] |
| | Sage Hill | Host plant mapping: 76 plants<br>Total HDS individuals: 0 adults |
| Arroyo toad[h] | Ramona Grasslands | (Total individuals: 0) |
| Tricolored blackbird[i] | Ramona Grasslands | (Total individuals: 0) |
| Burrowing owl | Ramona Grasslands | Burrowing owl sign (i.e., whitewash, pellet, potential burrows) |
| Coastal cactus wren | Lakeside Linkage | Territories: 2<br>Pairs: 2<br>Total Individuals: 5 |
| Northern harrier | San Luis Rey River Park | Territories: 0<br>Total Individuals: 0 |
| | Tijuana River Valley Regional Park | Territories: 1<br>Pairs: 3<br>Total Individuals: 6–9 |
| Southwestern willow flycatcher[j] | San Luis Rey River Park | Total WIFL individuals: 4–5 |

| Species | County Park/Preserve | Monitoring Results |
|---|---|---|
| Least Bell's vireo | San Luis Rey River Park | Total Individuals: up to 68 adults |
| Pallid bat | Hellhole Canyon | Roosting habitat assessment: suitable roosting habitat present (i.e., rocky outcrops, boulders, under bark or in tree cavities). |
| | Mount Olympus | Roosting habitat assessment: suitable roosting habitat present (i.e., rocky outcrops, boulders, under bark or in tree cavities, abandoned human-made structures). |
| | Wilderness Gardens | Roosting habitat assessment: suitable roosting habitat present (i.e., historic and unused buildings, rocky outcrops, under bark or in tree cavities). |
| Townsend's big-eared bat | Hellhole Canyon | Roosting habitat assessment: suitable roosting habitat present (i.e., boulder, rocky outcrops, tree hollows and cavities). |
| | Wilderness Gardens | Roosting habitat assessment: suitable roosting habitat present (i.e., historic and unused buildings, rocky outcrops, under bark or in tree cavities). |
| Stephens' kangaroo rat | Hellhole Canyon | Habitat assessment: 0 of 3 sample plots with high potential<br>3 considered occupied based on sign |
| | Ramona Grasslands | Habitat assessment: 11 of 28 sample plots with high potential<br>13 sample plots considered occupied based on sign |

Notes:

a. At the recommendation of the San Diego Management and Monitoring Program, San Diego thornmint monitoring efforts at Sycamore Canyon/Goodan Ranch County Preserve were reduced to five of the permanent monitoring plots (SYGOACIL01, SYGOACIL05, SYGOACIL06, SYGOACIL08, SYGOACIL10) starting in 2024.
b. Del Dios Highlands 1 = MSP Occurrence IDs BAVA3_6DDHP004_1, BAVA3_6DDHP004_2, and BAVA3_6DDHP004_3. Del Dios Highlands 2 = MSP Occurrence ID BAVA3_6DDHP028_0.
c. Orcutt's brodiaea results for Escondido Creek, Simon, and Mount Olympus County Preserves from Mulligan Biological Consulting are provided in parentheses.
d. Furby-North 1 = MSP Occurrence ID DECO13_3OMEA026_1. Furby-North 2 = MSP Occurrence ID DECO13_3OMEA040_1. Otay tarplant IMG monitoring results from Mulligan Biological Consulting are provided in parentheses.
e. Tijuana River Valley Regional Park 1 = MSP Occurrence IDs COOR7_1TIRI009_1 and COOR7_1TIRI009_2. Tijuana River Valley Regional Park 2 = MSP Occurrence IDs COOR7_1SMGU006_1 and COOR7_1SMGU006_2. Tijuana River Valley Regional Park 3 = MSP Occurrence ID COOR7_1ESGU010_1.
f. Sycamore Canyon/Goodan Ranch 1 = MSP Occurrence ID MOLIV_4SYCA006_1. Sycamore Canyon/Goodan Ranch 2 = MSP Occurrence ID MOLIV_4SYCA002_1. Sycamore Canyon/Goodan Ranch 3 = MSP Occurrence ID MOLIV_4SPCA006_1.
g. Harbison's dun skipper monitoring results from Dr. Daniel Marschalek are provided in parentheses.
h. Arroyo toad monitoring results from the U.S. Geological Survey are provided in parentheses.
i. Tricolored blackbird monitoring results from the San Diego Natural History Museum are provided in parentheses.
j. WIFL = willow flycatcher

# CHAPTER 1
# Introduction

## 1.1 Purpose of the Project

As a participant in the Multiple Species Conservation Program (MSCP) and the adopted South County MSCP Subarea Plan, the County of San Diego (County) is obligated to conduct biological monitoring of habitats and species covered by the MSCP to ensure that the MSCP biological conservation goals and conditions for species coverage are being met. The County Department of Parks and Recreation (DPR) prepared a Targeted Monitoring Plan (TMP) (ESA and ICF 2015) to provide detailed specifications for implementation of monitoring and adaptive management within 10 County-owned and managed conserved lands (parks and preserves) (Preserve Group 1) overseen by DPR. The TMP was revised in December 2022 (ESA and ICF 2022) to incorporate 10 additional parks and preserves (Preserve Group 2) and again in August 2024 (ESA 2024) to incorporate 11 additional parks and preserves (Preserve Group 3). These 31 parks and preserves fall within the South County MSCP Subarea Plan Area and the draft North County MSCP Plan Area. The draft North County MSCP Plan Area preserves are included at this time due to the number of sensitive on-site resources that require their conservation and management. In total, the TMP addresses monitoring and adaptive management within 31 parks and preserves for 23 plant and wildlife species and two habitat types.

The TMP is an adaptive implementation plan that includes focused goals and objectives for target resources and detailed monitoring protocols. It is intended to achieve the management directives for species per the adopted South County MSCP Subarea Plan Framework Management Plan (County of San Diego 2001). The regional framework that guides monitoring at the preserve level has been refined over time and is still evolving through a collaborative effort among U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW) (collectively known as the Wildlife Agencies), MSCP jurisdictions, and outside scientific experts. It is understood by all stakeholders (e.g., state and federal resource agencies, municipal and county agencies, land managers) that adaptive management is an iterative process in which lessons are learned and used to further refine priorities, goals, objectives, and monitoring methods.

The TMP addresses monitoring and management within the following 31 parks and preserves: El Monte County Park, Louis A. Stelzer County Park, San Luis Rey River Park, Tijuana River Valley Regional Park, and Barnett Ranch, Bottle Peak, Boulder Oaks, Del Dios Highlands, Dictionary Hill, El Capitan, Escondido Creek, Furby-North, Hellhole Canyon, Iron Mountain, Keys Creek, Lakeside Linkage, Lawrence and Barbara Daley, Los Peñasquitos Canyon, Lusardi Creek, Mountain Meadow, Mount Olympus, Oakoasis, Peutz Valley, Ramona Grasslands, Sage Hill, Santa Margarita, Simon, Skyline, Stoneridge, Sycamore Canyon/Goodan Ranch, and Wilderness Gardens County Preserves.

Following the TMP resource-specific monitoring frequencies, resource-specific monitoring was conducted in 15 parks and preserves identified in the 2024 TMP: San Luis Rey River Park and Tijuana River Valley Regional Park, and Boulder Oaks, Del Dios Highlands, Dictionary Hill, Hellhole Canyon, Iron Mountain, Lakeside Linkage, Lusardi Creek, Mount Olympus, Ramona Grasslands, Sage Hill, Simon, Sycamore Canyon/Goodan Ranch, and Wilderness Gardens County Preserves (ESA 2024).

**Table ES-1** presents the monitoring conducted by Environmental Science Associates (ESA) for 17 MSCP- or draft North County MSCP-covered species in 2025.

The goal of resource-specific monitoring is to collect high-quality data to inform trends in occurrences and populations, evaluate the current habitat conditions, assess threats, and provide adaptive management recommendations to ensure that the conservation goals of the MSCP and draft North County MSCP are being met. The goal of focused adaptive management is to enhance suitable habitat and support the persistence of MSCP- and draft North County MSCP-covered species and habitats.

## 1.2 Multiple Species Conservation Program Context

The MSCP is a comprehensive habitat conservation planning document and one of several subregional habitat conservation programs in San Diego County that contribute to the preservation of regional biodiversity. Agencies participating in the MSCP include the County, other local jurisdictions within San Diego County (e.g., City of San Diego, City of Chula Vista), and the Wildlife Agencies. The County and other local jurisdictions implement the MSCP through subarea plans, which describe specific implementing mechanisms for the MSCP. The MSCP Plan and subarea plans serve as a multiple-species Habitat Conservation Plan pursuant to Section 10(a)(1)(B) of the federal Endangered Species Act and as a Natural Community Conservation Plan (NCCP) pursuant to the California NCCP Act of 1991 (amended in 2001) and the state Endangered Species Act.

The South County MSCP Subarea Plan was adopted in October 1997 and covers 23 vegetation communities and 85 species (County of San Diego 1997). The County is preparing the draft North County MSCP for the northwestern unincorporated areas of the county and the draft East County MSCP for the eastern unincorporated areas of the county.

Species-specific management and monitoring requirements for the MSCP are summarized in Table 3-5 of the MSCP Plan (City of San Diego 1998). In addition, the assurances and obligations to implement the South County MSCP Subarea Plan have been established in the Implementing Agreement (County of San Diego 1998) signed by the County and the Wildlife Agencies.

# CHAPTER 2
# Study Area Description

## 2.1 Overview

During the 2025 reporting period, Environmental Science Associates (ESA) performed resource-specific monitoring in the following 15 parks and preserves identified in the TMP: San Luis Rey River Park and Tijuana River Valley Regional Park, and Boulder Oaks, Del Dios Highlands, Dictionary Hill, Hellhole Canyon, Iron Mountain, Lakeside Linkage, Lusardi Creek, Mount Olympus, Ramona Grasslands, Sage Hill, Simon, Sycamore Canyon/Goodan Ranch, and Wilderness Gardens County Preserves (**Figure 1**).

Boulder Oaks, Dictionary Hill, Iron Mountain, Lusardi Creek, and Sycamore Canyon/Goodan Ranch County Preserves are located entirely within the South County MSCP Subarea Plan Area and are monitored and managed in accordance with the Implementing Agreement (County of San Diego 1998). Portions of Ramona Grasslands County Preserve are located within the South County MSCP Subarea Plan Area and draft North County MSCP Plan Area. San Luis Rey River Park and Hellhole Canyon, Sage Hill, Simon, Mount Olympus, and Wilderness Gardens County Preserves are located completely within the draft North County MSCP Plan Area. These preserve areas will be monitored and managed in accordance with the draft North County MSCP Plan upon adoption. They are included in the TMP at this time due to the number of sensitive on-site resources that require conservation and management. Tijuana River Valley Regional Park is located within the City of San Diego MSCP Subarea Plan Area and is monitored and managed in accordance with the County's Implementing Agreement (County of San Diego 1998).

## 2.2 Project Location

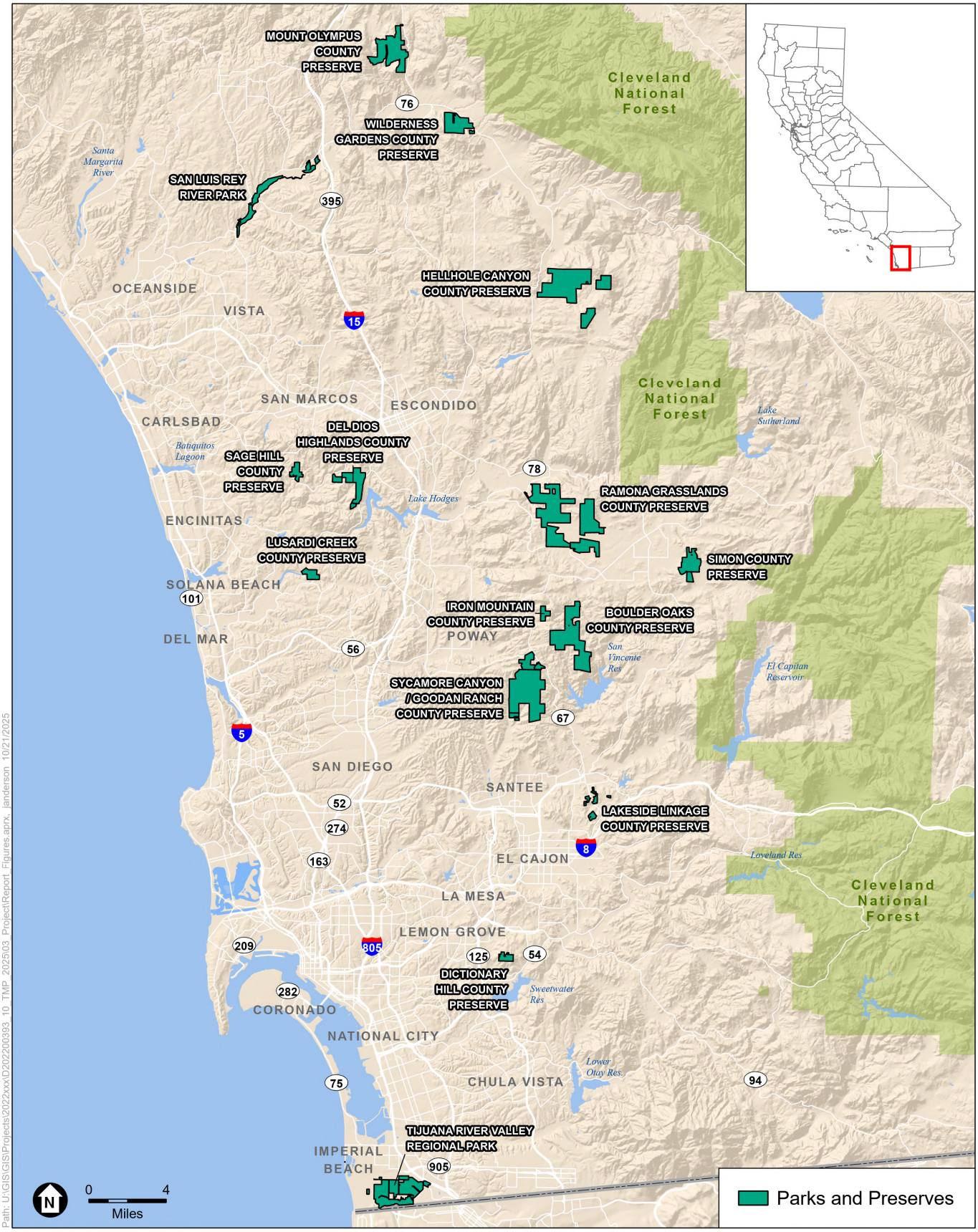
Descriptions of the 15 park and preserve locations monitored in 2025 are provided below.

### 2.2.1 Boulder Oaks County Preserve

Boulder Oaks County Preserve is located south of the unincorporated township of Ramona, between State Route (SR) 67 and Mussey Grade Road, in central San Diego County. It is located just north of the San Vicente Reservoir, extending east from Iron Mountain and north of Fosters Canyon, and is bisected by Foster Truck Trail.

### 2.2.2 Del Dios Highlands County Preserve

Del Dios Highlands County Preserve is located southwest of the city of Escondido, west of Del Dios Highway, and northwest of Lake Hodges, within an unincorporated area of San Diego County. It is located at 9860 Del Dios Highway, Escondido, adjacent to Lake Hodges.

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SOURCE: ESRI; SanGIS, 2025.

COSD DPR 569744 TO 10 – Implementation of Targeted Monitoring Plan – 2025 Resource-Specific Monitoring

*Targeted Monitoring Plan Resource-Specific Monitoring 2025 Annual Report*

**Figure 1**

Project Location

ESA

### 2.2.3 Dictionary Hill County Preserve

Dictionary Hill County Preserve is located in the unincorporated community of Spring Valley, east of SR 125 and south of SR 94. It is located along the slopes of a mountain named Dictionary Hill and is generally surrounded by residential development.

### 2.2.4 Hellhole Canyon County Preserve

Hellhole Canyon County Preserve is located northeast of Escondido within Valley Center, an unincorporated community of San Diego County, and consists of a contiguous preserve, as well as five non-contiguous additions. It is in northeastern San Diego County in the Peninsular Geomorphic Range and consists of two main mountains, Rodriguez Mountain and an unnamed mountain, as well as Hell Creek.

### 2.2.5 Iron Mountain County Preserve

Iron Mountain County Preserve is located in the city of Poway, east of SR 67 and north of San Vicente Reservoir. It is directly north of Iron Mountain.

### 2.2.6 Lakeside Linkage County Preserve

Lakeside Linkage County Preserve is composed of four non-contiguous properties: (1) western property, located west of Los Coches Road between Calle Lucia Terrace on the south and a private drive south of Rock Crest Lane on the north; (2) central property, located east of Los Coches Road between Ha Hana Road on the south and extending slightly north of Casa Vista Road on the north; (3) eastern property, located approximately one block northwest of the junction of Lakeview and East Lakeview Roads; and (4) southwest property, located directly south of the western property. The Preserve is located along both sides of Los Coches Road between SR 67 and Interstate 8 within Lakeside, Lakeview, and Winter Gardens, which are unincorporated communities of San Diego County.

### 2.2.7 Lusardi Creek County Preserve

Lusardi Creek County Preserve is located along the northern boundary of the city of San Diego, slightly southeast of Rancho Santa Fe, an unincorporated community of San Diego County. It is in western San Diego County in the Lusardi Creek Valley, just north of San Dieguito Road, west of Del Sur and South of Artesian Road, within the San Dieguito River Watershed.

### 2.2.8 Mount Olympus County Preserve

Mount Olympus County Preserve comprises two non-contiguous parcels. It is located south of Temecula, just east of Rainbow, an unincorporated community of San Diego County. It is located north of SR 76, south of SR 79, east of Interstate 15, and west of the Cleveland National Forest.

### 2.2.9 Ramona Grasslands County Preserve

Ramona Grasslands County Preserve is west of Ramona, an unincorporated community of San Diego County. It is in west-central San Diego County in the western portion of Santa Maria Valley within the San Dieguito Watershed.

### 2.2.10 Sage Hill County Preserve

Sage Hill County Preserve is located in the coastal foothills of western San Diego County. It is located north of Elfin Forest Road and east of Carib Drive.

### 2.2.11 San Luis Rey River Park

San Luis Rey River Park is located in the unincorporated community of Bonsall, east of Interstate 15 and alongside SR 76. It extends approximately 19 miles along the San Luis Rey River.

### 2.2.12 Simon County Preserve

Simon County Preserve is located within Ramona, an unincorporated community of San Diego County, east of SR 67, and within the San Dieguito and San Diego River Watersheds. The preserve is bound by access points from Woods Hill Lane to the north, Arena Way to the east, and Bassett Way to the south.

### 2.2.13 Sycamore Canyon/Goodan Ranch County Preserve

Sycamore Canyon/Goodan Ranch County Preserve is located just east of Marine Corps Air Station Miramar and approximately 2 miles north of Santee within an unincorporated area of San Diego County. It is in the coastal foothills of the Peninsular Ranges in south-central San Diego County within the Peñasquitos and San Diego Watersheds.

### 2.2.14 Tijuana River Valley Regional Park

Tijuana River Valley Regional Park is located in the southern portion of the city of San Diego MSCP Subarea Plan, within the southwestern portion of San Diego County. It is bounded by Sunset Avenue to the north, the U.S.–Mexico Border to the south, Border Field State Park and the Tijuana River National Estuarine Research Preserve to the west, and Dairy Mart Road and the San Ysidro community to the east.

### 2.2.15 Wilderness Gardens County Preserve

Wilderness Gardens County Preserve comprises six contiguous parcels and one separate parcel. It is located at 14209 Highway 76, Pala, an unincorporated community of San Diego County. It is immediately south of SR 76/Pala Road, between Pauma Ridge Road and Pala Mission Road, within northwestern San Diego County in the San Luis Rey River Valley adjacent to Pala Mountain.

# CHAPTER 3
# Methods

## 3.1 Overview

Specific monitoring methods are described below. Areas monitored are depicted in figures provided in Chapter 4, *Results and Discussion*. All data was collected using Esri's ArcGIS Field Maps mobile application (Field Maps); data sheets for all surveys can be found in referenced resource-specific appendices. The final report and collected data will be submitted to the San Diego Management and Monitoring Program (SDMMP), consistent with the reporting requirements in the TMP (ESA 2024).

For the purposes of this report, non-native plant species are species that were introduced to California after European contact and as a direct or indirect result of human activity, as defined by the California Invasive Plant Council (Cal-IPC). Invasive non-native plant species are species rated by Cal-IPC in the Invasive Plant Inventory Database (Cal-IPC 2025) because they are not native, and once introduced can establish, quickly reproduce and spread, and cause harm to native vegetation communities, the environment, economy, and/or human health. Once invasive non-native plant species spread into wildland ecosystems, they can hybridize with native plant species, displace native plant and wildlife species, alter biological communities, and/or alter ecosystem processes (Cal-IPC n.d.).

## 3.2 Rare Plant Monitoring

ESA biologists conducted resource-specific monitoring in 2025 for 8 of the 10 TMP rare plant species. Rare plant monitoring followed the most current Management and Monitoring Strategic Plan (MSP) Rare Plant Monitoring Protocol prepared by SDMMP (SDMMP 2025). Additional data was collected for Encinitas baccharis (*Baccharis vanessae*) at Del Dios Highlands County Preserve and willowy monardella (*Monardella viminea*) at Sycamore Canyon/Goodan Ranch County Preserve, as required by the TMP. Incidental observations of MSCP-covered species or other special-status species observed outside monitoring plots were recorded. Monitoring details, including species, dates, number of monitoring plots, preserve name, and field personnel, are listed in **Table 1**.

**TABLE 1**
**MSP RARE PLANT MONITORING SURVEY SUMMARY**

| Species | Plot Establishment Date | 2025 Monitoring Date | # of Permanent Monitoring Plots | County Preserve | Names of Biologists |
|---|---|---|---|---|---|
| San Diego thornmint | April 22, May 4–5, 2016; and May 4, 2017 | May 14–15, May 19 | 5 | Sycamore Canyon/ Goodan Ranch | Dillon Travis, Amy Orduño-Baez, Mary Cozy |
| San Diego thornmint | April 26, 2016 | May 12 | 1 | Simon | Brenda McMillan, Karla Alcaraz |
| Encinitas baccharis | July 24 and 30, 2015 and August 28, 2025 | July 15*, August 7*, and August 27–28 | 4 | Del Dios Highlands | Dillon Travis, Brenda McMillan, Valeria Parra-Santoro, Amy Orduño-Baez |
| Orcutt's brodiaea | May 10, 2018 | May 16* and May 29 | 1 | Boulder Oaks | Brenda McMillan, Dillon Travis, Karla Alcaraz |
| San Miguel savory | April 6 and 16, 2016 | May 16 | 2 | Boulder Oaks | Brenda McMillan, Karla Alcaraz |
| Orcutt's bird's-beak | June 29, 2016; June 5, 2017, June 11, 2021, and June 10, 2025 | May 27*, June 5, and June 10 | 5 | Tijuana River Valley Regional Park | Dillon Travis, Brenda McMillan, Karla Alcaraz |
| Variegated dudleya | June 23, 2017, and April 14, 2021 | May 8* and May 20 | 2 | Sycamore Canyon/ Goodan Ranch | Dillon Travis, Stefanie Lehner, Mary Cozy |
| Variegated dudleya | April 27, 2016 | May 8* and May 21 | 1 | Lusardi Creek | Dillon Travis, Stefanie Lehner, Mary Cozy |
| Variegated dudleya | May 13, 2025 | May 8* and May 13 | 1 | Dictionary Hill | Dillon Travis, Stefanie Lehner |
| Heart-leaved pitcher sage | June 4, 2025 | May 6* and June 4 | 1 | Iron Mountain | Brenda McMillan, Dillon Travis, Mary Cozy |
| Willowy monardella | July 7, 2015; June 22, 2016; June 9, 2021 | June 18 and July 19 | 3 | Sycamore Canyon/ Goodan Ranch | Dillon Travis, Adrienne Lee, Amy Orduño-Baez |

Notes:

* These monitoring dates are associated with bloom checks to determine peak bloom timing to conduct monitoring.

Established permanent monitoring plots were monitored for each species. The history of monitoring plot establishment is as follows:

- **San Diego thornmint**. One permanent monitoring plot was established for San Diego thornmint (*Acanthomintha ilicifolia*) within Simon County Preserve by the Conservation Biology Institute (CBI) in 2016. Ten permanent monitoring plots were established for San Diego thornmint within Sycamore Canyon/Goodan Ranch County Preserve by ICF in 2016, and an eleventh permanent monitoring plot was added by ICF in 2017. In February 2024, SDMMP recommended reducing the monitoring effort for San Diego thornmint at the Sycamore Canyon/Goodan Ranch County Preserve from 11 to 5 permanent monitoring plots. These monitoring plots are SYGOACIL01, SYGOACIL05, SYGOACIL06, SYGOACIL08, and SYGOACIL10.

- **Encinitas baccharis.** Three permanent monitoring plots were established for Encinitas baccharis within Del Dios Highlands County Preserve by ICF in 2015, and one new permanent monitoring plot was established by ESA in 2025.
- **Orcutt's brodiaea.** One permanent monitoring plot was established for Orcutt's brodiaea (*Brodiaea orcuttii*) within Boulder Oaks County Preserve by AECOM in 2018.
- **San Miguel savory**. Two permanent monitoring plots were established for San Miguel savory (*Clinopodium chandleri*) within Boulder Oaks County Preserve by ICF in 2016.
- **Orcutt's bird's-beak**. One permanent monitoring plot was established for Orcutt's bird's-beak (*Dicranostegia orcuttiana*) within Tijuana River Valley Regional Park by CBI in 2016, a second permanent monitoring plot was added by CBI in 2017, a third monitoring plot was added by CBI in 2021, and two additional permanent monitoring plots were added by ESA in 2025.
- **Variegated dudleya**. One permanent monitoring plot was established for variegated dudleya (*Dudleya variegata*) within Sycamore Canyon/Goodan Ranch County Preserve by ICF in 2017, and a second permanent monitoring plot was established by ESA in 2021. One permanent monitoring plot was established for variegated dudleya within Lusardi Creek County Preserve by ICF in 2016. One permanent monitoring plot was established for variegated dudleya within Dictionary Hill County Preserve by ESA in 2025.
- **Heart-leaved pitcher sage**. One permanent monitoring plot was established for heart-leaved pitcher sage (*Lepechinia cardiophylla*) within Iron Mountain County Preserve by ESA in 2025.
- **Willowy monardella**. One permanent monitoring plot was established for willowy monardella within Sycamore Canyon/Goodan Ranch County Preserve by ICF in 2015, a second permanent monitoring plot was established by CBI in 2016, and a third permanent monitoring plot was established by ESA in 2021.

Monitoring of special-status plant occurrence status within the permanent monitoring plots followed the MSP 2025 Rare Plant Monitoring Protocol (SDMMP 2025), which included the following steps:

- Map the perimeter of the current extent of the occurrence with submeter-accuracy Global Positioning System (GPS) and Field Maps and estimating or counting and recording the number of plants within the current mapped extent. (If the previously mapped current extent was still an accurate representation of the 2025 extent of the occurrence, no remapping occurred.)
- Conduct photo monitoring by taking a picture from the previously established permanent photo point facing toward the center point of the plot. (The photo followed the angle and direction of the previous year's photograph, when applicable.)
- Conduct a habitat assessment within the permanent monitoring plot using the MSP – 2025 Rare Plant Occurrence Monitoring Form to identify and record number of target plants per plot; phenological stages of plants; evidence of herbivory, disease, and stunted growth; and associated species.
- Conduct a threats assessment within the current maximum extent of the occurrence and adjacent 10-meter buffer.
- Provide management recommendations for the site using the MSP – 2025 Rare Plant Occurrence Monitoring Form.

Additional data specified in the TMP was collected for two rare plant species, Encinitas baccharis and willowy monardella.

- **Encinitas baccharis**. The sex and age of each shrub within each plot was identified and recorded to determine the male-to-female ratio within each plot.
  - Seedling: 4 inches tall or less
  - Adult: more than 4 inches tall
- **Willowy monardella**. The height, width, and length in meters of each willowy monardella cluster within the monitoring plot was recorded. A cluster is defined as plants within 0.5 meters of each other (Rebman and Dossey 2006). The plants were then classified as seedling, juvenile, mature, or adult based on the following categories:
  - Seedling: lacks multiple stems and is less than 4 inches tall
  - Juvenile: lacks multiple stems and is more than 4 inches tall
  - Mature: more than 4 inches tall and has less than 20 stems
  - Adult: more than 4 inches tall and has more than 20 stems

Reconnaissance surveys were conducted to identify new occurrences and establish new permanent monitoring plots and associated permanent photo points as follows:

- Encinitas baccharis at Del Dios Highlands County Preserve
- Orcutt's bird's-beak at Tijuana River Valley Regional Park
- Variegated dudleya at Dictionary Hill County Preserve
- Heart-leaved pitcher sage at Iron Mountain County Preserve

## 3.3 Harbison's Dun Skipper

### 3.3.1 Harbison's Dun Skipper Host Plant Mapping

A literature search and field survey were conducted to identify Harbison's dun skipper (*Euphyes vestris harbisoni*) (HDS) host plant locations. San Diego Natural History Museum's Plant Atlas, Calflora, SDMMP's Master Occurrence Matrix (MOM) database, and baseline biological reports pertaining to Sage Hill County Preserve were reviewed to determine previously documented San Diego sedge (*Carex spissa*) locations within Sage Hill County Preserve. Vegetation maps and aerial imagery were reviewed to assess potentially suitable riparian woodland habitat, particularly southern riparian forest and southern coast live oak riparian forest, which should be targeted for host plant mapping. ESA and Blackhawk Environmental, Inc. (Blackhawk) biologists mapped locations of San Diego sedge plants, estimated plant counts within suitable habitat, and opportunistically checked patches of host plant for larvae present in the south-flowing tributary of the Escondido Creek system that bisects Sage Hill County Preserve on May 23, 2025, prior to conducting adult surveys (**Table 2**).

**TABLE 2**
**HARBISON'S DUN SKIPPER SURVEY SUMMARY**

| County Preserve | Survey Type | 2025 Survey Date | Survey Times | Start Weather Conditions | End Weather Conditions | Names of Biologists |
|---|---|---|---|---|---|---|
| Hellhole Canyon | Adult Flight Surveys | May 22 | 1010–1315 | Temp: 72.5°F<br>10% Cloud Cover<br>Wind Speed: 0.2 mph | Temp: 78.6°F<br>0% Cloud Cover<br>Wind Speed: 0.5 mph | Kris Alberts*, Dillon Travis |
| | | June 19 | 0815–1245 | Temp: 68°F<br>0% Cloud Cover<br>Wind Speed: 0.8 mph | Temp: 84°F<br>0% Cloud Cover<br>Wind Speed: 0.3 mph | Kris Alberts*, Dillon Travis |
| Sage Hill | Host Plant Mapping | May 23 | 0900–1200 | Temp: 68°F<br>20% Cloud Cover<br>Wind Speed: 0.8 mph | Temp: 72°F<br>0% Cloud Cover<br>Wind Speed: 0.5 mph | Tawni Gotbaum*, Mary Cozy |
| | Adult Flight Surveys | May 28 | 0945–1215 | Temp: 71°F<br>80% Cloud Cover<br>Wind Speed: 0.2 mph | Temp: 77.3°F<br>10% Cloud Cover<br>Wind Speed: 0.1 mph | Seth Reimers*, Dillon Travis |
| | | June 20 | 0950–1215 | Temp: 70°F<br>0% Cloud Cover<br>Wind Speed: 1.5 mph | Temp: 78°F<br>0% Cloud Cover<br>Wind Speed: 2 mph | Kris Alberts*, Karla Alcaraz |

Note:
* Blackhawk Environmental, Inc. staff.

### 3.3.2 Harbison's Dun Skipper Adult Flight Surveys

ESA and Blackhawk biologists conducted two adult surveys for HDS at Hellhole Canyon County Preserve and Sage Hill County Preserve during the 2025 flight season (between May 15 through June 30) (**Table 2**). Surveys in Hellhole Canyon County Preserve were conducted at the two locations previously surveyed in 2021–2024. Two new survey locations were established at Sage Hill County Preserve in May 2025. Surveys focused on immediate areas surrounding host plant San Diego sedge (*Carex spissa*) patches and worked outward to nearby potential nectar sources. Surveys were conducted in appropriate weather (sunny or partly sunny, 20˚C–35˚C, and modest wind speeds of less than 15 mph) (Marschalek and Deutschman 2015). Potential nectar sources and all butterfly species observed during surveys were recorded. A habitat and threats assessment was conducted concurrently with the first adult flight survey, following the *Rare Butterfly Management and Conservation Planning* report (Marschalek and Deutschman 2016) to assess tree species, composition of tree canopy, percent of canopy that is thinning, percent of dead trees, and percent of trees with fire damage; general health conditions of San Diego sedge (i.e., leaves were green, green with brown tips, or mostly brown); presence of flowing and standing water; and threats to habitat such as drought, climate change, human intrusion, pesticide use, altered hydrology, altered fire regime, invasive non-native plant species, competition from native cattail (*Typha* spp.), and tree pests such as gold-spotted oak borer (*Agrilus auroguttatus*) and shothole borer (*Euwallacea* sp.).

## 3.4 Burrowing Owl

ESA and Blackhawk biologists conducted presence/absence monitoring for breeding burrowing owls within the nine previously determined monitoring polygons within Ramona Grasslands County Preserve.

A habitat and threats assessment was conducted concurrently with the last survey. Since neither SDMMP nor other regional entities have developed a species-specific threats assessment for the burrowing owl, the threats assessment form from Section VI of the 2025 Rare Plant Occurrence Monitoring Form and the 2025 Management Needs and Notes Form was completed (SDMMP 2025). The threats assessment survey included an evaluation of the vegetation as it pertains to the needs of the burrowing owl (e.g., native or non-native vegetation, vegetation height). Survey dates, weather conditions, and field personnel names are provided in **Table 3**. Three presence/absence surveys of all nine monitoring polygons were conducted approximately 3 weeks or more apart during the burrowing owl breeding season (February 1–August 31) and during the recommended timeframe outlined in the CDFW *Staff Report on Burrowing Owl Mitigation* (CDFG 2012). In past years, four surveys were conducted, with the first survey taking place in the early spring; however, due to the timing of contract execution, only three surveys were completed in 2025. The surveys were conducted between April 15 and July 15, the peak breeding period for burrowing owl in California. The final survey was conducted after June 15, as recommended, to confirm nesting success; this is also when owls will most likely remain above ground and are more detectable (**Table 3**).

**TABLE 3**
**BURROWING OWL SURVEY SUMMARY**

| 2025 Survey Date | Survey Number | Survey Times | Start Weather Conditions | End Weather Conditions | Names of Biologists |
|---|---|---|---|---|---|
| May 14 | 1a | 0546–1145 | Temp: 49°F, 10% cloud cover; Visibility: Good; Precipitation: None; Avg. Wind Speed: 1 mph; Wind Direction: W | Temp: 70°F, 20% cloud cover; Visibility: Good; Precipitation: None; Avg. Wind Speed: 5 mph; Wind Direction: W | Brennan Mulrooney, Natasha Kabala, Seth Reimers* |
| May 15 | 1b | 0529–1206 | Temp: 48°F, 100% cloud cover; Visibility: Good; Precipitation: None; Avg. Wind Speed: 5.5 mph; Wind Direction: NE | Temp: 67°F, 0% cloud cover; Visibility: Good; Precipitation: None; Avg. Wind Speed: 7 mph; Wind Direction: NW | Brennan Mulrooney, Karla Alcaraz, Zach Fenske* |
| June 11 | 2a | 0541–1048 | Temp: 58°F, 100% cloud cover; Visibility: Fair; Precipitation: Fog; Avg. Wind Speed: 1 mph; Wind Direction: SW | Temp: 74°F, 0% cloud cover; Visibility: Good; Precipitation: None; Avg. Wind Speed: 3 mph; Wind Direction: W | Brennan Mulrooney, Amy Orduño-Baez, Zach Fenske* |
| June 12 | 2b | 0512–1018 | Temp: 58°F, 100% cloud cover; Visibility: Fair; Precipitation: None; Avg. Wind Speed: 4.5 mph; Wind Direction: NW | Temp: 73°F, 2% cloud cover; Visibility: Good; Precipitation: None; Avg. Wind Speed: 5 mph; Wind Direction: W | Brennan Mulrooney, Karla Alcaraz, Tawni Gotbaum* |
| July 8 | 3a | 0539–1047 | Temp: 58°F, 20% cloud cover; Visibility: Good; Precipitation: None; Avg. Wind Speed: 4.5 mph; Wind Direction: NW | Temp: 81°F, 0% cloud cover; Visibility: Good; Precipitation: None; Avg. Wind Speed: 8 mph; Wind Direction: NW | Karla Alcaraz, Amy Orduño-Baez, Andrew South* |
| July 9 | 3b | 0530–1128 | Temp: 65°F, 30% cloud cover; Visibility: Good; Precipitation: None; Avg. Wind Speed: 1.5 mph; Wind Direction: NE | Temp: 80°F, 0% cloud cover; Visibility: Good; Precipitation: None; Avg. Wind Speed: 8.5 mph; Wind Direction: W | Karla Alcaraz, Amy Orduño-Baez, Andrew South* |

Note:
* Blackhawk Environmental, Inc. staff.

Surveys were conducted during the morning hours and under favorable weather conditions for burrowing owl surveys (e.g., no heavy fog, high winds, or precipitation). ESA and Blackhawk biologists scanned the monitoring polygons with binoculars before walking transects (no more than 100 feet apart) through the monitoring polygon to provide 100 percent coverage. Potential burrows or rock crevices were inspected for burrowing owl sign (e.g., tracks, whitewash, pellets). Incidental observations of MSCP-covered species or other special-status species were recorded on Field Maps and the Fulcrum mobile applications.

## 3.5 Coastal Cactus Wren

ESA biologists conducted avian point count surveys at the six previously established avian point count stations (ESA 2022) with a focus on coastal cactus wren on Lakeside Linkage County Preserve to monitor the status of coastal cactus wren within the preserve. In past years, four surveys were conducted, with the first survey taking place in early spring, but due to the timing of contract execution, only three avian point count surveys were completed in 2025 at the six point count stations. Survey dates, times, weather conditions, and field personnel are provided in **Table 4**. Avian point count surveys followed the methodology detailed in Ralph et al. 1995. Each point count was 10 minutes in duration. During each point count period, surveyors recorded every species seen or heard, as well as the total number of individuals of each species. In addition to the number of each species detected, the distance of each individual detection from the survey point was recorded. Birds detected only flying through the preserve, but not landing, were recorded separately as "flyovers." Any breeding activity observed was also noted. Avian point count data was recorded on paper data sheets and summarized in a final table. Incidental observations of MSCP-covered species or other special-status species were recorded on Field Maps and the Fulcrum mobile applications.

**TABLE 4**
**COASTAL CACTUS WREN SURVEY SUMMARY**

| 2025 Survey Date | Survey Number | Survey Times | Start Weather Conditions | End Weather Conditions | Names of Biologists |
|---|---|---|---|---|---|
| May 6 | 1 | 0622–1100 | Temp: 58 °F, 100% Cloud Cover; Visibility: Good; Precipitation: None; Avg. Wind Speed: 0.5 mph; Wind Direction: SW | Temp: 68 °F, 100% Cloud Cover; Visibility: Good; Precipitation: None; Avg. Wind Speed: 0.5 mph; Wind Direction: SW | Brennan Mulrooney, Dillon Travis |
| June 3 | 2 | 0621–1106 | Temp: 60 °F, 100% Cloud Cover; Visibility: Good; Precipitation: None; Avg. Wind Speed: 5 mph; Wind Direction: W | Temp: 70 °F, 100% Cloud Cover; Visibility: Good; Precipitation: None; Avg. Wind Speed: 5 mph; Wind Direction: SW | Brennan Mulrooney, Karla Alcaraz |
| June 27 | 3 | 0613–1127 | Temp: 60 °F, 100% Cloud Cover; Visibility: Good; Precipitation: None; Avg. Wind Speed: 1 mph; Wind Direction: N | Temp: 79 °F, 0% Cloud Cover; Visibility: Good; Precipitation: None; Avg. Wind Speed: 2 mph; Wind Direction: W | Brennan Mulrooney |
| July 21 | 4* | 0815–1621 | Temp: 61 °F, 100% Cloud Cover; Visibility: Good; Precipitation: None; Avg. Wind Speed: 2 mph; Wind Direction: W | Temp: 77 °F, 0% Cloud Cover; Visibility: Good; Precipitation: None; Avg. Wind Speed: 9 mph; Wind Direction: SW | Brenda McMillan, Karla Alcaraz |

Note:

* Due to the presence of agitated coastal cactus wrens within cactus restoration areas during the June 27, 2025 survey, an additional survey was conducted on July 21, 2025, to complete photo monitoring and vegetation density estimates for the cactus restoration areas.

Immediately following each avian point count survey, cactus restoration areas and other large cactus patches on the Lakeside Linkage County Preserve were inspected for the presence of coastal cactus wren nests.

ESA biologist Brennan Mulrooney conducted a coastal cactus wren habitat and threats assessment monitoring on June 27, 2025, during the last point count survey. The U.S. Geological Survey (USGS) Cactus Wren Survey Guide Item #4 was used as the threat assessment for coastal cactus wren (USGS 2017). The threats assessment survey included an evaluation of the vegetation as it pertains to the needs of the coastal cactus wren (e.g., native or non-native vegetation, overtopping cactus, low cactus density).

ESA biologists Brenda McMillan and Karla Alcaraz were scheduled to complete the photo monitoring and vegetation density portions of the habitat and threats assessment on the same day as the coastal cactus wren habitat and threats assessment monitoring. Due to the presence of coastal cactus wrens and at least one newly fledged chick, the survey was postponed to avoid disturbing the coastal cactus wren. On July 21, 2025, they conducted cactus density estimates within the two restoration areas. Vegetation density estimates were conducted by estimating percent cover of prickly pear and coast cholla within their respective planting polygons and measuring cactus height across 109 cactus plots to evaluate habitat suitability for coastal cactus wren nesting. Additional data collection within the restoration areas included presence of non-native plant species, shrub cover within the cactus patch, presence of cochineal scales, and indicators of herbivory, physical damage, and new growth. Qualitative notes were also recorded to support the assessment of habitat conditions and potential nesting suitability. Photo monitoring was conducted at established photo points within the two restoration areas. Photographs were taken from the same vantage points and during the same time of year as previous photos to document and monitor the progress of the restoration sites over time. Additional qualitative photographs were taken throughout the site to document the condition of restored habitat and any qualitative changes to the cactus stands.

## 3.6 Northern Harrier

ESA biologists conducted three nesting surveys, once a month for 3 months (May–July 2025), within the San Luis Rey River Park and the Tijuana River Valley Regional Park to document northern harrier (*Circus hudsonius*) individuals and breeding behavior. If nest sites were detected, the habitat was characterized and nest success was noted, if feasible. Nests were deemed successful if fledged young were observed. Incidental observations of MSCP-covered species or other special-status species were recorded on Field Maps and the Fulcrum mobile applications. Survey dates, weather conditions, and field personnel names are provided in **Table 5**.

Surveys were conducted during the morning hours and under favorable weather conditions for raptor surveys (e.g., no heavy fog, high winds, or precipitation). ESA biologists focused on survey areas with low scrub and/or other low-growing vegetation. ESA biologists scanned these areas with binoculars and spotting scopes before walking along trails or dirt access roads to cover as much of the suitable habitat in the parks as feasible. ESA biologists reviewed the 2024 TMP Annual Report to ensure all known northern harrier locations in the Tijuana River Valley Regional Park were recorded and documented in 2025 (ESA 2025b).

**TABLE 5**
**NORTHERN HARRIER SURVEY SUMMARY**

| County Park | 2025 Survey Date | Survey Number | Survey Times | Start Weather Conditions | End Weather Conditions | Names of Biologists |
|---|---|---|---|---|---|---|
| San Luis Rey River Park | May 9 | 1 | 0708–1230 | Temp: 63°F, 0% cloud cover; Visibility: Good; Precipitation: None; Avg. Wind Speed: 0 mph; Wind Direction: N/A | Temp: 78°F, 0% cloud cover; Visibility: Good; Precipitation: None; Avg. Wind Speed: 4 mph; Wind Direction: W | Brennan Mulrooney, Mary Cozy |
| | June 13 | 2 | 0654–1119 | Temp: 60°F, 100% cloud cover; Visibility: Good; Precipitation: None; Avg. Wind Speed: 0.5 mph; Wind Direction: NW | Temp: 72°F, 3% cloud cover; Visibility: Good; Precipitation: None; Avg. Wind Speed: 4.5 mph; Wind Direction: SW | Brennan Mulrooney, Karla Alcaraz |
| | July 3 | 3 | 0650–1113 | Temp: 60°F, 100% cloud cover; Visibility: Good; Precipitation: None; Avg. Wind Speed: 1.5 mph; Wind Direction: NW | Temp: 74°F, 0% cloud cover; Visibility: Good; Precipitation: None; Avg. Wind Speed: 4 mph; Wind Direction: SW | Brennan Mulrooney, Karla Alcaraz |
| Tijuana River Valley Regional Park | May 5 | 1 | 0635–1135 | Temp: 59°F, 90% cloud cover; Visibility: Good; Precipitation: None; Avg. Wind Speed: 0 mph; Wind Direction: N/A | Temp: 60°F, 50% cloud cover; Visibility: Good; Precipitation: None; Avg. Wind Speed: 4 mph; Wind Direction: SW | Brennan Mulrooney, Natasha Kabala |
| | June 5 | 2 | 0640–1208 | Temp: 62°F, 100% cloud cover; Visibility: Good; Precipitation: None; Avg. Wind Speed: 2.5 mph; Wind Direction: NW | Temp: 68°F, 100% cloud cover; Visibility: Good; Precipitation: None; Avg. Wind Speed: 5.5 mph; Wind Direction: NW | Brennan Mulrooney, Karla Alcaraz |
| | July 1 | 3 | 0627–1221 | Temp: 64°F, 100% cloud cover; Visibility: Good; Precipitation: None; Avg. Wind Speed: 5.5 mph; Wind Direction: NW | Temp: 72°F, 20% cloud cover; Visibility: Good; Precipitation: None; Avg. Wind Speed: 5 mph; Wind Direction: W | Brennan Mulrooney, Karla Alcaraz |

ESA biologists conducted the threats assessment monitoring during the July surveys, using the northern harrier threat assessment form created by AECOM and SDMMP during the county-wide 2021 survey effort (AECOM 2022). The threats assessment survey included an evaluation of potential threats to northern harrier nest success, breeding and foraging habitat, and/or potential management recommendations.

## 3.7 Southwestern Willow Flycatcher

Blackhawk biologist Kris Alberts (USFWS permit ES039640-6) conducted presence/absence monitoring surveys for southwestern willow flycatcher in May through June 2025 within the San Luis Rey River Park. Survey timing and frequency followed the latest accepted protocols of the USGS (Sogge, Ahlers, and Sferra 2010) for general surveys where no foreseeable impacts to southwestern willow flycatcher or their habitat are proposed: a minimum of one survey pass must occur within survey period 1 (May 15–31), within survey period 2 (June 1–24), and within survey period 3 (June 25–July 17), for a total of three survey passes. Due to the large survey area, the three survey passes for southwestern willow flycatcher were split into three sections (eastern, central, and western) and were surveyed on separate days. Survey dates, weather conditions, and field personnel names are provided in **Table 6**.

**TABLE 6**
**SOUTHWESTERN WILLOW FLYCATCHER SURVEY SUMMARY**

| Survey Pass - Section | 2025 Survey Date | Time (start/end) | Wind (mph) (start/end) | Temperature (F) (start-end) | Cloud Cover Percentage (start/end) | Names of Biologists |
|---|---|---|---|---|---|---|
| Pass 1 – Eastern | May 15 | 0550–1100 | 0/3 | 54°–75° | 100–0 | Kris Alberts* |
| Pass 1 – Central | May 16 | 0545–1105 | 030 | 57°–69° | 100–0 | Kris Alberts* |
| Pass 1 – Western | May 17 | 0555–1100 | 0/2 | 59°–67° | 100–100 | Kris Alberts* |
| Pass 2 – Eastern | June 2 | 0550–1120 | 0/7 | 61°–84° | 0–0 | Kris Alberts* |
| Pass 2 – Central | June 3 | 0545–1110 | 0/2 | 61°–72° | 100–90 | Kris Alberts* |
| Pass 2 – Western | June 4 | 0600–1110 | 0/3 | 62°–66° | 100–100 | Kris Alberts* |
| Pass 3 – Eastern | June 25 | 0540–1100 | 0/2 | 64°–81° | 100–0 | Kris Alberts* |
| Pass 3 – Central | June 26 | 0545–1030 | 0/2 | 65°–78° | 0–2 | Kris Alberts* |
| Pass 3 – Western | June 27 | 0540–1100 | 0/4 | 62°–76° | 100–0 | Kris Alberts* |

Note:
* Blackhawk Environmental, Inc. staff.

Surveys were conducted mainly between pre-dawn and 11 a.m., though some surveys were slightly extended when avian activity remained high and weather conditions remained favorable. The surveys were done by walking slowly through and adjacent to southwestern willow flycatcher-suitable habitats while playing back recorded "fitz-bew" calls on an Apple iPhone 15 Pro with an external JBL Clip speaker. The surveying biologist looked and listened for willow flycatcher and/or southwestern willow flycatcher presence throughout the survey durations, using binoculars and/or the naked eye, as appropriate. The biologist listened for willow flycatcher/southwestern willow flycatcher calls, and incidental observations of MSCP-covered species or other special-status species were recorded on the Field Maps application.

## 3.8 Least Bell's Vireo

Blackhawk biologists conducted presence/absence monitoring surveys for least Bell's vireo in May through June 2025 within the San Luis Rey River Park. Survey methods followed an approved modified protocol, based on the USFWS *Least Bell's Vireo Survey Guidelines* issued January 19, 2001 (USFWS 2001). The USFWS methodology stipulates that eight surveys are to occur between April 10 and July 31 in suitable habitats at least 10 days apart. However, a modified survey schedule was approved by the USFWS for only three survey passes, plus a select fourth survey that consisted of surveying select areas where least Bell's vireos were not observed during the first three survey passes but were thought to still have some potential to occur. Due to the large survey area, the three survey passes for least Bell's vireo were split up into three sections (eastern, central, and western) and were surveyed on separate days. Survey dates, weather conditions, and field personnel names are provided in **Table 7**.

**TABLE 7**
**LEAST BELL'S VIREO SURVEY SUMMARY**

| Survey Pass - Section | 2025 Survey Date | Time (start/end) | Wind (mph) (start/end) | Temperature (F) (start-end) | Cloud Cover Percentage (start/end) | Names of Biologists |
|---|---|---|---|---|---|---|
| Pass 1 – Eastern | May 15 | 0550–1100 | 0/3 | 54°–75° | 100–0 | Andy Steyers* |
| Pass 1 – Central | May 16 | 0545–1105 | 030 | 57°–69° | 100–0 | Hayley Milner* |
| Pass 1 – Western | May 17 | 0555–1100 | 0/2 | 59°–67° | 100–100 | Michelle Picca* |
| Pass 2 – Eastern | June 2 | 0550–1120 | 0/7 | 61°–84° | 0–0 | Andy Steyers* |
| Pass 2 – Central | June 3 | 0545–1110 | 0/2 | 61°–72° | 100–90 | Hayley Milner* |
| Pass 2 – Western | June 4 | 0600–1110 | 0/3 | 62°–66° | 100–100 | Andy Steyers* |
| Pass 3 – Eastern | June 25 | 0540–1100 | 0/2 | 64°–81° | 100–0 | Hayley Milner* |
| Pass 3 – Central | June 26 | 0545–1030 | 0/2 | 65°–78° | 0–2 | Hayley Milner* |
| Pass 3 – Western | June 27 | 0540–1100 | 0/4 | 62°–76° | 100–0 | Tawni Gotbaum* |
| Select Pass 4 – Central/Western | June 30 | 0630–1100 | 1/6 | 62°–76° | 100–0 | Andy Steyers*, Katie Quint* |

Note:
* Blackhawk Environmental, Inc. staff.

Surveys were conducted generally between pre-dawn and 11 a.m., though some surveys were slightly extended when avian activity remained high and weather conditions remained favorable. The surveys were done by walking slowly through and/or adjacent to least Bell's vireo–suitable habitats, looking and listening for least Bell's vireo presence throughout the survey durations, using binoculars and/or the naked eye, as appropriate. Surveys were conducted without using recorded vocalization playbacks, with the biologists actively looking and listening for least Bell's vireo. When least Bell's vireos were detected, the number of individuals and the specific locations were recorded in the Field Maps application. Territories and nesting habits were not directly surveyed and/or mapped due to time limitations, though all male detections were assumed to be a breeding pair since no frequently advertising males or males ranging widely in search of a mate were observed, which suggests that all male detections were of already paired individuals. In accordance with the USFWS *Least Bell's Vireo Survey Guidelines* (USFWS 2001), observations of brown-headed cowbirds (*Molothrus ater*) were recorded and GPS locations taken for any individuals detected within least Bell's vireo territory during each survey. Incidental observations of MSCP-covered species or other special-status species were recorded on the Field Maps application.

# 3.9 Pallid Bat

## 3.9.1 Roosting & Foraging Habitat Threat Assessment

ESA biologists identified potential roosting and foraging areas (e.g., tree cavities, rocky cliffs, outcrops, and natural caves) for pallid bats (*Antrozous pallidus*) within Hellhole Canyon, Mount Olympus, and Wilderness Gardens County Preserves based on review of aerial maps and daytime visual threat assessments. The daytime visual threat assessment of potential roosting and foraging habitat was conducted using the Section VI of the 2025 Rare Plant Occurrence Monitoring Protocol (SDMMP 2025). Survey date, weather conditions, and field personnel names are provided in **Table 8**.

**TABLE 8**
**PALLID AND TOWNSEND'S BIG-EARED BAT SURVEY SUMMARY**

| Survey Type | 2025 Survey Date | County Preserve | Start Weather Conditions | End Weather Conditions | Names of Biologists |
|---|---|---|---|---|---|
| Roosting and Foraging Habitat Threat Assessment | June 23 | Hellhole Canyon | Temp: 75.0°F, 0% cloud cover; Visibility: Good; Precipitation: None; Avg. Wind Speed: 10.5 mph; Wind Direction: SW | Temp: 75.0°F, 0% cloud cover; Visibility: Good; Precipitation: None; Avg. Wind Speed: 10.5 mph; Wind Direction: SW | Karla Alcaraz, Amy Orduño-Baez |
| Roosting and Foraging Habitat Threat Assessment | June 23 | Mount Olympus | Temp: 61°F, 100% cloud cover; Visibility: Good; Precipitation: None; Avg. Wind Speed: 3 mph; Wind Direction: SW | Temp: 67.0°F, 100% cloud cover; Visibility: Good; Precipitation: None; Avg. Wind Speed: 9.5 mph; Wind Direction: SW | Karla Alcaraz, Amy Orduño-Baez |
| Roosting and Foraging Habitat Threat Assessment | June 23 | Wilderness Gardens | Temp: 70.0°F, 75% cloud cover; Visibility: Good; Precipitation: None; Avg. Wind Speed: 6.5 mph; Wind Direction: W | Temp: 75.0°F, 5% cloud cover; Visibility: Good; Precipitation: None; Avg. Wind Speed: 7.5 mph; Wind Direction: SW | Karla Alcaraz, Amy Orduño-Baez |

# 3.10 Townsend's Big-Eared Bat

## 3.10.1 Roosting and Foraging Habitat Threat Assessment

ESA biologists identified potential roosting and foraging areas (e.g., tree cavities, rocky cliffs, outcrops, and natural caves) for Townsend's big-eared bats (*Corynorhinus townsendii*) within Hellhole Canyon and Wilderness Gardens County Preserves based on review of aerial maps and daytime visual threat assessments. The daytime visual threat assessment of potential roosting and foraging habitat was conducted using the Section VI of the 2025 Rare Plant Occurrence Monitoring Protocol (SDMMP 2025). Survey date, weather conditions, and field personnel names are provided in **Table 8**.

# 3.11 Stephens' Kangaroo Rat

SKR habitat monitoring at Hellhole Canyon and Ramona Grasslands County Preserves was conducted in September 2025. Specific monitoring protocols followed those outlined in the TMP for SKR monitoring at both preserves (ESA 2024). This methodology follows the methodology used by USGS for SKR monitoring at Camp Pendleton (Brehme et al. 2016). Incidental observations of MSCP-covered species or other special-status species were recorded.

- **Hellhole Canyon County Preserve.** Baseline SKR trapping surveys were conducted in 2020 within the northeastern portion of the Sierra Verde Addition of Hellhole Canyon County Preserve and confirmed SKR presence in one of the three trapping plots (ESA 2021). Per the TMP (ESA 2024), the 2025 SKR monitoring effort sampled the same three sampling plots established during the 2020 baseline trapping surveys due to the limited size of suitable SKR habitat within Hellhole Canyon County Preserve.
- **Ramona Grasslands County Preserve.** Monitoring plots were initially established within SKR Management Areas 1 and 2 within Grazing Management Units 2A, 2B, and 3A and the 3-acre SKR Management Area 3 on the preserve in 2016, following an adapted methodology used by USGS for

SKR monitoring at Camp Pendleton (Brehme et al. 2016). A 50- by 50-meter grid pattern was overlain onto a georeferenced aerial map over each of the core SKR monitoring areas (areas monitored for continued SKR presence and distribution), and 28 plots were established. Of these 28 plots, 16 were determined to be permanent sampling plots that have been monitored since 2016: A1-1 to A1-6, A2-1, A2-6, A2-7, 3A-1, 3A-6, 3A-7, 3A-8, A3-1, A3-2, and A3-3. The 2025 SKR monitoring effort sampled these 16 permanent sampling plots for consistency with previous monitoring efforts and 12 randomly selected plots—6 within the SKR monitoring areas and 6 within the SKR discovery areas (areas monitored to determine if SKR colonization is occurring)—for a total of 28 sampling plots (ESA 2024).

All monitoring plots were located in the field using the cellular ArcGIS Field Map application. Representative photographs were taken from the southeast corner of each plot, facing northwest. The biologists then walked systematic transects through each plot, searching for kangaroo rat sign (e.g., burrows, scat, tracks, trails through vegetation, and dust-bathing sites) until 100 percent coverage of the plot was achieved. All SKR sign were recorded on electronic survey forms using the Survey123 application. SKR presence or absence within a given plot was determined solely on whether SKR sign was observed within the plot.

Habitat assessment forms were completed on the Survey123 application for each plot, specifically noting habitat characteristics critical to SKR habitat suitability, including percent bare ground, living herb density, shrub/tree density, percentage of dead plant litter, gopher or ground squirrel density, obstruction factor, types of disturbance, and land use. These assessment variables were modeled after field forms used by Brehme et al. (2016) (adapted from a field form in Montgomery et al. 2008). Based on the quality of potentially suitable SKR habitat and the density of apparent kangaroo rat sign, each plot was assigned an SKR-potential rating (e.g., High Potential, Medium Potential, Low Potential, or No Potential). Survey dates, times, weather conditions, and field personnel names for these surveys are included in **Table 9**.

**TABLE 9**
**SKR HABITAT ASSESSMENT SURVEY SUMMARY**

| County Preserve | 2025 Survey Date | Survey Times | Start Weather Conditions | End Weather Conditions | Name of Biologists |
|---|---|---|---|---|---|
| Hellhole Canyon | September 24 | 0920–1110 | Temp: 75°F<br>30% Cloud Cover<br>Wind Speed: 1–4 mph | Temp: 79°F<br>20% Cloud Cover<br>Wind Speed: 2–6 mph | Dillon Travis,<br>Kris Alberts* |
| Ramona Grasslands | September 22 | 0830–1520 | Temp: 66°F<br>20% Cloud Cover<br>Wind Speed 0–2 mph | Temp: 81°F<br>10% Cloud Cover<br>Wind Speed: 1–3 mph | Dillon Travis,<br>Kris Alberts* |
| | September 23 | 0825–1315 | Temp: 62°F<br>40% Cloud Cover<br>Wind Speed: 0–2 mph | Temp: 82°F<br>25% Cloud Cover<br>Wind Speed: 2–6 mph | Dillon Travis,<br>Kris Alberts* |

Note:
* Blackhawk Environmental, Inc. staff.

# 3.12 Regional Monitoring Efforts

DPR coordinated with regional monitoring partners regarding monitoring activities to reduce duplication of efforts and to minimize impacts on the species. Through DPR-issued Right-of-Entry (ROE) Permits, conservation partners—including Mulligan Biological Consulting, contracted by San Diego Association of Governments (SANDAG); Dr. Daniel Marschalek (with the University of Central Missouri) and David K. Faulkner (with the San Diego Natural History Museum), contracted by SANDAG; USGS, contracted by SANDAG; and the San Diego Natural History Museum—performed monitoring activities for species included in the TMP on parks and preserves in 2025. Monitoring details, including species, preserve name, dates, methodology, and monitoring entity, are listed in **Table 10**.

**TABLE 10**
**ADDITIONAL MONITORING SURVEY SUMMARY**

| Species | County Preserve | 2025 Survey Date | Methodology | Monitoring Entity |
|---|---|---|---|---|
| Parish's brittlescale | Ramona Grasslands | July 18 | MSP Rare Plant Monitoring Protocol | Mulligan Biological Consulting |
| Orcutt's brodiaea | Simon | June 3 | MSP Rare Plant Monitoring Protocol | Mulligan Biological Consulting |
| | Escondido Creek | May 19 | MSP Rare Plant Monitoring Protocol | Mulligan Biological Consulting |
| | Mount Olympus | June 11 | MSP Rare Plant Monitoring Protocol | Mulligan Biological Consulting |
| Otay tarplant | Furby-North | May 28 and 29 | MSP Rare Plant Monitoring Protocol | Mulligan Biological Consulting |
| Baja California oatgrass* | Sycamore Canyon/Goodan Ranch | April 25 | MSP Rare Plant Monitoring Protocol | Mulligan Biological Consulting |
| Harbison's dun skipper | Hellhole Canyon | February 11 and March 4 | Larval surveys | Dr. Daniel Marschalek (with the University of Central Missouri) and David K. Faulkner (with the San Diego Natural History Museum) |
| | | June 5 and June 25 | Adult flight surveys | |
| Arroyo toad | Ramona Grasslands | May 12, May 13, and June 17 | USGS Aquatic Species and Habitat Assessment Protocol | USGS |
| Tricolored blackbird | Ramona Grasslands | April 18 and May 9 | SDMMP San Diego County Tricolored Blackbird Breeding Surveys and Habitat and Threat Assessments Protocol | San Diego Natural History Museum |

Note:

* Baja California oatgrass is not a species covered under the TMP.

# CHAPTER 4
# Results and Discussion

## 4.1 Rare Plant Monitoring

Rare plant monitoring was conducted at 26 permanent monitoring plots at eight preserves in 2025. Rare plant monitoring consisted of five San Diego thornmint monitoring plots at Sycamore Canyon/Goodan Ranch County Preserve, one San Diego thornmint monitoring plot at Simon County Preserve, four Encinitas baccharis monitoring plots at Del Dios Highlands County Preserve, one Orcutt's brodiaea monitoring plot at Boulder Oaks County Preserve, two San Miguel savory monitoring plots at Boulder Oaks County Preserve, five Orcutt's bird's-beak monitoring plots at Tijuana River Valley Regional Park, two variegated dudleya monitoring plots at Sycamore Canyon/Goodan Ranch County Preserve, one variegated dudleya monitoring plot at Lusardi Creek County Preserve, one variegated dudleya monitoring plot at Dictionary Hill County Preserve, one heart-leaved pitcher sage monitoring plot at Iron Mountain County Preserve, and three willowy monardella monitoring plots at Sycamore Canyon/Goodan Ranch County Preserve.

A summary of the monitoring plots, monitoring results, and management recommendations are provided in **Table 11**. Photographic monitoring and representative photographs of the monitored and managed plots are provided in **Appendix A**, *Rare Plant Monitoring – Permanent Photographic Monitoring & Representative Photographs*. MSP Rare Plant Occurrence Monitoring Forms, which include Rare Plant Habitat and Threats Assessments, are provided in **Appendix B**, *MSP Rare Plant Occurrence Monitoring Forms*.

### 4.1.1 San Diego Thornmint

#### Sycamore Canyon/Goodan Ranch County Preserve

Five monitoring plots within the San Diego thornmint population in Sycamore Canyon/Goodan Ranch County Preserve were monitored by ESA in 2025. A total of 5,321 San Diego thornmint plants were estimated within the monitoring plots. The entire population of San Diego thornmint within Sycamore Canyon County Preserve in 2025 is estimated at 9,736 plants. Monitoring plots, center points, photo points, and maximum extent are shown in **Figure 2**. Photo monitoring and representative photographs are provided in **Appendix A**. Special-status plant species detected include small-flowered bindweed (*Convolvulus simulans*) at three of the five monitoring plots and Palmer's grappling hook (*Harpagonella palmeri*) at all five monitoring plots. Across all five monitoring plots, San Diego thornmint habitat contained invasive non-native grasses and herbs, particularly purple false brome (*Brachypodium distachyon*) and tocalote (*Centaurea melitensis*).

**TABLE 11**
**MSP 2025 RARE PLANT MONITORING SUMMARY**

| Species | County Preserve | Plot #; MSP Occurrence ID[a] | Center Point Coordinates | Monitoring Plot Population | | Native Plant Cover | | Non-Native Plant Cover[b] | | Management Recommendations |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | # individuals | % cover | # species | % cover | # species | % cover | |
| San Diego thornmint *Acanthomintha ilicifolia* | Sycamore Canyon/ Goodan Ranch | SYGOACIL01 ACIL_4SYCA027_1 | E 501592 N 3644272 | 530 | 0.2 | 17 | 11.4[c] | 11 | 41.4 | Continue MSP rare plant monitoring of population. Continue management of invasive non-native grasses and forbs, particularly purple false brome and tocalote. Monitor gopher activity. Continue thatch removal. |
| | | SYGOACIL05 ACIL_4SYCA027_5 | E 502915 N 3643523 | 559 | 1.0 | 24 | 42.8 | 11 | 18.8 | |
| | | SYGOACIL06 ACIL_4SYCA027_6 | E 502252 N 3644084 | 2,100 | 1.0 | 15 | 34.0 | 11 | 9.8 | |
| | | SYGOACIL08 ACIL_4SYCA027_8 | E 502267 N 3644249 | 930 | 2.0 | 22 | 15.2 | 9 | 23.4 | |
| | | SYGOACIL10 ACIL_4SYCA027_10 | E 501927 N 3644370 | 1,112 | 3.0 | 18 | 47.2 | 7 | 4.0 | |
| San Diego thornmint *Acanthomintha ilicifolia* | Simon | – ACIL_4SIPR026_1 | E 516451 N 3654129 | 2,144 | 5 | 22 | 41.3 | 12 | 11.2 | Continue MSP rare plant monitoring of population. Monitor gopher activity. |
| Encinitas baccharis *Baccharis vanessae* | Del Dios Highlands | DD201501 BAVA3_6DDHP004_1 | E 488075 N 3658452 | 14 | 1.0 | 20 | 55.0 | 2 | 0.4 | Continue MSP rare plant monitoring of population. Thin native shrub canopy to reduce competition. |
| | | DD201502 BAVA3_6DDHP004_2 | E 488143 N 3658472 | 3 | 0.2 | 19 | 62.4 | 2 | 0.4 | |
| | | DD201503 BAVA3_6DDHP004_3 | E 488033 N 3658465 | 52 | 4.0 | 15 | 51.4 | 2 | 0.4 | |
| | | DD202504 BAVA3_6DDHP028_0 | E 488174 N 3660216 | 13 | 2.0 | 16 | 61.6 | 0 | 0.0 | |

| Species | County Preserve | Plot #; MSP Occurrence ID[a] | Center Point Coordinates | Monitoring Plot Population | | Native Plant Cover | | Non-Native Plant Cover[b] | | Management Recommendations |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | # individuals | % cover | # species | % cover | # species | % cover | |
| Orcutt's brodiaea *Brodiaea orcuttii* | Boulder Oaks | – BROR_4BOPR029_1 | E 506195<br>N 3647244 | 466 | 1.0 | 13 | 19.0 | 14 | 16.0 | Continue MSP rare plant monitoring of population. |
| San Miguel savory *Clinopodium chandleri* | Boulder Oaks | BOCLCH01 CLCH5_4BOPR002_1 | E 505067<br>N 3646951 | 100 | 2.0 | 27 | 69.4 | 5 | 0.8 | Continue MSP rare plant monitoring of population. |
| | | BOCLCH02 CLCH5_4BOPR002_2 | E 505422<br>N 3647075 | 97 | 1 | 22 | 48.2 | 6 | 3.3 | |
| Orcutt's bird's-beak *Dicranostegia orcuttiana* | Tijuana River Valley Regional Park | – COOR7_1TIRI009_1 | E 490646<br>N 3600256 | 1 | 0.2 | 25 | 35.8 | 5 | 1.8 | Continue MSP rare plant monitoring of population. Monitor gopher activity. Control access around monitoring plot COOR7_1SMGU006_2. |
| | | – COOR7_1TIRI009_2 | E 490415<br>N 3600440 | 8 | 0.2 | 22 | 45.8 | 7 | 5.2 | |
| | | – COOR7_1SMGU006_1 | E 491709<br>N 3600493 | 0 | 0.0 | 21 | 38.2 | 6 | 3.0 | |
| | | – COOR7_1SMGU006_2 | E 491443<br>N 3600514 | 98 | 1.0 | 18 | 72.8 | 7 | 1.4 | |
| | | – COOR7_1ESGU010_1 | E 492185<br>N 3602303 | 14 | 0.2 | 21 | 58.2 | 2 | 5.2 | |

| Species | County Preserve | Plot #; MSP Occurrence ID[a] | Center Point Coordinates | Monitoring Plot Population | | Native Plant Cover | | Non-Native Plant Cover[b] | | Management Recommendations |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | # individuals | % cover | # species | % cover | # species | % cover | |
| Variegated dudleya *Dudleya variegata* | Sycamore Canyon/ Goodan Ranch | SYGODUVA01 DUVA_4SYCA019_1 | E 52936<br>N 3643516 | 20 | 0.2 | 32 | 23.6 | 9 | 36.6 | Continue MSP rare plant monitoring of population. Continue management of invasive non-native grasses and forbs, particularly purple false brome and tocalote. Continue thatch removal. |
| | | SYGODUVA02 DUVA_4SYCA019_2 | E 502891<br>N 3643611 | 68 | 0.2 | 26 | 21.8 | 7 | 31.2 | |
| | Lusardi Creek | LCDUVA01 DUVA_6LUCR023_1 | E 484873<br>N 3652555 | 1 | 0.2 | 18 | 17.4 | 7 | 5.0 | Continue MSP rare plant monitoring of population. Repair herbivore exclusionary fencing. |
| | Dictionary Hill | – DUVA_3DHPR061_1 | E 500580<br>N 3620743 | 1,590 | 0.2 | 9 | 3.4 | 11 | 3.0 | Continue MSP rare plant monitoring of population. Conduct management of invasive non-native crimson fountain grass within the maximum extent. Control access around monitoring plot. |
| Heart-leaved pitcher sage *Lepechinia cardiophylla* | Iron Mountain | – LECA4_4IRMT003_1 | E 503936<br>N 3649640 | 10 | 1.0 | 29 | 58.4 | 3 | 0.4 | Continue MSP rare plant monitoring of population. |
| Willowy monardella *Monardella viminea* | Sycamore Canyon/ Goodan Ranch | SYC201501 MOLIV_4SYCA006_1 | E 502412<br>N 3642218 | 41 | 3.0 | 17 | 27.8 | 8 | 1.6 | Continue MSP rare plant monitoring of populations. |
| | | SYC201602 MOLIV_4SYCA002_1 | E 501045<br>N 3642551 | 0 | 0.0 | 9 | 16.0 | 13 | 2.6 | |
| | | SYC202103 MOLIV_4SPCA006_2 | E 501657<br>N 3640638 | 9 | 1.0 | 14 | 24.0 | 9 | 3.4 | |

Notes:

a. Plot # code was assigned during plot establishment by the establishing plot biologist and is used throughout this report when available. However, some monitoring plots do not have a plot # code associated with them as the establishing plot biologist used only the MSP occurrence ID (assigned by SDMMP) to establish and document the plot. In these instances, the MSP occurrence ID is used throughout this report.

b. Non-native plant cover calculation includes invasive non-native plant species.

Sycamore Canyon/Goodan Ranch County Preserve
Center Point
Photo Point
**2025 Mapped Maximum Extent**
San Diego Thornmint
Baja California Oatgrass*
**Incidental Invasive Non-Native Plant Species**
Artichoke Thistle
Crimson Fountain Grass

*SYGOACIL10 Detail*
SYGOACIL10
*SYGOACIL08 Detail*
SYGOACIL08
SPINCA_4SYCA008
SYGOACIL10
SYGOACIL01
SPINCA_4SYCA008
SYGOACIL08
*SYGOACIL01 Detail*
SPINCA_4S
SYGOACIL06
*SYGOACIL05 Detail*
SYGOACIL01
SPINCA_4SYCA008
SYGOACIL06
*SYGOACIL06 Detail*
SYGOACIL05
SYGOACIL05
N
0
800
Feet
67
Sycamore Canyon / Goodan Ranch

Path: U:\GIS\GIS\Projects\2022xxx\D2022000393_10_TMP_2025\03_Project\Report_Figures.aprx, janderson 1/6/2026

SOURCE: Nearmap, 2023; ESA, 2025.
**NOTE: Baja California oatgrass IMG monitoring results provided by Mulligan Biological Consulting.*

COSD DPR 569744 TO 10 – Implementation of Targeted Monitoring Plan – 2025 Resource-Specific Monitoring
*Targeted Monitoring Plan Resource-Specific Monitoring 2025 Annual Report*

**Figure 2**
San Diego Thornmint and Baja California Oatgrass Monitoring Results
Sycamore Canyon/Goodan Ranch County Preserve

ESA

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### *Monitoring Plot Number SYGOACIL01*

Monitoring plot SYGOACIL01 is in the northwestern portion of the San Diego thornmint population. A total of 530 San Diego thornmint plants were estimated within the monitoring plot; 50–75 percent were in flower, 25–50 percent were vegetative, and 10–25 percent were fruiting. Potential sign of stunted growth was detected in 0–10 percent of all plants. Total vegetative cover within the plot was 52.8 percent, with 11.4 percent native plant cover and 41.4 percent non-native plant cover. The dominant native plant species within the monitoring plot was toyon (*Heteromeles arbutifolia*). Invasive non-native plant species included purple false brome, compact brome (*Bromus madritensis*), tocalote, annual fescue (*Festuca myuros*), shortpod mustard (*Hirschfeldia incana*), and smooth cat's ear (*Hypochaeris glabra*). Non-native plant species included longbeak stork's bill (*Erodium botrys*), nit grass (*Gastridium phleoides*), narrowleaf cottonrose (*Logfia gallica*), scarlet pimpernel (*Lysimachia arvensis*), and spiny sowthistle (*Sonchus asper*). Invasive non-native artichoke thistle (*Cynara cardunculus*) was detected north of this plot's maximum extent (**Figure 2**). Special-status plant species detected within the monitoring plot included small-flowered bindweed and Palmer's grappling hook.

### *Monitoring Plot Number SYGOACIL05*

Monitoring plot SYGOACIL05 is in the southeastern portion of the San Diego thornmint population. A total of 559 San Diego thornmint plants were estimated within the monitoring plot; greater than 75 percent were in flower, 10–25 percent were vegetative, 10–25 percent were fruiting, and 0–10 percent were dead. Potential sign of stunted growth was detected in 0–10 percent of all plants. Total vegetative cover within the plot was 61.6 percent, with 42.8 percent native plant cover and 18.8 percent non-native plant cover. The dominant native plant species within the monitoring plot was mission manzanita (*Xylococcus bicolor*). Invasive non-native plant species included purple false brome, soft brome (*Bromus hordeaceus*), red brome (*Bromus rubens*), tocalote, redstem stork's bill (*Erodium cicutarium*), annual fescue, and smooth cat's ear. Non-native plant species included narrowleaf cottonrose, scarlet pimpernel, redseed plantain (*Plantago rhodosperma*), and spiny sowthistle. Special-status plant species detected within the monitoring plot included Palmer's grappling hook.

### *Monitoring Plot Number SYGOACIL06*

Monitoring plot SYGOACIL06 is in the central-northern portion of the San Diego thornmint population. A total of 2,100 San Diego thornmint plants were estimated within the monitoring plot; 50–75 percent were flowering, 25–50 percent were vegetative, 10–25 percent were fruiting, and 0–10 percent were dead. Potential sign of stunted growth was detected in 0–10 percent of all plants. Total vegetative cover within the plot was 43.8 percent, with 34 percent native plant cover and 9.8 percent non-native plant cover. The dominant native plant species within the monitoring plot were toyon, lemonade sumac (*Rhus integrifolia*), Torrey's hybrid oak (*Quercus X acutidens*), and mission manzanita. Invasive non-native plant species included slender oat (*Avena barbata*), purple false brome, soft brome, red brome, tocalote, redstem stork's bill, annual fescue, and smooth cat's ear. Non-native plant species included narrowleaf cottonrose, scarlet pimpernel, and spiny sowthistle. Invasive non-native crimson fountain grass (*Pennisetum setaceum*) was detected east of this plot's maximum extent (**Figure 2**). Special-status plant species detected within the monitoring plot included Palmer's grappling hook.

### *Monitoring Plot Number SYGOACIL08*

Monitoring plot SYGOACIL08 is in the central-northern portion of the San Diego thornmint population. A total of 930 San Diego thornmint plants were estimated within the monitoring plot; 20–50 percent were in flower, 50–75 percent were vegetative, 0–10 percent were fruiting, and 0–10 percent were dead. Potential sign of stunted growth was detected in 0–10 percent of all plants. Total vegetative cover within the plot was 38.6 percent, with 15.2 percent native plant cover and 23.4 percent non-native plant cover. The dominant native plant species within the monitoring plot were Torrey's hybrid oak and lemonade berry. Invasive non-native plant species included slender oat, purple false brome, soft brome, and tocalote. Non-native plant species included field bindweed (*Convolvulus arvensis*), petty spurge (*Euphorbia peplus*), scarlet pimpernel, spiny sowthistle, and common sowthistle (*Sonchus oleraceus*). Special-status plant species detected within the monitoring plot included small-flowered bindweed and Palmer's grappling hook.

### *Monitoring Plot Number SYGOACIL10*

Monitoring plot SYGOACIL10 is in the northwestern portion of the San Diego thornmint population. A total of 1,112 San Diego thornmint plants were estimated within the monitoring plot; greater than 75 percent were in flower, 0–10 percent were vegetative, 10–25 percent were fruiting, and 0–10 percent were dead. Potential sign of stunted growth was detected in 10–25 percent of all plants. Total vegetative cover within the plot was 51.2 percent, with 47.2 percent native plant cover and 4 percent non-native plant cover. The dominant native plant species within the monitoring plot were mock parsley (*Apiastrum angustifolium*), Torrey's hybrid oak, and black sage (*Salvia mellifera*). Invasive non-native plant species included red brome, tocalote, and redstem stork's bill. Non-native plant species included petty spurge, narrowleaf cottonrose, scarlet pimpernel, and spiny sowthistle. Special-status plant species detected within the monitoring plot included small-flowered bindweed and Palmer's grappling hook.

### *Adaptive Management Recommendations*

The results of the 2025 surveys, TMP management goals and objectives, and adaptive management actions outlined in the TMP were used to develop the following recommendations:

- **Continue focused invasive non-native plant species removal.** Adaptive management for the San Diego thornmint monitoring plots was implemented in 2025 as part of the Sycamore Canyon and Goodan Ranch Preserve Covered Species Threat Reduction Project, which is funded through the 30x30 grant program. Grant-funded management will continue through February 2026. However, ongoing invasive non-native plant management will still be necessary after the Sycamore Canyon and Goodan Ranch Preserve Covered Species Threat Reduction Project concludes to maintain invasive non-native plant cover below 20 percent and purple false brome cover below 10 percent cover. This is consistent with TMP recommendations (ESA 2024). To ensure the persistence of San Diego thornmint at Sycamore Canyon/Goodan Ranch County Preserve, it is recommended that invasive non-native plant control be continued by a qualified restoration specialist within at least three of the monitoring plots: plots 1, 5, and 8, and the surrounding areas, as needed, to reduce encroachment and competition from invasive non-native plant species and allow expansion opportunities for the San Diego thornmint population. Total invasive non-native plant cover and purple false brome percent cover for all monitoring plots in 2025 are provided in **Table 12** with recommended management priority levels. The invasive non-native plant species removal protocol within the TMP, which includes hand-clipping, hand-pulling, and herbicide use, should be followed. Care should be taken

when management or monitoring is performed to not trample San Diego thornmint plants. Artichoke thistle was also detected north of monitoring plot 1; these individuals should be removed and treated with herbicide during focused management to prevent future spread and encroachment into the San Diego thornmint population.

- **Monitor gopher activity.** Significant gopher activity was recorded within all five San Diego thornmint permanent monitoring plots. Gophers can disturb soil structure, including the sensitive soil type associated with San Diego thornmint, and may encourage further encroachment of non-native grasses into the permanent monitoring plots. It is recommended that gopher activity continue to be noted during TMP threat assessments, and SDMMP should be coordinated with regarding best management practices for gophers.

**TABLE 12**
**SAN DIEGO THORNMINT INVASIVE NON-NATIVE PLANT CONTROL MANAGEMENT PRIORITIES: SYCAMORE CANYON/GOODAN RANCH COUNTY PRESERVE**

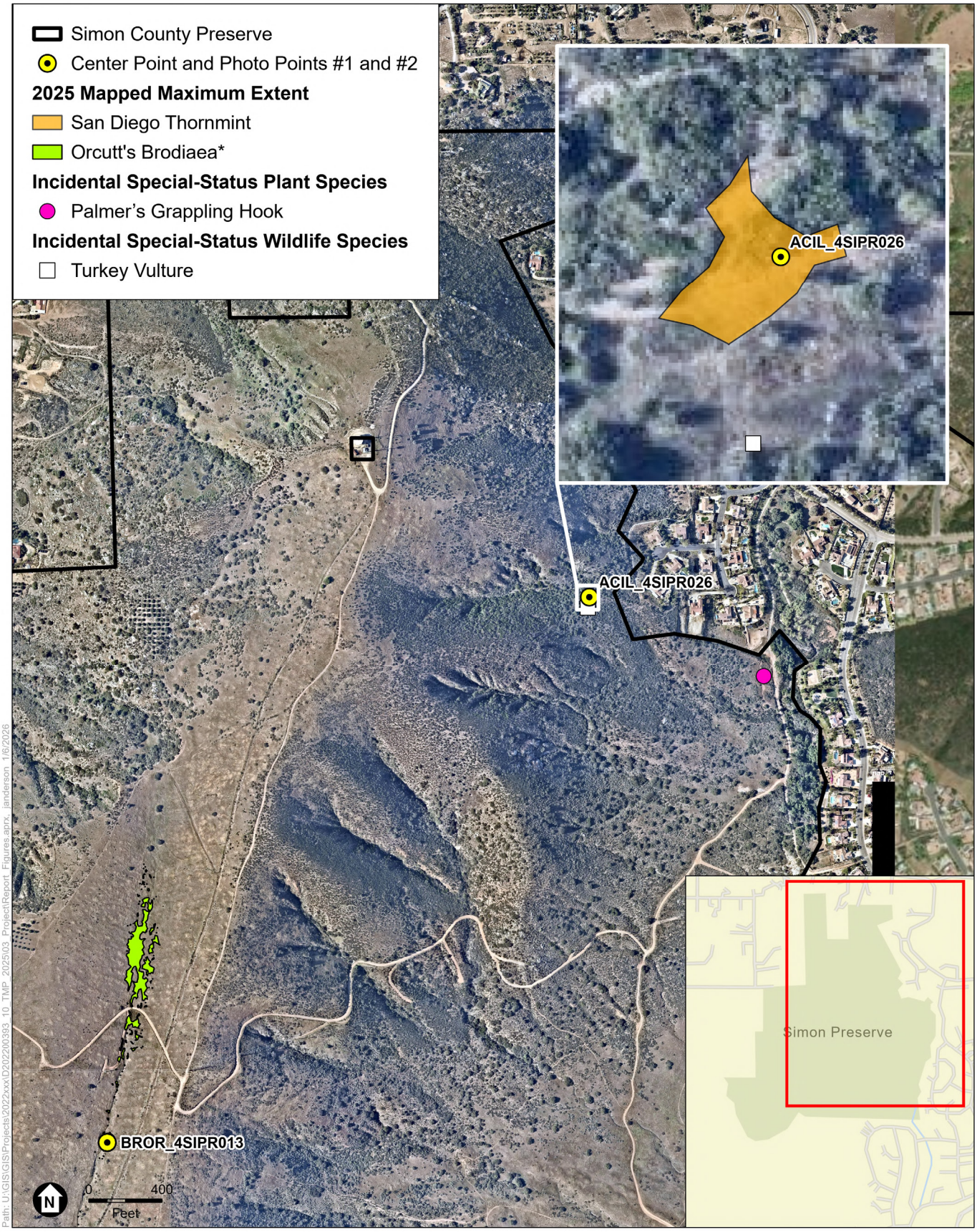
| Monitoring Plot | Total Non-Native Plant Cover (%) | Purple False Brome Cover (%)[a] | Priority for Invasive Non-Native Plant Management[b] |
|---|---|---|---|
| 1 | 41.4 | 37 | High |
| 5 | 18.8 | 14 | High |
| 6 | 9.8 | 4 | Low |
| 8 | 23.4 | 18 | High |
| 10 | 4 | 0.0 | Low |

Notes:

a. Invasive non-native purple false brome percent cover is included in the total non-native plant cover percentage.
b. Management priority was determined based on total non-native plant cover and purple false brome cover.
High = If total non-native plant cover was greater than 20 percent, and/or purple false brome cover was 10 percent or greater.
Moderate = If total non-native plant cover was 10–20 percent, and/or purple false brome cover was 5–10 percent.
Low = If total non-native plant cover was under 10 percent, and/or purple false brome cover was under 5 percent.

## Simon County Preserve

The one monitoring plot within the San Diego thornmint population in Simon County Preserve was monitored by ESA in 2025. A total of 2,144 San Diego thornmint plants were estimated within the monitoring plot. The entire population of San Diego thornmint within Simon County Preserve in 2025 is estimated at 2,144 plants. Monitoring plot, center point, photo point, and maximum extent are shown in **Figure 3**. Photo monitoring and representative photographs are provided in **Appendix A**. Special-status plant species detected inside the monitoring plot included Palmer's grappling hook and Douglas' silverpuffs (*Microseris douglasii ssp. platycarpha*). Palmer's grappling hook was also incidentally detected outside of the monitoring plot (**Figure 3**). Incidental special-status wildlife species observed outside of the monitoring plot included turkey vulture (*Cathartes aura*) (**Figure 3**). The San Diego thornmint habitat contained invasive non-native grasses and herbs, particularly slender oat, purple false brome, soft brome, redstem stork's bill, annual fescue, tocalote, and smooth cat's ear.




SOURCE: Nearmap, 4/18/2021; ESA, 2025.
**NOTE: Orcutt's brodiaea IMG monitoring results provided by Mulligan Biological Consulting.*

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**Figure 3**
San Diego Thornmint and Orcutt's Brodiaea Monitoring Results
Simon County Preserve

ESA

### *Monitoring Plot Number ACIL_4SIPR026_1*

Monitoring plot ACIL_4SIPR026_1 is in the central portion of the San Diego thornmint population. Approximately 2,144 San Diego thornmint plants were estimated within the monitoring plot; 1-10 percent were flowering and the remaining were vegetative. Total vegetative cover within the plot was 52.5 percent, with 41.3 percent native plant cover and 11.2 percent non-native plant cover (non-native plant cover includes invasive non-native plant species). The dominant native plant species within the monitoring plot was mission manzanita. Invasive non-native plant species included slender oat, soft brome, red brome, tocalote, redstem stork's bill, annual fescue, shortpod mustard, and smooth cat's ear. Non-native plant species included longbeak stork's bill, narrowleaf cottonrose, scarlet pimpernel, and groundsel (*Senecio vulgaris*). Special-status plant species detected inside the plot included Palmer's grappling hook and Douglas' silverpuffs. Incidental special-status wildlife species observed outside of the monitoring plot included turkey vulture (**Figure 3**).

### *Adaptive Management Recommendations*

Based on the results of the 2025 surveys, TMP management goals and objectives, and adaptive management actions outlined in the TMP, no management is recommended for 2026. Focused invasive non-native plant species management did not occur in 2024, and while non-native plant cover increased from 8.4 percent in 2024 to 10.8 percent in 2025, these cover percentages are below the 20 percent non-native plant cover TMP-recommended threshold for management (ESA 2024). Monitoring in 2026 should continue to track non-native plant cover within and around the San Diego thornmint population at Simon County Preserve to determine whether focused invasive non-native plant species management is required.

- **Monitor gopher activity.** Significant gopher activity was recorded within the San Diego thornmint permanent monitoring plot. Gophers can disturb soil structure, including the sensitive soil type associated with San Diego thornmint, and may encourage further encroachment of non-native grasses into the permanent monitoring plots. It is recommended that gopher activity continue to be noted during TMP threat assessments, and coordinate with SDMMP on best management practices for gophers.

## 4.1.2 Encinitas Baccharis

### Del Dios Highlands County Preserve

The three previously established monitoring plots within the Encinitas baccharis population in Del Dios Highlands County Preserve were monitored by ESA in 2025. An additional monitoring plot was established and monitored within the Del Dios Highlands County Preserve in 2025. A total of 82 Encinitas baccharis plants were estimated within the monitoring plots. The entire population of Encinitas baccharis plants within Del Dios Highlands County Preserve in 2025 is estimated at 264 plants. Monitoring plot, center point, photo point, and maximum extent are shown in **Figure 4**. Photo monitoring and representative photographs are provided in **Appendix A**. Special-status plant species detected within the monitoring plot included wart-stemmed ceanothus (*Ceanothus verrucosus*). Incidental special-status wildlife species detected outside the monitoring plot included turkey vulture (**Figure 4**). The Encinitas baccharis habitat contained invasive non-native plant species, particularly compact brome and red brome. Additional monitoring data, including sex, male-to-female ratio, and age of the plants in each monitoring plot, are provided in **Table 13**.

**TABLE 13**
**ENCINITAS BACCHARIS ADDITIONAL MONITORING DATA: DEL DIOS HIGHLANDS COUNTY PRESERVE**

| Monitoring Plot | # of individuals | Sex[a] | Male-to-Female Ratio | Age |
|---|---|---|---|---|
| DD201501 | 14 | 13 vegetative<br>1 male | NA | 5 adults<br>9 seedlings |
| DD201502 | 3 | 3 vegetative | NA | 3 adults |
| DD201503 | 52 | 51 vegetative<br>1 male | NA | 33 adults<br>19 seedlings |
| DD202504 | 13 | 12 vegetative<br>1 female | NA | 13 adults |

Notes:

a. The vast majority of plants were not blooming and showed no signs of blooming this year. This is likely due to below-average rainfall during the 2024–2025 wet season.

### *Monitoring Plot Number DD201501*

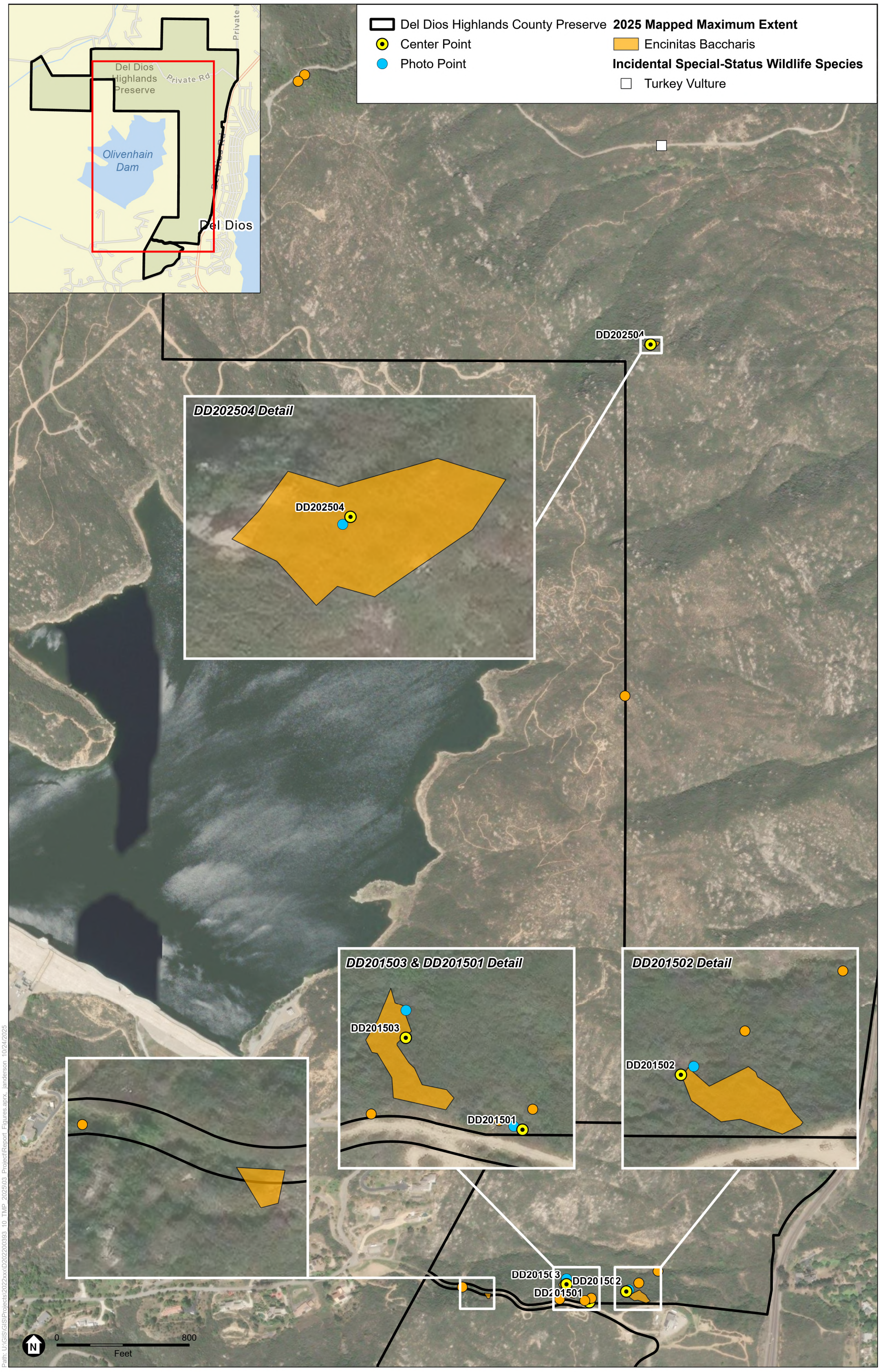
Monitoring plot DD201501 is located in the central portion of the southern Encinitas baccharis population. A total of 14 Encinitas baccharis plants were detected within the monitoring plot; 0–10 percent were flowering, and the remaining were vegetative. Total vegetative cover within the plot was 55.4 percent, with 55.0 percent native plant cover and 0.4 percent non-native plant cover. The dominant native plant species within the monitoring plot was wart-stemmed ceanothus. Invasive non-native plant species included compact brome and red brome. Special-status plant species detected within the monitoring plot included wart-stemmed ceanothus.

### *Monitoring Plot Number DD201502*

Monitoring plot DD201502 is located in the eastern portion of the southern Encinitas baccharis population. A total of three Encinitas baccharis plants were detected within the monitoring plot; all were vegetative. Total vegetative cover within the plot was 62.8 percent, with 62.4 percent native plant cover and 0.4 percent non-native plant cover. The dominant native plant species within the monitoring plot was woolyleaf ceanothus (*Ceanothus tomentosus*). Invasive non-native plant species included compact brome; non-native plant species included nit grass (*Gastridium phleoides*). Special-status plant species detected within the monitoring plot included wart-stemmed ceanothus.

### *Monitoring Plot Number DD201503*

Monitoring plot DD201503 is located in the western portion of the southern Encinitas baccharis population. A total of 52 Encinitas baccharis plants were estimated within the monitoring plot; over 75 percent were vegetative, 0–10 percent were flowering, and 0–10 percent were dead. Total vegetative cover within the plot was 51.8 percent, with 51.4 percent native plant cover and 0.4 percent non-native plant cover. The dominant native plant species within the monitoring plot were Mission manzanita and wart-stemmed ceanothus. Invasive non-native plant species included purple false brome and red brome. Special-status plant species detected within the monitoring plot included wart-stemmed ceanothus.




SOURCE: ESRI, 2025; ESA, 2025.

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**Figure 4**
Encinitas Baccharis Monitoring Results
Del Dios Highlands County Preserve

ESA

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### *Monitoring Plot Number DD202504*

Monitoring plot DD202504 is located in the northern portion of the Encinitas baccharis population. A total of 13 Encinitas baccharis plants were estimated within the monitoring plot; 0–10 percent were flowering, and the remaining were vegetative. Total vegetative cover within the plot was 61.6 percent, with 61.6 percent native plant cover and 0 percent non-native plant cover. The dominant native plant species within the monitoring plot were Mission manzanita and chamise (*Adenostoma fasciculatum*). No invasive non-native plants were observed within the monitoring plot.

### *Adaptive Management Recommendations*

The results of the 2025 surveys, TMP management goals and objectives, and the adaptive management actions outlined in the TMP were used to develop the following recommendation:

- **Thin native vegetation to reduce competition and improve access to monitoring plots.** Vegetation canopy in and around the monitoring plots is very dense. Thinning of native shrub canopy, including chamise and woolyleaf ceanothus, should be considered to reduce potential native competition to Encinitas baccharis plants and improve access to monitoring plots.

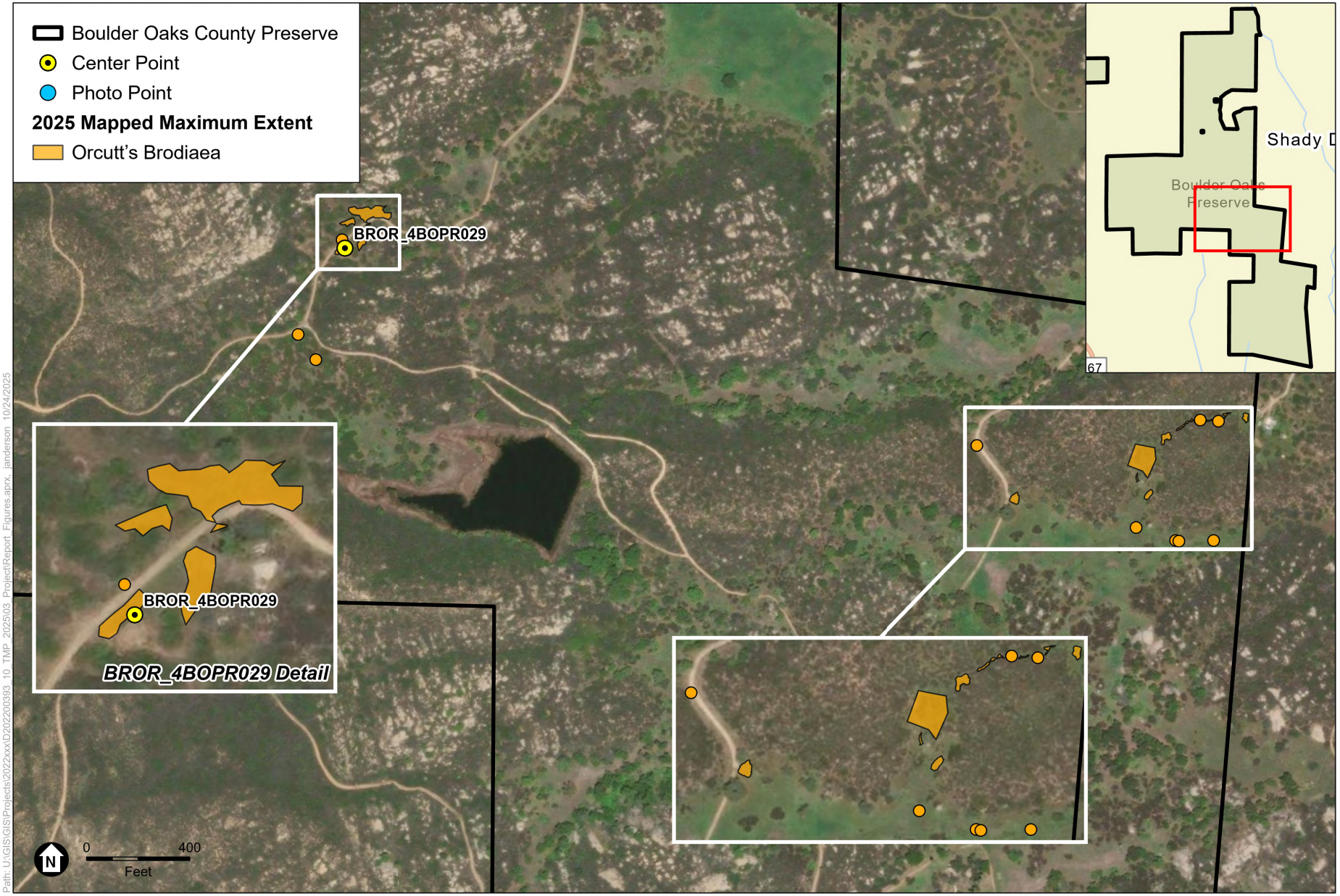
## 4.1.3 Orcutt's Brodiaea

### Boulder Oaks County Preserve

The one monitoring plot within the Orcutt's brodiaea population in Boulder Oaks County Preserve was monitored by ESA in 2025. A total of 466 Orcutt's brodiaea plants were estimated within the monitoring plot. The entire population of Orcutt's brodiaea within Boulder Oaks County Preserve in 2025 is estimated at 1,026 plants. Monitoring plot, center point, photo point, and maximum extent are shown in **Figure 5**. Photo monitoring and representative photographs are provided in **Appendix A**. No additional special-status species were detected inside the monitoring plot. The Orcutt's brodiaea habitat contained invasive non-native grasses and herbs, particularly soft brome, stinkwort (*Dittrichia graveolens*), longflowered veldtgrass (*Ehrharta longiflora*), annual fescue, and smooth cat's ear.

### *Monitoring Plot Number BROR_4BOPR029_1*

Monitoring plot BROR_4BOPR029_1 is in the central portion of the Orcutt's brodiaea population. Approximately 466 Orcutt's brodiaea plants were estimated within the monitoring plot; 50–75 percent were flowering, 1–10 percent were fruiting, and 1–10 percent were dead. Total vegetative cover within the plot was 35 percent, with 19 percent native plant cover and 16 percent non-native plant cover. The dominant native plant species within the monitoring plot was Menzies' goldenbush (*Isocoma menziesii*). Invasive non-native plant species included ripgut brome, soft brome, red brome, tocalote, stinkwort, longflowered veldtgrass, annual fescue, and smooth cat's ear. Non-native plant species included longbeak stork's bill, narrowleaf cottonrose, hyssop loosestrife (*Lythrum hyssopifolia*), annual rabbitsfoot grass (*Polypogon monspeliensis*), common Mediterranean grass (*Schismus barbatus*), and common catchfly (*Silene gallica*). No special-status plant species or special-status wildlife were detected inside or outside of the monitoring plot.




SOURCE: ESRI, 2025; ESA, 2025

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**Figure 5**

Orcutt's Brodiaea Monitoring Results
Boulder Oaks County Preserve

ESA

### *Adaptive Management Recommendations*

Based on the results of the 2025 surveys, TMP management goals and objectives, and the adaptive management actions outlined in the TMP, no management is recommended for 2026. Non-native plant cover was 16 percent, below the 20 percent non-native plant cover TMP-recommended threshold for management (ESA 2024). Monitoring in 2027 should continue to track non-native plant cover within and around the Orcutt's brodiaea population at Boulder Oaks County Preserve and determine whether focused invasive non-native plant species management is required.

## 4.1.4 San Miguel Savory

### Boulder Oaks County Preserve

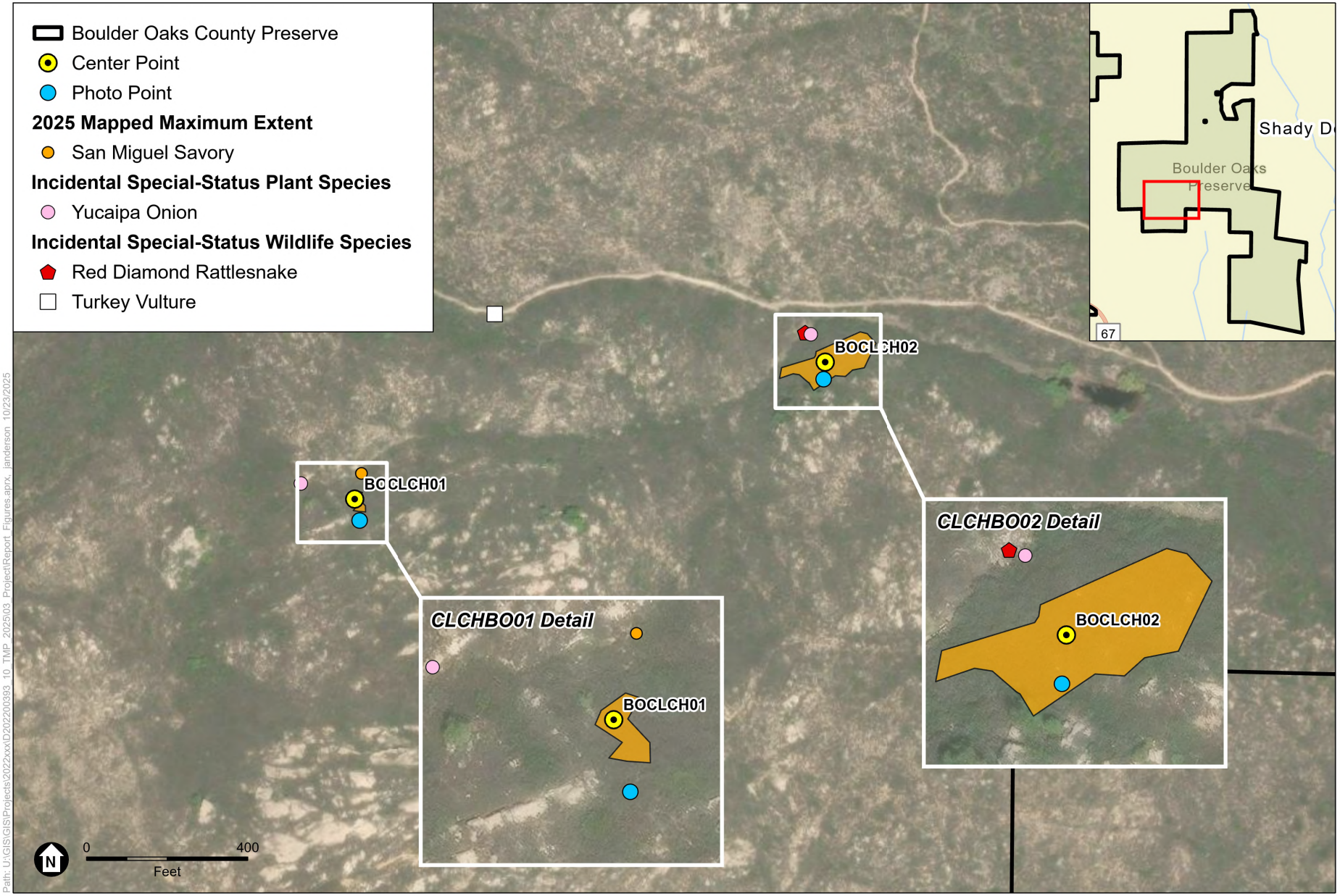
The two monitoring plots within the San Miguel savory population in Boulder Oaks County Preserve were monitored by ESA in 2025. A total of 197 San Miguel savory plants were estimated within the monitoring plots. The entire population of San Miguel savory plants within Boulder Oaks County Preserve in 2025 is estimated at 478 plants. Monitoring plot, center point, photo point, and maximum extent are shown in **Figure 6**. Photo monitoring and representative photographs are provided in **Appendix A**. One special-status plant, Yucaipa onion (*Allium marvinii*), was observed outside of both monitoring plots (**Figure 6**). Incidental special-status wildlife species detected included turkey vulture at BOCLCH01 and red-diamond rattlesnake (*Crotalus ruber*) near BOCLCH02 (**Figure 6**). Across both monitoring plots, San Miguel savory habitat contained invasive non-native grasses and herbs, particularly annual fescue and smooth cat's ear.

#### *Monitoring Plot Number BOCLCH01*

Monitoring plot BOCLCH01 is located in the western portion of the San Miguel savory population. A total of 100 San Miguel savory plants were detected to be within the monitoring plot; 10–25 percent were in flower, 50–75 percent were vegetative. Total vegetative cover within the plot was 70.2 percent, with 69.4 percent native plant cover and 0.8 percent non-native plant cover. The dominant native plant species within the monitoring plot was chamise. Invasive non-native plant species included annual fescue, smooth cat's ear, and red brome; non-native plant species included common catchfly. Yucaipa onion was the only special-status plant species detected within the plot (**Figure 6**). Turkey vulture was the only special-status wildlife species detected within the plot (**Figure 6**).

#### *Monitoring Plot Number BOCLCH02*

Monitoring plot BOCLCH02 is located in the eastern portion of the San Miguel savory population. A total of 97 San Miguel savory plants were detected within the monitoring plot; 10–25 percent were flowering and 50–75 percent were vegetative. Total vegetative cover within the plot was 51.5 percent, with 48.2 percent native plant cover and 3.3 percent non-native plant cover. The dominant native plant species within the monitoring plot was chamise. Invasive non-native plant species included longflowered veldtgrass (*Ehrharta longiflora*); no other non-native plant species was detected. Yucaipa onion was the only special-status plant species detected within the plot (**Figure 6**). Red-diamond rattlesnake was the only special-status wildlife species detected near the plot (**Figure 6**).




SOURCE: ESRI, 2025; ESA, 2025

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**Figure 6**
San Miguel Savory Monitoring Results
Boulder Oaks County Preserve

ESA

### *Adaptive Management Recommendations*

The results of the 2025 surveys, TMP management goals and objectives, and the adaptive management actions outlined in the TMP were used to develop the following recommendation:

- **Conduct focused invasive non-native plant species removal within and around BOCLCH02.** The TMP recommends overall invasive non-native plant cover be kept to less than 20 percent (ESA 2024). Although non-native plant cover was 0.8 percent and 3.31 percent, respectively, within the monitoring plots, on-site observations demonstrated that high-priority invasive non-native longflowered veldtgrass was still detected within monitoring plot BOCLCH02, with increased cover adjacent to the monitoring plot. To limit the expansion of longflowered veldtgrass and ensure the persistence of San Miguel savory at Boulder Oaks County Preserve, it is recommended that invasive non-native plant control be continued within monitoring plot BOCLCH02 by a qualified restoration specialist, with a focus on treatment of longflowered veldtgrass populations.

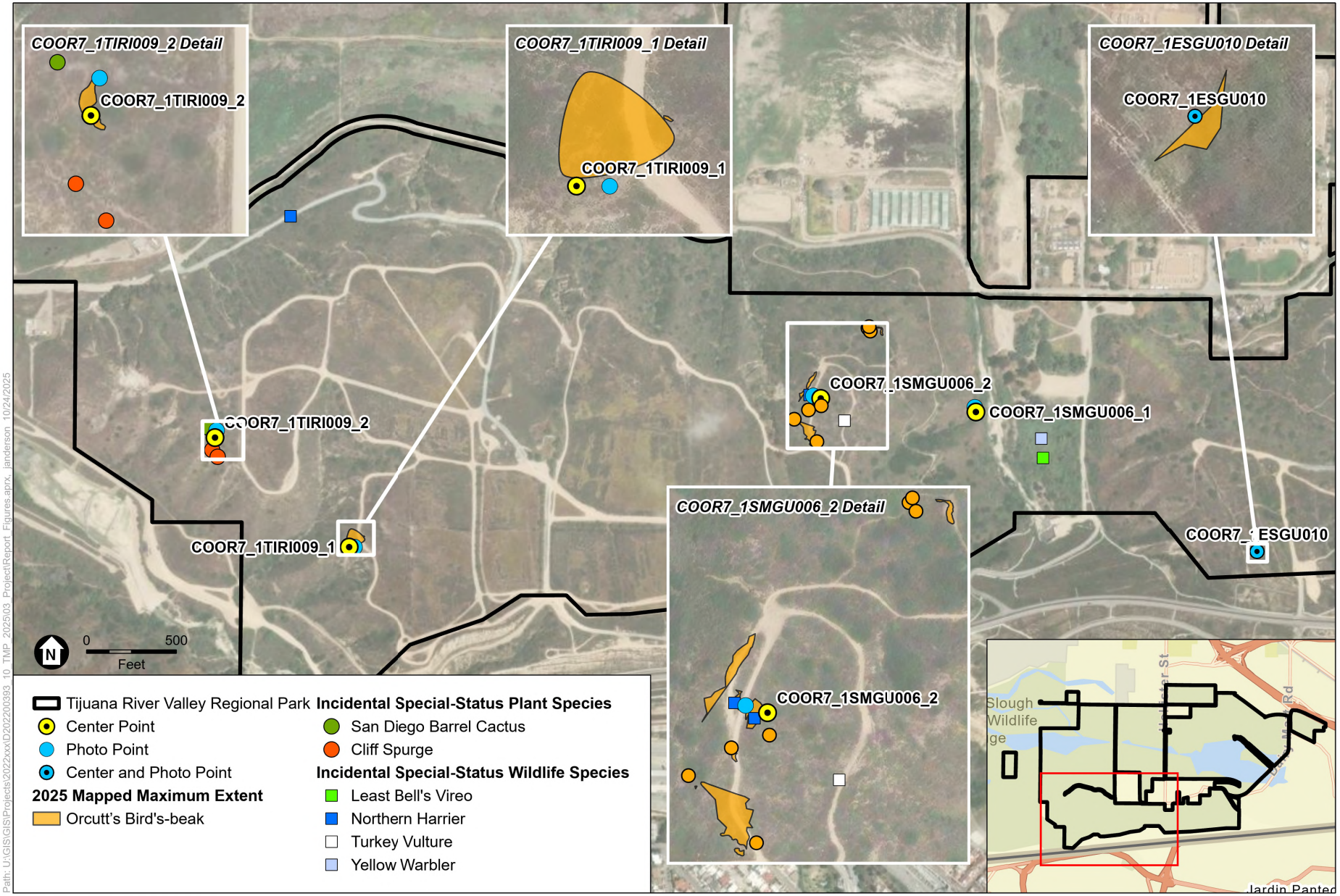
## 4.1.5 Orcutt's Bird's-Beak

### Tijuana River Valley Regional Park

The three previously established monitoring plots within the Orcutt's bird's-beak population in Tijuana River Valley Regional Park were monitored by ESA in 2025. Two additional monitoring plots were established and monitored within the Tijuana River Valley Regional Park in 2025. A total of 121 Orcutt's bird's-beak plants were estimated within the monitoring plots. The entire population of Orcutt's bird's-beak plants within Tijuana River Valley Regional Park in 2025 is estimated at 610 plants. Monitoring plot, center point, photo point, and maximum extent are shown in **Figure 7**. Photo monitoring and representative photographs are provided in **Appendix A**. Special-status plant species detected within the monitoring plots included San Diego barrel cactus (*Ferocactus viridescens*), western dichondra (*Dichondra occidentalis*), torhleaf goldeneye (*Bahiopsis laciniata*), and mesa spikemoss (*Selaginella cinerascens*). Incidental special-status species observed outside of the monitoring plot included San Diego barrel cactus, cliff spurge (*Euphorbia misera*), least Bell's vireo, northern harrier, turkey vulture, and yellow warbler (*Setophaga petechia*) (**Figure 7**). The Orcutt's bird's-beak habitat contained invasive non-native grasses and herbs, particularly red brome and shortpod mustard.

#### *Monitoring Plot Number COOR7_1TIRI009_1*

Monitoring plot COOR7_1TIRI009_1 is in the southern portion of the Orcutt's bird's-beak population. One Orcutt's bird's-beak plant was estimated within the monitoring plot and was observed as flowering. No signs of herbivory were detected. Total vegetative cover within the plot was 37.6 percent, with 35.8 percent native plant cover and 1.8 percent non-native plant cover. The dominant native plant species within the monitoring plot were California sagebrush (*Artemesia californica*) and mesa spikemoss. Invasive non-native plant species included annual fescue, smooth cat's ear, and red brome. Non-native plant species included narrowleaf cottonrose. Special-status plant species detected within the plot included torhleaf goldeneye, San Diego barrel cactus, western dichondra, and mesa spikemoss.

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SOURCE: ESRI, 2025; ESA, 2025.

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**Figure 7**

Orcutt's Bird's-Beak Monitoring Results
Tijuana River Valley Regional Park

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### *Monitoring Plot Number COOR7_1TIRI009_2*

Monitoring plot COOR7_1TIRI009_2 is in the southwestern portion of the Orcutt's bird's-beak population. A total of eight Orcutt's bird's-beak plants was estimated within the monitoring plot; 50–75 percent were flowering, 10–25 percent were vegetative or dead. Potential sign of herbivory was detected in 25–50 percent of all plants. Total vegetative cover within the plot was 51.0 percent, with 45.8 percent native plant cover and 5.2 percent non-native plant cover. The dominant native plant species within the monitoring plot was California sagebrush. Invasive non-native plant species included annual fescue, tocalote, redstem stork's bill, shortpod mustard, and smooth cat's ear. Non-native plant species included narrowleaf cottonrose and red brome. Special-status plant species detected within the plot included mesa spikemoss and torhleaf goldeneye. Incidental special-status species observed outside of the monitoring plot included San Diego barrel cactus and cliff spurge (**Figure 7**).

### *Monitoring Plot Number COOR7_1SMGU006_1*

Monitoring plot COOR7_1SMGU006_1 is in the central portion of the Orcutt's bird's-beak population. No Orcutt's bird's-beak plants were detected within the monitoring plot in 2025. Total vegetative cover within the plot was 41.2 percent, with 38.2 percent native plant cover and 3.0 percent non-native plant cover. The dominant native plant species within the monitoring plot were bladderpod (*Peritoma arborea*) and California brittlebush (*Encelia californica*). Invasive non-native plant species included annual fescue, tocalote, shortpod mustard, smooth cat's ear, and red brome. Incidental special-status wildlife species observed outside of the monitoring plot included least Bell's vireo and yellow warbler (**Figure 7**).

### *Monitoring Plot Number COOR7_1SMGU006_2*

Monitoring plot COOR7_1SMGU006_2 is in the central portion of the Orcutt's bird's-beak population. A total of 98 Orcutt's bird's-beak plants were detected within the monitoring plot; 50–75 precent were flowering, 10–25 percent were fruiting, 0–10 percent were dead. Total vegetative cover within the plot was 74.2 percent, with 72.8 percent native plant cover and 1.4 percent non-native plant cover. The dominant native plant species within the monitoring plot was California sagebrush. Invasive non-native plant species included annual fescue, tocalote, redstem stork's bill, shortpod mustard, and smooth cat's ear. Non-native plant species included red brome. Special-status plant species observed the monitoring plot included San Diego barrel cactus. Incidental special-status wildlife species observed outside of the monitoring plot included turkey vulture and northern harrier (**Figure 7**).

### *Monitoring Plot Number COOR7_1ESGU010_1*

Monitoring plot COOR7_1ESGU010_1 is in the eastern portion of the Orcutt's bird's-beak population. A total of 14 Orcutt's bird's-beak plants were detected within the monitoring plot; 50–75 percent were flowering, 10–25 percent were fruiting, and 0–10 percent were dead. Total vegetative cover within the plot was 63.2 percent, with 58.2 percent native plant cover and 5.2 percent non-native plant cover. The dominant native plant species within the monitoring plot was California sagebrush. Invasive non-native plant species included charlock mustard (*Sinapis arvensis*) and red brome. Special-status plant species observed in the monitoring plot include San Diego barrel cactus and torhleaf goldeneye.

### *Adaptive Management Recommendations*

The results of the 2025 surveys, TMP management goals and objectives, and the adaptive management actions outlined in the TMP were used to develop the following recommendations:

- **Monitor gopher activity.** Significant gopher activity was observed within the monitoring plot and maximum extent of the COOR7_1SMGU006_2. Gophers can disturb soil structure and may encourage further encroachment of non-native grasses into the permanent monitoring plot. It is recommended that gopher activity continue to be noted during TMP threat assessments, and coordinate with SDMMP on best management practices for gophers.
- **Control access around monitoring plot COOR7_1SMGU006_2.** Vehicle tire tracks and crushed vegetation were observed within the maximum extent of the of the COOR7_1SMGU006_2 monitoring plot. Installation of signage stating sensitive resources are in the area and regular preserve patrols focusing on these areas are recommended to control access in sensitive resource areas.

## 4.1.6 Variegated Dudleya

### Sycamore Canyon/Goodan Ranch County Preserve

The two monitoring plots within the variegated dudleya population in Sycamore Canyon/Goodan Ranch County Preserve we monitored by ESA in 2025. A total of 88 variegated dudleya plants were estimated within the monitoring plots. The entire population of variegated dudleya within Sycamore Canyon/Goodan Ranch County Preserve in 2025 is estimated at 156 plants. Monitoring plot, center point, photo point, and maximum extent are shown in **Figure 8**. Photo monitoring and representative photographs are provided in **Appendix A**. Special-status plant species, San Diego thornmint, Palmer's grappling hook, and mesa spikemoss were observed within the monitoring plots. The variegated dudleya habitat contained invasive non-native grasses and herbs, particularly purple false brome and soft brome.

### *Monitoring Plot Number SYGODUVA01*

Monitoring plot SYGODUVA01 is located in the southeastern portion of the variegated dudleya population. A total of 20 variegated dudleya plants were detected within the monitoring plot; all were flowering. Total vegetative cover within the plot was 60.2 percent, with 23.6 percent native plant cover and 36.6 percent non-native plant cover. The dominant native plant species within the monitoring plot were laurel sumac. Invasive non-native plant species included purple false brome, soft brome, tocalote, redstem stork's bill, and smooth cat's ear. Non-native plant species included narrowleaf cottonrose, scarlet pimpernel, redseed plantain, and spiny sowthistle. Special-status plant species detected within the plot were San Diego thornmint, Palmer's grappling hook, mesa spikemoss.




SOURCE: ESRI, 2025; ESA, 2025.

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**Figure 8**

Variegated Dudleya Monitoring Results
Sycamore Canyon/Goodan Ranch County Preserve

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### *Monitoring Plot Number SYGODUVA02*

Monitoring plot SYGODUVA02 is located in the northwestern portion of the variegated dudleya population. A total of 68 variegated dudleya plants were detected within the monitoring plot; over 75 percent were flowering and 0–10 percent were vegetative. Total vegetative cover within the plot was 53.0 percent, with 21.8 percent native plant cover and 31.2 percent non-native plant cover. The dominant native plant species within the monitoring plot were spiny redberry (*Rhamnus crocea*) and laurel sumac. Invasive non-native plant species included purple false brome, ripgut brome, soft brome, tocalote, and redstem stork's bill; non-native plant species included spiny sowthistle and common sowthistle. Palmer's grappling hook was the only special-status plant species detected within the plot.

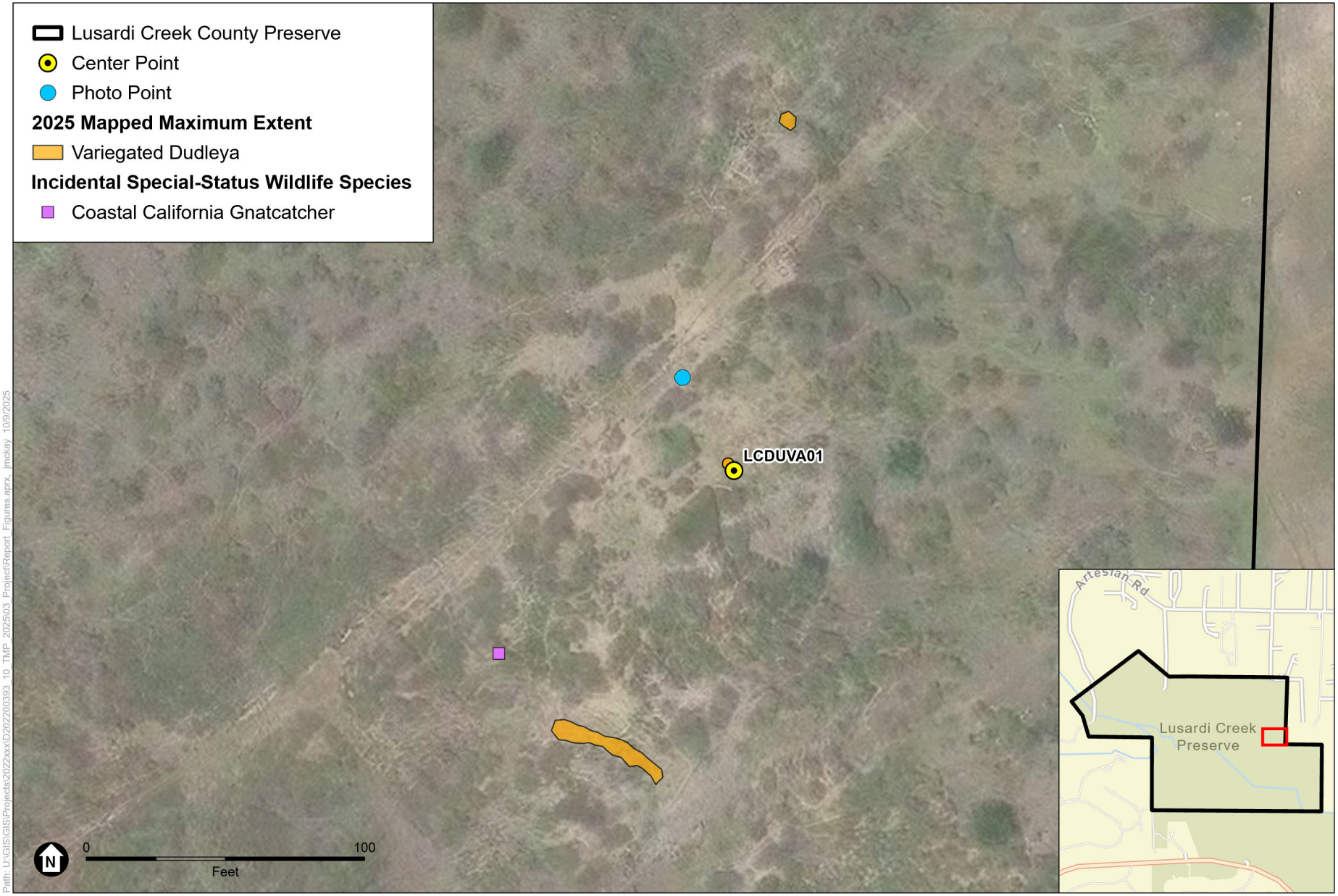
### *Adaptive Management Recommendations*

The results of the 2025 surveys, TMP management goals and objectives, and the adaptive management actions outlined in the TMP were used to develop the following recommendation:

- **Conduct focused invasive non-native plant species removal.** Adaptive management for the variegated dudleya monitoring plots was implemented in 2025 as part of the Sycamore Canyon and Goodan Ranch Preserve Covered Species Threat Reduction Project, which is funded through the 30x30 grant program. Grant-funded management will continue through February 2026. However, ongoing invasive non-native plant management will still be necessary after the Sycamore Canyon and Goodan Ranch Preserve Covered Species Threat Reduction Project concludes to maintain invasive non-native plant cover below 20 percent. This is consistent with TMP recommendations (ESA 2024). Total non-native plant cover within the monitoring plots in 2025 was 36.6 percent and 31.2 percent and thatch cover was estimated to be 2.0 percent and 5.8 percent, respectively. To ensure the persistence of variegated dudleya at Sycamore Canyon/Goodan Ranch County Preserve, it is recommended that invasive non-native plant control and thatch removal be continued by a qualified restoration specialist. Invasive non-native plants within 18 inches of variegated dudleya plants should be carefully pulled by hand. Mechanical weed trimmers can be used to dethatch remaining invasive non-native plant species to 1 to 2 inches from the ground surrounding variegated dudleya occurrences within 12-meter radius circles around each of the established plot center points. All biomass should be manually collected, bagged, and properly disposed of at an approved off-site facility.

## Lusardi Creek County Preserve

The one monitoring plot within the variegated dudleya population in Lusardi Creek County Preserve was monitored by ESA in 2025. One variegated dudleya plant was detected within the monitoring plot. The entire population of variegated dudleya within Lusardi Creek County Preserve in 2025 is estimated at 15 plants. Monitoring plot, center point, photo point, and maximum extent are shown in **Figure 9**. Photo monitoring and representative photographs are provided in **Appendix A**. Special-status plant species observed within the monitoring plot include San Diego barrel cactus and mesa spikemoss. Incidental special-status species observed outside of the monitoring plot included coastal California gnatcatcher (*Polioptila californica californica*) (**Figure 9**). The variegated dudleya habitat contained invasive non-native grasses and herbs, particularly purple false brome.

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SOURCE: ESRI, 2025; ESA, 2025.

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**Figure 9**

Variegated Dudleya Monitoring Results
Lusardi Creek County Preserve

ESA

### *Monitoring Plot Number LCDUVA01*

Monitoring plot LCDUVA01 is located in the eastern portion of the variegated dudleya population. One variegated dudleya plant was detected within the monitoring plot and was flowering. Total vegetative cover within the plot was 22.4 percent, with 17.4 percent native plant cover and 5.0 percent non-native plant cover. The dominant native plant species within the monitoring plot was purple needle grass (*Stipa pulchra*). Invasive non-native plant species included purple false brome, soft brome, red brome, foxtail brome, annual fescue, Italian rye grass, smooth cat's ear, and Russian thistle; non-native plant species included longbeak stork's bill. Special-status plant species detected within the plot were San Diego barrel cactus and mesa spikemoss. Incidental special-status species observed outside of the monitoring plot included coastal California gnatcatcher (**Figure 9**).

### *Adaptive Management Recommendations*

The results of the 2025 surveys, TMP management goals and objectives, and the adaptive management actions outlined in the TMP were used to develop the following recommendation:

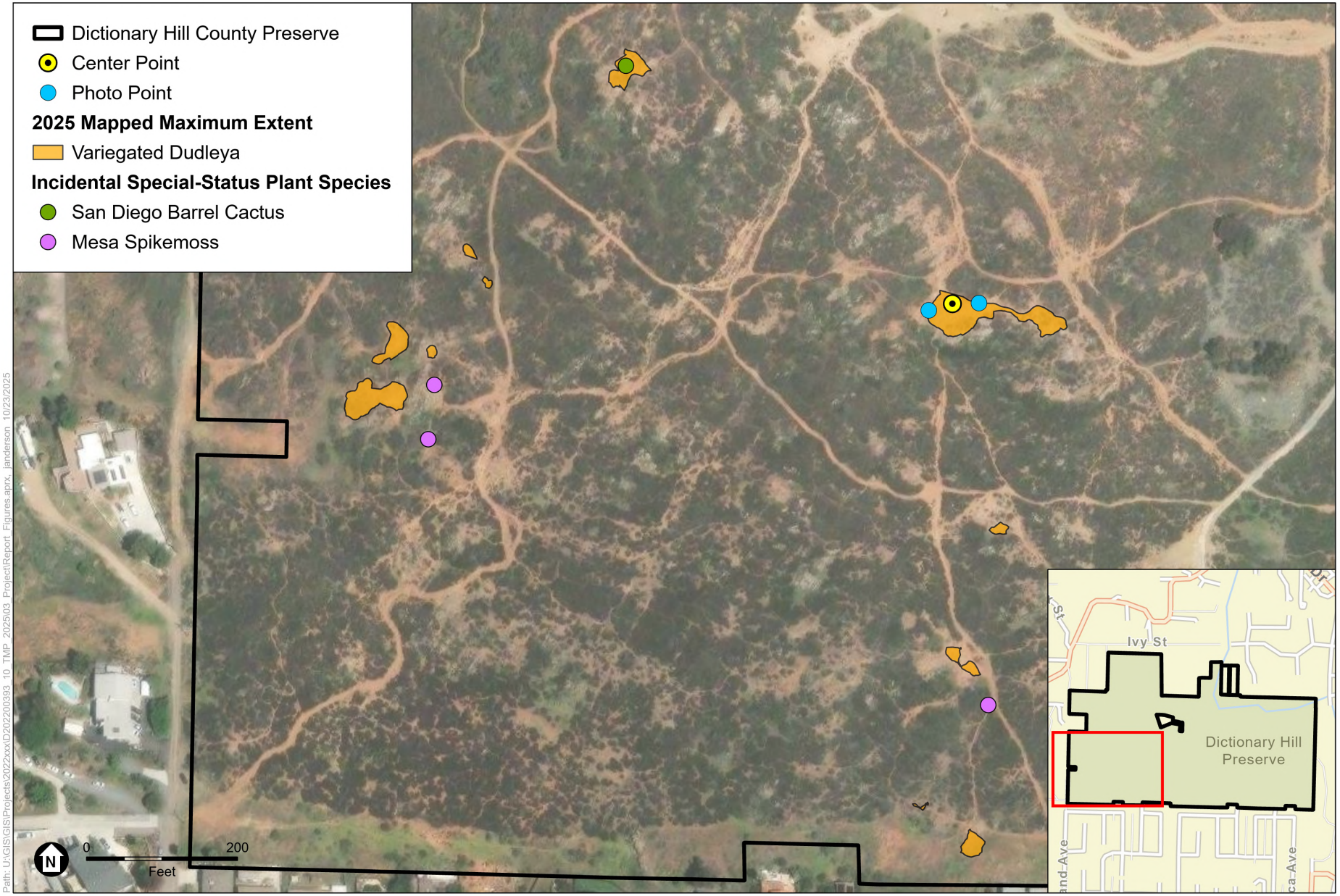
- **Repair herbivore exclusionary fencing.** During TMP IMG monitoring, it was observed that the herbivore exclusionary fencing was damaged. It is recommended that this fencing is repaired to keep out herbivores such as rabbits from feeding on the variegated dudleya population.

## Dictionary Hill County Preserve

The one monitoring plot within the variegated dudleya population in Dictionary Hill County Preserve was established and monitored by ESA in 2025. A total of 1,590 variegated dudleya plants were detected within the monitoring plot. The entire population of variegated dudleya within Dictionary Hill County Preserve in 2025 is estimated at 4,756 plants. Monitoring plot, center point, photo point, and maximum extent are shown in **Figure 10**. Photo monitoring and representative photographs are provided in **Appendix A**. Special-status plant species observed within the monitoring plot were mesa spikemoss, San Diego barrel cactus, and torhleaf goldeneye. Mesa spikemoss and San Diego barrel cactus were also incidentally observed outside the monitoring plot (**Figure 10**). The variegated dudleya habitat contained invasive non-native grasses and herbs, particularly common Mediterranean grass (*Schismus barbatus*).

### *Monitoring Plot Number DUVA_3DHPR061_1*

Monitoring plot DUVA_3DHPR061_1 is located in the eastern portion of the variegated dudleya population. A total of 1,590 variegated dudleya plants were detected within the monitoring plot; over 75 percent were flowering and 0–10 percent were dead or had signs of herbivory. Total vegetative cover within the plot was 6.4 percent, with 3.4 percent native plant cover and 3.0 percent non-native plant cover. The dominant native plant species within the monitoring plot were California sagebrush and mesa spikemoss. Invasive non-native plant species included purple false brome, ripgut brome, annual fescue, Italian rye grass, smooth cat's ear, red brome, compact brome, redstem stork's bill, shortpod mustard, and common Mediterranean grass; non-native plant species included goldentop grass (*Lamarckia aurea*). Special-status plant species detected outside the plot were mesa spikemoss and San Diego barrel cactus (**Figure 10**).

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SOURCE: ESRI, 2025; ESA, 2025.

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**Figure 10**

Variegated Dudleya Monitoring Results
Dictionary Hill County Preserve

ESA

### *Adaptive Management Recommendations*

The results of the 2025 surveys, TMP management goals and objectives, and the adaptive management actions outlined in the TMP were used to develop the following recommendations:

- **Conduct focused invasive non-native plant species removal.** The TMP recommends overall invasive non-native plant cover be kept to less than 20 percent (ESA 2024). While the total non-native plant cover within the monitoring plot was below the 20 percent threshold in 2025, crimson fountain grass was observed on the rocky outcroppings within the variegated dudleya's maximum extent. To limit the expansion of crimson fountain grass and ensure the persistence of variegated dudleya at Dictionary Hill County Preserve, it is recommended that invasive non-native plant control, with a focus on crimson fountain grass, be conducted by a qualified restoration specialist. Crimson fountain grass and any additional invasive non-native plants within 18 inches of variegated dudleya plants should be carefully pulled by hand. All biomass should be manually collected, bagged, and properly disposed of at an approved off-site facility.
- **Control access around monitoring plot.** An unauthorized trail used by hikers and bikers runs through the center of the monitoring plot. Installation of signage stating sensitive resources in the area and exclusionary fencing are recommended to protect and ensure the persistence of variegated dudleya at Dictionary Hill County Preserve.

## 4.1.7 Heart-Leaved Pitcher Sage

### Iron Mountain County Preserve

The one monitoring plot within the heart-leaved pitcher sage population in Iron Mountain County Preserve was monitored by ESA in 2025. A total of 10 heart-leaved pitcher sage plants were estimated within the monitoring plot. The entire population of heart-leaved pitcher sage within Iron Mountain County Preserve in 2025 is estimated at 55 plants. Monitoring plot, center point, photo point, and maximum extent are shown in **Figure 11**. Photo monitoring and representative photographs are provided in **Appendix A**. Incidental special-status species observed outside of the monitoring plot included Yucaipa onion (**Figure 11**). The heart-leaved pitcher sage habitat contained invasive non-native grasses and herbs, particularly annual fescue.

### *Monitoring Plot Number LECA4_4IRMT003_1*

Monitoring plot LECA4_4IRMT003_1 is in the central portion of the heart-leaved pitcher sage population. A total of 10 heart-leaved pitcher sage plants were estimated within the monitoring plot; over 75 percent were vegetative. Total vegetative cover within the plot was 58.8 percent, with 58.4 percent native plant cover and 0.4 percent non-native plant cover. The co-dominant native plant species within the monitoring plot were scrub oak and bigberry manzanita (*Arctostaphylos glauca*). Invasive non-native plant species included annual fescue. Non-native plant species included narrowleaf cottonrose and nit grass. Incidental special-status species observed outside of the monitoring plot included Yucaipa onion (**Figure 11**).




SOURCE: ESRI, 2025; ESA, 2025.

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**Figure 11**

Heart-Leaved Pitcher Sage Monitoring Results
Iron Mountain County Preserve

ESA

### *Adaptive Management Recommendations*

Based on the results of the 2025 surveys, TMP management goals and objectives, and the adaptive management actions outlined in the TMP, no management is recommended for 2026. Non-native plant cover was 0.4 percent, below the 20 percent non-native plant cover TMP-recommended threshold for management (ESA 2024).

## 4.1.8 Willowy Monardella

### Sycamore Canyon/Goodan Ranch County Preserve

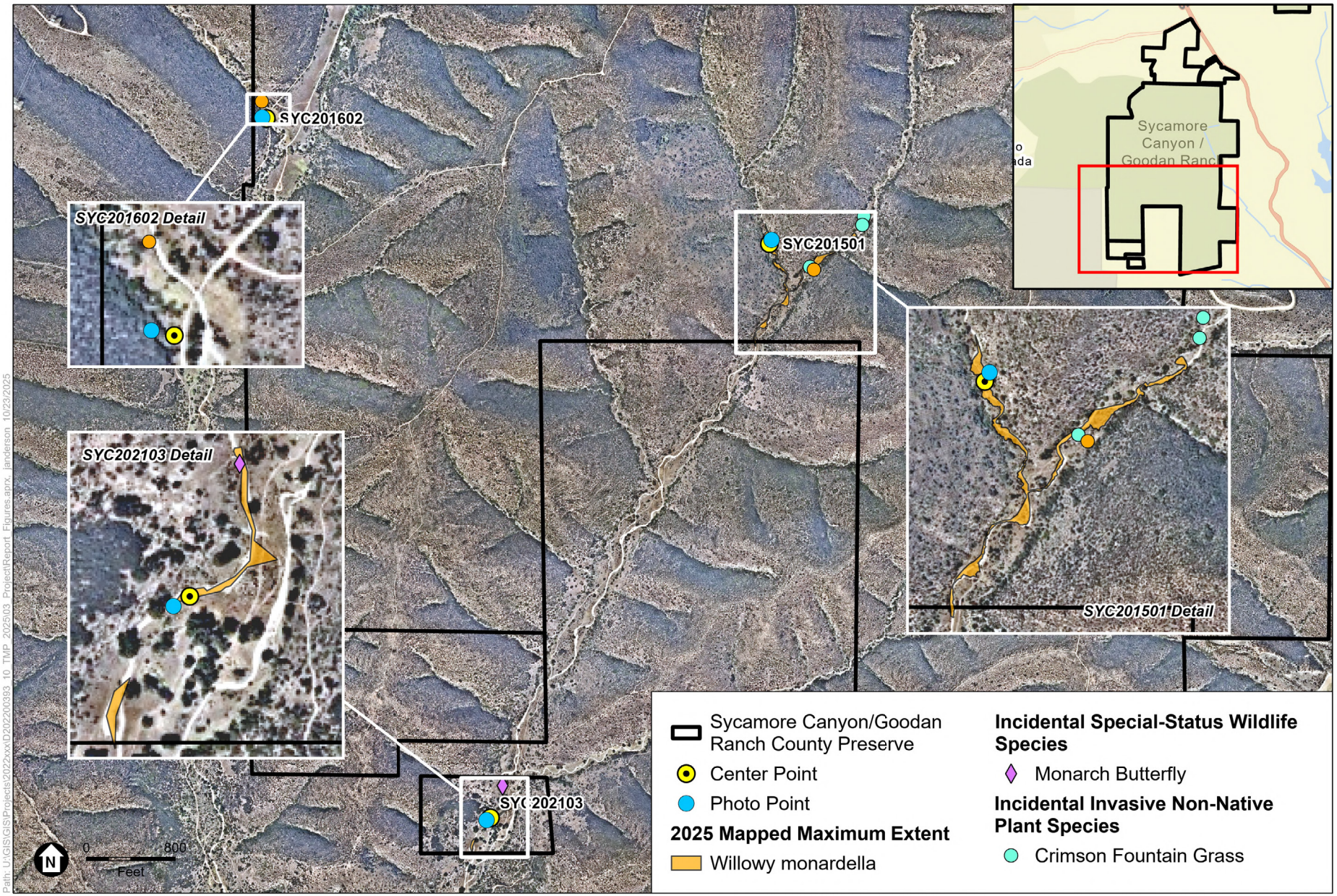
The three monitoring plots within the willowy monardella population in Sycamore Canyon/Goodan Ranch County Preserve were monitored by ESA in 2025. A total of 50 willowy monardella plants were estimated within the monitoring plots. The entire population of willowy monardella within Sycamore Canyon/Goodan Ranch County Preserve is estimated at 474 individual plants. Monitoring plots, center points, photo points, and maximum extent are shown in **Figure 12**. Photo monitoring and representative photographs are provided in **Appendix A**. Across all monitoring plots, willowy monardella habitat contained invasive non-native grasses and herbs, particularly slender oat, purple false brome, brome grasses, tocalote, and annual fescue. Incidental special-status wildlife species detected included monarch butterfly (*Danaus plexippus*) (**Figure 12**). Additional monitoring data, including number of patches, area covered by patches, volume of patches, and growth stages of the plants in each patch, were collected (**Table 14**).

#### *Monitoring Plot Number SYC201501*

Monitoring plot SYC201501 is in the central portion of the willowy monardella population. A total of 41 willowy monardella plants were estimated within the monitoring plot; 0–10 percent were flowering and the remaining were vegetative. Total vegetative cover within the plot was 29.4 percent, with 27.8 percent native plant cover and 1.6 percent non-native plant cover. The dominant native plant species within the monitoring plot was California buckwheat (*Eriogonum fasciculatum*). Invasive non-native plant species included slender oat, purple false brome, ripgut brome, soft brome, compact brome, tocalote, and annual fescue. Invasive non-native crimson fountain grass was detected east of this monitoring plot (**Figure 12**). No special-status species were detected within or outside the monitoring plot.

#### *Monitoring Plot Number SYC201602*

Monitoring plot SYC201602 is in the western portion of the willowy monardella population. No willowy monardella plants were observed within the monitoring plot. Total vegetative cover within the plot was 18.6 percent, with 16.0 percent native plant cover and 2.6 percent non-native plant cover. The dominant native plant species within the monitoring plot was California buckwheat (*Eriogonum fasciculatum*). Invasive non-native plant species included slender oat, purple false brome, ripgut brome, soft brome, compact brome, tocalote, Italian rye grass, shortpod mustard, smooth cat's ear, curly dock, and annual fescue; non-native plant species included stork's bill (*Erodium* spp.) and jointed charlock (*Raphanus raphanistrum*). No special-status species were detected within or outside the monitoring plot.




SOURCE: Nearmap, 4/18/2021; ESA, 2025.

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**Figure 12**

Willowy Monardella Monitoring Results
Sycamore Canyon/Goodan Ranch County Preserve

ESA

**TABLE 14**
**WILLOWY MONARDELLA ADDITIONAL MONITORING DATA: SYCAMORE CANYON/ GOODAN RANCH COUNTY PRESERVE**

| Monitoring Plot | Patch Number | Width (m) | Length (m) | Height (m) | Area (width x length) | Volume (width x length x height) | # of Individuals within Patch | Growth Stage |
|---|---|---|---|---|---|---|---|---|
| SYC201501 | 1 | 0.9 | 1.02 | 0.48 | 0.92 | 0.44 | 1 | 1 Adult |
| | 2 | 1.44 | 0.7 | 0.82 | 1 | 0.83 | 2 | 1 Mature<br>1 Adult |
| | 3 | 1.4 | 1.36 | 0.49 | 1.9 | 0.93 | 1 | 1 Adult |
| | 4 | 0.8 | 0.37 | 0.6 | 0.30 | 0.18 | 1 | 1 Adult |
| | 5 | 1.46 | 1.39 | 0.74 | 2.03 | 1.5 | 5 | 2 Mature<br>3 Adults |
| | 6 | 1.51 | 1.88 | 0.52 | 2.84 | 1.48 | 3 | 1 Mature<br>2 Adults |
| | 7 | 0.94 | 0.83 | 0.67 | 0.78 | 0.52 | 2 | 2 Adults |
| | 8 | 1.47 | 0.86 | 0.77 | 1.26 | 0.97 | 3 | 3 Adults |
| | 9 | 0.24 | 0.62 | 0.51 | 0.15 | 0.08 | 1 | 1 Mature |
| | 10 | 1.32 | 0.68 | 0.45 | 0.89 | 0.4 | 2 | 2 Adults |
| | 11 | 1.28 | 4.67 | 0.55 | 5.98 | 3.29 | 11 | 1 Mature<br>10 Adults |
| | 12 | 2.28 | 2.17 | 0.88 | 4.95 | 4.35 | 4 | 4 Adults |
| | 13 | 1.12 | 1 | 0.93 | 1.12 | 1.04 | 1 | 1 Adult |
| | 14 | 2.17 | 1.83 | 0.53 | 3.97 | 2.1 | 4 | 1 Mature<br>3 Adults |
| SYC201602 | 1 | -- | -- | -- | -- | -- | 0 | N/A |
| SYC202103 | 1 | 0.48 | 0.58 | 0.61 | 0.28 | 0.17 | 2 | 2 Mature |
| | 2 | 1.35 | 1.30 | 0.76 | 1.74 | 1.33 | 1 | 1 Adult |
| | 3 | 1.70 | 0.64 | 1.04 | 1.08 | 1.13 | 2 | 1 Mature<br>1 Adult |
| | 4 | 1.09 | 0.81 | 0.38 | 0.89 | 0.34 | 4 | 1 Mature<br>3 Juveniles |

### *Monitoring Plot Number SYC202103*

Monitoring plot SYC202103 is in the southern portion of the willowy monardella population. A total of nine willowy monardella plants were estimated within the monitoring plot; 50–75 percent were flowering and the remaining were vegetative. Total vegetative cover within the plot was 27.4 percent, with 24.0 percent native plant cover and 3.4 percent non-native plant cover. The dominant native plant species within the monitoring plot was California buckwheat. Invasive non-native plant species included slender oat, purple false brome, ripgut brome, soft brome, compact brome, tocalote, shortpod mustard, smooth cat's ear, and annual fescue. Incidental special-status wildlife species detected north of this monitoring plot included monarch butterfly (**Figure 12**).

### *Adaptive Management Recommendations*

Adaptive management for the willowy monardella monitoring plots was implemented in 2025 as part of the Sycamore Canyon and Goodan Ranch Preserve Covered Species Threat Reduction Project, which is funded through the 30x30 grant program. Grant-funded management will continue through February 2026. Based on the results of the 2025 surveys, TMP management goals and objectives, and the 30x30 grant program–funded adaptive management actions, no additional management is recommended for 2026. Non-native plant cover was 1.6 percent, 2.6 percent, and 3.4 percent, respectively, within the monitoring plots, which is below the 10 percent non-native plant cover TMP-recommended threshold for management (ESA 2024).

## 4.1.9 Regional MSP Rare Plant Monitoring

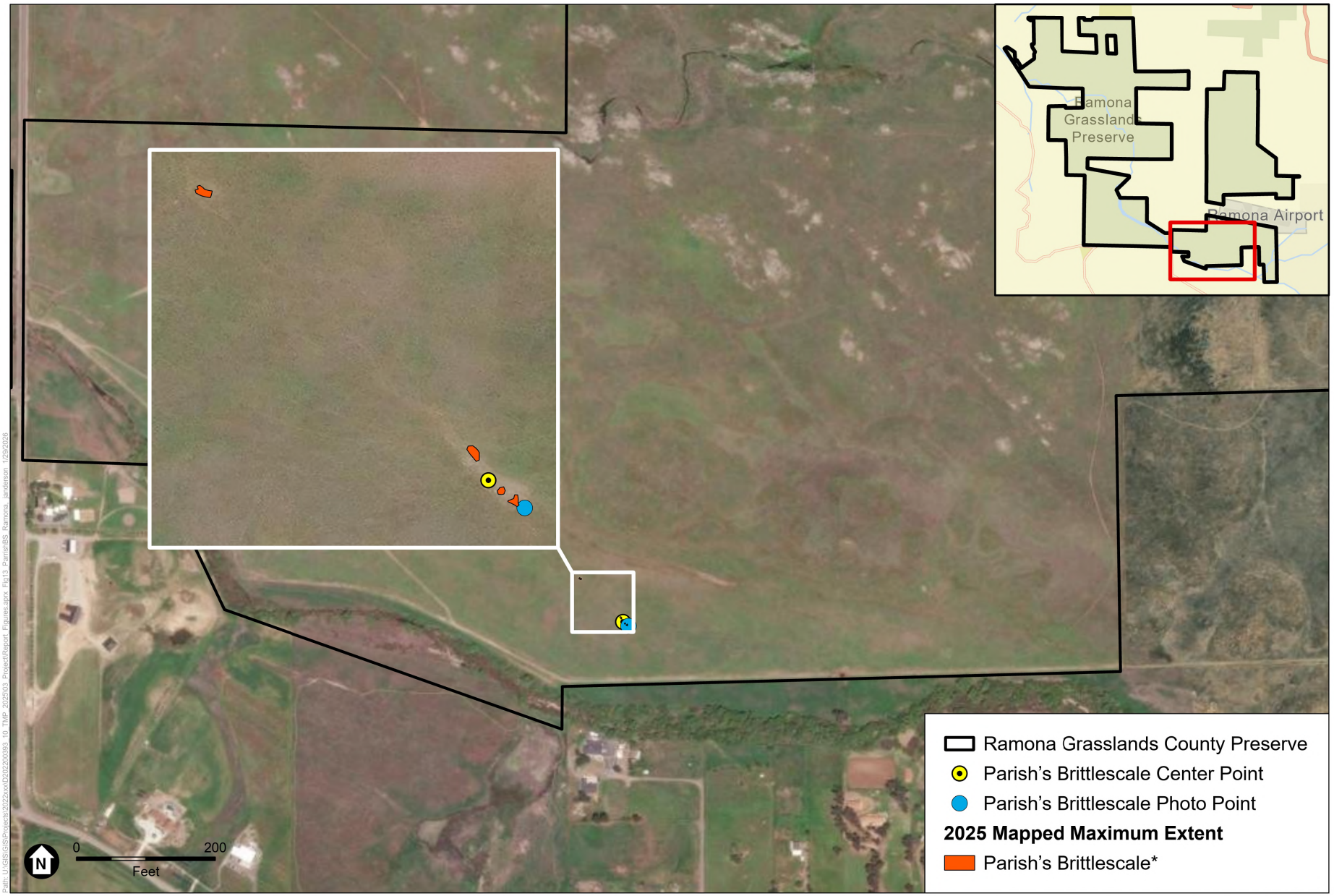
Through ROE permits issued by DPR, Mulligan Biological Consulting (contracted by SANDAG) conducted MSP rare plant monitoring for Parish's brittlescale at one permanent monitoring plot at Ramona Grasslands County Preserve; for Orcutt's brodiaea at one permanent monitoring plot at Escondido Creek County Preserve, Simon County Preserve, and Mount Olympus County Preserve, respectively; for Otay tarplant at two permanent monitoring plots at Furby-North County Preserve; for Baja California oatgrass (*Sphenopholis interrupta* ssp. *californica*) at Sycamore Canyon/Goodan Ranch County Preserve; and for Encinitas baccharis at one permanent monitoring plot at El Capitan County Preserve in 2025. Results of MSP rare plant monitoring by Mulligan Biological Consulting are provided in **Table 15**. MSP rare plant monitoring results for Parish's brittlescale at Ramona Grasslands County Preserve are depicted in **Figure 13**. MSP rare plant monitoring results for Orcutt's brodiaea at Simon County Preserve are depicted in **Figure 3**. MSP rare plant monitoring results for Otay tarplant at Furby-North County Preserve are depicted in **Figure 14**. MSP rare plant monitoring results for Baja California oatgrass at Sycamore Canyon/Goodan Ranch County Preserve are depicted in **Figure 2**.

**TABLE 15**
**REGIONAL MSP 2025 RARE PLANT MONITORING RESULTS**

| Species | County Preserve | Plot #; MSP Occurrence ID | Monitoring Plot Population[a] | Maximum Extent Population Estimate[b] | Native Plant % Cover | Non-Native Plant % Cover | Threats |
|---|---|---|---|---|---|---|---|
| Parish's brittlescale *Atriplex parishii* | Ramona Grasslands | ATPA2_5RAGR001 | 81 | 119 | 0.8 | 11.0 | Non-native grasses, thatch, and suffocation from cow manure |
| Orcutt's brodiaea *Brodiaea orcuttii* | Escondido Creek | BROR_6ECPR024 | 2 | 98 | 39.0 | 19.8 | Non-native grasses, forbs, and thatch |
| | Simon | BROR_4SIPR013 | 34 | 3,500 | 14.6 | 58.4 | Non-native grasses, forbs, and thatch |
| | Mount Olympus | BROR_8MTOL023 | 21 | 1,933 | 84.6 | 2.2 | Non-native grasses |
| Otay tarplant *Deinandra conjugens* | Furby-North | DECO13_3OMEA026 | 610 | 783 | 28.8 | 15.0 | Non-native grasses, forbs, and thatch |
| | | DECO13_3OMEA40 | 123 | 300 | 35.4 | 8.0 | Non-native grasses and forbs |
| Baja California oatgrass[c] *Sphenopholis interrupta* ssp. *californica* | Sycamore Canyon/ Goodan Ranch | SPINCA_4SYCA008 | 81 | 164 | 30.6 | 6.8 | Non-native grasses |
| Encinitas baccharis *Baccharis vanessae* | El Capitan | BAVA3_4ECOS021 | 14 | 31 | 33.0 | 4.0 | Non-native grasses |

Notes:

a. Monitoring plot population is the number of plants identified in the monitoring plot.
b. Maximum extent population is the total number of plants identified in the preserve, including the plants identified in the monitoring plot.
c. Baja California oatgrass is not a species covered under the TMP.




SOURCE: ESRI, 2025

**NOTE: Parish's brittlescale IMG monitoring results provided by Mulligan Biological Consulting.*

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**Figure 13**

Parish's Brittlescale Monitoring Results
Ramona Grasslands County Preserve

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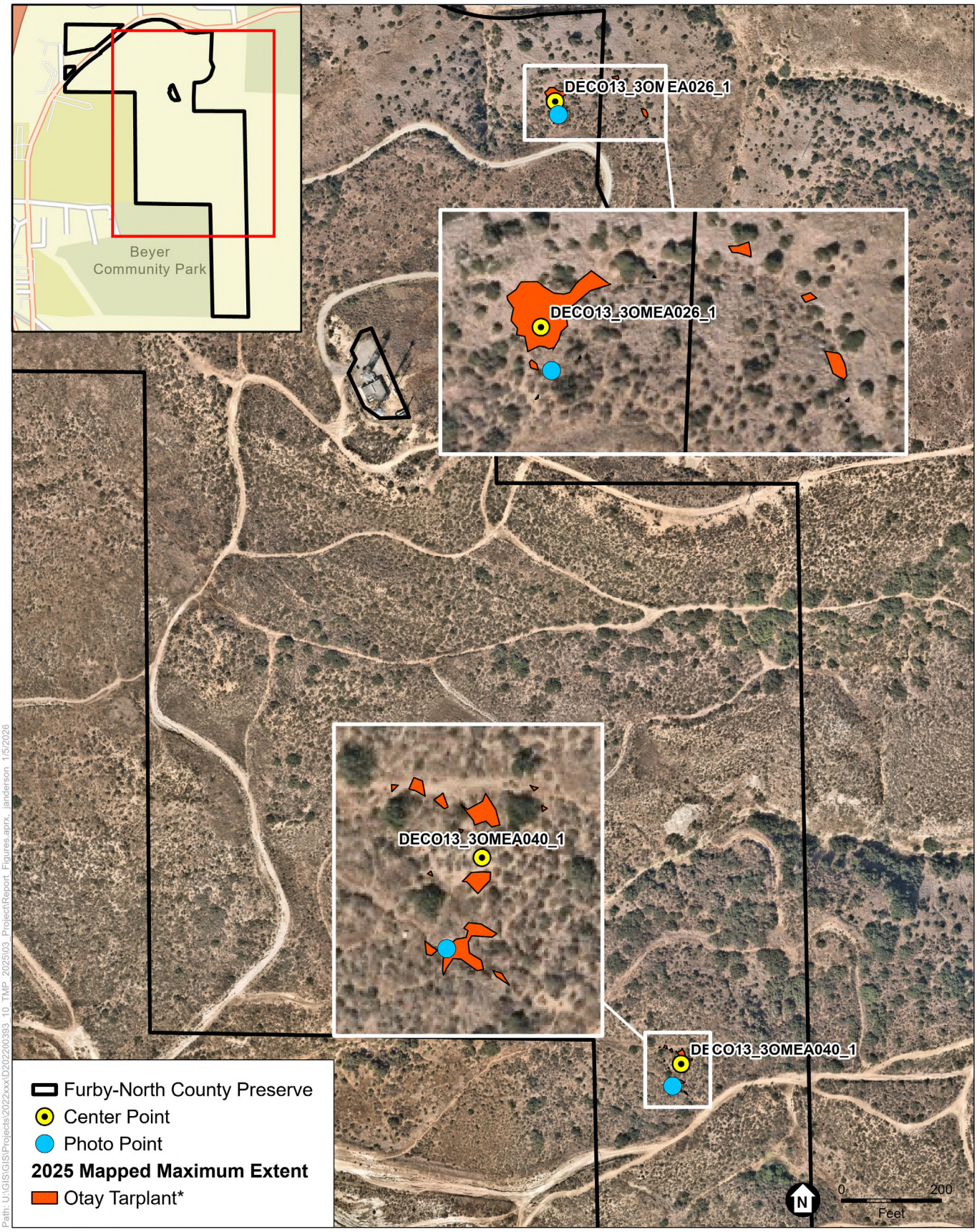


SOURCE: Nearmap, 9/21/2020
**NOTE: IMG monitoring results provided by Mulligan Biological Consulting.*

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**Figure 14**
Otay Tarplant Monitoring Results
Furby-North County Preserve

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# 4.2 Harbison's Dun Skipper

## 4.2.1 Harbison's Dun Skipper Host Plant Mapping

### Sage Hill County Preserve

Locations of San Diego sedge, the larval host plant of HDS, within suitable habitat of the south-flowing tributary of the Escondido Creek system within Sage Hill County Preserve are depicted in **Figure 15**. Approximately 76 San Diego sedge plants were observed within the tributary during host plant mapping in 2025. More plants are likely within the tributary, but large, dense patches of poison oak made some areas physically and visually inaccessible.

## 4.2.2 Adult Flight Surveys

### Hellhole Canyon County Preserve

HDS adult flight surveys were conducted at two locations (survey locations 1 and 2) around large patches of San Diego sedge within suitable habitat along Hell Creek and its southern tributary in Hellhole Canyon County Preserve (**Figure 16**). During the first adult flight survey on May 22, 2025, HDS was not observed at either survey location. During the second adult flight survey on June 19, 2025, one male HDS was observed at survey location 1, where it was seen nectaring on black sage. Two pairs (4 individuals) of HDS were observed at survey location 2 where they were seen chasing one another and basking in the sun on the leaves of wild California grape (*Vitis californica*). All butterfly species and potential nectar sources observed during the two adult flight surveys are presented in **Table 16**. Monitoring locations and HDS detections are depicted in **Figure 16**. Incidental special-status species observed included Belding's orange-throated whiptail (*Aspidoscelis hyperythra beldingi*) and turkey vulture (**Figure 16**). Representative photographs from adult surveys, including HDS observations, are provided in **Appendix C**, *Harbison's Dun Skipper Representative Photographs and Field Forms*.

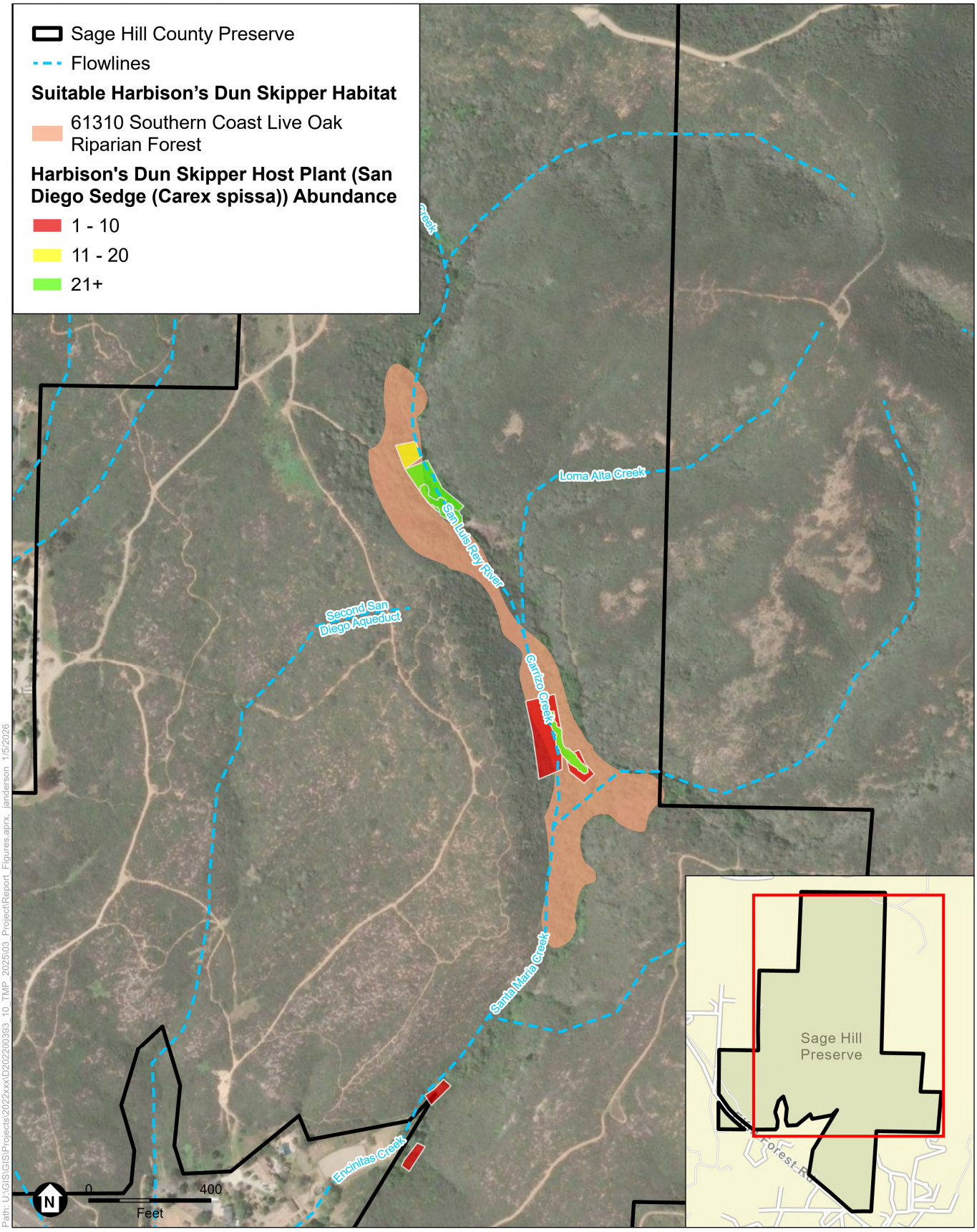
Habitat assessments were conducted at both adult flight survey locations concurrently with the first adult flight survey. The woodland habitat at survey location 1 consisted of 15 percent oaks, 30 percent sycamores (*Platanus* sp.), 40 percent willows (*Salix* spp.), and 15 percent cottonwoods (*Populus* sp.). The woodland habitat at survey location 2 consisted of 30 percent oaks, 15 percent sycamores, and 55 percent willows. The condition of San Diego sedge host plant populations at both survey locations ranged from all green (healthy) to mostly brown (dead). At both survey location 1 and 2, most San Diego sedge plants were seen to be green with brown tips, suggesting only minor drought or water stress. Climate change was the main threat detected at the survey locations during the threats assessment as other plant species within the habitat, such as willows and oaks, showed signs of drought stress. While San Diego sedge is not restricted to oak woodlands, this species is commonly found inhabiting partially shaded riparian oak woodlands (Brown 1991). The full habitat assessment data matrix can be found in **Appendix C**.

**TABLE 16**
**OBSERVED BUTTERFLY AND POTENTIAL NECTAR SOURCES: HELLHOLE CANYON COUNTY PRESERVE**

| Common Name | Scientific Name |
|---|---|
| **Butterflies Observed** | |
| California sister | *Adelpha californica* |
| Orange sulphur | *Colias eurytheme* |
| Bernardino blue | *Euphilotes bernardino* |
| Harbison's dun skipper | *Euphyes vestris harbisoni* |
| Silvery blue | *Glaucopsyche lygdamus* |
| Pale tiger swallowtail | *Papilio eurymedon* |
| Western tiger swallowtail | *Papilio rutulus* |
| Umber skipper | *Poanes melane* |
| Mourning cloak | *Nymphalis antiopa* |
| Gray hairstreak | *Strymon melinus* |
| California dogface | *Zerene eurydice* |
| **Potential Nectar Sources Observed** | |
| Foothill deervetch | *Acmispon brachycarpus* |
| Deerweed | *Acmispon glaber* |
| Hemp dogbane | *Apocynum cannabinum* |
| Mulefat | *Baccharis salicifolia* |
| Italian thistle* | *Carduus pycnocephalus** |
| California brittlebush | *Encelia californica* |
| Golden yarrow | *Eriophyllum confertiflorum* |
| Seep monkeyflower | *Erythranthe guttata* |
| Shortpod mustard* | *Hirschfeldia incana** |
| Southern honeysuckle | *Lonicera subspicata* |
| Arroyo lupine | *Lupinus succulentus* |
| Chaparral mallow | *Malacothamnus fasciculatus* |
| Indian sweetclover* | *Melilotus indica** |
| Caterpillar phacelia | *Phacelia cicutaria* |
| Cudweed | *Pseudognaphalium* sp. |
| Sierra milkwort | *Rhinotropis cornuta* |
| Blackberry | *Rubus ursinus* |
| California rose | *Rosa californica* |
| Black sage[a] | *Salvia mellifera*[a] |
| Blue elderberry | *Sambucus cerulea* |
| Nuttall's snapdragon | *Sairocarpus nuttallianus* |
| California bee plant | *Scrophularia californica* |
| Parish's nightshade | *Solanum parishii* |
| Spiny sowthistle* | *Sonchus oleraceus** |

Notes:

a. Harbison's dun skipper was observed nectaring on this species during 2025 adult flight surveys.
* Non-native plant species.




SOURCE: Nearmap, 4/18/2021; ESA, 2025.

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**Figure 15**

Harbison's Dun Skipper Host Plant Mapping
Sage Hill County Preserve

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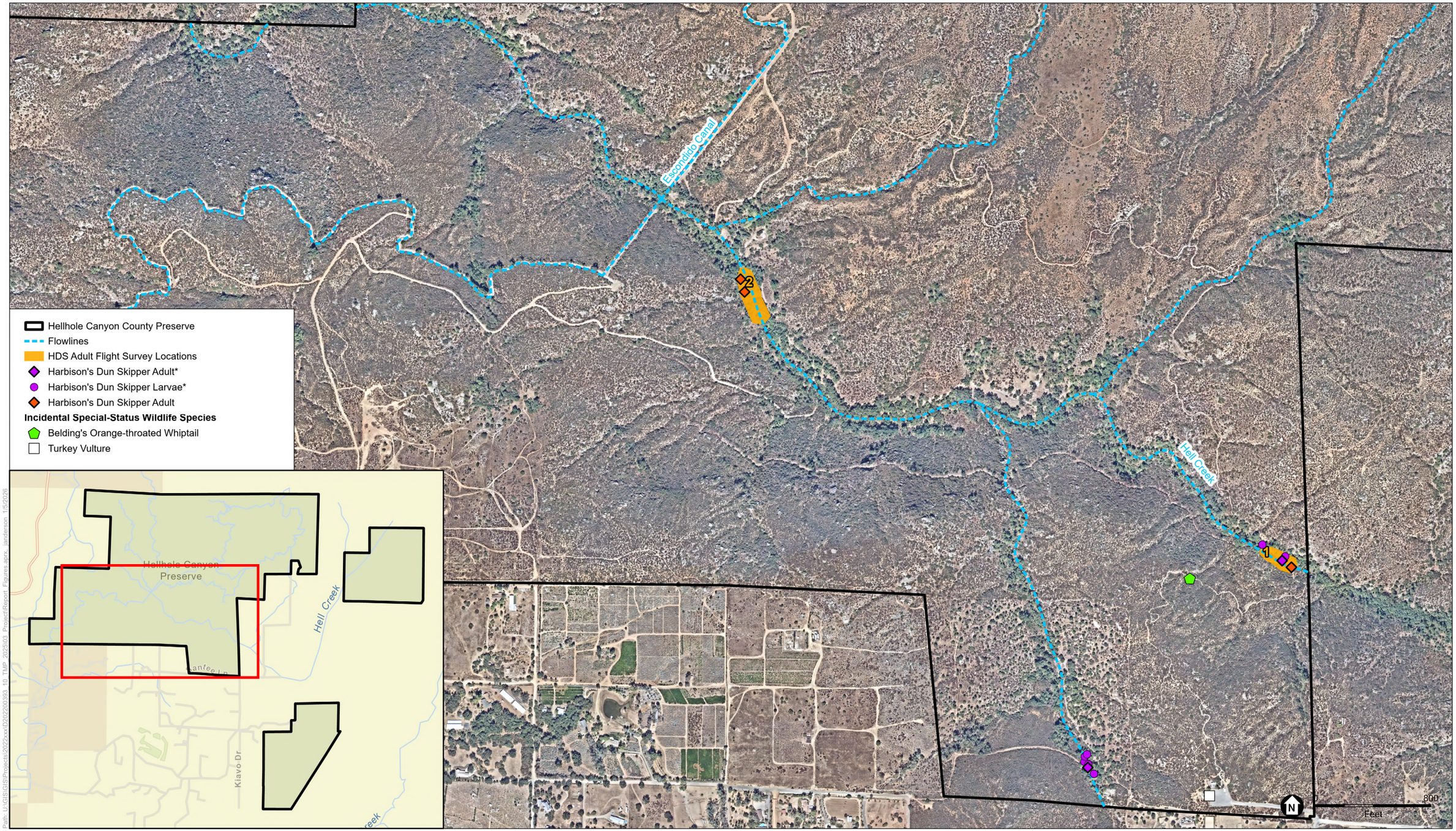


SOURCE: Nearmap, 2020; ESA, 2025.
**NOTE: * Larval and adult Harbison's dun skipper monitoring results provided by David K. Faulkner and Dr. Daniel Marschalek.*

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**Figure 16**
Harbison's Dun Skipper Monitoring Results
Hellhole Canyon County Preserve

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### *Adaptive Management Recommendations*

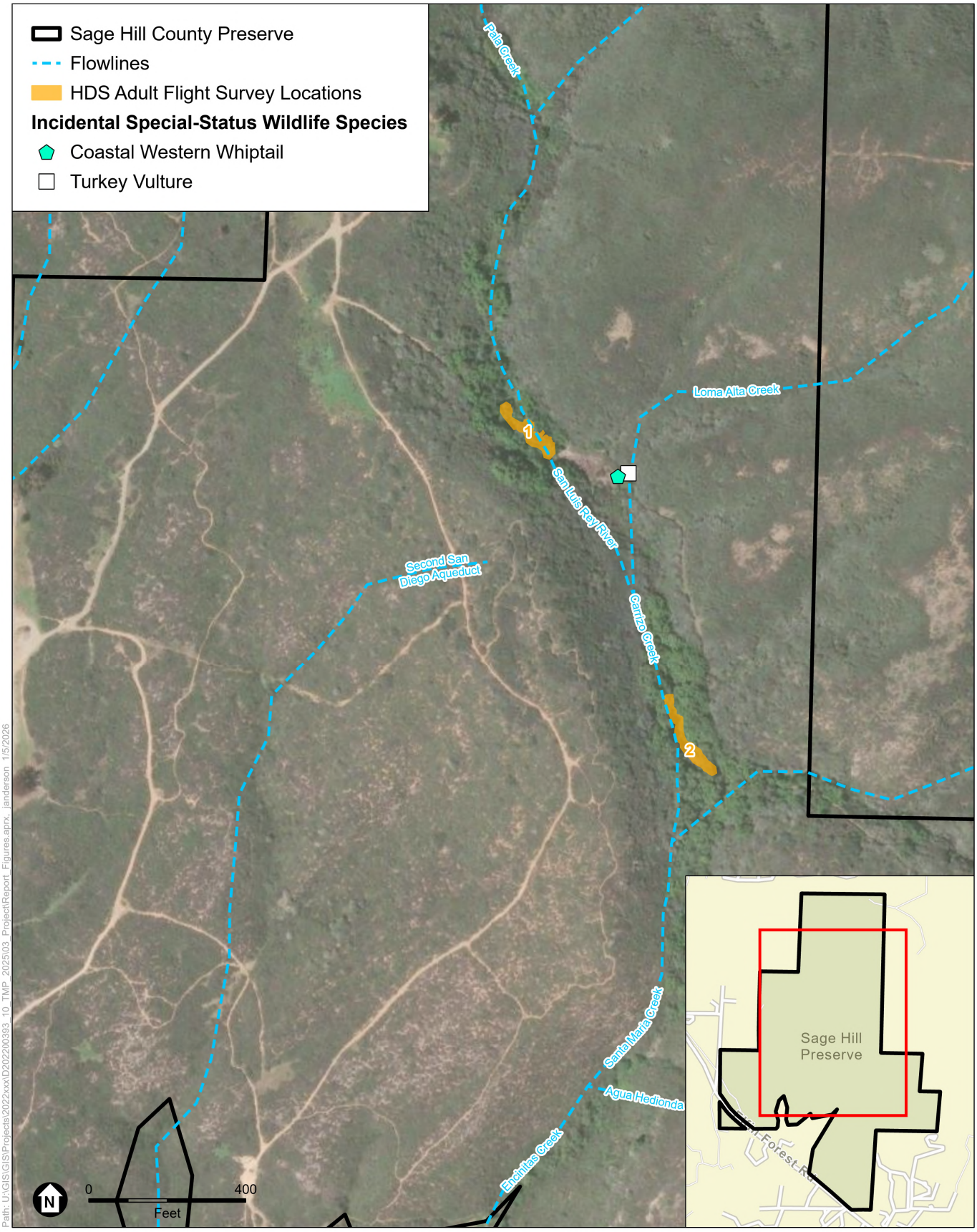
The results of the 2025 surveys, TMP management goals and objectives, and adaptive management actions outlined in the TMP were used to develop the following recommendations:

- **Thin native vegetation to reduce competition**. At survey location 2 in Hellhole Canyon County Preserve, native plants such as wild California grape have become overgrown, covering many potential nectar sources previously identified at this survey location. Thinning native plants by a qualified restoration specialist around this survey location is recommended to promote the persistence of potential HDS nectar sources.
- **Monitor/maintain nectar source seeded areas along Hell Creek**. Areas that were seeded with potential native nectar sources in 2024 along Hell Creek adjacent to and upstream of survey location 2 (**Figure 16**), should be monitored to assess seeding success, document site conditions and potential nectaring HDS individuals, and implement as needed follow-up management activities, such as hand weeding and additional seeding. In 2025, no seedling germination or recruitment was observed in these areas, likely due to low rainfall during the 2024–2025 rainy season.
- **Coordinate with other entities prior to conducting management or monitoring.** Future monitoring for HDS should be coordinated with Dr. Daniel Marschalek with the University of Central Missouri to implement consistent monitoring protocols, limit duplication of efforts, provide cumulative adaptive management recommendations, and provide transparency on any implemented management activities.

## Sage Hill County Preserve

HDS adult flight surveys were conducted at two locations (survey locations 1 and 2) around patches of San Diego sedge within suitable habitat along the south-flowing tributary of the Escondido Creek system that bisects the Sage Hill County Preserve (**Figure 17**). During both adult flight surveys on May 23 and June 17, 2025, no HDS were observed at either survey location 1 or 2. All butterfly species and potential nectar sources observed during the two adult flight surveys are presented in **Table 17**. Monitoring locations are depicted in **Figure 17**. Incidental special-status species observed included coastal western whiptail (*Aspidoscelis tigris stejnegeri*) and turkey vulture (**Figure 17**). Representative photographs from adult surveys are provided in **Appendix C**.

Habitat assessments were conducted at both adult flight survey locations concurrently with the first adult flight survey. The woodland habitat at survey location 1 consisted of 80 percent oaks and 20 percent willows. The woodland habitat at survey location 2 consisted of 65 percent oaks and 25 percent willows. The condition of San Diego sedge host plant populations at both survey locations ranged from all green (healthy) to mostly brown (dead). At survey location 1, most San Diego sedge plants were seen to be all green with brown tips, suggesting only minor drought or water stress. At survey location 2, San Diego sedge plants were all green. Climate change was the main threat detected at the survey locations during the threats assessment as other plant species within the habitat, such as willows and oaks, showed signs of heat and/or drought stress. Additional threats detected at the survey locations included invasive non-native plant species such as pampas grass, umbrella sedge (*Cyperus alternifolius*), and smilo grass (*Stipa miliacea*), as well as an authorized trail within survey location 1 and adjacent to survey location 2, where some native plants, including HDS host plant San Diego sedge and slender sunflower (*Helianthus gracilentus*), were trampled. The full habitat assessment data matrix can be found in **Appendix C**.




SOURCE: ESRI, 2025; ESA, 2025.

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**Figure 17**

Harbison's Dun Skipper Monitoring Results
Sage Hill County Preserve

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**TABLE 17**
**OBSERVED BUTTERFLY AND POTENTIAL NECTAR SOURCES: SAGE HILL COUNTY PRESERVE**

| Common Name | Scientific Name |
|---|---|
| **Butterflies Observed** | |
| California sister | *Adelpha californica* |
| Bernardino blue | *Euphilotes bernardino* |
| Mourning cloak | *Nymphalis antiopa* |
| Western tiger swallowtail | *Papilio rutulus* |
| Umber skipper | *Poanes melane* |
| Hedgerow hairstreak | *Satyrium saepium* |
| **Potential Nectar Sources Observed** | |
| Italian thistle* | *Carduus pycnocephalus** |
| Slender sunflower | *Helianthus gracilentus* |
| Shortpod mustard* | *Hirschfeldia incana** |
| Scarlet pimpernel | *Lysimachia arvensis* |
| Watercress | *Nasturtium officinale* |
| Caterpillar phacelia | *Phacelia cicutaria* |
| Dock | *Rumex* sp. |
| Black sage | *Salvia mellifera* |
| Blue elderberry | *Sambucus cerulea* |
| Ajuga hedge nettle | *Stachys ajugoides* |
| Parish's nightshade | *Solanum parishii* |
| Spiny sowthistle* | *Sonchus oleraceus** |

Notes:
* Non-native plant species.

## *Adaptive Management Recommendations*

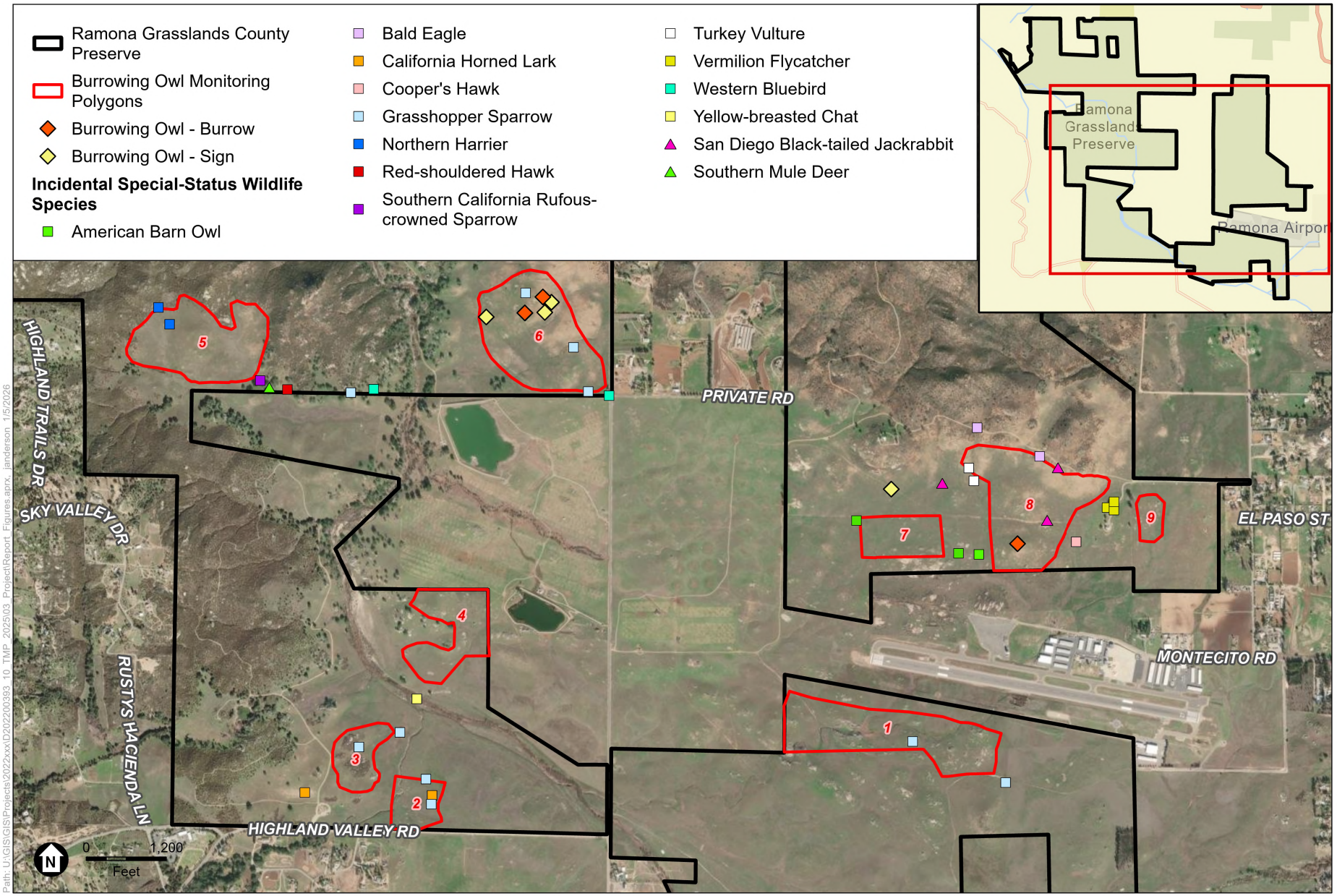
The results of the 2025 surveys, TMP management goals and objectives, and adaptive management actions outlined in the TMP were used to develop the following recommendations:

- **Conduct focused invasive non-native plant species removal.** Smilo grass and pampas grass were detected within both survey locations at Sage Hill County Preserve. Many pampas grass individuals had recent sign of being chemically treated; however, some individuals have resprouted. It is recommended that these invasive non-native plant populations be removed to stop additional encroachment into suitable HDS habitat.
- **Seed native nectar sources along the south-flowing tributary of the Escondido Creek in the Sage Hill County Preserve.** San Diego sedge host plant population is moderate in size within the south-flowing tributary of the Escondido Creek, but nectar sources are very limited. Seeding of potential native nectar sources should be implemented around the two adult flight survey monitoring locations. Seeding considerations include the following:
  - Potential native nectar sources can include hedgenettle, cobweb thistle, narrowleaf milkweed, and chaparral bushmallow (Marschalek and Deutschman 2015, 2016).

- Document the seed source (collection location) and confirm it is ecologically appropriate for Sage Hill County Preserve. Seed may be rejected based on its source.
- Document seed purity and germination percentages to determine pure live seed quantity.
- Apply seed in the fall, prior to first rains (e.g., November). Seed applied at other times of the year are more likely to be lost to predation and/or not receive sufficient rainfall to support germination and survival of seedlings.
- Prepare seeding areas in willow riparian and oak riparian woodland areas by thinning thatch and reducing weed presence/competition, as needed. The optimal seeding condition is to provide seed direct contact with the soil and space to grow while retaining some organic debris (e.g., organic mulch) and existing native plant growth in place.
- Apply seed by hand. Select method (e.g., selective hand application or use of "belly spreader") based on the quantity of seed and size of seeding areas. Lightly rake seed into the top 0.25 inch of soil and provide "light" natural organic mulch cover (less than 80 percent cover to provide light and space for germinates).
- Apply species in ecologically appropriate areas (e.g., closer or further from the creek) within willow riparian and oak riparian woodland areas. Depending on the species and habitat conditions, species may be seeded together or in separate locations.
- Document date of application, species and quantities of seed applied, and locations via GPS coordinates.
- Conduct follow-up maintenance and monitoring to assess seeding success, site conditions, and implement as needed follow-up management activities.

## 4.3 Burrowing Owl

Monitoring polygons were revised in 2022 based on the monitoring results that year; 2025 presence/absence and habitat suitability monitoring for burrowing owl occurred across these nine revised monitoring polygons (**Figure 18**). During the 2025 breeding burrowing owl surveys within Ramona Grasslands County Preserve, no burrowing owls or active burrows were observed by ESA. Sign of burrowing owl activity was found in monitoring polygon 6 during survey 1. Extensive whitewash and at least one presumed burrowing owl pellet were found near a suitable burrow. There was no indication that a burrowing owl was still using the burrow and the sign appeared old. The site may have been used by one burrowing owl as a wintering site in 2024/2025 but there were no signs of a breeding attempt. No new signs of activity were noted during subsequent surveys. Incidentally observed special-status species included American barn owl (*Tyto furcata* [*alba*]), bald eagle, California horned lark (*Eremophila alpestris actia*), Cooper's hawk (*Astur cooperii*), grasshopper sparrow (*Ammodramus savannarum*), northern harrier, red-shouldered hawk (*Buteo lineatus*), Southern California rufous-crowned sparrow, turkey vulture, vermilion flycatcher (*Pyrocephalus rubinus*), western bluebird (*Sialia mexicana*), yellow-breasted chat (*Icteria virens*), San Diego black-tailed jackrabbit, and southern mule deer (*Odocoileus hemionus fuliginata*) (**Figure 18**). The habitat and threats assessment survey included an evaluation of the vegetation and topography as it pertains to the needs of the burrowing owl. Field forms, including the habitat and threats assessment form, are included in **Appendix D**, *Burrowing Owl Field Forms*.




SOURCE: ESRI, 2025; ESA, 2025

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**Figure 18**

Burrowing Owl Monitoring Results
Ramona Grasslands County Preserve

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### 4.3.1 Habitat and Threats Assessment

Habitat and threats were assessed during surveys to determine: (1) if identified threats are having a direct negative effect on the species or habitat, and (2) if adaptive management actions need to be implemented.

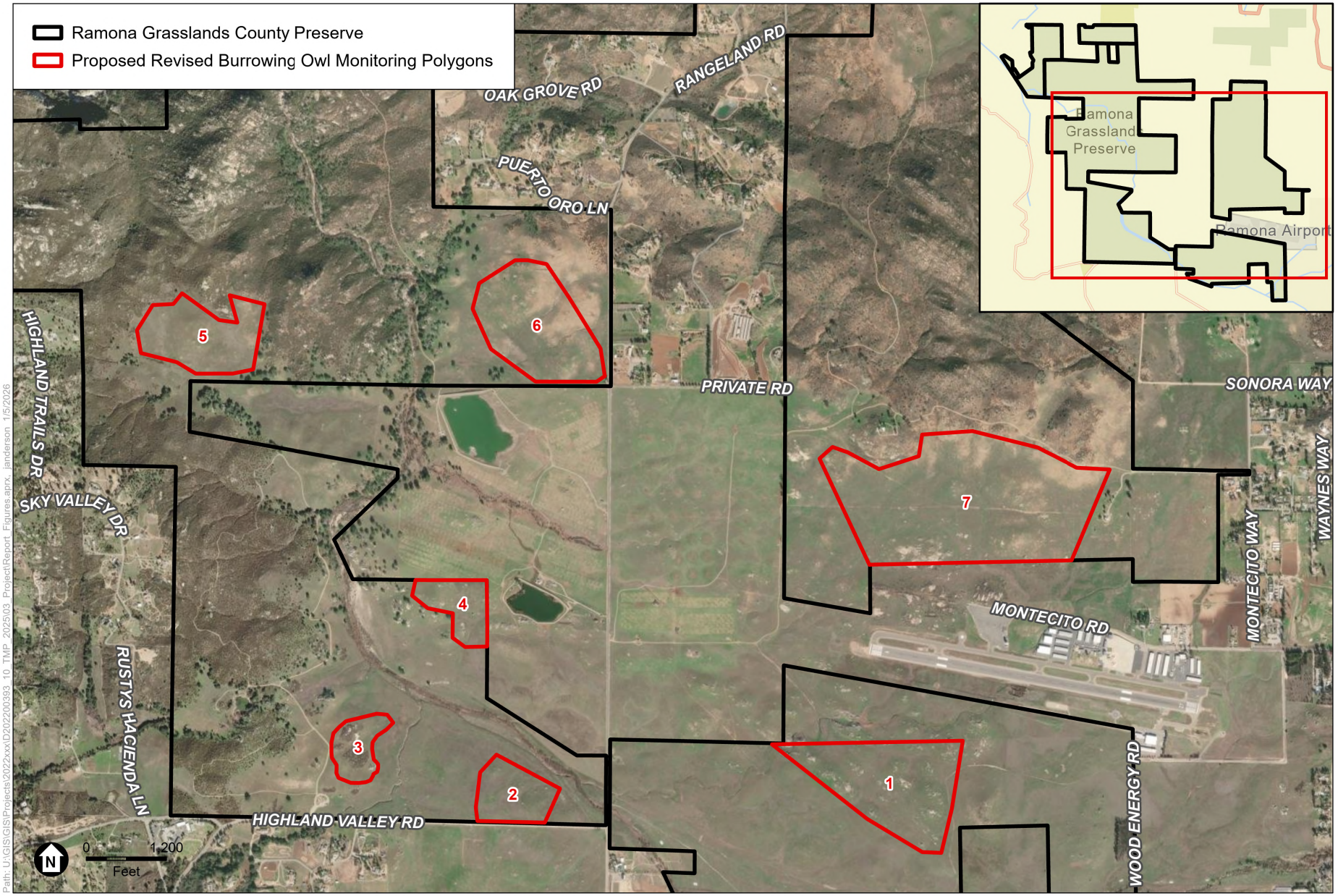
Suitable habitat characteristics include open, relatively flat expanses of grassland with short, sparse vegetation for foraging and presence of small mammal burrows for nesting, breeding, and roosting. Ramona Grasslands County Preserve does provide some high-quality suitable habitat, but much of the land area that is topographically suitable and provides suitable burrows, has tall dense annual vegetation that obscures the entrances to those burrows, making them unlikely to become occupied. Habitat assessments for each monitoring polygon are as follows. Monitoring polygon 1 had very few ground squirrel observations or burrow complexes; other small mammal burrows (gophers and cottontail) were present but sparse. This polygon had several large rock outcrops, but fewer burrows around them than in other parcels. Monitoring polygons 2 and 3 had a high concentration of ground squirrel colonies, most of which were directly adjacent to rocky outcrops, but annual vegetation was tall enough to obscure many of the otherwise suitable burrows. Monitoring polygon 4 consisted of grassland with several rocky outcrops. The ground squirrel colonies were concentrated around the rocky outcrops. The southern portion of the polygon had few suitable burrows and taller annual vegetation. The highest concentration of suitable burrows was in the northern portion of the monitoring polygon just south of the preserve boundary. Annual vegetation here was not as tall or dense. Monitoring polygons 5 and 6 had multiple ground squirrel colonies within their rolling grasslands landscape. These monitoring polygons have ideal suitable habitat for burrowing owl. Monitoring polygons 7, 8, and 9 were characterized by relatively flat grasslands and multiple ground squirrel colonies. Monitoring polygon 8 had the highest concentration of burrows, and the majority of them had active ground squirrel activity, particularly in the northern portion of the polygon. The following threats were observed:

- **Predator presence.** Mammalian predators observed included coyotes (*Canis latrans*) (seen on most preserve properties and during most surveys), striped skunk (*Mephitis mephitis*), and long-tailed weasel (*Neogale frenata*). Potential avian predators that were observed include red-tailed hawk (*Buteo jamaicensis*), Cooper's hawk, bald eagle, golden eagle, American peregrine falcon (*Falco peregrinus anatum*), American crow (*Corvus brachyrhynchos*), and common raven (*Corvus corax*).
- **Thick or tall vegetation.** Monitoring polygons 1, 2, and 3 had vegetation high enough to discourage burrowing owl use. This vegetation mostly consisted of invasive non-native grasses and other invasive non-native forbs such as mustards.

### 4.3.2 Adaptive Management Recommendations

The Ramona Grasslands County Preserve has the potential to provide extensive suitable breeding and foraging habitat for burrowing owl; however, ESA surveys conducted in 2025 did not find any evidence of breeding within the surveyed polygons. The results of the 2025 surveys, TMP management goals and objectives, and the adaptive management actions outlined in the TMP were used to develop the following recommendations:

- **Revise monitoring polygons.** Based on the 2025 breeding burrowing owl surveys, four of the nine monitoring polygons are recommended to be modified to maximize the potential to detect and locate burrowing owls, their burrows, and/or their sign on the preserve during future surveys (**Figure 19**). Proposed revisions to monitoring polygons considered presence of rocky outcrops, more open grassland areas, increased squirrel activity, and higher density of burrows.




SOURCE: ESRI, 2025; ESA, 2025

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**Figure 19**

Burrowing Owl Revised Monitoring Polygons
Ramona Grasslands County Preserve

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- **Reduce vegetation height.** Suitable burrows are found throughout the preserve; however, they were covered by tall vegetation by the end of the survey period. Areas with suitable burrows would benefit from reduction of vegetation near rock outcrops or other areas of ground squirrel activity.
- **Coordinate with other entities prior to conducting management or monitoring.** Future monitoring for burrowing owl should be coordinated with the San Diego Zoo Institute for Conservation Research to determine their timing and type of monitoring surveys at Ramona Grasslands County Preserve.

## 4.4 Coastal Cactus Wren

ESA biologists conducted three avian point count surveys in 2025. Surveys were conducted at six previously established point count stations within the Lakeside Linkage County Preserve. Additionally, ESA biologists performed nesting bird surveys with a focus on coastal cactus wren in areas with suitable patches of cactus. These surveys were aimed at determining the status of coastal cactus wren within Lakeside Linkage County Preserve. Fifty-two avian species were detected during the avian point count and nesting bird surveys on the central property of Lakeside Linkage County Preserve in 2025 (**Table 18**). During survey 1 (early May), three adult coastal cactus wrens were detected during point counts. During survey 2 (early June), two adult coastal cactus wrens were detected during point counts. During survey 3 (late June), one adult and one juvenile coastal cactus wren were detected during point counts (**Table 18** and **Figure 20**). In addition to the coastal cactus wrens detected during point count surveys, a pair was detected outside the preserve boundary on the west-facing slope between points 1 and 2. During survey 1, a coastal cactus wren was observed visiting a possible nest in this area and a pair was seen at this location during survey 2 (**Figure 20**). Additional special-status species detected during avian point count surveys included Belding's orange-throated whiptail, coastal California gnatcatchers with an active nest, Cooper's hawk, red-shouldered hawk, Southern California rufous-crowned sparrow, turkey vulture, Vaux's swift (*Chaetura vauxi*), western bluebird, and yellow warbler (*Setophaga petechia*) (**Figure 20**). Avian point count data sheets are provided in **Appendix E**, *Coastal Cactus Wren Photo Monitoring and Field Forms*.

Coastal cactus wren nesting behavior was documented in both restoration areas (R1 and R2) within the preserve in 2025. Multiple nests were found in both areas, and a nest in R2 produced at least one fledgling (observed during survey 3). Nests were also seen from a distance on the west-facing slope outside the preserve boundary, but the activity and/or success of those nests could not be determined (**Figure 20**). Nests were found in both coast prickly pear (*Opuntia littoralis*) and coast cholla (*Cylindropuntia prolifera*).

**TABLE 18**
**COASTAL CACTUS WREN AVIAN POINT COUNT SURVEY RESULTS: LAKESIDE LINKAGE COUNTY PRESERVE**

| Common Name by Family | Scientific Name | 5/6/2025 | 6/3/2025 | 6/27/2025 | Special-Status Species Designation[1] | | |
|---|---|---|---|---|---|---|---|
| | | | | | Federal | State | Local |
| ***Odontophoridae*** | | | | | | | |
| California Quail | *Callipepla californica* | X | X | X | - | - | - |
| ***Phasianidae*** | | | | | | | |
| Indian Peafowl* | *Pavo cristatus* | X | - | - | - | - | - |
| ***Columbidae*** | | | | | | | |
| Rock Pigeon* | *Columba livia* | X | - | - | - | - | - |
| Eurasian Collared-dove* | *Streptopelia decaocto* | - | X | X | | | |
| Mourning Dove | *Zenaida macroura* | X | X | X | - | - | - |
| ***Cuculidae*** | | | | | | | |
| Greater Roadrunner | *Geococcyx californianus* | - | X | - | - | - | - |
| ***Caprimulgidae*** | | | | | | | |
| Lesser Nighthawk | *Chordeiles acutipennis* | - | X | - | - | - | - |
| ***Apodidae*** | | | | | | | |
| White-throated Swift | *Aeronautes saxatalis* | - | - | X | - | - | - |
| Vaux's Swift | *Chaetura vauxi* | X | - | - | - | SSC | - |
| ***Trochilidae*** | | | | | | | |
| Anna's Hummingbird | *Calypte anna* | X | X | X | - | - | - |
| Costa's Hummingbird | *Calypte costae* | X | X | X | - | - | - |
| Allen's Hummingbird | *Selasphorus sasin* | X | X | X | - | - | - |
| ***Cathartidae*** | | | | | | | |
| Turkey Vulture | *Cathartes aura* | X | X | X | - | - | County Group 1 |
| ***Accipitridae*** | | | | | | | |
| Cooper's Hawk | *Astur cooperii* | X | X | X | - | WL | MSCP<br>County Group 1 |
| Red-shouldered Hawk | *Buteo lineatus* | - | X | - | - | - | County Group 1 |
| Red-tailed Hawk | Buteo jamaicensis | X | X | X | - | - | - |

| Common Name by Family | Scientific Name | 5/6/2025 | 6/3/2025 | 6/27/2025 | Special-Status Species Designation[1] | | |
|---|---|---|---|---|---|---|---|
| | | | | | Federal | State | Local |
| ***Strigidae*** | | | | | | | |
| Great Horned Owl | *Bubo virginianus* | - | X | - | - | - | - |
| ***Picidae*** | | | | | | | |
| Nuttall's Woodpecker | *Dryobates nuttallii* | X | X | X | - | - | - |
| ***Psittacidae*** | | | | | | | |
| Red-crowned Parrot* | *Amazona viridigenalis* | X | - | X | - | - | - |
| ***Tyrannidae*** | | | | | | | |
| Western Flycatcher | *Empidonax difficilis* | X | - | - | - | - | - |
| Ash-throated Flycatcher | *Myiarchus cinerascens* | X | X | - | - | - | - |
| Black Phoebe | *Sayornis nigricans* | - | X | X | - | - | - |
| Say's Phoebe | *Sayornis saya* | - | X | - | - | - | - |
| Cassin's Kingbird | *Tyrannus vociferans* | X | X | X | - | - | - |
| ***Corvidae*** | | | | | | | |
| American Crow | *Corvus brachyrhynchos* | X | X | X | - | - | - |
| California Scrub-jay | *Aphelocoma californica* | - | X | - | - | - | - |
| Common Raven | *Corvus corax* | X | X | X | - | - | - |
| ***Hirundinidae*** | | | | | | | |
| Cliff Swallow | *Petrochelidon pyrrhonota* | - | X | X | - | - | - |
| Northern Rough-winged Swallow | *Stelgidopteryx serripennis* | - | X | - | - | - | - |
| ***Aegithalidae*** | | | | | | | |
| Bushtit | *Psaltriparus minimus* | - | X | X | - | - | - |
| ***Paradoxornithidae*** | | | | | | | |
| Wrentit | *Chamaea fasciata* | X | X | X | - | - | - |
| ***Polioptilidae*** | | | | | | | |
| Coastal California Gnatcatcher | *Polioptila californica californica* | X | X | X | FT | SSC | MSCP County Group 1 |

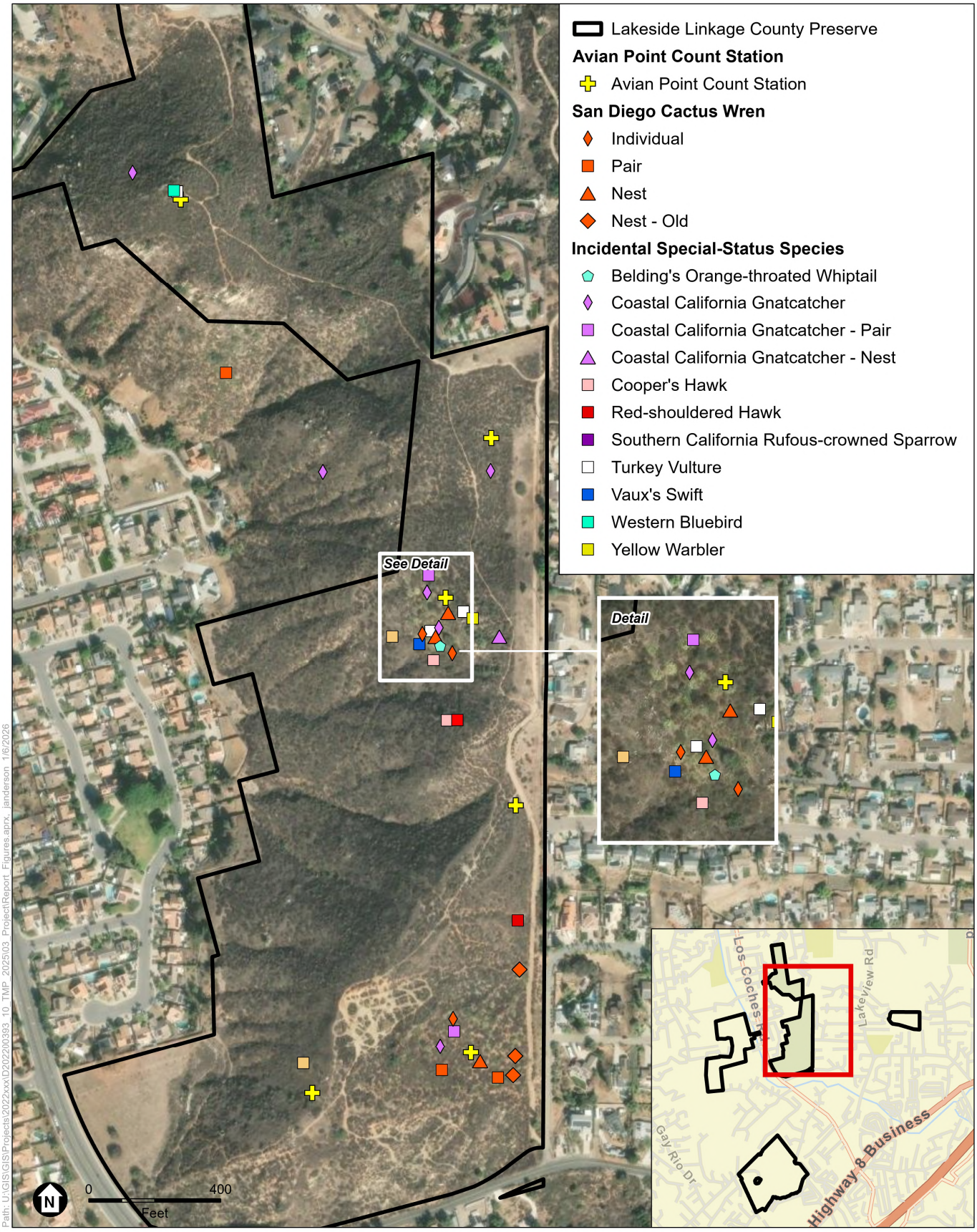
| Common Name by Family | Scientific Name | 5/6/2025 | 6/3/2025 | 6/27/2025 | Special-Status Species Designation[1] | | |
|---|---|---|---|---|---|---|---|
| | | | | | Federal | State | Local |
| ***Troglodytidae*** | | | | | | | |
| Coastal Cactus Wren | *Campylorhynchus brunneicapillus sandiegensis* | X | X | X | - | SSC | MSCP, NE, County Group 1 |
| Bewick's Wren | *Thryomanes bewickii* | X | X | X | - | - | - |
| Northern House Wren | *Troglodytes aedon* | X | X | - | - | - | - |
| ***Mimidae*** | | | | | | | |
| California Thrasher | *Toxostoma redivivum* | X | X | X | - | - | - |
| Northern Mockingbird | *Mimus polyglottos* | X | X | X | - | - | - |
| ***Turdidae*** | | | | | | | |
| Western Bluebird | *Sialia mexicana* | X | - | - | - | - | MSCP County Group 2 |
| ***Passeridae*** | | | | | | | |
| House Sparrow | *Passer domesticus* | - | - | X | - | - | - |
| ***Fringillidae*** | | | | | | | |
| House Finch | *Haemorhous mexicanus* | X | X | X | - | - | - |
| Lawrence's Goldfinch | *Spinus lawrencei* | - | X | X | - | - | - |
| Lesser Goldfinch | *Spinus psaltria* | X | X | X | - | - | - |
| ***Passerellidae*** | | | | | | | |
| California Towhee | *Melozone crissalis* | X | X | X | - | - | - |
| Southern California Rufous-crowned Sparrow | *Aimophila ruficeps canescens* | X | X | X | - | WL | MSCP County Group 1 |
| Spotted Towhee | *Pipilo maculatus* | X | - | X | - | - | - |
| ***Icteridae*** | | | | | | | |
| Hooded Oriole | *Icterus cucullatus* | X | X | X | - | - | - |
| Great-tailed Grackle | *Quiscalus mexicanus* | X | - | - | - | - | - |
| ***Parulidae*** | | | | | | | |
| Wilson's Warbler | *Cardellina pusilla* | X | - | - | - | - | - |
| Orange-crowned Warbler | *Leiothlypis celata* | X | - | - | - | - | - |
| Yellow Warbler | *Setophaga petechia* | X | - | - | - | SSC | County Group 2 |

| Common Name by Family | Scientific Name | 5/6/2025 | 6/3/2025 | 6/27/2025 | Special-Status Species Designation[1] | | |
|---|---|---|---|---|---|---|---|
| | | | | | Federal | State | Local |
| ***Cardinalidae*** | | | | | | | |
| Black-headed Grosbeak | *Pheucticus melanocephalus* | X | - | - | - | - | - |
| Lazuli Bunting | *Passerina amoena* | X | - | - | - | - | - |
| Blue Grosbeak | *Passerina caerulea* | X | - | - | - | - | - |
| Western Tanager | *Piranga ludoviciana* | X | - | - | - | - | - |
| **Total Number of Species Observed** | **54** | **40** | **37** | **32** | | | |

Notes:

* Non-native Species
1. Special-Status Species Designation

FT = Federally Threatened
SSC = CDFW Species of Special Concern
WL CDF = Watch List Species
MSCP = MSCP-Covered Species
NE MSCP Narrow Endemic Species: Rare, narrow endemic animal species known from San Diego County within the MSCP Subarea Plan
County Group 1 Animals of high sensitivity (listed or specific natural history requirements).
County Group 2 Animals declining but not in immediate threat of extinction or extirpation.




SOURCE: ESRI; ESA, 2025

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**Figure 20**
Coastal Cactus Wren Monitoring Results
Lakeside Linkage County Preserve

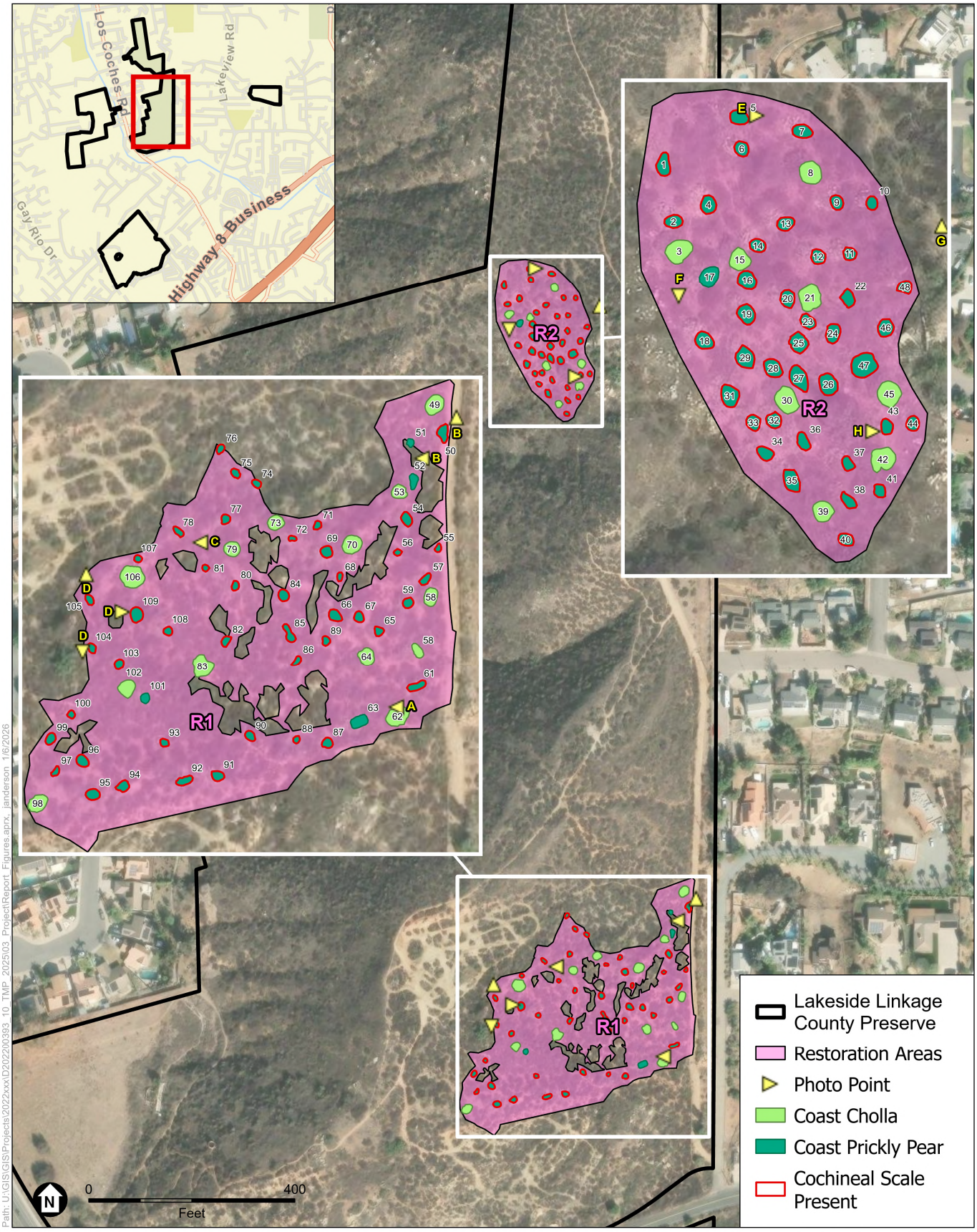
### 4.4.1 Habitat and Threats Assessment

Photo monitoring of the northern and southern restoration areas on the central property of Lakeside Linkage County Preserve began in 2011 and has been conducted from 2011–2016, 2018, 2019, 2022, and 2025. Images from these years are shown in **Appendix E**. Locations of restoration areas and related photo points are shown in **Figure 21**. Vegetation density within the two restoration areas was assessed using a modified relevé method (California Native Plant Society Vegetation Committee 2007). Results are summarized in **Table 19** and include cactus cover, non-native vegetation cover, cactus height, and observed stress indicators. Cochineal scale was recorded as present in 77 percent of monitored plots using a binary presence/absence method, with coast prickly pear showing presence in 94 percent of its plots and coast cholla showing none. Most plots had dense cactus cover and minimal non-native vegetation. While herbivory signs were noted in coast prickly pear, both species exhibited regeneration, with coast cholla showing greater structural stability for cactus wren nesting.

Habitat and threats were assessed during surveys to determine: (1) if identified threats are having a direct negative effect on the species or habitat, and (2) if adaptive management actions need to be implemented. See **Appendix E** for the habitat and threats assessment field forms.

Monitoring across the preserve revealed that both restoration areas support structurally suitable cactus habitat with high cover and low non-native vegetation. The northern restoration area (R1) was in fair to good condition. Cochineal scale and herbivory signs were widespread in coast prickly pear, though new growth was evident. Die-off observed in the 2022 surveys—likely due to frost—had reduced patch size by July 2022. In 2025, portions of these patches showed recovery, with improved cactus cover and new growth, although stressors persist. The southern restoration area (R2) was in good condition, showing consistent regeneration, lower stress indicators, and strong performance from coast cholla, which remained free of cochineal scale and contributed to vertical structure suitable for cactus wren nesting. While not within the restoration areas, trash/litter (e.g., water bottles, beer cans, e-cigarette cartridges) and bike usage were documented within the preserve. The following threats were observed:

- **Cochineal scale (*Dactylopius* spp.) was observed on coast prickly pear pads.** While presence was recorded using a binary method, high densities of these insects can cause chlorosis, stunted growth, and pad mortality (UC IPM n.d.). Approximately 94 percent of prickly pear plots were found to have cochineal scale. **Figure 21** depicts which plots were documented as having cochineal scale presence. Leaving plots untreated may result in continued infestation.
- **Native thatch within R1 and R2 allowing predator access.** The cactus patches in both restoration areas meet the minimum height and density suitable for coastal cactus wrens to build nests (both roost and breeding nests); however, the majority of the cacti patches have native thatch (e.g., California sagebrush and California buckwheat) growing within or adjacent to the cactus stands. This vegetation may facilitate predator movement into nesting areas, potentially compromising nest safety despite structural suitability.
- **Unauthorized access/trails.** Unauthorized access was not observed within R1 and R2; however, unauthorized trails were observed within the preserve.




SOURCE: ESRI; ESA, 2025

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**Figure 21**

Coastal Cactus Wren Habitat and Threats Assessment Results
Lakeside Linkage County Preserve

**TABLE 19**
**CACTUS RESTORATION PLOT MONITORING DATA: LAKESIDE LINKAGE COUNTY PRESERVE**

| Plot ID | Species | % Cactus Cover | % NN | Max Height (cm/m) | Shrubs present in Plot (Y/N) | Cochineal (Y/N)[a] | Herbivory (H), Damage (D), or New Growth (NG)? | Notes[b] |
|---|---|---|---|---|---|---|---|---|
| 1 | Coast prickly pear *Opuntia littoralis* | 90 | 5 | 142 | Y | Y | H / D / NG | |
| 2 | Coast prickly pear *Opuntia littoralis* | 85 | 3 | 163 | Y | Y | D / NG | |
| 3 | Coast cholla *Cylindropuntia prolifera* | 90 | 0.2 | 168 | Y | N | NG | |
| 4 | Coast prickly pear *Opuntia littoralis* | 90 | 2 | 137 | Y | Y | D | |
| 5 | Coast prickly pear *Opuntia littoralis* | 85 | 1 | 170 | Y | Y | H / D / NG | Woodrat nest present |
| 6 | Coast prickly pear *Opuntia littoralis* | 95 | 1 | 155 | Y | Y | H / D / NG | |
| 7 | Coast prickly pear *Opuntia littoralis* | 95 | 3 | 89 | Y | Y | H / D / NG | |
| 8 | Coast cholla *Cylindropuntia prolifera* | 90 | 0.2 | 158 | Y | N | NG | |
| 9 | Coast prickly pear *Opuntia littoralis* | 80 | 2 | 86 | Y | Y | H / D / NG | |
| 10 | Coast prickly pear *Opuntia littoralis* | 80 | 2 | 117 | Y | Y | H / D / NG | |
| 11 | Coast prickly pear *Opuntia littoralis* | 95 | 1 | 128 | Y | Y | H / D / NG | |
| 12 | Coast prickly pear *Opuntia littoralis* | 85 | 4 | 104 | Y | Y | H / D / NG | Woodrat nest present |
| 13 | Coast prickly pear *Opuntia littoralis* | 85 | 2 | 122 | Y | Y | H / D / NG | |
| 14 | Coast prickly pear *Opuntia littoralis* | 95 | 1 | 152 | N | Y | NG | |
| 15 | Coast cholla *Cylindropuntia prolifera* | 95 | 1 | 152 | Y | N | NG | |
| 16 | Coast prickly pear *Opuntia littoralis* | 95 | 0 | 130 | Y | Y | H / D / NG | ERIFAS <1% |
| 17 | Coast prickly pear *Opuntia littoralis* | 98 | 1 | 148 | Y | N | D / NG | BAHLAC <1% |
| 18 | Coast prickly pear *Opuntia littoralis* | 80 | 1 | 122 | Y | Y | NG | BAHLAC <1% |
| 19 | Coast prickly pear *Opuntia littoralis* | 85 | 1 | 152 | Y | Y | H / D / NG | |

| Plot ID | Species | % Cactus Cover | % NN | Max Height (cm/m) | Shrubs present in Plot (Y/N) | Cochineal (Y/N)[a] | Herbivory (H), Damage (D), or New Growth (NG)? | Notes[b] |
|---|---|---|---|---|---|---|---|---|
| 20 | Coast prickly pear *Opuntia littoralis* | 70 | 0.2 | 140 | N | Y | H / D / NG | BG |
| 21 | Coast cholla *Cylindropuntia prolifera* | 95 | 1 | 104 | Y | N | NG | |
| 22 | Coast prickly pear *Opuntia littoralis* | 90 | 0.2 | 110 | Y | Y | H / D / NG | ERIFAS <1% |
| 23 | Coast prickly pear *Opuntia littoralis* | 60 | 0 | 150 | N | Y | H / D / NG | BG |
| 24 | Coast prickly pear *Opuntia littoralis* | 75 | 0.2 | 126 | Y | Y | H / D / NG | Small mammal nests present |
| 25 | Coast prickly pear *Opuntia littoralis* | 70 | 0 | 125 | N | Y | H / D / NG | BG |
| 26 | Coast prickly pear *Opuntia littoralis* | 70 | 0.2 | 146 | Y | Y | H / D / NG | |
| 27 | Coast prickly pear *Opuntia littoralis* | 65 | 0 | 138 | Y | Y | H / D / NG | |
| 28 | Coast prickly pear *Opuntia littoralis* | 75 | 0 | 119 | N | Y | H / D / NG | |
| 29 | Coast prickly pear *Opuntia littoralis* | 75 | 0.2 | 128 | Y | Y | H / D / NG | ERIFAS <1% |
| 30 | Coast cholla *Cylindropuntia prolifera* | 95 | 0 | 163 | N | N | NG | Old CACW nest collapsed |
| 31 | Coast prickly pear *Opuntia littoralis* | 80 | 0.2 | 151 | Y | Y | H / D / NG | |
| 32 | Coast prickly pear *Opuntia littoralis* | 90 | 0 | 161 | N | Y | H / D | |
| 33 | Coast prickly pear *Opuntia littoralis* | 80 | 0 | 139 | N | Y | H / D / NG | |
| 34 | Coast prickly pear *Opuntia littoralis* | 90 | 0.2 | 128 | N | Y | H / D / NG | |
| 35 | Coast prickly pear *Opuntia littoralis* | 60 | 1 | 142 | Y | Y | H / D / NG | ARTCAL, ERIFAS |
| 36 | Coast prickly pear *Opuntia littoralis* | 90 | 0 | 164 | N | Y | H / D / NG | |
| 37 | Coast prickly pear *Opuntia littoralis* | 95 | 0.2 | 130 | Y | Y | H / D / NG | |
| 38 | Coast prickly pear *Opuntia littoralis* | 75 | 0.2 | 110 | Y | Y | H / D / NG | |
| 39 | Coast cholla *Cylindropuntia prolifera* | 90 | 0 | 127 | Y | N | NG | Dense, BG |

| Plot ID | Species | % Cactus Cover | % NN | Max Height (cm/m) | Shrubs present in Plot (Y/N) | Cochineal (Y/N)[a] | Herbivory (H), Damage (D), or New Growth (NG)? | Notes[b] |
|---|---|---|---|---|---|---|---|---|
| 40 | Coast prickly pear *Opuntia littoralis* | 70 | 0.2 | 125 | Y | Y | H / D / NG | |
| 41 | Coast prickly pear *Opuntia littoralis* | 50 | 0.2 | 100 | Y | Y | H / D / NG | DS |
| 42 | Coast cholla *Cylindropuntia prolifera* | 85 | 0.2 | 126 | Y | N | NG | |
| 43 | Coast prickly pear *Opuntia littoralis* | 90 | 0 | 164 | N | Y | H / D / NG | |
| 44 | Coast prickly pear *Opuntia littoralis* | 80 | 1 | 155 | Y | Y | H / D / NG | |
| 45 | Coast cholla *Cylindropuntia prolifera* | 85 | 0.2 | 200 | Y | N | NG | |
| 46 | Coast prickly pear *Opuntia littoralis* | 50 | 1 | 150 | Y | Y | H / D / NG | Sprawling, DS |
| 47 | Coast prickly pear *Opuntia littoralis* | 50 | 0.2 | 143 | Y | Y | H / D / NG | DS |
| 48 | Coast prickly pear *Opuntia littoralis* | 60 | 2 | 115 | Y | Y | H / D | ARTCAL, ERIFAS |
| 49 | Coast cholla *Cylindropuntia prolifera* | 70 | 3 | 163 | Y | N | NG | |
| 50 | Coast prickly pear *Opuntia littoralis* | 65 | 0.2 | 91 | Y | Y | H / D / NG | |
| 51 | Coast prickly pear *Opuntia littoralis* | 60 | 1 | 91 | Y | N | NG | |
| 52 | Coast prickly pear *Opuntia littoralis* | 75 | 0.2 | 91 | Y | N | H / D / NG | |
| 53 | Coast cholla *Cylindropuntia prolifera* | 75 | 0.2 | 152 | Y | N | NG | |
| 54 | Coast prickly pear *Opuntia littoralis* | 95 | 0.2 | 122 | Y | Y | H / D | |
| 55 | Coast prickly pear *Opuntia littoralis* | 60 | 1 | 105 | Y | Y | H / D / NG | |
| 56 | Coast prickly pear *Opuntia littoralis* | 75 | 0.2 | 150 | Y | Y | H / D / NG | |
| 57 | Coast prickly pear *Opuntia littoralis* | 80 | 0.2 | 140 | Y | Y | H / D / NG | |
| 58 | Coast cholla *Cylindropuntia prolifera* | 80 | 0.2 | 152 | Y | N | NG | |

| Plot ID | Species | % Cactus Cover | % NN | Max Height (cm/m) | Shrubs present in Plot (Y/N) | Cochineal (Y/N)[a] | Herbivory (H), Damage (D), or New Growth (NG)? | Notes[b] |
|---|---|---|---|---|---|---|---|---|
| 59 | Coast prickly pear *Opuntia littoralis* | 90 | 0.2 | 155 | Y | Y | H / D / NG | |
| 60 | Coast prickly pear *Opuntia littoralis* | 85 | 0.2 | 163 | Y | Y | H / D / NG | |
| 61 | Coast prickly pear *Opuntia littoralis* | 80 | 0.2 | 147 | Y | Y | H / D / NG | |
| 62 | Coast cholla *Cylindropuntia prolifera* | 90 | 0.2 | 91 | Y | N | NG | |
| 63 | Coast prickly pear *Opuntia littoralis* | 60 | 0.2 | 110 | N | N | H / D | |
| 64 | Coast cholla *Cylindropuntia prolifera* | 80 | 0 | 156 | Y | N | NG | 3 CACW nests |
| 65 | Coast prickly pear *Opuntia littoralis* | 60 | 0 | 130 | Y | Y | H / D / NG | |
| 66 | Coast prickly pear *Opuntia littoralis* | 75 | 0.2 | 155 | Y | Y | H / D / NG | |
| 67 | Coast prickly pear *Opuntia littoralis* | 80 | 0 | 105 | Y | Y | H / D / NG | |
| 68 | Coast prickly pear *Opuntia littoralis* | 75 | 0 | 159 | Y | Y | H / D / NG | |
| 69 | Coast prickly pear *Opuntia littoralis* | 70 | 0.2 | 150 | Y | Y | H / D / NG | |
| 70 | Coast cholla *Cylindropuntia prolifera* | 60 | 0 | 174 | Y | N | NG | |
| 71 | Coast prickly pear *Opuntia littoralis* | 80 | 0.2 | 125 | Y | Y | H / D / NG | |
| 72 | Coast prickly pear *Opuntia littoralis* | 70 | 0 | 150 | Y | Y | H / D | |
| 73 | Coast cholla *Cylindropuntia prolifera* | 70 | 0 | 160 | Y | N | NG | |
| 74 | Coast prickly pear *Opuntia littoralis* | 60 | 0 | 152 | Y | Y | H / D / NG | |
| 75 | Coast prickly pear *Opuntia littoralis* | 85 | 0.2 | 153 | Y | Y | H / D / NG | |
| 76 | Coast prickly pear *Opuntia littoralis* | 40 | 0 | 136 | Y | Y | H / D / NG | |
| 77 | Coast prickly pear *Opuntia littoralis* | 85 | 0 | 164 | Y | Y | H / D / NG | |

| Plot ID | Species | % Cactus Cover | % NN | Max Height (cm/m) | Shrubs present in Plot (Y/N) | Cochineal (Y/N)[a] | Herbivory (H), Damage (D), or New Growth (NG)? | Notes[b] |
|---|---|---|---|---|---|---|---|---|
| 78 | Coast prickly pear *Opuntia littoralis* | 60 | 0 | 150 | Y | Y | H / D / NG | |
| 79 | Coast cholla *Cylindropuntia prolifera* | 50 | 0 | 163 | Y | N | NG | |
| 80 | Coast prickly pear *Opuntia littoralis* | 55 | 0 | 163 | Y | Y | H / D / NG | |
| 81 | Coast prickly pear *Opuntia littoralis* | 40 | 0.2 | 136 | Y | Y | H / D / NG | |
| 82 | Coast prickly pear *Opuntia littoralis* | 60 | 0.2 | 153 | Y | Y | H / D / NG | Woodrat nest present |
| 83 | Coast cholla *Cylindropuntia prolifera* | 45 | 0.2 | 180 | Y | N | NG | BG, Shrubby |
| 84 | Coast prickly pear *Opuntia littoralis* | 60 | 0 | 150 | Y | Y | H / D / NG | |
| 85 | Coast prickly pear *Opuntia littoralis* | 60 | 0.2 | 126 | Y | Y | H / D / NG | |
| 86 | Coast prickly pear *Opuntia littoralis* | 40 | 0 | 153 | Y | Y | H / D / NG | Shrubby |
| 87 | Coast prickly pear *Opuntia littoralis* | 75 | 0 | 140 | Y | Y | H / D / NG | Woodrat nest present, Scaley |
| 88 | Coast prickly pear *Opuntia littoralis* | 75 | 0.2 | 190 | Y | Y | H / D / NG | DS, Scaley |
| 89 | Coast prickly pear *Opuntia littoralis* | 85 | 0.2 | 148 | Y | Y | H / D / NG | |
| 90 | Coast prickly pear *Opuntia littoralis* | 90 | 0.2 | 163 | Y | Y | H / D | Old CACW nest present |
| 91 | Coast prickly pear *Opuntia littoralis* | 60 | 0.2 | 157 | Y | Y | H / D | |
| 92 | Coast prickly pear *Opuntia littoralis* | 75 | 0.2 | 138 | Y | Y | H / D / NG | |
| 93 | Coast prickly pear *Opuntia littoralis* | 70 | 0 | 149 | Y | Y | H / D | |
| 94 | Coast prickly pear *Opuntia littoralis* | 55 | 0 | 160 | Y | Y | H / D / NG | Shrubby |
| 95 | Coast prickly pear *Opuntia littoralis* | 55 | 0.2 | 157 | Y | Y | H / D | |
| 96 | Coast prickly pear *Opuntia littoralis* | 55 | 0 | 150 | Y | Y | H / D / NG | |
| 97 | Coast prickly pear *Opuntia littoralis* | 70 | 0 | 168 | Y | Y | H / D / NG | |

| Plot ID | Species | % Cactus Cover | % NN | Max Height (cm/m) | Shrubs present in Plot (Y/N) | Cochineal (Y/N)[a] | Herbivory (H), Damage (D), or New Growth (NG)? | Notes[b] |
|---|---|---|---|---|---|---|---|---|
| 98 | Coast cholla *Cylindropuntia prolifera* | 95 | 0.2 | 170 | Y | N | NG | |
| 99 | Coast prickly pear *Opuntia littoralis* | 70 | 0 | 158 | Y | Y | H / D | |
| 100 | Coast prickly pear *Opuntia littoralis* | 80 | 0.2 | 154 | Y | Y | H / D | Shrubs encroaching |
| 101 | Coast prickly pear *Opuntia littoralis* | 75 | 0 | 115 | Y | N | NG | |
| 102 | Coast cholla *Cylindropuntia prolifera* | 40 | 0 | 135 | Y | N | NG | |
| 103 | Coast prickly pear *Opuntia littoralis* | 90 | 0 | 170 | Y | Y | H / D / NG | |
| 104 | Coast prickly pear *Opuntia littoralis* | 65 | 0.2 | 160 | Y | Y | H / D / NG | |
| 105 | Coast prickly pear *Opuntia littoralis* | 60 | 0 | 156 | Y | Y | H / D | |
| 106 | Coast cholla *Cylindropuntia prolifera* | 85 | 0 | 160 | Y | N | H / D | |
| 107 | Coast prickly pear *Opuntia littoralis* | 60 | 0 | 143 | Y | Y | H / D | |
| 108 | Coast prickly pear *Opuntia littoralis* | 75 | 0 | 110 | Y | Y | H / D / NG | |
| 109 | Coast prickly pear *Opuntia littoralis* | 60 | 0 | 155 | Y | Y | H / D / NG | |

Notes:

a. Cochineal scale observations were recorded as present (Y) or absent (N).
b. ARTCAL = *Artemisia californica* (California sagebrush)
BAHLAC = *Bahiopsis laciniata* (tornleaf goldeneye)
ERIFAS = *Eriogonum fasciculatum* (California buckwheat)
<1% = Indicates a few individuals are present, scattered within the monitoring plot.
No % listed = Species is visually significant or forms a patch within the monitoring plot.
CACW = Coastal cactus wren
BG = Bare ground recorded within cactus plots.
DS = Drought stress detected.
Shrubby = Area dominated by shrubs.
Sprawling = Plant is growing horizontally rather than growing upright.
Scaley = Plant is heavily covered with cochineal scale insects.

## 4.4.2 Adaptive Management Recommendations

The TMP management goal for coastal cactus wren is to restore, enhance, and maintain suitable nesting habitat for coastal cactus wren on the Lakeside Linkage County Preserve (ESA 2024). Adaptive management to reduce native ladder plants and treat invasive non-native plants within the established cacti patches at both restoration sites was funded by the CDFW Local Assistance Grant and implemented

in October 2025. Future monitoring should continue to document native and invasive non-native vegetation presence that could become ladder plants and increase predation potential at coastal cactus wren nests to determine if adaptive management is required. The results of the 2025 surveys, TMP management goals and objectives, and the adaptive management actions outlined in the TMP were used to develop the following recommendation:

- **Monitor and manage cochineal scale on coastal prickly pear.** Targeted biological or manual removal methods should be considered, such as pruning and disposal of heavily infested pads (i.e., coast prickly pear in monitoring plots 87 and 88; see **Figure 21** for documented cochineal scale presence), dislodging waxy coverings with high-pressure water sprays, and application of insecticidal soap to exposed scale bodies, particularly in frost-damaged or drought-stressed patches (UC IPM n.d.). Treatments involving insecticidal soap should be considered only when manual and mechanical methods prove insufficient to control scale populations and should be applied selectively to minimize ecological impact. This management activity should occur outside of the nesting bird season (February 15–August 15) (County of San Diego 2010).

# 4.5 Northern Harrier

## 4.5.1 San Luis Rey River Park

Northern harrier nesting surveys took place in 2025 at San Luis Rey River Park in areas of suitable habitat. These areas were characterized by open, treeless expanses with low-growing, low-density scrub or open grassland. These areas of open habitat were concentrated between the San Luis Rey River and the southern/eastern boundary of the park. Representative photographs of the survey areas and completed field forms are provided in **Appendix F**, *Northern Harrier Survey Forms*.

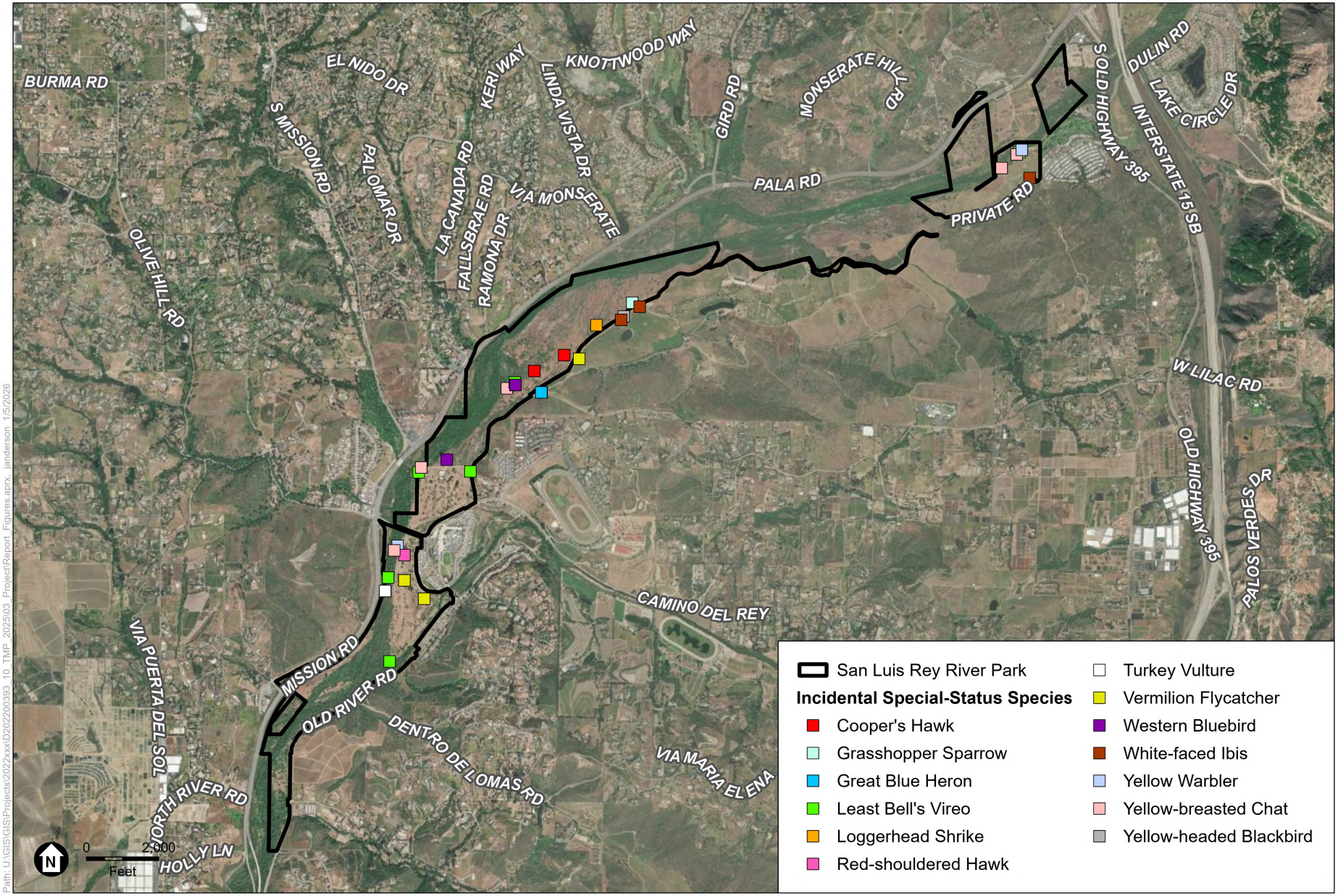
No northern harriers were observed during any of the three northern harrier surveys in 2025. Incidentally observed special-status wildlife species included Cooper's hawk, grasshopper sparrow, great blue heron (*Ardea herodias*), least Bell's vireo, loggerhead shrike, red-shouldered hawk, turkey vulture, vermilion flycatcher, western bluebird, white-faced ibis (*Plegadis chihi*), yellow warbler, yellow-breasted chat, and yellow-headed blackbird (*Xanthocephalus xanthocephalus*) (**Figure 22**).

### Habitat and Threats Assessment

Habitat and threats were assessed during surveys to determine: (1) if identified threats are having a direct negative effect on the species or habitat, and (2) if adaptive management actions need to be implemented.

### Adaptive Management Recommendations

The San Luis Rey River Park supports suitable foraging and nesting habitat for northern harrier. However, based on the 2025 survey results (breeding season only), the San Luis Rey River Park is not currently being used by northern harriers for nesting or foraging. If the species were to use the San Luis Rey River Park outside of the breeding season, threats such as encampments of unhoused people, without effective management, may diminish the species use of the San Luis Rey River Park over time.

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SOURCE: ESRI, 2021; ESA, 2025

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**Figure 22**

Northern Harrier Monitoring Results
San Luis Rey River Park

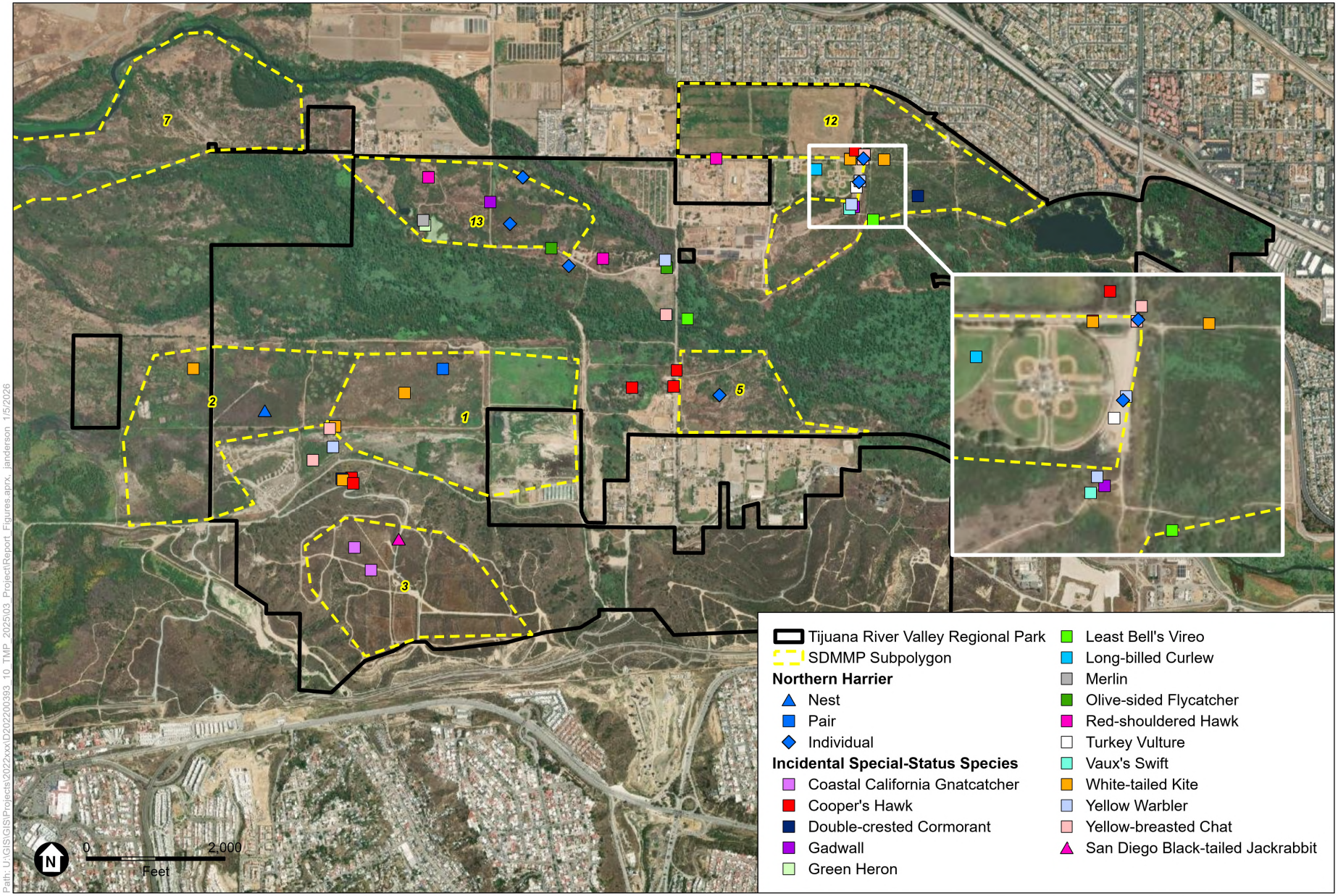
ESA

### 4.5.2 Tijuana River Valley Regional Park

The 2025 northern harrier nesting surveys focused on areas with low scrub and/or vegetation cover and areas with previously documented northern harrier use in Tijuana River Valley Regional Park. These areas include the coastal sage scrub vegetation community in the western portion of the Tijuana River Valley Regional Park north of Monument Road and west of Hollister Street, the southern willow scrub vegetation community in the northwestern portion of the Tijuana River Valley Regional Park near the intersection of Saturn Boulevard and Sunset Avenue, the Diegan coastal sage scrub habitat on Stuart Mesa, the Diegan coastal sage scrub vegetation community northeast of the Hollister Street and Monument Road intersection, the mule fat/southern willow scrub habitat east and south of the Tijuana River Valley Sports Complex, and the abandoned agricultural habitat north of the Tijuana River Valley Sports Complex. Representative photographs of the survey areas and completed field forms are provided in **Appendix F**.

Northern harriers were observed during all surveys with the highest observations during the month of May. While, based on previous monitoring results, up to five northern harrier territories could be present within the Tijuana River Valley Regional Park, only one northern harrier territory (Territory 1 [SDMMP Subpolygon 02]) was confirmed to be occupied in 2025 (**Table 20** and **Figure 23**). The nest in this territory produced at least two fledglings, seen accompanied by an adult male on July 1. Two additional pairs were observed adjacent to this territory during the May 5 survey, but those birds were not observed in that area on subsequent surveys. Northern harriers were seen carrying food in Territory 3 (SDMMP Subpolygon 13) during the July 1 survey, but they flew west out of sight and may have been the birds from Territory 1, carrying food back to that nest. An adult female and a juvenile were seen together in Territory 5 (SDMMP Subpolygon 12) during the July 1 survey. However, it is possible that this was the female and one of the young from Territory 1. The nest site in Territory 1 was located approximately 70 meters north of a public trail and 150 meters north of the campground. While northern harriers were seen throughout the valley during 2025, the only concentration of observations was near Territory 1. It is possible that, due to the below-average rainfall in 2024/2025, overall productivity was low and that Territory 1 was likely the only successful nest in Tijuana River Valley Regional Park in 2025. Overall, there were a lower number of northern harrier observations in 2025 compared to previous survey years (2021–2024).

Incidentally observed special-status wildlife species included coastal California gnatcatcher, Cooper's hawk, double-crested cormorant (*Nannopterum auritum*), gadwall (*Mareca strepera*), green heron (*Butorides virescens*), least Bell's vireo, long-billed curlew (*Numenius americanus*), merlin (*Falco columbarius*), olive-sided flycatcher (*Contopus cooperi*), red-shouldered hawk, turkey vulture, Vaux's swift, white-tailed kite (*Elanus leucurus*), yellow warbler, yellow-breasted chat, and San Diego black-tailed jackrabbit (**Figure 23**).




SOURCE: ESRI, 2022; ESA, 2025.

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**Figure 23**

Northern Harrier Monitoring Results
Tijuana River Valley Regional Park

ESA

**TABLE 20**
**NORTHERN HARRIER NESTING SURVEY RESULTS: TIJUANA RIVER VALLEY REGIONAL PARK**

| Territory (SDMMP Subpolygon) | Type | Nest Success | Location | Observation Summary |
|---|---|---|---|---|
| 1 (Subpolygon 02) | Pair | Successful (Chicks) | North of the TRVRP campground. Likely same location as historic nesting. | A pair successfully nested here, with at least two young reaching fledgling age by the time of the July survey. |
| 2* (Subpolygon 05) | None | Not Occupied | Northeast of the Hollister St/Monument Rd Intersect. | One foraging adult male seen in May that may have been the same individual seen that day in Territory 3. |
| 3 (Subpolygon 13) | Other | Unknown | West of the TRVRP Bird & Butterfly Garden. | Adult male and female seen foraging during each survey, but no nesting behavior observed. May have been nesting outside TRVRP. |
| 4* (Subpolygon 01) | None | Not Occupied | Northeast of the newly constructed TRVRP campground. | A pair was seen during the May survey but not seen on later surveys. |
| 5* (Subpolygon 12) | Other | Unknown | East and South of Tijuana River Valley Sports Complex. | An adult female and a juvenile were seen together during the July survey. It is possible that these birds came from Territory 1 as they had not been seen previously and the adult female was not seen at Territory 1 during the July survey. |

Notes:
TRVRP = Tijuana River Valley Regional Park
* Potential territories due to territorial distance from other territories and evidence during previous years' surveys.

## Habitat and Threats Assessment

Habitat and threats were assessed during surveys to determine: (1) if identified threats are having a direct negative effect on the species or habitat, and (2) if adaptive management actions need to be implemented.

Suitable foraging habitat for northern harriers includes low-height and sparsely covered vegetation such as non-native grassland, coastal sage scrub, mule fat scrub, abandoned agriculture, and disturbed habitat. Suitable nesting habitat for northern harriers includes dense scrub habitats that limit predation or predator harassment such as mule fat scrub, coastal sage scrub, marsh, and cattail habitat. Overall, the Tijuana River Valley Regional Park provides high-quality suitable foraging and nesting habitat for northern harriers as demonstrated by a successful northern harrier nest in 2025. The following threat was observed:

- **Nest disturbance.** Northern harrier is a ground-nesting species. The nest site in Territory 1 is close to authorized public trails. The campground and adjacent trails were closed due to flooding in 2024 but were open in 2025. An increase in public use (e.g., campground users) and U.S. Border Patrol activities could potentially affect future nesting success if trail usage encroaches on nesting harriers.

## Adaptive Management Recommendations

The Tijuana River Valley Regional Park supports suitable foraging and nesting habitat; however, threats such as nest disturbance, without effective management, may diminish the success of the species over time. The results of 2025 nest monitoring, TMP management goals and objectives, and the adaptive management actions outlined in the TMP were used to develop the following recommendations:

- **Monitor trail use in vicinity of the Territory 1 nest site.** Install trail counters on trails in the vicinity of the nest in Territory 1 track trail use. This will provide baseline trail use information and

inform if seasonal trail closure is warranted to prevent nest disturbance. Trail closure is not recommended at this time.

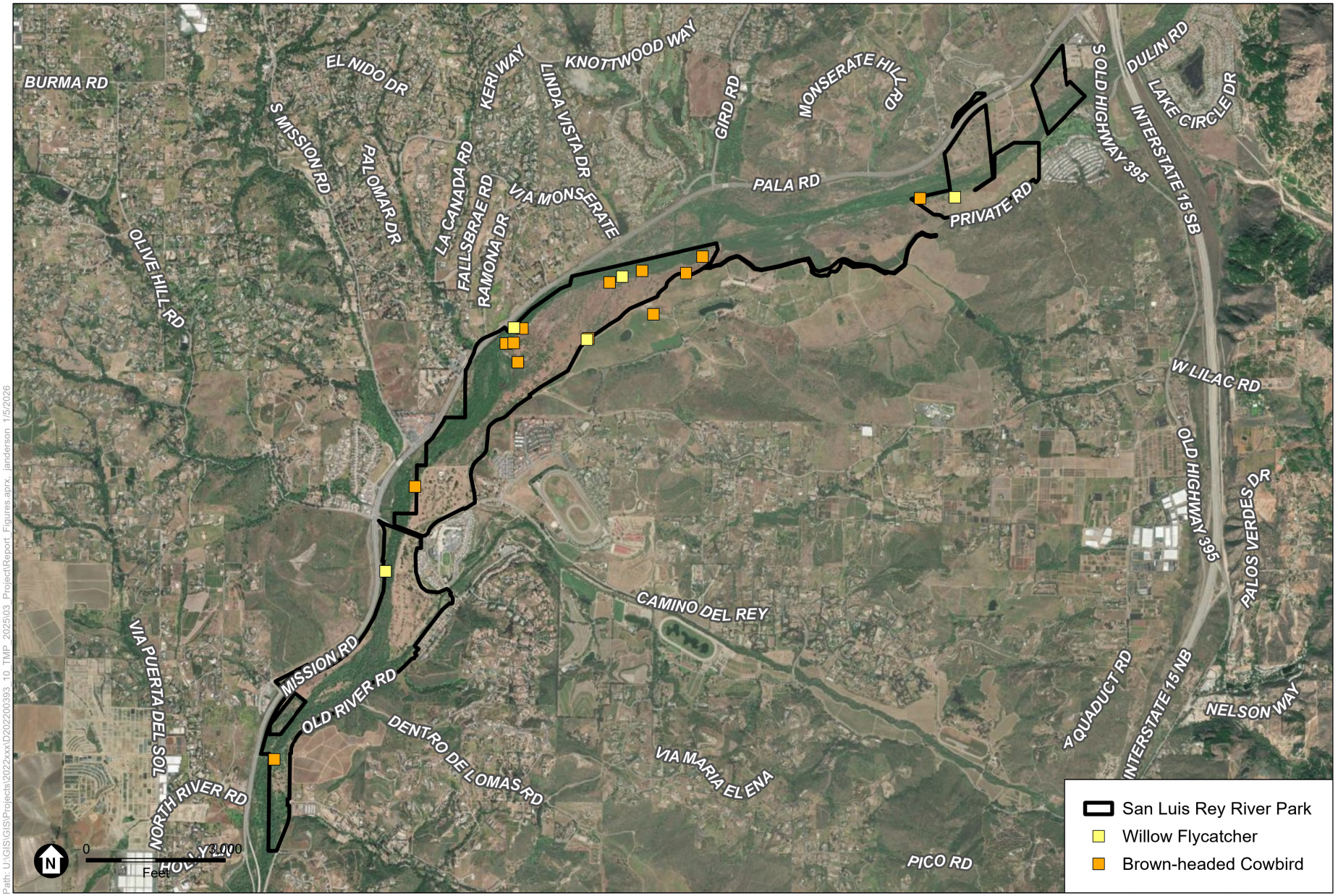
## 4.6 Southwestern Willow Flycatcher

Southwestern willow flycatcher surveys took place in 2025 at San Luis Rey River Park in areas of suitable habitat, such as southern cottonwood-willow riparian forest and southern willow scrub. Adjacent areas, including disturbed habitat, non-native grassland, tamarisk scrub, and Diegan coastal sage scrub were also assessed and surveyed. The submitted 45-day report is provided in **Appendix G**, *Southwestern Willow Flycatcher & Least Bell's Vireo USFWS 45-Day Report*.

Survey results are summarized in **Table 21** below and depicted in **Figure 24**. Four to five willow flycatchers were detected within the survey area, all of which were detected during survey pass 2. At least one willow flycatcher was detected in each survey section, including one in the eastern section, three in the central section and one likely willow flycatcher in the western section. All four to five willow flycatcher detections were located within the southern cottonwood-willow riparian forest habitat, though only two of the detections were in the main riparian corridor of the river where optimal southwestern willow flycatcher nesting habitat occurs. All five detections were of single birds that responded almost immediately to the fitz-bew playback calls. Brown-headed cowbirds were detected flying over or perched in the survey area on every survey pass (**Figure 24**). A brown-headed cowbird trapping program was in place and operating within the survey area during the 2025 season through a DPR-issued ROE Permit. A complete list of all wildlife observed during the surveys is included in **Appendix G**.

**TABLE 21**
**SOUTHWESTERN WILLOW FLYCATCHER TERRITORY SURVEY RESULTS: SAN LUIS REY RIVER PARK**

| Survey Pass | Section | Date | Detections/Comments | GPS Coordinates |
|---|---|---|---|---|
| 1 | N/A | N/A | N/A | N/A |
| 2 | Eastern | 6/2/25 | Willow flycatcher fitz-bew response repeatedly to playback between 8:04 a.m. and 8:40 a.m. Located in area of blue elderberry, arroyo willow and Fremont Cottonwood. Observed flycatching. Unbanded. | 33.313728, -117.173399 |
| | Eastern | 6/2/25 | Fitz-bew response in area of Fremont cottonwood and mule fat dominated area. Detected between 9:42 a.m. and 9:55 a.m. Unbanded. | 33.302661, -117.206584 |
| | Eastern | 6/2/25 | Quick, aggressive fitz-bew in response to playback. Detected in Fremont cottonwood, arroyo willow and sandbar willow dominated area from 10:35 a.m. to 10:45 a.m. Unbanded. | 33.307471, -117.203444 |
| | Central | 6/3/25 | Few fitz-bew responses to playback. Detected between 6:49 a.m. and 7:20 a.m. in Fremont cottonwood, California sycamore and arroyo willow dominated area with poison oak and marshy inclusion. Detected closer to SR-76 and never approached playback area along south side of river. Did not see. | 33.303514, -117.213194 |
| | Western | 6/4/25 | Only occasional whits from 10:20 a.m. to 10:40 a.m., no fitz-bew. Did not see. The timing of this detection, in conjunction with whit calls, strongly suggests that this was a willow flycatcher. | 33.284907, -117.22458 |
| 3 | N/A | N/A | N/A | N/A |




SOURCE: ESRI, 2021; Blackhawk Environmental, Inc., 2025; ESA, 2025

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**Figure 24**

Southwestern Willow Flycatcher Monitoring Results
San Luis Rey River Park

ESA

### 4.6.1 Habitat and Threats Assessment

Habitat and threats were assessed during species surveys to determine: (1) if identified threats are having a direct negative effect on the species or habitat, and (2) if adaptive management actions need to be implemented.

Suitable breeding habitat for southwestern willow flycatcher includes relatively dense riparian vegetation and habitats, particularly those dominated by willows. Overall, San Luis Rey River Park provides moderate- to high-quality suitable breeding habitat. The following threats were observed:

- **Nest parasitism by brown-headed cowbird.** The observations of adult brown-headed cowbirds during every survey within San Luis Rey River Park and the presence of an active brown-headed cowbird trapping program within the survey area during the 2025 season are indicative of the continued threat of nest parasitism.
- **Invasive non-native plant species.** Invasive non-native plant species occur on the preserve in scattered locations; however, several of these species have the ability to become established in a short period of time. Tamarisk (*Tamarix ramosissima*), arundo (*Arundo donax*), and perennial pepperweed (*Lepidium latifolium*), are invasive non-native plant species rated as "High" by Cal-IPC for the severe impacts it can have on hydrological processes and plant and wildlife communities (Cal-IPC 2025). These invasive non-native plant species can outcompete and displace native plant species, resulting in degraded riparian habitats and reducing suitable southwestern willow flycatcher habitat.

### 4.6.2 Adaptive Management Recommendations

The results of 2025 surveys, TMP management goals and objectives, and the adaptive management actions outlined in the TMP were used to develop the following recommendations:

- **Conduct habitat restoration and habitat enhancement.** Removal of invasive non-native plant species through mechanical or chemical methods is recommended outside of the avian nesting season (March–September). Hand tools and herbicide (aquatic-safe) could be used during the nesting season if a biologist is present to clear the impact areas in front of the restoration crew. This may be needed for annual and perennial invasive non-native plant species that grow and seed out during nesting season. Ideally, herbicide should be applied before seed sets on plants, which may involve multiple treatment visits throughout the season. Furthermore, removal or treatment of invasive non-native plants creates an opportunity for habitat enhancement and restoration in areas that have low plant diversity.
- **Continue brown-headed cowbird trapping program.** A brown-headed cowbird trapping program was observed in 2025 and is presumed to have reduced the numbers of free-flying brown-headed cowbirds within the survey area. Brown-headed cowbird trapping should continue in the park.

## 4.7 Least Bell's Vireo

Least Bell's vireo surveys took place in 2025 at San Luis Rey River Park in areas of suitable habitat, such as southern cottonwood-willow riparian forest and southern willow scrub. Adjacent areas, including disturbed habitat, non-native grassland, tamarisk scrub, and Diegan coastal sage scrub were also assessed and surveyed. The submitted 45-day report is provided in **Appendix G**.

Survey results are summarized in **Table 22** below and depicted in **Figure 25**. Thirty-two least Bell's vireos were observed during survey pass 1. Thirty-two least Bell's vireos were observed during survey pass 2. Thirty-four least Bell's vireos were observed during survey pass 3. One least Bell's vireo was detected during the select survey pass 4 (which consisted of surveying select areas where least Bell's vireos were not observed during the first three survey passes but were thought to still have some potential to occur), though this observation was near previous least Bell's vireo observations and is likely not a new individual. A majority of the males were observed in similar areas for at least two of the passes, suggesting they may have occupied a breeding territory, with some directly detected to be in a pair. However, territories and nesting status were not closely surveyed due to timing limitations and confirmation of pair and nesting status was not possible. Regardless, all male least Bell's vireo detections were presumed to be of paired individuals, based on behavior alone. None of the detected males were advertising often and high in the canopy, nor ranging widely in search of a mate, so, all male detections were assumed paired or were directly observed to be paired in the few instances where a female was seen or heard as well. Therefore, it is assumed that up to 68 adult least Bell's vireos occupied San Luis Rey River Park during the 2025 season.

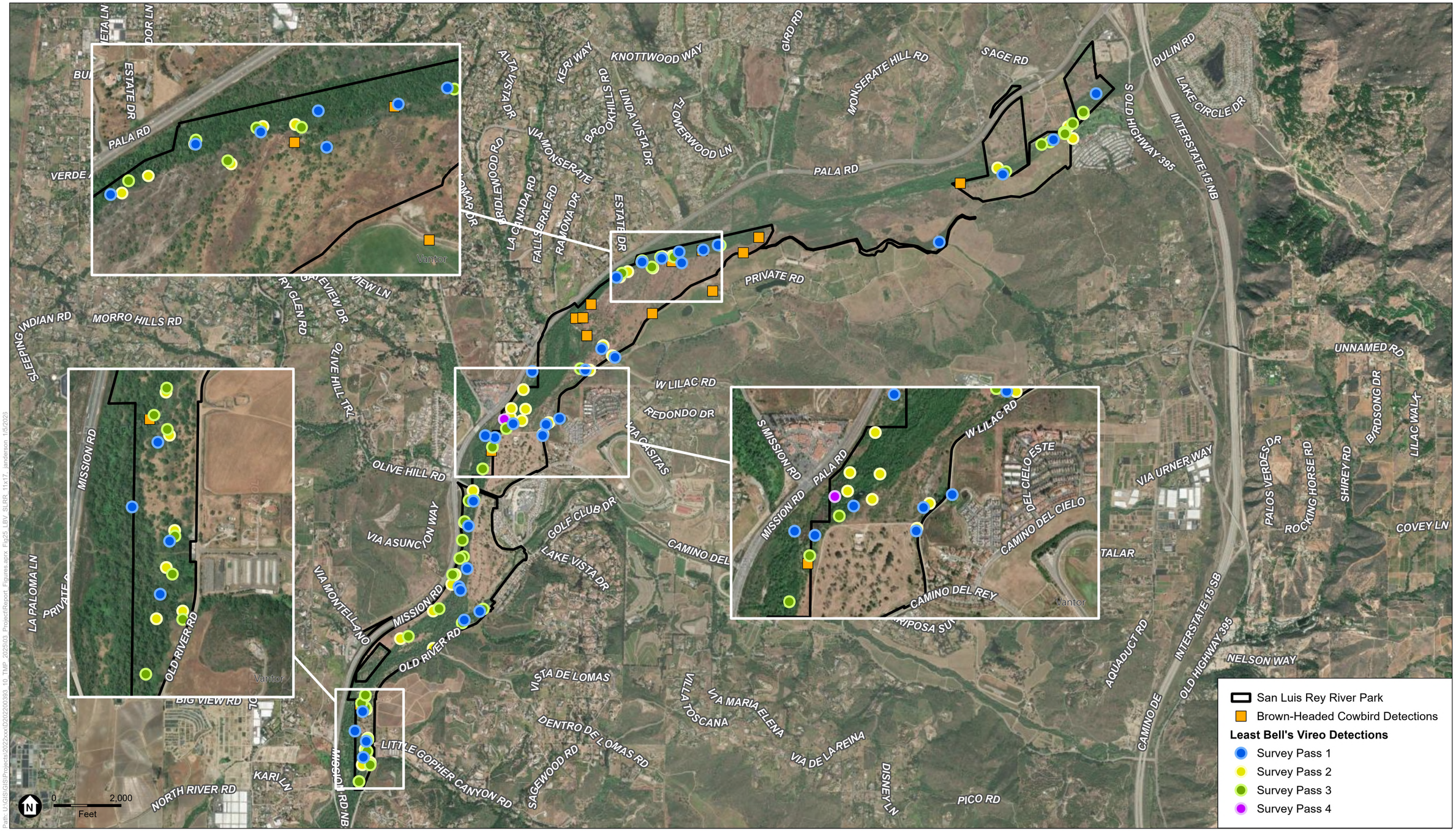
Brown-headed cowbirds were detected flying over or perched in the survey area on every survey pass (**Figure 25**). A brown-headed cowbird trapping program was in place and operating within the survey area during the 2025 season through a DPR-issued ROE Permit. A complete list of all wildlife observed during the surveys is included in **Appendix G**.

### 4.7.1 Habitat and Threats Assessment

Habitat and threats were assessed during species surveys to determine: (1) if identified threats are having a direct negative effect on the species or habitat, and (2) if adaptive management actions need to be implemented.

Suitable breeding habitat for least Bell's vireo includes riparian woodlands, particularly those dominated by willows. Overall, San Luis Rey River Park provides moderate- to high-quality suitable breeding habitat. The following threats were observed:

- **Nest parasitism by brown-headed cowbird.** The observations of adult brown-headed cowbirds during every survey within San Luis Rey River Park and the presence of an active brown-headed cowbird trapping program within the survey area during the 2025 season are indicative of the continued threat of nest parasitism.
- **Invasive non-native plant species.** Invasive non-native plant species occur on the preserve in scattered locations; however, several of these species could become established in a short period of time. Tamarisk, arundo, and perennial pepperweed are invasive non-native plant species rated as "High" by Cal-IPC for the severe impacts they can have on hydrological processes and plant and wildlife communities (Cal-IPC 2025). These invasive non-native plant species can outcompete and displace native plant species, resulting in degraded riparian habitats and reducing suitable least Bell's vireo habitat.

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SOURCE: ESRI, 2021; Blackhawk Environmental, Inc., 2025; ESA, 2025

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**Figure 25**
Least Bell's Vireo Monitoring Results
San Luis Rey River Park

ESA

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**TABLE 22**
**LEAST BELL'S VIREO MONITORING RESULTS: SAN LUIS REY RIVER PARK**

| Pass 1 Detections | | | Pass 2 Detections | | | Pass 3 Detections | | | Pass 4 Detections | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Date** | **Section** | **GPS Coordinates** | **Date** | **Section** | **GPS Coordinates** | **Date** | **Section** | **GPS Coordinates** | **Date** | **Section** | **GPS Coordinates** |
| 5/15/25 | Eastern | 33.32108, -117.163389 | 6/2/25 | Eastern | 33.31836, -117.16607 | 6/25/25 | Eastern | 33.317898, -117.16646 | 6/30/25 | Central | 33.293962, -117.220786 |
| | | 33.317287, -117.167503 | | | 33.306154, -117.20888 | | | 33.318623, -117.16565 | | | |
| | | 33.314397, -117.172412 | | | 33.306477, -117.20645 | | | 33.319558, -117.16462 | | | |
| | | 33.308799, -117.178534 | | | 33.306959, -117.20752 | | | 33.317103, -117.16783 | | | |
| | | 33.308398, -117.200109 | | | 33.307405, -117.20552 | | | 33.316891, -117.16864 | | | |
| | | 33.307987, -117.201547 | | | 33.307461, -117.20456 | | | 33.314638, -117.17213 | | | |
| | | 33.306909, -117.20364 | 6/3/25 | Central | 33.299273, -117.21032 | | | 33.308371, -117.19991 | | | |
| | | 33.307803, -117.203897 | | | 33.30009, -117.21122 | | | 33.307393, -117.20439 | | | |
| | | 33.30727, -117.205582 | | | 33.305719, -117.20965 | | | 33.307368, -117.2057 | | | |
| | | 33.306953, -117.207493 | | | 33.298077, -117.21249 | | | 33.30655, -117.20654 | | | |
| 5/16/25 | Central | 33.29914, -117.210049 | | | 33.29484, -117.21871 | | | 33.307055, -117.20749 | | | |
| | | 33.299835, -117.211364 | | | 33.293863, -117.21906 | 6/26/25 | Central | 33.306023, -117.20945 | | | |
| | | 33.30568, -117.209977 | | | 33.294169, -117.22019 | | | 33.298187, -117.21341 | | | |
| | | 33.298088, -117.212927 | | | 33.296434, -117.21894 | | | 33.29321, -117.22056 | | | |

| Pass 1 Detections | | | Pass 2 Detections | | | Pass 3 Detections | | | Pass 4 Detections | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Date** | **Section** | **GPS Coordinates** | **Date** | **Section** | **GPS Coordinates** | **Date** | **Section** | **GPS Coordinates** | **Date** | **Section** | **GPS Coordinates** |
| | | 33.2936, -117.219907 | | | 33.294883, -117.22009 | | | 33.291674, -117.2219 | | | |
| | | 33.292458, -117.221672 | | | 33.292767, -117.21699 | | | 33.289895, -117.22282 | | | |
| | | 33.29261, -117.222606 | | | 33.293726, -117.21643 | | | 33.264243, -117.23458 | | | |
| | | 33.292663, -117.217024 | | | 33.265623, -117.23428 | | | 33.265615, -117.23351 | | | |
| | | 33.293566, -117.216698 | | | 33.266887, -117.23401 | | | 33.266725, -117.23383 | | | |
| | | 33.294072, -117.215387 | | | 33.265819, -117.23351 | | | 33.267664, -117.23376 | | | |
| | | 33.297927, -117.218094 | | | 33.267799, -117.23377 | | | 33.270286, -117.23402 | | | |
| | | | 6/4/25 | Western | | 6/27/25 | Western | | | | |

| Pass 1 Detections | | | Pass 2 Detections | | | Pass 3 Detections | | | Pass 4 Detections | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Date** | **Section** | **GPS Coordinates** | **Date** | **Section** | **GPS Coordinates** | **Date** | **Section** | **GPS Coordinates** | **Date** | **Section** | **GPS Coordinates** |
| 5/17/25 | Western | 33.287256, -117.223702 | | | 33.270145, -117.23395 | | | 33.270643, -117.23441 | | | |
| | | 33.285229, -117.22416 | | | 33.271217, -117.23407 | | | 33.271317, -117.23405 | | | |
| | | 33.281757, -117.224261 | | | 33.275225, -117.22748 | | | 33.276177, -117.22991 | | | |
| | | 33.280259, -117.225033 | | | 33.275987, -117.23068 | | | 33.278463, -117.22695 | | | |
| | | 33.279978, -117.224882 | | | 33.278269, -117.22752 | | | 33.281244, -117.22567 | | | |
| | | 33.278278, -117.222986 | | | 33.279978, -117.22488 | | | 33.282718, -117.22462 | | | |
| | | 33.277556, -117.224489 | | | 33.280456, -117.22574 | | | 33.282578, -117.22497 | | | |
| | | 33.269969, -117.234292 | | | 33.281265, -117.22542 | | | 33.284068, -117.22475 | | | |
| | | 33.268371, -117.235029 | | | 33.281746, -117.22426 | | | 33.285577, -117.22454 | | | |
| | | 33.267537, -117.233918 | | | 33.28551, -117.22456 | | | 33.287291, -117.22413 | | | |
| | | 33.266228, -117.234179 | | | 33.288112, -117.22375 | | | 33.287354, -117.22364 | | | |
| | | | | | | | | 33.278463, -117.22265 | | | |
| | | | | | | | | 33.277324, -117.22468 | | | |

### 4.7.2 Adaptive Management Recommendations

The results of 2025 surveys, TMP management goals and objectives, and the adaptive management actions outlined in the TMP were used to develop the following recommendations:

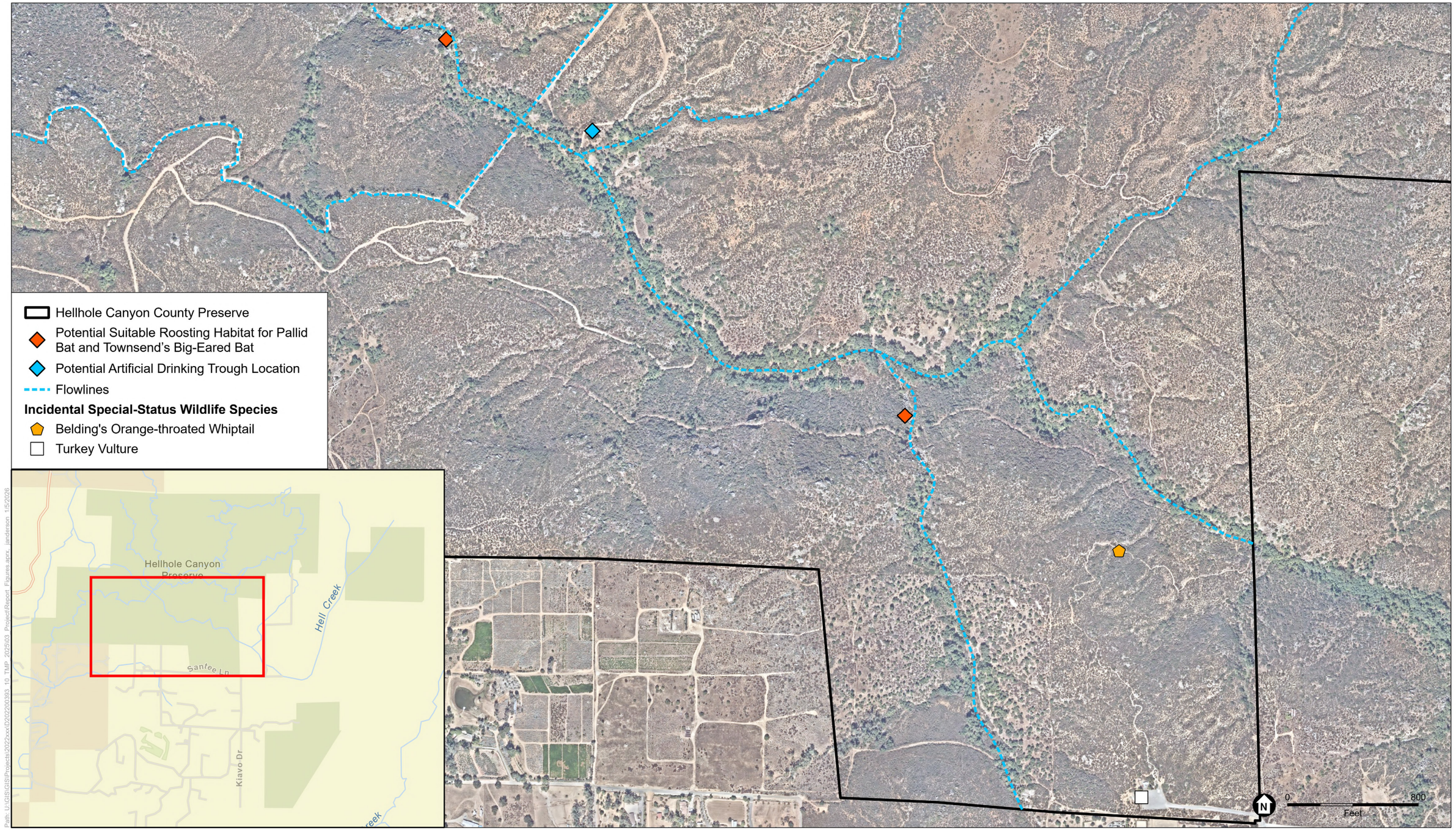
- **Conduct habitat restoration and habitat enhancement.** Removal of invasive non-native plant species through mechanical or chemical methods is recommended outside of the avian nesting season (March–September). Hand tools and herbicide (aquatic-safe) could be used during the nesting season if a biologist is present to clear the impact areas in front of the restoration crew. This may be needed for annual and perennial invasive non-native plant species that grow and seed out during nesting season. Ideally, herbicide should be applied before seed sets on plants, which may involve multiple treatment visits throughout the season. Furthermore, removal or treatment of invasive non-native plants creates an opportunity for habitat enhancement and restoration in areas that have low plant diversity. Additionally, there are islands of riparian trees east of the river corridor (around the horse grounds in the central section) that are separated by ripgut brome and other non-native grasses that could be revegetated with riparian trees and shrubs, which would encourage larger blocks or linear alignments of restored riparian habitat. This revegetation would increase suitable habitat for least Bell's vireo, potentially allowing them to spread laterally and populate the preserve even more, while decreasing non-native grassland cover on the park.
- **Continue brown-headed cowbird trapping program.** A brown-headed cowbird trapping program was observed in 2025 and is presumed to have reduced the numbers of free-flying brown-headed cowbirds within the survey area. Brown-headed cowbird trapping should continue in the park.

## 4.8 Pallid Bat

ESA conducted surveys to evaluate roosting and foraging habitat and document threat data to inform management needs in Hellhole Canyon County Preserve (**Figure 26**), Mount Olympus County Preserve (**Figure 27**), and Wilderness Gardens County Preserve (**Figure 28**). Field documentation consisted of habitat and threats assessment forms and are included in **Appendix H**, *Bat Habitat and Threats Assessment Field Forms and Representative Photographs*. Incidentally observed special-status wildlife species included Belding's orange-throated whiptail and turkey vulture at Hellhole Canyon County Preserve (**Figure 26**).

### 4.8.1 Roosting and Foraging Habitat Assessment

Pallid bat is a multi-habitat roosting species and forages on terrestrial arthropods in oak savanna-type habitats, grassy oak and sycamore-lined river terraces, native grasslands, and sparsely vegetated scrublands. Suitable foraging habitat also includes dirt trails, roads, and staging areas, particularly where these features cuts through dense scrubland habitat like chaparral. Pallid bats are ground-gleaning insectivores and typically forage close to the ground, often capturing prey from surfaces. They have an affinity for roosting in human-made structures but can also be found roosting in a variety of natural crevice and cavity situations, such as rock crevices, natural caves, mines, under tree bark, and in tree cavities and hollows. Roosting sites are typically low-light, sheltered environments located near suitable foraging habitats, which support the species' ground-level hunting behavior and prey availability.

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SOURCE: Nearmap, 2020; ESA, 2025.

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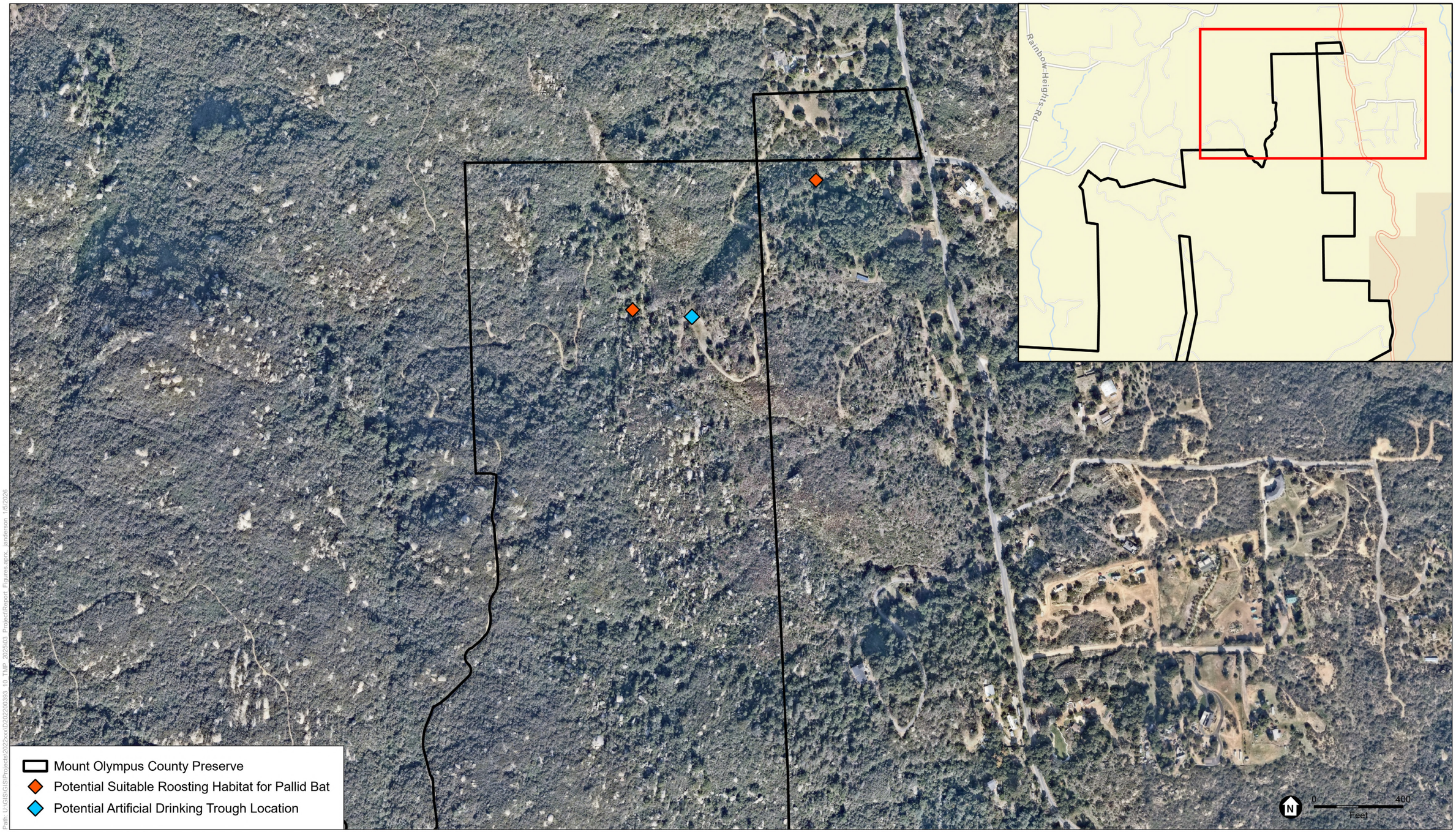
**Figure 26**
Pallid Bat and Townsend's Big-Eared Bat Habitat Assessment Results
Hellhole Canyon County Preserve

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SOURCE: Nearmap, 2021; ESA, 2025.

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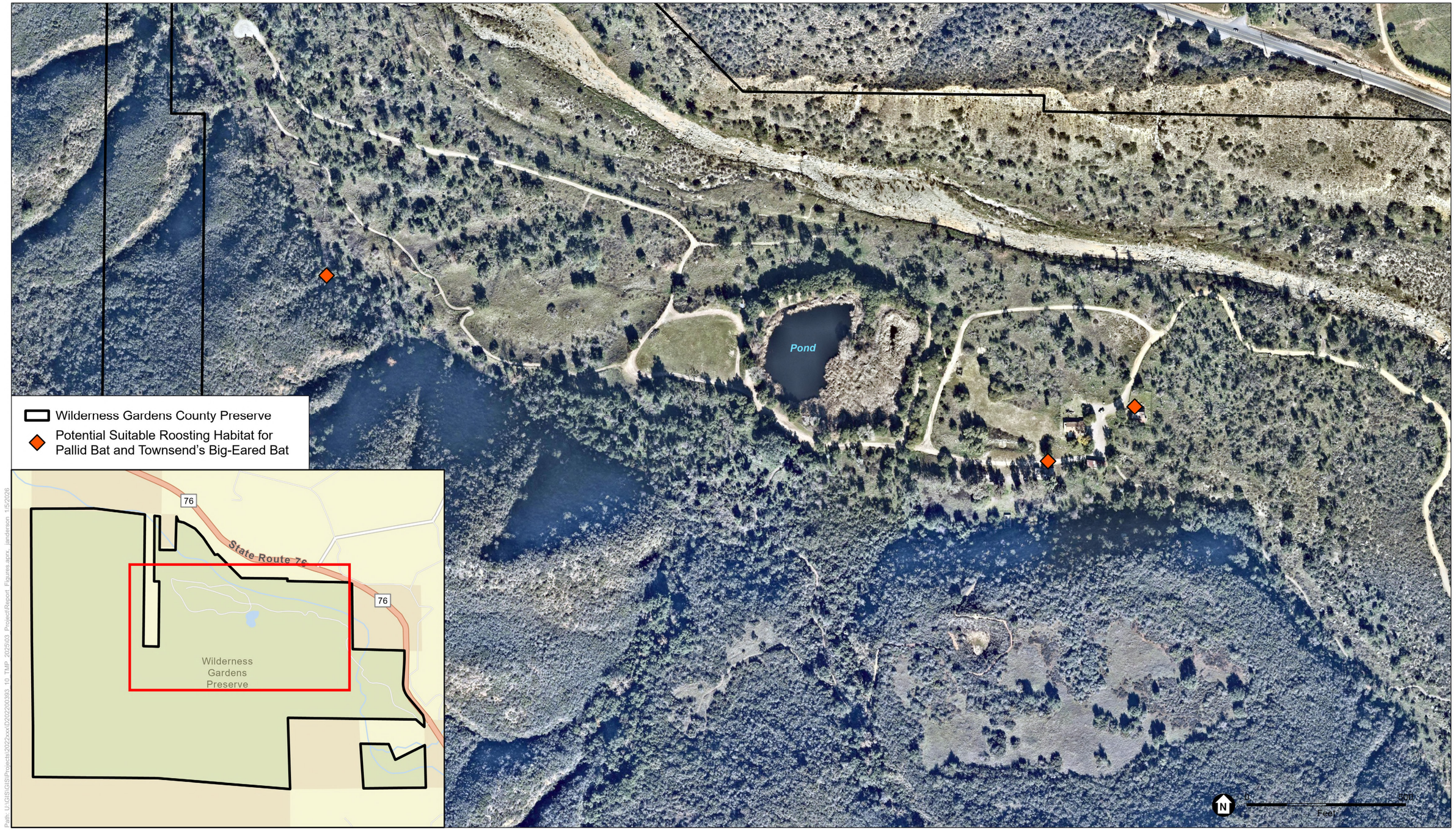
**Figure 27**
Pallid Bat Habitat Assessment Results
Mount Olympus County Preserve

ESA

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SOURCE: Nearmap, 2021; ESA, 2025.

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**Figure 28**
Pallid Bat and Townsend's Big-Eared Bat Habitat Assessment Results
Wilderness Gardens County Preserve

ESA

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## Hellhole Canyon County Preserve

### *Roosting Habitat*

There is an abundance of rocky outcrops, cliffs, and boulders that could provide suitable roosting habitat for pallid bats in Hellhole Canyon County Preserve. The rocky and boulder-strewn areas that appear most suitable for pallid bat and other crevice- and cavity-roosting bat species include the rocky/boulder draw near the "grotto" and along Hell Creek, from the beginning of significant boulder habitat to the western end of Hell Creek within the preserve (**Figure 26**). There are also a number of oaks and other tree species on-site that have the potential to provide pallid bat roosting opportunities under bark and/or in tree hollows and cavities. Most of the suitable trees are found along Hell Creek within the preserve. There are no suitable human-made structures that could serve as roosting habitat for pallid bats in Hellhole Canyon County Preserve.

### *Foraging Habitat*

Suitable foraging habitat on Hellhole Canyon County Preserve includes the sycamore-lined Hell Creek and the sparsely vegetated scrubland. The numerous dirt trails and roads that run through chaparral and coastal sage scrub habitats on the preserve may also provide open flight corridors and surface-level access to prey. These features are consistent with the species' known preference for foraging in open, low-vegetation areas.

## Mount Olympus County Preserve

### *Roosting Habitat*

There is an abundance of rocky outcrops and boulders throughout the Mount Olympus County Preserve that could provide suitable roosting habitat for pallid bats. Oaks and other tree species on-site have the potential for providing pallid bat roosting opportunities under bark or within in tree hollows and cavities. Most of the suitable trees are found in the forested eastern portion of the preserve along Pala Temecula Road. There are abandoned human-made structures that may also serve as roosting habitat for pallid bats in Mount Olympus County Preserve (**Figure 27**). Pallid bats were acoustically detected during transect surveys conducted in 2022, indicating that the preserve is likely being used for roosting (ESA 2022).

### *Foraging Habitat*

Suitable foraging habitat on Mount Olympus County Preserve is limited to the rocky outcrops, dirt trails, and roads through the preserve. While there is oak and sycamore woodland, they are densely vegetated and lack openings for foraging pallid bats. One fallen tree was observed along a trail, which may further reduce corridor openness and limit access to prey. Maintaining clear, sparsely vegetated trail margins may help support foraging opportunities for this species.

## Wilderness Gardens County Preserve

### *Roosting Habitat*

Historic and unused buildings near the center of Wilderness Gardens County Preserve and the exposed rocky habitat such as the rocky outcrops near the northern boundary of the preserve may provide potential pallid bat roosting habitat (**Figure 28**). Additional potential roosting habitat for pallid bat occurs in suitable trees that may have loose bark, cavities, and hollows along the San Luis Rey River, along the

base of and in the draws of the chaparral-covered hillside that dominate the preserve, and near the two ponds on-site.

### *Foraging Habitat*

Suitable foraging habitat on Wilderness Gardens County Preserve includes the sycamore-lined San Luis Rey River, native grassland, and the sparsely vegetated scrubland. The numerous dirt trails and roads that run through chaparral and coastal sage scrub habitats on the preserve also provide suitable foraging habitat for pallid bats.

## 4.8.2 Threats Assessment

Threats to pallid bats and potential suitable roosting and foraging habitat were assessed during species-specific surveys to determine: (1) if identified threats are having a direct negative effect on the species or habitat, and (2) if adaptive management actions need to be implemented. The following threats were observed:

- **Invasive non-native plant species.** Invasive non-native plant species alter vegetation structure, which affects foraging success. Invasive non-native plant cover is present in Hellhole Canyon County Preserve, Mount Olympus County Preserve, and Wilderness Gardens County Preserve along the dirt trails and roads on-site and presents a potentially significant threat to pallid bat foraging habitat (see Representative Photographs in **Appendix H**). Pallid bats require open and sparsely vegetated areas for foraging such that they can easily access terrestrial arthropods; therefore, dense invasive non-native plant cover reduces suitable foraging habitat (Krutzsch 1948).
- **Invasive non-native animals.** Adult American bullfrogs (*Lithobates catesbeianus*) have voracious appetites and will consume anything they can fit into their mouths, including invertebrates, birds, bats, rodents, amphibians, reptiles, etc. (CDFW n.d.). During 2025 surveys, American bullfrogs were observed in the pond area of Wilderness Gardens County Preserve (see Representative Photographs in **Appendix H**). Bullfrog predation on insects may reduce prey availability for pallid bats.

## 4.8.3 Adaptive Management Recommendations

The following are adaptive management recommendations to maintain and enhance suitable roosting and foraging habitat for pallid bat:

- **Foraging habitat enhancement.** Focused pallid bat foraging habitat management can include targeted dethatching, mowing, and/or herbicide treatment for non-native plant species within and along trails, roads, disturbed areas, and sparsely vegetated habitats that provide openings for foraging pallid bats on Mount Olympus County Preserve. Targeted dethatching and mowing can reduce the overall height of the existing vegetation and increase open ground, maximizing the ability for pallid bats to forage. Herbicide treatment can be used to maintain open ground areas and trail widths. Where feasible, removing fallen trees and other obstructions from trails will help maintain suitable foraging conditions. Focused management should occur outside of the avian nesting season (March–September) at Hellhole Canyon County Preserve and Wilderness Gardens County Preserve. Mechanical methods and herbicide could be used during the avian nesting season if a biologist is present to clear the impact areas in front of the restoration crew. Thatch and vegetation removal should be implemented with weedeaters and rakes; debris should be hauled out and disposed of off-

site at a county landfill. Ideally, herbicide should be applied before seed sets on plants, which may involve multiple treatment visits throughout the season.

- **Control invasive non-native predators.** American bullfrogs were observed in one of the ponds within Wilderness Gardens County Preserve during the 2025 habitat assessment. Targeted removal of breeding-size adult bullfrogs is recommended to minimize impacts to native bats by enhancing and increasing insect prey base.
- **Enhance drinking sources.** Enhance drinking sources for pallid bats at Hellhole Canyon County Preserve and Mount Olympus County Preserve by installing spring- and/or water-table-fed artificial drinking troughs in the preserves where such aquatic features are present and logistically feasible (i.e., near roads and/or trails). Potential artificial drinking trough locations for Hellhole Canyon and Mount Olympus County Preserves are included in **Figure 26** and **Figure 27**, respectively. Both locations are near access roads and are assumed to have access to potential wells that could fill the drinking troughs. Troughs should be designed to allow safe access for bats in flight and should be placed in areas with minimal disturbance and low light exposure to reduce predation risk and encourage use. At Wilderness Gardens County Preserve (**Figure 28**), the existing pond can be enhanced by selectively clearing cattails and dense wetland vegetation to provide better opportunities for pallid bats to drink while in flight. Periodic maintenance may be necessary to prevent regrowth of obstructive vegetation.
- **Create roost structures.** Create and install artificial roost structures in Hellhole Canyon, Mount Olympus, and Wilderness Gardens County Preserves to provide consistent and protected roost structures. Artificial roosts that are large and thermally stable and provide roosting opportunities for crevice- and cave-roosting bats are recommended. This can include cinderblock style "combat town" structures typically found on military bases. Artificial roost locations that are near foraging habitats such as riparian areas, oak woodlands, and near water sources are ideal, but they should be put in areas where they would not be subject to disturbance and vandalism. Placement in shaded areas or with thermal buffering materials can help maintain stable internal temperatures, which is especially important for maternity roosts and overwintering use. Where feasible, structures should be monitored periodically to assess use, structural integrity, and potential maintenance needs.
- **Conduct mist-netting to determine pallid bat occupancy.** Pallid bats are most readily detected by mist-net capture and by finding their guano or culled insect parts in their night roosts. In absence of mist-netting or obvious roosts to detect pallid bat signs, the alternative is to use electronic bat detectors. Pallid bat echolocation calls can resemble other more common species such as the big brown bat (*Eptesicus fuscus*). Future pallid bat monitoring should implement a combination of acoustic monitoring (either passive or transect-based) and mist-netting to confirm presence of species and document individual bat information to inform population dynamics, as recommended in the TMP (ESA 2024).

## 4.9 Townsend's Big-Eared Bat

ESA conducted surveys to evaluate roosting and foraging habitat and document threat data to inform management needs in Hellhole Canyon County Preserve and Wilderness Gardens County Preserve. Field documentation consisted of habitat and threats assessment forms and are included in **Appendix H**. Incidentally observed special-status wildlife species included turkey vulture and Belding's orange-throated whiptail at Hellhole Canyon County Preserve (**Figure 26**).

### 4.9.1 Roosting and Foraging Habitat Assessment

Townsend's big-eared bat is an obligate cave-roosting species that depends on caves and cave-analogs for its roosting requirements. Roosting situations include natural caves, including boulder caves, mines, tree hollows, and human-made structures that mimic cave-like environments. These environments are typically low-light, thermally stable environments located near suitable foraging habitats. Townsend's big-eared bat primarily feeds on small to medium-sized moths and typically forages in edge habitats along streams and wooded areas. This species prefers low-clutter environments with high moth abundance and may be difficult to detect acoustically due to its low-intensity echolocation calls.

#### Hellhole Canyon County Preserve

##### *Roosting Habitat*

There is an abundance of boulder habitat that could provide suitable roosting habitat in Hellhole Canyon County Preserve. The boulder-strewn areas that appear most suitable for the Townsend's big-eared bat include the boulder draw near the "grotto" and along Hell Creek, from the beginning of significant boulder habitat to the western end of Hell Creek (**Figure 26**). Trees with hollows and cavities also have the potential for providing Townsend's big-eared bat roosting opportunities but are not the preferred roosting location for this species. Most of the suitable trees are found along Hell Creek in the preserve. There are no suitable human-made structures that could serve as roosting habitat for the Townsend's big-eared bat within the preserve.

##### *Foraging Habitat*

Suitable foraging habitats in Hellhole Canyon County Preserve are primarily limited to the woodland edge habitats surrounding Hell Creek. These areas may support foraging activity where vegetation structure allows for maneuverability and where moths are likely to occur.

#### Wilderness Gardens County Preserve

##### *Roosting Habitat*

Historic and unused buildings near the center of Wilderness Gardens County Preserve and the exposed rocky habitat such as the rocky outcrops near the northwest boundary of the preserve provide potential Townsend's big-eared bat roosting habitat (**Figure 28**). Exposed rocky habitat such as the rocky outcrops near the northern boundary of the preserve serve as potential roosting habitat for Townsend's big-eared bat as well. Additional potential roosting habitat for Townsend's big-eared bat occurs in suitable trees that could have loose bark, cavities, and hollows along the San Luis Rey River, along the base of and in the draws of the chaparral-covered hillside that dominates the preserve, and near the two ponds on-site.

##### *Foraging Habitat*

Suitable foraging habitat on Wilderness Gardens County Preserve includes the woodland area surrounding the pond and the woodland edge habitats around San Luis Rey River. These areas may support foraging activity where vegetation structure allows for maneuverability and supports moth populations.

### 4.9.2 Threats Assessment

Threats to roosting and foraging habitat were assessed during species surveys to determine: (1) if identified threats are having a direct negative effect on the species or habitat, and (2) if adaptive management actions need to be implemented. The following threats were observed:

- **Invasive non-native plant species.** Invasive non-native plant species alter vegetation structure, which affects foraging success. Invasive non-native plant cover is present in both Hellhole Canyon County Preserve and Wilderness Gardens County Preserve, particularly near water sources such as Hell Creek and the pond, respectively. This vegetation presents a potentially significant threat to Townsend's big-eared bat foraging habitat by obstructing flight paths, reducing moth prey availability, and degrading the open understory conditions these bats require for effective foraging (see Representative Photographs in **Appendix H**). Townsend's big-eared bats forage for moths within edge habitats along riparian corridors and wooded areas; therefore, invasive non-native plant cover could reduce suitable foraging habitat.
- **Invasive non-native animals.** Adult American bullfrogs have voracious appetites and will consume anything they can fit into their mouths, including invertebrates, birds, bats, rodents, amphibians, reptiles, etc. (CDFW n.d.). During 2025 surveys, American bullfrogs were observed in the pond area of Wilderness Gardens County Preserve (see Representative Photographs in **Appendix H**). For Townsend's big-eared bats, bullfrog predation on insects may diminish the prey base, posing a threat to their foraging habitat and success.

### 4.9.3 Adaptive Management Recommendations

The following are adaptive management recommendations to maintain and enhance suitable roosting and foraging habitat for Townsend's big-eared bat:

- **Foraging habitat enhancement.** Focused Townsend's big-eared bat foraging habitat management can include targeted mowing and/or herbicide treatment for non-native plant species along edge habitats adjacent to Hell Creek and San Luis Rey River and adjacent to and within woodland habitat areas. Targeted mowing can increase native plant diversity by reducing invasive non-native plants, increasing prey abundancy, and maximizing the ability of Townsend's big-eared bats to forage in intact native habitat. Herbicide treatment can be used to reduce invasive non-native plants and increase prey abundance. Focused management should occur outside of the avian nesting season (March–September) at Hellhole Canyon County Preserve and Wilderness Gardens County Preserve and away from recreation areas such as trails and staging areas. Mechanical methods and herbicide could be used during the avian nesting season if a biologist is present to clear the impact areas in front of the restoration crew. Vegetation removal should be implemented with weedeaters and rakes; debris should be hauled out and disposed of off-site at a county landfill. Ideally, herbicide should be applied before seed sets on plants, which may involve multiple treatment visits throughout the season.
- **Control invasive non-native predators.** American bullfrogs were observed in one of the ponds within Wilderness Gardens County Preserve during the 2025 habitat assessment. Targeted removal of breeding-size adult bullfrogs is recommended to minimize impacts to native bats by enhancing and increasing insect prey base.

- **Enhance drinking sources.** Enhance drinking sources for Townsend's big-eared bats at Hellhole Canyon County Preserve by installing spring- and/or water-table-fed artificial drinking troughs in the preserve where such aquatic features are present and logistically feasible (i.e., near roads and/or trails). Potential artificial drinking trough locations for Hellhole Canyon County Preserve are included in **Figure 26**, respectively. The location is near an access road and assumed to have access to potential wells that could fill the drinking troughs. Troughs should be designed to allow safe access for bats in flight and should be placed in areas with minimal disturbance and low light exposure to reduce predation risk and encourage use. At Wilderness Gardens County Preserve (**Figure 28**), the existing pond can be enhanced by clearing cattails and dense wetland vegetation to provide better opportunities for Townsend's big-eared bats to drink while in flight. Periodic maintenance may be necessary to prevent regrowth of obstructive vegetation.
- **Create roost structures.** Create and install artificial roost structures in Hellhole Canyon and Wilderness Gardens County Preserves to provide consistent and protected roost structures. Artificial roosts that are large, thermally stable, and provide roosting opportunities for cave-roosting bats are recommended. This can include cinderblock style "combat town" structures typically found on military bases. Artificial roost locations that are near foraging habitats such as riparian areas, oak woodlands, and near water sources are ideal, but they should be put in areas where they would not be subject to disturbance and vandalism. Placement in shaded areas or with thermal buffering materials can help maintain stable internal temperatures, which is especially important for maternity roosts and overwintering use. Where feasible, structures should be monitored periodically to assess use, structural integrity, and potential maintenance needs.
- **Conduct mist-netting to determine Townsend's big-eared bat occupancy.** Townsend's big-eared bats are most readily detected by mist-net capture and by finding their guano or culled insect parts in their night roosts. In absence of mist-netting or obvious roosts to detect Townsend's big-eared bat sign, the alternative is to use electronic bat detectors. Townsend's big-eared bats appear to have low detection rates. Future Townsend's big-eared bat monitoring should implement a combination of acoustic monitoring (either passive or transect) and mist-netting to confirm presence of species and document individual bat information to inform population dynamics, as recommended in the TMP (ESA 2024).

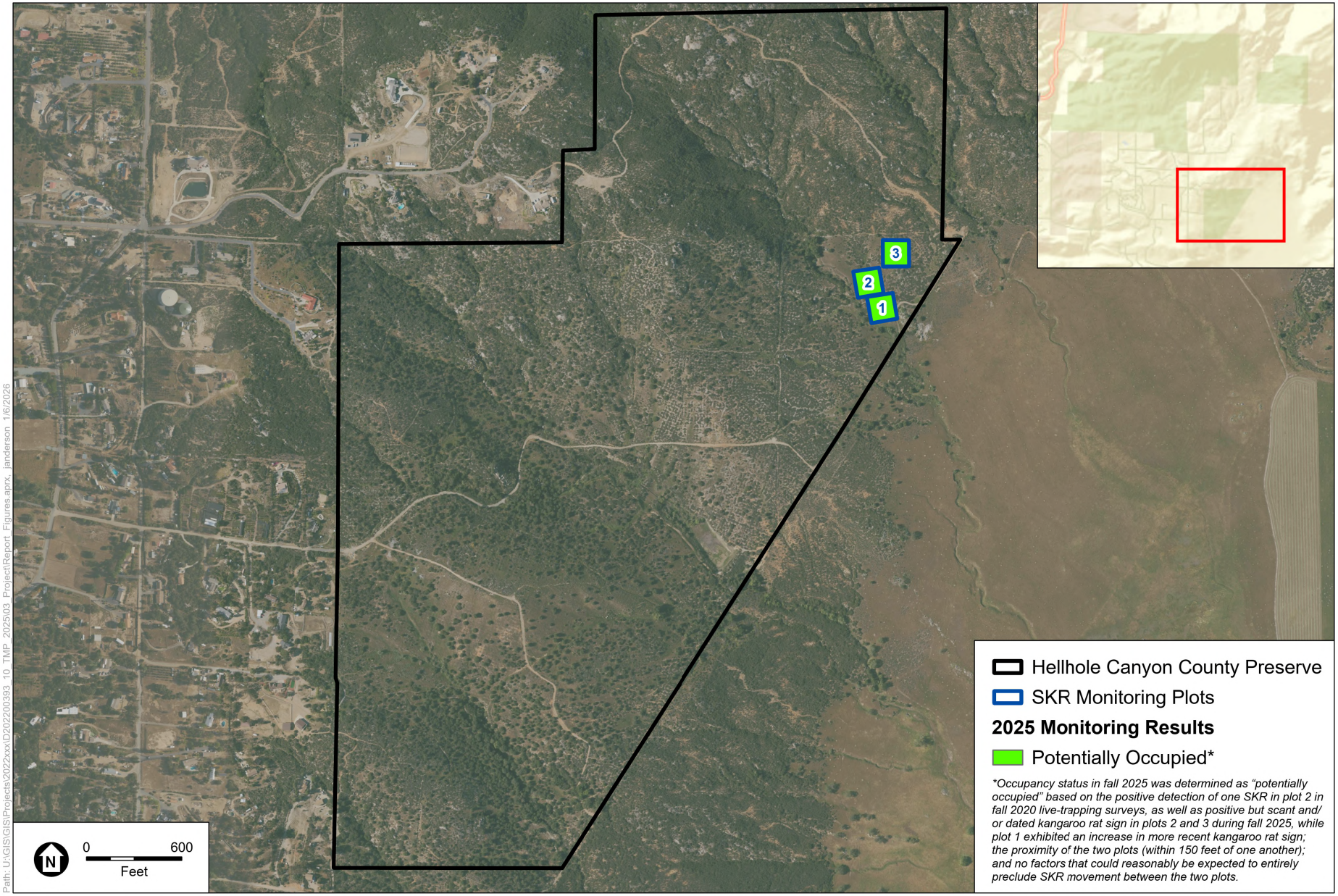
# 4.10 Stephens' Kangaroo Rat

ESA and Blackhawk biologists conducted a burrow/sign search and habitat characterization to inform SKR management needs in Hellhole Canyon County Preserve and Ramona Grasslands County Preserve. The habitat assessment memorandums for both preserves are included in **Appendix I**, *Stephens' Kangaroo Rat Monitoring Memorandums.*

## 4.10.1 Hellhole Canyon County Preserve

### Habitat Assessment

Habitat assessments were conducted at three monitoring plots within the Sierra Verde addition of Hellhole Canyon County Preserve. All three plots were determined to be potentially occupied by SKR (**Figure 29**, **Table 23**). Each plot was rated for SKR potential; two plots were rated medium, and one was rated low (**Table 24**).




SOURCE: NAIP, 2020; SanGIS, 2024; ESA, 2025.

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**Figure 29**

Stephens' Kangaroo Rat Monitoring Results
Hellhole Canyon County Preserve

ESA

**TABLE 23**
**SKR MONITORING RESULTS: HELLHOLE CANYON COUNTY PRESERVE**

| Occupancy/Potential | | # of Monitoring Plots |
|---|---|---|
| SKR Occupancy* | Occupied | 3* |
| | Unoccupied | 0 |
| SKR Potential | High | 0 |
| | Medium | 2 |
| | Low | 1 |
| | No | 0 |

Notes:

SKR = Stephens' kangaroo rat.
* Occupancy status was determined as "potentially occupied" based on the positive detection of one SKR in plot 2 during fall 2020 live-trapping surveys, positive kangaroo rat sign during fall 2025 monitoring, the proximity of all three plots (within 150 feet of one another), and no factors that could reasonably be expected to entirely preclude SKR movement between the three plots.

**TABLE 24**
**SKR HABITAT ASSESSMENT SUMMARY: HELLHOLE CANYON COUNTY PRESERVE**

| Fall 2025 | | | | | | | | | | Fall 2024 |
|---|---|---|---|---|---|---|---|---|---|---|
| Plot ID | % Bare Ground | Living Herb Density | Shrub/ Tree Density (%) | Plant Litter (Dead) (%) | Gopher/ Ground Squirrel Density^ | Obstruction Factor | Potential K-Rat Sign* | SKR Occupancy Determination+ | Rating† | Rating† |
| 1 | 0–5 | Low | 5–25 | 50–75 | High/Low | High | B, S, T | Potentially Occupied | Medium** | Low |
| 2 | 0–5 | Low | 5–25 | 50–75 | Medium/Low | Medium | B, S | Potentially Occupied | Medium** | Medium** |
| 3 | 0–5 | High | 25–50 | 25–50 | Medium/Low | High | B, S | Potentially Occupied | Low** | Medium** |

Notes:

SKR = Stephens' kangaroo rat
^ Active gopher excavation density ratings used; inactive excavation density ratings excluded.
* Potential Kangaroo Rat Sign: B = Burrow(s); S = Scat; T = Tracks; TD = Tail Drag; TV = Trails in Vegetation; O = Other
** Exhibited habitat conditions and observed sign indicates plot is likely or potentially occupied by SKR.
† Estimated potential for SKR occupancy based on habitat community condition and observed kangaroo rat sign.
\+ Occupancy status in fall 2025 was determined as "potentially occupied" as described in the footnote in **Table 23.**

SKR occupancy potential did not change for the three monitoring plots in fall 2025 compared to fall 2024 monitoring. SKR was found present at only one of the three monitoring plots during the fall 2020 live-trapping effort, but Dulzura kangaroo rat (*Dipodomys simulans*) (DKR) was also found present during the live-trapping effort. Based on sign detected during the fall 2025 habitat assessment monitoring effort, SKR presence was potentially detected at all three of the monitoring plots; however, habitat assessment monitoring cannot conclusively differentiate between SKR and DKR. Based on the fall 2020 live-trapping effort, SKR and DKR are both present on-site and there are no obstruction factors that could preclude the possibility of SKR from any of the three monitoring plots, especially considering the proximity of the three plots (all within 150 feet of one another). Therefore, SKR was potentially present at all three monitoring plots (**Table 24**). Habitat suitability for SKR increased from low to medium for plot 1 and decreased from medium to low for plot 3 in fall 2025 compared to fall 2024. These results indicate seasonal SKR occupancy can increase or decrease at given sites between monitoring years due to variables such as drought/precipitation, survey timing, food availability, and competition among sympatric species. The following variables influenced survey results:

- **Precipitation.** The period between the fall 2024 and fall 2025 monitoring efforts was marked by a significantly below-average rainfall year in Valley Center, following 2 years of above-average rainfall in the area. Although drought can appear beneficial for SKR suitability because it is likely to decrease vegetation density and height, it ultimately reduces food availability over time and can increase dead plant litter, which may increase obstruction factors. The immediate effects of low rainfall were observed during the 2025 monitoring efforts with decreased or unchanged density of standing/living herbs for all three plots, though the overall obstruction factor either remained the same or increased. In an ecological regime that is free of anthropogenic influences, such as cattle grazing, low rainfall could serve to increase habitat suitability for SKR by reducing vegetation cover that excludes SKR. However, consistent drought can lead to fewer food sources and thus can ultimately decrease suitability for SKR.
- **Vegetation composition.** During the 2025 monitoring effort, none of the plots were observed to have had any mowing conducted. The 2023 monitoring effort was the most recent time any mowing was observed to be conducted. Regardless of this, with significantly below-average rainfall during the previous rainy season, herbaceous vegetation coverage was shown to decrease in two of the three plots and remained the same in the third. All plots were dominated with low-growing redstem stork's bill, which facilitates SKR movement and is a potential food source, as well as taller-growing ruderal species, such as shortpod mustard. Plot 1 increased in obstruction factor compared to 2024, while plots 2 and 3 remained the same. Plot 2 presented similar findings as previous years, with more open areas primarily vegetated with low-growing redstem stork's bill and a medium obstruction factor, compared to plots 1 and 3, which presented with higher percentages of ruderal species and a high obstruction factor. Potential for SKR had no correlation to the change in obstruction factors during 2025, with plot 1 increasing in potential (primarily due to the observed increase of recent kangaroo rat sign) despite an increase in obstruction factor and plot 3 decreasing in potential with no change in obstruction factor.

Detailed monitoring methods and results, including plot photographs and habitat assessment forms, are included in **Appendix I**.

### Adaptive Management Recommendations

The following are the adaptive management recommendations to ensure persistence of SKR at Hellhole Canyon County Preserve. The incidental observations of thatch and non-native plant species in 2025, TMP management goals and objectives, and the adaptive management actions outlined in the TMP were used to develop the following recommendations:

- **Habitat enhancement.** Focused management within the 5.8-acre management area is recommended to enhance and ensure persistence of suitable SKR habitat. Focused SKR management can include targeted dethatching, mowing, and/or scraping. Targeted dethatching and mowing can reduce the overall height of the existing vegetation and assist with disarticulation of herbaceous weeds. Scraping can reduce vegetation density and increase open ground, maximizing the ability of SKR to move across the landscape.

## 4.10.2 Ramona Grasslands County Preserve

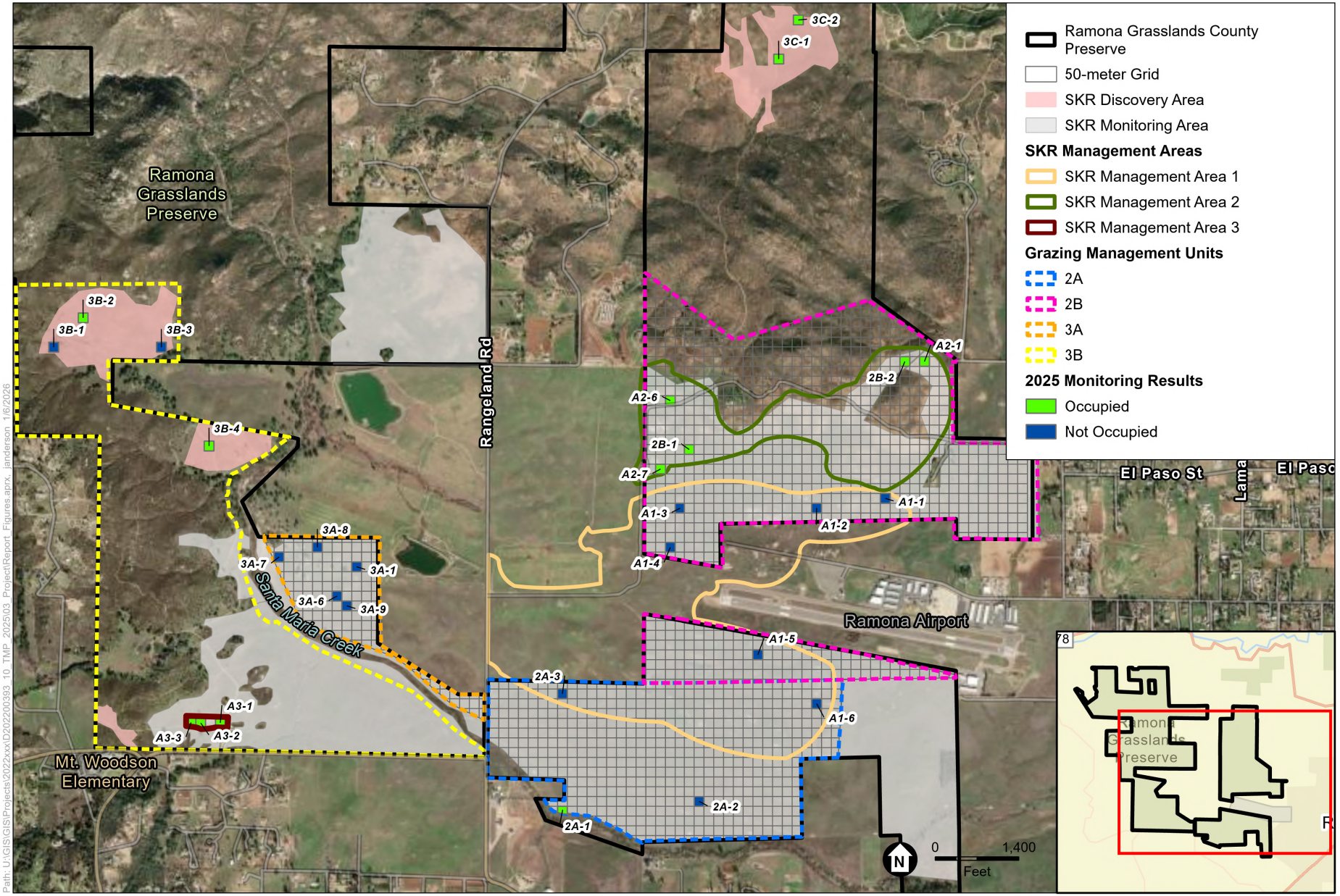
### Habitat Assessment

Habitat assessments were conducted at 28 monitoring plots within Ramona Grasslands County Preserve. Of these plots, 13 were determined to be occupied by SKR and 15 were determined to be unoccupied (**Figure 30, Table 25**). Each plot was rated for SKR potential and, in total, 11 monitoring plots were characterized as having high potential, 9 were characterized as having medium potential, 7 were characterized as having low potential, and 1 was characterized as having no potential for SKR (**Table 26**).

**TABLE 25**
**SKR MONITORING RESULTS: RAMONA GRASSLANDS COUNTY PRESERVE**

| Occupancy/Potential | | # of Monitoring Plots |
|---|---|---|
| SKR Occupancy | Occupied | 13 |
| | Unoccupied | 15 |
| SKR Potential | High | 11 |
| | Medium | 9 |
| | Low | 7 |
| | No | 1 |

Note:
SKR = Stephens' kangaroo rat.




SOURCE: ESRI; ESA, 2025

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**Figure 30**

Stephens' Kangaroo Rat Monitoring Results
Ramona Grasslands County Preserve

ESA

**TABLE 26**
**SKR HABITAT ASSESSMENT SUMMARY: RAMONA GRASSLANDS COUNTY PRESERVE**

| | Fall 2025 | | | | | | | | | Fall 2024 |
|---|---|---|---|---|---|---|---|---|---|---|
| Plot ID | % Bare Ground | Living Herb Density | Shrub/Tree Density (%) | Plant Litter (Dead) (%) | Gopher/ Ground Squirrel Density^ | Obstruction Factor | Potential K-Rat Sign* | SKR Occupancy Determination | Rating† | Rating† |
| A1-1 | 0–5 | Low | 0 | 50–75 | Medium/High | Low | B# | Not Occupied | High | Low |
| A1-2 | 0 | High | 0 | 25–50 | Low/Low | High | None | Not Occupied | None | Low |
| A1-3 | 5–25 | Low | 0 | 50–75 | Low/Medium | Low | None | Not Occupied | High | High |
| A1-4 | 0–5 | High | 0–5 | 50–75 | Medium/Medium | High | None | Not Occupied | Low | Low |
| A1-5 | 0–5 | Medium | 0–5 | 50–75 | High/Low | Medium | None | Not Occupied | Low | Low |
| A1-6 | 5–25 | Low | 0–5 | 50-75 | Medium/Low | Medium | None | Not Occupied | Medium | Low |
| A2-1 | 5–25 | Low | 0–5 | 50–75 | Low/High | Low | B, S | Occupied | High** | High** |
| A2-6 | 5–25 | Medium | 0–5 | 50–75 | Low/High | Low | B, S | Occupied | High** | High** |
| A2-7 | 5–25 | Medium | 0–5 | 75–95 | High/Medium | Low-Medium | B, S | Occupied | High** | High** |
| A3-1 | 50–75 | Low | 0 | 25–50 | Low/Medium | Low | B, S | Occupied | High** | High** |
| A3-2 | 50–75 | Low | 0 | 25–50 | Low/Medium | Low | B, S, T | Occupied | High** | High** |
| A3-3 | 25–50 | Low | 0 | 25–50 | Low/Medium | Low | B, S | Occupied | High** | High** |
| 2A-1 | 5–25 | Low | 0–5 | 50–75 | Medium/Low | Low | B, S | Occupied | Medium** | Low |
| 2A-2 | 0–5 | Low | 0–5 | 50–75 | High/Low | Low-Medium | None | Not Occupied | Medium | N/A |
| 2A-3 | 0–5 | Low | 0 | 50–75 | High/Medium | Low-Medium | None | Not Occupied | Medium | N/A |
| 2B-1 | 5–25 | Medium | 5–25 | 75–95 | Low/Medium | Low | B, S, CF | Occupied | High** | Medium |
| 2B-2 | 0–5 | Medium | 25–50 | 50–75 | High/Medium | Low-Medium | B, S | Occupied | Medium** | Low |
| 3A-1 | 0–5 | Medium | 0 | 25–50 | Medium/Low | High | None | Not Occupied | Low | Low |
| 3A-6 | 0–5 | Medium | 0–5 | 50–75 | Medium/Low | Low-Medium | None | Not Occupied | Medium | Low |
| 3A-7 | 0–5 | Medium | 0 | 25–50 | High/Low | High | None | Not Occupied | Low | Low |
| 3A-8 | 0–5 | Low | 0 | 50–75 | Medium/Medium | Medium | None | Not Occupied | Medium | Low |
| 3A-9 | 0–5 | Low | 0–5 | 50–75 | High/Low | Medium-High | None | Not Occupied | Low | N/A |
| 3B-1 | 0–5 | Medium | 0–5 | 50–75 | Low/Low | High | None | Not Occupied | Low | High** |
| 3B-2 | 0–5 | Medium | 0–5 | 50–75 | Low/Medium | Low-Medium | B, S | Occupied | High** | High** |

| | Fall 2025 | | | | | | | | | Fall 2024 |
|---|---|---|---|---|---|---|---|---|---|---|
| Plot ID | % Bare Ground | Living Herb Density | Shrub/Tree Density (%) | Plant Litter (Dead) (%) | Gopher/ Ground Squirrel Density^ | Obstruction Factor | Potential K-Rat Sign* | SKR Occupancy Determination | Rating† | Rating† |
| 3B-3 | 0–5 | Low | 0–5 | 50–75 | Medium/Low | Low-Medium | None | Not Occupied | Medium | High** |
| 3B-4 | 5–25 | Low | 0–5 | 50–75 | Low/Medium | Low | B, S | Occupied | High | N/A |
| 3C-1 | 0–5 | Medium | 0–5 | 50–75 | Low/Low | High | S | Occupied | Low** | Low |
| 3C-2 | 0–5 | Low | 5–25 | 50–75 | Medium/Low | Low | B, S | Occupied | Medium** | Low |

Notes:

SKR = Stephens' kangaroo rat
^ Active gopher excavation density ratings used; inactive excavations excluded.
* Potential Kangaroo Rat Sign: B = Burrow(s); S = Scat; T = Tracks; TD = Tail Drag; TV = Trails in Vegetation; CF = Caching/Foraging Craters; O = Other
** Exhibited habitat conditions and observed sign indicates plot is likely occupied by SKR.
† Estimated potential for SKR occupancy based on habitat community condition and observed kangaroo rat sign.

The 2025 results indicate slight shifts in overall SKR suitability that can increase or decrease at given sites between monitoring years due to variables such as randomized assignment of non-permanent monitoring plots that varies between monitoring years, annual grazing practices, and drought/precipitation. Generally, there was an overall increase in SKR potential in 2025, and the following variables influenced the survey results:

- **Precipitation.** There was a decrease in the average rainfall observed in the greater San Diego region in 2025 compared to the above-average rainfall between fall 2022 and fall 2024. An increase in overall rainfall can be beneficial for SKR suitability in that it can increase food availability; however, significant increases in rainfall are likely to increase vegetation density and height, which may increase obstruction factors and lower SKR potential, as observed during the fall 2023 and 2024 monitoring efforts. With lower rainfall between fall 2024 and 2025 monitoring efforts, overall vegetation coverage, particularly standing/living herbaceous coverage and dead plant litter, largely decreased compared to the two previous years.
- **Grazing.** Active grazing occurs in most of the SKR monitoring areas, thereby helping to reduce significant vegetative growth. During the fall 2025 monitoring efforts, recent grazing within the past 3 to 6 months was largely correlated to lower vegetation coverage and lower obstruction factors. Of the 12 monitoring plots that experienced recent grazing, 5 increased in SKR potential, 4 remained the same, and 3 were not monitored during the prior year; none of the monitoring plots decreased in potential. Furthermore, all except 1 of the 12 monitoring plots had a potential rating of high or medium. The previous year's monitoring results did not find that grazing directly correlated to higher SKR potential, indicating there are several factors that can influence overall habitat suitability.
- **Vegetation composition.** Most of the annual vegetation present in the high- or medium-potential SKR plots consisted of redstem stork's bill, western ragweed (*Ambrosia psilostachya*), shortpod mustard, and Menzies' goldenbush. Annual vegetation in the low-potential plots comprised similar species, as well as curly dock (*Rumex crispus*). Dense annual grasses were also observed in several low-potential plots, which may preclude or reduce SKR movement.

Detailed monitoring methods and results, including plot photographs and habitat assessment forms, are included in **Appendix I**.

## Adaptive Management Recommendations

The following are the adaptive management recommendations to ensure persistence of SKR at Ramona Grasslands County Preserve:

- **Coordinate with the grazing lessee on cattle grazing practices.** Coordinate with the grazing lessee to provide information on the conservation goals to be fulfilled by grazing on the preserve, including those for SKR, and discuss grazing frequency, timing, rotation, and RDM targets to better guide annual grazing practices on the preserve. Recent 2025 RDM monitoring reports should be used to inform 2026 grazing practices to meet RDM targets for SKR.

# 4.11 Regional MSP Wildlife Monitoring Results

Through a DPR-issued ROE permit, Dr. Daniel Marschalek (with the University of Central Missouri) and David K. Faulkner (with the San Diego Natural History Museum) conducted Harbison's dun skipper monitoring at Hellhole Canyon County Preserve. Also through DPR-issued ROE permits, the USGS and the San Diego Natural History Museum conducted arroyo toad and tricolored blackbird monitoring at Ramona Grasslands County Preserve, respectively. Results are provided below.

## 4.11.1 Harbison's Dun Skipper

Regional monitoring efforts for HDS included monitoring surveys performed by Dr. Daniel Marschalek with the University of Central Missouri and David K. Faulkner with the San Diego Natural History Museum. Dr. Marschalek and his team conducted larval surveys on February 11 and March 4, 2025, and adult flight surveys for HDS within Hellhole Canyon County Preserve on June 5 and June 25, 2025. Thirty-three HDS larvae and two HDS adults were detected during surveys (**Figure 16**).

## 4.11.2 Arroyo Toad

Regional monitoring efforts for arroyo toad included monitoring surveys performed by USGS permitted biologists (recovery permit TE-045991-19.1) along reaches 25, 29, 34, 39, and 44 in the Santa Maria Creek within Ramona Grasslands County Preserve. No arroyo toads were detected in the 10 reach segments surveyed. Two-striped garter snake (*Thamnophis hammondii*), a special-status wildlife species, was incidentally observed in reach segments 25B and 44A. Four invasive non-native red swamp crayfish (*Procambarus clarkii*) were recorded across reaches 29 and 44; and nine invasive non-native American bullfrogs were observed across reaches 29 and 34.

## 4.11.3 Tricolored Blackbird

Regional monitoring efforts for tricolored blackbird included monitoring surveys performed by the San Diego Natural History Museum biologists within Ramona Grasslands County Preserve. No tricolored blackbird nesting colonies were observed within the preserve.

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# CHAPTER 5
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# Appendix A

## Rare Plant Monitoring – Permanent Photographic Monitoring & Representative Photographs

# A-1 San Diego Thornmint

## Sycamore Canyon/Goodan Ranch County Preserve Permanent Photo Points




**Photo 1.** San Diego thornmint photo monitoring at SYGOACIL01.
ACIL_4SYCA027_1_Photo1_05142025




**Photo 2.** San Diego thornmint photo monitoring at SYGOACIL05.
ACIL_4SYCA027_5_Photo1_05192025




**Photo 3.** San Diego thornmint photo monitoring at SYGOACIL06. ACIL_4SYCA027_6_Photo1_05152025




**Photo 4.** San Diego thornmint photo monitoring at SYGOACIL08. ACIL_4SYCA027_8_Photo1_05152025




**Photo 5.** San Diego thornmint photo monitoring at SYGOACIL10.
ACIL_4SYCA027_10_Photo1_05142025

## Sycamore Canyon/Goodan Ranch County Preserve Representative Photographs



**Photo 6.** San Diego thornmint flowering amongst invasive non-native purple false brome and artichoke thistle at Sycamore Canyon/Goodan Ranch County Preserve.



**Photo 7.** San Diego thornmint population flowering amongst invasive non-native mock parsley and gopher mounds at Sycamore Canyon/Goodan Ranch County Preserve.



**Photo 8.** Sensitive native small-flowered morning glory detected within San Diego thornmint monitoring plots at Sycamore Canyon/Goodan Ranch County Preserve.

## Simon County Preserve Permanent Photo Points




**Photo 9.** San Diego thornmint photo monitoring at SIPRACIL01 (Photo Point 1). ACIL_4SIPR026_1_Photo1_05122025

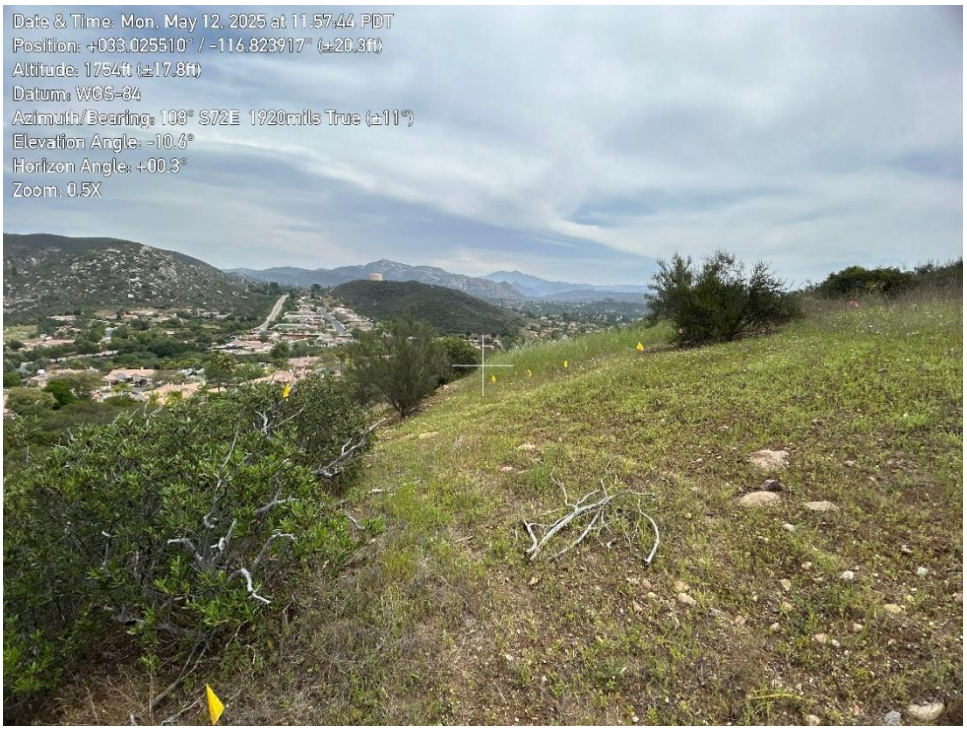


**Photo 10.** San Diego thornmint photo monitoring at SIPRACIL01 (Photo Point 2) ACIL_4SIPR026_1_Photo2_05122025

## Simon County Preserve Representative Photographs




**Photo 11.** Gopher mounds within the permanent monitoring plot for San Diego thornmint at Simon County Preserve.

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# A-2 Encinitas Baccharis

## Del Dios Highlands County Preserve Permanent Photo Points




**Photo 12.** Encinitas baccharis photo monitoring at DD201501.
BAVA3_6DDHP004_1_Photo1_08272025




**Photo 13.** Encinitas baccharis photo monitoring at DD201502.
BAVA3_6DDHP004_2_Photo1_08272025




**Photo 14.** Encinitas baccharis photo monitoring at DD201503.
BAVA3_6DDHP004_3_Photo1_08272025




**Photo 15.** Encinitas baccharis photo monitoring at DD202504.
BAVA3_6DDHP028_0_Photo1_08282025




**Photo 16.** Encinitas baccharis photo monitoring at DD202504.
BAVA3_6DDHP028_0_Photo2_08282025

## Del Dios Highlands County Preserve Representative Photographs



**Photo 17.** Encinitas baccharis female flowers observed at Del Dios Highlands County Preserve.



**Photo 18.** Encinitas baccharis seedlings observed at Del Dios Highlands County Preserve.

# A-3 Orcutt's Brodiaea

## Boulder Oaks County Preserve Permanent Photo Points




**Photo 19.** Orcutt's Brodiaea photo monitoring at BROR_4BOPR029_1. BROR_4BOPR029_1_Photo1_05292025

## Boulder Oaks County Preserve Representative Photographs



**Photo 20.** Orcutt's brodiaea flowering at Boulder Oaks County Preserve.



**Photo 21.** Orcutt's brodiaea representative habitat at Boulder Oaks County Preserve.

# A-4 San Miguel Savory

## Boulder Oaks County Preserve Permanent Photo Points




**Photo 22.** San Miguel Savory photo monitoring at BOCLCH01.
CLCH5_4BOPR002_1_Photo1_05162025




**Photo 23.** San Miguel Savory photo monitoring at BOCLCH02.
CLCH5_4BOPR002_2_Photo1_05162025

## Boulder Oaks County Preserve Representative Photographs



**Photo 24.** San Miguel Savory flowering at Boulder Oaks County Preserve.



**Photo 25.** Special-status plant Marvin's onion in the San Miguel Savory monitoring plots at Boulder Oaks County Preserve.

# A-5 Orcutt's Bird's-Beak

## Tijuana River Valley Regional Park Permanent Photo Points

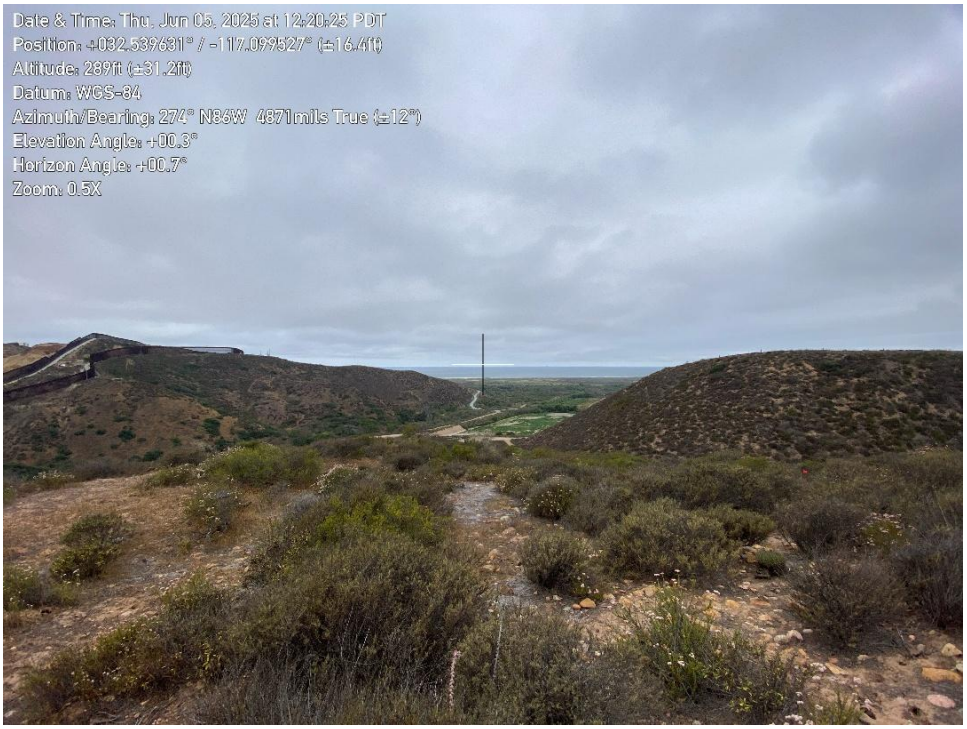


**Photo 26.** Orcutt's bird's-beak photo monitoring at COOR7_1TIRI009_1. COOR7_1TIRI009_1_Photo1_06052025




**Photo 27.** Orcutt's bird's-beak photo monitoring at COOR7_1TIRI009_2. COOR7_1TIRI009_2_Photo1_06102025




**Photo 28.** Orcutt's bird's-beak photo monitoring at COOR7_1SMGU006_1. COOR7_1SMGU006_1_Photo1_06052025




**Photo 29.** Orcutt's bird's-beak photo monitoring at COOR7_1SMGU006_2. COOR7_1SMGU006_2_Photo1_06102025




**Photo 30.** Orcutt's bird's-beak photo monitoring at COOR7_1ESGU10_1. COOR7_1ESGU10_1_Photo1_06052025

## Tijuana River Valley Regional Park Representative Photographs



**Photo 31.** Orcutt's birds-beak flowering at Tijuana River Valley Regional Park.

# A-6 Variegated Dudleya

## Sycamore Canyon/Goodan Ranch County Preserve Permanent Photo Points

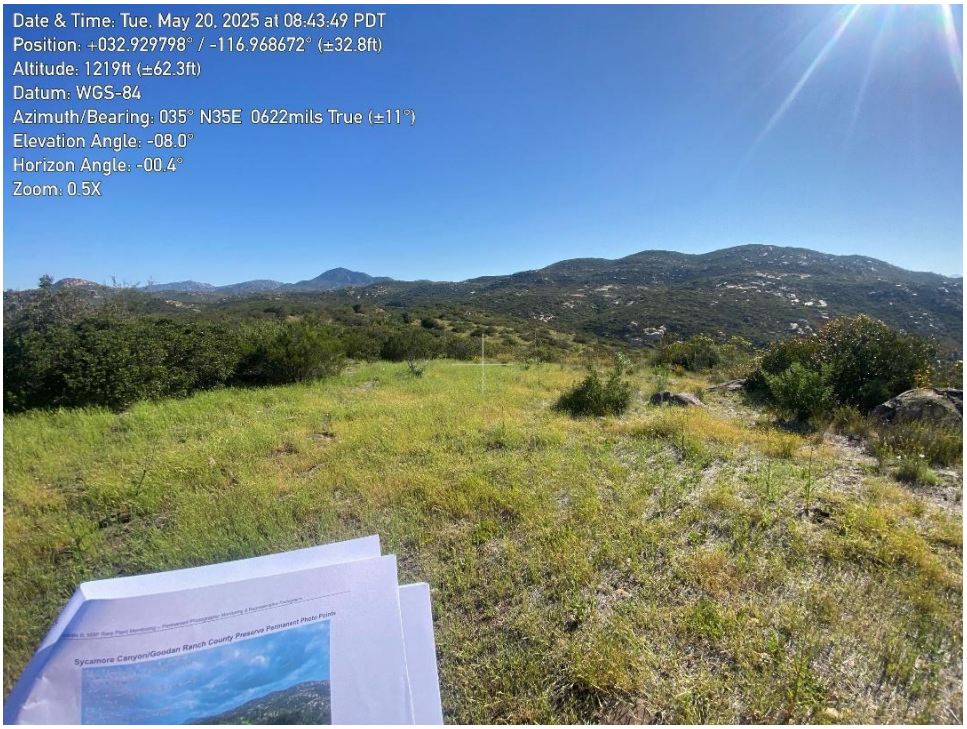


**Photo 32.** Variegated dudleya photo monitoring at SYGODUVA01.
DUVA_4SYCA019_1_Photo1_05202025




**Photo 33.** Variegated dudleya photo monitoring at SYGODUVA02.
DUVA_4SYCA019_2_Photo1_05202025

## Sycamore Canyon/Goodan Ranch County Preserve Representative Photographs



**Photo 34.** Variegated dudleya flowering amongst invasive non-native purple false brome at Sycamore Canyon/Goodan Ranch County Preserve.



**Photo 35.** Variegated dudleya flowering amongst Bigelow's spikemoss at Sycamore Canyon/Goodan Ranch County Preserve.

## Lusardi Creek County Preserve Permanent Photo Points




**Photo 36.** Variegated dudleya photo monitoring at LCDUVA01.
DUVA_6LUCR023_1_Photo1_05212025

## Lusardi Creek County Preserve Representative Photographs



**Photo 37.** Variegated dudleya blooming alongside annual fescue at Lusardi Creek County Preserve.

## Dictionary Hill County Preserve Permanent Photo Points




**Photo 38.** Variegated dudleya photo monitoring at DUVA_3DHPR061_1. DUVA_3DHPR061_1_Photo1_05132025




**Photo 39.** Variegated dudleya photo monitoring at DUVA_3DHPR061_1. DUVA_3DHPR061_1_Photo2_05132025

## Dictionary Hill County Preserve Representative Photographs




**Photo 40.** Variegated dudleya blooming among invasive non-native stork's bill at Dictionary Hill County Preserve.

# A-7 Heart-Leaved Pitcher Sage

## Iron Mountain County Preserve Permanent Photo Points




**Photo 41.** Heart-leaved pitcher sage photo monitoring at LECA4_4IRMT003_1. LECA4_4IRMT003_1_Photo1_06042025

## Iron Mountain County Preserve Representative Photographs



**Photo 42.** Heart-leaved pitcher sage flowering at Iron Mountain County Preserve.



**Photo 43.** Special-status plant Marvin's onion flowering at Iron Mountain County Preserve.

# A-8 Willowy Monardella

## Sycamore Canyon/Goodan Ranch County Preserve Permanent Photo Points

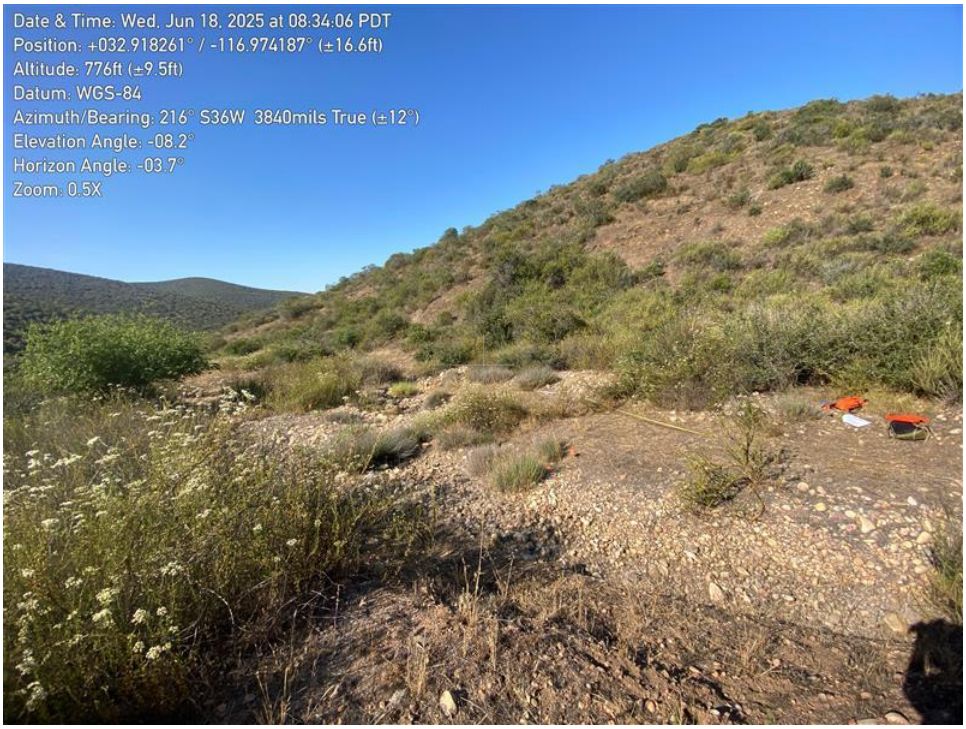


**Photo 44.** Willowy monardella photo monitoring at SYC201501.
MOLIV_4SYCA006_1_Photo1_06182025




**Photo 45.** Willowy monardella photo monitoring at SYC201602.
MOLIV_4SYCA002_1_Photo1_06182025




**Photo 46.** Willowy monardella photo monitoring at SYC202103. MOLIV_4SYCA006_2_Photo1_06182025

## Sycamore Canyon/Goodan Ranch County Preserve Representative Photographs




**Photo 47.** Willowy monardella blooming at Sycamore Canyon/Goodan Ranch County Preserve.



**Photo 48.** California bumble bees pollinating willowy monardella at Sycamore Canyon/Goodan Ranch County Preserve.



**Photo 49.** Juvenile willowy monardella at Sycamore Canyon/Goodan Ranch County Preserve.

# Appendix B

## MSP Rare Plant Occurrence Monitoring Forms

# B-1 San Diego Thornmint

| MSP Occurr. ID & Sample point: | ACIL_4SYCA027_1 |
|---|---|
| Preserve | Sycamore Canyon And Goodan Ranch Preserves |
| MgtUnit | 4 |
| Land Owner | County of San Diego Department of Parks and Recreation |
| Land Manager | County of San Diego Department of Parks and Recreation |
| UpdateSampInfo | no |
| Can this survey be shared publicly? | yes |
| Scientific Name | Acanthomintha ilicifolia |
| Date | 5/14/2025 |
| Time Start | 12:22 |
| Surveyors | Dillon Travis; Mary Cozy |
| Affiliation | Environmental Science Associates |
| Number of Plants in the Sampling Area | 530 |
| Exact or Estimate for Number in Sampling Area | estimate |
| Uncertainty for Sampling Area | medium |
| Sampling Area Radius (meters) | 10 |
| Count is clusters or individuals? | individ_plants |
| Count is flowering or vegetated plants? (only answer for geophytes) | NA |
| Category for Percent Vegetative in Sampling Area | 4 |
| Category for Percent Flowering in Sampling Area | 5 |
| Category for Percent Fruiting in Sampling Area | 3 |
| Category for Percent Dead in Sampling Area | 2 |
| Category for Percent Herbivory in Sampling Area | 1 |
| Category for Percent Diseased in Sampling Area | 1 |
| Category for Percent Stunted Growth in Sampling Area | 2 |
| Sampling Area within Current Mapped Extent? | yes |
| GPSAccurracy | 4.8 |
| GPSAccurracyUnits | ft |
| PlotX | 501592 |
| PlotY | 3644272 |
| Check your location of the SAMPLE PLOT against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| Photo1X | Photo1_E_UTM |
| Photo1Y | Photo1_N_UTM |
| Check your location of the PHOTO POINT 1 against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| CameraType | iPhone 10 |
| Photo1Dir | 203 Degrees |

| MSP Occurr. ID & Sample point: | ACIL_4SYCA027_1 |
|---|---|
| Photo1Hei | CamHei_Photo1 |
| Photo1Ang | CamAng_Photo1 |
| UpdatePhotoInfo | no |
| PhotoNumPhoto1 | ACIL_4SYCA027_1_Photo1_05142025 |
| SANDAG2012_VegAllianceAssoc | Brachypodium distachyon Semi-Natural Stand Type |
| CryptogamicCrustCover | 2 |
| ThatchCover | 4 |
| ThatchDepthAverage_cat | 2 |
| ThatchDepthMax_cm | 2 |
| DeadStandingBiomass_Presence | yes |
| DeadStanding_CoverSpecies | Baccharis sarothroides |
| DeadStanding_CoverClass | 2 |
| DeadStandingHeightAverage_cm | 177 |
| FeralPigActivity | 1 |
| GroundSquirrelActivity | 1 |
| GopherActivity | 4 |
| SamplingAreaRepresent_of_mapped_occurr | yes |
| If no, Note Differences: | NA |
| Acanthomintha ilicifolia - San Diego thornmint | 0.2 |
| Acmispon glaber - deerweed | 0.2 |
| Apiastrum angustifolium - mock parsley | 0.2 |
| Artemisia californica - coastal sagebrush | 0.2 |
| Baccharis sarothroides - desertbroom | 2 |
| Brachypodium distachyon - purple false brome | 37 |
| Bromus madritensis - compact brome | 0.2 |
| Calochortus splendens - splendid mariposa lily | 0.2 |
| Centaurea melitensis - Maltese star-thistle | 0.2 |
| Chlorogalum parviflorum - smallflower soap plant | 0.2 |
| Convolvulus simulans - field bindweed | 0.2 |
| Crassula connata - sand pygmyweed | 0.2 |
| Deinandra fasciculata - clustered tarweed | 1 |
| Erodium botrys - longbeak stork's bill | 1 |
| Festuca myuros - annual fescue | 0.2 |
| Gastridium phleoides - nit grass | 0.2 |
| Harpagonella palmeri - Palmer's grappling-hook | 0.2 |
| Heteromeles arbutifolia - toyon | 3 |
| Hirschfeldia incana - shortpod mustard | 0.2 |
| Hypochaeris glabra - smooth cat's ear | 0.2 |
| Logfia gallica - narrowleaf cottonrose | 0.2 |

| MSP Occurr. ID & Sample point: | ACIL_4SYCA027_1 |
|---|---|
| Lysimachia arvensis - Scarlet pimpernel | 1 |
| Malosma laurina - laurel sumac | 0.2 |
| Plantago erecta - California plantain | 0.2 |
| Rhamnus crocea - spiny redberry | 2 |
| Salvia mellifera - black sage | 1 |
| Sisyrinchium bellum - western blue-eyed grass | 0.2 |
| Sonchus asper - spiny sowthistle | 1 |
| Other Associated Species? | no |
| BareGround | 41 |
| CrypSoils | 2 |
| Rock | 3 |
| Litter | 1 |
| Water | 0 |
| Vegetation | 52.8 |
| DeadShrubs | 1 |
| TotalPercCover | 100.8 |
| Alreadyentered | no |
| Ifyes_whichsurvey | |
| Number of Plants per Current Mapped Extent | 13712 |
| Exact or Estimate for Max Extent Number | estimate |
| uncertainty_MaxExt | Medium |
| Plants_clusters_vs_individ_MaxExt | individ_plants |
| Count is flowering or vegetated plants? (only answer for geophytes) | NA |
| AreaCurrentMappedExtent | Polygons submitted |
| Area_exact_or_estim | Medium |
| CurrentExtentPerimMethod | Exact |
| SpeciesLocated_in_maximumExtent | Yes |
| ExpandedEfforty_n | No |
| SurroundingLandUse | Conserved open space preserve, open to hiking, mountain biking, equestrian use. |
| NonnativeForbs | 3 |
| NonnativeForbs_desc | Artichoke thistle, Shortpod mustard, and tocalote spread throughout maximum extent |
| NonnativeGrasses | 6 |
| NonnativeGrasses_desc | Brachypodium distachyon dominates area |
| NonnativeWoodyPlts | 1 |
| NonnativeWoodyPlts_desc | NA |
| CompetitiveNativePlts | 3 |
| CompetitiveNativePlts_desc | Potentially tar weed. This year is dry so the tar weed isn't dense in ACIL plots. |
| Dumping_trash | 1 |

| MSP Occurr. ID & Sample point: | ACIL_4SYCA027_1 |
|---|---|
| Dumping_trash_desc | NA |
| Encampments | 1 |
| Encampments_desc | NA |
| FeralPig | 1 |
| FeralPig_desc | NA |
| Trampling | 3 |
| Trampling_desc | From TMP monitoring |
| Vandalism | 1 |
| Vandalism_desc | NA |
| CurrentGrazing | 1 |
| CurrentGrazing_desc | NA |
| HistoricGrazing | unknown |
| HistoricGrazing_desc | NA |
| HistoricAgriculture | unknown |
| HistoricAgriculture_desc | NA |
| Drought Severity | 2 |
| DroughSev_desc | Stunted plants, less plant biomass and more bare ground present. |
| AlteredHydrology | 1 |
| AlteredHydrology_desc | NA |
| Erosion | 1 |
| Erosion_desc | NA |
| UrbanRunoff | 1 |
| UrbanRunoff_desc | NA |
| SlopeMovement | 1 |
| SlopeMovement_desc | NA |
| SoilCompaction | 2 |
| SoilCompaction_desc | From TMP monitoring |
| FuelModZone_FireBreak | 1 |
| FuelModZone_FireBreak_desc | NA |
| RoadConst_Mainten | 1 |
| RoadConst_Mainten_descrip | NA |
| VegClearing | 1 |
| VegClearing_descript | NA |
| Restoration | 1 |
| Restoration_desc | NA |
| ORV_MtnBikeActivity_disturb | 1 |
| ORV_MtnBikeActivity_type | NA |
| EvidenceRecentFire | no |
| YearBurned | NA |

| **MSP Occurr. ID & Sample point:** | **ACIL_4SYCA027_1** |
|---|---|
| Trails_disturbance | 1 |
| Trails_authorized | NA |
| TrailUse_Hiking | NA |
| TrailUse_Biking | NA |
| TrailUse_Equestrian | NA |
| TrailUse_Dog | NA |
| TrailUse_ServiceVehicles | NA |
| TrailUse_Other | NA |
| TrailUse_illegal_descript | NA |
| OtherDisturbance | 1 |
| OtherDisturbance_descript | NA |
| ManageRecomm | Continued monitoring of ACIL populations, and hand weeding nonnative forms and grasses in monitoring areas |
| ManageActions_PastYr | Line trimming non-native grasses |
| CNDDB_SppDetected | Acanthomintha ilicifolia, Convolvulus simulans, Harpagonella palmeri |
| Notes | NA |
| Time Finish | 13:31 |

| **MSP Occurr. ID & Sample point:** | **ACIL_4SYCA027_5** |
|---|---|
| Preserve | Sycamore Canyon And Goodan Ranch Preserves |
| MgtUnit | 4 |
| Land Owner | County of San Diego Department of Parks and Recreation |
| Land Manager | County of San Diego Department of Parks and Recreation |
| UpdateSampInfo | no |
| Public | yes |
| Scientific Name | Acanthomintha ilicifolia |
| Date | 5/19/2025 |
| Time Start | 08:15 |
| Surveyors | Dillon Travis; Amy Orduno-Baez |
| Affiliation | Environmental Science Associates |
| Number of Plants in the Sampling Area | 559 |
| Exact or Estimate for Number in Sampling Area | estimate |
| Uncertainty for Sampling Area | low |
| Sampling Area Radius (meters) | 10 |
| Count is clusters or individuals? | individ_plants |
| Count is flowering or vegetated plants? (only answer for geophytes) | NA |
| Category for Percent Vegetative in Sampling Area | 3 |
| Category for Percent Flowering in Sampling Area | 6 |
| Category for Percent Fruiting in Sampling Area | 3 |
| Category for Percent Dead in Sampling Area | 2 |
| Category for Percent Herbivory in Sampling Area | 1 |
| Category for Percent Diseased in Sampling Area | 1 |
| Category for Percent Stunted Growth in Sampling Area | 2 |
| Sampling Area within Current Mapped Extent? | yes |
| GPSAccurracy | 4.8 |
| GPSAccurracyUnits | ft |
| PlotX | 502915 |
| PlotY | 3643523 |
| Check your location of the SAMPLE PLOT against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| Photo1X | Photo1_E_UTM |
| Photo1Y | Photo1_N_UTM |
| Check your location of the PHOTO POINT 1 against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| CameraType | iPhone 11 |
| Photo1Dir | 150 Degrees |

| MSP Occurr. ID & Sample point: | ACIL_4SYCA027_5 |
|---|---|
| Photo1Hei | CamHei_Photo1 |
| Photo1Ang | CamAng_Photo1 |
| UpdatePhotoInfo | no |
| PhotoNumPhoto1 | ACIL_4SYCA027_5_Photo1_05192025 |
| SANDAG2012_VegAllianceAssoc | Adenostoma fasciculatum-Xylococcus bicolor Association |
| CryptogamicCrustCover | 2 |
| ThatchCover | 2 |
| ThatchDepthAverage_cat | 2 |
| ThatchDepthMax_cm | 2 |
| DeadStandingBiomass_Presence | yes |
| DeadStanding_CoverSpecies | Acmispon glaber |
| DeadStanding_CoverClass | 2 |
| DeadStandingHeightAverage_cm | 40.64 |
| FeralPigActivity | 1 |
| GroundSquirrelActivity | 1 |
| GopherActivity | 3 |
| SamplingAreaRepresent_of_mapped_occurr | yes |
| If no, Note Differences: | NA |
| Acanthomintha ilicifolia - San Diego thornmint | 1 |
| Acmispon glaber - deerweed | 1 |
| Adenostoma fasciculatum - chamise | 5 |
| Allium sp. - onion | 0.2 |
| Apiastrum angustifolium - mock parsley | 0.2 |
| Brachypodium distachyon - purple false brome | 14 |
| Bromus hordeaceus - soft brome | 0.2 |
| Bromus madritensis - compact brome | |
| Bromus rubens - Red brome | 0.2 |
| Calochortus splendens - splendid mariposa lily | 0.2 |
| Calystegia macrostegia - island false bindweed | 0.2 |
| Centaurea melitensis - Maltese star-thistle | 3 |
| Cercocarpus betuloides - birch-leaf mountain-mahogany | 1 |
| Deinandra fasciculata - clustered tarweed | 2 |
| Dichelostemma capitatum - bluedicks | 0.2 |
| Eriophyllum confertiflorum - golden-yarrow | 0.2 |
| Erodium cicutarium - redstem stork's bill | 0.2 |
| Festuca myuros - annual fescue | 0.2 |
| Harpagonella palmeri - Palmer's grappling-hook | 0.2 |
| Heteromeles arbutifolia - toyon | 1 |
| Hypochaeris glabra - smooth cat's ear | 0.2 |

| MSP Occurr. ID & Sample point: | ACIL_4SYCA027_5 |
|---|---|
| Lepidium spp. - pepperweed | 0.2 |
| Logfia gallica - narrowleaf cottonrose | 0.2 |
| Lonicera subspicata - southern honeysuckle | 0.2 |
| Lysimachia arvensis - Scarlet pimpernel | 0.2 |
| Malosma laurina - laurel sumac | 5 |
| Plantago erecta - California plantain | 0.2 |
| Plantago rhodosperma - redseed plantain | 0.2 |
| Quercus X acutidens - Oak hybrid | 2 |
| Rhamnus crocea - spiny redberry | 2 |
| Salvia apiana - white sage | 0.2 |
| Sanicula arguta - sharptooth blacksnakeroot | 0.2 |
| Sisyrinchium bellum - western blue-eyed grass | 0.2 |
| Sonchus asper - spiny sowthistle | 0.2 |
| Stipa pulchra - Purple needle grass | 0.2 |
| Xylococcus bicolor - mission manzanita | 20 |
| Other Associated Species? | no |
| BareGround | 24.4 |
| CrypSoils | 1 |
| Rock | 10 |
| Litter | 2 |
| Water | 0 |
| Vegetation | 61.6 |
| DeadShrubs | 1 |
| TotalPercCover | 100 |
| Alreadyentered | yes |
| Ifyes_whichsurvey | ACIL_4SYCA027_1 |
| ManageRecomm | Continued monitoring and hand weeding of nonnative grasses and forbs |
| ManageActions_PastYr | Hand weeding non-native grasses and forbs and line trimming outside max extent in buffer. |
| CNDDB_SppDetected | Acanthomintha ilicifolia, Harpagonella palmeri |
| Notes | NA |
| Time Finish | 10:30 |

| MSP Occurr. ID & Sample point: | ACIL_4SYCA027_6 |
|---|---|
| Preserve | Sycamore Canyon And Goodan Ranch Preserves |
| MgtUnit | 4 |
| Land Owner | County of San Diego Department of Parks and Recreation |
| Land Manager | County of San Diego Department of Parks and Recreation |
| UpdateSampInfo | no |
| Public | yes |
| Scientific Name | Acanthomintha ilicifolia |
| Date | 5/15/2025 |
| Time Start | 11:01 |
| Surveyors | Dillon Travis; Amy Orduno Baez |
| Affiliation | Environmental Science Associates |
| Number of Plants in the Sampling Area | 2100 |
| Exact or Estimate for Number in Sampling Area | estimate |
| Uncertainty for Sampling Area | medium |
| Sampling Area Radius (meters) | 10 |
| Count is clusters or individuals? | individ_plants |
| Count is flowering or vegetated plants? (only answer for geophytes) | NA |
| Category for Percent Vegetative in Sampling Area | 4 |
| Category for Percent Flowering in Sampling Area | 5 |
| Category for Percent Fruiting in Sampling Area | 3 |
| Category for Percent Dead in Sampling Area | 2 |
| Category for Percent Herbivory in Sampling Area | 1 |
| Category for Percent Diseased in Sampling Area | 1 |
| Category for Percent Stunted Growth in Sampling Area | 2 |
| Sampling Area within Current Mapped Extent? | yes |
| GPSAccurracy | 10 |
| GPSAccurracyUnits | ft |
| PlotX | 502262 |
| PlotY | 3644082 |
| Check your location of the SAMPLE PLOT against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| Photo1X | Photo1_E_UTM |
| Photo1Y | Photo1_N_UTM |
| Check your location of the PHOTO POINT 1 against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| CameraType | iPhone 11 |
| Photo1Dir | 333 Degrees |

| MSP Occurr. ID & Sample point: | ACIL_4SYCA027_6 |
|---|---|
| Photo1Hei | CamHei_Photo1 |
| Photo1Ang | CamAng_Photo1 |
| UpdatePhotoInfo | no |
| PhotoNumPhoto1 | ACIL_4SYCA027_6_Photo1_05152025 |
| SANDAG2012_VegAllianceAssoc | Deinandra fasciculata Association |
| CryptogamicCrustCover | 1 |
| ThatchCover | 2 |
| ThatchDepthAverage_cat | 2 |
| ThatchDepthMax_cm | 2 |
| DeadStandingBiomass_Presence | yes |
| DeadStanding_CoverSpecies | Centaurea melitensis, Hesperoyucca whipplei |
| DeadStanding_CoverClass | 2 |
| DeadStandingHeightAverage_cm | 30 |
| FeralPigActivity | 1 |
| GroundSquirrelActivity | 1 |
| GopherActivity | 4 |
| SamplingAreaRepresent_of_mapped_occurr | yes |
| If no, Note Differences: | NA |
| Acanthomintha ilicifolia - San Diego thornmint | 1 |
| Apiastrum angustifolium - mock parsley | 1 |
| Artemisia californica - coastal sagebrush | 0.2 |
| Avena barbata - slender oat | 0.2 |
| Bloomeria clevelandii - San Diego goldenstar | |
| Bloomeria crocea - common goldenstar | 0.2 |
| Brachypodium distachyon - purple false brome | 4 |
| Bromus hordeaceus - soft brome | 0.2 |
| Bromus rubens - Red brome | 0.2 |
| Centaurea melitensis - Maltese star-thistle | 4 |
| Cneoridium dumosum - bush rue | 0.2 |
| Deinandra fasciculata - clustered tarweed | 2 |
| Eriophyllum confertiflorum - golden-yarrow | 0.2 |
| Erodium cicutarium - redstem stork's bill | 0.2 |
| Festuca myuros - annual fescue | 0.2 |
| Harpagonella palmeri - Palmer's grappling-hook | 0.2 |
| Heteromeles arbutifolia - toyon | 3 |
| Hypochaeris glabra - smooth cat's ear | 0.2 |
| Logfia gallica - narrowleaf cottonrose | 0.2 |
| Lysimachia arvensis - Scarlet pimpernel | 0.2 |
| Malosma laurina - laurel sumac | 5 |

| **MSP Occurr. ID & Sample point:** | **ACIL_4SYCA027_6** |
|---|---|
| Quercus X acutidens - Oak hybrid | 5 |
| Rhus integrifolia - lemonade sumac | 6 |
| Salvia apiana - white sage | 1 |
| Salvia mellifera - black sage | 3 |
| Sonchus asper - spiny sowthistle | 0.2 |
| Xylococcus bicolor - mission manzanita | 6 |
| Other Associated Species? | no |
| BareGround | 52 |
| CrypSoils | 0 |
| Rock | 1 |
| Litter | 3 |
| Water | 0 |
| Vegetation | 43.8 |
| DeadShrubs | 0.2 |
| TotalPercCover | 100 |
| Alreadyentered | yes |
| Ifyes_whichsurvey | ACIL_4SYCA027_1 |
| ManageRecomm | Continued monitoring and hand weeding of tocalote and invasive grasses. |
| ManageActions_PastYr | Hand weeding of tarweed and tocalote apparent. |
| CNDDB_SppDetected | Acanthomintha ilicifolia, Harpagonella palmeri |
| Notes | |
| Time Finish | 11:33 |

| **MSP Occurr. ID & Sample point:** | **ACIL_4SYCA027_8** |
|---|---|
| Preserve | Sycamore Canyon And Goodan Ranch Preserves |
| MgtUnit | 4 |
| Land Owner | County of San Diego Department of Parks and Recreation |
| Land Manager | County of San Diego Department of Parks and Recreation |
| SampID | 197 |
| UpdateSampInfo | no |
| Public | yes |
| Scientific Name | Acanthomintha ilicifolia |
| Date | 5/8/2025 |
| Time Start | 09:24 |
| Surveyors | Dillon Travis; Amy Orduno Baez |
| Affiliation | Environmental Science Associates |
| Number of Plants in the Sampling Area | 930 |
| Exact or Estimate for Number in Sampling Area | estimate |
| Uncertainty for Sampling Area | medium |
| Sampling Area Radius (meters) | 10 |
| Count is clusters or individuals? | individ_plants |
| Count is flowering or vegetated plants? (only answer for geophytes) | NA |
| Category for Percent Vegetative in Sampling Area | 5 |
| Category for Percent Flowering in Sampling Area | 4 |
| Category for Percent Fruiting in Sampling Area | 2 |
| Category for Percent Dead in Sampling Area | 2 |
| Category for Percent Herbivory in Sampling Area | 1 |
| Category for Percent Diseased in Sampling Area | 1 |
| Category for Percent Stunted Growth in Sampling Area | 2 |
| Sampling Area within Current Mapped Extent? | yes |
| GPSAccurracy | 5.8 |
| GPSAccurracyUnits | ft |
| PlotX | 502267 |
| PlotY | 3644249 |
| Check your location of the SAMPLE PLOT against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| Photo1X | Photo1_E_UTM |
| Photo1Y | Photo1_N_UTM |
| Check your location of the PHOTO POINT 1 against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| CameraType | iPhone 11 |

| MSP Occurr. ID & Sample point: | ACIL_4SYCA027_8 |
|---|---|
| Photo1Dir | 121 Degrees |
| Photo1Hei | CamHei_Photo1 |
| Photo1Ang | CamAng_Photo1 |
| UpdatePhotoInfo | no |
| PhotoNumPhoto1 | ACIL_4SYCA027_8_Photo1_05152025 |
| SANDAG2012_VegAllianceAssoc | Brachypodium distachyon Semi-Natural Stand Type |
| CryptogamicCrustCover | 1 |
| ThatchCover | 3 |
| ThatchDepthAverage_cat | 2 |
| ThatchDepthMax_cm | 1 |
| DeadStandingBiomass_Presence | yes |
| DeadStanding_CoverSpecies | Tocalote |
| DeadStanding_CoverClass | 2 |
| DeadStandingHeightAverage_cm | 35.5 |
| FeralPigActivity | 1 |
| GroundSquirrelActivity | 1 |
| GopherActivity | 3 |
| SamplingAreaRepresent_of_mapped_occurr | yes |
| If no, Note Differences: | NA |
| Acanthomintha ilicifolia - San Diego thornmint | 2 |
| Apiastrum angustifolium - mock parsley | 2 |
| Avena barbata - slender oat | 0.2 |
| Bloomeria crocea - common goldenstar | 0.2 |
| Brachypodium distachyon - purple false brome | 18 |
| Bromus hordeaceus - soft brome | 0.2 |
| Calochortus splendens - splendid mariposa lily | 0.2 |
| Ceanothus tomentosus - woolyleaf ceanothus | 1 |
| Centaurea melitensis - Maltese star-thistle | 4 |
| Chlorogalum parviflorum - smallflower soap plant | 0.2 |
| Convolvulus arvensis - field bindweed | 0.2 |
| Convolvulus simulans - field bindweed | 0.2 |
| Deinandra fasciculata - clustered tarweed | 0.2 |
| Dichelostemma capitatum - bluedicks | 0.2 |
| Eriophyllum confertiflorum - golden-yarrow | 0.2 |
| Euphorbia peplus - petty spurge | 0.2 |
| Festuca microstachys - small fescue | 0.2 |
| Harpagonella palmeri - Palmer's grappling-hook | 0.2 |
| Heteromeles arbutifolia - toyon | 0.2 |

| MSP Occurr. ID & Sample point: | ACIL_4SYCA027_8 |
|---|---|
| Lonicera subspicata - southern honeysuckle | 0.2 |
| Lupinus succulentus - Hollowleaf annual lupine | 0.2 |
| Lysimachia arvensis - Scarlet pimpernel | 0.2 |
| Malosma laurina - laurel sumac | 1 |
| Quercus X acutidens - Oak hybrid | 3 |
| Rhamnus crocea - spiny redberry | 0.2 |
| Rhus integrifolia - lemonade sumac | 3 |
| Sanicula arguta - sharptooth blacksnakeroot | 0.2 |
| Sisyrinchium bellum - western blue-eyed grass | 0.2 |
| Sonchus asper - spiny sowthistle | 0.2 |
| Sonchus oleraceus - common sowthistle | 0.2 |
| Uropappus lindleyi - Silver puffs | 0.2 |
| Other Associated Species? | no |
| BareGround | 54.4 |
| CrypSoils | 0 |
| Rock | 2 |
| Litter | 5 |
| Water | 0 |
| Vegetation | 38.6 |
| DeadShrubs | 0 |
| TotalPercCover | 100 |
| Alreadyentered | yes |
| Ifyes_whichsurvey | ACIL_4SYCA027_1 |
| ManageRecomm | Continued monitoring and invasive non-native grass and forb treatment. |
| ManageActions_PastYr | Hand weeding |
| CNDDB_SppDetected | Acanthomintha ilicifolia, Convolvulus simulans, Harpagonella palmeri |
| Notes | NA |
| Time Finish | 10:01 |

| MSP Occurr. ID & Sample point: | ACIL_4SYCA027_10 |
|---|---|
| Preserve | Sycamore Canyon And Goodan Ranch Preserves |
| MgtUnit | 4 |
| Land Owner | County of San Diego Department of Parks and Recreation |
| Land Manager | County of San Diego Department of Parks and Recreation |
| SampID | 199 |
| UpdateSampInfo | no |
| Public | yes |
| Scientific Name | Acanthomintha ilicifolia |
| Date | 5/14/2025 |
| Time Start | 09:11 |
| Surveyors | Dillon Travis; Mary Cozy |
| Affiliation | Environmental Science Associates |
| Number of Plants in the Sampling Area | 1,112 |
| Exact or Estimate for Number in Sampling Area | estimate |
| Uncertainty for Sampling Area | low |
| Sampling Area Radius (meters) | 10 |
| Count is clusters or individuals? | individ_plants |
| Count is flowering or vegetated plants? (only answer for geophytes) | NA |
| Category for Percent Vegetative in Sampling Area | 2 |
| Category for Percent Flowering in Sampling Area | 6 |
| Category for Percent Fruiting in Sampling Area | 3 |
| Category for Percent Dead in Sampling Area | 2 |
| Category for Percent Herbivory in Sampling Area | 2 |
| Category for Percent Diseased in Sampling Area | 1 |
| Category for Percent Stunted Growth in Sampling Area | 3 |
| Sampling Area within Current Mapped Extent? | yes |
| GPSAccurracy | 3 |
| GPSAccurracyUnits | ft |
| PlotX | 501927 |
| PlotY | 3644367 |
| Check your location of the SAMPLE PLOT against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| Photo1X | Photo1_E_UTM |
| Photo1Y | Photo1_N_UTM |

| **MSP Occurr. ID & Sample point:** | **ACIL_4SYCA027_10** |
|---|---|
| Check your location of the PHOTO POINT 1 against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| CameraType | IPhone11 |
| Photo1Dir | 093 Degrees |
| Photo1Hei | CamHei_Photo1 |
| Photo1Ang | CamAng_Photo1 |
| UpdatePhotoInfo | no |
| PhotoNumPhoto1 | ACIL_4SYCA027_10_Photo1_05142025 |
| SANDAG2012_VegAllianceAssoc | Salvia mellifera-Malosma laurina Association |
| CryptogamicCrustCover | 1 |
| ThatchCover | 2 |
| ThatchDepthAverage_cat | 2 |
| ThatchDepthMax_cm | 1.5 |
| DeadStandingBiomass_Presence | yes |
| DeadStanding_CoverSpecies | Xylococcus bicolor |
| DeadStanding_CoverClass | 2 |
| DeadStandingHeightAverage_cm | 78.74 |
| FeralPigActivity | 1 |
| GroundSquirrelActivity | 1 |
| GopherActivity | 4 |
| SamplingAreaRepresent_of_mapped_occurr | yes |
| If no, Note Differences: | NA |
| Acanthomintha ilicifolia - San Diego thornmint | 3 |
| Adenostoma fasciculatum - chamise | 0.2 |
| Apiastrum angustifolium - mock parsley | 8 |
| Artemisia californica - coastal sagebrush | 1 |
| Bromus rubens - Red brome | 0.2 |
| Ceanothus tomentosus - woolyleaf ceanothus | 1 |
| Centaurea melitensis - Maltese star-thistle | 1 |
| Cneoridium dumosum - bush rue | 0.2 |
| Convolvulus simulans - field bindweed | 0.2 |
| Deinandra fasciculata - clustered tarweed | 3 |
| Dichelostemma capitatum - bluedicks | 0.2 |
| Eriophyllum confertiflorum - golden-yarrow | 1 |
| Erodium cicutarium - redstem stork's bill | 2 |
| Euphorbia peplus - petty spurge | 0.2 |
| Harpagonella palmeri - Palmer's grappling-hook | 0.2 |
| Hesperoyucca whipplei - chaparral yucca | 0.2 |

| MSP Occurr. ID & Sample point: | ACIL_4SYCA027_10 |
|---|---|
| Logfia gallica - narrowleaf cottonrose | 0.2 |
| Lysimachia arvensis - Scarlet pimpernel | 0.2 |
| Malosma laurina - laurel sumac | 1 |
| Quercus X acutidens - Oak hybrid | 8 |
| Rhus ovata - sugar sumac | 5 |
| Salvia apiana - white sage | 3 |
| Salvia mellifera - black sage | 8 |
| Sonchus asper - spiny sowthistle | 0.2 |
| Xylococcus bicolor - mission manzanita | 4 |
| Other Associated Species | no |
| BareGround | 43.8 |
| CrypSoils | 0 |
| Rock | 1 |
| Litter | 4 |
| Water | 0 |
| Vegetation | 51.2 |
| DeadShrubs | 0 |
| TotalPercCover | 100 |
| Alreadyentered | yes |
| Ifyes_whichsurvey | ACIL_4SYCA027_1 |
| ManageRecomm | Continued monitoring and handweeding of tocalote and Apiastrum angustifolium |
| ManageActions_PastYr | Unknown |
| CNDDB_SppDetected | Acanthomintha ilicifolia, Convolvulus simulans, Harpagonella palmeri |
| Notes | NA |
| TimeFinish | 09:43 |

| MSP Occurr. ID & Sample point: | ACIL_4SIPR026_1 |
|---|---|
| Preserve | Simon Preserve |
| MgtUnit | 4 |
| Land Owner | County of San Diego Department of Parks and Recreation |
| Land Manager | County of San Diego Department of Parks and Recreation |
| UpdateSampInfo | no |
| Can this survey be shared publicly? | yes |
| Scientific Name | Acanthomintha ilicifolia |
| Date | 5/12/2025 |
| Time Start | 9:36 |
| Surveyors | Brenda McMillan, Karla Alcaraz |
| Affiliation | Environmental Science Associates |
| Number of Plants in the Sampling Area | 2,144 |
| Exact or Estimate for Number in Sampling Area | estimate |
| Uncertainty for Sampling Area | medium |
| Sampling Area Radius (meters) | 10 |
| Count is clusters or individuals? | individ_plants |
| Count is flowering or vegetated plants? (only answer for geophytes) | NA |
| Category for Percent Vegetative in Sampling Area | 6 |
| Category for Percent Flowering in Sampling Area | 2 |
| Category for Percent Fruiting in Sampling Area | 1 |
| Category for Percent Dead in Sampling Area | 1 |
| Category for Percent Herbivory in Sampling Area | 1 |
| Category for Percent Diseased in Sampling Area | 1 |
| Category for Percent Stunted Growth in Sampling Area | 1 |
| Sampling Area within Current Mapped Extent? | yes |
| GPSAccurracy | 7.4 |
| GPSAccurracyUnits | inch |
| PlotX | 516451 |
| PlotY | 3654129 |
| Check your location of the SAMPLE PLOT against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| Photo1X | Photo1_E_UTM |
| Photo1Y | Photo1_N_UTM |
| Check your location of the PHOTO POINT 1 against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| CameraType | iPhone 14 |

| MSP Occurr. ID & Sample point: | ACIL_4SIPR026_1 |
|---|---|
| Photo1Dir | 228 |
| Photo1Hei | CamHei_Photo1 |
| Photo1Ang | CamAng_Photo1 |
| UpdatePhotoInfo | no |
| PhotoNumPhoto1 | ACIL_4SIPR026_1_Photo1_05122025 |
| Photo2X | Photo2_E_UTM |
| Photo2Y | Photo2_N_UTM |
| Check your location of the PHOTO POINT 2 against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| Photo2Dir | 29 |
| Photo2Hei | CamHei_Photo2 |
| Photo2Ang | CamAng_Photo2 |
| UpdatePhoto2Info | no |
| PhotoNumPhoto2 | ACIL_4SIPR026_1_Photo2_05122025 |
| SANDAG2012_VegAllianceAssoc | Adenostoma fasciculatum-Xylococcus bicolor Association |
| CryptogamicCrustCover | 2 |
| ThatchCover | 2 |
| ThatchDepthAverage_cat | 2 |
| ThatchDepthMax_cm | 0.5 |
| DeadStandingBiomass_Presence | Yes |
| DeadStanding_CoverSpecies | Centaurea melitensis |
| DeadStanding_CoverClass | 2 |
| DeadStandingHeightAverage_cm | 61 |
| FeralPigActivity | 1 |
| GroundSquirrelActivity | 1 |
| GopherActivity | 3 |
| SamplingAreaRepresent_of_mapped_occurr | yes |
| If no, Note Differences: | NA |
| Acanthomintha ilicifolia - San Diego thornmint | 5 |
| Acmispon micranthus - San Diego bird's-foot trefoil | 0.2 |
| Adenostoma fasciculatum - chamise | 4 |
| Apiastrum angustifolium - mock parsley | 0.2 |
| Artemisia californica - coastal sagebrush | 0.2 |
| Avena barbata - slender oat | 0.2 |
| Bloomeria crocea - common goldenstar | 1 |
| Brachypodium distachyon - purple false brome | 1 |
| Bromus hordeaceus - soft brome | 2 |
| Bromus rubens - Red brome | 3 |
| Calochortus splendens - splendid mariposa lily | 0.2 |

| MSP Occurr. ID & Sample point: | ACIL_4SIPR026_1 |
|---|---|
| Centaurea melitensis - Maltese star-thistle | 2.5 |
| Chlorogalum parviflorum - smallflower soap plant | 0.2 |
| Deinandra fasciculata - clustered tarweed | 3.5 |
| Eriophyllum confertiflorum - golden-yarrow | 0.2 |
| Erodium botrys - longbeak stork's bill | 0.2 |
| Erodium cicutarium - redstem stork's bill | 0.2 |
| Festuca microstachys - small fescue | 0.2 |
| Festuca myuros - annual fescue | 1 |
| Fritillaria biflora var. biflora - chocolate lily | 1 |
| Harpagonella palmeri - Palmer's grappling-hook | 6 |
| Hypochaeris glabra - smooth cat's ear | 0.5 |
| Logfia filaginoides - California cottonrose | 0.2 |
| Logfia gallica - narrowleaf cottonrose | 0.2 |
| Microseris douglasii ssp. Platycarpha - Douglas' silverpuffs | 0.2 |
| Navarretia hamata ssp. hamata - hooked navarretia | 0.2 |
| Plantago erecta - California plantain | 0.2 |
| Stylocline gnaphaloides - mountain neststraw | 0.2 |
| Uropappus lindleyi - Silver puffs | 0.2 |
| Xylococcus bicolor - mission manzanita | 17 |
| Other Associated Species? | yes |
| othername1 | Stebbinsoseris heterocarpa |
| otherper1 | 1 |
| othername2 | Senecio vulgaris |
| otherper2 | 0.2 |
| othername3 | Lomatium urticulatum |
| otherper3 | 0.2 |
| othername4 | Lysimachia arvensis |
| otherper4 | 0.2 |
| BareGround | 45 |
| CrypSoils | 0.5 |
| Rock | 4 |
| Litter | 0.5 |
| Water | 0 |
| Vegetation | 52.5 |
| DeadShrubs | 0 |
| TotalPercCover | 102.5 |
| Is the maximum extent information already entered? | no |
| Number of Plants per Current Mapped Extent | 2,144 |
| Exact or Estimate for Max Extent Number | estimate |

| **MSP Occurr. ID & Sample point:** | **ACIL_4SIPR026_1** |
|---|---|
| uncertainty_MaxExt | low |
| Plants_clusters_vs_individ_MaxExt | individ_plants |
| Count is flowering or vegetated plants? (only answer for geophytes) | NA |
| AreaCurrentMappedExtent | Polygon submitted |
| Area_exact_or_estim | low |
| CurrentExtentPerimMethod | exact |
| SpeciesLocated_in_maximumExtent | yes |
| ExpandedEfforty_n | no |
| SurroundingLandUse | Conserved open space preserve. Surrounded by residential development. |
| NonnativeForbs | 5 |
| NonnativeForbs_desc | Non-native forbs (Lysimachia arvensis, Centaurea melitensis, Erodium spp., Hedypnois cretica, Hirschfeldia incana, Hypochaeris glabra, Logfia gallica, Sonchus asper, Melilotus indicus) |
| NonnativeGrasses | 3 |
| NonnativeGrasses_desc | Non-native grasses (Avena barbata, Bromus spp., Festuca spp.) |
| NonnativeWoodyPlts | 1 |
| NonnativeWoodyPlts_desc | NA |
| CompetitiveNativePlts | 1 |
| CompetitiveNativePlts_desc | NA |
| Dumping_trash | 1 |
| Dumping_trash_desc | NA |
| Encampments | 1 |
| Encampments_desc | NA |
| FeralPig | 1 |
| FeralPig_desc | NA |
| Trampling | 3 |
| Trampling_desc | Minimal trampling as a result of IMG monitoring |
| Vandalism | 1 |
| CurrentGrazing | 1 |
| CurrentGrazing_desc | NA |
| HistoricGrazing | no |
| HistoricGrazing_desc | NA |
| HistoricAgriculture | no |
| HistoricAgriculture_desc | NA |
| AlteredHydrology | 1 |
| AlteredHydrology_desc | NA |
| Erosion | 1 |
| Erosion_desc | NA |

| MSP Occurr. ID & Sample point: | ACIL_4SIPR026_1 |
|---|---|
| UrbanRunoff | 1 |
| UrbanRunoff_desc | NA |
| SlopeMovement | 1 |
| SlopeMovement_desc | NA |
| SoilCompaction | 1 |
| SoilCompaction_desc | NA |
| FuelModZone_FireBreak | 1 |
| FuelModZone_FireBreak_desc | NA |
| RoadConst_Mainten | 1 |
| RoadConst_Mainten_descrip | NA |
| VegClearing | 1 |
| VegClearing_descript | NA |
| Restoration | 1 |
| Restoration_desc | NA |
| ORV_MtnBikeActivity_disturb | 1 |
| ORV_MtnBikeActivity_type | NA |
| EvidenceRecentFire | no |
| YearBurned | NA |
| Trails_disturbance | 1 |
| Trails_authorized | NA |
| TrailUse_Hiking | NA |
| TrailUse_Biking | NA |
| TrailUse_Equestrian | NA |
| TrailUse_Dog | NA |
| TrailUse_ServiceVehicles | NA |
| TrailUse_Other | NA |
| TrailUse_illegal_descript | NA |
| OtherDisturbance | 1 |
| OtherDisturbance_descript | NA |
| ManageRecomm | Detach; invasive grass control in lens; seed bulk for reestablishment w/in Max extent & clay lens; maintenance w/in Clay lens incl Max extent. |
| ManageActions_PastYr | Unknown |
| CNDDB_SppDetected | Acanthomintha ilicifolia, Harpagonella palmeri, Microseris douglasii ssp., Platycarpha |
| Notes | NA |
| Time Finish | 14:30 |

# B-2 Encinitas Baccharis

| **MSP Occurr. ID & Sample point:** | **BAVA3_6DDHP004_1** |
|---|---|
| Preserve | Del Dios Highlands Open Space Preserve |
| MgtUnit | 6 |
| Land Owner | County of San Diego Department of Parks and Recreation |
| Land Manager | County of San Diego Department of Parks and Recreation |
| SampID | 146 |
| UpdateSampInfo | no |
| Public | yes |
| Scientific Name | Baccharis vanessae |
| Date | 8/27/2025 |
| Time Start | 11:21 |
| Surveyors | Dillon Travis, Amy Orduño-Baez |
| Affiliation | Environmental Science Associates |
| Number of Plants in the Sampling Area | 14 |
| Exact or Estimate for Number in Sampling Area | exact |
| Uncertainty for Sampling Area | very_low |
| Sampling Area Radius (meters) | 10 |
| Count is clusters or individuals? | individ_plants |
| Count is flowering or vegetated plants? (only answer for geophytes) | NA |
| Category for Percent Vegetative in Sampling Area | 6 |
| Category for Percent Flowering in Sampling Area | 2 |
| Category for Percent Fruiting in Sampling Area | 1 |
| Category for Percent Dead in Sampling Area | 1 |
| Category for Percent Herbivory in Sampling Area | 1 |
| Category for Percent Diseased in Sampling Area | 1 |
| Category for Percent Stunted Growth in Sampling Area | 2 |
| Sampling Area within Current Mapped Extent? | yes |
| GPSAccurracy | 7.8 |
| GPSAccurracyUnits | ft |
| PlotX | 488075 |
| PlotY | 3658452 |
| Check your location of the SAMPLE PLOT against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| Photo1X | Photo1_E_UTM |
| Photo1Y | Photo1_N_UTM |
| Check your location of the PHOTO POINT 1 against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| CameraType | iPhone 10 |
| Photo1Dir | East, 60 degrees |

| MSP Occurr. ID & Sample point: | BAVA3_6DDHP004_1 |
|---|---|
| Photo1Hei | CamHei_Photo1 |
| Photo1Ang | CamAng_Photo1 |
| UpdatePhotoInfo | no |
| PhotoNumPhoto1 | BAVA3_6DDHP004_1_Photo1_08272025 |
| SANDAG2012_VegAllianceAssoc | Ceanothus verrucosus Association |
| CryptogamicCrustCover | 2 |
| ThatchCover | 2 |
| ThatchDepthAverage_cat | 2 |
| ThatchDepthMax_cm | 2 |
| DeadStandingBiomass_Presence | no |
| DeadStanding_CoverSpecies | NA |
| DeadStanding_CoverClass | NA |
| DeadStandingHeightAverage_cm | NA |
| FeralPigActivity | 1 |
| GroundSquirrelActivity | 1 |
| GopherActivity | 1 |
| SamplingAreaRepresent_of_mapped_occurr | yes |
| If no, Note Differences: | NA |
| Artemisia californica - coastal sagebrush | 0.2 |
| Baccharis vanessae - Encinitas baccharis | 1 |
| Bromus madritensis - compact brome | 0.2 |
| Bromus rubens - Red brome | 0.2 |
| Ceanothus tomentosus - woolyleaf ceanothus | 1 |
| Ceanothus verrucosus - Wart-stemmed ceanothus | 26 |
| Cneoridium dumosum - bush rue | 5 |
| Diplacus aurantiacus ssp. Aurantiacus - orange bush monkeyflower | 0.2 |
| Eriophyllum confertiflorum - golden-yarrow | 0.2 |
| Galium angustifolium - narrowleaf bedstraw | 0.2 |
| Hazardia squarrosa - sawtooth goldenbush | 1 |
| Malosma laurina - laurel sumac | 4 |
| Marah macrocarpa - Chilicothe | 0.2 |
| Melica imperfecta - smallflower melicgrass | 0.2 |
| Pentagramma triangularis - goldbeck fern | 0.2 |
| Pseudognaphalium bioletti - two-color rabbit-tobacco | 0.2 |
| Rhus integrifolia - lemonade sumac | 3 |
| Rhus ovata - sugar sumac | 1 |
| Salvia mellifera - black sage | 3 |
| Scrophularia californica - California figwort | 0.2 |
| Selaginella bigelovii - bushy spikemoss | 0.2 |

| **MSP Occurr. ID & Sample point:** | **BAVA3_6DDHP004_1** |
|---|---|
| Xylococcus bicolor - mission manzanita | 8 |
| Other Associated Species? | no |
| BareGround | 20 |
| CrypSoils | 0.2 |
| Rock | 7 |
| Litter | 12.4 |
| Water | 0 |
| Vegetation | 55.4 |
| DeadShrubs | 5 |
| TotalPercCover | 100 |
| Alreadyentered | yes |
| Ifyes_whichsurvey | BAVA3_6DDHP004_3 |
| ManageRecomm | Continued monitoring. Consider thinning native shrub and creating an access trail to plots to avoid trampling Baccharis vanessae |
| ManageActions_PastYr | None |
| CNDDB_SppDetected | Baccharis vanessae, Ceanothus verrucosus |
| Notes | NA |
| Time Finish | 11:37 |

| **MSP Occurr. ID & Sample point:** | **BAVA3_6DDHP004_2** |
|---|---|
| Preserve | Del Dios Highlands Open Space Preserve |
| MgtUnit | 6 |
| Land Owner | County of San Diego Department of Parks and Recreation |
| Land Manager | County of San Diego Department of Parks and Recreation |
| SampID | 145 |
| UpdateSampInfo | no |
| Public | yes |
| Scientific Name | Baccharis vanessae |
| Date | 8/27/20225 |
| Time Start | 10:43 |
| Surveyors | Dillon Travis, Amy Orduño-Baez |
| Affiliation | Environmental Science Associates |
| Number of Plants in the Sampling Area | 3 |
| Exact or Estimate for Number in Sampling Area | exact |
| Uncertainty for Sampling Area | very_low |
| Sampling Area Radius (meters) | 10 |
| Count is clusters or individuals? | individ_plants |
| Count is flowering or vegetated plants? (only answer for geophytes) | NA |
| Category for Percent Vegetative in Sampling Area | 6 |
| Category for Percent Flowering in Sampling Area | 1 |
| Category for Percent Fruiting in Sampling Area | 1 |
| Category for Percent Dead in Sampling Area | 1 |
| Category for Percent Herbivory in Sampling Area | 1 |
| Category for Percent Diseased in Sampling Area | 1 |
| Category for Percent Stunted Growth in Sampling Area | 2 |
| Sampling Area within Current Mapped Extent? | yes |
| GPSAccurracy | 7.6 |
| GPSAccurracyUnits | ft |
| PlotX | 488143 |
| PlotY | 3658472 |
| Check your location of the SAMPLE PLOT against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| Photo1X | Photo1_E_UTM |
| Photo1Y | Photo1_N_UTM |
| Check your location of the PHOTO POINT 1 against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| CameraType | iPhone 10 |
| Photo1Dir | Southwest, 216 degrees |

| MSP Occurr. ID & Sample point: | BAVA3_6DDHP004_2 |
|---|---|
| Photo1Hei | CamHei_Photo1 |
| Photo1Ang | CamAng_Photo1 |
| UpdatePhotoInfo | no |
| PhotoNumPhoto1 | BAVA3_6DDHP004_2_Photo1_08272025 |
| SANDAG2012_VegAllianceAssoc | Ceanothus verrucosus Association |
| CryptogamicCrustCover | 2 |
| ThatchCover | 2 |
| ThatchDepthAverage_cat | 2 |
| ThatchDepthMax_cm | 3 |
| DeadStandingBiomass_Presence | no |
| DeadStanding_CoverSpecies | NA |
| DeadStanding_CoverClass | NA |
| DeadStandingHeightAverage_cm | NA |
| FeralPigActivity | 1 |
| GroundSquirrelActivity | 1 |
| GopherActivity | 1 |
| SamplingAreaRepresent_of_mapped_occurr | yes |
| If no, Note Differences: | NA |
| Baccharis vanessae - Encinitas baccharis | 0.2 |
| Bloomeria crocea - common goldenstar | 0.2 |
| Bromus madritensis - compact brome | 0.2 |
| Ceanothus tomentosus - woolyleaf ceanothus | 30 |
| Ceanothus verrucosus - Wart-stemmed ceanothus | 5 |
| Cneoridium dumosum - bush rue | 0.2 |
| Cryptantha spp. - cryptantha | 0.2 |
| Diplacus aurantiacus ssp. Aurantiacus - orange bush monkeyflower | 0.2 |
| Eriophyllum confertiflorum - golden-yarrow | 0.2 |
| Festuca microstachys - small fescue | 0.2 |
| Galium angustifolium - narrowleaf bedstraw | 0.2 |
| Gastridium phleoides - nit grass | 0.2 |
| Hazardia squarrosa - sawtooth goldenbush | 0.2 |
| Malosma laurina - laurel sumac | 7 |
| Marah macrocarpa - Chilicothe | 0.2 |
| Prunus ilicifolia - hollyleaf cherry | 2 |
| Pterostegia drymarioides - woodland pterostegia | 0.2 |
| Rhus integrifolia - lemonade sumac | 11 |
| Salvia mellifera - black sage | 2 |
| Selaginella bigelovii - bushy spikemoss | 0.2 |
| Xylococcus bicolor - mission manzanita | 3 |

| **MSP Occurr. ID & Sample point:** | **BAVA3_6DDHP004_2** |
|---|---|
| Other Associated Species? | no |
| BareGround | 6.2 |
| CrypSoils | 1 |
| Rock | 3 |
| Litter | 17 |
| Water | 0 |
| Vegetation | 62.8 |
| DeadShrubs | 10 |
| TotalPercCover | 100 |
| Alreadyentered | yes |
| Ifyes_whichsurvey | BAVA3_6DDHP004_3 |
| ManageRecomm | Continued monitoring. Consider thinning native shrub and creating an access trail to plots to avoid trampling Baccharis vanessae |
| ManageActions_PastYr | None |
| CNDDB_SppDetected | Baccharis vanessae, Ceanothus verrucosus |
| Notes | NA |
| Time Finish | 10:57 |

| **MSP Occurr. ID & Sample point:** | **BAVA3_6DDHP004_3** |
|---|---|
| Preserve | Del Dios Highlands Open Space Preserve |
| MgtUnit | 6 |
| Land Owner | County of San Diego Department of Parks and Recreation |
| Land Manager | County of San Diego Department of Parks and Recreation |
| SampID | 144 |
| UpdateSampInfo | no |
| Public | yes |
| Scientific Name | Baccharis vanessae |
| Date | 8/27/2025 |
| Time Start | 9:38 |
| Surveyors | Dillon Travis, Amy Orduño-Baez |
| Affiliation | Environmental Science Associates |
| Number of Plants in the Sampling Area | 52 |
| Exact or Estimate for Number in Sampling Area | exact |
| Uncertainty for Sampling Area | very_low |
| Sampling Area Radius (meters) | 10 |
| Count is clusters or individuals? | individ_plants |
| Count is flowering or vegetated plants? (only answer for geophytes) | NA |
| Category for Percent Vegetative in Sampling Area | 6 |
| Category for Percent Flowering in Sampling Area | 2 |
| Category for Percent Fruiting in Sampling Area | 1 |
| Category for Percent Dead in Sampling Area | 2 |
| Category for Percent Herbivory in Sampling Area | 1 |
| Category for Percent Diseased in Sampling Area | 1 |
| Category for Percent Stunted Growth in Sampling Area | 2 |
| Sampling Area within Current Mapped Extent? | yes |
| GPSAccurracy | 8.5 |
| GPSAccurracyUnits | ft |
| PlotX | 488033 |
| PlotY | 3658485 |
| Check your location of the SAMPLE PLOT against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| Photo1X | Photo1_E_UTM |
| Photo1Y | Photo1_N_UTM |
| Check your location of the PHOTO POINT 1 against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| CameraType | iPhone 10 |

| MSP Occurr. ID & Sample point: | BAVA3_6DDHP004_3 |
|---|---|
| Photo1Dir | Southwest, 220 degrees |
| Photo1Hei | CamHei_Photo1 |
| Photo1Ang | CamAng_Photo1 |
| UpdatePhotoInfo | no |
| PhotoNumPhoto1 | BAVA3_6DDHP004_3_Photo1_08272025 |
| SANDAG2012_VegAllianceAssoc | Ceanothus verrucosus Association |
| CryptogamicCrustCover | 2 |
| ThatchCover | 1 |
| ThatchDepthAverage_cat | 1 |
| ThatchDepthMax_cm | 0 |
| DeadStandingBiomass_Presence | yes |
| DeadStanding_CoverSpecies | no |
| DeadStanding_CoverClass | NA |
| DeadStandingHeightAverage_cm | NA |
| FeralPigActivity | 1 |
| GroundSquirrelActivity | 1 |
| GopherActivity | 1 |
| SamplingAreaRepresent_of_mapped_occurr | yes |
| If no, Note Differences: | NA |
| Adenostoma fasciculatum - chamise | 1 |
| Baccharis vanessae - Encinitas baccharis | 4 |
| Brachypodium distachyon - purple false brome | 0.2 |
| Bromus rubens - Red brome | 0.2 |
| Ceanothus tomentosus - woolyleaf ceanothus | 2 |
| Ceanothus verrucosus - Wart-stemmed ceanothus | 12 |
| Cercocarpus minutiflorus - smooth mountain-mahogany | 2 |
| Cneoridium dumosum - bush rue | 0.2 |
| Diplacus aurantiacus ssp. Aurantiacus - orange bush monkeyflower | 0.2 |
| Festuca microstachys - small fescue | 0.2 |
| Galium angustifolium - narrowleaf bedstraw | 0.2 |
| Hazardia squarrosa - sawtooth goldenbush | 0.2 |
| Muhlenbergia microsperma - littleseed muhly | 0.2 |
| Rhus integrifolia - lemonade sumac | 10 |
| Salvia mellifera - black sage | 1 |
| Selaginella bigelovii - bushy spikemoss | 0.2 |
| Xylococcus bicolor - mission manzanita | 18 |
| Other Associated Species? | yes |
| othername1 | Pentagramma viscosa |
| otherper1 | 0.2 |

| MSP Occurr. ID & Sample point: | BAVA3_6DDHP004_3 |
|---|---|
| othername2 | Keckiella cordifolia |
| otherper2 | 0.2 |
| BareGround | 11 |
| CrypSoils | 1 |
| Rock | 10 |
| Litter | 21 |
| Water | 0 |
| Vegetation | 52.2 |
| DeadShrubs | 5 |
| TotalPercCover | 100.2 |
| Alreadyentered | no |
| NumPlantsperCurrentMappedExtent | 236 |
| ExactorEstimate_MaxExt | exact |
| uncertainty_MaxExt | low |
| Plants_clusters_vs_individ_MaxExt | individ_plants |
| Flower_Veget_MaxExt | NA |
| uncertainty_Area | very_low |
| CurrentExtentPerimMethod | exact |
| SpeciesLocated_in_maximumExtent | yes |
| ExpandedEfforty_n | no |
| SurroundingLandUse | Preserve open to recreational activities, adjacent to private residential neighborhoods |
| NonnativeForbs | 3 |
| NonnativeForbs_desc | Some Herschfeldia incana individuals in max extent |
| NonnativeGrasses | 3 |
| NonnativeGrasses_desc | Brachypodium distachyon and brome species present in understory in max extent. |
| NonnativeWoodyPlts | 2 |
| NonnativeWoodyPlts_desc | Tree tobacco present in max extent |
| CompetitiveNativePlts | 6 |
| CompetitiveNativePlts_desc | Ceanothus spp. and Xylococcus bicolor dominate the midstory canopy, shading out BAVA. |
| Dumping_trash | 1 |
| Encampments | 1 |
| FeralPig | 1 |
| Trampling | 3 |
| Trampling_desc | Due to TMP montoring |
| Vandalism | 1 |

| MSP Occurr. ID & Sample point: | BAVA3_6DDHP004_3 |
|---|---|
| CurrentGrazing | 1 |
| HistoricGrazing | no |
| HistoricAgriculture | no |
| DroughtSev | 1 |
| DroughtSev_desc | Many annual forbs did not grow here this year. |
| SeaLevelRise | 1 |
| AlteredHydrology | 1 |
| Erosion | 3 |
| Erosion_desc | Old water pipes from private property into preserve have caused some erosion into the max extent. |
| UrbanRunoff | 1 |
| SlopeMovement | 1 |
| SoilCompaction | 1 |
| FuelModZone_FireBreak | 3 |
| FuelModZone_FireBreak_desc | FMZ created by adjacent private residence. May have impacted some BAVA plants near the road. |
| RoadConst_Mainten | 3 |
| RoadConst_Mainten_descrip | Road adjacent to montoring plots is maintained by home owner. |
| VegClearing | 2 |
| VegClearing_descript | From adjacent home owner along roads. |
| Restoration | 1 |
| ORV_MtnBikeActivity_disturb | 1 |
| EvidenceRecentFire | no |
| Trails_disturbance | 1 |
| OtherDisturbance | 1 |
| ManageRecomm | Continued monitoring of population |
| ManageActions_PastYr | None |
| CNDDB_SppDetected | Baccharis vanessae |
| Notes | NA |
| TimeFinish | 10:00 |

| **MSP Occurr. ID & Sample point:** | **BAVA3_6DDHP028_0** |
|---|---|
| Preserve | Del Dios Highlands Open Space Preserve |
| MgtUnit | 6 |
| Land Owner | County of San Diego Department of Parks and Recreation |
| Land Manager | County of San Diego Department of Parks and Recreation |
| SampID | 144 |
| UpdateSampInfo | no |
| Public | yes |
| Scientific Name | Baccharis vanessae |
| Date | 8/28/2025 |
| Time Start | 10:35 |
| Surveyors | Dillon Travis, Brenda McMillan |
| Affiliation | Environmental Science Associates |
| Number of Plants in the Sampling Area | 13 |
| Exact or Estimate for Number in Sampling Area | exact |
| Uncertainty for Sampling Area | very_low |
| Sampling Area Radius (meters) | 10 |
| Count is clusters or individuals? | individ_plants |
| Count is flowering or vegetated plants? (only answer for geophytes) | NA |
| Category for Percent Vegetative in Sampling Area | 6 |
| Category for Percent Flowering in Sampling Area | 2 |
| Category for Percent Fruiting in Sampling Area | 1 |
| Category for Percent Dead in Sampling Area | 1 |
| Category for Percent Herbivory in Sampling Area | 1 |
| Category for Percent Diseased in Sampling Area | 1 |
| Category for Percent Stunted Growth in Sampling Area | 1 |
| Sampling Area within Current Mapped Extent? | yes |
| GPSAccurracy | 12 |
| GPSAccurracyUnits | ft |
| PlotX | |
| PlotY | |
| Check your location of the SAMPLE PLOT against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| Photo1X | Photo1_E_UTM |
| Photo1Y | Photo1_N_UTM |

| **MSP Occurr. ID & Sample point:** | **BAVA3_6DDHP028_0** |
|---|---|
| Check your location of the PHOTO POINT 1 against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| CameraType | iPhone 10 |
| Photo1Dir | Southwest, 220 degrees |
| Photo1Hei | CamHei_Photo1 |
| Photo1Ang | CamAng_Photo1 |
| UpdatePhotoInfo | no |
| PhotoNumPhoto1 | BAVA3_6DDHP028_0_Photo1 _08282025 |
| PhotoNumPhoto2 | BAVA3_6DDHP028_0_Photo2 _08282025 |
| SANDAG2012_VegAllianceAssoc | Ceanothus verrucosus Association |
| CryptogamicCrustCover | 2 |
| ThatchCover | 1 |
| ThatchDepthAverage_cat | 1 |
| ThatchDepthMax_cm | 0 |
| DeadStandingBiomass_Presence | no |
| DeadStanding_CoverSpecies | no |
| DeadStanding_CoverClass | NA |
| DeadStandingHeightAverage_cm | NA |
| FeralPigActivity | 1 |
| GroundSquirrelActivity | 1 |
| GopherActivity | 1 |
| SamplingAreaRepresent_of_mapped_occurr | yes |
| If no, Note Differences: | NA |
| Adenostoma fasciculatum - chamise | 12 |
| Baccharis vanessae - Encinitas baccharis | 2 |
| Ceanothus tomentosus - woolyleaf ceanothus | 5 |
| Cercocarpus minutiflorus - smooth mountain-mahogany | 8 |
| Crocanthemum scoparium var. scoparium - Bisbee peak rushrose | 2 |
| Diplacus aurantiacus ssp. Aurantiacus - orange bush monkeyflower | 0.2 |
| Galium angustifolium - narrowleaf bedstraw | 1 |
| Galium aparine - stickywilly | 0.2 |
| Lonicera subspicata - southern honeysuckle | 0.2 |
| Malosma laurina - laurel sumac | 3 |
| Melica imperfecta - smallflower melicgrass | 0.2 |
| Rhus integrifolia - lemonade sumac | 5 |
| Salvia mellifera - black sage | 0.2 |
| Selaginella bigelovii - bushy spikemoss | 0.2 |

| MSP Occurr. ID & Sample point: | BAVA3_6DDHP028_0 |
|---|---|
| Stipa pulchra - Purple needle grass | 0.2 |
| Xylococcus bicolor - mission manzanita | 16 |
| Other Associated Species? | yes |
| othername1 | Arisdida adscensionis |
| otherper1 | 0.2 |
| othername2 | Ceanothus perplexens |
| otherper2 | 5 |
| othername3 | Rhamnus ilicifolia |
| otherper3 | 1 |
| BareGround | 10 |
| CrypSoils | 0.4 |
| Rock | 25 |
| Litter | 2 |
| Water | 0 |
| Vegetation | 61.6 |
| DeadShrubs | 1 |
| TotalPercCover | 100 |
| Alreadyentered | no |
| NumPlantsperCurrentMappedExtent | 236 |
| ExactorEstimate_MaxExt | exact |
| uncertainty_MaxExt | low |
| Plants_clusters_vs_individ_MaxExt | individ_plants |
| Flower_Veget_MaxExt | NA |
| uncertainty_Area | very_low |
| CurrentExtentPerimMethod | exact |
| SpeciesLocated_in_maximumExtent | yes |
| ExpandedEfforty_n | no |
| SurroundingLandUse | Preserve open to recreational use and by electrical utility companies |
| NonnativeForbs | 3 |
| NonnativeForbs_desc | Along edges of trails and roads; Stinkwort and tocalote |
| NonnativeGrasses | 3 |
| NonnativeGrasses_desc | Avena, and Bromus species present along trails |
| NonnativeWoodyPlts | 1 |
| CompetitiveNativePlts | 1 |
| Dumping_trash | 1 |
| Encampments | 1 |
| FeralPig | 1 |

| MSP Occurr. ID & Sample point: | BAVA3_6DDHP028_0 |
|---|---|
| Trampling | 3 |
| Trampling_desc | Due to TMP monitoring |
| Vandalism | 1 |
| CurrentGrazing | 1 |
| HistoricGrazing | no |
| HistoricAgriculture | no |
| DroughtSev | 1 |
| DroughtSev_desc | Missing annual plants that are usually present. |
| SeaLevelRise | 1 |
| AlteredHydrology | 1 |
| Erosion | 1 |
| UrbanRunoff | 1 |
| SlopeMovement | 1 |
| SoilCompaction | 1 |
| FuelModZone_FireBreak | 1 |
| RoadConst_Mainten | 3 |
| RoadConst_Mainten_descrip | DPR and utility roads are maintained. |
| VegClearing | 1 |
| Restoration | 1 |
| ORV_MtnBikeActivity_disturb | 1 |
| EvidenceRecentFire | no |
| Trails_disturbance | 3 |
| OtherDisturbance | 1 |
| ManageRecomm | Continued monitoring of population |
| ManageActions_PastYr | None |
| CNDDB_SppDetected | Baccharis vanessae , Comarostaphylis diversifolia |
| Notes | NA |
| TimeFinish | 11:22 |

# B-3 Orcutt's Brodiaea

| **MSP Occurr. ID & Sample point:** | **BROR_4BOPR029_1** |
|---|---|
| Preserve | Boulder Oaks Preserve |
| MgtUnit | 4 |
| Land Owner | County of San Diego Department of Parks and Recreation |
| Land Manager | County of San Diego Department of Parks and Recreation |
| SampID | 20185251 |
| UpdateSampInfo | no |
| Public | yes |
| Scientific Name | Brodiaea orcuttii |
| Date | 5/29/2025 |
| Time Start | 12:37 |
| Surveyors | Brenda McMillan; Dillon Travis |
| Affiliation | Environmental Science Associates |
| Number of Plants in the Sampling Area | 466 |
| Exact or Estimate for Number in Sampling Area | exact |
| Uncertainty for Sampling Area | very_low |
| Sampling Area Radius (meters) | 10 |
| Count is clusters or individuals? | individ_plants |
| Count is flowering or vegetated plants? (only answer for geophytes) | flowering |
| Category for Percent Vegetative in Sampling Area | 0 |
| Category for Percent Flowering in Sampling Area | 1 |
| Category for Percent Fruiting in Sampling Area | 1 |
| Category for Percent Dead in Sampling Area | 2 |
| Category for Percent Herbivory in Sampling Area | 2 |
| Category for Percent Diseased in Sampling Area | 1 |
| Category for Percent Stunted Growth in Sampling Area | 1 |
| Sampling Area within Current Mapped Extent? | yes |
| GPSAccurracy | 1.2 |
| GPSAccurracyUnits | ft |
| PlotX | 505067 |
| PlotY | 3646951 |
| Check your location of the SAMPLE PLOT against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| Photo1X | Photo1_E_UTM |
| Photo1Y | Photo1_N_UTM |
| Check your location of the PHOTO POINT 1 against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| CameraType | iPhone 11 |

| MSP Occurr. ID & Sample point: | BROR_4BOPR029_1 |
|---|---|
| Photo1Dir | 349 Degrees |
| Photo1Hei | CamHei_Photo1 |
| Photo1Ang | CamAng_Photo1 |
| UpdatePhotoInfo | no |
| PhotoNumPhoto1 | BROR_4BOPR029_1_Photo1_05292025 |
| SANDAG2012_VegAllianceAssoc | Isocoma mensezii association |
| CryptogamicCrustCover | 2 |
| ThatchCover | 4 |
| ThatchDepthAverage_cat | 3 |
| ThatchDepthMax_cm | 2 |
| DeadStandingBiomass_Presence | yes |
| DeadStanding_CoverSpecies | Tocalote, Dittrichia graviolens |
| DeadStanding_CoverClass | 2 |
| DeadStandingHeightAverage_cm | 29 |
| FeralPigActivity | 1 |
| GroundSquirrelActivity | 1 |
| GopherActivity | 4 |
| SamplingAreaRepresent_of_mapped_occurr | yes |
| If no, Note Differences: | NA |
| Acmispon americanus - American bird's-foot trefoil | 0.2 |
| Artemisia californica - coastal sagebrush | 0.2 |
| Brodiaea orcuttii - Orcutt's brodiaea | 1 |
| Bromus  diandrus - ripgut brome | 0.2 |
| Bromus hordeaceus - soft brome | 2 |
| Bromus rubens - Red brome | 0.2 |
| Centaurea melitensis - Maltese star-thistle | 0.2 |
| Crassula connata - sand pygmyweed | 0.2 |
| Croton setiger - dove weed | 0.2 |
| Deinandra fasciculata - clustered tarweed | 0.2 |
| Dittrichia gravolens - Stinkwort | 0.2 |
| Ehrharta longiflora - longflowered veldtgrass | 1 |
| Eriogonum fasciculatum - California buckwheat | 1 |
| Erodium botrys - longbeak stork's bill | 7 |
| Festuca myuros - annual fescue | 4 |
| Galium spp. - bedstraw | 0.2 |
| Hypochaeris glabra - smooth cat's ear | 0.2 |
| Isocoma menziesii - Menzies' goldenbush | 15 |
| Logfia gallica - narrowleaf cottonrose | 0.2 |
| Lythrum hyssopifolia - hyssop loosestrife | 0.2 |

| MSP Occurr. ID & Sample point: | BROR_4BOPR029_1 |
|---|---|
| Polypogon monspeliensis - annual rabbitsfoot grass | 0.2 |
| Quercus X acutidens - Oak hybrid | 0.2 |
| Schismus barbatus - common Mediterranean grass | 0.2 |
| Sidalcea malviflora - Checker bloom | 0.2 |
| Silene gallica - common catchfly | 0.2 |
| Sisyrinchium bellum - western blue-eyed grass | 0.2 |
| Other Associated Species? | yes |
| othername1 | Acmispon strigosus |
| otherper1 | 0.2 |
| BareGround | 61 |
| CrypSoils | 1 |
| Rock | 0.2 |
| Litter | 2 |
| Water | 0 |
| Vegetation | 35 |
| DeadShrubs | 1 |
| TotalPercCover | 100.2 |
| Alreadyentered | no |
| NumPlantsperCurrentMappedExtent | 1026 |
| ExactorEstimate_MaxExt | exact |
| uncertainty_MaxExt | very_low |
| Plants_clusters_vs_individ_MaxExt | individ_plants |
| Flower_Veget_MaxExt | flowering |
| AreaCurrentMappedExtent | Polygon submitted |
| Area_exact_or_estim | exact |
| CurrentExtentPerimMethod | GPS |
| SpeciesLocated_in_maximumExtent | yes |
| Reason_IfNotFound | NA |
| ExpandedEfforty_n | no |
| SurroundingLandUse | Preserve, not open to the public. Road through middle of plot |
| NonnativeForbs | 7 |
| NonnativeForbs_desc | Tocalote and Erodium form dense patches |
| NonnativeGrasses | 7 |
| NonnativeGrasses_desc | Festuca myuros also forms dense stands in open areas |
| NonnativeWoodyPlts | 1 |
| NonnativeWoodyPlts_desc | NA |
| CompetitiveNativePlts | 1 |
| CompetitiveNativePlts_desc | NA |
| Dumping_trash | 1 |

| MSP Occurr. ID & Sample point: | BROR_4BOPR029_1 |
|---|---|
| Dumping_trash_desc | NA |
| Encampments | 1 |
| Encampments_desc | NA |
| FeralPig | 1 |
| FeralPig_desc | NA |
| Trampling | 3 |
| Trampling_desc | From TMP IMG |
| Vandalism | 1 |
| Vandalism_desc | NA |
| CurrentGrazing | 1 |
| CurrentGrazing_desc | NA |
| HistoricGrazing | Yes |
| HistoricGrazing_desc | Trails and stock ponds |
| HistoricAgriculture | unknown |
| HistoricAgriculture_desc | NA |
| Droughtsev | 2 |
| DorughtSev_desc | Significantly less biomass compared to previous years. Stunted annual plants. |
| AlteredHydrology | 3 |
| AlteredHydrology_desc | Road and stock ponds like have changed hydrology |
| Erosion | 1 |
| Erosion_desc | NA |
| UrbanRunoff | 1 |
| UrbanRunoff_desc | NA |
| SlopeMovement | 1 |
| SlopeMovement_desc | NA |
| SoilCompaction | 1 |
| SoilCompaction_desc | NA |
| FuelModZone_FireBreak | 1 |
| FuelModZone_FireBreak_desc | NA |
| RoadConst_Mainten | 4 |
| RoadConst_Mainten_descrip | NA |
| VegClearing | 1 |
| VegClearing_descript | NA |
| Restoration | 1 |
| Restoration_desc | NA |
| ORV_MtnBikeActivity_disturb | 1 |
| ORV_MtnBikeActivity_type | NA |
| EvidenceRecentFire | no |
| YearBurned | N/A |

| **MSP Occurr. ID & Sample point:** | **BROR_4BOPR029_1** |
|---|---|
| Trails_disturbance | 3 |
| Trails_authorized | yes |
| TrailUse_Hiking | yes |
| TrailUse_Biking | unknown |
| TrailUse_Equestrian | yes |
| TrailUse_Dog | unknown |
| TrailUse_ServiceVehicles | yes |
| TrailUse_Other | unknown |
| TrailUse_illegal_descript | Private road, not accessible to public |
| OtherDisturbance | 1 |
| OtherDisturbance_descript | NA |
| ManageRecomm | Continued monitoring and non native forb (Dittrichia and Erodium) removal and thatch removal. |
| ManageActions_PastYr | Unknown |
| CNDDB_SppDetected | Brodiaea orcuttii |
| Notes | Native bees observed foraging on the Brodiaea, honey bees observed foraging only on Erodium |
| Time Finish | 13:39 |

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# B-4 San Miguel Savory

| **MSP Occurr. ID & Sample point:** | **CLCH5_4BOPR002_1** |
|---|---|
| Preserve | Boulder Oaks Preserve |
| MgtUnit | 4 |
| Land Owner | County of San Diego Department of Parks and Recreation |
| Land Manager | County of San Diego Department of Parks and Recreation |
| SampID | 275 |
| UpdateSampInfo | no |
| Public | yes |
| Scientific Name | Clinopodium chandleri |
| Date | 5/16/2025 |
| Time Start | 13:45 |
| Surveyors | Brenda McMillan; Karla Alcaraz |
| Affiliation | Environmental Science Associates |
| Number of Plants in the Sampling Area | 96 |
| Exact or Estimate for Number in Sampling Area | exact |
| Uncertainty for Sampling Area | very_low |
| Sampling Area Radius (meters) | 10 |
| Count is clusters or individuals? | individ_plants |
| Count is flowering or vegetated plants? (only answer for geophytes) | NA |
| Category for Percent Vegetative in Sampling Area | 5 |
| Category for Percent Flowering in Sampling Area | 3 |
| Category for Percent Fruiting in Sampling Area | 1 |
| Category for Percent Dead in Sampling Area | 1 |
| Category for Percent Herbivory in Sampling Area | 2 |
| Category for Percent Diseased in Sampling Area | 1 |
| Category for Percent Stunted Growth in Sampling Area | 1 |
| Sampling Area within Current Mapped Extent? | yes |
| GPSAccurracy | 7 |
| GPSAccurracyUnits | inch |
| PlotX | 505067 |
| PlotY | 3646951 |
| Check your location of the SAMPLE PLOT against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| Photo1X | Photo1_E_UTM |
| Photo1Y | Photo1_N_UTM |
| Check your location of the PHOTO POINT 1 against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| CameraType | iPhone 14 |

| MSP Occurr. ID & Sample point: | CLCH5_4BOPR002_1 |
|---|---|
| Photo1Dir | 349 Degrees |
| Photo1Hei | CamHei_Photo1 |
| Photo1Ang | CamAng_Photo1 |
| UpdatePhotoInfo | no |
| PhotoNumPhoto1 | CLCH5_4BOPR002_1_Photo1_05162025 |
| SANDAG2012_VegAllianceAssoc | Arctostaphylos glandulosa-Adenostoma fasciculatum/Chamaebatia australis Association |
| CryptogamicCrustCover | 3 |
| ThatchCover | 2 |
| ThatchDepthAverage_cat | 2 |
| ThatchDepthMax_cm | 0.5 |
| DeadStandingBiomass_Presence | no |
| DeadStanding_CoverSpecies | NA |
| DeadStanding_CoverClass | NA |
| DeadStandingHeightAverage_cm | NA |
| FeralPigActivity | 1 |
| GroundSquirrelActivity | 1 |
| GopherActivity | 1 |
| SamplingAreaRepresent_of_mapped_occurr | yes |
| If no, Note Differences: | NA |
| Acmispon glaber - deerweed | 0.2 |
| Adenostoma fasciculatum - chamise | 20 |
| Apiastrum angustifolium - mock parsley | 0.2 |
| Arctostaphylos glandulosa - Adams' manzanita | 15 |
| Bromus rubens - Red brome | 0.2 |
| Ceanothus tomentosus - woolyleaf ceanothus | 10 |
| Chamaebatia australis - Southern mountain misery | 0.2 |
| Chlorogalum parviflorum - smallflower soap plant | 0.2 |
| Clinopodium chandleri - San Miguel savory | 2 |
| Crocanthemum scoparium var. scoparium - Bisbee peak rushrose | 0.2 |
| Dendromecon rigida - Tree poppy | 2 |
| Dichelostemma capitatum - bluedicks | 0.2 |
| Diplacus aurantiacus ssp. Aurantiacus - orange bush monkeyflower | 1 |
| Eriophyllum confertiflorum - golden-yarrow | 0.2 |
| Festuca myuros - annual fescue | 0.2 |
| Galium angustifolium - narrowleaf bedstraw | 0.2 |
| Hazardia squarrosa - sawtooth goldenbush | 3 |
| Hypochaeris glabra - smooth cat's ear | 0.2 |
| Logfia filaginoides - California cottonrose | 0.2 |

| MSP Occurr. ID & Sample point: | CLCH5_4BOPR002_1 |
|---|---|
| Melica imperfecta - smallflower melicgrass | 0.2 |
| Pentagramma triangularis ssp. triangularis - goldback fern | 0.2 |
| Pseudognaphalium californicum - ladies' tobacco | 0.2 |
| Rhus ovata - sugar sumac | 1 |
| Sidalcea malviflora - Checker bloom | 0.2 |
| Silene gallica - common catchfly | 0.2 |
| Toxicoscordion venenosum var. venenosum - meadow deathcamas | 0.2 |
| Xylococcus bicolor - mission manzanita | 10 |
| Other Associated Species? | yes |
| othername1 | Festuca octoflora |
| otherper1 | 0.2 |
| othername2 | Erigeron foliosus |
| otherper2 | 0.2 |
| othername3 | Rhanmus californica |
| otherper3 | 2 |
| othername4 | Myriopteris covillei |
| otherper4 | 0.2 |
| BareGround | 20 |
| CrypSoils | 1 |
| Rock | 7 |
| Litter | 3 |
| Water | 0 |
| Vegetation | 70.2 |
| DeadShrubs | 0.5 |
| TotalPercCover | 101.7 |
| Alreadyentered | no |
| NumPlantsperCurrentMappedExtent | 146 |
| ExactorEstimate_MaxExt | estimate |
| uncertainty_MaxExt | very_low |
| Plants_clusters_vs_individ_MaxExt | individ_plants |
| Flower_Veget_MaxExt | NA |
| AreaCurrentMappedExtent | Polygon submitted |
| Area_exact_or_estim | excact |
| CurrentExtentPerimMethod | GPS |
| SpeciesLocated_in_maximumExtent | yes |
| Reason_IfNotFound | NA |
| ExpandedEfforty_n | no |

| MSP Occurr. ID & Sample point: | CLCH5_4BOPR002_1 |
|---|---|
| SurroundingLandUse | Conserved open space preserve. Land not open to public. Recreational use by Wildwood Camp approximately 1 mile NW. Access road approximately 545 ft North. |
| NonnativeForbs | 4 |
| NonnativeForbs_desc | Brassica and Hirschfeldia along trail leading to plot |
| NonnativeGrasses | 5 |
| NonnativeGrasses_desc | Erharta longiflora, Bromus spp., Avena sp., Festuca myuros along trail leading to plot |
| NonnativeWoodyPlts | 1 |
| NonnativeWoodyPlts_desc | NA |
| CompetitiveNativePlts | 1 |
| CompetitiveNativePlts_desc | NA |
| Dumping_trash | 1 |
| Dumping_trash_desc | NA |
| Encampments | 1 |
| Encampments_desc | NA |
| FeralPig | 1 |
| FeralPig_desc | NA |
| Trampling | 4 |
| Trampling_desc | Trails and monitoring |
| Vandalism | 1 |
| Vandalism_desc | NA |
| CurrentGrazing | 1 |
| CurrentGrazing_desc | NA |
| HistoricGrazing | no |
| HistoricGrazing_desc | NA |
| HistoricAgriculture | no |
| HistoricAgriculture_desc | NA |
| Droughtsev | 1 |
| DorughtSev_desc | Non native species had lower cover, less flowers smaller plants |
| AlteredHydrology | 1 |
| AlteredHydrology_desc | NA |
| Erosion | 1 |
| Erosion_desc | NA |
| UrbanRunoff | 1 |
| UrbanRunoff_desc | NA |
| SlopeMovement | 1 |
| SlopeMovement_desc | NA |
| SoilCompaction | 1 |
| SoilCompaction_desc | NA |

| **MSP Occurr. ID & Sample point:** | **CLCH5_4BOPR002_1** |
|---|---|
| FuelModZone_FireBreak | 1 |
| FuelModZone_FireBreak_desc | NA |
| RoadConst_Mainten | 1 |
| RoadConst_Mainten_descrip | NA |
| VegClearing | 4 |
| VegClearing_descript | Invasive species management within plot |
| Restoration | 5 |
| Restoration_desc | Invasive species management |
| ORV_MtnBikeActivity_disturb | 1 |
| ORV_MtnBikeActivity_type | NA |
| EvidenceRecentFire | no |
| YearBurned | N/A |
| Trails_disturbance | 3 |
| Trails_authorized | both |
| TrailUse_Hiking | yes |
| TrailUse_Biking | no |
| TrailUse_Equestrian | no |
| TrailUse_Dog | no |
| TrailUse_ServiceVehicles | no |
| TrailUse_Other | yes |
| TrailUse_illegal_descript | Potential wildlife trail, also being used for monitoring and maintenance access (CLCHBO02). |
| OtherDisturbance | 1 |
| OtherDisturbance_descript | NA |
| ManageRecomm | Not worth the risk to CLCH. Site with <5% weed cover |
| ManageActions_PastYr | None |
| CNDDB_SppDetected | Clinopodium chandleri, Allium marvinii |
| Notes | NA |
| Time Finish | 16:33 |

| MSP Occurr. ID & Sample point: | CLCH5_4BOPR002_2 |
|---|---|
| Preserve | Boulder Oaks Preserve |
| MgtUnit | 4 |
| Land Owner | County of San Diego Department of Parks and Recreation |
| Land Manager | County of San Diego Department of Parks and Recreation |
| SampID | 276 |
| UpdateSampInfo | no |
| Public | yes |
| Scientific Name | Clinopodium chandleri |
| Date | 5/16/2025 |
| Time Start | 16:53 |
| Surveyors | Brenda McMillan; Karla Alcaraz |
| Affiliation | Environmental Science Associates |
| Number of Plants in the Sampling Area | 96 |
| Exact or Estimate for Number in Sampling Area | exact |
| Uncertainty for Sampling Area | low |
| Sampling Area Radius (meters) | 10 |
| Count is clusters or individuals? | individ_plants |
| Count is flowering or vegetated plants? (only answer for geophytes) | NA |
| Category for Percent Vegetative in Sampling Area | 5 |
| Category for Percent Flowering in Sampling Area | 3 |
| Category for Percent Fruiting in Sampling Area | 2 |
| Category for Percent Dead in Sampling Area | 1 |
| Category for Percent Herbivory in Sampling Area | 1 |
| Category for Percent Diseased in Sampling Area | 1 |
| Category for Percent Stunted Growth in Sampling Area | 1 |
| Sampling Area within Current Mapped Extent? | yes |
| GPSAccurracy | 7.5 |
| GPSAccurracyUnits | inch |
| PlotX | 505422 |
| PlotY | 3647075 |
| Check your location of the SAMPLE PLOT against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| Photo1X | Photo1_E_UTM |
| Photo1Y | Photo1_N_UTM |
| Check your location of the PHOTO POINT 1 against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| CameraType | iPhone 14 |

| MSP Occurr. ID & Sample point: | CLCH5_4BOPR002_2 |
|---|---|
| Photo1Dir | 012 Degrees |
| Photo1Hei | CamHei_Photo1 |
| Photo1Ang | CamAng_Photo1 |
| UpdatePhotoInfo | no |
| PhotoNumPhoto1 | CLCH5_4BOPR002_2_Photo1_05162025 |
| SANDAG2012_VegAllianceAssoc | Arctostaphylos glauca-Adenostoma fasciculatum-Xylococcus-Ceanothus tomentosus Association |
| CryptogamicCrustCover | 2 |
| ThatchCover | 2 |
| ThatchDepthAverage_cat | 2 |
| ThatchDepthMax_cm | 0.5 |
| DeadStandingBiomass_Presence | yes |
| DeadStanding_CoverSpecies | no |
| DeadStanding_CoverClass | NA |
| DeadStandingHeightAverage_cm | NA |
| FeralPigActivity | 1 |
| GroundSquirrelActivity | 1 |
| GopherActivity | 1 |
| SamplingAreaRepresent_of_mapped_occurr | yes |
| If no, Note Differences: | NA |
| Acmispon glaber - deerweed | 0.2 |
| Adenostoma fasciculatum - chamise | 20 |
| Bromus madritensis ssp. Rubens - foxtail brome | 0.2 |
| Calochortus spp. - mariposa lily | 0.2 |
| Calystegia macrostegia - island false bindweed | 0.2 |
| Ceanothus tomentosus - woolyleaf ceanothus | 10 |
| Clinopodium chandleri - San Miguel savory | 1 |
| Crocanthemum scoparium var. scoparium - Bisbee peak rushrose | 0.2 |
| Dead Shrub/Shrubs | 0.2 |
| Dendromecon rigida - Tree poppy | 0.2 |
| Dichelostemma capitatum - bluedicks | 0.2 |
| Diplacus aurantiacus ssp. Aurantiacus - orange bush monkeyflower | 0.2 |
| Ehrharta calycina - perennial veldtgrass | 0.2 |
| Eriophyllum confertiflorum - golden-yarrow | 0.2 |
| Festuca myuros - annual fescue | 0.2 |
| Galium angustifolium - narrowleaf bedstraw | 1 |
| Xylococcus bicolor - mission manzanita | 7 |
| Other Associated Species? | yes |
| othername1 | Chamabatia australis |

| MSP Occurr. ID & Sample point: | CLCH5_4BOPR002_2 |
|---|---|
| otherper1 | 1 |
| othername2 | Melica imperfecta |
| otherper2 | 1 |
| othername3 | Brachypodium distachyon |
| otherper3 | 2 |
| other | Pen tri .2, Tox ven .2, Api ang .2, Arc glan 5, Mar mac .2, Pse cal .2, Sel big .2, Hyp gla .2, Ant nut .2, Eri fol .2, Fes oct .2, Fest my .2, Myr cov .2 |
| BareGround | 40 |
| CrypSoils | 0 |
| Rock | 7 |
| Litter | 2 |
| Water | 0 |
| Vegetation | 51.5 |
| DeadShrubs | 1 |
| TotalPercCover | 101.5 |
| Alreadyentered | yes |
| Ifyes_whichsurvey | CLCH5_4BOPR002_1 |
| ManageRecomm | Continue monitoring and treatment for invasive grasses (perennial veldt grass, annual fescue, and bromes) |
| ManageActions_PastYr | Non-native weed control |
| CNDDB_SppDetected | Clinopodium chandleri, Chamaebatia australis, Crotalus ruber, Allium marvinii |
| Notes | NA |
| Time Finish | 18:13 |

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# B-5 Orcutt's Bird's-Beak

| **MSP Occurr. ID & Sample point:** | **COOR7_1TIRI009_1** |
|---|---|
| Preserve | Tijuana River Valley Regional Park |
| MgtUnit | 1 |
| Land Owner | County of San Diego Department of Parks and Recreation |
| Land Manager | County of San Diego Department of Parks and Recreation |
| SampID | 285 |
| UpdateSampInfo | no |
| Public | yes |
| Scientific Name | Dicranostegia orcuttiana |
| Date | 6/5/2025 |
| Time Start | 12:30 |
| Surveyors | Brenda McMillan; Dillon Travis |
| Affiliation | Environmental Science Associates |
| Number of Plants in the Sampling Area | 1 |
| Exact or Estimate for Number in Sampling Area | exact |
| Uncertainty for Sampling Area | Very_low |
| Sampling Area Radius (meters) | 10 |
| Count is clusters or individuals? | individ_plants |
| Count is flowering or vegetated plants? (only answer for geophytes) | NA |
| Category for Percent Vegetative in Sampling Area | 1 |
| Category for Percent Flowering in Sampling Area | 6 |
| Category for Percent Fruiting in Sampling Area | 1 |
| Category for Percent Dead in Sampling Area | 1 |
| Category for Percent Herbivory in Sampling Area | 1 |
| Category for Percent Diseased in Sampling Area | 1 |
| Category for Percent Stunted Growth in Sampling Area | 1 |
| Sampling Area within Current Mapped Extent? | yes |
| GPSAccurracy | 8.4 |
| GPSAccurracyUnits | ft |
| PlotX | 490646 |
| PlotY | 3600256 |
| Check your location of the SAMPLE PLOT against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| Photo1X | Photo1_E_UTM |
| Photo1Y | Photo1_N_UTM |
| Check your location of the PHOTO POINT 1 against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| CameraType | iPhone11 |

| MSP Occurr. ID & Sample point: | COOR7_1TIRI009_1 |
|---|---|
| Photo1Dir | 261 |
| Photo1Hei | CamHei_Photo1 |
| Photo1Ang | CamAng_Photo1 |
| UpdatePhotoInfo | no |
| PhotoNumPhoto1 | COOR7_1TIRI009_1_Photo1_06052025 |
| SANDAG2012_VegAllianceAssoc | Artemisia californica-Eriogonum fasciculatum-Opuntia littoralis/Dudleya (edulis) Association |
| CryptogamicCrustCover | 2 |
| ThatchCover | 2 |
| ThatchDepthAverage_cat | 2 |
| ThatchDepthMax_cm | 1 |
| DeadStandingBiomass_Presence | yes |
| DeadStanding_CoverSpecies | Sinapis arvensis |
| DeadStanding_CoverClass | 2 |
| DeadStandingHeightAverage_cm | 20 |
| FeralPigActivity | 1 |
| GroundSquirrelActivity | 1 |
| GopherActivity | 4 |
| SamplingAreaRepresent_of_mapped_occurr | yes |
| SamplingArea_diffs_from_mapped_occurr | |
| Acmispon glaber - deerweed | 0.2 |
| Artemisia californica - coastal sagebrush | 15 |
| Bahiopsis laciniata - torhleaf goldeneye | 1 |
| Bromus rubens - Red brome | 1 |
| Cneoridium dumosum - bush rue | 5 |
| Cryptantha intermedia - Clearwater cryptantha | 0.2 |
| Daucus pusillus - American wild carrot | 0.2 |
| Deinandra fasciculata - clustered tarweed | 0.2 |
| Dichondra occidentalis - western ponysfoot | 0.2 |
| Dudleya edulis - fingertips | 0.2 |
| Dudleya pulverulenta - chalk dudleya | 0.2 |
| Eriogonum fasciculatum - California buckwheat | 3 |
| Ferocactus viridescens var. viridescens - San Diego barrel cactus | 0.2 |
| Festuca myuros - annual fescue | 0.2 |
| Hypochaeris glabra - smooth cat's ear | 0.2 |
| Lasthenia gracilis - needle goldfields | 0.2 |
| Lepidium spp. - pepperweed | 0.2 |
| Logfia gallica - narrowleaf cottonrose | 0.2 |
| Malacothamnus fasciculatus - Mendocino bushmallow | 0.2 |

| MSP Occurr. ID & Sample point: | COOR7_1TIRI009_1 |
|---|---|
| Malosma laurina - laurel sumac | 1 |
| Marah macrocarpa - Chilicothe | 0.2 |
| Navarretia hamata - hooked pincushionplant | 0.2 |
| Osmadenia tenella - false rosinweed | 0.2 |
| Peritoma arborea - bladderpod spiderflower | 0.2 |
| Plantago erecta - California plantain | 0.2 |
| Selaginella bigelovii - bushy spikemoss | 0.2 |
| Selaginella cinerascens - mesa spikemoss | 7 |
| Stephanomeria spp. - wirelettuce | 0.2 |
| Stipa pulchra - Purple needle grass | 0.2 |
| Other Associated Species? | yes |
| othername1 | Sinapis arvensis |
| otherper1 | 0.2 |
| BareGround | 51.4 |
| CrypSoils | 1 |
| Rock | 7 |
| Litter | 2 |
| Water | 0 |
| Vegetation | 37.6 |
| DeadShrubs | 1 |
| TotalPercCover | 100 |
| Alreadyentered | no |
| NumPlantsperCurrentMappedExtent | 12 |
| ExactorEstimate_MaxExt | exact |
| uncertainty_MaxExt | low |
| Plants_clusters_vs_individ_MaxExt | individ_plants |
| Flower_Veget_MaxExt | NA |
| AreaCurrentMappedExtent | Polygon submitted |
| Area_exact_or_estim | very_low |
| CurrentExtentPerimMethod | exact |
| SpeciesLocated_in_maximumExtent | yes |
| ExpandedEfforty_n | no |
| SurroundingLandUse | Open space preserve used by border patrol |
| NonnativeForbs | 5 |
| NonnativeForbs_desc | Sinapis arvensis is now present in max extent |
| NonnativeGrasses | 4 |
| NonnativeGrasses_desc | Bromus rubens and Festuca distributed throughout open areas. |
| NonnativeWoodyPlts | 1 |
| NonnativeWoodyPlts_desc | NA |

| MSP Occurr. ID & Sample point: | COOR7_1TIRI009_1 |
|---|---|
| CompetitiveNativePlts | 1 |
| CompetitiveNativePlts_desc | NA |
| Dumping_trash | 1 |
| Dumping_trash_desc | NA |
| Encampments | 1 |
| Encampments_desc | NA |
| FeralPig | 1 |
| FeralPig_desc | NA |
| Trampling | 3 |
| Trampling_desc | Some trampling from IMG surveys and from border patrol/ migrants. |
| Vandalism | 1 |
| Vandalism_desc | NA |
| CurrentGrazing | 1 |
| CurrentGrazing_desc | NA |
| HistoricGrazing | unknown |
| HistoricGrazing_desc | NA |
| HistoricAgriculture | unknown |
| DroughtSev | 2 |
| DroughtSev_desc | Significantly less living plant biomass and more dead shrubs present this year compared to other years. |
| HistoricAgriculture_desc | NA |
| AlteredHydrology | 1 |
| AlteredHydrology_desc | NA |
| Erosion | 1 |
| Erosion_desc | NA |
| UrbanRunoff | 1 |
| UrbanRunoff_desc | NA |
| SlopeMovement | 1 |
| SlopeMovement_desc | NA |
| SoilCompaction | 3 |
| SoilCompaction_desc | From border patrol vehicles, especially adjacent to roads. |
| FuelModZone_FireBreak | 1 |
| FuelModZone_FireBreak_desc | NA |
| RoadConst_Mainten | 4 |
| RoadConst_Mainten_descrip | Roads used and maintained by border patrol |
| VegClearing | 1 |
| VegClearing_descript | NA |
| Restoration | 1 |

| **MSP Occurr. ID & Sample point:** | **COOR7_1TIRI009_1** |
|---|---|
| Restoration_desc | NA |
| ORV_MtnBikeActivity_disturb | 4 |
| ORV_MtnBikeActivity_type | Border Patrol ORVs |
| EvidenceRecentFire | no |
| YearBurned | NA |
| Trails_disturbance | 1 |
| Trails_authorized | unknown |
| TrailUse_Hiking | unknown |
| TrailUse_Biking | unknown |
| TrailUse_Equestrian | no |
| TrailUse_Dog | unknown |
| TrailUse_ServiceVehicles | yes |
| TrailUse_Other | yes |
| TrailUse_illegal_descript | Border Patrol |
| OtherDisturbance | 1 |
| OtherDisturbance_descript | NA |
| ManageRecomm | Continued monitoring, and removal of invasive mustards and Brome species before they go to seed (Feb-Mar) |
| ManageActions_PastYr | None |
| CNDDB_SppDetected | Dicranostegia orcuttiana, Ferocactus viridescens, Dichondra occidentalis, Selaginella cinerascens, Bahiopsis laciniata |
| Notes | NA |
| Time Finish | 13:01 |

| MSP Occurr. ID & Sample point: | COOR7_1TIRI009_2 |
|---|---|
| Preserve | Tijuana River Valley Regional Park |
| MgtUnit | 1 |
| Land Owner | County of San Diego Department of Parks and Recreation |
| Land Manager | County of San Diego Department of Parks and Recreation |
| SampID | TBD |
| UpdateSampInfo | yes |
| Public | yes |
| Scientific Name | Dicranostegia orcuttiana |
| Date | 6/10/2025 |
| Time Start | 10:56 |
| Surveyors | Brenda McMillan; Dillon Travis |
| Affiliation | Environmental Science Associates |
| Number of Plants in the Sampling Area | 8 |
| Exact or Estimate for Number in Sampling Area | exact |
| Uncertainty for Sampling Area | Very_low |
| Sampling Area Radius (meters) | 10 |
| Count is clusters or individuals? | individ_plants |
| Count is flowering or vegetated plants? (only answer for geophytes) | NA |
| Category for Percent Vegetative in Sampling Area | 3 |
| Category for Percent Flowering in Sampling Area | 5 |
| Category for Percent Fruiting in Sampling Area | 3 |
| Category for Percent Dead in Sampling Area | 1 |
| Category for Percent Herbivory in Sampling Area | 4 |
| Category for Percent Diseased in Sampling Area | 1 |
| Category for Percent Stunted Growth in Sampling Area | 5 |
| Sampling Area within Current Mapped Extent? | yes |
| GPSAccurracy | 5.6 |
| GPSAccurracyUnits | ft |
| PlotX | -117.102071 |
| PlotY | 32.541291 |
| Check your location of the SAMPLE PLOT against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| Photo1X | Photo1_E_UTM |
| Photo1Y | Photo1_N_UTM |
| Check your location of the PHOTO POINT 1 against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| CameraType | iPhone11 |

| MSP Occurr. ID & Sample point: | COOR7_1TIRI009_2 |
|---|---|
| Photo1Dir | 261 |
| Photo1Hei | CamHei_Photo1 |
| Photo1Ang | CamAng_Photo1 |
| UpdatePhotoInfo | no |
| PhotoNumPhoto1 | COOR7_1TIRI009_1_Photo1_newwestpop_06052025 |
| SANDAG2012_VegAllianceAssoc | Artemisia californica-Eriogonum fasciculatum-Opuntia littoralis/Dudleya (edulis) Association |
| CryptogamicCrustCover | 2 |
| ThatchCover | 2 |
| ThatchDepthAverage_cat | 2 |
| ThatchDepthMax_cm | 1 |
| DeadStandingBiomass_Presence | yes |
| DeadStanding_CoverSpecies | Tocalote, Hirschfeldia incana |
| DeadStanding_CoverClass | 2 |
| DeadStandingHeightAverage_cm | 28 |
| FeralPigActivity | 1 |
| GroundSquirrelActivity | 1 |
| GopherActivity | 4 |
| SamplingAreaRepresent_of_mapped_occurr | yes |
| SamplingArea_diffs_from_mapped_occurr | |
| Acmispon glaber - deerweed | 0.2 |
| Artemisia californica - coastal sagebrush | 25 |
| Bahiopsis laciniata - torhleaf goldeneye | 2 |
| Bromus rubens - Red brome | 4 |
| Centaurea melitensis - Maltese star-thistle | 0.2 |
| Cneoridium dumosum - bush rue | 5 |
| Daucus pusillus - American wild carrot | 0.2 |
| Deinandra fasciculata - clustered tarweed | 0.2 |
| Dicranostegia orcuttiana - Orcutt's birds-beak | 0.2 |
| Dudleya edulis - fingertips | 0.2 |
| Dudleya pulverulenta - chalk dudleya | 0.2 |
| Encelia californica - California brittlebush | 1 |
| Ephedra californica - California ephedra | 0.2 |
| Eriogonum fasciculatum - California buckwheat | 1 |
| Erodium cicutarium - redstem stork's bill | 0.2 |
| Festuca myuros - annual fescue | 0.2 |
| Hirschfeldia incana - shortpod mustard | 0.2 |
| Hypochaeris glabra - smooth cat's ear | 0.2 |
| Logfia gallica - narrowleaf cottonrose | 0.2 |

| MSP Occurr. ID & Sample point: | COOR7_1TIRI009_2 |
|---|---|
| Navarretia hamata - hooked pincushionplant | 0.2 |
| Peritoma arborea - bladderpod spiderflower | 0.2 |
| Rhus integrifolia - lemonade sumac | 5 |
| Selaginella cinerascens - mesa spikemoss | 1 |
| Stephanomeria diegensis - San Diego wirelettuce | 0.2 |
| Stipa pulchra - Purple needle grass | 0.2 |
| Stylocline gnaphaloides - mountain neststraw | 0.2 |
| Other Associated Species? | yes |
| othername1 | Amsinckia menzesii |
| otherper1 | 0.2 |
| Othername2 | Euphorbia misera |
| Otherper2 | 3 |
| Othername3 | Bergerocactus emoryi |
| Otherper3 | 0.2 |
| BareGround | 45 |
| CrypSoils | 0.2 |
| Rock | 1 |
| Litter | 2 |
| Water | 0 |
| Vegetation | 51 |
| DeadShrubs | 1 |
| TotalPercCover | 100.2 |
| Alreadyentered | yes |
| Ifyeas_whichsurvey | COOR7_1TIRI009_1 |
| ManageRecomm | Continued monitoring, monitoring of gopher activity, Non-native grass removal |
| ManageActions_PastYr | None |
| CNDDB_SppDetected | Ferocactus viridescens, Dicranostegia orcuttiana, Euphorbia misera, Bahiopsis laciniata, Selaginella cinerascens |
| Notes | NA |
| Time Finish | 11:25 |

| **MSP Occurr. ID & Sample point:** | **COOR7_1SMGU006_1** |
|---|---|
| Preserve | Tijuana River Valley Regional Park |
| MgtUnit | 1 |
| Land Owner | County of San Diego Department of Parks and Recreation |
| Land Manager | County of San Diego Department of Parks and Recreation |
| SampID | 2017190 |
| UpdateSampInfo | no |
| Public | yes |
| Scientific Name | Dicranostegia orcuttiana |
| Date | 6/5/2025 |
| Time Start | 09:51 |
| Surveyors | Brenda McMillan; Dillon Travis |
| Affiliation | Environmental Science Associates |
| Number of Plants in the Sampling Area | 0 |
| Exact or Estimate for Number in Sampling Area | exact |
| Uncertainty for Sampling Area | very_low |
| Sampling Area Radius (meters) | 10 |
| Count is clusters or individuals? | individ_plants |
| Count is flowering or vegetated plants? (only answer for geophytes) | NA |
| Category for Percent Vegetative in Sampling Area | 1 |
| Category for Percent Flowering in Sampling Area | 1 |
| Category for Percent Fruiting in Sampling Area | 1 |
| Category for Percent Dead in Sampling Area | 1 |
| Category for Percent Herbivory in Sampling Area | 1 |
| Category for Percent Diseased in Sampling Area | 1 |
| Category for Percent Stunted Growth in Sampling Area | 1 |
| Sampling Area within Current Mapped Extent? | yes |
| GPSAccurracy | 8.3 |
| GPSAccurracyUnits | ft |
| PlotX | 491709 |
| PlotY | 3600493 |
| Check your location of the SAMPLE PLOT against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| Photo1X | Photo1_E_UTM |
| Photo1Y | Photo1_N_UTM |
| Check your location of the PHOTO POINT 1 against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |

| MSP Occurr. ID & Sample point: | COOR7_1SMGU006_1 |
|---|---|
| CameraType | iPhone11 |
| Photo1Dir | 101 |
| Photo1Hei | CamHei_Photo1 |
| Photo1Ang | CamAng_Photo1 |
| UpdatePhotoInfo | no |
| PhotoNumPhoto1 | COOR7_1SMGU_1_Photo1_06052025 |
| SANDAG2012_VegAllianceAssoc | Encelia californica- Artemesia californica association |
| CryptogamicCrustCover | 1 |
| ThatchCover | 2 |
| ThatchDepthAverage_cat | 3 |
| ThatchDepthMax_cm | 2 |
| DeadStandingBiomass_Presence | yes |
| DeadStanding_CoverSpecies | Sinapis arvensis, Hirschfeldia incana |
| DeadStanding_CoverClass | 2 |
| DeadStandingHeightAverage_cm | 29 |
| FeralPigActivity | 1 |
| GroundSquirrelActivity | 1 |
| GopherActivity | 4 |
| SamplingAreaRepresent_of_mapped_occurr | yes |
| If no, Note Differences: | NA |
| Artemisia californica - coastal sagebrush | 5 |
| Bromus rubens - Red brome | 0.2 |
| Centaurea melitensis - Maltese star-thistle | 0.2 |
| Cneoridium dumosum - bush rue | 1 |
| Cuscuta californica - California dodder | 0.2 |
| Deinandra fasciculata - clustered tarweed | 0.2 |
| Dudleya pulverulenta - chalk dudleya | 0.2 |
| Encelia californica - California brittlebush | 6 |
| Eriogonum fasciculatum - California buckwheat | 5 |
| Festuca myuros - annual fescue | 0.2 |
| Hirschfeldia incana - shortpod mustard | 0.2 |
| Hypochaeris glabra - smooth cat's ear | 0.2 |
| Lasthenia gracilis - needle goldfields | 0.2 |
| Malosma laurina - laurel sumac | 1 |
| Marah macrocarpa - Chilicothe | 0.2 |
| Mirabilis laevis var. crassifolia - California four o'clock | 0.2 |
| Pentagramma glanduloviscida - San Diego silverback fern | 0.2 |
| Peritoma arborea - bladderpod spiderflower | 8 |
| Pseudognaphalium beneolens - Cudweed | 0.2 |

| MSP Occurr. ID & Sample point: | COOR7_1SMGU006_1 |
|---|---|
| Rhamnus crocea - spiny redberry | 3 |
| Rhus integrifolia - lemonade sumac | 4 |
| Scrophularia californica - California figwort | 0.2 |
| Yucca schidigera - Mojave yucca | 1 |
| Other Associated Species? | yes |
| othername1 | Amsinckia menzesii |
| otherper1 | 0.2 |
| othername2 | Sambucus caerula sp nigra |
| otherper2 | 2 |
| othername3 | Sinapis arvensis |
| otherper3 | 2 |
| BareGround | 51.8 |
| CrypSoils | 0 |
| Rock | 3 |
| Litter | 2 |
| Water | 0 |
| Vegetation | 41.2 |
| DeadShrubs | 2 |
| TotalPercCover | 100 |
| Alreadyentered | no |
| Ifyes_whichsurvey | NA |
| NumPlantsperCurrentMappedExtent | 573 |
| ExactorEstimate_MaxExt | exact |
| uncertainty_MaxExt | low |
| Plants_clusters_vs_individ_MaxExt | individ_plants |
| Flower_Veget_MaxExt | NA |
| AreaCurrentMappedExtent | Polygon submitted |
| Area_exact_or_estim | very_low |
| CurrentExtentPerimMethod | exact |
| SpeciesLocated_in_maximumExtent | yes |
| ExpandedEfforty_n | no |
| SurroundingLandUse | Open space preserve used by border patrol |
| NonnativeForbs | 7 |
| NonnativeForbs_desc | Shortpod mustard and Sinapis arvensis |
| NonnativeGrasses | 5 |
| NonnativeGrasses_desc | Sparsely scattered Bromus rubens in maximum extent. |
| NonnativeWoodyPlts | 1 |
| NonnativeWoodyPlts_desc | NA |
| CompetitiveNativePlts | 1 |

| MSP Occurr. ID & Sample point: | COOR7_1SMGU006_1 |
|---|---|
| CompetitiveNativePlts_desc | NA |
| Dumping_trash | 1 |
| Dumping_trash_desc | NA |
| Encampments | 1 |
| Encampments_desc | NA |
| FeralPig | 1 |
| FeralPig_desc | NA |
| Trampling | 6 |
| Trampling_desc | Some trampling from IMG surveys and from border patrol/ migrants. |
| Vandalism | 1 |
| Vandalism_desc | NA |
| CurrentGrazing | 1 |
| CurrentGrazing_desc | NA |
| HistoricGrazing | unknown |
| HistoricGrazing_desc | NA |
| HistoricAgriculture | unknown |
| DroughtSev | 2 |
| DroughtSev_desc | Significantly less living plant biomass and more dead shrubs present this year compared to other years. |
| HistoricAgriculture_desc | NA |
| AlteredHydrology | 1 |
| AlteredHydrology_desc | NA |
| Erosion | 1 |
| Erosion_desc | NA |
| UrbanRunoff | 1 |
| UrbanRunoff_desc | NA |
| SlopeMovement | 1 |
| SlopeMovement_desc | NA |
| SoilCompaction | 4 |
| SoilCompaction_desc | From border patrol vehicles, especially adjacent to roads. |
| FuelModZone_FireBreak | 1 |
| FuelModZone_FireBreak_desc | NA |
| RoadConst_Mainten | 5 |
| RoadConst_Mainten_descrip | Roads used and maintained by border patrol |
| VegClearing | 1 |
| VegClearing_descript | NA |
| Restoration | 1 |
| Restoration_desc | NA |
| ORV_MtnBikeActivity_disturb | 6 |

| **MSP Occurr. ID & Sample point:** | **COOR7_1SMGU006_1** |
|---|---|
| ORV_MtnBikeActivity_type | Border Patrol ORVs |
| EvidenceRecentFire | no |
| YearBurned | NA |
| Trails_disturbance | 5 |
| Trails_authorized | unknown |
| TrailUse_Hiking | unknown |
| TrailUse_Biking | unknown |
| TrailUse_Equestrian | no |
| TrailUse_Dog | unknown |
| TrailUse_ServiceVehicles | yes |
| TrailUse_Other | yes |
| TrailUse_illegal_descript | Border Patrol |
| OtherDisturbance | 1 |
| OtherDisturbance_descript | NA |
| ManageRecomm | Orcutt's birds beak hasn't been located in this plot for 4 years. Plot can likely be abandoned |
| ManageActions_PastYr | Hand and machine weeding of grasses and mustards. |
| CNDDB_SppDetected | Yellow warbler, Least Bell's Vireo |
| Notes | Dicranostegia orcuttiana not found. |
| Time Finish | 10:16 |

| MSP Occurr. ID & Sample point: | COOR7_1SMGU006_2 |
|---|---|
| Preserve | Tijuana River Valley Regional Park |
| MgtUnit | 1 |
| Land Owner | County of San Diego Department of Parks and Recreation |
| Land Manager | County of San Diego Department of Parks and Recreation |
| SampID | TBD |
| UpdateSampInfo | no |
| Public | yes |
| Scientific Name | Dicranostegia orcuttiana |
| Date | 6/10/2025 |
| Time Start | 09:17 |
| Surveyors | Brenda McMillan; Dillon Travis |
| Affiliation | Environmental Science Associates |
| Number of Plants in the Sampling Area | 98 |
| Exact or Estimate for Number in Sampling Area | exact |
| Uncertainty for Sampling Area | Very_low |
| Sampling Area Radius (meters) | 10 |
| Count is clusters or individuals? | individ_plants |
| Count is flowering or vegetated plants? (only answer for geophytes) | NA |
| Category for Percent Vegetative in Sampling Area | 1 |
| Category for Percent Flowering in Sampling Area | 5 |
| Category for Percent Fruiting in Sampling Area | 3 |
| Category for Percent Dead in Sampling Area | 2 |
| Category for Percent Herbivory in Sampling Area | 5 |
| Category for Percent Diseased in Sampling Area | 1 |
| Category for Percent Stunted Growth in Sampling Area | 5 |
| Sampling Area within Current Mapped Extent? | yes |
| GPSAccurracy | 6.2 |
| GPSAccurracyUnits | ft |
| PlotX | -117.091128 |
| PlotY | 32.541967 |
| Check your location of the SAMPLE PLOT against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| Photo1X | Photo1_E_UTM |
| Photo1Y | Photo1_N_UTM |
| Check your location of the PHOTO POINT 1 against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| CameraType | iPhone11 |

| MSP Occurr. ID & Sample point: | COOR7_1SMGU006_2 |
|---|---|
| Photo1Dir | 261 |
| Photo1Hei | CamHei_Photo1 |
| Photo1Ang | CamAng_Photo1 |
| UpdatePhotoInfo | no |
| PhotoNumPhoto1 | COOR7_1TIRI009_new_east_pop_06102025 |
| SANDAG2012_VegAllianceAssoc | Artemisia californica association |
| CryptogamicCrustCover | 2 |
| ThatchCover | 1 |
| ThatchDepthAverage_cat | 1 |
| ThatchDepthMax_cm | 0.5 |
| DeadStandingBiomass_Presence | yes |
| DeadStanding_CoverSpecies | Hirschfeldia incana |
| DeadStanding_CoverClass | 2 |
| DeadStandingHeightAverage_cm | 83 |
| FeralPigActivity | 1 |
| GroundSquirrelActivity | 1 |
| GopherActivity | 4 |
| SamplingAreaRepresent_of_mapped_occurr | yes |
| SamplingArea_diffs_from_mapped_occurr | |
| Acmispon glaber var. glaber - Deerweed | 0.2 |
| Artemisia californica - coastal sagebrush | 51 |
| Baccharis sarothroides - desertbroom | 0.2 |
| Bromus rubens - Red brome | 0.2 |
| Cardionema ramosissimum - sandcarpet | 0.2 |
| Centaurea melitensis - Maltese star-thistle | 0.2 |
| Corethrogyne filaginifolia - California sandaster | 0.2 |
| Dicranostegia orcuttiana - Orcutt's birds-beak | 1 |
| Eriogonum fasciculatum - California buckwheat | 10 |
| Eriophyllum confertiflorum - golden-yarrow | 0.2 |
| Erodium cicutarium - redstem stork's bill | 0.2 |
| Ferocactus viridescens var. viridescens - San Diego barrel cactus | 0.2 |
| Festuca myuros - annual fescue | 0.2 |
| Hirschfeldia incana - shortpod mustard | 0.2 |
| Hypochaeris glabra - smooth cat's ear | 0.2 |
| Logfia gallica - narrowleaf cottonrose | 0.2 |
| Navarretia hamata - hooked pincushionplant | 0.2 |
| Osmadenia tenella - false rosinweed | 0.2 |
| Peritoma arborea - bladderpod spiderflower | 0.2 |
| Pseudognaphalium bioletti - two-color rabbit-tobacco | 0.2 |

| MSP Occurr. ID & Sample point: | COOR7_1SMGU006_2 |
|---|---|
| Rhus integrifolia - lemonade sumac | 8 |
| Stephanomeria diegensis - San Diego wirelettuce | 0.2 |
| Stipa spp. - needlegrass | 0.2 |
| Uropappus lindleyi - Silver puffs | 0.2 |
| Other Associated Species? | yes |
| othername1 | Chaenactis glabriuscula |
| otherper1 | 0.2 |
| BareGround | 18.6 |
| CrypSoils | 1 |
| Rock | 0.2 |
| Litter | 3 |
| Water | 0 |
| Vegetation | 74.2 |
| DeadShrubs | 3 |
| TotalPercCover | 100 |
| Alreadyentered | yes |
| Ifyes_whichsurvey | COOR7_1SMGU006_1 |
| NumPlantsperCurrentMappedExtent | 573 |
| ManageRecomm | Continued monitoring, gopher monitoring, Bromus rubens removal, install barrier or sign to prevent border patrol from driving over it. |
| ManageActions_PastYr | None |
| CNDDB_SppDetected | Dicranostegia orcuttiana, Turkey vulture, Northern Harrier, Ferocactus viridescens |
| Notes | NA |
| Time Finish | 10:01 |

| **MSP Occurr. ID & Sample point:** | **COOR7_1ESGU010_1** |
|---|---|
| Preserve | Tijuana River Valley Regional Park |
| MgtUnit | 1 |
| Land Owner | County of San Diego Department of Parks and Recreation |
| Land Manager | County of San Diego Department of Parks and Recreation |
| SampID | 202167 |
| UpdateSampInfo | no |
| Public | yes |
| Scientific Name | Dicranostegia orcuttiana |
| Date | 6/5/2025 |
| Time Start | 08:19 |
| Surveyors | Brenda McMillan; Dillon Travis |
| Affiliation | Environmental Science Associates |
| Number of Plants in the Sampling Area | 14 |
| Exact or Estimate for Number in Sampling Area | exact |
| Uncertainty for Sampling Area | Very_low |
| Sampling Area Radius (meters) | 10 |
| Count is clusters or individuals? | individ_plants |
| Count is flowering or vegetated plants? (only answer for geophytes) | NA |
| Category for Percent Vegetative in Sampling Area | 1 |
| Category for Percent Flowering in Sampling Area | 6 |
| Category for Percent Fruiting in Sampling Area | 2 |
| Category for Percent Dead in Sampling Area | 2 |
| Category for Percent Herbivory in Sampling Area | 1 |
| Category for Percent Diseased in Sampling Area | 1 |
| Category for Percent Stunted Growth in Sampling Area | 2 |
| Sampling Area within Current Mapped Extent? | yes |
| GPSAccurracy | 14.7 |
| GPSAccurracyUnits | ft |
| PlotX | 490646 |
| PlotY | 3600256 |
| Check your location of the SAMPLE PLOT against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| Photo1X | Photo1_E_UTM |
| Photo1Y | Photo1_N_UTM |
| Check your location of the PHOTO POINT 1 against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| CameraType | iPhone11 |

| MSP Occurr. ID & Sample point: | COOR7_1ESGU010_1 |
|---|---|
| Photo1Dir | 261 |
| Photo1Hei | CamHei_Photo1 |
| Photo1Ang | CamAng_Photo1 |
| UpdatePhotoInfo | no |
| PhotoNumPhoto1 | COOR7_1ESGU010_1_Photo1_06052025 |
| SANDAG2012_VegAllianceAssoc | Artemesia californica-Eriogonum fasciculatum-Malosma laurina association |
| CryptogamicCrustCover | 2 |
| ThatchCover | 1 |
| ThatchDepthAverage_cat | 1 |
| ThatchDepthMax_cm | 0 |
| DeadStandingBiomass_Presence | yes |
| DeadStanding_CoverSpecies | Sinapis arvensis |
| DeadStanding_CoverClass | 2 |
| DeadStandingHeightAverage_cm | 37 |
| FeralPigActivity | 1 |
| GroundSquirrelActivity | 1 |
| GopherActivity | 4 |
| SamplingAreaRepresent_of_mapped_occurr | yes |
| SamplingArea_diffs_from_mapped_occurr | |
| Acmispon glaber var. brevialatus - Short winged deerweed | 0.2 |
| Artemisia californica - coastal sagebrush | 30 |
| Bahiopsis laciniata - torhleaf goldeneye | 1 |
| Bromus rubens - Red brome | 0.2 |
| Clematis pauciflora - ropevine clematis | 0.2 |
| Cneoridium dumosum - bush rue | 0.2 |
| Cryptantha spp. - cryptantha | 0.2 |
| Deinandra fasciculata - clustered tarweed | 0.2 |
| Dichelostemma capitatum - bluedicks | 0.2 |
| Dicranostegia orcuttiana - Orcutt's birds-beak | 0.2 |
| Dudleya pulverulenta - chalk dudleya | 0.2 |
| Encelia californica - California brittlebush | 1 |
| Eriogonum fasciculatum - California buckwheat | 7 |
| Ferocactus viridescens var. viridescens - San Diego barrel cactus | 0.2 |
| Lepidium spp. - pepperweed | 0.2 |
| Malosma laurina - laurel sumac | 15 |
| Marah macrocarpa - Chilicothe | 0.2 |
| Rhus integrifolia - lemonade sumac | 0.2 |
| Salvia apiana - white sage | 1 |

| MSP Occurr. ID & Sample point: | COOR7_1ESGU010_1 |
|---|---|
| Stephanomeria diegensis - San Diego wirelettuce | 0.2 |
| Other Associated Species? | yes |
| othername1 | Sinapis arvensis |
| otherper1 | 0.2 |
| Othername2 | Calochortus weedii |
| Otherper2 | 0.2 |
| Othername2 | Solanum xantii |
| Otherper2 | 0.2 |
| BareGround | 23.8 |
| CrypSoils | 0.2 |
| Rock | 10 |
| Litter | 2 |
| Water | 0 |
| Vegetation | 63.2 |
| DeadShrubs | 1 |
| TotalPercCover | 100.2 |
| Alreadyentered | no |
| NumPlantsperCurrentMappedExtent | 15 |
| ExactorEstimate_MaxExt | exact |
| uncertainty_MaxExt | low |
| Plants_clusters_vs_individ_MaxExt | individ_plants |
| Flower_Veget_MaxExt | NA |
| AreaCurrentMappedExtent | Polygon submitted |
| Area_exact_or_estim | very_low |
| CurrentExtentPerimMethod | exact |
| SpeciesLocated_in_maximumExtent | yes |
| ExpandedEfforty_n | no |
| SurroundingLandUse | Open space preserve used by border patrol |
| NonnativeForbs | 7 |
| NonnativeForbs_desc | Sinapis arvensis is now present in max extent |
| NonnativeGrasses | 5 |
| NonnativeGrasses_desc | Sparsely scattered Bromus in maximum extent. |
| NonnativeWoodyPlts | 1 |
| NonnativeWoodyPlts_desc | NA |
| CompetitiveNativePlts | 1 |
| CompetitiveNativePlts_desc | NA |
| Dumping_trash | 1 |
| Dumping_trash_desc | NA |
| Encampments | 1 |

| MSP Occurr. ID & Sample point: | COOR7_1ESGU010_1 |
|---|---|
| Encampments_desc | NA |
| FeralPig | 1 |
| FeralPig_desc | NA |
| Trampling | 6 |
| Trampling_desc | Some trampling from IMG surveys and from border patrol/ migrants. |
| Vandalism | 1 |
| Vandalism_desc | NA |
| CurrentGrazing | 1 |
| CurrentGrazing_desc | NA |
| HistoricGrazing | unknown |
| HistoricGrazing_desc | NA |
| HistoricAgriculture | unknown |
| DroughtSev | 2 |
| DroughtSev_desc | Significantly less living plant biomass and more dead shrubs present this year compared to other years. |
| HistoricAgriculture_desc | NA |
| AlteredHydrology | 1 |
| AlteredHydrology_desc | NA |
| Erosion | 1 |
| Erosion_desc | NA |
| UrbanRunoff | 1 |
| UrbanRunoff_desc | NA |
| SlopeMovement | 1 |
| SlopeMovement_desc | NA |
| SoilCompaction | 4 |
| SoilCompaction_desc | From border patrol vehicles, especially adjacent to roads. |
| FuelModZone_FireBreak | 1 |
| FuelModZone_FireBreak_desc | NA |
| RoadConst_Mainten | 5 |
| RoadConst_Mainten_descrip | Roads used and maintained by border patrol |
| VegClearing | 1 |
| VegClearing_descript | NA |
| Restoration | 1 |
| Restoration_desc | NA |
| ORV_MtnBikeActivity_disturb | 6 |
| ORV_MtnBikeActivity_type | Border Patrol ORVs |
| EvidenceRecentFire | no |
| YearBurned | NA |

| **MSP Occurr. ID & Sample point:** | **COOR7_1ESGU010_1** |
|---|---|
| Trails_disturbance | 5 |
| Trails_authorized | unknown |
| TrailUse_Hiking | unknown |
| TrailUse_Biking | unknown |
| TrailUse_Equestrian | no |
| TrailUse_Dog | unknown |
| TrailUse_ServiceVehicles | yes |
| TrailUse_Other | yes |
| TrailUse_illegal_descript | Border Patrol |
| OtherDisturbance | 1 |
| OtherDisturbance_descript | NA |
| ManageRecomm | Continued monitoring, nonnative mustard control in February before mustard sets seed. Potentially seed with native shrubs the birds beak parasitizes. |
| ManageActions_PastYr | None |
| CNDDB_SppDetected | Ferocactus viridescens, Dicranostegia orcuttiana, Bahiopsis laciniata |
| Notes | NA |
| Time Finish | 09:12 |

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# B-6 Variegated Dudleya

| **MSP Occurr. ID & Sample point:** | **DUVA_4SYCA019_1** |
|---|---|
| Preserve | Sycamore Canyon and Goodan Ranch Preserves |
| MgtUnit | 4 |
| Land Owner | County of San Diego Department of Parks and Recreation |
| Land Manager | County of San Diego Department of Parks and Recreation |
| SampID | 2017236 |
| UpdateSampInfo | no |
| Public | yes |
| Scientific Name | Dudleya variegata |
| Date | 5/20/2025 |
| Time Start | 09:14 |
| Surveyors | Dillon Travis; Mary Cozy |
| Affiliation | Environmental Science Associates |
| Number of Plants in the Sampling Area | 20 |
| Exact or Estimate for Number in Sampling Area | exact |
| Uncertainty for Sampling Area | Very_low |
| Sampling Area Radius (meters) | 10 |
| Count is clusters or individuals? | individ_plants |
| Count is flowering or vegetated plants? (only answer for geophytes) | vegetative |
| Category for Percent Vegetative in Sampling Area | 1 |
| Category for Percent Flowering in Sampling Area | 6 |
| Category for Percent Fruiting in Sampling Area | 2 |
| Category for Percent Dead in Sampling Area | 1 |
| Category for Percent Herbivory in Sampling Area | 2 |
| Category for Percent Diseased in Sampling Area | 1 |
| Category for Percent Stunted Growth in Sampling Area | 4 |
| Sampling Area within Current Mapped Extent? | yes |
| GPSAccurracy | 5.1 |
| GPSAccurracyUnits | ft |
| PlotX | 502938 |
| PlotY | 3643517 |
| Check your location of the SAMPLE PLOT against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| Photo1X | Photo1_E_UTM |
| Photo1Y | Photo1_N_UTM |
| Check your location of the PHOTO POINT 1 against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| CameraType | iphone11 |

| MSP Occurr. ID & Sample point: | DUVA_4SYCA019_1 |
|---|---|
| Photo1Dir | Northeast, 42 Degrees |
| Photo1Hei | CamHei_Photo1 |
| Photo1Ang | CamAng_Photo1 |
| UpdatePhotoInfo | no |
| PhotoNumPhoto1 | DUVA_4SYCA019_1_Photo1_05202025 |
| SANDAG2012_VegAllianceAssoc | Brachypodium distachyon Semi-Natural Stand Type |
| CryptogamicCrustCover | 2 |
| ThatchCover | 3 |
| ThatchDepthAverage_cat | 2 |
| ThatchDepthMax_cm | 2 |
| DeadStandingBiomass_Presence | yes |
| DeadStanding_CoverSpecies | Deinandra fasciculata |
| DeadStanding_CoverClass | 2 |
| DeadStandingHeightAverage_cm | 46 |
| FeralPigActivity | 1 |
| GroundSquirrelActivity | 1 |
| GopherActivity | 3 |
| SamplingAreaRepresent_of_mapped_occurr | yes |
| If no, Note Differences: | NA |
| Acanthomintha ilicifolia - San Diego thornmint | 0.2 |
| Acmispon glaber - deerweed | 0.2 |
| Adenostoma fasciculatum - chamise | 3 |
| Allium haematochiton - redskin onion | 0.2 |
| Apiastrum angustifolium - mock parsley | 0.2 |
| Artemisia californica - coastal sagebrush | 1 |
| Bloomeria crocea - common goldenstar | 0.2 |
| Brachypodium distachyon - purple false brome | 35 |
| Bromus hordeaceus - soft brome | 0.2 |
| Calochortus splendens - splendid mariposa lily | 0.2 |
| Calystegia macrostegia - island false bindweed | 0.2 |
| Centaurea melitensis - Maltese star-thistle | 0.2 |
| Chlorogalum parviflorum - smallflower soap plant | 0.2 |
| Convolvulus simulans - field bindweed | 0.2 |
| Deinandra fasciculata - clustered tarweed | 1 |
| Dichelostemma capitatum - bluedicks | 0.2 |
| Dudleya variegata - Variegated dudleya | 0.2 |
| Eriogonum fasciculatum - California buckwheat | 0.2 |
| Eriophyllum confertiflorum - golden-yarrow | 0.2 |
| Erodium cicutarium - redstem stork's bill | 0.2 |

| MSP Occurr. ID & Sample point: | DUVA_4SYCA019_1 |
|---|---|
| Fritillaria biflora - chocolate lily | 0.2 |
| Harpagonella palmeri - Palmer's grappling-hook | 0.2 |
| Hypochaeris glabra - smooth cat's ear | 0.2 |
| Lepidium spp. - pepperweed | 0.2 |
| Logfia filaginoides - California cottonrose | 0.2 |
| Logfia gallica - narrowleaf cottonrose | 0.2 |
| Lonicera subspicata - southern honeysuckle | 0.2 |
| Lysimachia arvensis - Scarlet pimpernel | 0.2 |
| Malosma laurina - laurel sumac | 4 |
| Plantago erecta - California plantain | 0.2 |
| Plantago rhodosperma - redseed plantain | 0.2 |
| Rhamnus crocea - spiny redberry | 3 |
| Rhus integrifolia - lemonade sumac | 2 |
| Salvia apiana - white sage | 1 |
| Salvia mellifera - black sage | 1 |
| Sanicula arguta - sharptooth blacksnakeroot | 0.2 |
| Selaginella cinerascens - mesa spikemoss | 0.2 |
| Sisyrinchium bellum - western blue-eyed grass | 0.2 |
| Sonchus asper - spiny sowthistle | 0.2 |
| Stipa pulchra - Purple needle grass | 0.2 |
| Xylococcus bicolor - mission manzanita | 3 |
| Other Associated Species? | no |
| BareGround | 28.6 |
| CrypSoils | 1 |
| Rock | 8 |
| Litter | 2 |
| Water | 0 |
| Vegetation | 60.2 |
| DeadShrubs | 0.2 |
| TotalPercCover | 100 |
| Alreadyentered | yes |
| Ifyes_whichsurvey | DUVA_4SYCA019_2 |
| ManageRecomm | Continued monitoring and hand weeding of non native grasses and forbs. |
| ManageActions_PastYr | Hand weeding of Deinandra? |
| CNDDB_SppDetected | Convolvulus simulans, Harpagonella palmeri, Acanthomentha ilicifolia, Dudleya variegata |
| Notes | NA |
| Time Finish | 09:49 |

| MSP Occurr. ID & Sample point: | DUVA_4SYCA019_2 |
|---|---|
| Preserve | Sycamore Canyon and Goodan Ranch Preserves |
| MgtUnit | 4 |
| LandOwn | County of San Diego Department of Parks and Recreation |
| LandMan | County of San Diego Department of Parks and Recreation |
| SampID | 202160 |
| UpdateSampInfo | no |
| Public | yes |
| Scientific Name | Dudleya variegata |
| Date | 5/20/2025 |
| TimeStart | 10:27 |
| Surveyors | Dillon Travis; Mary Cozy |
| Affliation | Environmental Science Associates |
| Number of Plants in the Sampling Area | 68 |
| Exact or Estimate for Number in Sampling Area | exact |
| Uncertainty for Sampling Area | Very_low |
| Sampling Area Radius (meters) | 10 |
| Count is clusters or individuals? | individ_plants |
| Count is flowering or vegetated plants? (only answer for geophytes) | vegetative |
| Category for Percent Vegetative in Sampling Area | 2 |
| Category for Percent Flowering in Sampling Area | 6 |
| Category for Percent Fruiting in Sampling Area | 2 |
| Category for Percent Dead in Sampling Area | 1 |
| Category for Percent Herbivory in Sampling Area | 2 |
| Category for Percent Diseased in Sampling Area | 1 |
| Category for Percent Stunted Growth in Sampling Area | 2 |
| Sampling Area within Current Mapped Extent? | yes |
| GPSAccurracy | 5.1 |
| GPSAccurracyUnits | ft |
| PlotX | 502891 |
| PlotY | 3643611 |
| Check your location of the SAMPLE PLOT against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| Photo1X | Photo1_E_UTM |
| Photo1Y | Photo1_N_UTM |
| Check your location of the PHOTO POINT 1 against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| CameraType | iPhone 11 |

| MSP Occurr. ID & Sample point: | DUVA_4SYCA019_2 |
|---|---|
| Photo1Dir | 335 |
| Photo1Hei | CamHei_Photo1 |
| Photo1Ang | CamAng_Photo1 |
| UpdatePhotoInfo | no |
| PhotoNumPhoto1 | DUVA_4SYCA019_2_Photo1_05202025 |
| SANDAG2012_VegAllianceAssoc | Brachypodium distachyon Semi-Natural Stand Type |
| CryptogamicCrustCover | 2 |
| ThatchCover | 3 |
| ThatchDepthAverage_cat | 2 |
| ThatchDepthMax_cm | 2 |
| DeadStandingBiomass_Presence | yes |
| DeadStanding_CoverSpecies | Acmispon glaber |
| DeadStanding_CoverClass | 2 |
| DeadStandingHeightAverage_cm | 24 |
| FeralPigActivity | 1 |
| GroundSquirrelActivity | 1 |
| GopherActivity | 2 |
| SamplingAreaRepresent_of_mapped_occurr | yes |
| If no, Note Differences: | NA |
| Acmispon glaber - deerweed | 1 |
| Allium haematochiton - redskin onion | 0.2 |
| Artemisia californica - coastal sagebrush | 1 |
| Brachypodium distachyon - purple false brome | 30 |
| Bromus  diandrus - ripgut brome | 0.2 |
| Bromus hordeaceus - soft brome | 0.2 |
| Calochortus splendens - splendid mariposa lily | 0.2 |
| Calystegia macrostegia - island false bindweed | 0.2 |
| Ceanothus tomentosus - woolyleaf ceanothus | 1 |
| Centaurea melitensis - Maltese star-thistle | 0.2 |
| Chlorogalum parviflorum - smallflower soap plant | 0.2 |
| Deinandra fasciculata - clustered tarweed | 0.2 |
| Dichelostemma capitatum - bluedicks | 0.2 |
| Dudleya variegata - Variegated dudleya | 0.2 |
| Eriophyllum confertiflorum - golden-yarrow | 0.2 |
| Erodium cicutarium - redstem stork's bill | 0.2 |
| Harpagonella palmeri - Palmer's grappling-hook | 0.2 |
| Heteromeles arbutifolia - toyon | 1 |
| Lonicera subspicata - southern honeysuckle | 1 |
| Malosma laurina - laurel sumac | 3 |

| MSP Occurr. ID & Sample point: | DUVA_4SYCA019_2 |
|---|---|
| Microseris douglasii - Douglas' silverpuffs | 0.2 |
| Plantago erecta - California plantain | 0.2 |
| Pseudognaphalium californicum - ladies' tobacco | 0.2 |
| Quercus berberidifolia - scrub oak | 2 |
| Rhamnus crocea - spiny redberry | 5 |
| Rhus integrifolia - lemonade sumac | 1 |
| Salvia apiana - white sage | 1 |
| Salvia mellifera - black sage | 0.2 |
| Selaginella spp. - spikemoss | 0.2 |
| Sisyrinchium bellum - western blue-eyed grass | 1 |
| Sonchus asper - spiny sowthistle | 0.2 |
| Sonchus oleraceus - common sowthistle | 0.2 |
| Stipa pulchra - Purple needle grass | 1 |
| Other Associated Species? | no |
| BareGround | 30 |
| CrypSoils | 0.2 |
| Rock | 10 |
| Litter | 5.8 |
| Water | 0 |
| Vegetation | 53 |
| DeadShrubs | 1 |
| TotalPercCover | 100 |
| Alreadyentered | no |
| NumPlantsperCurrentMappedExtent | 141 |
| ExactorEstimate_MaxExt | exact |
| uncertainty_MaxExt | low |
| Plants_clusters_vs_individ_MaxExt | individ_plants |
| Flower_Veget_MaxExt | vegetative |
| AreaCurrentMappedExtent | Polygon Submitted |
| Area_exact_or_estim | very_low |
| CurrentExtentPerimMethod | exact |
| SpeciesLocated_in_maximumExtent | yes |
| Reason_IfNotFound | NA |
| ExpandedEfforty_n | no |
| SurroundingLandUse | Conserved open space reserve, open to recreation ie hiking, biking, equestrian |
| NonnativeForbs | 4 |
| NonnativeForbs_desc | Centaurea melitensis, Erodium spp. spread throughout max extent |
| NonnativeGrasses | 5 |

| MSP Occurr. ID & Sample point: | DUVA_4SYCA019_2 |
|---|---|
| NonnativeGrasses_desc | Brachypodium distachyon widespread and common in all open areas. Bromus sp. present but not dominant |
| NonnativeWoodyPlts | 1 |
| NonnativeWoodyPlts_desc | NA |
| CompetitiveNativePlts | 3 |
| CompetitiveNativePlts_desc | Potentially Deinandra fasciculata, but it is not as prevalent as past two years. |
| Dumping_trash | 1 |
| Dumping_trash_desc | NA |
| Encampments | 1 |
| Encampments_desc | NA |
| FeralPig | 1 |
| FeralPig_desc | NA |
| Trampling | 1 |
| Trampling_desc | NA |
| Vandalism | 1 |
| Vandalism_desc | NA |
| CurrentGrazing | 1 |
| CurrentGrazing_desc | NA |
| HistoricGrazing | unknown |
| HistoricGrazing_desc | NA |
| HistoricAgriculture | no |
| HistoricAgriculture_desc | NA |
| DroughtSev | 2 |
| DroughtSev_desc | Stunted plants and less biomass compared to previous two years. |
| AlteredHydrology | 1 |
| AlteredHydrology_desc | NA |
| Erosion | 1 |
| Erosion_desc | NA |
| UrbanRunoff | 1 |
| UrbanRunoff_desc | NA |
| SlopeMovement | 1 |
| SlopeMovement_desc | NA |
| SoilCompaction | 3 |
| SoilCompaction_desc | From TMP IMG surveys |
| FuelModZone_FireBreak | 1 |
| FuelModZone_FireBreak_desc | NA |
| RoadConst_Mainten | 1 |
| RoadConst_Mainten_descrip | NA |

| **MSP Occurr. ID & Sample point:** | **DUVA_4SYCA019_2** |
|---|---|
| VegClearing | 1 |
| VegClearing_descript | NA |
| Restoration | 1 |
| Restoration_desc | NA |
| ORV_MtnBikeActivity_disturb | 1 |
| ORV_MtnBikeActivity_type | NA |
| EvidenceRecentFire | no |
| YearBurned | NA |
| Trails_disturbance | 2 |
| Trails_authorized | yes |
| TrailUse_Hiking | yes |
| TrailUse_Biking | yes |
| TrailUse_Equestrian | yes |
| TrailUse_Dog | yes |
| TrailUse_ServiceVehicles | yes |
| TrailUse_Other | yes |
| TrailUse_illegal_descript | No unauthorized trails in monitoring plot areas. |
| OtherDisturbance | 1 |
| OtherDisturbance_descript | NA |
| ManageRecomm | Continued monitoring and hand weeding of non native grasses and forbs |
| ManageActions_PastYr | Hand weeding of Deinandra fasciculata and invasive forbs. |
| CNDDB_SppDetected | Dudleya variegata, Harpagonella palmeri |
| Notes | NA |
| TimeFinish | 11:38 |

| MSP Occurr. ID & Sample point: | DUVA_6LUCR023_1 |
|---|---|
| Preserve | Lusardi Creek Preserve |
| MgtUnit | 6 |
| Land Owner | County of San Diego Department of Parks and Recreation |
| Land Manager | County of San Diego Department of Parks and Recreation |
| SampID | 319 |
| UpdateSampInfo | no |
| Public | yes |
| Scientific Name | Dudleya variegata |
| Date | 5/21/2025 |
| Time Start | 08:06 |
| Surveyors | Dillon Travis, Mary Cozy |
| Affiliation | Environmental Science Associates |
| Number of Plants in the Sampling Area | 1 |
| Exact or Estimate for Number in Sampling Area | exact |
| Uncertainty for Sampling Area | very_low |
| Sampling Area Radius (meters) | 10 |
| Count is clusters or individuals? | individ_plants |
| Count is flowering or vegetated plants? (only answer for geophytes) | vegetative |
| Category for Percent Vegetative in Sampling Area | 1 |
| Category for Percent Flowering in Sampling Area | 6 |
| Category for Percent Fruiting in Sampling Area | 1 |
| Category for Percent Dead in Sampling Area | 1 |
| Category for Percent Herbivory in Sampling Area | 1 |
| Category for Percent Diseased in Sampling Area | 1 |
| Category for Percent Stunted Growth in Sampling Area | 1 |
| Sampling Area within Current Mapped Extent? | yes |
| GPSAccurracy | 5.8 |
| GPSAccurracyUnits | feet |
| PlotX | 484873 |
| PlotY | 3652555 |
| Check your location of the SAMPLE PLOT against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| Photo1X | Photo1_E_UTM |
| Photo1Y | Photo1_N_UTM |
| Check your location of the PHOTO POINT 1 against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| CameraType | iPhone 11 |

| MSP Occurr. ID & Sample point: | DUVA_6LUCR023_1 |
|---|---|
| Photo1Dir | 158 Degrees |
| Photo1Hei | CamHei_Photo1 |
| Photo1Ang | CamAng_Photo1 |
| UpdatePhotoInfo | no |
| PhotoNumPhoto1 | DUVA_6LUCR023_1_Photo1_05212025 |
| SANDAG2012_VegAllianceAssoc | Stipa pulchra Association |
| CryptogamicCrustCover | 3 |
| ThatchCover | 2 |
| ThatchDepthAverage_cat | 2 |
| ThatchDepthMax_cm | 1 |
| DeadStandingBiomass_Presence | yes |
| DeadStanding_CoverSpecies | Artemisia californica, Acmispon glaber |
| DeadStanding_CoverClass | 2 |
| DeadStandingHeightAverage_cm | 65 |
| FeralPigActivity | 1 |
| GroundSquirrelActivity | 1 |
| GopherActivity | 1 |
| SamplingAreaRepresent_of_mapped_occurr | yes |
| If no, Note Differences: | NA |
| Acmispon glaber - deerweed | 2 |
| Artemisia californica - coastal sagebrush | 2 |
| Brachypodium distachyon - purple false brome | 3 |
| Bromus hordeaceus - soft brome | 0.2 |
| Bromus rubens - Red brome | 0.2 |
| Calochortus splendens - splendid mariposa lily | 0.2 |
| Chlorogalum parviflorum - smallflower soap plant | 0.2 |
| Crassula connata - sand pygmyweed | 0.2 |
| Cryptantha spp. - cryptantha | 0.2 |
| Deinandra fasciculata - clustered tarweed | 2 |
| Dudleya variegata - Variegated dudleya | 0.2 |
| Eriogonum fasciculatum - California buckwheat | 1 |
| Erodium botrys - longbeak stork's bill | 1 |
| Ferocactus viridescens - San Diego barrel cactus | 0.2 |
| Festuca myuros - annual fescue | 0.2 |
| Festuca perennis - Italian rye grass | 0.2 |
| Hypochaeris glabra - smooth cat's ear | 0.2 |
| Logfia filaginoides - California cottonrose | 0.2 |
| Plantago erecta - California plantain | 0.2 |
| Pseudognaphalium spp. - cudweed | 0.2 |

| MSP Occurr. ID & Sample point: | DUVA_6LUCR023_1 |
|---|---|
| Salvia mellifera - black sage | 4 |
| Selaginella cinerascens - mesa spikemoss | 0.2 |
| Sisyrinchium bellum - western blue-eyed grass | 0.2 |
| Stipa lepida - Foothill needle grass | 0.2 |
| Stipa spp. - needlegrass | 4 |
| Other Associated Species? | no |
| BareGround | 63.4 |
| CrypSoils | 5 |
| Rock | 5 |
| Litter | 4 |
| Water | 0 |
| Vegetation | 22.4 |
| DeadShrubs | 0.2 |
| TotalPercCover | 100 |
| Alreadyentered | no |
| NumPlantsperCurrentMappedExtent | 15 |
| ExactorEstimate_MaxExt | exact |
| uncertainty_MaxExt | low |
| Plants_clusters_vs_individ_MaxExt | individ_plants |
| Flower_Veget_MaxExt | vegetative |
| AreaCurrentMappedExtent | Polygon submitted |
| Area_exact_or_estim | very_low |
| CurrentExtentPerimMethod | exact |
| SpeciesLocated_in_maximumExtent | yes |
| Reason_IfNotFound | NA |
| SurroundingLandUse | Open space preserve, adjacent to residential development |
| NonnativeForbs | 4 |
| NonnativeForbs_desc | Erodium spp. pre able to in open areas in maximum extent |
| NonnativeGrasses | 5 |
| NonnativeGrasses_desc | Brachypodium distachyon and Bromus spp. prevalent through plots and maximum extent. |
| NonnativeWoodyPlts | 2 |
| NonnativeWoodyPlts_desc | Tree tobacco on residential property adjacent to preserve |
| CompetitiveNativePlts | 3 |
| CompetitiveNativePlts_desc | Stipa pulchra and Deinandra fasciculata are prevalent, and may be competing for optimal DUVA habitat. |
| Dumping_trash | 1 |
| Dumping_trash_desc | NA |

| MSP Occurr. ID & Sample point: | DUVA_6LUCR023_1 |
|---|---|
| Encampments | 1 |
| Encampments_desc | NA |
| FeralPig | 1 |
| FeralPig_desc | NA |
| Trampling | 1 |
| Trampling_desc | NA |
| Vandalism | 1 |
| Vandalism_desc | NA |
| CurrentGrazing | 1 |
| CurrentGrazing_desc | NA |
| HistoricGrazing | unknown |
| HistoricGrazing_desc | NA |
| HistoricAgriculture | unknown |
| HistoricAgriculture_desc | NA |
| DroughtSev | 2 |
| DroughtSev_desc | Stunted plants and less plant biomass compared to previous years |
| AlteredHydrology | 1 |
| AlteredHydrology_desc | NA |
| Erosion | 1 |
| Erosion_desc | NA |
| UrbanRunoff | 1 |
| UrbanRunoff_desc | NA |
| SlopeMovement | 1 |
| SlopeMovement_desc | NA |
| SoilCompaction | 1 |
| SoilCompaction_desc | NA |
| FuelModZone_FireBreak | 1 |
| FuelModZone_FireBreak_desc | NA |
| RoadConst_Mainten | 1 |
| RoadConst_Mainten_descrip | NA |
| VegClearing | 1 |
| VegClearing_descript | NA |
| Restoration | 1 |
| Restoration_desc | NA |
| ORV_MtnBikeActivity_disturb | 1 |
| ORV_MtnBikeActivity_type | NA |
| EvidenceRecentFire | No |
| YearBurned | NA |
| Trails_disturbance | 3 |

| **MSP Occurr. ID & Sample point:** | **DUVA_6LUCR023_1** |
|---|---|
| Trails_authorized | No |
| TrailUse_Hiking | No |
| TrailUse_Biking | No |
| TrailUse_Equestrian | no |
| TrailUse_Dog | no |
| TrailUse_ServiceVehicles | no |
| TrailUse_Other | yes |
| TrailUse_illegal_descript | Old trail/ road that runs through the maximum extent is likely used by residential personnel in addition to park rangers. Low usage. |
| OtherDisturbance | 1 |
| OtherDisturbance_descript | NA |
| ManageRecomm | Continued monitoring and repair of herbivore exclusionary fencing. |
| ManageActions_PastYr | Hand weeding and line trimming of invasive grasses and forbs |
| CNDDB_SppDetected | Dudleya variegata, Ferocactus veridescens |
| Notes | Repair exclusionary fencing. |
| Time Finish | 10:24 |

| **MSP Occurr. ID & Sample point:** | **DUVA_3DHPR061_1** |
|---|---|
| Preserve | Dictionary Hill Preserve |
| MgtUnit | 1 |
| LandOwn | County of San Diego Department of Parks and Recreation |
| LandMan | County of San Diego Department of Parks and Recreation |
| SampID | 202512 |
| UpdateSampInfo | new |
| Public | yes |
| Scientific Name | Dudleya variegata |
| Date | 5/13/2025 |
| TimeStart | 08:34 |
| Surveyors | Dillon Travis; Stefanie Lehner |
| Affliation | Environmental Science Associates |
| Number of Plants in the Sampling Area | 1590 |
| Exact or Estimate for Number in Sampling Area | exact |
| Uncertainty for Sampling Area | low |
| Sampling Area Radius (meters) | 10 |
| Count is clusters or individuals? | individ_plants |
| Count is flowering or vegetated plants? (only answer for geophytes) | flowering |
| Category for Percent Vegetative in Sampling Area | 1 |
| Category for Percent Flowering in Sampling Area | 6 |
| Category for Percent Fruiting in Sampling Area | 2 |
| Category for Percent Dead in Sampling Area | 2 |
| Category for Percent Herbivory in Sampling Area | 2 |
| Category for Percent Diseased in Sampling Area | 1 |
| Category for Percent Stunted Growth in Sampling Area | 4 |
| Sampling Area within Current Mapped Extent? | yes |
| GPSAccurracy | 4.8 |
| GPSAccurracyUnits | ft |
| PlotX | 502891 |
| PlotY | 3643611 |
| Check your location of the SAMPLE PLOT against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| Photo1X | Photo1_E_UTM |
| Photo1Y | Photo1_N_UTM |
| Check your location of the PHOTO POINT 1 against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| CameraType | iPhone 11 |

| MSP Occurr. ID & Sample point: | DUVA_3DHPR061_1 |
|---|---|
| Photo1Dir | 335 |
| Photo1Hei | CamHei_Photo1 |
| Photo1Ang | CamAng_Photo1 |
| UpdatePhotoInfo | no |
| PhotoNumPhoto1 | DUVA_3DHPR061_1_Photo1_05132025 |
| SANDAG2012_VegAllianceAssoc | Eriogonum fasciculatum and Artemesia californica association |
| CryptogamicCrustCover | 3 |
| ThatchCover | 2 |
| ThatchDepthAverage_cat | 2 |
| ThatchDepthMax_cm | 1 |
| DeadStandingBiomass_Presence | yes |
| DeadStanding_CoverSpecies | Eriogonum fasciculatum, Hirschfeldia incana |
| DeadStanding_CoverClass | 2 |
| DeadStandingHeightAverage_cm | 82 |
| FeralPigActivity | 1 |
| GroundSquirrelActivity | 1 |
| GopherActivity | 1 |
| SamplingAreaRepresent_of_mapped_occurr | yes |
| If no, Note Differences: | NA |
| Artemisia californica - coastal sagebrush | 1 |
| Bahiopsis laciniata - torhleaf goldeneye | 0.2 |
| Brachypodium distachyon - purple false brome | 0.2 |
| Bromus  diandrus - ripgut brome | 0.2 |
| Bromus madritensis - compact brome | 0.2 |
| Bromus rubens - Red brome | 0.2 |
| Centaurea melitensis - Maltese star-thistle | 0.2 |
| Crassula connata - sand pygmyweed | 0.2 |
| Deinandra fasciculata - clustered tarweed | 0.2 |
| Dudleya variegata - Variegated dudleya | 0.2 |
| Eriogonum fasciculatum - California buckwheat | 0.2 |
| Erodium cicutarium - redstem stork's bill | 0.2 |
| Ferocactus viridescens - San Diego barrel cactus | 0.2 |
| Festuca myuros - annual fescue | 0.2 |
| Hirschfeldia incana - shortpod mustard | 0.2 |
| Hypochaeris glabra - smooth cat's ear | 0.2 |
| Lamarckia aurea - goldentop grass | 0.2 |
| Schismus barbatus - common Mediterranean grass | 1 |
| Selaginella bigelovii - bushy spikemoss | 0.2 |
| Selaginella cinerascens - mesa spikemoss | 1 |

| MSP Occurr. ID & Sample point: | DUVA_3DHPR061_1 |
|---|---|
| Other Associated Species? | no |
| BareGround | 22.4 |
| CrypSoils | 20 |
| Rock | 50 |
| Litter | 1 |
| Water | 0 |
| Vegetation | 6.4 |
| DeadShrubs | 0.2 |
| TotalPercCover | 100 |
| Alreadyentered | no |
| NumPlantsperCurrentMappedExtent | 4756 |
| ExactorEstimate_MaxExt | exact |
| uncertainty_MaxExt | low |
| Plants_clusters_vs_individ_MaxExt | individ_plants |
| Flower_Veget_MaxExt | flowering |
| AreaCurrentMappedExtent | Polygon Submitted |
| Area_exact_or_estim | very_low |
| CurrentExtentPerimMethod | exact |
| SpeciesLocated_in_maximumExtent | yes |
| Reason_IfNotFound | NA |
| ExpandedEfforty_n | no |
| SurroundingLandUse | Hiking and biking trails |
| NonnativeForbs | 4 |
| NonnativeForbs_desc | Hirschfeldia incana, Glebionis coronaria, Eriogonum sp throughout rocky outcroppings with DUVA |
| NonnativeGrasses | 3 |
| NonnativeGrasses_desc | Bromus spp., Schismus barbatus, crimson fountain grass, and other grasses observed on rocky outcroppings with DUVA present. Also present around areas with no cryptogamic crust. |
| NonnativeWoodyPlts | 3 |
| NonnativeWoodyPlts_desc | Eucalyptus trees present in southern central area of the preserve, away from DUVA populations but within maximum extent. |
| CompetitiveNativePlts | 1 |
| CompetitiveNativePlts_desc | Potentially could include Deinandra fasciculata growing in rock cracks where DUVA can grow. |
| Dumping_trash | 1 |
| Dumping_trash_desc | NA |
| Encampments | 1 |
| Encampments_desc | NA |

| MSP Occurr. ID & Sample point: | DUVA_3DHPR061_1 |
|---|---|
| FeralPig | 1 |
| FeralPig_desc | NA |
| Trampling | 4 |
| Trampling_desc | Unauthorized hiking and biking trails through the center of the monitored population, and through DUVA populations adjacent to unauthorized hiking and biking trails. |
| Vandalism | 1 |
| Vandalism_desc | NA |
| CurrentGrazing | 1 |
| CurrentGrazing_desc | NA |
| HistoricGrazing | unknown |
| HistoricGrazing_desc | NA |
| HistoricAgriculture | no |
| HistoricAgriculture_desc | NA |
| DroughtSev | 2 |
| DroughtSev_desc | DUVA individuals appear stunted compared to previous high rainfall years. |
| AlteredHydrology | 1 |
| AlteredHydrology_desc | NA |
| Erosion | 3 |
| Erosion_desc | Erosion present adjacent to monitored DUVA population and other occupancies due to unauthorized hiking trails. |
| UrbanRunoff | 1 |
| UrbanRunoff_desc | NA |
| SlopeMovement | 1 |
| SlopeMovement_desc | NA |
| SoilCompaction | 3 |
| SoilCompaction_desc | Compaction and loss of cryptogamic crusts due to unauthorized trails. |
| FuelModZone_FireBreak | 3 |
| FuelModZone_FireBreak_desc | FMZs around residences occur adjacent to the southern most DUVA population, within 10 meters. |
| RoadConst_Mainten | 3 |
| RoadConst_Mainten_descrip | Service road to hill top. |
| VegClearing | 1 |
| VegClearing_descript | NA |
| Restoration | 1 |
| Restoration_desc | NA |
| ORV_MtnBikeActivity_disturb | 4 |
| ORV_MtnBikeActivity_type | Electric bike and dirt bikes appear to be used on unauthorized trails. |

| **MSP Occurr. ID & Sample point:** | **DUVA_3DHPR061_1** |
|---|---|
| EvidenceRecentFire | no |
| YearBurned | NA |
| Trails_disturbance | 4 |
| Trails_authorized | both |
| TrailUse_Hiking | yes |
| TrailUse_Biking | yes |
| TrailUse_Equestrian | unknown |
| TrailUse_Dog | yes |
| TrailUse_ServiceVehicles | yes |
| TrailUse_Other | yes |
| TrailUse_illegal_descript | No unauthorized trails in monitoring plot areas. |
| OtherDisturbance | 1 |
| OtherDisturbance_descript | Electric bike and dirt bikes within the DUVA monitoring plot. |
| ManageRecomm | Fencing is recommended to keep public from trampling the monitoring population, in addition crimson fountain grass may be removed from the western DUVA populations. |
| ManageActions_PastYr | None. |
| CNDDB_SppDetected | Ferocactus viridescens, Dudleya variegata, Selaginella cinerascens |
| Notes | NA |
| TimeFinish | 11:32 |

# B-7 Heart-leaved Pitcher Sage

| MSP_Occurr_ID_sampPt | LECA4_4IRMT003_1 |
|---|---|
| Preserve | Iron Mountain County Preserve |
| MgtUnit | TBD |
| Land Owner | County of San Diego Department of Parks and Recreation |
| Land Manager | County of San Diego Department of Parks and Recreation |
| SampID | TBD |
| UpdateSampInfo | yes |
| Public | no |
| Scientific Name | Lepechinia cardiophylla |
| Date | 6/4/2025 |
| Time Start | 11:45 |
| Surveyors | Dillon Travis; Brenda McMillan |
| Affiliation | Environmental Science Associates |
| Number of Plants in the Sampling Area | 10 |
| Exact or Estimate for Number in Sampling Area | exact |
| Uncertainty for Sampling Area | very_low |
| Sampling Area Radius (meters) | 10 |
| Count is clusters or individuals? | individuals |
| Count is flowering or vegetated plants? (only answer for geophytes) | NA |
| Category for Percent Vegetative in Sampling Area | 6 |
| Category for Percent Flowering in Sampling Area | 1 |
| Category for Percent Fruiting in Sampling Area | 1 |
| Category for Percent Dead in Sampling Area | 1 |
| Category for Percent Herbivory in Sampling Area | 2 |
| Category for Percent Diseased in Sampling Area | 1 |
| Category for Percent Stunted Growth in Sampling Area | 1 |
| Sampling Area within Current Mapped Extent? | yes |
| GPSAccurracy | 8.5 |
| GPSAccurracyUnits | ft |
| PlotX | -116.957868 |
| PlotY | 32.985143 |
| Check your location of the SAMPLE PLOT against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | new |
| Photo1X | -116.957873 |
| Photo1Y | 32.985124 |
| Check your location of the PHOTO POINT 1 against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | new |
| CameraType | iPhone 11 |
| Photo1Dir | South, 176 Degrees |

| MSP_Occurr_ID_sampPt | LECA4_4IRMT003_1 |
|---|---|
| Photo1Hei | CamHei_Photo1 |
| Photo1Ang | CamAng_Photo1 |
| UpdatePhotoInfo | no |
| PhotoNumPhoto1 | LECA_1IRMO_1_Photo1_06042025 |
| SANDAG2012_VegAllianceAssoc | Quercus berberidifolia association |
| CryptogamicCrustCover | 2 |
| ThatchCover | 1 |
| ThatchDepthAverage_cat | 1 |
| ThatchDepthMax_cm | 0 |
| DeadStandingBiomass_Presence | yes |
| DeadStanding_CoverSpecies | Eriophylum confertiflorum, Ceanothus tomentosus, Arctostaphylos glandulosa |
| DeadStanding_CoverClass | 2 |
| DeadStandingHeightAverage_cm | 54 |
| FeralPigActivity | 1 |
| GroundSquirrelActivity | 1 |
| GopherActivity | 1 |
| SamplingAreaRepresent_of_mapped_occurr | yes |
| If no, Note Differences: | NA |
| Acmispon glaber - deerweed | 0.2 |
| Adenostoma fasciculatum - chamise | 1 |
| Calochortus spp. - mariposa lily | 0.2 |
| Calystegia macrostegia - island false bindweed | 0.2 |
| Ceanothus tomentosus - woolyleaf ceanothus | 4 |
| Crocanthemum scoparium var. scoparium - Bisbee peak rushrose | 0.2 |
| Diplacus aurantiacus ssp. Aurantiacus - orange bush monkeyflower | 0.2 |
| Dudleya edulis - fingertips | 0.2 |
| Eriophyllum confertiflorum - golden-yarrow | 0.2 |
| Festuca myuros - annual fescue | 0.2 |
| Galium angustifolium - narrowleaf bedstraw | 0.2 |
| Gastridium phleoides - nit grass | 0.2 |
| Hazardia squarrosa - sawtooth goldenbush | 0.2 |
| Logfia gallica - narrowleaf cottonrose | 0.2 |
| Lonicera subspicata - southern honeysuckle | 0.2 |
| Melica imperfecta - smallflower melicgrass | 2 |
| Pentagramma triangularis - goldbeck fern | 0.2 |
| Pseudognaphalium bioletti - two-color rabbit-tobacco | 0.2 |
| Quercus berberidifolia - scrub oak | 25 |
| Quercus engelmannii X - Engelmann's oak hybrid | 0.2 |

| MSP_Occurr_ID_sampPt | LECA4_4IRMT003_1 |
|---|---|
| Rhus ovata - sugar sumac | 0.2 |
| Uropappus lindleyi - Silver puffs | 0.2 |
| Xylococcus bicolor - mission manzanita | 1 |
| Other Associated Species? | yes |
| othername1 | Arctostaphylos glauca |
| otherper1 | 20 |
| othername2 | Erigeron foliosus |
| otherper2 | 0.2 |
| othername3 | Galium nuttallianum |
| otherper3 | 0.2 |
| othername4 | Keckiella cordifolia |
| otherper4 | 0.2 |
| othername5 | Lepechinia cardiophylla |
| otherper5 | 1 |
| other | Rhamnus ilicifolia 0.2, Sanicula bipinnatifida 0.2, Styrax redivivus 0.2, Myriopterus newberryi 0.2 |
| BareGround | 15 |
| CrypSoils | 1 |
| Rock | 20 |
| Litter | 5 |
| Water | 0 |
| Vegetation | 59 |
| DeadShrubs | 0.2 |
| TotalPercCover | 100.2 |
| Alreadyentered | no |
| NumPlantsperCurrentMappedExtent | 55 |
| ExactorEstimate_MaxExt | estimate |
| uncertainty_MaxExt | low |
| Plants_clusters_vs_individ_MaxExt | clusters |
| Flower_Veget_MaxExt | NA |
| AreaCurrentMappedExtent | Polygon submitted |
| Area_exact_or_estim | very_low |
| CurrentExtentPerimMethod | exact |
| SpeciesLocated_in_maximumExtent | yes |
| Reason_IfNotFound | NA |
| ExpandedEfforty_n | no |
| SurroundingLandUse | Hiking and equestrian trail open to the public |
| NonnativeForbs | 1 |
| NonnativeForbs_desc | |

| MSP_Occurr_ID_sampPt | LECA4_4IRMT003_1 |
|---|---|
| NonnativeGrasses | 3 |
| NonnativeGrasses_desc | Gastridium and Festuca sparsely scattered along trail and in understory. |
| NonnativeWoodyPlts | 1 |
| NonnativeWoodyPlts_desc | NA |
| CompetitiveNativePlts | 1 |
| CompetitiveNativePlts_desc | NA |
| Dumping_trash | 1 |
| Dumping_trash_desc | NA |
| Encampments | 1 |
| Encampments_desc | NA |
| FeralPig | 1 |
| FeralPig_desc | NA |
| Trampling | 1 |
| Trampling_desc | NA |
| Vandalism | 1 |
| Vandalism_desc | NA |
| CurrentGrazing | 1 |
| CurrentGrazing_desc | NA |
| HistoricGrazing | No |
| HistoricGrazing_desc | NA |
| HistoricAgriculture | No |
| HistoricAgriculture_desc | NA |
| DroughtSev | 0 |
| DroughtSev_desc | NA |
| AlteredHydrology | 1 |
| AlteredHydrology_desc | NA |
| Erosion | 1 |
| Erosion_desc | NA |
| UrbanRunoff | 1 |
| UrbanRunoff_desc | NA |
| SlopeMovement | 1 |
| SlopeMovement_desc | NA |
| SoilCompaction | 1 |
| SoilCompaction_desc | NA |
| FuelModZone_FireBreak | 1 |
| FuelModZone_FireBreak_desc | NA |
| RoadConst_Mainten | 1 |
| RoadConst_Mainten_descrip | NA |

| MSP_Occurr_ID_sampPt | LECA4_4IRMT003_1 |
|---|---|
| VegClearing | 1 |
| VegClearing_descript | NA |
| Restoration | 1 |
| Restoration_desc | NA |
| ORV_MtnBikeActivity_disturb | 1 |
| ORV_MtnBikeActivity_type | NA |
| EvidenceRecentFire | No |
| YearBurned | NA |
| Trails_disturbance | 4 |
| Trails_authorized | yes |
| TrailUse_Hiking | yes |
| TrailUse_Biking | unknown |
| TrailUse_Equestrian | yes |
| TrailUse_Dog | yes |
| TrailUse_ServiceVehicles | no |
| TrailUse_Other | no |
| TrailUse_illegal_descript | NA |
| OtherDisturbance | 1 |
| OtherDisturbance_descript | NA |
| ManageRecomm | Continued passive monitoring |
| ManageActions_PastYr | None |
| CNDDB_SppDetected | Lepechinia cardiophylla |
| Notes | For future montoring, avoid entering area with the Lepechinia cardiophylla. It is steep and foot entrance may trample plants. |
| Time Finish | 13:01 |

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# B-8 Willowy Monardella

| MSP_Occurr_ID_sampPt | MOLIV_4SYCA006_1 |
|---|---|
| Preserve | Sycamore Canyon and Goodan Ranch Preserves |
| MgtUnit | 4 |
| Land Owner | County of San Diego Department of Parks and Recreation |
| Land Manager | County of San Diego Department of Parks and Recreation |
| SampID | 172 |
| UpdateSampInfo | no |
| Public | yes |
| Scientific Name | Monardella viminea |
| Date | 6/18/2025 |
| Time Start | 08:31 |
| Surveyors | Dillon Travis; Amy Orduño-Baez |
| Affiliation | Environmental Science Associates |
| Number of Plants in the Sampling Area | 41 |
| Exact or Estimate for Number in Sampling Area | exact |
| Uncertainty for Sampling Area | very_low |
| Sampling Area Radius (meters) | 10 |
| Count is clusters or individuals? | clusters |
| Count is flowering or vegetated plants? (only answer for geophytes) | NA |
| Category for Percent Vegetative in Sampling Area | 6 |
| Category for Percent Flowering in Sampling Area | 2 |
| Category for Percent Fruiting in Sampling Area | 1 |
| Category for Percent Dead in Sampling Area | 1 |
| Category for Percent Herbivory in Sampling Area | 1 |
| Category for Percent Diseased in Sampling Area | 1 |
| Category for Percent Stunted Growth in Sampling Area | 2 |
| Sampling Area within Current Mapped Extent? | yes |
| GPSAccurracy | 12 |
| GPSAccurracyUnits | ft |
| PlotX | 502412 |
| PlotY | 3642218 |
| Check your location of the SAMPLE PLOT against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| Photo1X | Photo1_E_UTM |
| Photo1Y | Photo1_N_UTM |
| Check your location of the PHOTO POINT 1 against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| CameraType | iPhone 11 |

| MSP_Occurr_ID_sampPt | MOLIV_4SYCA006_1 |
|---|---|
| Photo1Dir | South, 176 Degrees |
| Photo1Hei | CamHei_Photo1 |
| Photo1Ang | CamAng_Photo1 |
| UpdatePhotoInfo | no |
| PhotoNumPhoto1 | MOLIV_4SYCA006_1_Photo1_06182025 |
| SANDAG2012_VegAllianceAssoc | Eriogonum fasciculatum Association |
| CryptogamicCrustCover | 2 |
| ThatchCover | 2 |
| ThatchDepthAverage_cat | 2 |
| ThatchDepthMax_cm | 1 |
| DeadStandingBiomass_Presence | yes |
| DeadStanding_CoverSpecies | Italian thistle |
| DeadStanding_CoverClass | 2 |
| DeadStandingHeightAverage_cm | 60 |
| FeralPigActivity | 1 |
| GroundSquirrelActivity | 1 |
| GopherActivity | 3 |
| SamplingAreaRepresent_of_mapped_occurr | yes |
| If no, Note Differences: | NA |
| Acmispon glaber - deerweed | 0.2 |
| Artemisia californica - coastal sagebrush | 2 |
| Avena barbata - slender oat | 0.2 |
| Brachypodium distachyon - purple false brome | 0.2 |
| Bromus  diandrus - ripgut brome | 0.2 |
| Bromus hordeaceus - soft brome | 0.2 |
| Bromus madritensis - compact brome | 0.2 |
| Calystegia macrostegia - island false bindweed | 0.2 |
| Centaurea melitensis - Maltese star-thistle | 0.2 |
| Deinandra fasciculata - clustered tarweed | 0.2 |
| Eriogonum fasciculatum - California buckwheat | 11 |
| Eriophyllum confertiflorum - golden-yarrow | 0.2 |
| Festuca myuros - annual fescue | 0.2 |
| Galium angustifolium - narrowleaf bedstraw | 1 |
| Helianthus gracilentus - slender sunflower | 0.2 |
| Malosma laurina - laurel sumac | 1 |
| Mirabilis laevis - desert wishbone-bush | 0.2 |
| Monardella viminea - Willowy monardella | 3 |
| Prunus ilicifolia - hollyleaf cherry | 1 |

| MSP_Occurr_ID_sampPt | MOLIV_4SYCA006_1 |
|---|---|
| Rhamnus crocea - spiny redberry | 4 |
| Salvia apiana - white sage | 0.2 |
| Salvia mellifera - black sage | 3 |
| Selaginella bigelovii - bushy spikemoss | 0.2 |
| Sisyrinchium bellum - western blue-eyed grass | 0.2 |
| Other Associated Species? | yes |
| othername1 | Cirsium sp. |
| otherper1 | 0.2 |
| BareGround | 29.4 |
| CrypSoils | 0.2 |
| Rock | 25 |
| Litter | 15 |
| Water | 0 |
| Vegetation | 29.4 |
| DeadShrubs | 1 |
| TotalPercCover | 100 |
| Alreadyentered | no |
| NumPlantsperCurrentMappedExtent | 408 |
| ExactorEstimate_MaxExt | exact |
| uncertainty_MaxExt | very_low |
| Plants_clusters_vs_individ_MaxExt | clusters |
| Flower_Veget_MaxExt | NA |
| AreaCurrentMappedExtent | Polygon submitted |
| Area_exact_or_estim | very_low |
| CurrentExtentPerimMethod | exact |
| SpeciesLocated_in_maximumExtent | yes |
| Reason_IfNotFound | NA |
| ExpandedEfforty_n | no |
| SurroundingLandUse | Conserved open space preserve, open to hiking, mountain biking, equestrian use |
| NonnativeForbs | 3 |
| NonnativeForbs_desc | Centaurea melitensis and Cersium sp. |
| NonnativeGrasses | 5 |
| NonnativeGrasses_desc | Avena barbata, Bromus spp., Brachypodium distachyon, Festuca myuros |
| NonnativeWoodyPlts | 1 |
| NonnativeWoodyPlts_desc | NA |
| CompetitiveNativePlts | 1 |

| MSP_Occurr_ID_sampPt | MOLIV_4SYCA006_1 |
|---|---|
| CompetitiveNativePlts_desc | NA |
| Dumping_trash | 1 |
| Dumping_trash_desc | NA |
| Encampments | 1 |
| Encampments_desc | NA |
| FeralPig | 1 |
| FeralPig_desc | NA |
| Trampling | 3 |
| Trampling_desc | Light trampling due to TMP IMG survey |
| Vandalism | 1 |
| Vandalism_desc | NA |
| CurrentGrazing | 1 |
| CurrentGrazing_desc | NA |
| HistoricGrazing | yes |
| HistoricGrazing_desc | Old ranching area |
| HistoricAgriculture | unknown |
| HistoricAgriculture_desc | NA |
| DroughtSev | 1 |
| DroughtSev_desc | Stunted plant growth of monardellas and other native species |
| AlteredHydrology | 3 |
| AlteredHydrology_desc | Creekbed channel |
| Erosion | 3 |
| Erosion_desc | Creek bed channel erosion |
| UrbanRunoff | 1 |
| UrbanRunoff_desc | NA |
| SlopeMovement | 1 |
| SlopeMovement_desc | NA |
| SoilCompaction | 1 |
| SoilCompaction_desc | NA |
| FuelModZone_FireBreak | 1 |
| FuelModZone_FireBreak_desc | NA |
| RoadConst_Mainten | 2 |
| RoadConst_Mainten_descrip | Off road trail used by rangers and likely surrounding residents |
| VegClearing | 7 |
| VegClearing_descript | Nonnative grass and forb removal |
| Restoration | 6 |
| Restoration_desc | Nonnative plant removal |

| MSP_Occurr_ID_sampPt | MOLIV_4SYCA006_1 |
|---|---|
| ORV_MtnBikeActivity_disturb | 2 |
| ORV_MtnBikeActivity_type | Ranger vehicles and private vehicles on trail |
| EvidenceRecentFire | no |
| YearBurned | NA |
| Trails_disturbance | 2 |
| Trails_authorized | yes |
| TrailUse_Hiking | yes |
| TrailUse_Biking | yes |
| TrailUse_Equestrian | yes |
| TrailUse_Dog | unknown |
| TrailUse_ServiceVehicles | yes |
| TrailUse_Other | no |
| TrailUse_illegal_descript | NA |
| OtherDisturbance | 1 |
| OtherDisturbance_descript | NA |
| ManageRecomm | Continued monitoring and nonnative grass and forb removal |
| ManageActions_PastYr | Nonnative grass and forb removal |
| CNDDB_SppDetected | Monardella viminea |
| Notes | NA |
| Time Finish | 09:03 |

| MSP_Occurr_ID_sampPt | MOLIV_4SYCA002_1 |
|---|---|
| Preserve | Sycamore Canyon And Goodan Ranch Preserves |
| MgtUnit | 4 |
| Land Owner | County of San Diego Department of Parks and Recreation |
| Land Manager | County of San Diego Department of Parks and Recreation |
| SampID | 328 |
| UpdateSampInfo | no |
| Public | yes |
| Scientific Name | Monardella viminea |
| Date | 6/18/2025 |
| Time Start | 11:27 |
| Surveyors | Dillon Travis; Amy Orduno-Baez |
| Affiliation | Environmental Science Associates |
| Number of Plants in the Sampling Area | 0 |
| Exact or Estimate for Number in Sampling Area | exact |
| Uncertainty for Sampling Area | very_low |
| Sampling Area Radius (meters) | 10 |
| Count is clusters or individuals? | clusters |
| Count is flowering or vegetated plants? (only answer for geophytes) | NA |
| Category for Percent Vegetative in Sampling Area | 1 |
| Category for Percent Flowering in Sampling Area | 1 |
| Category for Percent Fruiting in Sampling Area | 1 |
| Category for Percent Dead in Sampling Area | 1 |
| Category for Percent Herbivory in Sampling Area | 1 |
| Category for Percent Diseased in Sampling Area | 1 |
| Category for Percent Stunted Growth in Sampling Area | 1 |
| Sampling Area within Current Mapped Extent? | yes |
| GPSAccurracy | 8 |
| GPSAccurracyUnits | ft |
| PlotX | 501045 |
| PlotY | 3642551 |
| Check your location of the SAMPLE PLOT against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| Photo1X | Photo1_E_UTM |
| Photo1Y | Photo1_N_UTM |
| Check your location of the PHOTO POINT 1 against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| CameraType | iPhone 11 |

| MSP_Occurr_ID_sampPt | MOLIV_4SYCA002_1 |
|---|---|
| Photo1Dir | 200 |
| Photo1Hei | CamHei_Photo1 |
| Photo1Ang | CamAng_Photo1 |
| UpdatePhotoInfo | no |
| PhotoNumPhoto1 | MOLIV_4SYCA002_1_Photo1_06182025 |
| SANDAG2012_VegAllianceAssoc | Eriogonum fasciculatum Association |
| CryptogamicCrustCover | 1 |
| ThatchCover | 4 |
| ThatchDepthAverage_cat | 3 |
| ThatchDepthMax_cm | 2.5 |
| DeadStandingBiomass_Presence | no |
| DeadStanding_CoverSpecies | NA |
| DeadStanding_CoverClass | NA |
| DeadStandingHeightAverage_cm | NA |
| FeralPigActivity | 1 |
| GroundSquirrelActivity | 1 |
| GopherActivity | 4 |
| SamplingAreaRepresent_of_mapped_occurr | yes |
| If no, Note Differences: | NA |
| Acmispon glaber - deerweed | 0.2 |
| Artemisia californica - coastal sagebrush | 0.2 |
| Avena barbata - slender oat | 0.2 |
| Brachypodium distachyon - purple false brome | 0.2 |
| Bromus  diandrus - ripgut brome | 0.2 |
| Bromus hordeaceus - soft brome | 0.2 |
| Bromus madritensis - compact brome | 0.2 |
| Centaurea melitensis - Maltese star-thistle | 0.2 |
| Cercocarpus minutiflorus - smooth mountain-mahogany | 4 |
| Croton setiger - dove weed | 0.2 |
| Eriogonum fasciculatum - California buckwheat | 7 |
| Erodium spp. - stork's bill | 0.2 |
| Festuca myuros - annual fescue | 0.2 |
| Festuca perennis - Italian rye grass | 0.2 |
| Heteromeles arbutifolia - toyon | 1 |
| Hirschfeldia incana - shortpod mustard | 0.2 |
| Hypochaeris glabra - smooth cat's ear | 0.2 |
| Lonicera subspicata - southern honeysuckle | 0.2 |
| Prunus ilicifolia - hollyleaf cherry | 3 |
| Raphanus raphanistrum - Jointed charlock | 0.2 |

| MSP_Occurr_ID_sampPt | MOLIV_4SYCA002_1 |
|---|---|
| Rumex crispus - Curly dock | 0.2 |
| Salvia apiana - white sage | 0.2 |
| Other Associated Species? | no |
| BareGround | 30.2 |
| CrypSoils | 0.2 |
| Rock | 45 |
| Litter | 6 |
| Water | 0 |
| Vegetation | 18.6 |
| DeadShrubs | 0 |
| TotalPercCover | 100 |
| Alreadyentered | no |
| NumPlantsperCurrentMappedExtent | 1 |
| ExactorEstimate_MaxExt | exact |
| uncertainty_MaxExt | very_low |
| Plants_clusters_vs_individ_MaxExt | clusters |
| Flower_Veget_MaxExt | NA |
| AreaCurrentMappedExtent | Polygon submitted |
| Area_exact_or_estim | very_low |
| CurrentExtentPerimMethod | exact |
| SpeciesLocated_in_maximumExtent | yes |
| Reason_IfNotFound | NA |
| ExpandedEfforty_n | no |
| SurroundingLandUse | Conserved open space preserve, open to hiking, mountain biking, equestrian use |
| NonnativeForbs | 4 |
| NonnativeForbs_desc | Erodium sp, Hirschfeldia incana, Hypocharis glabra, Tocalote |
| NonnativeGrasses | 5 |
| NonnativeGrasses_desc | Bromus spp, Avena barbata, Brachypodium distachyon, Festuca myuros |
| NonnativeWoodyPlts | 1 |
| NonnativeWoodyPlts_desc | NA |
| CompetitiveNativePlts | 1 |
| CompetitiveNativePlts_desc | NA |
| Dumping_trash | 1 |
| Dumping_trash_desc | NA |
| Encampments | 1 |
| Encampments_desc | NA |

| MSP_Occurr_ID_sampPt | MOLIV_4SYCA002_1 |
|---|---|
| FeralPig | 1 |
| FeralPig_desc | NA |
| Trampling | 1 |
| Trampling_desc | NA |
| Vandalism | 1 |
| Vandalism_desc | NA |
| CurrentGrazing | 1 |
| CurrentGrazing_desc | NA |
| HistoricGrazing | Yes |
| HistoricGrazing_desc | Old ranching area |
| HistoricAgriculture | unknown |
| HistoricAgriculture_desc | NA |
| DroughtSev | 1 |
| DroughtSev_desc | Some plants are stunted in growth, less living biomass compared to previous years |
| AlteredHydrology | 1 |
| AlteredHydrology_desc | NA |
| Erosion | 1 |
| Erosion_desc | NA |
| UrbanRunoff | 1 |
| UrbanRunoff_desc | NA |
| SlopeMovement | 1 |
| SlopeMovement_desc | NA |
| SoilCompaction | 1 |
| SoilCompaction_desc | NA |
| FuelModZone_FireBreak | 1 |
| FuelModZone_FireBreak_desc | NA |
| RoadConst_Mainten | 2 |
| RoadConst_Mainten_descrip | Managed trail open to public is adjacent to the monitoring plot. |
| VegClearing | 6 |
| VegClearing_descript | Removal of nonnative grasses and Forbes |
| Restoration | 1 |
| Restoration_desc | NA |
| ORV_MtnBikeActivity_disturb | 2 |
| ORV_MtnBikeActivity_type | Ranger vehicles |
| EvidenceRecentFire | No |
| YearBurned | NA |
| Trails_disturbance | 3 |

| MSP_Occurr_ID_sampPt | MOLIV_4SYCA002_1 |
|---|---|
| Trails_authorized | yes |
| TrailUse_Hiking | yes |
| TrailUse_Biking | yes |
| TrailUse_Equestrian | yes |
| TrailUse_Dog | yes |
| TrailUse_ServiceVehicles | yes |
| TrailUse_Other | unknown |
| TrailUse_illegal_descript | NA |
| OtherDisturbance | 1 |
| OtherDisturbance_descript | NA |
| ManageRecomm | Continued monitoring, likely need to move this plot |
| ManageActions_PastYr | Nonnative grass and forbs removal within plot. |
| CNDDB_SppDetected | None |
| Notes | NA |
| Time Finish | 11:48 |

| MSP_Occurr_ID_sampPt | MOLIV_4SPCA006_2 |
|---|---|
| Preserve | Sycamore Canyon and Goodan Ranch Preserves |
| MgtUnit | 4 |
| Land Owner | County of San Diego Department of Parks and Recreation |
| Land Manager | County of San Diego Department of Parks and Recreation |
| SampID | 202157 |
| UpdateSampInfo | no |
| Public | yes |
| Scientific Name | Monardella viminea |
| Date | 6/18/2025 |
| Time Start | 09:56 |
| Surveyors | Dillon Travis; Amy Orduño-Baez |
| Affiliation | Environmental Science Associates |
| Number of Plants in the Sampling Area | 9 |
| Exact or Estimate for Number in Sampling Area | exact |
| Uncertainty for Sampling Area | very_low |
| Sampling Area Radius (meters) | 10 |
| Count is clusters or individuals? | clusters |
| Count is flowering or vegetated plants? (only answer for geophytes) | NA |
| Category for Percent Vegetative in Sampling Area | 4 |
| Category for Percent Flowering in Sampling Area | 5 |
| Category for Percent Fruiting in Sampling Area | 2 |
| Category for Percent Dead in Sampling Area | 1 |
| Category for Percent Herbivory in Sampling Area | 1 |
| Category for Percent Diseased in Sampling Area | 1 |
| Category for Percent Stunted Growth in Sampling Area | 1 |
| Sampling Area within Current Mapped Extent? | yes |
| GPSAccurracy | 10 |
| GPSAccurracyUnits | ft |
| PlotX | 501657 |
| PlotY | 3640638 |
| Check your location of the SAMPLE PLOT against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| Photo1X | |
| Photo1Y | |
| Check your location of the PHOTO POINT 1 against the location above or provided by SDMMP. If your coordinates match, select "no change". If the coordinates differ, select the reason. | no_change |
| CameraType | iPhone 11 |

| MSP_Occurr_ID_sampPt | MOLIV_4SPCA006_2 |
|---|---|
| Photo1Dir | |
| Photo1Hei | |
| Photo1Ang | |
| UpdatePhotoInfo | no |
| PhotoNumPhoto1 | MOLIV_4SYCA006_2_Photo1_06182025 |
| SANDAG2012_VegAllianceAssoc | Eriogonum fasciculatum-Salvia apiana Association |
| CryptogamicCrustCover | 2 |
| ThatchCover | 3 |
| ThatchDepthAverage_cat | 2 |
| ThatchDepthMax_cm | 1 |
| DeadStandingBiomass_Presence | no |
| DeadStanding_CoverSpecies | NA |
| DeadStanding_CoverClass | NA |
| DeadStandingHeightAverage_cm | NA |
| FeralPigActivity | 1 |
| GroundSquirrelActivity | 1 |
| GopherActivity | 3 |
| SamplingAreaRepresent_of_mapped_occurr | yes |
| If no, Note Differences: | NA |
| Acmispon glaber - deerweed | 0.2 |
| Ambrosia psilostachya - Cuman ragweed | 0.2 |
| Artemisia californica - coastal sagebrush | 3 |
| Avena barbata - slender oat | 0.2 |
| Baccharis pilularis - coyotebrush | 0.2 |
| Brachypodium distachyon - purple false brome | 0.2 |
| Bromus  diandrus - ripgut brome | 1 |
| Bromus hordeaceus - soft brome | 0.2 |
| Bromus madritensis - compact brome | 0.2 |
| Calystegia macrostegia - island false bindweed | 0.2 |
| Centaurea melitensis - Maltese star-thistle | 0.2 |
| Cuscuta californica - California dodder | 0.2 |
| Eriogonum fasciculatum - California buckwheat | 16 |
| Festuca myuros - annual fescue | 1 |
| Galium spp. - bedstraw | 0.2 |
| Hirschfeldia incana - shortpod mustard | 0.2 |
| Hypochaeris glabra - smooth cat's ear | 0.2 |
| Mirabilis laevis - desert wishbone-bush | 0.2 |
| Monardella viminea - Willowy monardella | 1 |

| MSP_Occurr_ID_sampPt | MOLIV_4SPCA006_2 |
|---|---|
| Pentagramma triangularis - goldbeck fern | 0.2 |
| Rhamnus crocea - spiny redberry | 0.2 |
| Salvia apiana - white sage | 2 |
| Stephanomeria spp. - wirelettuce | 0.2 |
| Other Associated Species? | yes |
| othername1 | Epilobium canum |
| otherper1 | 0.2 |
| othername2 | Eschscholzia californica |
| otherper2 | 0.2 |
| BareGround | 30.4 |
| CrypSoils | 0.2 |
| Rock | 35 |
| Litter | 7 |
| Water | 0 |
| Vegetation | 27.4 |
| DeadShrubs | 0 |
| TotalPercCover | 100 |
| Alreadyentered | no |
| Ifyes_whichsurvey | NA |
| NumPlantsperCurrentMappedExtent | 65 |
| ExactorEstimate_MaxExt | exact |
| uncertainty_MaxExt | very_low |
| Plants_clusters_vs_individ_MaxExt | clusters |
| Flower_Veget_MaxExt | NA |
| AreaCurrentMappedExtent | Polygon submitted |
| Area_exact_or_estim | very_low |
| CurrentExtentPerimMethod | exact |
| SpeciesLocated_in_maximumExtent | yes |
| Reason_IfNotFound | NA |
| ExpandedEfforty_n | no |
| SurroundingLandUse | Conserved open space preserve, open to hiking, mountain biking, equestrian use |
| NonnativeForbs | 3 |
| NonnativeForbs_desc | Centaurea melitensis and Cersium sp. |
| NonnativeGrasses | 5 |
| NonnativeGrasses_desc | Avena barbata, Bromus spp., Brachypodium distachyon, Festuca myuros |
| NonnativeWoodyPlts | 1 |

| MSP_Occurr_ID_sampPt | MOLIV_4SPCA006_2 |
|---|---|
| NonnativeWoodyPlts_desc | NA |
| CompetitiveNativePlts | 1 |
| CompetitiveNativePlts_desc | NA |
| Dumping_trash | 1 |
| Dumping_trash_desc | NA |
| Encampments | 1 |
| Encampments_desc | NA |
| FeralPig | 1 |
| FeralPig_desc | NA |
| Trampling | 3 |
| Trampling_desc | Light trampling due to TMP IMG survey |
| Vandalism | 1 |
| Vandalism_desc | NA |
| CurrentGrazing | 1 |
| CurrentGrazing_desc | NA |
| HistoricGrazing | yes |
| HistoricGrazing_desc | Old ranching area |
| HistoricAgriculture | unknown |
| HistoricAgriculture_desc | NA |
| DroughtSev | 1 |
| DroughtSev_desc | Stunted plant growth of monardellas and other native species |
| AlteredHydrology | 3 |
| AlteredHydrology_desc | Creekbed channel |
| Erosion | 3 |
| Erosion_desc | Creek bed channel erosion |
| UrbanRunoff | 1 |
| UrbanRunoff_desc | NA |
| SlopeMovement | 1 |
| SlopeMovement_desc | NA |
| SoilCompaction | 1 |
| SoilCompaction_desc | NA |
| FuelModZone_FireBreak | 1 |
| FuelModZone_FireBreak_desc | NA |
| RoadConst_Mainten | 2 |
| RoadConst_Mainten_descrip | Off road trail used by rangers and likely surrounding residents |
| VegClearing | 7 |
| VegClearing_descript | Nonnative grass and forb removal |

| MSP_Occurr_ID_sampPt | MOLIV_4SPCA006_2 |
|---|---|
| Restoration | 6 |
| Restoration_desc | Nonnative plant removal |
| ORV_MtnBikeActivity_disturb | 2 |
| ORV_MtnBikeActivity_type | Ranger vehicles and private vehicles on trail |
| EvidenceRecentFire | no |
| YearBurned | unkown |
| Trails_disturbance | 2 |
| Trails_authorized | yes |
| TrailUse_Hiking | yes |
| TrailUse_Biking | yes |
| TrailUse_Equestrian | yes |
| TrailUse_Dog | unknown |
| TrailUse_ServiceVehicles | yes |
| TrailUse_Other | no |
| TrailUse_illegal_descript | NA |
| OtherDisturbance | 1 |
| OtherDisturbance_descript | NA |
| ManageRecomm | Continued monitoring and invasive nonnative grass and forb removal |
| ManageActions_PastYr | Nonnative grass and forb removal |
| CNDDB_SppDetected | Monardella viminea |
| Notes | NA |
| Time Finish | 10:17 |

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# Appendix C

## Harbison's Dun Skipper Representative Photographs and Field Forms

# C-1 Representative Monitoring Photographs

## Hellhole Canyon County Preserve Harbison's Dun Skipper Monitoring Representative Photographs




**Photo 1.** Harbison's dun skipper larval host plant San Diego sedge (*Carex spissa*) observed during adult flight surveys at Hellhole Canyon County Preserve.



**Photo 2.** Harbison's dun skipper observed nectaring on black sage (*Salvia mellifera*) at Hellhole Canyon County Preserve.



**Photo 3.** Harbison's dun skipper observed basking on wild California grape (*Vitus californica*) at Hellhole Canyon County Preserve.

## Sage Hill County Preserve Harbison's Dun Skipper Monitoring Representative Photographs




**Photo 4.** Suitable Harbison's dun skipper habitat at survey location 1 at Sage Hill County Preserve.




**Photo 5.** Suitable Harbison's dun skipper habitat at survey location 2 at Sage Hill County Preserve.




**Photo 6.** Harbison's dun skipper larval host plant San Diego sedge (*Carex spissa*) observed during adult flight surveys at Sage Hill County Preserve.

# C-2 Field Forms

## Hellhole Canyon County Preserve Harbison's Dun Skipper Field Forms

**HARBISON'S DUN SKIPPER HABITAT AND THREATS ASSESSMENT MATRIX AT HELLHOLE CANYON COUNTY PRESERVE**

| | | | | Oaks | | | | | Sycamores | | | | | Willows | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Site | Date | Latitude | Longitude | % composition | % healthy | % thin canopy | % dead | % fire damage | % composition | % healthy | % thin canopy | % dead | % fire damage | % composition | % healthy | % thin canopy | % dead | % fire damage |
| Hellhole Canyon County Preserve | 5/22/25 | 33.22113196 | -116.93281752 | 15 | 100 | 0 | 0 | 0 | 30 | 90 | 10 | 0 | 0 | 40 | 80 | 20 | 0 | 0 |
| Hellhole Canyon County Preserve | 5/22/25 | 33.22609057 | -116.94489268 | 30 | 70 | 20 | 10 | 0 | 15 | 85 | 15 | 0 | 0 | 55 | 90 | 10 | 0 | 0 |

| | | | | Cottonwoods | | | | | Eucalyptus | | | | | Ornamental | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Site | Date | Latitude | Longitude | % composition | % healthy | % thin canopy | % dead | % fire damage | % composition | % healthy | % thin canopy | % dead | % fire damage | % composition | % healthy | % thin canopy | % dead | % fire damage |
| Hellhole Canyon County Preserve | 5/22/25 | 33.22113196 | -116.93281752 | 15 | 90 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hellhole Canyon County Preserve | 5/22/25 | 33.22609057 | -116.94489268 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| Site | Date | Latitude | Longitude | Royal Empress Tree | | | | | Ash | | | | | *Carex spissa* | | | Water | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | % composition | % healthy | % thin canopy | % dead | % fire damage | % composition | % healthy | % thin canopy | % dead | % fire damage | % all green | % brown tips | % mostly brown | Flowing water | Standing Water |
| Hellhole Canyon County Preserve | 5/22/25 | 33.22113196 | -116.93281752 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 65 | 10 | Y | N |
| Hellhole Canyon County Preserve | 5/22/25 | 33.22609057 | -116.94489268 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 70 | 10 | Y | N |

| Site | Threats | | | | | | | | | | | | | | Threats: Non-Native Vegetation | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Grazing | Dumping/Trash | Encampments | Feral Pig Activity | Illegal Trails | GSOB | KSHB/PSHB | Drought | Climate Change | Human Intrusion | Pesticide | Altered Hydrology | Altered Fire | *Typha* sp. | *Arundo donax* | Tamarisk | Pampas Grass | Smilo Grass | Thistle | Tree Tobacco | Mustard | Fennel | Palm Trees | Castor Bean | Fountaingrass | Ice Plant | Horehound | Tocalote | Umbrella Sedge |
| Hellhole Canyon County Preserve | N | N | N | Y | N | U | U | Y | Y | N | N | N | N | N | N | N | N | N | N | N | Y | N | N | N | N | N | N | N | N | N |
| Hellhole Canyon County Preserve | N | N | N | N | N | U | U | Y | Y | N | N | N | N | N | Y | N | N | Y | N | N | N | N | N | N | N | N | N | N | N | N |

NOTES:

**Tree Species**

% composition: across all tree species, adds up to 100%

% healthy, % thin canopy, % dead: within a tree species, adds up to 100%

% fire damage: within a tree species; same tree could be included in other categories

**San Diego Sedge**

*Carex spissa*: % of plants that have leaves that are all green; green with brown tips; or all brown; adds up to 100%

**Threats**

GSOB: gold-spotted oak borer

KSHB/PSHB: Kuroshio shot hole borer/polyphagous shot hole borer (*Euwallacea* sp.)

Arundo: *Arundo donax*

Tamarisk: *Tamarix* sp.

Pampas grass: *Cortaderia* sp.

Smilo grass: *Stipa miliacea*

Thistle: several genera possible

Tree Tobacco: *Nicotiana glauca*

Mustard: *Brassica nigra* or *Hirschfeldia incana*

Fennel: *Foeniculum vulgare*

Palm Trees: several genera possible

Castor Bean: *Ricinus communis*

Fountaingrass: *Pennisetum setaceum*

Ice Plant: several genera possible

Horehound: *Marrubium vulgare*

Tocalote: *Centaurea melitensis*

Umbrella Sedge: *Cyperus involucratus*

N = No; Y = Yes; U - Unknown

## Sage Hill County Preserve Harbison's Dun Skipper Field Forms

**HARBISON'S DUN SKIPPER HABITAT AND THREATS ASSESSMENT MATRIX AT SAGE HILL COUNTY PRESERVE**

| Site | Date | Latitude | Longitude | Oaks | | | | | Sycamores | | | | | Willows | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | % composition | % healthy | % thin canopy | % dead | % fire damage | % composition | % healthy | % thin canopy | % dead | % fire damage | % composition | % healthy | % thin canopy | % dead | % fire damage |
| Sage Hill County Preserve | 5/28/25 | 33.090241 | -117.179869 | 80 | 100 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 100 | 0 | 0 | 0 |
| Sage Hill County Preserve | 5/28/25 | 33.088089 | -117.178564 | 65 | 90 | 10 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 100 | 20 | 0 | 0 |

| Site | Date | Latitude | Longitude | Cottonwoods | | | | | Eucalyptus | | | | | Ornamental | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | % composition | % healthy | % thin canopy | % dead | % fire damage | % composition | % healthy | % thin canopy | % dead | % fire damage | % composition | % healthy | % thin canopy | % dead | % fire damage |
| Sage Hill County Preserve | 5/28/25 | 33.090241 | -117.179869 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sage Hill County Preserve | 5/28/25 | 33.088089 | -117.178564 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| Site | Date | Latitude | Longitude | Royal Empress Tree | | | | | Ash | | | | | *Carex spissa* | | | Water | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | % composition | % healthy | % thin canopy | % dead | % fire damage | % composition | % healthy | % thin canopy | % dead | % fire damage | % all green | % brown tips | % mostly brown | Flowing water | Standing Water |
| Sage Hill County Preserve | 5/28/25 | 33.090241 | -117.179869 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 90 | 5 | 5 | Y | N |
| Sage Hill County Preserve | 5/28/25 | 33.088089 | -117.178564 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 80 | 5 | 15 | Y | N |

| Site | Threats | | | | | | | | | | | | | | Threats: Non-Native Vegetation | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Grazing | Dumping/Trash | Encampments | Feral Pig Activity | Illegal Trails | GSOB | KSHB/PSHB | Drought | Climate Change | Human Intrusion | Pesticide | Altered Hydrology | Altered Fire | *Typha* sp. | *Arundo donax* | Tamarisk | Pampas Grass | Smilo Grass | Thistle | Tree Tobacco | Mustard | Fennel | Palm Trees | Castor Bean | Fountaingrass | Ice Plant | Horehound | Tocalote | Umbrella Sedge |
| Sage Hill County Preserve | N | N | N | N | N | U | U | Y | Y | Y | Y | N | U | N | N | N | N | Y | N | N | N | N | N | N | N | N | N | N | N | Y |
| Sage Hill County Preserve | N | N | N | N | N | U | U | Y | Y | Y | Y | N | N | N | N | N | N | Y | Y | N | N | N | N | N | N | N | N | N | N | Y |

NOTES:

**Tree Species**

% composition: across all tree species, adds up to 100%

% healthy, % thin canopy, % dead: within a tree species, adds up to 100%

% fire damage: within a tree species; same tree could be included in other categories

**San Diego Sedge**

*Carex spissa*: % of plants that have leaves that are all green; green with brown tips; or all brown; adds up to 100%

**Threats**

GSOB: gold-spotted oak borer

KSHB/PSHB: Kuroshio shot hole borer/polyphagous shot hole borer (*Euwallacea* sp.)

Arundo: *Arundo donax*

Tamarisk: *Tamarix* sp.

Pampas grass: *Cortaderia* sp.

Smilo grass: *Stipa miliacea*
Thistle: several genera possible
Tree Tobacco: *Nicotiana glauca*
Mustard: *Brassica nigra* or *Hirschfeldia incana*
Fennel: *Foeniculum vulgare*
Palm Trees: several genera possible
Castor Bean: *Ricinus communis*
Fountaingrass: *Pennisetum setaceum*
Ice Plant: several genera possible
Horehound: *Marrubium vulgare*
Tocalote: *Centaurea melitensis*
Umbrella Sedge: *Cyperus involucratus*
N = No; Y = Yes; U - Unknown

# Appendix D
## Burrowing Owl Field Forms

# D-1 Fulcrum Field Forms

# 2_COSD DPR Bio

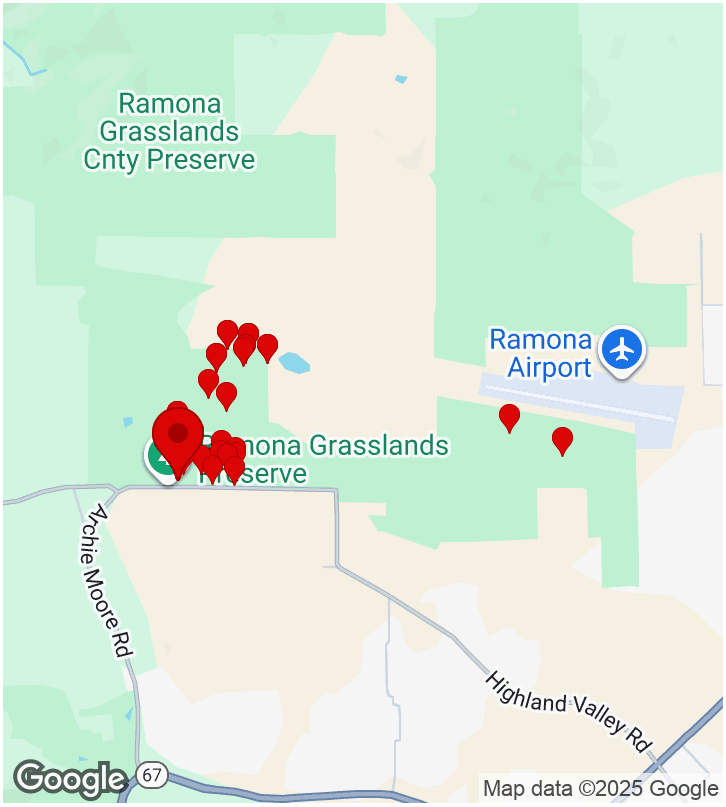
Biology Surveys (SoCal Bio ONLY)

## TMP Monitoring ▸ BUOW

**7/7/2025, 7:53:56 PM UTC**



West facing view of southern blob of polygon four.




### CREATED

5/14/2025, 12:46:17 PM UTC
by Brennan Mulrooney

### UPDATED

7/7/2025, 7:53:56 PM UTC
by Karla Alcaraz

### LOCATION

33.033548, -116.949743

## Parent Form

| | |
|---|---|
| **Project Name:** | TMP Monitoring ▸ BUOW |
| **Preserve/Park Name** | Ramona Grasslands |
| **General Survey Type** | TMP Monitoring |
| **Specific Survey Type** | TMP BUOW |
| **Observer/Surveyor:** | Brennan Mulrooney |
| **Assistant Observer/Surveyor:** | Natasha Kabala, Seth Reimers |
| **Date:** | May 14, 2025 |

## START Weather Details:

| | |
|---|---|
| **Start - Time:** | 05:46 |
| **Start - Temperature:** | 49 |
| **Start - Wind Direction From (select one):** | W |
| **Start - Low Wind Speed:** | 0 |
| **Start - High Wind Speed:** | 2 |
| **Start - Average Wind Speed:** | 12 |
| **Start - Cloud Cover (%):** | 10 |
| **Start - Precipitation (select one):** | None |
| **Start - Visibility (select one):** | Good |
| **Start - Notes (if applicable):** | |

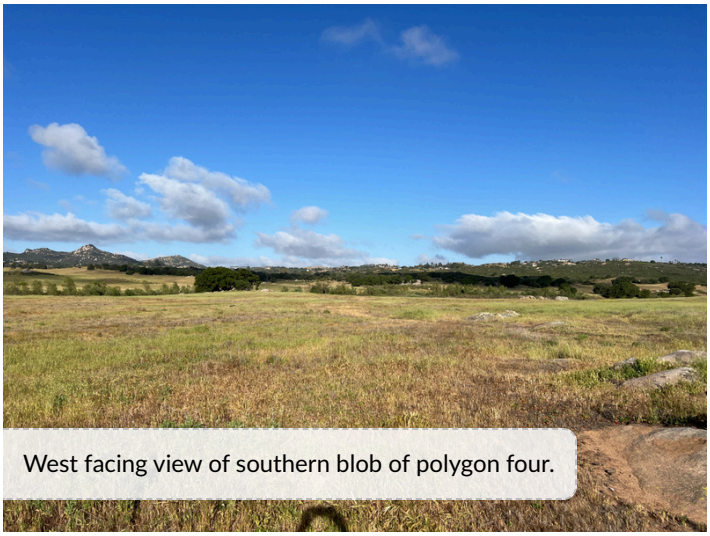
## END Weather Details:

| | |
|---|---|
| **Time Out:** | 11:45 |
| **End - Temperature:** | 70 |
| **End - Wind Direction From (select one):** | W |
| **End - Low Wind Speed:** | 3 |
| **End - High Wind Speed:** | 7 |
| **End - Average Wind Speed:** | 5 |
| **End - Cloud Cover (%):** | 20 |
| **End - Precipitation (select one):** | None |
| **End - Visibility (select one):** | Good |
| **End - Notes (if applicable):** | |
| **Total Hours:** | |

| | |
|---|---|
| **Project Location (description):** | Polygons 1-4 |

| | |
|---|---|
| **Notes** | No BUOW and no sign detected. One BUOW observed at artificial burrow south of road. |
| **Observation Type:** | Bird, Mammal, Reptile, Amphibian |

**Photos**



West facing view of southern blob of polygon four.





South facing view of polygon 3





Northwest facing view of polygon 1





Southwest facing view of western end of polygon one.



Suitable burrow in polygon one, entrance obscured by grass.

## Amphibian

## Amphibian Observation: (1 Item)

### Amphibian Observation: - 1. 1 record

| | |
|---|---|
| **Amphibian (Common or Scientific Name):** | American Bullfrog; Lithobates catesbeianus |
| **Is the Amphibian Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | Many in this ponded portion of the creek |
| **Photo(s) of Amphibian:** | |

## Bird

# Bird Observation: (25 Items)

## Bird Observation: - 1. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Brown-headed Cowbird; Molothrus ater; BHCO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 2. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Western Meadowlark; Sturnella neglecta; WEME |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 3. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Red-tailed Hawk; Buteo jamaicensis; RTHA |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 4. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Common Raven; Corvus corax; CORA |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 5. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Grasshopper Sparrow; Ammodramus savannarum; GRSP |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Auditory |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Singing/calling |
| **Bird Sex (check all that apply):** | Male |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 6. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Blue Grosbeak; Passerina caerulea; BLGR |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 7. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | House Finch; Haemorhous mexicanus; HOFI |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 8. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | California Horned Lark; Eremophila alpestris actia; HOLA-ssp actia |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | coastal range of CA to n Baja CA |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Both |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Singing/calling |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 9. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Lark Sparrow; Chondestes grammacus; LASP |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 10. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Ash-throated Flycatcher; Myiarchus cinerascens; ATFL |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 11. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Yellow-breasted Chat; Icteria virens; YBCH |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Auditory |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Singing/calling |
| **Bird Sex (check all that apply):** | Male |
| **Bird Age (check all that apply):** | Adult |

| | |
|---|---|
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 12. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Oak Titmouse; Baeolophus inornatus; OATI |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 13. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | White-breasted Nuthatch; Sitta carolinensis; WBNU |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 14. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Red-winged Blackbird; Agelaius phoeniceus; RWBL |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 15. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Cliff Swallow; Petrochelidon pyrrhonota; CLSW |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 16. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | California Towhee; Melozone crissalis; CALT |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 17. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Cassin's Kingbird; Tyrannus vociferans; CAKI |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 18. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | White-throated Swift; Aeronautes saxatalis; WTSW |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 19. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Bullock's Oriole; Icterus bullockii; BUOR |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 20. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Bushtit; Psaltriparus minimus; BUSH |
| **Is the Bird Sensitive ?** | no |

| | |
|---|---|
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 21. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Lazuli Bunting; Passerina amoena; LAZB |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 22. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Mourning Dove; Zenaida macroura; MODO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 23. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Nuttall's Woodpecker; Dryobates nuttallii; NUWO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 24. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Grasshopper Sparrow; Ammodramus savannarum; GRSP |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Both |

| | |
|---|---|
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Singing/calling |
| **Bird Sex (check all that apply):** | Male |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

### Bird Observation: - 25. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Grasshopper Sparrow; Ammodramus savannarum; GRSP |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

### Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Perched (not singing) |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Mammal

## Mammal Observation: (3 Items)

### Mammal Observation: - 1. 1 record

| | |
|---|---|
| **Mammal (Common or Scientific Name):** | Desert Cottontail; Sylvilagus audubonii |
| **Is the Mammal Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Mammal:** | |

### Mammal Observation: - 2. 1 record

| | |
|---|---|
| **Mammal (Common or Scientific Name):** | Coyote; Canis latrans |
| **Is the Mammal Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Mammal:** | |

### Mammal Observation: - 3. 1 record

| | |
|---|---|
| **Mammal (Common or Scientific Name):** | California Ground Squirrel; Ostospermophilus beecheyi |
| **Is the Mammal Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Mammal:** | |

## Reptile

## Reptile Observation: (3 Items)

### Reptile Observation: - 1. 1 record

| | |
|---|---|
| **Reptile (Common or Scientific Name):** | Western Rattlesnake; Crotalus oreganus |
| **Is the Reptile Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Reptile:** | |

### Reptile Observation: - 2. 1 record

| | |
|---|---|
| **Reptile (Common or Scientific Name):** | Granite Spiny Lizard; Sceloporus orcutti |
| **Is the Reptile Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Reptile:** | |

## Reptile Observation: - 3. 1 record

| | |
|---|---|
| **Reptile (Common or Scientific Name):** | Common Side-blotched Lizard; Uta stansburiana |
| **Is the Reptile Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Reptile:** | |

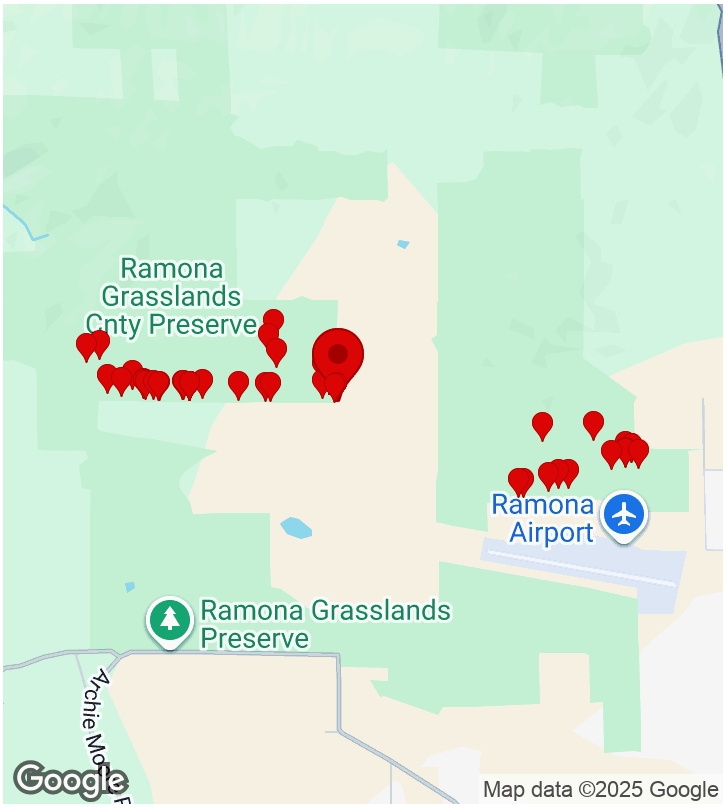
# 2_COSD DPR Bio

Biology Surveys (SoCal Bio ONLY)

## TMP Monitoring ▸ BUOW

**5/16/2025, 2:54:18 AM UTC**




**CREATED**

5/15/2025, 12:29:05 PM UTC
by Karla Alcaraz

**UPDATED**

5/16/2025, 2:54:18 AM UTC
by Karla Alcaraz

**LOCATION**

33.051111, -116.936144

## Parent Form

| | |
|---|---|
| **Project Name:** | TMP Monitoring ▸ BUOW |
| **Preserve/Park Name** | Ramona Grasslands |
| **General Survey Type** | TMP Monitoring |
| **Specific Survey Type** | TMP BUOW |
| **Observer/Surveyor:** | Brennan Mulrooney |
| **Assistant Observer/Surveyor:** | Karla Alcaraz, Zach Fenske |
| **Date:** | May 15, 2025 |

## START Weather Details:

| | |
|---|---|
| **Start - Time:** | 05:29 |
| **Start - Temperature:** | 48 |
| **Start - Wind Direction From (select one):** | NE |
| **Start - Low Wind Speed:** | 1 |
| **Start - High Wind Speed:** | 10 |
| **Start - Average Wind Speed:** | 5.5 |
| **Start - Cloud Cover (%):** | 100 |
| **Start - Precipitation (select one):** | None |
| **Start - Visibility (select one):** | |
| **Start - Notes (if applicable):** | |

## END Weather Details:

| | |
|---|---|
| **Time Out:** | 12:06 |
| **End - Temperature:** | 67 |
| **End - Wind Direction From (select one):** | NW |
| **End - Low Wind Speed:** | 5 |
| **End - High Wind Speed:** | 10 |
| **End - Average Wind Speed:** | 7 |
| **End - Cloud Cover (%):** | 0 |
| **End - Precipitation (select one):** | None |
| **End - Visibility (select one):** | Good |
| **End - Notes (if applicable):** | |
| **Total Hours:** | |

| | |
|---|---|
| **Project Location (description):** | |

| | |
|---|---|
| **Notes** | Observations began in Polygon 5, where burrows were found with claw marks on the sides, likely dug by badgers. In Polygon 6, extensive whitewash was noted near a potential burrow, along with ambiguous pellets, but no signs of recent activity. Bulls in the area were visibly active and appeared agitated by the presence of surveyors. The survey ultimately covered polygons 5 through 9. |
| **Observation Type:** | Bird, Mammal, Plant, Reptile, Amphibian |

**Photos**


Facing NW





Cattle present upon arrival to the site.
































West facing view of polygon 8.





Facing NE polygon 9

## Amphibian

## Amphibian Observation: (1 Item)

### Amphibian Observation: - 1. 1 record

| | |
|---|---|
| **Amphibian (Common or Scientific Name):** | Baja California Treefrog; Pseudacris hypochondriaca |
| **Is the Amphibian Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Amphibian:** | |

## Bird

# Bird Observation: (45 Items)

## Bird Observation: - 1. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Western Meadowlark; Sturnella neglecta; WEME |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 2. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | House Finch; Haemorhous mexicanus; HOFI |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 3. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Northern Mockingbird; Mimus polyglottos; NOMO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 4. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Common Raven; Corvus corax; CORA |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 5. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Red-winged Blackbird; Agelaius phoeniceus; RWBL |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 6. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Say's Phoebe; Sayornis saya; SAPH |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 7. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Cassin's Kingbird; Tyrannus vociferans; CAKI |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 8. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Lesser Black-backed Gull; Larus fuscus; LBBG |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 9. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Mourning Dove; Zenaida macroura; MODO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |

**Photo(s) of Bird:**

## Bird Observation: - 10. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | California Towhee; Melozone crissalis; CALT |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 11. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Ash-throated Flycatcher; Myiarchus cinerascens; ATFL |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 12. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Wrentit; Chamaea fasciata; WREN |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 13. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Spotted Towhee; Pipilo maculatus; SPTO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 14. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Northern House Wren; Troglodytes aedon; NHWR |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 15. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Grasshopper Sparrow; Ammodramus savannarum; GRSP |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Auditory |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Singing/calling |
| **Bird Sex (check all that apply):** | Male |
| **Bird Age (check all that apply):** | Unknown |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 16. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | California Quail; Callipepla californica; CAQU |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 17. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Northern Harrier; Circus hudsonius; NOHA |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | In flight |
| **Bird Sex (check all that apply):** | Male |
| **Bird Age (check all that apply):** | Subadult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 18. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Lazuli Bunting; Passerina amoena; LAZB |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 19. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Lark Sparrow; Chondestes grammacus; LASP |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 20. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Northern Flicker; Colaptes auratus; NOFL |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 21. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Oak Titmouse; Baeolophus inornatus; OATI |
| **Is the Bird Sensitive ?** | no |

| | |
|---|---|
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 22. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Red-shouldered Hawk; Buteo lineatus; RSHA |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual, Auditory |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | In flight |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Unknown |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 23. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Western Wood-Pewee; Contopus sordidulus; WEWP |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 24. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Bushtit; Psaltriparus minimus; BUSH |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 25. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Phainopepla; Phainopepla nitens; PHAI |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 26. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Acorn Woodpecker; Melanerpes formicivorus; ACWO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 27. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Western Bluebird; Sialia mexicana; WEBL |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Perched (not singing) |
| **Bird Sex (check all that apply):** | Female |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 28. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Mallard; Anas platyrhynchos; MALL |
| **Is the Bird Sensitive ?** | no |

| | |
|---|---|
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 29. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Red-tailed Hawk; Buteo jamaicensis; RTHA |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 30. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Cliff Swallow; Petrochelidon pyrrhonota; CLSW |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 31. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Anna's Hummingbird; Calypte anna; ANHU |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 32. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | European Starling; Sturnus vulgaris; EUST |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 33. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Killdeer; Charadrius vociferus; KILL |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 34. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Wild Turkey; Meleagris gallopavo; WITU |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 35. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Eared Grebe; Podiceps nigricollis; EAGR |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 36. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Ring-necked Duck; Aythya collaris; RNDU |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 37. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Ruddy Duck; Oxyura jamaicensis; RUDU |
| **Is the Bird Sensitive ?** | no |

| | |
|---|---|
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 38. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Violet-green Swallow; Tachycineta thalassina; VGSW |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 39. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Western Tanager; Piranga ludoviciana; WETA |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 40. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Vermilion Flycatcher; Pyrocephalus rubinus; VEFL |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Perched (not singing) |
| **Bird Sex (check all that apply):** | Male |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 41. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Turkey Vulture; Cathartes aura; TUVU |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | In flight |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 42. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Costa's Hummingbird; Calypte costae; COHU |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 43. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | American Barn Owl; Tyto alba; ABOW |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Dead |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Unknown |

| | |
|---|---|
| **Additional Notes:** | Predated |

**Photo(s) of Bird:**



## Bird Observation: - 44. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Brewer's Blackbird; Euphagus cyanocephalus; BRBL |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |

**Photo(s) of Bird:**

## Bird Observation: - 45. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Hooded Oriole; Icterus cucullatus; HOOR |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |

**Photo(s) of Bird:**

# Mammal

## Mammal Observation: (6 Items)

### Mammal Observation: - 1. 1 record

| | |
|---|---|
| **Mammal (Common or Scientific Name):** | Desert Cottontail; Sylvilagus audubonii |
| **Is the Mammal Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Mammal:** | |

### Mammal Observation: - 2. 1 record

| | |
|---|---|
| **Mammal (Common or Scientific Name):** | Southern Mule Deer; Odocoileus hemionus fuliginata |
| **Is the Mammal Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

### Sensitive Mammal Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual sighting |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Moving (flushed) |
| **Mammal Sex (check all that apply):** | Unknown |
| **Mammal Age (check all that apply):** | Unknown |
| **Additional Notes:** | |
| **Photo(s) of Mammal:** | |

### Mammal Observation: - 3. 1 record

| | |
|---|---|
| **Mammal (Common or Scientific Name):** | California Ground Squirrel; Ostospermophilus beecheyi |
| **Is the Mammal Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Mammal:** | |

## Mammal Observation: - 4. 1 record

| | |
|---|---|
| **Mammal (Common or Scientific Name):** | San Diego Black-tailed Jackrabbit; Lepus californicus bennettii |
| **Is the Mammal Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Mammal Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual sighting |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Moving (flushed) |
| **Mammal Sex (check all that apply):** | Unknown |
| **Mammal Age (check all that apply):** | Unknown |
| **Additional Notes:** | |
| **Photo(s) of Mammal:** | |

## Mammal Observation: - 5. 1 record

| | |
|---|---|
| **Mammal (Common or Scientific Name):** | Long-tailed Weasel; Mustela frenata |
| **Is the Mammal Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Mammal:** | |

## Mammal Observation: - 6. 1 record

| | |
|---|---|
| **Mammal (Common or Scientific Name):** | Coyote; Canis latrans |
| **Is the Mammal Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Mammal:** | |

# Plants

## Plant Observation: (2 Items)

### Plant Observation: - 1. 1 record

| | |
|---|---|
| **Plant (Common or Scientific Name):** | Vicia villosa |
| **Is the Plant Sensitive ?** | no |
| **State** | N/A |
| **Federal** | N/A |
| **CA Rare Plant Rank** | N/A |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Plant:** | |

### Plant Observation: - 2. 1 record

| | |
|---|---|
| **Plant (Common or Scientific Name):** | Acmispon argophyllus |
| **Is the Plant Sensitive ?** | no |
| **State** | N/A |
| **Federal** | N/A |
| **CA Rare Plant Rank** | N/A |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Plant:** | |

## Reptile

## Reptile Observation: (4 Items)

### Reptile Observation: - 1. 1 record

| | |
|---|---|
| **Reptile (Common or Scientific Name):** | Gophersnake; Pituophis catenifer |
| **Is the Reptile Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Reptile:** | |

### Reptile Observation: - 2. 1 record

| | |
|---|---|
| **Reptile (Common or Scientific Name):** | Common Side-blotched Lizard; Uta stansburiana |
| **Is the Reptile Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Reptile:** | |

## Reptile Observation: - 3. 1 record

| | |
|---|---|
| **Reptile (Common or Scientific Name):** | Western Fence Lizard; Sceloporus occidentalis |
| **Is the Reptile Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Reptile:** | |

## Reptile Observation: - 4. 1 record

| | |
|---|---|
| **Reptile (Common or Scientific Name):** | Granite Spiny Lizard; Sceloporus orcutti |
| **Is the Reptile Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Reptile:** | |

# 2_COSD DPR Bio

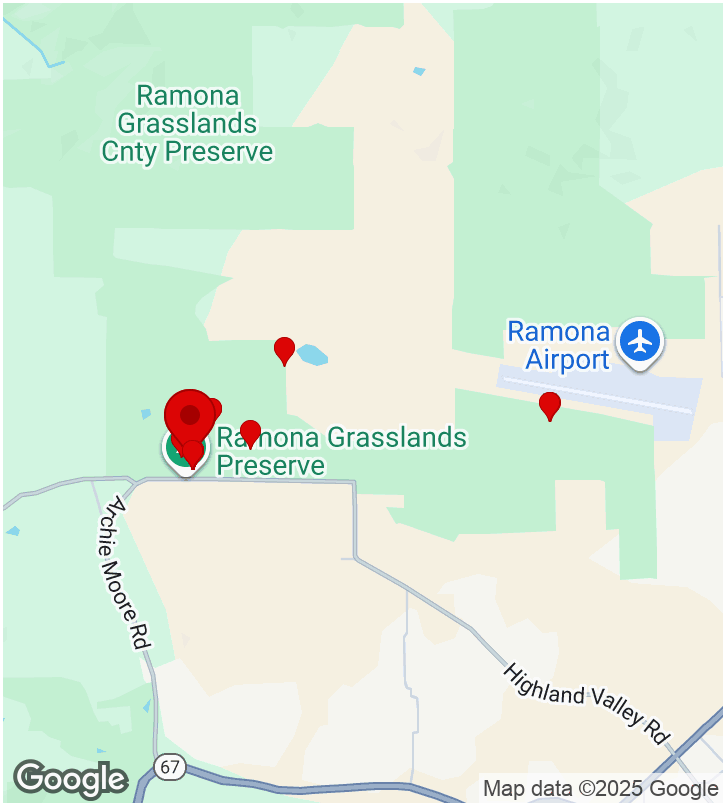
Biology Surveys (SoCal Bio ONLY)

## TMP Monitoring ▸ BUOW

**7/31/2025, 8:22:19 PM UTC**



East facing view of polygon 2




**CREATED**

6/11/2025, 12:41:20 PM UTC
by Brennan Mulrooney

**UPDATED**

7/31/2025, 8:22:19 PM UTC
by Brennan Mulrooney

**LOCATION**

33.034281, -116.950274

## Parent Form

| | |
|---|---|
| **Project Name:** | TMP Monitoring ▸ BUOW |
| **Preserve/Park Name** | Ramona Grasslands |
| **General Survey Type** | TMP Monitoring |
| **Specific Survey Type** | TMP BUOW |
| **Observer/Surveyor:** | Brennan Mulrooney |
| **Assistant Observer/Surveyor:** | Amy Orduño-Baez, Zach Fenske |
| **Date:** | June 11, 2025 |

## START Weather Details:

| | |
|---|---|
| **Start - Time:** | 05:41 |
| **Start - Temperature:** | 58 |
| **Start - Wind Direction From (select one):** | SW |
| **Start - Low Wind Speed:** | 0 |
| **Start - High Wind Speed:** | 2 |
| **Start - Average Wind Speed:** | 1 |
| **Start - Cloud Cover (%):** | 100 |
| **Start - Precipitation (select one):** | None |
| **Start - Visibility (select one):** | Poor |
| **Start - Notes (if applicable):** | Fog |

## END Weather Details:

| | |
|---|---|
| **Time Out:** | 10:48 |
| **End - Temperature:** | 74 |
| **End - Wind Direction From (select one):** | W |
| **End - Low Wind Speed:** | 1 |
| **End - High Wind Speed:** | 5 |
| **End - Average Wind Speed:** | 3 |
| **End - Cloud Cover (%):** | 0 |
| **End - Precipitation (select one):** | None |
| **End - Visibility (select one):** | Good |
| **End - Notes (if applicable):** | |
| **Total Hours:** | |

| | |
|---|---|
| **Project Location (description):** | Polygons 1,2,3 |

| | |
|---|---|
| **Notes** | No BUOW, no sign at any burrows. |
| **Observation Type:** | Bird, Mammal, Reptile |

**Photos**



East facing view of polygon 2





SE facing view of polygon 2



West facing view of polygon 1

# Bird

# Bird Observation: (24 Items)

## Bird Observation: - 1. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Costa's Hummingbird; Calypte costae; COHU |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 2. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Mourning Dove; Zenaida macroura; MODO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 3. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Anna's Hummingbird; Calypte anna; ANHU |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 4. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Killdeer; Charadrius vociferus; KILL |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 5. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Western Cattle-Egret; Ardea ibis; WCEG |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 6. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Red-tailed Hawk; Buteo jamaicensis; RTHA |
| **Is the Bird Sensitive ?** | no |

| | |
|---|---|
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 7. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Acorn Woodpecker; Melanerpes formicivorus; ACWO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 8. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Cassin's Kingbird; Tyrannus vociferans; CAKI |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 9. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Western Kingbird; Tyrannus verticalis; WEKI |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 10. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Common Raven; Corvus corax; CORA |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 11. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | California Scrub-Jay; Aphelocoma californica; CASJ |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 12. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Cliff Swallow; Petrochelidon pyrrhonota; CLSW |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 13. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Bushtit; Psaltriparus minimus; BUSH |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 14. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | California Horned Lark; Eremophila alpestris actia; HOLA-ssp actia |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | coastal range of CA to n Baja CA |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Auditory |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Singing/calling |
| **Bird Sex (check all that apply):** | Male |
| **Bird Age (check all that apply):** | Adult |

| | |
|---|---|
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 15. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Rock Wren; Salpinctes obsoletus; ROWR |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 16. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | European Starling; Sturnus vulgaris; EUST |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 17. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Grasshopper Sparrow; Ammodramus savannarum; GRSP |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Both |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Singing/calling |
| **Bird Sex (check all that apply):** | Male |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 18. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | House Finch; Haemorhous mexicanus; HOFI |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 19. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Lark Sparrow; Chondestes grammacus; LASP |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 20. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Western Meadowlark; Sturnella neglecta; WEME |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 21. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Red-winged Blackbird; Agelaius phoeniceus; RWBL |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 22. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Brown-headed Cowbird; Molothrus ater; BHCO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |

**Photo(s) of Bird:**

### Bird Observation: - 23. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Common Yellowthroat; Geothlypis trichas; COYE |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

### Bird Observation: - 24. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Blue Grosbeak; Passerina caerulea; BLGR |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Mammal

## Mammal Observation: (2 Items)

### Mammal Observation: - 1. 1 record

| | |
|---|---|
| **Mammal (Common or Scientific Name):** | Coyote; Canis latrans |
| **Is the Mammal Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Mammal:** | |

### Mammal Observation: - 2. 1 record

| | |
|---|---|
| **Mammal (Common or Scientific Name):** | Desert Cottontail; Sylvilagus audubonii |
| **Is the Mammal Sensitive ?** | no |
| **Sub-Species Info:** | N/A |

| | |
|---|---|
| **Additional Notes:** | |
| **Photo(s) of Mammal:** | |

# Reptile

## Reptile Observation: (2 Items)

### Reptile Observation: - 1. 1 record

| | |
|---|---|
| **Reptile (Common or Scientific Name):** | Granite Spiny Lizard; Sceloporus orcutti |
| **Is the Reptile Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Reptile:** | |

### Reptile Observation: - 2. 1 record

| | |
|---|---|
| **Reptile (Common or Scientific Name):** | Common Side-blotched Lizard; Uta stansburiana |
| **Is the Reptile Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Reptile:** | |

# 2_COSD DPR Bio

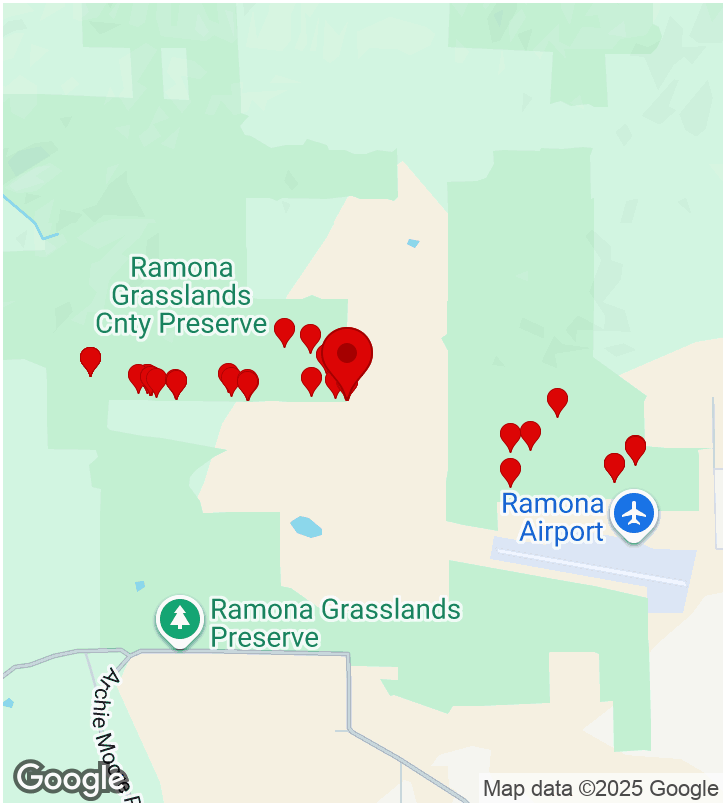
Biology Surveys (SoCal Bio ONLY)

## TMP Monitoring ▸ BUOW

**7/31/2025, 8:21:30 PM UTC**



North facing view of polygon 5.




### CREATED

6/12/2025, 12:12:59 PM UTC
by Karla Alcaraz

### UPDATED

7/31/2025, 8:21:30 PM UTC
by Brennan Mulrooney

### LOCATION

33.051102, -116.936240

## Parent Form

| | |
|---|---|
| **Project Name:** | TMP Monitoring ▸ BUOW |
| **Preserve/Park Name** | Ramona Grasslands |
| **General Survey Type** | TMP Monitoring |
| **Specific Survey Type** | TMP BUOW |
| **Observer/Surveyor:** | Brennan Mulrooney |
| **Assistant Observer/Surveyor:** | Karla Alcaraz, Tawni Gotbaum |
| **Date:** | June 12, 2025 |

## START Weather Details:

| | |
|---|---|
| **Start - Time:** | 05:12 |
| **Start - Temperature:** | 58 |
| **Start - Wind Direction From (select one):** | NW |
| **Start - Low Wind Speed:** | 0 |
| **Start - High Wind Speed:** | 9 |
| **Start - Average Wind Speed:** | 4.5 |
| **Start - Cloud Cover (%):** | 100 |
| **Start - Precipitation (select one):** | Misting |
| **Start - Visibility (select one):** | Fair |
| **Start - Notes (if applicable):** | |

## END Weather Details:

| | |
|---|---|
| **Time Out:** | 10:18 |
| **End - Temperature:** | 73 |
| **End - Wind Direction From (select one):** | W |
| **End - Low Wind Speed:** | 0 |
| **End - High Wind Speed:** | 10 |
| **End - Average Wind Speed:** | 5 |
| **End - Cloud Cover (%):** | 2 |
| **End - Precipitation (select one):** | None |
| **End - Visibility (select one):** | Good |
| **End - Notes (if applicable):** | |
| **Total Hours:** | |

| | |
|---|---|
| **Project Location (description):** | |

| | |
|---|---|
| **Notes** | No BUOW signs observed during the survey period. |
| **Observation Type:** | Bird, Amphibian, Plant, Mammal, Reptile |

**Photos**



North facing view of polygon 5.





Northwest facing view of polygon 6.





## Amphibian

# Amphibian Observation: (1 Item)

## Amphibian Observation: - 1. 1 record

| | |
|---|---|
| **Amphibian (Common or Scientific Name):** | American Bullfrog; Lithobates catesbeianus |
| **Is the Amphibian Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Amphibian:** | |

# Bird

# Bird Observation: (38 Items)

## Bird Observation: - 1. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Western Kingbird; Tyrannus verticalis; WEKI |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 2. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Lark Sparrow; Chondestes grammacus; LASP |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 3. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Killdeer; Charadrius vociferus; KILL |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |

| | |
|---|---|
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 4. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Western Bluebird; Sialia mexicana; WEBL |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Auditory |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Singing/calling |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Unknown |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 5. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Great Horned Owl; Bubo virginianus; GHOW |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 6. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Lesser Nighthawk; Chordeiles acutipennis; LENI |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 7. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Mourning Dove; Zenaida macroura; MODO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 8. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Blue Grosbeak; Passerina caerulea; BLGR |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 9. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Ash-throated Flycatcher; Myiarchus cinerascens; ATFL |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 10. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Spotted Towhee; Pipilo maculatus; SPTO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 11. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Wild Turkey; Meleagris gallopavo; WITU |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |

**Photo(s) of Bird:**

## Bird Observation: - 12. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | White-breasted Nuthatch; Sitta carolinensis; WBNU |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |

**Photo(s) of Bird:**

## Bird Observation: - 13. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Southern California Rufous-crowned Sparrow; Aimophila ruficeps canescens; RSCP-SoCal |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Auditory |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Singing/calling |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Unknown |
| **Additional Notes:** | |

**Photo(s) of Bird:**

## Bird Observation: - 14. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Bullock's Oriole; Icterus bullockii; BUOR |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |

**Photo(s) of Bird:**

## Bird Observation: - 15. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | California Thrasher; Toxostoma redivivum; CATH |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 16. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | American Crow; Corvus brachyrhynchos; AMCR |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 17. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Wrentit; Chamaea fasciata; WREN |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 18. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | California Quail; Callipepla californica; CAQU |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 19. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | California Towhee; Melozone crissalis; CALT |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |

**Photo(s) of Bird:**

## Bird Observation: - 20. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Western Wood-Pewee; Contopus sordidulus; WEWP |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |

**Photo(s) of Bird:**

## Bird Observation: - 21. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Phainopepla; Phainopepla nitens; PHAI |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |

**Photo(s) of Bird:**

## Bird Observation: - 22. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Western Meadowlark; Sturnella neglecta; WEME |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |

**Photo(s) of Bird:**

## Bird Observation: - 23. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Northern House Wren; Troglodytes aedon; NHWR |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |

**Photo(s) of Bird:**

## Bird Observation: - 24. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Red-tailed Hawk; Buteo jamaicensis; RTHA |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 25. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Song Sparrow; Melospiza melodia; SOSP |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 26. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Bushtit; Psaltriparus minimus; BUSH |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 27. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Acorn Woodpecker; Melanerpes formicivorus; ACWO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 28. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Brown-headed Cowbird; Molothrus ater; BHCO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |

**Photo(s) of Bird:**

## Bird Observation: - 29. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Cassin's Kingbird; Tyrannus vociferans; CAKI |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |

**Photo(s) of Bird:**

## Bird Observation: - 30. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Black-necked Stilt; Himantopus mexicanus; BNST |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |

**Photo(s) of Bird:**

## Bird Observation: - 31. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Grasshopper Sparrow; Ammodramus savannarum; GRSP |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Auditory |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Singing/calling |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Unknown |
| **Additional Notes:** | |

**Photo(s) of Bird:**

## Bird Observation: - 32. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Anna's Hummingbird; Calypte anna; ANHU |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 33. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Brewer's Blackbird; Euphagus cyanocephalus; BRBL |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 34. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Vermilion Flycatcher; Pyrocephalus rubinus; VEFL |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 2 |
| **Behavior (check all that apply):** | Perched (not singing) |
| **Bird Sex (check all that apply):** | Male, Unknown |
| **Bird Age (check all that apply):** | Adult, Unknown |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 35. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Bald Eagle; Haliaeetus leucocephalus; BAEA |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual, Auditory |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Perched (not singing) |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | Flew northwest past the house on the hill, no longer visible. |
| **Photo(s) of Bird:** | |

## Bird Observation: - 36. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Northern Mockingbird; Mimus polyglottos; NOMO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 37. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Greater Roadrunner; Geococcyx californianus; GRRO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 38. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Cooper's Hawk; Accipiter cooperii; COHA |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Perched (not singing) |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Adult |

| | |
|---|---|
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

# Mammal

# Mammal Observation: (4 Items)

## Mammal Observation: - 1. 1 record

| | |
|---|---|
| **Mammal (Common or Scientific Name):** | California Ground Squirrel; Ostospermophilus beecheyi |
| **Is the Mammal Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Mammal:** | |

## Mammal Observation: - 2. 1 record

| | |
|---|---|
| **Mammal (Common or Scientific Name):** | Desert Cottontail; Sylvilagus audubonii |
| **Is the Mammal Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Mammal:** | |

## Mammal Observation: - 3. 1 record

| | |
|---|---|
| **Mammal (Common or Scientific Name):** | Coyote; Canis latrans |
| **Is the Mammal Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Mammal:** | |

## Mammal Observation: - 4. 1 record

| | |
|---|---|
| **Mammal (Common or Scientific Name):** | San Diego Black-tailed Jackrabbit; Lepus californicus bennettii |
| **Is the Mammal Sensitive ?** | yes |

| | |
|---|---|
| **Sub-Species Info:** | N/A |

### Sensitive Mammal Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual sighting |
| **Number of individuals observed:** | 5 |
| **Behavior (check all that apply):** | Moving (flushed) |
| **Mammal Sex (check all that apply):** | Unknown |
| **Mammal Age (check all that apply):** | Unknown |
| **Additional Notes:** | |
| **Photo(s) of Mammal:** | |

## Plants

## Plant Observation: (1 Item)

### Plant Observation: - 1. 1 record

| | |
|---|---|
| **Plant (Common or Scientific Name):** | Erodium botrys |
| **Is the Plant Sensitive ?** | no |
| **State** | N/A |
| **Federal** | N/A |
| **CA Rare Plant Rank** | N/A |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Plant:** | |

## Reptile

## Reptile Observation: (2 Items)

### Reptile Observation: - 1. 1 record

| | |
|---|---|
| **Reptile (Common or Scientific Name):** | Granite Spiny Lizard; Sceloporus orcutti |
| **Is the Reptile Sensitive ?** | no |

| | |
|---|---|
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Reptile:** | |

## Reptile Observation: - 2. 1 record

| | |
|---|---|
| **Reptile (Common or Scientific Name):** | Common Side-blotched Lizard; Uta stansburiana |
| **Is the Reptile Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Reptile:** | |

# 2_COSD DPR Bio

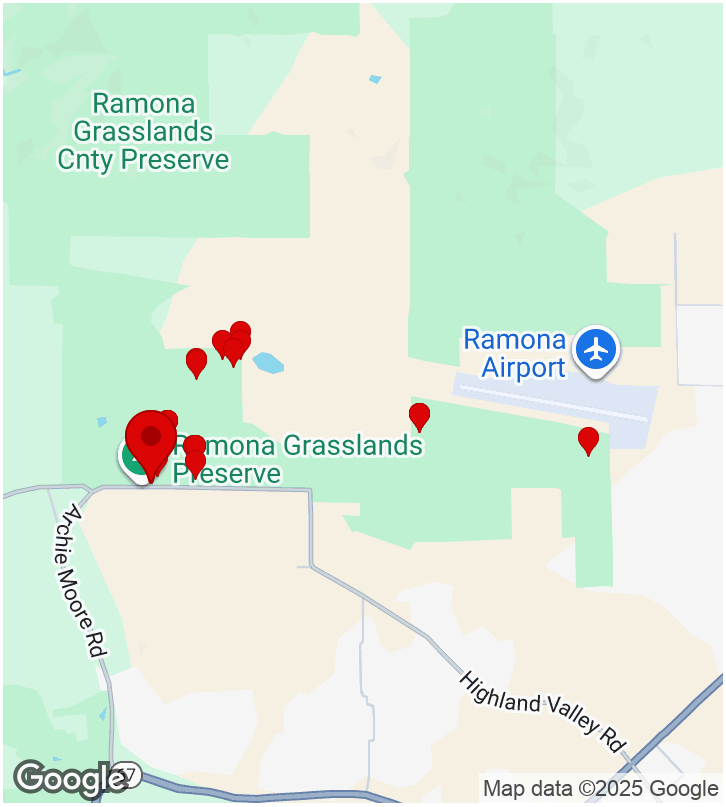
Biology Surveys (SoCal Bio ONLY)

## TMP Monitoring ▸ BUOW

**7/15/2025, 3:44:21 PM UTC**



Facing NE. Polygon 2.




**CREATED**

7/8/2025, 12:39:16 PM UTC
by SC Fulcrum16

**UPDATED**

7/15/2025, 3:44:21 PM UTC
by Karla Alcaraz

**LOCATION**

33.033367, -116.949767

## Parent Form

| | |
|---|---|
| **Project Name:** | TMP Monitoring ▸ BUOW |
| **Preserve/Park Name** | Ramona Grasslands |
| **General Survey Type** | TMP Monitoring |
| **Specific Survey Type** | TMP BUOW |
| **Observer/Surveyor:** | Karla Alcaraz, Amy Orduño-Baez |
| **Assistant Observer/Surveyor:** | Andrew South (Blackhawk) |
| **Date:** | July 8, 2025 |

## START Weather Details:

| | |
|---|---|
| **Start - Time:** | 05:39 |
| **Start - Temperature:** | 58 |
| **Start - Wind Direction From (select one):** | NW |
| **Start - Low Wind Speed:** | 4 |
| **Start - High Wind Speed:** | 5 |
| **Start - Average Wind Speed:** | 4.5 |
| **Start - Cloud Cover (%):** | 20 |
| **Start - Precipitation (select one):** | None |
| **Start - Visibility (select one):** | Good |
| **Start - Notes (if applicable):** | |

## END Weather Details:

| | |
|---|---|
| **Time Out:** | 10:47 |
| **End - Temperature:** | 81 |
| **End - Wind Direction From (select one):** | NW |
| **End - Low Wind Speed:** | 7 |
| **End - High Wind Speed:** | 9 |
| **End - Average Wind Speed:** | 8 |
| **End - Cloud Cover (%):** | 0 |
| **End - Precipitation (select one):** | None |
| **End - Visibility (select one):** | Good |
| **End - Notes (if applicable):** | |
| **Total Hours:** | |

| | |
|---|---|
| **Project Location (description):** | |

| | |
|---|---|
| **Notes** | No sign of BUOW. Surveyed polygons 1 through 4.<br><br>Presence of ground squirrels, presence of mammal burrows, percent cover of bare ground 0-10%, and presence of scattered shrubs and rocky outcrops that could be used as cover to hide from predators, observations of predators such as coyotes or raptors, no signs of unauthorized access such as off-road vehicle use, no observations of potential use of rodenticide, presence of thick or tall vegetation. |
| **Observation Type:** | Bird, Mammal, Reptile |

**Photos**



Facing NE. Polygon 2.





Facing NE. Polygon 3.





Facing NW. Polygon 1.



Facing E. Polygon 1.

## Bird

## Bird Observation: (15 Items)

## Bird Observation: - 1. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Horned Lark; Eremophila alpestris; HOLA |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 2. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Mourning Dove; Zenaida macroura; MODO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 3. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | American Crow; Corvus brachyrhynchos; AMCR |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 4. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Blue Grosbeak; Passerina caerulea; BLGR |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 5. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Grasshopper Sparrow; Ammodramus savannarum; GRSP |
| **Is the Bird Sensitive ?** | yes |

| | |
|---|---|
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Auditory |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Singing/calling |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Unknown |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 6. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | House Finch; Haemorhous mexicanus; HOFI |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 7. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Red-winged Blackbird; Agelaius phoeniceus; RWBL |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 8. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Anna's Hummingbird; Calypte anna; ANHU |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 9. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Western Meadowlark; Sturnella neglecta; WEME |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 10. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Black Phoebe; Sayornis nigricans; BLPH |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 11. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Bushtit; Psaltriparus minimus; BUSH |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 12. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Say's Phoebe; Sayornis saya; SAPH |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 13. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Cassin's Kingbird; Tyrannus vociferans; CAKI |
| **Is the Bird Sensitive ?** | no |

| | |
|---|---|
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

### Bird Observation: - 14. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Peregrine Falcon; Falco peregrinus; PEFA |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | 2 individuals likely a pair; heard calling and seen flying |
| **Photo(s) of Bird:** | |

### Bird Observation: - 15. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Red-tailed Hawk; Buteo jamaicensis; RTHA |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Mammal

## Mammal Observation: (3 Items)

### Mammal Observation: - 1. 1 record

| | |
|---|---|
| **Mammal (Common or Scientific Name):** | Desert Cottontail; Sylvilagus audubonii |
| **Is the Mammal Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Mammal:** | |

### Mammal Observation: - 2. 1 record

| | |
|---|---|
| **Mammal (Common or Scientific Name):** | California Ground Squirrel; Ostospermophilus beecheyi |

| | |
|---|---|
| **Is the Mammal Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Mammal:** | |

### Mammal Observation: - 3. 1 record

| | |
|---|---|
| **Mammal (Common or Scientific Name):** | Coyote; Canis latrans |
| **Is the Mammal Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Mammal:** | |

## Reptile

## Reptile Observation: (2 Items)

### Reptile Observation: - 1. 1 record

| | |
|---|---|
| **Reptile (Common or Scientific Name):** | Granite Spiny Lizard; Sceloporus orcutti |
| **Is the Reptile Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Reptile:** | |

### Reptile Observation: - 2. 1 record

| | |
|---|---|
| **Reptile (Common or Scientific Name):** | Western Fence Lizard; Sceloporus occidentalis |
| **Is the Reptile Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Reptile:** | |

# 2_COSD DPR Bio

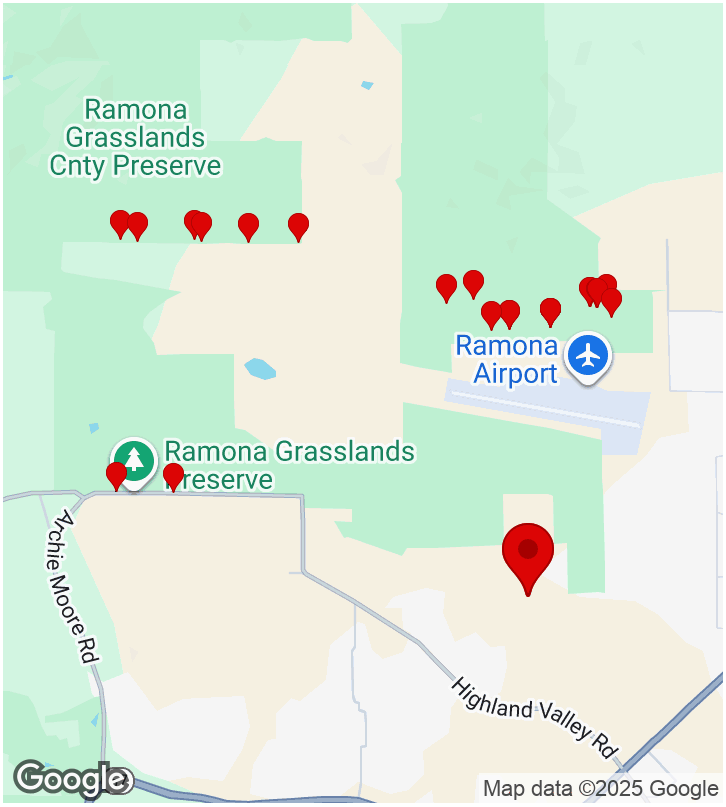
Biology Surveys (SoCal Bio ONLY)

## TMP Monitoring ▸ BUOW

**7/15/2025, 3:45:14 PM UTC**



Facing SE. Polygon 9.




**CREATED**

7/9/2025, 12:30:49 PM UTC
by SC Fulcrum16

**UPDATED**

7/15/2025, 3:45:14 PM UTC
by Karla Alcaraz

**LOCATION**

33.025680, -116.916736

## Parent Form

| | |
|---|---|
| **Project Name:** | TMP Monitoring ▸ BUOW |
| **Preserve/Park Name** | Ramona Grasslands |
| **General Survey Type** | TMP Monitoring |
| **Specific Survey Type** | TMP BUOW |
| **Observer/Surveyor:** | Karla Alcaraz, Amy Orduño-Baez |
| **Assistant Observer/Surveyor:** | Andrew South (Blackhawk) |
| **Date:** | July 9, 2025 |

## START Weather Details:

| | |
|---|---|
| **Start - Time:** | 05:30 |
| **Start - Temperature:** | 65 |
| **Start - Wind Direction From (select one):** | NE |
| **Start - Low Wind Speed:** | 1 |
| **Start - High Wind Speed:** | 2 |
| **Start - Average Wind Speed:** | 1.5 |
| **Start - Cloud Cover (%):** | 30 |
| **Start - Precipitation (select one):** | None |
| **Start - Visibility (select one):** | Good |
| **Start - Notes (if applicable):** | |

## END Weather Details:

| | |
|---|---|
| **Time Out:** | 11:28 |
| **End - Temperature:** | 80 |
| **End - Wind Direction From (select one):** | W |
| **End - Low Wind Speed:** | 7 |
| **End - High Wind Speed:** | 10 |
| **End - Average Wind Speed:** | 8.5 |
| **End - Cloud Cover (%):** | 0 |
| **End - Precipitation (select one):** | None |
| **End - Visibility (select one):** | Good |
| **End - Notes (if applicable):** | |
| **Total Hours:** | |

| | |
|---|---|
| **Project Location (description):** | |

| | |
|---|---|
| **Notes** | No sign of BUOW during the survey period. Surveyed polygons 5-9.<br><br>Presence of ground squirrels, presence of mammal burrows, percent cover of bare ground 0-30%, and presence of scattered shrubs and rocky outcrops that could be used as cover to hide from predators, observations of predators such as coyotes or raptors, no signs of unauthorized access such as off-road vehicle use, no observations of potential use of rodenticide, presence of thick or tall vegetation. |
| **Observation Type:** | Mammal, Bird, Reptile |

**Photos**



Facing SE. Polygon 9.





Facing W. Polygon 7.





Facing NW. Polygon 6.

Facing W. Polygon 5.

## Bird

## Bird Observation: (16 Items)

## Bird Observation: - 1. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Cassin's Kingbird; Tyrannus vociferans; CAKI |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 2. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | American Crow; Corvus brachyrhynchos; AMCR |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 3. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | House Sparrow; Passer domesticus; HOSP |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 4. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Mourning Dove; Zenaida macroura; MODO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 5. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | California Quail; Callipepla californica; CAQU |
| **Is the Bird Sensitive ?** | no |

| | |
|---|---|
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 6. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Western Meadowlark; Sturnella neglecta; WEME |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 7. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Blue Grosbeak; Passerina caerulea; BLGR |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 8. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Red-tailed Hawk; Buteo jamaicensis; RTHA |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 9. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Hooded Oriole; Icterus cucullatus; HOOR |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 10. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Anna's Hummingbird; Calypte anna; ANHU |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 11. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Acorn Woodpecker; Melanerpes formicivorus; ACWO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 12. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Bushtit; Psaltriparus minimus; BUSH |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 13. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | American Kestrel; Falco sparverius; AMKE |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 14. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Northern Mockingbird; Mimus polyglottos; NOMO |
| **Is the Bird Sensitive ?** | no |

| | |
|---|---|
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 15. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Turkey Vulture; Cathartes aura; TUVU |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | In flight |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 16. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Western Kingbird; Tyrannus verticalis; WEKI |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

# Mammal

# Mammal Observation: (5 Items)

## Mammal Observation: - 1. 1 record

| | |
|---|---|
| **Mammal (Common or Scientific Name):** | Black-tailed Jackrabbit; Lepus californicus |
| **Is the Mammal Sensitive ?** | no |

| | |
|---|---|
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Mammal:** | |

## Mammal Observation: - 2. 1 record

| | |
|---|---|
| **Mammal (Common or Scientific Name):** | Coyote; Canis latrans |
| **Is the Mammal Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Mammal:** | |

## Mammal Observation: - 3. 1 record

| | |
|---|---|
| **Mammal (Common or Scientific Name):** | Desert Cottontail; Sylvilagus audubonii |
| **Is the Mammal Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Mammal:** | |

## Mammal Observation: - 4. 1 record

| | |
|---|---|
| **Mammal (Common or Scientific Name):** | California Ground Squirrel; Ostospermophilus beecheyi |
| **Is the Mammal Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Mammal:** | |

## Mammal Observation: - 5. 1 record

| | |
|---|---|
| **Mammal (Common or Scientific Name):** | Mule Deer; Odocoileus hemionus |
| **Is the Mammal Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Mammal:** | |

# Reptile

## Reptile Observation: (1 Item)

### Reptile Observation: - 1. 1 record

| | |
|---|---|
| **Reptile (Common or Scientific Name):** | Granite Spiny Lizard; Sceloporus orcutti |
| **Is the Reptile Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Reptile:** | |

# D-2 Habitat and Threats Assessment

*Scientific Name: Athene cunicularia* *Common Name: Burrowing Owl*

*MSP Occurrence ID:* *New MSP Occurrence? Yes:_____, No:_____, Unknown:_____*

*Sample Point #:* *New Sample Point? Yes:_____, No:_____, Unknown:_____*

*Occurrence Name:* *CNDDB EO#:* *Translocated? Yes:_____, No:_____, Unknown:_____*

*Preserve: Ramona Grasslands County Preserve – Polygon 1*

*Land Owner:* *Land Manager:*

*Surveyors & Affiliation: Karla Alcaraz, Amy Orduño-Baez, Andrew South & Environmental Science Associates, Blackhawk Environmental*

*Date: July 8, 2025* *Time Start:*

**I. SAMPLE PLOT INFORMATION.** *Count # plants in 10m radius sample plot, see p. 4 for category definitions for phenology, herbivory, disease & stunted growth. Record notes on p. 3.*

# Plants/Sample Plot:_____Exact:_____Estimate:_____Uncertainty?_____Sample plot radius_____m

For both exact counts and estimates, indicate: Counted/estimated indiv. plants:_____OR Counted/estimated clusters of plants:_____

For geophytes: are counts of flowering or vegetative individuals? Flowering:_____Vegetative:_____

Phenology in Sample Plot (Categories 1-6): Vegetative:_____Flowering:_____Fruiting:_____Dead:_____

Evidence in Sample Plot (Categories 1-6) of: Herbivory:_____Disease:_____Stunted Growth:_____

Is Sample Plot within Current Mapped Extent?_____Yes_____No

**II. SAMPLE PLOT LOCATION & SITE PHOTOMONITORING -** *consult SDMMP list of GPS coordinates for plot center and photo locations.*

*Enter here only if new habitat plot location or to make a correction to coordinates in list provided.*

GPS/Smartphone Accuracy: +/-_____m Datum:_____(NAD83 Recommended) Coord. Syst: UTM:___State Plane:___

Center of Plot Coord: E:_____N:_____No Change:_____New:_____Correction:_____

Camera type:_____PhotoCoord: E:_____N:_____No Change:____New:_____Correction:_____

Location 1: _____ _____ _____ _____ _____

Direction (facing) Height (m) Camera Angle Up or Down Photo #

E:_____N:_____ _____ _____ _____ _____ _____ _____

Photo Location 2 [Coordinates] Direction (facing) Height (m) Camera Angle Up or Down Photo #

**III. SAMPLE PLOT ASSESSMENT** *- Assess habitat covariates in* ***10m radius sample t plot****. Vegetation alliance can be assigned using San Diego vegetation key (AECOM 2012) in office or field using "Associated Species" data. See page 4 for mammal activity categories. Record any notes on p. 3.*

SANDAG 2012 Vegetation Alliance/Association: _____

*Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (50% to <75%); 6 (≥75%)*

Cryptogamic Crust Cover:_____(category) Thatch (Non-Native Grass) Cover:_____(category)

*Thatch Depth categories: 1 (no thatch); 2 (<1 cm); 3 (1 to <5 cm); 4 (5 to <10 cm); 5 (10 to <15 cm); 6 (15 to < 20 cm); 7 (≥ 20 cm)*

Thatch Depth: Ave._____(category) Thatch Depth: Max:_____cm

Dead Standing Biomass? Yes:_____No:_____If yes, species:_____Cover Class (1-6):_____Ave. Height:_____cm

Mammal Species Activity Categories (1-4): Feral Pig Activity:_____Ground Squirrel Activity:_____Gopher Activity: _____

Habitat plot representative of maximum extent? Yes:_____No:_____If no, note differences on Page 3.

**IV. ASSOCIATED SPECIES IN SAMPLE PLOT** ***Record cover estimate, not cover category****. See % cover diagram, p. 5. Record substrate, total veg & total cover at bottom of form. Total cover should be at least 100% to account for entire plot. Record notes on p. 3.*

| Species | % Cover | Species | % Cover |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Bare Ground:_____Cryptogamic Soil Crust:_____ Rock:_____ Litter:_____

Water:_____ Total Live Vegetation:_____ Dead Shrubs:_____ Total Cover:_____(∑ =100%)

| | |
|---|---|
| *Scientific Name: Burrowing Owl* | *MSP Occurrence ID:* |
| *Preserve: Ramona Grassland County Preserve* | *Occurrence Name: Polygon 1* |
| *Date: July 8, 2025* | *Surveyors & Affiliation/Agency: Karla Alcaraz, Amy Orduño-Baez, Andrew South & Environmental Science Associates, Blackhawk Environmental* |

**V. CURRENT MAPPED EXTENT INFORMATION.** *Count or estimate number of plants in mapped extent. Area can be calculated based on GIS perimeter mapping or visual mapping on aerial photo in the office.*

# Plants/Current Mapped Extent:_____, Exact Count:_____, Estimate (1000s, 10k):_____, Uncertainty?_____

For both exact counts and estimates, indicate: Counted/estimated individual plants:_____OR Counted/estimated clusters of plants:_____

For geophytes: are counts of flowering or vegetative individuals? Flowering:_____Vegetative:_____

Area of Current Mapped Extent:_____Units:_____Exact (GPS mapping):_____Estimate:_____

Perimeter of current extent determined by walking it or estimated by other means (mapped on aerials)? Walked:_____Other (describe p. 3):_____

Species in Maximum Extent? Yes:_____No:_____If not, why

_____

**VI. THREATS ASSESSMENT IN MAXIMUM EXTENT** - *Assess threats within the **occurrence's maximum extent** (cumulative extent over years of monitoring) **plus 10-m surrounding buffer**. Record notes on p. 3.*

Surrounding Land Use/Activity at or Adjacent to Site: Airport and associated aviation activities and rural development.

*Disturbance Classes (rank each threat as 1-7): 1 = no sign of disturbance, 2 = disturbance in 10m surrounding buffer but not within maximum extent, 3 = disturbance occurs in >0 % to <10% of area within maximum extent, 4 = disturbance in 10% to <25% of maximum extent, 5 = disturbance in 25 to < 50% of maximum extent, 6 = disturbance occurs within 50 to <75% of maximum exent, and 7 = disturbance occurs within ≥75% of maximum extent.*

| | | | | | |
|---|---|---|---|---|---|
| Non-Native Forbs* | 4 | Feral Pig Activity* | 1 | Erosion* | 1 |
| Non-Native Grasses* | 6 | Trampling* | 1 | Urban Runoff* | 1 |
| Non-Native Woody Plants* | 1 | Vandalism* | 1 | Sea-level rise* | |
| Competitive Native Plants* | 2 | Grazing (Y/N/UNK)* | Unknown | Slope Movement* | 1 |
| Dumping/Trash* | 2 | Historic Agriculture (Y/N/Unk)* | Unknown | Soil Compaction* | 1 |
| Encampments* | 1 | Altered Hydrology* | 1 | *Additional room for notes on page 4. | |

Fuel Modification Zone/Fire Break: 1 If Observed, Briefly Describe:

Road Construction/Maintenance: 2 If Observed, Briefly Describe: Visible vehicle tracks, unknown if from service vehicles.

Vegetation Clearing: 1 If Observed, Briefly Describe:

Restoration Project (Impacts): 1 If Observed, Briefly Describe:

ORV Activity 2 If Observed, List Type(s) of ORV Activity: Visible vehicle tracks, unknown if from service vehicles.

Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned?____OR Unknown Burn Year? Unknown

Disturbance from Trails (authorized & unauthorized) 2 If Trails are Present, are they Authorized (circle one)? ☐ Yes / ☐ No / ☐ Both / ☑ Unknown

Type of Trail Use (Yes/No)? Hiking: No Biking: No Equestrian: No Dog: No Service Vehicles: Unknown Other (Describe):_____

Illegal Trail Use? ☐ Yes ☐ No ☑ Unknown

Describe: Predator presence (6) Other Disturbance? List & Rank: Presence of predators such as raptors.

Collection? Yes:_____ No:_____ Collector:_____

Collection #:_____ Herbarium:_____ Species Collected: _____

Collection 2, Collector:_____ (enter additional collections on p. 3)

Collection #:_____ Herbarium:_____ Species Collected: _____

Occurrence ID: _____ Species: Burrowing Owl Date: July 8, 2025

## VI. MANAGEMENT RECOMMENDATIONS

Manage vegetation to maintain the low, open cover preferred by BUOW. Avoid tall, dense vegetation that may obscure visibility or provide cover for predators. In areas with rocky outcrops and suitable burrows, prioritize vegetation management to enhance their suitability as potential BUOW habitat.

## VII. MANAGEMENT ACTIONS IN LAST YEAR

Unknown

## VIII. CNDDB SPECIES DETECTED & NOTES

List any sensitive plant or animal species to add to the CNDDB:

**Time Finish:** 10:48

Occurrence ID: _____ Species: Burrowing Owl Date: July 8, 2025

Non-Native Forbs. If Observed, Briefly Describe: *Lactuca serriola*, *Ambrosia psilostachya*, *Erodium cicutarium*, *Hirschfeldia incana*, *Erodium botrys* and *Rumex* sp., can outcompete native species and alter suitable habitat.

Non-Native Grasses. If Observed, Briefly Describe: *Avena* sp., *Bromus diandrus*, *Bromus* sp., *Hordeum marinum* can reduce visibility and increase fire risk.

Non-Native Woody Plants. If Observed, Briefly Describe:

Competitive Native Plants. If Observed, Briefly Describe: *Ambrosia psilostachya* and *Croton setiger* observed. Can form dense patches that may reduce the open, low-vegetation habitat preferred by BUOW for visibility.

Dumping/Trash. If Observed, Briefly Describe: A single Mylar balloon was observed on site.

Encampments. If Observed, Briefly Describe:

Feral Pig Activity. If Observed, Briefly Describe:

Trampling. If Observed, Briefly Describe:

Vandalism. If Observed, Briefly Describe:

Grazing. If Observed, Briefly Describe:

Historic Agriculture. If Observed, Briefly Describe:

Altered Hydrology. If Observed, Briefly Describe:

Sea level rise. If Observed, Briefly Describe:

Erosion. If Observed, Briefly Describe:

Urban Runoff. If Observed, Briefly Describe:

Slope Movement. If Observed, Briefly Describe:

Soil Compaction. If Observed, Briefly Describe:

**Time Finish:** 10:48

**Categories of % Individuals in Sample Plot for Phenological Stages (Vegetative, Flowering, Fruiting & Dead) and for Evidence of Herbivory, Disease and Stunted Growth.**

1 = 0% (not detected)

2 = >0% to <10%

3 = 10% to <25%

4 = 25% to <50%

5 = 50% to <75%

6 = ≥75%

**% Cover Class Definitions within Sample Plot for Cryptogamic Crust and Thatch.**

See page 5 for illustrations of different cover classes.

1 = 0% cover (not detected)

2 = >0% to <10% cover

3 = 10% to <25% cover

4 = 25% to <50% cover

5 = 50% to <75% cover

6 = ≥75% cover

**Feral Pig Activity within Sample Plot:**

1 = No feral pig activity (rooting, wallowing, vegetation destruction, tracks, scat, pig) detected.

2 = Signs of pig activity (rooting, wallowing, vegetation destruction) in sample plot appear months old.

3 = Signs of recent pig activity (rooting, wallowing, vegetation destruction, tracks, scat, pig) in adjacent area but not within sample plot.

4 = Recent signs of pig activity (rooting, wallowing, vegetation destruction, tracks, scat, pigs) within sample plot.

**Ground Squirrel Activity within Sample Plot:**

1 = No ground squirrel burrows detected.

2 = Burrows and/or ground squirrels observed in adjacent area but not within sample plot.

3 = Single squirrel or burrow seen within sample plot.

4 = Multiple burrows and/or squirrels seen within sample plot.

**Botta's Pocket Gopher Activity within Sample Plot:**

1 = No pocket gopher mounds detected.

2 = Mounds or gophers observed in adjacent area but not within sample plot.

3 = <10 mounds observed within sample plot.

4 = ≥10 mounds or one or more gophers seen within sample plot.

**Disturbance Categories within the Maximum Extent:**

1 = No sign of disturbance within maximum extent or in adjacent 10 m buffer.

2 = Disturbance does not occur within maximum extent but is detected within the surrounding 10 m buffer area.

3 = Disturbance present in >0% to <10% of area within maximum extent.

4 = Disturbance occurs in 10% to <25% of area within maximum extent.

5 = Disturbance occurs in 25% to <50% of area within maximum extent.

6 = Disturbance occurs 50% to <75% of area within maximum extent.

7 = Disturbance occurs ≥75% of area within maximum extent.

**CNPS Cover Diagram** 

Cover Diagrams from CNPS



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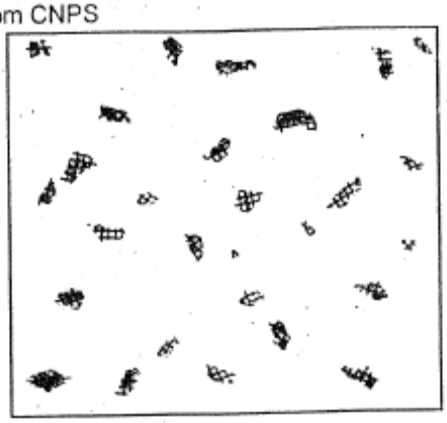

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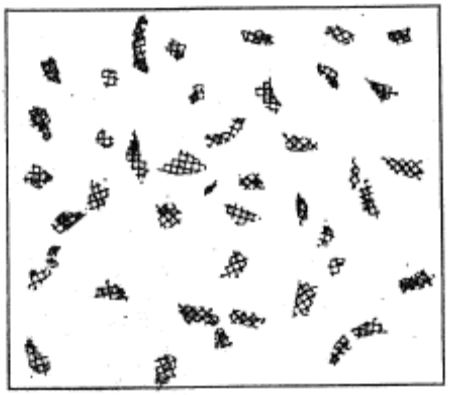

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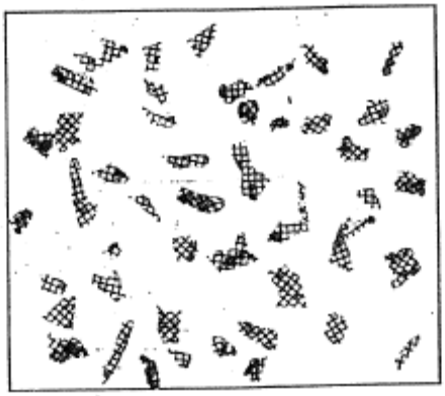

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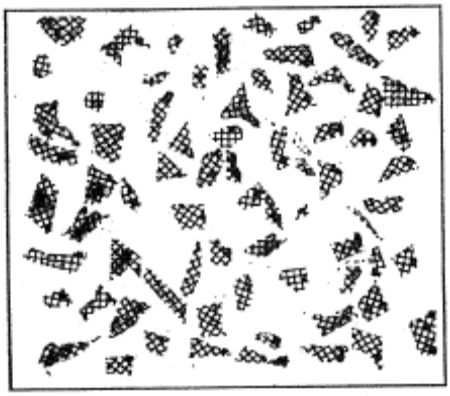

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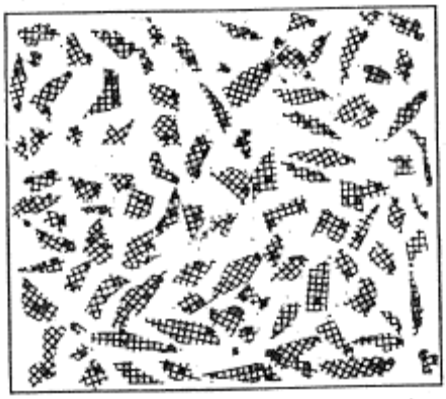

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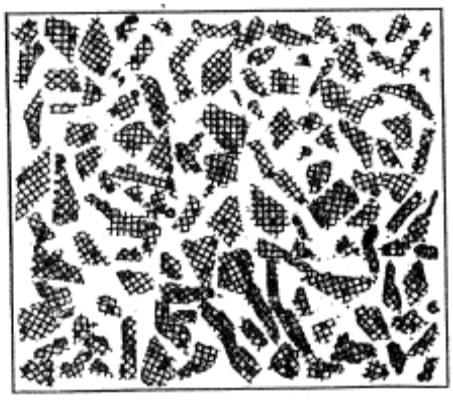

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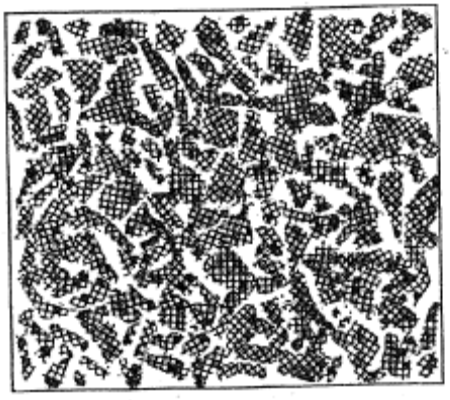

75%

*Scientific Name: Athene cunicularia* *Common Name: Burrowing Owl*

*MSP Occurrence ID:* *New MSP Occurrence? Yes:_____, No:_____, Unknown:_____*

*Sample Point #:* *New Sample Point? Yes:_____, No:_____, Unknown:_____*

*Occurrence Name:* *CNDDB EO#:* *Translocated? Yes:_____, No:_____, Unknown:_____*

*Preserve: Ramona Grasslands County Preserve – Polygons 2-4*

*Land Owner:* *Land Manager:*

*Surveyors & Affiliation: Karla Alcaraz, Amy Orduño-Baez, Andrew South & Environmental Science Associates, Blackhawk Environmental*

*Date: July 8, 2025* *Time Start: 05:47*

**I. SAMPLE PLOT INFORMATION.** *Count # plants in 10m radius sample plot, see p. 4 for category definitions for phenology, herbivory, disease & stunted growth. Record notes on p. 3.*

# Plants/Sample Plot:_____Exact:_____Estimate:_____Uncertainty?_____Sample plot radius_____m

For both exact counts and estimates, indicate: Counted/estimated indiv. plants:_____OR Counted/estimated clusters of plants:_____

For geophytes: are counts of flowering or vegetative individuals? Flowering:_____Vegetative:_____

Phenology in Sample Plot (Categories 1-6): Vegetative:_____Flowering:_____Fruiting:_____Dead:_____

Evidence in Sample Plot (Categories 1-6) of: Herbivory:_____Disease:_____Stunted Growth:_____

Is Sample Plot within Current Mapped Extent?_____Yes_____No

**II. SAMPLE PLOT LOCATION & SITE PHOTOMONITORING -** *consult SDMMP list of GPS coordinates for plot center and photo locations.*

*Enter here only if new habitat plot location or to make a correction to coordinates in list provided.*

GPS/Smartphone Accuracy: +/-_____m Datum:_____(NAD83 Recommended) Coord. Syst: UTM:___State Plane:___

Center of Plot Coord: E:_____N:_____No Change:_____New:_____Correction:_____

Camera type:_____PhotoCoord: E:_____N:_____No Change:____New:_____Correction:_____

Location 1: _____ _____ _____ _____ _____

Direction (facing) Height (m) Camera Angle Up or Down Photo #

E:_____N:_____ _____ _____ _____ _____ _____

Photo Location 2 [Coordinates] Direction (facing) Height (m) Camera Angle Up or Down Photo #

**III. SAMPLE PLOT ASSESSMENT** - *Assess habitat covariates in* ***10m radius sample t plot****. Vegetation alliance can be assigned using San Diego vegetation key (AECOM 2012) in office or field using "Associated Species" data. See page 4 for mammal activity categories. Record any notes on p. 3.*

SANDAG 2012 Vegetation Alliance/Association: _____

*Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (50% to <75%); 6 (≥75%)*

Cryptogamic Crust Cover:_____(category) Thatch (Non-Native Grass) Cover:_____(category)

*Thatch Depth categories: 1 (no thatch); 2 (<1 cm); 3 (1 to <5 cm); 4 (5 to <10 cm); 5 (10 to <15 cm); 6 (15 to < 20 cm); 7 (≥ 20 cm)*

Thatch Depth: Ave._____(category) Thatch Depth: Max:_____cm

Dead Standing Biomass? Yes:_____No:_____If yes, species:_____Cover Class (1-6):_____Ave. Height:_____cm

Mammal Species Activity Categories (1-4): Feral Pig Activity:_____Ground Squirrel Activity: 4 Gopher Activity: _____

Habitat plot representative of maximum extent? Yes:_____No:_____If no, note differences on Page 3.

**IV. ASSOCIATED SPECIES IN SAMPLE PLOT** ***Record cover estimate, not cover category****. See % cover diagram, p. 5. Record substrate, total veg & total cover at bottom of form. Total cover should be at least 100% to account for entire plot. Record notes on p. 3.*

| Species | % Cover | Species | % Cover |
|---|---|---|---|
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Bare Ground:_____Cryptogamic Soil Crust:_____ Rock:_____ Litter:_____

Water:_____ Total Live Vegetation:_____ Dead Shrubs:_____ Total Cover:_____(∑ =100%)

| | |
|---|---|
| *Scientific Name: Burrowing Owl* | *MSP Occurrence ID: N/A* |
| *Preserve: Ramona Grasslands Preserve* | *Occurrence Name: Polygons 2-4* |
| *Date: July 8, 2025* | *Surveyors & Affiliation/Agency: Karla Alcaraz, Amy Orduño-Baez, Andrew South & Environmental Science Associates, Blackhawk Environmental* |

**V. CURRENT MAPPED EXTENT INFORMATION.** *Count or estimate number of plants in mapped extent. Area can be calculated based on GIS perimeter mapping or visual mapping on aerial photo in the office.*

# Plants/Current Mapped Extent:_____, Exact Count:_____, Estimate (1000s, 10k):_____, Uncertainty?_____

For both exact counts and estimates, indicate: Counted/estimated individual plants:_____OR Counted/estimated clusters of plants:_____

For geophytes: are counts of flowering or vegetative individuals? Flowering:_____Vegetative:_____

Area of Current Mapped Extent:_____Units:_____Exact (GPS mapping):_____Estimate:_____

Perimeter of current extent determined by walking it or estimated by other means (mapped on aerials)? Walked:_____Other (describe p. 3):_____

Species in Maximum Extent? Yes:_____No:_____If not, why

_____

**VI. THREATS ASSESSMENT IN MAXIMUM EXTENT** - *Assess threats within the **occurrence's maximum extent** (cumulative extent over years of monitoring) **plus 10-m surrounding buffer**. Record notes on p. 3.*

Surrounding Land Use/Activity at or Adjacent to Site: Rural development, cattle grazing, RMWD operations, and activities associated with grazing land management

*Disturbance Classes (rank each threat as 1-7): 1 = no sign of disturbance, 2 = disturbance in 10m surrounding buffer but not within maximum extent, 3 = disturbance occurs in >0 % to <10% of area within maximum extent, 4 = disturbance in 10% to <25% of maximum extent, 5 = disturbance in 25 to < 50% of maximum extent, 6 = disturbance occurs within 50 to <75% of maximum exent, and 7 = disturbance occurs within ≥75% of maximum extent.*

| | | | | | |
|---|---|---|---|---|---|
| Non-Native Forbs* | 5 | Feral Pig Activity* | 1 | Erosion* | 3 |
| Non-Native Grasses* | 7 | Trampling* | 6 | Urban Runoff* | 1 |
| Non-Native Woody Plants* | 1 | Vandalism* | 1 | Sea-level rise* | |
| Competitive Native Plants* | 3 | Grazing (Y/N/UNK)* | Yes | Slope Movement* | 1 |
| Dumping/Trash* | 1 | Historic Agriculture (Y/N/Unk)* | Unknown | Soil Compaction* | 5 |
| Encampments* | 1 | Altered Hydrology* | 1 | *Additional room for notes on page 4. | |

Fuel Modification Zone/Fire Break: 1 If Observed, Briefly Describe:

Road Construction/Maintenance: 1 If Observed, Briefly Describe:

Vegetation Clearing: 1 If Observed, Briefly Describe:

Restoration Project (Impacts): 1 If Observed, Briefly Describe:

ORV Activity 1 If Observed, List Type(s) of ORV Activity:

Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned?____OR Unknown Burn Year? Unknown

Disturbance from Trails (authorized & unauthorized) 1 If Trails are Present, are they Authorized (circle one)? ☑ Yes / ☐ No / ☐ Both / ☐ Unknown

Type of Trail Use (Yes/No)? Hiking: Yes Biking: Yes Equestrian: Yes Dog: Yes Service Vehicles: Yes Other (Describe):Trail use occurs adjacent to, but not within, the selected monitoring polygons.

Illegal Trail Use? ☐ Yes ☑ No ☐ Unknown

Describe: Predator presence (6) Other Disturbance? List & Rank: Presence of predators such as raptors.

Collection? Yes:_____ No:_____ Collector:_____

Collection #:_____ Herbarium:_____ Species Collected: _____

Collection 2, Collector:_____ (enter additional collections on p. 3)

Collection #:_____ Herbarium:_____ Species Collected: _____

Occurrence ID: _____ Species: Burrowing Owl Date: July 8, 2025

## VI. MANAGEMENT RECOMMENDATIONS

Manage vegetation to maintain the low, open cover preferred by BUOW. Avoid tall, dense vegetation that may obscure visibility or provide cover for predators. In areas with rocky outcrops and suitable burrows, prioritize vegetation management to enhance their suitability as potential BUOW habitat.

## VII. MANAGEMENT ACTIONS IN LAST YEAR

Unknown

## VIII. CNDDB SPECIES DETECTED & NOTES

List any sensitive plant or animal species to add to the CNDDB:

American Peregrine Falcon, California Horned Lark, Grasshopper Sparrow

**Time Finish:** 08:38

Occurrence ID: _____ Species: Burrowing Owl Date: July 8, 2025

Non-Native Forbs. If Observed, Briefly Describe: *Erodium botrys* observed. *Hirschfeldia incana* was observed can outcompete native species and alter suitable habitat.

Non-Native Grasses. If Observed, Briefly Describe: *Bromus diandrus*, *Avena* sp., *Bromus* sp. can reduce visibility and increase fire risk.

Non-Native Woody Plants. If Observed, Briefly Describe:

Competitive Native Plants. If Observed, Briefly Describe: *Ambrosia psilostachya* and *Croton setiger* observed. Can form dense patches that may reduce the open, low-vegetation habitat preferred by BUOW for visibility.

Dumping/Trash. If Observed, Briefly Describe:

Encampments. If Observed, Briefly Describe:

Feral Pig Activity. If Observed, Briefly Describe:

Trampling. If Observed, Briefly Describe: Vegetation disturbance and potential impacts to BUOW may result from frequent cattle movement/trampling.

Vandalism. If Observed, Briefly Describe:

Grazing. If Observed, Briefly Describe: Cattle grazing observed—may help maintain low vegetation but risks trampling burrows.

Historic Agriculture. If Observed, Briefly Describe:

Altered Hydrology. If Observed, Briefly Describe:

Sea level rise. If Observed, Briefly Describe:

Erosion. If Observed, Briefly Describe: Erosion due to trampling by cattle observed in certain areas.

Urban Runoff. If Observed, Briefly Describe:

Slope Movement. If Observed, Briefly Describe:

Soil Compaction. If Observed, Briefly Describe: Evidence of soil compaction observed in the form of cattle trails.

**Time Finish:** 08:38

**Categories of % Individuals in Sample Plot for Phenological Stages (Vegetative, Flowering, Fruiting & Dead) and for Evidence of Herbivory, Disease and Stunted Growth.**

1 = 0% (not detected)

2 = >0% to <10%

3 = 10% to <25%

4 = 25% to <50%

5 = 50% to <75%

6 = ≥75%

**% Cover Class Definitions within Sample Plot for Cryptogamic Crust and Thatch.**

See page 5 for illustrations of different cover classes.

1 = 0% cover (not detected)

2 = >0% to <10% cover

3 = 10% to <25% cover

4 = 25% to <50% cover

5 = 50% to <75% cover

6 = ≥75% cover

**Feral Pig Activity within Sample Plot:**

1 = No feral pig activity (rooting, wallowing, vegetation destruction, tracks, scat, pig) detected.

2 = Signs of pig activity (rooting, wallowing, vegetation destruction) in sample plot appear months old.

3 = Signs of recent pig activity (rooting, wallowing, vegetation destruction, tracks, scat, pig) in adjacent area but not within sample plot.

4 = Recent signs of pig activity (rooting, wallowing, vegetation destruction, tracks, scat, pigs) within sample plot.

**Ground Squirrel Activity within Sample Plot:**

1 = No ground squirrel burrows detected.

2 = Burrows and/or ground squirrels observed in adjacent area but not within sample plot.

3 = Single squirrel or burrow seen within sample plot.

4 = Multiple burrows and/or squirrels seen within sample plot.

**Botta's Pocket Gopher Activity within Sample Plot:**

1 = No pocket gopher mounds detected.

2 = Mounds or gophers observed in adjacent area but not within sample plot.

3 = <10 mounds observed within sample plot.

4 = ≥10 mounds or one or more gophers seen within sample plot.

**Disturbance Categories within the Maximum Extent:**

1 = No sign of disturbance within maximum extent or in adjacent 10 m buffer.

2 = Disturbance does not occur within maximum extent but is detected within the surrounding 10 m buffer area.

3 = Disturbance present in >0% to <10% of area within maximum extent.

4 = Disturbance occurs in 10% to <25% of area within maximum extent.

5 = Disturbance occurs in 25% to <50% of area within maximum extent.

6 = Disturbance occurs 50% to <75% of area within maximum extent.

7 = Disturbance occurs ≥75% of area within maximum extent.

**CNPS Cover Diagram** 

Cover Diagrams from CNPS



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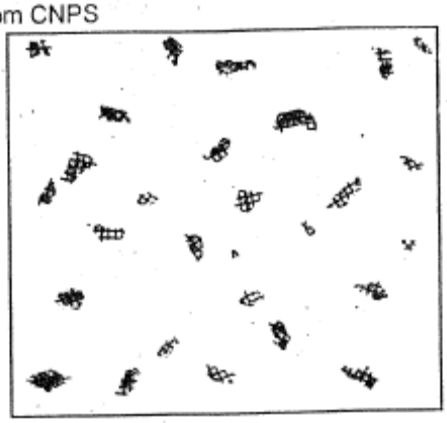

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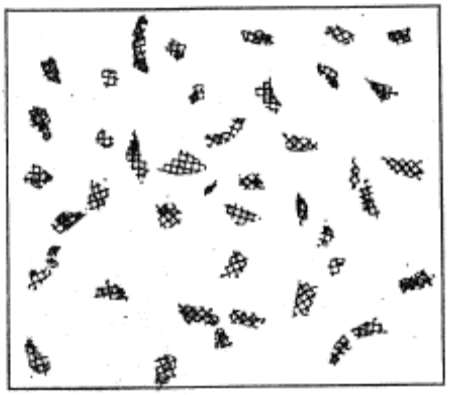

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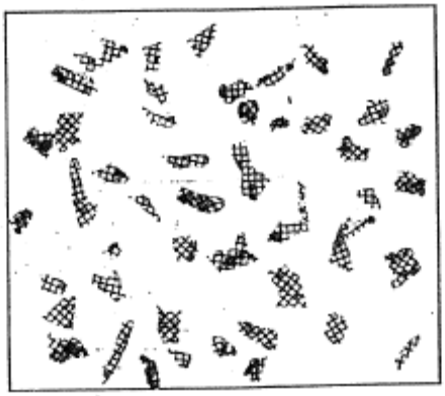

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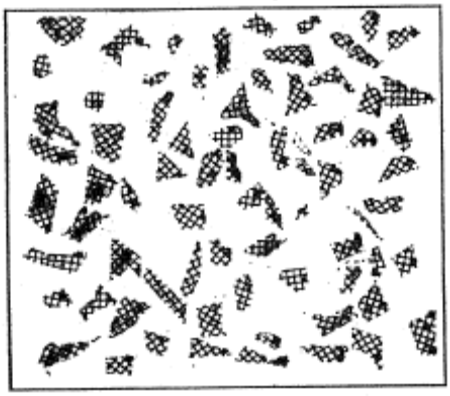

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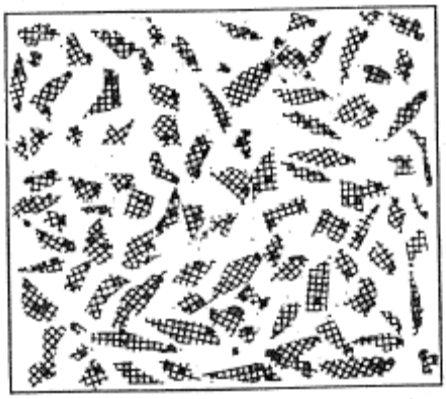

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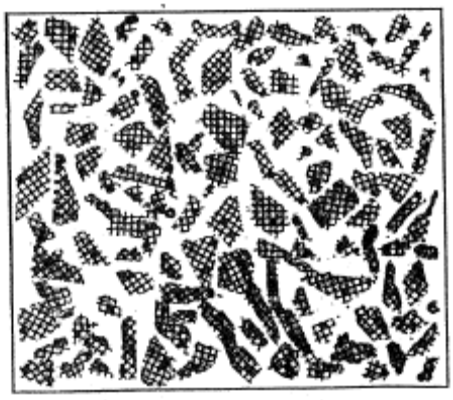

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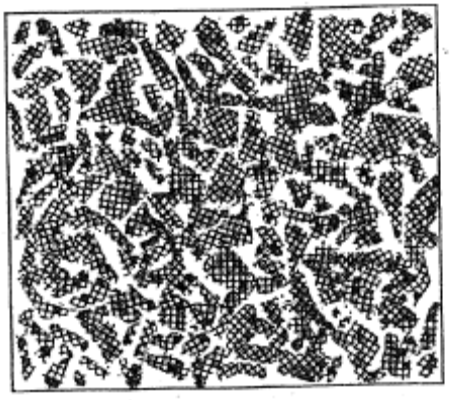

75%

*Scientific Name: Athene cunicularia* *Common Name: Burrowing Owl*

*MSP Occurrence ID:* *New MSP Occurrence? Yes:_____, No:_____, Unknown:_____*

*Sample Point #:* *New Sample Point? Yes:_____, No:_____, Unknown:_____*

*Occurrence Name:* *CNDDB EO#:* *Translocated? Yes:_____, No:_____, Unknown:_____*

*Preserve: Ramona Grasslands County Preserve – Polygon 5*

*Land Owner:* *Land Manager:*

*Surveyors & Affiliation: Karla Alcaraz, Amy Orduño-Baez, Andrew South & Environmental Science Associates, Blackhawk Environmental*

*Date: July 9, 2025* *Time Start:*

**I. SAMPLE PLOT INFORMATION.** *Count # plants in 10m radius sample plot, see p. 4 for category definitions for phenology, herbivory, disease & stunted growth. Record notes on p. 3.*

# Plants/Sample Plot:_____Exact:_____Estimate:_____Uncertainty?_____Sample plot radius_____m

For both exact counts and estimates, indicate: Counted/estimated indiv. plants:_____OR Counted/estimated clusters of plants:_____

For geophytes: are counts of flowering or vegetative individuals? Flowering:_____Vegetative:_____

Phenology in Sample Plot (Categories 1-6): Vegetative:_____Flowering:_____Fruiting:_____Dead:_____

Evidence in Sample Plot (Categories 1-6) of: Herbivory:_____Disease:_____Stunted Growth:_____

Is Sample Plot within Current Mapped Extent?_____Yes_____No

**II. SAMPLE PLOT LOCATION & SITE PHOTOMONITORING -** *consult SDMMP list of GPS coordinates for plot center and photo locations. Enter here only if new habitat plot location or to make a correction to coordinates in list provided.*

GPS/Smartphone Accuracy: +/-_____m Datum:_____(NAD83 Recommended) Coord. Syst: UTM:___State Plane:___

Center of Plot Coord: E:_____N:_____No Change:_____New:_____Correction:_____

Camera type:_____PhotoCoord: E:_____N:_____No Change:____New:_____Correction:_____

Location 1: _____ _____ _____ _____ _____

Direction (facing) Height (m) Camera Angle Up or Down Photo #

E:_____N:_____ _____ _____ _____ _____ _____ _____

Photo Location 2 [Coordinates] Direction (facing) Height (m) Camera Angle Up or Down Photo #

**III. SAMPLE PLOT ASSESSMENT** *- Assess habitat covariates in* ***10m radius sample t plot****. Vegetation alliance can be assigned using San Diego vegetation key (AECOM 2012) in office or field using "Associated Species" data. See page 4 for mammal activity categories. Record any notes on p. 3.*

SANDAG 2012 Vegetation Alliance/Association: _____

*Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (50% to <75%); 6 (≥75%)*

Cryptogamic Crust Cover:_____(category) Thatch (Non-Native Grass) Cover:_____(category)

*Thatch Depth categories: 1 (no thatch); 2 (<1 cm); 3 (1 to <5 cm); 4 (5 to <10 cm); 5 (10 to <15 cm); 6 (15 to < 20 cm); 7 (≥ 20 cm)*

Thatch Depth: Ave._____(category) Thatch Depth: Max:_____cm

Dead Standing Biomass? Yes:_____No:_____If yes, species:_____Cover Class (1-6):_____Ave. Height:_____cm

Mammal Species Activity Categories (1-4): Feral Pig Activity:_____Ground Squirrel Activity:_____Gopher Activity: _____

Habitat plot representative of maximum extent? Yes:_____No:_____If no, note differences on Page 3.

**IV. ASSOCIATED SPECIES IN SAMPLE PLOT** ***Record cover estimate, not cover category****. See % cover diagram, p. 5. Record substrate, total veg & total cover at bottom of form. Total cover should be at least 100% to account for entire plot. Record notes on p. 3.*

| Species | % Cover | Species | % Cover |
|---|---|---|---|
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Bare Ground:_____Cryptogamic Soil Crust:_____ Rock:_____ Litter:_____

Water:_____ Total Live Vegetation:_____ Dead Shrubs:_____ Total Cover:_____(∑ =100%)

| | |
|---|---|
| *Scientific Name: Athene cunicularia* | *MSP Occurrence ID:* |
| *Preserve: Ramona Grasslands County Preserve* | *Occurrence Name: Polygon 5* |
| *Date: July 9, 2025* | *Surveyors & Affiliation/Agency: Karla Alcaraz, Amy Orduño-Baez, Andrew South & Environmental Science Associates, Blackhawk Environmental* |

**V. CURRENT MAPPED EXTENT INFORMATION.** *Count or estimate number of plants in mapped extent. Area can be calculated based on GIS perimeter mapping or visual mapping on aerial photo in the office.*

# Plants/Current Mapped Extent:_____, Exact Count:_____, Estimate (1000s, 10k):_____, Uncertainty?_____

For both exact counts and estimates, indicate: Counted/estimated individual plants:_____OR Counted/estimated clusters of plants:_____

For geophytes: are counts of flowering or vegetative individuals? Flowering:_____Vegetative:_____

Area of Current Mapped Extent:_____Units:_____Exact (GPS mapping):_____Estimate:_____

Perimeter of current extent determined by walking it or estimated by other means (mapped on aerials)? Walked:_____Other (describe p. 3):_____

Species in Maximum Extent? Yes:_____No:_____If not, why

**VI. THREATS ASSESSMENT IN MAXIMUM EXTENT** - *Assess threats within the **occurrence's maximum extent** (cumulative extent over years of monitoring) **plus 10-m surrounding buffer**. Record notes on p. 3.*

Surrounding Land Use/Activity at or Adjacent to Site: Rural development, cattle grazing, RMWD operations, and activities associated with grazing land management, and residential homes.

*Disturbance Classes (rank each threat as 1-7): 1 = no sign of disturbance, 2 = disturbance in 10m surrounding buffer but not within maximum extent, 3 = disturbance occurs in >0 % to <10% of area within maximum extent, 4 = disturbance in 10% to <25% of maximum extent, 5 = disturbance in 25 to < 50% of maximum extent, 6 = disturbance occurs within 50 to <75% of maximum exent, and 7 = disturbance occurs within ≥75% of maximum extent.*

| | | | | | |
|---|---|---|---|---|---|
| Non-Native Forbs* | 3 | Feral Pig Activity* | 1 | Erosion* | 1 |
| Non-Native Grasses* | 5 | Trampling* | 1 | Urban Runoff* | 1 |
| Non-Native Woody Plants* | 2 | Vandalism* | 1 | Sea-level rise* | |
| Competitive Native Plants* | 3 | Grazing (Y/N/UNK)* | Unknown | Slope Movement* | 1 |
| Dumping/Trash* | 1 | Historic Agriculture (Y/N/Unk)* | Unknown | Soil Compaction* | 2 |
| Encampments* | 1 | Altered Hydrology* | 1 | *Additional room for notes on page 4. | |

Fuel Modification Zone/Fire Break: 1 If Observed, Briefly Describe:

Road Construction/Maintenance: 2 If Observed, Briefly Describe: Service vehicle access was observed; visible tire tracks were present along established routes.

Vegetation Clearing: 1 If Observed, Briefly Describe:

Restoration Project (Impacts): 1 If Observed, Briefly Describe:

ORV Activity 1 If Observed, List Type(s) of ORV Activity:

Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned?____OR Unknown Burn Year? Unknown

Disturbance from Trails (authorized & unauthorized) 2 If Trails are Present, are they Authorized (circle one)? ☐ Yes / ☐ No / ☐ Both / ☑ Unknown

Type of Trail Use (Yes/No)? Hiking: No Biking: No Equestrian: No Dog: No Service Vehicles: Yes Other (Describe):_____

Illegal Trail Use? ☐ Yes ☑ No ☐ Unknown

Describe: Predator presence (6) Other Disturbance? List & Rank: Presence of predators such as raptors.

Collection? Yes:_____ No:_____ Collector:_____

Collection #:_____ Herbarium:_____ Species Collected: _____

Collection 2, Collector:_____ (enter additional collections on p. 3)

Collection #:_____ Herbarium:_____ Species Collected: _____

Occurrence ID: _____ Species: Burrowing Owl Date: July 9, 2025

## VI. MANAGEMENT RECOMMENDATIONS

Manage vegetation to maintain the low, open cover preferred by BUOW. Avoid tall, dense vegetation that may obscure visibility or provide cover for predators. In areas with rocky outcrops and suitable burrows, prioritize vegetation management to enhance their suitability as potential BUOW habitat.

## VII. MANAGEMENT ACTIONS IN LAST YEAR

Unknown

## VIII. CNDDB SPECIES DETECTED & NOTES

List any sensitive plant or animal species to add to the CNDDB:

Northern Harrier and Southern Mule Deer

**Time Finish:** 09:42

Occurrence ID: _____ Species: Burrowing Owl Date: July 9, 2025

Non-Native Forbs. If Observed, Briefly Describe: *Erodium botrys*, *Hirschfeldia incana*, *Rumex* sp. can outcompete native species and alter suitable habitat.

Non-Native Grasses. If Observed, Briefly Describe: *Avena* sp., *Bromus diandrus*, *Bromus* sp., *Bromus hordeaceus* can reduce visibility and increase fire risk.

Non-Native Woody Plants. If Observed, Briefly Describe: *Tamarix* sp can outcompete native species and alter suitable habitat.

Competitive Native Plants. If Observed, Briefly Describe: *Ambrosia psilostachya* and *Croton setiger* observed. Can form dense patches that may reduce the open, low-vegetation habitat preferred by BUOW for visibility.

Dumping/Trash. If Observed, Briefly Describe:

Encampments. If Observed, Briefly Describe:

Feral Pig Activity. If Observed, Briefly Describe:

Trampling. If Observed, Briefly Describe:

Vandalism. If Observed, Briefly Describe:

Grazing. If Observed, Briefly Describe: Potential cattle grazing observed in areas adjacent to polygon 5—may help maintain low vegetation but risks trampling burrows.

Historic Agriculture. If Observed, Briefly Describe:

Altered Hydrology. If Observed, Briefly Describe:

Sea level rise. If Observed, Briefly Describe:

Erosion. If Observed, Briefly Describe:

Urban Runoff. If Observed, Briefly Describe:

Slope Movement. If Observed, Briefly Describe:

Soil Compaction. If Observed, Briefly Describe: Evidence of soil compaction observed in the form of visible vehicle tracks along established access routes.

**Time Finish:** 09:42

**Categories of % Individuals in Sample Plot for Phenological Stages (Vegetative, Flowering, Fruiting & Dead) and for Evidence of Herbivory, Disease and Stunted Growth.**

1 = 0% (not detected)

2 = >0% to <10%

3 = 10% to <25%

4 = 25% to <50%

5 = 50% to <75%

6 = ≥75%

**% Cover Class Definitions within Sample Plot for Cryptogamic Crust and Thatch.**

See page 5 for illustrations of different cover classes.

1 = 0% cover (not detected)

2 = >0% to <10% cover

3 = 10% to <25% cover

4 = 25% to <50% cover

5 = 50% to <75% cover

6 = ≥75% cover

**Feral Pig Activity within Sample Plot:**

1 = No feral pig activity (rooting, wallowing, vegetation destruction, tracks, scat, pig) detected.

2 = Signs of pig activity (rooting, wallowing, vegetation destruction) in sample plot appear months old.

3 = Signs of recent pig activity (rooting, wallowing, vegetation destruction, tracks, scat, pig) in adjacent area but not within sample plot.

4 = Recent signs of pig activity (rooting, wallowing, vegetation destruction, tracks, scat, pigs) within sample plot.

**Ground Squirrel Activity within Sample Plot:**

1 = No ground squirrel burrows detected.

2 = Burrows and/or ground squirrels observed in adjacent area but not within sample plot.

3 = Single squirrel or burrow seen within sample plot.

4 = Multiple burrows and/or squirrels seen within sample plot.

**Botta's Pocket Gopher Activity within Sample Plot:**

1 = No pocket gopher mounds detected.

2 = Mounds or gophers observed in adjacent area but not within sample plot.

3 = <10 mounds observed within sample plot.

4 = ≥10 mounds or one or more gophers seen within sample plot.

**Disturbance Categories within the Maximum Extent:**

1 = No sign of disturbance within maximum extent or in adjacent 10 m buffer.

2 = Disturbance does not occur within maximum extent but is detected within the surrounding 10 m buffer area.

3 = Disturbance present in >0% to <10% of area within maximum extent.

4 = Disturbance occurs in 10% to <25% of area within maximum extent.

5 = Disturbance occurs in 25% to <50% of area within maximum extent.

6 = Disturbance occurs 50% to <75% of area within maximum extent.

7 = Disturbance occurs ≥75% of area within maximum extent.

**CNPS Cover Diagram** 

Cover Diagrams from CNPS



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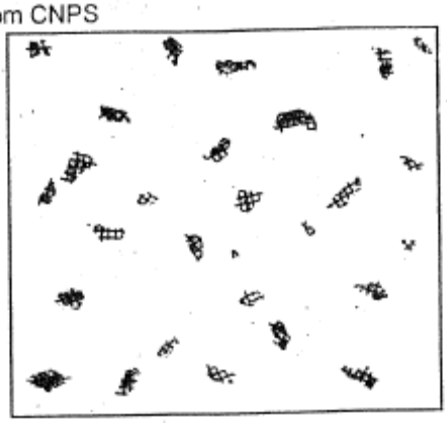

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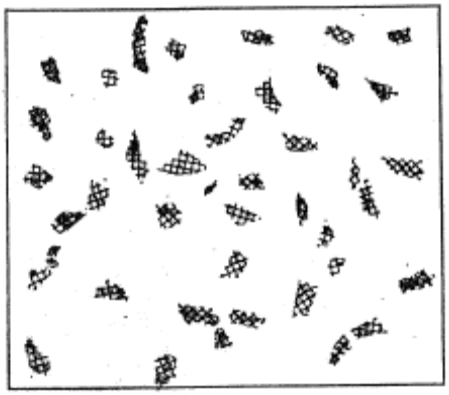

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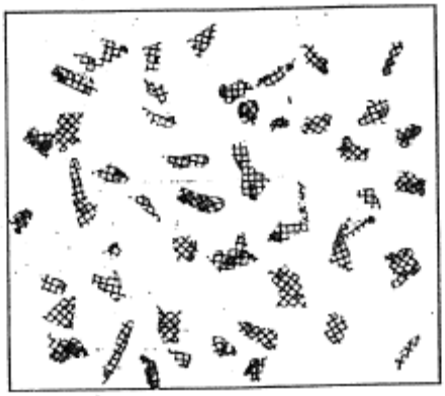

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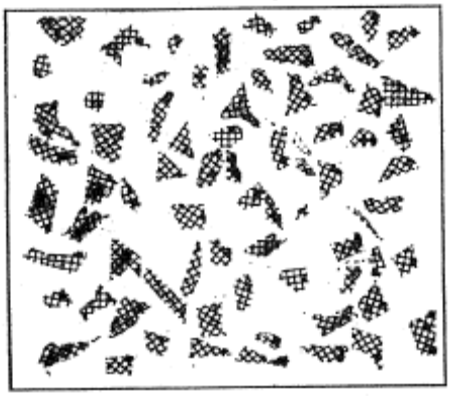

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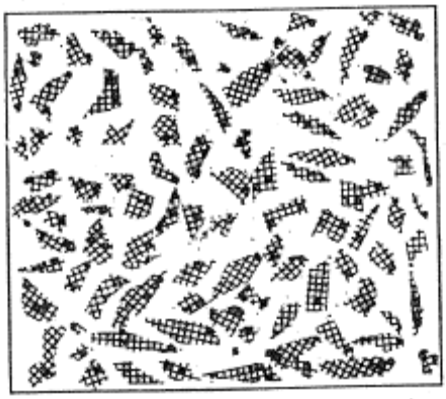

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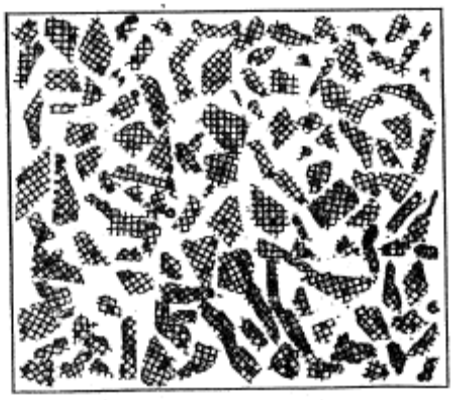

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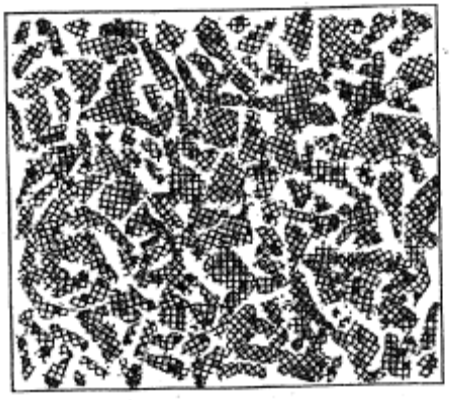

75%

*Scientific Name: Athene cunicularia* *Common Name: Burrowing Owl*

*MSP Occurrence ID:* *New MSP Occurrence? Yes:_____, No:_____, Unknown:_____*

*Sample Point #:* *New Sample Point? Yes:_____, No:_____, Unknown:_____*

*Occurrence Name:* *CNDDB EO#:* *Translocated? Yes:_____, No:_____, Unknown:_____*

*Preserve: Ramona Grasslands County Preserve – Polygon 6*

*Land Owner:* *Land Manager:*

*Surveyors & Affiliation: Karla Alcaraz, Amy Orduño-Baez, Andrew South & Environmental Science Associates, Blackhawk Environmental*

*Date: July 9, 2025* *Time Start:*

**I. SAMPLE PLOT INFORMATION.** *Count # plants in 10m radius sample plot, see p. 4 for category definitions for phenology, herbivory, disease & stunted growth. Record notes on p. 3.*

# Plants/Sample Plot:_____Exact:_____Estimate:_____Uncertainty?_____Sample plot radius_____m

For both exact counts and estimates, indicate: Counted/estimated indiv. plants:_____OR Counted/estimated clusters of plants:_____

For geophytes: are counts of flowering or vegetative individuals? Flowering:_____Vegetative:_____

Phenology in Sample Plot (Categories 1-6): Vegetative:_____Flowering:_____Fruiting:_____Dead:_____

Evidence in Sample Plot (Categories 1-6) of: Herbivory:_____Disease:_____Stunted Growth:_____

Is Sample Plot within Current Mapped Extent?_____Yes_____No

**II. SAMPLE PLOT LOCATION & SITE PHOTOMONITORING -** *consult SDMMP list of GPS coordinates for plot center and photo locations.*

*Enter here only if new habitat plot location or to make a correction to coordinates in list provided.*

GPS/Smartphone Accuracy: +/-_____m Datum:_____(NAD83 Recommended) Coord. Syst: UTM:___State Plane:___

Center of Plot Coord: E:_____N:_____No Change:_____New:_____Correction:_____

Camera type:_____PhotoCoord: E:_____N:_____No Change:____New:_____Correction:_____

Location 1: _____ _____ _____ _____ _____

Direction (facing) Height (m) Camera Angle Up or Down Photo #

E:_____N:_____ _____ _____ _____ _____ _____ _____

Photo Location 2 [Coordinates] Direction (facing) Height (m) Camera Angle Up or Down Photo #

**III. SAMPLE PLOT ASSESSMENT** *- Assess habitat covariates in* ***10m radius sample t plot****. Vegetation alliance can be assigned using San Diego vegetation key (AECOM 2012) in office or field using "Associated Species" data. See page 4 for mammal activity categories. Record any notes on p. 3.*

SANDAG 2012 Vegetation Alliance/Association: _____

*Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (50% to <75%); 6 (≥75%)*

Cryptogamic Crust Cover:_____(category) Thatch (Non-Native Grass) Cover:_____(category)

*Thatch Depth categories: 1 (no thatch); 2 (<1 cm); 3 (1 to <5 cm); 4 (5 to <10 cm); 5 (10 to <15 cm); 6 (15 to < 20 cm); 7 (≥ 20 cm)*

Thatch Depth: Ave._____(category) Thatch Depth: Max:_____cm

Dead Standing Biomass? Yes:_____No:_____If yes, species:_____Cover Class (1-6):_____Ave. Height:_____cm

Mammal Species Activity Categories (1-4): Feral Pig Activity:_____Ground Squirrel Activity: 4 Gopher Activity: _____

Habitat plot representative of maximum extent? Yes:_____No:_____If no, note differences on Page 3.

**IV. ASSOCIATED SPECIES IN SAMPLE PLOT** ***Record cover estimate, not cover category****. See % cover diagram, p. 5. Record substrate, total veg & total cover at bottom of form. Total cover should be at least 100% to account for entire plot. Record notes on p. 3.*

| Species | % Cover | Species | % Cover |
|---|---|---|---|
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Bare Ground:_____Cryptogamic Soil Crust:_____ Rock:_____ Litter:_____

Water:_____ Total Live Vegetation:_____ Dead Shrubs:_____ Total Cover:_____(∑ =100%)

| | |
|---|---|
| *Scientific Name: Burrowing Owl* | *MSP Occurrence ID:* |
| *Preserve: Ramona Grasslands County Preserve* | *Occurrence Name: Polygon 6* |
| *Date: July 9, 2025* | *Surveyors & Affiliation/Agency: Karla Alcaraz, Amy Orduño-Baez, Andrew South & Environmental Science Associates, Blackhawk Environmental* |

**V. CURRENT MAPPED EXTENT INFORMATION.** *Count or estimate number of plants in mapped extent. Area can be calculated based on GIS perimeter mapping or visual mapping on aerial photo in the office.*

# Plants/Current Mapped Extent:_____, Exact Count:_____, Estimate (1000s, 10k):_____, Uncertainty?_____

For both exact counts and estimates, indicate: Counted/estimated individual plants:_____OR Counted/estimated clusters of plants:_____

For geophytes: are counts of flowering or vegetative individuals? Flowering:_____Vegetative:_____

Area of Current Mapped Extent:_____Units:_____Exact (GPS mapping):_____Estimate:_____

Perimeter of current extent determined by walking it or estimated by other means (mapped on aerials)? Walked:_____Other (describe p. 3):_____

Species in Maximum Extent? Yes:_____No:_____If not, why

_____

**VI. THREATS ASSESSMENT IN MAXIMUM EXTENT** - *Assess threats within the **occurrence's maximum extent** (cumulative extent over years of monitoring) **plus 10-m surrounding buffer**. Record notes on p. 3.*

Surrounding Land Use/Activity at or Adjacent to Site: Rural development, cattle grazing, and activities associated with grazing land management

*Disturbance Classes (rank each threat as 1-7): 1 = no sign of disturbance, 2 = disturbance in 10m surrounding buffer but not within maximum extent, 3 = disturbance occurs in >0 % to <10% of area within maximum extent, 4 = disturbance in 10% to <25% of maximum extent, 5 = disturbance in 25 to < 50% of maximum extent, 6 = disturbance occurs within 50 to <75% of maximum exent, and 7 = disturbance occurs within ≥75% of maximum extent.*

| | | | | | |
|---|---|---|---|---|---|
| Non-Native Forbs* | 4 | Feral Pig Activity* | 1 | Erosion* | 3 |
| Non-Native Grasses* | 5 | Trampling* | 5 | Urban Runoff* | 1 |
| Non-Native Woody Plants* | 1 | Vandalism* | 1 | Sea-level rise* | |
| Competitive Native Plants* | 2 | Grazing (Y/N/UNK)* | Yes | Slope Movement* | 1 |
| Dumping/Trash* | 1 | Historic Agriculture (Y/N/Unk)* | Unknown | Soil Compaction* | 4 |
| Encampments* | 1 | Altered Hydrology* | 1 | *Additional room for notes on page 4. | |

Fuel Modification Zone/Fire Break: 1 If Observed, Briefly Describe:

Road Construction/Maintenance: 1 If Observed, Briefly Describe:

Vegetation Clearing: 1 If Observed, Briefly Describe:

Restoration Project (Impacts): 1 If Observed, Briefly Describe:

ORV Activity 1 If Observed, List Type(s) of ORV Activity:

Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned?____OR Unknown Burn Year? Unknown

Disturbance from Trails (authorized & unauthorized) 1 If Trails are Present, are they Authorized (circle one)? ☐ Yes / ☑ No / ☐ Both / ☐ Unknown

Type of Trail Use (Yes/No)? Hiking: No Biking: No Equestrian: No Dog: No Service Vehicles: No Other (Describe):

_____

Illegal Trail Use? ☐ Yes ☑ No ☐ Unknown

Describe: Predator presence (6) Other Disturbance? List & Rank: Presence of predators such as raptors.

Collection? Yes:_____ No:_____ Collector:_____

Collection #:_____ Herbarium:_____ Species Collected: _____

Collection 2, Collector:_____ (enter additional collections on p. 3)

Collection #:_____ Herbarium:_____ Species Collected: _____

Occurrence ID: _____ Species: Burrowing Owl Date: July 9, 2025

## VI. MANAGEMENT RECOMMENDATIONS

Manage vegetation to maintain the low, open cover preferred by BUOW. Avoid tall, dense vegetation that may obscure visibility or provide cover for predators. In areas with rocky outcrops and suitable burrows, prioritize vegetation management to enhance their suitability as potential BUOW habitat.

## VII. MANAGEMENT ACTIONS IN LAST YEAR

Unknown

## VIII. CNDDB SPECIES DETECTED & NOTES

List any sensitive plant or animal species to add to the CNDDB:

Grasshopper Sparrow

**Time Finish:** 10:44

Occurrence ID: _____ Species: Burrowing Owl Date: July 9, 2025

Non-Native Forbs. If Observed, Briefly Describe: *Erodium botrys*, *Hirschfeldia incana, Rumex sp.* can outcompete native species and alter suitable habitat.

Non-Native Grasses. If Observed, Briefly Describe: *Avena* sp. and *Bromus diandrus*,can reduce visibility and increase fire risk.

Non-Native Woody Plants. If Observed, Briefly Describe:

Competitive Native Plants. If Observed, Briefly Describe: *Ambrosia psilostachya* observed. Can form dense patches that may reduce the open, low-vegetation habitat preferred by BUOW for visibility.

Dumping/Trash. If Observed, Briefly Describe:

Encampments. If Observed, Briefly Describe:

Feral Pig Activity. If Observed, Briefly Describe:

Trampling. If Observed, Briefly Describe: Vegetation disturbance and potential impacts to BUOW may result from frequent cattle movement/trampling.

Vandalism. If Observed, Briefly Describe:

Grazing. If Observed, Briefly Describe: Cattle grazing observed—may help maintain low vegetation but risks trampling burrows.

Historic Agriculture. If Observed, Briefly Describe:

Altered Hydrology. If Observed, Briefly Describe:

Sea level rise. If Observed, Briefly Describe:

Erosion. If Observed, Briefly Describe: Erosion due to trampling by cattle observed in certain areas.

Urban Runoff. If Observed, Briefly Describe:

Slope Movement. If Observed, Briefly Describe:

Soil Compaction. If Observed, Briefly Describe: Evidence of soil compaction observed in the form of visible vehicle tracks and cattle trails.

**Time Finish:** 10:44

**Categories of % Individuals in Sample Plot for Phenological Stages (Vegetative, Flowering, Fruiting & Dead) and for Evidence of Herbivory, Disease and Stunted Growth.**

1 = 0% (not detected)

2 = >0% to <10%

3 = 10% to <25%

4 = 25% to <50%

5 = 50% to <75%

6 = ≥75%

**% Cover Class Definitions within Sample Plot for Cryptogamic Crust and Thatch.**

See page 5 for illustrations of different cover classes.

1 = 0% cover (not detected)

2 = >0% to <10% cover

3 = 10% to <25% cover

4 = 25% to <50% cover

5 = 50% to <75% cover

6 = ≥75% cover

**Feral Pig Activity within Sample Plot:**

1 = No feral pig activity (rooting, wallowing, vegetation destruction, tracks, scat, pig) detected.

2 = Signs of pig activity (rooting, wallowing, vegetation destruction) in sample plot appear months old.

3 = Signs of recent pig activity (rooting, wallowing, vegetation destruction, tracks, scat, pig) in adjacent area but not within sample plot.

4 = Recent signs of pig activity (rooting, wallowing, vegetation destruction, tracks, scat, pigs) within sample plot.

**Ground Squirrel Activity within Sample Plot:**

1 = No ground squirrel burrows detected.

2 = Burrows and/or ground squirrels observed in adjacent area but not within sample plot.

3 = Single squirrel or burrow seen within sample plot.

4 = Multiple burrows and/or squirrels seen within sample plot.

**Botta's Pocket Gopher Activity within Sample Plot:**

1 = No pocket gopher mounds detected.

2 = Mounds or gophers observed in adjacent area but not within sample plot.

3 = <10 mounds observed within sample plot.

4 = ≥10 mounds or one or more gophers seen within sample plot.

**Disturbance Categories within the Maximum Extent:**

1 = No sign of disturbance within maximum extent or in adjacent 10 m buffer.

2 = Disturbance does not occur within maximum extent but is detected within the surrounding 10 m buffer area.

3 = Disturbance present in >0% to <10% of area within maximum extent.

4 = Disturbance occurs in 10% to <25% of area within maximum extent.

5 = Disturbance occurs in 25% to <50% of area within maximum extent.

6 = Disturbance occurs 50% to <75% of area within maximum extent.

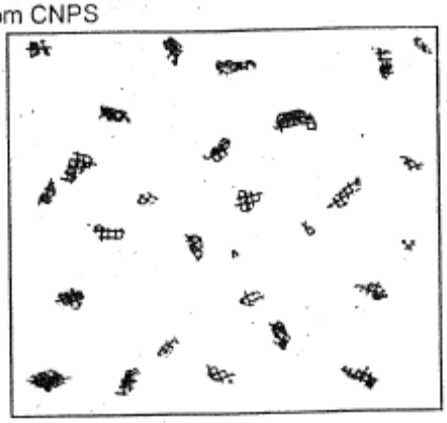
7 = Disturbance occurs ≥75% of area within maximum extent.

**CNPS Cover Diagram** 

Cover Diagrams from CNPS



1%



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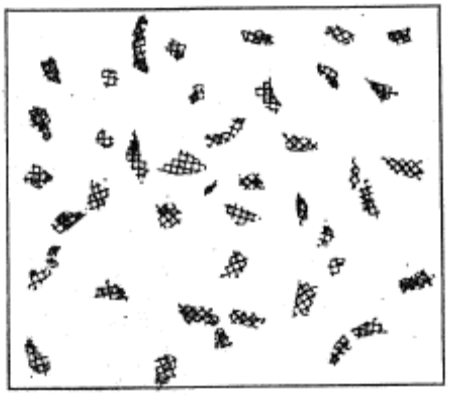

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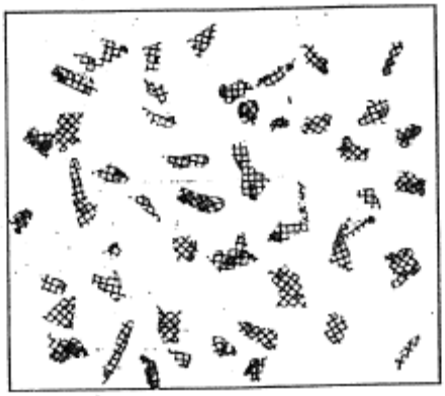

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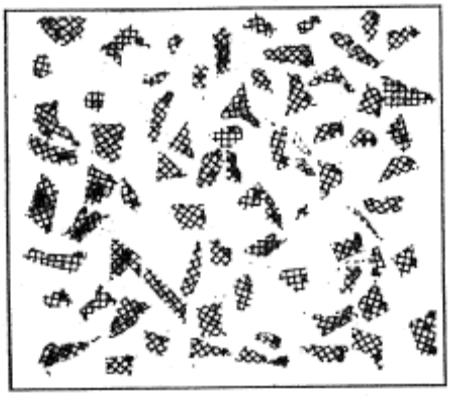

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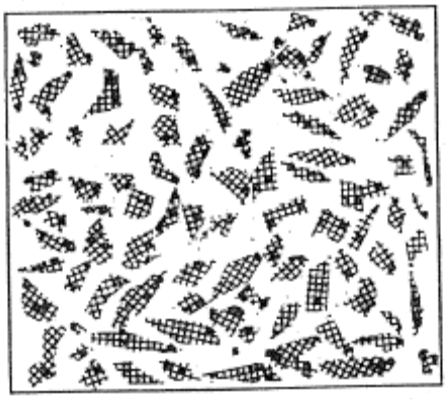

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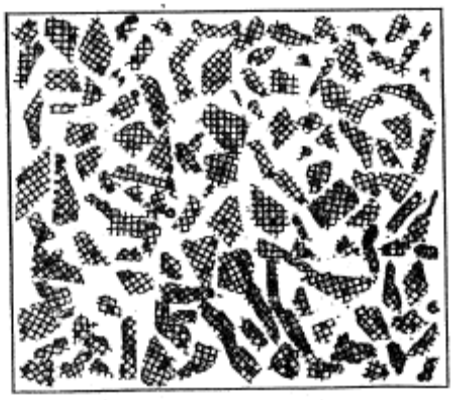

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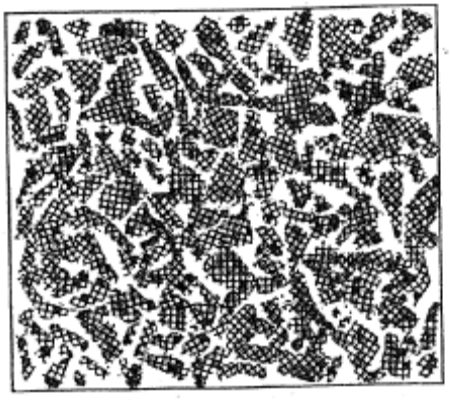

75%

*Scientific Name: Athene cunicularia* *Common Name: Burrowing Owl*

*MSP Occurrence ID:* *New MSP Occurrence? Yes:_____, No:_____, Unknown:_____*

*Sample Point #:* *New Sample Point? Yes:_____, No:_____, Unknown:_____*

*Occurrence Name:* *CNDDB EO#:* *Translocated? Yes:_____, No:_____, Unknown:_____*

*Preserve: Ramona Grasslands County Preserve – Polygons 7-8*

*Land Owner:* *Land Manager:*

*Surveyors & Affiliation: Karla Alcaraz, Amy Orduño-Baez, Andrew South & Environmental Science Associates, Blackhawk Environmental*

*Date: July 9, 2025* *Time Start:*

**I. SAMPLE PLOT INFORMATION.** *Count # plants in 10m radius sample plot, see p. 4 for category definitions for phenology, herbivory, disease & stunted growth. Record notes on p. 3.*

# Plants/Sample Plot:_____Exact:_____Estimate:_____Uncertainty?_____Sample plot radius_____m

For both exact counts and estimates, indicate: Counted/estimated indiv. plants:_____OR Counted/estimated clusters of plants:_____

For geophytes: are counts of flowering or vegetative individuals? Flowering:_____Vegetative:_____

Phenology in Sample Plot (Categories 1-6): Vegetative:_____Flowering:_____Fruiting:_____Dead:_____

Evidence in Sample Plot (Categories 1-6) of: Herbivory:_____Disease:_____Stunted Growth:_____

Is Sample Plot within Current Mapped Extent?_____Yes_____No

**II. SAMPLE PLOT LOCATION & SITE PHOTOMONITORING -** *consult SDMMP list of GPS coordinates for plot center and photo locations.*

*Enter here only if new habitat plot location or to make a correction to coordinates in list provided.*

GPS/Smartphone Accuracy: +/-_____m Datum:_____(NAD83 Recommended) Coord. Syst: UTM:___State Plane:___

Center of Plot Coord: E:_____N:_____No Change:_____New:_____Correction:_____

Camera type:_____PhotoCoord: E:_____N:_____No Change:____New:_____Correction:_____

Location 1: _____ _____ _____ _____ _____

Direction (facing) Height (m) Camera Angle Up or Down Photo #

E:_____N:_____ _____ _____ _____ _____ _____ _____

Photo Location 2 [Coordinates] Direction (facing) Height (m) Camera Angle Up or Down Photo #

**III. SAMPLE PLOT ASSESSMENT** *- Assess habitat covariates in* ***10m radius sample t plot****. Vegetation alliance can be assigned using San Diego vegetation key (AECOM 2012) in office or field using "Associated Species" data. See page 4 for mammal activity categories. Record any notes on p. 3.*

SANDAG 2012 Vegetation Alliance/Association: _____

*Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (50% to <75%); 6 (≥75%)*

Cryptogamic Crust Cover:_____(category) Thatch (Non-Native Grass) Cover:_____(category)

*Thatch Depth categories: 1 (no thatch); 2 (<1 cm); 3 (1 to <5 cm); 4 (5 to <10 cm); 5 (10 to <15 cm); 6 (15 to < 20 cm); 7 ( ≥ 20 cm)*

Thatch Depth: Ave._____(category) Thatch Depth: Max:_____cm

Dead Standing Biomass? Yes:_____No:_____If yes, species:_____Cover Class (1-6):_____Ave. Height:_____cm

Mammal Species Activity Categories (1-4): Feral Pig Activity:_____Ground Squirrel Activity:_____Gopher Activity: _____

Habitat plot representative of maximum extent? Yes:_____No:_____If no, note differences on Page 3.

**IV. ASSOCIATED SPECIES IN SAMPLE PLOT** ***Record cover estimate, not cover category****. See % cover diagram, p. 5. Record substrate, total veg & total cover at bottom of form. Total cover should be at least 100% to account for entire plot. Record notes on p. 3.*

| Species | % Cover | Species | % Cover |
|---|---|---|---|
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Bare Ground:_____Cryptogamic Soil Crust:_____ Rock:_____ Litter:_____

Water:_____ Total Live Vegetation:_____ Dead Shrubs:_____ Total Cover:_____(∑ =100%)

| | |
|---|---|
| *Scientific Name:* *Athene cunicularia* | *MSP Occurrence ID:* |
| *Preserve: Ramona Grasslands County Preserve* | *Occurrence Name: Polygons 7-8* |
| *Date: July 9, 2025* | *Surveyors & Affiliation/Agency: Karla Alcaraz, Amy Orduño-Baez, Andrew South & Environmental Science Associates, Blackhawk Environmental* |

**V. CURRENT MAPPED EXTENT INFORMATION.** *Count or estimate number of plants in mapped extent. Area can be calculated based on GIS perimeter mapping or visual mapping on aerial photo in the office.*

# Plants/Current Mapped Extent:_____, Exact Count:_____, Estimate (1000s, 10k):_____, Uncertainty?_____

For both exact counts and estimates, indicate: Counted/estimated individual plants:_____OR Counted/estimated clusters of plants:_____

For geophytes: are counts of flowering or vegetative individuals? Flowering:_____Vegetative:_____

Area of Current Mapped Extent:_____Units:_____Exact (GPS mapping):_____Estimate:_____

Perimeter of current extent determined by walking it or estimated by other means (mapped on aerials)? Walked:_____Other (describe p. 3):_____

Species in Maximum Extent? Yes:_____No:_____If not, why

**VI. THREATS ASSESSMENT IN MAXIMUM EXTENT** - *Assess threats within the* ***occurrence's maximum extent*** *(cumulative extent over years of monitoring)* ***plus 10-m surrounding buffer****. Record notes on p. 3.*

Surrounding Land Use/Activity at or Adjacent to Site: Rural development, cattle grazing, RMWD operations, and activities associated with grazing land management and residential homes.

*Disturbance Classes (rank each threat as 1-7): 1 = no sign of disturbance, 2 = disturbance in 10m surrounding buffer but not within maximum extent, 3 = disturbance occurs in >0 % to <10% of area within maximum extent, 4 = disturbance in 10% to <25% of maximum extent, 5 = disturbance in 25 to < 50% of maximum extent, 6 = disturbance occurs within 50 to <75% of maximum exent, and 7 = disturbance occurs within ≥75% of maximum extent.*

| | | | | | |
|---|---|---|---|---|---|
| Non-Native Forbs* | 4 | Feral Pig Activity* | 1 | Erosion* | 2 |
| Non-Native Grasses* | 5 | Trampling* | 4 | Urban Runoff* | 1 |
| Non-Native Woody Plants* | 1 | Vandalism* | 1 | Sea-level rise* | |
| Competitive Native Plants* | 2 | Grazing (Y/N/UNK)* | Yes | Slope Movement* | 1 |
| Dumping/Trash* | 1 | Historic Agriculture (Y/N/Unk)* | Unknown | Soil Compaction* | 3 |
| Encampments* | 1 | Altered Hydrology* | 1 | *Additional room for notes on page 4. | |

Fuel Modification Zone/Fire Break: 1 If Observed, Briefly Describe:

Road Construction/Maintenance: 2 If Observed, Briefly Describe: Service vehicle access was observed; visible tire tracks were present along established routes.

Vegetation Clearing: 1 If Observed, Briefly Describe: Unknown

Restoration Project (Impacts): 1 If Observed, Briefly Describe:

ORV Activity 1 If Observed, List Type(s) of ORV Activity:

Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned?____OR Unknown Burn Year? Unknown

Disturbance from Trails (authorized & unauthorized) 2 If Trails are Present, are they Authorized (circle one)? ☐ Yes / ☑ No / ☐ Both / ☐ Unknown

Type of Trail Use (Yes/No)? Hiking: No Biking: No Equestrian: No Dog: No Service Vehicles: Yes Other (Describe):

Illegal Trail Use? ☐ Yes ☑ No ☐ Unknown

Describe: Predator presence (6) Other Disturbance? List & Rank: Presence of predators such as raptors.

Collection? Yes:_____ No:_____ Collector:_____

Collection #:_____ Herbarium:_____ Species Collected: _____

Collection 2, Collector:_____ (enter additional collections on p. 3)

Collection #:_____ Herbarium:_____ Species Collected: _____

Occurrence ID: _____ Species: Burrowing Owl Date: July 9, 2025

## VI. MANAGEMENT RECOMMENDATIONS

Manage vegetation to maintain the low, open cover preferred by BUOW. Avoid tall, dense vegetation that may obscure visibility or provide cover for predators. In areas with rocky outcrops and suitable burrows, prioritize vegetation management to enhance their suitability as potential BUOW habitat.

## VII. MANAGEMENT ACTIONS IN LAST YEAR

Unknown

## VIII. CNDDB SPECIES DETECTED & NOTES

List any sensitive plant or animal species to add to the CNDDB:

American Barn Owl, Cooper's Hawk, San Diego Black-Tailed Jackrabbit, Turkey Vulture, Bald Eagle, and Vermilion Flycatcher

**Time Finish:** 07:41

Occurrence ID: _____ Species: Burrowing Owl Date: July 9, 2025

Non-Native Forbs. If Observed, Briefly Describe: *Erodium botrys* and *Hirschfeldia incana* can outcompete native species and alter suitable habitat.

Non-Native Grasses. If Observed, Briefly Describe: *Avena* sp., *Bromus diandrus*, *Bromus* sp., *Bromus hordeaceus, and Hordeum* sp. can reduce visibility and increase fire risk.

Non-Native Woody Plants. If Observed, Briefly Describe:

Competitive Native Plants. If Observed, Briefly Describe: *Ambrosia psilostachya* and *Croton setiger* observed. Can form dense patches that may reduce the open, low-vegetation habitat preferred by BUOW for visibility.

Dumping/Trash. If Observed, Briefly Describe:

Encampments. If Observed, Briefly Describe:

Feral Pig Activity. If Observed, Briefly Describe:

Trampling. If Observed, Briefly Describe: Vegetation disturbance and potential impacts to BUOW may result from frequent cattle movement/trampling.

Vandalism. If Observed, Briefly Describe:

Grazing. If Observed, Briefly Describe: Cattle grazing observed—may help maintain low vegetation but risks trampling burrows.

Historic Agriculture. If Observed, Briefly Describe:

Altered Hydrology. If Observed, Briefly Describe:

Sea level rise. If Observed, Briefly Describe:

Erosion. If Observed, Briefly Describe: Erosion due to trampling by cattle observed in certain areas.

Urban Runoff. If Observed, Briefly Describe:

Slope Movement. If Observed, Briefly Describe:

Soil Compaction. If Observed, Briefly Describe: Evidence of soil compaction observed in the form of visible vehicle tracks and cattle trails.

**Time Finish:** 07:41

**Categories of % Individuals in Sample Plot for Phenological Stages (Vegetative, Flowering, Fruiting & Dead) and for Evidence of Herbivory, Disease and Stunted Growth.**

1 = 0% (not detected)

2 = >0% to <10%

3 = 10% to <25%

4 = 25% to <50%

5 = 50% to <75%

6 = ≥75%

**% Cover Class Definitions within Sample Plot for Cryptogamic Crust and Thatch.**

See page 5 for illustrations of different cover classes.

1 = 0% cover (not detected)

2 = >0% to <10% cover

3 = 10% to <25% cover

4 = 25% to <50% cover

5 = 50% to <75% cover

6 = ≥75% cover

**Feral Pig Activity within Sample Plot:**

1 = No feral pig activity (rooting, wallowing, vegetation destruction, tracks, scat, pig) detected.

2 = Signs of pig activity (rooting, wallowing, vegetation destruction) in sample plot appear months old.

3 = Signs of recent pig activity (rooting, wallowing, vegetation destruction, tracks, scat, pig) in adjacent area but not within sample plot.

4 = Recent signs of pig activity (rooting, wallowing, vegetation destruction, tracks, scat, pigs) within sample plot.

**Ground Squirrel Activity within Sample Plot:**

1 = No ground squirrel burrows detected.

2 = Burrows and/or ground squirrels observed in adjacent area but not within sample plot.

3 = Single squirrel or burrow seen within sample plot.

4 = Multiple burrows and/or squirrels seen within sample plot.

**Botta's Pocket Gopher Activity within Sample Plot:**

1 = No pocket gopher mounds detected.

2 = Mounds or gophers observed in adjacent area but not within sample plot.

3 = <10 mounds observed within sample plot.

4 = ≥10 mounds or one or more gophers seen within sample plot.

**Disturbance Categories within the Maximum Extent:**

1 = No sign of disturbance within maximum extent or in adjacent 10 m buffer.

2 = Disturbance does not occur within maximum extent but is detected within the surrounding 10 m buffer area.

3 = Disturbance present in >0% to <10% of area within maximum extent.

4 = Disturbance occurs in 10% to <25% of area within maximum extent.

5 = Disturbance occurs in 25% to <50% of area within maximum extent.

6 = Disturbance occurs 50% to <75% of area within maximum extent.

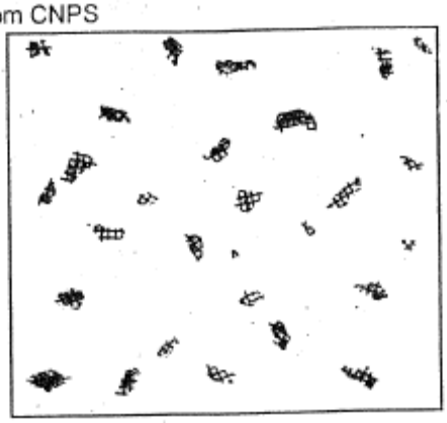
7 = Disturbance occurs ≥75% of area within maximum extent.

**CNPS Cover Diagram** 

Cover Diagrams from CNPS



1%



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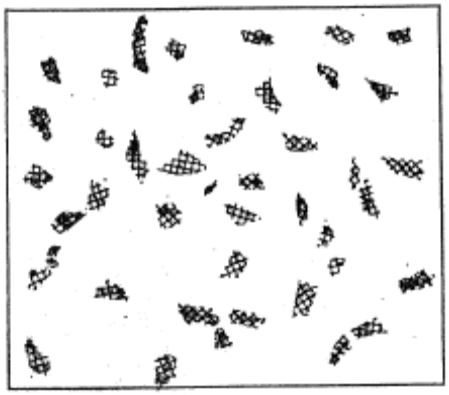

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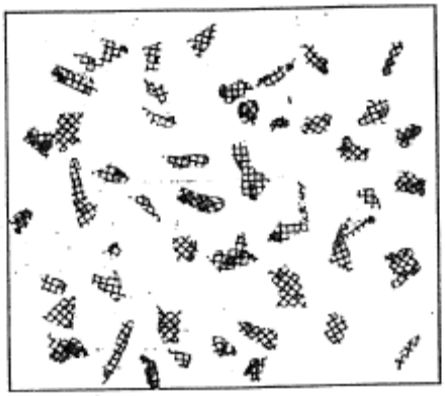

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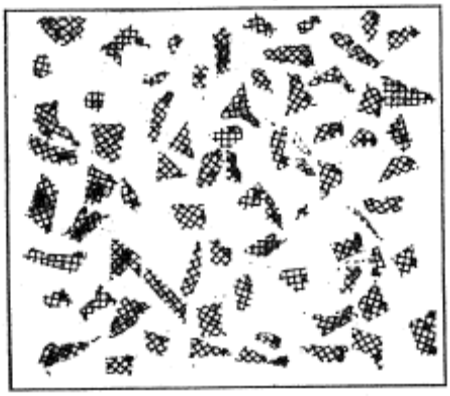

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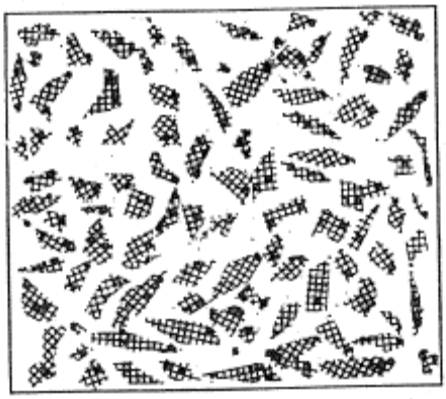

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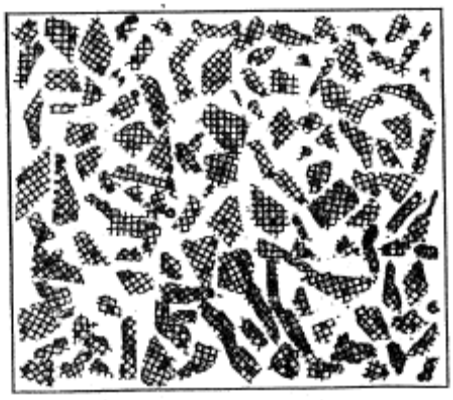

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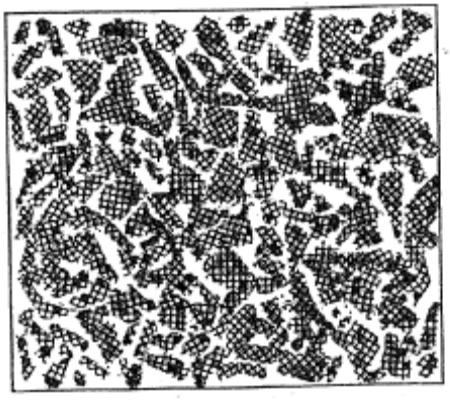

75%

*Scientific Name: Athene cunicularia* *Common Name: Burrowing Owl*

*MSP Occurrence ID:* *New MSP Occurrence? Yes:_____, No:_____, Unknown:_____*

*Sample Point #:* *New Sample Point? Yes:_____, No:_____, Unknown:_____*

*Occurrence Name:* *CNDDB EO#:* *Translocated? Yes:_____, No:_____, Unknown:_____*

*Preserve: Ramona Grasslands County Preserve – Polygon 9*

*Land Owner:* *Land Manager:*

*Surveyors & Affiliation: Karla Alcaraz, Amy Orduño-Baez, Andrew South & Environmental Science Associates, Blackhawk Environmental*

*Date: July 9, 2025* *Time Start:*

**I. SAMPLE PLOT INFORMATION.** *Count # plants in 10m radius sample plot, see p. 4 for category definitions for phenology, herbivory, disease & stunted growth. Record notes on p. 3.*

# Plants/Sample Plot:_____Exact:_____Estimate:_____Uncertainty?_____Sample plot radius_____m

For both exact counts and estimates, indicate: Counted/estimated indiv. plants:_____OR Counted/estimated clusters of plants:_____

For geophytes: are counts of flowering or vegetative individuals? Flowering:_____Vegetative:_____

Phenology in Sample Plot (Categories 1-6): Vegetative:_____Flowering:_____Fruiting:_____Dead:_____

Evidence in Sample Plot (Categories 1-6) of: Herbivory:_____Disease:_____Stunted Growth:_____

Is Sample Plot within Current Mapped Extent?_____Yes_____No

**II. SAMPLE PLOT LOCATION & SITE PHOTOMONITORING -** *consult SDMMP list of GPS coordinates for plot center and photo locations.*

*Enter here only if new habitat plot location or to make a correction to coordinates in list provided.*

GPS/Smartphone Accuracy: +/-_____m Datum:_____(NAD83 Recommended) Coord. Syst: UTM:___State Plane:___

Center of Plot Coord: E:_____N:_____No Change:_____New:_____Correction:_____

Camera type:_____PhotoCoord: E:_____N:_____No Change:____New:_____Correction:_____

Location 1: _____ _____ _____ _____ _____

Direction (facing) Height (m) Camera Angle Up or Down Photo #

E:_____N:_____ _____ _____ _____ _____ _____ _____

Photo Location 2 [Coordinates] Direction (facing) Height (m) Camera Angle Up or Down Photo #

**III. SAMPLE PLOT ASSESSMENT** *- Assess habitat covariates in* ***10m radius sample t plot****. Vegetation alliance can be assigned using San Diego vegetation key (AECOM 2012) in office or field using "Associated Species" data. See page 4 for mammal activity categories. Record any notes on p. 3.*

SANDAG 2012 Vegetation Alliance/Association: _____

*Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (50% to <75%); 6 (≥75%)*

Cryptogamic Crust Cover:_____(category) Thatch (Non-Native Grass) Cover:_____(category)

*Thatch Depth categories: 1 (no thatch); 2 (<1 cm); 3 (1 to <5 cm); 4 (5 to <10 cm); 5 (10 to <15 cm); 6 (15 to < 20 cm); 7 (≥ 20 cm)*

Thatch Depth: Ave._____(category) Thatch Depth: Max:_____cm

Dead Standing Biomass? Yes:_____No:_____If yes, species:_____Cover Class (1-6):_____Ave. Height:_____cm

Mammal Species Activity Categories (1-4): Feral Pig Activity:_____Ground Squirrel Activity:_____Gopher Activity: _____

Habitat plot representative of maximum extent? Yes:_____No:_____If no, note differences on Page 3.

**IV. ASSOCIATED SPECIES IN SAMPLE PLOT** ***Record cover estimate, not cover category****. See % cover diagram, p. 5. Record substrate, total veg & total cover at bottom of form. Total cover should be at least 100% to account for entire plot. Record notes on p. 3.*

| Species | % Cover | Species | % Cover |
|---|---|---|---|
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Bare Ground:_____Cryptogamic Soil Crust:_____ Rock:_____ Litter:_____

Water:_____ Total Live Vegetation:_____ Dead Shrubs:_____ Total Cover:_____(∑ =100%)

| | |
|---|---|
| *Scientific Name: Burrowing Owl* | *MSP Occurrence ID:* |
| *Preserve: Ramona Grasslands County Preserve* | *Occurrence Name: Polygon 9* |
| *Date: July 9, 2025* | *Surveyors & Affiliation/Agency: Karla Alcaraz, Amy Orduño-Baez, Andrew South & Environmental Science Associates, Blackhawk Environmental* |

**V. CURRENT MAPPED EXTENT INFORMATION.** *Count or estimate number of plants in mapped extent. Area can be calculated based on GIS perimeter mapping or visual mapping on aerial photo in the office.*

# Plants/Current Mapped Extent:_____, Exact Count:_____, Estimate (1000s, 10k):_____, Uncertainty?_____

For both exact counts and estimates, indicate: Counted/estimated individual plants:_____OR Counted/estimated clusters of plants:_____

For geophytes: are counts of flowering or vegetative individuals? Flowering:_____Vegetative:_____

Area of Current Mapped Extent:_____Units:_____Exact (GPS mapping):_____Estimate:_____

Perimeter of current extent determined by walking it or estimated by other means (mapped on aerials)? Walked:_____Other (describe p. 3):_____

Species in Maximum Extent? Yes:_____No:_____If not, why

**VI. THREATS ASSESSMENT IN MAXIMUM EXTENT** - *Assess threats within the **occurrence's maximum extent** (cumulative extent over years of monitoring) **plus 10-m surrounding buffer**. Record notes on p. 3.*

Surrounding Land Use/Activity at or Adjacent to Site: Rural development, cattle grazing, and activities associated with grazing land management

*Disturbance Classes (rank each threat as 1-7): 1 = no sign of disturbance, 2 = disturbance in 10m surrounding buffer but not within maximum extent, 3 = disturbance occurs in >0 % to <10% of area within maximum extent, 4 = disturbance in 10% to <25% of maximum extent, 5 = disturbance in 25 to < 50% of maximum extent, 6 = disturbance occurs within 50 to <75% of maximum exent, and 7 = disturbance occurs within ≥75% of maximum extent.*

| | | | | | |
|---|---|---|---|---|---|
| Non-Native Forbs* | 3 | Feral Pig Activity* | 1 | Erosion* | 2 |
| Non-Native Grasses* | 6 | Trampling* | 4 | Urban Runoff* | 1 |
| Non-Native Woody Plants* | 1 | Vandalism* | 1 | Sea-level rise* | |
| Competitive Native Plants* | 2 | Grazing (Y/N/UNK)* | Yes | Slope Movement* | 1 |
| Dumping/Trash* | 1 | Historic Agriculture (Y/N/Unk)* | Unknown | Soil Compaction* | 2 |
| Encampments* | 1 | Altered Hydrology* | 1 | | |

*Additional room for notes on page 4.

Fuel Modification Zone/Fire Break: 1 If Observed, Briefly Describe:

Road Construction/Maintenance: 1 If Observed, Briefly Describe:

Vegetation Clearing: 1 If Observed, Briefly Describe: Unknown

Restoration Project (Impacts): 1 If Observed, Briefly Describe:

ORV Activity 1 If Observed, List Type(s) of ORV Activity:

Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned?____OR Unknown Burn Year?

Disturbance from Trails (authorized & unauthorized) 1 If Trails are Present, are they Authorized (circle one)? ☐ Yes / ☐ No / ☑ Both / ☐ Unknown

Type of Trail Use (Yes/No)? Hiking: No Biking: No Equestrian: No Dog: No Service Vehicles: Yes Other (Describe): Owner lives here, Unsuitable habitat for BUOW

Illegal Trail Use? ☐ Yes ☑ No ☐ Unknown

Describe: Predator presence (6) Other Disturbance? List & Rank: Presence of predators such as raptors (red-tailed hawk nest in eucalyptus tree).

Collection? Yes:_____ No:_____ Collector:_____

Collection #:_____ Herbarium:_____ Species Collected: _____

Collection 2, Collector:_____ (enter additional collections on p. 3)

Collection #:_____ Herbarium:_____ Species Collected: _____

Occurrence ID: _____ Species: Burrowing Owl Date: July 9, 2025

## VI. MANAGEMENT RECOMMENDATIONS

Manage vegetation to maintain the low, open cover preferred by BUOW. Avoid tall, dense vegetation that may obscure visibility or provide cover for predators. In areas with rocky outcrops and suitable burrows, prioritize vegetation management to enhance their suitability as potential BUOW habitat.

## VII. MANAGEMENT ACTIONS IN LAST YEAR

Unknown

## VIII. CNDDB SPECIES DETECTED & NOTES

List any sensitive plant or animal species to add to the CNDDB:

**Time Finish:** 06:00

Occurrence ID: _____ Species: Burrowing Owl Date: July 9, 2025

Non-Native Forbs. If Observed, Briefly Describe: *Hirschfeldia incana* and *Erodium botrys* can outcompete native species and alter suitable habitat.

Non-Native Grasses. If Observed, Briefly Describe: Avena sp., Bromus sp., Lamarckia aurea, Bromus hordeaceus, Bromus diandrus, Hordeum marinumcan reduce visibility and increase fire risk.

Non-Native Woody Plants. If Observed, Briefly Describe:

Competitive Native Plants. If Observed, Briefly Describe: *Ambrosia psilostachya* and *Croton setiger* observed. Can form dense patches that may reduce the open, low-vegetation habitat preferred by BUOW for visibility.

Dumping/Trash. If Observed, Briefly Describe:

Encampments. If Observed, Briefly Describe:

Feral Pig Activity. If Observed, Briefly Describe:

Trampling. If Observed, Briefly Describe: Vegetation disturbance and potential impacts to BUOW may result from frequent cattle movement/trampling.

Vandalism. If Observed, Briefly Describe:

Grazing. If Observed, Briefly Describe: Cattle grazing observed—may help maintain low vegetation but risks trampling burrows.

Historic Agriculture. If Observed, Briefly Describe:

Altered Hydrology. If Observed, Briefly Describe:

Sea level rise. If Observed, Briefly Describe:

Erosion. If Observed, Briefly Describe:

Urban Runoff. If Observed, Briefly Describe:

Slope Movement. If Observed, Briefly Describe:

Soil Compaction. If Observed, Briefly Describe: Evidence of soil compaction observed in the form of visible cattle trails.

**Time Finish:** 06:00

**Categories of % Individuals in Sample Plot for Phenological Stages (Vegetative, Flowering, Fruiting & Dead) and for Evidence of Herbivory, Disease and Stunted Growth.**

1 = 0% (not detected)

2 = >0% to <10%

3 = 10% to <25%

4 = 25% to <50%

5 = 50% to <75%

6 = ≥75%

**% Cover Class Definitions within Sample Plot for Cryptogamic Crust and Thatch.**

See page 5 for illustrations of different cover classes.

1 = 0% cover (not detected)

2 = >0% to <10% cover

3 = 10% to <25% cover

4 = 25% to <50% cover

5 = 50% to <75% cover

6 = ≥75% cover

**Feral Pig Activity within Sample Plot:**

1 = No feral pig activity (rooting, wallowing, vegetation destruction, tracks, scat, pig) detected.

2 = Signs of pig activity (rooting, wallowing, vegetation destruction) in sample plot appear months old.

3 = Signs of recent pig activity (rooting, wallowing, vegetation destruction, tracks, scat, pig) in adjacent area but not within sample plot.

4 = Recent signs of pig activity (rooting, wallowing, vegetation destruction, tracks, scat, pigs) within sample plot.

**Ground Squirrel Activity within Sample Plot:**

1 = No ground squirrel burrows detected.

2 = Burrows and/or ground squirrels observed in adjacent area but not within sample plot.

3 = Single squirrel or burrow seen within sample plot.

4 = Multiple burrows and/or squirrels seen within sample plot.

**Botta's Pocket Gopher Activity within Sample Plot:**

1 = No pocket gopher mounds detected.

2 = Mounds or gophers observed in adjacent area but not within sample plot.

3 = <10 mounds observed within sample plot.

4 = ≥10 mounds or one or more gophers seen within sample plot.

**Disturbance Categories within the Maximum Extent:**

1 = No sign of disturbance within maximum extent or in adjacent 10 m buffer.

2 = Disturbance does not occur within maximum extent but is detected within the surrounding 10 m buffer area.

3 = Disturbance present in >0% to <10% of area within maximum extent.

4 = Disturbance occurs in 10% to <25% of area within maximum extent.

5 = Disturbance occurs in 25% to <50% of area within maximum extent.

6 = Disturbance occurs 50% to <75% of area within maximum extent.

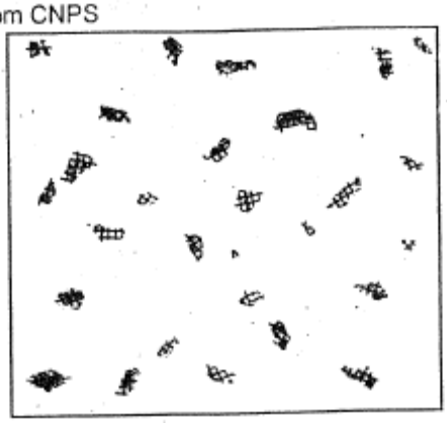
7 = Disturbance occurs ≥75% of area within maximum extent.

**CNPS Cover Diagram** 

Cover Diagrams from CNPS



1%



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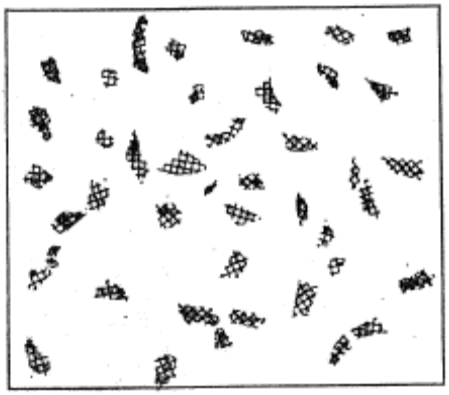

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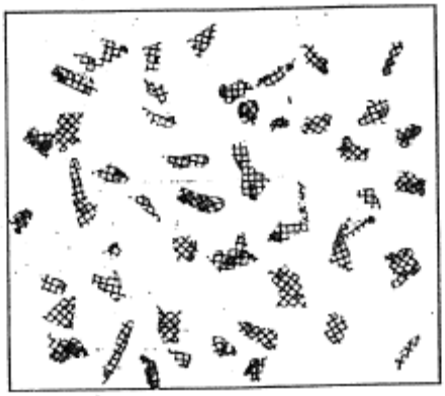

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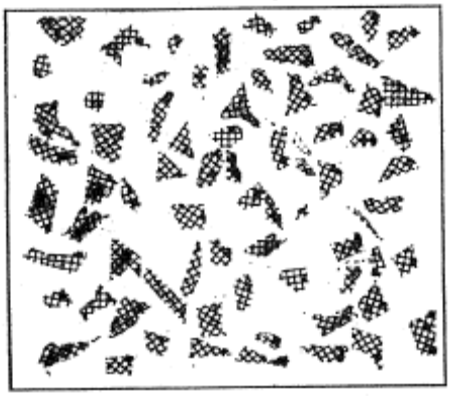

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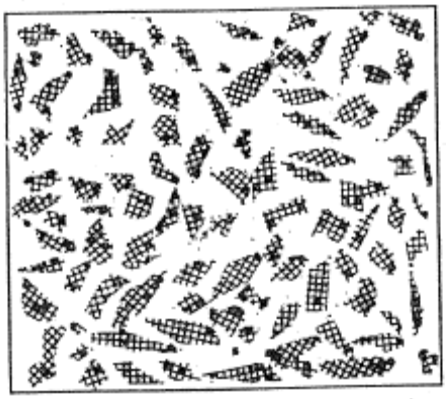

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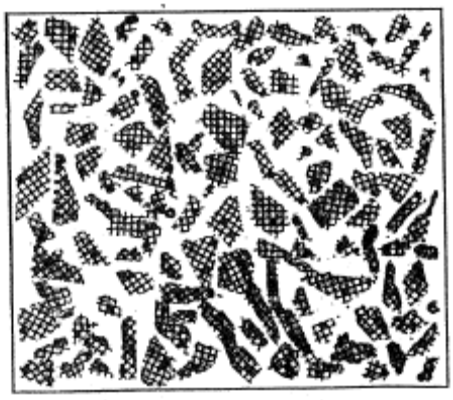
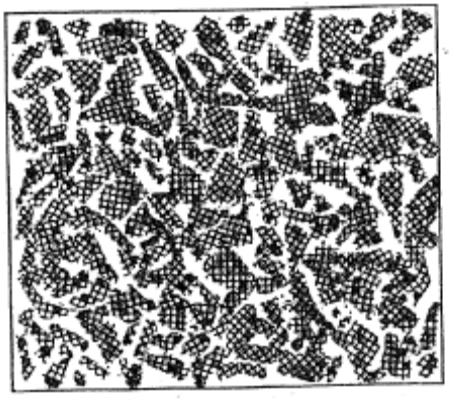


50%



75%

# Appendix E

## Coastal Cactus Wren Photo Monitoring and Field Forms

# E-1 Photo Monitoring



2011 Before clearing and planting



2012 After cactus installation



2013 July



2014 July



2016 July



2018 July



2019 July



2022 July



2025 June-July

D202200393.10

SOURCE: ESA, 2025

COSD DPR 569744_TO 10 TMP Implementation

**Appendix E**
Cactus Wren Habitat Restoration Photo-Monitoring
Lakeside Linkage County Preserve
Photopoint A West

ESA



2011 Before clearing and planting



2012 After cactus installation



2013 July



2014 July



2016 July



2018 July



2019 July



2022 July



2025 June-July

D202200393.10

SOURCE: ESA, 2025

COSD DPR 569744_TO 10 TMP Implementation

**Appendix E**
Cactus Wren Habitat Restoration Photo-Monitoring
Lakeside Linkage County Preserve
Photopoint B North

ESA



2011 Before clearing and planting



2012 After cactus installation



2013 July



2014 July



2016 July



2018 July



2019 July



2022 July



2025 June-July

D202200393.10

SOURCE: ESA, 2025

COSD DPR 569744_TO 10 TMP Implementation

**Appendix E**
Cactus Wren Habitat Restoration Photo-Monitoring
Lakeside Linkage County Preserve
Photopoint B West

ESA



2011 Before clearing and planting



2012 After cactus installation



2013 July



2014 July



2016 July



2018 July



2019 July



2022 July



2025 June-July

D202200393.10

SOURCE: ESA, 2025

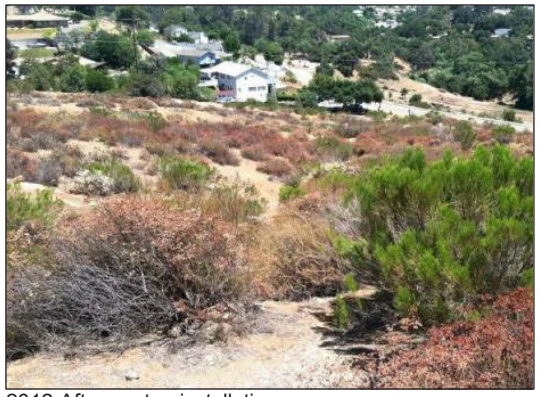
COSD DPR 569744_TO 10 TMP Implementation

**Appendix E**
Cactus Wren Habitat Restoration Photo-Monitoring
Lakeside Linkage County Preserve
Photopoint C West

ESA



2011 Before clearing and planting



2012 After cactus installation



2013 July



2014 July



2016 July



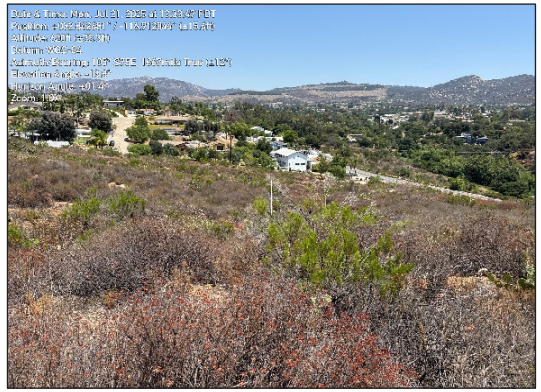
2018 July



2019 July



2022 July



2025 June-July

D202200393.10

SOURCE: ESA, 2025

COSD DPR 569744_TO 10 TMP Implementation

**Appendix E**
Cactus Wren Habitat Restoration Photo-Monitoring
Lakeside Linkage County Preserve
Photopoint D East

ESA



2011 Before clearing and planting



2012 After cactus installation



2013 July



2014 July



2016 July



2018 July



2019 July



2022 July



2025 June-July

D202200393.10

SOURCE: ESA, 2025

COSD DPR 569744_TO 10 TMP Implementation

**Appendix E**
Cactus Wren Habitat Restoration Photo-Monitoring
Lakeside Linkage County Preserve
Photopoint D North

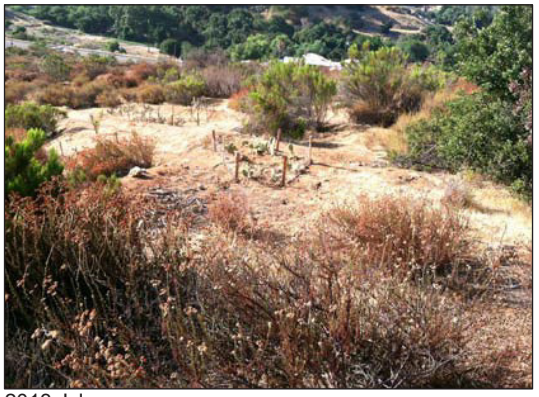
ESA



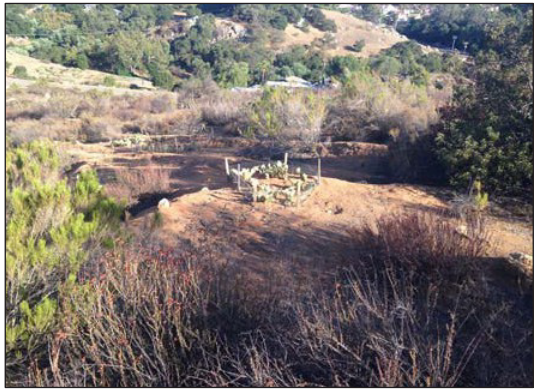
2011 Before clearing and planting



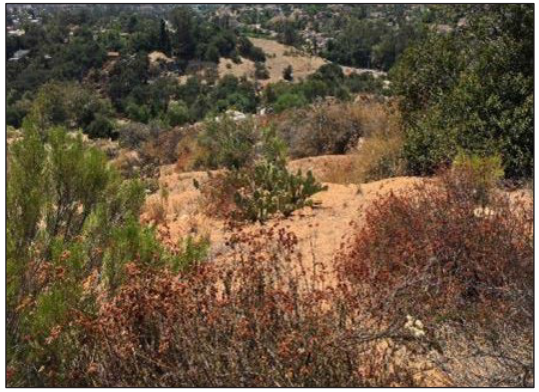
2012 After cactus installation



2013 July



2014 July



2016 July



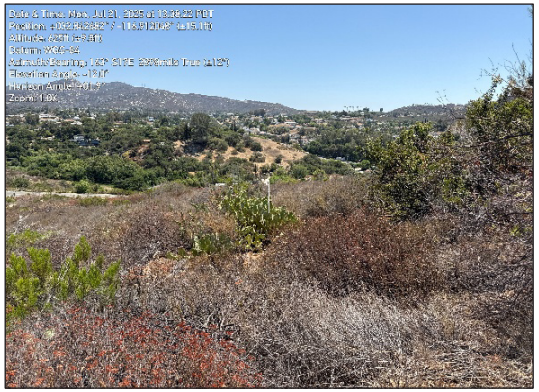
2018 July



2019 July



2022 July



2025 June-July

D202200393.10

SOURCE: ESA, 2025

COSD DPR 569744_TO 10 TMP Implementation

**Appendix E**
Cactus Wren Habitat Restoration Photo-Monitoring
Lakeside Linkage County Preserve
Photopoint D South

ESA



2011 Before clearing and planting



2012 After cactus installation



2013 July



2014 July



2016 July



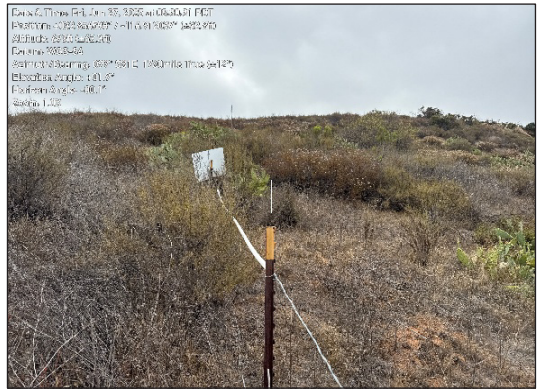
2018 July



2019 July



2022 July



2025 June-July

D202200393.10

SOURCE: ESA, 2025

COSD DPR 569744_TO 10 TMP Implementation

**Appendix E**
Cactus Wren Habitat Restoration Photo-Monitoring
Lakeside Linkage County Preserve
Photopoint E East

ESA



2011 Before clearing and planting



2012 After cactus installation



2013 July



2014 July



2016 July



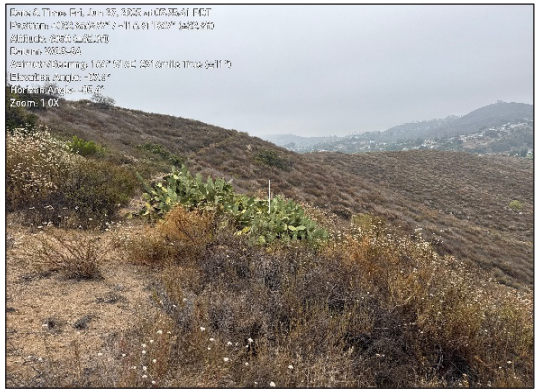
2018 July



2019 July



2022 July




2025 June-July

D202200393.10

SOURCE: ESA, 2025

COSD DPR 569744_TO 10 TMP Implementation

**Appendix E**
Cactus Wren Habitat Restoration Photo-Monitoring
Lakeside Linkage County Preserve
Photopoint F South

ESA



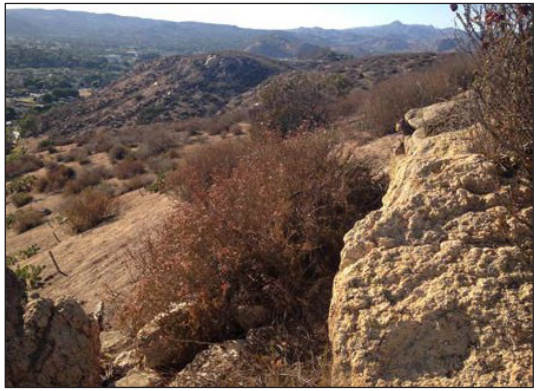
2011 Before clearing and planting



2012 After cactus installation



2013 July



2014 July



2016 July



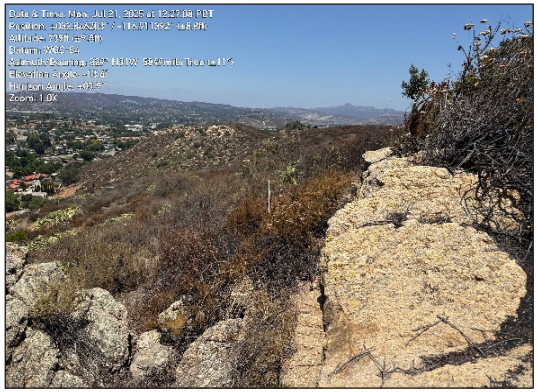
2018 July



2019 July



2022 July



2025 June-July

D202200393.10

SOURCE: ESA, 2025

COSD DPR 569744_TO 10 TMP Implementation

**Appendix E**
Cactus Wren Habitat Restoration Photo-Monitoring
Lakeside Linkage County Preserve
Photopoint G North

ESA



2011 Before clearing and planting



2012 After cactus installation



2013 July



2014 July



2016 July



2018 July



2019 July



2022 July



2025 June-July

D202200393.10

SOURCE: ESA, 2025

COSD DPR 569744_TO 10 TMP Implementation

**Appendix E**
Cactus Wren Habitat Restoration Photo-Monitoring
Lakeside Linkage County Preserve
Photopoint H East

ESA

# E-2 Point Count Spreadsheet Scans

Surveyors: B. MULROONEY D. TRAVIS

## Point count spreadsheet

Date: 6 MAY 25

| Station # | Species | ≤ 50 m 0-3 min | ≤ 50 m 3-5 min | ≤ 50 m 5-10 min | ≥ 50 m 0-3 min | ≥ 50 m 3-5 min | ≥ 50 m 5-10 min | Flyover 0-3 min | Flyover 3-5 min | Flyover 5-10 min |
|---|---|---|---|---|---|---|---|---|---|---|
| TIME 0634 | | | | | | | | | | |
| 4 | LEGO | II (2) | | | I (1) | 5 (5) | | | | |
| | AMCR | ~~FLY~~ | | | I (1) | | | | | II (2) |
| | HOFI | | | 4 (1) | 10 (10) | | | | | |
| | CALT | | | | III (3) | | | | | |
| | BLGR | | | | I (1) | | | | | |
| | WREN | | II (2) | | I (1) | | | | | |
| | ANHU | I (1) | | | | | | | | |
| | LAZB | | | | | I (1) | | | | |
| | CLSW | | | | | | III (3) | | | |
| | ROPI | | | | | | | | | (7) |
| | CAKI | | | | | | | | I (1) | |
| 0655 6 | CACW | II (2) | | | | | | | | |
| | CATH | | | | (1) | | | | | |
| | LEGO | | | | (2) | | | | | |
| | WREN | | | | (2) | | | | | |
| | HOOR | | | | (1) | | | | | |
| | BEWR | | | | (1) | | | | | |
| | NHWR | | | | (1) | | | | | |
| | WETA | | | | (1) | | | | | |
| | NOMO | | | | (1) | | | | | |
| | WEFL | | | I (1) | | | | | | |
| | BHGR | | | I (1) | | | | | | |
| | CAQU | | | | | | (1) | | | |
| | CALT | | | | | | (2) | | | |
| 0725 5 | LAZB | | | | I (1) | | (1) | | | |
| | LEGO | II (4) | | | | | | | | |
| | NOMO | I (1) | | | | | | | | |
| | MODO | I (1) | | | | | | | | |
| | BEWR | I (1) | | | | | | | | |
| | CALT | I (1) | | | | (1) | | | | |
| | HEFL | II (2) | | | III (4) | | | | | |
| | BLPH | | | | I (1) | | | | | |
| | ANHU | | | | (1) | | (1) | | | |
| | ALHU | 2 (1) | | | | | | | | |
| | BHGR | | | | | (1) | | | | |
| | BLGR | | | | | (1) | | | | |

Surveyors: _____

| TIME | Point count spreadsheet | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Date: 6MAY25 | | ≤ 50 m | | | ≥ 50 m | | | Flyover | | | |
| | Station # | Species | 0-3 min | 3-5 min | 5-10 min | 0-3 min | 3-5 min | 5-10 min | 0-3 min | 3-5 min | 5-10 min | |
| 0749 | 3 | CALW | (1) | | | | | | | | | |
| | | BEWR | | | | " (2) | | | | | | |
| | | LEGO | " (2) | | | " (2) | | (2) | | | | |
| | | HOFI | | | | (5) | | | | | | |
| | | MODO | | | | | | | " (2) | | | |
| | | CALT | " (2) | | | [illegible] | | | | | | |
| | | LAZB | | | | 1 (1) | | | | | | |
| | | OCWA | | | | ' (1) | | | | | | |
| | | ANHU | ' (1) | | | | | | | | | |
| | | COHA | | | | ' (1) | | | | | | |
| | | COHU | | ' (1) | | | | | | | | |
| | | WIWA | | ' (1) | | | | | | | | |
| | | ATFL | | | | | | (1) | | | | |
| | | CANN | | | (2) | | | | | | | |
| 0818 | 2 | EUCD | | | | " (2) | | | | | | |
| | | HOFI | " (2) | | | | " (2) | | | | | |
| | | CAQU | ' (1) | " (2) | | ' (1) | | | | | | |
| | | NOMO | | | | ' (1) | | | | | | |
| | | CATH | ' (1) | | | | | | | | | |
| | | WEBL | | | | | | | (11) | | | |
| | | WREN | "' (4) | | | | | | | | | |
| | | CALT | ' (1) | | | | | | | | | |
| | | BEWR | ' (1) | | | ' (1) | ' (1) | | | | | |
| | | ATFL | (1) | | | | | | | | | |
| | | NUWO | | | | (1) | | | | | | |
| | | BLPH | | | | | (1) | | | | | |
| | | NHWR | | (1) | | | | | | | | |
| | | ANHU | | | | | | | | (2) | | |
| | | ALHU | | | | | | | | (1) | | |
| | | HOOR | | ' (1) | | | | | | | | |
| | | GTGR | | | | | | | | | (5) | |
| | | | | | | | | | | | | |

Surveyors: _____

TIME
0842

| Point count spreadsheet | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Date: 6 MAY 25 | | ≤ 50 m | | | ≥ 50 m | | | Flyover | | | |
| Station # | Species | 0-3 min | 3-5 min | 5-10 min | 0-3 min | 3-5 min | 5-10 min | 0-3 min | 3-5 min | 5-10 min | |
| 1 | RTHA | | | | | | | 1 | | | |
| | WTSW | | | | | | | 1 | 5 | 1 5 | |
| | BCHR | 1 1 | | | 1 1 | | | | | | |
| | HOFI | | | | 10 | | | | | | |
| | SPTO | | | | 1 1 | | | | | | |
| | LEGO | | | | 11 2 | | | | | | |
| | CALT | 1 1 | | | 1 1 | | | 1 1 | | | |
| | CAQU | | | | 11 2 | | | | | | |
| | WREN | 11 2 | | | 11 2 | | | | | | |
| | LAZB | | | | 1 1 | | | | | | |
| | CASJ | | | | 1 1 | | | | | | |
| | NHWR | | | | 1 1 | | | | | | |
| | WIWA | 2 | | | | | | | | | |
| | ~~HSPR~~ | | | | * | | | | | | |
| | CLSW | | | | | | | | 5 | 5 | |
| | VASW | | | | | | | | 5 | | |
| | TUVU | | | | | | | | | 2 | |

Surveyors: Brennan McKinney, Karla Alcaraz

0633

IN Point count spreadsheet OUT

| Date: 6/3/25 | | ≤ 50 m | | | ≥ 50 m | | | Flyover | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Station # | Species | 0-3 min | 3-5 min | 5-10 min | 0-3 min | 3-5 min | 5-10 min | 0-3 min | 3-5 min | 5-10 min | |
| 5 | LEGO | 1 | | (1) | III | | (3) | | [illegible] | IIIII | (5) |
| 5 | BEWR | II | | (2) | | | | | | | |
| 5 | [illegible] CALT | II II | | (4) | II | | (2) | | | | |
| 5 | WREN | II | | (2) | II | 1 | (2) | | | | |
| 5 | [illegible] CATH | | | | I | | (1) | | | | |
| 5 | LAGO | | | | | | | 1 | | | (1) |
| 5 | SPTO | 1 | | (1) | 1 | | (1) | | | | |
| 5 | HOFI | | | | 1 | | (1) | | | | |
| 5 | CAKI | | | | 1 | | (1) | | | | |
| 5 | [illegible] NOMO | | | | | 1 | (1) | | | | |
| 5 | [illegible] | | | | | 1 | (1) | | | | |
| 5 | HOOR | | | | | 1 | (1) | | | | |
| 5 | EUCD | | | | | 1 | (1) | | | | |
| 5 | GHOW | | 1 | (1) | | | | | | | |
| 5 | COHU | | 1 | (1) | | | | | | | |
| 3 | COHA | | | (0) | II | | (2) | | | | |
| 3 | WREN | | II | (2) | II | | (2) | | | | |
| 3 | HOFI | | | | IIII | | (5) | II | | (2) | |
| 3 | RSHA | | | | 1 | | (1) | | | | |
| 3 | CACW | 1 | | (1) | | | | | | | |
| 3 | SPTO | | 1 | (1) | 1 | | (1) | | | | |
| 3 | CALT | | 1 | (1) | 1 | | (1) | | | | |
| 3 | CAGN | 1 | | (1) | [illegible] | | | | | | |
| 3 | BEWR | | | | 1 | | (1) | | | | |
| 3 | [illegible] SSCP | | | | | 1 | (1) | | | | |
| 3 | CATH | | | | | 1 | (1) | | | | |
| 3 | ALHU | | 1 | (1) | | | | | | | |
| 3 | LEGU | | | | | | IIII (4) | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

TIME

cal towhee –
wrentit –
thrasher –
lawrence –

northern house wren –

0704

(persistent) nuttalls crown sparrow

Surveyors: BMJ

| Point count spreadsheet | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Date: | | ≤ 50 m | | | ≥ 50 m | | | Flyover | | |
| Station # | Species | 0-3 min | 3-5 min | 5-10 min | 0-3 min | 3-5 min | 5-10 min | 0-3 min | 3-5 min | 5-10 min |
| TIME 0739 | | | | | | | | | | |
| 2 | AMCR | | | | 1 | | 1 (2) | | | |
| 2 | LEGO | | | | IIII | | (4) | | II | (2) |
| 2 | CAKI | | | | 1 | | (1) | | | |
| 2 | NOMO | | | | 1 | | (1) | | | |
| 2 | CALT | | | | 1 | | (1) | | | |
| 2 | BCAGN | 1 | | (1) | | | | | | |
| 2 | COHA | | | | | | | 1 | 1 | (1) |
| 2 | ANHU | 1 | 1 | (1) | | | | | | |
| 2 | HOMI | | | | | II | (2) | | | |
| 2 | MODO | | | | | | | | IIII | (4) |
| 2 | BEWR | | | | | 1 | (1) | | | |
| 2 | NHWR | | | | | 1 | (1) | | | |
| 2 | HOOR | | | | | | 1 (1) | | 1 | (1) |
| 2 | CAQU | | 1 | 1 (1) | | | | | | |
| 0803 1 | LEGO | 1 | | (1) | | 1 | (1) | | | |
| 1 | RTHA | | | | 1 | | (1) | | | |
| 1 | HOOR | | | | 1 | | (1) | | | |
| 1 | AOFL | | | | IIII | | (5) | | | |
| 1 | SPTO | | | | 1 | | 1 (2) | | | |
| 1 | BEWR | | | | 1 | | (1) | | | |
| 1 | CATH | | | | 1 | | (1) | | | |
| 1 | CALT | II | | (2) | | II | II (4) | | | |
| 1 | RSHA | | | | | II | (2) | | | |
| 1 | WIEN | | | | | II | (2) | | | |
| 1 | AMCO | | | | | II | (2) | | | |
| 1 | NOMO | | | | | | 1 (1) | | | |
| 1 | ANHU | | | | | | 1 (1) | | | |
| socal — 1 | RCSP | | | | | | 1 (1) | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

Surveyors: B. Mu, Karla Alcaraz

Point count spreadsheet

| Date: | | ≤ 50 m | | | ≥ 50 m | | | Flyover | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Station # | Species | 0-3 min | 3-5 min | 5-10 min | 0-3 min | 3-5 min | 5-10 min | 0-3 min | 3-5 min | 5-10 min |
| TIME 0926 4 | HOFI | 1 | | (1) | IIIIII | | (8) | 1 | | (1) |
| 4 | LEGO | | | | II | III | (5) | | | |
| 4 | AMCO | | | | | | | 1 | | (1) |
| 4 | ANHU | | | | | | | 1 | | (1) |
| 4 | HOSP | | | | II | | (2) | | | |
| 4 | CORA | | | | II | | (2) | | | |
| 0944 Le | AMCO | | | | | | | 1 | | (1) |
| Le | ANHU | 1 | | (1) | | | | | | |
| Le | ALHU | 1 | | (1) | | | | | | |
| Le | CAGN | IIII | | (4) | | | | | | |
| Le | LEGO | | | | | | | 1 | III | (4) |
| Le | SPTO | | | | 1 | | (1) | | | |
| Le | MOOR | | | | 1 | | (1) | | | |
| Le | NOMO | | | | 1 | | (1) | | | |
| Le | HOFI | 1 | | (1) | | | | | | |
| Le | CALT | II | | (2) | | | | | | |
| Le | ~~SHAWK~~ NHWK (northern harrier) | | | | 1 | | (1) | | | |
| Le | CACW | | | 1 (1) | | | | | | |
| | ATFL | | | 1 (1) | | | | | | |

Surveyors: Brennan Mulroony

| Point count spreadsheet | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Date: 6/27 | | ≤ 50 m | | | ≥ 50 m | | | Flyover | | |
| Station # | Species | 0-3 min | 3-5 min | 5-10 min | 0-3 min | 3-5 min | 5-10 min | 0-3 min | 3-5 min | 5-10 min |
| 0621 6 | WREN | | | | 1 | | | | | |
| | LEGO | 1 | | | 1 | | | | | |
| | RCPA | | | | 30 | | | | | |
| | HOFI | 1 | | | 2-2 | | | | | |
| | CALT | 1 | | | | | | | | |
| | SPTO | 1 | | | | | | | | |
| | HOOR | | | | 1 | | | | | |
| | CORA | | | | 1 | | | | | |
| | AMCR | | | | 5 | | | | | |
| | RTHA | | | | 1 | | | | | |
| | CAQU | | | 2 | | | | | | |
| | ANHU | | | 1 | | | | | | |
| | EUCD | | | | | 2 | | | | |
| | CLSW | | | | | | | | | 1 |
| 0649 4 | LEGO | 15 | | | | | | | 5 | |
| | WREN | 2 | | | | | | | | |
| | HOSP | | | | 2 | | | | | |
| | CALT | 2 | | | | | | | | |
| | BUSH | 2 | | | | | | | | |
| | CAKI | | 2 | | 2 | | | | | |
| | RCSP | 1 | | | | | | | | |
| | COHA | | | | 1 | | | | | |
| | HEFI | | | | | | | | 1 | |
| | AMCR | | | | | | | | 1-1 | 2 |
| | NOMO | | | | | | | 1 | | |
| 0721 3 | CAFH | 1 | | | 1 | | | | | |
| | CALT | 1 | 1 2 | | 1 | | | | | |
| | NOMO | | | | 1 | 1 | | | | |
| | CACW | | | 1 2 | 1 | | | | | |
| | RCSP | | | | 1 | | | | | |
| | COHU | | 1 | | | | | | | |
| | HOOR | | | | | 1 | | | | |
| ALHU | | | | | | | | 1 | | |

Surveyors: BRENNAN MULROONEY

## Point count spreadsheet

| Date: 6/27/25 | | ≤ 50 m | | | ≥ 50 m | | | Flyover | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Station # | Species | 0-3 min | 3-5 min | 5-10 min | 0-3 min | 3-5 min | 5-10 min | 0-3 min | 3-5 min | 5-10 min |
| 0751 2 | CALT | III (3) | | | | | | | | |
| | NOMO | | (1) | (1) | (1) | | | | | |
| | HOFI | | | | II (2) | | | | | |
| | MODO | | | | (1) | | | | | |
| | WREN | II (2) | | | | | | | | |
| | ANHU | | | | | | | (2) | | |
| | COHU | (1) | | | | | | | | |
| | LEGO | | | | (1) | | | | | |
| | HOOR | | (1) | | | | | | | |
| | CAQU | | | (1) | | | | | | |
| | BLPH | | | | | | (1) | | | |
| 0813 1 | NOMO | | | | II (2) | | | | | |
| | BOWR | | | | (1) | | | | | |
| | CALT | | | | (1) | | | | | |
| | BLPH | | | | (1) | | | | | |
| | MODO | | | (1) | | | | | (1) | |
| | WREN | | | | | II (2) | | | | |
| | AMCR | | | | | (1) | | | | |
| | RLHU | | | | | | | | | (1) |
| | SPTO | | | | | | (1) | | | |
| | CORA | | | | | | (1) | | | |
| 0945 5 | HOFI | | | | (5) | | | | | |
| | ANHU | (1) | | | | | | | | |
| | LEGO | (1) | | | (3) | | 2 | | | |
| | NOMO | | | | (1) | | | | | |
| | RTHA | | | | | | | (1) | | |
| | TUTU | | | | | (1) | | | | |
| | CALT | | (1) | | | | | | | |
| | BOWR | | | | | | (1) | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

# E-3 Threat Assessment Forms

# 2_COSD DPR Bio

Biology Surveys (SoCal Bio ONLY)

## TMP Monitoring ▸ SD Cactus Wren

**6/27/2025, 5:26:01 PM UTC**






**CREATED**

6/27/2025, 5:19:45 PM UTC
by Brennan Mulrooney

**UPDATED**

6/27/2025, 5:26:01 PM UTC
by Brennan Mulrooney

**LOCATION**

32.842886, -116.911188

## Parent Form

| | |
|---|---|
| **Project Name:** | TMP Monitoring ▸ SD Cactus Wren |
| **Preserve/Park Name** | Lakeside Linkage |
| **General Survey Type** | TMP Monitoring |
| **Specific Survey Type** | CACW Threat Assessment |
| **Observer/Surveyor:** | Brennan Mulrooney |
| **Assistant Observer/Surveyor:** | |
| **Date:** | June 27, 2025 |

## START Weather Details:

| | |
|---|---|
| **Start - Time:** | 10:19 |
| **Start - Temperature:** | |
| **Start - Wind Direction From (select one):** | |
| **Start - Low Wind Speed:** | |
| **Start - High Wind Speed:** | |
| **Start - Average Wind Speed:** | |
| **Start - Cloud Cover (%):** | |
| **Start - Precipitation (select one):** | None |
| **Start - Visibility (select one):** | |
| **Start - Notes (if applicable):** | |

## END Weather Details:

| | |
|---|---|
| **Time Out:** | 10:45 |
| **End - Temperature:** | |
| **End - Wind Direction From (select one):** | |
| **End - Low Wind Speed:** | |
| **End - High Wind Speed:** | |
| **End - Average Wind Speed:** | |
| **End - Cloud Cover (%):** | |
| **End - Precipitation (select one):** | None |
| **End - Visibility (select one):** | |
| **End - Notes (if applicable):** | |
| **Total Hours:** | |

| | |
|---|---|
| **Project Location (description):** | |

| | |
|---|---|
| **Notes** | |
| **Observation Type:** | Bird |

**Photos**







## Bird

## Bird Observation: (1 Item)

### Bird Observation: - 1. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Wrentit; Chamaea fasciata; WREN |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## CACW Threats

| | |
|---|---|
| **Survey Round** | Round 3 |
| **Date** | June 27, 2025 |
| **Restoration Plot Name** | R1 |
| **What is the dominant non-cactus shrub species (>50% cover)?** | Eriogonum fasciculatum |
| **If there are two species sharing dominance, add second species here.** | Artemisia californica |
| **Elderberry Present?** | Yes |

## What is the vegetation type within the restoration plots?

| | |
|---|---|
| **Total Percent Cover of Cactus** | 30 |
| **What percent of the cactus is crowded/overtopped by shrubs and vines?** | 70 |
| **What is the percent cover of non-native annuals?** | 20 |
| **Non-Native Species** | Bromus spp, Centaurea, |

## Specific to the Cacti populations within the restoration plots.

| | |
|---|---|
| **% Dead Cactus** | 0 |
| **% Unhealthy Cactus** | 15 |
| **Habitat Description** | CSS |
| **Habitat Management Recs** | Remove nonnatives and replace with native grasses to insure birds still can find adequate nest material. Remove or cut shrubs that are overtopping cactus |
| **Invasive Species Risk** | Yes |
| **Invasive Species Description** | Tocolote and Bromus |
| **Invasive Spp Management Recs** | Remove |
| **Risk from Ag Practices** | No |
| **Other Habitat Risks?** | Yes |
| **Describe Other Risks** | Fire |
| **Other Habitat Management Recs** | Stop off-road motor bike use |
| **CACW Foraging Habitat at Risk?** | Yes |
| **Describe CACW Foraging Habitat** | Fire |
| **Foraging Habitat Management Recs** | Stop off-road motor bike use |
| **Predators Present?** | No |
| **Risk from Humans?** | Yes |
| **Description of Human Risks** | Unauthorized Trail Use |
| **Human Management Recs** | Stop off-road motor bike use |

| | |
|---|---|
| **Description of Other Threats** | |
| **Management Recs Other Threats** | |
| **Other Notes** | Cholla looks much healthier than prickly pear. This site has much more tall-stature shrubbery that obscures the cactus that is here. |

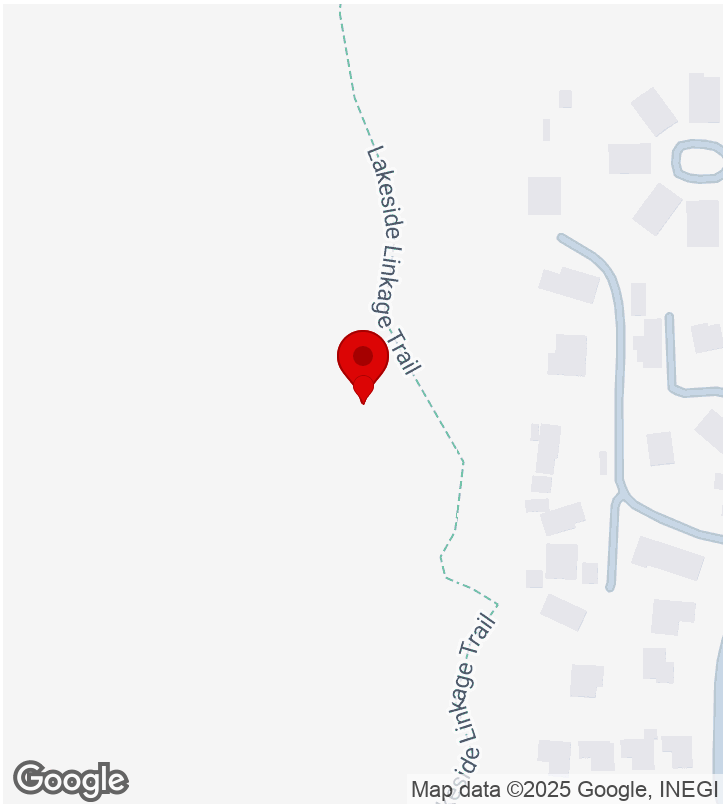
# 2_COSD DPR Bio

Biology Surveys (SoCal Bio ONLY)

## TMP Monitoring ▸ SD Cactus Wren

**6/27/2025, 4:41:24 PM UTC**






**CREATED**

6/27/2025, 4:07:54 PM UTC
by Brennan Mulrooney

**UPDATED**

6/27/2025, 4:41:24 PM UTC
by Brennan Mulrooney

**LOCATION**

32.846352, -116.911514

## Parent Form

| | |
|---|---|
| **Project Name:** | TMP Monitoring ▸ SD Cactus Wren |
| **Preserve/Park Name** | Lakeside Linkage |
| **General Survey Type** | TMP Monitoring |
| **Specific Survey Type** | CACW Threat Assessment |
| **Observer/Surveyor:** | Brennan Mulrooney |
| **Assistant Observer/Surveyor:** | |
| **Date:** | June 27, 2025 |

## START Weather Details:

| | |
|---|---|
| **Start - Time:** | 09:07 |
| **Start - Temperature:** | |
| **Start - Wind Direction From (select one):** | |
| **Start - Low Wind Speed:** | |
| **Start - High Wind Speed:** | |
| **Start - Average Wind Speed:** | |
| **Start - Cloud Cover (%):** | |
| **Start - Precipitation (select one):** | None |
| **Start - Visibility (select one):** | |
| **Start - Notes (if applicable):** | |

## END Weather Details:

| | |
|---|---|
| **Time Out:** | 09:40 |
| **End - Temperature:** | |
| **End - Wind Direction From (select one):** | |
| **End - Low Wind Speed:** | |
| **End - High Wind Speed:** | |
| **End - Average Wind Speed:** | |
| **End - Cloud Cover (%):** | |
| **End - Precipitation (select one):** | None |
| **End - Visibility (select one):** | |
| **End - Notes (if applicable):** | |
| **Total Hours:** | |

| | |
|---|---|
| **Project Location (description):** | |

| | |
|---|---|
| **Notes** | |
| **Observation Type:** | Bird |

**Photos**



## Bird

## Bird Observation: (1 Item)

### Bird Observation: - 1. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Coastal Cactus Wren; Campylorhynchus brunneicapillus sandiegensis; CACW-Coastal |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | Found only in Orange and San Diego Counties |

### Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Both |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Foraging |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Unknown |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## CACW Threats

| | |
|---|---|
| **Survey Round** | Round 3 |
| **Date** | June 27, 2025 |
| **Restoration Plot Name** | R2 |
| **What is the dominant non-cactus shrub species (>50% cover)?** | Eriogonum fasciculatum |
| **If there are two species sharing dominance, add second species here.** | Artemisia californica |
| **Elderberry Present?** | Yes |

## What is the vegetation type within the restoration plots?

| | |
|---|---|
| **Total Percent Cover of Cactus** | 30 |
| **What percent of the cactus is crowded/overtopped by shrubs and vines?** | 5 |
| **What is the percent cover of non-native annuals?** | 20 |
| **Non-Native Species** | Bromus spp, Centaurea, |

## Specific to the Cacti populations within the restoration plots.

| | |
|---|---|
| **% Dead Cactus** | 0 |
| **% Unhealthy Cactus** | 15 |
| **Habitat Description** | CSS |
| **Habitat Management Recs** | Remove nonnatives and replace with native grasses to insure birds still can find adequate nest material |
| **Invasive Species Risk** | Yes |
| **Invasive Species Description** | To plots and Bromus |
| **Invasive Spp Management Recs** | Remove |
| **Risk from Ag Practices** | No |
| **Other Habitat Risks?** | Yes |
| **Describe Other Risks** | Fire |
| **Other Habitat Management Recs** | Stop off-road motor bike use |
| **CACW Foraging Habitat at Risk?** | Yes |
| **Describe CACW Foraging Habitat** | Fire |
| **Foraging Habitat Management Recs** | Stop off-road motor bike use |
| **Predators Present?** | Yes |
| **Predation Risk Level** | Medium |
| **Description of Predation Risk** | COHA |
| **Predator Management Recs** | None |
| **Risk from Humans?** | Yes |

| | |
|---|---|
| **Description of Human Risks** | Unauthorized Trail Use |
| **Human Management Recs** | Stop off-road motor bike use |
| **Description of Other Threats** | |
| **Management Recs Other Threats** | |
| **Other Notes** | |

# Appendix F
## Northern Harrier Survey Forms

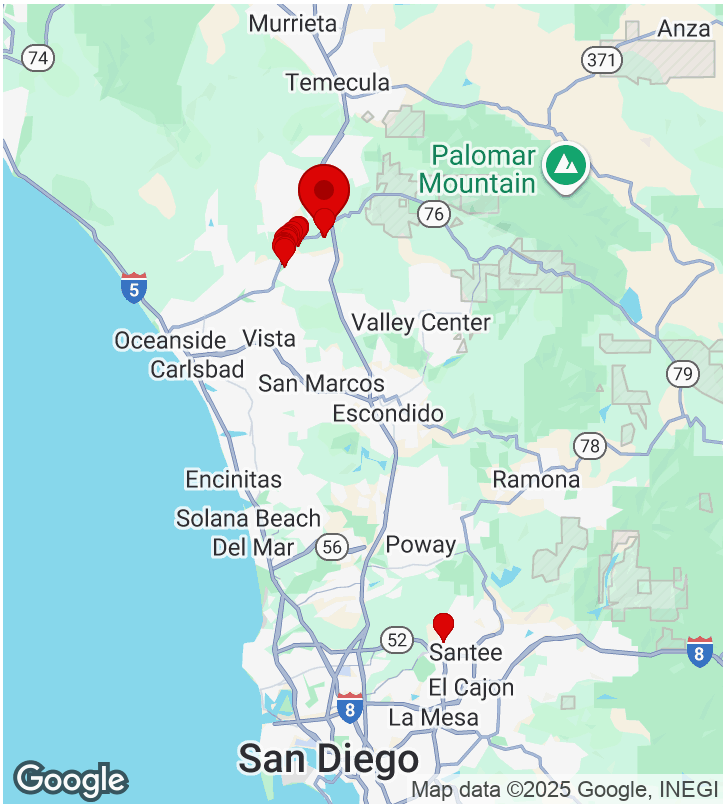
# F-1 San Luis Rey River Park Field Forms and Threat Assessment Forms

# 2_COSD DPR Bio

Biology Surveys (SoCal Bio ONLY)

## TMP Monitoring ▸ Northern Harrier

**5/9/2025, 11:16:18 PM UTC**




**CREATED**

5/9/2025, 2:08:38 PM UTC
by Brennan Mulrooney

**UPDATED**

5/9/2025, 11:16:18 PM UTC
by Brennan Mulrooney

**LOCATION**

33.314208, -117.167261

## Parent Form

| | |
|---|---|
| **Project Name:** | TMP Monitoring ▸ Northern Harrier |
| **Preserve/Park Name** | San Luis Rey River County Park |
| **General Survey Type** | TMP Monitoring |
| **Specific Survey Type** | TMP Northern Harrier |
| **Observer/Surveyor:** | Brennan Mulrooney |
| **Assistant Observer/Surveyor:** | Mary Cozy |
| **Date:** | May 9, 2025 |

## START Weather Details:

| | |
|---|---|
| **Start - Time:** | 07:08 |
| **Start - Temperature:** | 63 |
| **Start - Wind Direction From (select one):** | N/A |
| **Start - Low Wind Speed:** | 0 |
| **Start - High Wind Speed:** | 0 |
| **Start - Average Wind Speed:** | 0 |
| **Start - Cloud Cover (%):** | 0 |
| **Start - Precipitation (select one):** | None |
| **Start - Visibility (select one):** | Good |
| **Start - Notes (if applicable):** | |

## END Weather Details:

| | |
|---|---|
| **Time Out:** | 12:30 |
| **End - Temperature:** | 78 |
| **End - Wind Direction From (select one):** | W |
| **End - Low Wind Speed:** | 3 |
| **End - High Wind Speed:** | 5 |
| **End - Average Wind Speed:** | 4 |
| **End - Cloud Cover (%):** | 0 |
| **End - Precipitation (select one):** | None |
| **End - Visibility (select one):** | |
| **End - Notes (if applicable):** | |
| **Total Hours:** | |

| | |
|---|---|
| **Project Location (description):** | |

| | |
|---|---|
| **Notes** | |
| **Observation Type:** | Bird, Mammal, Reptile, Butterfly/Moth |
| **Photos** | |

# Bird

## Bird Observation: (53 Items)

### Bird Observation: - 1. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Ash-throated Flycatcher; Myiarchus cinerascens; ATFL |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

### Bird Observation: - 2. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Cassin's Kingbird; Tyrannus vociferans; CAKI |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

### Bird Observation: - 3. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Northern Mockingbird; Mimus polyglottos; NOMO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

### Bird Observation: - 4. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | California Towhee; Melozone crissalis; CALT |
| **Is the Bird Sensitive ?** | no |

| | |
|---|---|
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 5. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Yellow Warbler; Setophaga petechia; YEWA |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Auditory |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Singing/calling |
| **Bird Sex (check all that apply):** | Male |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 6. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Least Bell's Vireo; Vireo bellii pusillus; LBVI |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | Breeds from central California south to n. Baja CA |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Auditory |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Singing/calling |
| **Bird Sex (check all that apply):** | Male |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | Location approximate |
| **Photo(s) of Bird:** | |

## Bird Observation: - 7. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Yellow-breasted Chat; Icteria virens; YBCH |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Auditory |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Singing/calling |
| **Bird Sex (check all that apply):** | Male |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 8. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Common Yellowthroat; Geothlypis trichas; COYE |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 9. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Mourning Dove; Zenaida macroura; MODO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 10. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Hairy Woodpecker; Dryobates villosus; HAWO |
| **Is the Bird Sensitive ?** | no |

| | |
|---|---|
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 11. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Acorn Woodpecker; Melanerpes formicivorus; ACWO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 12. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Cliff Swallow; Petrochelidon pyrrhonota; CLSW |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 13. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Say's Phoebe; Sayornis saya; SAPH |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 14. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Bewick's Wren; Thryomanes bewickii; BEWR |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 15. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Brown-headed Cowbird; Molothrus ater; BHCO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 16. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | California Scrub-Jay; Aphelocoma californica; CASJ |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 17. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Wrentit; Chamaea fasciata; WREN |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 18. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | European Starling; Sturnus vulgaris; EUST |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 19. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Lazuli Bunting; Passerina amoena; LAZB |
| **Is the Bird Sensitive ?** | no |

| | |
|---|---|
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 20. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Hooded Oriole; Icterus cucullatus; HOOR |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 21. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Song Sparrow; Melospiza melodia; SOSP |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 22. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | White-faced Ibis; Plegadis chihi; WFIB |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 2 |
| **Behavior (check all that apply):** | In flight |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Unknown |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 23. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Chipping Sparrow; Spizella passerina; CHSP |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 24. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Lawrence's Goldfinch; Spinus lawrencei; LAGO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 25. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Red-shouldered Hawk; Buteo lineatus; RSHA |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Perched (not singing) |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 26. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Northern House Wren; Troglodytes aedon; NHWR |
| **Is the Bird Sensitive ?** | no |

| | |
|---|---|
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 27. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | American Crow; Corvus brachyrhynchos; AMCR |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 28. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | House Finch; Haemorhous mexicanus; HOFI |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 29. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Black Phoebe; Sayornis nigricans; BLPH |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 30. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Vermilion Flycatcher; Pyrocephalus rubinus; VEFL |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Auditory |

| | |
|---|---|
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Singing/calling |
| **Bird Sex (check all that apply):** | Male |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 31. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Lark Sparrow; Chondestes grammacus; LASP |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 32. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Phainopepla; Phainopepla nitens; PHAI |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 33. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Eurasian Collared-Dove; Streptopelia decaocto; EUCD |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 34. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | American Goldfinch; Spinus tristis; AGOL |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |

| | |
|---|---|
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 35. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Lesser Goldfinch; Spinus psaltria; LEGO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 36. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Nuttall's Woodpecker; Dryobates nuttallii; NUWO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 37. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Bushtit; Psaltriparus minimus; BUSH |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 38. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Turkey Vulture; Cathartes aura; TUVU |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |

| | |
|---|---|
| **Behavior (check all that apply):** | In flight |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 39. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Western Tanager; Piranga ludoviciana; WETA |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 40. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Allen's Hummingbird; Selasphorus sasin; ALHU |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 41. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Cedar Waxwing; Bombycilla cedrorum; CEDW |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 42. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Spotted Towhee; Pipilo maculatus; SPTO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |

**Photo(s) of Bird:**

## Bird Observation: - 43. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | American Kestrel; Falco sparverius; AMKE |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |

**Photo(s) of Bird:**

## Bird Observation: - 44. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Red-winged Blackbird; Agelaius phoeniceus; RWBL |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |

**Photo(s) of Bird:**

## Bird Observation: - 45. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Western Bluebird; Sialia mexicana; WEBL |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Perched (not singing) |
| **Bird Sex (check all that apply):** | Male |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |

**Photo(s) of Bird:**

## Bird Observation: - 46. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Tree Swallow; Tachycineta bicolor; TRES |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 47. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Orange-crowned Warbler; Leiothlypis celata; OCWA |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 48. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Yellow-headed Blackbird; Xanthocephalus xanthocephalus; YHBL |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Both |
| **Number of individuals observed:** | 6 |
| **Behavior (check all that apply):** | Perched (not singing) |
| **Bird Sex (check all that apply):** | Female, Male |
| **Bird Age (check all that apply):** | Adult, Subadult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 49. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Grasshopper Sparrow; Ammodramus savannarum; GRSP |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Both |
| **Number of individuals observed:** | 2 |
| **Behavior (check all that apply):** | Perched (not singing) |
| **Bird Sex (check all that apply):** | Female, Male |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 50. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Western Meadowlark; Sturnella neglecta; WEME |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 51. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Barn Swallow; Hirundo rustica; BARS |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 52. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Savannah Sparrow; Passerculus sandwichensis; SAVS |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | Only found on the Channel Islands |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 53. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Cooper's Hawk; Astur cooperii; COHA |
| **Is the Bird Sensitive ?** | yes |

| | |
|---|---|
| **Sub-Species Info:** | N/A |

### Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | In flight |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Butterfly/Moth

## Butterfly/Moth Observation: (3 Items)

### Butterfly/Moth Observation: - 1. 1 record

| | |
|---|---|
| **Butterfly/Moth (Common or Scientific Name):** | Eufala Skipper; Lerodea eufala |
| **Is the Butterfly/Moth Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Butterfly/Moth:** | |

### Butterfly/Moth Observation: - 2. 1 record

| | |
|---|---|
| **Butterfly/Moth (Common or Scientific Name):** | Mourning Cloak; Nymphalis antiopa |
| **Is the Butterfly/Moth Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Butterfly/Moth:** | |

### Butterfly/Moth Observation: - 3. 1 record

| | |
|---|---|
| **Butterfly/Moth (Common or Scientific Name):** | Cloudless Sulphur; Phoebis sennae |
| **Is the Butterfly/Moth Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Butterfly/Moth:** | |

## Mammal

## Mammal Observation: (3 Items)

### Mammal Observation: - 1. 1 record

| | |
|---|---|
| **Mammal (Common or Scientific Name):** | Coyote; Canis latrans |
| **Is the Mammal Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Mammal:** | |

### Mammal Observation: - 2. 1 record

| | |
|---|---|
| **Mammal (Common or Scientific Name):** | California Ground Squirrel; Ostospermophilus beecheyi |
| **Is the Mammal Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Mammal:** | |

### Mammal Observation: - 3. 1 record

| | |
|---|---|
| **Mammal (Common or Scientific Name):** | Desert Cottontail; Sylvilagus audubonii |
| **Is the Mammal Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |

**Photo(s) of Mammal:**

## Reptile

## Reptile Observation: (1 Item)

### Reptile Observation: - 1. 1 record

| | |
|---|---|
| **Reptile (Common or Scientific Name):** | Western Fence Lizard; Sceloporus occidentalis |
| **Is the Reptile Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |

**Photo(s) of Reptile:**

# 2_COSD DPR Bio

Biology Surveys (SoCal Bio ONLY)

## TMP Monitoring ▸ Northern Harrier

**10/15/2025, 12:09:15 AM UTC**



Suitable foraging habitat west of Rancho Monserate Country Club. Facing NW




**CREATED**

6/13/2025, 1:54:27 PM UTC
by Karla Alcaraz

**UPDATED**

10/15/2025, 12:09:15 AM UTC
by Brennan Mulrooney

**LOCATION**

33.314417, -117.167078

## Parent Form

| | |
|---|---|
| **Project Name:** | TMP Monitoring ▸ Northern Harrier |
| **Preserve/Park Name** | San Luis Rey River County Park |
| **General Survey Type** | TMP Monitoring |
| **Specific Survey Type** | TMP Northern Harrier |
| **Observer/Surveyor:** | Brennan Mulrooney |
| **Assistant Observer/Surveyor:** | Karla Alcaraz |
| **Date:** | June 13, 2025 |

## START Weather Details:

| | |
|---|---|
| **Start - Time:** | 06:54 |
| **Start - Temperature:** | 60 |
| **Start - Wind Direction From (select one):** | NW |
| **Start - Low Wind Speed:** | 0 |
| **Start - High Wind Speed:** | 1 |
| **Start - Average Wind Speed:** | 0.5 |
| **Start - Cloud Cover (%):** | 100 |
| **Start - Precipitation (select one):** | None |
| **Start - Visibility (select one):** | Good |
| **Start - Notes (if applicable):** | |

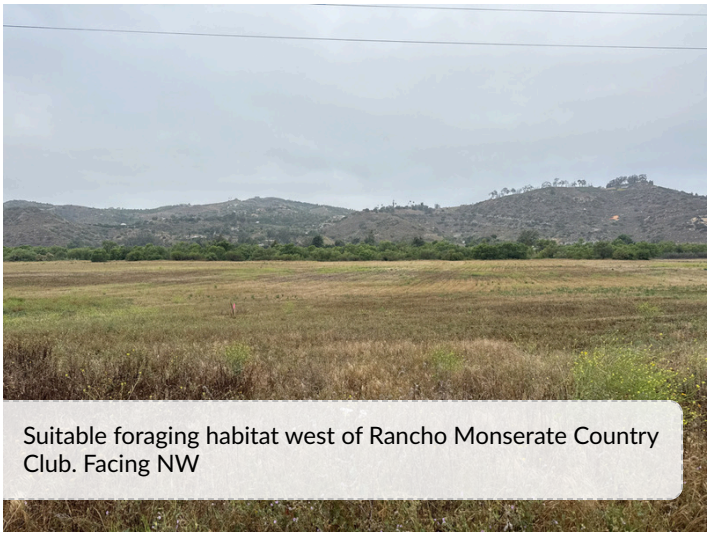
## END Weather Details:

| | |
|---|---|
| **Time Out:** | 11:19 |
| **End - Temperature:** | 72 |
| **End - Wind Direction From (select one):** | SW |
| **End - Low Wind Speed:** | 0 |
| **End - High Wind Speed:** | 9 |
| **End - Average Wind Speed:** | 4.5 |
| **End - Cloud Cover (%):** | 3 |
| **End - Precipitation (select one):** | None |
| **End - Visibility (select one):** | Good |
| **End - Notes (if applicable):** | |
| **Total Hours:** | |

| | |
|---|---|
| **Project Location (description):** | |

| | |
|---|---|
| **Notes** | The presence of fog is causing the area to appear darker at 0731. No sign of NOHA during the survey period. |
| **Observation Type:** | Bird, Mammal, Plant, Invertebrate, Reptile, Butterfly/Moth |

**Photos**



Suitable foraging habitat west of Rancho Monserate Country Club. Facing NW



Suitable foraging and breeding habitat north of W Lilac Rd. Facing W



Suitable foraging and breeding habitat northwest of W Lilac Rd. Facing N



Unsuitable habitat south of Camino Del Rey. Facing W



Unsuitable habitat near Little Gopher Canyon Rd. Facing NW

## Bird

# Bird Observation: (51 Items)

## Bird Observation: - 1. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | American Kestrel; Falco sparverius; AMKE |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 2. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Spotted Towhee; Pipilo maculatus; SPTO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 3. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Northern Mockingbird; Mimus polyglottos; NOMO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 4. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | California Thrasher; Toxostoma redivivum; CATH |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 5. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Anna's Hummingbird; Calypte anna; ANHU |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 6. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | California Towhee; Melozone crissalis; CALT |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 7. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Yellow Warbler; Setophaga petechia; YEWA |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Auditory |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Singing/calling |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Unknown |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 8. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Common Yellowthroat; Geothlypis trichas; COYE |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 9. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | American Crow; Corvus brachyrhynchos; AMCR |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 10. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | House Finch; Haemorhous mexicanus; HOFI |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 11. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Cassin's Kingbird; Tyrannus vociferans; CAKI |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 12. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Red-tailed Hawk; Buteo jamaicensis; RTHA |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 13. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Cliff Swallow; Petrochelidon pyrrhonota; CLSW |

| | |
|---|---|
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 14. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Mourning Dove; Zenaida macroura; MODO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 15. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Wrentit; Chamaea fasciata; WREN |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 16. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Yellow-breasted Chat; Icteria virens; YBCH |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Auditory |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Singing/calling |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Unknown |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 17. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | European Starling; Sturnus vulgaris; EUST |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 18. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Northern Flicker; Colaptes auratus; NOFL |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 19. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Western Bluebird; Sialia mexicana; WEBL |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Perched (not singing) |
| **Bird Sex (check all that apply):** | Male |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 20. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Brown-headed Cowbird; Molothrus ater; BHCO |
| **Is the Bird Sensitive ?** | no |

| | |
|---|---|
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 21. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Blue-gray Gnatcatcher; Polioptila caerulea; BGGN |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 22. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Phainopepla; Phainopepla nitens; PHAI |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 23. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | White-faced Ibis; Plegadis chihi; WFIB |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | In flight |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Unknown |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 24. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Lesser Goldfinch; Spinus psaltria; LEGO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 25. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Blue Grosbeak; Passerina caerulea; BLGR |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 26. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Tree Swallow; Tachycineta bicolor; TRES |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 27. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Great Blue Heron; Ardea herodias; GBHE |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | In flight |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Unknown |

| | |
|---|---|
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 28. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Red-winged Blackbird; Agelaius phoeniceus; RWBL |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 29. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Least Bell's Vireo; Vireo bellii pusillus; LBVI |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | Breeds from central California south to n. Baja CA |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Auditory |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Singing/calling |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Unknown |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 30. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Ash-throated Flycatcher; Myiarchus cinerascens; ATFL |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 31. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Orange-crowned Warbler; Leiothlypis celata; OCWA |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 32. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Black Phoebe; Sayornis nigricans; BLPH |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 33. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Cooper's Hawk; Astur cooperii; COHA |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | In flight |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Subadult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 34. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Say's Phoebe; Sayornis saya; SAPH |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 35. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Great Egret; Ardea alba; GREG |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 36. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Black-headed Grosbeak; Pheucticus melanocephalus; BHGR |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 37. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Lawrence's Goldfinch; Spinus lawrencei; LAGO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 38. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Turkey Vulture; Cathartes aura; TUVU |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | In flight |
| **Bird Sex (check all that apply):** | Unknown |

| | |
|---|---|
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 39. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Vermilion Flycatcher; Pyrocephalus rubinus; VEFL |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Perched (not singing) |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Subadult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 40. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Acorn Woodpecker; Melanerpes formicivorus; ACWO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 41. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Nuttall's Woodpecker; Dryobates nuttallii; NUWO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 42. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Red-shouldered Hawk; Buteo lineatus; RSHA |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | In flight |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 43. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Hooded Oriole; Icterus cucullatus; HOOR |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 44. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | White-breasted Nuthatch; Sitta carolinensis; WBNU |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 45. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Oak Titmouse; Baeolophus inornatus; OATI |
| **Is the Bird Sensitive ?** | no |

| | |
|---|---|
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 46. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Downy Woodpecker; Dryobates pubescens; DOWO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 47. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Western Flycatcher; Empidonax difficilis; WEFL |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 48. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Northern Rough-winged Swallow; Stelgidopteryx serripennis; NRWS |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 49. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Swainson's Thrush; Catharus ustulatus; SWTH |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

### Bird Observation: - 50. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Lark Sparrow; Chondestes grammacus; LASP |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

### Bird Observation: - 51. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Allen's Hummingbird; Selasphorus sasin; ALHU |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Butterfly/Moth

## Butterfly/Moth Observation: (3 Items)

### Butterfly/Moth Observation: - 1. 1 record

| | |
|---|---|
| **Butterfly/Moth (Common or Scientific Name):** | Fiery Skipper; Hylephila phyleus |
| **Is the Butterfly/Moth Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Butterfly/Moth:** | |

### Butterfly/Moth Observation: - 2. 1 record

| | |
|---|---|
| **Butterfly/Moth (Common or Scientific Name):** | Western Tiger Swallowtail; Papilio rutulus |
| **Is the Butterfly/Moth Sensitive ?** | no |
| **Sub-Species Info:** | N/A |

| | |
|---|---|
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Butterfly/Moth:** | |

### Butterfly/Moth Observation: - 3. 1 record

| | |
|---|---|
| **Butterfly/Moth (Common or Scientific Name):** | Mourning Cloak; Nymphalis antiopa |
| **Is the Butterfly/Moth Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Butterfly/Moth:** | |

## Invertebrate

## Invertebrate Observation: (2 Items)

### Invertebrate Observation: - 1.

| | |
|---|---|
| **Invertebrate (Common or Scientific Name):** | |
| **Other Invertebrate Species** | Dermacentor variabilis |
| **Is the Invertebrate Sensitive ?** | No |
| **Is the Invertebrate Sensitive ?** | |
| **Sub-Species Info:** | |
| **Additional Notes:** | |
| **Photo(s) of Invertebrate:** | |



## Invertebrate Observation: - 2.

| | |
|---|---|
| **Invertebrate (Common or Scientific Name):** | |
| **Other Invertebrate Species** | Procambarus clarkii |
| **Is the Invertebrate Sensitive ?** | No |
| **Is the Invertebrate Sensitive ?** | |
| **Sub-Species Info:** | |
| **Additional Notes:** | |
| **Photo(s) of Invertebrate:** | |

# Mammal

## Mammal Observation: (4 Items)

### Mammal Observation: - 1. 1 record

| | |
|---|---|
| **Mammal (Common or Scientific Name):** | Desert Cottontail; Sylvilagus audubonii |
| **Is the Mammal Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Mammal:** | |

### Mammal Observation: - 2. 1 record

| | |
|---|---|
| **Mammal (Common or Scientific Name):** | Coyote; Canis latrans |
| **Is the Mammal Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Mammal:** | |

### Mammal Observation: - 3. 1 record

| | |
|---|---|
| **Mammal (Common or Scientific Name):** | California Ground Squirrel; Ostospermophilus beecheyi |
| **Is the Mammal Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Mammal:** | |

### Mammal Observation: - 4. 1 record

| | |
|---|---|
| **Mammal (Common or Scientific Name):** | Botta's Pocket Gopher; Thomomys bottae |
| **Is the Mammal Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | Skull only |
| **Photo(s) of Mammal:** | |

## Plants

## Plant Observation: (9 Items)

### Plant Observation: - 1. 1 record

| | |
|---|---|
| **Plant (Common or Scientific Name):** | Deinandra fasciculata |
| **Is the Plant Sensitive ?** | no |
| **State** | N/A |
| **Federal** | N/A |
| **CA Rare Plant Rank** | N/A |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Plant:** | |

## Plant Observation: - 2. 1 record

| | |
|---|---|
| **Plant (Common or Scientific Name):** | Erodium botrys |
| **Is the Plant Sensitive ?** | no |
| **State** | N/A |
| **Federal** | N/A |
| **CA Rare Plant Rank** | N/A |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Plant:** | |

## Plant Observation: - 3. 1 record

| | |
|---|---|
| **Plant (Common or Scientific Name):** | Erodium cicutarium |
| **Is the Plant Sensitive ?** | no |
| **State** | N/A |
| **Federal** | N/A |
| **CA Rare Plant Rank** | N/A |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Plant:** | |

## Plant Observation: - 4. 1 record

| | |
|---|---|
| **Plant (Common or Scientific Name):** | Glebionis coronaria |
| **Is the Plant Sensitive ?** | no |
| **State** | N/A |
| **Federal** | N/A |

| | |
|---|---|
| **CA Rare Plant Rank** | N/A |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Plant:** | |

## Plant Observation: - 5. 1 record

| | |
|---|---|
| **Plant (Common or Scientific Name):** | Stephanomeria exigua |
| **Is the Plant Sensitive ?** | no |
| **State** | N/A |
| **Federal** | N/A |
| **CA Rare Plant Rank** | N/A |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Plant:** | |



## Plant Observation: - 6. 1 record

| | |
|---|---|
| **Plant (Common or Scientific Name):** | Lotus tenuis |

| | |
|---|---|
| **Is the Plant Sensitive ?** | no |
| **State** | N/A |
| **Federal** | N/A |
| **CA Rare Plant Rank** | N/A |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Plant:** | |

## Plant Observation: - 7. 1 record

| | |
|---|---|
| **Plant (Common or Scientific Name):** | Plantago lanceolata |
| **Is the Plant Sensitive ?** | no |
| **State** | N/A |
| **Federal** | N/A |
| **CA Rare Plant Rank** | N/A |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Plant:** | |

## Plant Observation: - 8. 1 record

| | |
|---|---|
| **Plant (Common or Scientific Name):** | Cucurbita foetidissima |
| **Is the Plant Sensitive ?** | no |
| **State** | N/A |
| **Federal** | N/A |
| **CA Rare Plant Rank** | N/A |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Plant:** | |

## Plant Observation: - 9. 1 record

| | |
|---|---|
| **Plant (Common or Scientific Name):** | Avena barbata |
| **Is the Plant Sensitive ?** | no |
| **State** | N/A |
| **Federal** | N/A |
| **CA Rare Plant Rank** | N/A |

| | |
|---|---|
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Plant:** | |

# Reptile

## Reptile Observation: (2 Items)

### Reptile Observation: - 1. 1 record

| | |
|---|---|
| **Reptile (Common or Scientific Name):** | Gophersnake; Pituophis catenifer |
| **Is the Reptile Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Reptile:** | |

### Reptile Observation: - 2. 1 record

| | |
|---|---|
| **Reptile (Common or Scientific Name):** | Western Fence Lizard; Sceloporus occidentalis |
| **Is the Reptile Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Reptile:** | |

# 2_COSD DPR Bio

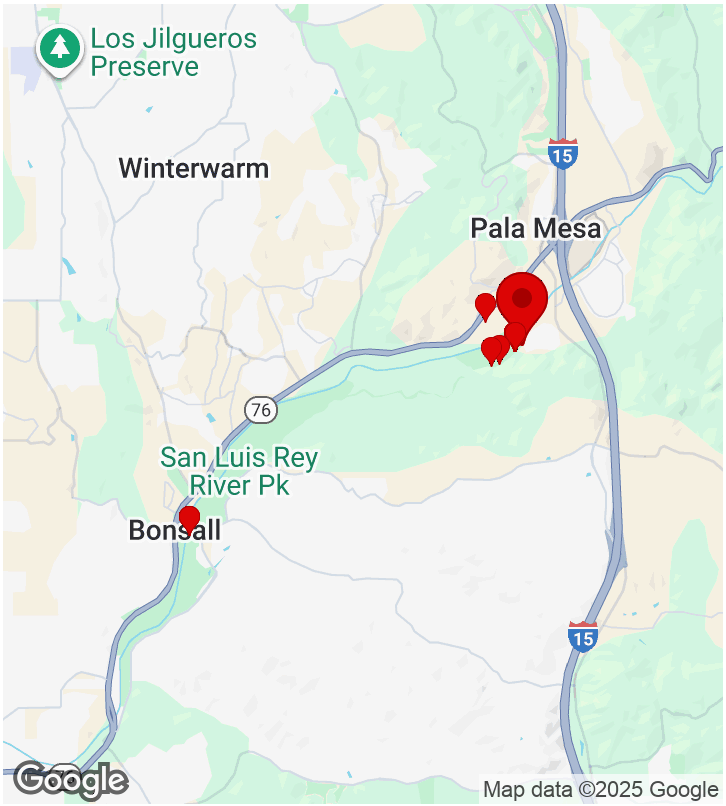
Biology Surveys (SoCal Bio ONLY)

## TMP Monitoring ▸ Northern Harrier

**10/15/2025, 12:15:16 AM UTC**



Suitable foraging habitat west of Rancho Monserate Country Club. Facing NW




**CREATED**

7/3/2025, 1:50:26 PM UTC
by Karla Alcaraz

**UPDATED**

10/15/2025, 12:15:16 AM UTC
by Brennan Mulrooney

**LOCATION**

33.315281, -117.165957

## Parent Form

| | |
|---|---|
| **Project Name:** | TMP Monitoring ▸ Northern Harrier |
| **Preserve/Park Name** | San Luis Rey River County Park |
| **General Survey Type** | TMP Monitoring |
| **Specific Survey Type** | TMP Northern Harrier |
| **Observer/Surveyor:** | Brennan Mulrooney |
| **Assistant Observer/Surveyor:** | Karla Alcaraz |
| **Date:** | July 3, 2025 |

## START Weather Details:

| | |
|---|---|
| **Start - Time:** | 06:50 |
| **Start - Temperature:** | 60 |
| **Start - Wind Direction From (select one):** | NW |
| **Start - Low Wind Speed:** | 1 |
| **Start - High Wind Speed:** | 2 |
| **Start - Average Wind Speed:** | 1.5 |
| **Start - Cloud Cover (%):** | 100 |
| **Start - Precipitation (select one):** | None |
| **Start - Visibility (select one):** | Good |
| **Start - Notes (if applicable):** | |

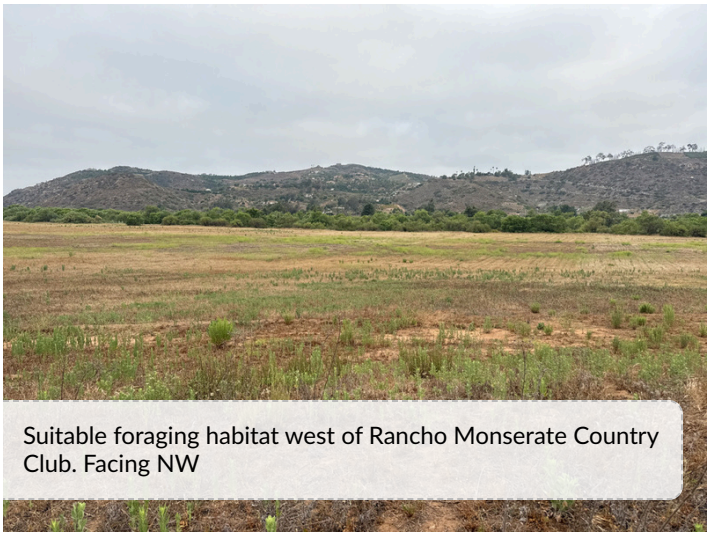
## END Weather Details:

| | |
|---|---|
| **Time Out:** | 11:13 |
| **End - Temperature:** | 74 |
| **End - Wind Direction From (select one):** | SW |
| **End - Low Wind Speed:** | 1 |
| **End - High Wind Speed:** | 7 |
| **End - Average Wind Speed:** | 4 |
| **End - Cloud Cover (%):** | 0 |
| **End - Precipitation (select one):** | None |
| **End - Visibility (select one):** | Good |
| **End - Notes (if applicable):** | |
| **Total Hours:** | |

| | |
|---|---|
| **Project Location (description):** | |

| | |
|---|---|
| **Notes** | Mustard, morning glory, bromus diandrous, bromus sp, avena sp (area across NE polygon) |
| **Observation Type:** | Bird, Mammal, Plant, Invertebrate, Fish |

**Photos**



Suitable foraging habitat west of Rancho Monserate Country Club. Facing NW



Suitable foraging habitat west of Rancho Monserate Country Club. Facing W



Unsuitable habitat south of Camino Del Rey. Facing W



Good area to target for restoration. North of the river at the east end of the preserve.



Good area to target for restoration. North of the river at the east end of the preserve.

## Bird

# Bird Observation: (19 Items)

## Bird Observation: - 1. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | American Kestrel; Falco sparverius; AMKE |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 2. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Mourning Dove; Zenaida macroura; MODO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 3. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | White-faced Ibis; Plegadis chihi; WFIB |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Foraging |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Unknown |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 4. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Wrentit; Chamaea fasciata; WREN |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 5. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | House Finch; Haemorhous mexicanus; HOFI |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 6. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Northern Mockingbird; Mimus polyglottos; NOMO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 7. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Red-tailed Hawk; Buteo jamaicensis; RTHA |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 8. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Black-headed Grosbeak; Pheucticus melanocephalus; BHGR |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |

**Photo(s) of Bird:**

## Bird Observation: - 9. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Yellow-breasted Chat; Icteria virens; YBCH |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Auditory |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Singing/calling |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Unknown |
| **Additional Notes:** | |

**Photo(s) of Bird:**

## Bird Observation: - 10. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | California Towhee; Melozone crissalis; CALT |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |

**Photo(s) of Bird:**

## Bird Observation: - 11. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Spotted Towhee; Pipilo maculatus; SPTO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |

**Photo(s) of Bird:**

## Bird Observation: - 12. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Ash-throated Flycatcher; Myiarchus cinerascens; ATFL |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 13. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Phainopepla; Phainopepla nitens; PHAI |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 14. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | California Thrasher; Toxostoma redivivum; CATH |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 15. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | California Scrub-Jay; Aphelocoma californica; CASJ |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 16. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Brown-headed Cowbird; Molothrus ater; BHCO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |

**Photo(s) of Bird:**

## Bird Observation: - 17. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Hooded Oriole; Icterus cucullatus; HOOR |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 18. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Bushtit; Psaltriparus minimus; BUSH |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 19. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Black-chinned Hummingbird; Archilochus alexandri; BCHU |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

# Fish

## Fish Observation: (2 Items)

### Fish Observation: - 1. 1 record

| | |
|---|---|
| **Fish (Common or Scientific Name):** | Largemouth Bass; Micropterus salmoides |
| **Is the Fish Sensitive ?** | no |
| **Sub-Species Info:** | N/A |

| | |
|---|---|
| **Additional Notes:** | |
| **Photo(s) of Fish:** | |

### Fish Observation: - 2. 1 record

| | |
|---|---|
| **Fish (Common or Scientific Name):** | Western mosquitofish; Gambusia affinis |
| **Is the Fish Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Fish:** | |

## Invertebrate

## Invertebrate Observation: (1 Item)

### Invertebrate Observation: - 1.

| | |
|---|---|
| **Invertebrate (Common or Scientific Name):** | |
| **Other Invertebrate Species** | Procambarus clarkii |
| **Is the Invertebrate Sensitive ?** | |
| **Is the Invertebrate Sensitive ?** | |
| **Sub-Species Info:** | |
| **Additional Notes:** | |
| **Photo(s) of Invertebrate:** | |

## Mammal

## Mammal Observation: (2 Items)

### Mammal Observation: - 1. 1 record

| | |
|---|---|
| **Mammal (Common or Scientific Name):** | Coyote; Canis latrans |
| **Is the Mammal Sensitive ?** | no |
| **Sub-Species Info:** | N/A |

| | |
|---|---|
| **Additional Notes:** | 3 |
| **Photo(s) of Mammal:** | |

### Mammal Observation: - 2. 1 record

| | |
|---|---|
| **Mammal (Common or Scientific Name):** | Desert Cottontail; Sylvilagus audubonii |
| **Is the Mammal Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Mammal:** | |

## Plants

## Plant Observation: (11 Items)

### Plant Observation: - 1. 1 record

| | |
|---|---|
| **Plant (Common or Scientific Name):** | Ambrosia psilostachya |
| **Is the Plant Sensitive ?** | no |
| **State** | N/A |
| **Federal** | N/A |
| **CA Rare Plant Rank** | N/A |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Plant:** | |



## Plant Observation: - 2. 1 record

| | |
|---|---|
| **Plant (Common or Scientific Name):** | Heterotheca grandiflora |
| **Is the Plant Sensitive ?** | no |
| **State** | N/A |
| **Federal** | N/A |
| **CA Rare Plant Rank** | N/A |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Plant:** | |



## Plant Observation: - 3. 1 record

| | |
|---|---|
| **Plant (Common or Scientific Name):** | Deinandra fasciculata |
| **Is the Plant Sensitive ?** | no |
| **State** | N/A |
| **Federal** | N/A |
| **CA Rare Plant Rank** | N/A |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Plant:** | |

## Plant Observation: - 4.

| | |
|---|---|
| **Plant (Common or Scientific Name):** | |
| **Other Plant Species** | Avena sp |
| **Is the plant Sensitive ?** | |
| **Is the Plant Sensitive ?** | |
| **State** | |

| | |
|---|---|
| **Federal** | |
| **CA Rare Plant Rank** | |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Plant:** | |

## Plant Observation: - 5. 1 record

| | |
|---|---|
| **Plant (Common or Scientific Name):** | Bromus diandrus |
| **Is the Plant Sensitive ?** | no |
| **State** | N/A |
| **Federal** | N/A |
| **CA Rare Plant Rank** | N/A |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Plant:** | |

## Plant Observation: - 6.

| | |
|---|---|
| **Plant (Common or Scientific Name):** | |
| **Other Plant Species** | Bromus sp |
| **Is the plant Sensitive ?** | |
| **Is the Plant Sensitive ?** | |
| **State** | |
| **Federal** | |
| **CA Rare Plant Rank** | |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Plant:** | |

## Plant Observation: - 7. 1 record

| | |
|---|---|
| **Plant (Common or Scientific Name):** | Tree Tobacco |
| **Is the Plant Sensitive ?** | no |
| **State** | N/A |
| **Federal** | N/A |
| **CA Rare Plant Rank** | N/A |

| | |
|---|---|
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Plant:** | |

## Plant Observation: - 8. 1 record

| | |
|---|---|
| **Plant (Common or Scientific Name):** | Short-Pod Mustard |
| **Is the Plant Sensitive ?** | no |
| **State** | N/A |
| **Federal** | N/A |
| **CA Rare Plant Rank** | N/A |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Plant:** | |

## Plant Observation: - 9. 1 record

| | |
|---|---|
| **Plant (Common or Scientific Name):** | Erodium botrys |
| **Is the Plant Sensitive ?** | no |
| **State** | N/A |
| **Federal** | N/A |
| **CA Rare Plant Rank** | N/A |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Plant:** | |

## Plant Observation: - 10.

| | |
|---|---|
| **Plant (Common or Scientific Name):** | |
| **Other Plant Species** | Rumex sp |
| **Is the plant Sensitive ?** | |
| **Is the Plant Sensitive ?** | |
| **State** | |
| **Federal** | |
| **CA Rare Plant Rank** | |
| **Number of individuals observed:** | |
| **Additional Notes:** | |

**Photo(s) of Plant:**

## Plant Observation: - 11.

| | |
|---|---|
| **Plant (Common or Scientific Name):** | |
| **Other Plant Species** | Tamarix sp |
| **Is the plant Sensitive ?** | |
| **Is the Plant Sensitive ?** | |
| **State** | |
| **Federal** | |
| **CA Rare Plant Rank** | |
| **Number of individuals observed:** | |
| **Additional Notes:** | |

**Photo(s) of Plant:**

# 2_COSD DPR Bio

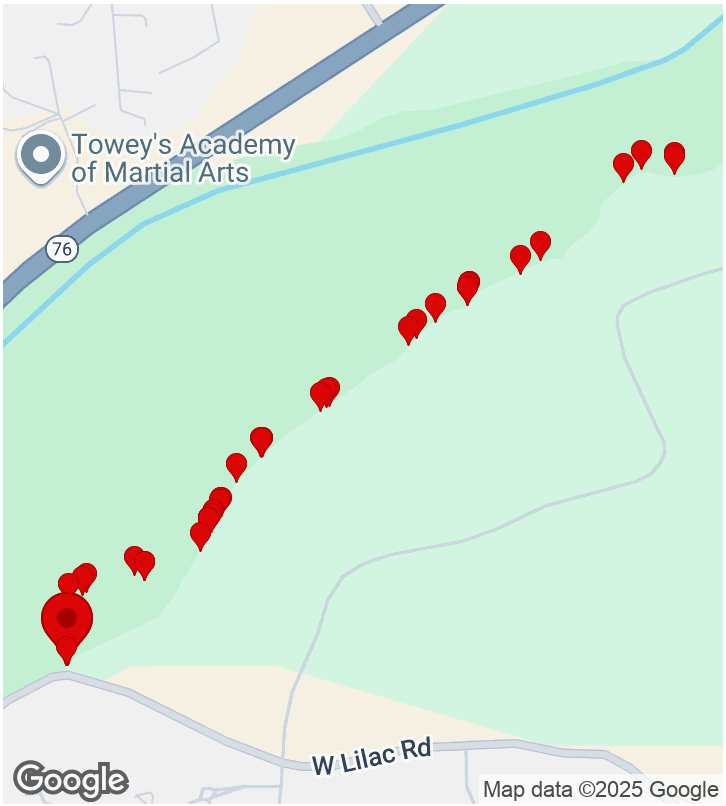
Biology Surveys (SoCal Bio ONLY)

## TMP Monitoring ▸ Northern Harrier

**10/15/2025, 12:57:27 AM UTC**



Suitable breeding and foraging habitat northwest of Ocean Breeze Ranch, facing west.




**CREATED**

7/3/2025, 2:58:43 PM UTC
by Karla Alcaraz

**UPDATED**

10/15/2025, 12:57:27 AM UTC
by Brennan Mulrooney

**LOCATION**

33.298677, -117.210605

## Parent Form

| | |
|---|---|
| **Project Name:** | TMP Monitoring ▸ Northern Harrier |
| **Preserve/Park Name** | San Luis Rey River County Park |
| **General Survey Type** | TMP Monitoring |
| **Specific Survey Type** | NOHA Threats Assessment |
| **Observer/Surveyor:** | Brennan Mulrooney |
| **Assistant Observer/Surveyor:** | Karla Alcaraz |
| **Date:** | July 3, 2025 |

## START Weather Details:

| | |
|---|---|
| **Start - Time:** | 07:58 |
| **Start - Temperature:** | 64 |
| **Start - Wind Direction From (select one):** | SW |
| **Start - Low Wind Speed:** | 0 |
| **Start - High Wind Speed:** | 1 |
| **Start - Average Wind Speed:** | 0.5 |
| **Start - Cloud Cover (%):** | 90 |
| **Start - Precipitation (select one):** | None |
| **Start - Visibility (select one):** | Good |
| **Start - Notes (if applicable):** | |

## END Weather Details:

| | |
|---|---|
| **Time Out:** | 10:32 |
| **End - Temperature:** | 72 |
| **End - Wind Direction From (select one):** | SW |
| **End - Low Wind Speed:** | 0 |
| **End - High Wind Speed:** | 6 |
| **End - Average Wind Speed:** | 3 |
| **End - Cloud Cover (%):** | 0 |
| **End - Precipitation (select one):** | None |
| **End - Visibility (select one):** | Good |
| **End - Notes (if applicable):** | |
| **Total Hours:** | |

| | |
|---|---|
| **Project Location (description):** | |

| | |
|---|---|
| **Notes** | Horse Pasture Area |
| **Observation Type:** | Bird, Plant, Mammal, Butterfly/Moth, Reptile |

**Photos**



Suitable breeding and foraging habitat northwest of Ocean Breeze Ranch, facing west.



Suitable breeding and foraging habitat north of Ocean Breeze Ranch, facing northeast.



Suitable foraging habitat on Ocean Breeze Ranch, facing southeast.



Suitable breeding and foraging habitat northwest of Ocean Breeze Ranch, facing northwest. Mapped as disturbed

# Bird

# Bird Observation: (27 Items)

## Bird Observation: - 1. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Blue Grosbeak; Passerina caerulea; BLGR |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 2. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Yellow Warbler; Setophaga petechia; YEWA |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Auditory |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Singing/calling |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Juvenile |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 3. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Nuttall's Woodpecker; Dryobates nuttallii; NUWO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 4. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Great Blue Heron; Ardea herodias; GBHE |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | In flight |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Adult |

| | |
|---|---|
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 5. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Cliff Swallow; Petrochelidon pyrrhonota; CLSW |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 6. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Northern Flicker; Colaptes auratus; NOFL |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 7. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Black Phoebe; Sayornis nigricans; BLPH |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 8. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Common Yellowthroat; Geothlypis trichas; COYE |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 9. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Bewick's Wren; Thryomanes bewickii; BEWR |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 10. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Song Sparrow; Melospiza melodia; SOSP |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 11. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Downy Woodpecker; Dryobates pubescens; DOWO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 12. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Acorn Woodpecker; Melanerpes formicivorus; ACWO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 13. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Great-tailed Grackle; Quiscalus mexicanus; GTGR |
| **Is the Bird Sensitive ?** | no |

| | |
|---|---|
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 14. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Western Bluebird; Sialia mexicana; WEBL |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Perched (not singing) |
| **Bird Sex (check all that apply):** | Male |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 15. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Say's Phoebe; Sayornis saya; SAPH |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 16. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Western Meadowlark; Sturnella neglecta; WEME |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 17. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Loggerhead Shrike; Lanius ludovicianus; LOSH |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Perched (not singing) |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 18. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Great Egret; Ardea alba; GREG |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | Flyover |
| **Photo(s) of Bird:** | |

## Bird Observation: - 19. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Turkey Vulture; Cathartes aura; TUVU |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | In flight |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Unknown |

| | |
|---|---|
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 20. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Vermilion Flycatcher; Pyrocephalus rubinus; VEFL |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 2 |
| **Behavior (check all that apply):** | In flight |
| **Bird Sex (check all that apply):** | Male, Female |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 21. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | American Peregrine Falcon; Falco peregrinus anatum; PEFA |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | Found throughout North America (south of tundra) and northern Mexico |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Perched (not singing) |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 22. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Red-shouldered Hawk; Buteo lineatus; RSHA |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Perched (not singing) |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 23. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Swainson's Thrush; Catharus ustulatus; SWTH |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 24. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Bullock's Oriole; Icterus bullockii; BUOR |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 25. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Cassin's Kingbird; Tyrannus vociferans; CAKI |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

### Bird Observation: - 26. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Ash-throated Flycatcher; Myiarchus cinerascens; ATFL |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

### Bird Observation: - 27. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | California Towhee; Melozone crissalis; CALT |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Butterfly/Moth

## Butterfly/Moth Observation: (3 Items)

### Butterfly/Moth Observation: - 1. 1 record

| | |
|---|---|
| **Butterfly/Moth (Common or Scientific Name):** | Fiery Skipper; Hylephila phyleus |
| **Is the Butterfly/Moth Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Butterfly/Moth:** | |

### Butterfly/Moth Observation: - 2. 1 record

| | |
|---|---|
| **Butterfly/Moth (Common or Scientific Name):** | Western Pygmy-Blue; Brephidium exilis |
| **Is the Butterfly/Moth Sensitive ?** | no |

| | |
|---|---|
| **Sub-Species Info:** | N/A |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Butterfly/Moth:** | |

### Butterfly/Moth Observation: - 3. 1 record

| | |
|---|---|
| **Butterfly/Moth (Common or Scientific Name):** | Monarch; Danaus plexippus |
| **Is the Butterfly/Moth Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |
| **Number of individuals observed:** | 1 |

### Sensitive Butterfly/Moth Observation

| | |
|---|---|
| **Observation Type:** | Visual sighting |
| **Behavior (check all that apply):** | Flying |
| **Butterfly Sex (check all that apply):** | Unknown |
| **Butterfly Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Butterfly/Moth:** | |

## Mammal

## Mammal Observation: (1 Item)

### Mammal Observation: - 1. 1 record

| | |
|---|---|
| **Mammal (Common or Scientific Name):** | California Ground Squirrel; Ostospermophilus beecheyi |
| **Is the Mammal Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Mammal:** | |

## Plants

# Plant Observation: (12 Items)

## Plant Observation: - 1. 1 record

| | |
|---|---|
| **Plant (Common or Scientific Name):** | Short-Pod Mustard |
| **Is the Plant Sensitive ?** | no |
| **State** | N/A |
| **Federal** | N/A |
| **CA Rare Plant Rank** | N/A |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Plant:** | |

## Plant Observation: - 2. 1 record

| | |
|---|---|
| **Plant (Common or Scientific Name):** | Lactuca serriola |
| **Is the Plant Sensitive ?** | no |
| **State** | N/A |
| **Federal** | N/A |
| **CA Rare Plant Rank** | N/A |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Plant:** | |

## Plant Observation: - 3.

| | |
|---|---|
| **Plant (Common or Scientific Name):** | |
| **Other Plant Species** | Avena sp |
| **Is the plant Sensitive ?** | |
| **Is the Plant Sensitive ?** | |
| **State** | |
| **Federal** | |
| **CA Rare Plant Rank** | |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Plant:** | |

## Plant Observation: - 4.

| | |
|---|---|
| **Plant (Common or Scientific Name):** | |
| **Other Plant Species** | Tamarisk sp |
| **Is the plant Sensitive ?** | |
| **Is the Plant Sensitive ?** | |
| **State** | |
| **Federal** | |
| **CA Rare Plant Rank** | |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Plant:** | |

## Plant Observation: - 5. 1 record

| | |
|---|---|
| **Plant (Common or Scientific Name):** | Bromus diandrus |
| **Is the Plant Sensitive ?** | no |
| **State** | N/A |
| **Federal** | N/A |
| **CA Rare Plant Rank** | N/A |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Plant:** | |

## Plant Observation: - 6. 1 record

| | |
|---|---|
| **Plant (Common or Scientific Name):** | Ambrosia psilostachya |
| **Is the Plant Sensitive ?** | no |
| **State** | N/A |
| **Federal** | N/A |
| **CA Rare Plant Rank** | N/A |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Plant:** | |

## Plant Observation: - 7. 1 record

| | |
|---|---|
| **Plant (Common or Scientific Name):** | Chenopodium berlandieri |
| **Is the Plant Sensitive ?** | no |
| **State** | N/A |
| **Federal** | N/A |
| **CA Rare Plant Rank** | N/A |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Plant:** | |

## Plant Observation: - 8. 1 record

| | |
|---|---|
| **Plant (Common or Scientific Name):** | Datura wrightii |
| **Is the Plant Sensitive ?** | no |
| **State** | N/A |
| **Federal** | N/A |
| **CA Rare Plant Rank** | N/A |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Plant:** | |

## Plant Observation: - 9. 1 record

| | |
|---|---|
| **Plant (Common or Scientific Name):** | Salix exigua |
| **Is the Plant Sensitive ?** | no |
| **State** | N/A |
| **Federal** | N/A |
| **CA Rare Plant Rank** | N/A |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Plant:** | |



## Plant Observation: - 10.

| | |
|---|---|
| **Plant (Common or Scientific Name):** | |
| **Other Plant Species** | Russian thistle sp |
| **Is the plant Sensitive ?** | |
| **Is the Plant Sensitive ?** | |
| **State** | |
| **Federal** | |
| **CA Rare Plant Rank** | |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Plant:** | |



## Plant Observation: - 11.

| | |
|---|---|
| **Plant (Common or Scientific Name):** | |
| **Other Plant Species** | Urtica sp |
| **Is the plant Sensitive ?** | |
| **Is the Plant Sensitive ?** | |
| **State** | |
| **Federal** | |
| **CA Rare Plant Rank** | |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Plant:** | |



## Plant Observation: - 12.

| | |
|---|---|
| **Plant (Common or Scientific Name):** | |
| **Other Plant Species** | Rumex sp |
| **Is the plant Sensitive ?** | |
| **Is the Plant Sensitive ?** | |
| **State** | |
| **Federal** | |
| **CA Rare Plant Rank** | |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Plant:** | |

# Reptile

## Reptile Observation: (1 Item)

## Reptile Observation: - 1. 1 record

| | |
|---|---|
| **Reptile (Common or Scientific Name):** | Western Fence Lizard; Sceloporus occidentalis |
| **Is the Reptile Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Reptile:** | |

## NOHA Threats Assessment

| | |
|---|---|
| **Survey Round** | Round 3 |
| **Subpolygon Name** | |
| **Is this an existing subpolygon?** | No |

## New Subpolygon

| | |
|---|---|
| **Primary Habitat** | Non-native Grassland |
| **% Primary Habitat** | |
| **Secondary Habitat** | Southern Cottonwood |
| **% Secondary Habitat** | |
| **Other Habitat** | |
| **% Other Habitat** | |
| **Date** | July 3, 2025 |
| **Primary Observer** | Brennan Mulrooney |
| **Secondary Observer** | Karla Alcaraz |
| **Suitable For Nesting?** | Yes |
| **Subpolygon Occupied?** | No |
| **Habitat Description** | |
| **Habitat Management Recs** | |
| **Invasive Species Risk** | Yes |
| **If yes, Invasive Species Description** | Tamarisk, Bromus sp, mustard, prickly lettuce |
| **Invasive Spp Management Recs** | |
| **Risk from Ag Practices** | No |
| **Other Habitat Risks?** | No |
| **NOHA Foraging Habitat at Risk?** | Yes |
| **If yes, describe NOHA Foraging Habitat** | Nonnative species |
| **Foraging Habitat Management Recs** | |

| | |
|---|---|
| **Predators Present?** | Yes |
| **Predation Risk Level** | Medium |
| **Description of Predation Risk** | Coyote |
| **Predator Management Recs** | |
| **Risk from Humans?** | Yes |
| **Description of Human Risks** | Unauthorized Trail Use |
| **Human Management Recs** | |
| **Description of Other Threats** | |
| **Management Recs Other Threats** | |
| **Dominant Surrounding Land Use** | Urban/Developed, Horse Pasture |
| **Subpolygon Notes** | |
| **Subpolygon Photos** | |

# 2_COSD DPR Bio

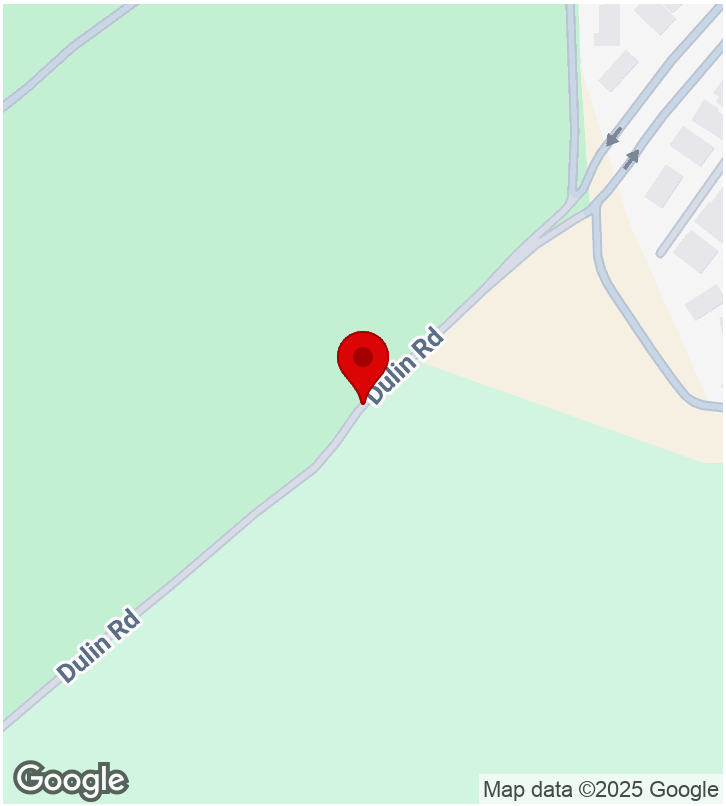
Biology Surveys (SoCal Bio ONLY)

## TMP Monitoring ▸ Northern Harrier

**10/15/2025, 1:02:53 AM UTC**



Suitable foraging habitat west of Rancho Monserate Country Club. Facing NW




**CREATED**

7/3/2025, 1:54:12 PM UTC
by Karla Alcaraz

**UPDATED**

10/15/2025, 1:02:53 AM UTC
by Brennan Mulrooney

**LOCATION**

33.314433, -117.167048

## Parent Form

| | |
|---|---|
| **Project Name:** | TMP Monitoring ▸ Northern Harrier |
| **Preserve/Park Name** | San Luis Rey River County Park |
| **General Survey Type** | TMP Monitoring |
| **Specific Survey Type** | NOHA Threats Assessment |
| **Observer/Surveyor:** | Brennan Mulrooney |
| **Assistant Observer/Surveyor:** | Karla Alcaraz |
| **Date:** | July 3, 2025 |

## START Weather Details:

| | |
|---|---|
| **Start - Time:** | 06:54 |
| **Start - Temperature:** | 60 |
| **Start - Wind Direction From (select one):** | NW |
| **Start - Low Wind Speed:** | 1 |
| **Start - High Wind Speed:** | 2 |
| **Start - Average Wind Speed:** | 1.5 |
| **Start - Cloud Cover (%):** | 100 |
| **Start - Precipitation (select one):** | None |
| **Start - Visibility (select one):** | Good |
| **Start - Notes (if applicable):** | |

## END Weather Details:

| | |
|---|---|
| **Time Out:** | 11:13 |
| **End - Temperature:** | 74 |
| **End - Wind Direction From (select one):** | SW |
| **End - Low Wind Speed:** | 1 |
| **End - High Wind Speed:** | 7 |
| **End - Average Wind Speed:** | 4 |
| **End - Cloud Cover (%):** | 0 |
| **End - Precipitation (select one):** | None |
| **End - Visibility (select one):** | Good |
| **End - Notes (if applicable):** | |
| **Total Hours:** | |

| | |
|---|---|
| **Project Location (description):** | |

| | |
|---|---|
| **Notes** | Northeast polygon |
| **Observation Type:** | Bird |

**Photos**



Suitable foraging habitat west of Rancho Monserate Country Club. Facing NW

## Bird

## Bird Observation:

## NOHA Threats Assessment

| | |
|---|---|
| **Survey Round** | Round 3 |
| **Subpolygon Name** | |
| **Is this an existing subpolygon?** | No |

## New Subpolygon

| | |
|---|---|
| **Primary Habitat** | Disturbed Habitat |
| **% Primary Habitat** | |
| **Secondary Habitat** | Disturbed Southern Cottonwood |
| **% Secondary Habitat** | |
| **Other Habitat** | |
| **% Other Habitat** | |
| **Date** | July 3, 2025 |
| **Primary Observer** | Brennan Mulrooney |
| **Secondary Observer** | Karla Alcaraz |
| **Suitable For Nesting?** | Yes |
| **Subpolygon Occupied?** | No |

| | |
|---|---|
| **Habitat Description** | |
| **Habitat Management Recs** | |
| **Invasive Species Risk** | Yes |
| **If yes, Invasive Species Description** | |
| **Invasive Spp Management Recs** | |
| **Risk from Ag Practices** | Yes |
| **If yes, Ag Description** | Mowing in the breeding season |
| **Ag Management Recs** | |
| **Other Habitat Risks?** | No |
| **NOHA Foraging Habitat at Risk?** | Yes |
| **If yes, describe NOHA Foraging Habitat** | Mowing in the breeding season |
| **Foraging Habitat Management Recs** | |
| **Predators Present?** | Yes |
| **Predation Risk Level** | Medium |
| **Description of Predation Risk** | Coyote |
| **Predator Management Recs** | |
| **Risk from Humans?** | Yes |
| **Description of Human Risks** | |
| **Human Management Recs** | |
| **Description of Other Threats** | |
| **Management Recs Other Threats** | |
| **Dominant Surrounding Land Use** | Urban/Developed, Disturbed Habitat, Coastal Scrub, Riparian Forest/Woodland |
| **Subpolygon Notes** | |
| **Subpolygon Photos** | |

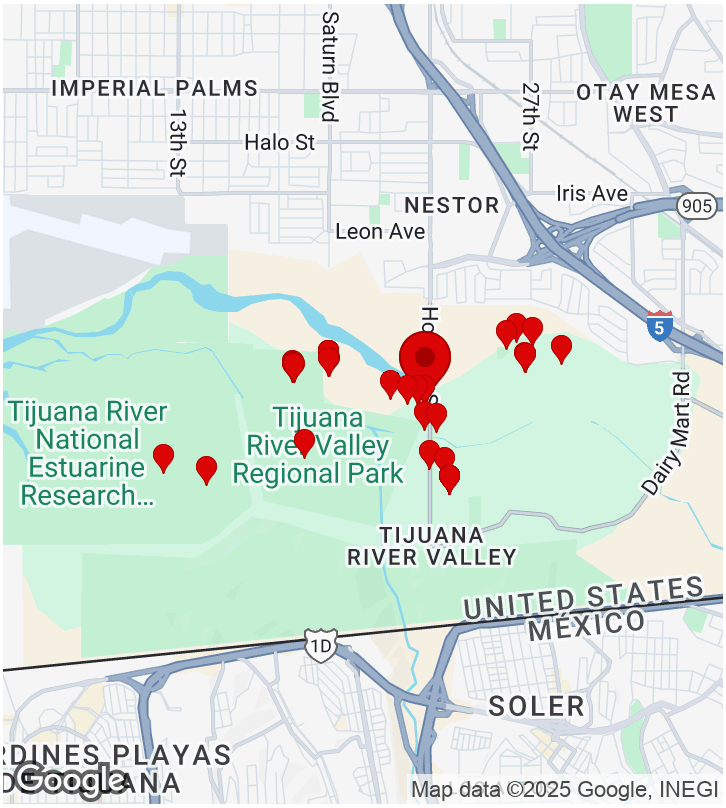
# F-2 Tijuana River Valley Regional Park Field Forms and Threat Assessment Forms

# 2_COSD DPR Bio

Biology Surveys (SoCal Bio ONLY)

## TMP Monitoring ▸ Northern Harrier

**5/7/2025, 5:32:14 PM UTC**




**CREATED**

5/5/2025, 1:35:35 PM UTC
by Brennan Mulrooney

**UPDATED**

5/7/2025, 5:32:14 PM UTC
by SC Fulcrum16

**LOCATION**

32.553826, -117.084583

## Parent Form

| | |
|---|---|
| **Project Name:** | TMP Monitoring ▸ Northern Harrier |
| **Preserve/Park Name** | Tijuana River Valley Regional Park |
| **General Survey Type** | TMP Monitoring |
| **Specific Survey Type** | TMP Northern Harrier |
| **Observer/Surveyor:** | Brennan Mulrooney |
| **Assistant Observer/Surveyor:** | Natasha Kabala |
| **Date:** | May 5, 2025 |

## START Weather Details:

| | |
|---|---|
| **Start - Time:** | 06:35 |
| **Start - Temperature:** | 59 |
| **Start - Wind Direction From (select one):** | N/A |
| **Start - Low Wind Speed:** | 0 |
| **Start - High Wind Speed:** | 0 |
| **Start - Average Wind Speed:** | 0 |
| **Start - Cloud Cover (%):** | 90 |
| **Start - Precipitation (select one):** | None |
| **Start - Visibility (select one):** | Good |
| **Start - Notes (if applicable):** | |

## END Weather Details:

| | |
|---|---|
| **Time Out:** | 11:35 |
| **End - Temperature:** | 60 |
| **End - Wind Direction From (select one):** | SW |
| **End - Low Wind Speed:** | 3 |
| **End - High Wind Speed:** | 5 |
| **End - Average Wind Speed:** | 4 |
| **End - Cloud Cover (%):** | 50 |
| **End - Precipitation (select one):** | None |
| **End - Visibility (select one):** | |
| **End - Notes (if applicable):** | |
| **Total Hours:** | |

| | |
|---|---|
| **Project Location (description):** | Sunset ponds, Pony Land, Ball Fields, Campground |

| | |
|---|---|
| **Notes** | 1 male at Sunset. Possibly the same male at Pony. No birds at ball fields. 2 pairs north of campground and possibly a 3rd pair west of campground off county property. |
| **Observation Type:** | Bird, Mammal, Amphibian, Reptile |
| **Photos** | |

# Amphibian

## Amphibian Observation: (1 Item)

### Amphibian Observation: - 1. 1 record

| | |
|---|---|
| **Amphibian (Common or Scientific Name):** | American Bullfrog; Lithobates catesbeianus |
| **Is the Amphibian Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Amphibian:** | |

# Bird

## Bird Observation: (57 Items)

### Bird Observation: - 1. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Olive-sided Flycatcher; Contopus cooperi; OSFL |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

### Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Perched (not singing) |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 2. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | California Quail; Callipepla californica; CAQU |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 3. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Song Sparrow; Melospiza melodia; SOSP |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 4. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Least Bell's Vireo; Vireo bellii pusillus; LBVI |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | Breeds from central California south to n. Baja CA |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Auditory |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Singing/calling |
| **Bird Sex (check all that apply):** | Male |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 5. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Swainson's Thrush; Catharus ustulatus; SWTH |
| **Is the Bird Sensitive ?** | no |

| | |
|---|---|
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 6. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Yellow-breasted Chat; Icteria virens; YBCH |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Auditory |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Singing/calling |
| **Bird Sex (check all that apply):** | Male |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 7. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Yellow Warbler; Setophaga petechia; YEWA |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Auditory |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Singing/calling |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 8. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Mallard; Anas platyrhynchos; MALL |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 9. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Red-shouldered Hawk; Buteo lineatus; RSHA |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Auditory |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Singing/calling |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 10. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Swinhoe's White-eye; Zosterops simplex; SWWE |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 11. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Black-headed Grosbeak; Pheucticus melanocephalus; BHGR |
| **Is the Bird Sensitive ?** | no |

| | |
|---|---|
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 12. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Brown-headed Cowbird; Molothrus ater; BHCO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 13. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Black Phoebe; Sayornis nigricans; BLPH |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 14. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | California Towhee; Melozone crissalis; CALT |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 15. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Orange-crowned Warbler; Leiothlypis celata; OCWA |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 16. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Western Kingbird; Tyrannus verticalis; WEKI |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 17. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Gadwall; Mareca strepera; GADW |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Both |
| **Number of individuals observed:** | 2 |
| **Behavior (check all that apply):** | In flight |
| **Bird Sex (check all that apply):** | Female, Male |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 18. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Northern Rough-winged Swallow; Stelgidopteryx serripennis; NRWS |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 19. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Mourning Dove; Zenaida macroura; MODO |
| **Is the Bird Sensitive ?** | no |

| | |
|---|---|
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 20. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Cliff Swallow; Petrochelidon pyrrhonota; CLSW |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 21. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Common Yellowthroat; Geothlypis trichas; COYE |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 22. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Black-crowned Night Heron; Nycticorax nycticorax; BCNH |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 23. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Lazuli Bunting; Passerina amoena; LAZB |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 24. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Ruddy Duck; Oxyura jamaicensis; RUDU |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 25. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Red-winged Blackbird; Agelaius phoeniceus; RWBL |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 26. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Tree Swallow; Tachycineta bicolor; TRES |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 27. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Red-tailed Hawk; Buteo jamaicensis; RTHA |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 28. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Northern House Wren; Troglodytes aedon; NHWR |
| **Is the Bird Sensitive ?** | no |

| | |
|---|---|
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 29. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Pied-billed Grebe; Podilymbus podiceps; PBGR |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 30. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Northern Harrier; Circus hudsonius; NOHA |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Foraging |
| **Bird Sex (check all that apply):** | Male |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | Foraging alone. No calls. |
| **Photo(s) of Bird:** | |

## Bird Observation: - 31. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Common Gallinule; Gallinula galeata; COGA |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 32. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Wilson's Warbler; Cardellina pusilla; WIWA |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 33. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Western Wood-Pewee; Contopus sordidulus; WEWP |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 34. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Merlin; Falco columbarius; MERL |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | In flight |
| **Bird Sex (check all that apply):** | Female |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 35. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Downy Woodpecker; Dryobates pubescens; DOWO |
| **Is the Bird Sensitive ?** | no |

| | |
|---|---|
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 36. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Spotted Towhee; Pipilo maculatus; SPTO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 37. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Killdeer; Charadrius vociferus; KILL |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 38. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Bushtit; Psaltriparus minimus; BUSH |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 39. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Anna's Hummingbird; Calypte anna; ANHU |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 40. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Allen's Hummingbird; Selasphorus sasin; ALHU |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 41. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | American Crow; Corvus brachyrhynchos; AMCR |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 42. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Black-throated Magpie-jay; Calocitta colliei; BTMJ |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 43. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Cooper's Hawk; Astur cooperii; COHA |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Perched (not singing) |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Adult |

| | |
|---|---|
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 44. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Western Tanager; Piranga ludoviciana; WETA |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 45. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Western Flycatcher; Empidonax difficilis; WEFL |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 46. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | American Goldfinch; Spinus tristis; AGOL |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 47. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Vaux's Swift; Chaetura vauxi; VASW |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |

| | |
|---|---|
| **Behavior (check all that apply):** | Foraging |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 48. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | White-throated Swift; Aeronautes saxatalis; WTSW |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 49. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Rock Pigeon; Columba livia; ROPI |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 50. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Long-billed Curlew; Numenius americanus; LBCU |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 2 |
| **Behavior (check all that apply):** | Foraging |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 51. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Ash-throated Flycatcher; Myiarchus cinerascens; ATFL |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 52. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Double-crested Cormorant; Nannopterum auritum; DCCO |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 3 |
| **Behavior (check all that apply):** | In flight |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Unknown |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 53. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Great-tailed Grackle; Quiscalus mexicanus; GTGR |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 54. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Northern Harrier; Circus hudsonius; NOHA |
| **Is the Bird Sensitive ?** | yes |

| | |
|---|---|
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Foraging |
| **Bird Sex (check all that apply):** | Male |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | Same as sunset pond bird? |
| **Photo(s) of Bird:** | |

## Bird Observation: - 55. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Northern Harrier; Circus hudsonius; NOHA |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Both |
| **Number of individuals observed:** | 2 |
| **Behavior (check all that apply):** | Nest building, Foraging, Territorial display |
| **Bird Sex (check all that apply):** | Male, Female |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | Saw female bring stick to nest and then saw male bring her a lizard that she then took to the nest. |
| **Photo(s) of Bird:** | |

## Bird Observation: - 56. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Northern Harrier; Circus hudsonius; NOHA |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |

| | |
|---|---|
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Territorial display, Foraging |
| **Bird Sex (check all that apply):** | Female |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | Aggressive interaction with female from territory north of the campground |
| **Photo(s) of Bird:** | |

### Bird Observation: - 57. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Northern Harrier; Circus hudsonius; NOHA |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

### Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 2 |
| **Behavior (check all that apply):** | Foraging, Perched (not singing) |
| **Bird Sex (check all that apply):** | Female, Male |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | Probably a nesting pair. Only saw the female briefly. Male spent most of his time perched in tree tobacco. Chased a RTHA that came close. |
| **Photo(s) of Bird:** | |

## Mammal

## Mammal Observation: (2 Items)

### Mammal Observation: - 1. 1 record

| | |
|---|---|
| **Mammal (Common or Scientific Name):** | Desert Cottontail; Sylvilagus audubonii |
| **Is the Mammal Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Mammal:** | |

## Mammal Observation: - 2. 1 record

| | |
|---|---|
| **Mammal (Common or Scientific Name):** | California Ground Squirrel; Ostospermophilus beecheyi |
| **Is the Mammal Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Mammal:** | |

## Reptile

## Reptile Observation:

# 2_COSD DPR Bio

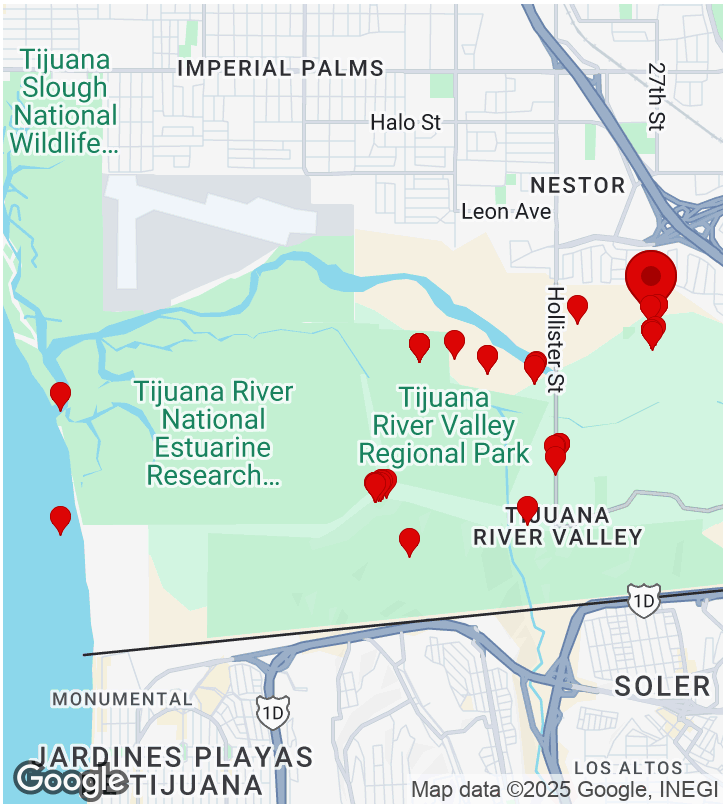
Biology Surveys (SoCal Bio ONLY)

## TMP Monitoring ▸ Northern Harrier

**10/14/2025, 11:25:00 PM UTC**



Subpolygon 12. Facing NE




### CREATED

6/5/2025, 1:40:07 PM UTC
by Karla Alcaraz

### UPDATED

10/14/2025, 11:25:00 PM UTC
by Brennan Mulrooney

### LOCATION

32.558211, -117.075996

## Parent Form

| | |
|---|---|
| **Project Name:** | TMP Monitoring ▸ Northern Harrier |
| **Preserve/Park Name** | Tijuana River Valley Regional Park |
| **General Survey Type** | TMP Monitoring |
| **Specific Survey Type** | TMP Northern Harrier |
| **Observer/Surveyor:** | Brennan Mulrooney |
| **Assistant Observer/Surveyor:** | Karla Alcaraz |
| **Date:** | June 5, 2025 |

## START Weather Details:

| | |
|---|---|
| **Start - Time:** | 06:40 |
| **Start - Temperature:** | 62 |
| **Start - Wind Direction From (select one):** | NW |
| **Start - Low Wind Speed:** | 2 |
| **Start - High Wind Speed:** | 3 |
| **Start - Average Wind Speed:** | 2.5 |
| **Start - Cloud Cover (%):** | 100 |
| **Start - Precipitation (select one):** | Misting |
| **Start - Visibility (select one):** | Good |
| **Start - Notes (if applicable):** | |

## END Weather Details:

| | |
|---|---|
| **Time Out:** | 12:08 |
| **End - Temperature:** | 68 |
| **End - Wind Direction From (select one):** | NW |
| **End - Low Wind Speed:** | 2 |
| **End - High Wind Speed:** | 9 |
| **End - Average Wind Speed:** | 5.5 |
| **End - Cloud Cover (%):** | 100 |
| **End - Precipitation (select one):** | None |
| **End - Visibility (select one):** | Good |
| **End - Notes (if applicable):** | |
| **Total Hours:** | |

| | |
|---|---|
| **Project Location (description):** | Started at Ballfields, then Spooner's, then Pony Land, then Sunset Ponds |

| | |
|---|---|
| **Notes** | 1st and 2nd NOHA (pair)<br><br>3rd NOHA (Unpaired, female) Seen at 0856, flew behind eucalyptus trees near campground (32.5435955, -117.1030505). Seen again at 0905, flying near RTHA. Seen again at 0921, near Hollister Street.<br><br>4th NOHA (adult, male) Seen at 1045, appeared foraging. Flew down and no longer visible at 1048.<br><br>NOHA seen: Appeared to be eating something at 1136; lizard sp. |
| **Observation Type:** | Nesting Bird Behavior, Bird, Mammal, Invertebrate, Plant |

**Photos**


Subpolygon 12. Facing NE


Subpolygon 12. Facing E


Subpolygons 1 and 2. Facing N


Subpolygon 2. Facing W


North slope of Spooners Mesa Facing S


Subpolygon 1. Facing E


Subpolygon 5. Facing E


Subpolygon 5. Facing NW


Subpolygon 13. Facing NE


Subpolygon 13. Facing SW


Subpolygon 13. Facing E


Subpolygon 13. Facing W

# Bird

## Bird Observation: (45 Items)

### Bird Observation: - 1. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Cooper's Hawk; Astur cooperii; COHA |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

### Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 2 |
| **Behavior (check all that apply):** | Perched (not singing) |

| | |
|---|---|
| **Bird Sex (check all that apply):** | Male, Female |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 2. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Song Sparrow; Melospiza melodia; SOSP |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 3. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | American Crow; Corvus brachyrhynchos; AMCR |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 4. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | White-tailed Kite; Elanus leucurus; WTKI |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Perched (not singing) |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | 1st WTKI |
| **Photo(s) of Bird:** | |

## Bird Observation: - 5. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | American Goldfinch; Spinus tristis; AGOL |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 6. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Western Gull; Larus occidentalis; WEGU |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 7. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Yellow-breasted Chat; Icteria virens; YBCH |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Perched (not singing) |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 8. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Bushtit; Psaltriparus minimus; BUSH |
| **Is the Bird Sensitive ?** | no |

| | |
|---|---|
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 9. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | California Towhee; Melozone crissalis; CALT |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 10. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Common Yellowthroat; Geothlypis trichas; COYE |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 11. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Northern House Wren; Troglodytes aedon; NHWR |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 12. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Yellow Warbler; Setophaga petechia; YEWA |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Auditory |

| | |
|---|---|
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Singing/calling |
| **Bird Sex (check all that apply):** | Male |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 13. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Gadwall; Mareca strepera; GADW |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 2 |
| **Behavior (check all that apply):** | In flight |
| **Bird Sex (check all that apply):** | Male, Female |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 14. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Red-shouldered Hawk; Buteo lineatus; RSHA |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Perched (not singing) |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |

**Photo(s) of Bird:**

## Bird Observation: - 15. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Double-crested Cormorant; Nannopterum auritum; DCCO |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 2 |
| **Behavior (check all that apply):** | In flight |
| **Bird Sex (check all that apply):** | Male, Female |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |

**Photo(s) of Bird:**

## Bird Observation: - 16. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Bewick's Wren; Thryomanes bewickii; BEWR |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |

**Photo(s) of Bird:**

## Bird Observation: - 17. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Wrentit; Chamaea fasciata; WREN |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |

**Photo(s) of Bird:**

## Bird Observation: - 18. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Northern Mockingbird; Mimus polyglottos; NOMO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 19. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | California Thrasher; Toxostoma redivivum; CATH |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 20. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | White-tailed Kite; Elanus leucurus; WTKI |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Perched (not singing) |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | 2nd WTKI |
| **Photo(s) of Bird:** | |

## Bird Observation: - 21. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Brown Pelican; Pelecanus occidentalis; BRPE |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 22. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Greater Roadrunner; Geococcyx californianus; GRRO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 23. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Northern Harrier; Circus hudsonius; NOHA |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | In flight |
| **Bird Sex (check all that apply):** | Male |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | Likely same male from earlier. |
| **Photo(s) of Bird:** | |

## Bird Observation: - 24. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Costa's Hummingbird; Calypte costae; COHU |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 25. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Cooper's Hawk; Astur cooperii; COHA |
| **Is the Bird Sensitive ?** | yes |

| | |
|---|---|
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | In flight |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Unknown |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 26. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Mourning Dove; Zenaida macroura; MODO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 27. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Eurasian Collared-Dove; Streptopelia decaocto; EUCD |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 28. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Black-throated Magpie-jay; Calocitta colliei; BTMJ |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 29. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | House Sparrow; Passer domesticus; HOSP |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 30. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Nuttall's Woodpecker; Dryobates nuttallii; NUWO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 31. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Black-headed Grosbeak; Pheucticus melanocephalus; BHGR |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 32. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Orange-crowned Warbler; Leiothlypis celata; OCWA |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 33. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Swinhoe's White-eye; Zosterops simplex; SWWE |
| **Is the Bird Sensitive ?** | no |

| | |
|---|---|
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 34. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | California Towhee; Melozone crissalis; CALT |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 35. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Black Phoebe; Sayornis nigricans; BLPH |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 36. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Olive-sided Flycatcher; Contopus cooperi; OSFL |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Perched (not singing) |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 37. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Hutton's Vireo; Vireo huttoni; HUVI |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 38. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Tree Swallow; Tachycineta bicolor; TRES |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 39. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Red-winged Blackbird; Agelaius phoeniceus; RWBL |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 40. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Green Heron; Butorides virescens; GRHE |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Perched (not singing) |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Adult |

| | |
|---|---|
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 41. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Common Gallinule; Gallinula galeata; COGA |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 42. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Downy Woodpecker; Dryobates pubescens; DOWO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 43. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Western Tanager; Piranga ludoviciana; WETA |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 44. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Lawrence's Goldfinch; Spinus lawrencei; LAGO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

### Bird Observation: - 45. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Hooded Oriole; Icterus cucullatus; HOOR |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Nesting Bird Behavior

## Nesting Bird Behavior Observation: (1 Item)

### Nesting Bird Behavior Observation: - 1. 1 record

| | |
|---|---|
| **Status of Nest:** | Active |
| **Activity Status of Nest:** | Confirmed adults using nests |
| **Bird (Common or Scientific Name):** | Northern Harrier; Circus hudsonius; NOHA |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

### Bird Nest Observation

| | |
|---|---|
| **Observation Type:** | Visual |
| **Number of individuals observed:** | 2 |
| **Behavior (check all that apply):** | In flight |
| **Bird Sex (check all that apply):** | Female |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | Carrying material to nest at 0728. Male brought food to the nest and then dropped it. Observed female at 0839 flying, might have been stretching her wings, flew past the male to the nest. |
| **Photo(s) of Bird:** | |

## Invertebrate

## Invertebrate Observation: (2 Items)

## Invertebrate Observation: - 1.

| | |
|---|---|
| **Invertebrate (Common or Scientific Name):** | |
| **Other Invertebrate Species** | Apis mellifera (western honey bee) |
| **Is the Invertebrate Sensitive ?** | No |
| **Is the Invertebrate Sensitive ?** | |
| **Sub-Species Info:** | |
| **Additional Notes:** | |
| **Photo(s) of Invertebrate:** | |

## Invertebrate Observation: - 2.

| | |
|---|---|
| **Invertebrate (Common or Scientific Name):** | |
| **Other Invertebrate Species** | Murgantia histrionica |
| **Is the Invertebrate Sensitive ?** | No |
| **Is the Invertebrate Sensitive ?** | |
| **Sub-Species Info:** | |
| **Additional Notes:** | |
| **Photo(s) of Invertebrate:** | |



## Mammal

## Mammal Observation: (3 Items)

### Mammal Observation: - 1. 1 record

| | |
|---|---|
| **Mammal (Common or Scientific Name):** | Virginia Opossum; Didelphis virginiana |
| **Is the Mammal Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Mammal:** | |

### Mammal Observation: - 2. 1 record

| | |
|---|---|
| **Mammal (Common or Scientific Name):** | Bottle-nosed Dolphin; Tursiops truncatus |
| **Is the Mammal Sensitive ?** | no |
| **Sub-Species Info:** | N/A |

| | |
|---|---|
| **Additional Notes:** | 4 individuals observed. |
| **Photo(s) of Mammal:** | |

### Mammal Observation: - 3. 1 record

| | |
|---|---|
| **Mammal (Common or Scientific Name):** | San Diego Black-tailed Jackrabbit; Lepus californicus bennettii |
| **Is the Mammal Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

### Sensitive Mammal Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual sighting |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Moving (flushed) |
| **Mammal Sex (check all that apply):** | Unknown |
| **Mammal Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Mammal:** | |

## Plants

## Plant Observation: (4 Items)

### Plant Observation: - 1. 1 record

| | |
|---|---|
| **Plant (Common or Scientific Name):** | Dudleya pulverulenta |
| **Is the Plant Sensitive ?** | no |
| **State** | N/A |
| **Federal** | N/A |
| **CA Rare Plant Rank** | N/A |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Plant:** | |



## Plant Observation: - 2. 1 record

| | |
|---|---|
| **Plant (Common or Scientific Name):** | Cardionema ramosissimum |
| **Is the Plant Sensitive ?** | no |
| **State** | N/A |
| **Federal** | N/A |
| **CA Rare Plant Rank** | N/A |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Plant:** | |



## Plant Observation: - 3. 1 record

| | |
|---|---|
| **Plant (Common or Scientific Name):** | Dudleya edulis |
| **Is the Plant Sensitive ?** | no |
| **State** | N/A |
| **Federal** | N/A |
| **CA Rare Plant Rank** | N/A |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Plant:** | |



## Plant Observation: - 4. 1 record

| | |
|---|---|
| **Plant (Common or Scientific Name):** | Bladderpod |
| **Is the Plant Sensitive ?** | no |
| **State** | N/A |
| **Federal** | N/A |
| **CA Rare Plant Rank** | N/A |
| **Number of individuals observed:** | |
| **Additional Notes:** | |
| **Photo(s) of Plant:** | |



# 2_COSD DPR Bio

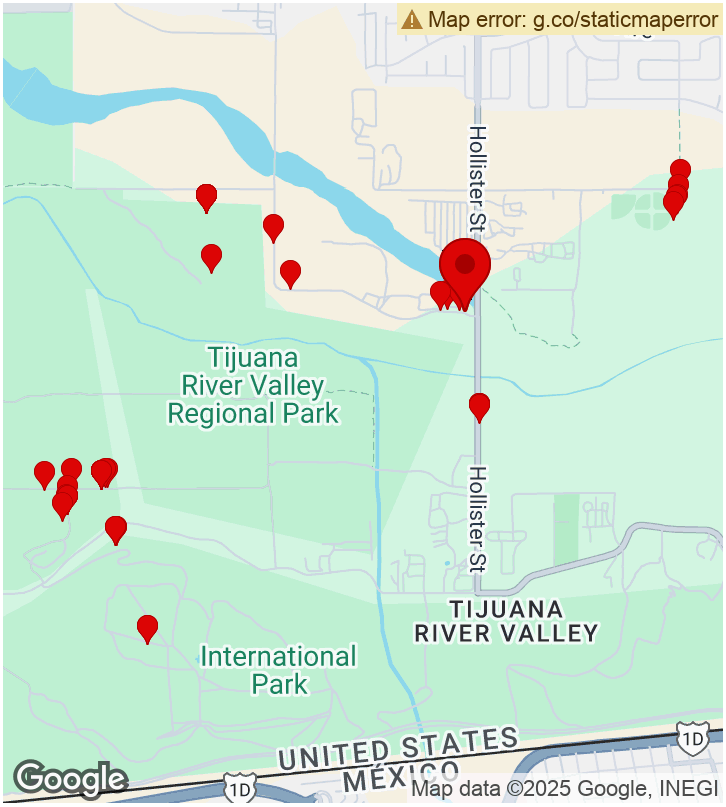
Biology Surveys (SoCal Bio ONLY)

## TMP Monitoring ▸ Northern Harrier

**10/14/2025, 11:38:37 PM UTC**



Subpolygon 13. Facing SE.




### CREATED

7/1/2025, 1:27:05 PM UTC
by Karla Alcaraz

### UPDATED

10/14/2025, 11:38:37 PM UTC
by Brennan Mulrooney

### LOCATION

32.553783, -117.084637

## Parent Form

| | |
|---|---|
| **Project Name:** | TMP Monitoring ▸ Northern Harrier |
| **Preserve/Park Name** | Tijuana River Valley Regional Park |
| **General Survey Type** | TMP Monitoring |
| **Specific Survey Type** | TMP Northern Harrier |
| **Observer/Surveyor:** | Brennan Mulrooney |
| **Assistant Observer/Surveyor:** | Karla Alcaraz |
| **Date:** | July 1, 2025 |

## START Weather Details:

| | |
|---|---|
| **Start - Time:** | 06:27 |
| **Start - Temperature:** | 64 |
| **Start - Wind Direction From (select one):** | NW |
| **Start - Low Wind Speed:** | 2 |
| **Start - High Wind Speed:** | 9 |
| **Start - Average Wind Speed:** | 5.5 |
| **Start - Cloud Cover (%):** | 100 |
| **Start - Precipitation (select one):** | None |
| **Start - Visibility (select one):** | Good |
| **Start - Notes (if applicable):** | Stinky |

## END Weather Details:

| | |
|---|---|
| **Time Out:** | 12:21 |
| **End - Temperature:** | 72 |
| **End - Wind Direction From (select one):** | W |
| **End - Low Wind Speed:** | 2 |
| **End - High Wind Speed:** | 8 |
| **End - Average Wind Speed:** | 5 |
| **End - Cloud Cover (%):** | 20 |
| **End - Precipitation (select one):** | None |
| **End - Visibility (select one):** | Good |
| **End - Notes (if applicable):** | |
| **Total Hours:** | |

| | |
|---|---|
| **Project Location (description):** | |

| | |
|---|---|
| **Notes** | Campground - Male and 2 juveniles NOHA<br>Spooner - no NOHA observed<br>Ponyland - Male flying<br>Sunset Ponds - Female and male carrying food flying west<br>Baseball Field - Female flying flyover<br>Female seen again at 1217; juvenile flew in at 1219 and female dive-bombed juv and continued as we left the sight |
| **Observation Type:** | Bird, Plant, Nesting Bird Behavior, Mammal |

**Photos**


Subpolygon 13. Facing SE.


Subpolygon 13. Facing W.


Subpolygon 13. Facing E.


Subpolygon 13. Facing E.


Subpolygon 5. Facing E.


Subpolygon 5. Facing S/.


Tamarisk trees on Spooners Mesa.


Subpolygon 3. Facing E.


Subpolygon 3. Facing E.


Subpolygon 3. Facing E.




Subpolygon 3. Facing N.


Subpolygon 3. Facing W.


Subpolygon 2. Facing W.


Subpolygon 2. Facing NW.


Subpolygon 1. Facing NE.


Subpolygon 1. Facing S.


Subpolygon 1. Facing W.


Non-native vegetation in Subpolygon 1. Facing S.


Non-native vegetation in Subpolygon 1. Facing ne.


Subpolygon 2. Facing E.


Subpolygon 2. Facing N.

# Bird

## Bird Observation: (43 Items)

### Bird Observation: - 1. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Northern Harrier; Circus hudsonius; NOHA |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

### Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | In flight |

| | |
|---|---|
| **Bird Sex (check all that apply):** | Male |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | Flying east. |
| **Photo(s) of Bird:** | |

## Bird Observation: - 2. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Bewick's Wren; Thryomanes bewickii; BEWR |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 3. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | California Towhee; Melozone crissalis; CALT |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 4. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Wrentit; Chamaea fasciata; WREN |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 5. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Song Sparrow; Melospiza melodia; SOSP |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 6. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | House Finch; Haemorhous mexicanus; HOFI |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 7. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Downy Woodpecker; Dryobates pubescens; DOWO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 8. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Northern Harrier; Circus hudsonius; NOHA |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 2 |
| **Behavior (check all that apply):** | In flight |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Juvenile |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 9. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Greater Roadrunner; Geococcyx californianus; GRRO |
| **Is the Bird Sensitive ?** | no |

| | |
|---|---|
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 10. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Blue Grosbeak; Passerina caerulea; BLGR |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 11. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Common Yellowthroat; Geothlypis trichas; COYE |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 12. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Yellow-breasted Chat; Icteria virens; YBCH |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Auditory |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Singing/calling |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Unknown |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 13. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Cliff Swallow; Petrochelidon pyrrhonota; CLSW |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 14. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Black Phoebe; Sayornis nigricans; BLPH |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 15. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Lesser Goldfinch; Spinus psaltria; LEGO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 16. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | White-tailed Kite; Elanus leucurus; WTKI |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | In flight |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Adult |

| | |
|---|---|
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 17. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Say's Phoebe; Sayornis saya; SAPH |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 18. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Red-tailed Hawk; Buteo jamaicensis; RTHA |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 19. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Lawrence's Goldfinch; Spinus lawrencei; LAGO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 20. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Bushtit; Psaltriparus minimus; BUSH |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 21. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Coastal California Gnatcatcher; Polioptila californica californica; CAGN |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Auditory |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Singing/calling |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Unknown |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 22. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Cassin's Kingbird; Tyrannus vociferans; CAKI |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 23. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Barn Swallow; Hirundo rustica; BARS |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 24. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Northern Harrier; Circus hudsonius; NOHA |
| **Is the Bird Sensitive ?** | yes |

| | |
|---|---|
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | In flight |
| **Bird Sex (check all that apply):** | Female |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | Possibly flying towards campground at 0930. |
| **Photo(s) of Bird:** | |

## Bird Observation: - 25. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Northern Harrier; Circus hudsonius; NOHA |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | In flight |
| **Bird Sex (check all that apply):** | Male |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | Flying south then southeast, flying behind willows near pony land at 0933. |
| **Photo(s) of Bird:** | |

## Bird Observation: - 26. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Cooper's Hawk; Astur cooperii; COHA |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |

| | |
|---|---|
| **Behavior (check all that apply):** | In flight |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 27. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Black-headed Grosbeak; Pheucticus melanocephalus; BHGR |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 28. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Northern Harrier; Circus hudsonius; NOHA |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | In flight |
| **Bird Sex (check all that apply):** | Male |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | Carrying food at 0954. |
| **Photo(s) of Bird:** | |

## Bird Observation: - 29. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Red-shouldered Hawk; Buteo lineatus; RSHA |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | In flight |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 30. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Red-winged Blackbird; Agelaius phoeniceus; RWBL |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 31. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Northern Rough-winged Swallow; Stelgidopteryx serripennis; NRWS |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 32. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Mallard; Anas platyrhynchos; MALL |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 33. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Northern Harrier; Circus hudsonius; NOHA |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | In flight |
| **Bird Sex (check all that apply):** | Female |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | Seen at 1029. |
| **Photo(s) of Bird:** | |

## Bird Observation: - 34. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Gadwall; Mareca strepera; GADW |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 4 |
| **Behavior (check all that apply):** | In flight |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Unknown |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 35. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Common Gallinule; Gallinula galeata; COGA |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 36. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Northern Harrier; Circus hudsonius; NOHA |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | In flight |
| **Bird Sex (check all that apply):** | Female |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | Seen flying at 1058 and no longer visible at 1102. |
| **Photo(s) of Bird:** | |

## Bird Observation: - 37. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Northern Harrier; Circus hudsonius; NOHA |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | In flight |
| **Bird Sex (check all that apply):** | Female |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | Seen again at 1105. |
| **Photo(s) of Bird:** | |

## Bird Observation: - 38. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Brown-headed Cowbird; Molothrus ater; BHCO |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |

| | |
|---|---|
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 39. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Allen's Hummingbird; Selasphorus sasin; ALHU |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 40. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Yellow Warbler; Setophaga petechia; YEWA |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Both |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | Singing/calling |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Unknown |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 41. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Turkey Vulture; Cathartes aura; TUVU |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |

| | |
|---|---|
| **Behavior (check all that apply):** | In flight |
| **Bird Sex (check all that apply):** | Unknown |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## Bird Observation: - 42. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Northern Harrier; Circus hudsonius; NOHA |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 1 |
| **Behavior (check all that apply):** | In flight |
| **Bird Sex (check all that apply):** | Female |
| **Bird Age (check all that apply):** | Adult |
| **Additional Notes:** | Not foraging in the polygon flew over at high altitude heading east at 1210 toward sod farm. |
| **Photo(s) of Bird:** | |

## Bird Observation: - 43. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Northern Harrier; Circus hudsonius; NOHA |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

## Sensitive Bird Observation

| | |
|---|---|
| **Observation Type (check all that apply):** | Visual |
| **Number of individuals observed:** | 2 |
| **Behavior (check all that apply):** | In flight |
| **Bird Sex (check all that apply):** | Female, Unknown |
| **Bird Age (check all that apply):** | Adult, Juvenile |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

# Nesting Bird Behavior

## Nesting Bird Behavior Observation: (1 Item)

### Nesting Bird Behavior Observation: - 1. 1 record

| | |
|---|---|
| **Status of Nest:** | Active |
| **Activity Status of Nest:** | Fledglings near nest |
| **Bird (Common or Scientific Name):** | Northern Harrier; Circus hudsonius; NOHA |
| **Is the Bird Sensitive ?** | yes |
| **Sub-Species Info:** | N/A |

### Bird Nest Observation

| | |
|---|---|
| **Observation Type:** | Both |
| **Number of individuals observed:** | 3 |
| **Behavior (check all that apply):** | Fledglings |
| **Bird Sex (check all that apply):** | Male, Unknown |
| **Bird Age (check all that apply):** | Juvenile, Adult |
| **Additional Notes:** | Adult male bringing food to fledglings at 0750. Adult female not seen. |
| **Photo(s) of Bird:** | |

# Mammal

## Mammal Observation: (1 Item)

### Mammal Observation: - 1. 1 record

| | |
|---|---|
| **Mammal (Common or Scientific Name):** | California Ground Squirrel; Ostospermophilus beecheyi |
| **Is the Mammal Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Mammal:** | |

## Plants

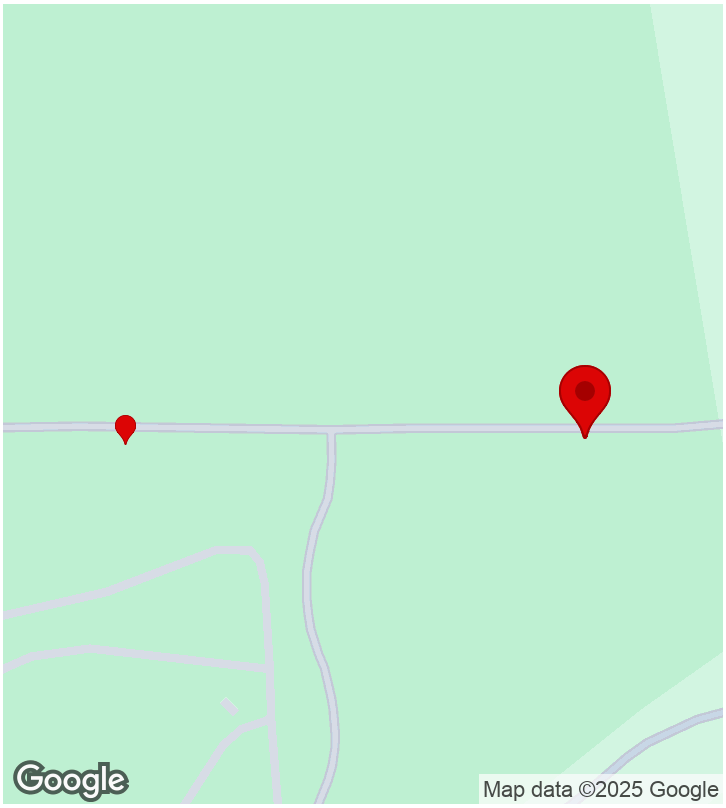
## Plant Observation:

# 2_COSD DPR Bio

Biology Surveys (SoCal Bio ONLY)

## TMP Monitoring ▸ Northern Harrier

**10/15/2025, 8:23:07 PM UTC**




**CREATED**

7/1/2025, 2:28:43 PM UTC
by Brennan Mulrooney

**UPDATED**

10/15/2025, 8:23:07 PM UTC
by Brennan Mulrooney

**LOCATION**

32.547341, -117.100259

## Parent Form

| | |
|---|---|
| **Project Name:** | TMP Monitoring ▸ Northern Harrier |
| **Preserve/Park Name** | Tijuana River Valley Regional Park |
| **General Survey Type** | TMP Monitoring |
| **Specific Survey Type** | NOHA Threats Assessment |
| **Observer/Surveyor:** | Brennan Mulrooney |
| **Assistant Observer/Surveyor:** | Karla Alcaraz |
| **Date:** | July 1, 2025 |

## START Weather Details:

| | |
|---|---|
| **Start - Time:** | 07:29 |
| **Start - Temperature:** | 64 |
| **Start - Wind Direction From (select one):** | NW |
| **Start - Low Wind Speed:** | 2 |
| **Start - High Wind Speed:** | 9 |
| **Start - Average Wind Speed:** | 5.5 |
| **Start - Cloud Cover (%):** | 100 |
| **Start - Precipitation (select one):** | None |
| **Start - Visibility (select one):** | Good |
| **Start - Notes (if applicable):** | Stinky |

## END Weather Details:

| | |
|---|---|
| **Time Out:** | 06:31 |
| **End - Temperature:** | |
| **End - Wind Direction From (select one):** | |
| **End - Low Wind Speed:** | |
| **End - High Wind Speed:** | |
| **End - Average Wind Speed:** | |
| **End - Cloud Cover (%):** | |
| **End - Precipitation (select one):** | None |
| **End - Visibility (select one):** | |
| **End - Notes (if applicable):** | |
| **Total Hours:** | |

| | |
|---|---|
| **Project Location (description):** | |

| | |
|---|---|
| **Notes** | |
| **Observation Type:** | Bird |
| **Photos** | |

# Bird

## Bird Observation: (1 Item)

### Bird Observation: - 1. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Common Yellowthroat; Geothlypis trichas; COYE |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## NOHA Threats Assessment

| | |
|---|---|
| **Survey Round** | Round 3 |
| **Subpolygon Name** | Tijuana Estuary 01 |
| **Is this an existing subpolygon?** | Yes |
| **Date** | July 1, 2025 |
| **Primary Observer** | Brennan Mulrooney |
| **Secondary Observer** | Karla Alcaraz |
| **Suitable For Nesting?** | Yes |
| **Subpolygon Occupied?** | No |
| **Habitat Description** | Suitable open scrub habitat |
| **Habitat Management Recs** | Continue to discourage illegal trails and off leash dogs |
| **Invasive Species Risk** | Yes |
| **If yes, Invasive Species Description** | Garland Daisy, Bull Thistle |
| **Invasive Spp Management Recs** | Remove nonnative plants, plant native scrub species |
| **Risk from Ag Practices** | No |
| **Other Habitat Risks?** | No |
| **NOHA Foraging Habitat at Risk?** | No |
| **Predators Present?** | Yes |
| **Predation Risk Level** | Low |

| | |
|---|---|
| **Description of Predation Risk** | Coyotes |
| **Predator Management Recs** | None |
| **Risk from Humans?** | Yes |
| **Description of Human Risks** | Unauthorized Trail Use, Off-leash Dog(s), Border Patrol Activities |
| **Human Management Recs** | Educational signage |
| **Description of Other Threats** | |
| **Management Recs Other Threats** | |
| **Dominant Surrounding Land Use** | Riparian Forest/Woodland, Coastal Scrub, Campground |
| **Subpolygon Notes** | Human threats were not directly observed on this day, but are known to be threats in this area. |

**Subpolygon Photos**




Subpolygon 1. NW facing.



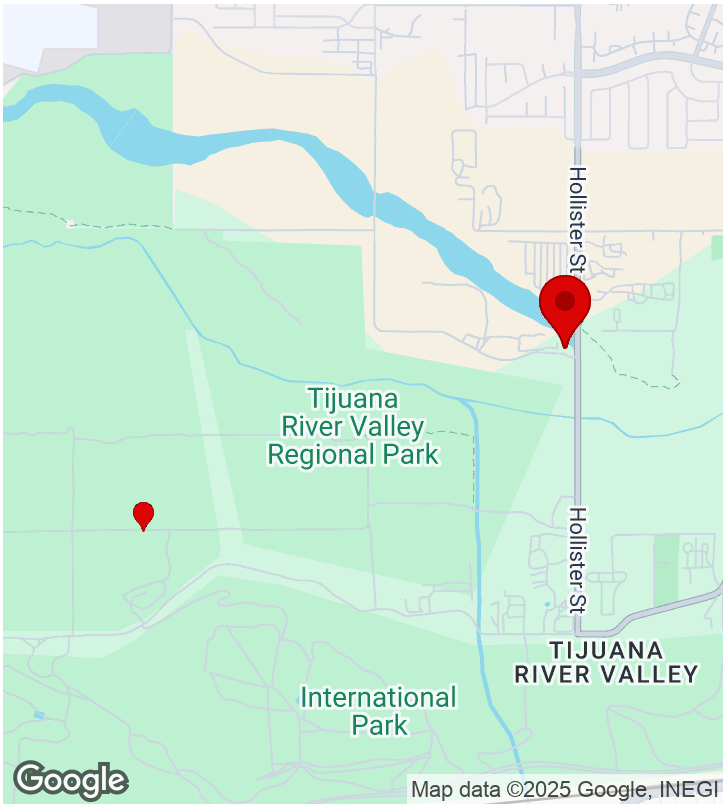

Subpolygon 1. NE facing.

# 2_COSD DPR Bio

Biology Surveys (SoCal Bio ONLY)

## TMP Monitoring ▸ Northern Harrier

**10/15/2025, 8:05:00 PM UTC**




**CREATED**

7/1/2025, 1:29:16 PM UTC
by Karla Alcaraz

**UPDATED**

10/15/2025, 8:05:00 PM UTC
by Brennan Mulrooney

**LOCATION**

32.553922, -117.084630

## Parent Form

| | |
|---|---|
| **Project Name:** | TMP Monitoring ▸ Northern Harrier |
| **Preserve/Park Name** | Tijuana River Valley Regional Park |
| **General Survey Type** | TMP Monitoring |
| **Specific Survey Type** | NOHA Threats Assessment |
| **Observer/Surveyor:** | Brennan Mulrooney |
| **Assistant Observer/Surveyor:** | Karla Alcaraz |
| **Date:** | July 1, 2025 |

## START Weather Details:

| | |
|---|---|
| **Start - Time:** | 06:29 |
| **Start - Temperature:** | 64 |
| **Start - Wind Direction From (select one):** | NW |
| **Start - Low Wind Speed:** | 2 |
| **Start - High Wind Speed:** | 9 |
| **Start - Average Wind Speed:** | 5.5 |
| **Start - Cloud Cover (%):** | 100 |
| **Start - Precipitation (select one):** | None |
| **Start - Visibility (select one):** | Good |
| **Start - Notes (if applicable):** | Stinky |

## END Weather Details:

| | |
|---|---|
| **Time Out:** | 06:31 |
| **End - Temperature:** | |
| **End - Wind Direction From (select one):** | |
| **End - Low Wind Speed:** | |
| **End - High Wind Speed:** | |
| **End - Average Wind Speed:** | |
| **End - Cloud Cover (%):** | |
| **End - Precipitation (select one):** | None |
| **End - Visibility (select one):** | |
| **End - Notes (if applicable):** | |
| **Total Hours:** | |

| | |
|---|---|
| **Project Location (description):** | |

| | |
|---|---|
| **Notes** | |
| **Observation Type:** | Bird |
| **Photos** | |

## Bird

## Bird Observation: (1 Item)

### Bird Observation: - 1. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Common Yellowthroat; Geothlypis trichas; COYE |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## NOHA Threats Assessment

| | |
|---|---|
| **Survey Round** | Round 3 |
| **Subpolygon Name** | Tijuana Estuary 02 |
| **Is this an existing subpolygon?** | Yes |
| **Date** | July 1, 2025 |
| **Primary Observer** | Brennan Mulrooney |
| **Secondary Observer** | Karla Alcaraz |
| **Suitable For Nesting?** | Yes |
| **Subpolygon Occupied?** | Yes |

## Occupied Subpolygon

| | |
|---|---|
| **Breeding Behavior Observed?** | Yes |
| **If yes, what breeding behavior was observed?** | Feeding Fledgling(s) |
| **Other Behavior** | |
| **Nest Site Located?** | Yes |
| **Nesting Habitat** | Coastal Scrub, recovering from past ag use. Dominated by Isocoma. |
| **Foraging Behavior Observed?** | Yes |
| **Foraging Habitat** | Coastal Scrub |

| | |
|---|---|
| **# Fledglings** | 2 |
| **NOHA Comments** | |
| **Habitat Description** | Suitable open scrub habitat |
| **Habitat Management Recs** | Continue to discourage illegal trails and off leash dogs |
| **Invasive Species Risk** | No |
| **Risk from Ag Practices** | No |
| **Other Habitat Risks?** | No |
| **NOHA Foraging Habitat at Risk?** | No |
| **Predators Present?** | Yes |
| **Predation Risk Level** | Low |
| **Description of Predation Risk** | Coyotes |
| **Predator Management Recs** | None |
| **Risk from Humans?** | Yes |
| **Description of Human Risks** | Unauthorized Trail Use, Off-leash Dog(s), Border Patrol Activities |
| **Human Management Recs** | Educational signage |
| **Description of Other Threats** | |
| **Management Recs Other Threats** | |
| **Dominant Surrounding Land Use** | Riparian Forest/Woodland, Coastal Scrub, Campground |
| **Subpolygon Notes** | Human threats were not directly observed on this day, but are known to be threats in this area. |

**Subpolygon Photos**



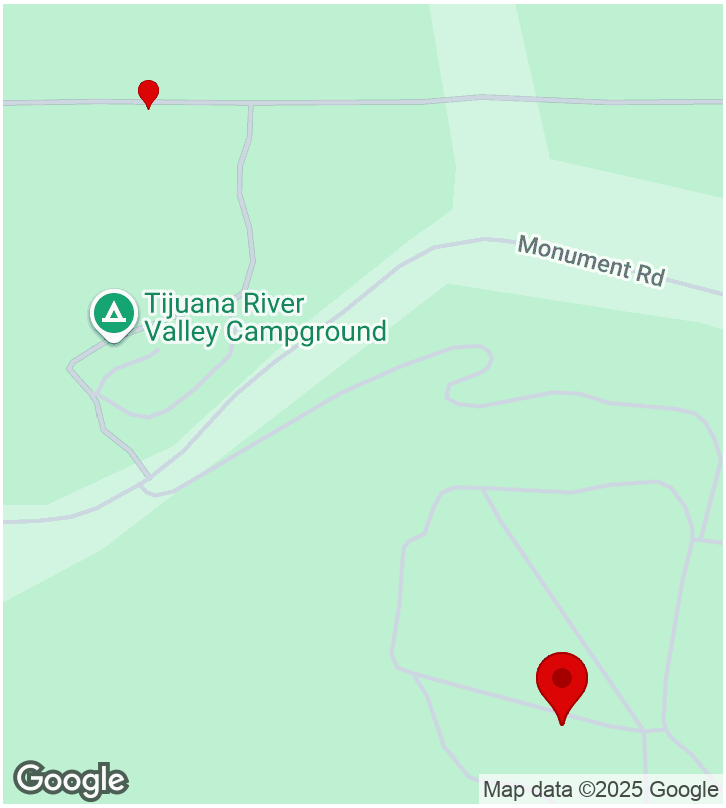



# 2_COSD DPR Bio

Biology Surveys (SoCal Bio ONLY)

## TMP Monitoring ▸ Northern Harrier

**10/15/2025, 7:53:34 PM UTC**




**CREATED**

7/1/2025, 3:37:34 PM UTC
by Brennan Mulrooney

**UPDATED**

10/15/2025, 7:53:34 PM UTC
by Brennan Mulrooney

**LOCATION**

32.541747, -117.098282

## Parent Form

| | |
|---|---|
| **Project Name:** | TMP Monitoring ▸ Northern Harrier |
| **Preserve/Park Name** | Tijuana River Valley Regional Park |
| **General Survey Type** | TMP Monitoring |
| **Specific Survey Type** | NOHA Threats Assessment |
| **Observer/Surveyor:** | Brennan Mulrooney |
| **Assistant Observer/Surveyor:** | Karla Alcaraz |
| **Date:** | July 1, 2025 |

## START Weather Details:

| | |
|---|---|
| **Start - Time:** | 08:37 |
| **Start - Temperature:** | 64 |
| **Start - Wind Direction From (select one):** | NW |
| **Start - Low Wind Speed:** | 2 |
| **Start - High Wind Speed:** | 9 |
| **Start - Average Wind Speed:** | 5.5 |
| **Start - Cloud Cover (%):** | 100 |
| **Start - Precipitation (select one):** | None |
| **Start - Visibility (select one):** | Good |
| **Start - Notes (if applicable):** | Stinky |

## END Weather Details:

| | |
|---|---|
| **Time Out:** | 06:31 |
| **End - Temperature:** | |
| **End - Wind Direction From (select one):** | |
| **End - Low Wind Speed:** | |
| **End - High Wind Speed:** | |
| **End - Average Wind Speed:** | |
| **End - Cloud Cover (%):** | |
| **End - Precipitation (select one):** | None |
| **End - Visibility (select one):** | |
| **End - Notes (if applicable):** | |
| **Total Hours:** | |

**Project Location (description):**

| | |
|---|---|
| **Notes** | |
| **Observation Type:** | Bird |
| **Photos** | |

# Bird

## Bird Observation: (1 Item)

### Bird Observation: - 1. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Common Yellowthroat; Geothlypis trichas; COYE |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## NOHA Threats Assessment

| | |
|---|---|
| **Survey Round** | Round 3 |
| **Subpolygon Name** | Tijuana Estuary 03 |
| **Is this an existing subpolygon?** | Yes |
| **Date** | July 1, 2025 |
| **Primary Observer** | Brennan Mulrooney |
| **Secondary Observer** | Karla Alcaraz |
| **Suitable For Nesting?** | Yes |
| **Subpolygon Occupied?** | No |
| **Habitat Description** | Suitable open scrub habitat |
| **Habitat Management Recs** | Continue to discourage illegal trails and off leash dogs |
| **Invasive Species Risk** | No |
| **Risk from Ag Practices** | No |
| **Other Habitat Risks?** | No |
| **NOHA Foraging Habitat at Risk?** | No |
| **Predators Present?** | Yes |
| **Predation Risk Level** | Low |
| **Description of Predation Risk** | Coyotes |
| **Predator Management Recs** | None |

| | |
|---|---|
| **Risk from Humans?** | Yes |
| **Description of Human Risks** | Unauthorized Trail Use, Off-leash Dog(s), Border Patrol Activities |
| **Human Management Recs** | Educational signage |
| **Description of Other Threats** | |
| **Management Recs Other Threats** | |
| **Dominant Surrounding Land Use** | Coastal Scrub, Urban/Developed |
| **Subpolygon Notes** | Human threats were not directly observed on this day, but are known to be threats in this area. |

**Subpolygon Photos**



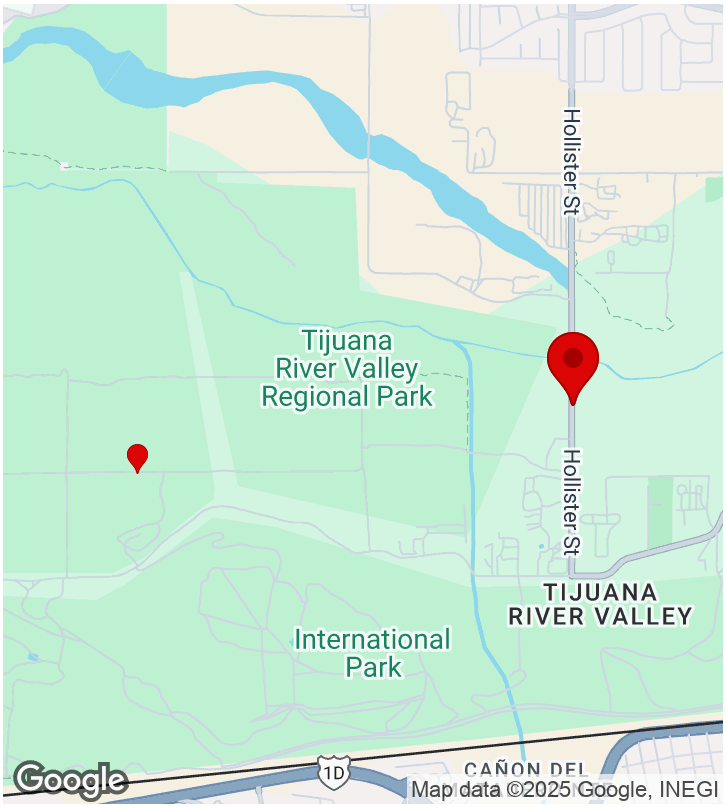



# 2_COSD DPR Bio

Biology Surveys (SoCal Bio ONLY)

## TMP Monitoring ▸ Northern Harrier

**10/15/2025, 7:49:17 PM UTC**




**CREATED**

7/1/2025, 4:15:52 PM UTC
by Brennan Mulrooney

**UPDATED**

10/15/2025, 7:49:17 PM UTC
by Brennan Mulrooney

**LOCATION**

32.549766, -117.084054

## Parent Form

| | |
|---|---|
| **Project Name:** | TMP Monitoring ▸ Northern Harrier |
| **Preserve/Park Name** | Tijuana River Valley Regional Park |
| **General Survey Type** | TMP Monitoring |
| **Specific Survey Type** | NOHA Threats Assessment |
| **Observer/Surveyor:** | Brennan Mulrooney |
| **Assistant Observer/Surveyor:** | Karla Alcaraz |
| **Date:** | July 1, 2025 |

## START Weather Details:

| | |
|---|---|
| **Start - Time:** | 09:15 |
| **Start - Temperature:** | 64 |
| **Start - Wind Direction From (select one):** | NW |
| **Start - Low Wind Speed:** | 2 |
| **Start - High Wind Speed:** | 9 |
| **Start - Average Wind Speed:** | 5.5 |
| **Start - Cloud Cover (%):** | 100 |
| **Start - Precipitation (select one):** | None |
| **Start - Visibility (select one):** | Good |
| **Start - Notes (if applicable):** | Stinky |

## END Weather Details:

| | |
|---|---|
| **Time Out:** | 06:31 |
| **End - Temperature:** | |
| **End - Wind Direction From (select one):** | |
| **End - Low Wind Speed:** | |
| **End - High Wind Speed:** | |
| **End - Average Wind Speed:** | |
| **End - Cloud Cover (%):** | |
| **End - Precipitation (select one):** | None |
| **End - Visibility (select one):** | |
| **End - Notes (if applicable):** | |
| **Total Hours:** | |

| | |
|---|---|
| **Project Location (description):** | |

| | |
|---|---|
| **Notes** | |
| **Observation Type:** | Bird |
| **Photos** | |

# Bird

## Bird Observation: (1 Item)

### Bird Observation: - 1. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Common Yellowthroat; Geothlypis trichas; COYE |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## NOHA Threats Assessment

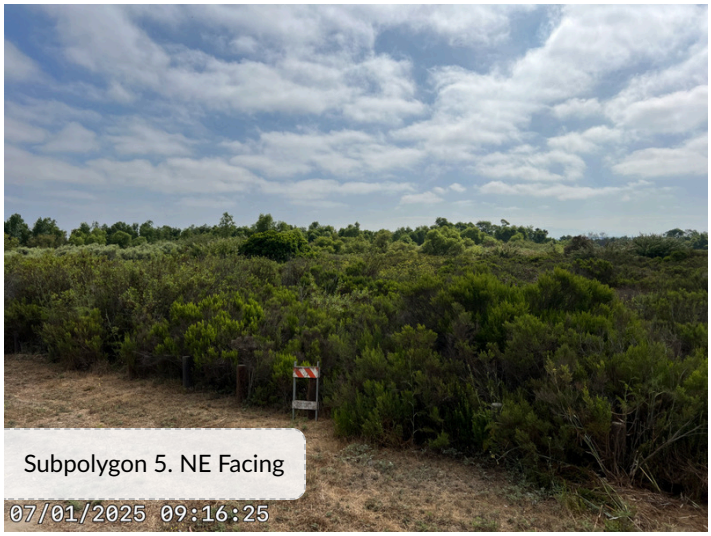
| | |
|---|---|
| **Survey Round** | Round 3 |
| **Subpolygon Name** | Tijuana Estuary 05 |
| **Is this an existing subpolygon?** | Yes |
| **Date** | July 1, 2025 |
| **Primary Observer** | Brennan Mulrooney |
| **Secondary Observer** | Karla Alcaraz |
| **Suitable For Nesting?** | Yes |
| **Subpolygon Occupied?** | No |
| **Habitat Description** | Suitable open scrub habitat |
| **Habitat Management Recs** | Continue to discourage illegal trails and off leash dogs |
| **Invasive Species Risk** | Yes |
| **If yes, Invasive Species Description** | Arundo, tamarisk, fennel, tree tobacco, mustard |
| **Invasive Spp Management Recs** | |
| **Risk from Ag Practices** | No |
| **Other Habitat Risks?** | No |
| **NOHA Foraging Habitat at Risk?** | No |
| **Predators Present?** | Yes |
| **Predation Risk Level** | Low |

| | |
|---|---|
| **Description of Predation Risk** | Coyotes |
| **Predator Management Recs** | None |
| **Risk from Humans?** | Yes |
| **Description of Human Risks** | Unauthorized Trail Use, Off-leash Dog(s), Border Patrol Activities |
| **Human Management Recs** | Educational signage |
| **Description of Other Threats** | |
| **Management Recs Other Threats** | |
| **Dominant Surrounding Land Use** | Coastal Scrub, Urban/Developed, Riparian Forest/Woodland |
| **Subpolygon Notes** | Human threats were not directly observed on this day, but are known to be threats in this area. |

**Subpolygon Photos**




Subpolygon 5. SE facing



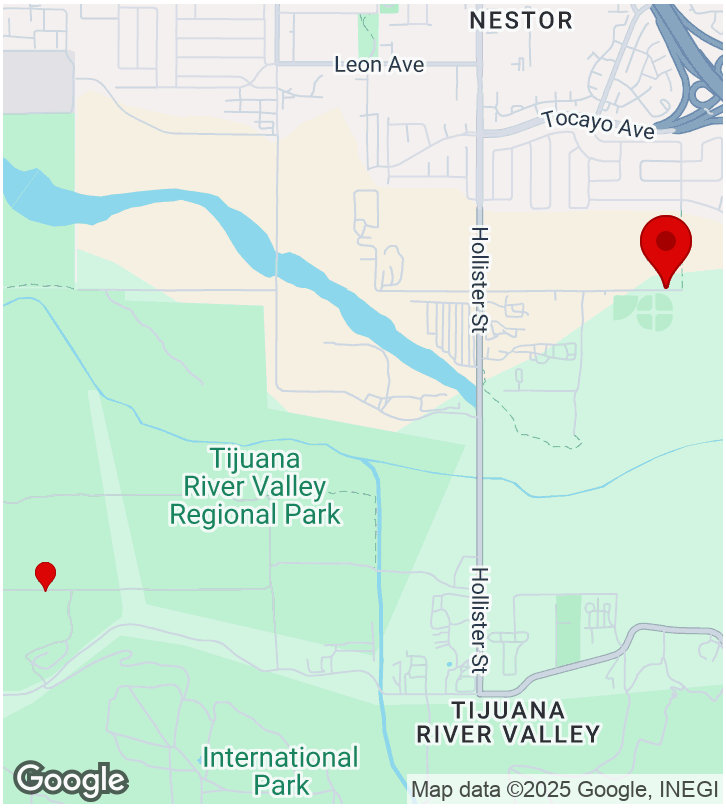

Subpolygon 5. NE Facing

# 2_COSD DPR Bio

Biology Surveys (SoCal Bio ONLY)

## TMP Monitoring ▸ Northern Harrier

**10/15/2025, 1:08:34 AM UTC**




**CREATED**

7/1/2025, 6:32:22 PM UTC
by Brennan Mulrooney

**UPDATED**

10/15/2025, 1:08:34 AM UTC
by Brennan Mulrooney

**LOCATION**

32.558296, -117.076123

## Parent Form

| | |
|---|---|
| **Project Name:** | TMP Monitoring ▸ Northern Harrier |
| **Preserve/Park Name** | Tijuana River Valley Regional Park |
| **General Survey Type** | TMP Monitoring |
| **Specific Survey Type** | NOHA Threats Assessment |
| **Observer/Surveyor:** | Brennan Mulrooney |
| **Assistant Observer/Surveyor:** | Karla Alcaraz |
| **Date:** | July 1, 2025 |

## START Weather Details:

| | |
|---|---|
| **Start - Time:** | 11:30 |
| **Start - Temperature:** | 64 |
| **Start - Wind Direction From (select one):** | NW |
| **Start - Low Wind Speed:** | 2 |
| **Start - High Wind Speed:** | 9 |
| **Start - Average Wind Speed:** | 5.5 |
| **Start - Cloud Cover (%):** | 100 |
| **Start - Precipitation (select one):** | None |
| **Start - Visibility (select one):** | Good |
| **Start - Notes (if applicable):** | Stinky |

## END Weather Details:

| | |
|---|---|
| **Time Out:** | 12:10 |
| **End - Temperature:** | |
| **End - Wind Direction From (select one):** | |
| **End - Low Wind Speed:** | |
| **End - High Wind Speed:** | |
| **End - Average Wind Speed:** | |
| **End - Cloud Cover (%):** | |
| **End - Precipitation (select one):** | None |
| **End - Visibility (select one):** | |
| **End - Notes (if applicable):** | |
| **Total Hours:** | |

| | |
|---|---|
| **Project Location (description):** | |

| | |
|---|---|
| **Notes** | |
| **Observation Type:** | Bird |
| **Photos** | |

# Bird

## Bird Observation: (1 Item)

### Bird Observation: - 1. 1 record

| | |
|---|---|
| **Bird (Common or Scientific Name):** | Common Yellowthroat; Geothlypis trichas; COYE |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## NOHA Threats Assessment

| | |
|---|---|
| **Survey Round** | Round 3 |
| **Subpolygon Name** | Tijuana Estuary 12 (ESA) |
| **Is this an existing subpolygon?** | Yes |
| **Date** | July 1, 2025 |
| **Primary Observer** | Brennan Mulrooney |
| **Secondary Observer** | Karla Alcaraz |
| **Suitable For Nesting?** | Yes |
| **Subpolygon Occupied?** | No |
| **Habitat Description** | Suitable open scrub habitat, mostly in the southern portion. |
| **Habitat Management Recs** | Continue to discourage illegal trails and off leash dogs |
| **Invasive Species Risk** | Yes |
| **If yes, Invasive Species Description** | Arundo, tamarisk, crystalline ice plant, garland daisy, fan palm, mustard |
| **Invasive Spp Management Recs** | Remove invasives, plant native scrub species |
| **Risk from Ag Practices** | Yes |
| **If yes, Ag Description** | Field north of Sunset has been mowed during the breeding season. |
| **Ag Management Recs** | Don’t mow during breeding season |
| **Other Habitat Risks?** | No |
| **NOHA Foraging Habitat at Risk?** | No |

| | |
|---|---|
| **Predators Present?** | Yes |
| **Predation Risk Level** | Low |
| **Description of Predation Risk** | Coyotes |
| **Predator Management Recs** | None |
| **Risk from Humans?** | Yes |
| **Description of Human Risks** | Unauthorized Trail Use, Off-leash Dog(s), Border Patrol Activities, Feral cats |
| **Human Management Recs** | Educational signage |
| **Description of Other Threats** | |
| **Management Recs Other Threats** | |
| **Dominant Surrounding Land Use** | Coastal Scrub, Urban/Developed, Riparian Forest/Woodland, Agriculture, Riparian Scrub |
| **Subpolygon Notes** | Human threats were not directly observed on this day, but are known to be threats in this area. |

**Subpolygon Photos**



Subpolygon 12. Facing NW



Subpolygon 12. East facing from end of sunset. Veg is probably too tall now.



Subpolygon 12. Southwest facing view south of the ballfields.

# 2_COSD DPR Bio

Biology Surveys (SoCal Bio ONLY)

## TMP Monitoring ▸ Northern Harrier

**10/15/2025, 7:31:39 PM UTC**




**CREATED**

7/1/2025, 5:33:02 PM UTC
by Brennan Mulrooney

**UPDATED**

10/15/2025, 7:31:39 PM UTC
by Brennan Mulrooney

**LOCATION**

32.557412, -117.095539

## Parent Form

| | |
|---|---|
| **Project Name:** | TMP Monitoring ▸ Northern Harrier |
| **Preserve/Park Name** | Tijuana River Valley Regional Park |
| **General Survey Type** | TMP Monitoring |
| **Specific Survey Type** | NOHA Threats Assessment |
| **Observer/Surveyor:** | Brennan Mulrooney |
| **Assistant Observer/Surveyor:** | Karla Alcaraz |
| **Date:** | July 1, 2025 |

## START Weather Details:

| | |
|---|---|
| **Start - Time:** | 10:00 |
| **Start - Temperature:** | 64 |
| **Start - Wind Direction From (select one):** | NW |
| **Start - Low Wind Speed:** | 2 |
| **Start - High Wind Speed:** | 9 |
| **Start - Average Wind Speed:** | 5.5 |
| **Start - Cloud Cover (%):** | 100 |
| **Start - Precipitation (select one):** | None |
| **Start - Visibility (select one):** | Good |
| **Start - Notes (if applicable):** | Stinky |

## END Weather Details:

| | |
|---|---|
| **Time Out:** | 06:31 |
| **End - Temperature:** | |
| **End - Wind Direction From (select one):** | |
| **End - Low Wind Speed:** | |
| **End - High Wind Speed:** | |
| **End - Average Wind Speed:** | |
| **End - Cloud Cover (%):** | |
| **End - Precipitation (select one):** | None |
| **End - Visibility (select one):** | |
| **End - Notes (if applicable):** | |
| **Total Hours:** | |

| | |
|---|---|
| **Project Location (description):** | |

| | |
|---|---|
| **Notes** | |
| **Observation Type:** | Bird |
| **Photos** | |

# Bird

## Bird Observation: (1 Item)

### Bird Observation: - 1. 1 record

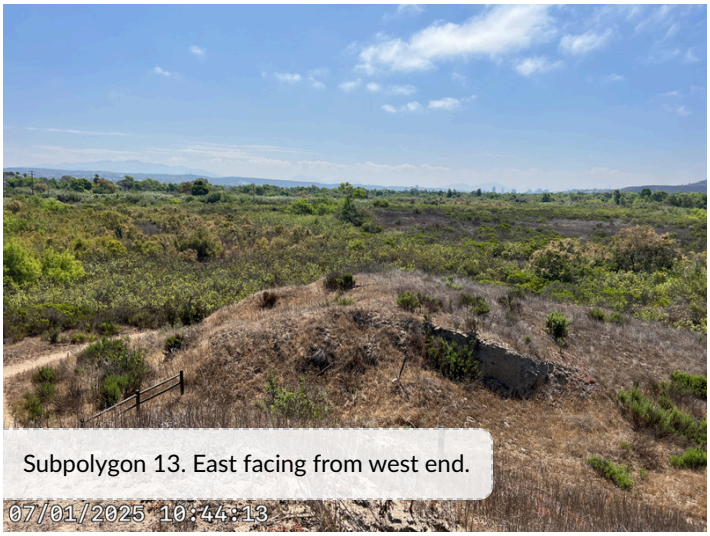
| | |
|---|---|
| **Bird (Common or Scientific Name):** | Common Yellowthroat; Geothlypis trichas; COYE |
| **Is the Bird Sensitive ?** | no |
| **Sub-Species Info:** | N/A |
| **Additional Notes:** | |
| **Photo(s) of Bird:** | |

## NOHA Threats Assessment

| | |
|---|---|
| **Survey Round** | Round 3 |
| **Subpolygon Name** | Tijuana Estuary 13 (ESA) |
| **Is this an existing subpolygon?** | Yes |
| **Date** | July 1, 2025 |
| **Primary Observer** | Brennan Mulrooney |
| **Secondary Observer** | Karla Alcaraz |
| **Suitable For Nesting?** | Yes |
| **Subpolygon Occupied?** | No |
| **Habitat Description** | Suitable open scrub habitat |
| **Habitat Management Recs** | Continue to discourage illegal trails and off leash dogs |
| **Invasive Species Risk** | Yes |
| **If yes, Invasive Species Description** | Arundo, tamarisk, crystalline ice plant, garland daisy, fan palm, mustard |
| **Invasive Spp Management Recs** | Remove invasives, plant native scrub species |
| **Risk from Ag Practices** | No |
| **Other Habitat Risks?** | No |
| **NOHA Foraging Habitat at Risk?** | No |
| **Predators Present?** | Yes |
| **Predation Risk Level** | Low |

| | |
|---|---|
| **Description of Predation Risk** | Coyotes |
| **Predator Management Recs** | None |
| **Risk from Humans?** | Yes |
| **Description of Human Risks** | Unauthorized Trail Use, Off-leash Dog(s), Border Patrol Activities, Feral cats |
| **Human Management Recs** | Educational signage |
| **Description of Other Threats** | |
| **Management Recs Other Threats** | |
| **Dominant Surrounding Land Use** | Coastal Scrub, Urban/Developed, Riparian Forest/Woodland |
| **Subpolygon Notes** | Human threats were not directly observed on this day, but are known to be threats in this area. Except for the cat, we saw one on Sunset Ave |

**Subpolygon Photos**




Subpolygon 13. East facing from west end.

# Appendix G

## Southwestern Willow Flycatcher & Least Bell's Vireo USFWS 45-Day Report

# G-1 Southwestern Willow Flycatcher & Least Bell's Vireo USFWS 45-Day Report

4337 Sheridan Lane
San Diego, CA, 92120
Phone: 619.972.7932
Phone: 619.972.8714
www.blackhawkenv.com

August 8, 2025

Ms. Jess Sattler
Recovery Permit Coordinator
U.S. Fish and Wildlife Service – Carlsbad Fish and Wildlife Office
2177 Salk Ave, Suite 250
Carlsbad, CA 92008
Email: fw8_cfwo_permits@fws.gov
Office: 760.431.9440

**Subject: Results of 2025 Least Bell's Vireo & Southwestern Willow Flycatcher Surveys for the San Luis Rey River Park, Bonsall, San Diego County, California – Implementation of Targeted Monitoring Plan**

Dear Ms. Sattler:

This letter report presents the methodology and results of focused surveys conducted for least Bell's vireo (LBVI) (*Vireo bellii pusillus*) and southwestern willow flycatcher (SWFL) (*Empidonax traillii extimus*) at the San Luis Rey River Park (SLRRP)in Bonsall, San Diego County, California. Blackhawk Environmental Inc. (Blackhawk) was contracted through Environmental Science Associates (ESA) to conduct surveys to determine the presence or absence of the two species within the SLRRP as directed by the County of San Diego (County) Department of Parks and Recreation (DPR) Targeted Monitoring Plan (TMP) (ESA 2024). All SWFL surveys were conducted by Blackhawk Principal Biologist Kris Alberts (United States Fish and Wildlife Service [USFWS] permit ES039640-6), and all LBVI surveys were conducted concurrently with the SWFL surveys by Blackhawk Biologists Andy Steyers, Hayley Milner, Michelle Picca, Tawni Gotbaum and Katie Quint. Surveys were conducted between April 10, 2024, through July 15, 2024, according to USFWS and United States Geological Service (USGS) protocols (Sogge, Ahlers, and Sferra 2010; USFWS 2001). No projects or impacts are proposed to either species within SLRRP; therefore, a modified survey schedule was proposed for LBVI and approved by the USFWS that reduced the typical number of survey passes from eight down to three passes, plus a select fourth pass for certain areas where data gaps may have existed following the three survey passes. Similarly, SWFL survey timing and frequency followed the USFWS protocol for general surveys because no projects or impacts are proposed.

This report includes location and site descriptions, species accounts, survey methods, survey results and conclusion sections. Attachments include survey area vicinity, location, and survey results maps (Attachment A); and an observed/detected wildlife species list (Attachment B).

## LOCATION DESCRIPTION

The SLRRP is an approximately 764-acre open space preserve located along the San Luis Rey River within the unincorporated community of Bonsall in northern San Diego County. The survey area is shown on the USGS *Bonsall* quadrangle in Sections 14, 20, 29, 30, and 31 and falls within Township 10 South; Range 03 West and the Monserate Land Grant (USGS 2012) (Figure 1).

## SITE DESCRIPTION

The survey area runs generally along a 6-mile stretch of the river between Interstate 15 at the eastern end and the intersection of Montrachet Street and Old River Road at the western end (survey area), southeast of California State Route 76 (Figure 1). For purposes of these surveys, the survey area was generally split into three survey sections: eastern, central, and western. The eastern section extends for slightly less than three miles through several disjunct patches of suitable habitat, from the Rancho Monserate Country Club on the east side to the Dulin Ranch grounds on the west side. The central section extends for approximately 1.5 miles across a wide swath of the San Luis Rey River and surrounding habitat from the Dulin Ranch grounds on the east side to the Camino del Rey bridge on the west side. The western section extends for almost two miles from the Camino del Rey bridge on the east side toward the intersection of Montrachet Street and Old River Road. All LBVI/SWFL surveys were conducted within suitable riparian habitat of the San Luis Rey River at elevations from 130 to 250 feet above mean sea level (amsl). Suitable riparian habitat for LBVI and SWFL includes southern cottonwood-willow riparian forest (351.30 acres), disturbed southern cottonwood-willow riparian forest (42.74 acres), southern willow scrub (0.87 acres), and tamarisk scrub (2.35 acres). Other adjacent habitats suitable for foraging were also surveyed opportunistically (Figures 2a–2c). Brief descriptions of suitable LBVI and SWFL vegetation communities within SLRRP are excerpted or modified from descriptions provided in the 2011 Baseline Biodiversity Survey Report for the San Luis Rey River Park (Dudek 2011) and the 2019 Baseline Biodiversity Report for the San Luis Rey River Park Acquisition Parcels (ICF 2019) and presented below.

### Southern Cottonwood-Willow Riparian Forest

This habitat is characterized as tall, open, broad-leafed, winter-deciduous riparian forest dominated by cottonwood (*Populus* spp.) and several tree willow species (*Salix* spp.). The understory is generally composed of shrubby willows. Associated species within this community can include mugwort (*Artemisia vulgaris*), mulefat (*Baccharis salicifolia*), western sycamore (*Platanus racemosa*), and hoary nettle (*Urtica dioica* ssp. *holosericea*).

### Southern Willow Scrub

This habitat is characterized as dense, broad-leafed, winter-deciduous riparian thickets dominated by red willow (*Salix laevigata*), along with co-dominant species such as arroyo willow (*Salix lasiolepis*) and sandbar willow (*Salix exigua*). Most stands are too dense to allow much understory development.

### Tamarisk Scrub

Tamarisk scrub is a weedy monoculture of any of the several tamarisk species (*Tamarix* spp.). Common species detected within this habitat include tamarisk, sandbar willow, big salt bush (*Atriplex lentiformis*), salt grass (*Distichlis spicata*), and arrowweed (*Pluchea sericea*).

## SURVEY METHODS

Blackhawk Principal Biologist Kris Alberts conducted all SWFL assessments and surveys, and concurrently, Blackhawk Biologists Andy Steyers, Hayley Milner, Michelle Picca, Katie Quint and Tawni Gotbaum conducted the LBVI surveys. A total of four LBVI surveys were conducted at least 10 days apart from one another (except for the fourth partial survey pass), and a total of three SWFL surveys were completed at least five days apart from one another within three survey windows for non-project-

related surveys. Due to the large survey area, the three survey passes for LBVI and SWFL were split up into three sections (eastern, central, and western) and were surveyed on separate days. These areas are depicted on Figures 2a–2c. LBVI and SWFL surveys were conducted during favorable weather conditions between dawn and 11:30 am on May 15, 16, and 17 (Pass 1); June 2, 3, and 4 (Pass 2); and June 24, 25, and 26 (Pass 3). In addition, a select fourth LBVI survey was conducted by two biologists on June 30, 2025. Survey conditions are presented for each pass below in Tables 1a–1d.

## Least Bell's Vireo Survey Methods

LBVI survey methods followed an approved modified protocol, based on the accepted protocol of the USFWS (2001). The LBVI methodology stipulates that eight surveys are to occur between April 10 and July 31 in suitable habitats at least 10 days apart. However, a modified survey schedule was approved by the USFWS for only three survey passes, plus a select fourth survey that consisted of surveying select areas where LBVI were not observed during the first three survey passes but were thought to still have some potential to occur. Surveys were conducted generally between pre-dawn and 11:00 am, though some surveys were slightly extended when avian activity remained high and weather conditions remained favorable. Surveys were conducted without using recorded vocalization playbacks, with the biologists actively looking and listening for LBVI. The surveying biologists were familiar with the songs, calls, and scolds of adult and juvenile LBVI, as well as plumage characteristics in relation to other vireo species. When LBVI were detected, the number of individuals detected, and the specific locations were recorded using Global Positioning System (GPS) coordinates. The presence of brown-headed cowbird (BHCO) was also recorded.

The surveys were done by walking slowly through and/or adjacent to LBVI-suitable habitats, looking and listening for LBVI presence throughout the survey durations, using binoculars and/or the naked eye, as appropriate. LBVI locations of individuals directly observed and/or aurally detected were mapped directly onto the ESRI ArcGIS Field Maps application on the biologists' smartphones during each survey (Figures 2a–2c). Territories and nesting habits were not directly surveyed and/or mapped due to time limitations, though all male detections were assumed to be a breeding pair since no frequently advertising males were observed, nor ranging widely in search of a mate, which suggests that all male detections were of paired individuals. The biologists listened for any and all LBVI calls, as well as all other bird species. All LBVI-relevant data and wildlife species were recorded in the field notes of the biologists for inclusion in this report. The complete list of wildlife species detected during the surveys is provided as Attachment B. Survey conditions for each survey pass are presented in Tables 1a–1d.

## Southwestern Willow Flycatcher Survey Methods

SWFL survey methods followed the latest accepted protocols of the USGS (Sogge, Ahlers, and Sferra 2010). The SWFL methodology stipulates that for general surveys where no foreseeable impacts to SWFL or their habitat are proposed, a minimum of one survey pass must occur within survey period 1 (May 15–31), within survey period 2 (June 1–24), and within survey period 3 (June 25–July 17), for a total of three survey passes. Therefore, three total SWFL survey passes were conducted within SLRRP, with one survey pass conducted during each survey period May 15, 16 and 17 (period 1); June 2, 3, and 4 (period 2); and June 25, 26, and 27 (period 3) within the 2025 SWFL breeding season.

**Table 1a. Survey Conditions Pass 1**

| Section | Surveyors | Date | Time | Temperature °F | Wind (mph) | Cloud Cover % | Precipitation |
|---|---|---|---|---|---|---|---|
| Eastern | Kris Alberts<br>Andy Steyers | 5-15-25 | 0550–1100 | 54–75 | 0–3 | 100–0 | None |
| Central | Kris Alberts Hayley Milner | 5-16-25 | 0545–1105 | 57–69 | 0–3 | 100–0 | None |
| Western | Kris Alberts<br>Michelle Picca | 5-17-25 | 0555–1100 | 59–67 | 0–2 | 100 | None |

**Table 1b. Survey Conditions Pass 2**

| Section | Surveyors | Date | Time | Temperature °F | Wind (mph) | Cloud Cover % | Precipitation |
|---|---|---|---|---|---|---|---|
| Eastern | Kris Alberts<br>Andy Steyers | 6-2-25 | 0550–1120 | 61–84 | 0–7 | 0 | None |
| Central | Kris Alberts Hayley Milner | 6-3-25 | 0545–1110 | 61–72 | 0–2 | 100–90 | None |
| Western | Kris Alberts<br>Andy Steyers | 6-4-25 | 0600–1110 | 62–66 | 0–3 | 100 | None |

**Table 1c. Survey Conditions Pass 3**

| Section | Surveyors | Date | Time | Temperature °F | Wind (mph) | Cloud Cover % | Precipitation |
|---|---|---|---|---|---|---|---|
| Eastern | Kris Alberts<br>Hayley Milner | 6-25-25 | 0540–1100 | 64–81 | 0–3 | 100–0 | None |
| Central | Kris Alberts Hayley Milner | 6-26-25 | 0545–1030 | 65–78 | 0–2 | 100–0 | None |
| Western | Kris Alberts<br>Tawni Gotbaum | 6-27-25 | 0540–1100 | 62–76 | 0–4 | 100–0 | None |

**Table 1d. Survey Conditions Select Pass 4***

| Section | Surveyors | Date | Time | Temperature °F | Wind (mph) | Cloud Cover % | Precipitation |
|---|---|---|---|---|---|---|---|
| Central/<br>Western Portions | Andy Steyers<br>Katie Quint | 6-30-25 | 0630–1100 | 62–76 | 1–6 | 100–0 | None |

* Only LBVI surveys conducted during the select Pass 4

SWFL surveys were conducted mainly between pre-dawn and 11:00 am, though some surveys were slightly extended when avian activity remained high and weather conditions remained favorable. The surveys were done by walking slowly through and adjacent to SWFL-suitable habitats while playing back recorded "fitz-bew" calls on an Apple iPhone 15 Pro with an external JBL Clip speaker. The surveying biologist looked and listened for WIFL and/or SWFL presence throughout the survey durations,

using binoculars and/or the naked eye, as appropriate. The biologist listened for WIFL/SWFL calls, as well as all those of other bird species. All WIFL/SWFL-relevant data and wildlife species were recorded in the field notes of the biologist for inclusion in this report. As mentioned above, the complete list of wildlife species detected during the surveys is provided as Attachment C. Survey conditions for each survey pass are presented in Tables 1a–1c.

## SURVEY RESULTS

Blackhawk observed 32 LBVI within the survey area during Pass 1, 32 LBVI during Pass 2, and 34 LBVI during Pass 3 (Figures 2a–2c). In addition, one LBVI was detected during the select Pass 4, though this observation was near previous LBVI observations and is not likely a new individual. A majority of the males were observed in similar areas for at least two of the passes, suggesting they may have occupied a breeding territory, with some directly detected to be in a pair. However, territories and nesting status were not closely surveyed due to timing limitations and confirmation of pair and nesting status was not possible. Regardless, all male LBVI detections were presumed to be of paired individuals, based on behavior alone; none of the detected males were advertising often and high in the canopy, nor ranging widely in search of a mate. So, all male detections were assumed paired or were directly observed to be paired in the few instances where a female was seen or heard as well. Therefore, it is assumed that up to 68 adult LBVI occupied the SLRRP during the 2025 season. Table 2 lists the GPS points of each LBVI location during each pass. No LBVI were observed with leg bands.

The LBVI-occupied riparian habitat within the survey area is best described as Southern Cottonwood-Willow Riparian Forest (SCWRF) and Southern Willow Scrub (SWS) with areas of disturbed SCWRF (Holland 1986). In addition, other assessed/surveyed habitats included adjacent areas of Disturbed Habitat, Non-native Grassland, Tamarisk Scrub, and Diegan Coastal Sage Scrub (Holland 1986).

The SCWRF and SWS within the Survey Area was variously dominated or co-dominated by Fremont cottonwood, arroyo willow, Goodding's black willow, red willow and mule fat. Other native tree and large shrub species included western sycamore (*Platanus racemosa*) and blue elderberry (*Sambucus nigra* ssp. *caerulea*). Large invasive non-native tree and plant species interspersed within the San Luis Rey River included blue gum eucalyptus (*Eucalyptus globulum*), giant reed, salt cedar and Washington fan palm (*Washingtonia robusta*). Understories were generally dense collections of low hanging twigs and branches of the native plant species mentioned in this paragraph, but also included poison oak, California mugwort, short-pod mustard (*Hirschfeldia incana*), poison hemlock (*Conium maculatum*), ragweed (*Ambrosia psilostachya*) and evening primrose (*Oenethera elata*) (Baldwin et al. 2012).

## Table 2. LBVI Observations

| Pass 1 | | | | Pass 2 | | | | Pass 3 | | | | Pass 4 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Date** | **Section** | **Lat** | **Long** | **Date** | **Section** | **Lat** | **Long** | **Date** | **Section** | **Lat** | **Long** | **Date** | **Section** | **Lat** | **Long** |
| 5/15/25 | Eastern | 33.32108 | -117.163389 | 6/2/25 | Eastern | 33.31836 | -117.16607 | 6/25/25 | Eastern | 33.317898 | -117.16646 | 6/30/25 | Central | 33.293962 | -117.220786 |
| | | 33.317287 | -117.167503 | | | 33.306154 | -117.20888 | | | 33.318623 | -117.16565 | | | | |
| | | 33.314397 | -117.172412 | | | 33.306477 | -117.20645 | | | 33.319558 | -117.16462 | | | | |
| | | 33.308799 | -117.178534 | | | 33.306959 | -117.20752 | | | 33.317103 | -117.16783 | | | | |
| | | 33.308398 | -117.200109 | | | 33.307405 | -117.20552 | | | 33.316891 | -117.16864 | | | | |
| | | 33.307987 | -117.201547 | | | 33.307461 | -117.20456 | | | 33.314638 | -117.17213 | | | | |
| | | 33.306909 | -117.20364 | 6/3/25 | Central | 33.299273 | -117.21032 | | | 33.308371 | -117.19991 | | | | |
| | | 33.307803 | -117.203897 | | | 33.30009 | -117.21122 | | | 33.307393 | -117.20439 | | | | |
| | | 33.30727 | -117.205582 | | | 33.305719 | -117.20965 | | | 33.307368 | -117.2057 | | | | |
| | | 33.306953 | -117.207493 | | | 33.298077 | -117.21249 | | | 33.30655 | -117.20654 | | | | |
| 5/16/25 | Central | 33.29914 | -117.210049 | | | 33.29484 | -117.21871 | | | 33.307055 | -117.20749 | | | | |
| | | 33.299835 | -117.211364 | | | 33.293863 | -117.21906 | 6/26/25 | Central | 33.306023 | -117.20945 | | | | |
| | | 33.30568 | -117.209977 | | | 33.294169 | -117.22019 | | | 33.298187 | -117.21341 | | | | |
| | | 33.298088 | -117.212927 | | | 33.296434 | -117.21894 | | | 33.29321 | -117.22056 | | | | |
| | | 33.2936 | -117.219907 | | | 33.294883 | -117.22009 | | | 33.291674 | -117.2219 | | | | |
| | | 33.292458 | -117.221672 | | | 33.292767 | -117.21699 | | | 33.289895 | -117.22282 | | | | |
| | | 33.29261 | -117.222606 | | | 33.293726 | -117.21643 | 6/27/25 | Western | 33.264243 | -117.23458 | | | | |
| | | 33.292663 | -117.217024 | 6/4/25 | Western | 33.265623 | -117.23428 | | | 33.265615 | -117.23351 | | | | |
| | | 33.293566 | -117.216698 | | | 33.266887 | -117.23401 | | | 33.266725 | -117.23383 | | | | |
| | | 33.294072 | -117.215387 | | | 33.265819 | -117.23351 | | | 33.267664 | -117.23376 | | | | |
| | | 33.297927 | -117.218094 | | | 33.267799 | -117.23377 | | | 33.270286 | -117.23402 | | | | |
| 5/17/25 | Western | 33.287256 | -117.223702 | | | 33.270145 | -117.23395 | | | 33.270643 | -117.23441 | | | | |
| | | 33.285229 | -117.22416 | | | 33.271217 | -117.23407 | | | 33.271317 | -117.23405 | | | | |
| | | 33.281757 | -117.224261 | | | 33.275225 | -117.22748 | | | 33.276177 | -117.22991 | | | | |
| | | 33.280259 | -117.225033 | | | 33.275987 | -117.23068 | | | 33.278463 | -117.22695 | | | | |
| | | 33.279978 | -117.224882 | | | 33.278269 | -117.22752 | | | 33.281244 | -117.22567 | | | | |
| | | 33.278278 | -117.222986 | | | 33.279978 | -117.22488 | | | 33.282718 | -117.22462 | | | | |
| | | 33.277556 | -117.224489 | | | 33.280456 | -117.22574 | | | 33.282578 | -117.22497 | | | | |
| | | 33.269969 | -117.234292 | | | 33.281265 | -117.22542 | | | 33.284068 | -117.22475 | | | | |
| | | 33.268371 | -117.235029 | | | 33.281746 | -117.22426 | | | 33.285577 | -117.22454 | | | | |
| | | 33.267537 | -117.233918 | | | 33.28551 | -117.22456 | | | 33.287291 | -117.22413 | | | | |
| | | 33.266228 | -117.234179 | | | 33.288112 | -117.22375 | | | 33.287354 | -117.22364 | | | | |
| | | | | | | | | | | 33.278463 | -117.22265 | | | | |
| | | | | | | | | | | 33.277324 | -117.22468 | | | | |

Four to five WIFL were detected within the survey area, all of which were detected during Pass 2. At least one WIFL was detected in each survey section, including one in the eastern section, three in the central section and one likely WIFL in the western section. All four to five WIFL detections were located within the SCWRF habitat, as described above, though only two of the detections were in the main riparian corridor of the river where optimal SWFL nesting habitat occurs. All five detections were of single birds that responded almost immediately to the fitz-bew playback calls. Table 3 provides the GPS location of each WIFL detection. No SWFL were detected during the surveys.

**Table 3. WIFL Observations**

| Pass | Section | Date | Observations/Comments | GPS Coordinates |
|---|---|---|---|---|
| 1 | N/A | N/A | N/A | N/A |
| 2 | Eastern | 6-2-25 | Willow flycatcher fitz-bew response repeatedly to playback between 8:04am and 8:40am. Located in area of blue elderberry, arroyo willow and Fremont Cottonwood. Observed flycatching. Unbanded. | 33.313728, -117.173399 |
| | Eastern | 6-2-25 | Fitz-bew response in area of Fremont cottonwood and mule fat dominated area. Detected between 9:42am and 9:55am. Unbanded. | 33.302661, -117.206584 |
| | Eastern | 6-2-25 | Quick, aggressive fitz-bew in response to playback. Detected in Fremont cottonwood, arroyo willow and sandbar willow dominated area from 10:35am to 10:45am. Unbanded. | 33.307471, -117.203444 |
| | Central | 6-3-25 | Few fitz-bew responses to playback. Detected between 6:49am and 7:20am in Fremont cottonwood, California sycamore and arroyo willow dominated area with poison oak and marshy inclusion. Detected closer to SR-76 and never approached playback area along south side of river. Did not see. | 33.303514, -117.213194 |
| | Western | 6-4-25 | Only occasional whits from 10:20am to 10:40am, no fitz-bew. Did not see. The timing of this detection, in conjunction with whit calls, strongly suggests that this was a WIFL. | 33.284907, -117.22458 |
| 3 | N/A | N/A | N/A | N/A |

The BHCO, a brood parasite of LBVI, SWFL, and many other passerines, was detected flying over or perched in the survey area on every survey. A BHCO trapping program was in place and operating within the survey area during the 2025 season through a DPR issued Right-of-Entry Permit. This trapping program undoubtedly reduced the numbers of free-flying BHCO. Approximately four to eight individual BHCO were detected on each survey, utilizing essentially the entire survey area (Figures 2a–2c).

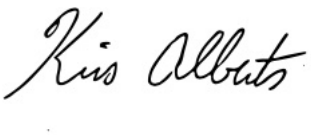
Several additional County of San Diego-sensitive Group 1 bird species were also observed on, overhead and/or adjacent to the SLRRP, including: Cooper's hawk (*Astur cooperi*), red-shouldered hawk (*Buteo lineatus*), turkey vulture (*Cathartes aura*), yellow-breasted chat (*Icteria virens*), white-faced ibis (*Plegadis chihi*), white-tailed kite (*Elanus caeruleus*), and vermilion flycatcher (*Pyrocephalus rubinus flammeus*). In addition, several County of San Diego-sensitive Group 2 bird species were also observed on, overhead or adjacent to the SLRRP, including: great blue heron (*Ardea herodias*), green heron (*Butorides virescens*), yellow warbler (*Setophagia petechia*), double-crested cormorant

(*Nannopterum auritum*) and western bluebird (*Sialia mexicana*) (Chesser et al. 2020; CDFW 2024). All the above species, except for turkey vulture, are known to or have potential to nest in and/or adjacent to SLRRP, based on observed nesting behaviors, suitable habitat, paired presence during the nesting season, and/or ample suitable nesting and foraging habitat.

## CONCLUSION

I certify this report to be a complete and accurate account of the findings and conclusions of surveys for LBVI and SWFL conducted within the SLRRP during the 2025 breeding season. If you have any questions regarding this report, please feel free to call me at 619.972.8714 or e-mail me at kris@blackhawkenv.com, and I will address all questions and concerns.

Sincerely,



Kris Alberts
Principal Biologist
USFWS Permit ES039640-6

## ATTACHMENTS

**A: Figures**

**B: Observed/Detected Vertebrate Wildlife Species List**

## REFERENCES

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# Attachment A
## Figures

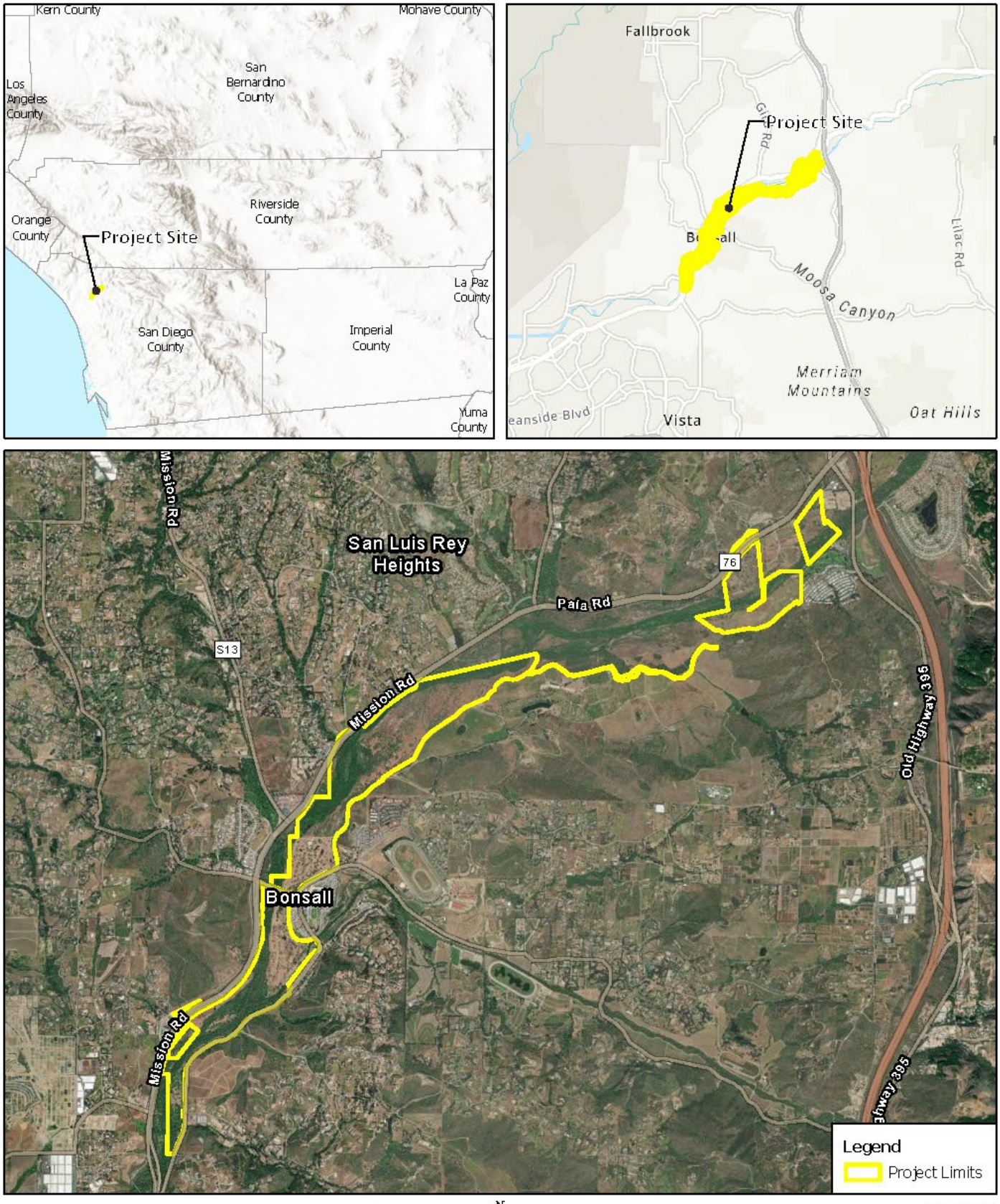
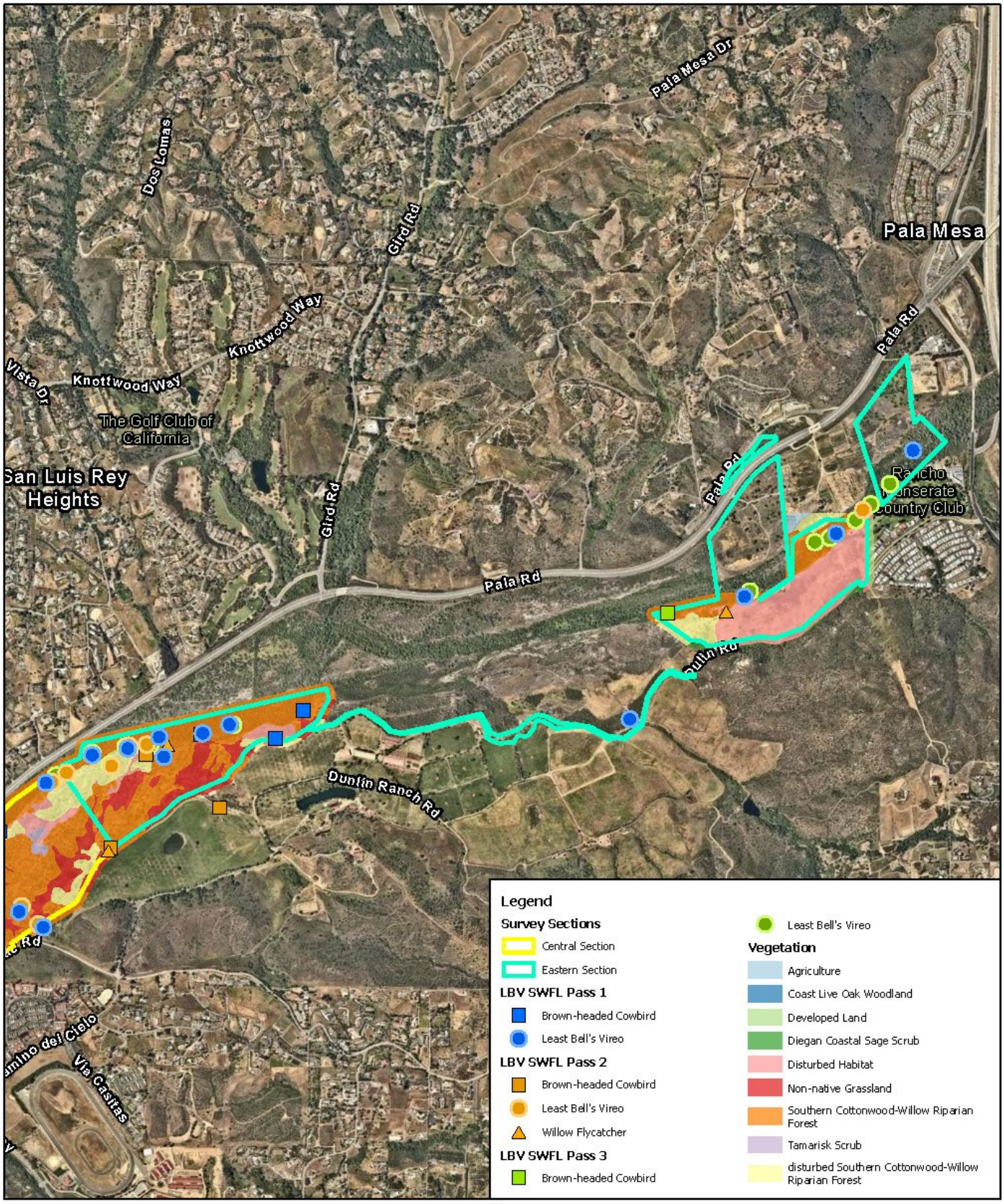



**Figure 1**

## Project Vicinity and Location

San Luis Rey River Park Targeted Monitoring Plan




N

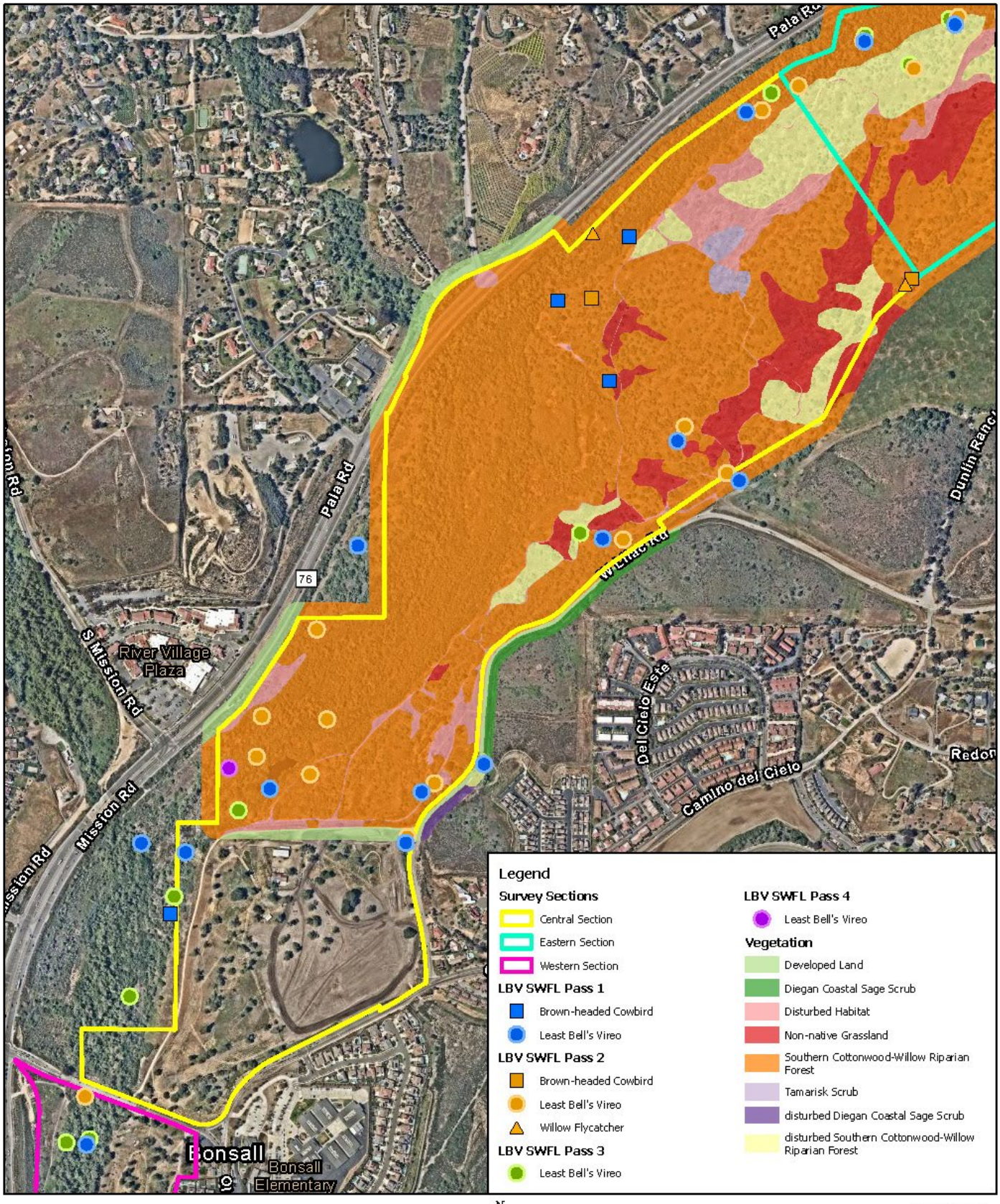
0 1,000

Feet

**Figure 2a**

## 2025 LBVI & SWFL Survey Results
## Eastern Section

San Luis Rey River Park Targeted Monitoring Plan




N

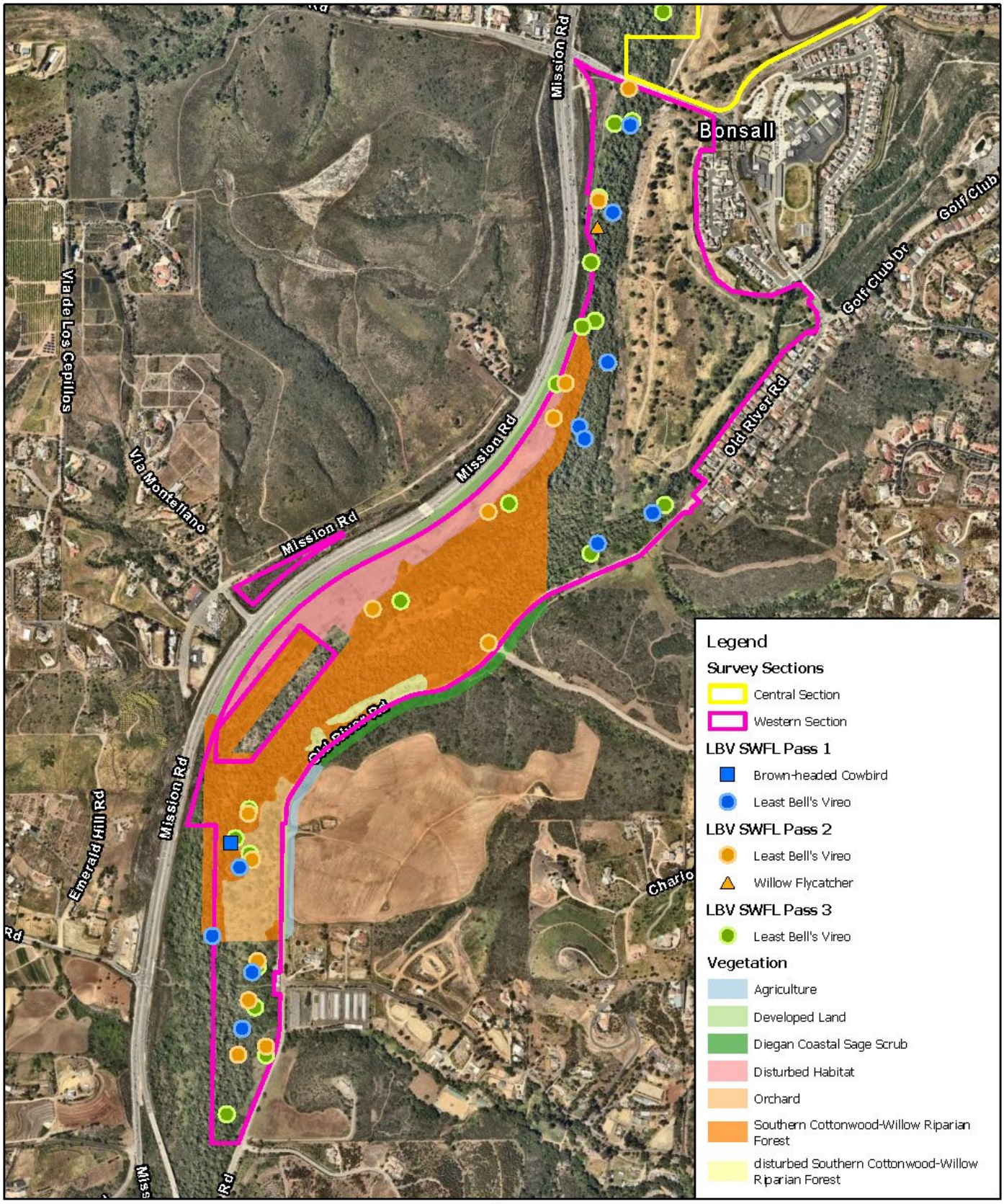
0 800

Feet

**Figure 2b**

## 2025 LBVI & SWFL Survey Results
## Central Section

San Luis Rey River Park Targeted Monitoring Plan




N

0 1,000

Feet

**Figure 2c**

## 2025 LBVI & SWFL Survey Results
## Western Section

San Luis Rey River Park Targeted Monitoring Plan

# Attachment B

## SLRRP 2025 Wildlife List

## OBSERVED/DETECTED WILDLIFE SPECIES LIST

## San Luis Rey River Park 2025

| AVES | BIRDS | STATUS[1] |
|---|---|---|
| **ACCIPITRIDAE** | **Hawks & eagles** | |
| *Astur cooperii* | Cooper's hawk | None/WL/Group 1 |
| *Buteo jamaicensis* | red-tailed hawk | None/None/None |
| *Buteo lineatus* | red-shouldered hawk | None/None/Group 1 |
| *Elanus leucurus* | white-tailed kite | None/FP/ Draft North County MSCP, Group 1 |
| **AEGITHALIDAE** | **Long-tailed tits** | |
| *Psaltriparus minimus* | bushtit | None/None/None |
| **ANATIDAE** | **Ducks, geese & waterfowl** | |
| *Anas platyrhynchos* | mallard | None/None/None |
| **APODIDAE** | **Swifts** | |
| *Aeronautes saxatalis* | white-throated swift | None/None/None |
| **ARDEIDAE** | **Herons & egrets** | |
| *Ardea alba* | great egret | None/None/None |
| *Ardea herodias* | great blue heron | None/None/Group 2 |
| *Butorides virescens* | green heron | None/None/Group 2 |
| *Egretta thula* | snowy egret | None/None/None |
| **CARDINALIDAE** | **Cardinals & allies** | |
| *Passerina caerulea* | blue grosbeak | None/None/None |
| *Pheucticus melanocephalus* | black-headed grosbeak | None/None/None |
| **CATHARTIDAE** | **New World vultures** | |
| *Cathartes aura* | turkey vulture | None/None/Group 1 |
| **COLUMBIDAE** | **Pigeons & doves** | |
| * *Columba livia* | rock pigeon | None/None/None |
| * *Streptopelia decaocto* | Eurasian collared-dove | None/None/None |
| *Zenaida macroura* | mourning dove | None/None/None |
| **CORVIDAE** | **Crows & jays** | |
| *Aphelocoma californica obscura* | California scrub-jay | None/None/None |
| *Corvus brachyrhynchos* | American crow | None/None/None |
| *Corvus corax* | common raven | None/None/None |
| **ESTRILDIDAE** | **Waxbills & allies** | |
| *Lonchura punctulata* | scaly-breasted munia | None/None/None |
| **FALCONIDAE** | **Falcons** | |
| *Falco sparverius* | American kestrel | None/None/None |
| **HIRUNDINIDAE** | **Swallows** | |
| *Petrochelidon pyrrhonota* | cliff swallow | None/None/None |
| *Stelgidopteryx serripennis* | northern rough-winged swallow | None/None/None |
| *Trachycineta bicolor* | tree swallow | None/None/None |
| **ICTERIIDAE** | **Chats** | |
| *Icteria virens* | yellow-breasted chat | None/SSC/Group 1 |
| **FRINGILLIDAE** | **Finches & allies** | |
| *Haemorhous mexicanus* | house finch | None/None/None |
| *Spinus lawrencei* | Lawrence's goldfinch | None/None/None |
| *Spinus psaltria* | lesser goldfinch | None/None/None |
| *Spinus tristis* | American goldfinch | None/None/None |

| AVES | BIRDS | STATUS[1] |
|---|---|---|
| **ICTERIDAE** | **New World blackbirds, orioles & allies** | |
| *Agelaius phoeniceus* | red-winged blackbird | None/None/None |
| *Euphagus cyanocephalus* | Brewer's blackbird | None/None/None |
| *Icterus cucullatus* | hooded oriole | None/None/None |
| *Molothrus ater* | brown-headed cowbird | None/None/None |
| *Quiscalus mexicanus* | great-tailed grackle | None/None/None |
| **MIMIDAE** | **Mockingbirds & thrashers** | |
| *Mimus polyglottos* | northern mockingbird | None/None/None |
| *Toxostoma redivivum* | California thrasher | None/None/None |
| **ODONTOPHORIDAE** | **New World quails** | |
| *Callipepla californica* | California quail | None/None/None |
| **PANIONIDAE** | **Ospreys** | |
| *Pandion haliaetus* | osprey | None/WL/Group 1 |
| **PARIDAE** | **Tits, chickadees & titmice** | |
| *Baelophus inornatus* | oak titmouse | None/None/None |
| **PARULIDAE** | **Wood warblers & relatives** | |
| *Cardellina pusilla* | Wilson's warbler | None/None/None |
| *Geothlypis trichas* | common yellowthroat | None/None/None |
| *Oreothlypis celata* | orange-crowned warbler | None/None/None |
| *Setophaga coronata* | yellow-rumped warbler | None/None/None |
| *Setophaga petechia* | yellow warbler | None/SSC/Group 2 |
| *Setophaga townsendi* | Townsend's warbler | None/None/None |
| **PASSERELLIDAE** | **New World sparrows** | |
| *Chondestes grammacus* | lark sparrow | None/None/None |
| *Melospiza melodia* | song sparrow | None/None/None |
| *Melozone crissalis* | California towhee | None/None/None |
| *Pipilo maculatus* | spotted towhee | None/None/None |
| **PASSERIDAE** | **Old World sparrows** | |
| ** Passer domesticus* | house sparrow | None/None/None |
| **PHALACROCORACIDAE** | **Cormorants & shags** | |
| *Nannopterum auritum* | double-crested cormorant | None/WL/Group 2 |
| **PHASIANIDAE** | **Pheasants, grouse & allies** | |
| *Pavo* sp. | peafowl | None/None/None |
| **PICIDAE** | **Woodpeckers & allies** | |
| *Colaptes auratus* | northern flicker | None/None/None |
| *Dryobates pubescens* | downy woodpecker | None/None/None |
| *Melanerpes formicivorus* | acorn woodpecker | None/None/None |
| *Picoides nuttallii* | Nuttall's woodpecker | None/None/None |
| **POLIOPTILIDAE** | **Gnatcatchers** | |
| *Polioptila caerulea* | blue-gray gnatcatcher | None/None/None |
| **PTILIOGONATIDAE** | **Silky flycatchers** | |
| *Phainopepla nitens* | phainopepla | None/None/None |
| **SITTIDAE** | **Nuthatches** | |
| *Sitta carolinensis* | white-breasted nuthatch | None/None/None |
| **STURNIDAE** | **Starlings & allies** | |
| ** Sturnus vulgaris* | European starling | None/None/None |
| **SYLVIIDAE** | **True warblers & parrotbills** | |
| *Chamaea fasciata* | wrentit | None/None/None |

| AVES | BIRDS | STATUS[1] |
|---|---|---|
| **THRESKIORNITHIDAE** | **Ibises & spoonbills** | |
| *Plegadis chihi* | white-faced ibis | None/WL/Group 1 |
| **TROCHILIDAE** | **Hummingbirds** | |
| *Calypte anna* | Anna's hummingbird | None/None/None |
| *Selasphorus sasin* | Allen's hummingbird | None/None/None |
| **TROGLODYTIDAE** | **Wrens** | |
| *Thryomanes bewickii* | Bewick's wren | None/None/None |
| *Troglodytes aedon* | house wren | None/None/None |
| **TURDIDAE** | **Thrushes & allies** | |
| *Catharus ustulatus* | Swainson's thrush | None/None/None |
| *Sialia mexicana* | western bluebird | None/None/Group 2 |
| *Turdus migratorius* | American robin | None/None/None |
| **TYRANNIDAE** | **Tyrant flycatchers** | |
| *Contopus sordidulus* | western wood pewee | None/None/None |
| *Empidonax difficilis* | western flycatcher | None/None/None |
| *Empidonax traillii* | willow flycatcher | None/SE/None |
| *Myiarchus cinerascens* | ash-throated flycatcher | None/None/None |
| *Pyrocephalus rubinus* | vermilion flycatcher | None/SSC/Group 1 |
| *Sayornis nigricans* | black phoebe | None/None/None |
| *Sayornia saya* | Say's phoebe | None/None/None |
| *Tyrannus vociferans* | Cassin's kingbird | None/None/None |
| **VIREONIDAE** | **Vireos** | |
| *Vireo bellii pusillus* | least Bell's vireo | FE/SE/Draft North County MSCP, Group 1 |
| *Vireo huttoni* | Hutton's vireo | None/None/None |

| ACTINOPTERYGII | RAY-FINNED FISHES | STATUS[1] |
|---|---|---|
| **CENTRARCHIDAE** | **Sunfishes** | |
| *Micropterus nigricans* | largemouth bass | None/None/None |

| AMPHIBIA | AMPHIBIANS | STATUS[1] |
|---|---|---|
| **RANIDAE** | **True frogs** | |
| *Lithobates catesbeianus* | bullfrog | None/None/None |

| REPTILIA | REPTILES | STATUS[1] |
|---|---|---|
| **COLUBRIDAE** | **Colubrid snakes** | |
| *Masticophis flagellus* | red racer | None/None/None |
| **PHRYNOSOMATIDAE** | **Zebra-tailed, earless, fringe-toed, spiny, tree, side-blotched & horned lizards** | |
| *Sceloporus occidentalis longipes* | Great Basin fence lizard | None/None/None |
| *Uta stansburiana elegans* | western side-blotched lizard | None/None/None |

| MAMMALIA | MAMMALS | STATUS[1] |
|---|---|---|
| **CANIDAE** | **Foxes, wolves & allies** | |
| *Canis lupus familiaris* | domestic dog | None/None/None |
| *Canis latrans* | coyote | None/None/None |
| *Urocyon cinereoargenteus* | gray fox (scat) | None/None/None |
| **CRICETIDAE** | **New World rats and mice & allies** | |
| *Neotoma fuscipes* | dusky-footed woodrat | None/None/None |
| **FELIDAE** | **Cats** | |
| *Lynx rufus* | bobcat (scat) | None/None/None |
| **GEOMYIDAE** | **Gophers** | |
| *Thomomys bottae* | botta's pocket gopher (burrows) | None/None/None |
| **LEPORIDAE** | **Rabbits & hares** | |
| *Sylvilagus audobonii* | desert cottontail | None/None/None |
| **MUSTELIDAE** | **Mustelids** | |
| *Mustela frenata* | long-tailed weasel | None/None/None |
| **PROCYONIDAE** | **Raccoons & allies** | |
| *Procyon lotor* | Raccoon (scat) | None/None/None |
| **SCIURIDAE** | **Squirrels** | |
| *Otospermophilus beecheyi* | California ground squirrel | None/None/None |

NOTES:
1. FE: Federally Endangered
   SE: State Endangered
   WL: California Department of Fish and Wildlife Watch List
   FP: California Department of Fish and Wildlife Fully Protected
   SSC: California Department of Fish and Wildlife Species of Special Concern
   Draft North County MSCP: Covered under the Draft North County MSCP
   Group 1: Animals of high sensitivity (listed or specific natural history requirements) (County)
   Group 2: Animals declining but not in immediate threat of extinction or extirpation (County)
* Non-native species

# Appendix H

## Bat Habitat and Threats Assessment Field Forms and Representative Photographs

# H-1 Habitat and Threats Assessment Forms

*Scientific Name: Antrozous pallidus & Corynorhinus townsendii* *Common Name: Pallid Bat & Townsend's Big-eared Bat*

*MSP Occurrence ID:* *New MSP Occurrence? Yes:____, No:____, Unknown:____*

*Sample Point #:* *New Sample Point? Yes:____, No:____, Unknown:____*

*Occurrence Name:* *CNDDB EO#:* *Translocated? Yes:____, No:____, Unknown:____*

*Preserve: Hellhole Canyon County Preserve*

*Land Owner:* *Land Manager:*

*Surveyors & Affiliation:*

*Date: June 23, 2025* *Time Start: 14:02*

**I. SAMPLE PLOT INFORMATION.** *Count # plants in 10m radius sample plot, see p. 4 for category definitions for phenology, herbivory, disease & stunted growth. Record notes on p. 3.*

# Plants/Sample Plot:_____Exact:_____Estimate:_____Uncertainty?_____Sample plot radius_____m

For both exact counts and estimates, indicate: Counted/estimated indiv. plants:_____OR Counted/estimated clusters of plants:_____

For geophytes: are counts of flowering or vegetative individuals? Flowering:_____Vegetative:_____

Phenology in Sample Plot (Categories 1-6): Vegetative:_____Flowering:_____Fruiting:_____Dead:_____

Evidence in Sample Plot (Categories 1-6) of: Herbivory:_____Disease:_____Stunted Growth:_____

Is Sample Plot within Current Mapped Extent?_____Yes_____No

**II. SAMPLE PLOT LOCATION & SITE PHOTOMONITORING -** *consult SDMMP list of GPS coordinates for plot center and photo locations. Enter here only if new habitat plot location or to make a correction to coordinates in list provided.*

GPS/Smartphone Accuracy: +/-_____m Datum:_____(NAD83 Recommended) Coord. Syst: UTM:___State Plane:___

Center of Plot Coord: E:_____N:_____No Change:_____New:_____Correction:_____

Camera type:_____PhotoCoord: E:_____N:_____No Change:____New:_____Correction:_____

Location 1: _____ Direction (facing) _____ Height (m) _____ Camera Angle _____ Up or Down _____ Photo #

E:_____N:_____ Photo Location 2 [Coordinates] _____ Direction (facing) _____ Height (m) _____ Camera Angle _____ Up or Down _____ Photo #

**III. SAMPLE PLOT ASSESSMENT** *- Assess habitat covariates in* ***10m radius sample t plot****. Vegetation alliance can be assigned using San Diego vegetation key (AECOM 2012) in office or field using "Associated Species" data. See page 4 for mammal activity categories. Record any notes on p. 3.*

SANDAG 2012 Vegetation Alliance/Association: _____

*Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (50% to <75%); 6 (≥75%)*

Cryptogamic Crust Cover:_____(category) Thatch (Non-Native Grass) Cover:_____(category)

*Thatch Depth categories: 1 (no thatch); 2 (<1 cm); 3 (1 to <5 cm); 4 (5 to <10 cm); 5 (10 to <15 cm); 6 (15 to < 20 cm); 7 ( ≥ 20 cm)*

Thatch Depth: Ave._____(category) Thatch Depth: Max:_____cm

Dead Standing Biomass? Yes:_____No:_____If yes, species:_____Cover Class (1-6):_____Ave. Height:_____cm

Mammal Species Activity Categories (1-4): Feral Pig Activity:_____Ground Squirrel Activity:_____Gopher Activity: _____

Habitat plot representative of maximum extent? Yes:_____No:_____If no, note differences on Page 3.

**IV. ASSOCIATED SPECIES IN SAMPLE PLOT** ***Record cover estimate, not cover category****. See % cover diagram, p. 5. Record substrate, total veg & total cover at bottom of form. Total cover should be at least 100% to account for entire plot. Record notes on p. 3.*

| Species | % Cover | Species | % Cover |
|---|---|---|---|
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Bare Ground:_____Cryptogamic Soil Crust:_____ Rock:_____ Litter:_____

| | |
|---|---|
| *Scientific Name: Antrozous pallidus & Corynorhinus townsendii* | *MSP Occurrence ID:* |
| *Preserve: Hellhole Canyon County Preserve* | *Occurrence Name:* |
| *Date: June 23, 2025* | *Surveyors & Affiliation/Agency: Karla Alcaraz (ESA) and Amy Orduño-Baez (ESA)* |

**V. CURRENT MAPPED EXTENT INFORMATION.** *Count or estimate number of plants in mapped extent. Area can be calculated based on GIS perimeter mapping or visual mapping on aerial photo in the office.*

# Plants/Current Mapped Extent:_____, Exact Count:_____, Estimate (1000s, 10k):_____, Uncertainty?_____

For both exact counts and estimates, indicate: Counted/estimated individual plants:_____OR Counted/estimated clusters of plants:_____

For geophytes: are counts of flowering or vegetative individuals? Flowering:_____Vegetative:_____

Area of Current Mapped Extent:_____Units:_____Exact (GPS mapping):_____Estimate:_____

Perimeter of current extent determined by walking it or estimated by other means (mapped on aerials)? Walked:_____Other (describe p. 3):_____

Species in Maximum Extent? Yes:_____No:_____If not, why

**VI. THREATS ASSESSMENT IN MAXIMUM EXTENT** - *Assess threats within the **occurrence's maximum extent** (cumulative extent over years of monitoring) **plus 10-m surrounding buffer**. Record notes on p. 3.*

Surrounding Land Use/Activity at or Adjacent to Site: The Preserve is surrounded by open space to the north and east and rural developments to the south and west.

*Disturbance Classes (rank each threat as 1-7): 1 = no sign of disturbance, 2 = disturbance in 10m surrounding buffer but not within maximum extent, 3 = disturbance occurs in >0 % to <10% of area within maximum extent, 4 = disturbance in 10% to <25% of maximum extent, 5 = disturbance in 25 to < 50% of maximum extent, 6 = disturbance occurs within 50 to <75% of maximum exent, and 7 = disturbance occurs within ≥75% of maximum extent.*

| | | | | | |
|---|---|---|---|---|---|
| Non-Native Forbs* | 2 | Feral Pig Activity* | 1 | Erosion* | 3 |
| Non-Native Grasses* | 3 | Trampling* | 1 | Urban Runoff* | 1 |
| Non-Native Woody Plants* | 1 | Vandalism* | 1 | Sea-level rise* | |
| Competitive Native Plants* | 1 | Grazing (Y/N/UNK)* | Unknown | Slope Movement* | 1 |
| Dumping/Trash* | 1 | Historic Agriculture (Y/N/Unk)* | Unknown | Soil Compaction* | 3 |
| Encampments* | 1 | Altered Hydrology* | 3 | *Additional room for notes on page 4. | |

Fuel Modification Zone/Fire Break: 1 If Observed, Briefly Describe:

Road Construction/Maintenance: 3 If Observed, Briefly Describe: Established hiking trail.

Vegetation Clearing: 3 If Observed, Briefly Describe: Established hiking trail.

Restoration Project (Impacts): 1 If Observed, Briefly Describe:

ORV Activity 1 If Observed, List Type(s) of ORV Activity:

Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned?____OR Unknown Burn Year? Unknown

Disturbance from Trails (authorized & unauthorized) 3 If Trails are Present, are they Authorized (circle one)? ☑ Yes / ☐ No / ☐ Both / ☐ Unknown

Type of Trail Use (Yes/No)? Hiking: Yes Biking: Yes Equestrian: Yes Dog: Yes Service Vehicles: No Other (Describe):_____

Illegal Trail Use? ☐ Yes ☑ No ☐ Unknown

Describe: _____ Other Disturbance? List & Rank:

Collection? Yes:_____ No:_____ Collector:_____

Collection #:_____ Herbarium:_____ Species Collected: _____

Collection 2, Collector:_____ (enter additional collections on p. 3)

Collection #:_____ Herbarium:_____ Species Collected: _____

Occurrence ID: _____ Species: Pallid Bat & Townsend's Big-eared Bat Date: June 23, 2025

## VI. MANAGEMENT RECOMMENDATIONS

Targeted removal of non-native plant species is recommended along trails and Hell Creek to restore native habitat quality and reduce the spread of invasives.

Install artificial roost structures in suitable locations to provide additional secure roosting opportunities for bats.

## VII. MANAGEMENT ACTIONS IN LAST YEAR

Unknown

## VIII. CNDDB SPECIES DETECTED & NOTES

List any sensitive plant or animal species to add to the CNDDB:

Turkey Vulture and Orange-throated Whiptail

**Time Finish:** 15:12

Occurrence ID: _____ Species: Pallid Bat & Townsend's Big-eared Bat Date: June 23, 2025

Non-Native Forbs. If Observed, Briefly Describe: *Hirschfeldia incana* found along trails.

Non-Native Grasses. If Observed, Briefly Describe: *Bromus* sp., *Bromus diandrus*, found along trails. *Polypogon monspeliensis* found along Hell Creek.

Non-Native Woody Plants. If Observed, Briefly Describe:

Competitive Native Plants. If Observed, Briefly Describe: *Ambrosia psilostachya* found along trails and Hell Creek.

Dumping/Trash. If Observed, Briefly Describe:

Encampments. If Observed, Briefly Describe:

Feral Pig Activity. If Observed, Briefly Describe:

Trampling. If Observed, Briefly Describe:

Vandalism. If Observed, Briefly Describe:

Grazing. If Observed, Briefly Describe:

Historic Agriculture. If Observed, Briefly Describe:

Altered Hydrology. If Observed, Briefly Describe: Minor evidence of altered hydrology observed near Hell Creek, where erosion is present.

Sea level rise. If Observed, Briefly Describe:

Erosion. If Observed, Briefly Describe: Signs of erosion found along trails.

Urban Runoff. If Observed, Briefly Describe:

Slope Movement. If Observed, Briefly Describe:

Soil Compaction. If Observed, Briefly Describe: Established hiking trail.

**Time Finish:** 15:12

**Categories of % Individuals in Sample Plot for Phenological Stages (Vegetative, Flowering, Fruiting & Dead) and for Evidence of Herbivory, Disease and Stunted Growth.**

1 = 0% (not detected)

2 = >0% to <10%

3 = 10% to <25%

4 = 25% to <50%

5 = 50% to <75%

6 = ≥75%

**% Cover Class Definitions within Sample Plot for Cryptogamic Crust and Thatch.**

See page 5 for illustrations of different cover classes.

1 = 0% cover (not detected)

2 = >0% to <10% cover

3 = 10% to <25% cover

4 = 25% to <50% cover

5 = 50% to <75% cover

6 = ≥75% cover

**Feral Pig Activity within Sample Plot:**

1 = No feral pig activity (rooting, wallowing, vegetation destruction, tracks, scat, pig) detected.

2 = Signs of pig activity (rooting, wallowing, vegetation destruction) in sample plot appear months old.

3 = Signs of recent pig activity (rooting, wallowing, vegetation destruction, tracks, scat, pig) in adjacent area but not within sample plot.

4 = Recent signs of pig activity (rooting, wallowing, vegetation destruction, tracks, scat, pigs) within sample plot.

**Ground Squirrel Activity within Sample Plot:**

1 = No ground squirrel burrows detected.

2 = Burrows and/or ground squirrels observed in adjacent area but not within sample plot.

3 = Single squirrel or burrow seen within sample plot.

4 = Multiple burrows and/or squirrels seen within sample plot.

**Botta's Pocket Gopher Activity within Sample Plot:**

1 = No pocket gopher mounds detected.

2 = Mounds or gophers observed in adjacent area but not within sample plot.

3 = <10 mounds observed within sample plot.

4 = ≥10 mounds or one or more gophers seen within sample plot.

**Disturbance Categories within the Maximum Extent:**

1 = No sign of disturbance within maximum extent or in adjacent 10 m buffer.

2 = Disturbance does not occur within maximum extent but is detected within the surrounding 10 m buffer area.

3 = Disturbance present in >0% to <10% of area within maximum extent.

4 = Disturbance occurs in 10% to <25% of area within maximum extent.

5 = Disturbance occurs in 25% to <50% of area within maximum extent.

6 = Disturbance occurs 50% to <75% of area within maximum extent.

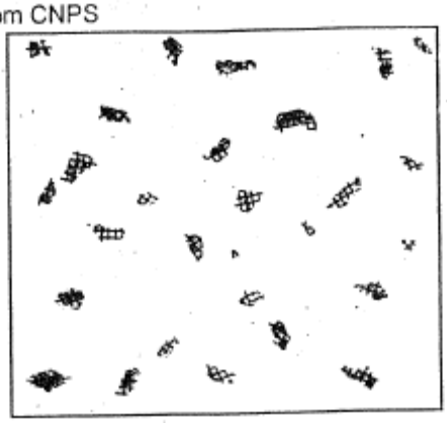
7 = Disturbance occurs ≥75% of area within maximum extent.

**CNPS Cover Diagram** 

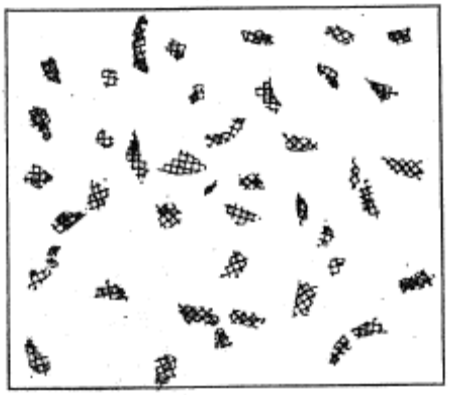
Cover Diagrams from CNPS



1%



5%



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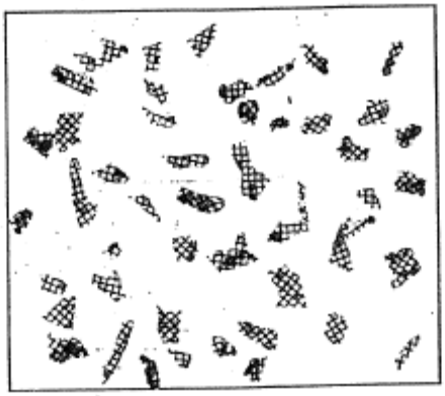
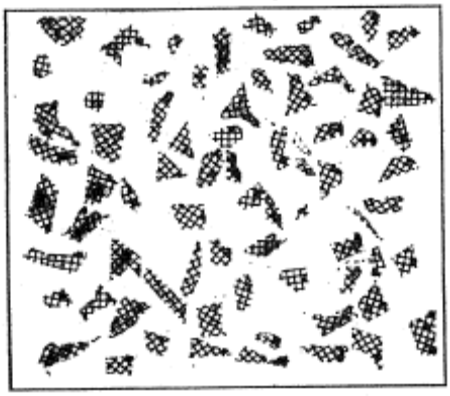


15%



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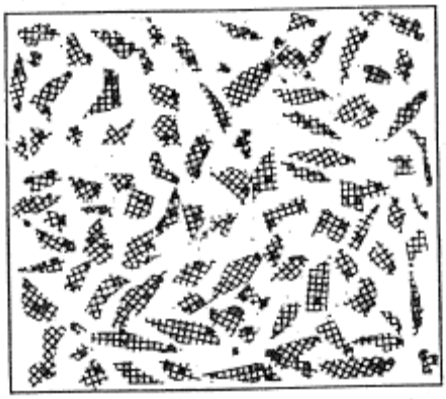

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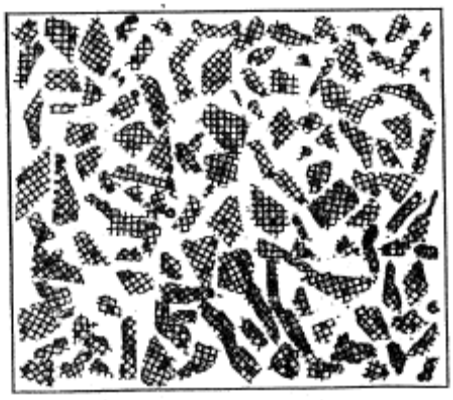

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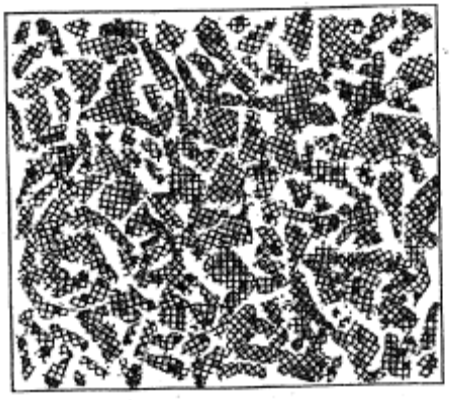

75%

*Scientific Name: Antrozous pallidus & Corynorhinus townsendii* | *Common Name: Pallid Bat & Townsend's Big-eared Bat*

*MSP Occurrence ID:* | *New MSP Occurrence? Yes:____, No:____, Unknown:____*

*Sample Point #:* | *New Sample Point? Yes:____, No:____, Unknown:____*

*Occurrence Name:* *CNDDB EO#:* *Translocated? Yes:____, No:____, Unknown:____*

*Preserve: Wilderness Gardens County Preserve*

*Land Owner:* | *Land Manager:*

*Surveyors & Affiliation:*

*Date: June 23, 2025* | *Time Start: 11:07*

**I. SAMPLE PLOT INFORMATION.** *Count # plants in 10m radius sample plot, see p. 4 for category definitions for phenology, herbivory, disease & stunted growth. Record notes on p. 3.*

# Plants/Sample Plot:_____Exact:_____Estimate:_____Uncertainty?_____Sample plot radius_____m

For both exact counts and estimates, indicate: Counted/estimated indiv. plants:_____OR Counted/estimated clusters of plants:_____

For geophytes: are counts of flowering or vegetative individuals? Flowering:_____Vegetative:_____

Phenology in Sample Plot (Categories 1-6): Vegetative:_____Flowering:_____Fruiting:_____Dead:_____

Evidence in Sample Plot (Categories 1-6) of: Herbivory:_____Disease:_____Stunted Growth:_____

Is Sample Plot within Current Mapped Extent?_____Yes_____No

**II. SAMPLE PLOT LOCATION & SITE PHOTOMONITORING -** *consult SDMMP list of GPS coordinates for plot center and photo locations. Enter here only if new habitat plot location or to make a correction to coordinates in list provided.*

GPS/Smartphone Accuracy: +/-_____m Datum:_____(NAD83 Recommended) Coord. Syst: UTM:____State Plane:____

Center of Plot Coord: E:_____N:_____No Change:_____New:_____Correction:_____

Camera type:_____PhotoCoord: E:_____N:_____No Change:____New:_____Correction:_____

Location 1: _____ Direction (facing) _____ Height (m) _____ Camera Angle _____ Up or Down _____ Photo #

E:_____N:_____ Photo Location 2 [Coordinates] _____ Direction (facing) _____ Height (m) _____ Camera Angle _____ Up or Down _____ Photo #

**III. SAMPLE PLOT ASSESSMENT** *- Assess habitat covariates in* ***10m radius sample t plot****. Vegetation alliance can be assigned using San Diego vegetation key (AECOM 2012) in office or field using "Associated Species" data. See page 4 for mammal activity categories. Record any notes on p. 3.*

SANDAG 2012 Vegetation Alliance/Association: _____

*Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (50% to <75%); 6 (≥75%)*

Cryptogamic Crust Cover:_____(category) Thatch (Non-Native Grass) Cover:_____(category)

*Thatch Depth categories: 1 (no thatch); 2 (<1 cm); 3 (1 to <5 cm); 4 (5 to <10 cm); 5 (10 to <15 cm); 6 (15 to < 20 cm); 7 (≥ 20 cm)*

Thatch Depth: Ave._____(category) Thatch Depth: Max:_____cm

Dead Standing Biomass? Yes:_____No:_____If yes, species:_____Cover Class (1-6):_____Ave. Height:_____cm

Mammal Species Activity Categories (1-4): Feral Pig Activity:_____Ground Squirrel Activity:_____Gopher Activity: _____

Habitat plot representative of maximum extent? Yes:_____No:_____If no, note differences on Page 3.

**IV. ASSOCIATED SPECIES IN SAMPLE PLOT** ***Record cover estimate, not cover category****. See % cover diagram, p. 5. Record substrate, total veg & total cover at bottom of form. Total cover should be at least 100% to account for entire plot. Record notes on p. 3.*

| Species | % Cover | Species | % Cover |
|---|---|---|---|
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Bare Ground:_____Cryptogamic Soil Crust:_____ Rock:_____ Litter:_____

| | |
|---|---|
| *Scientific Name: Antrozous pallidus & Corynorhinus townsendii* | *MSP Occurrence ID:* |
| *Preserve: Wilderness Gardens County Preserve* | *Occurrence Name:* |
| *Date: June 23, 2025* | *Surveyors & Affiliation/Agency: Karla Alcaraz (ESA) and Amy Orduño-Baez (ESA)* |

**V. CURRENT MAPPED EXTENT INFORMATION.** *Count or estimate number of plants in mapped extent. Area can be calculated based on GIS perimeter mapping or visual mapping on aerial photo in the office.*

# Plants/Current Mapped Extent:_____, Exact Count:_____, Estimate (1000s, 10k):_____, Uncertainty?_____

For both exact counts and estimates, indicate: Counted/estimated individual plants:_____OR Counted/estimated clusters of plants:_____

For geophytes: are counts of flowering or vegetative individuals? Flowering:_____Vegetative:_____

Area of Current Mapped Extent:_____Units:_____Exact (GPS mapping):_____Estimate:_____

Perimeter of current extent determined by walking it or estimated by other means (mapped on aerials)? Walked:_____Other (describe p. 3):_____

Species in Maximum Extent? Yes:_____No:_____If not, why

**VI. THREATS ASSESSMENT IN MAXIMUM EXTENT** - *Assess threats within the **occurrence's maximum extent** (cumulative extent over years of monitoring) **plus 10-m surrounding buffer**. Record notes on p. 3.*

Surrounding Land Use/Activity at or Adjacent to Site: The Preserve is surrounded by open space to the west and the south. Agricultural and residential development is located in the east and north.

*Disturbance Classes (rank each threat as 1-7): 1 = no sign of disturbance, 2 = disturbance in 10m surrounding buffer but not within maximum extent, 3 = disturbance occurs in >0 % to <10% of area within maximum extent, 4 = disturbance in 10% to <25% of maximum extent, 5 = disturbance in 25 to < 50% of maximum extent, 6 = disturbance occurs within 50 to <75% of maximum exent, and 7 = disturbance occurs within ≥75% of maximum extent.*

| | | | | | |
|---|---|---|---|---|---|
| Non-Native Forbs* | 2 | Feral Pig Activity* | 1 | Erosion* | 3 |
| Non-Native Grasses* | 4 | Trampling* | 1 | Urban Runoff* | 1 |
| Non-Native Woody Plants* | 3 | Vandalism* | 1 | Sea-level rise* | |
| Competitive Native Plants* | 1 | Grazing (Y/N/UNK)* | Unknown | Slope Movement* | 1 |
| Dumping/Trash* | 1 | Historic Agriculture (Y/N/Unk)* | Yes | Soil Compaction* | 3 |
| Encampments* | 1 | Altered Hydrology* | 2 | | |

*Additional room for notes on page 4.

Fuel Modification Zone/Fire Break: 1 If Observed, Briefly Describe:

Road Construction/Maintenance: 3 If Observed, Briefly Describe: Established hiking trail.

Vegetation Clearing: 3 If Observed, Briefly Describe: Established hiking trail.

Restoration Project (Impacts): 3 If Observed, Briefly Describe: Native tree saplings planted throughout the Preserve.

ORV Activity 1 If Observed, List Type(s) of ORV Activity:

Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned?____OR Unknown Burn Year? Unknown

Disturbance from Trails (authorized & unauthorized) 3 If Trails are Present, are they Authorized (circle one)? ☑ Yes / ☐ No / ☐ Both / ☐ Unknown

Type of Trail Use (Yes/No)? Hiking: Yes Biking: Yes Equestrian: No Dog: Yes Service Vehicles: Yes Other (Describe): Rangers

Illegal Trail Use? ☐ Yes ☑ No ☐ Unknown

Describe: _____ Other Disturbance? List & Rank:

Bullfrogs

Collection? Yes:_____ No:_____ Collector:_____

Collection #:_____ Herbarium:_____ Species Collected: _____

Collection 2, Collector:_____ (enter additional collections on p. 3)

Collection #:_____ Herbarium:_____ Species Collected: _____

Occurrence ID: _____ Species: Pallid Bat & Townsend's Big-eared Bat Date: June 23, 2025

## VI. MANAGEMENT RECOMMENDATIONS

Targeted removal of non-native plant species is recommended along trails and pond area to restore native habitat quality and reduce the spread of invasives. Reduce vegetation in pond to provide better foraging access to bats.

Install artificial roost structures in suitable locations to provide additional secure roosting opportunities for bats.

## VII. MANAGEMENT ACTIONS IN LAST YEAR

Unknown

## VIII. CNDDB SPECIES DETECTED & NOTES

List any sensitive plant or animal species to add to the CNDDB:

None

**Time Finish:** 12:59

Occurrence ID: _____ Species: Pallid Bat & Townsend's Big-eared Bat Date: June 23, 2025

Non-Native Forbs. If Observed, Briefly Describe: Small patches of *Hirschfeldia incana* observed throughout the area, with concentrated *Carduus pycnocephalus* growth and presence of other non-native species near the pond.

Non-Native Grasses. If Observed, Briefly Describe: *Bromus* spp. and *Avena* sp. are widely distributed across the Preserve.

Non-Native Woody Plants. If Observed, Briefly Describe: *Schinus* sp. found within the preserve.

Competitive Native Plants. If Observed, Briefly Describe: Dense growth of Vitis spp. noted near the pond area, potentially impacting surrounding vegetation.

Dumping/Trash. If Observed, Briefly Describe:

Encampments. If Observed, Briefly Describe:

Feral Pig Activity. If Observed, Briefly Describe:

Trampling. If Observed, Briefly Describe:

Vandalism. If Observed, Briefly Describe:

Grazing. If Observed, Briefly Describe:

Historic Agriculture. If Observed, Briefly Describe: Site includes remnants of a historic grist mill, later converted into a ranch and subsequently owned by a horticulturist.

Altered Hydrology. If Observed, Briefly Describe:

Sea level rise. If Observed, Briefly Describe:

Erosion. If Observed, Briefly Describe: Minor erosion observed along established trail segments.

Urban Runoff. If Observed, Briefly Describe:

Slope Movement. If Observed, Briefly Describe:

Soil Compaction. If Observed, Briefly Describe: Established hiking trails within the Preserve.

**Time Finish:** 12:59

**Categories of % Individuals in Sample Plot for Phenological Stages (Vegetative, Flowering, Fruiting & Dead) and for Evidence of Herbivory, Disease and Stunted Growth.**

1 = 0% (not detected)

2 = >0% to <10%

3 = 10% to <25%

4 = 25% to <50%

5 = 50% to <75%

6 = ≥75%

**% Cover Class Definitions within Sample Plot for Cryptogamic Crust and Thatch.**

See page 5 for illustrations of different cover classes.

1 = 0% cover (not detected)

2 = >0% to <10% cover

3 = 10% to <25% cover

4 = 25% to <50% cover

5 = 50% to <75% cover

6 = ≥75% cover

**Feral Pig Activity within Sample Plot:**

1 = No feral pig activity (rooting, wallowing, vegetation destruction, tracks, scat, pig) detected.

2 = Signs of pig activity (rooting, wallowing, vegetation destruction) in sample plot appear months old.

3 = Signs of recent pig activity (rooting, wallowing, vegetation destruction, tracks, scat, pig) in adjacent area but not within sample plot.

4 = Recent signs of pig activity (rooting, wallowing, vegetation destruction, tracks, scat, pigs) within sample plot.

**Ground Squirrel Activity within Sample Plot:**

1 = No ground squirrel burrows detected.

2 = Burrows and/or ground squirrels observed in adjacent area but not within sample plot.

3 = Single squirrel or burrow seen within sample plot.

4 = Multiple burrows and/or squirrels seen within sample plot.

**Botta's Pocket Gopher Activity within Sample Plot:**

1 = No pocket gopher mounds detected.

2 = Mounds or gophers observed in adjacent area but not within sample plot.

3 = <10 mounds observed within sample plot.

4 = ≥10 mounds or one or more gophers seen within sample plot.

**Disturbance Categories within the Maximum Extent:**

1 = No sign of disturbance within maximum extent or in adjacent 10 m buffer.

2 = Disturbance does not occur within maximum extent but is detected within the surrounding 10 m buffer area.

3 = Disturbance present in >0% to <10% of area within maximum extent.

4 = Disturbance occurs in 10% to <25% of area within maximum extent.

5 = Disturbance occurs in 25% to <50% of area within maximum extent.

6 = Disturbance occurs 50% to <75% of area within maximum extent.

7 = Disturbance occurs ≥75% of area within maximum extent.

**CNPS Cover Diagram** 

Cover Diagrams from CNPS



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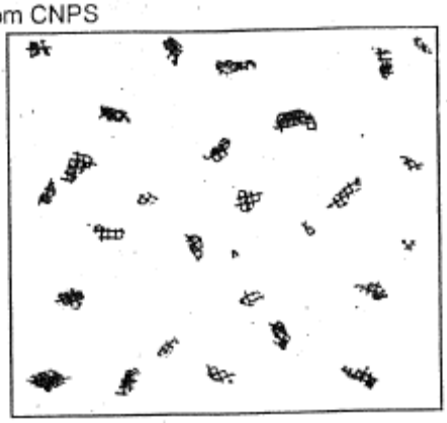

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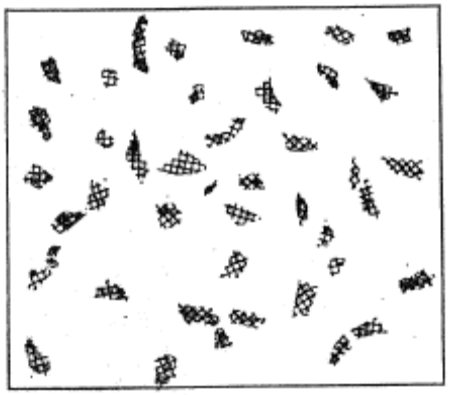

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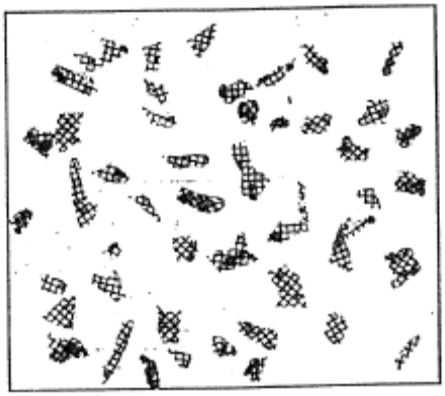

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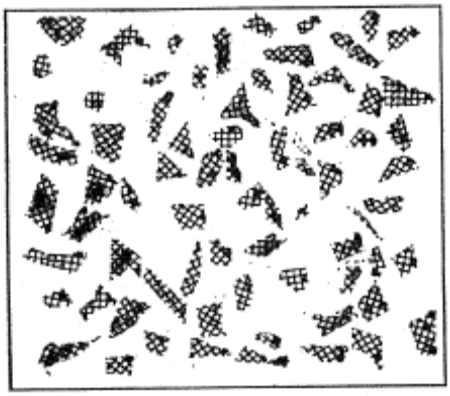

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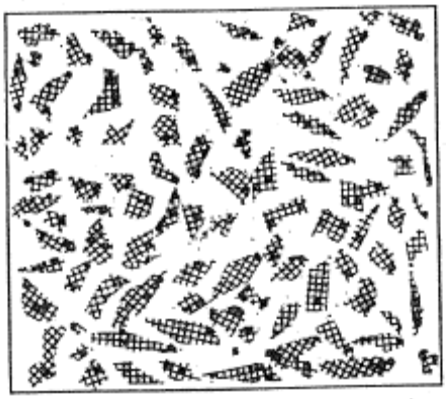

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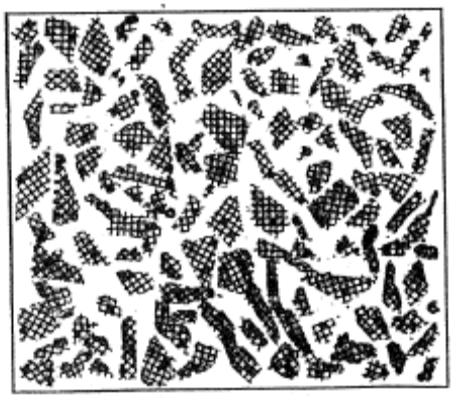

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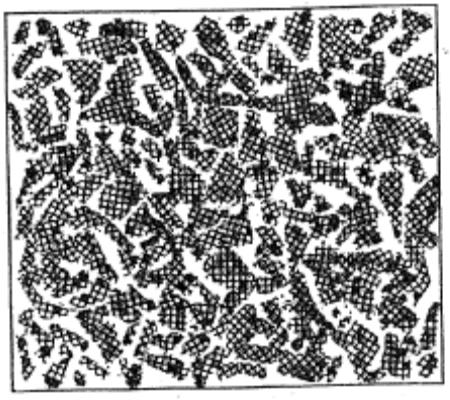

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*Scientific Name: Antrozous pallidus* *Common Name: Pallid Bat*

*MSP Occurrence ID:* *New MSP Occurrence? Yes:_____, No:_____, Unknown:_____*

*Sample Point #:* *New Sample Point? Yes:_____, No:_____, Unknown:_____*

*Occurrence Name:* *CNDDB EO#:* *Translocated? Yes:_____, No:_____, Unknown:_____*

*Preserve: Mount Olympus County Preserve*

*Land Owner:* *Land Manager:*

*Surveyors & Affiliation:*

*Date: June 23, 2025* *Time Start: 09:01*

**I. SAMPLE PLOT INFORMATION.** *Count # plants in 10m radius sample plot, see p. 4 for category definitions for phenology, herbivory, disease & stunted growth. Record notes on p. 3.*

# Plants/Sample Plot:_____Exact:_____Estimate:_____Uncertainty?_____Sample plot radius_____m

For both exact counts and estimates, indicate: Counted/estimated indiv. plants:_____OR Counted/estimated clusters of plants:_____

For geophytes: are counts of flowering or vegetative individuals? Flowering:_____Vegetative:_____

Phenology in Sample Plot (Categories 1-6): Vegetative:_____Flowering:_____Fruiting:_____Dead:_____

Evidence in Sample Plot (Categories 1-6) of: Herbivory:_____Disease:_____Stunted Growth:_____

Is Sample Plot within Current Mapped Extent?_____Yes_____No

**II. SAMPLE PLOT LOCATION & SITE PHOTOMONITORING -** *consult SDMMP list of GPS coordinates for plot center and photo locations.*

*Enter here only if new habitat plot location or to make a correction to coordinates in list provided.*

GPS/Smartphone Accuracy: +/-_____m Datum:_____(NAD83 Recommended) Coord. Syst: UTM:___State Plane:___

Center of Plot Coord: E:_____N:_____No Change:_____New:_____Correction:_____

Camera type:_____PhotoCoord: E:_____N:_____No Change:____New:_____Correction:_____

Location 1: _____ _____ _____ _____ _____

Direction (facing) Height (m) Camera Angle Up or Down Photo #

E:_____N:_____ _____ _____ _____ _____ _____ _____

Photo Location 2 [Coordinates] Direction (facing) Height (m) Camera Angle Up or Down Photo #

**III. SAMPLE PLOT ASSESSMENT** *- Assess habitat covariates in* ***10m radius sample t plot****. Vegetation alliance can be assigned using San Diego vegetation key (AECOM 2012) in office or field using "Associated Species" data. See page 4 for mammal activity categories. Record any notes on p. 3.*

SANDAG 2012 Vegetation Alliance/Association: _____

*Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (50% to <75%); 6 (≥75%)*

Cryptogamic Crust Cover:_____(category) Thatch (Non-Native Grass) Cover:_____(category)

*Thatch Depth categories: 1 (no thatch); 2 (<1 cm); 3 (1 to <5 cm); 4 (5 to <10 cm); 5 (10 to <15 cm); 6 (15 to < 20 cm); 7 (≥ 20 cm)*

Thatch Depth: Ave._____(category) Thatch Depth: Max:_____cm

Dead Standing Biomass? Yes:_____No:_____If yes, species:_____Cover Class (1-6):_____Ave. Height:_____cm

Mammal Species Activity Categories (1-4): Feral Pig Activity:_____Ground Squirrel Activity:_____Gopher Activity: _____

Habitat plot representative of maximum extent? Yes:_____No:_____If no, note differences on Page 3.

**IV. ASSOCIATED SPECIES IN SAMPLE PLOT** ***Record cover estimate, not cover category****. See % cover diagram, p. 5. Record substrate, total veg & total cover at bottom of form. Total cover should be at least 100% to account for entire plot. Record notes on p. 3.*

| Species | % Cover | Species | % Cover |
|---|---|---|---|
| | | | |
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| | | | |

Bare Ground:_____Cryptogamic Soil Crust:_____ Rock:_____ Litter:_____

Water:_____ Total Live Vegetation:_____ Dead Shrubs:_____ Total Cover:_____(∑ =100%)

| | |
|---|---|
| *Scientific Name: Pallid Bat* | *MSP Occurrence ID:* |
| *Preserve: Mount Olympus County Preserve* | *Occurrence Name:* |
| *Date: June 23, 2025* | *Surveyors & Affiliation/Agency: Karla Alcaraz (ESA) and Amy Orduño-Baez (ESA)* |

**V. CURRENT MAPPED EXTENT INFORMATION.** *Count or estimate number of plants in mapped extent. Area can be calculated based on GIS perimeter mapping or visual mapping on aerial photo in the office.*

# Plants/Current Mapped Extent:_____, Exact Count:_____, Estimate (1000s, 10k):_____, Uncertainty?_____

For both exact counts and estimates, indicate: Counted/estimated individual plants:_____OR Counted/estimated clusters of plants:_____

For geophytes: are counts of flowering or vegetative individuals? Flowering:_____Vegetative:_____

Area of Current Mapped Extent:_____Units:_____Exact (GPS mapping):_____Estimate:_____

Perimeter of current extent determined by walking it or estimated by other means (mapped on aerials)? Walked:_____Other (describe p. 3):_____

Species in Maximum Extent? Yes:_____No:_____If not, why

_____

**VI. THREATS ASSESSMENT IN MAXIMUM EXTENT** - *Assess threats within the **occurrence's maximum extent** (cumulative extent over years of monitoring) **plus 10-m surrounding buffer**. Record notes on p. 3.*

Surrounding Land Use/Activity at or Adjacent to Site: The Preserve is surrounded by open space and rural development. A heavily used paved road borders the eastern boundary.

*Disturbance Classes (rank each threat as 1-7): 1 = no sign of disturbance, 2 = disturbance in 10m surrounding buffer but not within maximum extent, 3 = disturbance occurs in >0 % to <10% of area within maximum extent, 4 = disturbance in 10% to <25% of maximum extent, 5 = disturbance in 25 to < 50% of maximum extent, 6 = disturbance occurs within 50 to <75% of maximum exent, and 7 = disturbance occurs within ≥75% of maximum extent.*

| | | | | | |
|---|---|---|---|---|---|
| Non-Native Forbs* | 3 | Feral Pig Activity* | 1 | Erosion* | 3 |
| Non-Native Grasses* | 2 | Trampling* | 1 | Urban Runoff* | 1 |
| Non-Native Woody Plants* | 3 | Vandalism* | 1 | Sea-level rise* | |
| Competitive Native Plants* | 1 | Grazing (Y/N/UNK)* | No | Slope Movement* | 1 |
| Dumping/Trash* | 2 | Historic Agriculture (Y/N/Unk)* | Unknown | Soil Compaction* | 3 |
| Encampments* | 1 | Altered Hydrology* | 1 | *Additional room for notes on page 4. | |

Fuel Modification Zone/Fire Break: 1 If Observed, Briefly Describe:

Road Construction/Maintenance: 1 If Observed, Briefly Describe:

Vegetation Clearing: 1 If Observed, Briefly Describe:

Restoration Project (Impacts): 1 If Observed, Briefly Describe:

ORV Activity 1 If Observed, List Type(s) of ORV Activity:

Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned? Unknown OR Unknown Burn Year?

Disturbance from Trails (authorized & unauthorized) 2 If Trails are Present, are they Authorized (circle one)? ☐ Yes / ☐ No / ☑ Both / ☐ Unknown

Type of Trail Use (Yes/No)? Hiking: Yes Biking: Yes Equestrian: No Dog: No Service Vehicles: Yes Other (Describe): Evidence of unauthorized motorized vehicle use and hikers has been documented in previous years, but the Preserve is not open to the public and no unauthorized trail use was observed during 2025 threat assessment.

Illegal Trail Use? ☐ Yes ☑ No ☐ Unknown

Describe: No illegal trail use was observed during the recent threats assessment, but previous years have documented evidence of unauthorized access Other Disturbance? List & Rank:

Collection? Yes:_____ No:_____ Collector:_____

Collection #:_____ Herbarium:_____ Species Collected: _____

Collection 2, Collector:_____ (enter additional collections on p. 3)

Collection #:_____ Herbarium:_____ Species Collected: _____

Occurrence ID: _____ Species: Pallid Bat Date: June 23, 2025

## VI. MANAGEMENT RECOMMENDATIONS

Targeted removal of non-native plant species is recommended around the staging area, along trails, and near abandoned human structures to restore native habitat quality and reduce the spread of invasives.

Install artificial roost structures in suitable locations to provide additional secure roosting opportunities for bats.

Enhance drinking sources for bats by installing artificial water troughs where feasible.

## VII. MANAGEMENT ACTIONS IN LAST YEAR

Unknown

## VIII. CNDDB SPECIES DETECTED & NOTES

List any sensitive plant or animal species to add to the CNDDB:

None

**Time Finish:** 10:42

Occurrence ID: _____ Species: Pallid Bat Date: June 23, 2025

Non-Native Forbs. If Observed, Briefly Describe: *Hirschfeldia incana* is present in the staging area as well as along the trail. Non-native forbs such as *Centaurea melitensis*, *Carduus pycnocephalus*, and *Erodium cicutarium* are found surrounding the abandoned structures and in disturbed areas.

Non-Native Grasses. If Observed, Briefly Describe: *Bromus diandrus* is present around the abandoned human structures, particularly in disturbed areas.

Non-Native Woody Plants. If Observed, Briefly Describe: *Opuntia* sp., *Trichocereus spachianus*, and *Aloe* sp. are non-native succulent and cactus species found in the area near the abandoned human structures. These species are likely remnants of ornamental plantings and are not widespread within the preserve.

Competitive Native Plants. If Observed, Briefly Describe:

Dumping/Trash. If Observed, Briefly Describe: Debris from abandoned human structures is present on-site.

Encampments. If Observed, Briefly Describe:

Feral Pig Activity. If Observed, Briefly Describe:

Trampling. If Observed, Briefly Describe:

Vandalism. If Observed, Briefly Describe:

Grazing. If Observed, Briefly Describe:

Historic Agriculture. If Observed, Briefly Describe: No definitive evidence of historic agricultural use was observed during the assessment. The original use of the site is unclear, but the presence of abandoned structures and debris may be related to past residential or other activities.

Altered Hydrology. If Observed, Briefly Describe:

Sea level rise. If Observed, Briefly Describe:

Erosion. If Observed, Briefly Describe: Erosion was observed in some areas, primarily resulting from past trail use and active gopher and/or other small mammal activity.

Urban Runoff. If Observed, Briefly Describe:

Slope Movement. If Observed, Briefly Describe:

Soil Compaction. If Observed, Briefly Describe: Soil compaction was observed in some areas due to previous trail use, while high gopher and/or other small mammal activity has loosened the soil in certain areas.

**Time Finish:** 10:42

**Categories of % Individuals in Sample Plot for Phenological Stages (Vegetative, Flowering, Fruiting & Dead) and for Evidence of Herbivory, Disease and Stunted Growth.**

1 = 0% (not detected)

2 = >0% to <10%

3 = 10% to <25%

4 = 25% to <50%

5 = 50% to <75%

6 = ≥75%

**% Cover Class Definitions within Sample Plot for Cryptogamic Crust and Thatch.**

See page 5 for illustrations of different cover classes.

1 = 0% cover (not detected)

2 = >0% to <10% cover

3 = 10% to <25% cover

4 = 25% to <50% cover

5 = 50% to <75% cover

6 = ≥75% cover

**Feral Pig Activity within Sample Plot:**

1 = No feral pig activity (rooting, wallowing, vegetation destruction, tracks, scat, pig) detected.

2 = Signs of pig activity (rooting, wallowing, vegetation destruction) in sample plot appear months old.

3 = Signs of recent pig activity (rooting, wallowing, vegetation destruction, tracks, scat, pig) in adjacent area but not within sample plot.

4 = Recent signs of pig activity (rooting, wallowing, vegetation destruction, tracks, scat, pigs) within sample plot.

**Ground Squirrel Activity within Sample Plot:**

1 = No ground squirrel burrows detected.

2 = Burrows and/or ground squirrels observed in adjacent area but not within sample plot.

3 = Single squirrel or burrow seen within sample plot.

4 = Multiple burrows and/or squirrels seen within sample plot.

**Botta's Pocket Gopher Activity within Sample Plot:**

1 = No pocket gopher mounds detected.

2 = Mounds or gophers observed in adjacent area but not within sample plot.

3 = <10 mounds observed within sample plot.

4 = ≥10 mounds or one or more gophers seen within sample plot.

**Disturbance Categories within the Maximum Extent:**

1 = No sign of disturbance within maximum extent or in adjacent 10 m buffer.

2 = Disturbance does not occur within maximum extent but is detected within the surrounding 10 m buffer area.

3 = Disturbance present in >0% to <10% of area within maximum extent.

4 = Disturbance occurs in 10% to <25% of area within maximum extent.

5 = Disturbance occurs in 25% to <50% of area within maximum extent.

6 = Disturbance occurs 50% to <75% of area within maximum extent.

7 = Disturbance occurs ≥75% of area within maximum extent.

**CNPS Cover Diagram** 

Cover Diagrams from CNPS



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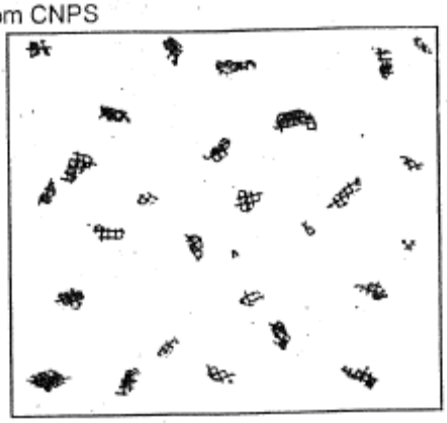

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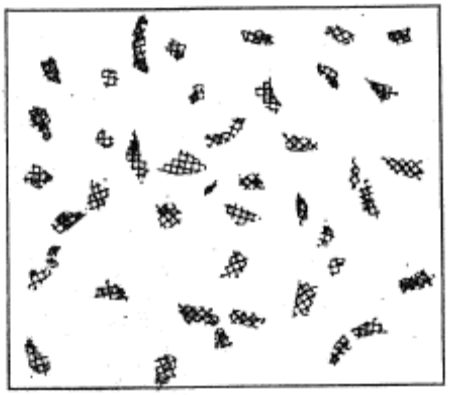

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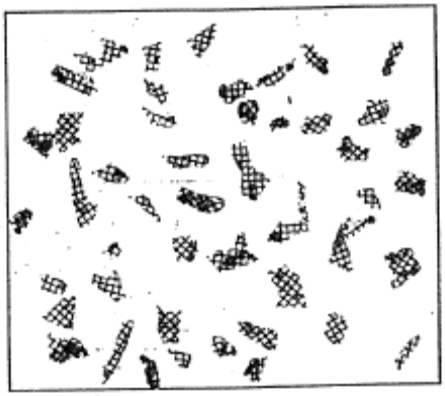

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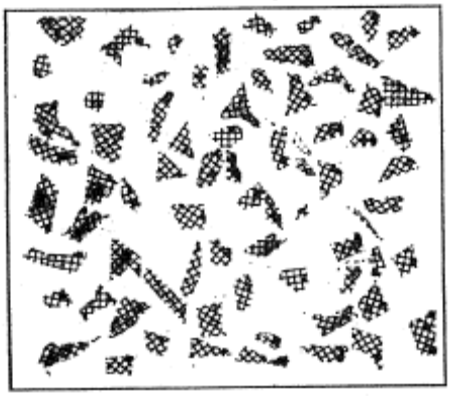

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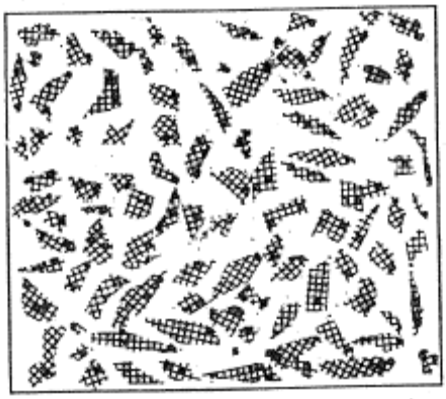

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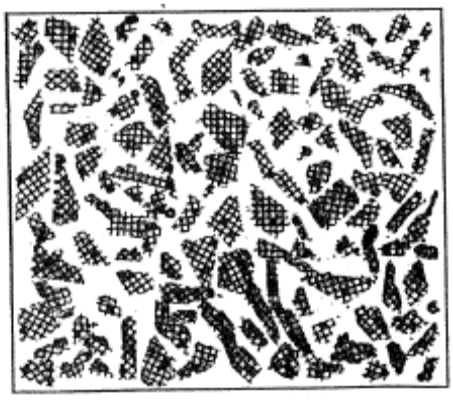

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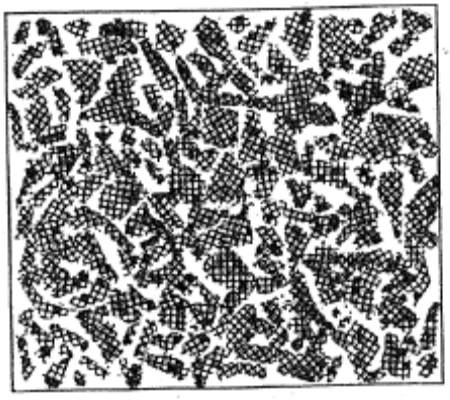

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# H-2 Representative Photographs

## Hellhole Canyon County Preserve Invasive Non-Native Plants Representative Photographs




**Photo 1.** Invasive non-native plant cover, such as grasses and mustard, is present along dirt trails within Hellhole Canyon County Preserve, potentially reducing suitable foraging habitat.



**Photo 2.** Invasive non-native plant cover, such as grasses, is present in Hell Creek within Hellhole Canyon County Preserve, potentially reducing suitable foraging habitat.

**Mount Olympus County Preserve Invasive Non-Native Plants Representative Photograph**



**Photo 3.** Invasive non-native plant cover, such as grasses, are present along dirt trails and areas near abandoned human structures within Mount Olympus County Preserve, potentially reducing suitable foraging habitat.

**Mount Olympus County Preserve Habitat Representative Photograph**



**Photo 4.** A fallen tree is present along trail within Mount Olympus County Preserve, potentially reducing suitable foraging habitat.

## Wilderness Gardens County Preserve Invasive Non-Native Plants Representative Photographs



**Photo 5.** Invasive non-native plant cover, such as grasses, is present near historic buildings within Wilderness Gardens County Preserve, potentially reducing suitable foraging habitat.



**Photo 6.** Invasive non-native plant cover, such as grasses, is present along dirt trails within Wilderness Gardens County Preserve, potentially reducing suitable foraging habitat.



**Photo 7.** Invasive non-native plant cover, such as thistles, is present along dirt trails within Wilderness Gardens County Preserve, potentially reducing suitable foraging habitat.

## Wilderness Gardens County Preserve Invasive Non-Native Animal Representative Photograph

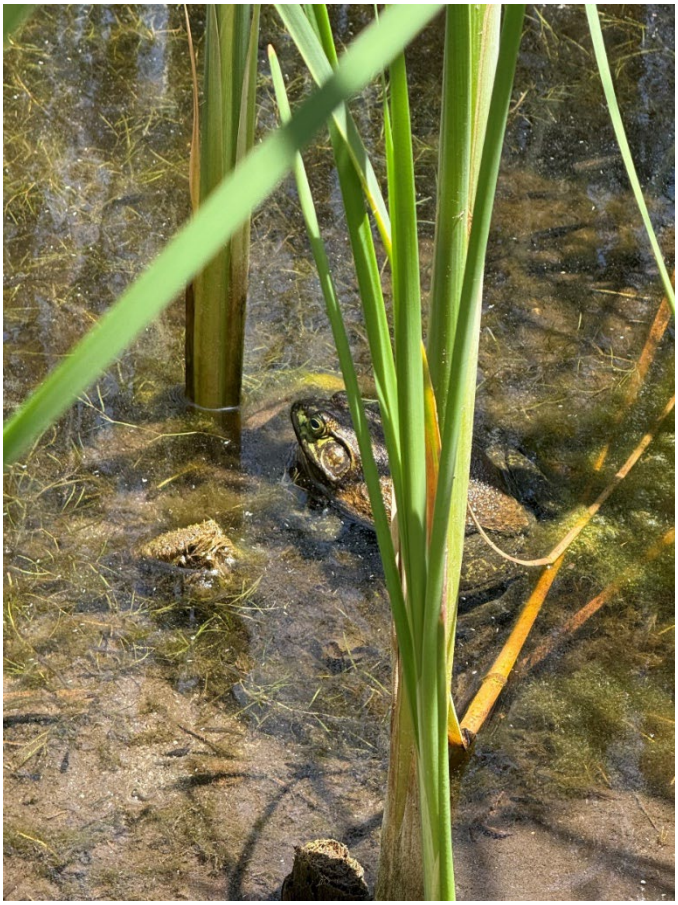

**Photo 8.** Invasive non-native bullfrog is present in pond area within Wilderness Gardens County Preserve, potentially reducing suitable foraging habitat for native bat species, including pallid bats and Townsend's big-eared bats.

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# Appendix I

## Stephens' Kangaroo Rat Habitat Monitoring Memorandums

# I-1 Stephens' Kangaroo Rat Habitat Assessment Memorandum: Hellhole Canyon County Preserve

# FINAL

# FALL 2025 STEPHENS' KANGAROO RAT MONITORING

## HELLHOLE CANYON COUNTY PRESERVE

### VALLEY CENTER, SAN DIEGO COUNTY, CALIFORNIA

***Prepared for:***
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County of San Diego Department of Parks and Recreation
Resource Management Division
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***On Behalf of:***
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Email: alee@esassoc.com

**December 12, 2025**

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**B. FIELD FORMS WITH SITE PHOTOGRAPHS**

## EXECUTIVE SUMMARY

Environmental Science Associates (ESA) was contracted by the County of San Diego (County) Department of Parks and Recreation (DPR) with Blackhawk Environmental, Inc. as a sub-consultant to conduct resource-specific monitoring for the federal- and state-threatened Stephens' kangaroo rat (*Dipodomys stephensi*) (SKR) within the Hellhole Canyon County Preserve (Preserve) during the fall of 2025. Survey methodology followed the Targeted Monitoring Plan (TMP) (ESA 2024a). The monitoring was a habitat assessment of the three plots established during the 2020 live-trapping conducted by ESA and sub-consultant Aardvark Environmental (ESA 2021) and monitored during the fall 2021, 2022, 2023, and 2024 SKR habitat assessments (ESA and Blackhawk Environmental, Inc. 2021, 2022, 2023, 2024) associated with 2021, 2022, 2023, and 2024 TMP resource-specific monitoring (ESA 2022, 2023, 2024b, 2025).

This report summarizes results of the SKR habitat assessment within the Preserve for the fall of 2025. The fall 2025 monitoring was conducted at a similar time of year compared to previous monitoring efforts, but no mowing/weed whipping had occurred, as was the case in 2024. The 2023 monitoring effort was the most recent time any mowing was observed to be conducted. Regardless of this, with significantly below-average rainfall during the previous rainy season, herbaceous vegetation coverage was shown to decrease in two of the three plots and remained the same in the third. During the 2024 monitoring year, there was a greater percentage of annual vegetation standing due to the above-average annual rainfall, compared to the typical dry and largely senesced conditions observed during the 2020 trapping surveys, the fall 2021 and 2022 monitoring efforts, and the mowed/weed whipped conditions present during the 2023 monitoring effort. As a result of low rainfall, monitoring plots in fall 2025 were anticipated to yield higher SKR potential results with lower obstruction factors. However, potential for SKR had no correlation to the change in obstruction factors during 2025, with Plot 1 increasing in potential despite an increase in obstruction factor and Plot 3 decreasing in potential with no change in obstruction factor. These results illustrate that seasonal SKR occupancy can increase or decrease at given sites between monitoring years.

The fall 2025 monitoring results continue to demonstrate a reduction in SKR habitat suitability compared to that of the fall 2020 trapping survey and fall 2021 and 2022 monitoring efforts, all of which saw high potential for SKR in all three plots. The fall 2020 live trapping survey yielded 1 SKR in plot 2 and 17 Dulzura kangaroo rats (*Dipodomys simulans*) spread among all three plots. The three plots are all within 150 feet of one another, and there are no factors that could preclude SKR movement between the three plots. In 2021, 2022, 2023 and 2024, kangaroo rat sign was detected at all three monitoring plots; therefore, all three plots were assumed potentially occupied by SKR. This assumption considered the positive detection of SKR in plot 2 in fall 2020; kangaroo rat sign in all three plots in fall 2021, fall 2022, fall 2023 and fall 2024; and the lack of obstruction factors that would preclude SKR movement between the three proximal plots. In 2025, burrows and scat were observed in all three plots, though potential ratings remain at medium or low for the three plots, compared to high potential ratings in one to three plots in previous years. Kangaroo rat sign was reduced across plots 2 and 3 in 2025 compared with previous years, but increased and recent sign was found only in plot 1. Despite these 2025 findings, long-term SKR population viability on a landscape level within the Preserve is not anticipated to be in any danger of extirpation as currently managed, given that anthropogenic influence is minimal within the monitoring area.

## 1.0 INTRODUCTION

### Purpose and Regulatory Background

As a participant in the Multiple Species Conservation Program (MSCP) and the adopted MSCP South County Subarea Plan, the County of San Diego (County) is obligated to conduct biological monitoring of habitats and species covered under the MSCP to ensure that the MSCP biological conservation goals and conditions for species coverage are being met. The County Department of Parks and Recreation (DPR) prepared the Targeted Monitoring Plan (TMP) to provide detailed specifications for implementation of adaptive management and monitoring within 10 County-owned and managed conserved lands (open space parks and preserves) overseen by DPR (ESA and ICF 2015). The TMP was revised and updated in December 2022 (ESA and ICF 2022) to incorporate 10 additional open space parks and preserves (Preserve Group 2) and again in August 2024 (ESA 2024a) to incorporate 11 additional open space parks and preserves (Preserve Group 3). The revised TMP also confirmed monitoring and management goals and objectives for TMP-covered species at the newly added open space parks and preserves. The TMP is an adaptive management plan that includes both focused goals and objectives for target resources and detailed monitoring protocols and is intended to achieve the management directives for species per the adopted South County MSCP Framework Management Plan. The regional framework that guides monitoring at the preserve level has been refined over time and is still evolving through a collaborative effort among U.S. Fish and Wildlife Service, California Department of Fish and Wildlife, MSCP jurisdictions, and outside experts. Stakeholders (e.g., state and federal resource agencies, municipal and county agencies, land managers) understand that adaptive management is an iterative process in which lessons are learned and used to further refine priorities, goals, objectives, and monitoring methods. The TMP addresses monitoring within the following 31 open space parks and preserves: Barnett Ranch County Preserve, Bottle Peak County Preserve, Boulder Oaks County Preserve, Del Dios Highlands County Preserve, Dictionary Hill County Preserve, El Capitan County Preserve, El Monte County Park, Escondido Creek County Preserve, Furby-North County Preserve, Hellhole Canyon County Preserve, Iron Mountain County Preserve, Keys Creek County Preserve, Lakeside Linkage County Preserve, Lawrence and Barbara Daley County Preserve, Los Peñasquitos Canyon County Preserve, Louis A. Stelzer County Park, Lusardi Creek County Preserve, Mount Olympus County Preserve, Mountain Meadow County Preserve, Oakoasis County Preserve, Peutz Valley County Preserve, Ramona Grasslands County Preserve, Sage Hill County Preserve, San Luis Rey River Park, Santa Margarita County Preserve, Simon County Preserve, Skyline County Preserve, Stoneridge County Preserve, Sycamore Canyon/Goodan Ranch County Preserve, Tijuana River Valley Regional Park, and Wilderness Gardens County Preserve.

### Project Location and Description

Hellhole Canyon County Preserve (Preserve) is located within the draft North County MSCP Plan Area. The Preserve is located northeast of Escondido within Valley Center, an unincorporated community of San Diego County.

The Preserve is in the eastern portion of the unincorporated area of Valley Center (Attachment A, Figure 1). The Preserve is in Township 11 South, Range 1 West, and Range 1 East as depicted on the United States Geological Survey (USGS) 7.5-minute Rodriguez Mountain quadrangle (Attachment A, Figure 2). The Preserve is in northeastern San Diego County in the Peninsular Geomorphic Range and consists of mountain and peak faces of Rodriguez Mountain, rocky hills, unnamed streams, drainages, Hell Creek, and valleys north and east of Paradise Mountain. Elevations range from approximately 457 meters (1,500 feet) above mean sea level within Hell Creek to approximately 1,143 meters (3,750 feet) above mean sea level on the western face of Rodriguez Mountain in the eastern section of the

Preserve. SKR were historically observed within the Sierra Verde Addition of the Preserve. Suitable annual and perennial grassland and open coastal sage scrub habitat for SKR is present within the northeast corner of the Sierra Verde Addition of the Preserve, and SKR and Dulzura kangaroo rat presence were confirmed during baseline trapping surveys conducted in 2020.

## 2.0 METHODS

### SKR Monitoring Area Determination

The SKR monitoring area was originally determined based on the 2020 baseline visual habitat assessment and live-trapping results. Within the Preserve, suitable SKR habitat is confined to the northeastern corner of the Sierra Verde Addition. Potentially suitable SKR habitat (i.e., flat terrain and/or gentle slopes that support low-growing, open habitat) were included within the SKR monitoring area. The current SKR monitoring area focused on open coastal sage scrub and annual and perennial grassland habitats as the only area in the larger Hellhole Canyon County Preserve that provides suitable SKR habitat with connectivity to the high-quality expansive grassland habitat within the adjacent Rancho Guejito property (Attachment A, Figure 3).

### Monitoring Plots

Baseline SKR trapping surveys were conducted in 2020 within the northeastern corner of the Sierra Verde Addition and confirmed SKR presence in one of the three trapping plots (Plot 2). Per the updated TMP (ESA 2024a), the 2025 SKR monitoring effort sampled the same three sampling plots established during 2020 baseline trapping surveys due to the limited size of suitable SKR habitat within the Preserve. In accordance with the TMP, specific monitoring protocols followed an adapted methodology used by USGS for SKR monitoring at Camp Pendleton (Brehme et al. 2016). Monitoring details, including dates, weather conditions, and field personnel are listed in Table 1.

**Table 1. Survey Conditions**

| Biologists | Date | Start/End Time | Start/End Air Temperature (°F) | Start/End Wind Speed (mph) | Start/End Cloud Cover (%) | Precipitation |
|---|---|---|---|---|---|---|
| Kris Alberts<br>Dillon Travis | 09-24-25 | 0920–1110 | 75–79 | 1-4 / 2-6 | 30 / 20 | None |

A cellular ArcGIS Collector application was used to determine the locations of all monitoring plots in the field. Representative photographs were taken from the southeast corner of each plot, facing northwest (Attachment B). The biologists then walked systematic transects through each plot searching for kangaroo rat sign (e.g., burrows, scat, tracks, trails through vegetation, dust-bathing sites) until 100 percent coverage of the plot was achieved. All kangaroo rat sign was recorded on the Survey123 application. Potential presence or absence of SKR within a given plot was determined solely on whether or not kangaroo rat sign was observed within the plot.

Habitat assessment forms on the Survey123 application were also completed for each plot, specifically noting habitat characteristics critical to SKR habitat suitability, including percent bare ground, living herb density, shrub/tree density, percentage of dead plant litter, gopher or ground squirrel density, obstruction factor, types of disturbance, and land use (Attachment B). These assessment variables were modeled after field forms used by Brehme et al. (2016) (adapted from a field form in Montgomery

et al. 2008). Based on the quality of potentially suitable SKR habitat and the density of apparent kangaroo rat sign, each plot was assigned an SKR potential rating using primarily the following criteria:

- High Potential
    - Readily apparent potential SKR sign (particularly scat and burrows)
    - Relatively flat to gently sloping topography
    - Presence of bare ground common
    - Relatively low living herb density
    - Extremely low to no shrub cover
    - Relatively low obstruction factor (O.F.)[1]
- Medium Potential
    - Some potential SKR sign (particularly scat and burrows) observed, but infrequent and/or appearing dated or inactive
    - Gently to moderately sloping topography
    - Presence of bare ground moderate
    - Low shrub percent cover
    - Relatively low herb cover
    - Low to moderate O.F.
- Low Potential
    - Trace to no apparent potential SKR sign
    - Moderately sloping topography
    - Minimal bare ground
    - Moderate to high shrub percent cover
    - Moderate to very high living herb density
    - Moderate to high O.F.
- No Potential
    - No apparent potential SKR sign
    - Moderate to steep sloping topography
    - No bare ground
    - High shrub percent cover
    - High living herb density
    - High O.F

[1] Obstruction factor (O.F.) is the observable ground-level conditions of herbaceous vegetation or dead litter that has the potential to obstruct movement of kangaroo rats across the landscape. High O.F. would consist of a very high density of herb and/or dead litter at the ground level. Low O.F. would consist of a low density of herb or dead litter at the ground level, with a high proportion of patches of bare ground.

## 3.0 RESULTS

A comparison between the overall rating of SKR potential at each plot from the fall 2020 trapping survey to the fall 2021, 2022, 2023, 2024, and 2025 monitoring is included in Table 2; increased or decreased changes for the analyzed elements are provided in the final column of Table 2 comparing fall 2024 to fall 2025 (ESA and Blackhawk Environmental, Inc. 2024). Results of the 2025 SKR habitat assessment for each sample plot are provided in Table 3. In 2025, habitat assessments were conducted at three monitoring plots, and all three were determined to be potentially occupied by SKR (Attachment A, Figure 4). Each plot was rated for SKR potential; two plots were characterized as medium potential and one as low potential. None of the sample plots were found to have high or no potential for SKR.

**Table 2. SKR Habitat Assessment Comparison**

| | | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2024–2025 Change |
|---|---|---|---|---|---|---|---|---|
| **SKR Occupancy** | **Occupied** | 1 | 3* | 3* | 2* | 3* | 3* | 0 |
| | **Unoccupied** | 2 | 0 | 0 | 1 | 0 | 0 | 0 |
| **SKR Potential** | **High** | 3 | 3 | 3 | 1 | 0 | 0 | 0 |
| | **Medium** | 0 | 0 | 0 | 1 | 2 | 2 | 0 |
| | **Low** | 0 | 0 | 0 | 1 | 1 | 1 | 0 |
| | **No** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

*Occupancy status in fall 2025 was determined as "potentially occupied" based on the positive detection of one SKR in plot 2 in fall 2020 live-trapping surveys, as well as positive but scant and/or dated kangaroo rat sign in plots 2 and 3 during fall 2025, while plot 1 exhibited an increase in more recent kangaroo rat sign; the proximity of the two plots (within 150 feet of one another); and no factors that could reasonably be expected to entirely preclude SKR movement between the two plots.

## Table 3. SKR Habitat Assessment Summary

| Fall 2025 | | | | | | | | | | Fall 2024 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Plot ID** | **% Bare Ground** | **Living Herb Density** | **Shrub/Tree Density (%)** | **Plant Litter (Dead) (%)** | **Gopher/ Ground Squirrel Density^** | **Obstruction Factor** | **Potential K-Rat Sign*** | **SKR Occupancy Determination+** | **Rating†** | **Rating†** |
| 1 | 0–5 | Low | 5-25 | 50–75 | High/Low | High | B, S, T | Potentially Occupied | Medium** | Low |
| 2 | 0–5 | Low | 5–25 | 50–75 | Medium/Low | Medium | B, S | Potentially Occupied | Medium** | Medium** |
| 3 | 0–5 | High | 25–50 | 25–50 | Medium/Low | High | B, S | Potentially Occupied | Low** | Medium** |

^ = Active gopher excavation density ratings used; inactive excavation density ratings excluded.
* = Potential kangaroo rat sign: B = Burrow(s); S = Scat; T = Tracks; TD = Tail Drag; TV = Trails in Vegetation; O = Other
** = Exhibited habitat conditions and observed sign indicates plot is likely or potentially occupied by SKR.
† = Estimated potential for SKR occupancy based on habitat community condition and observed kangaroo rat sign.
+ = Occupancy status in fall 2025 was determined as "potentially occupied," as described in the footnote on Table 2.

## 4.0 DISCUSSION

During the 2025 monitoring efforts, SKR sign was observed to have increased in type and abundance in Plot 1 and remained the same in Plot 3, compared to 2024 where abundance had decreased from the previous year. Occupancy potential, when compared to 2024, remained the same for Plot 2 (medium), while Plot 1 increased to medium potential and Plot 3 decreased to low potential. SKR was recorded at only one of the three monitoring plots during the fall 2020 trapping survey but was potentially detected at all three monitoring plots during the fall 2021, 2022, 2023, and 2024 habitat assessments. During the 2025 monitoring efforts, all three plots indicated they were likely potentially occupied by SKR with scat and burrows present at all plots, as well as tracks present at Plot 1 (Table 3).

SKR activity in Plot 1 during the 2025 monitoring effort appeared more recent and abundant compared to the 2024 monitoring efforts, where potential for SKR was detected at each plot, though all sign was minimal, apparently inactive, and/or dated (ESA and Blackhawk Environmental, Inc. 2024). Absent DNA testing, differentiating between SKR and Dulzura kangaroo rat sign in the field is not conclusive in and of itself. There are no obstruction factors that could preclude the possibility of SKR from any of the three sites, especially considering their proximity (within 150 feet of one another). Monitoring results from 2021 and 2022 suggested high potential for SKR in all three plots, whereas in 2023, potential for SKR was high only in Plot 2. In 2024, potential for SKR remained low in Plot 1 and was medium in Plots 2 and 3, and in 2025, SKR potential increased to medium in Plot 1, remained as medium in Plot 2, and decreased to low in Plot 3. These results indicate that seasonal SKR occupancy can increase or decrease at given sites between monitoring years due to variables such as precipitation, survey timing, predation, weather, food availability, competition among sympatric species, microtopographic differences, proximity of groundwater, habitat maintenance activities, and/or availability of natural or artificial water sources that could affect localized plant phenologies, which in turn can affect vegetative density and food availability, etc.

The period between the fall 2024 and fall 2025 monitoring efforts was marked by a significantly below-average rainfall year in Valley Center, following two years of above-average rainfall in the area. Although drought can appear beneficial for SKR suitability because it is likely to decrease vegetation density and height, it ultimately reduces food availability over time and can increase dead plant litter that may increase obstruction factors. The immediate effects of low rainfall were observed during the 2025 monitoring efforts with decreased or unchanged density of standing/living herbs for all three plots, though the overall obstruction factor either remained the same or increased. In an ecological regime that is free of anthropogenic influences such as cattle grazing, low rainfall could serve to increase habitat suitability for SKR by reducing vegetation cover that excludes SKR. However, consistent drought can lead to lower food sources and ultimately decrease suitability for SKR.

During the 2025 monitoring effort, none of the plots were observed to have had any mowing conducted. The 2023 monitoring effort was the most recent time any mowing was observed to be conducted. Regardless of this, with significantly below-average rainfall during the previous rainy season, herbaceous vegetation coverage was shown to decrease in two of the three plots and remained the same in the third. All plots were dominated with low-growing filarees (*Erodium cicutarium*), which facilitates SKR movement and is a potential food source, as well as taller-growing ruderal species, such as short-pod mustard (*Hirschfeldia incana*). Plot 1 increased in obstruction factor compared to 2024, while Plots 2 and 3 remained the same. Plot 2 presented similar findings as previous years, with more open areas primarily vegetated with low-growing filarees and a medium obstruction

factor, compared to Plots 1 and 3 which presented with higher percentages of ruderal species and a high obstruction factor. Potential for SKR had no correlation to the change in obstruction factors during 2025, with Plot 1 increasing in potential (primarily due to the observed increase of recent kangaroo rat sign) despite an increase in obstruction factor and Plot 3 decreasing in potential with no change in obstruction factor.

To enable consistent data comparisons on a year-to-year basis, it is recommended that future monitoring continue to be conducted during the dry season (July through November), following the precedent set by the fall 2020–2024 monitoring efforts. Annual weather patterns within the greater San Diego region are known to have significant variability in rainfall quantities, while generally dry conditions prevail for most of the year. This rainfall variability can cause significant, albeit temporary, changes in herb density, dead plant litter, bare ground, and obstruction factors that tend to be most dramatic when comparing site conditions during the wet season. Dry season monitoring is likely to yield a more consistent comparison of the assessment areas.

## 5.0 SURVEYOR CERTIFICATION

All data, statements, analyses, findings, and attachments within this report are accurate and truthful in terms of describing the existing conditions and the project as proposed to Blackhawk Environmental, Inc.

Kris Alberts
Principal Biologist

## 6.0 REFERENCES

Brehme, C. S., D. R. Clark, and R. N. Fisher

2016 *Stephens' Kangaroo Rat Monitoring on MCB Camp Pendleton, Results and Trends Analyses for Fall-Winter 2014*. Prepared for Wildlife Management Branch, AC/S Environmental Security, Marine Corps Base Camp Pendleton. 52pp.

ESA

2021 Baseline Biodiversity Survey Report for the Hellhole Canyon Preserve Additions. Prepared for the County of San Diego Department of Parks and Recreation. January 2021.

2022 Targeted Monitoring Plan Resource-Specific Monitoring 2021 Annual Report. Prepared for the County of San Diego Department of Parks and Recreation. May 2022.

2023 Targeted Monitoring Plan Resource-Specific Monitoring 2022 Annual Report. Prepared for the County of San Diego Department of Parks and Recreation. January 2023.

2024a Final Targeted Monitoring Plan. Prepared for the County of San Diego Department of Parks and Recreation. August 2024.

2024b Targeted Monitoring Plan Resource-Specific Monitoring & Management 2023 Annual Report. Prepared for the County of San Diego Department of Parks and Recreation. March 2024.

ESA and Blackhawk Environmental, Inc.

2021 Fall 2021 Stephens' Kangaroo Rat Monitoring, Hellhole Canyon County Preserve, Valley Center, San Diego County, California. Prepared for the County of San Diego Department of Parks and Recreation. November 1, 2021.

2022 Fall 2022 Stephens' Kangaroo Rat Monitoring, Hellhole Canyon County Preserve, Valley Center, San Diego County, California. Prepared for the County of San Diego Department of Parks and Recreation. December 22, 2022.

2023 Fall 2023 Stephens' Kangaroo Rat Monitoring, Hellhole Canyon County Preserve, Valley Center, San Diego County, California. Prepared for the County of San Diego Department of Parks and Recreation. December 5, 2023.

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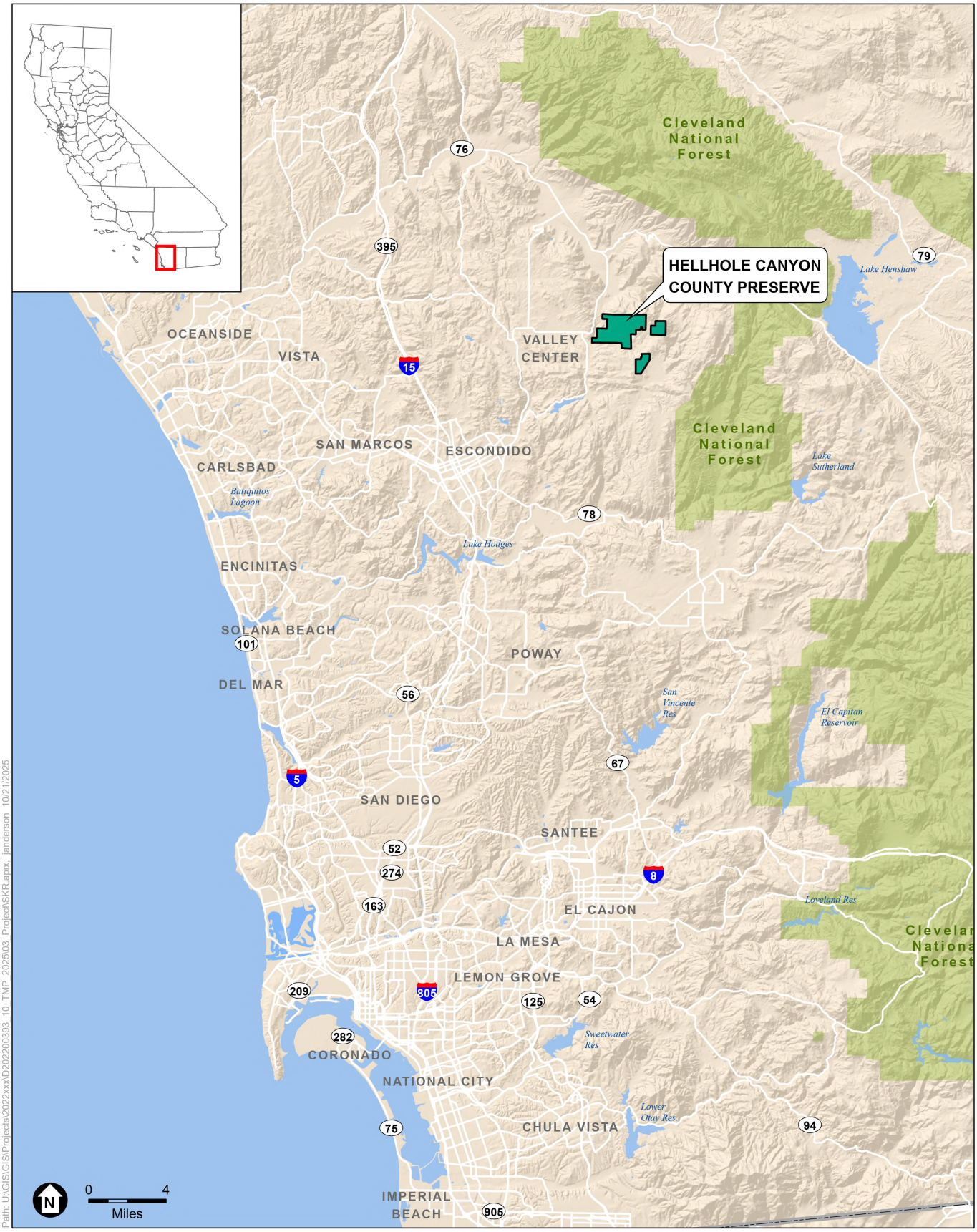
2015 Comprehensive Monitoring Plan (now referred to as the "Targeted Monitoring Plan." Prepared for the County of San Diego Department of Parks and Recreation. July 2015.

2022 Targeted Monitoring Plan Update. Prepared for the County of San Diego Department of Parks and Recreation. December 2022.

Montgomery, S. J., D. J. Grout, C. M. Wolf, V. M. Shoblock, A. Davenport, and R. N. Knight

2008 *Stephens' kangaroo rat monitoring program, and results of annual monitoring sessions between spring 2002 and fall 2004, at Naval Weapons Station Seal Beach Detachment Fallbrook*. Unpublished report submitted by SJM Biological Consultants to the Environmental Programs and Services Office, Naval Weapons Station Seal Beach Detachment Fallbrook, Fallbrook, CA.

# ATTACHMENT A
# FIGURES

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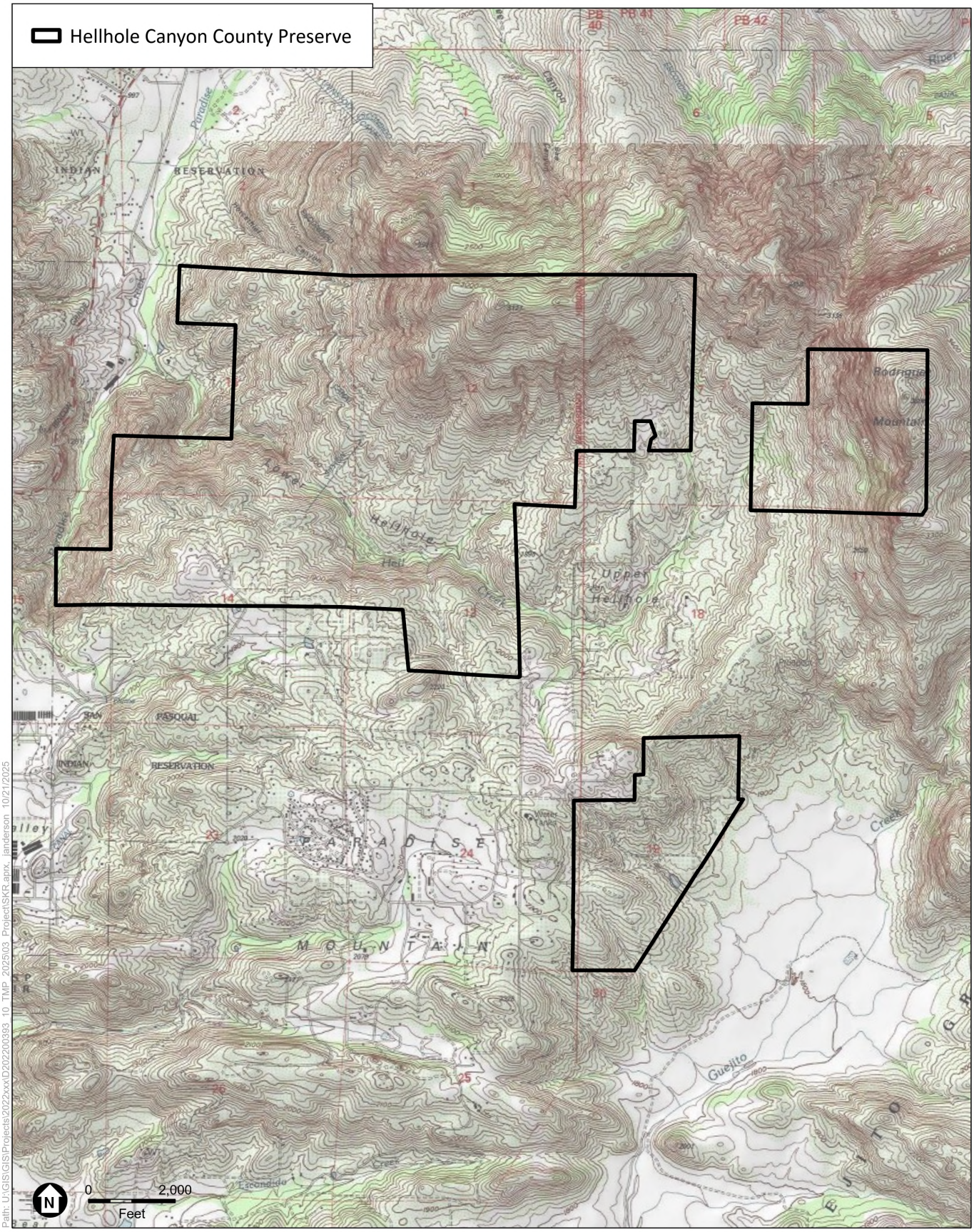
SOURCE: ESRI; SanGIS, 2025

COSD DPR 569744 TO 10 – Implementation of Targeted Monitoring Plan – 2025 Resource-Specific Monitoring
*Fall 2025 SKR Habitat Monitoring Memorandum – Hellhole Canyon County Preserve*

**Figure 1**
Regional Location

ESA



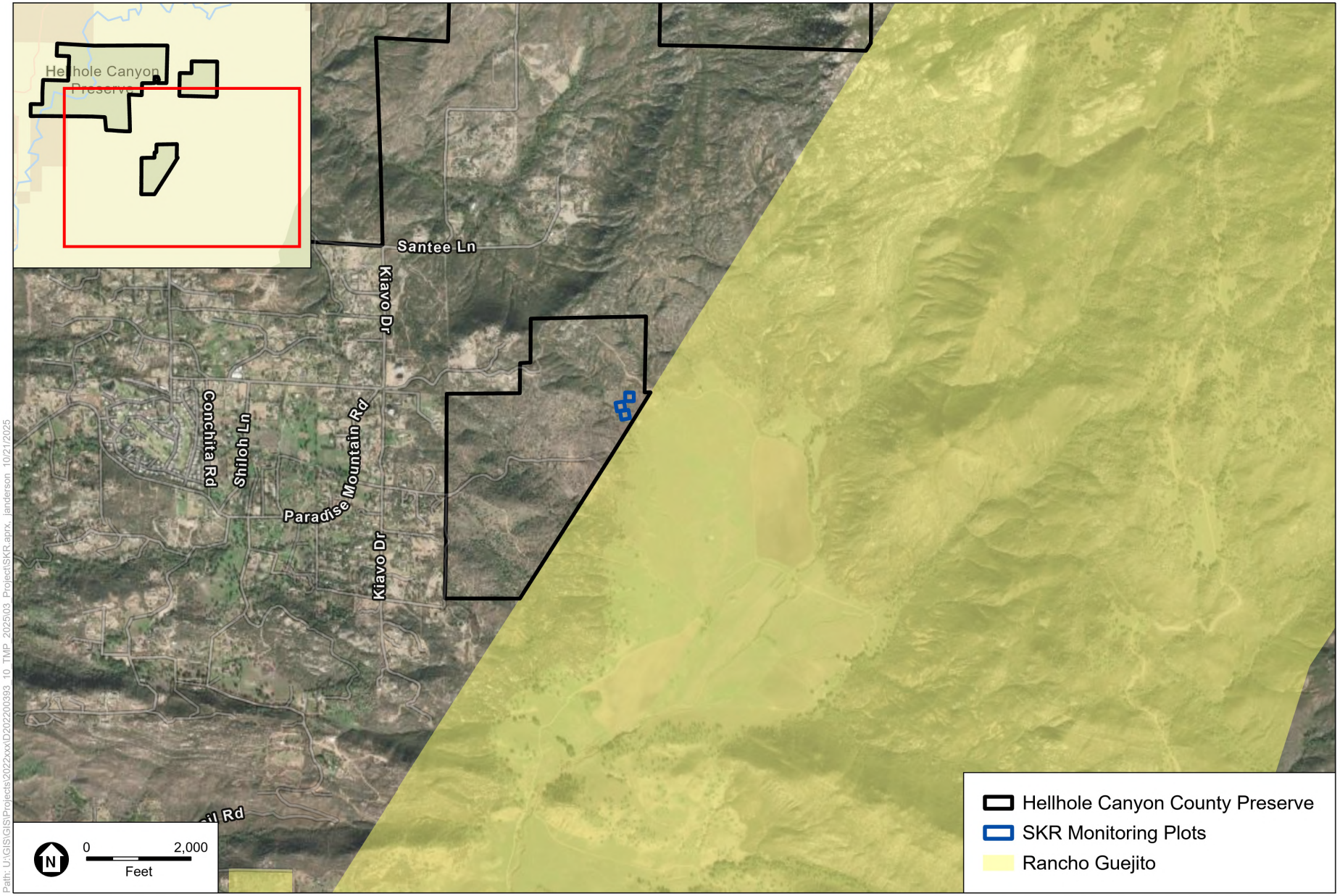

Path: U:\GIS\GIS\Projects\2022xxx\D202200393_10_TMP_2025\03_Project\SKR.aprx, janderson 10/21/2025

SOURCE: USGS 7.5 minute,
Rodriguez Mountain quadrangle

COSD DPR 569744 TO 10 – Implementation of Targeted Monitoring Plan –
2025 Resource-Specific Monitoring
*Fall 2025 SKR Habitat Monitoring Memorandum – Hellhole Canyon County Preserve*

**Figure 2**
Project Location

ESA




Path: U:\GIS\GIS\Projects\2022xxx\D2022000393_10_TMP_2025\03_Project\SKR.aprx, janderson 10/21/2025

SOURCE: ESRI, 2022; SanGIS, 2025

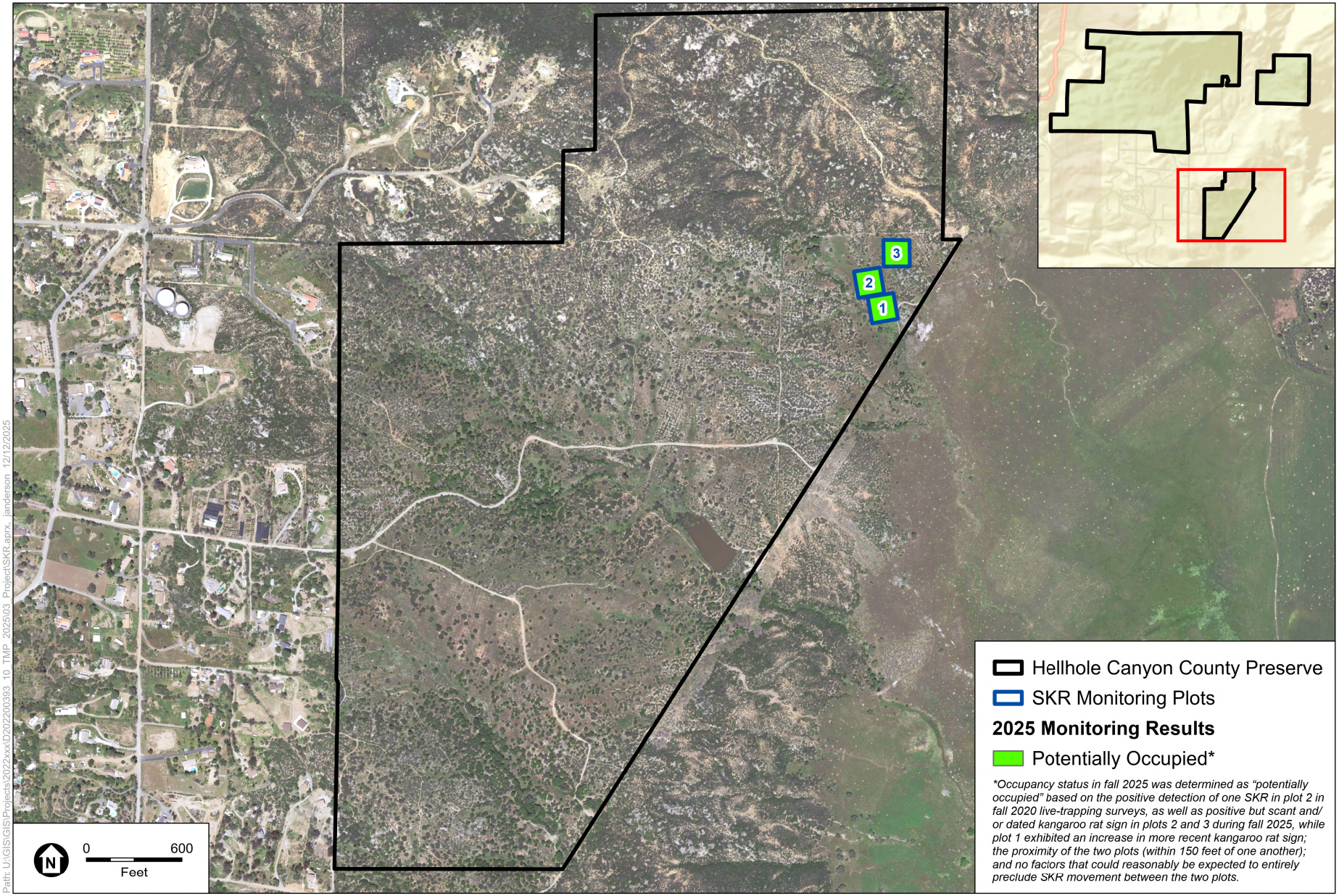
COSD DPR 569744 TO 10 – Implementation of Targeted Monitoring Plan – 2025 Resource-Specific Monitoring

*Fall 2025 SKR Habitat Monitoring Memorandum – Hellhole Canyon County Preserve*

**Figure 3**

SKR Monitoring Area

ESA




SOURCE: NAIP, 2020; SanGIS, 2024; ESA, 2025.

COSD DPR 569744 TO 10 – Implementation of Targeted Monitoring Plan – 2025 Resource-Specific Monitoring

*Fall 2025 SKR Habitat Monitoring Memorandum – Hellhole Canyon County Preserve*

**Figure 4**

2025 SKR Monitoring Results

ESA

# ATTACHMENT B
# FIELD FORMS WITH SITE PHOTOGRAPHS

# SKR Monitoring – Habitat Assessment Form

**Plot Number:** 1 **Date/ Time:** 09/24/2025 10:56

**Grazing Management Unit:** NA **SKR Management Area:** None

**Digital Photographs taken @ SE Corner of Plot?** ☑ Yes ☐ No

**Observer(s):** DT KA

**Trapping needed to confirm SKR vs DKR?** ☑ Yes ☐ No

**Overall SKR Potential:** ☐ High ☑ Medium ☐ Low ☐ None

**Comments:** Obstruction factor high, more KR burrows than last year

## Plot Habitat Descriptors

**Describe current land use:** ☐ Grazing ☑ Open Space ☐ Other

**Soil Surface Hardness:** ☐ Hard ☑ Medium ☐ Soft

**Living/Standing Herb Density:** ☐ High ☐ Medium ☑ Low

**Bare Ground:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75%

**Plant Litter (dead):** ☐ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☑ 50-75%

**Forb Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75%

**Grass Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75%

**Shrub Cover:** ☐ 0 ☐ 0-5% ☑ 5-25% ☐ 25-50% ☐ 50-75%

**Forbs - List 3 Dominant Species:** Hirschfeldia incana, Erodium cicutarium, Croton setiger

**Grasses - List 3 Dominant Species:** Bromus diandrus, Bromus rubens, Bromus hordaceous

**Shrubs - List 3 Dominant Species:** Eriogonum fasciculatum, Baccharis salicifolia

**Trees - Dominant Species:** Quercus agrifolia

**Abundance of ACTIVE Gopher Excavations:** ☑ High ☐ Medium ☐ Low

**Abundance of INACTIVE Gopher Excavations:** ☑ High ☐ Medium ☐ Low

**Abundance of ground squirrel burrows:** ☐ High ☐ Medium ☑ Low

**Substrate Disturbance:** ☐ None ☐ Grazing ☐ Grading ☐ Discing ☐ Furrows

Grazing - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Grading - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Discing- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Furrows- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Mowing – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☑ Older

Dirt Road – Estimate When? ☑ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Paved Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Other? Describe: Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

**Potential Kangaroo Rat Sign?** ☑ Scat ☑ Burrow(s) ☑ Tracks ☐ Tail Drag ☐ Caching/foraging craters

Other(Describe):

| | |
|---|---|
| **Date:** September 24, 2025 10:56 AM | **Preserve:** Hellhole Canyon Preserve |
| **Plot:** 1 | **Observers:** DT KA |







# SKR Monitoring – Habitat Assessment Form

**Plot Number:** 2 **Date/ Time:** 09/24/2025 11:00

**Grazing Management Unit:** NA **SKR Management Area:** None

**Digital Photographs taken @ SE Corner of Plot?** ☑ Yes ☐ No

**Observer(s):** DT KA

**Trapping needed to confirm SKR vs DKR?** ☑ Yes ☐ No

**Overall SKR Potential:** ☐ High ☑ Medium ☐ Low ☐ None

**Comments:** Obstruction factor medium

## Plot Habitat Descriptors

**Describe current land use:** ☐ Grazing ☑ Open Space ☐ Other

**Soil Surface Hardness:** ☐ Hard ☑ Medium ☐ Soft

**Living/Standing Herb Density:** ☐ High ☐ Medium ☑ Low

**Bare Ground:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75%

**Plant Litter (dead):** ☐ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☑ 50-75%

**Forb Cover:** ☐ 0 ☐ 0-5% ☑ 5-25% ☐ 25-50% ☐ 50-75%

**Grass Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75%

**Shrub Cover:** ☐ 0 ☐ 0-5% ☑ 5-25% ☐ 25-50% ☐ 50-75%

**Forbs - List 3 Dominant Species:** Hirschfeldia incana, Erodium cicutarium, Centaurea melitensis

**Grasses - List 3 Dominant Species:** Bromus hordaceous, Bromus diandrus

**Shrubs - List 3 Dominant Species:** Eriogonum fasciculatum, Gutierrezia californica

**Trees - Dominant Species:**

**Abundance of ACTIVE Gopher Excavations:** ☐ High ☑ Medium ☐ Low

**Abundance of INACTIVE Gopher Excavations:** ☐ High ☑ Medium ☐ Low

**Abundance of ground squirrel burrows:** ☐ High ☐ Medium ☑ Low

**Substrate Disturbance:** ☐ None ☐ Grazing ☐ Grading ☐ Discing ☐ Furrows

Grazing - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Grading - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Discing- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Furrows- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Mowing – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☑ Older

Dirt Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Paved Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Other? Describe: Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

**Potential Kangaroo Rat Sign?** ☑ Scat ☑ Burrow(s) ☐ Tracks ☐ Tail Drag ☐ Caching/foraging craters

Other(Describe):

| | |
|---|---|
| **Date:** September 24, 2025 11:00 AM | **Preserve:** Hellhole Canyon Preserve |
| **Plot:** 2 | **Observers:** DT KA |







# SKR Monitoring – Habitat Assessment Form

**Plot Number:** 3 **Date/ Time:** 09/24/2025 11:04

**Grazing Management Unit:** NA **SKR Management Area:** None

**Digital Photographs taken @ SE Corner of Plot?** ☑ Yes ☐ No

**Observer(s):** DT KA

**Trapping needed to confirm SKR vs DKR?** ☑ Yes ☐ No

**Overall SKR Potential:** ☐ High ☐ Medium ☑ Low ☐ None

**Comments:** High obstruction factor, more shrubs this year

## Plot Habitat Descriptors

**Describe current land use:** ☐ Grazing ☑ Open Space ☐ Other

**Soil Surface Hardness:** ☐ Hard ☑ Medium ☐ Soft

**Living/Standing Herb Density:** ☑ High ☐ Medium ☐ Low

**Bare Ground:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75%

**Plant Litter (dead):** ☐ 0 ☐ 0-5% ☐ 5-25% ☑ 25-50% ☐ 50-75%

**Forb Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75%

**Grass Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75%

**Shrub Cover:** ☐ 0 ☐ 0-5% ☐ 5-25% ☑ 25-50% ☐ 50-75%

**Forbs - List 3 Dominant Species:** Hirschfeldia incana, Centaurea melitensis, Erodium cicutarium

**Grasses - List 3 Dominant Species:** Bromus hordaceous, Bromus diandrus

**Shrubs - List 3 Dominant Species:** Eriogonum fasciculatum, Gutierrezia californica

**Trees - Dominant Species:** Quercus agrifolia, Quercus engelmannii, Citrus tree

**Abundance of ACTIVE Gopher Excavations:** ☐ High ☑ Medium ☐ Low

**Abundance of INACTIVE Gopher Excavations:** ☐ High ☑ Medium ☐ Low

**Abundance of ground squirrel burrows:** ☐ High ☐ Medium ☑ Low

**Substrate Disturbance:** ☐ None ☐ Grazing ☐ Grading ☐ Discing ☐ Furrows

Grazing - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Grading - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Discing- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Furrows- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Mowing – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☑ Older

Dirt Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Paved Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Other? Describe: Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

**Potential Kangaroo Rat Sign?** ☑ Scat ☑ Burrow(s) ☐ Tracks ☐ Tail Drag ☐ Caching/foraging craters

Other(Describe):

| | |
|---|---|
| **Date:** September 24, 2025 11:04 AM | **Preserve:** Hellhole Canyon Preserve |
| **Plot:** 3 | **Observers:** DT KA |







# I-2 Stephens' Kangaroo Rat Habitat Assessment Memorandum: Ramona Grasslands County Preserve

# FINAL

# FALL 2025 STEPHENS' KANGAROO RAT MONITORING

## RAMONA GRASSLANDS COUNTY PRESERVE

### RAMONA, SAN DIEGO COUNTY, CALIFORNIA

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**December 9, 2025**

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## EXECUTIVE SUMMARY

Environmental Science Associates (ESA) was contracted by the County of San Diego (County) Department of Parks and Recreation (DPR) with Blackhawk Environmental, Inc. as a sub-consultant to conduct resource-specific monitoring for the federal- and state-threatened Stephens' kangaroo rat (*Dipodomys stephensi*) (SKR) within the Ramona Grasslands County Preserve (Preserve) during the fall of 2025. Survey methodology followed the Targeted Monitoring Plan (ESA 2024). The monitoring was a habitat assessment of (1) the 16 permanent monitoring plots, established during the 2016 SKR monitoring effort (ICF 2017), and (2) 12 randomly selected monitoring plots, including 6 within the SKR monitoring area and 6 within the SKR discovery area.

This report summarizes results of the SKR habitat assessment within the Preserve for the fall of 2025. Monitoring results this year showed an overall increase in SKR potential and occupancy compared to fall 2024, likely due to the decrease in annual rainfall observed in the San Diego area between 2024 and 2025. In turn, this year's monitoring effort observed less vegetation coverage and less obstruction factors compared to the previous year. During the fall 2023 and fall 2024 monitoring efforts, the San Diego area had observed above-average rainfall, which showed a continued increase in annual vegetation living/standing compared to the typical dry and largely senesced conditions observed during fall 2022, fall 2021, and winter 2017–2018, which followed some of the worst drought years in recorded California history. Comparatively, the winter 2019 monitoring occurred during a period when abundant, green, and freshly growing annual vegetation was present following recent, above-average rainfall. While above-average rainfall can result in greater food sources, it can also increase vegetation coverage and obstruction factors. With below-average rainfall observed between fall 2024 and 2025, the 2025 monitoring effort resulted in less living/standing herbaceous coverage, less dead plant litter, and less obstruction factors, in turn increasing SKR potential. In addition to rainfall, grazing and other substrate disturbances can affect SKR habitat suitability. During the fall of 2025 monitoring efforts, recent grazing within the past 3 to 6 months was largely correlated to lower vegetation coverage and lower obstruction factors. Furthermore, 11 of the 12 monitoring plots that observed recent grazing had medium or high SKR potential.

Overall, the fall 2025 monitoring results demonstrated an increase in occupancy compared to 2024, along with a notable increase in SKR habitat suitability. While there was only a slight increase in the number of high-potential monitoring plots in 2025 compared to the previous year, there was a significant increase in the number of medium-potential monitoring plots and subsequently a significant decrease in low-potential monitoring plots. This indicates that conditions were more favorable for SKR in 2024 to 2025, likely due to less annual rainfall observed between 2024 and 2025 in the greater San Diego area. These findings could also be due to a combination of other factors, such as annual fluctuations in habitat characteristics, grazing regimes, SKR population dynamics, different timings of monitoring, and other variables that may affect SKR occupancy/suitability of a given monitoring plot at a given time. With occupancy numbers appearing potentially higher than previous years, long-term SKR population viability on a landscape level within the Preserve is not expected to have decreased, and SKR is not anticipated to be in any danger of extirpation as currently managed.

## 1.0 INTRODUCTION

### Purpose and Regulatory Background

As a participant in the Multiple Species Conservation Program (MSCP) and the adopted MSCP South County Subarea Plan, the County of San Diego (County) is obligated to conduct biological monitoring of habitats and species covered under the MSCP to ensure that the MSCP biological conservation goals and conditions for species coverage are being met. The County Department of Parks and Recreation (DPR) prepared the Targeted Monitoring Plan (TMP) to provide detailed specifications for implementation of adaptive management and monitoring within 10 County-owned and -managed conserved lands (open space parks and preserves) overseen by DPR (ESA and ICF 2015). The TMP was revised in December 2022 (ESA and ICF 2022) to incorporate 10 additional open space parks and preserves (Preserve Group 2) and again in August 2024 (ESA 2024) to incorporate 11 additional open space parks and preserves (Preserve Group 3). The revised TMP also confirmed monitoring and management goals and objectives for TMP-covered species at the newly added open space parks and preserves. The TMP is an adaptive management plan that includes both focused goals and objectives for target resources and detailed monitoring protocols and is intended to achieve the management directives for species per the adopted South County MSCP Framework Management Plan. The regional framework that guides monitoring at the preserve level has been refined over time and is still evolving through a collaborative effort among U.S. Fish and Wildlife Service, California Department of Fish and Wildlife, MSCP jurisdictions, and outside experts. Stakeholders (e.g., state and federal resource agencies, municipal and county agencies, land managers) understand that adaptive management is an iterative process in which lessons are learned and used to further refine priorities, goals, objectives, and monitoring methods. The TMP addresses monitoring within the following 31 open space parks and preserves: Barnett Ranch County Preserve, Bottle Peak County Preserve, Boulder Oaks County Preserve, Del Dios Highlands County Preserve, Dictionary Hill County Preserve, El Capitan County Preserve, El Monte County Park, Escondido Creek County Preserve, Furby-North County Preserve, Hellhole Canyon County Preserve, Iron Mountain County Preserve, Keys Creek County Preserve, Lakeside Linkage County Preserve, Lawrence and Barbara Daley County Preserve, Los Peñasquitos Canyon County Preserve, Louis A. Stelzer County Park, Lusardi Creek County Preserve, Mount Olympus County Preserve, Mountain Meadow County Preserve, Oakoasis County Preserve, Peutz Valley County Preserve, Ramona Grasslands County Preserve, Sage Hill County Preserve, San Luis Rey River Park, Santa Margarita County Preserve, Simon County Preserve, Skyline County Preserve, Stoneridge County Preserve, Sycamore Canyon/Goodan Ranch County Preserve, Tijuana River Valley Regional Park, and Wilderness Gardens County Preserve.

### Project Location and Description

Ramona Grasslands County Preserve (Preserve) is located within both the MSCP South County Subarea Plan Area and the draft North County MSCP Plan Area. The Preserve is in the Santa Maria Valley west of the unincorporated community of Ramona, San Diego County, California.

Ramona Grasslands County Preserve is in part of the historic Santa Maria Rancho in the western portion of the Santa Maria Valley, approximately 2 miles west of downtown Ramona, California, and 6 miles east of Interstate 15 (Attachment A, Figure 1). The Preserve is in Township 13 South, Range 1 East, and Range 1 West as depicted on the United States Geological Survey (USGS) 7.5-minute *San Pasqual, California* quadrangle (Attachment A, Figure 2). The Preserve is within the Santa Maria Valley, consisting of a broad basin surrounded by gentle hills and steep, rocky slopes ranging in elevation from approximately 410 meters (1,350 feet) above mean sea level along the valley floor to over 518 meters (1,700 feet) above mean sea level in the rocky hills of the northern sections of the Preserve.

Historic use of the Preserve has consisted of cattle grazing and other anthropogenic uses. The site contains a network of dirt roads and trails used primarily for ranch access as well as DPR maintenance purposes. Cattle grazing is generally confined to lowland areas within the Preserve and occurs year-round without formalized rotation or rest periods. Stocking rates are established on an annual basis, primarily based on weather and forage conditions.

The northwest portion of the Preserve, west of Rangeland Road and generally north of the Ramona Municipal Water District (RMWD) property, is characterized by rocky hills bisected by Bandy Canyon, through which the Santa Maria Creek flows. The southwest portion of the Preserve consists of rolling hills with rocky outcrops and areas of oak woodland that transition into the lower topography grasslands to the south. The northeast portion of the Preserve, east of Rangeland Road and north of Ramona Airport, is characterized by rocky chaparral-covered hillsides in the north and lower-lying valley grasslands in the south. The southeast portion of the Preserve, east of Rangeland Road and south of the Ramona Airport, consists of low, rolling hills supporting grasslands and rocky outcrops.

RMWD utilizes land west of Rangeland Road for storage and infiltration of treated sewage effluent. Treated effluent is piped from a treatment facility to two storage reservoirs that exist on the property. Treated effluent is disposed of on RMWD property and on ranchland east of Rangeland Road through infiltration in a series of spray fields. The irrigated spray fields are an important year-round source of green forage for cattle grazing. The RMWD property is located west and east of Rangeland Road and is bordered by the Preserve to the north, south, and west.

The Ramona Airport is east of Rangeland Road and borders the Preserve to the north and south. Low-density residential areas are present to the north of the Preserve (accessible by Rangeland Road), adjacent to the Preserve's southern boundary, and along much of the Preserve's western and eastern boundary. Other areas around the periphery of the Preserve are used for dry farming and small citrus and avocado orchards.

## 2.0 METHODS

### SKR Monitoring Area Determination

SKR monitoring areas were originally determined based on potentially suitable SKR habitat. Within the Preserve, specific management areas have been developed by DPR and are referred to as Grazing Management Units (i.e., 1A, 1B, 1C, 2A, 2B, 3A, 3B, 3C, 3D, 3E, 4A, 4B, 4C, and 5) and SKR Management Areas (i.e., 1, 2, and 3). Grazing Management Units that provide potentially suitable SKR habitat (i.e., flat terrain and/or gentle slopes that support open, low-growing grasslands) were included within the SKR monitoring area; however, only portions of the associated Grazing Management Units are within SKR Management Areas. The current SKR monitoring areas are focused on Grazing Management Units 1A, 1C, 2A (which contains a portion of SKR Management Area 1), 2B (which contains portions of SKR Management Area 1 and all of Management Area 2), 3A, 3B (which contains SKR Management Area 3), 3C, 3D, 3E, and 4A, as these areas provide suitable SKR habitat (Attachment A, Figure 3). Additional SKR discovery areas are located within Grazing Management Units 3B and 4C. It is important to note that Grazing Management Unit 3A is not located within an SKR Management Area, but it is included in the monitoring based on previously determined SKR habitat suitability.

### Monitoring Plots

Monitoring plots were initially established within SKR core habitat areas on the Preserve in 2016, following an adapted methodology used by USGS for SKR monitoring at Camp Pendleton (Brehme et al. 2016). A 50-meter by 50-meter grid pattern was overlain onto a georeferenced aerial map over

each of the core SKR monitoring areas, and 28 monitoring plots were established. Of these 28 monitoring plots, 16 were determined to be permanent monitoring plots that have been monitored since 2016: A1-1 to A1-6, A2-1, A2-6, A2-7, A3-1 to A3-3, 3A-1, 3A-6, 3A-7, and 3A-8Per the TMP (ESA 2024), the 2025 SKR monitoring sampled these 16 permanent monitoring plots for consistency with previous monitoring, and 12 randomly selected monitoring plots—6 within the SKR monitoring area and 6 within the SKR discovery area—for a total of 28 monitoring plots. Monitoring details, including dates, weather conditions, and personnel are shown in Table 1.

**Table 1. Survey Conditions**

| Biologist(s) | Date | Start/End Time | Start/End Air Temperature (°F) | Start/End Wind Speed (mph) | Start/End Cloud Cover (%) | Precipitation |
|---|---|---|---|---|---|---|
| Kris Alberts<br>Dillon Travis | 09-22-25 | 0830–1520 | 66–81 | 0-2 / 1-3 | 20 / 10 | None |
| Kris Alberts<br>Dillon Travis | 09-23-25 | 0825–1315 | 62–82 | 0–2 / 2–6 | 40 / 25 | None |

All monitoring plots were located in the field using the cellular ArcGIS FieldMaps application. Representative photographs were taken from the southeast corner of each monitoring plot, facing northwest (Attachment B). The biologists then walked systematic transects through each monitoring plot, searching for kangaroo rat sign (e.g., burrows, scat, tracks, trails through vegetation, dust-bathing sites) until 100 percent coverage of the monitoring plot was achieved. All kangaroo rat sign was recorded on the Survey123 application. Presence or absence of SKR within a given monitoring plot was determined solely on whether or not kangaroo rat sign was observed within the monitoring plot.

Habitat assessment forms on the Survey123 application were also completed for each monitoring plot, specifically noting habitat characteristics critical to SKR habitat suitability, including percent bare ground, living herb density, shrub/tree density, percentage of dead plant litter, gopher or ground squirrel density, obstruction factor, types of disturbance and land use (Attachment B). These assessment variables were modeled after field forms used by Brehme et al. (2016) (adapted from a field form in Montgomery et al. 2008). Based on the quality of potentially suitable SKR habitat and the density of apparent kangaroo rat sign, each monitoring plot was assigned an SKR potential rating using primarily the following criteria:

- High Potential
    - Readily apparent potential SKR sign (particularly scat and burrows)
    - Relatively flat to gently sloping topography
    - Presence of bare ground common
    - Relatively low living herb density
    - Extremely low to no shrub cover
    - Relatively low obstruction factor (O.F.)[1]

[1] Obstruction factor (O.F.) is the observable ground-level conditions of herbaceous vegetation or dead litter that has the potential to obstruct movement of kangaroo rats across the landscape. High O.F. would consist of a very high density of herb and/or dead litter at the ground level. Low O.F. would consist of a low density of herb or dead litter at the ground level, with a high proportion of patches of bare ground.

- Medium Potential
  - Some potential SKR sign (particularly scat and burrows) observed, but infrequent and/or appearing dated or inactive
  - Gently to moderately sloping topography
  - Presence of bare ground moderate
  - Low shrub percent cover
  - Relatively low herb cover
  - Low to moderate O.F.
- Low Potential
  - Trace to no apparent potential SKR sign
  - Moderately sloping topography
  - Minimal bare ground
  - Moderate to high shrub percent cover
  - Moderate to very high living herb density
  - Moderate to high O.F.
- No Potential
  - No apparent potential SKR sign
  - Moderate to steep sloping topography
  - No bare ground
  - High shrub percent cover
  - High living herb density
  - High O.F.

## 3.0 RESULTS

A comparison between the overall rating of SKR potential at each monitoring plot from the winter of 2017–2018 (ICF 2018), winter of 2019 (ESA and Blackhawk Environmental, Inc. 2019), fall of 2021 (ESA and Blackhawk Environmental, Inc. 2021), fall of 2022 (ESA and Blackhawk Environmental, Inc. 2022), fall of 2023 (ESA and Blackhawk Environmental, Inc. 2023), fall of 2024 (ESA and Blackhawk Environmental, Inc. 2024), and fall of 2025 is included in Table 2. Increased or decreased changes for the analyzed elements are provided in the final column of Table 2 comparing the fall 2024 and fall 2025 results only. Results of the 2025 SKR habitat assessment for each monitoring plot are provided in Table 3. In 2025, habitat assessments were conducted at 28 monitoring plots; 13 were determined to be potentially or likely occupied by SKR, and 15 were determined to be unoccupied. Each monitoring plot was rated for SKR potential, and, in total, 11 monitoring plots were characterized as having a high potential, 9 were characterized as having a medium potential, 7 were characterized as having low potential, and one was characterized as having no potential (Attachment A, Figure 4).

**Table 2. SKR Habitat Assessment Comparison**

| | | Winter 2017–2018 | Winter 2019 | Fall 2021 | Fall 2022 | Fall 2023 | Fall 2024 | Fall 2025 | 2024–2025 Change |
|---|---|---|---|---|---|---|---|---|---|
| **SKR Occupancy** | **Occupied** | 14 | 19 | 14 | 15 | 14 | 10 | 13 | +3 |
| | **Unoccupied** | 14 | 9 | 14 | 13 | 14 | 18 | 15 | -3 |
| **SKR Potential** | **High** | 11 | 21 | 17 | 15 | 8 | 10 | 11 | +1 |
| | **Medium** | 5 | 1 | 5 | 7 | 10 | 1 | 9 | +8 |
| | **Low** | 7 | 6 | 6 | 5 | 10 | 17 | 7 | -10 |
| | **No** | 5 | 0 | 0 | 1 | 0 | 0 | 1 | +1 |

## Table 3. SKR Habitat Assessment Summary

| Fall 2025 | | | | | | | | | | Fall 2024 |
|---|---|---|---|---|---|---|---|---|---|---|
| Plot ID | % Bare Ground | Living Herb Density | Shrub/Tree Density (%) | Plant Litter (Dead) (%) | Gopher/ Ground Squirrel Density^ | Obstruction Factor | Potential K-Rat Sign* | SKR Occupancy Determination | Rating† | Rating† |
| **A1-1** | **0–5** | **Low** | **0** | **50–75** | **Medium/High** | **Low** | **B#** | **Not Occupied** | **High** | **Low** |
| **A1-2** | **0** | **High** | **0** | **25–50** | **Low/Low** | **High** | **None** | **Not Occupied** | **None** | **Low** |
| **A1-3** | **5–25** | **Low** | **0** | **50–75** | **Low/Medium** | **Low** | **None** | **Not Occupied** | **High** | **High** |
| **A1-4** | **0–5** | **High** | **0–5** | **50–75** | **Medium/Medium** | **High** | **None** | **Not Occupied** | **Low** | **Low** |
| **A1-5** | **0–5** | **Medium** | **0–5** | **50–75** | **High/Low** | **Medium** | **None** | **Not Occupied** | **Low** | **Low** |
| **A1-6** | **5–25** | **Low** | **0–5** | **50-75** | **Medium/Low** | **Medium** | **None** | **Not Occupied** | **Medium** | **Low** |
| **A2-1** | **5–25** | **Low** | **0–5** | **50–75** | **Low/High** | **Low** | **B, S** | **Occupied** | **High**** | **High**** |
| **A2-6** | **5–25** | **Medium** | **0–5** | **50–75** | **Low/High** | **Low** | **B, S** | **Occupied** | **High**** | **High**** |
| **A2-7** | **5–25** | **Medium** | **0–5** | **75–95** | **High/Medium** | **Low-Med** | **B, S** | **Occupied** | **High**** | **High**** |
| **A3-1** | **50–75** | **Low** | **0** | **25–50** | **Low/Medium** | **Low** | **B, S** | **Occupied** | **High**** | **High**** |
| **A3-2** | **50–75** | **Low** | **0** | **25–50** | **Low/Medium** | **Low** | **B, S, T** | **Occupied** | **High**** | **High**** |
| **A3-3** | **25–50** | **Low** | **0** | **25–50** | **Low/Medium** | **Low** | **B, S** | **Occupied** | **High**** | **High**** |
| 2A-1 | 5–25 | Low | 0–5 | 50–75 | Medium/Low | Low | B, S | Occupied | Medium** | Low |
| 2A-2 | 0–5 | Low | 0–5 | 50–75 | High/Low | Low-Med | None | Not Occupied | Medium | N/A |
| 2A-3 | 0–5 | Low | 0 | 50–75 | High/Medium | Low-Med | None | Not Occupied | Medium | N/A |
| 2B-1 | 5–25 | Medium | 5–25 | 75–95 | Low/Medium | Low | B, S, CF | Occupied | High** | Medium |
| 2B-2 | 0–5 | Medium | 25–50 | 50–75 | High/Medium | Low-Med | B, S | Occupied | Medium** | Low |
| **3A-1** | **0–5** | **Medium** | **0** | **25–50** | **Medium/Low** | **High** | **None** | **Not Occupied** | **Low** | **Low** |
| **3A-6** | **0–5** | **Medium** | **0–5** | **50–75** | **Medium/Low** | **Med-Low** | **None** | **Not Occupied** | **Medium** | **Low** |
| **3A-7** | **0–5** | **Medium** | **0** | **25–50** | **High/Low** | **High** | **None** | **Not Occupied** | **Low** | **Low** |
| **3A-8** | **0–5** | **Low** | **0** | **50–75** | **Medium/Medium** | **Medium** | **None** | **Not Occupied** | **Medium** | **Low** |
| 3A-9 | 0–5 | Low | 0–5 | 50–75 | High/Low | Med-High | None | Not Occupied | Low | N/A |
| 3B-1 | 0–5 | Medium | 0–5 | 50–75 | Low/Low | High | None | Not Occupied | Low | High** |
| 3B-2 | 0–5 | Medium | 0–5 | 50–75 | Low/Medium | Low-Med | B, S | Occupied | High** | High** |
| 3B-3 | 0–5 | Low | 0–5 | 50–75 | Medium/Low | Low-Med | None | Not Occupied | Medium | High** |
| 3B-4 | 5–25 | Low | 0–5 | 50–75 | Low/Medium | Low | B, S | Occupied | High | N/A |
| 3C-1 | 0–5 | Medium | 0–5 | 50–75 | Low/Low | High | S | Occupied | Low** | Low |
| 3C-2 | 0–5 | Low | 5–25 | 50–75 | Medium/Low | Low | B, S | Occupied | Medium** | Low |

^= Active gopher excavation density ratings used; inactive excavations excluded.
* = Potential Kangaroo Rat Sign: B = Burrow(s); S = Scat; T = Tracks; TD = Tail Drag; TV = Trails in Vegetation; CF = Caching/Foraging Craters; O = Other
** = Exhibited habitat conditions and observed sign indicates monitoring plot is likely occupied by SKR.
† = Estimated potential for SKR occupancy based on habitat community condition and observed kangaroo rat sign.
# = Potential kangaroo rat burrow – not definite.
**bold** = permanent monitoring plot
N/A = Monitoring plot not surveyed in 2024

## 4.0 DISCUSSION

Overall occupancy showed an increase in occupied monitoring plots from 10 in fall 2024 to 13 in fall 2025, which is more on-par with monitoring results from winter 2017–2018 and fall 2021 through fall 2023 that resulted in 14 or 15 occupied monitoring plots (Table 2). Fall 2019 monitoring resulted in the highest occupancy at 19 occupied monitoring plots. The fall 2025 monitoring effort also resulted in 11 monitoring plots with high potential for SKR, compared to 10 monitoring plots in fall 2024, 8 monitoring plots in 2023, 15 monitoring plots in fall 2022, 17 monitoring plots in fall 2021, 21 monitoring plots in fall 2019, and 11 monitoring plots in winter 2017–2018 (Table 2). In addition to this slight increase in the number of high-potential monitoring plots in 2025 compared to the previous year, there was also a significant increase in the number of medium-potential monitoring plots, from one plot in 2024 to nine plots in 2025. The seven low-potential monitoring plots in 2025 are more similar to results from 2017–2022 monitoring efforts which had between five to seven low-potential monitoring plots, a significant decrease from the 17 monitoring plots in 2024 and 10 monitoring plots in 2023 (Table 2). One monitoring plot was categorized as no potential in 2025 (where rating is "none"), while the only other years with no-potential monitoring plots were fall 2022 (1 plot) and winter 2017–2018 (5 plots). When assessing only the 16 permanent monitoring plots, fall 2025 resulted in eight monitoring plots with high SKR potential, three monitoring plots with medium potential, four monitoring plots with low potential, and zero monitoring plots with no potential (Table 3). Comparatively, fall 2024 resulted in seven permanent monitoring plots with high SKR potential, no permanent monitoring plots with medium potential, nine permanent monitoring plots with low potential, and zero permanent monitoring plots with no potential. These results indicate similar findings as the whole 28 monitoring plots, with an increase in high- and medium-potential monitoring plots, and a decrease in the number of low-potential monitoring plots in 2025 compared to 2024.

The results, when considered collectively, indicate slight shifts in overall SKR suitability that can increase or decrease at given sites between monitoring years due to certain variables. Various factors that can affect suitability include randomized assignment of non-permanent monitoring plots that varies between survey years, annual grazing practices, precipitation, survey timing, predation, weather, food availability, competition among sympatric species, microtopographic differences, proximity of groundwater, and/or availability of natural or artificial water sources that could affect localized plant phenologies, which in turn can affect vegetative density and food availability, etc.

The findings of fall 2025 monitoring efforts showed an overall increase in SKR potential and occupancy, which is a change from the two previous monitoring efforts. This increase may be partly attributed to the decrease in the average rainfall observed in the greater San Diego region in 2025, compared to the above-average rainfall between fall 2022 and fall 2024. An increase in overall rainfall can be beneficial for SKR suitability in that it can increase food availability; however, significant increases in rainfall are likely to increase vegetation density and height, which may increase obstruction factors and lower SKR potential, as observed during the fall 2023 and 2024 monitoring efforts. With lower rainfall between fall 2024 and 2025, overall vegetation coverage, particularly standing/living herbaceous coverage and dead plant litter, largely decreased compared to the two previous years. Consequently, 12 of the 28 monitoring plots decreased in obstruction factors while only three monitoring plots increased in obstruction factors. In turn, eight monitoring plots increased in their potential for SKR while only three monitoring plots decreased in their potential. In an ecological regime that is free of anthropogenic influences such as cattle grazing, below-average rainfall could result in an increase of suitable habitat for SKR by reducing vegetation cover that excludes SKR. Long term drought, however, can ultimately have a negative impact on SKR suitability by lowering the availability of food sources.

In addition to rainfall, grazing and other substrate disturbance can impact SKR habitat suitability. Active grazing occurs in most of the SKR monitoring areas, thereby helping to reduce significant vegetative growth. During the fall 2025 monitoring efforts, recent grazing within the past 3 to 6 months was largely correlated to lower vegetation coverage and lower obstruction factors. Of the 12 monitoring plots that experienced recent grazing, five increased in SKR potential, 4 remained the same and 3 were not monitored the year prior; none of the monitoring plots decreased in potential. Furthermore, all except one of the 12 monitoring plots had a potential rating of high or medium. The previous year's monitoring results did not find that grazing directly correlated to higher SKR potential, indicating there are several factors that can influence overall habitat suitability.

The majority of the annual vegetation present in the high- or medium-potential SKR monitoring plots consisted of red stemmed filaree (*Erodium cicutarium*), western ragweed (*Ambrosia psilostachya*), short-pod mustard (*Hirschfeldia incana*), and Menzies' goldenbush (*Isocoma menziesii*). Annual vegetation in the low-potential areas was composed of similar species, as well as curly dock (*Rumex crispus*). Dense annual grasses were also observed in several low-potential monitoring plots, which can preclude or reduce SKR movement.

To enable consistent data comparisons on a year-to-year basis, it is recommended that future monitoring continue to be conducted during the dry season (June through November). Annual weather patterns in the greater San Diego region are known to have significant variability in rainfall quantities, while generally dry conditions prevail for the majority of the year. This rainfall variability can cause significant, albeit temporary, changes in herb density, dead plant litter, bare ground, and obstruction factors that tend to be most dramatic when comparing site conditions during the wet season. Dry season monitoring is likely to yield a more consistent comparison of the assessment areas.

## 5.0 SURVEYOR CERTIFICATION

All data, statements, analyses, findings, and attachments within this report are accurate and truthful in terms of describing the existing conditions and the Project as proposed to Blackhawk Environmental, Inc.

Kris Alberts
Principal Biologist

## 6.0 REFERENCES

Brehme, C. S., D. R. Clark, and R. N. Fisher

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ESA and Blackhawk Environmental, Inc.

2019 Winter 2019 Stephens' Kangaroo Rat Monitoring, Ramona Grasslands Preserve, Ramona, San Diego County, California. Report dated April 16, 2019.

2021 Fall 2021 Stephens' Kangaroo Rat Monitoring, Ramona Grasslands County Preserve, Ramona, San Diego County, California. Prepared for the County of San Diego Department of Parks and Recreation. November 1, 2021.

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ICF

2017 2016 Stephens' Kangaroo Rat Monitoring at the Ramona Grasslands Preserve, Ramona, San Diego County, California. Prepared for the County of San Diego Department of Parks and Recreation.

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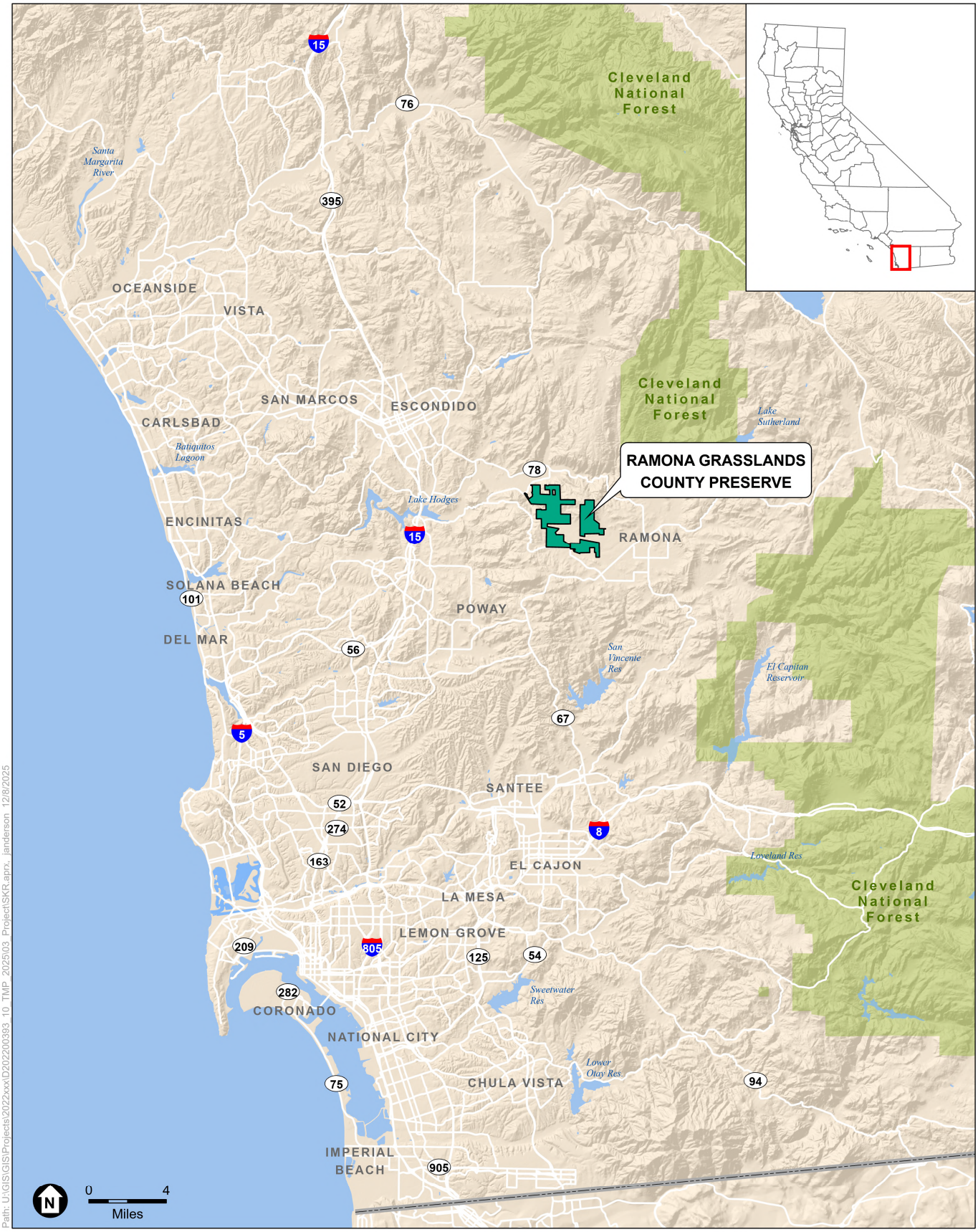
# ATTACHMENT A
# FIGURES

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SOURCE: ESRI; SanGIS, 2025

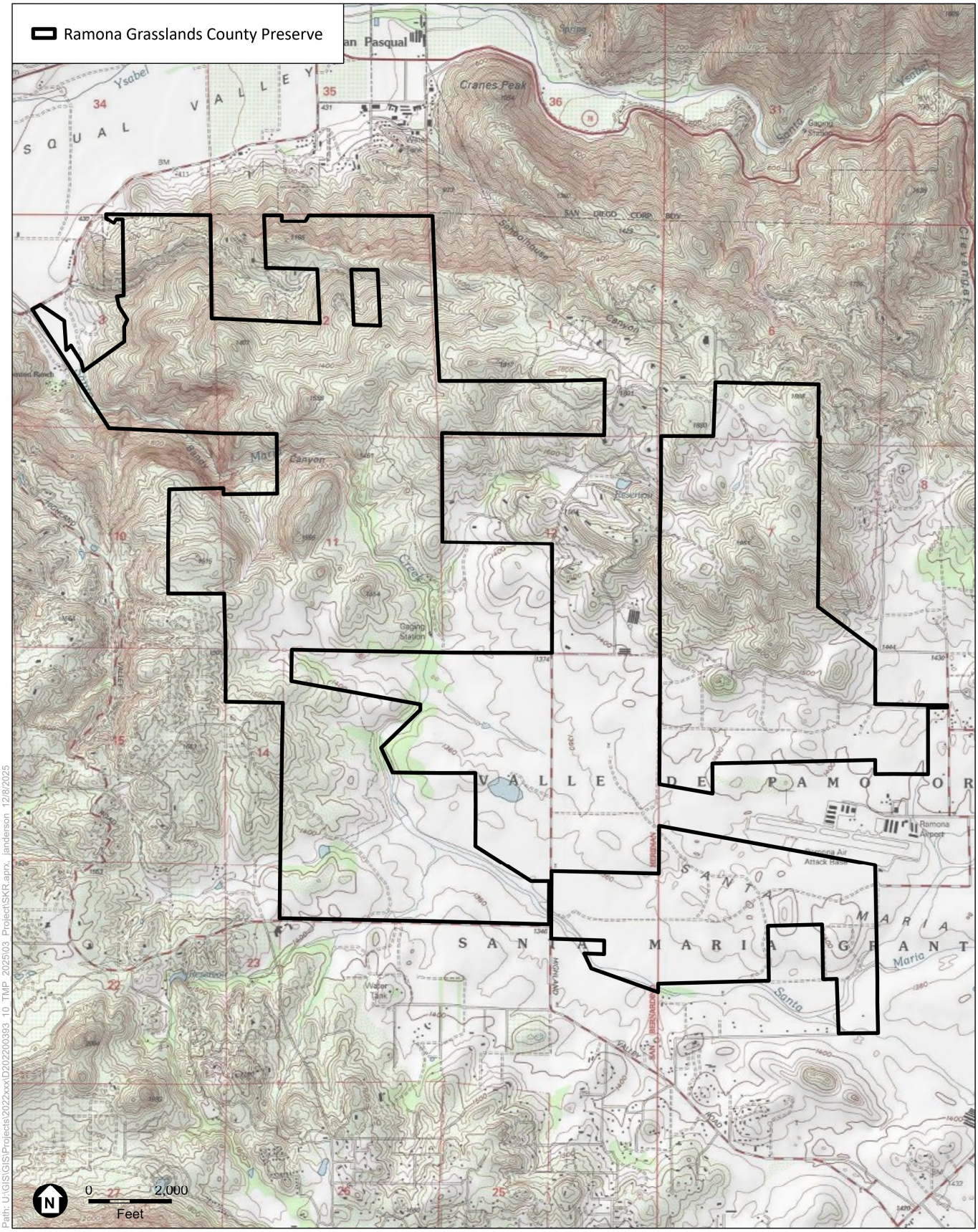
COSD DPR 569744 TO 10 – Implementation of Targeted Monitoring Plan – 2025 Resource-Specific Monitoring

*Fall 2025 SKR Habitat Monitoring Memorandum – Ramona Grasslands County Preserve*

**Figure 1**

Regional Location

ESA




SOURCE: USGS 7.5 minute, San Pasqual quadrangle

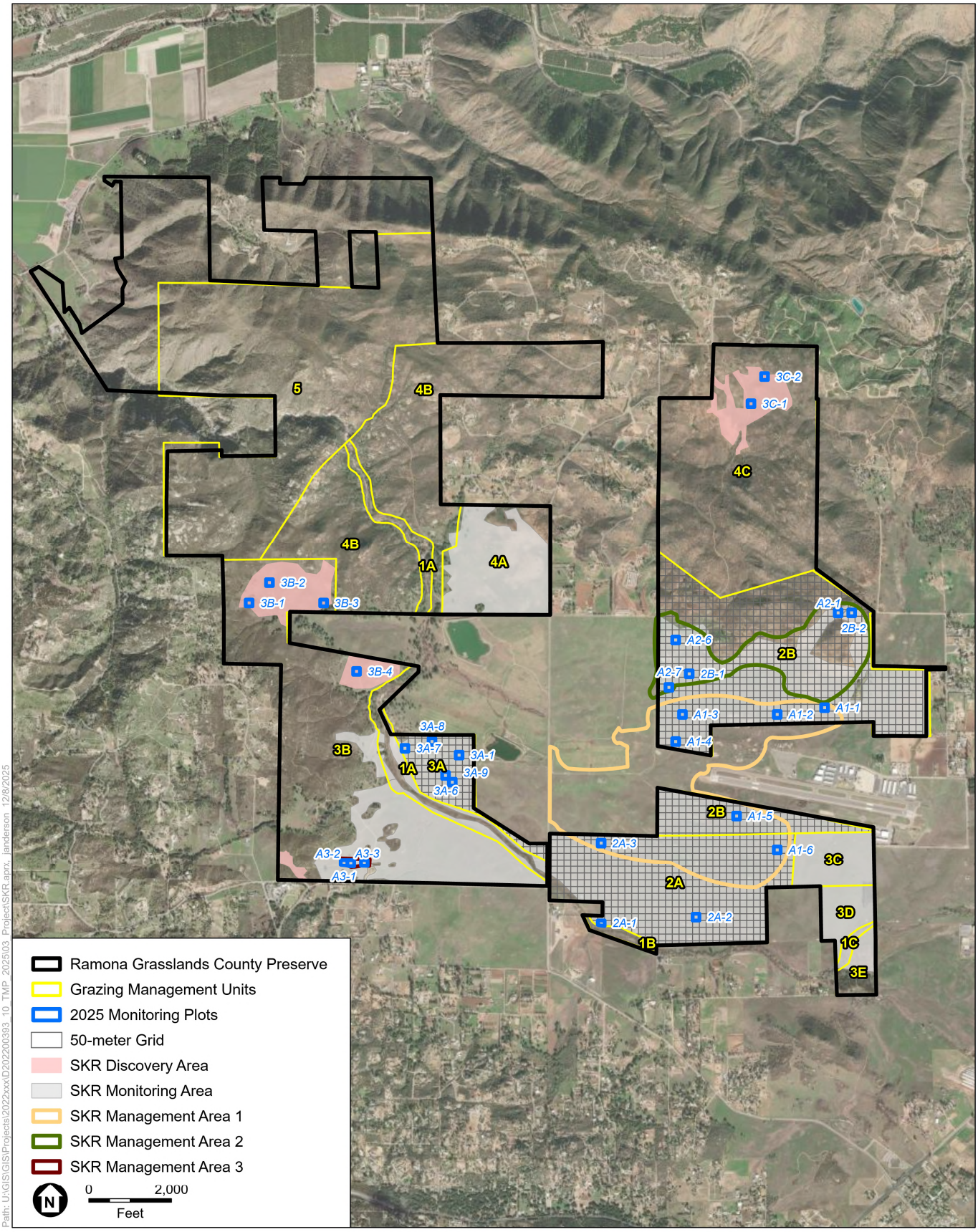
COSD DPR 569744 TO 10 – Implementation of Targeted Monitoring Plan – 2025 Resource-Specific Monitoring

*Fall 2025 SKR Habitat Monitoring Memorandum – Ramona Grasslands County Preserve*

**Figure 2**

Project Location

ESA



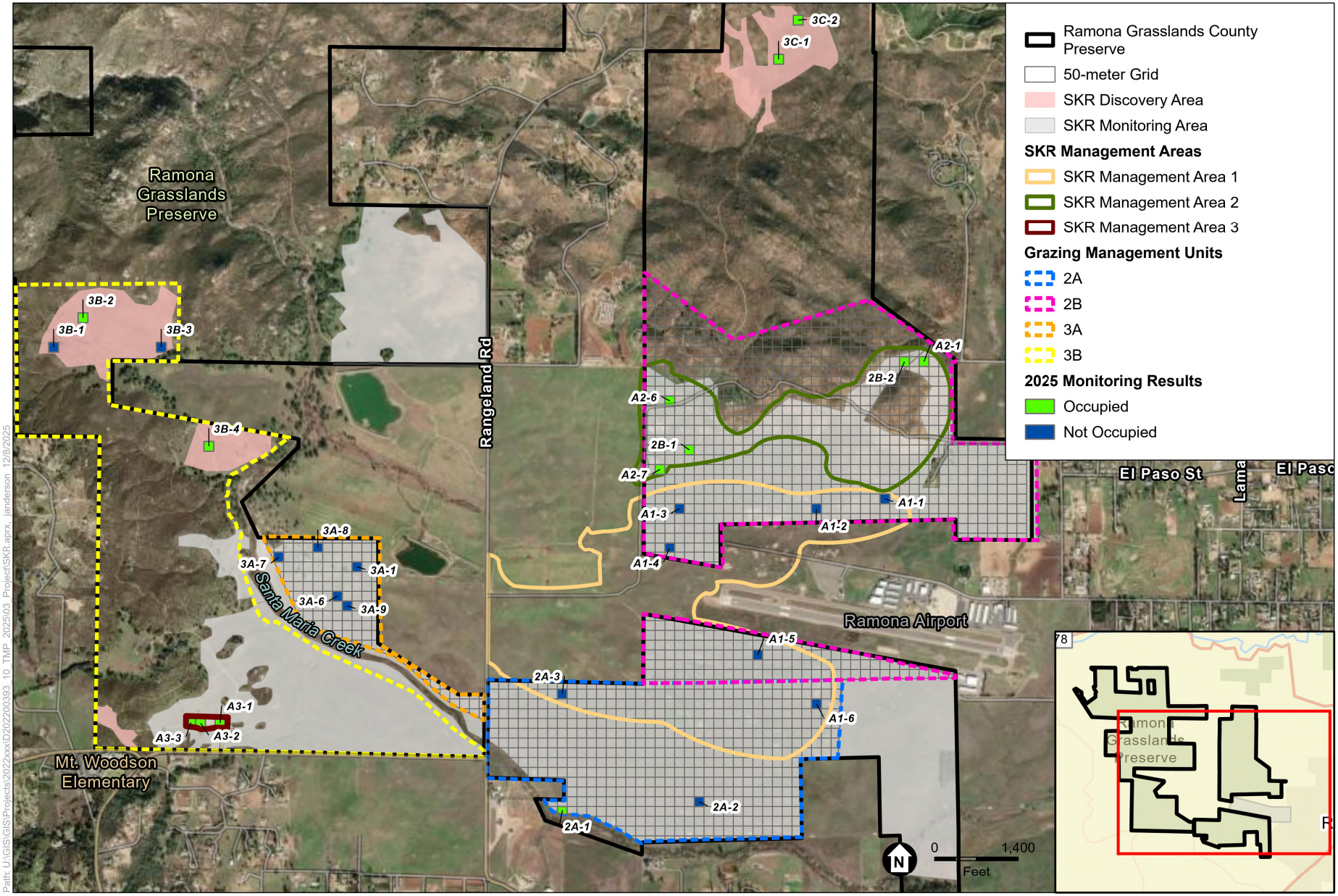

Path: U:\GIS\GIS\Projects\2022xxx\D2022000393_10_TMP_2025\03_Project\SKR.aprx, janderson 12/8/2025

SOURCE: ESRI, 2025

COSD DPR 569744 TO 10 – Implementation of Targeted Monitoring Plan – 2025 Resource-Specific Monitoring
*Fall 2025 SKR Habitat Monitoring Memorandum – Ramona Grasslands County Preserve*

**Figure 3**
SKR Monitoring and Management Areas

ESA




SOURCE: ESRI; ESA, 2025

COSD DPR 569744 TO 10 – Implementation of Targeted Monitoring Plan – 2025 Resource-Specific Monitoring

*Fall 2025 SKR Habitat Monitoring Memorandum – Ramona Grasslands County Preserve*

**Figure 4**

2025 SKR Monitoring Results

ESA

# ATTACHMENT B
# FIELD FORMS WITH SITE PHOTOGRAPHS

# SKR Monitoring – Habitat Assessment Form

**Plot Number:** 2A-1 **Date/ Time:** 09/22/2025 13:10

**Grazing Management Unit:** 2A **SKR Management Area:** None

**Digital Photographs taken @ SE Corner of Plot?** ☑ Yes ☐ No

**Observer(s):** DT KA

**Trapping needed to confirm SKR vs DKR?** ☑ Yes ☐ No

**Overall SKR Potential:** ☐ High ☑ Medium ☐ Low ☐ None

**Comments:** Low obstruction factor, mowing occurring near pipe line

## Plot Habitat Descriptors

**Describe current land use:** ☑ Grazing ☐ Open Space ☐ Other

**Soil Surface Hardness:** ☐ Hard ☐ Medium ☑ Soft

**Living/Standing Herb Density:** ☐ High ☐ Medium ☑ Low

**Bare Ground:** ☐ 0 ☐ 0-5% ☑ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Plant Litter (dead):** ☐ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☑ 50-75% ☐ 75-95%

**Forb Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Grass Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Shrub Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Forbs - List 3 Dominant Species:** Herschfeldia incana, Croton setiger, Ambrosia psilostachya

**Grasses - List 3 Dominant Species:** Distichilis spicata, Bromus diandrus, Avena barbata

**Shrubs - List 3 Dominant Species:** Gutierrezia californica

**Trees - Dominant Species:**

**Abundance of ACTIVE Gopher Excavations:** ☐ High ☑ Medium ☐ Low

**Abundance of INACTIVE Gopher Excavations:** ☑ High ☐ Medium ☐ Low

**Abundance of ground squirrel burrows:** ☐ High ☐ Medium ☑ Low

**Substrate Disturbance:** ☐ None ☑ Grazing ☐ Grading ☐ Discing ☐ Furrows

Grazing - Estimate When? ☑ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Grading - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Discing- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Furrows- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Mowing – Estimate When? ☐ past 3 months ☑ past 6 months ☐ past 12 months ☐ Older

Dirt Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

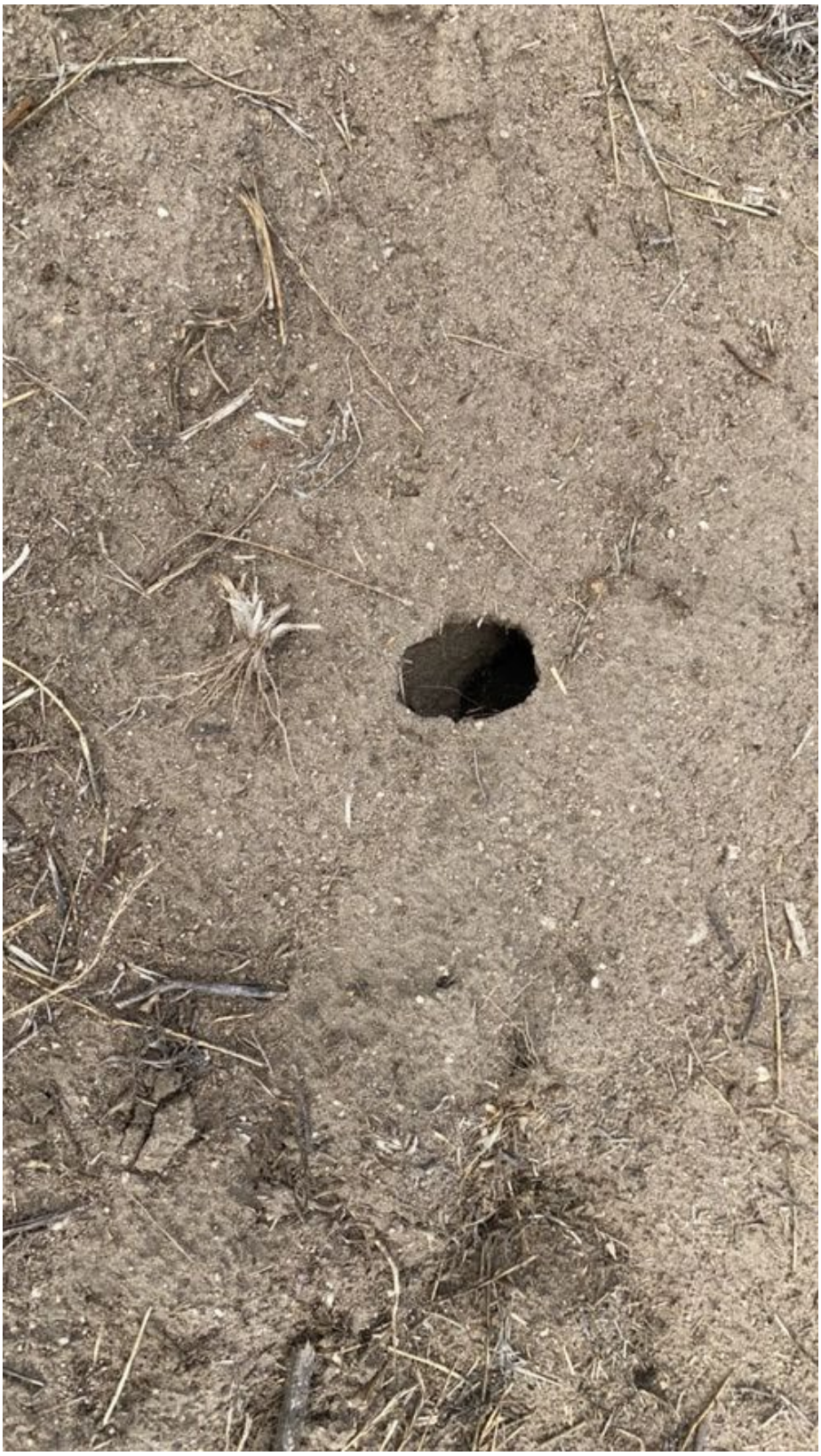
Paved Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Other? Describe: Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

| | |
|---|---|
| **Date:** September 22, 2025 1:10 PM | **Preserve:** Ramona Grasslands Preserve |
| **Plot:** 2A-1 | **Observers:** DT KA |

**Potential Kangaroo Rat Sign?** ☑ Scat ☑ Burrow(s) ☐ Tracks ☐ Tail Drag ☐ Caching/foraging craters
Other(Describe):







# SKR Monitoring – Habitat Assessment Form

**Plot Number:** 2A-2 **Date/ Time:** 09/22/2025 13:50

**Grazing Management Unit:** 2A **SKR Management Area:** None

**Digital Photographs taken @ SE Corner of Plot?** ☑ Yes ☐ No

**Observer(s):** DT KA

**Trapping needed to confirm SKR vs DKR?** ☐ Yes ☑ No

**Overall SKR Potential:** ☐ High ☑ Medium ☐ Low ☐ None

**Comments:** Low to moderate obstruction factor, no SKR sign

## Plot Habitat Descriptors

**Describe current land use:** ☑ Grazing ☐ Open Space ☐ Other

**Soil Surface Hardness:** ☐ Hard ☑ Medium ☐ Soft

**Living/Standing Herb Density:** ☐ High ☐ Medium ☑ Low

**Bare Ground:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Plant Litter (dead):** ☐ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☑ 50-75% ☐ 75-95%

**Forb Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Grass Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Shrub Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Forbs - List 3 Dominant Species:** Ambrosia psilostachya, Rumex crispus, Erodium cicutarium

**Grasses - List 3 Dominant Species:** Distichilis spicata, Avena barbata, Bromus diandrus

**Shrubs - List 3 Dominant Species:** Isocoma menzesii

**Trees - Dominant Species:**

**Abundance of ACTIVE Gopher Excavations:** ☑ High ☐ Medium ☐ Low

**Abundance of INACTIVE Gopher Excavations:** ☐ High ☑ Medium ☐ Low

**Abundance of ground squirrel burrows:** ☐ High ☐ Medium ☑ Low

**Substrate Disturbance:** ☐ None ☑ Grazing ☐ Grading ☐ Discing ☐ Furrows

Grazing - Estimate When? ☑ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Grading - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Discing- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Furrows- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Mowing – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Dirt Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Paved Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Other? Describe: Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

| | |
|---|---|
| **Date:** September 22, 2025 1:50 PM | **Preserve:** Ramona Grasslands Preserve |
| **Plot:** 2A-2 | **Observers:** DT KA |

**Potential Kangaroo Rat Sign?** ☐ Scat ☐ Burrow(s) ☐ Tracks ☐ Tail Drag ☐ Caching/foraging craters
Other(Describe):



# SKR Monitoring – Habitat Assessment Form

**Plot Number:** 2A-3 **Date/ Time:** 09/22/2025 13:28

**Grazing Management Unit:** 2A **SKR Management Area:** 1

**Digital Photographs taken @ SE Corner of Plot?** ☑ Yes ☐ No

**Observer(s):** DT and KA

**Trapping needed to confirm SKR vs DKR?** ☑ Yes ☐ No

**Overall SKR Potential:** ☐ High ☑ Medium ☐ Low ☐ None

**Comments:** Moderate to low obstruction factor, no SKR sign

## Plot Habitat Descriptors

**Describe current land use:** ☑ Grazing ☐ Open Space ☐ Other

**Soil Surface Hardness:** ☐ Hard ☐ Medium ☑ Soft

**Living/Standing Herb Density:** ☐ High ☐ Medium ☑ Low

**Bare Ground:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Plant Litter (dead):** ☐ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☑ 50-75% ☐ 75-95%

**Forb Cover:** ☐ 0 ☐ 0-5% ☑ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Grass Cover:** ☐ 0 ☐ 0-5% ☑ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Shrub Cover:** ☑ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Forbs - List 3 Dominant Species:** Ambrosia psilostachya, Hirschfeldia incana,

**Grasses - List 3 Dominant Species:** Distichilis spicata, Avena barbata, Bromus diandrus

**Shrubs - List 3 Dominant Species:**

**Trees - Dominant Species:**

**Abundance of ACTIVE Gopher Excavations:** ☑ High ☐ Medium ☐ Low

**Abundance of INACTIVE Gopher Excavations:** ☑ High ☐ Medium ☐ Low

**Abundance of ground squirrel burrows:** ☐ High ☑ Medium ☐ Low

**Substrate Disturbance:** ☐ None ☑ Grazing ☐ Grading ☐ Discing ☐ Furrows

Grazing - Estimate When? ☑ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Grading - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Discing- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Furrows- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Mowing – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Dirt Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Paved Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Other? Describe: Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

| | |
|---|---|
| **Date:** September 22, 2025 1:28 PM | **Preserve:** Ramona Grasslands Preserve |
| **Plot:** 2A-3 | **Observers:** DT and KA |

**Potential Kangaroo Rat Sign?** ☐ Scat ☐ Burrow(s) ☐ Tracks ☐ Tail Drag ☐ Caching/foraging craters
Other(Describe):



# SKR Monitoring – Habitat Assessment Form

**Plot Number:** 2B-1 **Date/ Time:** 09/22/2025 10:01

**Grazing Management Unit:** 2B **SKR Management Area:** 2

**Digital Photographs taken @ SE Corner of Plot?** ☑ Yes ☐ No

**Observer(s):** DT and KA

**Trapping needed to confirm SKR vs DKR?** ☐ Yes ☑ No

**Overall SKR Potential:** ☑ High ☐ Medium ☐ Low ☐ None

**Comments:** Low obstruction factor, except around shrubs

## Plot Habitat Descriptors

**Describe current land use:** ☑ Grazing ☐ Open Space ☐ Other

**Soil Surface Hardness:** ☐ Hard ☑ Medium ☐ Soft

**Living/Standing Herb Density:** ☐ High ☑ Medium ☐ Low

**Bare Ground:** ☐ 0 ☐ 0-5% ☑ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Plant Litter (dead):** ☐ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☑ 75-95%

**Forb Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Grass Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Shrub Cover:** ☐ 0 ☐ 0-5% ☑ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Forbs - List 3 Dominant Species:** Herschfeldia incana, Erodium cicutarium, Ambrosia psilostachya

**Grasses - List 3 Dominant Species:** Bromus rubens, Disticilus spicata, Bromus hordaceous

**Shrubs - List 3 Dominant Species:** Artemisia californica, Isocoma menzesii

**Trees - Dominant Species:**

**Abundance of ACTIVE Gopher Excavations:** ☐ High ☐ Medium ☑ Low

**Abundance of INACTIVE Gopher Excavations:** ☐ High ☑ Medium ☐ Low

**Abundance of ground squirrel burrows:** ☐ High ☑ Medium ☐ Low

**Substrate Disturbance:** ☐ None ☑ Grazing ☐ Grading ☐ Discing ☐ Furrows

Grazing - Estimate When? ☐ past 3 months ☑ past 6 months ☐ past 12 months ☐ Older

Grading - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Discing- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Furrows- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Mowing – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Dirt Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

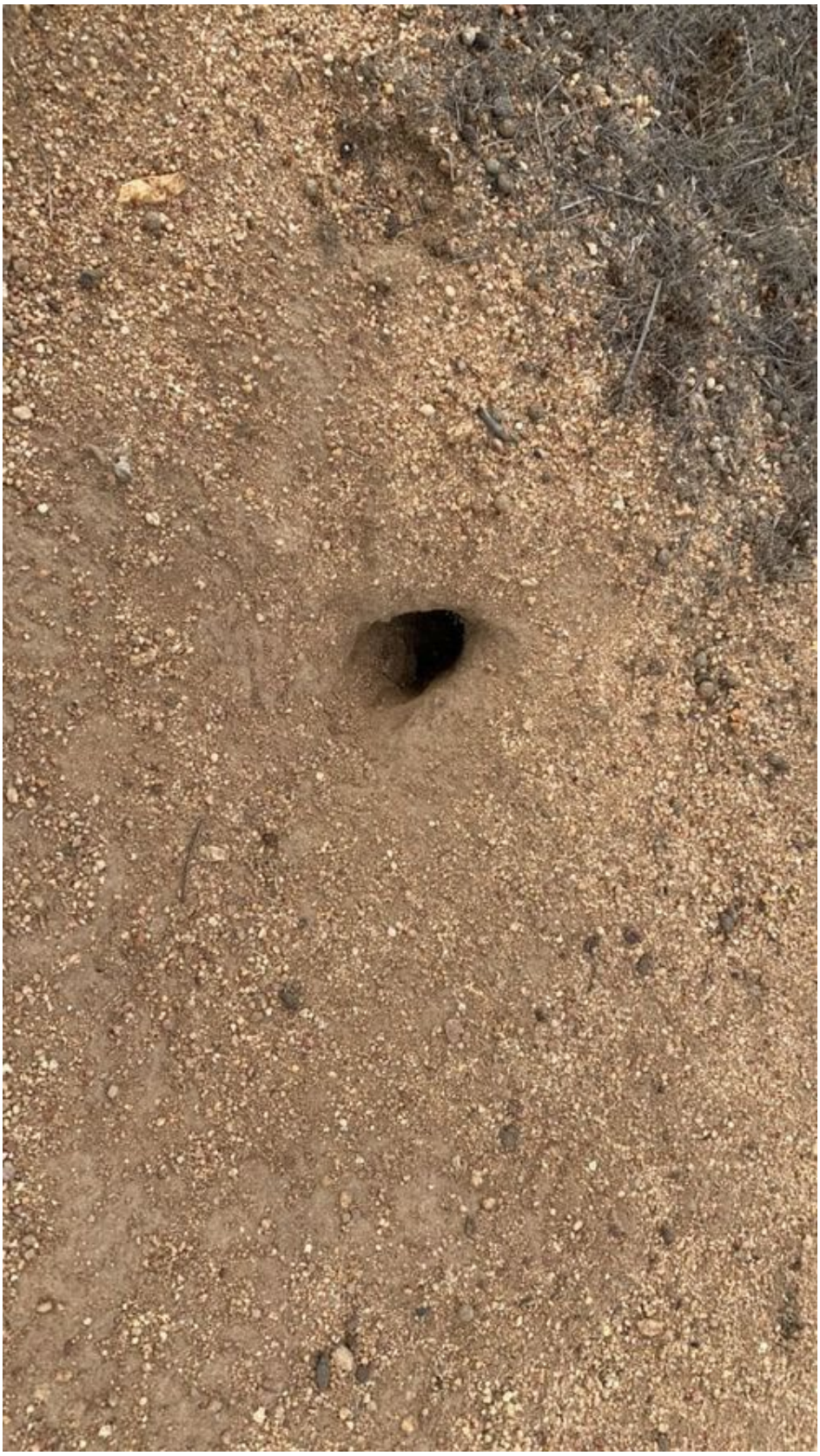
Paved Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Other? Describe: Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

| | |
|---|---|
| **Date:** September 22, 2025 10:01 AM | **Preserve:** Ramona Grasslands Preserve |
| **Plot:** 2B-1 | **Observers:** DT and KA |

**Potential Kangaroo Rat Sign?** ☑ Scat ☑ Burrow(s) ☐ Tracks ☐ Tail Drag ☑ Caching/foraging craters
Other(Describe):







# SKR Monitoring – Habitat Assessment Form

**Plot Number:** 2B-2 **Date/ Time:** 09/22/2025 09:01

**Grazing Management Unit:** 2B **SKR Management Area:** 2

**Digital Photographs taken @ SE Corner of Plot?** ☑ Yes ☐ No

**Observer(s):** DT and KA

**Trapping needed to confirm SKR vs DKR?** ☑ Yes ☐ No

**Overall SKR Potential:** ☐ High ☑ Medium ☐ Low ☐ None

**Comments:**

## Plot Habitat Descriptors

**Describe current land use:** ☑ Grazing ☐ Open Space ☐ Other

**Soil Surface Hardness:** ☐ Hard ☑ Medium ☐ Soft

**Living/Standing Herb Density:** ☐ High ☑ Medium ☐ Low

**Bare Ground:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Plant Litter (dead):** ☐ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☑ 50-75% ☐ 75-95%

**Forb Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Grass Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Shrub Cover:** ☐ 0 ☐ 0-5% ☐ 5-25% ☑ 25-50% ☐ 50-75% ☐ 75-95%

**Forbs - List 3 Dominant Species:** Corethrogyne filaginifolia, Herschfeldia incana, Erodium cicutarium

**Grasses - List 3 Dominant Species:** Bromus rubens, Bromus hordaceous

**Shrubs - List 3 Dominant Species:** Eriogonum fasciculatum, Artemisia californica

**Trees - Dominant Species:**

**Abundance of ACTIVE Gopher Excavations:** ☑ High ☐ Medium ☐ Low

**Abundance of INACTIVE Gopher Excavations:** ☐ High ☑ Medium ☐ Low

**Abundance of ground squirrel burrows:** ☐ High ☑ Medium ☐ Low

**Substrate Disturbance:** ☐ None ☑ Grazing ☐ Grading ☐ Discing ☐ Furrows

Grazing - Estimate When? ☐ past 3 months ☑ past 6 months ☐ past 12 months ☐ Older

Grading - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Discing- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Furrows- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Mowing – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Dirt Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Paved Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Other? Describe: Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

| | |
|---|---|
| **Date:** September 22, 2025 9:01 AM | **Preserve:** Ramona Grasslands Preserve |
| **Plot:** 2B-2 | **Observers:** DT and KA |

**Potential Kangaroo Rat Sign?** ☑ Scat ☑ Burrow(s) ☐ Tracks ☐ Tail Drag ☐ Caching/foraging craters
Other(Describe):







# SKR Monitoring – Habitat Assessment Form

**Plot Number:** 3C-1 **Date/ Time:** 09/22/2025 12:25

**Grazing Management Unit:** NA **SKR Management Area:** None

**Digital Photographs taken @ SE Corner of Plot?** ☑ Yes ☐ No

**Observer(s):** DT KA

**Trapping needed to confirm SKR vs DKR?** ☑ Yes ☐ No

**Overall SKR Potential:** ☐ High ☐ Medium ☑ Low ☐ None

**Comments:** High obstruction factor, inactive burrow and scat in road

## Plot Habitat Descriptors

**Describe current land use:** ☐ Grazing ☑ Open Space ☐ Other

**Soil Surface Hardness:** ☐ Hard ☑ Medium ☐ Soft

**Living/Standing Herb Density:** ☐ High ☑ Medium ☐ Low

**Bare Ground:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Plant Litter (dead):** ☐ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☑ 50-75% ☐ 75-95%

**Forb Cover:** ☐ 0 ☐ 0-5% ☑ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Grass Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Shrub Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Forbs - List 3 Dominant Species:** Corethrogyne filaginifolia, Croton setiger, Ambrosia psilostachya

**Grasses - List 3 Dominant Species:** Avena barbata, Bromus diandrus, Bromus rubens

**Shrubs - List 3 Dominant Species:** Isocoma menzesii

**Trees - Dominant Species:**

**Abundance of ACTIVE Gopher Excavations:** ☐ High ☐ Medium ☑ Low

**Abundance of INACTIVE Gopher Excavations:** ☐ High ☑ Medium ☐ Low

**Abundance of ground squirrel burrows:** ☐ High ☐ Medium ☑ Low

**Substrate Disturbance:** ☐ None ☐ Grazing ☐ Grading ☐ Discing ☐ Furrows

Grazing - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Grading - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Discing- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Furrows- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Mowing – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Dirt Road – Estimate When? ☑ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Paved Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Other? Describe: Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

| | |
|---|---|
| **Date:** September 22, 2025 12:25 PM | **Preserve:** Ramona Grasslands Preserve |
| **Plot:** 3C-1 | **Observers:** DT KA |

**Potential Kangaroo Rat Sign?** ☑ Scat ☐ Burrow(s) ☐ Tracks ☐ Tail Drag ☐ Caching/foraging craters
Other(Describe):







# SKR Monitoring – Habitat Assessment Form

**Plot Number:** 3C-2 **Date/ Time:** 09/22/2025 12:38
**Grazing Management Unit:** NA **SKR Management Area:** None
**Digital Photographs taken @ SE Corner of Plot?** ☑ Yes ☐ No
**Observer(s):** DT KA
**Trapping needed to confirm SKR vs DKR?** ☑ Yes ☐ No
**Overall SKR Potential:** ☐ High ☑ Medium ☐ Low ☐ None
**Comments:** Low obstruction factor

## Plot Habitat Descriptors

**Describe current land use:** ☐ Grazing ☑ Open Space ☐ Other
**Soil Surface Hardness:** ☐ Hard ☑ Medium ☐ Soft
**Living/Standing Herb Density:** ☐ High ☐ Medium ☑ Low
**Bare Ground:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Plant Litter (dead):** ☐ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☑ 50-75% ☐ 75-95%

**Forb Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Grass Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Shrub Cover:** ☐ 0 ☐ 0-5% ☑ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Forbs - List 3 Dominant Species:** Herschfeldia incana, Erodium cicutarium, Ambrosia psilostachya
**Grasses - List 3 Dominant Species:** Avena barbata, Bromus diandrus, Bromus hordaceous
**Shrubs - List 3 Dominant Species:** Isocoma menzesii, Eriogonum fasciculatum
**Trees - Dominant Species:**
**Abundance of ACTIVE Gopher Excavations:** ☐ High ☑ Medium ☐ Low
**Abundance of INACTIVE Gopher Excavations:** ☐ High ☑ Medium ☐ Low
**Abundance of ground squirrel burrows:** ☐ High ☐ Medium ☑ Low
**Substrate Disturbance:** ☑ None ☐ Grazing ☐ Grading ☐ Discing ☐ Furrows

Grazing - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older
Grading - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older
Discing- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older
Furrows- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older
Mowing – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older
Dirt Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older
Paved Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older
Other? Describe: Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

| | |
|---|---|
| **Date:** September 22, 2025 12:38 PM | **Preserve:** Ramona Grasslands Preserve |
| **Plot:** 3C-2 | **Observers:** DT KA |

**Potential Kangaroo Rat Sign?** ☑ Scat ☑ Burrow(s) ☐ Tracks ☐ Tail Drag ☐ Caching/foraging craters
Other(Describe):







# SKR Monitoring – Habitat Assessment Form

**Plot Number:** A1-1 **Date/ Time:** 09/22/2025 08:27

**Grazing Management Unit:** 2B **SKR Management Area:** 1

**Digital Photographs taken @ SE Corner of Plot?** ☑ Yes ☐ No

**Observer(s):** DT and KA

**Trapping needed to confirm SKR vs DKR?** ☐ Yes ☑ No

**Overall SKR Potential:** ☑ High ☐ Medium ☐ Low ☐ None

**Comments:** Has been grazed this year, good habitat. One potential SKR burrow

## Plot Habitat Descriptors

**Describe current land use:** ☑ Grazing ☐ Open Space ☐ Other

**Soil Surface Hardness:** ☐ Hard ☑ Medium ☐ Soft

**Living/Standing Herb Density:** ☐ High ☐ Medium ☑ Low

**Bare Ground:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Plant Litter (dead):** ☐ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☑ 50-75% ☐ 75-95%

**Forb Cover:** ☐ 0 ☐ 0-5% ☐ 5-25% ☑ 25-50% ☐ 50-75% ☐ 75-95%

**Grass Cover:** ☐ 0 ☐ 0-5% ☐ 5-25% ☑ 25-50% ☐ 50-75% ☐ 75-95%

**Shrub Cover:** ☑ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Forbs - List 3 Dominant Species:** Ambrosia psilostachya, Herschfeldia incana, Erodium cicutarium

**Grasses - List 3 Dominant Species:** Bromus rubens, Bromus hordaceous, Avena barbata

**Shrubs - List 3 Dominant Species:**

**Trees - Dominant Species:**

**Abundance of ACTIVE Gopher Excavations:** ☐ High ☑ Medium ☐ Low

**Abundance of INACTIVE Gopher Excavations:** ☐ High ☑ Medium ☐ Low

**Abundance of ground squirrel burrows:** ☑ High ☐ Medium ☐ Low

**Substrate Disturbance:** ☐ None ☑ Grazing ☐ Grading ☐ Discing ☐ Furrows

Grazing - Estimate When? ☐ past 3 months ☑ past 6 months ☐ past 12 months ☐ Older

Grading - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Discing- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Furrows- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Mowing – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Dirt Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Paved Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Other? Describe: Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

| | |
|---|---|
| **Date:** September 22, 2025 8:27 AM | **Preserve:** Ramona Grasslands Preserve |
| **Plot:** A1-1 | **Observers:** DT and KA |

**Potential Kangaroo Rat Sign?** ☐ Scat ☑ Burrow(s) ☐ Tracks ☐ Tail Drag ☐ Caching/foraging craters
Other(Describe):





# SKR Monitoring – Habitat Assessment Form

**Plot Number:** A1-2 **Date/ Time:** 09/22/2025 10:55

**Grazing Management Unit:** 2B **SKR Management Area:** 1

**Digital Photographs taken @ SE Corner of Plot?** ☑ Yes ☐ No

**Observer(s):** DT KA

**Trapping needed to confirm SKR vs DKR?** ☐ Yes ☑ No

**Overall SKR Potential:** ☐ High ☐ Medium ☐ Low ☑ None

**Comments:** High obstruction factor, no sign.

## Plot Habitat Descriptors

**Describe current land use:** ☑ Grazing ☐ Open Space ☐ Other

**Soil Surface Hardness:** ☐ Hard ☐ Medium ☑ Soft

**Living/Standing Herb Density:** ☑ High ☐ Medium ☐ Low

**Bare Ground:** ☑ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Plant Litter (dead):** ☐ 0 ☐ 0-5% ☐ 5-25% ☑ 25-50% ☐ 50-75% ☐ 75-95%

**Forb Cover:** ☐ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☑ 50-75% ☐ 75-95%

**Grass Cover:** ☐ 0 ☐ 0-5% ☐ 5-25% ☑ 25-50% ☐ 50-75% ☐ 75-95%

**Shrub Cover:** ☑ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Forbs - List 3 Dominant Species:** Ambrosia psilostachya, Rumex crispus

**Grasses - List 3 Dominant Species:** Distichilis spicata, Bromus diandrus, Avena barbata

**Shrubs - List 3 Dominant Species:** 0

**Trees - Dominant Species:**

**Abundance of ACTIVE Gopher Excavations:** ☐ High ☐ Medium ☑ Low

**Abundance of INACTIVE Gopher Excavations:** ☐ High ☐ Medium ☑ Low

**Abundance of ground squirrel burrows:** ☐ High ☐ Medium ☑ Low

**Substrate Disturbance:** ☐ None ☑ Grazing ☐ Grading ☐ Discing ☐ Furrows

Grazing - Estimate When? ☐ past 3 months ☐ past 6 months ☑ past 12 months ☐ Older

Grading - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Discing- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Furrows- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Mowing – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Dirt Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Paved Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Other? Describe: Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

| | |
|---|---|
| **Date:** September 22, 2025 10:55 AM | **Preserve:** Ramona Grasslands Preserve |
| **Plot:** A1-2 | **Observers:** DT KA |

**Potential Kangaroo Rat Sign?** ☐ Scat ☐ Burrow(s) ☐ Tracks ☐ Tail Drag ☐ Caching/foraging craters
Other(Describe):



# SKR Monitoring – Habitat Assessment Form

**Plot Number:** A1-3 **Date/ Time:** 09/22/2025 10:27

**Grazing Management Unit:** 2B **SKR Management Area:** 1

**Digital Photographs taken @ SE Corner of Plot?** ☑ Yes ☐ No

**Observer(s):** DT and KA

**Trapping needed to confirm SKR vs DKR?** ☐ Yes ☑ No

**Overall SKR Potential:** ☑ High ☐ Medium ☐ Low ☐ None

**Comments:** Low obstruction factor, no SKR sign

## Plot Habitat Descriptors

**Describe current land use:** ☑ Grazing ☐ Open Space ☐ Other

**Soil Surface Hardness:** ☐ Hard ☑ Medium ☐ Soft

**Living/Standing Herb Density:** ☐ High ☐ Medium ☑ Low

**Bare Ground:** ☐ 0 ☐ 0-5% ☑ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Plant Litter (dead):** ☐ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☑ 50-75% ☐ 75-95%

**Forb Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Grass Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Shrub Cover:** ☑ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Forbs - List 3 Dominant Species:** Ambrosia psilostachya, Erodium cicutarium

**Grasses - List 3 Dominant Species:** Distichilis spicata, Bromus rubens, Bromus hordaceous

**Shrubs - List 3 Dominant Species:**

**Trees - Dominant Species:**

**Abundance of ACTIVE Gopher Excavations:** ☐ High ☐ Medium ☑ Low

**Abundance of INACTIVE Gopher Excavations:** ☐ High ☐ Medium ☑ Low

**Abundance of ground squirrel burrows:** ☐ High ☑ Medium ☐ Low

**Substrate Disturbance:** ☐ None ☑ Grazing ☐ Grading ☐ Discing ☐ Furrows

Grazing - Estimate When? ☐ past 3 months ☐ past 6 months ☑ past 12 months ☐ Older

Grading - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Discing- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Furrows- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Mowing – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Dirt Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Paved Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Other? Describe: Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

| | |
|---|---|
| **Date:** September 22, 2025 10:27 AM | **Preserve:** Ramona Grasslands Preserve |
| **Plot:** A1-3 | **Observers:** DT and KA |

**Potential Kangaroo Rat Sign?** ☐ Scat ☐ Burrow(s) ☐ Tracks ☐ Tail Drag ☐ Caching/foraging craters
Other(Describe):



# SKR Monitoring – Habitat Assessment Form

**Plot Number:** A1-4 **Date/ Time:** 09/22/2025 10:37

**Grazing Management Unit:** 2B **SKR Management Area:** 1

**Digital Photographs taken @ SE Corner of Plot?** ☑ Yes ☐ No

**Observer(s):** DT and KA

**Trapping needed to confirm SKR vs DKR?** ☐ Yes ☑ No

**Overall SKR Potential:** ☐ High ☐ Medium ☑ Low ☐ None

**Comments:** High obstruction factor

## Plot Habitat Descriptors

**Describe current land use:** ☑ Grazing ☐ Open Space ☐ Other

**Soil Surface Hardness:** ☐ Hard ☑ Medium ☐ Soft

**Living/Standing Herb Density:** ☑ High ☐ Medium ☐ Low

**Bare Ground:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Plant Litter (dead):** ☐ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☑ 50-75% ☐ 75-95%

**Forb Cover:** ☐ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☑ 50-75% ☐ 75-95%

**Grass Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Shrub Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Forbs - List 3 Dominant Species:** Ambrosia psilostachya, Herschfeldia incana, Croton setiger

**Grasses - List 3 Dominant Species:** Distichilis spicata, Avena barbata, Bromus hordaceous

**Shrubs - List 3 Dominant Species:** Isocoma menzesii

**Trees - Dominant Species:**

**Abundance of ACTIVE Gopher Excavations:** ☐ High ☑ Medium ☐ Low

**Abundance of INACTIVE Gopher Excavations:** ☑ High ☐ Medium ☐ Low

**Abundance of ground squirrel burrows:** ☐ High ☑ Medium ☐ Low

**Substrate Disturbance:** ☐ None ☑ Grazing ☐ Grading ☐ Discing ☐ Furrows

Grazing - Estimate When? ☐ past 3 months ☑ past 6 months ☐ past 12 months ☐ Older

Grading - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Discing- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Furrows- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Mowing – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Dirt Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Paved Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Other? Describe: Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

| | |
|---|---|
| **Date:** September 22, 2025 10:37 AM | **Preserve:** Ramona Grasslands Preserve |
| **Plot:** A1-4 | **Observers:** DT and KA |

**Potential Kangaroo Rat Sign?** ☐ Scat ☐ Burrow(s) ☐ Tracks ☐ Tail Drag ☐ Caching/foraging craters
Other(Describe):



# SKR Monitoring – Habitat Assessment Form

**Plot Number:** A1-5 **Date/ Time:** 09/22/2025 14:11

**Grazing Management Unit:** 2B **SKR Management Area:** 1

**Digital Photographs taken @ SE Corner of Plot?** ☑ Yes ☐ No

**Observer(s):** DT KA

**Trapping needed to confirm SKR vs DKR?** ☐ Yes ☑ No

**Overall SKR Potential:** ☐ High ☐ Medium ☑ Low ☐ None

**Comments:** Moderate obstruction factor, no SKR sign

## Plot Habitat Descriptors

**Describe current land use:** ☐ Grazing ☑ Open Space ☐ Other

**Soil Surface Hardness:** ☐ Hard ☑ Medium ☐ Soft

**Living/Standing Herb Density:** ☐ High ☑ Medium ☐ Low

**Bare Ground:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Plant Litter (dead):** ☐ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☑ 50-75% ☐ 75-95%

**Forb Cover:** ☐ 0 ☐ 0-5% ☑ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Grass Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Shrub Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Forbs - List 3 Dominant Species:** Ambrosia psilostachya, Erodium cicutarium, California bee plant

**Grasses - List 3 Dominant Species:** Distichilis spicata, Avena barbata, Bromus diandrus

**Shrubs - List 3 Dominant Species:** Isocoma menzesii

**Trees - Dominant Species:**

**Abundance of ACTIVE Gopher Excavations:** ☑ High ☐ Medium ☐ Low

**Abundance of INACTIVE Gopher Excavations:** ☑ High ☐ Medium ☐ Low

**Abundance of ground squirrel burrows:** ☐ High ☐ Medium ☑ Low

**Substrate Disturbance:** ☐ None ☑ Grazing ☐ Grading ☐ Discing ☐ Furrows

Grazing - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☑ Older

Grading - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Discing- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Furrows- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Mowing – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Dirt Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Paved Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Other? Describe: Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

| | |
|---|---|
| **Date:** September 22, 2025 2:11 PM | **Preserve:** Ramona Grasslands Preserve |
| **Plot:** A1-5 | **Observers:** DT KA |

**Potential Kangaroo Rat Sign?** ☐ Scat ☐ Burrow(s) ☐ Tracks ☐ Tail Drag ☐ Caching/foraging craters
Other(Describe):



# SKR Monitoring – Habitat Assessment Form

**Plot Number:** A1-6 **Date/ Time:** 09/22/2025 14:27

**Grazing Management Unit:** 2A **SKR Management Area:** 1

**Digital Photographs taken @ SE Corner of Plot?** ☑ Yes ☐ No

**Observer(s):** DT KA

**Trapping needed to confirm SKR vs DKR?** ☐ Yes ☑ No

**Overall SKR Potential:** ☐ High ☑ Medium ☐ Low ☐ None

**Comments:** Moderate obstruction factor. Road can be used by SKR. No SKR sign.

## Plot Habitat Descriptors

**Describe current land use:** ☑ Grazing ☐ Open Space ☐ Other

**Soil Surface Hardness:** ☐ Hard ☑ Medium ☐ Soft

**Living/Standing Herb Density:** ☐ High ☐ Medium ☑ Low

**Bare Ground:** ☐ 0 ☐ 0-5% ☑ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Plant Litter (dead):** ☐ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☑ 50-75% ☐ 75-95%

**Forb Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Grass Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Shrub Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Forbs - List 3 Dominant Species:** Ambrosia psilostachya, Erodium cicutarium, Herschfeldia incana

**Grasses - List 3 Dominant Species:** Avena barbata, Distichilis spicata, Bromus hordaceous

**Shrubs - List 3 Dominant Species:** Isocoma menzesii

**Trees - Dominant Species:**

**Abundance of ACTIVE Gopher Excavations:** ☐ High ☑ Medium ☐ Low

**Abundance of INACTIVE Gopher Excavations:** ☐ High ☑ Medium ☐ Low

**Abundance of ground squirrel burrows:** ☐ High ☐ Medium ☑ Low

**Substrate Disturbance:** ☐ None ☑ Grazing ☐ Grading ☐ Discing ☐ Furrows

Grazing - Estimate When? ☑ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Grading - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Discing- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Furrows- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Mowing – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Dirt Road – Estimate When? ☑ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Paved Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Other? Describe: Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

| | |
|---|---|
| **Date:** September 22, 2025 2:27 PM | **Preserve:** Ramona Grasslands Preserve |
| **Plot:** A1-6 | **Observers:** DT KA |

**Potential Kangaroo Rat Sign?** ☐ Scat ☐ Burrow(s) ☐ Tracks ☐ Tail Drag ☐ Caching/foraging craters
Other(Describe):



# SKR Monitoring – Habitat Assessment Form

**Plot Number:** A2-1 **Date/ Time:** 09/22/2025 08:51

**Grazing Management Unit:** 2B **SKR Management Area:** 2

**Digital Photographs taken @ SE Corner of Plot?** ☑ Yes ☐ No

**Observer(s):** DT and KA

**Trapping needed to confirm SKR vs DKR?** ☑ Yes ☐ No

**Overall SKR Potential:** ☑ High ☐ Medium ☐ Low ☐ None

**Comments:** Burrows near scrub habitat, trap to confirm SKR

## Plot Habitat Descriptors

**Describe current land use:** ☑ Grazing ☐ Open Space ☐ Other

**Soil Surface Hardness:** ☐ Hard ☑ Medium ☐ Soft

**Living/Standing Herb Density:** ☐ High ☐ Medium ☑ Low

**Bare Ground:** ☐ 0 ☐ 0-5% ☑ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Plant Litter (dead):** ☐ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☑ 50-75% ☐ 75-95%

**Forb Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95% ☐ 75-95%

**Grass Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95% ☐ 75-95%

**Shrub Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95% ☐ 75-95%

**Forbs - List 3 Dominant Species:** Erodium cicutarium, Herschfeldia incana, Corethrogyne filaginifolia

**Grasses - List 3 Dominant Species:** Bromus hordaceous, Bromus rubens, Avena barbata

**Shrubs - List 3 Dominant Species:** Eriogonum fasciculatum, Artemesia californica

**Trees - Dominant Species:**

**Abundance of ACTIVE Gopher Excavations:** ☐ High ☐ Medium ☑ Low

**Abundance of INACTIVE Gopher Excavations:** ☐ High ☑ Medium ☐ Low

**Abundance of ground squirrel burrows:** ☑ High ☐ Medium ☐ Low

**Substrate Disturbance:** ☐ None ☑ Grazing ☐ Grading ☐ Discing ☐ Furrows

Grazing - Estimate When? ☐ past 3 months ☑ past 6 months ☐ past 12 months ☐ Older

Grading - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Discing- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Furrows- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Mowing – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Dirt Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Paved Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Other? Describe: Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

| | |
|---|---|
| **Date:** September 22, 2025 8:51 AM | **Preserve:** Ramona Grasslands Preserve |
| **Plot:** A2-1 | **Observers:** DT and KA |

**Potential Kangaroo Rat Sign?** ☑ Scat ☑ Burrow(s) ☐ Tracks ☐ Tail Drag ☐ Caching/foraging craters
Other(Describe):







# SKR Monitoring – Habitat Assessment Form

**Plot Number:** A2-6 **Date/ Time:** 09/22/2025 09:43

**Grazing Management Unit:** 2B **SKR Management Area:** 2

**Digital Photographs taken @ SE Corner of Plot?** ☑ Yes ☐ No

**Observer(s):** DT and KA

**Trapping needed to confirm SKR vs DKR?** ☐ Yes ☑ No

**Overall SKR Potential:** ☑ High ☐ Medium ☐ Low ☐ None

**Comments:** Low obstruction factor

## Plot Habitat Descriptors

**Describe current land use:** ☑ Grazing ☐ Open Space ☐ Other

**Soil Surface Hardness:** ☐ Hard ☑ Medium ☐ Soft

**Living/Standing Herb Density:** ☐ High ☑ Medium ☐ Low

**Bare Ground:** ☐ 0 ☐ 0-5% ☑ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Plant Litter (dead):** ☐ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☑ 50-75% ☐ 75-95%

**Forb Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Grass Cover:** ☐ 0 ☐ 0-5% ☑ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Shrub Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Forbs - List 3 Dominant Species:** Ambrosia psilostachya, Herschfeldia incana, Erodium cicutarium

**Grasses - List 3 Dominant Species:** Bromus rubens, Bromus hordaceous, Avena barbata

**Shrubs - List 3 Dominant Species:** Isocoma menzesii

**Trees - Dominant Species:**

**Abundance of ACTIVE Gopher Excavations:** ☐ High ☐ Medium ☑ Low

**Abundance of INACTIVE Gopher Excavations:** ☐ High ☑ Medium ☐ Low

**Abundance of ground squirrel burrows:** ☑ High ☐ Medium ☐ Low

**Substrate Disturbance:** ☐ None ☑ Grazing ☐ Grading ☐ Discing ☐ Furrows

Grazing - Estimate When? ☑ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Grading - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Discing- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Furrows- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Mowing – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Dirt Road – Estimate When? ☑ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Paved Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Other? Describe: Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

| | |
|---|---|
| **Date:** September 22, 2025 9:43 AM | **Preserve:** Ramona Grasslands Preserve |
| **Plot:** A2-6 | **Observers:** DT and KA |

**Potential Kangaroo Rat Sign?** ☑ Scat ☑ Burrow(s) ☐ Tracks ☐ Tail Drag ☐ Caching/foraging craters
Other(Describe):







# SKR Monitoring – Habitat Assessment Form

**Plot Number:** A2-7 **Date/ Time:** 09/22/2025 10:12

**Grazing Management Unit:** 2B **SKR Management Area:** 2

**Digital Photographs taken @ SE Corner of Plot?** ☑ Yes ☐ No

**Observer(s):** DT and KA

**Trapping needed to confirm SKR vs DKR?** ☐ Yes ☑ No

**Overall SKR Potential:** ☑ High ☐ Medium ☐ Low ☐ None

**Comments:** Low to medium obstruction factor

## Plot Habitat Descriptors

**Describe current land use:** ☑ Grazing ☐ Open Space ☐ Other

**Soil Surface Hardness:** ☐ Hard ☑ Medium ☐ Soft

**Living/Standing Herb Density:** ☐ High ☑ Medium ☐ Low

**Bare Ground:** ☐ 0 ☐ 0-5% ☑ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Plant Litter (dead):** ☐ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☑ 75-95%

**Forb Cover:** ☐ 0 ☐ 0-5% ☑ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Grass Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Shrub Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Forbs - List 3 Dominant Species:** Croton setiger, Ambrosia psilostachya, Erodium cicutarium

**Grasses - List 3 Dominant Species:** Distichilis spicata, Bromus rubens, Avena barbata

**Shrubs - List 3 Dominant Species:** Isocoma menzesii

**Trees - Dominant Species:**

**Abundance of ACTIVE Gopher Excavations:** ☑ High ☐ Medium ☐ Low

**Abundance of INACTIVE Gopher Excavations:** ☐ High ☑ Medium ☐ Low

**Abundance of ground squirrel burrows:** ☐ High ☑ Medium ☐ Low

**Substrate Disturbance:** ☐ None ☑ Grazing ☐ Grading ☐ Discing ☐ Furrows

Grazing - Estimate When? ☑ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Grading - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Discing- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Furrows- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Mowing – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Dirt Road – Estimate When? ☐ past 3 months ☑ past 6 months ☐ past 12 months ☐ Older

Paved Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Other? Describe: Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

| | |
|---|---|
| **Date:** September 22, 2025 10:12 AM | **Preserve:** Ramona Grasslands Preserve |
| **Plot:** A2-7 | **Observers:** DT and KA |

**Potential Kangaroo Rat Sign?** ☑ Scat ☑ Burrow(s) ☐ Tracks ☐ Tail Drag ☐ Caching/foraging craters
Other(Describe):





# SKR Monitoring – Habitat Assessment Form

**Plot Number:** 3A-1 **Date/ Time:** 09/23/2025 10:52

**Grazing Management Unit:** 3A **SKR Management Area:** None

**Digital Photographs taken @ SE Corner of Plot?** ☑ Yes ☐ No

**Observer(s):** DT KA

**Trapping needed to confirm SKR vs DKR?** ☐ Yes ☑ No

**Overall SKR Potential:** ☐ High ☐ Medium ☑ Low ☐ None

**Comments:** High obstruction factor, no SKR sign

## Plot Habitat Descriptors

**Describe current land use:** ☑ Grazing ☐ Open Space ☐ Other

**Soil Surface Hardness:** ☐ Hard ☑ Medium ☐ Soft

**Living/Standing Herb Density:** ☐ High ☑ Medium ☐ Low

**Bare Ground:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Plant Litter (dead):** ☐ 0 ☐ 0-5% ☐ 5-25% ☑ 25-50% ☐ 50-75% ☐ 75-95%

**Forb Cover:** ☐ 0 ☐ 0-5% ☐ 5-25% ☑ 25-50% ☐ 50-75% ☐ 75-95%

**Grass Cover:** ☐ 0 ☐ 0-5% ☑ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Shrub Cover:** ☑ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Forbs - List 3 Dominant Species:** Ambrosia psilostachya, Rumex crispus, Herschfeldia incana

**Grasses - List 3 Dominant Species:** Distichilis spicata, Bromus diandrus, Bromus hordaceous

**Shrubs - List 3 Dominant Species:**

**Trees - Dominant Species:**

**Abundance of ACTIVE Gopher Excavations:** ☐ High ☑ Medium ☐ Low

**Abundance of INACTIVE Gopher Excavations:** ☐ High ☑ Medium ☐ Low

**Abundance of ground squirrel burrows:** ☐ High ☐ Medium ☑ Low

**Substrate Disturbance:** ☐ None ☑ Grazing ☐ Grading ☐ Discing ☐ Furrows

Grazing - Estimate When? ☐ past 3 months ☐ past 6 months ☑ past 12 months ☐ Older

Grading - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Discing- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Furrows- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Mowing – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Dirt Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Paved Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Other? Describe: Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

| | |
|---|---|
| **Date:** September 23, 2025 10:52 AM | **Preserve:** Ramona Grasslands Preserve |
| **Plot:** 3A-1 | **Observers:** DT KA |

**Potential Kangaroo Rat Sign?** ☐ Scat ☐ Burrow(s) ☐ Tracks ☐ Tail Drag ☐ Caching/foraging craters
Other(Describe):



# SKR Monitoring – Habitat Assessment Form

**Plot Number:** 3A-6 **Date/ Time:** 09/23/2025 11:06

**Grazing Management Unit:** 3A **SKR Management Area:** None

**Digital Photographs taken @ SE Corner of Plot?** ☑ Yes ☐ No

**Observer(s):** DT KA

**Trapping needed to confirm SKR vs DKR?** ☐ Yes ☑ No

**Overall SKR Potential:** ☐ High ☑ Medium ☐ Low ☐ None

**Comments:** Medium to low obstruction, No SKR sign

## Plot Habitat Descriptors

**Describe current land use:** ☑ Grazing ☐ Open Space ☐ Other

**Soil Surface Hardness:** ☐ Hard ☑ Medium ☐ Soft

**Living/Standing Herb Density:** ☐ High ☑ Medium ☐ Low

**Bare Ground:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Plant Litter (dead):** ☐ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☑ 50-75% ☐ 75-95%

**Forb Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Grass Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Shrub Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Forbs - List 3 Dominant Species:** Ambrosia psilostachya, Herschfeldia incana, Erodium cicutarium

**Grasses - List 3 Dominant Species:** Bromus rubens, Bromus hordaceous, Distichilis spicata

**Shrubs - List 3 Dominant Species:** Isocoma menzesii

**Trees - Dominant Species:**

**Abundance of ACTIVE Gopher Excavations:** ☐ High ☑ Medium ☐ Low

**Abundance of INACTIVE Gopher Excavations:** ☐ High ☑ Medium ☐ Low

**Abundance of ground squirrel burrows:** ☐ High ☐ Medium ☑ Low

**Substrate Disturbance:** ☐ None ☑ Grazing ☐ Grading ☐ Discing ☐ Furrows

Grazing - Estimate When? ☐ past 3 months ☐ past 6 months ☑ past 12 months ☐ Older

Grading - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Discing- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Furrows- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Mowing – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Dirt Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Paved Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Other? Describe: Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

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|---|---|
| **Date:** September 23, 2025 11:06 AM | **Preserve:** Ramona Grasslands Preserve |
| **Plot:** 3A-6 | **Observers:** DT KA |

**Potential Kangaroo Rat Sign?** ☐ Scat ☐ Burrow(s) ☐ Tracks ☐ Tail Drag ☐ Caching/foraging craters
Other(Describe):



# SKR Monitoring – Habitat Assessment Form

**Plot Number:** 3A-7 **Date/ Time:** 09/23/2025 10:31

**Grazing Management Unit:** NA **SKR Management Area:** None

**Digital Photographs taken @ SE Corner of Plot?** ☑ Yes ☐ No

**Observer(s):** DT KA

**Trapping needed to confirm SKR vs DKR?** ☐ Yes ☑ No

**Overall SKR Potential:** ☐ High ☐ Medium ☑ Low ☐ None

**Comments:** High obstruction factor, no SKR sign

## Plot Habitat Descriptors

**Describe current land use:** ☑ Grazing ☐ Open Space ☐ Other

**Soil Surface Hardness:** ☐ Hard ☐ Medium ☑ Soft

**Living/Standing Herb Density:** ☐ High ☑ Medium ☐ Low

**Bare Ground:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Plant Litter (dead):** ☐ 0 ☐ 0-5% ☐ 5-25% ☑ 25-50% ☐ 50-75% ☐ 75-95%

**Forb Cover:** ☐ 0 ☐ 0-5% ☑ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Grass Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75%☐ 75-95%

**Shrub Cover:** ☑ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Forbs - List 3 Dominant Species:** Ambrosia psilostachya, Herschfeldia incana, Heterotheca grandiflora

**Grasses - List 3 Dominant Species:** Distichilis spicata, Bromus diandrus, Avena barbata

**Shrubs - List 3 Dominant Species:**

**Trees - Dominant Species:**

**Abundance of ACTIVE Gopher Excavations:** ☑ High ☐ Medium ☐ Low

**Abundance of INACTIVE Gopher Excavations:** ☑ High ☐ Medium ☐ Low

**Abundance of ground squirrel burrows:** ☐ High ☐ Medium ☑ Low

**Substrate Disturbance:** ☐ None ☑ Grazing ☐ Grading ☐ Discing ☐ Furrows

Grazing - Estimate When? ☐ past 3 months ☐ past 6 months ☑ past 12 months ☐ Older

Grading - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Discing- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Furrows- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Mowing – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Dirt Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Paved Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Other? Describe: Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

| | |
|---|---|
| **Date:** September 23, 2025 10:31 AM | **Preserve:** Ramona Grasslands Preserve |
| **Plot:** 3A-7 | **Observers:** DT KA |

**Potential Kangaroo Rat Sign?** ☐ Scat ☐ Burrow(s) ☐ Tracks ☐ Tail Drag ☐ Caching/foraging craters
Other(Describe):





# SKR Monitoring – Habitat Assessment Form

**Plot Number:** 3A-8 **Date/ Time:** 09/23/2025 10:42

**Grazing Management Unit:** 3A **SKR Management Area:** None

**Digital Photographs taken @ SE Corner of Plot?** ☑ Yes ☐ No

**Observer(s):** DT KA

**Trapping needed to confirm SKR vs DKR?** ☐ Yes ☑ No

**Overall SKR Potential:** ☐ High ☑ Medium ☐ Low ☐ None

**Comments:** Moderate obstruction factor, no SKR sign

## Plot Habitat Descriptors

**Describe current land use:** ☑ Grazing ☐ Open Space ☐ Other

**Soil Surface Hardness:** ☐ Hard ☑ Medium ☐ Soft

**Living/Standing Herb Density:** ☐ High ☐ Medium ☑ Low

**Bare Ground:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Plant Litter (dead):** ☐ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☑ 50-75% ☐ 75-95%

**Forb Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Grass Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Shrub Cover:** ☑ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Forbs - List 3 Dominant Species:** Herschfeldia incana, Croton setiger, Ambrosia psilostachya

**Grasses - List 3 Dominant Species:** Bromus rubens, Bromus hordaceous, Avena barbata

**Shrubs - List 3 Dominant Species:**

**Trees - Dominant Species:**

**Abundance of ACTIVE Gopher Excavations:** ☐ High ☑ Medium ☐ Low

**Abundance of INACTIVE Gopher Excavations:** ☐ High ☑ Medium ☐ Low

**Abundance of ground squirrel burrows:** ☐ High ☑ Medium ☐ Low

**Substrate Disturbance:** ☐ None ☑ Grazing ☐ Grading ☐ Discing ☐ Furrows

Grazing - Estimate When? ☐ past 3 months ☐ past 6 months ☑ past 12 months ☐ Older

Grading - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Discing- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Furrows- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Mowing – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Dirt Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Paved Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Other? Describe: Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

| | |
|---|---|
| **Date:** September 23, 2025 10:42 AM | **Preserve:** Ramona Grasslands Preserve |
| **Plot:** 3A-8 | **Observers:** DT KA |

**Potential Kangaroo Rat Sign?** ☐ Scat ☐ Burrow(s) ☐ Tracks ☐ Tail Drag ☐ Caching/foraging craters
Other(Describe):



# SKR Monitoring – Habitat Assessment Form

**Plot Number:** 3A-9 **Date/ Time:** 09/23/2025 10:58

**Grazing Management Unit:** 3A **SKR Management Area:** None

**Digital Photographs taken @ SE Corner of Plot?** ☑ Yes ☐ No

**Observer(s):** DT KA

**Trapping needed to confirm SKR vs DKR?** ☐ Yes ☑ No

**Overall SKR Potential:** ☐ High ☐ Medium ☑ Low ☐ None

**Comments:** Moderate to high obstruction factor, no SKR sign

## Plot Habitat Descriptors

**Describe current land use:** ☑ Grazing ☐ Open Space ☐ Other

**Soil Surface Hardness:** ☐ Hard ☑ Medium ☐ Soft

**Living/Standing Herb Density:** ☐ High ☐ Medium ☑ Low

**Bare Ground:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Plant Litter (dead):** ☐ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☑ 50-75% ☐ 75-95%

**Forb Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Grass Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Shrub Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Forbs - List 3 Dominant Species:** Ambrosia psilostachya, Rumex crispus

**Grasses - List 3 Dominant Species:** Distichilis spicata, Avena barbata, Hordium maritum

**Shrubs - List 3 Dominant Species:** Isocoma menzesii

**Trees - Dominant Species:**

**Abundance of ACTIVE Gopher Excavations:** ☑ High ☐ Medium ☐ Low

**Abundance of INACTIVE Gopher Excavations:** ☐ High ☑ Medium ☐ Low

**Abundance of ground squirrel burrows:** ☐ High ☐ Medium ☑ Low

**Substrate Disturbance:** ☐ None ☑ Grazing ☐ Grading ☐ Discing ☐ Furrows

Grazing - Estimate When? ☐ past 3 months ☐ past 6 months ☑ past 12 months ☐ Older

Grading - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Discing- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Furrows- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Mowing – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Dirt Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Paved Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Other? Describe: Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

**Potential Kangaroo Rat Sign?** ☐ Scat ☐ Burrow(s) ☐ Tracks ☐ Tail Drag ☐ Caching/foraging craters

Other(Describe):

| | |
|---|---|
| **Date:** September 23, 2025 10:58 AM | **Preserve:** Ramona Grasslands Preserve |
| **Plot:** 3A-9 | **Observers:** DT KA |



# SKR Monitoring – Habitat Assessment Form

**Plot Number:** 3B-1 **Date/ Time:** 09/23/2025 09:02

**Grazing Management Unit:** NA **SKR Management Area:** None

**Digital Photographs taken @ SE Corner of Plot?** ☑ Yes ☐ No

**Observer(s):** DT KA

**Trapping needed to confirm SKR vs DKR?** ☐ Yes ☑ No

**Overall SKR Potential:** ☐ High ☐ Medium ☑ Low ☐ None

**Comments:** High obstruction factor, No SKR sign

## Plot Habitat Descriptors

**Describe current land use:** ☑ Grazing ☐ Open Space ☐ Other

**Soil Surface Hardness:** ☐ Hard ☑ Medium ☐ Soft

**Living/Standing Herb Density:** ☐ High ☑ Medium ☐ Low

**Bare Ground:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Plant Litter (dead):** ☐ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☑ 50-75% ☐ 75-95%

**Forb Cover:** ☐ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☑ 50-75% ☐ 75-95%

**Grass Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Shrub Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Forbs - List 3 Dominant Species:** Erodium cicutarium, Vinegar weed, Ambrosia psilostachya

**Grasses - List 3 Dominant Species:** Bromus rubens, Bromus diandrus, Avena barbata

**Shrubs - List 3 Dominant Species:** Corethrogyne filaginifolia, Isocoma menzesii, Salvia apiana

**Trees - Dominant Species:** Quercus agrifolia

**Abundance of ACTIVE Gopher Excavations:** ☐ High ☐ Medium ☑ Low

**Abundance of INACTIVE Gopher Excavations:** ☐ High ☑ Medium ☐ Low

**Abundance of ground squirrel burrows:** ☐ High ☐ Medium ☑ Low

**Substrate Disturbance:** ☐ None ☑ Grazing ☐ Grading ☐ Discing ☐ Furrows

Grazing - Estimate When? ☐ past 3 months ☐ past 6 months ☑ past 12 months ☐ Older

Grading - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Discing- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Furrows- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Mowing – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Dirt Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Paved Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Other? Describe: Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

| | |
|---|---|
| **Date:** September 23, 2025 9:02 AM | **Preserve:** Ramona Grasslands Preserve |
| **Plot:** 3B-1 | **Observers:** DT KA |

**Potential Kangaroo Rat Sign?** ☐ Scat ☐ Burrow(s) ☐ Tracks ☐ Tail Drag ☐ Caching/foraging craters
Other(Describe):



# SKR Monitoring – Habitat Assessment Form

**Plot Number:** 3B-2 **Date/ Time:** 09/23/2025 09:17

**Grazing Management Unit:** NA **SKR Management Area:** None

**Digital Photographs taken @ SE Corner of Plot?** ☑ Yes ☐ No

**Observer(s):** DT KA

**Trapping needed to confirm SKR vs DKR?** ☑ Yes ☐ No

**Overall SKR Potential:** ☑ High ☐ Medium ☐ Low ☐ None

**Comments:** Low to moderate obstruction factor

## Plot Habitat Descriptors

**Describe current land use:** ☑ Grazing ☐ Open Space ☐ Other

**Soil Surface Hardness:** ☐ Hard ☑ Medium ☐ Soft

**Living/Standing Herb Density:** ☐ High ☑ Medium ☐ Low

**Bare Ground:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Plant Litter (dead):** ☐ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☑ 50-75% ☐ 75-95%

**Forb Cover:** ☐ 0 ☐ 0-5% ☑ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Grass Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Shrub Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Forbs - List 3 Dominant Species:** Ambrosia psilostachya, Herschfeldia incana, Erodium cicutarium

**Grasses - List 3 Dominant Species:** Bromus rubens, Bromus hordaceous, Bromus diandrus

**Shrubs - List 3 Dominant Species:** Corethrogyne filaginifolia

**Trees - Dominant Species:**

**Abundance of ACTIVE Gopher Excavations:** ☐ High ☐ Medium ☑ Low

**Abundance of INACTIVE Gopher Excavations:** ☐ High ☑ Medium ☐ Low

**Abundance of ground squirrel burrows:** ☐ High ☑ Medium ☐ Low

**Substrate Disturbance:** ☐ None ☑ Grazing ☐ Grading ☐ Discing ☐ Furrows

Grazing - Estimate When? ☐ past 3 months ☐ past 6 months ☑ past 12 months ☐ Older

Grading - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Discing- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Furrows- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Mowing – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

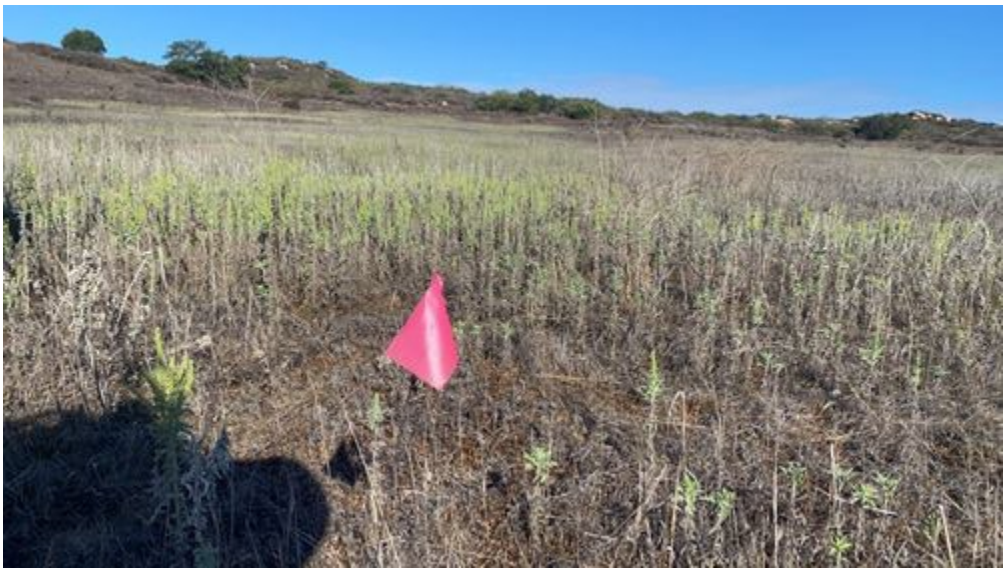
Dirt Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Paved Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Other? Describe: Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

| | |
|---|---|
| **Date:** September 23, 2025 9:17 AM | **Preserve:** Ramona Grasslands Preserve |
| **Plot:** 3B-2 | **Observers:** DT KA |

**Potential Kangaroo Rat Sign?** ☑ Scat ☑ Burrow(s) ☐ Tracks ☐ Tail Drag ☐ Caching/foraging craters
Other(Describe):







# SKR Monitoring – Habitat Assessment Form

**Plot Number:** 3B-3 **Date/ Time:** 09/23/2025 09:36

**Grazing Management Unit:** NA **SKR Management Area:** None

**Digital Photographs taken @ SE Corner of Plot?** ☑ Yes ☐ No

**Observer(s):** DT KA

**Trapping needed to confirm SKR vs DKR?** ☑ Yes ☐ No

**Overall SKR Potential:** ☐ High ☑ Medium ☐ Low ☐ None

**Comments:** Low to moderate obstruction factor

## Plot Habitat Descriptors

**Describe current land use:** ☑ Grazing ☐ Open Space ☐ Other

**Soil Surface Hardness:** ☐ Hard ☑ Medium ☐ Soft

**Living/Standing Herb Density:** ☐ High ☐ Medium ☑ Low

**Bare Ground:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Plant Litter (dead):** ☐ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☑ 50-75% ☐ 75-95%

**Forb Cover:** ☐ 0 ☐ 0-5% ☑ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Grass Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Shrub Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Forbs - List 3 Dominant Species:** Ambrosia psilostachya, Herschfeldia incana, Erodium cicutarium

**Grasses - List 3 Dominant Species:** Bromus diandrus, Bromus hordaceous, Distichilis spicata

**Shrubs - List 3 Dominant Species:** Corethrogyne filaginifolia

**Trees - Dominant Species:**

**Abundance of ACTIVE Gopher Excavations:** ☐ High ☑ Medium ☐ Low

**Abundance of INACTIVE Gopher Excavations:** ☐ High ☑ Medium ☐ Low

**Abundance of ground squirrel burrows:** ☐ High ☐ Medium ☑ Low

**Substrate Disturbance:** ☑ None ☐ Grazing ☐ Grading ☐ Discing ☐ Furrows

Grazing - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Grading - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Discing- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Furrows- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Mowing – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Dirt Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Paved Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Other? Describe: Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

| | |
|---|---|
| **Date:** September 23, 2025 9:36 AM | **Preserve:** Ramona Grasslands Preserve |
| **Plot:** 3B-3 | **Observers:** DT KA |

**Potential Kangaroo Rat Sign?** ☐ Scat ☐ Burrow(s) ☐ Tracks ☐ Tail Drag ☐ Caching/foraging craters
Other(Describe):



# SKR Monitoring – Habitat Assessment Form

**Plot Number:** 3B-4 **Date/ Time:** 09/23/2025 10:08

**Grazing Management Unit:** NA **SKR Management Area:** None

**Digital Photographs taken @ SE Corner of Plot?** ☑ Yes ☐ No

**Observer(s):** DT KA

**Trapping needed to confirm SKR vs DKR?** ☐ Yes ☑ No

**Overall SKR Potential:** ☑ High ☐ Medium ☐ Low ☐ None

**Comments:** Low obstruction factor

## Plot Habitat Descriptors

**Describe current land use:** ☑ Grazing ☐ Open Space ☐ Other

**Soil Surface Hardness:** ☐ Hard ☑ Medium ☐ Soft

**Living/Standing Herb Density:** ☐ High ☐ Medium ☑ Low

**Bare Ground:** ☐ 0 ☐ 0-5% ☑ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Plant Litter (dead):** ☐ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☑ 50-75% ☐ 75-95%

**Forb Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Grass Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Shrub Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Forbs - List 3 Dominant Species:** Ambrosia psilostachya, Herschfeldia incana, Erodium cicutarium

**Grasses - List 3 Dominant Species:** Avena barbata, Distichilis spicata, Bromus hordaceous

**Shrubs - List 3 Dominant Species:** Corethrogyne filaginifolia

**Trees - Dominant Species:**

**Abundance of ACTIVE Gopher Excavations:** ☐ High ☐ Medium ☑ Low

**Abundance of INACTIVE Gopher Excavations:** ☐ High ☑ Medium ☐ Low

**Abundance of ground squirrel burrows:** ☐ High ☑ Medium ☐ Low

**Substrate Disturbance:** ☐ None ☑ Grazing ☐ Grading ☐ Discing ☐ Furrows

Grazing - Estimate When? ☐ past 3 months ☑ past 6 months ☐ past 12 months ☐ Older

Grading - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Discing- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Furrows- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Mowing – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Dirt Road – Estimate When? ☑ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Paved Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Other? Describe: Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

| | |
|---|---|
| **Date:** September 23, 2025 10:08 AM | **Preserve:** Ramona Grasslands Preserve |
| **Plot:** 3B-4 | **Observers:** DT KA |

**Potential Kangaroo Rat Sign?** ☑ Scat ☑ Burrow(s) ☐ Tracks ☐ Tail Drag ☐ Caching/foraging craters
Other(Describe):





# SKR Monitoring – Habitat Assessment Form

**Plot Number:** A3-1 **Date/ Time:** 09/23/2025 11:50

**Grazing Management Unit:** NA **SKR Management Area:** 3

**Digital Photographs taken @ SE Corner of Plot?** ☑ Yes ☐ No

**Observer(s):** DT KA

**Trapping needed to confirm SKR vs DKR?** ☐ Yes ☑ No

**Overall SKR Potential:** ☑ High ☐ Medium ☐ Low ☐ None

**Comments:** Low obstruction factor

## Plot Habitat Descriptors

**Describe current land use:** ☐ Grazing ☑ Open Space ☐ Other

**Soil Surface Hardness:** ☑ Hard ☐ Medium ☐ Soft

**Living/Standing Herb Density:** ☐ High ☐ Medium ☑ Low

**Bare Ground:** ☐ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☑ 50-75% ☐ 75-95%

**Plant Litter (dead):** ☐ 0 ☐ 0-5% ☐ 5-25% ☑ 25-50% ☐ 50-75% ☐ 75-95%

**Forb Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Grass Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Shrub Cover:** ☑ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Forbs - List 3 Dominant Species:** Ambrosia psilostachya, Herschfeldia incana, Erodium cicutarium

**Grasses - List 3 Dominant Species:** Bromus hordaceous, Bromus rubens

**Shrubs - List 3 Dominant Species:**

**Trees - Dominant Species:**

**Abundance of ACTIVE Gopher Excavations:** ☐ High ☐ Medium ☑ Low

**Abundance of INACTIVE Gopher Excavations:** ☐ High ☐ Medium ☑ Low

**Abundance of ground squirrel burrows:** ☐ High ☑ Medium ☐ Low

**Substrate Disturbance:** ☐ None ☐ Grazing ☐ Grading ☐ Discing ☐ Furrows

Grazing - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Grading - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Discing- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Furrows- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Mowing – Estimate When? ☐ past 3 months ☑ past 6 months ☐ past 12 months ☐ Older

Dirt Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Paved Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Other? Describe: Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

**Potential Kangaroo Rat Sign?** ☑ Scat ☑ Burrow(s) ☐ Tracks ☐ Tail Drag ☐ Caching/foraging craters

Other(Describe):

| | |
|---|---|
| **Date:** September 23, 2025 11:50 AM | **Preserve:** Ramona Grasslands Preserve |
| **Plot:** A3-1 | **Observers:** DT KA |







# SKR Monitoring – Habitat Assessment Form

**Plot Number:** A3-2 **Date/ Time:** 09/23/2025 11:45

**Grazing Management Unit:** NA **SKR Management Area:** 3

**Digital Photographs taken @ SE Corner of Plot?** ☑ Yes ☐ No

**Observer(s):** DT KA

**Trapping needed to confirm SKR vs DKR?** ☐ Yes ☑ No

**Overall SKR Potential:** ☑ High ☐ Medium ☐ Low ☐ None

**Comments:** Low obstruction factor

## Plot Habitat Descriptors

**Describe current land use:** ☐ Grazing ☑ Open Space ☐ Other

**Soil Surface Hardness:** ☑ Hard ☐ Medium ☐ Soft

**Living/Standing Herb Density:** ☐ High ☐ Medium ☑ Low

**Bare Ground:** ☐ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☑ 50-75% ☐ 75-95%

**Plant Litter (dead):** ☐ 0 ☐ 0-5% ☐ 5-25% ☑ 25-50% ☐ 50-75% ☐ 75-95%

**Forb Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Grass Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Shrub Cover:** ☑ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Forbs - List 3 Dominant Species:** Ambrosia psilostachya, Herschfeldia incana

**Grasses - List 3 Dominant Species:** Bromus hordaceous, Bromus rubens

**Shrubs - List 3 Dominant Species:**

**Trees - Dominant Species:**

**Abundance of ACTIVE Gopher Excavations:** ☐ High ☐ Medium ☑ Low

**Abundance of INACTIVE Gopher Excavations:** ☐ High ☐ Medium ☑ Low

**Abundance of ground squirrel burrows:** ☐ High ☑ Medium ☐ Low

**Substrate Disturbance:** ☐ None ☐ Grazing ☐ Grading ☐ Discing ☐ Furrows

Grazing - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Grading - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Discing- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Furrows- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Mowing – Estimate When? ☐ past 3 months ☑ past 6 months ☐ past 12 months ☐ Older

Dirt Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Paved Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Other? Describe: Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

**Potential Kangaroo Rat Sign?** ☑ Scat ☑ Burrow(s) ☑ Tracks ☐ Tail Drag ☐ Caching/foraging craters

Other(Describe):

| | |
|---|---|
| **Date:** September 23, 2025 11:45 AM | **Preserve:** Ramona Grasslands Preserve |
| **Plot:** A3-2 | **Observers:** DT KA |







# SKR Monitoring – Habitat Assessment Form

**Plot Number:** A3-3 **Date/ Time:** 09/23/2025 11:40

**Grazing Management Unit:** NA **SKR Management Area:** 3

**Digital Photographs taken @ SE Corner of Plot?** ☑ Yes ☐ No

**Observer(s):** DT KA

**Trapping needed to confirm SKR vs DKR?** ☐ Yes ☑ No

**Overall SKR Potential:** ☑ High ☐ Medium ☐ Low ☐ None

**Comments:** Low obstruction factor

## Plot Habitat Descriptors

**Describe current land use:** ☐ Grazing ☑ Open Space ☐ Other

**Soil Surface Hardness:** ☑ Hard ☐ Medium ☐ Soft

**Living/Standing Herb Density:** ☐ High ☐ Medium ☑ Low

**Bare Ground:** ☐ 0 ☐ 0-5% ☐ 5-25% ☑ 25-50% ☐ 50-75% ☐ 75-95%

**Plant Litter (dead):** ☐ 0 ☐ 0-5% ☐ 5-25% ☑ 25-50% ☐ 50-75% ☐ 75-95%

**Forb Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Grass Cover:** ☐ 0 ☑ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75% ☐ 75-95%

**Shrub Cover:** ☑ 0 ☐ 0-5% ☐ 5-25% ☐ 25-50% ☐ 50-75%☐ 75-95%

**Forbs - List 3 Dominant Species:** Herschfeldia incana, Erodium cicutarium, Ambrosia psilostachya

**Grasses - List 3 Dominant Species:** Bromus rubens, Bromus hordaceous

**Shrubs - List 3 Dominant Species:**

**Trees - Dominant Species:**

**Abundance of ACTIVE Gopher Excavations:** ☐ High ☐ Medium ☑ Low

**Abundance of INACTIVE Gopher Excavations:** ☐ High ☐ Medium ☑ Low

**Abundance of ground squirrel burrows:** ☐ High ☑ Medium ☐ Low

**Substrate Disturbance:** ☐ None ☐ Grazing ☐ Grading ☐ Discing ☐ Furrows

Grazing - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Grading - Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Discing- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Furrows- Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Mowing – Estimate When? ☐ past 3 months ☑ past 6 months ☐ past 12 months ☐ Older

Dirt Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Paved Road – Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

Other? Describe: Estimate When? ☐ past 3 months ☐ past 6 months ☐ past 12 months ☐ Older

**Potential Kangaroo Rat Sign?** ☑ Scat ☑ Burrow(s) ☐ Tracks ☐ Tail Drag ☐ Caching/foraging craters

Other(Describe):

| | |
|---|---|
| **Date:** September 23, 2025 11:40 AM | **Preserve:** Ramona Grasslands Preserve |
| **Plot:** A3-3 | **Observers:** DT KA |





