Annual Report for the Otay Ranch Preserve and Piper Ranch
January 1–December 31, 2025

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8: Repeat Photographic Monitoring to Document Conditions After Trash Removal
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Acronyms and Abbreviations

APN	assessor parcel number
ATV	all-terrain vehicle
BHCO	Brown-headed cowbird
Cal-IPC	California Invasive Plant Council
CACW	coastal cactus wren
CalFire	California Department of Forestry and Fire Protection
CAGN	coastal California gnatcatcher
CDFW	California Department of Fish and Wildlife
CFD	Community Facilities District
City	City of Chula Vista
CNPS	California Native Plant Society
County	County of San Diego
EMP	Environmental Mitigation Program
FY	Fiscal Year
GSOB	gold-spotted oak borer
IMG	Inspect and Manage
ISHB	Invasive shot hole borer
LBVI	least Bell's vireo
MSP	Management and Monitoring Strategic Plan
MSCP	Multiple Species Conservation Program
POM	Preserve Owner/Manager (City and County)
Preserve	Otay Ranch Preserve
project	Otay Ranch Preserve Enhancement Project
PSB	Preserve Steward/Biologist (RECON)
QCB	Quino checkerspot butterfly
RMP	Otay Ranch Preserve Phase 1 & Phase 2 Resource Management Plans
SANDAG	San Diego Association of Governments
SDMMP	San Diego Management and Monitoring Program
USDC	U.S. Department of Commerce
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
V8E	Village 8 East
YBCU	yellow-billed cuckoo

1.0 Introduction

The purpose of the 2025 annual report is to provide a summary of monitoring and management tasks performed on conveyed lands under Preserve Owner/Manager (POM) management in calendar year 2025 using funds generated by Community Facilities District (CFD) 97-2. Monitoring and management tasks were based on the priorities identified in the Otay Ranch Phase 2 Resource Management Plan Update (RMP; RECON Environmental, Inc. [RECON] 2018).

The Otay Ranch Preserve (Preserve) is located in southwestern San Diego County and is composed of three major parcels: Otay River parcel, Proctor Valley parcel, and San Ysidro Mountains parcel (County of San Diego [County] 1993). The Preserve boundaries include lands within the city of Chula Vista and the county of San Diego. Through December 31, 2025, lands that have been conveyed to the Preserve total 4,640.539 acres, including the property owner funded 11.900-acre Piper Ranch parcels (Table 1). No activities were performed on the Piper Ranch parcels during 2025. Figures 1–3 show the locations of conveyed land. The Rock Top and Sliver parcels were conveyed in 2025.

The Preserve is a hardline preserve that has been designed and is managed specifically for protection and enhancement of the multiple species present. The Preserve also serves to connect large areas of open space through a series of wildlife corridors, including connections between regional open space areas west and east of Otay Reservoir and north to San Miguel Mountain. The Preserve is managed by the POM (City of Chula Vista [City] and County). Preserve monitoring and operations/maintenance tasks were implemented by the Preserve Steward/Biologist (PSB; RECON) in consultation with the POM.

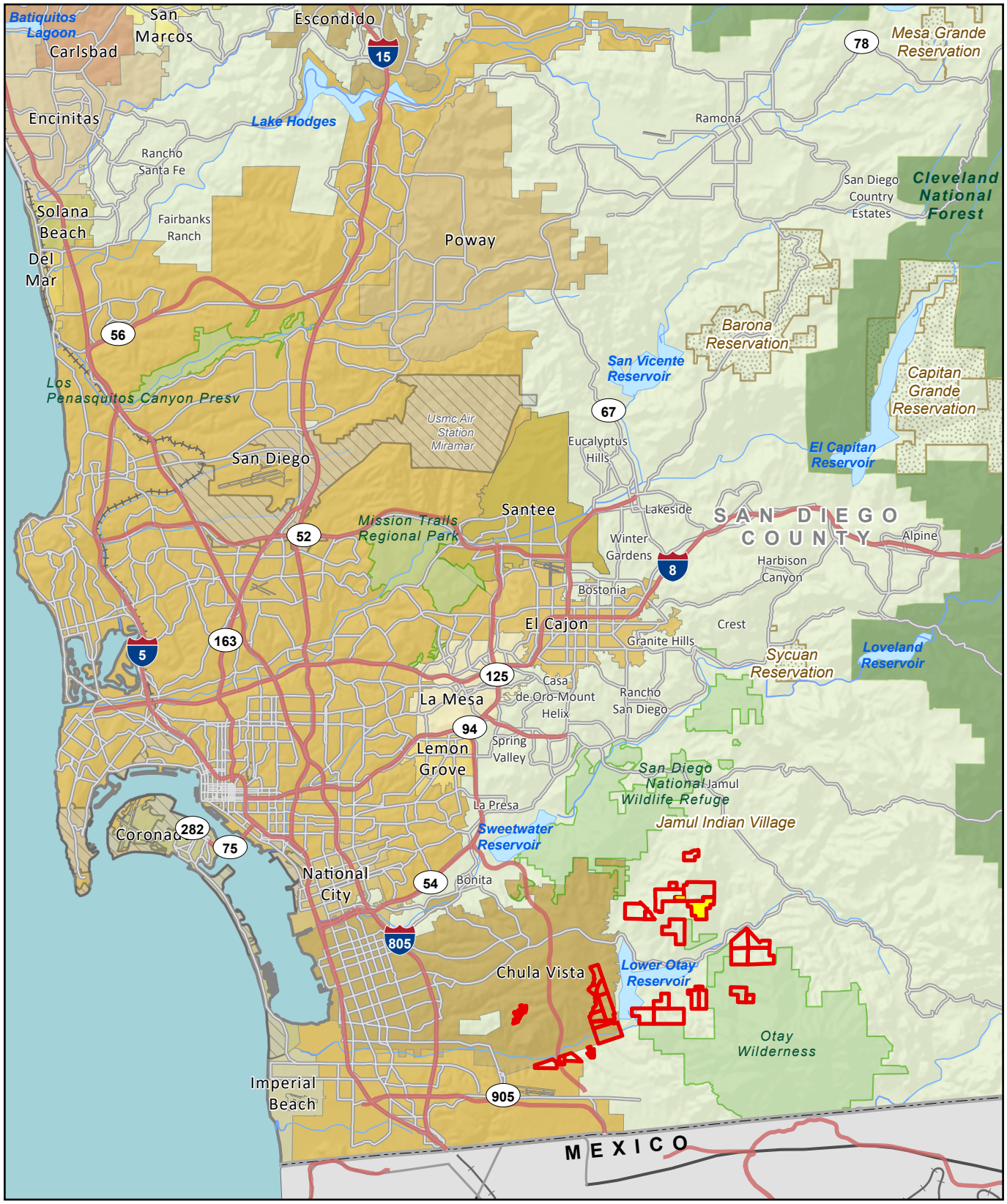
The purpose of this annual report is to document access issues, new site disturbances, previously undetected plant and wildlife species, sensitive species, and management tasks performed between January 1, 2025, and December 31, 2025.

Border 2 Incident

The Border 2 Fire ignited within the San Ysidro Mountains outside of the Otay Ranch Preserve on January 23, 2025, from an undetermined cause. Due to hot, dry, and windy Santa Ana conditions, the fire spread rapidly. During the night of January 23 and early morning hours on January 24, the fire reached portions of Otay Ranch Preserve within the Northern San Ysidro, San Ysidro, McMillin, Little Cedar Canyon, and Dulzura parcels. A significant rain event (greater than 0.5 inches) on January 26 and 27 helped slow the spread of the fire. The size of the Border 2 Fire was reported as 6,625 acres and was contained on January 28 (National Interagency Fire Center 2025). Within Otay Ranch Preserve, the Border 2 Fire footprint was 1,118 acres (Figure 4). Preserve Monitoring and Operations/Maintenance tasks were affected by the Border 2 Fire, and the POM/PSB response to the Border 2 Incident is discussed throughout this 2025 annual report.

Table 1 Conveyed Preserve Parcels, Assessor's Parcel Numbers, and Acreages as of December 2025		
Parcel(s)	Assessor Parcel Number (APN)	Acreage
Dulzura	598-160-17, 598-170-18, 647-050-06, 647-060-03, 647-060-05[b]	801.018
Salt Creek	643-070-08, 643-070-16[c], 644-080-09, 644-080-11, 644-080-15, 644-090-04	784.500
San Ysidro	647-130-03, 647-140-01	517.422
Proctor Valley Extension	598-090-01, 598-030-01, 598-080-05	399.700
Proctor Valley	598-080-06[d]	275.286
Ridge	598-140-04, 598-140-05	270.000
Rock Top	598-090-02	264.000
Jamul Mountains	598-070-08, 598-070-10[e]	258.132
McMillin	647-100-08, 647-100-10	230.280
Millenia	646-020-14, 646-030-20	189.200
Little Cedar Canyon	647-110-03, 647-120-03[f]	160.000
Northern Salt Creek	643-070-14	149.758[g]
Northern San Ysidro	647-090-07[h]	118.500
Proctor Valley (North)	597-150-16[i]	82.381
Proctor Valley (South)	598-020-05	40.000
Western Wolf Canyon	644-313-13, 644-313-14[j], 644-313-65, 644-313-66, 644-340-25	32.340
Wolf Canyon[k]	644-313-11	29.322
Johnson Canyon (East)	646-030-34[l]	21.500
Piper Ranch[m]	646-030-27, 646-030-33	11.900
Sliver	598-080-05	3.120
Bonita Glen	598-080-10[a]	2.180
TOTAL		4,640.539

NOTE:Parcel acreages are based on grant deeds provided by the City of Chula Vista. The deed acreages may differ slightly from the acreages calculated using geographic information system due to minor discrepancies in the parcel boundaries.
[a]Previous APN 598-080-05.
[b]Previous APNs 598-160-14, 598-170-04, 647-050-04, 647-060-01.
[c]Previous APN 643-070-10.
[d]Previous APN 598-08-002.
[e]Previous APNs 598-070-05, 598-070-06.
[f]Previous APNs 647-110-01, 647-120-01.
[g]Northern Salt Creek total acreage increased by 1.161 acres due to conveyance of Parcels A through E within the Parcel during 2022.
[h]Previous APN 647-090-04.
[i]Previous APN 597-150-06.
[j]Previous APN 646-030-31.
[k]Previous APN 644-313-12.
[l]The current APN is provided along with the original grant deed acreage from APN 644-313-07.
[m]A separate Community Facilities District will be established in the future.



Conveyed Land Under POM Management

Lands Conveyed in 2025

FIGURE 1
Regional Location of Otay Ranch Preserve and Piper Ranch

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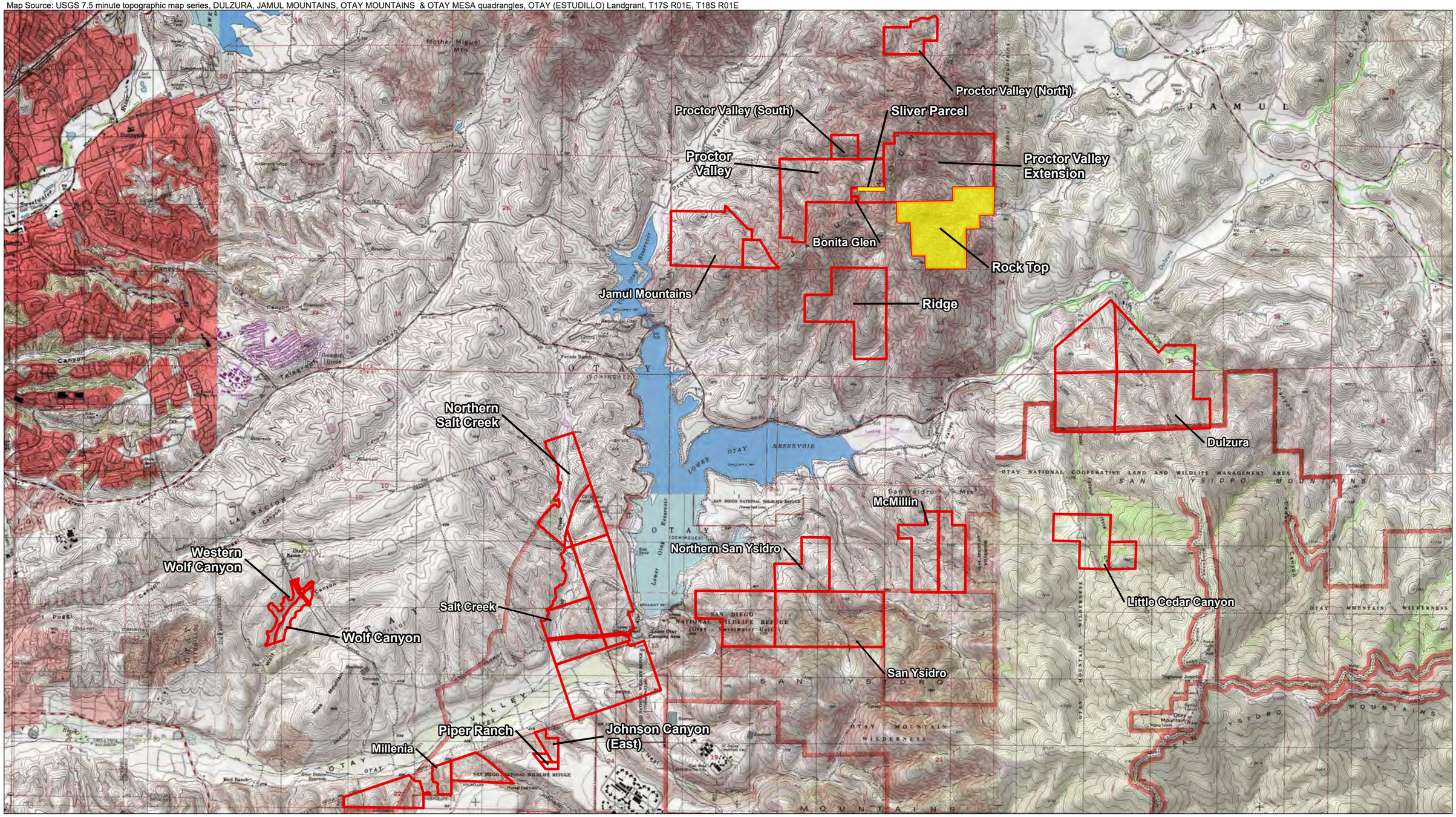
Map Source: USGS 7.5 minute topographic map series, DULZURA, JAMUL MOUNTAINS, OTAY MOUNTAINS & OTAY MESA quadrangles, OTAY (ESTUDILLO) Landgrant, T17S R01E, T18S R01E



Conveyed Land Under POM Management

Lands Conveyed in 2025

FIGURE 2
Otay Ranch Preserve and Piper Ranch
Location on USGS Map

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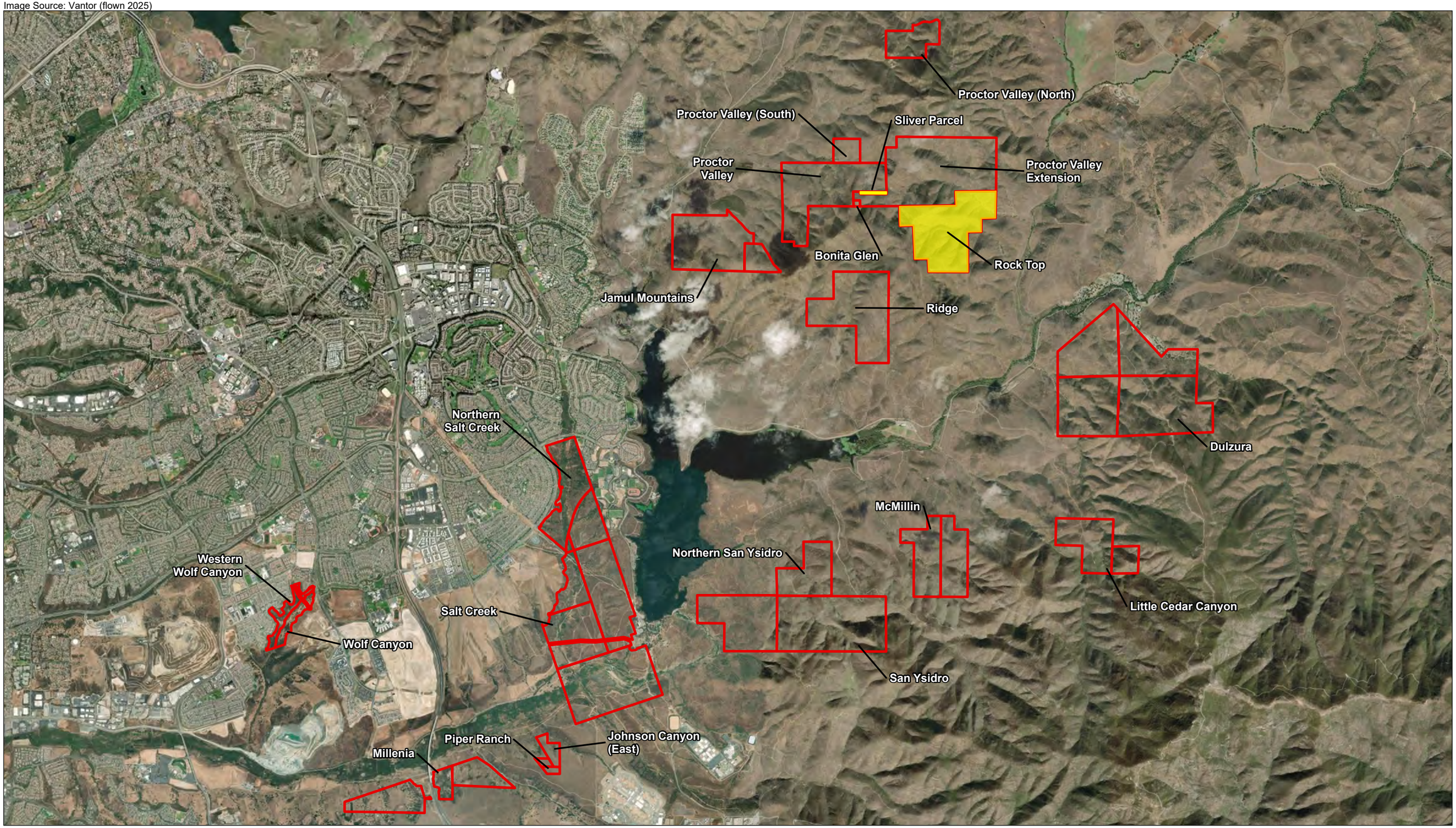
Image Source: Vantor (flown 2025)



Conveyed Land Under POM Management

Lands Conveyed in 2025

0 Feet 4,000

FIGURE 3
Otay Ranch Preserve and Piper Ranch on Aerial Photograph

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2.0 Preserve Monitoring

This chapter describes Preserve monitoring tasks that occurred between January 1 and December 31, 2025. These Preserve monitoring tasks were proposed in the Fiscal Year (FY) 2024–25 annual work plan and FY 2025–26 annual work plan (RECON 2024a and 2025a). The headings used within this annual report match the associated task numbers in the FY 2024–25 and FY 2025–26 annual work plans.

There are nine attachments to this report, which are described below:

- Attachment 1 includes Figures 4–57.
- Attachment 2 includes Photographs 1–35 of general monitoring, maintenance, and observations.
- Attachment 3 includes Photographs 1–10 of the photographic monitoring locations established for native shrub dieback.
- Attachment 4 includes Photographs 1–16 of Quino checkerspot butterfly surveys.
- Attachment 5 includes Photographs 1–40 of the repeat photographic monitoring to document changes at the former Quino checkerspot butterfly short-term threat reduction project.
- Attachment 6 includes Photographs 1–12 of the photographic monitoring locations established for Border 2 Fire recovery.
- Attachment 7 includes Photographs 1–40 of repeat photographic monitoring locations to document changes from the Border 2 Fire.
- Attachment 8 includes Photographs 1–8 of the repeat photographic monitoring to document conditions after trash removal.
- Attachment 9 includes Photographs 1–11 of photographic monitoring locations established for container plants installed for Border 2 Fire access and erosion control.

The following Preserve monitoring tasks were conducted in support of the Otay Ranch Preserve Phase 1 and Phase 2 RMPs (County of San Diego 1993; RECON 2018): seed collection and redistribution, Hermes copper butterfly (*Lycaena hermes*) qualitative monitoring, invasive shot hole borer (*Euwallacea* sp.; ISHB) tree health surveys and native shrub dieback surveys, focused rare plant surveys, western spadefoot (*Spea hammondii*) surveys, golden eagle (*Aquila chrysaetos*) camera surveys, Quino checkerspot butterfly (*Euphydras editha quino*; QCB) surveys, photographic monitoring, vegetation rapid assessment monitoring, baseline surveys, and gold-spotted oak borer (*Agrilus auroguttatus*) monitoring. The Preserve monitoring tasks also included land stewardship, consisting of site visits, meetings and coordination, and reporting.

2025 Weather Summary

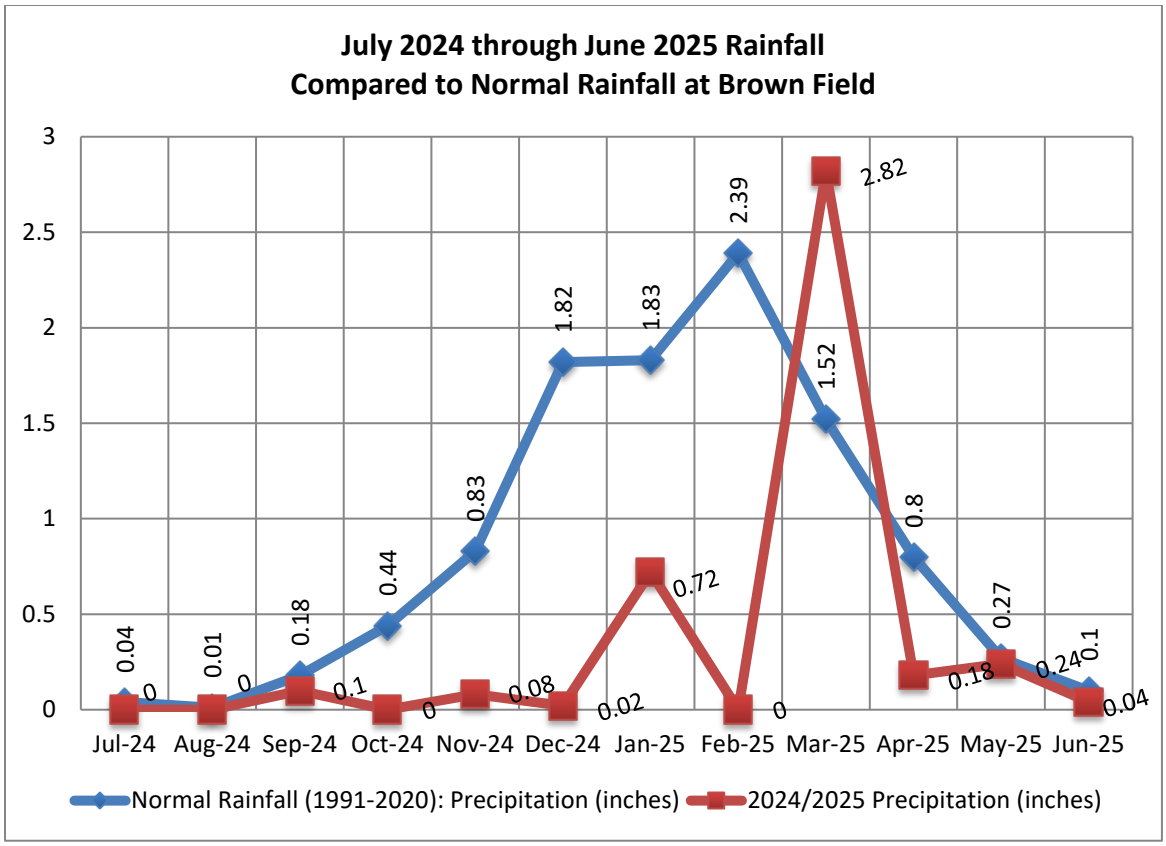
The total rainfall for the 2024-2025 season was well below normal by 6.03 inches. Between July 1, 2024 and June 30, 2025, rainfall at Brown Field (the closest reporting station) was 4.20 inches (Table 2 and Graph 1; U.S. Department of Commerce [USDC] 2025a and 2025b). At Brown Field, normal rainfall during this time period is approximately 10.23 inches based on rainfall data collected between 1991 and 2020 (USDC 2025b). Temperatures were above normal throughout the 2024-2025 season (Table 3; Graph 2).

No significant (greater than 0.5 inch) rain events occurred between July 1, 2024, and January 25, 2025. Hot Santa Ana winds were present in late January. The combination of critically dry vegetation and relative humidity down to 2 percent caused locally critical fire weather conditions per the National Weather Service (2025). One significant rain event occurred on January 26 and 27, totaling 0.72 inches. February continued to be dry with above normal temperatures and below normal rainfall. The National Weather Service reported on February 24, 2025, that it was the driest water year on record, with records dating back to 1850. Record breaking high temperatures were reported in February (8.8 degrees Fahrenheit above normal) and March (12.3 degrees Fahrenheit above normal). Two significant rain events occurred in March, between March 5 through 7, totaling 0.68 inches, and March 11 through 14, totaling 1.79 inches. Due to the severely dry and warm conditions, the soil dried rapidly. It was observed that many annual species germinated later than normal and shrubs flowered later than normal in 2025.

Table 2
July 2024 through June 2025 Rainfall Compared to Normal Rainfall

Month	Precipitation (inches)[1]	Normal Rainfall: Precipitation (inches)[2]	Difference (inches)
2024			
July	T	0.04	–0.04
August	T	0.01	–0.01
September	0.10	0.18	–0.08
October	0.00	0.44	–0.44
November	0.08	0.83	–0.75
December	0.02	1.82	–1.80
Total	**0.20**	**3.32**	**-3.12**
2025			
January	0.72	1.83	–1.11
February	T	2.39	–2.39
March	2.82	1.52	+1.30
April	0.18	0.80	–0.62
May	0.24	0.27	–0.03
June	0.04	0.10	–0.06
Total	**4.00**	**6.91**	**–2.91**
GRAND TOTAL	**4.20**	**10.23**	**–6.03**

[1]SOURCE: USDC 2025a
[2]SOURCE: USDC 2025b
T = Trace

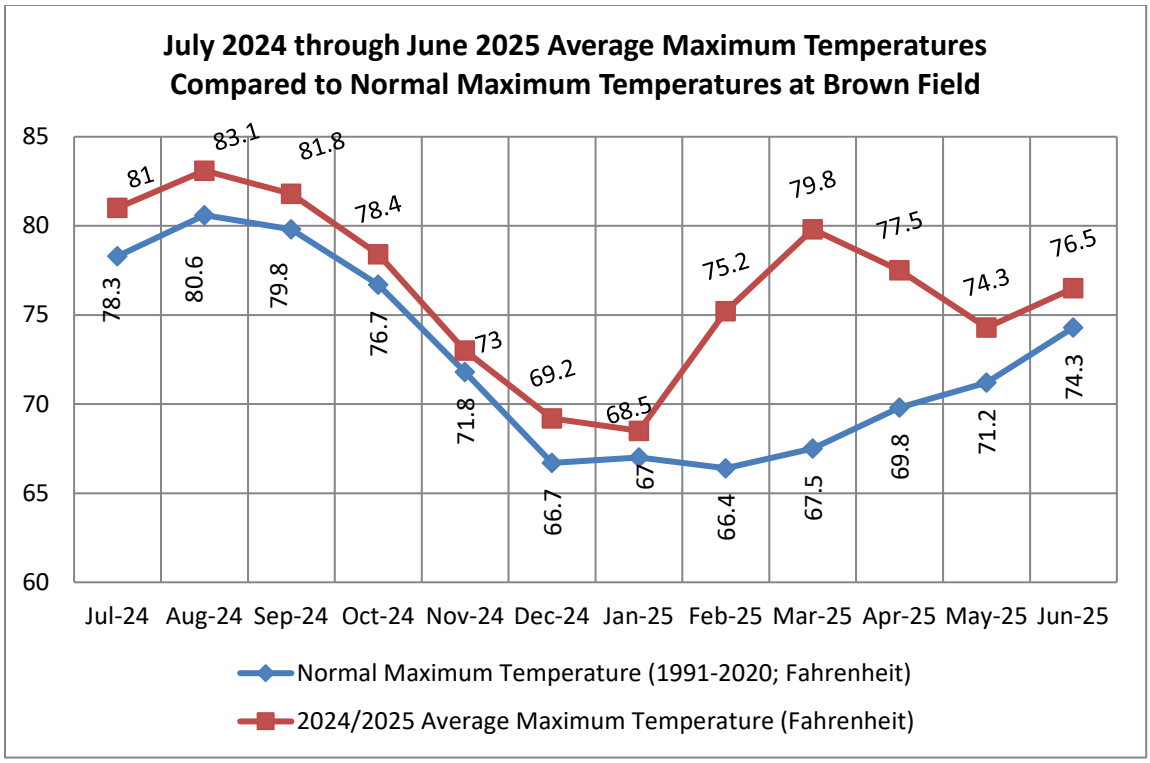


GRAPH 1

July 2024 through June 2025 Rainfall Compared to Normal Rainfall at Brown Field

Table 3 July 2024 through June 2025 Average Maximum Temperatures Compared to Normal Maximum Temperatures			
Month	Average Maximum Temperature (Fahrenheit)[1]	Normal Maximum Temperature (Fahrenheit)[2]	Difference (Fahrenheit)
2024			
July	81.0	78.3	+2.7
August	83.1	80.6	+2.5
September	81.8	79.8	+2.0
October	78.4	76.7	+1.7
November	73.0	71.8	+1.2
December	69.2	66.7	+2.5
2025			
January	68.5	67.0	+1.5
February	75.2	66.4	+8.8
March	79.8	67.5	+12.3
April	77.5	69.8	+7.7
May	74.3	71.2	+3.1
June	76.5	74.3	+2.2

[1]SOURCE: USDC 2025a
[2]SOURCE: USDC 2025b



GRAPH 2
July 2024 through June 2025 Average Maximum Temperatures
Compared to Normal Maximum Temperatures at Brown Field

Task 1: Surveys

Surveys conducted between January 1, 2025, and December 31, 2025, are discussed in the subtask sections below. The results of the QCB and baseline surveys are summarized in Section 4, Subtasks 4g (FY 2024-25) and 4b (FY 2025-26).

Subtask 1a. (FY 2024-25 and FY 2025-26) Seed Collection and Redistribution

Quino Checkerspot Butterfly

Seed from Quino checkerspot butterfly non-listed host plant species, dot-seed plantain (*Plantago erecta*), and non-listed nectar plants, common goldfields (*Lasthenia gracilis*) and farinose ground pink (*Linanthus dianthiflorus*), were collected from areas within Otay Ranch Preserve where Quino checkerspot butterfly have not been observed or have not been observed since 2009 and redistributed within select Quino checkerspot butterfly habitat restoration areas within the Millenia, Salt Creek, and Dulzura parcels (Figures 5 and 6; Table 4).

Post-fire Recovery Quino Checkerspot Butterfly

During the Border 2 Fire suppression, areas within occupied QCB habitat were cleared of vegetation by fire crews at the Dulzura and San Ysidro parcels to stop the fire from progressing. Dot-seed plantain and common goldfields seed from areas within Otay Ranch Preserve was redistributed within select areas that were occupied by Quino checkerspot butterfly prior to vegetation being scraped and grubbed by a bulldozer during the Border 2 Fire suppression effort at the Dulzura parcels (Figure 6; Table 4).

In summer 2025, for post-fire recovery, dot-seed plantain, common goldfields, cryptantha (*Cryptantha* spp.), and farinose ground pink seed was collected by Native West Nursery for seed bulking at the nursery. Seed bulking is a method for increasing the amount of available seed by germinating native seed, pollinating the plants, and collecting the seed all within a nursery setting. Seed bulking began at Native West Nursery in winter 2025. The purpose of the seed bulking program is to increase QCB host and nectar plants within areas cleared of vegetation during fire suppression and to increase the density of host and nectar plants in the surrounding QCB habitat.

Coastal Cactus Wren

Seed was also collected from non-listed plant species that support prey arthropod species for coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*), including purple needle grass (*Stipa pulchra*) and littleseed muhly (*Muhlenbergia microsperma*), from within Otay Ranch Preserve and redistributed within select cactus wren habitat restoration areas at the Salt Creek and Northern Salt Creek parcels (see Figure 5 and Table 4).

Table 4
Seed Collection and Redistribution
Parcel(s), Date, Task, Focal Species, and Corresponding Figure

Parcel(s)	Date	Task	Focal Species	Figure(s)
Border 2 Fire (Dulzura parcels): 01/23/2025 through 01/28/2025				
Dulzura	02/11/2025	Common goldfields seed was dispersed within select areas of the Border 2 Fire dozer line. The seed dispersal locations were mapped.	Quino checkerspot butterfly	6
Dulzura	02/12/2025	Common goldfields seed was dispersed within the former San Diego Association of Governments TransNet Environmental Mitigation Program Grant Quino Checkerspot Threat Reduction Project.	Quino checkerspot butterfly	6
Salt Creek	03/10/2025	Prior to a rain event, the PSB distributed farinose ground pink, common goldfields, and dot-seed plantain seed within the restoration area SC_16 (Attachment 2: Photograph 1).	Quino checkerspot butterfly	5
Salt Creek, Millenia	12/22/2025	Common goldfields and dot-seed plantain seed was distributed.	Quino checkerspot butterfly	5
Salt Creek, Northern Salt	12/23/2025	Littleseed muhly (*Muhlenbergia microsperma*) and purple needle grass (*Stipa pulchra*) seed was distributed	coastal cactus wren	5

Subtask 1c. (FY 2024-25) Invasive Shot Hole Borer (*Euwallacea* sp.; ISHB) Tree Health Surveys & Native Shrub Dieback Surveys

Tree health surveys were conducted to document the effects of ISHB within riparian vegetation at the Northern Salt Creek, Salt Creek, and Wolf Canyon parcels, totaling a 61.19-acre survey area (Figure 7). Surveys were conducted at the end of spring as any lack of vigor would be obvious in the tree crown, and signs of the ISHB would be fresh and easier to see. Table 5 lists the survey acreage for each location.

Table 5
Parcel Name and Acreage for Invasive Shot Hole Borer Tree Health Surveys

Parcel Name	Location	Survey Area Acreage
Salt Creek and Northern Salt Creek	Salt Creek drainage	51.6
Salt Creek	Otay River	5.3
Wolf Canyon	Unnamed drainage	4.3

Seven photo monitoring points established at Northern Salt Creek and Salt Creek parcels in 2021 within riparian areas with willow stands were revisited on May 14, 2025. One riparian photo monitoring location with two photos facing opposite directions was established at Wolf Canyon in 2023 and was revisited on May 22, 2025. Three, four, and three photo monitoring locations for native shrub dieback were established in 2025 at Salt Creek, Northern Salt Creek, and Wolf Canyon, respectively (Figure 7; Attachment 3: Photographs 1–10). Attachment 2: Photographs 2 and 3 show representative photos of healthy riparian trees at Photo Point 1 in May 2021 and May 2025. Tree health surveys consisted of a visual inspection of all willow trees for signs of ISHB and fusarium dieback such as ISHB entry/exit holes, frass, bark staining, sugary exudate, gumming, and branch dieback. Any trees with visible signs of potential ISHB infestation and/or potential Fusarium Dieback were mapped with a global positioning system unit. No ISHB sign was observed, and no samples were collected in 2025. No other native plants demonstrated unusual dieback or symptoms of disease, and no further testing was warranted. Table 6 lists the survey dates, parcels, tasks, and notes.

Table 6 Invasive Shot Hole Borer Tree Health Surveys and Native Shrub Dieback Surveys Dates, Parcels, Task, and Notes			
Date	Parcel(s)	Task	Notes
05/14/2025	Northern Salt Creek, Salt Creek	Tree health surveys; repeat photo monitoring; and native shrub dieback survey	All previous ISHB sample points were visited. Most of the trees were healthy, though some had a few branches that were dying back. No signs of ISHB exit wounds or exudates were observed and no physical samples were taken. Lemonade berry (*Rhus integrifolia*) and laurel sumac (*Malosma laurina*) were examined for signs of dieback. Most appeared healthy. A few had dieback on some branches and a few also had lesions. However, it does not appear to be a major dieback occurring presently. Photo monitoring was conducted at each established location.
05/22/2025	Wolf Canyon, Western Wolf Canyon	Tree health surveys; repeat photo monitoring; and native shrub dieback survey	No ISHB sign observed. Dieback was observed on lemonade berry shrubs near the south end of the parcels. Drought or root exposure due to erosion is suspected to be the cause. Willows on-site have healthy canopies.

In addition, in May 2025, native shrub dieback surveys were conducted at the Northern Salt Creek, Salt Creek, and Wolf Canyon parcels. Figure 7 shows the monitoring location and two, four, and three locations where dieback of lemonade berry (*Rhus integrifolia*) shrubs was observed at the Salt Creek, Northern Salt Creek, and Wolf Canyon parcels, respectively. Shrub dieback appeared to remain the same as previous years. Shrub with lesions will be visually monitored in 2026 for signs of recovery. If signs of recovery are not observed, additional tissue sampling may be proposed in future work plans. Attachment 2: Photograph 4 demonstrates evidence of a lesion on a lemonade berry at the Wolf Canyon parcels. Table 6 above lists the survey dates and notes.

Subtask 1d. (FY 2024-25) Focused Rare Plant Surveys

Rare plant surveys focusing on annual and herbaceous and conspicuous perennial species were conducted in spring 2025. Rare plant monitoring was conducted in accordance with the Management and Monitoring Strategic Plan (MSP) using the Inspect and Manage (IMG) protocol for species identified by the MSP IMG management group as priority species. Rare plant monitoring included conducting MSP IMG rare plant surveys and non-IMG rare plant census surveys (Table 7).

Table 7 Rare Plant Surveys Dates, Locations, and Survey Type		
Date	Location (Parcels)	Survey Type and Species
04/09/2025	Western Wolf Canyon	IMG – variegated dudleya*
04/10/2025	Salt Creek	IMG – variegated dudleya
04/14/2025	Salt Creek	IMG – variegated dudleya
04/15/2025	Salt Creek	IMG – variegated dudleya
04/16/2025	Salt Creek	IMG – variegated dudleya
04/25/2025	Millenia	IMG – variegated dudleya*
04/28/2025	Ridge	Census – variegated dudleya
04/28/2025	Jamul Mountains	IMG – variegated dudleya
04/29/2025	Dulzura	IMG – variegated dudleya
04/30/2025	Johnson Canyon (East)	IMG – variegated dudleya*
04/30/2025	Proctor Valley	Census – variegated dudleya, Dunn's mariposa lily
05/06/2025	Ridge	IMG – variegated dudleya
05/09/2025	Northern San Ysidro, San Ysidro	IMG – variegated dudleya
05/15/2025	San Ysidro	IMG – western spleenwort*
05/15/2025	San Ysidro	IMG – variegated dudleya
05/27/2025 05/29/2025 05/30/2025	Dulzura	Census - Dunn's mariposa lily
06/02/2025	Little Cedar Canyon	Census - Dunn's mariposa lily
06/03/2025	Proctor Valley (North)	IMG- San Miguel savory
06/04/2025	Northern San Ysidro	IMG – Orcutt's brodiaea
06/06/2025	Proctor Valley	Census - Dunn's mariposa lily
06/10/2025	Northern Salt Creek	IMG – Otay tarplant
06/11/2025	Millenia	Census – Otay tarplant
06/12/2025 06/13/2025	Western Wolf Canyon	IMG – Otay tarplant
06/23/2025	Northern San Ysidro, San Ysidro	IMG – Orcutt's brodiaea
06/27/2025	Little Cedar Canyon	IMG – Orcutt's brodiaea
IMG = Inspect and Manage *An IMG was not established as the species was not observed at that location.		

Results of the 2025 MSP IMG rare plant surveys are shown in Table 8 and Figures 8 through 14. Representative photos are shown in Attachment 2: Photographs 5 and 6.

Table 8
2025 Management Strategic Plan Inspect and Manage Rare Plant Survey Results

Common Name	Scientific Name	Parcel(s)	Estimated Number of Individuals	MSP IMG
variegated dudleya	*Dudleya variegata*	Dulzura	5,964	DUVA_6DUPA053_1
		Jamul Mountains	94	DUVA_3PRVA037_1
		Jamul Mountains	590	DUVA_3PRVA038_1
		Johnson Canyon (East)	0	DUVA_3RHRA044-0[a]
		Millenia	0	DUVA_3OTRA045_1[a]
		Northern San Ysidro	167	DUVA_6NOSY052_1
		Salt Creek	1,568	DUVA_3SCPA008_1, DUVA_3SCPA008_2, and DUVA_3SCPA008_3
		Salt Creek	2,473	DUVA_3SCPA032_1 and DUVA_3SCPA032_2
		Salt Creek	1,734	DUVA_3ORVA036_1 and DUVA_3ORVA036_2
		San Ysidro	821	DUVA_3SYPA011_1
		San Ysidro	386	DUVA_3OTMT006_2
		Wolf Canyon	0	-[a]
Otay tarplant	*Deinandra conjugens*	Northern Salt Creek	913	DECO13_3SCPA016_1
		Western Wolf Canyon	215	DECO13_3ORVA018_1
Orcutt's brodiaea	*Brodiaea orcuttii*	Little Cedar Canyon	22	BROR_3LCCP042_1
		Northern San Ysidro and San Ysidro	36	BROR_3SYPA008_1
San Miguel Savory	*Clinopodium chandleri*	Proctor Valley (North)	33[b]	CLCH5_3PRVA003_1
western spleenwort	*Asplenium vespertinum*	San Ysidro	0	N/A

[a]An IMG plot was not established as no individuals were observed.
[b]The number of individuals does not include plants in the eastern section of the parcels.
N/A = not applicable. Based on the San Diego Management and Monitoring Program (SDMMP) 2014-2026 IMG Monitoring Prioritization and Frequency Schedule (SDMMP 2022), establishing an IMG MSP Occurrence ID is not needed.

Non-IMG surveys focused on the Priority Group 1 species detailed in the work plan (FY 2024-25). Priority Group 2 through 4 species were monitored incidentally as budget allowed and are discussed below. A description of the criteria that were used to define each priority group can be found in the RMP (RECON 2018). The California Native Plant Society's (CNPS) Botanical Survey Guidelines were used as a guide for focused rare plant surveys (CNPS 2001). Rare plant occurrences were recorded in a California Natural Diversity Database data dictionary created by the PSB. Information collected in the data dictionary included species name, number of individuals, site quality, and additional comments. For species that are highly vulnerable to threats, such as variegated dudleya (*Dudleya variegata*), the top three threats were recorded for each metapopulation. In the field, surveyors revisited previously mapped locations and walked meandering transects to visually search for sensitive plants. Surveys occurred in spring, when annual and herbaceous perennial species were most visible. Table 9 shows the results of the non-IMG focused rare plant surveys for Priority Group 1 species. The focused rare plant survey results, including incidental rare plant observations, are shown in Figures 15 through 20. Representative photos are shown in Attachment 2: Photographs 7 and 8.

Table 9
Non-IMG Census Rare Plant Survey Results for Priority Group 1 Species

Parcel(s)	Priority Group	Common Name	Scientific Name	Number of Individuals
Dulzura	1	Dunn's mariposa lily	*Calochortus dunnii*	21,196
Little Cedar Canyon				1,025
Proctor Valley				8
		variegated dudleya	*Dudleya variegata*	679
Ridge				3
Millenia		Otay tarplant	*Deinandra conjugens*	241

Additional sensitive species that were incidentally observed are included in Table 10 and Figures 15 through 19.

Table 10
Incidental Rare Plant Observations*

Parcel(s)	Priority Group	Common Name	Scientific Name	Number of Individuals
Dulzura	1	San Diego goldenstar	*Bloomeria clevelanii*	29
	4	California adder's-tongue	*Ophioglossum californicum*	37
		golden-ray pentachaeta	*Pentachaeta aurea* ssp. *aurea*	3
		ocellated Humboldt lily	*Lilium humboldtii* ssp. *ocellatum*	2
Little Cedar Canyon	1	San Diego goldenstar	*Bloomeria clevelanii*	500
	3	purple stemodia	*Stemodia durantifolia*	1
	4	ocellated Humboldt lily	*Lilium humboldtii* ssp. *ocellatum*	114
McMillin	4	California adder's-tongue	*Ophioglossum californicum*	927
Millenia	4	graceful tarplant	*Holocarpha virgata* ssp. *elongata*	1
Northern Salt Creek	4	graceful tarplant	*Holocarpha virgata* ssp. *elongata*	100

Table 10 Incidental Rare Plant Observations*				
Parcel(s)	Priority Group	Common Name	Scientific Name	Number of Individuals
Northern San Ysidro	2	San Diego barrel cactus	*Ferocactus viridescens*	1
Proctor Valley	4	golden-ray pentachaeta	*Pentachaeta aurea* ssp. *aurea*	130
Salt Creek	1	San Diego button-celery	*Eryngium aristulatum* var. *parishii*	7
	4	Palmer's grapplinghook	*Harpagonella palmeri*	42
San Ysidro	1	Jennifer's monardella	*Monardella stoneana*	4
		San Diego goldenstar	*Bloomeria clevelanii*	20
	4	ashy spike-moss	*Selaginella cinerascens*	16,000
		California adder's-tongue	*Ophioglossum californicum*	65
		golden-ray pentachaeta	*Pentachaeta aurea* ssp. *aurea*	5,000
*Observed incidentally during rare plant surveys, other focused surveys, or site visits and maintenance visits.				

Subtask 1e. (FY 2024-25) Western Spadefoot (*Spea hammondii*) Surveys

Focused western spadefoot federally proposed threatened) survey areas were chosen and prioritized based on the potential existence of breeding pools at the Northern Salt Creek, Salt Creek, Millenia, Jamul Mountains, Northern San Ysidro, McMillin, Little Cedar Canyon, Dulzura, Proctor Valley, and Proctor Valley (South) parcels (Figure 21). Survey methods were modified from those described in Mitigation Ponds Offer Drought Resiliency for Western Spadefoot (*Spea hammondii)* Populations (Baumberger et al. 2020). However, since these surveys were not research surveys, the survey methods deviated from Baumberger et al. 2020 in that sampling did not continue until western spadefoot larvae metamorphosed. Pools must persist for a minimum of 30 days for western spadefoot larvae to complete development (Morey and Reznick 2004).

Western spadefoot presence was determined by qualified biologists through daytime visual encounter surveys where egg masses or tadpoles were observed, nighttime visual encounter surveys for adults, and adult acoustic surveys. Daytime visual encounter surveys consisted of visually inspecting each pool of standing water for spadefoot activity. Egg masses and tadpoles were noted. If visual inspections could not be completed due to turbidity, dip nets were used to complete the survey. For nighttime visual encounter surveys for adults, accessible locations were visited during rain events or when rain was forecasted that night. The biologists initially searched pools of standing water then surveyed in an outward fashion into the upland habitat within the 50-meter buffer. Survey began at least one-half hour after sunset. The biologist also listened for calling males during the nighttime surveys.

Western spadefoot presence surveys were initiated with the installation of adult acoustic data loggers (AudioMoths). AudioMoths were used to detect calling adult male western spadefoot during breeding season. AudioMoths were placed on branches or rebar with signs stating "Wildlife Study in Progress" attached below near select potential breeding pools within the parcels based on ponding observed from February 2024 Google Earth aerial imagery (see Figure 21). Eleven AudioMoths were placed as a trial for monitoring remote areas where nighttime surveys pose a risk for surveying

biologists or where access is not feasible during or immediately after rain events. Attachment 2: Photograph 9 demonstrates the setup of an Audiomoth. Western spadefoot survey dates, locations, and tasks from 2025 are included in Table 11. The AudioMoths were left on-site during the breeding season. The data was reviewed through a web portal to detect the presence of western spadefoot. Western spadefoot were detected through AudioMoth at device number 1 at Salt Creek on March 12, 2025, and tadpoles were observed in the southwestern corner of the Salt Creek parcels on March 27, 2025. Depending on surface topography and weather conditions (e.g., wind speed, rainfall), calling males may be detectable from up to about 0.8 kilometer away (Stebbins 1972). The results are shown on Figure 21. Rainfall was not favorable for surveying in FY 2024–25; therefore, the surveys will extend into FY 2025-26. AudioMoths were reinstalled within the Preserve in December 2025 (Figure 22).

Table 11
Western Spadefoot Surveys
Dates, Locations, and Tasks

Date	Location (Parcels)	Task(s)
Border 2 Fire: 01/23/2025 through 01/28/2025		
02/14/2025	Dulzura	The AudioMoth recorder was visited. It was noted that it was not damaged by the Border 2 Fire.
02/17/2025	Little Cedar Canyon	The AudioMoth recorder was visited. It was noted that it was not damaged by the Border 2 Fire.
03/12/2025	Salt Creek, Northern Salt Creek	Nighttime survey #1
03/13/2025	Jamul Mountains	Nighttime survey #1
03/20/2025	Little Cedar Canyon	Daytime survey #1
03/27/2025	Salt Creek, Northern Salt Creek, Millenia, McMillin	Daytime survey #1 AudioMoth 8 was removed by the PSB from McMillin. The case had melted in the Border 2 Fire, but the SD card was not damaged.
03/31/2025	Northern San Ysidro	Daytime survey #1
04/01/2025	Jamul Mountains, Proctor Valley (South)	Daytime survey #1
04/04/2025	Dulzura (west side)	Daytime survey #1
04/11/2025	Dulzura (east side)	Daytime survey #1
04/16/2025	Northern Salt Creek	AudioMoth 12 was removed by the PSB.
04/16/2025	Salt Creek	AudioMoth 1 was removed by the PSB.
04/25/2025	Millenia	AudioMoth 3 was removed by the PSB.
04/28/2025	Jamul Mountains	AudioMoth 5 was removed by the PSB.
04/29/2025	Dulzura (east side)	AudioMoth 10 was removed by the PSB.
04/30/2025	Dulzura (west side)	AudioMoth 11 was removed by the PSB.
05/07/2025	Proctor Valley (South)	AudioMoth 2 was removed by the PSB.
05/07/2025	Northern San Ysidro (west side)	AudioMoth 7 was removed by the PSB.
05/07/2025	Little Cedar Canyon	AudioMoth 9 was removed by the PSB.
05/07/2025	Northern San Ysidro (east side)	AudioMoth 6 was removed by the PSB.
12/03/2025	Dulzura (east side)	Reinstall - AudioMoth 6
12/04/2025	Northern San Ysidro	Reinstall - AudioMoth 10
12/04/2024	Little Cedar Canyon	Reinstall - AudioMoth 3

Table 11 Western Spadefoot Surveys Dates, Locations, and Tasks		
Date	Location (Parcels)	Task(s)
Border 2 Fire: 01/23/2025 through 01/28/2025		
12/05/2025	Jamul Mountains	Reinstall - AudioMoth 4
12/09/2025	McMillin	Reinstall - AudioMoth 7
12/09/2025	Dulzura (west side)	Reinstall - AudioMoth 9
12/09/2025	Proctor Valley (South) and Proctor Valley	Reinstall - AudioMoth 5
12/10/2025	Salt Creek	Reinstall -AudioMoth 11
12/10/2025	Northern Salt Creek	Reinstall - AudioMoth 2
12/10/2025	Millenia	Reinstall - AudioMoth 1

Subtask 1f. (FY 2024-25) and Subtask 1b. (FY 2025-26) Golden Eagle (Aquila *chrysaetos*) Camera Surveys

The golden eagle camera surveys were initiated in 2021 to document golden eagle usage within the Preserve as well as eagle responses to disturbance. Golden eagle camera survey dates, locations, and tasks from 2025 are included in Table 12. In 2025, three cameras at Dulzura and two cameras at Ridge were left in place and monitored, and seven cameras at McMillin were replaced due to fire damage (Figure 23). All cameras are cellular service-connected solar-powered. Seven cameras at the McMillin parcels were destroyed from the Border 2 Fire and were replaced along with the solar panels, and all replaced cameras were secured with anti-theft cables and locks. Wildlife signs stating "Wildlife Study in Progress" were prepared and attached on the T-post of each camera at the McMillin and Dulzura parcels to deter tampering of cameras. Attachment 2: Photograph 10 demonstrates the camera setup at the McMillin parcels. Camera visits were conducted to hand weed the area or service the cameras, as needed. Servicing the cellular service-connected solar-powered wildlife cameras included adjusting camera and solar panel angles, replacing cameras due to fire damage, and replacing wildlife signs, as needed. The area in front of the cameras was also hand-weeded, as needed, to reduce excess photographs triggered by the wind. The photos were monitored remotely through the Reveal Tactacam smart phone app and/or Tactacam Reveal's web portal. All data was reviewed for golden eagle presence, behavior, ID tags, age, prey items, and human presence. All seven of the cameras at the McMillin parcels focus on areas that burned during the Border 2 Fire. These cameras may provide information on golden eagle and their post-fire recovery within the McMillin parcels.

Table 12 Golden Eagle Camera Surveys Dates, Locations, and Tasks		
Date	Location (Parcels)	Survey Type[1]
01/07/2025	McMillin	Service cameras
Border 2 Fire: 01/23/2025 through 01/28/2025		
02/17/2025	McMillin	Checked on the status of all cameras at McMillin. 01MCM: The camera was brought back to the office. It was discovered that the camera and solar panel had been removed from the t-post. The camera had been thrown down the slope and the solar panel was assumed stolen. The camera was determined to be damaged from the Border 2 Fire and properly disposed of. 02MCM: The camera was brought back to the office. It was discovered that the camera and solar panel had been removed from the t-post. The camera was next to the t-post on the ground and the solar panel was assumed stolen. The camera was determined to be damaged from the Border 2 Fire and properly disposed of. 03MCM: The camera and solar panel were destroyed by fire. 04MCM: The camera and solar panel were damaged by the fire. Solar panel theft was attempted, but the previously installed bike cable kept the panel in place. 05MCM: The solar panel was missing and presumed stolen. The device was tampered with. The signs were missing. 06MCM: The camera and solar panel were destroyed from the Border 2 Fire. The solar panel and camera were melted beyond repair. 07MCM: The camera was damaged from the Border 2 Fire.
04/11/2025	McMillin	05MCM: the camera and solar panel were replaced. 06MCM: the camera and solar panel were replaced.
04/18/2025	McMillin	01MCM: the camera and solar panel were replaced. 02MCM: the camera and solar panel were replaced. 07MCM: the camera and solar panel were replaced.
04/22/2025	McMillin	01MCM: the solar panel was adjusted. 03MCM: the camera, solar panel, and lock were replaced.

Table 12 Golden Eagle Camera Surveys Dates, Locations, and Tasks		
Date	Location (Parcels)	Survey Type[1]
		04MCM: the camera, solar panel, and lock were replaced. 06MCM: the camera angle was adjusted. 07MCM: the solar panel was adjusted.
04/24/2025	McMillin	01MCM: a wildlife study sign was added. The solar panel was adjusted. 02MCM: the swivel bolt was replaced and the camera angle was adjusted. A wildlife study sign was added. 03MCM and 04MCM: the damaged solar panel and camera were removed. A wildlife study sign was installed on each post. 07MCM and 06MCM: a sign stating "Wildlife Study in Progress. Please DO NOT Damage Equipment" was secured to each post. A hole was drilled to allow the cable lock to pass through the post to secure the camera and solar panel. The camera angle was adjusted.
05/02/2025	McMillin	05MCM: camera adjusted.
06/16/2025	McMillin	01MCM through 07MCM: weeds were removed from within view of the camera. It was noted that all cameras have signs except for 05MCM. The signs state "Wildlife Study in Progress. Please DO NOT Damage Equipment" in both English and Spanish. A sign at 05MCM is not necessary since it's in the rocks and is not easily accessible.
06/19/2025	Dulzura	02DLZ: the camera was serviced by manually turning the camera on after the battery lost its charge. 01DLZ, 02DLZ, 03DLZ: weeds were removed from within view of the camera. 01DLZ, 02DLZ, 03DLZ: a sign was added to the camera post. The signs state "Wildlife Study in Progress. Please DO NOT Damage Equipment" in both English and Spanish.
07/23/2025	Dulzura	02DLZ: weeds were removed from within view of the camera. 03DLZ: Tightened the power cord between the solar panel and camera. Cleaned solar panel.
09/17/2025	McMillin	All cameras were visited. 02 MCM required maintenance.

Table 12 Golden Eagle Camera Surveys Dates, Locations, and Tasks		
Date	Location (Parcels)	Survey Type[1]
12/15/2025	Ridge	Visited due to remote observations that the cameras were unsteady. It was determined that the strap material had weathered and easily tore away. Wire was used to secure the camera bases to the rocks.
[1]Camera positions were adjusted, as needed. Cameras were resecured, as needed. Hand weeding was conducted, as needed. Solar panels were cleaned, as needed.		

Table 13 presents the golden eagle observations on the wildlife cameras within the Preserve during 2025. Attachment 2: Photographs 11 and 12 show representative golden eagle images that were captured by wildlife cameras at the McMillin parcels during 2025.

Table 13 Golden Eagle Observations within Otay Ranch Preserve		
Date	Camera Name	Number of Eagle(s) Observations
1/15/25	02DLZ	1
1/16/25	02DLZ	1
2/11/25	02DLZ	1
3/14/25	02DLZ	1
3/14/25	01DLZ	1
6/1/25	07MCM	1
6/15/25	04MCM	1
6/17/25	05MCM	1
6/24/25	07MCM	1
6/27/25	05MCM	1
6/27/25	06MCM	1
DLZ = Dulzura MCM = McMillin		

Table 14 presents all wildlife species that were documented on the wildlife cameras during 2025.

Table 14
Wildlife Species Documented on Wildlife Cameras

Species	Camera Location											
	01MCM	02MCM	03MCM	04MCM	05MCM	06MCM	07MCM	06RDG	07RDG	01DLZ	02DLZ	03DLZ
Priority Group 1												
golden eagle (*Aquila chrysaetos*)				X	X	X	X			X	X	
northern harrier (*Circus hudsonius*)											X	
Priority Group 2												
Cooper's hawk (*Astur [=Accipiter] cooperii*)		X			X							
southern mule deer (*Odocoileus hemionus fuliginata*)										X	X	X
Priority Group 4												
loggerhead shrike (*Lanius ludovicianus*)					X							
southern California ringtail (*Bassariscus astutus octavus*)										X	X	X
Species Evaluated But No Longer Considered Sensitive												
red-tailed hawk (*Buteo jamaicensis*)	X				X	X	X	X	X	X	X	
American kestrel (*Falco sparverius*)					X	X						
American barn owl (*Tyto furcata*)					X				X		X	
great horned owl (*Bubo virginianus*)				X	X	X			X			
Common Wildlife												
California quail (*Callipepla californica*)										X		X
turkey vulture (*Cathartes aura*)									X		X	
mourning dove (*Zenaida macroura*)							X					
greater roadrunner (*Geococcyx californianus*)	X				X							X
northern flicker (*Colaptes auratus*)											X	
common raven (*Corvus corax*)	X	X		X	X	X	X	X		X	X	X
Cassin's kingbird (*Tyrannus vociferans*)					X							
California towhee (*Melozone crissalis*)					X							
California ground squirrel (*Otopermophilus beecheyi*)	X	X			X		X			X		
coyote (*Canis latrans*)	X	X			X	X						X
common gray fox (*Urocyon cinereoargenteus*)	X									X	X	X
striped skunk (*Mephitis mephitis*)										X	X	
bobcat (*Lynx rufus*)		X										
mountain lion (*Puma concolor*)										X	X	X
human				1, 2, 3, 5	4	5	4			1		1

NOTES:
[1]on foot
[2]hunter
[3]motor bike
[4]parachute (landed within proximity of the camera)
[5]Border Patrol

The following is a summary of the photo data captured from January through December 2025. Attachment 2: Photographs 13–19 show images during and immediately following the Border 2 Fire. Attachment 2: Photographs 20–23 include wildlife bycatch from the cameras.

- McMillin: Golden eagle was observed on five dates during summer of 2025. This species was captured on four different cameras within the McMillin parcels (see Tables 13 and 14). McMillin continues to have human foot traffic with observations on four of the seven cameras. In 2025, there were also several observations of hunters passing by. Many common gray fox (*Urocyon cinereoargenteus*), great horned owl (*Bubo virginianus*), coyote (*Canis latrans*), bobcat (*Lynx rufus*), common raven (*Corvus corax*), and other small mammals such as California ground squirrel (*Otopermophilus beecheyi*) and passerines were observed. Three cameras (05MCM through 07MCM) monitor the same large set of boulders which has evidence of large raptor use (whitewash, bones, and feathers).

- Dulzura: Golden eagle was observed on five dates during winter of 2025. This species was captured on two different cameras within the Dulzura parcels (see Tables 13 and 14). Many common gray fox, common raven, red-tailed hawk (*Buteo jamaicensis*), and southern mule deer (*Odocoileus hemionus fuliginata*) were observed. Human foot traffic was infrequent.

- Ridge: No golden eagles were photographed at the Ridge camera locations in 2025. Red-tailed hawk, great horned owl, American barn owl (*Tyto furcata*), common raven, and turkey vulture (*Cathartes aura*) were observed. No human activity was observed.

Subtask 1g. (FY 2024-25) Quino Checkerspot Butterfly (*Euphydras editha quino*; QCB) Surveys

QCB surveys were conducted on the Dulzura, McMillin, and San Ysidro parcels (Figures 24–26; Table 15). Five adult flight surveys were conducted between April 4 and May 2, 2025, on 22.84 acres. Incidental butterfly observations were also recorded. QCB survey guidelines require surveys to be conducted weekly beginning the third week of February and ending the second Saturday in May. However, a deviation from these guidelines was approved by the U.S. Fish and Wildlife Service (USFWS) for these surveys. The approved deviation allowed for a maximum of five surveys within the survey area rather than continuing surveys to the end of the season or until QCB were detected (RECON 2025b).

Table 15
Parcel Name and Acreage for Quino Checkerspot Butterfly Surveys

Parcel Name	Survey Area Acreage
Dulzura	11.18
McMillin	10.22
San Ysidro	1.44

On March 5, the PSB sent an email to USFWS and the POM to provide notification that one Quino checkerspot larva had been observed within the Dulzura parcels adjacent to the Border 2 Fire dozer line. On March 6, the PSB attended a meeting with representatives from Wild Spring Ecology, USFWS, and California Department of Fish and Wildlife (CDFW) to coordinate Quino checkerspot butterfly surveys within the Border 2 Fire perimeter.

Prior to surveys, habitat assessments were conducted to map the presence and density of host plants. Habitat assessment and survey dates and locations are shown in Table 16. Site conditions during the surveys and co-occurring butterflies are shown in Attachment 4: Photographs 1–15. On March 18, USFWS provided approval via email to begin the QCB flight surveys on March 24. Adverse weather postponed the start date to April 4, 2025.

Table 16
Quino Checkerspot Butterfly Surveys
Dates and Locations

Date	Location (Parcels)	Survey Type
03/19/2025	Dulzura	Habitat Assessment
03/20/2025	San Ysidro	Habitat Assessment
03/26/2025	McMillin	Habitat Assessment
03/27/2025	McMillin	Habitat Assessment
04/04/2025	San Ysidro, McMillin, Dulzura	Survey 1
04/11/2025	San Ysidro, McMillin, Dulzura	Survey 2
04/18/2025	McMillin	Weather conditions checked on-site. Weather conditions were not suitable for conducting a focused survey.
04/22/2025	San Ysidro, McMillin, Dulzura	Survey 3
04/24/2025	San Ysidro, McMillin, Dulzura	Survey 4
05/02/2025	San Ysidro, McMillin, Dulzura	Survey 5

Subtask 1h. (FY 2024-25) Photographic Monitoring

The County was awarded an 18-month San Diego Association of Governments (SANDAG) TransNet Environmental Mitigation Program (EMP) grant for QCB short-term threat reduction. The project ended in fall 2024. During the post-grant period, photographic monitoring is being conducted at previously established locations within the project site at the Dulzura parcels as matching/complementary work to compare changes across the landscape for an additional four years ending by September 30, 2028. Repeat photos were collected on May 1, 2025, and June 19, 2025. The 12 photo locations are shown on Figure 27. Repeat photographs at eight previously established locations are shown in Attachment 5 (Attachment 5: Photographs 1-through 40). Photographs were also taken to show general site conditions.

Subtask 1i. (FY 2024-25) Vegetation Rapid Assessment

As mentioned in Subtask 1h, the County was awarded an 18-month SANDAG TransNet EMP grant for QCB short-term threat reduction. During the post-grant period, quantitative monitoring is being conducted within 0.69 acres at the Dulzura parcels as matching/complementary work to compare changes in plant diversity as well as cover estimates for bare ground, host, nectar, native, and non-native plants for an additional four years ending by September 30, 2028 (Figure 27: DLZ_3, DLZ_4, DLZ_6, DLZ_7). DLZ_5 was not included in the quantitative monitoring, since it was not planted or seeded. One rapid assessment survey using a modified CNPS Combined Vegetation Rapid Assessment and Relevé Field Form was conducted on June 19, 2025 (CNPS 2024). The vegetation rapid assessment was conducted in the 0.69-acre proposed weed treatment area shown on Figure 27.

On June 19, 2025, rapid assessment surveys were conducted within the hand-seed (DLZ_3 and DLZ_6), hand-seed (DLZ_7), and container plant areas (DLZ_4) as matching/complementary work for the SANDAG TransNet EMP grant for QCB short-term threat reduction project. Figure 27 shows the 0.69-acre quantitative monitoring area within the Dulzura parcels. A rapid assessment form was completed for each of the following areas: container plants area (Figure 27: DLZ_4), seeded by hand (Figure 27: DLZ_7), and seeded by hand (Figure 27: DLZ_3 and DLZ_6). Tables 17–19 present the results of the survey in June 2025, following restoration, compared to conditions in September 2023, prior to implementation.

Table 17
Container Plants Area (DLZ_4)
Rapid Assessment Results for the Dulzura Parcels

Vegetation Type	September 12, 2023 Absolute	June 19, 2025 Absolute	September 12, 2023 Relative (vegetation only)	June 19, 2025 Relative (vegetation only)
Average Total Cover (Shrub & Herbaceous)	2.56%	18.66%	100%	100%
Average Native Plant Cover	0.08%	18.23%	3.1%	97.7%
Average Invasive Non-native Plant Cover	2.48%	0.43%	96.9%	2.3%
Average Bare Ground	97.44%	81.34%	Not Applicable	Not Applicable

Table 18
Seeded by Hand (DLZ_7)
Rapid Assessment Results for the Dulzura Parcels

Vegetation Type	September 12, 2023 Absolute	June 19, 2025 Absolute	September 12, 2023 Relative (vegetation only)	June 19, 2025 Relative (vegetation only)
Average Total Cover (Shrub & Herbaceous)	8.34%	14.07%	100%	100%
Average Native Plant Cover	5.70%	11.65%	68.3%	82.8%
Average Invasive Non-native Plant Cover	2.64%	2.42%	31.7%	17.2%
Average Bare Ground	91.69%	85.93%	Not Applicable	Not Applicable

Table 19 Seeded by Hand (DLZ_3 and DLZ_6) Rapid Assessment Results for the Dulzura Parcels				
Vegetation Type	September 12, 2023 Absolute	June 19, 2025 Absolute	September 12, 2023 Relative (vegetation only)	June 19, 2025 Relative (vegetation only)
Average Total Cover (Shrub & Herbaceous)	13.84%	11.88%	100%	100%
Average Native Plant Cover	2.72%	8.45%	19.7%	71.1%
Average Invasive Non-native Plant Cover	11.12%	3.43%	80.3%	28.9%
Average Bare Ground	86.16%	88.12%	Not Applicable	Not Applicable

Subtask 1j. (FY 2024-25) Baseline Surveys

During spring and summer 2025, the PSB conducted surveys to gather baseline biological information at the Rock Top parcels. The surveys consisted of vegetation mapping, general plant and wildlife surveys, and photographic monitoring. Sensitive species were observed incidentally, and suitable habitat for sensitive wildlife species was evaluated. Dates and conditions of surveys conducted are shown on Tables 20 and 21.

Table 20 Rock Top Parcel Botanical Resources Survey Dates and Personnel	
Survey Dates	Surveyor(s)
05/05/2025	Anna Leavitt Kayo Valenti
05/13/2025	Anna Leavitt J.R. Sundberg
05/20/2025	Anna Leavitt Kayo Valenti
05/23/2025	Anna Leavitt
07/30/2025	J.R. Sundberg

Table 21 Rock Top Parcel Wildlife Survey Dates, Times, and Weather Conditions			
Survey Dates	Surveyor(s)	Beginning Conditions	Ending Conditions
05/05/2025	Anna Leavitt Kayo Valenti	9:55 a.m.; 63°F; wind 0–1 mph; 100% cloud cover	1:15 p.m.; 64°F; winds 1–3 mph; 100% cloud cover
05/13/2025	Anna Leavitt J.R. Sundberg	9:45 a.m.; 58°F; wind 2–8 mph; 80% cloud cover	3:15 p.m.; 68°F; winds 2–7 mph; 75% cloud cover
05/20/2025	Anna Leavitt Kayo Valenti	10:15 a.m.; 86°F; wind 0–2 mph; 0% cloud cover	1:10 p.m.; 87°F; wind 2–8 mph; 0% cloud cover
05/23/2025	Anna Leavitt	10:45 a.m.; 69°F; wind 0–3 mph; 0-3% cloud cover	1:20 p.m.; 75°F; wind 0–4 mph with gusts to 10 mph; 0% cloud cover
°F = degrees Fahrenheit; mph = miles per hour; % = percent			

Subtask 1k. (FY 2024-25) Gold-Spotted Oak Borer (*Agrilus auroguttatus*, GSOB) Monitoring

GSOB monitoring was conducted once within the oak woodland at the Dulzura parcels. A field visit to visually inspect trees for GSOB sign was conducted by RECON licensed arborist J.R. Sundberg on June 6, 2025. Most tree canopies appeared full and healthy. Damaged tree canopies were due to the Border 2 Fire suppression effort. No signs of GSOB were observed. The GSOB monitoring area is shown on Figure 28.

Task 2: Land Stewardship

Subtask 2a. (FY 2024-25 and FY 2025-26) Site Visits

Regularly scheduled site visits were conducted January 1–December 31, 2025, to document access issues, sensitive species, newly detected species, weeds, and the overall health of the sites. Site visit dates and locations are shown in Table 22.

Table 22 Site Visit Dates and Locations	
Date	Location (Parcels)[1]
01/02/2025	Salt Creek, Northern Salt Creek, Millenia
01/07/2025	San Ysidro, Northern San Ysidro, McMillin
01/08/2025	Millenia
01/09/2025	Dulzura, Jamul Mountains
01/13/2025	Wolf Canyon, Western Wolf Canyon, Salt Creek
01/16/2025	Northern Salt Creek, Salt Creek
01/23/2025	Salt Creek
01/28/2025	Dulzura, Northern San Ysidro, San Ysidro
01/29/2025	Ridge, Salt Creek, Millenia
02/06/2025	Salt Creek, Northern Salt Creek, Wolf Canyon, Western Wolf Canyon, Jamul Mountains
02/07/2025	Dulzura
02/10/2025	Dulzura
02/11/2025	Dulzura
02/12/2025	San Ysidro, Northern San Ysidro, Dulzura
02/17/2025	Little Cedar Canyon, McMillin, Dulzura
02/20/2025	Jamul Mountains
02/25/2025	Salt Creek
02/28/2025	Millenia, Wolf Canyon, Western Wolf Canyon
03/05/2025	Dulzura
03/10/2025	Salt Creek, Western Wolf Canyon, Wolf Canyon
03/11/2025	Dulzura
03/13/2025	Jamul Mountains
03/14/2025	Northern Salt Creek, Salt Creek
03/17/2025	Proctor Valley North
03/18/2025	Dulzura, Northern Salt Creek
03/19/2025	Dulzura
03/20/2025	San Ysidro, Northern San Ysidro, Little Cedar Canyon
03/26/2025	McMillin
03/27/2025	McMillin, Northern Salt Creek, Salt Creek, Millenia
03/31/2025	Northern San Ysidro
04/01/2025	Jamul Mountains, Salt Creek, Proctor Valley (South), Proctor Valley Extension, Bonita Glen, Proctor Valley
04/04/2025	Dulzura, McMillin, San Ysidro
04/09/2025	Wolf Canyon, Western Wolf Canyon
04/11/2025	McMillin, Dulzura, San Ysidro
04/14/2025	Salt Creek, Dulzura
04/16/2025	Salt Creek, Northern Salt Creek
04/18/2025	McMillin, Jamul Mountains
04/22/2025	McMillin
04/25/2025	Millenia
04/28/2025	Jamul Mountains
04/30/2025	Johnson Canyon (East), Proctor Valley, Dulzura
05/02/2025	McMillin, San Ysidro
05/05/2025	Dulzura, Proctor Valley Extension, Rock Top
05/06/2025	Ridge
05/07/2025	Northern San Ysidro, McMillin, Little Cedar Canyon, Proctor Valley (South)
05/08/2025	Millenia, Wolf Canyon, Western Wolf Canyon, Salt Creek
05/14/2025	Salt Creek, Northern Salt Creek
05/15/2025	Jamul Mountains, Dulzura, San Ysidro

Table 22 Site Visit Dates and Locations	
Date	Location (Parcels)[1]
05/16/2025	Millenia
05/22/2025	Wolf Canyon, Western Wolf Canyon
05/27/2025	Dulzura
05/29/2025	Salt Creek, Northern Salt Creek, Jamul Mountains, Dulzura
05/30/2025	Dulzura
06/02/2025	Little Cedar Canyon, Proctor Valley
06/03/2025	Proctor Valley (North)
06/04/2025	Northern San Ysidro, Salt Creek, Northern Salt Creek
06/05/2025	Little Cedar Canyon
06/06/2025	Dulzura, Northern San Ysidro, Millenia, Proctor Valley
06/09/2025	Proctor Valley North, San Ysidro, Northern San Ysidro, Little Cedar Canyon, Salt Creek, Northern Salt Creek
06/10/2025	Millenia, Northern Salt Creek, Salt Creek
06/11/2025	Millenia
06/12/2025	Western Wolf Canyon, Wolf Canyon, Salt Creek, Northern Salt Creek
06/13/2025	Western Wolf Canyon, Wolf Canyon
06/16/2025	McMillin
06/17/2025	McMillin
06/18/2025	Jamul Mountains, Proctor Valley, Dulzura
06/16/2025	Dulzura
06/18/2025	Dulzura, Jamul Mountains
06/19/2025	Dulzura
06/20/2025	Proctor Valley Extension, Bonita Glen
06/23/2025	San Ysidro, Northern San Ysidro
06/25/2025	Ridge
06/27/2025	Little Cedar Canyon, Salt Creek, Northern Salt Creek
07/21/2025	Northern Salt Creek, Salt Creek, Millenia
07/22/2025	Jamul Mountains, Salt Creek
07/23/2025	Dulzura
07/28/2025	Wolf Canyon, Western Wolf Canyon
07/29/2025	Northern San Ysidro, San Ysidro
07/30/2025	Rock Top
08/04/2025	Millenia, Salt Creek, Northern Salt Creek, Johnson Canyon (East)
08/06/2025	Dulzura, Jamul Mountains
08/19/2025	Salt Creek, Northern Salt Creek, Millenia
08/21/2025	Dulzura
08/22/2025	Jamul Mountains
08/27/2025	San Ysidro, Northern San Ysidro
08/28/2025	Wolf Canyon, Western Wolf Canyon
09/02/2025	Salt Creek, Northern Salt Creek, Millenia
09/04/2025	Dulzura, Salt Creek, San Ysidro, Jamul Mountains
09/11/2025	Ridge
09/15/2025	Proctor Valley (North), Dulzura
09/16/2025	Millenia, Salt Creek, Northern Salt Creek
09/17/2025	McMillin
09/18/2025	Jamul Mountains
09/26/2025	Wolf Canyon, Western Wolf Canyon
09/29/2025	San Ysidro, Northern San Ysidro
09/30/2025	Dulzura
10/03/2025	Salt Creek, Northern Salt Creek, Millenia

Table 22 Site Visit Dates and Locations	
Date	Location (Parcels)[1]
10/09/2025	Little Cedar Canyon
10/10/2025	Proctor Valley, Proctor Valley Extension, Rock Top, Proctor Valley (South), Bonita Glen, Sliver
10/16/2025	Jamul Mountains, Salt Creek, Northern Salt Creek
10/22/2025	Millenia, Salt Creek
10/23/2025	Wolf Canyon, Western Wolf Canyon, Salt Creek
10/24/2025	Dulzura, Salt Creek
10/27/2025	Jamul Mountains, San Ysidro, Northern San Ysidro
10/31/2025	Dulzura, Salt Creek
11/04/2025	Millenia, Johnson Canyon (East)
11/06/2025	Salt Creek
11/14/2025	Jamul Mountains
11/17/2025	Wolf Canyon, Western Wolf Canyon, Millenia
11/24/2025	Salt Creek, Northern Salt Creek, Millenia
11/25/2025	Dulzura
12/01/2025	Dulzura
12/02/2025	Dulzura
12/03/2025	Dulzura
12/04/2025	San Ysidro, Northern San Ysidro, Little Cedar Canyon
12/05/2025	Jamul Mountains
12/09/2025	McMillin, Proctor Valley (South), Dulzura, Proctor Valley
12/10/2025	Salt Creek, Northern Salt Creek, Millenia
12/12/2025	Dulzura
12/15/2025	Ridge
12/17/2025	Jamul Mountains
12/18/2025	Dulzura, Little Cedar Canyon
12/19/2025	Wolf Canyon, Western Wolf Canyon
12/22/2025	Salt Creek, Millenia
12/23/2025	Northern Salt Creek, Salt Creek
12/29/2025	Dulzura, Millenia, Salt Creek
12/30/2025	Proctor Valley, Bonita Glen, Proctor Valley Extension, Proctor Valley (South), Rock Top, Sliver
12/31/2025	Wolf Canyon, Western Wolf Canyon, Salt Creek, Dulzura, Jamul Mountains, Northern Salt Creek
[1]Includes site visits conducted in conjunction with other scheduled monitoring and/or maintenance tasks.	

Site visits were timed to occur during the Hermes copper adult flight season at the following parcel sets where scattered spiny redberry (*Rhamnus crocea*) occurs: Bonita Glen, Jamul Mountains, Little Cedar Canyon, McMillin, Northern San Ysidro, Proctor Valley Extension, Proctor Valley (North), Ridge, Salt Creek, and San Ysidro. The PSB visited select areas within previously mapped host plant spiny redberry locations, mapped additional observations of spiny redberry, and recorded the proximity to California buckwheat (*Eriogonum fasciculatum*). Spiny redberry locations mapped in 2025 are shown on Figures 29 and 30. Spiny redberry within the Rock Top parcels was mapped in May during baseline surveys. No Hermes copper was detected during the surveys. Survey dates, personnel, and weather conditions are shown in Table 23.

Table 23 Hermes Copper Survey Dates, Personnel, Times, and Conditions				
Date	Parcel(s)	Surveyors	Beginning Conditions	Ending Conditions
06/09/2025	Little Cedar Canyon	A. Leavitt K. Valenti	1:00 p.m.; 72°F; 0% cc; winds 0-2 mph	2:00 p.m.; 74°F; 0% cc; winds 2-4 mph
06/09/2025	Northern San Ysidro/San Ysidro	A. Leavitt K. Valenti	10:00 a.m.; 69°F; 0% cc; winds 0-2 mph	11:30 p.m.; 71°F; 0% cc; winds 3-5 mph
06/09/2025	Proctor Valley (North)	J. Sundberg K. Raffaini	10:15 a.m.; 68°F; 80% cc; winds 0-2 mph	2:15 p.m.; 75°F; 0% cc; winds 2-5 mph
06/12/2025	Salt Creek	J. Sundberg	11:40 a.m.; 71°F; 20% cc; winds 1-5 mph	12:00 p.m.; 72°F; 20% cc; winds 1-5 mph
06/16/2025	McMillin	K. Valenti K. Raffaini	11:20 a.m.; 69°F; 0% cc; winds 0-2 mph	12:15 p.m.; 74°F; 0% cc; winds 2-5 mph
06/18/2025	Jamul Mountains	J. Sundberg K. Raffaini	11:10 a.m.; 81°F; 0% cc; winds 1-5 mph	2:15 p.m.; 83°F; 0% cc; winds 2-5 mph
06/20/2025	Proctor Valley Extension	J. Sundberg	10:15 a.m.; 76°F; 0% cc; winds 1-6 mph	3:30 p.m.; 79°F; 0% cc; winds 3-7 mph
06/20/2025	Bonita Glen	J. Sundberg	1:45 p.m.; 83°F; 0% cc; winds 1-6 mph	2:30 p.m.; 83°F; 0% cc; winds 2-5 mph
06/25/2025	Ridge	J. Sundberg	9:45 p.m.; 74°F; 0% cc; winds 1-3 mph	2:30 p.m.; 83°F; 0% cc; winds 4-8 mph
°F = degrees Fahrenheit; mph = miles per hour; % = percent; cc = cloud cover				

Noteworthy events documented from site visits are described below for each parcel set within Tables 24–38. Figures 3141 show noteworthy data collected in 2025. Rare plants that were incidentally observed are included in Table 10, Subtask 1d above.

Bonita Glen

Table 24 Noteworthy Events Documented from Site Visits at Bonita Glen			
Type	Date	Activities/Observations	Figure(s)
Plants	06/20/2025	Select spiny redberry stands that may have the potential to support Hermes copper were visited. No Hermes copper were observed.	-

Dulzura Parcels

Table 25
Noteworthy Events Documented from Site Visits at Dulzura

Type	Date	Activities/Observations	Management Actions/Notes	Figure(s)
Border 2 Fire	01/28/2025	The PSB visited the Border 2 Fire suppression area with CalFire and USGS personnel.	Guidance was provided to CalFire crew for fire suppression repairs.	-
	02/07/2025, 03/11/2025	Areas affected by the Border 2 Fire were visited.	Repeat photo monitoring locations were established to monitor the Border 2 Fire recovery. Attachment 6: Photographs 1–12 show examples from the newly established photo monitoring locations.	32
	02/07/2025 02/10/2025 02/11/2025 02/12/2025 02/14/2025 02/17/2025	Areas affected by the Border 2 Fire were visited.	Fire suppression dozer lines, hand lines, Phos-check areas, and damaged fencing and signs were mapped.	4
	03/03/2025	Damage was observed on an AT&T telecommunication pole. Portions of the pole had burned during the Border 2 Fire and it was no longer attached to the ground.	AT&T was contacted to notify them of the damaged telecommunication pole.	33
	03/19/2025	Repeat photo monitoring locations were visited to document the effects of the Border 2 Fire.	Photos were taken(Attachment 7: Figures 1–40).	32
	12/29/2025	Nineteen coast live oak (*Quercus agrifolia*) and Engelmann oak (*Quercus engelmannii*) trees were destroyed and two showed signs of damage from the Border 2 Fire suppression effort.	Locations where oak trees were damaged or destroyed were mapped. Section 5c describes planting 20 Engelmann oaks to replace those destroyed.	33
Plants	03/19/2025	One hundred Texas filaree (*Erodium texanum*) were observed.	Noted due to this being an uncommon species coastally.	33

Table 25 Noteworthy Events Documented from Site Visits at Dulzura				
Type	Date	Activities/Observations	Management Actions/Notes	Figure(s)
	04/04/2025	One hundred twenty-two narrow-leaf milkweed (*Asclepias fascicularis*) were observed.	Noted due to it being the host plant for monarch.	33
	05/29/2025	One chocolate lily (*Fritillaria biflora*) was observed.	Noted due to being an indicator of clay soil.	33
	12/03/2025	One non-native Peruvian pepper tree (*Schinus molle*) was observed.	Noted for potential future treatment.	33
Wildlife	03/19/2025	One California trapdoor spider (*Bothriocyrtum californicum*) burrow was observed on the edge of the Border 2 Fire suppression dozer line.	Noted to document species in the Border 2 Fire suppression area.	33
	04/11/2025	One Crotch's bumble bee (*Bombus crotchii;* Priority Group 1) was observed.		33
	04/22/2025 05/02/2025	Three Gabb's checkerspot (*Chlosyne gabbii*) were observed.	Noted to document species in the Border 2 Fire footprint and to track the progression of the Quino checkerspot butterfly season.	33
	04/22/2025	Two southern mule deer (Priority Group 2) were observed.		33
	04/30/2025	One least Bell's vireo (*Vireo bellii pusillus*; Priority Group 1) detection was made.		33
	05/02/2025	Two southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*; Priority Group 2) detections were made.		33
	05/02/2025	One Coronado skink (*Plestiodon* [=*Eumeces*] *skiltonianus interparietalis*; Priority Group 4) was observed.		33
	05/02/2025	One grasshopper sparrow (*Ammodramus savannarum;* Priority Group 3) detection was made.		33
	05/02/2025	One California horned lark (*Eremophila alpestris actia;* Priority Group 4) detection was made.		33
	05/29/2025	Two locations with non-native domestic horse (*Equus caballus*) tracks and scat were observed.		33

Table 25 Noteworthy Events Documented from Site Visits at Dulzura				
Type	Date	Activities/Observations	Management Actions/Notes	Figure(s)
	07/23/2025	One San Diego black-tailed jackrabbit (*Lepus californicus bennettii;* Priority Group 3) was observed.	Noted due to it being one of the golden eagle's preferred prey species.	33
Access Issues	08/06/2025	Photo monitoring sites where trash had previously been removed were visited.	Repeat photos were collected to monitor changes over time	32
	08/21/2025	An unauthorized vehicle route was mapped within coastal sage scrub habitat.	Fencing was installed at a later date at the ingress and egress locations (see Subtask 5b).	33
General Observation	03/11/2025	Two abandoned exploratory mining pits over 55 years old were visited. The pits are visible in aerial imagery from at least the 1970s.	The locations were mapped. Fencing was later installed to encircle each pit, and signs were installed (see Subtask 5b)	33

Jamul Mountains Parcels

Table 26 Noteworthy Events Documented from Site Visits at Jamul Mountains				
Type	Date	Activities/Observations	Management Actions/Notes	Figure(s)
Access Issues	05/29/2025	It was noted that stickers had been placed on multiple preserve signs, obstructing the words on the sign.	Stickers were removed from previously installed preserve signs.	-
Plants	06/18/2025	Additional observations of spiny redberry were mapped. No Hermes copper were observed.	Select spiny redberry stands that may have the potential to support Hermes copper were visited.	30
Wildlife	02/20/2025	One white-tailed kite (*Elanus leucurus;* Priority Group 4) was observed.		34
	04/26/2025 04/28/2025	Two southern California rufous-crowned sparrow detections were made.		34
	04/26/2025	One grasshopper sparrow detection was made.		34

Table 26 Noteworthy Events Documented from Site Visits at Jamul Mountains				
Type	Date	Activities/Observations	Management Actions/Notes	Figure(s)
	04/28/2025	One Gabb's checkerspot was observed.	Noted to track the progression of the Quino checkerspot butterfly season.	34
	11/14/2025	One southern California rufous-crowned sparrow was detected.		34
	11/14/2025	One coastal California gnatcatcher (*Polioptila californica californica*; Priority Group 1) was detected.		34

Little Cedar Canyon Parcels

Table 27 Noteworthy Events Documented from Site Visits at Little Cedar Canyon				
Type	Date	Activities/Observations	Management Actions/Notes	Figure(s)
Border 2 Fire	02/17/2025	Areas affected by the Border 2 Fire were visited.	Fire suppression hand lines were mapped. Repeat photo monitoring locations were established to monitor the Border 2 Fire recovery (Attachment 6: Photographs 1–12).	4 and 32
	12/18/2025	Sprouting native shrubs were observed within the hand line cleared during the Border 2 Fire suppression effort. This was a positive sign of recovery.	Noted to monitor fire recovery.	-
Access Issues	10/09/2025	Photo monitoring sites where trash had previously been removed were visited.	Repeat photos were collected to monitor changes over time (Attachment 8: Photographs 1–8).	32
General Observations	05/07/2025	Numerous Tecate cypress seedlings were observed within the Little Cedar Canyon drainage where the Border 2 Fire had burned vegetation (Attachment 2: Photograph 24).	Noted to monitor fire recovery.	-

Table 27
Noteworthy Events Documented from Site Visits at Little Cedar Canyon

Type	Date	Activities/Observations	Management Actions/Notes	Figure(s)
Plants	06/02/2025	Thirty-one splendid mariposa lily (*Calochortus splendens*) were observed.	Noted due to the proximity to Dunn's mariposa lily.	35
	06/05/2025	Two hundred twenty narrow-leaf milkweed were observed.	Noted due to it being the host plant for monarch.	35
	06/05/2025	Twelve San Diego sedge (*Carex spissa*) were observed.	Noted due to it being the host plant for Harbison dun skipper (*Euphyes vestris harbisoni*).	35
	06/09/2025	Additional observations of spiny redberry were mapped. No Hermes copper were observed. The majority of spiny redberry burned during the Border 2 Fire.	Select spiny redberry stands were visited that may have the potential to support Hermes copper prior to the Border 2 Fire.	29
	06/27/2025	One pampas grass (*Cortaderia selloana*) was observed.	Noted for potential future treatment.	35
	06/27/2025	One Mexican fan palm (*Washingtonia robusta*) was observed.	Noted for potential future treatment.	35
Wildlife	02/17/2025	One greater roadrunner (*Geococcyx californianus*) was detected.	Noted due to it being a potential indicator of functioning habitat.	35
	06/02/2025	One blue-gray gnatcatcher (*Polioptila caerulea*) was detected.	Noted due to its proximity to past coastal California gnatcatcher occurrences.	35
	06/05/2025	One southern California rufous-crowned sparrow was detected.		35
	06/09/2025	One San Diego black-tailed jackrabbit was observed	Noted due to it being one of the golden eagle's preferred prey species.	35
	06/27/2025	One blue-gray gnatcatcher was detected.	Noted due to its proximity to past coastal California gnatcatcher occurrences.	35
	06/27/2025	Six monarch (Priority Group 2) butterflies were observed.		35
	06/27/2025	One hedgerow hairstreak (*Satyrium saepium*) was observed.	Noted due to it being in occupied Thorne's hairstreak habitat.	35

Table 27 Noteworthy Events Documented from Site Visits at Little Cedar Canyon				
Type	Date	Activities/Observations	Management Actions/Notes	Figure(s)
	06/27/2025	One umber skipper (*Lon melane*) was observed.	Noted due to it being in occupied Harbison dun skipper habitat.	35

McMillin Parcels

Table 28 Noteworthy Events Documented from Site Visits at McMillin				
Type	Date	Activities/Observations	Management Actions/Notes	Figure(s)
Border 2 Fire	02/17/2025, 03/17/2025	Areas affected by the Border 2 Fire were visited.	Repeat photo monitoring locations were established to monitor the Border 2 Fire recovery (Attachment 6: Photographs 1–12).	32
Plants	03/27/2025	Fifty San Diego sedge were observed.	Noted due to it being the host plant for Harbison dun skipper.	36
	03/27/2025 04/04/2025 04/11/2025 04/22/2025	Three hundred sixty-one Texas filaree were observed.	Noted due to this being an uncommon species coastally.	36
	06/16/2025	Additional observations of spiny redberry were mapped. No Hermes copper were observed	Select spiny redberry stands that may have the potential to support Hermes copper were visited.	29
Wildlife	03/27/2025	Two living American bullfrog (*Lithobates catesbeiana;* invasive amphibian) were observed. Two separate American bullfrogs were heard calling. Two juvenile American bullfrog were observed dead in water. It is presumed the juveniles died from the Border 2 Fire.		36
	04/11/2025	One San Diego tiger whiptail (*Aspidoscelis tigris stejnegeri;* Priority Group 3) was observed.		36
	06/16/2025	One San Diego tiger whiptail was observed.		36

Millenia Parcels

Table 29 Noteworthy Events Documented from Site Visits at Millenia				
Type	Date	Activities/Observations	Management Actions/Notes	Figure(s)
Plants	05/08/2025	Ten common goldfields were observed.	Noted due to common goldfields seed being dispersed in this area.	37
Wildlife	02/28/2025	One coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis;* Priority Group 1) was observed.		37
Access Issues	10/22/2025	Household trash was observed dumped within the parcels.	The trash was removed and fencing and signs were installed (see Section 5b)	37

Northern Salt Creek Parcels

Table 30 Noteworthy Events Documented from Site Visits at Northern Salt Creek				
Type	Date	Activities/Observations	Management Actions/Notes	Figure(s)
Plants	06/10/2025	Sixty-nine fascicled tarweed (*Deinandra fasciculata*) were observed.	Noted due to proximity to Otay tarplant.	38
Wildlife	05/29/2025	One least Bell's vireo was heard.		38
	06/10/2025	One yellow-breasted chat (*Icteria virens;* Priority Group 3) was heard.		38
	06/10/2025	Two least Bell's vireo were heard.		38
	10/16/2025	Tracks from one southern mule deer were observed.		38

Northern San Ysidro Parcel

Table 31
Noteworthy Events Documented from Site Visits at Northern San Ysidro

Type	Date	Activities/Observations	Management Actions/Notes	Figure(s)
Border 2 Fire	01/28/2025	The PSB visited the Border 2 Fire suppression area with CalFire and USGS personnel.	Guidance was provided to CalFire crew for fire suppression repairs.	-
	02/14/2025	Areas affected by the Border 2 Fire were visited.	Border 2 Fire suppression parking and vehicle turn around areas were mapped.	4
Plants	03/31/2025	60 San Diego sedge were observed.	Noted due to it being the host plant for Harbison dun skipper.	39
	05/15/2025 06/04/2025	108 narrow-leaf milkweed were observed.	Noted due to it being the host plant for monarch.	39
	06/09/2025	No Hermes copper were observed. A small percentage of the spiny redberry did not burn during the fire.	Select spiny redberry stands that may have the potential to support Hermes copper prior to the Border 2 Fire were visited.	29
Wildlife	03/31/2025	Three California treefrog (*Pseudacris* sp.) tadpoles were observed.	Noted to document species in the Border 2 Fire footprint and as part of the western spadefoot surveys.	39
	03/31/2025	Baja California treefrog (*Pseudacris hypochondriaca*) adult observations were made.	Noted to document species in the Border 2 Fire footprint and as part of the western spadefoot surveys.	39
	03/31/2025	One California treefrog (*Pseudacris cadaverina*) adult observation was made.	Noted to document species in the Border 2 Fire footprint and as part of the western spadefoot surveys.	39

Table 31 Noteworthy Events Documented from Site Visits at Northern San Ysidro				
Type	Date	Activities/Observations	Management Actions/Notes	Figure(s)
	04/23/2025 04/24/2025	Two Crotch's bumble bee observations were made.		39
	05/15/2025 06/04/2025	Two least Bell's vireo detections were made.		39

Proctor Valley Parcels

Table 32 Noteworthy Events Documented from Site Visits at Proctor Valley				
Type	Date	Activities/Observations	Management Actions/Notes	Figure(s)
Plants	12/30/2025	One individual coast live oak was mapped.	Noted due to it being an uncommon species within the parcels.	31
Wildlife	06/20/2025	Tracks from domestic cattle (*Bos taurus*) were mapped.	An email with coordinates was sent to CDFW to notify the owner of the cattle location and open fence line on April 1, 2025, when cattle were observed at the Proctor Valley Extension parcels. These tracks appeared to be old; therefore, no further action was taken.	31

Proctor Valley Extension Parcels

Table 33
Noteworthy Events Documented from Site Visits at Proctor Valley Extension

Type	Date	Activities/Observations	Management Actions/Notes	Figure(s)
Plants	06/20/2025	Additional observations of spiny redberry were mapped. No Hermes copper were observed.	Select spiny redberry stands that may have the potential to support Hermes copper were visited.	30
Wildlife	04/01/2025 06/20/2025	The PSB observed six to seven domestic cattle within the parcels.	An email with coordinates was sent to CDFW to notify the owner of the cattle location and open fence line on April 1, 2025. The tracks observed on June 20 appeared to be old; therefore, no further action was taken.	31
	05/20/2025	One San Diego black-tailed jackrabbit was observed.	Noted due to it being one of the golden eagle's preferred prey species.	31
	06/20/2025	One common animal, California bumble bee (*Bombus californicus*), detection was made.	Noted due to it occurring within potential Crotch's bumble bee habitat.	31
	06/20/2025	One common animal, blue-gray gnatcatcher , was observed.	Noted due to its proximity to coastal California gnatcatcher occurrences.	31

Proctor Valley (North) Parcel

Table 34
Noteworthy Events Documented from Site Visits at Proctor Valley (North)

Type	Date	Activities/Observations	Figure(s)
Plants	06/09/2025	Select spiny redberry stands that may have the potential to support Hermes copper were visited. Additional observations of spiny redberry were mapped. No Hermes copper were observed.	30

Ridge Parcels

Table 35 Noteworthy Events Documented from Site Visits at Ridge			
Type	Date	Activities/Observations	Figure(s)
Wildlife	05/06/2025	One Blainville's horned lizard (*Phrynosoma blainvillii* [=*P. coronatum* coastal population; Priority Group 2]) was observed.	40
Plants	06/25/2025	Select spiny redberry stands that may have the potential to support Hermes copper were visited. Additional observations of spiny redberry were mapped. No Hermes copper were observed.	30
	06/25/2025	Twenty narrow-leaf milkweed observations were made. Noted due to it being the host plant for monarch.	40
	06/25/2025	Fifteen San Diego sedge observations were made. Noted due to it being the host plant for Harbison dun skipper.	40
	06/25/2025	450 stinkwort (*Dittrichia graveolens*) individuals were removed by hand.	40

Salt Creek Parcels

Table 36 Noteworthy Events Documented from Site Visits at Salt Creek				
Type	Date	Activities/Observations	Management Actions/Notes	Figure(s)
General Observations	01/02/2025 01/16/2025	Herbivory was observed on barrel and coast cholla cacti.	Noted as it was thought that mammals were eating cacti for hydration due to extremely dry conditions.	-
Plants	01/16/2025	Locations for collecting needle grass (*Stipa* spp.), California centaury (*Zeltnera venusta*), coast cholla (*Cylindropuntia prolifera*), and coast prickly-pear (*Opuntia littoralis*) were scouted and mapped.	The potential collection locations were scouted.	-
	06/12/2025	Additional observations of spiny redberry were mapped. No Hermes copper were observed.	Select spiny redberry stands that may have the potential to support Hermes copper were visited.	29
	08/19/2025	Two Peruvian pepper trees were observed.	Noted due to potential future treatment.	38
	10/03/2025	One non-native African sumac (*Searsia lancea*) was observed.	Noted due to potential future treatment.	38

Table 36 Noteworthy Events Documented from Site Visits at Salt Creek				
Type	Date	Activities/Observations	Management Actions/Notes	Figure(s)
Wildlife	03/10/2025	One San Diego black-tailed jackrabbit was observed.	Noted due to it being one of the golden eagle's preferred prey species.	38
	01/16/2025 03/14/2025 04/21/2025 05/29/2025 10/03/2025	Seven coastal cactus wren detections were made.		38
	03/14/2025	One San Diego black-tailed jackrabbit was observed.	Noted due to it being one of the golden eagle's preferred prey species.	38
	04/21/2025 12/23/2025	Four California gnatcatcher detections were made..		38
	04/21/2025 05/08/2025 05/29/2025	Three least Bell's vireo detections were made.		38
	04/21/2025 12/23/2025	Two southern mule deer observations were made.		38
	04/21/2025	One red-tailed hawk was observed.		38
	04/21/2025 06/10/2025	Two greater roadrunner observations were made.	Noted due to it being a potential indicator of functioning habitat.	38
	05/29/2025 10/23/2025	One red diamond rattlesnake (*Crotalus ruber;* Priority Group 3) observation were made.		38

San Ysidro Parcels

Table 37 Noteworthy Events Documented from Site Visits at San Ysidro				
Type	Date	Activities/Observations	Management Actions/Notes	Figure(s)
Border 2 Fire	01/28/2025	The PSB visited the Border 2 Fire suppression area with CalFire and USGS personnel.	Guidance was provided to CalFire crew for fire suppression repairs.	-
	02/12/2025	Areas affected by the Border 2 Fire were visited.	Border 2 Fire suppression dozer lines were mapped. Repeat photo monitoring locations were established	4, 32

Table 37 Noteworthy Events Documented from Site Visits at San Ysidro				
Type	Date	Activities/Observations	Management Actions/Notes	Figure(s)
			(Attachment 6: Photographs 1–12).	
Plants	02/12/2025	Two chocolate lily were observed.	Noted due to it being an indicator of clay soil.	39
	05/15/2025	Seventy-five narrow-leaf milkweed were observed.	Noted due it being the host plant for monarch.	39
	06/23/2025	One stinkwort was observed.	A southern Pacific rattlesnake (*Crotalus oreganus helleri*) was adjacent to the stinkwort. The stinkwort was recorded for future treatment.	39
	06/09/2025	Additional observations of spiny redberry were mapped. No Hermes copper were observed. A small percentage of the spiny redberry did not burn during the fire.	Select spiny redberry stands that may have the potential to support Hermes copper prior to the Border 2 Fire were visited.	29
Wildlife	04/11/2025	One greater roadrunner was detected.		39
	04/22/2025 04/24/2025 05/02/2025 05/15/2025	Nine Gabb's checkerspot observations were made.	Noted to track the progression of the Quino checkerspot butterfly season.	39
	05/15/2025	One blue-gray gnatcatcher was observed.	Noted due its proximity to coastal California gnatcatcher occurrences.	39
	05/15/2025	One southern California rufous-crowned sparrow was detected.		39
	05/15/2025	One San Diego tiger whiptail was observed.		39
	06/09/2025	One California ground squirrel was observed.	Noted due to it being one of the golden eagle's preferred prey species.	39
	06/23/2025	One least Bell's vireo detection was made.		39
	06/23/2025 07/29/2025	Six invasive American bullfrog observations were made.		39
	08/27/2025	One San Diego black-tailed jackrabbit was observed.	Noted due to it being one of the golden eagle's preferred prey species.	39

Wolf Canyon and Western Wolf Canyon Parcels

Table 38
Noteworthy Events Documented from Site Visits at Western Wolf Canyon and Wolf Canyon

Type	Date	Activities/Observations	Figure(s)
Wildlife	06/13/2025	Two coastal California gnatcatchers were observed. One additional coastal California gnatcatcher was heard.	41
	06/13/2025	One coastal cactus wren was detected.	41
	06/13/2025	One greater roadrunner was detected.	41
	06/13/2025	One least Bell's vireo was detected.	41

Task 3: Meetings and Coordination

The PSB attended various land manager meetings and workshops through December 31, 2025. Meeting topics and dates are described in detail below.

Subtask 3a. (FY 2024-25 and FY 2025-26) SDMMP & MSP Meetings

The PSB attended monthly San Diego Management and Monitoring Program (SDMMP) meetings to assure consistency with regional conservation efforts and plans. The September SDMMP meeting recording was not shared with the public. SDMMP meetings were not held in October, November, or December. The Management and Monitoring Strategic Plan (MSP) meetings were attended in July and December. Table 39 provides a list of the meetings attended and dates meeting notes were submitted.

Table 39
San Diego Management and Monitoring Program and
Management and Monitoring Strategic Plan Meetings:
January 1, 2025, through December 31, 2025

Meeting Date	Meeting	Presenter	Topic	Meeting Note Submittal Date
01/22/2025	SDMMP	Gabe Elliott (Western Riverside County Regional Conservation Authority) Jessie Vinje (SageVinje Biological)	Recent Rare Plant Surveys in Western Riverside County SDMMP's Rare Plant Program - Background and Results From a Decade of Surveys and Monitoring	01/27/2025

Table 39 San Diego Management and Monitoring Program and Management and Monitoring Strategic Plan Meetings: January 1, 2025, through December 31, 2025				
Meeting Date	Meeting	Presenter	Topic	Meeting Note Submittal Date
02/26/2025	SDMMP	Megan Jennings (Institute for Ecological Monitoring and Management, San Diego State University) and Sarah Hennessy (US Forest Service)	The Southern California Montane Forest Strategy: Building Resilience and Adaptation into Forest Management	03/04/2025
03/26/2025	SDMMP	Felicia Hill and Joe Wier (Iipay Nation of Santa Ysabel) Brian Shomo (Riverside County Habitat Conservation Agency) Wayne Spencer (Conservation Biology Institute)	Iipay Nation of Santa Ysabel: Huunash Ewaa Habitat Restoration Stephens' Kangaroo Rat, a Success Story Three Years of Range Wide Monitoring for Stephens' Kangaroo Rat and Preliminary Thoughts on a Genetic Rescue Translocation in the Ramona Grasslands	03/26/2025
04/23/2025	SDMMP	Kris Preston and Annabelle Bernabe (SDMMP and USGS) Charlie de la Rosa (SD Zoo Wildlife Alliance)	Evaluating the Effectiveness of Cactus Scrub Management in Benefitting Coastal Cactus Wren Population Top Down and Bottom Ip: Remote Sensing and Vegetation Surveys to Inform Adaptive Management of Stinknet for Cactus Wren Restoration	06/03/2025
05/28/205	SDMMP	Fernando Najera (UC Davis)	An Update on the UC Davis Mountain Lion Research Project	06/03/2025
06/25/2025	SDMMP	Mendel Stewart (Natural Communities Coalition) Amy Vandergast (USGS)	Nature Reserve of Orange County Ecological Health Assessment Report Highlights Population Genetic Structure and Diversity in the Harbison Dun Skipper	06/25/2025

Table 39 San Diego Management and Monitoring Program and Management and Monitoring Strategic Plan Meetings: January 1, 2025, through December 31, 2025				
Meeting Date	Meeting	Presenter	Topic	Meeting Note Submittal Date
07/08/2025	MSP Land Managers	Brooke Prentice-Dekker (Center For Natural Lands Management) Lori Hargrove (San Diego Natural History Museum) Emily Perkins (SDMMP/USGS); Tristan Edgarian (USGS) Carlton Rochester (USGS)	San Diego Thornmint Seed Collection, Testing, and Expansion The Tricolored Blackbird in Southern California: Filling Gaps in Status and Conservation Needs Preserve Vegetation Mapping Wildlife Camera Mountain Lion Identification Request/Discussion	N/A
07/23/2025	SDMMP	Sebastian Fajardo Acuna (UC Davis) R. Brandon Pratt (CSU Bakersfield) Anna L. Jacobsen (CSU Bakersfield)	Shrub Dieback and Mortality in San Diego and Southern California Phytophthera and Botryosphaeriaceae in Chaparral Mortality of Native Shrubs Ecophysiological Approach to Restoration	07/29/2025
08/27/2025	SDMMP	Galen Reid, Habitat Manager (San Diego Habitat Conservancy) Sarah Maisonneuve	Tule Wind Preserve- Inventorying Sensitive Flora in the Dynamic In-Ko-Pah Mountains Inspiring Stewardship of San Diego's Native Biodiversity Through Environmental Education and Conservation	08/28/2025

Table 39 San Diego Management and Monitoring Program and Management and Monitoring Strategic Plan Meetings: January 1, 2025, through December 31, 2025				
Meeting Date	Meeting	Presenter	Topic	Meeting Note Submittal Date
12/09/2025	MSP	Ida Kaller-Vincent (Earth Discovery Institute) Tsaiwei Olee and Mary Jo Haynes (Palomar Audubon) Madison Wilson (SD Zoo Wildlife Alliance) Clayton Tschudy and Jonathan Appelbaum (Canyonlands) Felix Ratcliff (Rangeland Conservation Science) and James Bartolome (UC Berkeley)	Restoring Cactus Scrub Habitat for the Coastal Cactus Wren Palomar Audubon Society Cactus Wren Survey in the Biodiversity Reserve 2025 Volunteer-Led Cactus Wren Surveys: Palomar Audubon, SDMMP, SDZWA, USGS From Canyons to Communities: Canyonlands' Strategic Role in Regional Land Management SANDAG Grazing Monitoring Study Updates	N/A

Subtask 3b. (FY 2024-25 and FY 2025-26) Land Manager Meetings

Additional meetings were attended by the PSB to coordinate with other agencies and land managers. The following includes a list of meetings attended by the PSB:

- On January 26, the PSB provided the U.S. Geological Survey (USGS) with species information within the Border 2 Fire footprint to aid fire suppression and recovery. The PSB and City staff met with California Department of Forestry and Fire Protection (CalFire) Resource Advisor staff (James Gannon at BLM) at the Border 2 Fire incident command station at Snapdragon Stadium to discuss providing CalFire with suppression recovery guidance on POM lands.

- On January 28, the PSB visited the Border 2 Fire suppression area with CalFire and USGS personnel. The purpose of the visit was to provide guidance to CalFire crew for fire suppression repairs such as where to use vegetation that was downed during suppression activities to block potential unauthorized vehicle access and where to repair fencing that was cut or damaged by fire crews during suppression activities.

- On January 29, the PSB sent an email to the POM, USFWS, and CDFW to provide a status update on the Border 2 Fire.

- On March 20, the PSB attended the Southern California Resource Advisor Cohort meeting hosted by USGS. The purpose of the meeting was to familiarize land managers with fire crew methods.
- On June 10, the PSB attended the quarterly Southern California Resource Advisor Cohort meeting.
- On June 18, the PSB met with SANDAG and County Parks and Recreation staff to assist with a SANDAG-requested audit of the former SANDAG TransNet EMP grant for QCB short-term threat reduction project within the Dulzura parcels.
- The PSB prepared for and presented at the Multiple Species Conservation Program (MSCP) annual workshop on November 7. The PSB also prepared for and led a public field trip to the Salt Creek parcels as part of the workshop.

Subtask 3c. (FY 2024-25 and FY 2025-26): Meeting Notes

Meeting notes were prepared and provided to the POM for SDMMP meetings described under Subtask 3a.

Subtask 3d. (FY 2024-25 and FY 2025-26): POM

The POM and PSB coordinated Preserve monitoring and management tasks via phone, email, and virtual meetings. Coordination included topics such as Border 2 Fire, access issues, monitoring and management tasks, future conveyed lands, and proposed projects within Otay Ranch Preserve.

On January 24, the PSB prepared and sent an email to the POM providing a status update on the golden eagle cameras within the Border 2 Fire footprint.

The PSB prepared a PowerPoint presentation and presented it to the POM on February 4. The presentation provided a status update on the Border 2 Fire.

On February 10, the PSB and City staff visited the Border 2 Fire suppression area. The purpose was to plan for fire recovery.

The PSB presented a PowerPoint presentation at a POM meeting on March 10. The purpose of the presentation was to provide a status update on the Border 2 Fire impacts, next steps for FY 2024-25, and next steps for FY 2025-26.

On March 25, the PSB met with the POM to discuss two abandoned exploratory mining pits located on the Dulzura parcels. The purpose was to discuss options for securing the pits from possible falls. The PSB researched bat-friendly methods for closing the pits, designed signs, and prepared costs. Section 5b describes the fence and sign installation that occurred to secure the exploratory mining pits.

Task 4: Reporting

The following section describes reports that were submitted to the POM in support of the FY 2024–25 and FY 2025–26 annual work plans.

Subtask 4b. (FY 2024-25) and Subtask 4a. (FY 2025-26) Database Management and Contributions

Management and monitoring data collected between January 1, 2024, and December 31, 2024, were submitted to the California Natural Diversity Database, San Diego Biological Information and Observation System, and South Coast Multi-taxa Database on February 26, 2025.

The PSB coordinated with SDMMP for submitting MSP IMG 2025 survey data. MSP IMG photographs and spatial data collected in 2025 were finalized and uploaded onto the SDMMP website on December 4, 2025. MSP IMG field forms collected in 2025 were finalized and uploaded onto the SDMMP website on December 30, 2025.

Subtask 4d. (FY 2024-25) Annual Report

The 2024 Annual Report for the Otay Ranch Preserve was submitted to the POM on January 21, 2025 (RECON 2025c). The annual report summarized all Preserve monitoring and operations/maintenance tasks performed between January 1 and December 31, 2024. The County included the 2024 Otay Ranch Preserve annual report as an attachment to their 2024 MSCP annual report. The County MSCP annual report with the 2024 Otay Ranch Preserve annual report attached was submitted to USFWS and CDFW on June 4, 2025 (County of San Diego 2025).

Subtask 4e. (FY 2024-25) FY 2025–26 Annual Work Plan

The FY 2025–26 Annual Work Plan was submitted to the POM on May 16, 2025 (RECON 2025a). The work plan proposed Preserve monitoring and operations/maintenance tasks to be performed between July 1, 2025, and June 30, 2026.

Subtask 4f. (FY 2024-25) Quino Checkerspot Butterfly Pre-Survey Notification Letter

The PSB submitted the QCB pre-survey notification letter to USFWS (Stacey Love, Eric Porter, Susan Wynn) and the POM on March 14, 2025 (RECON 2025b). USFWS (Eric Porter) approved of the proposed deviation on March 18. QCB surveys were conducted according to USFWS protocol (USFWS 2014) except where deviations were approved.

Subtask 4g. (FY 2024-25) Quino Checkerspot Butterfly Post-Survey Report

The PSB submitted the QCB post-survey report to USFWS (Carlsbad Fish and Wildlife Office Recovery Permit Coordinator, and Susan Wynn, and Eric Porter), CDFW (Hillary Sardinas), and the POM on July 3, 2025 (RECON 2025d). Figures 46 through 48 show the QCB host and nectar plants mapped in 2025. While conducting other preserve monitoring tasks, RECON biologist JR Sundberg observed a QCB larva at the Dulzura parcels prior to initiating the flight surveys. The QCB larva observation made on March 5, 2025, is shown on a USGS 7.5-minute topographic map on Figure 49. See Attachment 4: Photographs 1–16 for a representative photograph from the surveys.

In general, the survey area consisted of very open burnt vegetation with lower quantities of dot-seed plantain than normal, with small patches of purple owl's-clover (*Castilleja exserta*) and areas with cryptobiotic soil crust. Vegetation within portions of the survey area at the Dulzura and San Ysidro parcels had recently been removed with a bulldozer and hand tools by fire crews during the Border 2 Fire suppression effort. A total of 56 butterfly and skipper observations were made during the focused surveys, representing eight species (and one unidentified species) (RECON 2025d). Unidentified species included an individual that could not be identified to a species level when it flew by. This unidentified fly-by included a duskywing skipper (*Erynnis* sp.). The most common butterfly species observed were immaculate bramble (*Callophrys dumetorum affinis*), Pacific Sara orangetip (*Anthocharis sara sara*), and common California ringlet (*Coenonympha california california*). No QCB observations were made during the focused surveys. The results of the QCB surveys are shown in Table 40.

Table 40
Quino Checkerspot Butterfly Survey Results

Parcel(s)	Common Name	Scientific Name	Number of Individuals
Dulzura	Quino checkerspot butterfly	*Euphydras editha quino*	1 - larva incidentally observed on 03/05/2025
McMillin			0
San Ysidro			0

Subtask 4b. (FY 2025-26) Baseline Survey Report

One baseline survey report was prepared summarizing the results of baseline surveys completed for the 264-acre Rock Top parcel (FY 2024–25 Work Plan Task 1j). The survey consisted of vegetation mapping, a general plant and wildlife survey, and photographic monitoring. Sensitive species were observed incidentally, and suitable habitat for sensitive wildlife species was evaluated. The baseline survey report was completed and submitted to the POM on October 17, 2025. The results of the baseline survey are shown in Figures 42–45.

The following summarized results are from the Rock Top baseline survey:

- 12 photographic monitoring points were established.

- 14 unique types of vegetation stands were identified.
- 163 plant species were observed, 137 native and 26 non-native.
    - 6 sensitive plant species were observed.
    - 16 non-native plant species ranked by California Invasive Plant Council (Cal-IPC) were observed.
- 15 invertebrate species were observed.
    - 0 sensitive invertebrate species were observed.
- 37 bird species were observed.
    - 2 sensitive bird species were observed.
- 8 mammal species were observed.
    - 2 sensitive mammal species were observed.

3.0 Operations/Maintenance

This chapter describes operations/maintenance tasks that occurred between January 1 and December 31, 2025. These tasks were proposed in the FY 2024–25 and FY 2025-26 annual work plans (RECON 2024a and 2025a).

Task 5: Access Control

Access control within the Preserve continues to be one of the highest priority tasks. Sensitive habitat, plants, and wildlife are being impacted by unauthorized foot and bicycle traffic, off-highway vehicles, target-shooting activities, and unauthorized route creation. The following sections detail work that was performed in an ongoing effort to minimize damage to the Preserve.

Subtask 5a. (FY 2024-25 and FY 2025-26) U.S. Customs and Border Protection/Agency Access Meetings & Coordination

- In February, the PSB coordinated with Geocaching HQ. They confirmed they can archive all geocaches on Otay Ranch Preserve from their database. The PSB also created an OpenStreetMap account and updated 79 unauthorized trails within Otay Ranch Preserve to private by using ArcGIS data. AllTrails uses the OpenStreetMap data for their platform.
- In March, the PSB coordinated with Geocaching HQ and AllTrails to continue to remove unauthorized trails and geocache information from their databases. On March 17, the PSB confirmed AllTrails listed all trails on POM property as private. On March 26, HQ stated that

they had archived the list of geocaches on POM property and would reach out to the cache owners to ask them to remove the geocache containers as soon as possible.

- In May, from a desktop computer, the PSB began mapping the Geocaches that were removed from the Geocache HQ database in March. Geocache HQ provided a list of removed geocaches. There was a total of 90 geocaches removed from the Geocache HQ database within Otay Ranch Preserve.
- In August, the PSB reviewed Geocaching and AllTrails data to determine if any new data had been added. A GIS layer was created to show the trails and geocache points that were removed from the Geocaching and AllTrails databases. Figure 50 shows the geocache locations that were removed from the AllTrails and Geocaching HQ databases.
- The PSB coordinated with San Diego Gas & Electric, Otay Water District, City of San Diego, and U.S. Customs and Border Protection regarding replacing locks to secure the gate at Hunte Parkway, as needed.
- In October, the PSB reviewed AllTrails and Geocache databases for any data occurring within Otay Ranch Preserve. There were no new trails or geocaches found in the databases.
- The PSB coordinated with USFWS and CDFW in December via email regarding replacing a lock at the off-site gate west of the Dulzura parcels. The lock was replaced.

Subtask 5b. (FY 2024-25 and FY 2025-26) Fence and Sign Installation and Repair

In 2025, management actions were taken at the following parcels due to observations of trespass and habitat damage: Dulzura, Jamul Mountains, Millenia, Northern Salt Creek, Northern San Ysidro, Salt Creek, San Ysidro, and Wolf Canyon. See below for management actions addressed in 2025 in response to unauthorized access observations.

During 2025, the PSB reviewed recent Google Earth imagery and mapped obvious unauthorized routes. The routes were verified in the field, and the type of trespass was noted.

Access control issues were addressed through December 31, 2025. Tables 41 through 48 summarize access control measures that were implemented per parcel between January 1 and December 31, 2025. Access control issues are described below the tables. The work completed addressed both immediate repair needs and long-term access control vulnerabilities. Attachment 2: Photographs 25–35 are representative photographs from access control activities. The following bullet points provide a summary of total POM property installations/repairs for fences, signs, gates, and additional access control, and the total off-site adjacent to the Preserve repairs conducted during 2025:

- Total POM property installations/repairs conducted during 2025 include:
    - 1,617 linear feet of fencing installed
    - 635 linear feet of fencing repaired

  - 24 signs installed
  - 5 signs replaced
  - 4 signs repaired
  - Gates were secured as needed
  - Additional access control included t-post installation with concrete (6 linear feet), one t-post was placed horizontally to block motorcycles (3 linear feet), installation of 2 temporary signs, 425 square feet of native branch vertical mulch placement, installation of 0.35 acres of coast cholla as a natural barrier, and installation of seven bollards during the Quino checkerspot butterfly and larva active period.
- Total off-site CDFW property installation conducted during 2025 include:
  - 66 linear feet of fencing installed in coordination with Nicholas Aponte (CDFW South San Diego Reserve Manager). The fence was installed to block an unauthorized motorcycle route that originated on CDFW property and entered Quino checkerspot butterfly habitat on POM property.

Table 41 Dulzura Parcels: Fencing, Sign, and Gate Installation and Repairs[1]								
Parcel	Date	Fencing Installed (linear feet)[2]	Fencing Repaired (linear feet)[2]	Signs Installed	Signs Replaced	Signs Repaired	Gate Repaired	Other Access Control Installed
Dulzura	02/07/2025	-	-	-	-	-	4 locks placed on 4 separate gates	7 bollards placed
	03/05/2025	47	140	-	-	1	-	-
	03/18/2025	-	-	3	-	-	-	-
	05/16/2025	-	-	-	-	-	-	7 bollards removed
	05/27/2025	100	-	10	-	-	-	-
	09/30/2025	445	20	-	-	-	-	-
	12/03/2025	-	-	-	-	-	-	7 bollards placed
TOTAL (POM Property)		**592**	**160**	**13**	**-**	**1**	**4 locks placed on 4 separate gates**	**7 bollards placed (2 times); 7 bollards removed (1 time)**

[1]Figure 33 shows access control data collected in 2025 at Dulzura Parcels.
[2]Ground length, not total materials used for repair.

Table 42 Jamul Mountain Parcels: Fencing, Sign, and Gate Installation and Repairs[1]								
Parcel	Date	Fencing Installed (linear feet)[2]	Fencing Repaired (linear feet)[2]	Signs Installed	Signs Replaced	Signs Repaired	Gate Repaired	Other Access Control Installed
Jamul Mountains	12/17/2025	-	-	-	1	-	-	-
TOTAL (POM Property)		**-**	**-**	**-**	**1**	**-**	**-**	**-**

[1]Figure 34 shows access control data collected in 2025 at Jamul Mountains Parcels.
[2]Ground length, not total materials used for repair.

Table 43 Millenia Parcels: Fencing, Sign, and Gate Installation and Repairs[1]								
Parcel	Date	Fencing Installed (linear feet)[2]	Fencing Repaired (linear feet)[2]	Signs Installed	Signs Replaced	Signs Repaired	Gate Repaired	Other Access Control Installed
Millenia	10/23/2025	30	-	1		--	-	-
	11/24/2025	360	-	3	-	-	-	-
TOTAL (POM Property)		**390**	**-**	**4**	**-**	**-**	**-**	**-**

[1]Figure 37 shows access control data collected in 2025 at Millenia Parcels
[2]Ground length, not total materials used for repair.

Table 44 Northern Salt Creek Parcels: Fencing, Sign, and Gate Installation and Repairs[1]								
Parcel	Date	Fencing Installed (linear feet)[2]	Fencing Repaired (linear feet)[2]	Signs Installed	Signs Replaced	Signs Repaired	Gate Repaired	Other Access Control Installed
Northern Salt Creek	03/18/2025	-	-	-	-	-	-	One t-post placed horizontally to block motorcycles (3 linear feet)
	06/10/2025	-	15	-	-	-	-	-
	11/24/2025	-	6	-	-	-	-	Concrete with t-posts (6 linear feet)
TOTAL (POM Property)		**-**	**21**	**-**	**-**	**-**	**-**	**One t-post placed horizontally to block motorcycles (3 linear feet), Concrete with t-posts (6 linear feet)**

[1]Figure 38 shows access control data collected in 2025 at Northern Salt Creek Parcels
[2]Ground length, not total materials used for repair.

Table 45 Northern San Ysidro Parcels and Adjacent CDFW Property: Fencing, Sign, and Gate Installation and Repairs[1]								
Parcel	Date	Fencing Installed (linear feet)[2]	Fencing Repaired (linear feet)[2]	Signs Installed	Signs Replaced	Signs Repaired	Gate Repaired	Other Access Control Installed
Northern San Ysidro (Off-site CDFW Property)	09/29/2025	66	-	-	-	-	-	-
TOTAL (Off-site CDFW Property)		**66**	**-**	**-**	**-**	**-**	**-**	**-**

[1]Figure 39 shows access control data collected in 2025 at Northern San Ysidro Parcels
[2]Ground length, not total materials used for repair.

Table 46
Salt Creek Parcels: Fencing, Sign, and Gate Installation and Repairs[1]

Parcel	Date	Fencing Installed (linear feet)[2]	Fencing Repaired (linear feet)[2]	Signs Installed	Signs Replaced	Signs Repaired	Gate Repaired	Other Access Control Installed
Salt Creek	01/23/2025 01/29/2025 01/30/2025 01/31/2025	-	-	-	-	-	-	0.21 acre coast cholla planted
	01/23/2025	86	-	-	-	-	-	0.14 acre coast cholla planted
	01/30/2025	-	10	-	-	-	-	-
	02/07/2025	-	10	-	-	-	-	-
	04/14/2025	-	10	-	-	-	-	-
	09/04/2025	-	10	-	-	-	-	-
	10/03/2025	284	25	-	-	-	-	-
	10/22/2025	-	215	-	4	3	-	-
	10/23/2025	-	20	-	-	-	-	425 square feet of native branch vertical mulch
	11/06/2025	-	-	1	-	-	-	-
	12/10/2025	-	154					
	12/31/2025	-	-	1	-	-	-	-
	ongoing	-	-	-	-	-	-	Gates secured, as needed.
TOTAL (POM Property)		**370**	**454**	**2**	**4**	**3**	**-**	**0.35 acre coast cholla planted, 425 square feet of native branch vertical mulch**

[1]Figure 38 shows access control data collected in 2025 at Salt Creek Parcels
[2]Ground length, not total materials used for repair.

Table 47 San Ysidro Parcels: Fencing, Sign, and Gate Installation and Repairs[1]								
Parcel	Date	Fencing Installed (linear feet)[2]	Fencing Repaired (linear feet)[2]	Signs Installed	Signs Replaced	Signs Repaired	Gate Repaired	Other Access Control Installed
San Ysidro	09/29/2025	218	-	-	-	-	-	-
San Ysidro	12/04/2025	-	-	3	-	-	-	-
TOTAL (POM Property)		**218**	**-**	**3**	**-**	**-**	**-**	**-**

[1]Figure 39 shows access control data collected in 2025 at San Ysidro Parcels
[2]Ground length, not total materials used for repair.

Table 48 Wolf Canyon Parcels: Fencing, Sign, and Gate Installation and Repairs[1]								
Parcel	Date	Fencing Installed (linear feet)[2]	Fencing Repaired (linear feet)[2]	Signs Installed	Signs Replaced	Signs Repaired	Gate Repaired	Other Access Control Installed
Wolf Canyon	12/19/2025	-	-	-	-	-	-	2 temporary signs
Wolf Canyon	12/31/2025	47	-	2	-	-	-	-
TOTAL (POM Property)		**47**	**-**	**2**	**-**	**-**	**-**	2 temporary signs

[1]Figure 41 shows access control data collected in 2025 at San Ysidro Parcels
[2]Ground length, not total materials used for repair.

Dulzura Parcels

Figure 33 shows access control data collected in 2025.

- On February 7:
    - Four combination locks were placed on four gates along Minnewawa Truck Trail and on the gate east of Thousand Trails Pio Pico RV Campground to secure the gates after the Border 2 Fire crews no longer needed access.
    - Seven bollards were placed in the previously installed sleeves and locked to close a dirt road during Quino checkerspot butterfly and larvae season. This effort was matching/complementary work for the 18-month SANDAG TransNet EMP grant for QCB short-term threat reduction that ended in fall 2024.
- In March, signs were designed for placement near the two abandoned exploratory mining pits.
- On March 5:
    - 47 linear feet of three-strand barbless wire t-post fencing was installed to extend the existing fence to protect occupied Quino checkerspot butterfly habitat.
    - A four-strand barbless wire t-post fence that had been damaged during the Border 2 Fire suppression was repaired along the northwestern boundary of the Dulzura parcels at three separate locations: 25 linear feet, 20 linear feet, and 20 linear feet.
    - 60 linear feet of a three-strand barbless wire t-post fence that had been damaged during the Border 2 Fire suppression was repaired along Minnewawa Truck Trail.
    - 15 linear feet of t-post barbless wire fence that had been damaged during the Border 2 Fire suppression was repaired near the eastern gate at the Thousand Trails Pio Pico RV Campground and preserve boundary.
    - One sign stating Dead End Ahead Area Closed to Vehicles was repaired. It had been knocked over by a dozer during the Border 2 Fire suppression.
- On March 18, three no trespassing signs were installed along the western boundary of the parcels.
- On April 30, the PSB and RECON crew met on-site at the abandoned exploratory mining pits to evaluate securing the pits.
- On May 16, seven bollards were removed to open a dirt road after the Quino checkerspot butterfly flight season had ended. This effort was matching/complementary work for the 18-month SANDAG TransNet EMP grant for QCB short-term threat reduction that ended in fall 2024.

- On May 27, 50 linear feet of welded wire material with t-posts and four signs on each side were installed to encircle the western abandoned exploratory mining pit. At the eastern pit, 50 linear feet of welded wire material with t-posts and four signs on each side were installed to encircle the pit. Rocks were gathered from the tailings and placed around the base of the fence to further demarcate the area at each pit. Approximately 150-200 feet southeast of each pit, one sign was installed to provide additional warning of the presence of the pits. Three signs were placed on existing t-posts along the western boundary of the parcels. The signs stated "No Trespassing. Dangerous Conditions!" in English and Spanish. Attachment 2: Photograph 26 shows one of the abandoned exploratory mining pits after fence and sign installation.

- On September 30, three sections totaling 445 linear feet of barbless wire t-post fencing were installed along Minnewawa Truck Trail to block unauthorized vehicles and mountain bikes from entering into sensitive habitat, including native grassland and coastal sage scrub. In addition, 20 linear feet of barbless wire t-post fencing was repaired along the northern boundary of the Dulzura parcels to block unauthorized vehicles from entering into sensitive habitat, including coastal sage scrub and occupied Quino checkerspot butterfly habitat.

- On December 3, seven bollards were installed to close a road during the Quino checkerspot butterfly and larva active period near DLZ_3 (Attachment 2: Photograph 25).

Jamul Mountains Parcels

Figure 34 shows access control data collected in 2025.

- On December 17, one sign stating "No Trespassing Otay Ranch Preserve Sensitive Habitat Area" was replaced to block an unauthorized motor bike route and further enforce recent fence installation.

Millenia Parcels

Figure 37 shows access control data collected in 2025.

- On October 23, 30 linear feet of new t-post barbless-wire fencing was installed to address persistent unauthorized dumping. Installation of new fencing creates a clearer physical barrier, reducing the likelihood of continued dumping. A sign reading "Area Closed to Vehicle Traffic" was also installed to reinforce access restrictions.

- On November 24, 360 linear feet of barbless wire t-post fencing was installed on either side of a previously installed fence to block an unauthorized route where trash was being dumped (Attachment 2: Photograph 34). Three signs stating "Area Closed to Vehicle Traffic," "No Trespassing – Otay Ranch Preserve," and "Notice – No Dumping. No Landscape Waste Disposal" were installed on the fence. The crew also removed three contractor-size trash bags full of trash that had been dumped on and directly adjacent to the parcel. The trash was disposed of off-site in a dumpster at the RECON yard.

Northern Salt Creek Parcels

Figure 38 shows access control data collected in 2025.

- On March 18, a single t-post was placed horizontally at the pedestrian crossing along the barbless wire fence to block motorcycles from entering the parcels.
- On June 10, 15 linear feet of t-post barbless wire fencing was repaired along the northern boundary of the Northern Salt Creek parcels.
- On November 24, the northern boundary fence was repaired. The crew added concrete to a row of t-posts six feet in length.

Northern San Ysidro Parcels

Figure 39 shows access control data collected in 2025.

- On September 29, 66 linear feet of barbless wire t-post fencing was installed off-site on CDFW property in coordination with Mr. Aponte. The fence blocked an unauthorized motorcycle route that originated on CDFW property and entered Quino checkerspot butterfly habitat on POM property.

Salt Creek Parcels

Figure 38 shows access control data collected in 2025.

- Gates were secured ongoing throughout 2025, as needed.
- On January 23, 29, 30, and 31, coast cholla was collected from on-site and planted within 0.21 acres for access control. The RECON restoration crew used line trimmers to cut dried plant material from the area prior to planting. The plant material was raked and removed from the planting area to reduce weed seeds and expose the soil surface.
- On January 23, 86 linear feet of three-strand barbless wire fence was installed to protect coastal cactus wren habitat from off-road vehicle activity. Coast cholla was collected on-site and planted within 0.14 acres for access control at this location. The RECON restoration crew used line trimmers to cut dried plant material from the area prior to planting.
- On January 30, the RECON crew repaired 10 linear feet of t-post barbless wire fence adjacent to the red gate along the eastern property boundary. On February 6, a 10-foot linear cut was observed adjacent to the location fixed on January 30. This new location was repaired on February 7.
- On April 14, 10 linear feet of barbed wire fencing were repaired along the eastern boundary between the red gate and chain-link gate.

- On September 4, 10 linear feet of barbless wire t-post fencing was repaired along the eastern boundary near the red gate.
- On October 3, 25 linear feet of barbless wire t-post fencing was repaired along the eastern boundary near the red gate to block unauthorized vehicles from entering into the preserve.
- On October 3, three sections totaling 242 linear feet of barbless wire t-post fencing was installed to tie into existing fencing. The fencing was installed to block unauthorized all-terrain vehicles from entering into coastal cactus wren habitat.
- On October 3, 42 linear feet of barbless wire t-post fencing was installed to block unauthorized trucks and motorcycles from driving through coastal sage scrub habitat.
- On October 22 and 23:
    - The RECON crew conducted maintenance and repair of existing fencing to ensure continued protection of sensitive habitat areas. Work included repairing approximately 15 linear feet of t-post barbless-wire fencing, tightening 200 linear feet of loose and sagging fence wires, removing trash and debris that could attract additional littering, and replacing four damaged or missing regulatory and informational signs, and repairing one sign.
    - Additional repairs were completed near the Salt Creek concrete ford, where the crew repaired 20 linear feet of t-post barbless-wire fencing at a location with recurring unauthorized vehicle activity. To further discourage vehicle access, vertical mulch consisting of branches from native shrubs was placed along disturbed areas within 425 square feet to obstruct informal turn-around locations and provide a natural visual cue that discourages the creation of unauthorized routes. This approach supplements the existing fencing and helps obscure the area.
- On November 6, the RECON crew installed one sign stating "Habitat Restoration in Progress – Keep Out" at an area previously planted with coast cholla cuttings.
- On December 10, 154 linear feet of t-post barbless wire fence was repaired near the concrete water crossing.
- On December 31, one restoration sign was installed.

San Ysidro Parcels

Figure 39 shows access control data collected in 2025.

- On September 29, four sections totaling 218 linear feet of barbless wire t-post fencing were installed to prevent unauthorized motorcycles from driving through sensitive habitat, including coastal sage scrub and Quino checkerspot butterfly habitat.

- On December 4, three signs stating "Off-road Activity Prohibited" were installed at the San Ysidro parcels.

Wolf Canyon Parcels

Figure 41 shows access control data collected in 2025.

- On December 8, 4 signs stating "Crossing Closed" were purchased.
- On December 19, two laminated signs stating "Crossing Closed" were temporarily installed.
- On December 31, the temporary "Crossing Closed" signs were replaced with permanent aluminum signs. Two "Crossing Closed" signs were installed on t-posts with concrete, and 47 linear feet of t-post barbless wire fencing was installed for safety reasons, to prevent vehicles and foot traffic from crossing the severely undercut Arizona crossing (Attachment 2: Photograph 35).

Subtask 5c. (FY 2025-26) Post-fire Recovery Access and Erosion Control

As part of the post-fire recovery effort, 3,175 linear feet of fencing and nine signs were installed to protect occupied QCB habitat within the Dulzura parcels.

As part of the post-fire recovery effort, native container plants were installed to serve as access control and erosion control through habitat restoration. Within 3.19 acres of coastal sage scrub, chaparral, and oak woodland habitat at select areas where vegetation was removed by fire crews during fire-suppression activities within the Dulzura parcels, 925 one-gallon container plants were installed. The habitat restoration locations are accessible by vehicle and occur at access points that will assist with access control and habitat recovery post-fire. Container plants susceptible to herbivory were caged with chicken wire. 410 cages were made on-site during plant installation. Nine signs were installed to support restoration activities. To support plant establishment following plant installation, container plants were hand watered, as needed.

Figure 51 shows post-fire recovery access and erosion control data collected in 2025. Table 49 lists fence and sign installation in support of the Border 2 Fire recovery effort.

- On September 30, the PSB placed flagging at the Dulzura parcels to delineate where to install fencing for the RECON crew.
- On October 1 and 2, the RECON crew installed approximately 1,630 linear feet of barbless wire t-post fencing to protect occupied QCB habitat from unauthorized vehicles. This area had previously burned during the Border 2 Fire and a portion of it had been dozed during the Border 2 Fire suppression effort.
- On October 24, 30, and 31 at the Dulzura parcels:

- The RECON crew completed installation of 1,545 linear feet of t-post barbless-wire fencing around a Quino checkerspot butterfly population to protect the area from unauthorized vehicle access (Attachment 2: Photograph 27). This population occurs within a portion of the Preserve that burned during the Border 2 Fire and a portion of it had been dozed during the Border 2 Fire suppression effort, making it especially vulnerable to post-fire impacts, soil disturbance, and habitat degradation. Installing fencing provides a critical protective buffer to maintain habitat integrity and support recovery of the host plant and associated native plant community.

- To further reinforce access control, three 4-inch-wide by 5-foot-tall round metal duct pipes were installed with concrete near the western boundary to simulate bollards, providing an additional, visible barrier to deter vehicles (Attachment 2: Photograph 28). This approach was selected because it is significantly more cost-effective and less labor-intensive than installing standard steel bollards while still providing additional protection.

- Six habitat restoration signs were installed along the fencing to clearly indicate ongoing restoration activities and to notify the public of sensitive biological resources. These measures collectively reduce the risk of damage from unauthorized access and support long-term recovery of fire-affected areas.

- On November 12, 13, 14, and 17, the crew cut materials for 410 wire plant cages.

- On November 25, 925 one-gallon container plants were delivered to the Dulzura parcels by Native West Nursery.

- On November 25 and 26, the RECON restoration crew dug holes and began installing plants within the post-fire habitat restoration/access control locations DLZ_10 and DLZ_14 (Attachment 2: Photographs 29 and 31–33). The crew watered each of the installed plants to encourage establishment. The crew constructed wire cages and installed them around plants subject to herbivory to protect them. The PSB established photo monitoring locations after the plant installation to monitor site conditions in the future (Attachment 9: Photographs 1–13).

- On December 1 and 2, the crew continued installing plants within the post-fire habitat restoration/access control locations DLZ_8 and DLZ_13. Taller species were placed closer to fence lines to build natural barriers as the plants grow. The crew constructed wire cages and installed them around plants subject to herbivory to protect them. Each plant was watered. The PSB established photo monitoring locations after the plant installation to monitor site conditions in the future (Attachment 9: Photographs 1 through 11).

- On December 3, four signs stating "Habitat Restoration in Progress – Please Keep Out" were installed at DLZ_9. The crew continued installing plants at DLZ_13. Oak litter from the site was placed around the installed oaks to act as mulch. The crew constructed wire cages and installed them around plants subject to herbivory to protect them. Each plant was watered.

- On December 4, the crew completed plant installation at DLZ_13 and weeded at DLZ_13. Plants were watered at DLZ_14. Twenty Engelmann oak were planted.
- On December 11, plants were watered and herbicide was applied to weeds at DLZ_8 and at DLZ_14.
- On December 12, the crew treated weeds and watered installed plants at DLZ_13. One sign stating "Habitat Restoration in Progress – Please Keep Out" was installed at DLZ_10 (Attachment 2: Photograph 30). The PSB established photo monitoring locations after the plant installation to monitor site conditions in the future (Attachment 9: Photographs 1–11).
- On December 17, the crew watered the previously installed plants at DLZ_8 and DLZ_10.
- On December 18, the crew treated weeds and watered installed plants at DLZ_13 and DLZ_14.

Table 49
Post-fire Recovery Access Control

Parcel	Date	Fencing Installed (linear feet)[1]	Fencing Repaired (linear feet)[1]	Signs Installed	Signs Replaced	Signs Repaired	Gate Repaired	Other Access Control Installed
Dulzura	10/01/2025 10/02/2025	1,630	-	-	-	-	-	-
	10/24/2025 10/30/2025 10/31/2025	1,545	-	6	-	-	-	3 round metal duct pipes
	11/25/2025 11/26/2025	-	-	-	-	-	-	925 1-gallon container plants
	12/01/2025 12/02/2025 12/03/2025 12/04/2025	-	-	-	-	-	-	Continued installing 925 1-gallon container plants
	12/03/2025	-	-	4	-	-	-	-
	12/12/2025	-	-	1	-	-	-	-
TOTAL (POM Property)		**3,175**	**-**	**11**	**-**	**-**	**-**	**3 round metal duct pipes, 925 1-gallon container plants**

[1]Ground length, not total materials used for repair.

Task 6: Invasive Species Treatment

The PSB coordinated weed removal and treatment work and qualitatively monitored treatment areas to determine proper timing, methods, and locations for weed treatment. For all herbicide activities, a field crew with annual pesticide training—under the supervision of a Qualified Applicator and project biologist—sprayed weeds within the non-native plant treatment areas.

Subtask 6a. (FY 2024-25 and FY 2025-26) Vegetation Treatment and Removal

Vegetation treatment and removal occurred January through December 2025. The RECON crew removed weeds within a variety of habitats described below. RECON biologists coordinated vegetation treatment and removal work, and qualitatively monitored treatment areas to determine proper timing for weed treatment. Otay tarplant and QCB host and nectar plants were flagged for avoidance prior to applying herbicide. Weeds within vernal pool basins were removed with hand tools. Weed species treated with glyphosate herbicide included primarily short-pod mustard (*Hirschfeldia incana;* Cal-IPC Rating: Moderate), black mustard (*Brassica nigra*; Cal-IPC Rating: Moderate), tocalote (*Centaurea melitensis*; Cal-IPC Rating: Moderate), non-native annual grasses (*Bromus* spp., *Festuca* spp., and *Avena* spp.; Cal-IPC Rating: Moderate to High), and filaree (*Erodium* spp.). Non-native plants removed by line trimmer consisted primarily of mustards (short-pod mustard and black mustard), tocalote, oats (*Avena* sp.), and other various non-native grasses. Stinkwort and false hawkbit (*Urospermum picroides*) were primarily treated by hand removal. The long-term goals of vegetation treatment are to decrease non-native plant cover to (1) maintain and enhance foraging habitat for coastal cactus wren, (2) increase bare ground cover for QCB, (3) increase habitat quality for vernal pool wildlife and plant species, and (4) reduce non-native competition for Otay tarplant. Table 50 provides a summary of the total vegetation treatment acreage at each parcel per focal sensitive species resource. Table 51 lists vegetation treatment and removal dates, locations, and focal species. Vegetation treatment and removal areas are shown in Figures 52 through 57.

Table 50
Otay Ranch Preserve 2025 Vegetation Treatment Locations by Parcel, Acreage, and Focal Sensitive Species Resource

Parcel(s)	Acreage	Focal Sensitive Species Resource	Focal Plant Species Treated
Millenia	16.30	Vernal pool & Potential QCB habitat	rattail sixweeks grass (*Festuca myuros*), bromes (*Bromus* spp.), filaree, oats, rye grass (*Festuca perennis*), tree tobacco (*Nicotiana glauca*), tumbleweed (*Salsola* sp.)
Northern Salt Creek	1.06	CACW	tocalote, bromes, short-pod mustard
Northern Salt Creek / Salt Creek	0.18	CACW	tocalote, short-pod mustard

Table 50 Otay Ranch Preserve 2025 Vegetation Treatment Locations by Parcel, Acreage, and Focal Sensitive Species Resource			
Parcel(s)	Acreage	Focal Sensitive Species Resource	Focal Plant Species Treated
Salt Creek	28.49	CACW	broom baccharis (*Baccharis sarothroides*), tocalote, short-pod mustard, filaree, sourclover (*Melilotus indicus*), bromes, broom baccharis, bristly ox-tongue (*Helminthotheca echioides*), smooth cat's ear (*Hypochaeris glabra*), fescue (*Festuca* sp.), tree tobacco, lemonade berry (*Rhus integrifolia*), laurel sumac (*Malosma laurina*)
Millenia	2.54	CACW	tumbleweed, filaree
Western Wolf Canyon	1.58	CACW	tocalote, short-pod mustard, yellow sourclover (*Melilotus indicus*), coyote brush (*Baccharis pilularis*), horehound (*Marrubium vulgare*)
Salt Creek	14.28	Vernal pool & QCB	soft chess (*Bromus hordeaceus*), rattail sixweeks grass , brome, filaree, tumbleweed, sourclover
Dulzura	0.73	QCB	filaree
Millenia	4.36	Otay tarplant	black mustard, fennel (*Foeniculum vulgare)*, rye grass, purple false brome (*Brachypodium distachyon*), bromes
Western Wolf Canyon	1.42	Otay tarplant	tocalote, sourclover, filaree
Dulzura	TWE	Various	stinkwort
Little Cedar Canyon	1.24	Various	Stinkwort
Millenia	TWE	Various	stinkwort
Northern Salt Creek	TWE	Various	stinkwort
Northern San Ysidro and San Ysidro	5.09	Various	stinkwort
Ridge	TWE	Various	stinkwort (Figure 40)
Salt Creek	TWE	Various	stinkwort
Wolf Canyon and Western Wolf Canyon	TWE	Various	stinkwort
Dulzura	TWE	Various	EDRR within the Border 2 Fire suppression lines. One individual Namaqualand daisy (*Dimorphotheca sinuata*) was removed by hand in 2025. The PSB had not documented this species within the Dulzura parcels previously.
Little Cedar Canyon	TWE	Various	false hawkbit
McMillin	TWE	Various	false hawkbit
Wolf Canyon	0.12	CACW, CAGN, Otay tarplant	tocalote, yellow sweetclover, horehound
CACW = coastal cactus wren; CAGN = coastal California gnatcatcher; TWE = Treated when encountered; QCB = Quino checkerspot butterfly			

Table 51
Otay Ranch Preserve Vegetation Treatment Locations, Treatment Dates, and Acreage

Parcel(s)	Polygon Number	Treatment Type	Treatment Date(s)	Previous SANDAG Grant No.	Previous RECON Project No.	Previous Project Name	Previous Project End Date	Length of Previous Project	Focal Sensitive Species Resource	Focal Plant Species Treated
Dulzura Parcels										
Dulzura	DLZ_3	Line trimmer, Herbicide application, Removed by hand	04/14/2025 06/06/2025	557744	10055	Otay Ranch Preserve Enhancement Project	Fall 2024	1 year	Quino checkerspot butterfly	filaree
Dulzura	DLZ_4	Line trimmer, Herbicide application, Removed by hand	04/14/2025 06/06/2025	557744	10055	Otay Ranch Preserve Enhancement Project	Fall 2024	1 year	Quino checkerspot butterfly	filaree
Dulzura	DLZ_4	Watered	01/03/2025	557744	10055	Otay Ranch Preserve Enhancement Project	Fall 2024	1 year	Quino checkerspot butterfly	N/A. Watered previously installed plants.
Dulzura	DLZ_5	Line trimmer, Herbicide application, Removed by hand	04/14/2025 06/06/2025	557744	10055	Otay Ranch Preserve Enhancement Project	Fall 2024	1 year	Quino checkerspot butterfly	filaree
Dulzura	DLZ_6	Line trimmer, Herbicide application, Removed by hand	04/14/2025 06/06/2025	557744	10055	Otay Ranch Preserve Enhancement Project	Fall 2024	1 year	Quino checkerspot butterfly	filaree
Dulzura	DLZ_7	Line trimmer, Herbicide application, Removed by hand	04/14/2025 06/06/2025	557744	10055	Otay Ranch Preserve Enhancement Project	Fall 2024	1 year	Quino checkerspot butterfly	filaree
Dulzura	DLZ_8	Herbicide application	12/11/2025	N/A	5256	Otay Ranch Preserve	N/A	N/A	coastal sage scrub	filaree
Dulzura	DLZ_13	Herbicide application	12/04/2025 12/18/2025	N/A	5256	Otay Ranch Preserve	N/A	N/A	Oak woodland	bromes
Dulzura	DLZ_14	Herbicide application	12/11/2025 12/18/2025	N/A	5256	Otay Ranch Preserve	N/A	N/A	Quino checkerspot butterfly	filaree
Dulzura	DLZ_Dittrichia	Removed by hand	08/06/2025	N/A	5256	Otay Ranch Preserve	N/A	N/A	Various	stinkwort
Little Cedar Canyon Parcels										
Little Cedar Canyon	LCC_dittrichia	Remove by hand	06/27/2025 10/09/2025	N/A	5256	Otay Ranch Preserve	N/A	N/A	Orcutt's brodiaea, ocellated Humboldt lily	stinkwort
Little Cedar Canyon	LCC_ Urospermum	Remove by hand	05/07/2025 06/05/2025 06/27/2025	N/A	5256	Otay Ranch Preserve	N/A	N/A	Orcutt's brodiaea, ocellated Humboldt lily	false hawkbit
Millenia Parcels										

Table 51
Otay Ranch Preserve Vegetation Treatment Locations, Treatment Dates, and Acreage

Parcel(s)	Polygon Number	Treatment Type	Treatment Date(s)	Previous SANDAG Grant No.	Previous RECON Project No.	Previous Project Name	Previous Project End Date	Length of Previous Project	Focal Sensitive Species Resource	Focal Plant Species Treated
Millenia	MLLN_1	Rake cut thatch, Line trim, Herbicide application	01/08/2025 05/16/2025	N/A	5256	Otay Ranch Preserve	N/A	N/A	Otay tarplant	purple false brome, perennial rye grass, black mustard, fennel
Millenia	MLLN_2	Line trimmer, herbicide application	05/16/2025	N/A	5256	Otay Ranch Preserve	N/A	N/A	Otay tarplant	black mustard, fennel
Millenia	MLLN_2.1	Removed by hand	01/09/2025	N/A	5256	Otay Ranch Preserve	N/A	N/A	coastal cactus wren	tumbleweed
Millenia	MLLN_3	Rake cut thatch, Herbicide application	01/08/2025 02/28/2025	N/A	5256	Otay Ranch Preserve	N/A	N/A	Potential Quino checkerspot butterfly and potential vernal pool habitat	rattail sixweeks grass, bromes, filaree, oats, perennial rye grass
Millenia	MLLN_4	Line trim, Herbicide application, Remove by hand	02/26/2025 02/27/2025 02/28/2025 12/29/2025	N/A	5256	Otay Ranch Preserve	N/A	N/A	Potential Quino checkerspot butterfly and potential vernal pool habitat	filaree, oats, perennial rye grass, brome, tree tobacco, tumbleweed
Millenia	MLLN_5	Line trimmer, herbicide application	05/22/2025	5004731	7682	Otay Ranch Coastal Cactus Wren Habitat Restoration and Enhancement Program	Fall 2018	3 years	coastal cactus wren	filaree
Millenia	MLLN_6	Line trimmer, herbicide application	05/22/2025 05/23/2025	N/A	5256	Otay Ranch Preserve	N/A	N/A	Otay tarplant	brome
Millenia	MLLN_7	Line trimmer, herbicide application	05/22/2025	5004731	7682	Otay Ranch Coastal Cactus Wren Habitat Restoration and Enhancement Program	Fall 2018	3 years	coastal cactus wren	filaree
Millenia	MLLN_8	Line trim, Rake cut thatch, Herbicide application	02/06/2025 02/07/2025 02/27/2025 02/28/2025 05/16/2025	N/A	5256	Otay Ranch Preserve	N/A	N/A	Potential Quino checkerspot butterfly and potential vernal pool habitat	oats, brome, filaree, Crete weed
Millenia	MLLN_Dittrichia	Remove by hand	07/29/2025 09/02/2025	N/A	5256	Otay Ranch Preserve	N/A	N/A	Various	stinkwort
McMillin Parcels										
McMillin	MCM_Urosper mum	Remove by hand	04/11/2025	N/A	5256	Otay Ranch Preserve	N/A	N/A	Quino checkerspot butterfly	false hawkbit
Northern Salt Creek Parcels										

Table 51
Otay Ranch Preserve Vegetation Treatment Locations, Treatment Dates, and Acreage

Parcel(s)	Polygon Number	Treatment Type	Treatment Date(s)	Previous SANDAG Grant No.	Previous RECON Project No.	Previous Project Name	Previous Project End Date	Length of Previous Project	Focal Sensitive Species Resource	Focal Plant Species Treated
Northern Salt Creek	NSC_1.2	Line trim	06/09/2025 06/10/2025	N/A	5256	Otay Ranch Preserve	N/A	N/A	coastal cactus wren	short-pod mustard
Northern Salt Creek	NSC_1	Herbicide application	03/31/2025 04/01/2025	N/A	5256	Otay Ranch Preserve	N/A	N/A	coastal cactus wren	tocalote, short-pod mustard, brome
Northern Salt Creek	NSC_Dittrichia	Remove by hand	07/29/2025 09/02/2025 09/16/2025	N/A	5256	Otay Ranch Preserve	N/A	N/A	Various	stinkwort
Northern Salt Creek and Salt Creek Parcels										
Northern Salt Creek and Salt Creek	NSC_SC_1	Herbicide application	03/27/2025 03/28/2025	N/A	5256	Otay Ranch Preserve	N/A	N/A	coastal cactus wren	tocalote, short-pod mustard
Salt Creek										
Salt Creek	SC_1	Herbicide application	03/27/2025	N/A	5256	Otay Ranch Preserve	N/A	N/A	coastal cactus wren	tocalote, short-pod mustard
Salt Creek	SC_1.1	Herbicide application	03/27/2025 03/28/2025	N/A	10013.2	Otay Ranch Preserve Habitat Restoration Project	Spring 2024	2 months	coastal cactus wren	tocalote, short-pod mustard
Salt Creek	SC_1.2	Herbicide application	03/27/2025	N/A	10013.2	Otay Ranch Preserve Habitat Restoration Project	Spring 2024	2 months	coastal cactus wren	tocalote, short-pod mustard
Salt Creek	SC_2	Remove by hand, Herbicide application	03/19/2025 11/06/2025	5001133	N/A	Salt Creek Coastal Cactus Wren Habitat Restoration Project (County of San Diego Parks and Recreation Department & Merkel & Associates)	Summer 2014	5 years	coastal cactus wren	short-pod mustard, broom baccharis, tocalote, tree tobacco
Salt Creek	SC_3	Herbicide application	03/19/2025	5004943	8340	Otay Ranch Coastal Cactus Wren Habitat Restoration and Enhancement Program	Fall 2018	18 months	coastal cactus wren	short-pod mustard, broom Baccharis, tocalote
Salt Creek	SC_3.1	Herbicide application	03/18/2025	N/A	10013.2	Otay Ranch Preserve Habitat Restoration Project	Spring 2024	2 months	coastal cactus wren	short-pod mustard, tocalote
Salt Creek	SC_5	Herbicide application	04/15/2025 04/21/2025	5004731	7682	Otay Ranch Coastal Cactus Wren Habitat Restoration and Enhancement Program	Fall 2018	3 years	coastal cactus wren	broom baccharis, tocalote, short-pod mustard, filaree, sourclover, brome

Table 51
Otay Ranch Preserve Vegetation Treatment Locations, Treatment Dates, and Acreage

Parcel(s)	Polygon Number	Treatment Type	Treatment Date(s)	Previous SANDAG Grant No.	Previous RECON Project No.	Previous Project Name	Previous Project End Date	Length of Previous Project	Focal Sensitive Species Resource	Focal Plant Species Treated
Salt Creek	SC_6	Herbicide application	04/15/2025 04/21/2025	5001970	6649	Otay Ranch Coastal Cactus Wren Habitat Restoration and Enhancement Program	Summer 2015	3 years	coastal cactus wren	broom baccharis, tocalote, short-pod mustard, filaree, *Melilotus indicus*, brome
Salt Creek	SC_7	Herbicide application	04/15/2025 04/21/2025	5004731	7682	Otay Ranch Coastal Cactus Wren Habitat Restoration and Enhancement Program	Fall 2018	3 years	coastal cactus wren	broom baccharis, tocalote, short-pod mustard, filaree, sourclover, brome
Salt Creek	SC_8	Herbicide application	03/17/2025	5004731	7682	Otay Ranch Coastal Cactus Wren Habitat Restoration and Enhancement Program	Fall 2018	3 years	coastal cactus wren	short-pod mustard, smooth cat's ear, tocalote, brome, filaree, fescue
Salt Creek	SC_8.2	Herbicide application	12/30/2025 12/31/2025	N/A	5256	Otay Ranch Preserve	N/A	N/A	coastal cactus wren	filaree, short-pod mustard
Salt Creek	SC_11.1	Herbicide application	12/30/2025 12/31/2025	N/A	5256	Otay Ranch Preserve	N/A	N/A	coastal cactus wren	filaree, short-pod mustard
Salt Creek	SC_12	Cut by hand, Herbicide application	10/23/2025 12/30/2025 12/31/2025	N/A	5256	Otay Ranch Preserve	N/A	N/A	coastal cactus wren	broom baccharis, tree tobacco , lemonade berry, laurel sumac, filaree, short-pod mustard
Salt Creek	SC_13	Line trim, Herbicide application	03/17/2025 06/04/2025 06/05/2025	5004731	7682	Otay Ranch Coastal Cactus Wren Habitat Restoration and Enhancement Program	Fall 2018	3 years	coastal cactus wren	short-pod mustard, smooth cat's ear, tocalote, brome, filaree, fescue, baccharis, bristly ox-tongue
Salt Creek	SC_13.1	Herbicide application	12/30/2025 12/31/2025	N/A	5256	Otay Ranch Preserve	N/A	N/A	coastal cactus wren	filaree, short-pod mustard
Salt Creek	SC_13.2	Herbicide application	12/30/2025 12/31/2025	N/A	5256	Otay Ranch Preserve	N/A	N/A	coastal cactus wren	filaree, short-pod mustard
Salt Creek	SC_13.3	Herbicide application	12/30/2025 12/31/2025	N/A	5256	Otay Ranch Preserve	N/A	N/A	coastal cactus wren	filaree, short-pod mustard
Salt Creek	SC_14	Herbicide application	03/17/2025	5004731	7682	Otay Ranch Coastal Cactus Wren Habitat Restoration and Enhancement Program	Fall 2018	3 years	coastal cactus wren	short-pod mustard, smooth cat's ear, tocalote, brome, filaree, fescue
Salt Creek	SC_14.1	Herbicide application	12/29/2025	NA	5256	Otay Ranch Preserve	N/A	N/A	coastal cactus wren	filaree, short-pod mustard

Table 51
Otay Ranch Preserve Vegetation Treatment Locations, Treatment Dates, and Acreage

Parcel(s)	Polygon Number	Treatment Type	Treatment Date(s)	Previous SANDAG Grant No.	Previous RECON Project No.	Previous Project Name	Previous Project End Date	Length of Previous Project	Focal Sensitive Species Resource	Focal Plant Species Treated
Salt Creek	SC_16	Line trimmer, herbicide application	05/08/2025 05/09/2025	N/A	7754	Quino Checkerspot Butterfly Recovery Program	Summer 2016	1 year	Quino checkerspot butterfly, vernal pools	Soft chess, rattail sixweeks grass, brome, filaree, tumbleweed., sourclover, hyssop loosestrife (*Lythrum hyssopifolium*), tocalote, annual beard grass (*Polypogon monspeliensis*), rye grass, and fascicled tarweed
Salt Creek	SC_24.1	Herbicide application	12/29/2025	N/A	5256	Otay Ranch Preserve	N/A	N/A	coastal cactus wren	filaree, short-pod mustard
Salt Creek	SC_25	Line trimmers, herbicide application	06/04/2025 06/05/2025 12/29/2025	N/A	5256	Otay Ranch Preserve	N/A	N/A	coastal cactus wren	tocalote, filaree, short-pod mustard, baccharis, bristly ox-tongue
Salt Creek	SC_32	Line trim, Herbicide application	04/22/2025 05/28/2025	5004943	8340	Otay Ranch Coastal Cactus Wren Habitat Restoration and Enhancement Program	Fall 2018	18 months	coastal cactus wren	broom baccharis, tocalote, short-pod mustard, filaree, sourclover, brome
Salt Creek	SC_33	Line trim, Herbicide application	04/15/2025 04/21/2025 05/28/2025	N/A	5256	Otay Ranch Preserve	N/A	N/A	coastal cactus wren	broom baccharis, tocalote, short-pod mustard, filaree, sourclover, brome
Salt Creek	SC_33.2	Line trim, Herbicide application	04/22/2025	N/A	10013.2	Otay Ranch Preserve Habitat Restoration Project	Spring 2024	2 months	coastal cactus wren	broom baccharis, tocalote, short-pod mustard, filaree, sourclover, brome
Salt Creek	SC_33.3	Herbicide application (all dates), Cholla planting (11/24/2025)	04/22/2025 05/27/2025 05/28/2025 05/29/2025 05/30/2025 11/24/2025	N/A	10013.2	Otay Ranch Preserve Habitat Restoration Project	Spring 2024	2 months	coastal cactus wren	broom baccharis, tocalote, short-pod mustard, filaree, sourclover, brome
Salt Creek	SC_Dittrichia	Remove by hand	07/29/2025 09/02/2025 09/16/2025 10/16/2025	N/A	5256	Otay Ranch Preserve	N/A	N/A	Various	stinkwort
San Ysidro and Northern San Ysidro Parcels										

Table 51
Otay Ranch Preserve Vegetation Treatment Locations, Treatment Dates, and Acreage

Parcel(s)	Polygon Number	Treatment Type	Treatment Date(s)	Previous SANDAG Grant No.	Previous RECON Project No.	Previous Project Name	Previous Project End Date	Length of Previous Project	Focal Sensitive Species Resource	Focal Plant Species Treated
San Ysidro and Northern San Ysidro	SY_NSY_Dittrichia	Remove by hand	06/23/2025 07/29/2025 08/27/2025	N/A	5256	Otay Ranch Preserve	N/A	N/A	Orcutt's brodiaea, Jennifer's monardella	stinkwort
Wolf Canyon										
Wolf Canyon	WC_Dittrichia	Removed by hand	07/28/2025	N/A	5256	Otay Ranch Preserve	N/A	N/A	Various	stinkwort
Western Wolf Canyon Parcels										
Western Wolf Canyon	WWC_1	Cut with line trimmers, Herbicide application	01/13/2025 01/20/2025 03/10/2025	N/A	3173	Otay Ranch Habitat Restoration/Wolf Canyon Habitat Restoration	Summer 2009	10 years	coastal cactus wren	tocalote, short-pod mustard, sourclover, white horehound
Western Wolf Canyon	WWC_2	Herbicide application	04/09/2025 04/10/2025	N/A	3173	Otay Ranch Habitat Restoration/Wolf Canyon Habitat Restoration	Summer 2009	10 years	Otay tarplant	tocalote, sourclover, filaree
Western Wolf Canyon	WWC_3	Cut with line trimmers, Herbicide application	01/13/2025 01/14/2025 01/20/2025 03/10/2025	N/A	3173	Otay Ranch Habitat Restoration/Wolf Canyon Habitat Restoration	Summer 2009	10 years	coastal cactus wren	sourclover, short-pod mustard, tocalote, white horehound
Western Wolf Canyon	WWC_4	Herbicide application	04/09/2025 04/10/2025	N/A	3173	Otay Ranch Habitat Restoration/Wolf Canyon Habitat Restoration	Summer 2009	10 years	Otay tarplant	tocalote, sourclover, filaree
Western Wolf Canyon	WWC_5	Herbicide application	04/09/2025 04/10/2025	N/A	3173	Otay Ranch Habitat Restoration/Wolf Canyon Habitat Restoration	Summer 2009	10 years	Otay tarplant	tocalote, sourclover, filaree
Western Wolf Canyon	WWC_6	Cut with line trimmers, Herbicide application	01/13/2025 01/20/2025 03/10/2025	N/A	3173	Otay Ranch Habitat Restoration/Wolf Canyon Habitat Restoration	Summer 2009	10 years	coastal cactus wren	tocalote, short-pod mustard, sourclover, coyote brush, white horehound
Wolf Canyon	WC_Camino	Herbicide application	03/10/2025	N/A	5256	Otay Ranch Preserve	N/A	N/A	coastal cactus wren, coastal California gnatcatcher, Otay tarplant	tocalote, sourclover, white horehound

N/A = Not Applicable

Vernal Pool Habitat (Salt Creek and Millenia)

The long-term goal within vernal pool habitat vegetation treatment areas is to increase habitat quality for vernal pool wildlife and plant species. Non-native species such as hyssop loosestrife, tocalote, annual beard grass, perennial rye grass, and fascicled tarweed were removed with hand tools within the 30 vernal pools established through grading in 2015 within approximately 0.25 acres at the Salt Creek parcels (see Figure 52, SC_16).

Within the Millenia parcels, per the Work Plans (FY 2024-25 and FY 2025-26), various non-native grasses and annual weeds were cut with line trimmers and treated with herbicide within upland habitat in the Non-Native Plant Treatment Area east of State Route 125 (see Figure 53; MLLN_8) and west of State Route 125 where there is potential vernal pool habitat (see Figure 53; MLLN_3 and MLLN_4). Approximately 16.3 acres of weeds were treated within the Millenia parcels potential vernal pool and QCB habitat.

Post-Fire Recovery Vegetation Treatment Locations

Figure 51 shows post-fire recovery vegetation treatment locations in 2025 (DLZ_8, DLZ_13, and DLZ_14).

Weeds were treated with herbicide and line trimmers within 4.0 acres of post-fire recovery areas within the Dulzura parcels in select areas where vegetation was cleared during fire-suppression activities. The purpose of weed treatment within these areas is to reduce resource competition for native plants that are in the process of reestablishment by means of germination from the soil seed bank or stump resprout. It will also reduce resource competition for the container plants that were installed in fall/winter 2025 (see Subtask 5c) and prepare the sites for future QCB host and nectar plant seed dispersal anticipated to occur in FY 2026-27.

Cactus Wren Habitat Enhancement (Salt Creek, Northern Salt Creek, Millenia, and Western Wolf Canyon)

Long-term control of weeds and shrubs around coast cholla habitat patches will reduce the risk of catastrophic fires that have the potential to cause loss of coastal cactus wren habitat. A total of 33.85 acres of cactus wren habitat was enhanced within Salt Creek, Northern Salt Creek, Western Wolf Canyon, and Millenia parcels in 2025. Table 52 includes all the cactus wren habitat enhancement locations and acreages that were treated in 2025 (see Figures 52 through 54). Several areas required multiple treatments throughout the year. In 2025, vegetation within cactus wren habitat enhancement areas was treated with herbicide and removed by hand and line trimmers. Shrub thinning occurred within the treatment areas, as needed. In addition, coast cholla cuttings were planted within 4.33 acres at Salt Creek and Northern Salt Creek parcels (see Figure 52; NSC_1.2, SC_11.1, SC_13.1, SC_13.2, SC_14.1, and SC_33.3) as access control. Previous coastal cactus wren SANDAG grant areas have continued to be maintained through CFD 97-2 funding after the grant projects ended. The following species were primarily treated within the cactus wren habitat enhancement areas: broom baccharis, California buckwheat, California sagebrush (*Artemisia californica*), fennel, tree tobacco, short-pod mustard, black mustard, stinkwort, tocalote, non-native

grasses, and filaree. Additional cactus wren habitat restoration areas shown on the FY 2024-25 Work Plan (RECON 2025a) were assessed for weed treatment, and no treatment was necessary in 2025.

Table 52
Cactus Wren Habitat Enhancement 2025 Summary
Treatment Locations and Acreage

Treatment Locations	Acreage
MLLN_2.1	1.12
MLLN_5	0.35
MLLN_7	1.07
NSC_1.2	0.24
NSC_1	0.82
NSC_SC_1	0.18
SC_1	0.32
SC_1.1	2.62
SC_1.2	0.43
SC_2	1.15
SC_3	2.18
SC_3.1	0.98
SC_5	0.72
SC_6	0.51
SC_7	1.41
SC_8	0.74
SC_8.2	0.08
SC_11.1	0.13
SC_12	0.82
SC_13	5.31
SC_13.1	0.14
SC_13.2	0.32
SC_13.3	0.12
SC_14	4.11
SC_14.1	0.21
SC_24.1	0.86
SC_25	0.33
SC_32	0.48
SC_33	0.35
SC_33.2	0.88
SC_33.3	3.29
WWC_1	0.62
WWC_3	0.49
WWC_6	0.47
TOTAL	33.85

Quino Checkerspot Butterfly Habitat (Salt Creek and Millenia)

QCB habitat enhancement continued within approximately 14.28 acres at the Salt Creek parcels during 2025 (see Figure 52; SC_16). The primary plants removed were black mustard, short-pod mustard, tocalote, non-native grasses, and hyssop loosestrife, as well as fascicled tarplant.

QCB habitat enhancement continued within approximately 12.38 acres at the Millenia parcels during 2025 (see Figure 53; MLLN_3, MLLN_4 and MLLN_8), per the Work Plan (FY 2024-25). This area overlaps with the vernal pool habitat restoration area. Primary weeds treated included tocalote, non-native annual grasses, crete weed (*Hedypnois cretica*), and filaree.

Quino Checkerspot Butterfly Habitat (SANDAG TransNet EMP Grant Matching/Complementary Work, Dulzura)

QCB habitat enhancement occurred within approximately 0.73 acres at the Dulzura parcels during 2025 (see Figure 27; DLZ_3, DLZ_4, DLZ_5, DLZ_6, and DLZ_7). The primary weeds treated were short-pod mustard, filaree, non-native grasses, and tocalote. In addition to weed treatment, on June 6, a portion of the plant cages were removed from the site from plants that had outgrown the cages.

Otay Tarplant Habitat (Millenia and Western Wolf Canyon)

The long-term goal at the Otay tarplant habitat treatment sites is to decrease non-native plant cover to maintain and enhance habitat for Otay tarplant. Black mustard, tocalote, stinkwort, prickly lettuce (*Lactuca serriola*), and non-native grasses were treated/removed within 4.36 acres of Otay tarplant habitat at MLLN_1, MLLN_2, and MLLN_6 within the Millenia parcels, in accordance with the Work Plan (FY 2024-25) (see Figure 53). These areas required multiple treatments throughout the year.

Tocalote, short-pod mustard, and black mustard were removed within 1.42 acres of Otay tarplant habitat at WWC_2, WWC_4, and WWC_5 within the Western Wolf Canyon parcels, in accordance with the Work Plan (FY 2024-25) (see Figure 54).

Early Detection Rapid Response

Early detection Rapid response was performed at the Dulzura, Little Cedar Canyon, McMillin, Millenia, Northern Salt Creek, Northern San Ysidro, Ridge, Salt Creek, San Ysidro, and Wolf Canyon parcels, in accordance with the Work Plan (FY 2024-25).

EDRR Stinkwort

Stinkwort (CAL-IPC Rating: Moderate/Alert) is sparsely distributed within the treatment survey areas at Salt Creek, Northern Salt Creek, Millenia, Wolf Canyon, Dulzura, San Ysidro, Northern San Ysidro, and Little Cedar Canyon parcels. An 'Alert' designation indicates that it has high potential for invasion into wildlands (Cal-IPC 2025). Stinkwort is removed by hand where encountered on the Preserve. Stinkwort was treated when encountered throughout the 784.5-acre Salt Creek parcels and 149.8-acre Northern Salt Creek parcels (see Figure 52). Stinkwort was removed by hand at several locations

within Millenia, Wolf Canyon, and Dulzura parcels, (see Figures 53, 54, and 57). Within the Northern San Ysidro and San Ysidro parcels, stinkwort was removed from within the 5.09-acre treatment survey area (see Figure 55). Within the Little Cedary Canyon parcels, stinkwort was removed from within the 1.24-acre treatment survey area (see Figure 56).

EDRR False Hawkbit

Sixty-eight individuals of false hawkbit (CAL-IPC Rating: Watch) were removed by hand on May 7, 2025, from the drainage within Little Cedar Canyon parcels (see Figure 56). False hawkbit was documented in San Diego County for the first time in 2022. This species was first observed within the preserve in 2023. The location where the species was observed was revisited at an appropriate time of the year in order to remove the individuals prior to setting seed and prevent the population from expanding. One individual false hawkbit was removed by hand on April 11, 2025, from the McMillin parcels (see Figure 56). This is the first time this species has been documented within the McMillin parcels.

EDRR Post-fire Recovery: Areas Cleared of Vegetation During Fire Suppression Activities

Fire equipment and machinery may have dispersed non-native seed from other areas of the state and country due to personnel, equipment, and machinery having been on-site at other fire incidents, such as the Palisades and Eaton fires, immediately prior to the Border 2 Fire. The PSB qualitatively monitored portions of the 23.11-acre Fire Assessment Area that were cleared of vegetation during fire suppression for non-native plant species previously not known to occur within the Preserve. One non-native species, Namaqualand daisy, was observed within the dozer line at the Dulzura parcels and was removed by hand (see Figure 57). This species had not been observed within the Dulzura parcels previously. Namaqualand daisy has not been evaluated by Cal-IPC (2025).

4.0 Future Tasks to be Performed

Anticipated tasks to occur between January 1 and June 30, 2026, are listed below (RECON 2025a). Tasks to be performed between July 1 and December 31, 2026, were proposed in the draft FY 2026–27 Annual Work Plan, which was submitted to the POM on January 23, 2026.

- Seed collection and redistribution to support QCB habitat within Millenia parcels and to support cactus wren habitat at Salt Creek, Northern Salt Creek, Millenia, and Western Wolf Canyon parcels. Seed collected for the QCB seed bulking program at the Dulzura parcels in support of post-fire recovery for QCB (Subtask 1a).
- Golden eagle camera surveys at Ridge, McMillin, and Dulzura parcels (Subtask 1b).
- Thorne's hairstreak (*Callophrys thornei*) surveys at Salt Creek, San Ysidro, Dulzura, and Little Cedar Canyon parcels (Subtask 1d).
- Harbison dun skipper (*Euphyes vestris harbisoni*) surveys at Dulzura, Little Cedar Canyon, and Northern San Ysidro parcels (Subtask 1e).

- Western spadefoot surveys at Northern Salt Creek, Salt Creek, Millenia, Jamul Mountains, Northern San Ysidro, McMillin, Little Cedar Canyon, Dulzura, Proctor Valley, and Proctor Valley (South) parcels (RECON 2024a; Subtask 1e). Rainfall was not favorable for surveying in FY 2024–25; therefore, the surveys will extend into FY 2025-26

- Photographic monitoring at Dulzura parcels to continue previous work for the SANDAG TransNet EMP grant for QCB short-term threat reduction project (Subtask 1f).

- Vegetation rapid assessment at Dulzura parcels to continue previous work for the SANDAG TransNet EMP grant for QCB short-term threat reduction project (Subtask 1g).

- Baseline surveys at Sliver parcel (Subtask 1h).

The following deliverables from the FY 2025–26 Annual Work Plan are anticipated to be submitted between January 1 and June 30, 2026:

- Database management and contributions for data collected between January 1, 2025, and December 31, 2025 (Subtask 4a).

- 2025 annual report (Subtask 4c).

- FY 2026–27 annual work plan for all tasks to be completed within the Otay Ranch Preserve between July 1, 2026, and June 30, 2027 (Subtask 4d).

All Land Stewardship (Subtask 2a), Meetings and Coordination (Subtasks 3a–3d), Access Control (Subtasks 5a through 5c), and Invasive Species Treatment (Subtask 6a) tasks are considered ongoing and will continue through the end of FY 2025–26.

5.0 Climate Change Adaptation Strategy

Climate change adaptation is defined by the National Wildlife Federation as "'initiatives and measures to reduce the vulnerability of natural or human systems against actual or expected climate change effects" (National Wildlife Federation 2014). The monitoring strategies conducted in 2025 were intended to provide the PSB and POM with information regarding the responses of species populations to the effects of climate change, as well as early detection of threats to sensitive populations. Management actions, such as invasive species control, were used to improve the resiliency of populations of sensitive vegetation communities, plants, and animals that are considered the most susceptible to these effects. Section 2.0 includes a weather summary for July 2024 through June 2025. The total rainfall for the 2024–2025 season was well below normal by 6.03 inches. Overall, record breaking low rainfall, high temperatures, and strong winds in January and February created a high risk for fire. Rain events at the end of January reduced the risk of fire and provided water for drought-stressed plants and wildlife.

Following the MSP approach to climate change, the goal of the climate change adaptation strategy for Otay Ranch Preserve is to:

- Maintain and enhance the long-term ecological integrity, resilience, and viability of ecosystems, RMP Phase 2 Priority Group species, and vegetation communities on conveyed lands.
- Facilitate range shifts in species and vegetation communities as necessary for long-term persistence in Otay Ranch Preserve within the constraints of the current preserve design.

In 2017, the SDMMP began developing habitat suitability models for plant and animal species and vegetation communities under current and future climate change scenarios. The SDMMP intends to extend the modeling to consider the influence of other types of threats, such as changing fire regimes, land use, and invasive species. They proposed to evaluate potential future conditions across the MSP Area to identify where species and vegetation communities may be expected to persist, where they may shift in response to changing environmental conditions, and where threats may be greatest. They also proposed to identify climate refugia and areas where climate change impacts may be the greatest. The SDMMP will consider the results of these modeling efforts when developing species and vegetation monitoring and management plans (SDMMP 2021). The POM and PSB will coordinate with the SDMMP once their climate modeling has been completed to discuss the climate forecast for Otay Ranch Preserve. Tables 1 through 3 in Attachment 10 of the FY 2025-26 work plan provides a list of plant and animal species and vegetation communities with specific climate change management and monitoring objectives identified in the MSP that occur or have potential to occur in Otay Ranch Preserve (RECON 2025a). The POM and PSB will coordinate with the SDMMP regarding these species and how Otay Ranch Preserve management and monitoring actions can support the SDMMP regional climate change goals and objectives.

Management strategies and monitoring approaches that can be used to respond to the threat of climate change at Otay Ranch Preserve include the following:

1. As funding allows, manage and monitor Priority Group species and vegetation communities identified by MSP to have climate change objectives (see Tables 1 through 3 in Attachment 10 of the FY 2025-26 Work Plan [RECON 2025a]).
2. Coordinate with SDMMP to determine which management and monitoring objectives are of the highest priority based on their modeling studies. Use SDMMP modeling to find areas of potential refugia in Otay Ranch Preserve and potentially assist with the migration of vulnerable species.
3. As funding allows, manage Priority Group species and vegetation communities to increase resilience by reducing threats from other sources such as non-native species, enhancing food webs, and improving pollinator services (SDMMP and The Nature Conservancy 2017).

Long-term climate predictions for California vary from warmer and drier to warmer and wetter, depending on which models are consulted. Identifying and predicting specific outcomes and changes in climate, attributable to human activities, are difficult because of the inherent natural variation in climate patterns that already exists, regardless of human intervention. The one aspect of climate change that does exhibit a consensus in climate models is that temperatures will be warmer overall. In a warmer environment, there will be greater evaporation. When higher evaporation is combined with a pattern of less rainfall, the negative effects of drought on native habitat systems may be compounded.

Table 53 identifies discrete tasks that were implemented between January 1 and December 31, 2025, to manage for the threat of climate change. By reducing competition for resources, weeding efforts are likely the most efficient way to mitigate potentially adverse effects of climate change and increase resilience in habitat that supports sensitive species. Photographic monitoring may also provide a means for more easily observing changes in vegetation over a prolonged period.

The current management methods used for vegetation control and shrub thinning on Otay Ranch Preserve increases available water in the habitat, which mitigates the threat of climate change. Without vegetation control and shrub thinning, non-native annual grasses reduce the amount of available water, particularly earlier in the growing season, which decreases the available water for native cactus, native annual flowers, and shrubs. Controlling non-native plant species makes more water available for native plant species. By reducing competition for water, native plants and seeds respond favorably. The PSB has observed the positive effects of weeding and shrub removal when seasonal rain totals were below normal. Native plant species have fared well during drier than average conditions. Native plants are adapted to survive drier periods; therefore, they usually fare well even in suboptimal conditions. Cactus in areas where vegetation management has occurred tend to be vibrant green with sufficient water reserves in each segment during late summer/fall compared to cactus in adjacent areas where vegetation management has not occurred that tend to be diminished in color with segments that have begun to desiccate.

Controlling the amount of fuel present is another management method used on Otay Ranch Preserve to reduce the threat of climate change, the negative effects of fire, and the potential loss of habitat, such as cactus habitat. By controlling weeds and implementing shrub thinning programs the amount of fuel available to carry fire and the potential for a fire to become intense is reduced. Vegetation management areas can serve as refugia for wildlife when intense fires burn surrounding areas. By removing shrubs from certain vegetation communities such as cactus patches, coast cholla and other native plant species are more likely to survive a passing fire, since even if some of the shrubs burn, the intensity of the heat produced is lessened.

The PSB has observed variability in the presence of native annual species as well as the presence of native grasses after shrub thinning. Some shrub-thinned sites display an increase of native annual flower species and abundance the next rainy season, like after intact habitat has burned. There are seemingly "fire follower" effects, were native annuals such a popcornflower (*Plagiobothrys* spp.), cryptantha, and other native annuals and bunch grasses can be quite common after shrub thinning is complete. This increase in native annual species and bunch grasses benefits wildlife species that have been identified in the MSP as having specific climate change management and monitoring objectives, such as coastal cactus wren. As part of the long-term monitoring efforts, available climate data, including rainfall and temperature, were reviewed and included in this 2025 annual report to aid in determining how observed changes in species dominance, diversity, and distribution may relate to climate change.

Table 53 Cross-Walk of 2025 Annual Report Tasks with Climate Change Adaptation Strategies	
Monitoring Task	Purpose
Botanical Resources	
Seed Collection and Redistribution (Task 1a)	Management actions, such as seed collection and redistribution, were used to improve the resiliency of populations of sensitive plants and animals that are vulnerable to climate change.
Repeat Vegetation Mapping, Photographic Monitoring, and Vegetation Rapid Assessment Monitoring (Tasks 1h, 1i, 1j, 2a)	Vegetation rapid assessment monitoring, vegetation mapping, and photographic monitoring provide biological data for vegetation communities and plant species present within the Preserve at the time the monitoring is conducted. By conducting repeat surveys, these data can be used to track changes in vegetation community and/or plant species diversity or abundance due to the effects of climate change, as well as provide a baseline for recovery should a climate-related catastrophic event, such as fire or severe flooding, occur.
Focused Surveys for Rare Plants (Tasks 1d)	Focused surveys monitored the response of sensitive plant species populations that are susceptible to the effects of climate change (e.g., increased drought, proliferation of non-native plant species). The 2025 monitoring effort will inform management actions to reduce threats and improve the resiliency of high-priority populations. Management actions may include habitat enhancement and weed control in areas with high-priority sensitive plant populations.
Invasive Species Treatment: Non-Native Plants (Task 6a)	Management actions, such as invasive species control, were used in 2025 to improve the resiliency of populations of sensitive vegetation communities, plants, and animals that are considered the most susceptible to these effects.
Zoological Resources	
Focused Surveys for Sensitive Wildlife: Western Spadefoot, Golden Eagle, and Quino Checkerspot Butterfly (Tasks 1e, 1f, and 1g)	Focused surveys monitored the response of sensitive wildlife species populations that are susceptible to the effects of climate change (e.g., reduced food availability, type conversion of suitable habitat). The 2025 monitoring effort will inform management actions to reduce threats and improve the resiliency of high-priority populations. Management actions may include habitat restoration and enhancement to expand the amount of suitable habitat available, create refugia, increase potential food sources, and connect fragmented or isolated habitat patches.
Invasive Species Treatment: Invasive Shot Hole Borer Monitoring, Native Shrub Dieback Surveys, and Gold-spotted Oak Borer Monitoring (Tasks 1c and 1k)	Invasive species monitoring provided information regarding new and emerging threats to sensitive habitats and species. The 2025 monitoring effort will inform management actions (e.g., trapping and other control methods) to reduce threats to high-priority populations of sensitive wildlife species, as well as to prevent the establishment of new populations of high-priority invasive species.

6.0 Additional Habitat Restoration Projects within the Otay Ranch Preserve

This chapter describes additional habitat restoration projects that occurred within the Preserve between January 1 and December 31, 2025. These projects did not use funds generated by CFD 97-2.

6.1 Otay River Restoration

The Otay River Restoration Project is located in the lower Otay River Watershed within the San Diego County MSCP. The project includes three separate components which will ultimately form one contiguous restoration area. The first component is a 40-acre restoration area referred to as the Pre-Bank which also includes an additional mile of invasive species control below Savage Dam. The second is a pending four-acre restoration area immediately downstream of the Pre-Bank referred to as the Village 8 East (V8E) restoration area. The Pre-Bank and V8E restoration areas are permittee-responsible mitigation areas used to compensate for impacts to aquatic resources caused by nearby residential development. The third component is the pending mitigation bank (Bank), which will restore an additional 200+ acres immediately downstream of the Pre-Bank and V8E restoration areas. The Bank will offer mitigation credits for a series of public and private developments planned within the City and surrounding watersheds. The Pre-Bank, V8E restoration area, and Bank all involve restoring a mosaic of floodplain, riparian, grassland, sage scrub, and vernal pool habitats. The Otay River Restoration Project furthers the goals and objectives of the County MSCP through restoration of riverine habitats for the federally endangered least Bell's vireo (*Vireo bellii pusillus*) and other listed species. The Otay River Restoration Project is also within the City's Greenbelt Master Plan and County's Otay Valley Regional Park, and will design and implement more than five miles of these trail systems.

In 2025, activities were conducted for all three components of the Otay River Restoration Project, including monitoring and maintenance of the Pre-Bank as well as various pre-construction activities for the V8E restoration area and Bank aiming to advance the permitting and planning process for those components. Site maintenance activities included trash removal, site protection through the installation and maintenance of fencing, and non-native plant control through mechanical and chemical methods. Monitoring within the Pre-Bank in 2025 included quantitative and qualitative site visits by SWCA Environmental Consultants restoration ecologists to evaluate the site's progress towards meeting success criteria and identify issues negatively impacting the success of the project. General wildlife use of restoration areas was monitored via camera traps, while bats and least Bell's vireo were monitored using formal protocol surveys. Least Bell's vireo have consistently established breeding territories within the Pre-Bank restoration areas over the past four seasons. The Pre-Bank has concluded its five-year maintenance and monitoring program and is planned to enter long-term management pending sign-off by the appropriate agencies.

Project activities in support of the permitting and planning process for the V8E restoration area and Bank continued in 2025. In preparation for V8E implementation, native plants were salvaged from within the limits of grading. Field surveys and data analyses were conducted throughout the portion of the Bank site that overlaps the Brown Field Formerly Used Defense Site to determine any presence

of munitions debris and munitions and explosives of concern as well as soil and water sampling to assess the presence of contaminants as part of the remediation review process administered through the California Department of Toxic Substances Control. Surveys were performed under biological, cultural, and tribal resource monitoring. Surveys and historical records of the Formerly Used Defense Site indicate the site should pose minimal risks to human health, safety, or the environment. No explosives or contamination of soil or water were found. The remediation review process will continue through 2026 and should facilitate the approval and safe implementation of the Bank.

7.0 References Cited

Baumberger, Katherine, Adam Backlin, Elizabeth Gallegos, Cynthia Hitchcock, Robert Fisher
2020 Mitigation Ponds Offer Drought Resiliency for Western Spadefoot (*Spea hammondii*) Populations. Bulletin of the Southern California Academy of Sciences: Vol. 119: Iss. 1. Available at: https://scholar.oxy.edu/scas/vol119/iss1/2

California Invasive Plant Council (Cal-IPC)
2025 California Invasive Plant Inventory. https://www.cal-ipc.org/plants/.

California Native Plant Society
2001 CNPS Botanical Survey Guidelines. Revised June 2. https://cnps.org/wp-content/uploads/2018/03/cnps_survey_guidelines.pdf.

2024 CDFW-CNPS Protocol for the Combined Vegetation Rapid Assessment and Relevé Field Form. January 10.

Morey, Steven, and David Reznick
2004 The Relationship Between Habitat Permanence and Larval Development in California Spadefoot Toads: Field and Laboratory Comparisons of Developmental Plasticity. Oikos 104:172-190. January.

National Interagency Fire Center
2025 2025 Wildland Fire Incident Locations to Date. https://data-nifc.opendata.arcgis.com/datasets/405814902c9e411cb4384c49d694e82b_0/explore?location=32.506084%2C-116.753621%2C10.65.

National Wildlife Federation
2014 Climate-Smart Conservation: Putting Adaptation Principles into Practice.

RECON Environmental, Inc. (RECON)
2018 Otay Ranch Phase 2 Resource Management Plan Update. September.

2024a FY 2024–25 Annual Work Plan for the Otay Ranch Conveyed Lands Managed by the Otay Ranch Preserve Owner/Manager. February 7.

2025a FY 2025–26 Annual Work Plan for the Otay Ranch Conveyed Lands Managed by the Otay Ranch Preserve Owner/Manager. May 16.

2025b Request for Waiver of 15-Day Notification, Proposed Deviation Request, and Pre-survey Notification for Focused Surveys for Quino Checkerspot Butterfly at Otay Ranch Preserve. March 14.

2025c Annual Report for the Otay Ranch Preserve, Johnson Canyon Otay Tarplant Preserve, and Piper Ranch, January 1–December 31, 2024. January 21.

2025d Otay Ranch Preserve – Dulzura, McMillin, and San Ysidro Parcels: 2025 Quino Checkerspot Butterfly Survey Report. July 3.

San Diego, County of

1993 Otay Ranch Phase 1 Resource Management Plan. October 28.

2024 Otay Ranch Preserve Enhancement Project (SANDAG Contract Number S1125469). Department of Parks and Recreation. SANDAG EMP Land Management Grants. Final Report. September 23.

2025 Attachment A – Multiple Species Conservation Program South County Subarea Plan Annual Report (Year 27). June 4. Appendix N. https://www.sdparks.org/content/dam/sdparks/en/pdf/2024_SCMSCP_AR_FINAL_Appendices.pdf.

San Diego Management and Monitoring Program (SDMMP)

2021 Climate Change. https://sdmmp.com/view_threat.php?threatid=TID_20160304_1450.

2022 Rare Plant Monitoring Frequency 2014-2026. https://sdmmp.com/view_article.php?cid=SDMMP_CID_187_65a80bd8273c9.

San Diego Management and Monitoring Program (SDMMP) and The Nature Conservancy

2017 Management and Monitoring Strategic Plan for Conserved Lands in Western San Diego County: A Strategic Habitat Conservation Roadmap. 3 Volumes. Prepared for the San Diego Association of Governments. San Diego.

Stebbins, R. C.

1972 Amphibians and Reptiles of California. University of California Press, Berkeley, CA.

U.S. Department of Commerce (USDC)

2025a NOWData National Oceanic and Atmospheric Administration Online Weather Data. Brown Field Station. https://www.weather.gov/wrh/climate?wfo=sgx.

2025b 1991-2020 Station Monthly Normals of Average Temperature, Precipitation, and Snowfall. Brown Field Station. National Centers for Environmental Information. National Oceanic and Atmospheric Administration. https://www.ncei.noaa.gov/access/us-climate-normals/#dataset=normals-monthly&timeframe=30&location=CA&station=USW00003178.

U.S. Fish and Wildlife Service (USFWS)
2014 Quino Checkerspot Butterfly Survey Protocol. February.

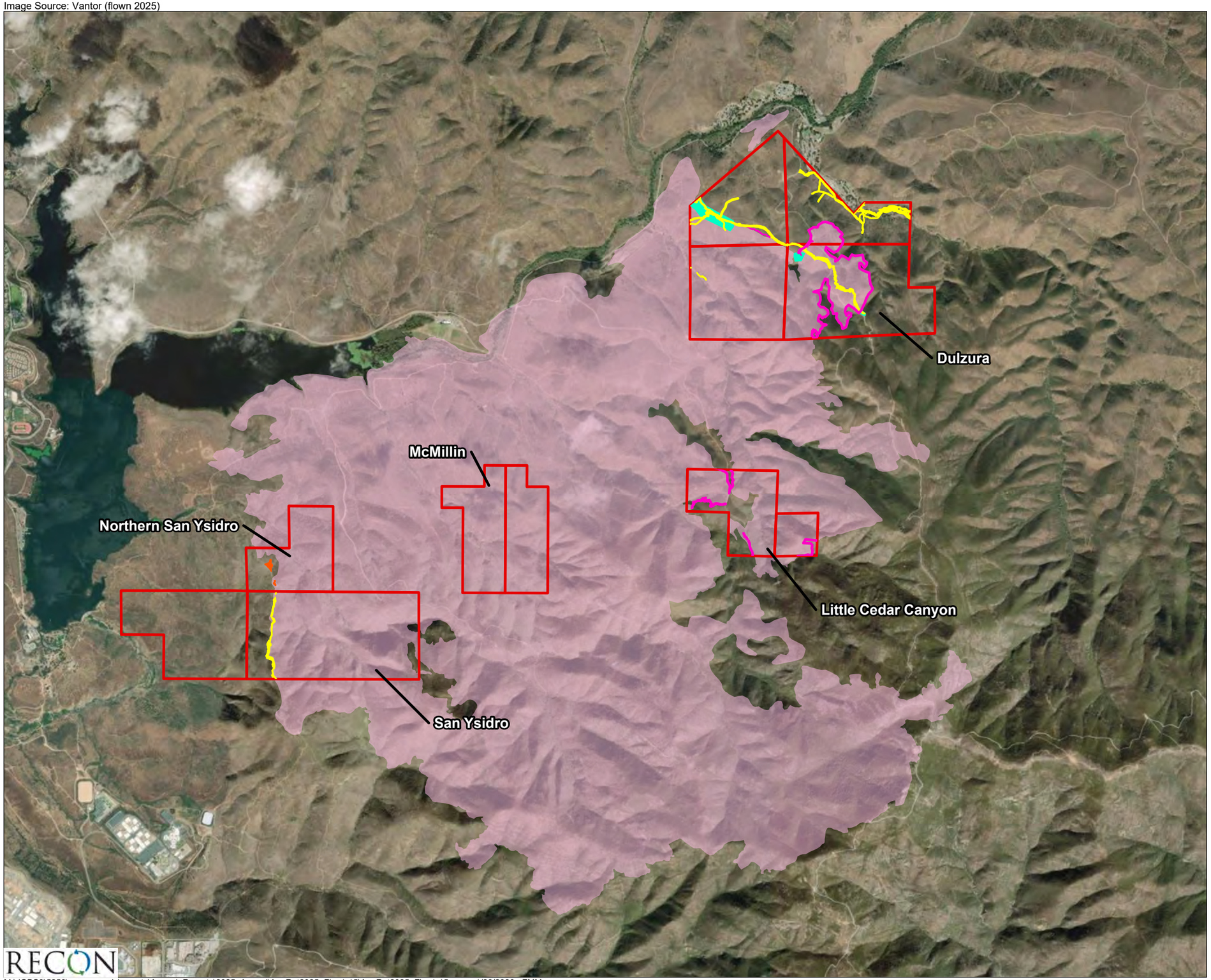
U.S. National Weather Service
2025 Past Weather Records. National Oceanic and Atmospheric Administration. https://www.weather.gov/wrh/Climate?wfo=sgx.

ATTACHMENTS

ATTACHMENT 1

Figures 4–57

Image Source: Vantor (flown 2025)



Conveyed Land Under POM Management

Border 2 Fire Area

Fire Assessment Polygons

Dozer Line

Hand Line

Phos-check

Fire Crew Vehicle Staging Area

0 Feet 3,000

FIGURE 4

Border 2 Fire and Post-fire Assessment, Northern San Ysidro, San Ysidro, McMillin, Little Cedar Canyon, and Dulzura Parcels

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Image Source: Vantor (flown 2025)

Conveyed Land Under POM Management
QCB Seed Dispersal Location
CACW Seed Dispersal Location

0 Feet 2,000

FIGURE 5
Seed Redistribution Locations,
Millenia and Salt Creek Parcels

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Image Source: Vantor (flown 2025)

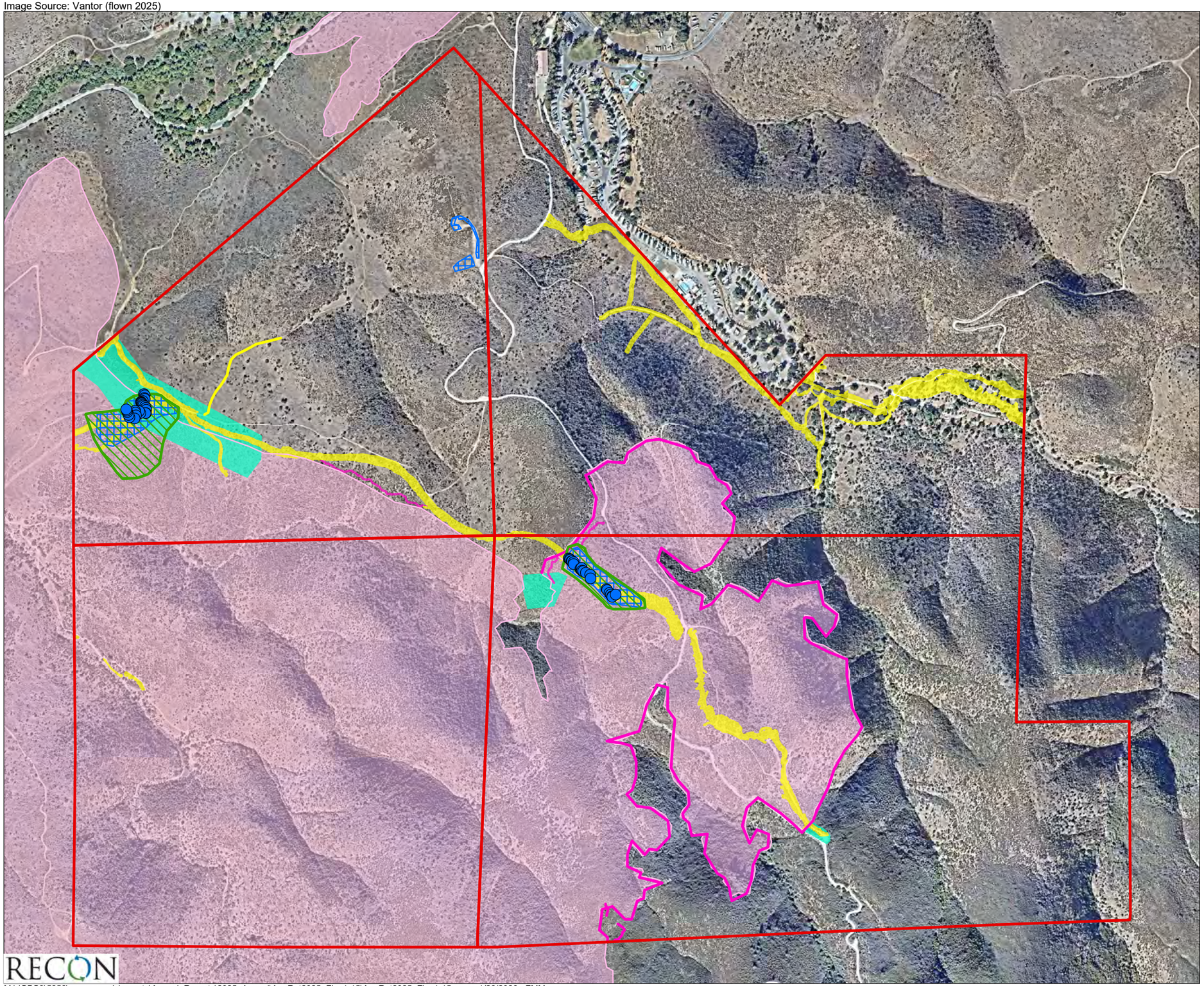

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FIGURE 6
Seed Redistribution Locations,
Dulzura Parcels

Image source: Nearmap (flown 2024)

0 Feet 2,000

Conveyed Land Under POM Management

ISHB Tree Health & Native Shrub Dieback Survey Area*

Otay River Restoration Survey Area (SWCA) **

*Surveys were coordinated with Otay River Restoration Project being managed by SWCA.

**Not Part of the RECON Survey Area

Riparian Photo Monitoring Points

Native Shrub Dieback Photo Monitoring Points

Native Shrub Dieback Observed Locations

FIGURE 7

ISHB & Native Shrub Dieback Monitoring Location, Salt Creek, Northern Salt Creek, and Wolf Canyon Parcels

RECON

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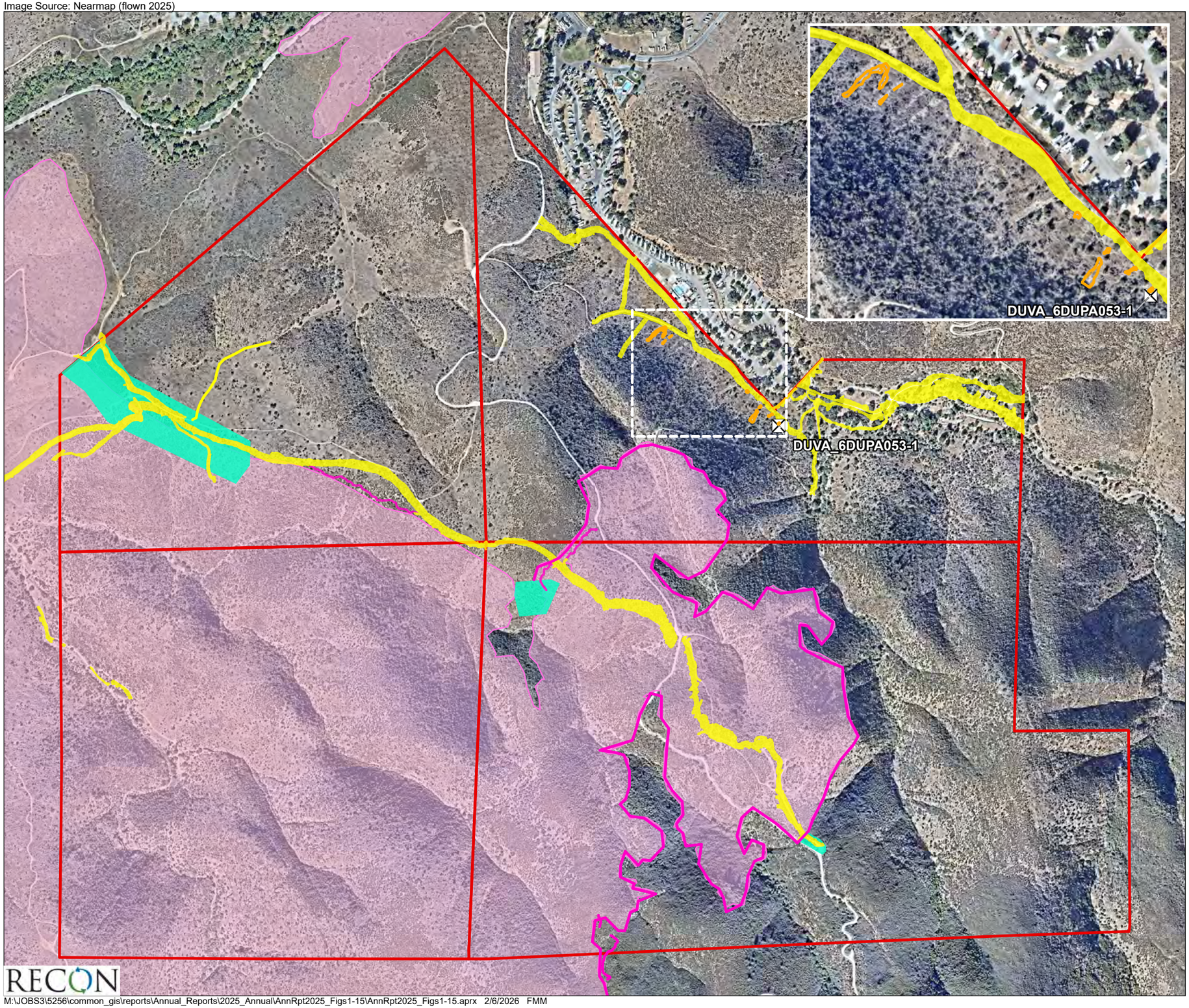
Image Source: Nearmap (flown 2025)



Conveyed Land Under POM Management

Border 2 Fire Area

Fire Assessment Polygons

Dozer Line

Hand Line

Phos-check

MSP IMG Rare Plant Monitoring Locations

Sensitive Plants

Variegated Dudleya (*Dudleya variegata*)

0 Feet 700

RECON

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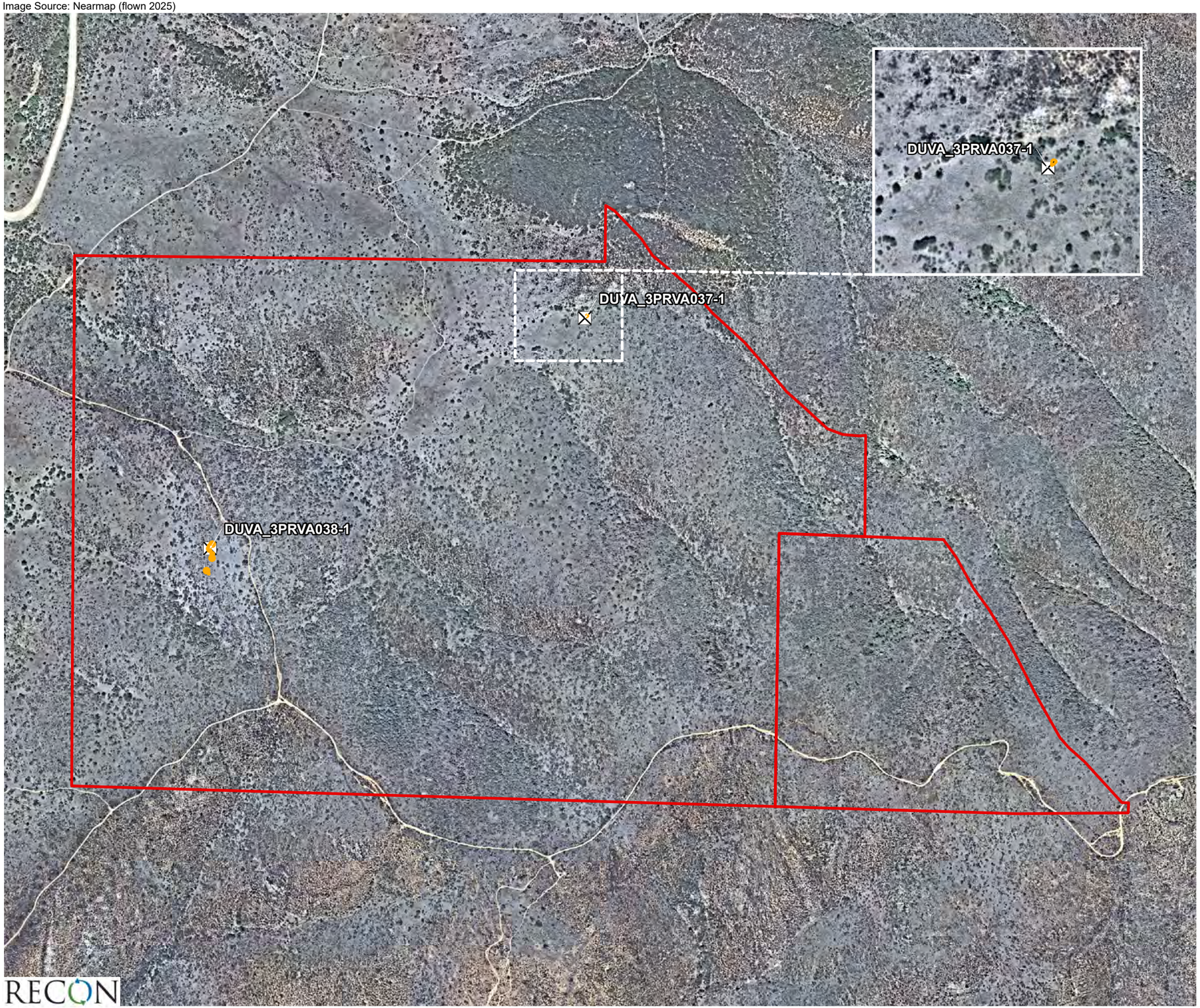
FIGURE 8

Rare Plant IMG Monitoring, Dulzura Parcels

Image Source: Nearmap (flown 2025)



Conveyed Land Under POM Management

MSP IMG Rare Plant Monitoring Locations

Variegated Dudleya
(*Dudleya variegata*)

0 Feet 500

FIGURE 9

Rare Plant IMG Monitoring,
Jamul Mountains Parcels

RECON

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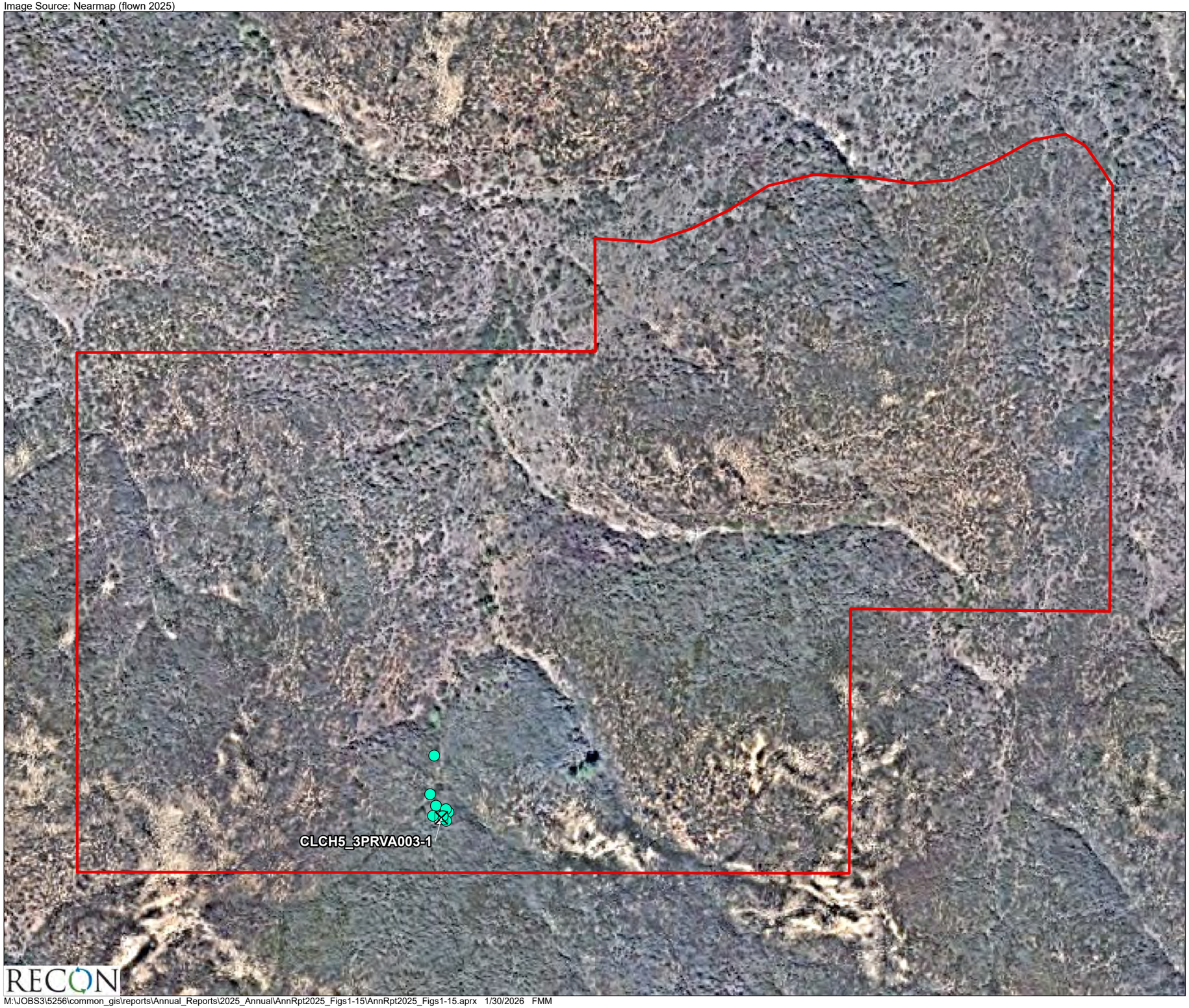
Image Source: Nearmap (flown 2025)



Conveyed Land Under POM Management

MSP IMG Rare Plant Monitoring Locations

Sensitive Plants

San Miguel Savory
(*Clinopodium chandleri [=Satureja chandleri]*)

0 Feet 250

FIGURE 10

Rare Plant IMG Monitoring,
Proctor Valley (North) Parcels

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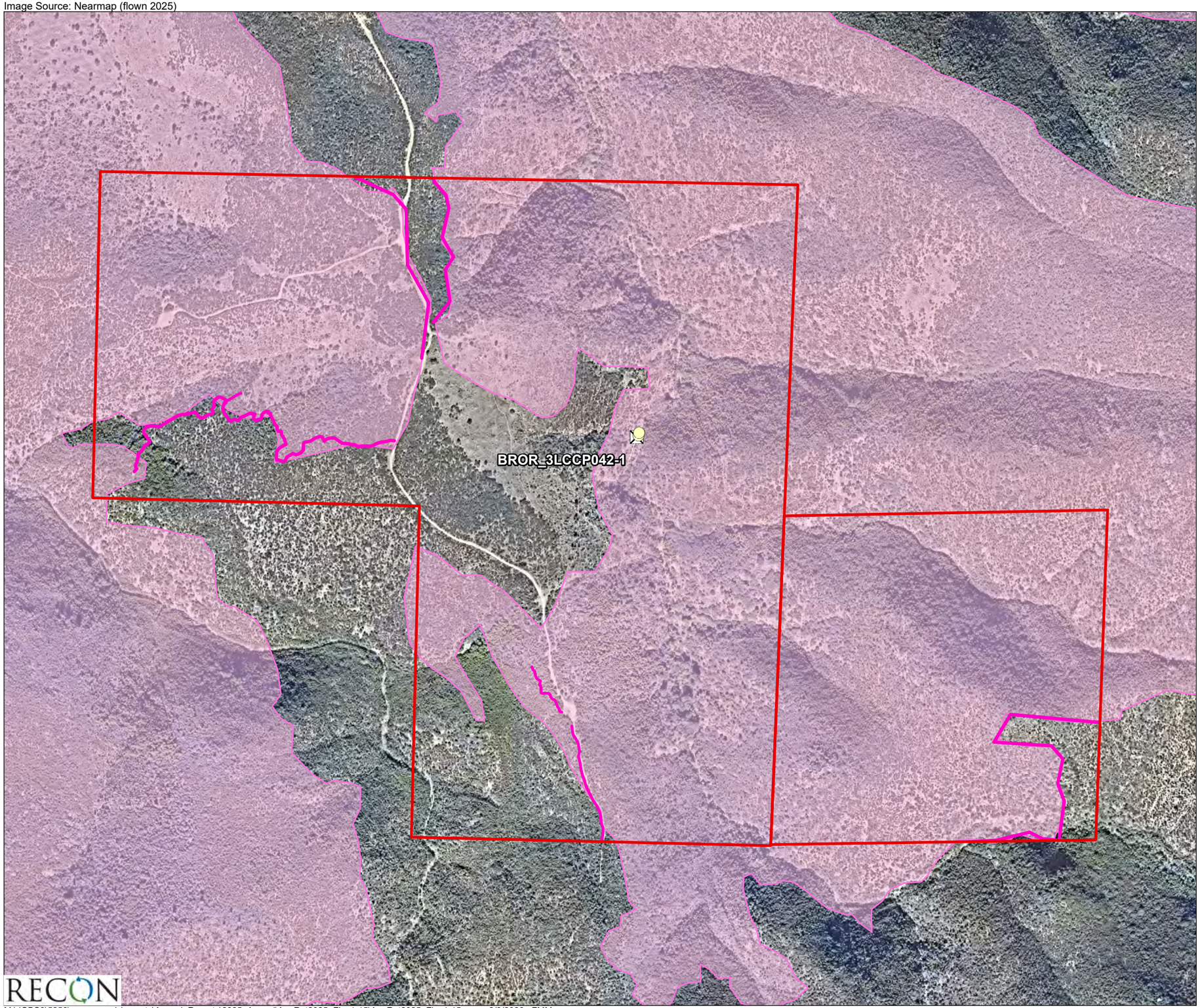
Image Source: Nearmap (flown 2025)



Conveyed Land Under POM Management

Border 2 Fire Area

Fire Assessment Polygons

Hand Line

MSP IMG Rare Plant Monitoring Locations

Sensitive Plants

Orcutt's Brodiaea
(*Brodiaea orcuttii*)

0 Feet 400

FIGURE 11

Rare Plant IMG Monitoring,
Little Cedar Canyon Parcels

RECON

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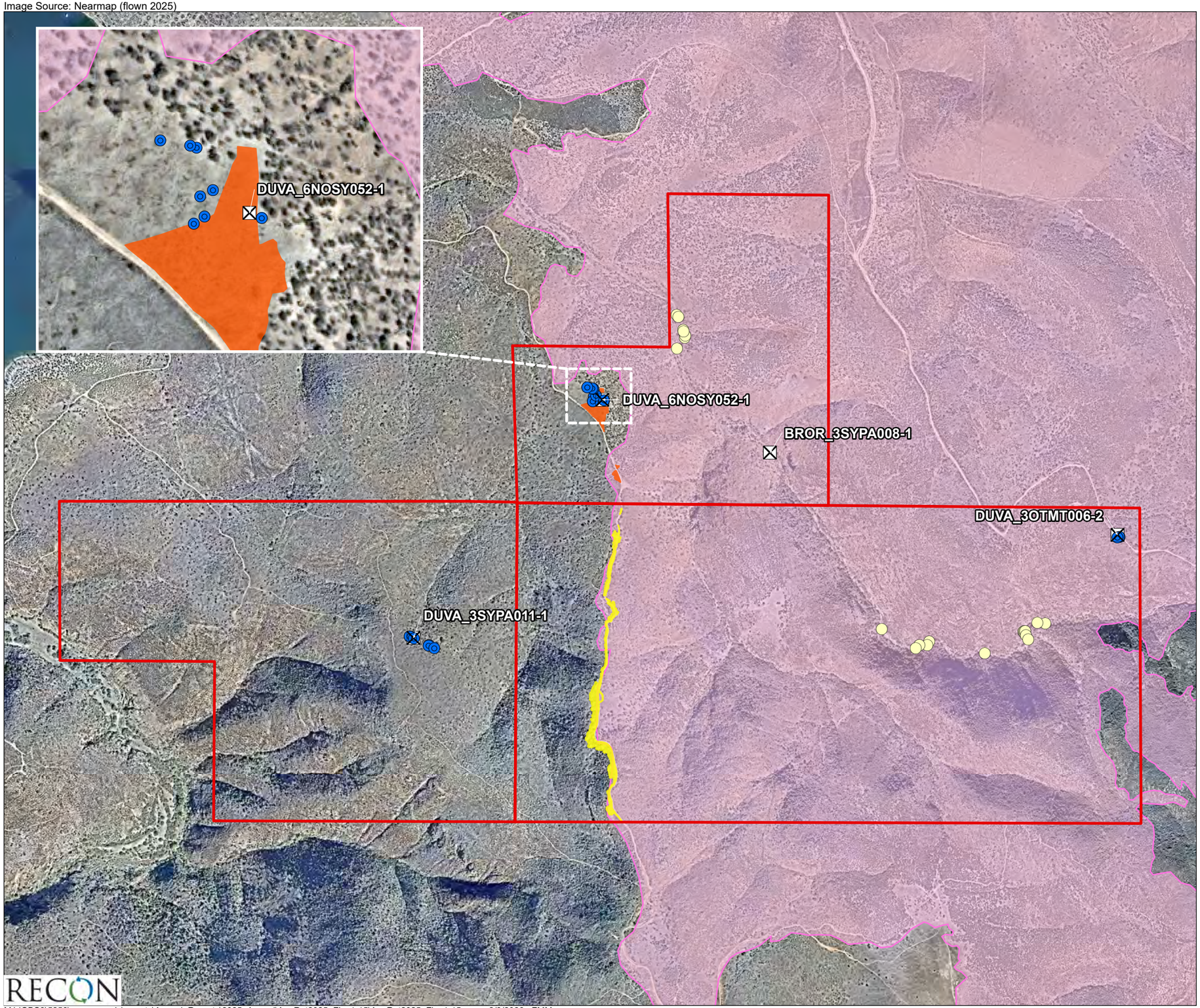
Image Source: Nearmap (flown 2025)



Conveyed Land Under POM Management

Border 2 Fire Area

Fire Assessment Polygons

Dozer Line

Fire Crew Vehicle Staging Area

MSP IMG Rare Plant Monitoring Locations

Sensitive Plants

Variegated Dudleya (*Dudleya variegata*)

Orcutt's Brodiaea (*Brodiaea orcuttii*)

0 Feet 850

RECON

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FIGURE 12

Rare Plant IMG Monitoring,
Northern San Ysidro and San Ysidro Parcels

Image Source: Nearmap (flown 2025)

Conveyed Land Under POM Management

MSP IMG Rare Plant Monitoring Locations

Sensitive Plants

Variegated Dudleya
(*Dudleya variegata*)

Otay Tarplant
(*Deinandra conjugens*)

0 Feet 1,500

FIGURE 13

Rare Plant IMG Monitoring,
Northern Salt Creek and Salt Creek Parcels

RECON

M:\JOBS3\5256\common_gis\reports\Annual_Reports\2025_Annual\AnnRpt2025_Figs1-15\AnnRpt2025_Figs1-15.aprx 1/30/2026 FMM

Image Source: Nearmap (flown 2025)

Conveyed Land Under POM Management

MSP IMG Rare Plant Monitoring Locations

Sensitive Plants

Otay Tarplant
(*Deinandra conjugens*)

0 Feet 350

FIGURE 14

Rare Plant IMG Monitoring,
Western Wolf Canyon Parcels

RECON

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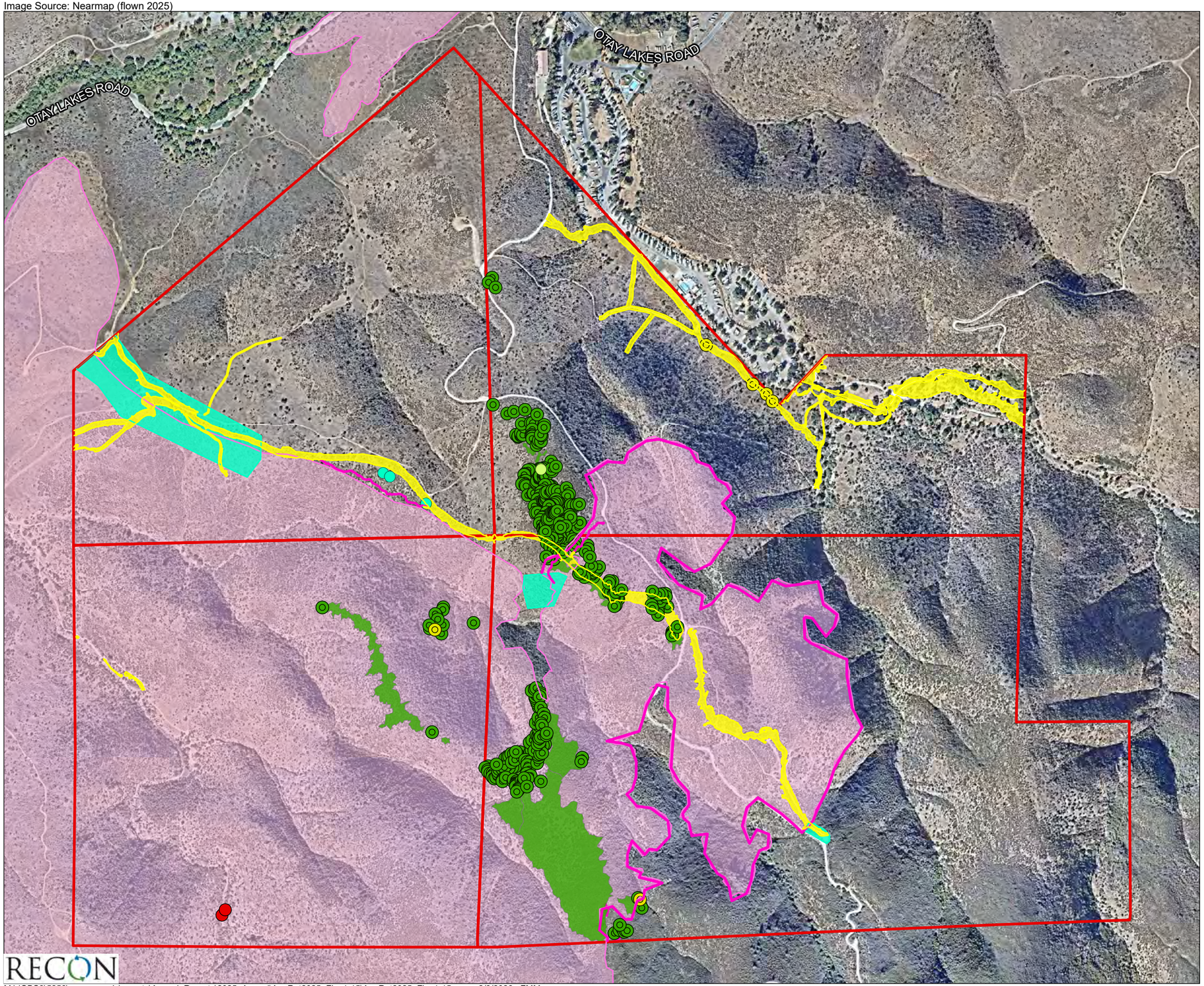
Image Source: Nearmap (flown 2025)



Conveyed Land Under POM Management
Border 2 Fire Area

Fire Assessment Polygons

Dozer Line
Hand Line
Phos-check

Sensitive Plants

Priority Group 1 (Census)

Dunn's Mariposa Lily (*Calochortus dunnii*)

Priority Group 1 (Incidental)

San Diego Goldenstar (*Bloomeria clevelandii*)

Priority Group 4 (Incidental)

Golden-ray Pentachaeta (*Pentachaeta aurea* ssp. *aurea*)

Ocellated Humboldt Lily (*Lilium humboldtii* ssp. *ocellatum*)

California Adder's-tongue (*Ophioglossum californicum*)

0 Feet 700

RECON

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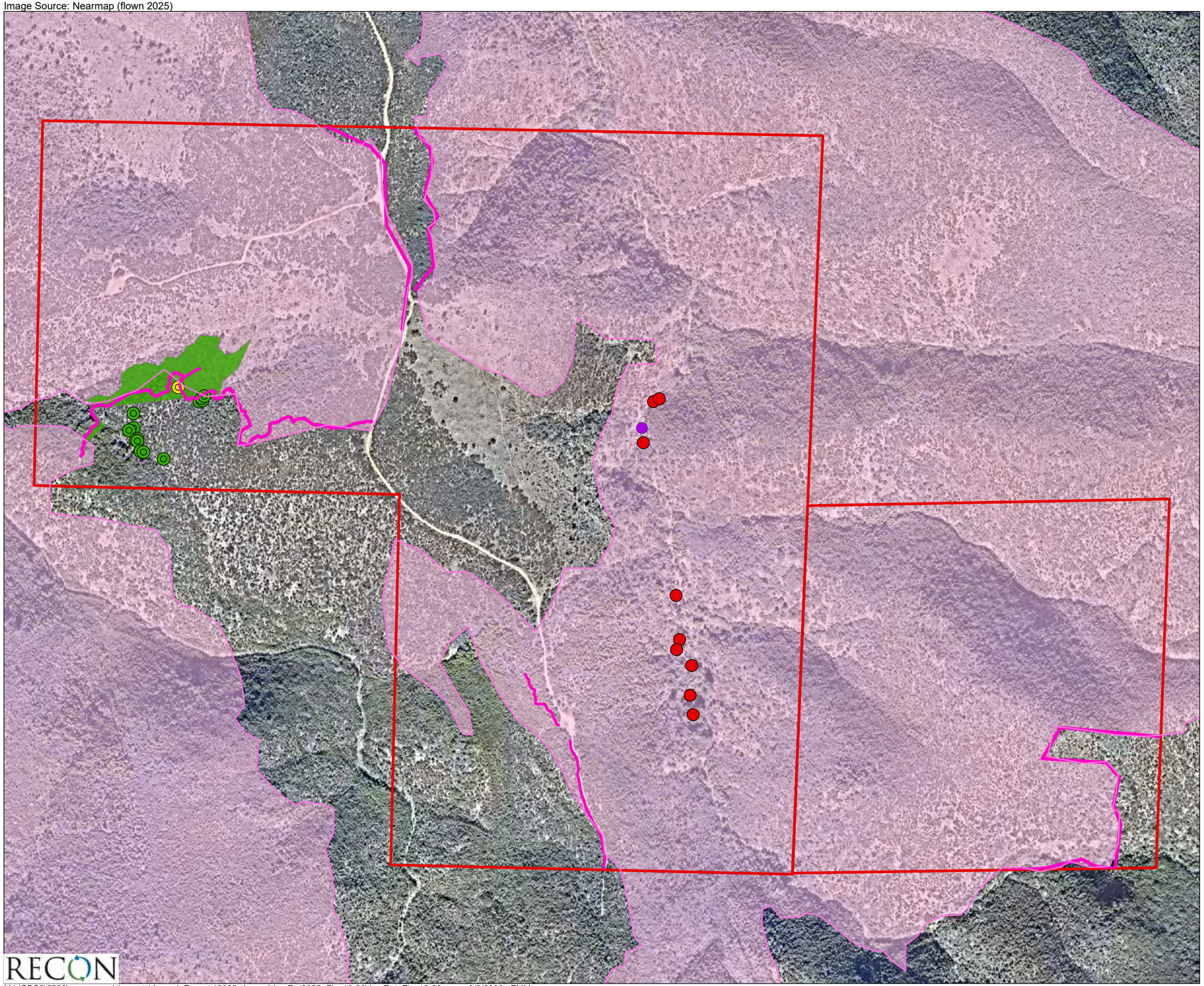
FIGURE 15
Rare Plant Census Survey and Incidental Rare Plant Observations, Dulzura Parcels

Image Source: Nearmap (flown 2025)



Conveyed Land Under POM Management

Border 2 Fire Area

Fire Assessment Polygons

Hand Line

Sensitive Plants

Priority Group 1 (Census)

Dunn's Mariposa Lily (*Calochortus dunnii*)

Priority Group 1 (Incidental)

San Diego Goldenstar (*Bloomeria clevelandii*)

Priority Group 3 (Incidental)

Purple Stemodia (*Stemodia durantifolia*)

Priority Group 4 (Incidental)

Ocellated Humboldt Lily (*Lilium humboldtii* ssp. *ocellatum*)

0 Feet 350

FIGURE 16

Rare Plant Census Survey and Incidental Rare Plant Observations, Little Cedar Canyon Parcels

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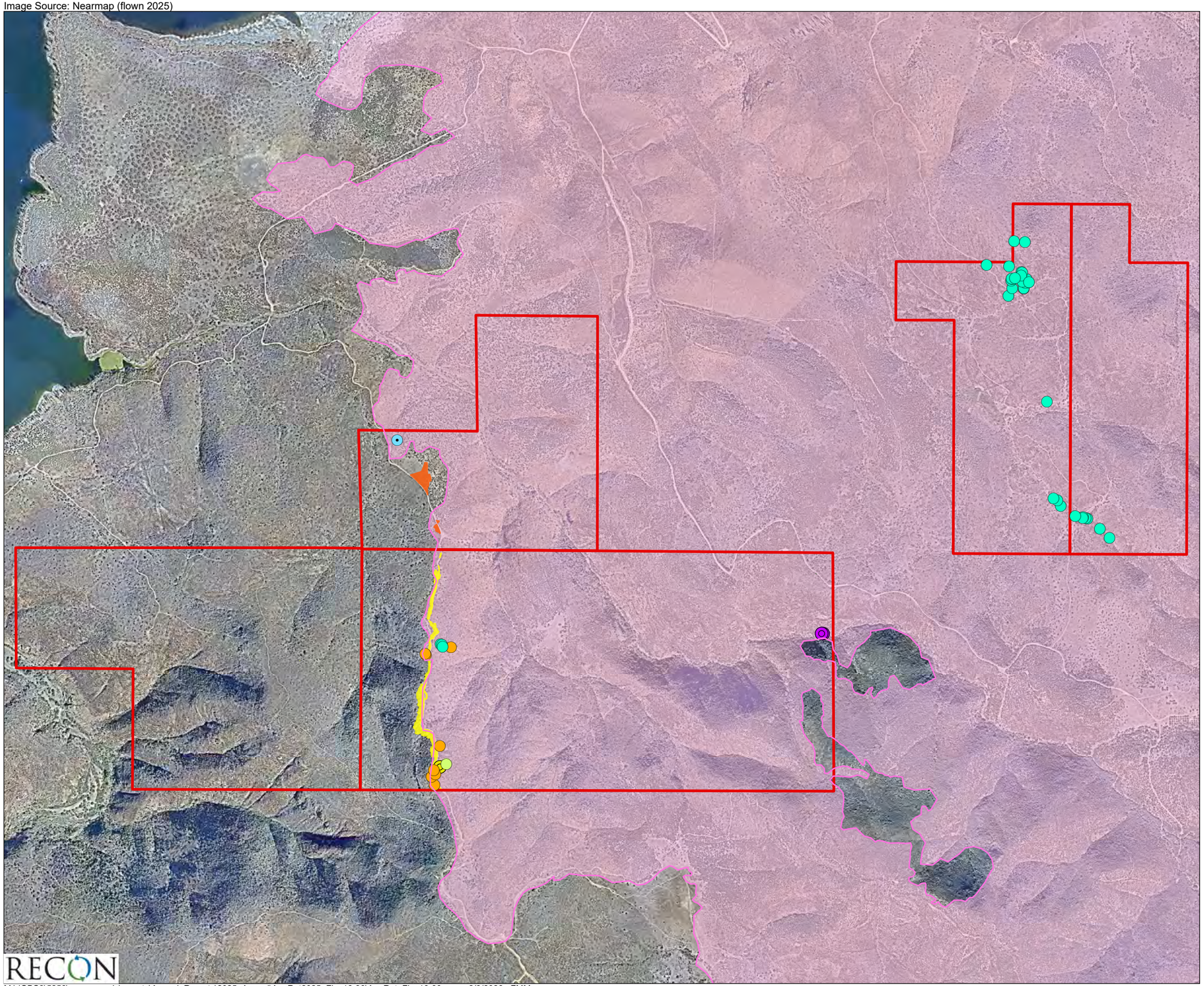
Image Source: Nearmap (flown 2025)



Conveyed Land Under POM Management
Border 2 Fire Area

Fire Assessment Polygons

Dozer Line
Fire Crew Vehicle Staging Area

Sensitive Plants

Priority Group 1 (Incidental)

San Diego Goldenstar (*Bloomeria clevelandii*)
Jennifer's Monardella (*Monardella stoneana*)

Priority Group 2 (Incidental)

San Diego Barrel Cactus (*Ferocactus viridescens*)

Priority Group 4 (Incidental)

Ashy Spike-moss (*Selaginella cinerascens*)
California Adder's-tongue (*Ophioglossum californicum*)
Golden-ray Pentachaeta (*Pentachaeta aurea* ssp. *aurea*)

0 Feet 1,100

FIGURE 17
Incidental Rare Plant Observations, Northern San Ysidro, San Ysidro, and McMillin Parcels

RECON

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Image Source: Nearmap (flown 2025)

Conveyed Land Under POM Management

Sensitive Plants

Priority Group 1 (Census)

- Otay Tarplant (*Deinandra conjugens*)

Priority Group 1 (Incidental)

- San Diego Button-celery (*Eryngium aristulatum* var. *parishii*)

Priority Group 4 (Incidental)

- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*)
- Palmer's Grapplinghook (*Harpagonella palmeri*)

0 Feet 2,000

FIGURE 18
Rare Plant Census Survey and Incidental Rare Plant Observations, Millenia, Salt Creek, and Northern Salt Creek Parcels

RECON

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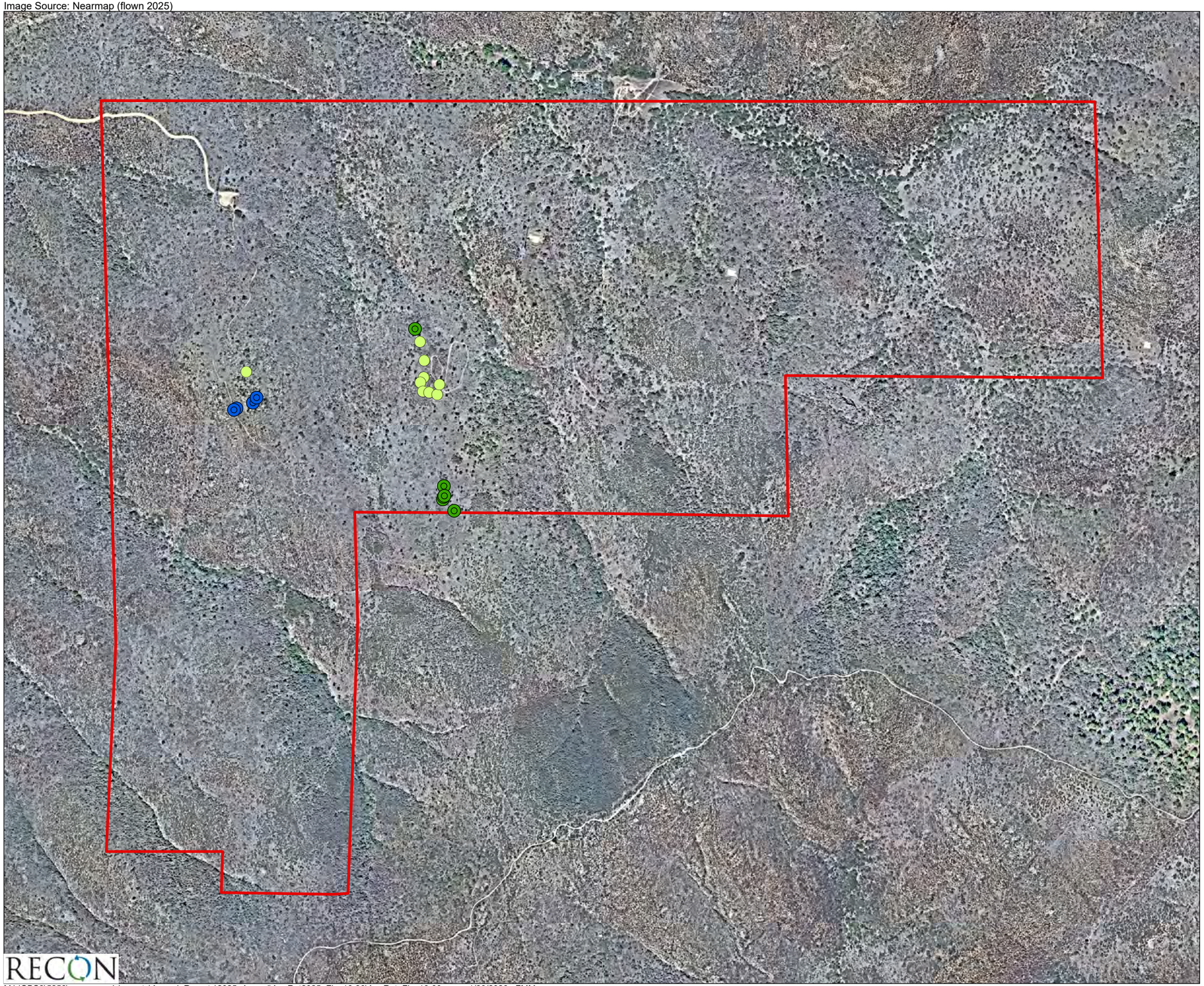
Image Source: Nearmap (flown 2025)



Conveyed Land Under POM Management

Sensitive Plants

Priority Group 1 (Census)

- Variegated Dudleya (*Dudleya variegata*)
- Dunn's Mariposa Lily (*Calochortus dunnii*)

Priority Group 4 (Incidental)

- Golden-ray Pentachaeta (*Pentachaeta aurea* ssp. *aurea*)

0 Feet 500

FIGURE 19
Rare Plant Census Survey and Incidental Rare Plant Observations, Proctor Valley Parcels

RECON

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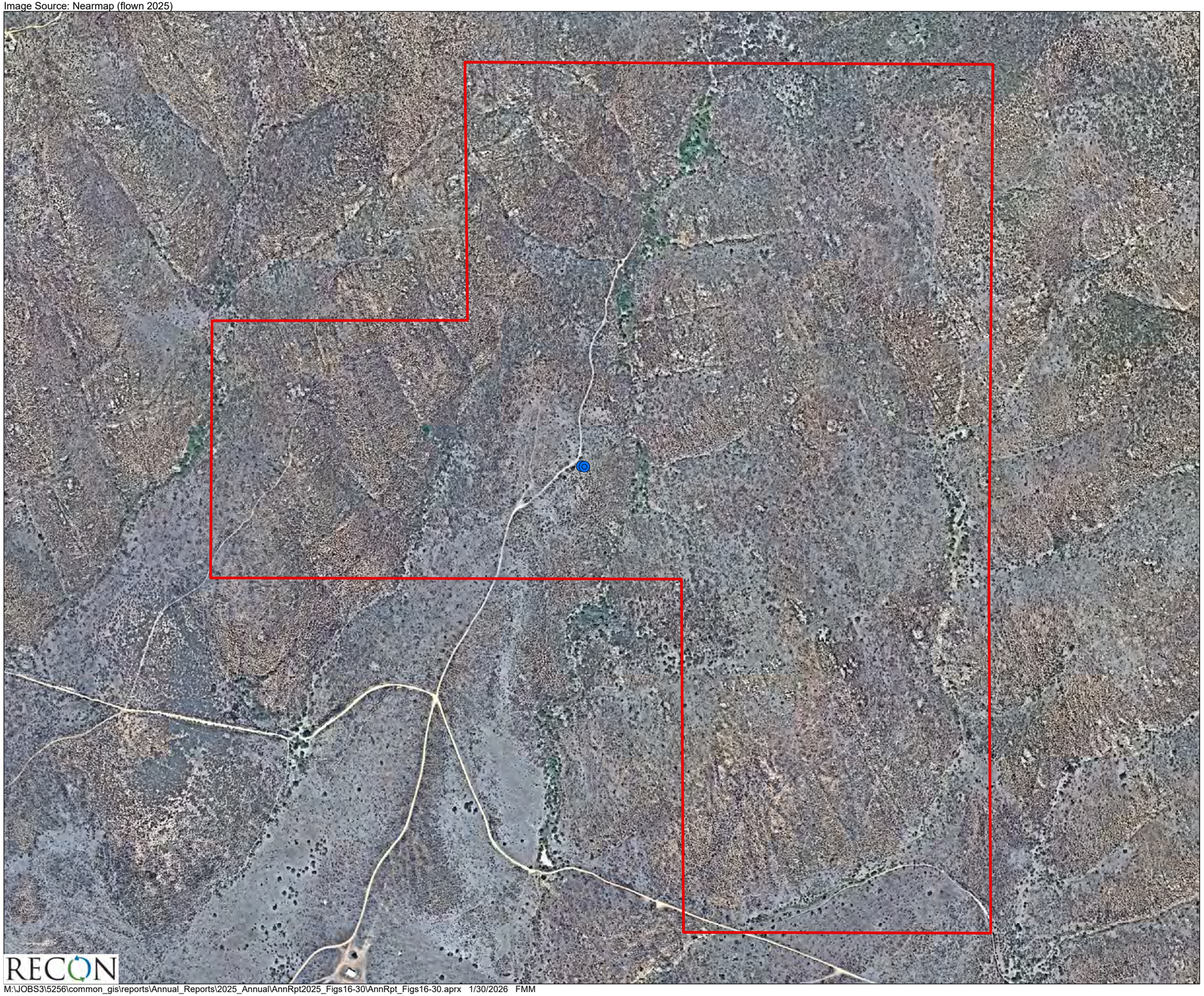
Image Source: Nearmap (flown 2025)



Conveyed Land Under POM Management

Sensitive Plants

Priority Group 1 (Census)

Variegated Dudleya
(*Dudleya variegata*)

0 Feet 500

FIGURE 20

Rare Plant Census Survey,
Ridge Parcels

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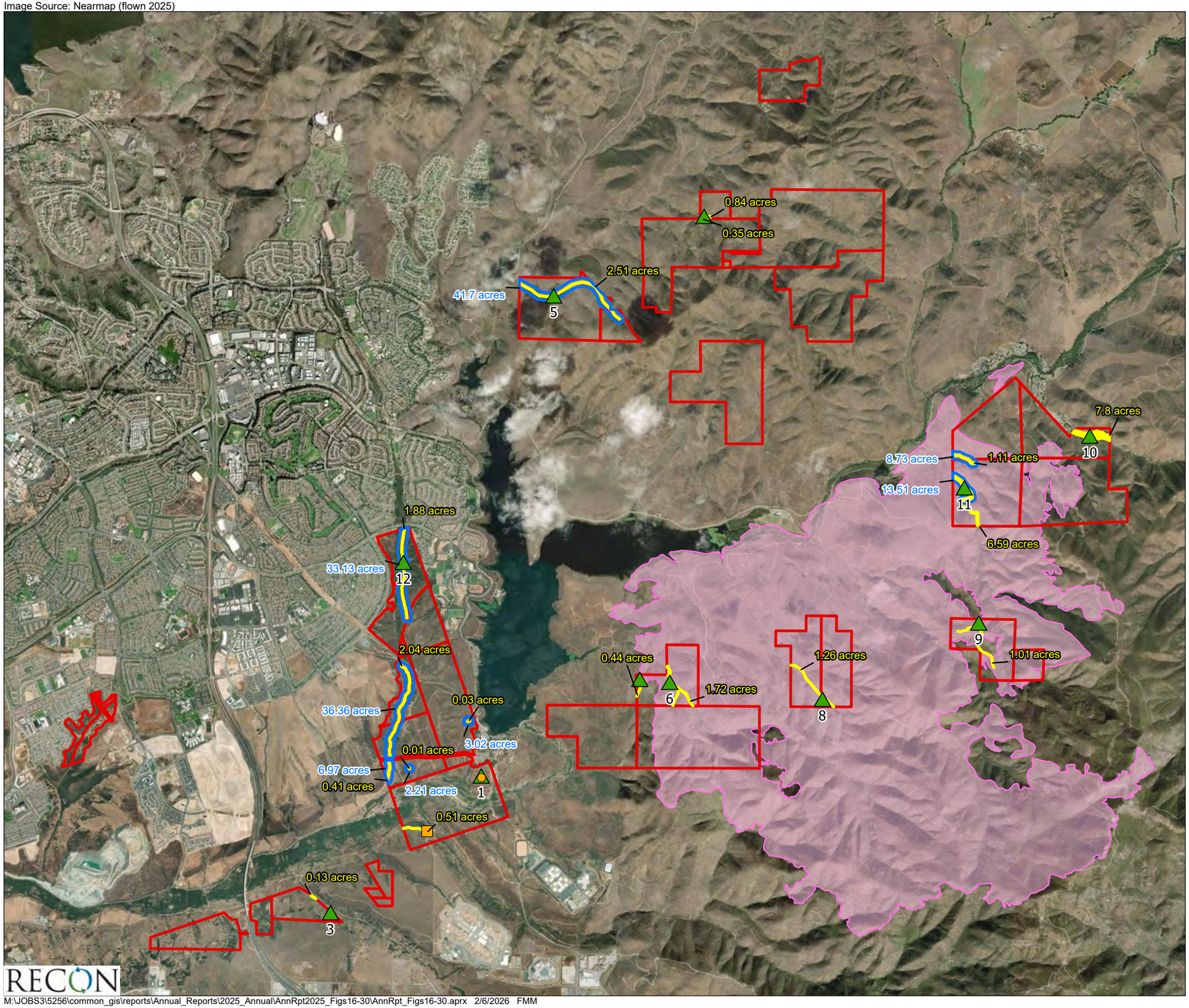
Image Source: Nearmap (flown 2025)



Conveyed Land Under POM Management

Border 2 Fire Area

Adult Nighttime Survey Area

Daytime Breeding Pool Survey Areas

Acoustic Data Logger

Western Spadefoot (Spea hammondii) – Calling, AudioMoth Detection on 03/12/2025

Western Spadefoot (*Spea hammondii*) – Tadpoles, Visual Observation on 03/27/2025

0 Miles 0.5

FIGURE 21

Focused Western Spadefoot Survey Area, Otay Ranch Preserve

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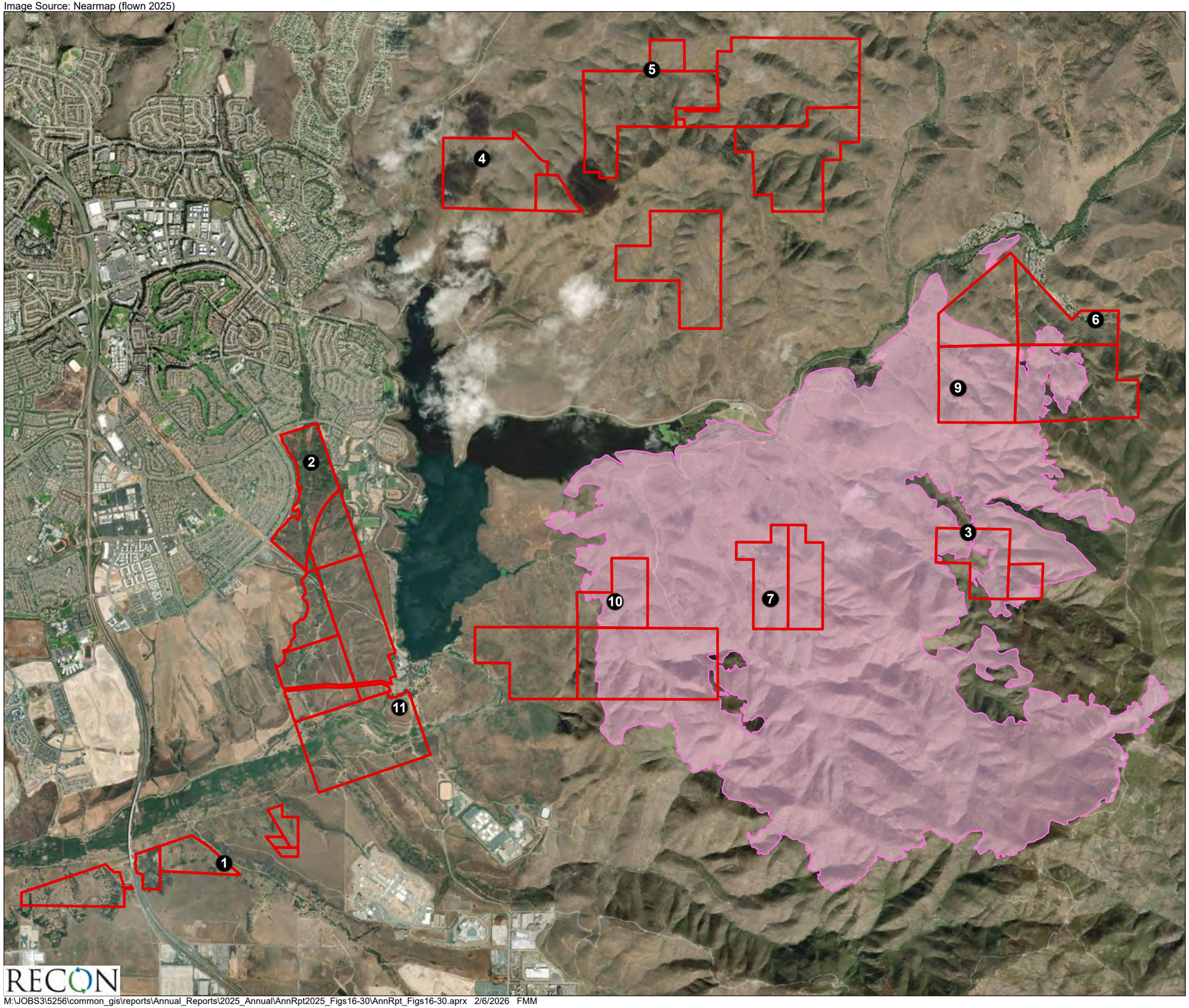
Image Source: Nearmap (flown 2025)



Conveyed Land Under POM Management

Border 2 Fire Area

Acoustic Data Logger

0 Miles 0.5

FIGURE 22

AudioMoth Locations, Placed December 2025, Otay Ranch Preserve

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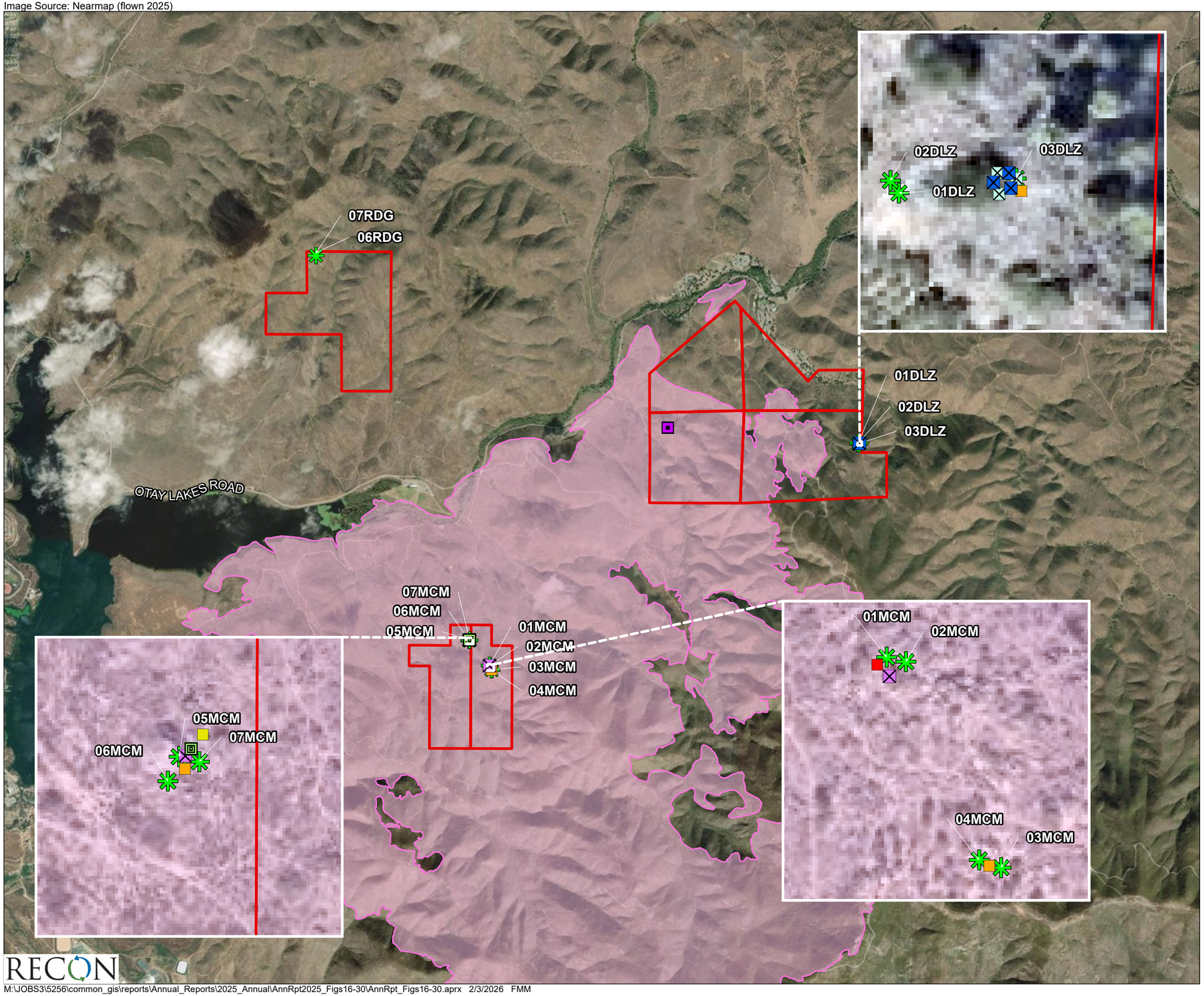
Image Source: Nearmap (flown 2025)



Conveyed Land Under POM Management

Border 2 Fire Area

Golden Eagle Camera Locations

Observations from Wildlife Camera Photos

Priority Group 1

- Golden Eagle (*Aquila chrysaetos*)
- Northern Harrier (*Circus hudsonius*)

Priority Group 2

- Southern Mule Deer (*Odocoileus hemionus fuliginata*)
- Cooper's Hawk (*Astur [=Accipiter] cooperii*)
- Southern California Ringtail (*Bassariscus astutus octavus*)

Priority Group 4

- Loggerhead Shrike (*Lanius ludovicianus*)

Golden Eagle Prey Source

Priority Group 3

- San Diego Black-tailed Jackrabbit (*Lepus californicus bennettii*)

Common Wildlife

- California Ground Squirrel (*Otopermophilus [=Spermophilus] beecheyi*)

0 Feet 3,000

FIGURE 23
Golden Eagle Camera Survey Locations and Wildlife Observations: Ridge, McMillin, and Dulzura Parcels

RECON

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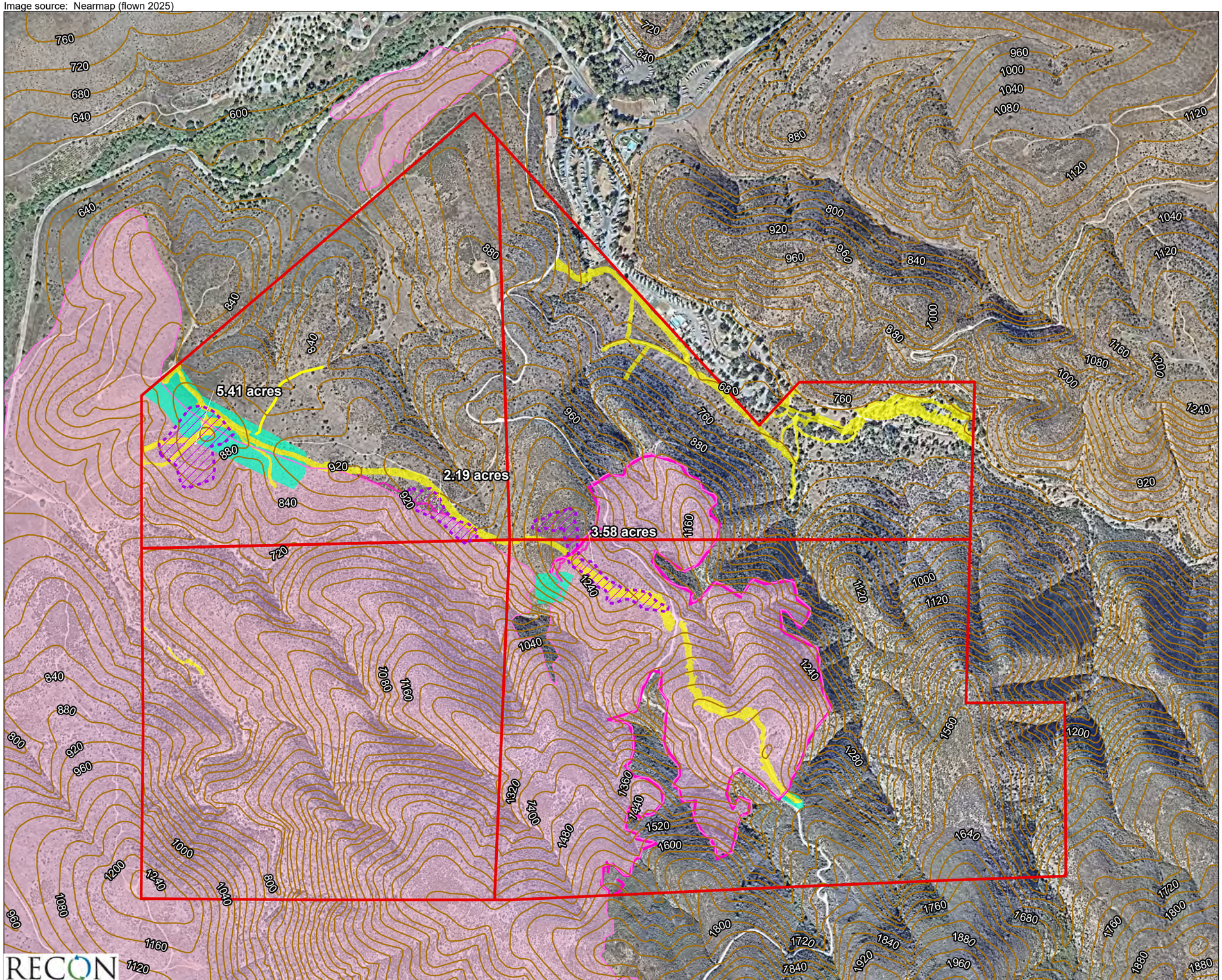
Image source: Nearmap (flown 2025)



Conveyed Land Under POM Management

Border 2 Fire Area

Habitat Assessment: Proposed 2025 QCB Survey Area per the Pre-survey Notification Letter Dated March 14, 2025

Contour Lines

Fire Assessment Polygons

Dozer Line

Hand Line

Phos-check

0 Feet 800

RECON

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FIGURE 24
Focused QCB Survey Area,
Dulzura Parcels

Image source: Nearmap (flown 2025)

Conveyed Land Under POM Management

Border 2 Fire Area

Habitat Assessment: Proposed 2025 QCB Survey Area per the Pre-survey Notification Letter Dated March 14, 2025

Contour Lines

0 Feet 450

FIGURE 25
Focused QCB Survey Area, McMillin Parcels

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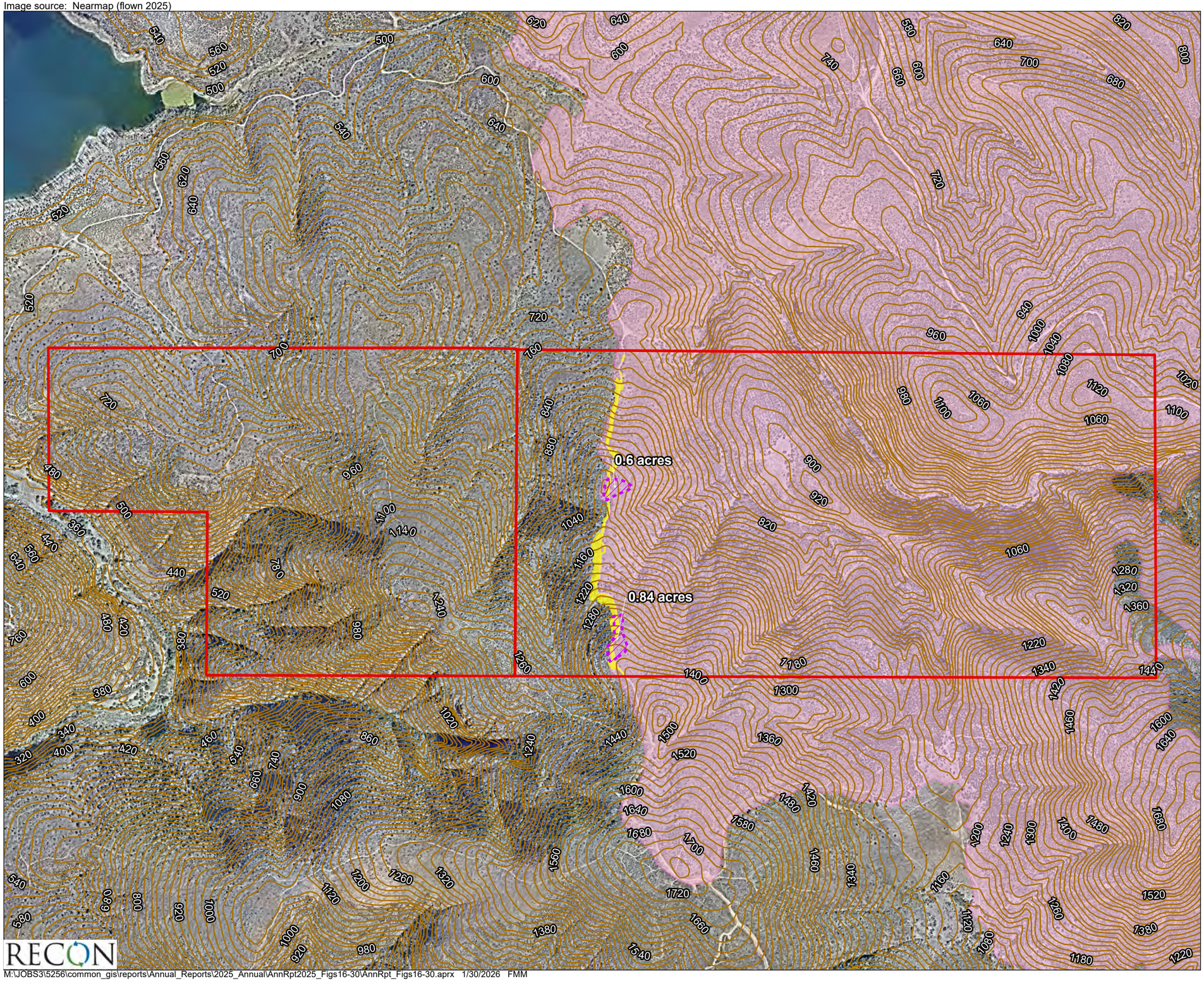
Image source: Nearmap (flown 2025)



Conveyed Land Under POM Management

Border 2 Fire Area

Habitat Assessment: Proposed 2025 QCB Survey Area per the Pre-survey Notification Letter Dated March 14, 2025

Contour Lines

Fire Assessment Polygons

Dozer Line

0 Feet 800

FIGURE 26
Focused QCB Survey Area,
San Ysidro Parcels

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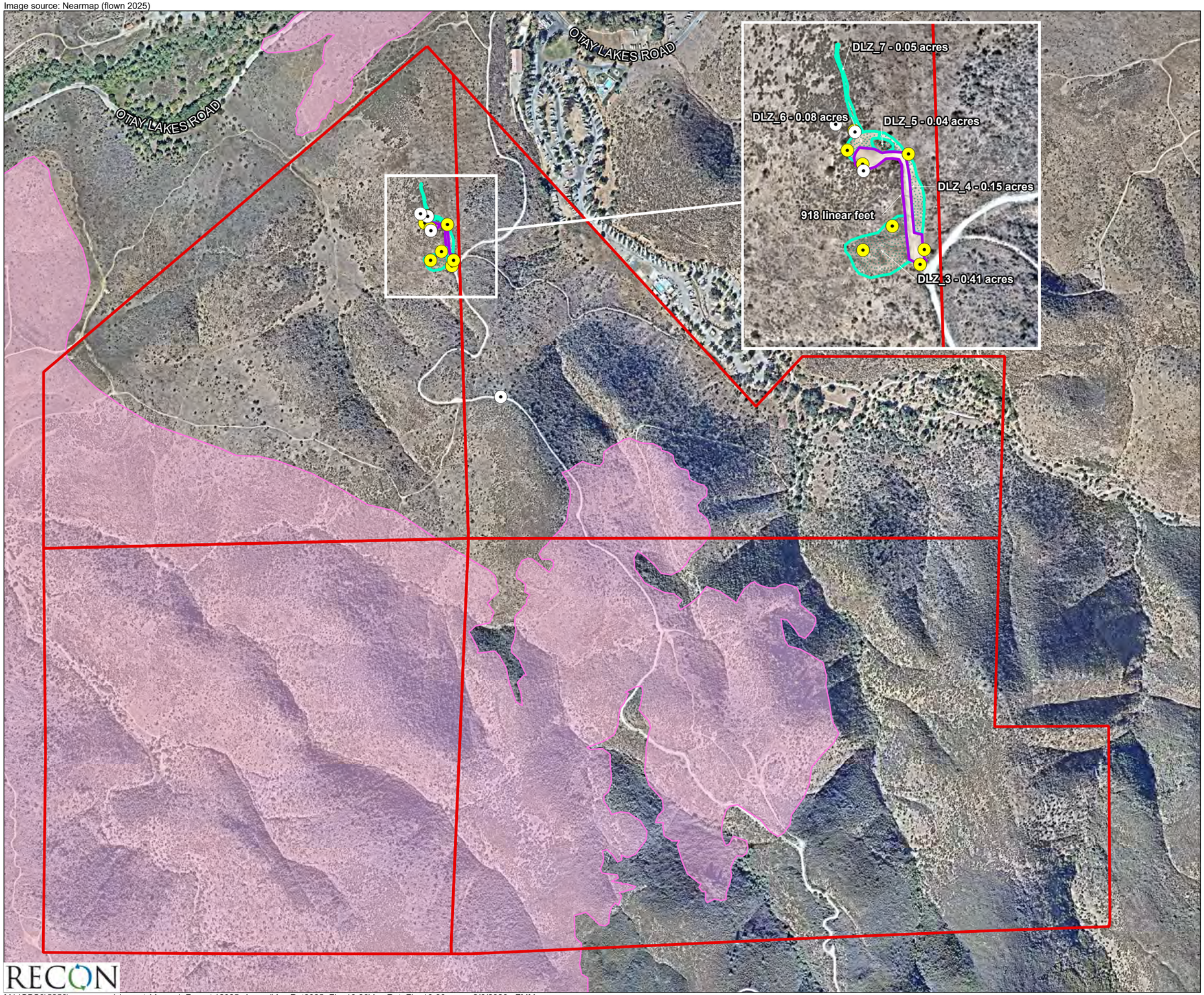
Image source: Nearmap (flown 2025)



Conveyed Land Under POM Management

Border 2 Fire Area

Weed Treatment Area

Proposed Barbless Wire T-post Fence

Photographic Monitoring Locations – Established in 2012

Photographic Monitoring Locations – Established in 2023

0 Feet 700

RECON

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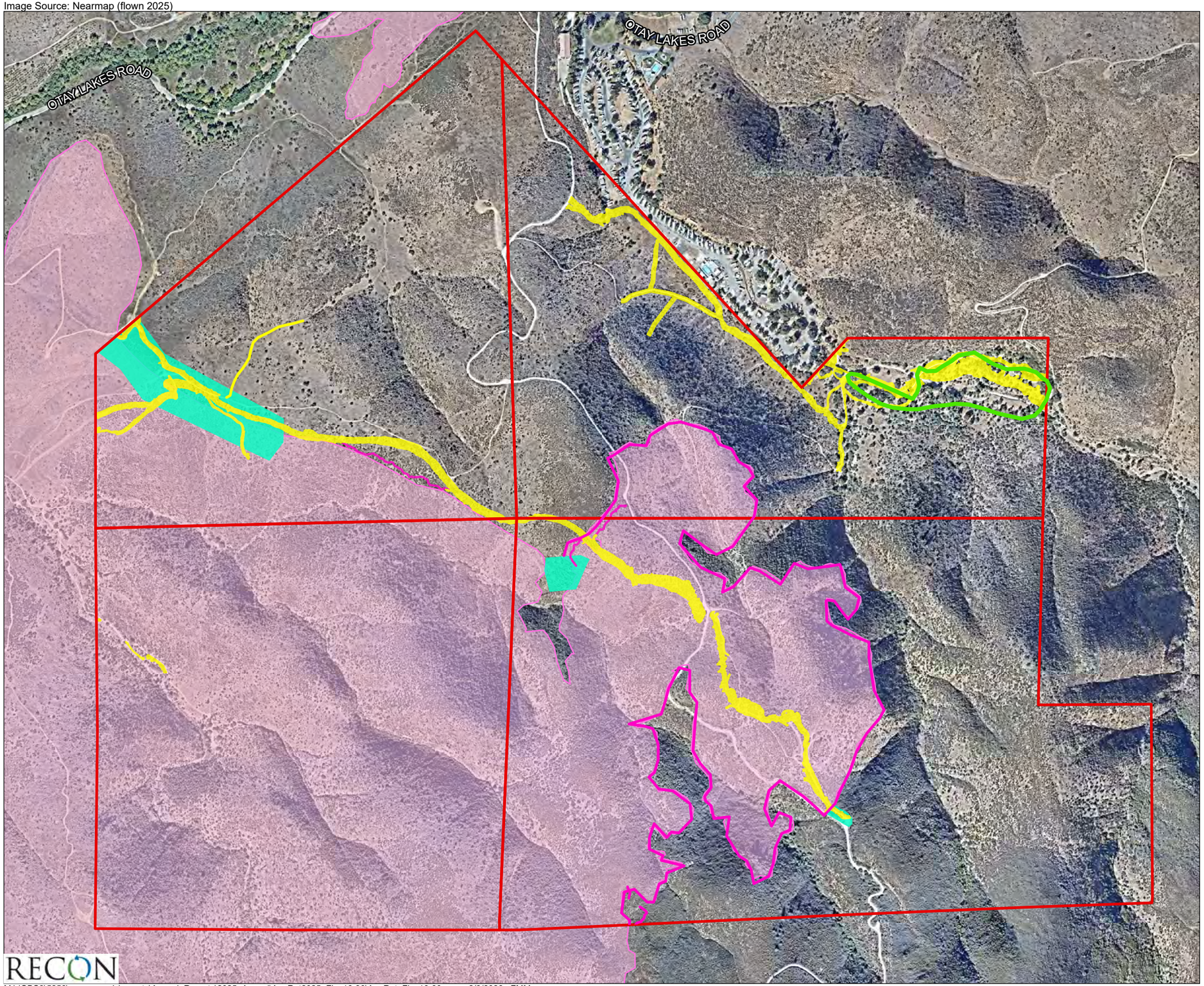
FIGURE 27

Photo Monitoring, Plant Treatment, and Quantitative Monitoring Areas: Dulzura Parcels

Image Source: Nearmap (flown 2025)



Conveyed Land Under POM Management

Gold-spotted Oak Borer (*Agrilus auroguttatus*) Monitoring Site

Border 2 Fire Area

Fire Assessment Polygons

Dozer Line

Hand Line

Phos-check

0 Feet 700

FIGURE 28

GSOB Monitoring Location: Dulzura Parcels

RECON

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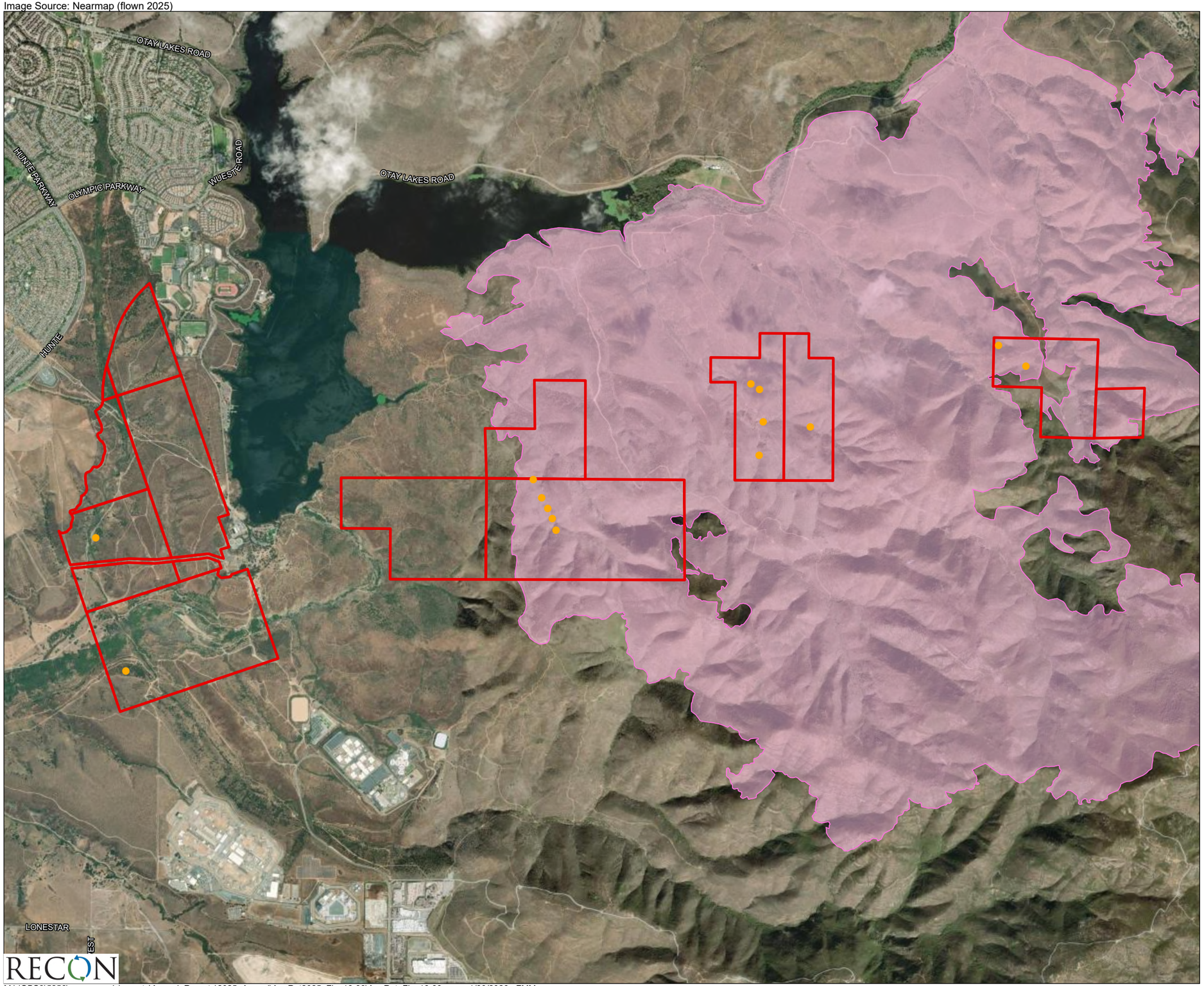
Image Source: Nearmap (flown 2025)



Conveyed Land Under POM Management
Border 2 Fire Area
Spiny Redberry

0 Feet 2,500

FIGURE 29
Spiny Redberry Locations Mapped in 2025, Little Cedar Canyon, McMillin, Northern San Ysidro, Salt Creek, and San Ysidro Parcels

RECON

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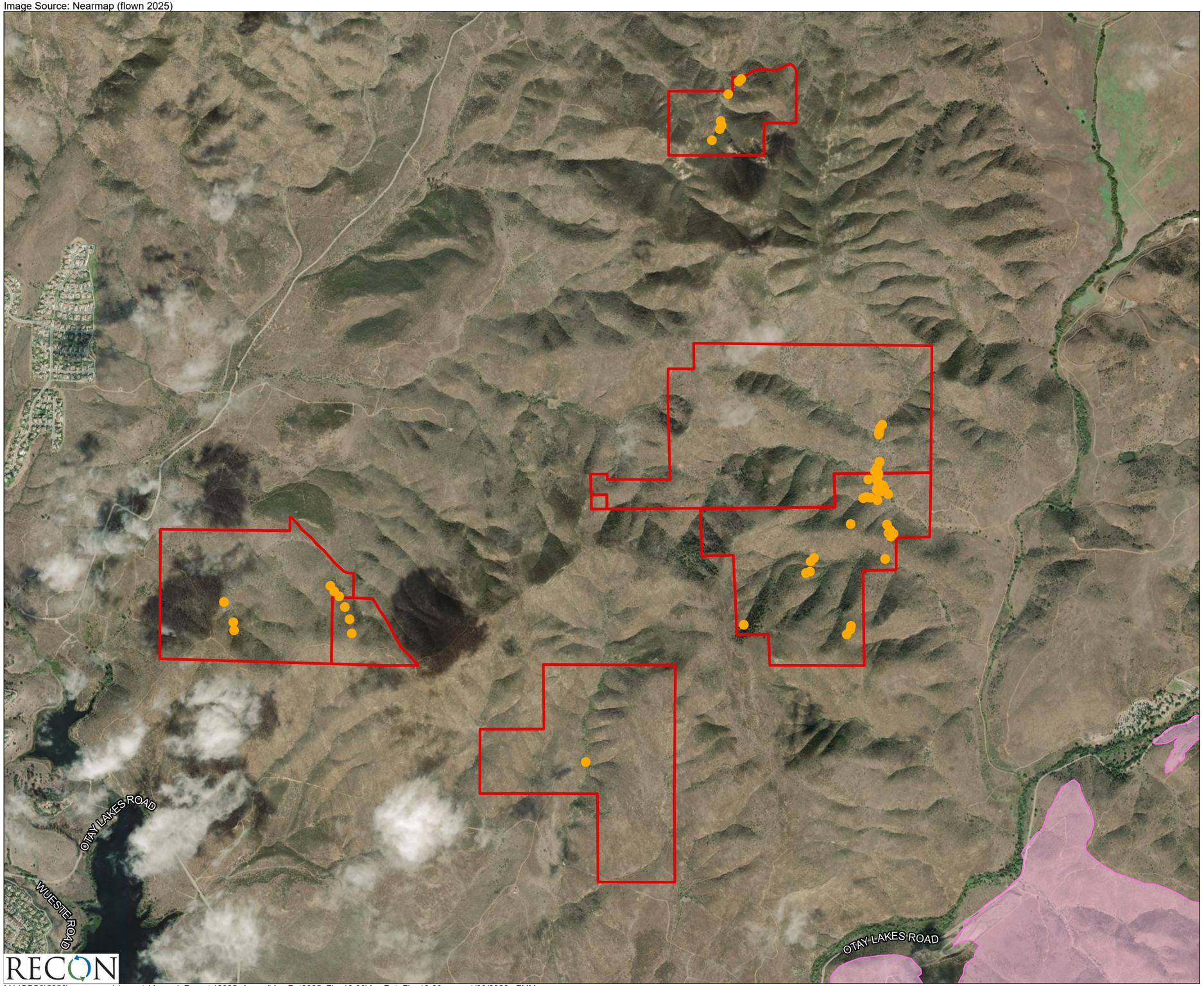
Image Source: Nearmap (flown 2025)



Conveyed Land Under POM Management
Border 2 Fire Area
Spiny Redberry

0 Feet 2,000

FIGURE 30
Spiny Redberry Locations Mapped in 2025, Bonita Glen, Jamul Mountains, Proctor Valley Extension, Proctor Valley (North), Ridge, and Rock Top Parcels

RECON

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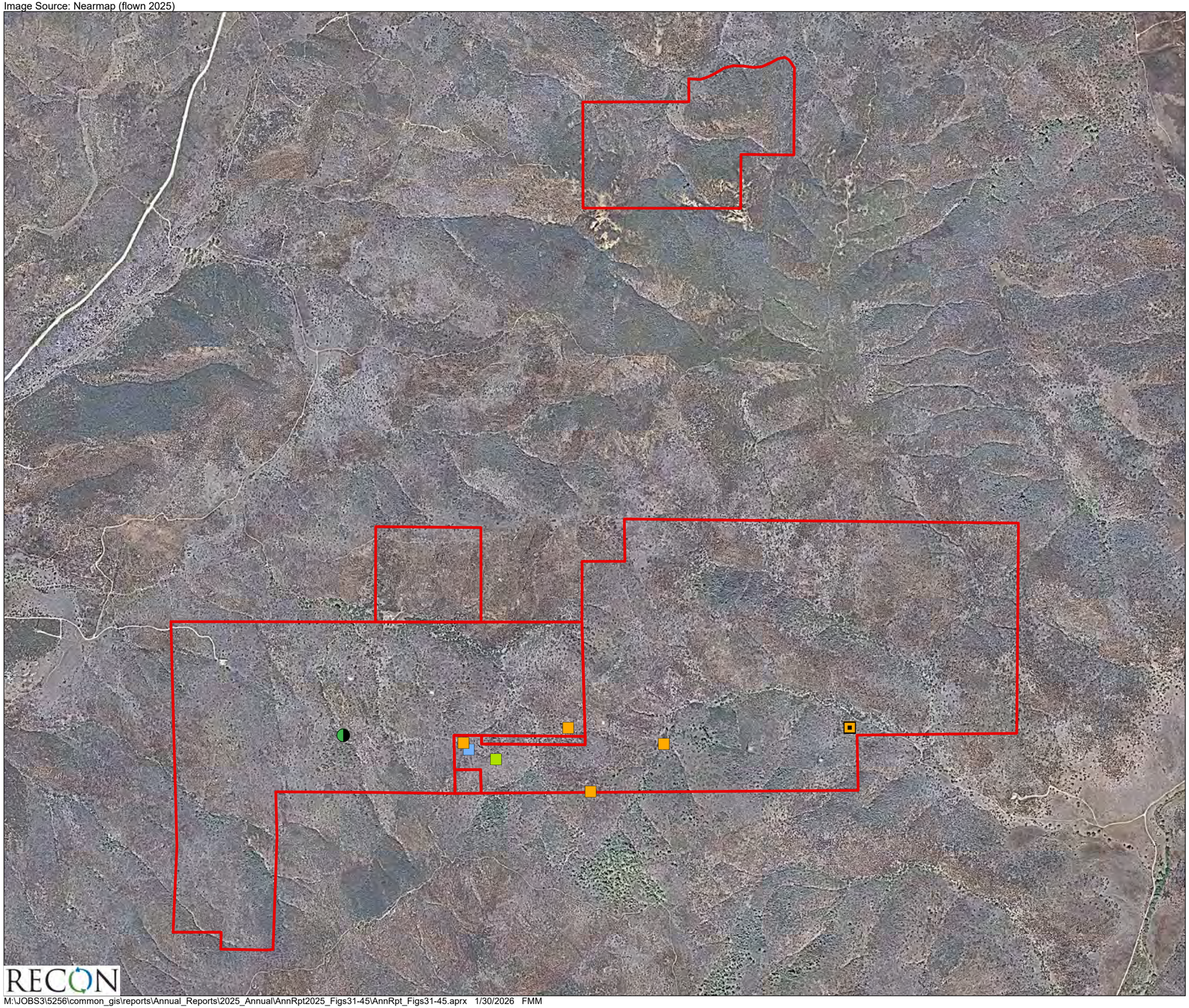
Image Source: Nearmap (flown 2025)



Conveyed Land Under POM Management

Common Plants

Coast Live Oak
(*Quercus agrifolia*)

Sensitive Wildlife

Priority Group 3

San Diego Black-tailed Jackrabbit
(*Lepus californicus bennettii*)

Common Wildlife

Blue-gray Gnatcatcher
(*Polioptila caerulea*)

California Bumble Bee
(*Bombus californicus*)

Domestic Cattle
(*Bos taurus*)

0 Feet 1,000

FIGURE 31

Noteworthy Plants, Wildlife, and Access Issues, Bonita Glen, Proctor Valley, Proctor Valley (North), Proctor Valley (South), Proctor Valley Extension, and Sliver Parcels

RECON

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Image Source: Nearmap (flown 2025)

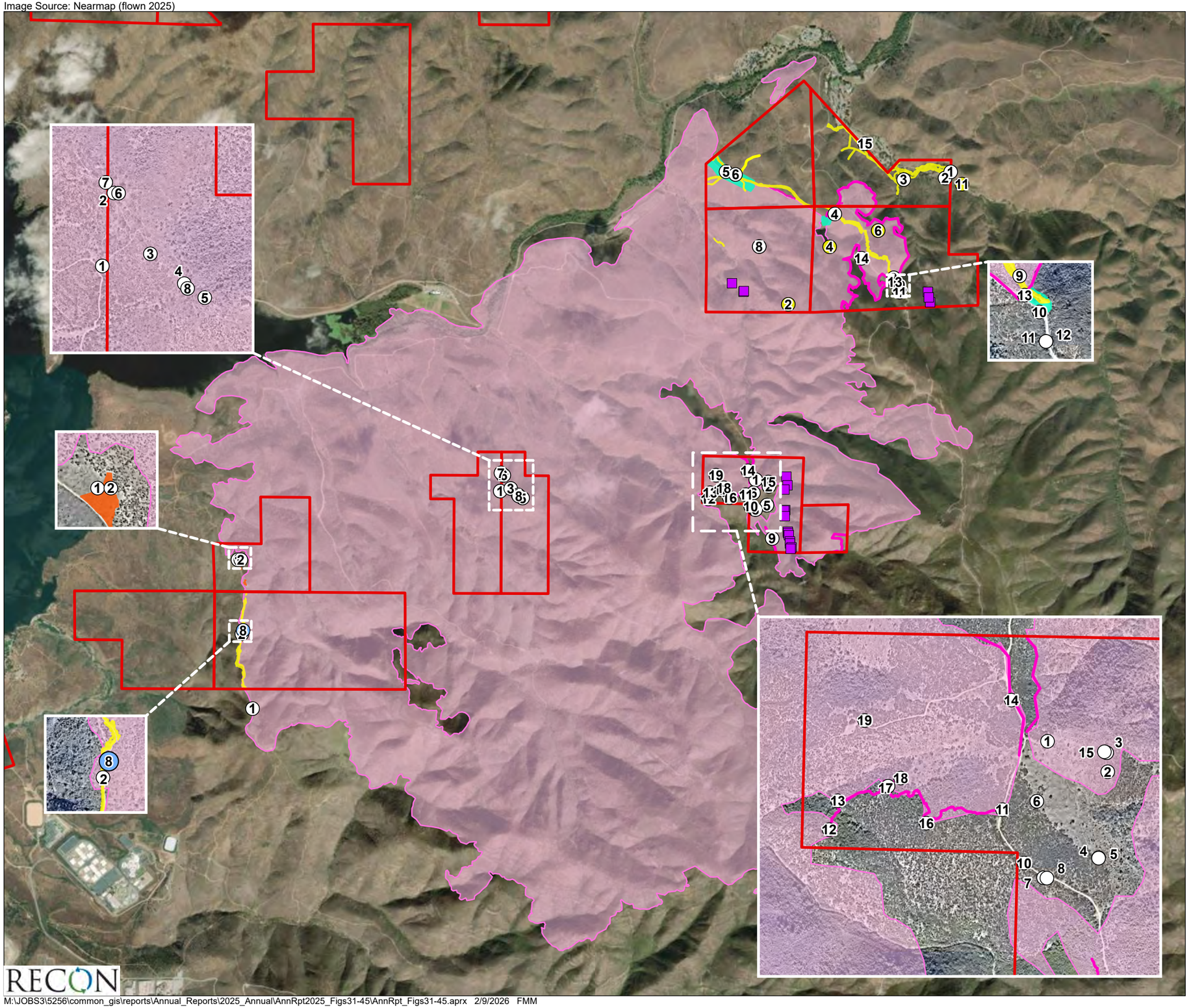

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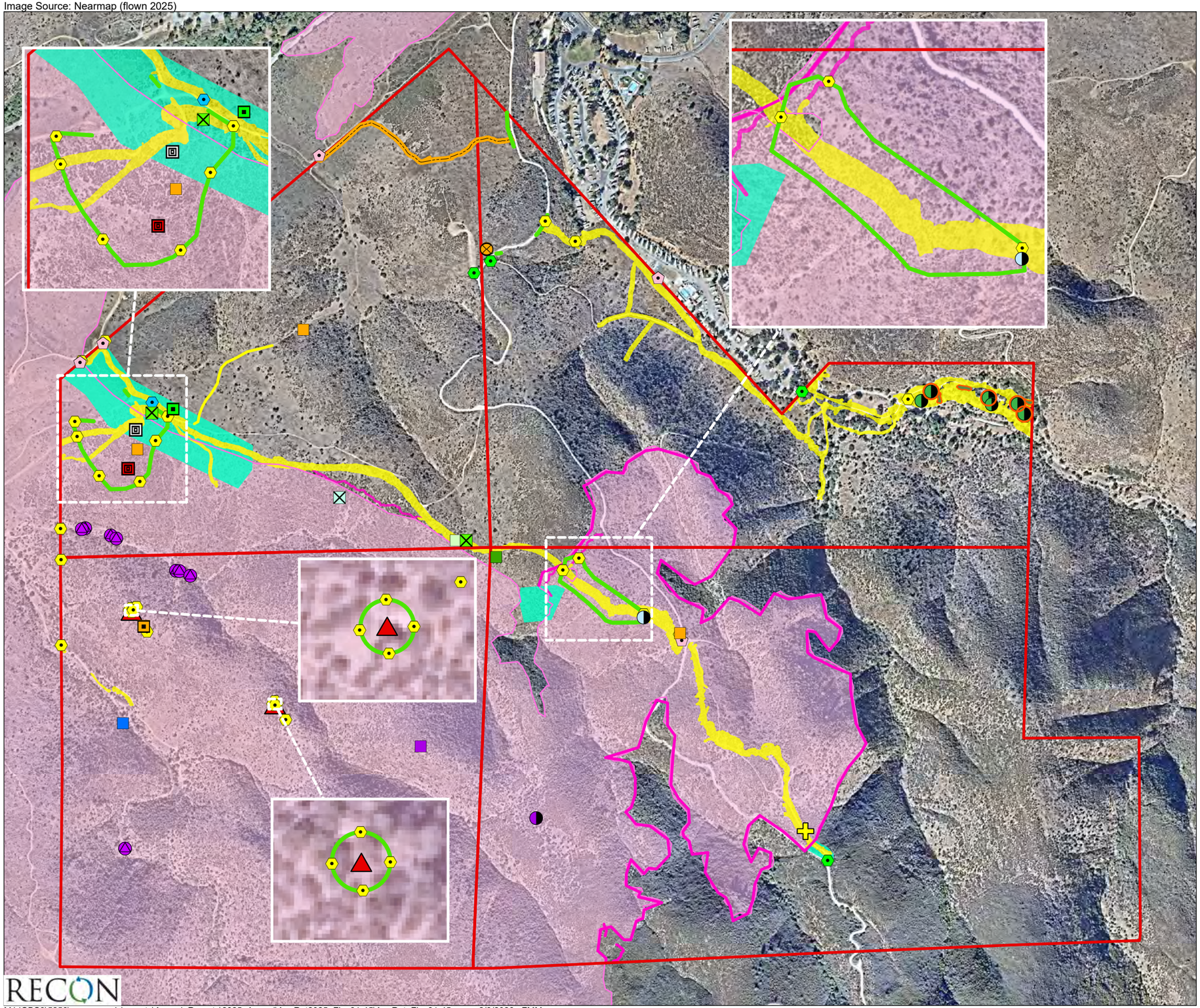
FIGURE 32

Photographic Monitoring Locations, Border 2 Fire, Otay Ranch Preserve

Image Source: Nearmap (flown 2025)



Conveyed Land Under POM Management
Border 2 Fire Area
Destroyed During Fire Suppression

Fire Assessment Polygons
- Dozer Line
- Hand Line
- Phos-check

Common Plants
- Coast Live Oak (*Quercus agrifolia*)
- Chocolate Lily (*Fritillaria biflora*)
- Texas Filaree (*Erodium texanum*)

Host Plants
- Narrow-leaf Milkweed (*Asclepias fascicularis*)

Invasive Plants
- Peruvian Pepper Tree (*Schinus molle*)

Sensitive Wildlife

Priority Group 1
- Least Bell's Vireo (*Vireo bellii pusillus*)
- Crotch's bumble bee (*Bombus crotchii*)

Priority Group 2
- Southern California Rufous-crowned Sparrow (*Aimophila ruficeps canescens*)
- Southern Mule Deer (*Odocoileus hemionus fuliginata*)

Priority Group 3
- San Diego Black-tailed Jackrabbit (*Lepus californicus bennettii*)
- Grasshopper Sparrow (*Ammodramus savannarum*)

Priority Group 4
- California Horned Lark (*Eremophila alpestris actia*)
- Coronado Skink (*Plestiodon [=Eumeces] skiltonianus interparietalis*)

Common Wildlife
- Gabb's Checkerspot (*Chlosyne gabbii*)
- California Trapdoor Spider (*Bothriocyrtum californicum*)
- Domestic Horse (*Equus caballus*)

Access Control
- Installed T-post (barbless wire) Fence
- Repaired T-post (barbless wire) Fence
- Repaired Gate
- Installed Sign
- Repaired Sign
- Abandoned Exploratory Mine Pits

Unauthorized Routes
- Truck

Other
- AT&T Telecommunication Pole – Burned

0 Feet 700

RECON

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FIGURE 33

Noteworthy Plants, Wildlife, and Access Issues, Dulzura Parcels

Image Source: Nearmap (flown 2025)

Conveyed Land Under POM Management

Sensitive Wildlife

Priority Group 1

Coastal California Gnatcatcher
(*Polioptila californica californica*)

Priority Group 2

Southern California Rufous-crowned Sparrow
(*Aimophila ruficeps canescens*)

Priority Group 3

Grasshopper Sparrow
(*Ammodramus savannarum*)

Priority Group 4

White-tailed Kite
(*Elanus leucurus*)

Common Wildlife

Gabb's Checkerspot
(*Chlosyne gabbii*)

Sign

Replaced

0 Feet 500

RECON

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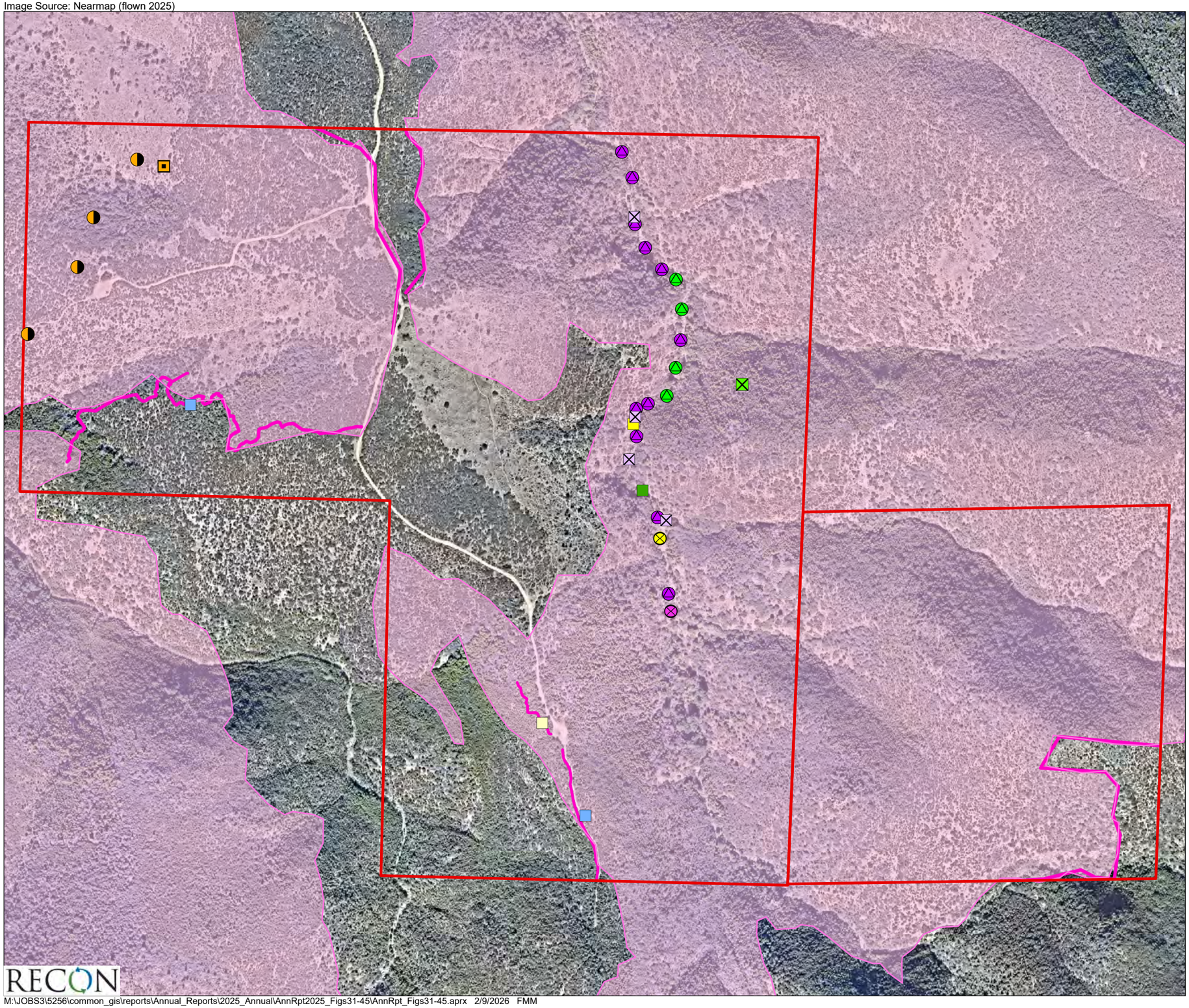
FIGURE 34

Noteworthy Wildlife and Access Issues,
Jamul Mountains Parcels

Image Source: Nearmap (flown 2025)



Conveyed Land Under POM Management
Border 2 Fire Area

Fire Assessment Polygons

Hand Line

Common Plants

Splendid Mariposa Lily
(*Calochortus splendens*)

Host Plants

San Diego Sedge
(*Carex spissa*)

Narrow-leaf Milkweed
(*Asclepias fascicularis*)

Invasive Plants

Pampas Grass
(*Cortaderia selloana*)

Mexican Fan Palm
(*Washingtonia robusta*)

Sensitive Wildlife

Priority Group 2

Southern California Rufous-crowned Sparrow
(*Aimophila ruficeps canescens*)

Monarch
(*Danaus plexippus*)

Priority Group 3

San Diego Black-tailed Jackrabbit
(*Lepus californicus bennettii*)

Common Wildlife

Greater Roadrunner
(*Geococcyx californianus*)

Blue-gray Gnatcatcher
(*Polioptila caerulea*)

Hedgerow Hairstreak
(*Satyrium saepium*)

Umber Skipper
(*Lon melane*)

0 Feet 350

FIGURE 35

Noteworthy Plants and Wildlife,
Little Cedar Canyon Parcels

RECON

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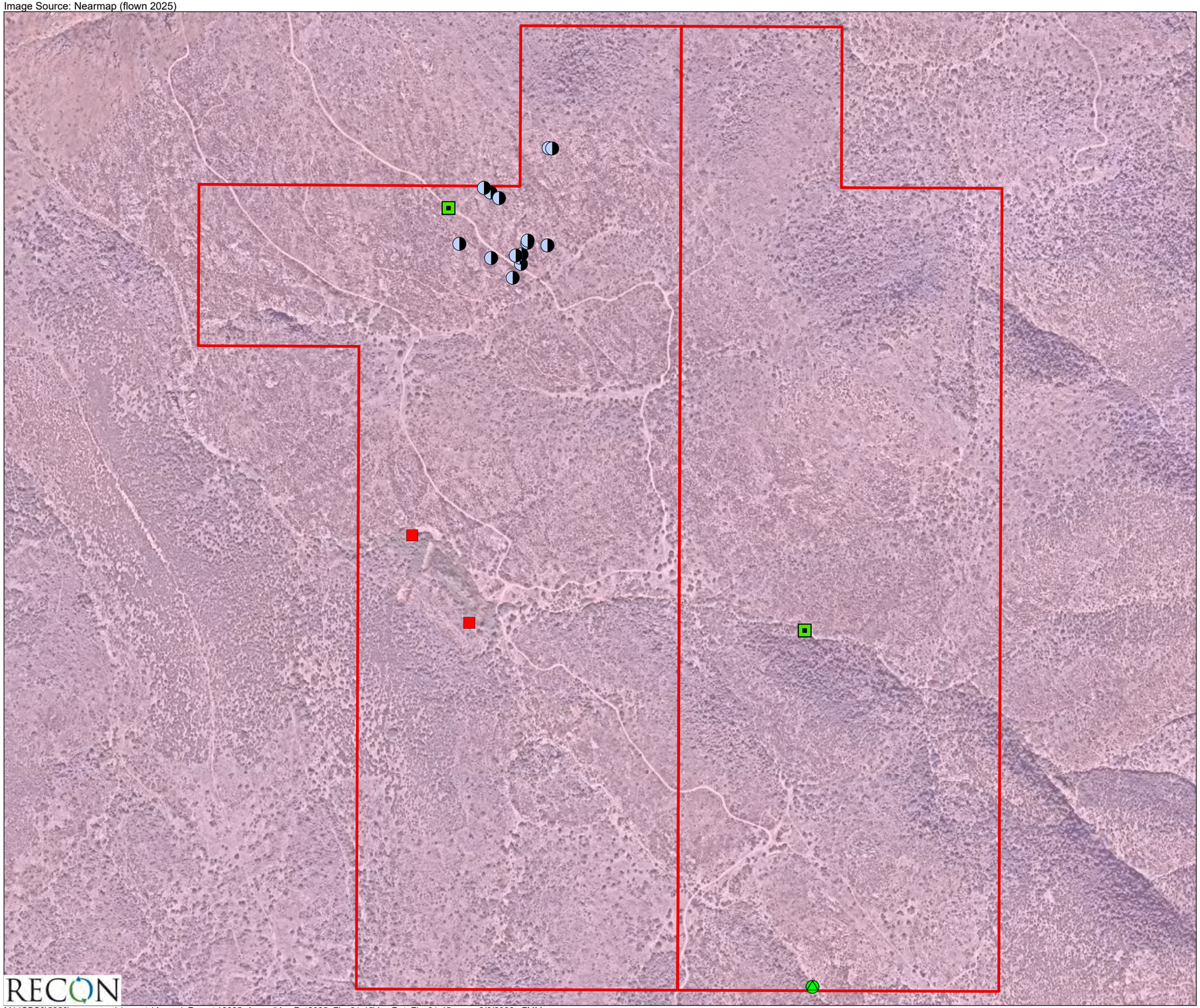
Image Source: Nearmap (flown 2025)



Conveyed Land Under POM Management
Border 2 Fire Area

Common Plants

Texas Filaree
(*Erodium texanum*)

Host Plants

San Diego Sedge
(*Carex spissa*)

Sensitive Wildlife

Priority Group 3

San Diegan Tiger Whiptail
(*Aspidoscelis tigris stejnegeri*)

Invasive Wildlife

American Bullfrog
(*Lithobates catesbeiana*)

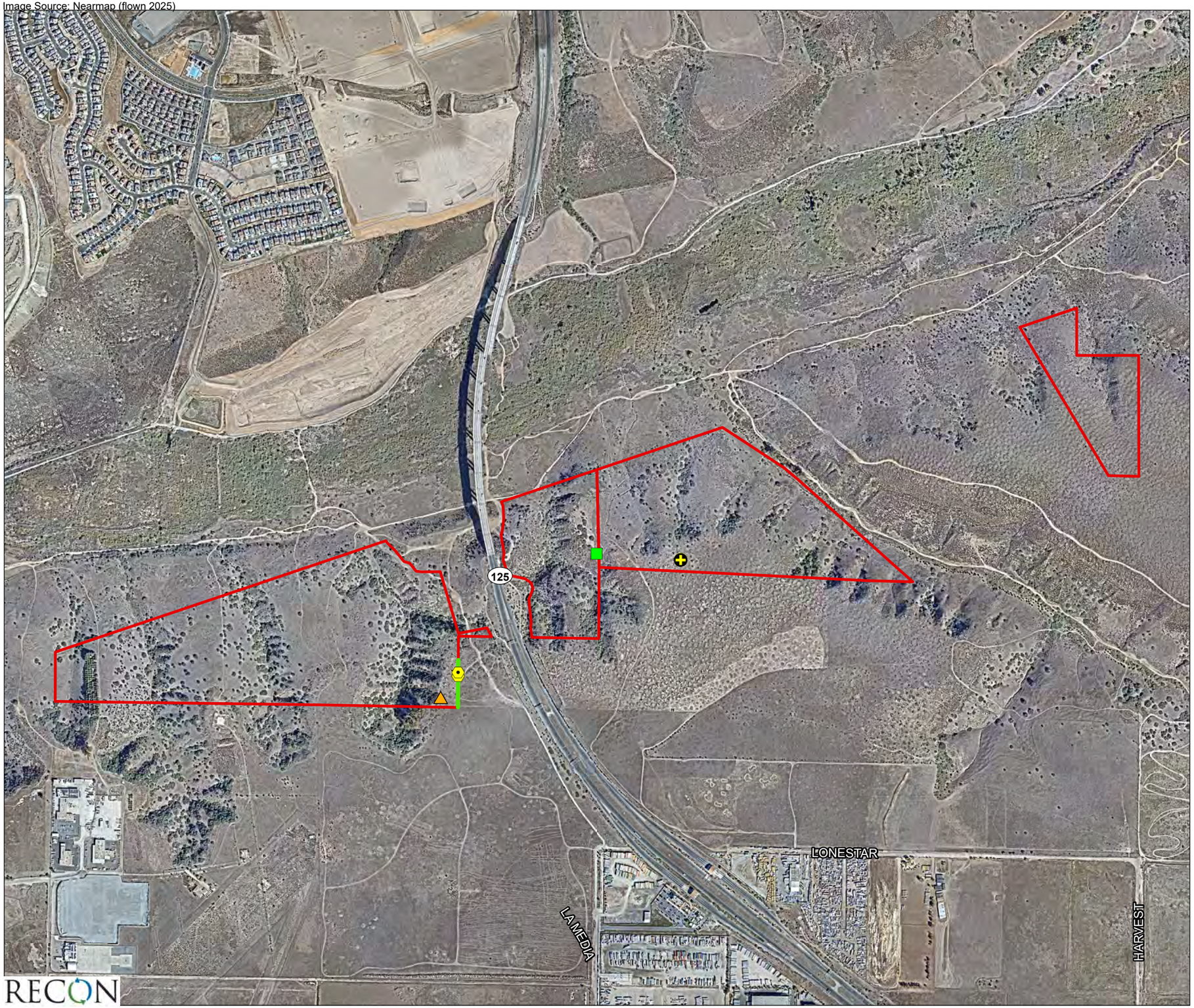
0 Feet 400

FIGURE 36

Noteworthy Plants and Wildlife,
McMillin Parcels

M:\JOBS3\5256\common_gis\reports\Annual_Reports\2025_Annual\AnnRpt2025_Figs31-45\AnnRpt_Figs31-45.aprx 2/6/2026 FMM

Image Source: Nearmap (flown 2025)



Conveyed Land Under POM Management

Nectar Plants

Common Goldfields
(*Lasthenia gracilis*)

Sensitive Wildlife

Priority Group 1

Coastal Cactus Wren
(*Campylorhynchus brunneicapillus sandiegensis*)

Access Control

Installed T-post (barbless wire) Fence

Installed Sign

Trash Location

0 Feet 900

FIGURE 37

Noteworthy Plants, Wildlife, and Access Issues,
Millenia and Johnson Canyon (East) Parcels

RECON

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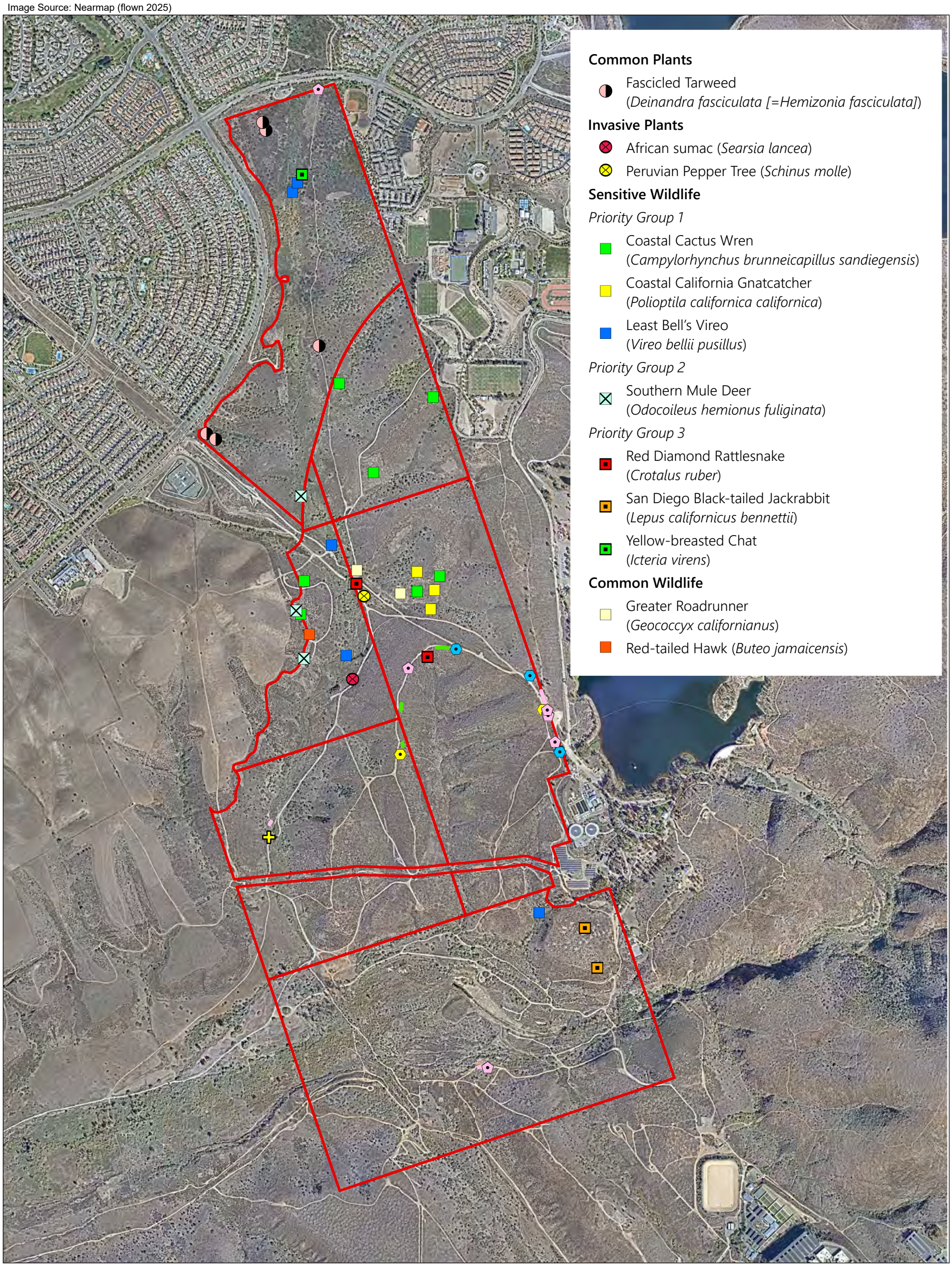
Image Source: Nearmap (flown 2025)



0 Feet 1,200

Conveyed Land Under POM Management
Repaired T-post (barbless wire) Fence
Installed T-post (barbless wire) Fence
Repaired T-post (barbless wire) Fence
Native Branch Vertical Mulch
Installed Sign
Repaired Sign

FIGURE 38

Noteworthy Plants, Wildlife, and Access Issues, Northern Salt Creek and Salt Creek Parcels

RECON

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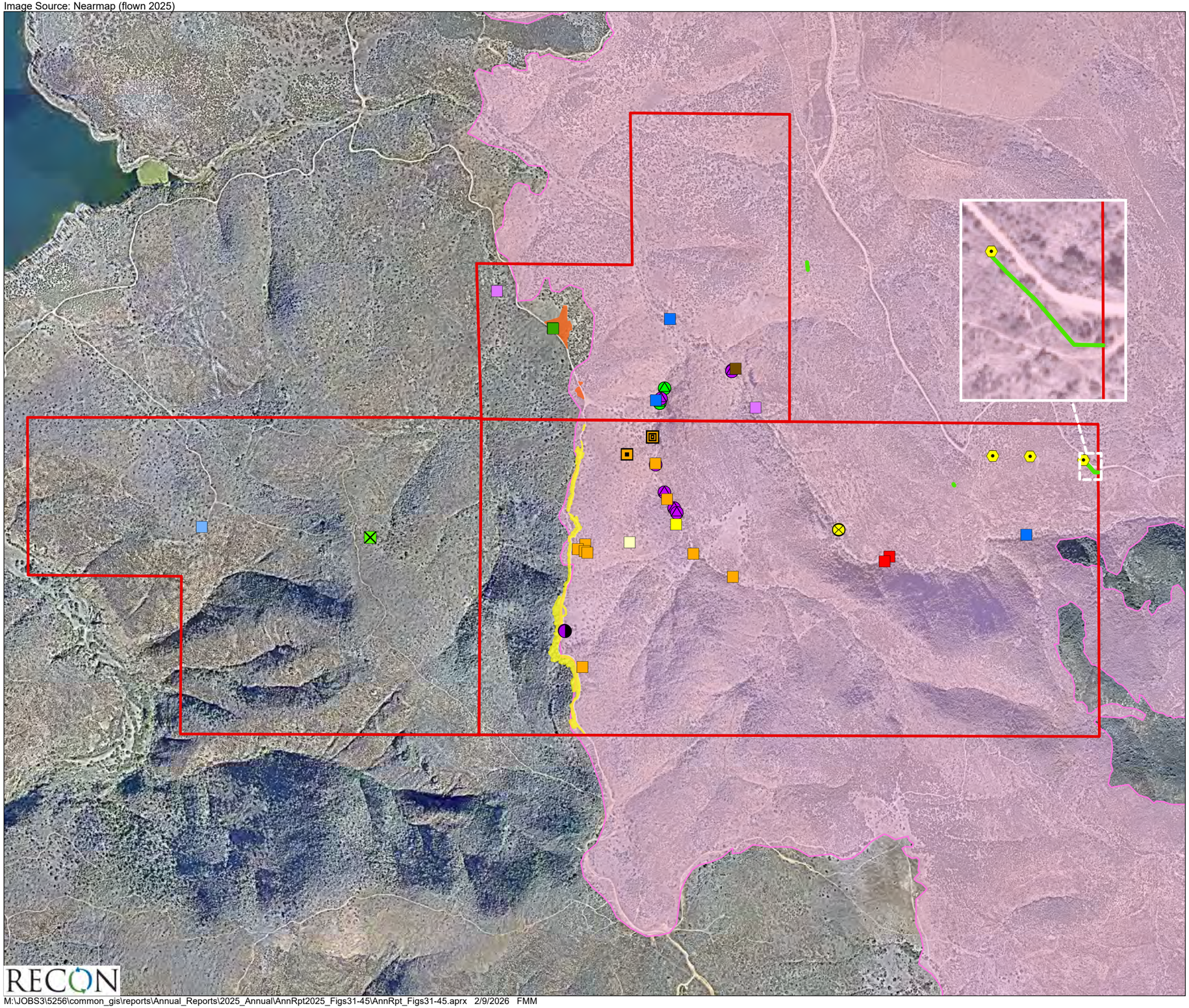
Image Source: Nearmap (flown 2025)



Conveyed Land Under POM Management
Border 2 Fire Area

Fire Assessment Polygons
Dozer Line
Fire Crew Vehicle Staging Area

Common Plants
Chocolate Lily (*Fritillaria biflora*)

Host Plants
San Diego Sedge (*Carex spissa*)
Narrow-leaf Milkweed (*Asclepias fascicularis*)

Invasive Plants
Stinkwort (*Dittrichia graveolens*)

Sensitive Wildlife
Priority Group 1
Least Bell's Vireo (*Vireo bellii pusillus*)
Crotch's Bumble Bee (*Bombus crotchii*)
Priority Group 2
Southern California Rufous-crowned Sparrow (*Aimophila ruficeps canescens*)
Priority Group 3
San Diego Black-tailed Jackrabbit (*Lepus californicus bennettii*)
San Diegan Tiger Whiptail (*Aspidoscelis tigris stejnegeri*)

Common Wildlife
Greater Roadrunner (*Geococcyx californianus*)
Blue-gray Gnatcatcher (*Polioptila caerulea*)
Gabb's Checkerspot (*Chlosyne gabbii*)
California Treefrog (*Pseudacris cadaverina*)
California Ground Squirrel (*Otopermophilus [=Spermophilus] beecheyi*)
Baja California Treefrog (*Pseudacris hypochondriaca*)

Invasive Wildlife
American Bullfrog (*Lithobates catesbeiana*)

Access Control
Installed T-post (barbless wire) Fence
Installed Sign

0 Feet 900

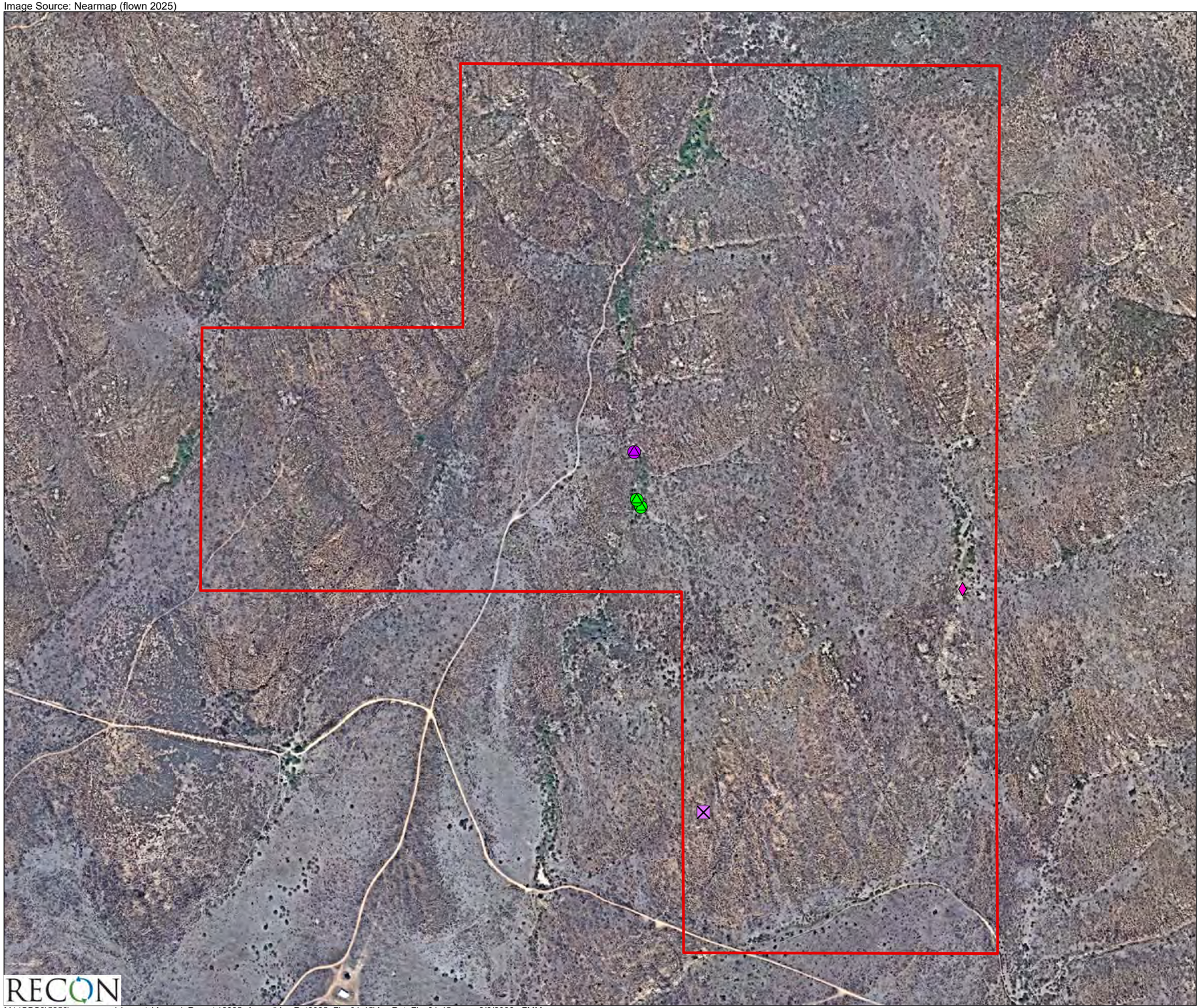
FIGURE 39

Noteworthy Plants, Wildlife, and Access Issues, Northern San Ysidro and San Ysidro Parcels

RECON

M:\JOBS3\5256\common_gis\reports\Annual_Reports\2025_Annual\AnnRpt2025_Figs31-45\AnnRpt_Figs31-45.aprx 2/9/2026 FMM

Image Source: Nearmap (flown 2025)



Conveyed Land Under POM Management

Host Plants

San Diego Sedge
(*Carex spissa*)

Narrow-leaf Milkweed
(*Asclepias fascicularis*)

Invasive Plant Treatment

Stinkwort
(*Dittrichia graveolens*)

Sensitive Wildlife

Priority Group 2

Blainville's Horned Lizard
(*Phrynosoma blainvillii*)

0 Feet 500

FIGURE 40

Noteworthy Plants and Wildlife,
Ridge Parcels

M:\JOBS3\5256\common_gis\reports\Annual_Reports\2025_Annual\AnnRpt2025_Figs31-45\AnnRpt_Figs31-45.aprx 2/6/2026 FMM

Image Source: Nearmap (flown 2025)

Conveyed Land Under POM Management

Sensitive Wildlife

Priority Group 1

- Coastal Cactus Wren (*Campylorhynchus brunneicapillus sandiegensis*)
- Coastal California Gnatcatcher (*Polioptila californica californica*)
- Least Bell's Vireo (*Vireo bellii pusillus*)

Common Wildlife

- Greater Roadrunner (*Geococcyx californianus*)

Access Control

- Installed T-post (barbless wire) Fence
- Installed Sign

0 Feet 350

RECON

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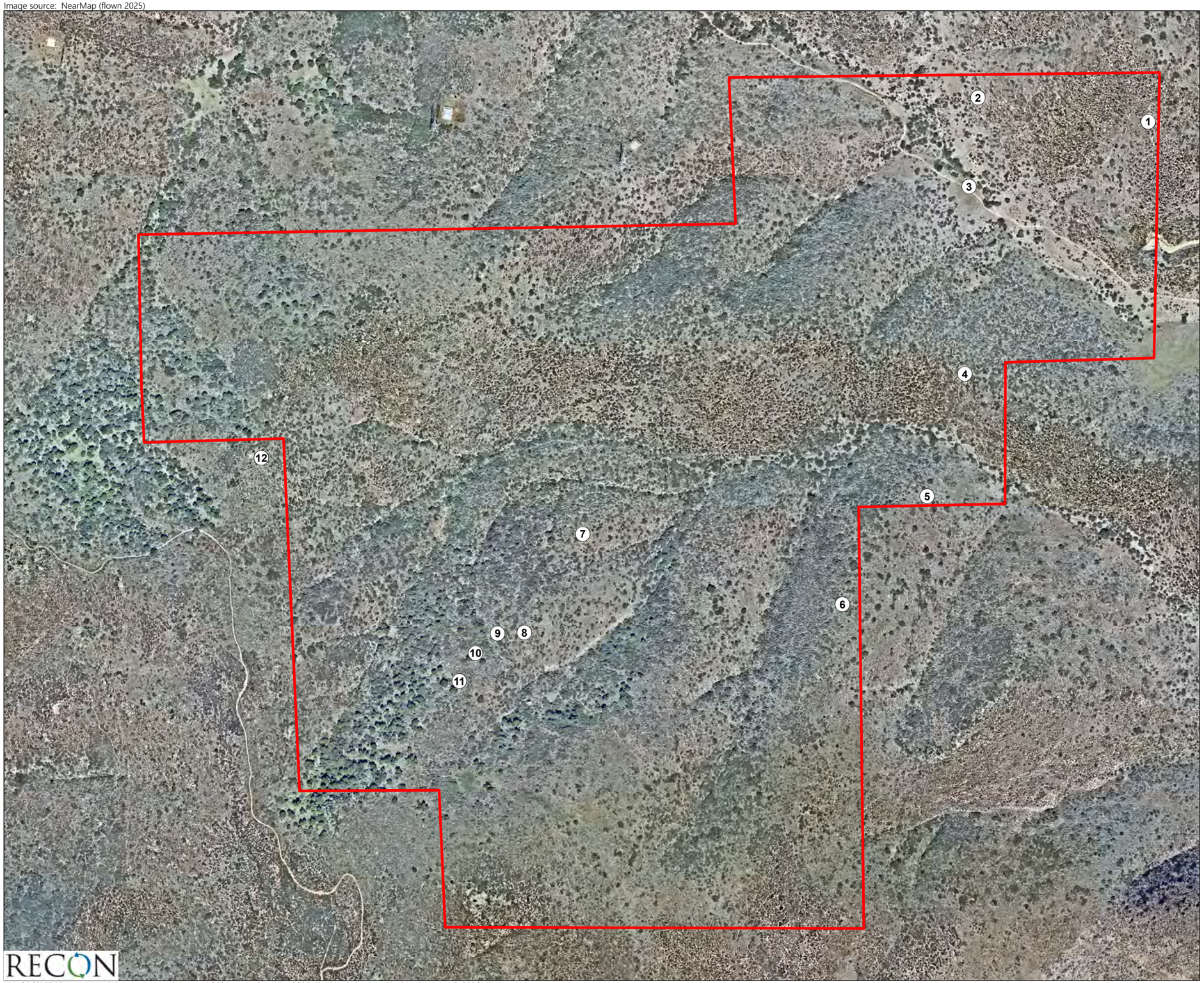
FIGURE 41

Noteworthy Plants, Wildlife, and Access Issues, Wolf Canyon and Western Wolf Canyon Parcels

Image source: NearMap (flown 2025)



Conveyed Land Under POM Management

Photographic Monitoring Location

0 Feet 450

FIGURE 42

Photographic Monitoring Locations, Rock Top Parcel

M:\JOBS3\5256\common_gis\reports\Annual_Reports\2025_Annual\AnnRpt2025_Figs31-45\AnnRpt_Figs31-45.aprx 1/7/2026 FMM

Image source: NearMap (flown 2025)

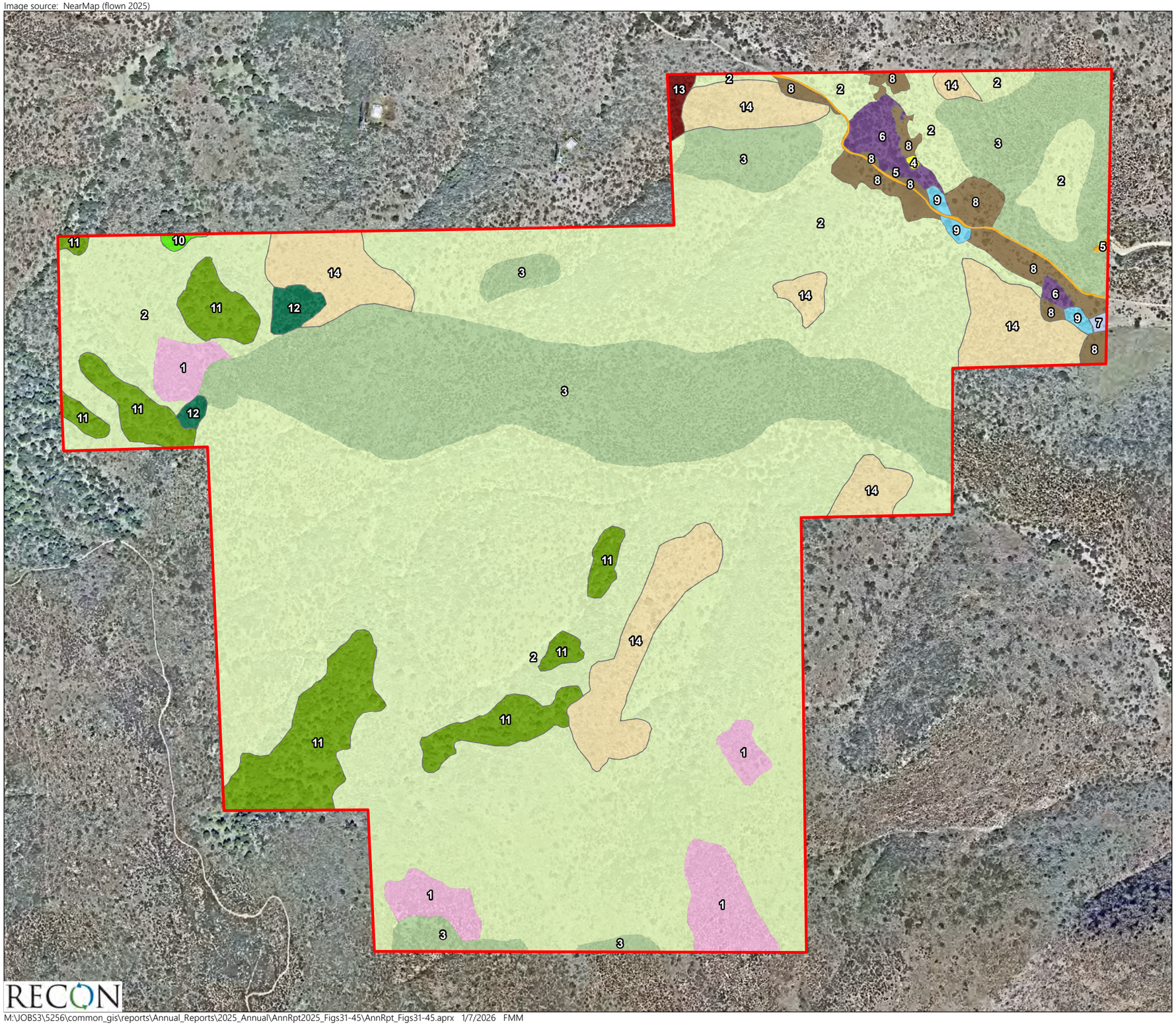


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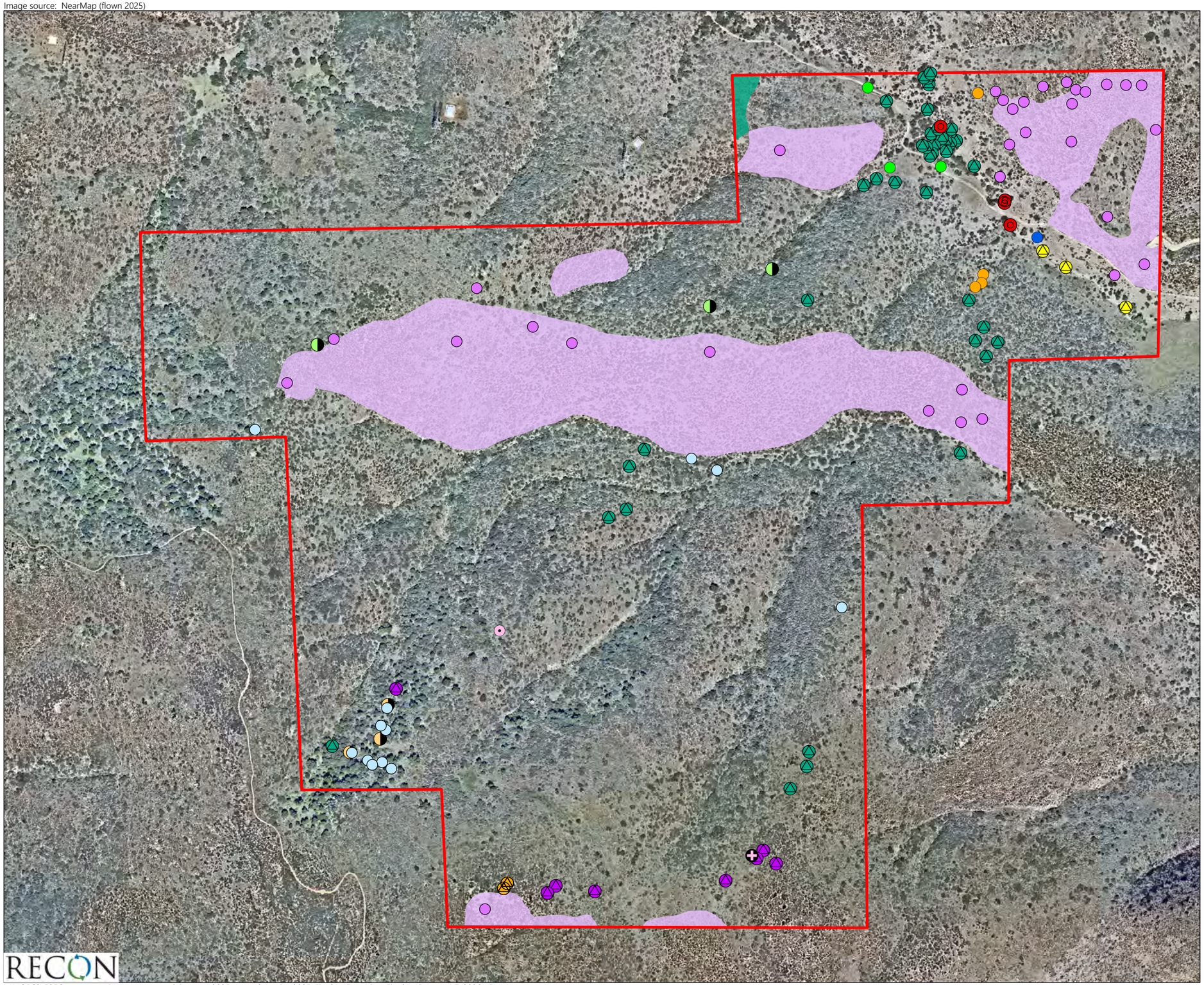
FIGURE 43
Vegetation Communities,
Rock Top Parcel

Image source: NearMap (flown 2025)



Conveyed Land Under POM Management

Sensitive Plants

Priority Group 3

- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*)
- Delicate Clarkia (*Clarkia delicata*)

Priority Group 4

- Ashy Spike-moss (*Selaginella cinerascens*)
- Southwestern Spiny Rush (*Juncus acutus* ssp. *leopoldii*)
- San Diego Needle Grass (*Stipa diegoensis*)
- San Diego Viguiera (*Bahiopsis laciniata*)

Host Plants

- Spiny Redberry (*Rhamnus crocea*)
- Purple Owl's-clover (*Castilleja exserta* ssp. *exserta*)
- Narrow-leaf Milkweed (*Asclepias fascicularis*)
- Thread-leaved Bird's-beak (*Cordylanthus rigidus* ssp. *setigerus*)

Nectar Plants

- Farinose Ground Pink (*Linanthus dianthiflorus*)

Common Plants

- Coast Live Oak (*Quercus agrifolia*)
- Long Spurred Plectritis (*Plectritis ciliosa*)

Invasive Plants

- Fennel (*Foeniculum vulgare*)

0 Feet 450

FIGURE 44
Sensitive and Noteworthy Plant Species Observed, Rock Top Parcel

RECON

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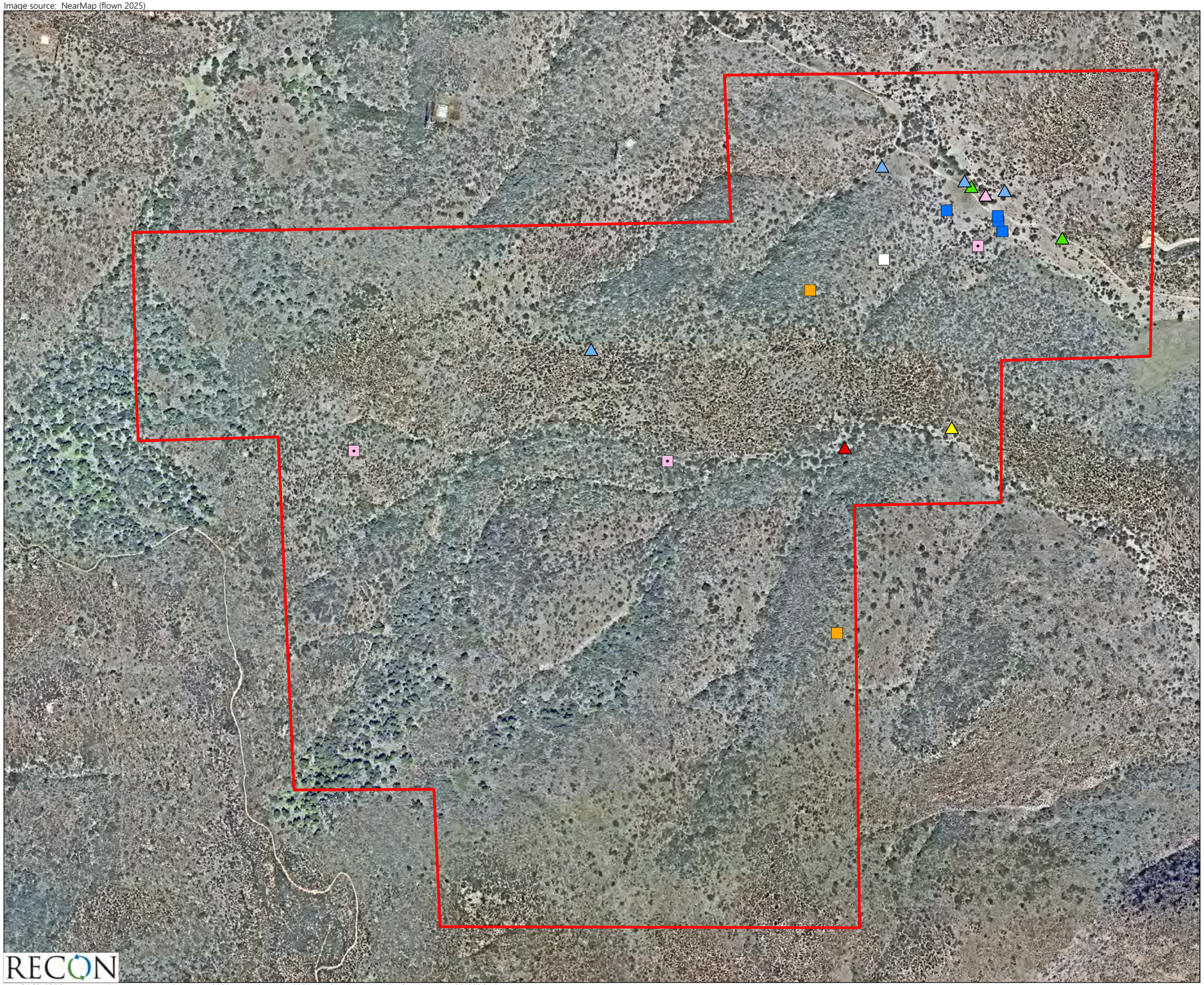
Image source: NearMap (flown 2025)



Conveyed Land Under POM Management

Sensitive Wildlife

Priority Group 1

Least Bell's Vireo
(*Vireo bellii pusillus*)

Priority Group 2

Southern California
Rufous-crowned Sparrow
(*Aimophila ruficeps canescens*)

Southern Mule Deer
(*Odocoileus hemionus fuliginata*)

Priority Group 3

San Diego Black-tailed Jackrabbit
(*Lepus californicus bennettii*)

Common Wildlife

Gabb's Checkerspot
(*Chlosyne gabbii*)

Blue-gray Gnatcatcher
(*Polioptila caerulea*)

Bobcat
(*Lynx rufus*)

California Ground Squirrel
(*Otopermophilus [=Spermophilus] beecheyi*)

Domestic Cattle
(*Bos taurus*)

0 Feet 450

FIGURE 45
Noteworthy Wildlife
Species Observed/Detected,
Rock Top Parcel

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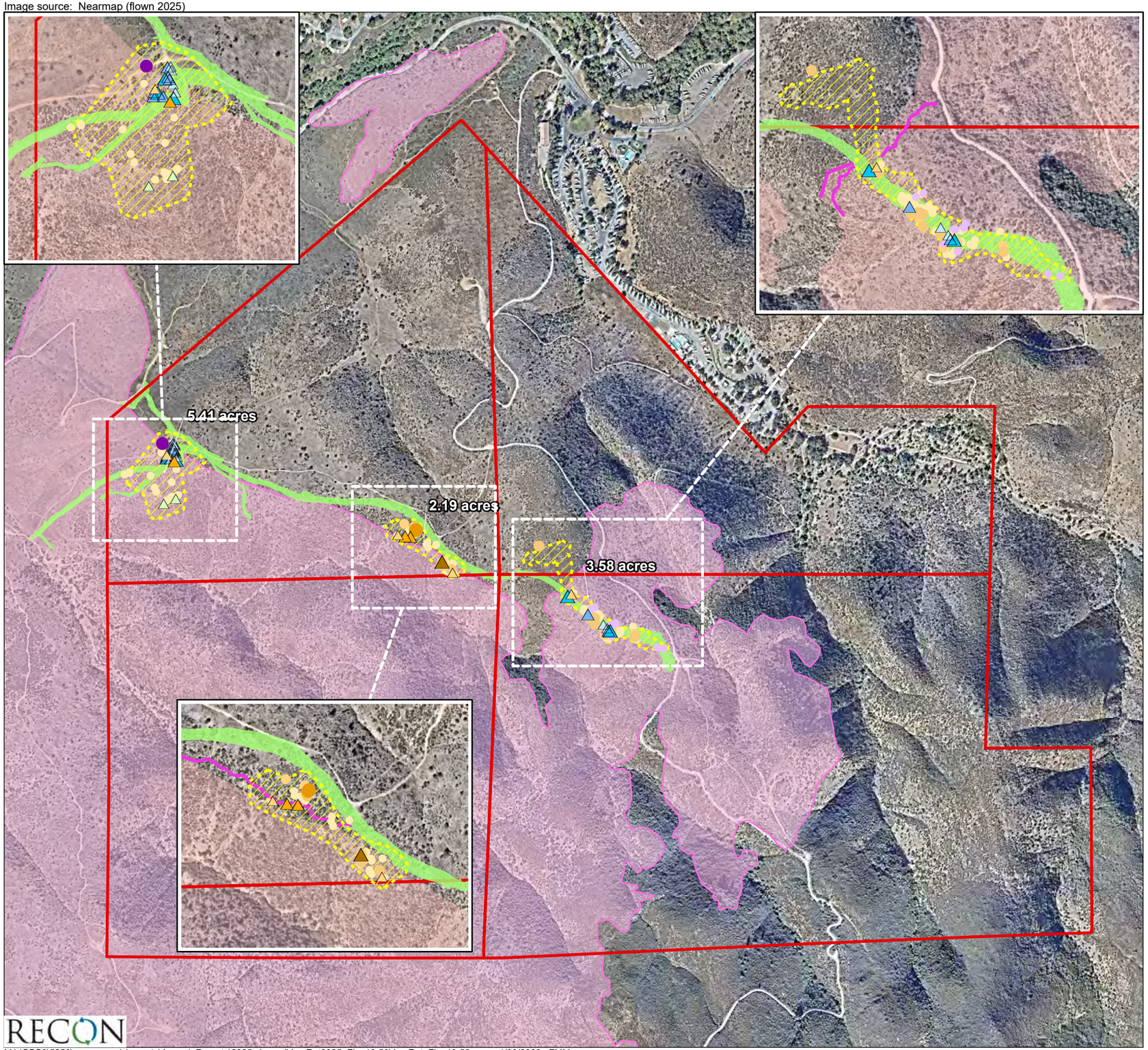
Image source: Nearmap (flown 2025)



Conveyed Land Under POM Management

Border 2 Fire Area

Adult QCB Survey Area 2025

Vegetation Scraped and Grubbed by Bulldozer During Border 2 Fire Suppression

Host Plants

Dot-seed Plantain (*Plantago erecta*) 6,489 Individuals

- 1-49
- 50-99
- 100-499
- 500-999
- 1,000-4,999

Purple Owl's-clover (*Castilleja exserta* ssp. *exserta*) 513 Individuals

- 1-49
- 500-999

Nectar Plants

Cryptantha (*Cryptantha* sp.)

- 1-49

Popcornflower (*Plagiobothrys* sp.) 410 individuals

- 1-49
- 50-99
- 100-499

Common Goldfields (*Lasthenia gracilis*) 565 Individuals

- 1-49
- 50-99
- 100-499

0 Feet 800

RECON

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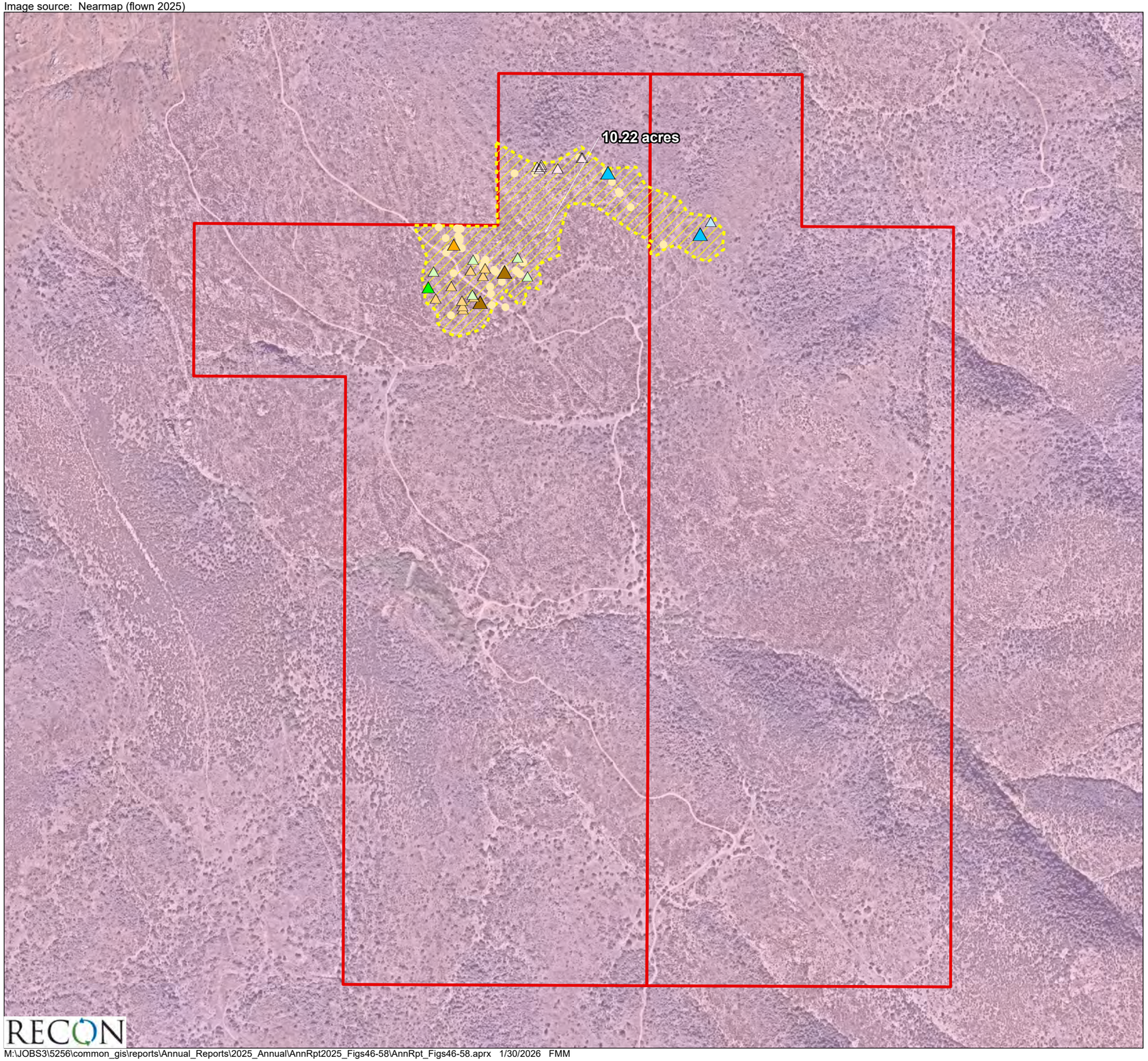
FIGURE 46
QCB Host and Nectar Plants,
Dulzura Parcels

Image source: Nearmap (flown 2025)



Conveyed Land Under POM Management

Border 2 Fire Area

Adult QCB Survey Area 2025

Host Plants

Dot-seed Plantain (*Plantago erecta*) 445 Individuals

- 1-49

Nectar Plants

Cryptantha (*Cryptantha* sp.) 140 individuals

- 1-49
- 50-199

Popcornflower (*Plagiobothrys* sp.) 440 individuals

- 1-49
- 50-99
- 100-499

Common Goldfields (*Lasthenia gracilis*) 100 Individuals

- 1-49
- 100-499

Farinose Ground Pink (*Linanthus dianthiflorus*) 56 Individuals

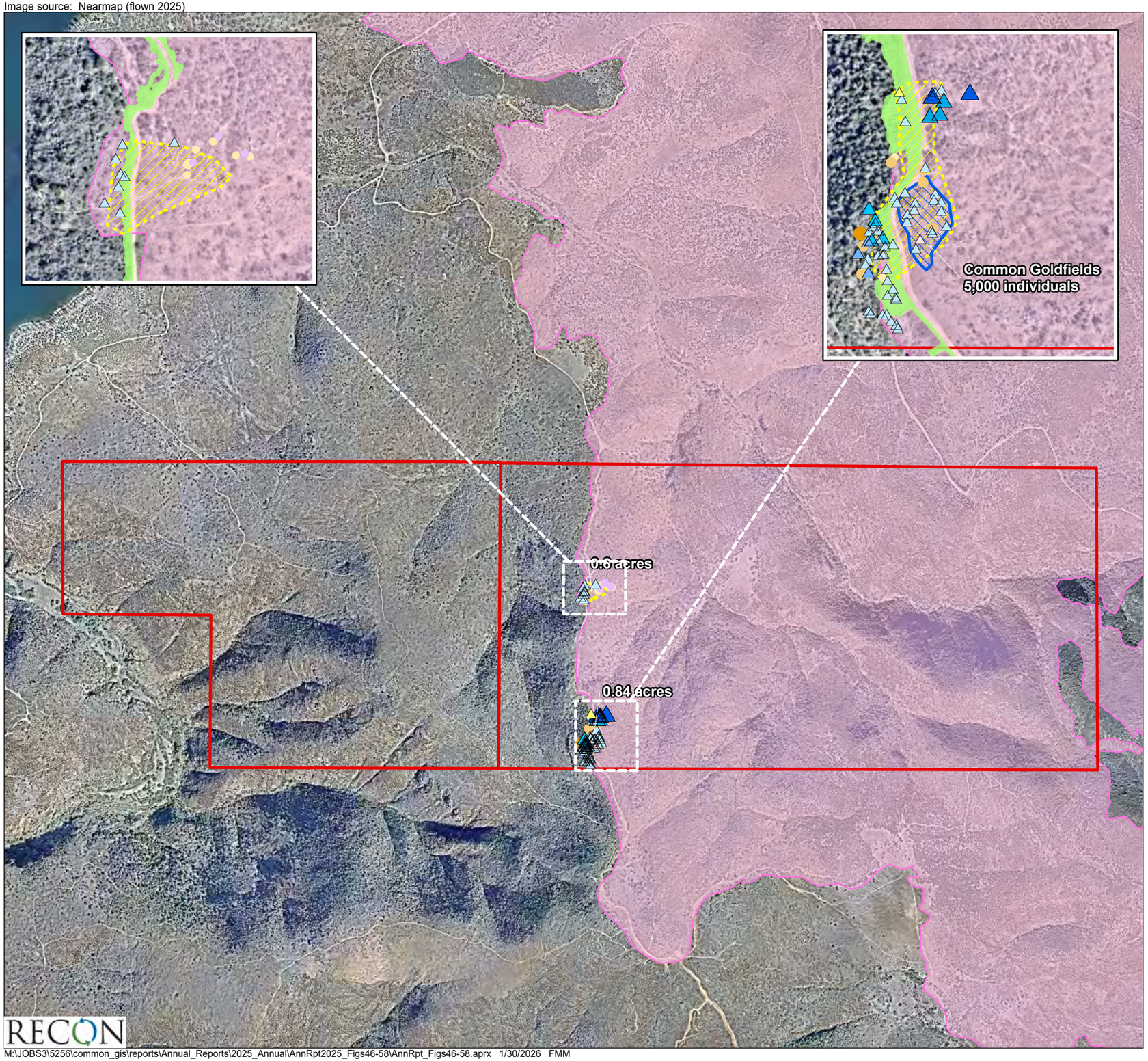
- 1-49

0 Feet 450

FIGURE 47
QCB Host and Nectar Plants,
McMillin Parcels

M:\JOBS3\5256\common_gis\reports\Annual_Reports\2025_Annual\AnnRpt2025_Figs46-58\AnnRpt_Figs46-58.aprx 1/30/2026 FMM

Image source: Nearmap (flown 2025)



Conveyed Land Under POM Management

Border 2 Fire Area

Adult QCB Survey Area 2025

Vegetation Scraped and Grubbed by Bulldozer During Border 2 Fire Suppression

Host Plants

Dot-seed Plantain (*Plantago erecta*) 3,362 Individuals

- 1-49
- 100-499
- 1,000-4,999

Purple Owl's-clover (*Castilleja exserta* ssp. *exserta*) 22 Individuals

- 1-49

Nectar Plants

Early Onion (*Allium praecox*) 1 individual

- 1-49

Farinose Ground Pink (*Linanthus dianthiflorus*) 17 Individuals

- 1-49

Common Goldfields (*Lasthenia gracilis*) 7,814 Individuals

- 1-49
- 50-99
- 100-499
- 500-999
- 1,000-5,000
- 5,000

0 Feet 1,000

RECON

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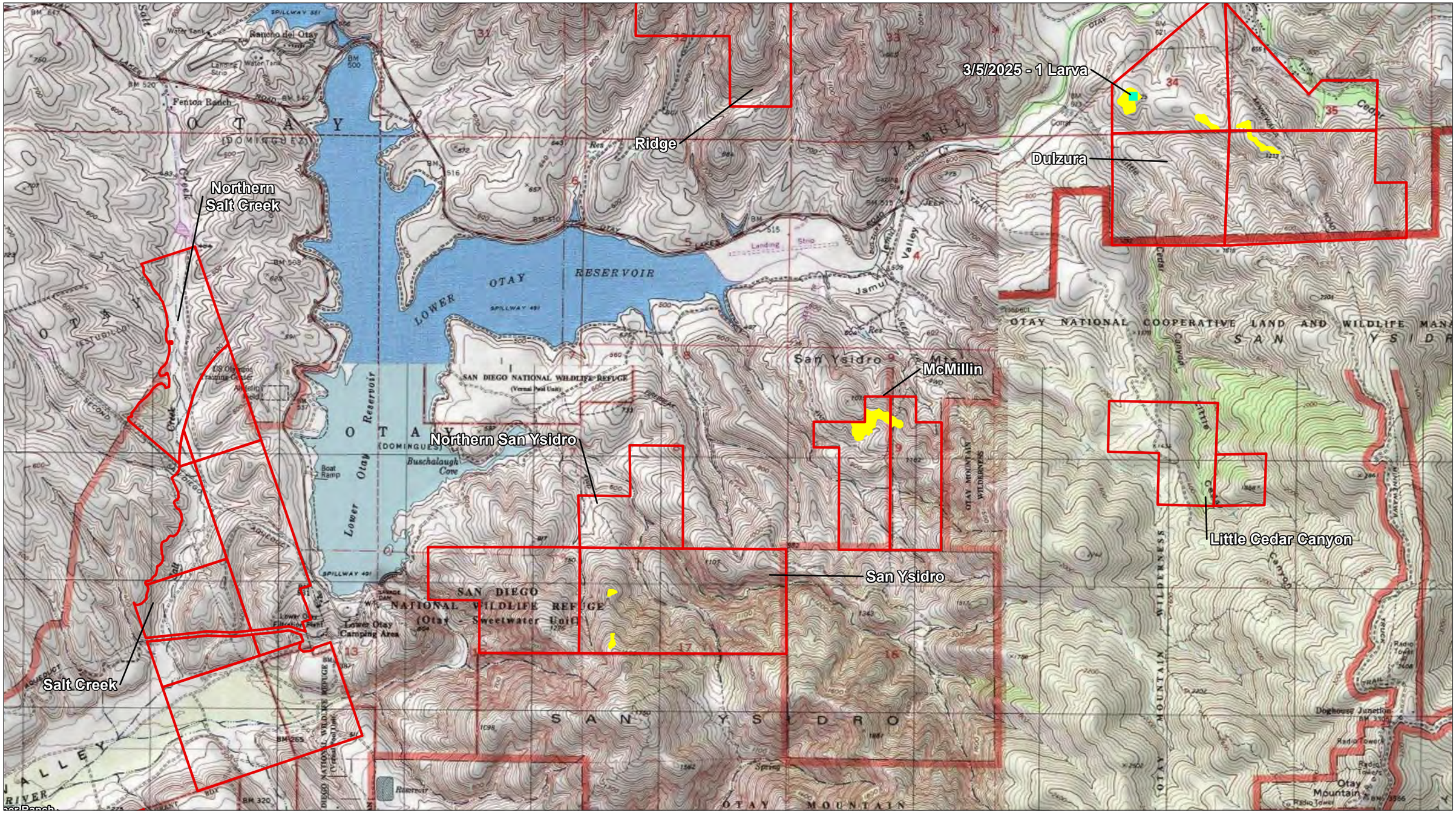
FIGURE 48
QCB Host and Nectar Plants,
San Ysidro Parcels

Map Source: USGS 7.5 minute topographic map series, DULZURA, JAMUL MOUNTAINS, OTAY MOUNTAINS & OTAY MESA quadrangles, OTAY (ESTUDILLO) Landgrant, T17S R01E, T18S R01E



0 Feet 2,000

Conveyed Land Under POM Management

Adult QCB Survey Area 2025

Quino Checkerspot (*Euphydryas editha quino*)

Larva

FIGURE 49

2025 QCB Incidental Observation Location on USGS 7.5′ Topographic Map: Otay Ranch Preserve

RECON

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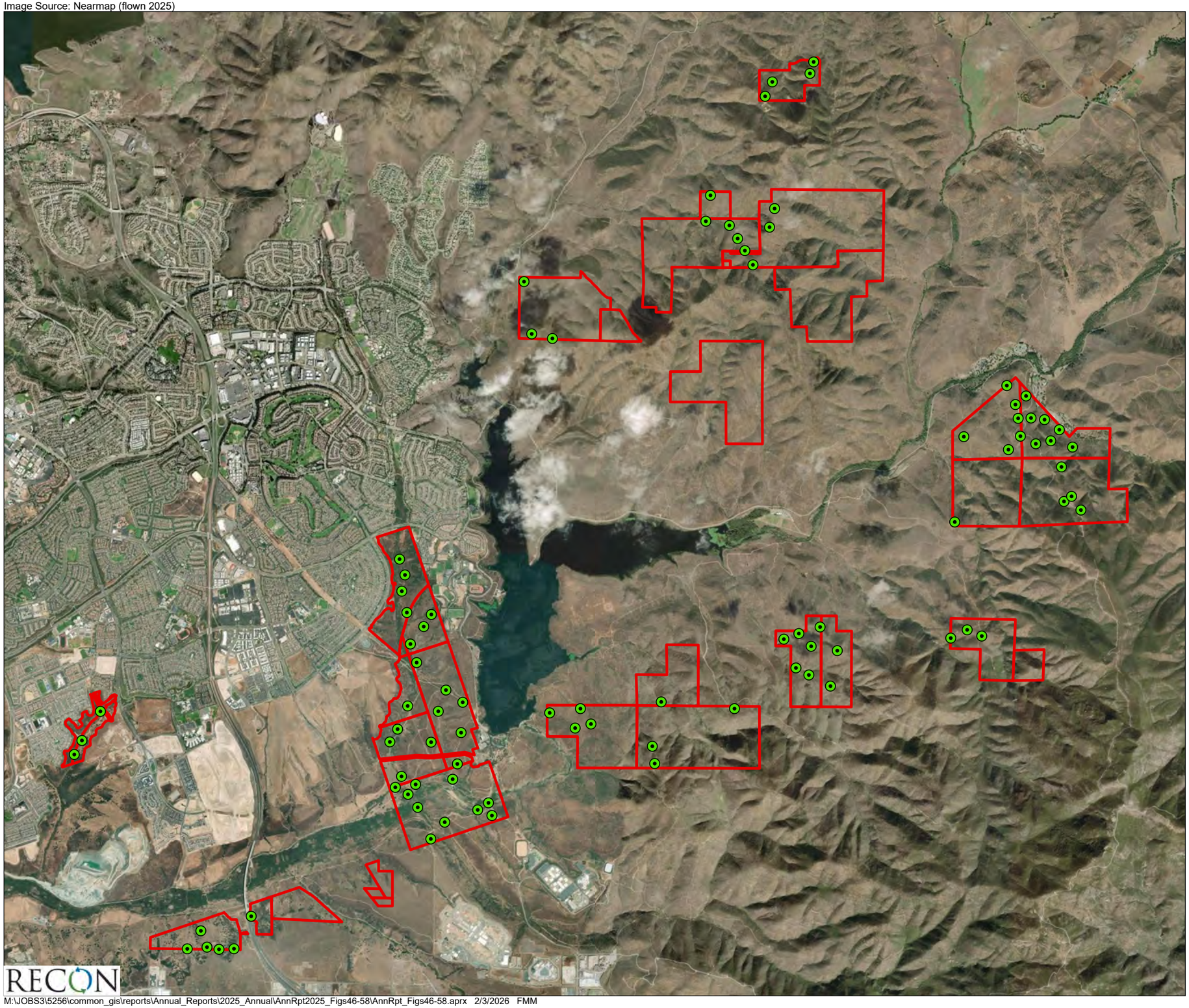
Image Source: Nearmap (flown 2025)



Conveyed Land Under POM Management

Geocache removed from the AllTrails and Geocaching HQ databases

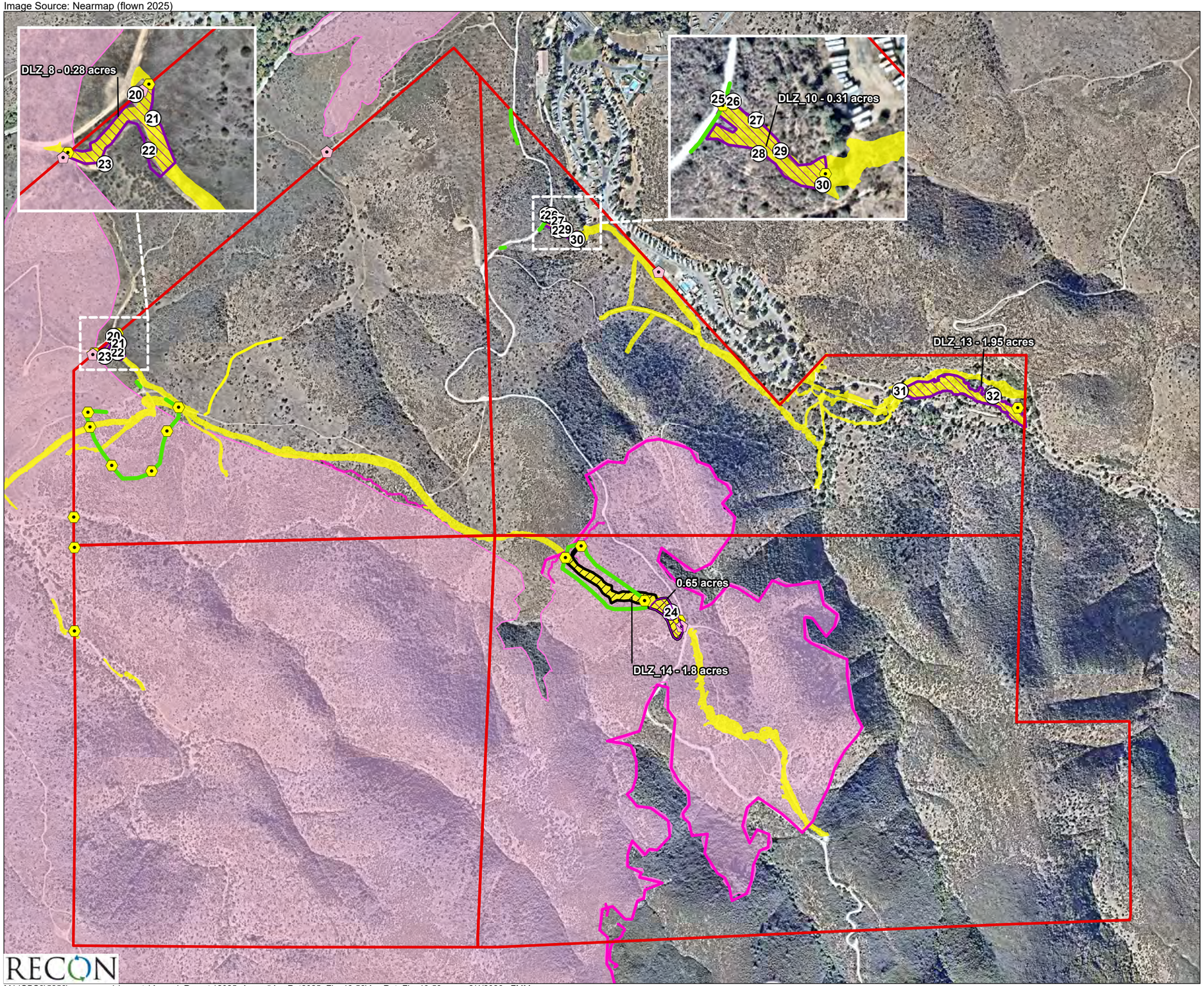
0 Miles 1

FIGURE 50

Removed Geocache Location Data, Otay Ranch Preserve

M:\JOBS3\5256\common_gis\reports\Annual_Reports\2025_Annual\AnnRpt2025_Figs46-58\AnnRpt_Figs46-58.aprx 2/3/2026 FMM

Image Source: Nearmap (flown 2025)



Conveyed Land Under POM Management

Border 2 Fire Area

Post-fire Vegetation Treatment Location

Post-fire Vegetation Treatment Location (Planted in 2025)

Post-fire Recovery Access and Erosion Control Photo Monitoring Locations

Fire Assessment Polygons

Dozer Line

Hand Line

Access Control

Installed T-post (barbless wire) Fence

Repaired T-post (barbless wire) Fence

Installed Sign

0 Feet 700

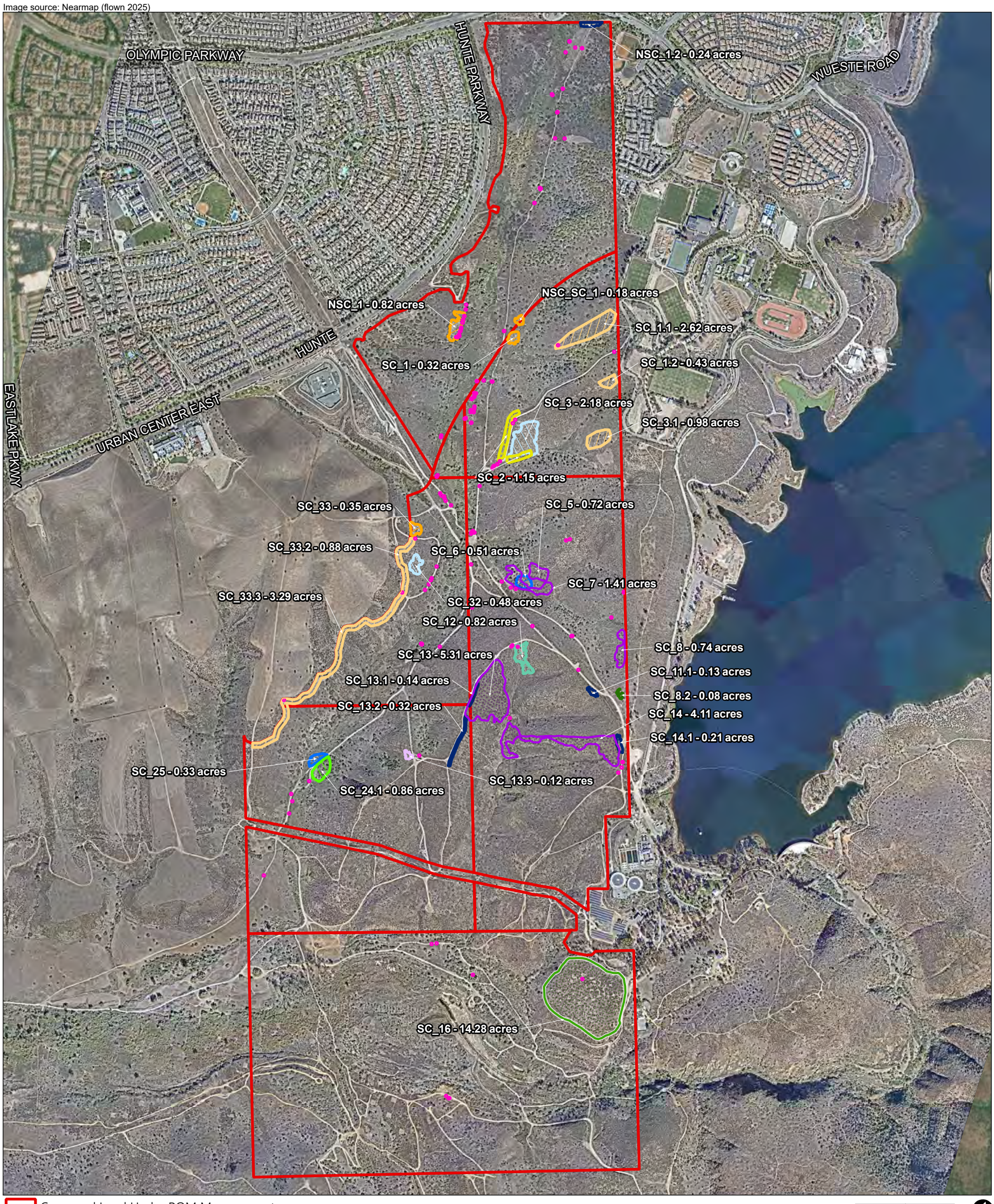
FIGURE 51

Post-fire Habitat Restoration/ Access Control Locations, Dulzura Parcels

RECON

M:\JOBS3\5256\common_gis\reports\Annual_Reports\2025_Annual\AnnRpt2025_Figs46-58\AnnRpt_Figs46-58.aprx 2/4/2026 FMM

Image source: Nearmap (flown 2025)



Conveyed Land Under POM Management
Proposed Shrub Thinning and Coast Cholla Planting
Cactus Wren Habitat Restoration Area (City of Chula Vista EMP Grant 5001970; ended summer 2015)
Cactus Wren Habitat Restoration Area (City of Chula Vista EMP Grant 5004943; ended August 2018)
Cactus Wren Habitat Restoration Area (County of San Diego Parks and Recreation Department EMP Grant 5001133; ended summer 2014)
Cactus Wren Habitat – Shrubs Thinned in January/February 2017 (Community Facility District 97-2 funded CACW habitat restoration)
Cactus Wren Habitat – Shrubs Thinned in January/February 2021 (Community Facility District 97-2 funded CACW habitat restoration)
Cactus Wren Habitat – Non-native Plant Treatment Area
Cactus Wren Habitat Restoration/Erosion Control/Unauthorized Route Closure Area (CFD 97-2 funded : planted in 2022)
Cactus Wren Habitat Restoration/Erosion Control/Unauthorized Route Closure Area (CFD 97-2 funded : planted in 2023)
Cactus Wren Habitat Restoration/Erosion Control/Unauthorized Route Closure Area (CFD 97-2 funded : planted in 2025)
Otay River Valley and Salt Creek Cactus Wren 3 Project (City of Chula Vista EMP Grant 5004731; ended fall 2018)
QCB Habitat - Non-native Plant Treatment Area
Stinkwort (*Dittrichia graveolens*) Treatment Location

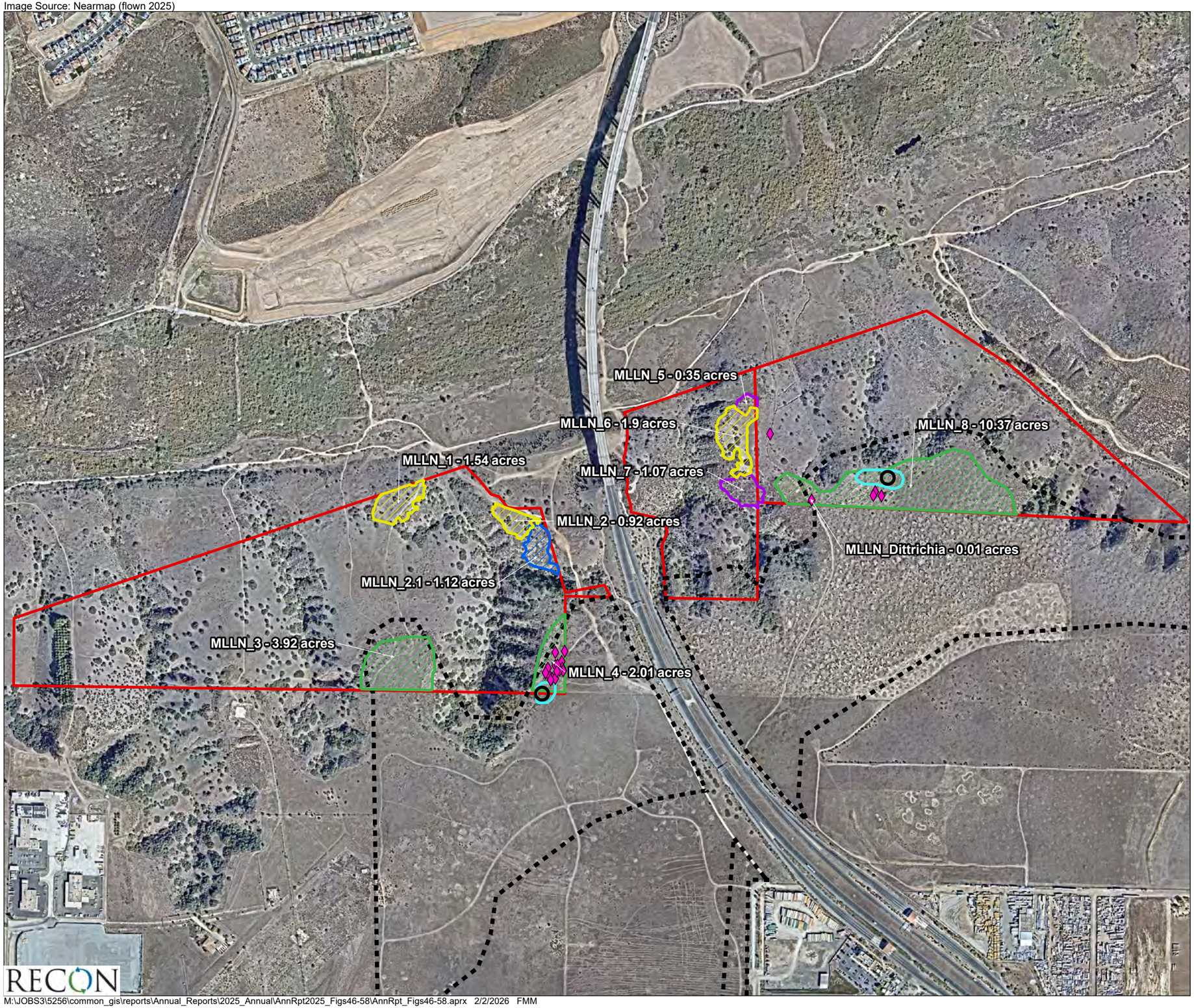
0 Feet 1,150

FIGURE 52
2025 Vegetation Removal and Treatment Areas,
Salt Creek and Northern Salt Creek Parcels

RECON

M:\JOBS3\5256\common_gis\reports\Annual_Reports\2025_Annual\AnnRpt2025_Figs46-58\AnnRpt_Figs46-58.aprx 2/2/2026 FMM

Image Source: Nearmap (flown 2025)



Conveyed Land Under POM Management

Non-native Plant Treatment Area

Otay Tarplant Habitat – Non-native Plant Treatment Area

Otay River Valley and Salt Creek Cactus Wren 3-year Project (City of Chula Vista EMP Grant 5004731; ended fall 2018)

Cactus Wren Habitat – Cholla Cactus Cuttings Planted in 2024 (Community Facility District 97-2 Funded CACW Habitat Restoration)

Stinkwort (*Dittrichia graveolens*) Treatment Location

Vernal Pool Preservation Area (2018)*

Vernal Pool Complexes (1995)**

Individual Vernal Pool with San Diego Button-celery (1995)**

*Source: Otay Ranch Phase 2 Resource Mangement Plan Update (RECON 2018)

**Source: Vernal Pool Management Plan for Otay Ranch (Dudek & Associates 1995)

0 Feet 750

FIGURE 53

2025 Vegetation Removal and Treatment Areas, Millenia Parcels

M:\JOBS3\5256\common_gis\reports\Annual_Reports\2025_Annual\AnnRpt2025_Figs46-58\AnnRpt_Figs46-58.aprx 2/2/2026 FMM

Image Source: Nearmap (flown 2025)

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Conveyed Land Under POM Management

Cactus Wren Habitat – Shrubs Thinned in December 2020/January 2021 (Community Facility District 97-2 funded CACW habitat restoration)

Otay Tarplant Habitat – Non-native Plant Treatment Area

Non-native Removal Area

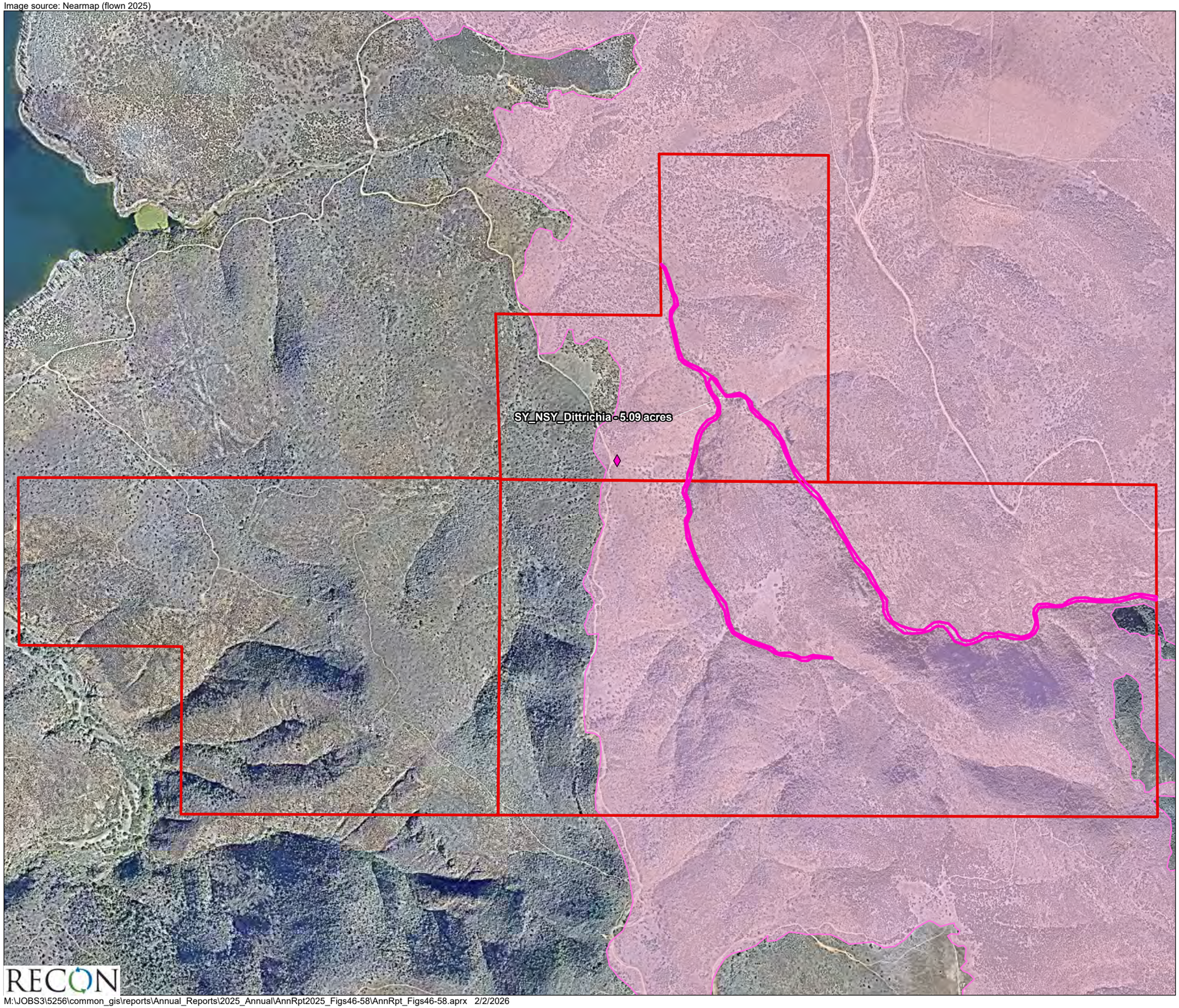
Stinkwort (*Dittrichia graveolens*) Treatment Location

0 Feet 350

FIGURE 54

2025 Vegetation Removal and Treatment Areas, Western Wolf Canyon and Wolf Canyon Parcels

Image source: Nearmap (flown 2025)



Conveyed Land Under POM Management

Border 2 Fire Area

Stinkwort (*Dittrichia graveolens*) Treatment Location

0 Feet 800

RECON

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FIGURE 55

2025 Vegetation Removal and Treatment Areas, San Ysidro and Northern San Ysidro Parcels

Image source: Nearmap (flown 2025)

Conveyed Land Under POM Management

Border 2 Fire Area

Stinkwort (*Dittrichia graveolens*) Treatment Location

False Hawkbit (*Urospermum picroides*) Treatment Location

0 Feet 1,000

FIGURE 56

2025 Vegetation Removal and Treatment Areas, McMillin and Little Cedar Canyon Parcels

RECON

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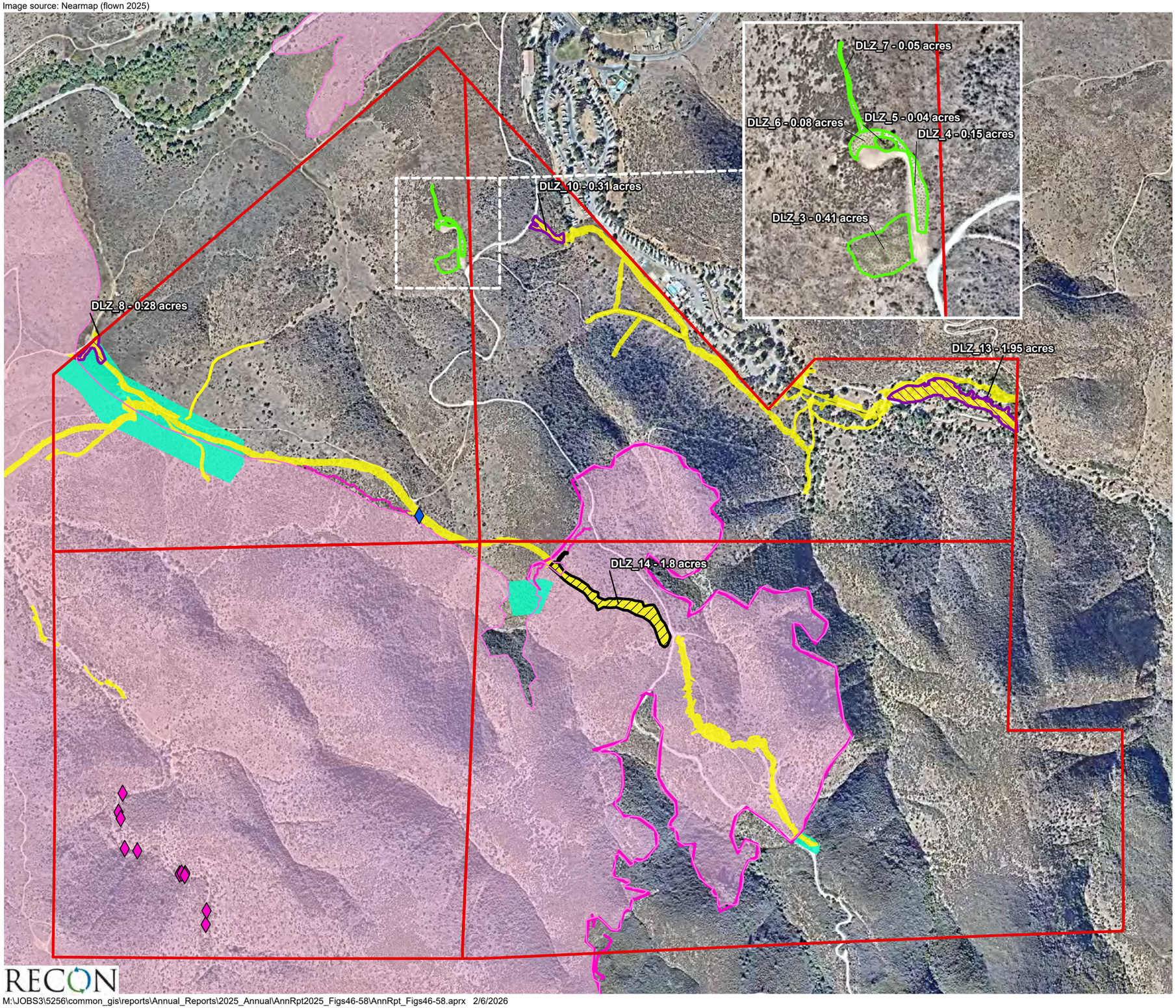
Image source: Nearmap (flown 2025)



Conveyed Land Under POM Management

Border 2 Fire Area

Fire Assessment Polygons

Dozer Line

Hand Line

Phos-check

Post-fire Vegetation Treatment Location

Post-fire Vegetation Treatment Location

Post-fire Vegetation Treatment Location (Planted in 2025)

Weed Treatment Area

Namaqualand Daisy (*Dimorphotheca sinuata*) Treatment Area

Stinkwort (*Dittrichia graveolens*) Treatment Area

0 Feet 700

RECON

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FIGURE 57

2025 Vegetation Removal and Treatment Areas, Dulzura Parcels

ATTACHMENT 2

General Photographs 1–35

PHOTOGRAPH 1
Scattering Common Goldfield Seeds, Salt Creek Parcels,
March 10, 2025

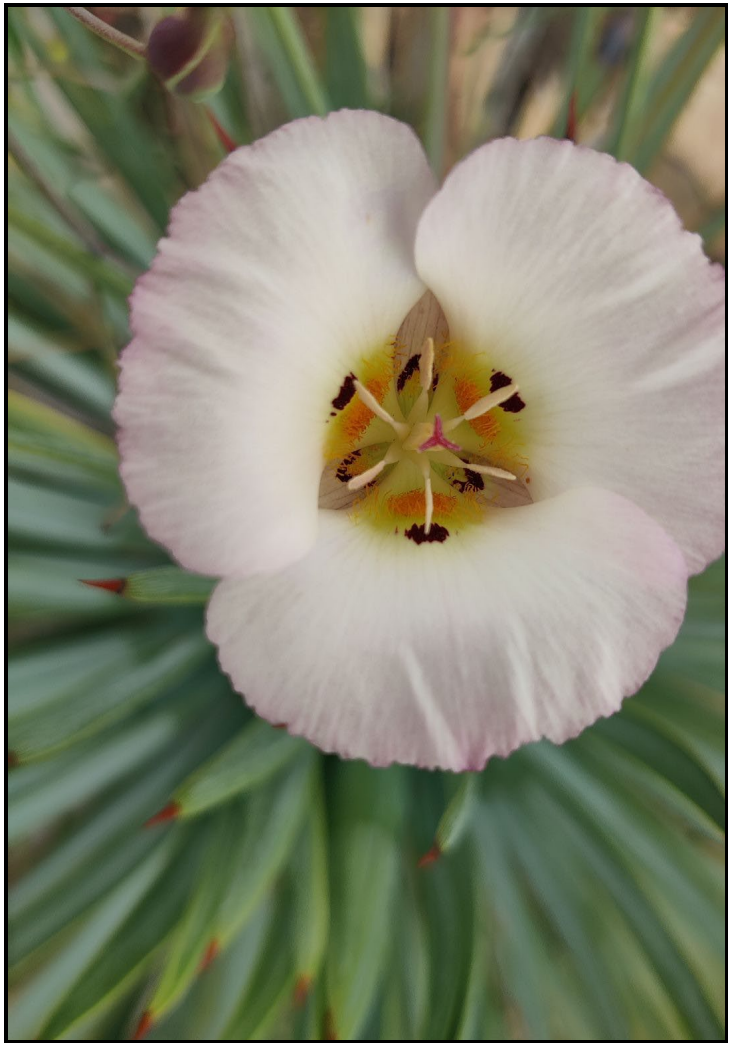
PHOTOGRAPH 2
Tree Health Survey, Photo Monitoring 1a, Salt Creek Parcels,
May 28, 2021

PHOTOGRAPH 3
Tree Health Survey, Photo Monitoring 1a, Salt Creek Parcels,
May 14, 2025

PHOTOGRAPH 4
Evidence of Lesion on a Lemonade Berry, Wolf Canyon,
May 22, 2025

PHOTOGRAPH 5
Variegated Dudleya IMG Survey, Salt Creek,
April 16, 2025

PHOTOGRAPH 6
Orcutt's Brodiaea IMG Survey, Little Cedar Canyon,
June 27, 2025



PHOTOGRAPH 7
Dunn's Mariposa Lily, Dulzura Parcels,
May 2, 2025

PHOTOGRAPH 8
Golden-Ray Pentachaeta, Dulzura Parcels,
April 24, 2025

PHOTOGRAPH 9
AudioMoth Acoustic Data Logger, Jamul Mountains,
March 13, 2025

PHOTOGRAPH 10
Wildlife Camera, McMillin,
April 18, 2025

PHOTOGRAPH 11
Golden Eagle, McMillin,
June 15, 2025

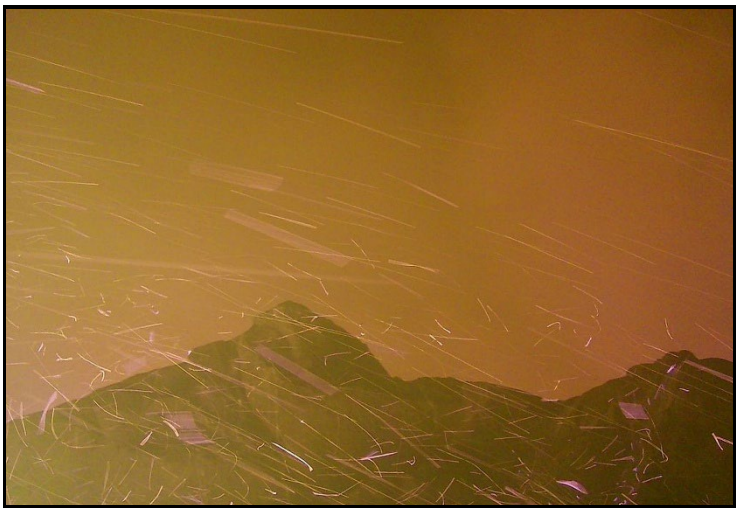
PHOTOGRAPH 12
Golden Eagle, McMillin,
October 21, 2025

PHOTOGRAPH 13
03MCM, Border 2 Fire, 01:14 a.m. McMillin,
January 24, 2025

PHOTOGRAPH 14
04MCM, Border 2 Fire, 01:14 a.m. McMillin,
January 24, 2025

PHOTOGRAPH 15
Same View, 04MCM, Border 2 Fire, 08:16 a.m. McMillin,
January 24, 2025

PHOTOGRAPH 16
05MCM, Border 2 Fire,
01:27 a.m. McMillin,
January 24, 2025



PHOTOGRAPH 17
Same View, 05MCM,
Border 2 Fire,
05:55 a.m., Great Horned
Owl, McMillin,
January 24, 2025

PHOTOGRAPH 18
Same View, 05MCM,
Border 2 Fire,
07:22 a.m., Common Raven,
McMillin,
January 24, 2025

PHOTOGRAPH 19
07MCM, Border 2 Fire, 01:25 a.m. McMillin,
January 24, 2025

PHOTOGRAPH 20
01DLZ, Mountain Lion, Dulzura Parcels,
March 14, 2025

PHOTOGRAPH 21
01DLZ, Southern California Ringtail, Dulzura Parcels,
October 7, 2025

PHOTOGRAPH 22
02DLZ, Southern California Ringtail, Dulzura Parcels,
December 23, 2025

PHOTOGRAPH 23
03DLZ, Common Gray Fox, Dulzura Parcels,
January 6, 2025

PHOTOGRAPH 24
Tecate Cypress Seedlings, Little Cedar Canyon,
May 7, 2025

PHOTOGRAPH 25
Seven Bollards Were Installed to Close a Road During the Quino Checkerspot Season, Dulzura Parcels, December 3, 2025

PHOTOGRAPH 26
Fencing and Signs were Installed at Two Abandoned Exploratory Mining Pits, Dulzura, May 27, 2025

PHOTOGRAPH 27
Fencing and Signs were Installed to Protect Quino Checkerspot Butterfly, Dulzura, October 31, 2025

PHOTOGRAPH 28
Metal Duct Pipes Were Installed, Dulzura, December 1, 2025

PHOTOGRAPH 29
Coastal Sage Scrub Container Plants were Installed in Areas Dozed During the Border 2 Fire Suppression, Dulzura, November 26, 2025

PHOTOGRAPH 30
Signs Were Installed at Dozer Lines Where Native Plants Were Installed, Dulzura Parcels, December 12, 2025

PHOTOGRAPH 31
Coast Live Oak were Planted to Replace those Dozed During Border 2 Fire Suppression, Dulzura Parcels, December 18, 2025

PHOTOGRAPH 32
Coastal Sage Scrub Container Plants were Installed in Areas Dozed During the Border 2 Fire Suppression, Dulzura Parcels, December 18, 2025

PHOTOGRAPH 33
Coastal Sage Scrub Container Plants were Installed in Areas Dozed During the Border 2 Fire Suppression, Dulzura Parcels, December 18, 2025

PHOTOGRAPH 34
Fence and Sign Installed in 2025, Millenia Parcels, December 22, 2025

PHOTOGRAPH 35

Fence and Sign Installation, Wolf Canyon Parcels, December 31, 2025

ATTACHMENT 3

Photographic Monitoring Established for Native Shrub Dieback

Photographs 1–10

PHOTOGRAPH 1
Photo Point 1, Facing North, May 14, 2025, Salt Creek Parcels

PHOTOGRAPH 2
Photo Point 2, Facing North-Northwest, May 14, 2025, Salt Creek Parcels

PHOTOGRAPH 3
Photo Point 3, Facing Northwest, May 14, 2025, Salt Creek Parcels

PHOTOGRAPH 4
Photo Point 4, Facing Southeast, May 14, 2025, Northern Salt Creek Parcels

PHOTOGRAPH 5
Photo Point 5, Facing East-Southeast, May 14, 2025,
Northern Salt Creek Parcels

PHOTOGRAPH 6
Photo Point 6, Facing West, May 14, 2025, Northern Salt Creek Parcels

PHOTOGRAPH 7
Photo Point 7, Facing North, May 14, 2025, Northern Salt Creek Parcels

PHOTOGRAPH 8
Photo Point 1, Facing North, May 22, 2025, Wolf Canyon Parcels

PHOTOGRAPH 9
Photo Point 2, Facing North, May 22, 2025, Wolf Canyon Parcels

PHOTOGRAPH 10
Photo Point 3, Facing East, May 22, 2025, Wolf Canyon Parcels

ATTACHMENT 4

Quino Checkerspot Survey Photographs 1–16

PHOTOGRAPH 1
Post-fire QCB Habitat, Dulzura Parcels, April 4, 2025

PHOTOGRAPH 2
Post-fire QCB Habitat, McMillin Parcels, April 11, 2025

PHOTOGRAPH 3
Post-fire QCB Habitat, San Ysidro, April 4, 2025

PHOTOGRAPH 4
Dot-seed Plantain Germinated within the Dozer Line,
Dulzura Parcels, March 19, 2025

PHOTOGRAPH 5
Dot-seed Plantain Germinated After the Border 2 Fire, Dulzura Parcels,
April 24, 2025

PHOTOGRAPH 6
Purple Owl's-clover was Present, Dulzura Parcels, April 24, 2025

PHOTOGRAPH 7
Popcornflower was Present as a Potential Nectar Source, San Ysidro Parcels, April 4, 2025

PHOTOGRAPH 8
Farinose Ground Pink was Present as a Potential Nectar Source, San Ysidro Parcels, April 4, 2025

PHOTOGRAPH 9
Golden-ray Pentachaeta was Present as a Potential Nectar Source, San Ysidro Parcels, April 24, 2025

PHOTOGRAPH 10
Common Goldfields were Present, Dulzura Parcels, May 2, 2025

PHOTOGRAPH 11
Common Goldfields Germinated within the Dozer Tracks, Dulzura Parcels, May 2, 2025

PHOTOGRAPH 12
Cryptantha was Present as a Potential Nectar Source, Dulzura Parcels, May 2, 2025

PHOTOGRAPH 13
Immaculate Bramble Hairstreak, San Ysidro Parcels, April 4, 2025

PHOTOGRAPH 14
Common California Ringlet, Dulzura Parcels,
May 2, 2025

PHOTOGRAPH 15
Gabb's Checkerspot, Dulzura Parcels,
April 22, 2025

PHOTOGRAPH 16
Quino Checkerspot Larva, Incidental Observation,
Dulzura Parcels, March 5, 2025

ATTACHMENT 5

Repeat Photographic Monitoring for the Former QCB Short-term Threat Reduction Project

Photographs 1–40

PHOTOGRAPH 1
Photo Point 1 Facing North,
October 6, 2023

PHOTOGRAPH 2
Photo Point 1 Facing North,
March 21, 2024

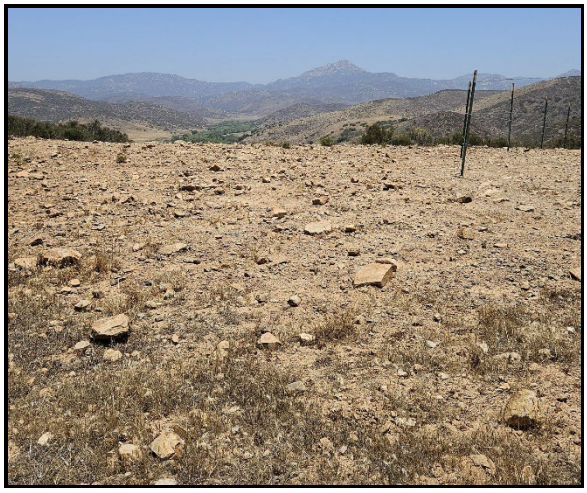
PHOTOGRAPH 3
Photo Point 1 Facing North,
June 28, 2024

PHOTOGRAPH 4
Photo Point 1 Facing North,
June 19, 2025

PHOTOGRAPH 5
Photo Point 2 Facing Northeast,
October 6, 2023

PHOTOGRAPH 6
Photo Point 2 Facing Northeast,
March 21, 2024

PHOTOGRAPH 7
Photo Point 2 Facing Northeast,
June 28, 2024



PHOTOGRAPH 8
Photo Point 2 Facing Northeast,
June 19, 2025

PHOTOGRAPH 9
Photo Point 3 Facing North,
October 6, 2023

PHOTOGRAPH 10
Photo Point 3 Facing North,
March 21, 2024

PHOTOGRAPH 11
Photo Point 3 Facing North,
June 28, 2024

PHOTOGRAPH 12
Photo Point 3 Facing North,
June 19, 2025

PHOTOGRAPH 13
Photo Point 4 Facing South,
October 6, 2023

PHOTOGRAPH 14
Photo Point 4 Facing South,
January 25, 2024

PHOTOGRAPH 15
Photo Point 4 Facing South,
June 28, 2024

PHOTOGRAPH 16
Photo Point 4 Facing South,
June 19, 2025

PHOTOGRAPH 17
Photo Point 5 Facing South,
October 6, 2023

PHOTOGRAPH 18
Photo Point 5 Facing South,
March 21, 2024

PHOTOGRAPH 19
Photo Point 5 Facing South,
June 28, 2024

PHOTOGRAPH 20
Photo Point 5 Facing South,
June 19, 2025

PHOTOGRAPH 21
Photo Point 6 Facing Southeast,
October 6, 2023

PHOTOGRAPH 22
Photo Point 6 Facing Southeast,
March 21, 2024

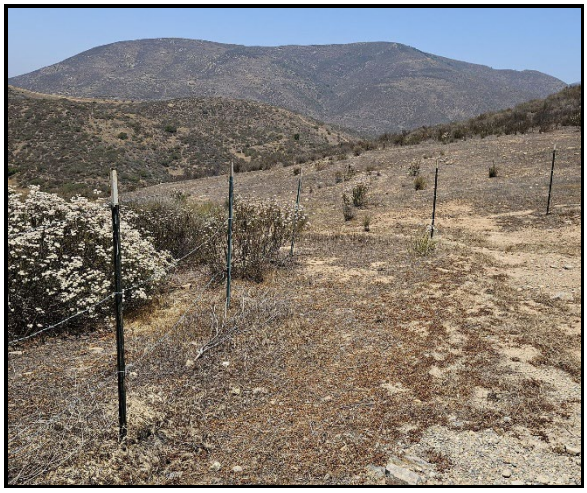
PHOTOGRAPH 23
Photo Point 6 Facing Southeast,
June 28, 2024

PHOTOGRAPH 24
Photo Point 6 Facing Southeast,
June 19, 2025

PHOTOGRAPH 25
Photo Point 7 Facing Northwest,
October 6, 2023

PHOTOGRAPH 26
Photo Point 7 Facing Northwest,
March 21, 2024

PHOTOGRAPH 27
Photo Point 7 Facing Northwest,
June 28, 2024



PHOTOGRAPH 28
Photo Point 7 Facing Northwest,
June 19, 2025

PHOTOGRAPH 29
Photo Point 7 Facing North,
October 6, 2023

PHOTOGRAPH 30
Photo Point 7 Facing North,
March 21, 2024

PHOTOGRAPH 31
Photo Point 7 Facing North,
June 28, 2024

PHOTOGRAPH 32
Photo Point 7 Facing North,
June 19, 2025

PHOTOGRAPH 33
Photo Point 8 Facing North,
October 6, 2023

PHOTOGRAPH 34
Photo Point 8 Facing North,
March 21, 2024

PHOTOGRAPH 35
Photo Point 8 Facing North,
June 28, 2024

PHOTOGRAPH 36
Photo Point 8 Facing North,
June 19, 2025

PHOTOGRAPH 37
Photo Point 8 Facing Northwest,
October 6, 2023

PHOTOGRAPH 38
Photo Point 8 Facing Northwest,
March 21, 2024

PHOTOGRAPH 39
Photo Point 8 Facing Northwest,
June 28, 2024

PHOTOGRAPH 40
Photo Point 8 Facing Northwest,
June 19, 2025

ATTACHMENT 6

Photographic Monitoring Established for Border 2 Fire Recovery

Photographs 1–12

PHOTOGRAPH 1
Photo Point 1, Border 2 Fire Suppression Area Lined with Downed Vegetation for Access Control by Fire Crews,
Dulzura Parcels, February 7, 2025

PHOTOGRAPH 2
Photo Point 4, Border 2 Fire Suppression Dozer Line,
Dulzura Parcels, February 12, 2025

PHOTOGRAPH 3

Photo Point 9, Border 2 Fire Suppression Hand Line,
Dulzura Parcels, February 12, 2025

PHOTOGRAPH 4

Photo Point 12, Border 2 Fire Suppression Hand Line,
Dulzura Parcels, February 12, 2025

PHOTOGRAPH 5
Photo Point 2, Border 2 Fire,
Little Cedar Canyon Parcels, February 17, 2025

PHOTOGRAPH 6
Photo Point 17, Border 2 Fire Suppression Hand Line,
Little Cedar Canyon Parcels, February 17, 2025

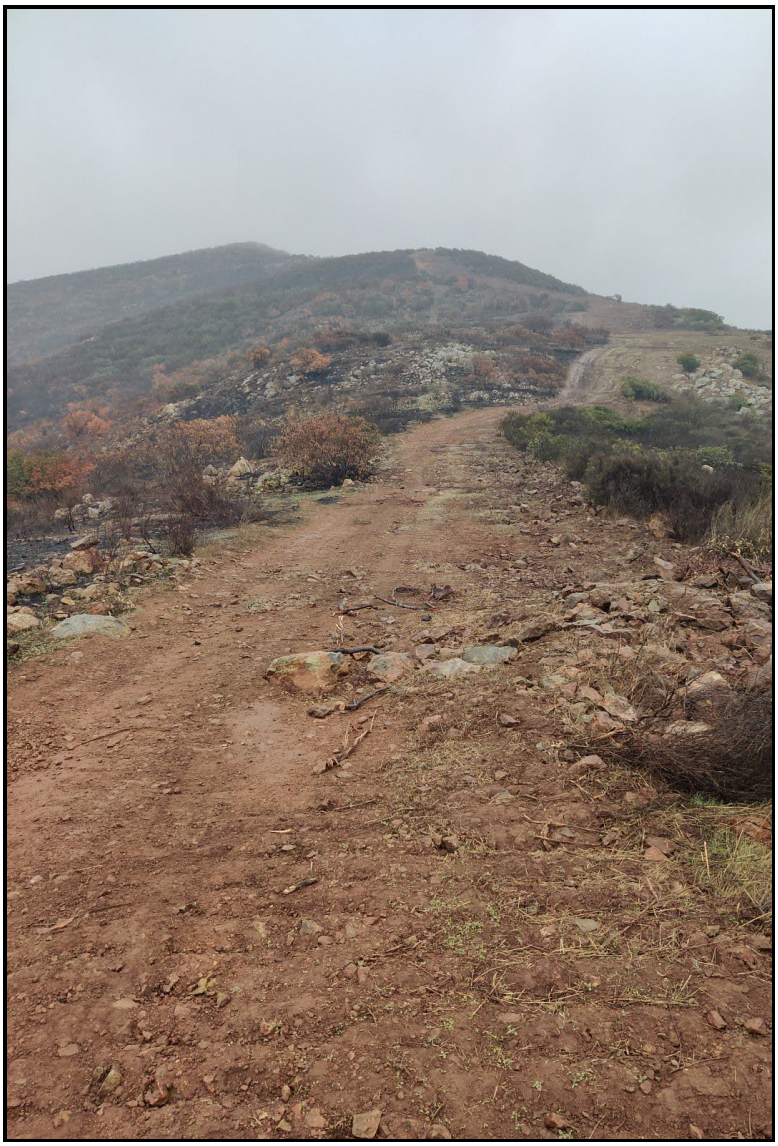
PHOTOGRAPH 7
Photo Point 13, Border 2 Fire Suppression Hand Line,
Little Cedar Canyon Parcels, February 17, 2025

PHOTOGRAPH 8
Photo Point 1, Border 2 Fire,
McMillin Parcels, February 17, 2025

PHOTOGRAPH 9
Photo Point 6, Border 2 Fire,
McMillin Parcels, February 17, 2025

PHOTOGRAPH 10
Photo Point 7, Border 2 Fire,
McMillin Parcels, February 17, 2025

PHOTOGRAPH 11
Photo Point 1, Border 2 Fire,
Northern San Ysidro Parcels, February 12, 2025



PHOTOGRAPH 12

Photo Point 2, Border 2 Fire Suppression Dozer Line,
San Ysidro Parcels, February 12, 2025

ATTACHMENT 7

Repeat Photographic Monitoring to Document Changes from the Border 2 Fire

Photographs 1–40

PHOTOGRAPH 1
Photo Point 2a, Facing South, April 14, 2021, Dulzura Parcels

PHOTOGRAPH 2
Photo Point 2a, Facing South, March 26, 2025, Dulzura Parcels

PHOTOGRAPH 3
Photo Point 2b, Facing South-Southeast, April 14, 2021, Dulzura Parcels

PHOTOGRAPH 4
Photo Point 2b, Facing South-Southeast, March 26, 2025, Dulzura Parcels

PHOTOGRAPH 5
Photo Point 2c, Facing West, April 14, 2021, Dulzura Parcels

PHOTOGRAPH 6
Photo Point 2c, Facing West, March 26, 2025, Dulzura Parcels

PHOTOGRAPH 7
Photo Point 2d, Facing Northwest, April 14, 2021, Dulzura Parcels

PHOTOGRAPH 8
Photo Point 2d, Facing Northwest, March 26, 2025, Dulzura Parcels

PHOTOGRAPH 9
Photo Point 4a, Facing East, April 14, 2021, Dulzura Parcels

PHOTOGRAPH 10
Photo Point 4a, Facing East, March 26, 2025, Dulzura Parcels

PHOTOGRAPH 11
Photo Point 4b, Facing East-Southeast, April 14, 2021, Dulzura Parcels

PHOTOGRAPH 12
Photo Point 4b, Facing East-Southeast, March 26, 2025, Dulzura Parcels

PHOTOGRAPH 13
Photo Point 4c, Facing South, April 14, 2021, Dulzura Parcels

PHOTOGRAPH 14
Photo Point 4c, Facing South, March 26, 2025, Dulzura Parcels

PHOTOGRAPH 15
Photo Point 4d, Facing South-Southwest, April 14, 2021, Dulzura Parcels

PHOTOGRAPH 16
Photo Point 4d, Facing South-Southwest, March 26, 2025, Dulzura Parcels

PHOTOGRAPH 17
Photo Point 6a, Facing South, April 14, 2021, Dulzura Parcels

PHOTOGRAPH 18
Photo Point 6a, Facing South, March 26, 2025, Dulzura Parcels

PHOTOGRAPH 19
Photo Point 6b, Facing South-Southwest, April 14, 2021, Dulzura Parcels

PHOTOGRAPH 20
Photo Point 6b, Facing South-Southwest, March 26, 2025, Dulzura Parcels

PHOTOGRAPH 21
Photo Point 6c, Facing Southwest, April 14, 2021, Dulzura Parcels

PHOTOGRAPH 22
Photo Point 6c, Facing Southwest, March 26, 2025, Dulzura Parcels

PHOTOGRAPH 23
Photo Point 6d, Facing West-Northwest, April 14, 2021, Dulzura Parcels

PHOTOGRAPH 24
Photo Point 6d, Facing West-Northwest, March 26, 2025, Dulzura Parcels

PHOTOGRAPH 25
Photo Point 11a, Facing Southeast-South, April 9, 2021, Dulzura Parcels

PHOTOGRAPH 26
Photo Point 11a, Facing Southeast-South, March 26, 2025, Dulzura Parcels

PHOTOGRAPH 27
Photo Point 11b, Facing South, April 9, 2021, Dulzura Parcels

PHOTOGRAPH 28
Photo Point 11b, Facing South, March 26, 2025, Dulzura Parcels

PHOTOGRAPH 29
Photo Point 11c, Facing West-Southwest, April 9, 2021, Dulzura Parcels

PHOTOGRAPH 30
Photo Point 11c, West-Southwest, March 26, 2025, Dulzura Parcels

PHOTOGRAPH 31
Photo Point 11d, Facing West, April 9, 2021, Dulzura Parcels

PHOTOGRAPH 32
Photo Point 11d, Facing West, March 26, 2025, Dulzura Parcels

PHOTOGRAPH 33
Photo Point 11d, Facing Northwest, April 9, 2021, Dulzura Parcels

PHOTOGRAPH 34
Photo Point 11d, Facing Northwest, March 26, 2025, Dulzura Parcels

PHOTOGRAPH 35
Photo Point 8a, Facing East, June 18, 2018, San Ysidro Parcels

PHOTOGRAPH 36
Photo Point 8a, Facing East, March 26, 2025, San Ysidro Parcels

PHOTOGRAPH 37
Photo Point 8b, Facing Southeast-South, June 18, 2018, San Ysidro Parcels

PHOTOGRAPH 38
Photo Point 8b, Facing Southeast-South, March 26, 2025, San Ysidro Parcels

PHOTOGRAPH 39
Photo Point 8b, Facing South, June 18, 2018, San Ysidro Parcels

PHOTOGRAPH 40
Photo Point 8b, Facing South, March 26, 2025, San Ysidro Parcels

ATTACHMENT 8

Repeat Photographic Monitoring to Document Conditions After Trash Removal

Photographs 1–8

PHOTOGRAPH 1
Photo Point 1, Prior to Trash Cleanup, Little Cedar Canyon,
April 10, 2024

PHOTOGRAPH 2
Photo Point 1, 1.5 Years After Trash Cleanup, Little Cedar Canyon,
October 9, 2025

PHOTOGRAPH 3
Photo Point 2, Prior to Trash Cleanup, Little Cedar Canyon,
April 10, 2024

PHOTOGRAPH 4
Photo Point 2, 1.5 Years After Trash Cleanup, Little Cedar Canyon,
October 9, 2025

PHOTOGRAPH 5
Photo Point 3, Prior to Trash Cleanup, Little Cedar Canyon,
April 10, 2024

PHOTOGRAPH 6
Photo Point 3, 1.5 Years After Trash Cleanup, Little Cedar Canyon,
October 9, 2025

PHOTOGRAPH 7
Photo Point 4, Prior to Trash Cleanup, Little Cedar Canyon,
April 10, 2024

PHOTOGRAPH 8
Photo Point 4, 1.5 Years After Trash Cleanup, Little Cedar Canyon,
October 9, 2025

ATTACHMENT 9

Photographic Monitoring Established for Container Plants Installed for Border 2 Fire Access and Erosion Control

Photographs 1–11

PHOTOGRAPH 1
PP20 at DLZ_8, Post-Fire Planting Photo Monitoring, Dulzura Parcels, December 12, 2025

PHOTOGRAPH 2
PP21 at DLZ_8, Post-Fire Planting Photo Monitoring, Dulzura Parcels, December 12, 2025

PHOTOGRAPH 3
PP22 at DLZ_8, Post-Fire Planting Photo Monitoring, Dulzura Parcels, December 12, 2025

PHOTOGRAPH 4
PP23 at DLZ_8, Post-Fire Planting Photo Monitoring, Dulzura Parcels, December 12, 2025

PHOTOGRAPH 5
PP24 at DLZ_14, Post-Fire Planting Photo Monitoring, Dulzura Parcels, November 26, 2025

PHOTOGRAPH 6
PP25 at DLZ_10, Post-Fire Planting Photo Monitoring, Dulzura Parcels, November 26, 2025

PHOTOGRAPH 7
PP26 at DLZ_10, Post-Fire Planting Photo Monitoring, Dulzura Parcels, November 26, 2025

PHOTOGRAPH 8
PP27 at DLZ_10, Post-Fire Planting Photo Monitoring, Dulzura Parcels, November 26, 2025

PHOTOGRAPH 9
PP28 at DLZ_10, Post-Fire Planting Photo Monitoring, Dulzura Parcels, November 26, 2025

PHOTOGRAPH 10
PP29 at DLZ_10, Post-Fire Planting Photo Monitoring, Dulzura Parcels, November 26, 2025

PHOTOGRAPH 11
PP30 at DLZ_10, Post-Fire Planting Photo Monitoring, Dulzura Parcels, November 26, 2025