

Task Order 11

HABITAT CONDITION ASSESSMENT

For the El Capitan, Lakeside Linkage, Oakoasis,
Sycamore Canyon/Goodan Ranch County Preserves,
Louis A. Stelzer County Park, and El Monte County Park

Prepared for
County of San Diego
Jennifer Price

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Appendix

A. Representative Photographs

Acronyms and Other Abbreviations

Abbreviation	Definition
Cal-IPC	California Invasive Plant Council
CNPS	California Native Plant Society
County	San Diego County
CRPR	California Rare Plant Rank
ESA	Environmental Science Associates
IMG	Inspect and Manage
MSCP	Multiple Species Conservation Program
RMP	Resource Management Plan
SDCRPR	San Diego County Regional Priority Ranking
SDMMP	San Diego Management and Monitoring Program
TMP	Targeted Monitoring Plan
VCM	Vegetation Classification Manual
VMP	Vegetation Management Plan

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HABITAT CONDITION ASSESSMENT

Overview

Per Environmental Science Associates (ESA) Contract 569744 Task Order 11, ESA conducted Vegetation Mapping and Habitat Assessments at six County of San Diego (County) preserves. Surveys were conducted between July 7 and August 6, 2025. The surveyed preserves are depicted in **Figure 1** and consist of El Capitan County Preserve, El Monte County Park, Lakeside Linkage County Preserve, Louis A. Stelzer County Park, Oakoasis County Preserve, and Sycamore Canyon/Goodan Ranch County Preserve (excluding recently surveyed properties east of State Route 67 and the southern parcel). This habitat condition assessment report summarizes the methodology and results from all survey efforts.

Methods

Vegetation mapping and habitat assessment for invasive non-native plant species and resource-specific monitoring followed the methods described in the Targeted Monitoring Plan (TMP) (ESA 2024) for surveillance-level goals and objectives. A summary of vegetation mapping and habitat assessment surveys is provided in **Table 1**, which includes preserve names, dates, and field personnel. Specific monitoring methods are described below.

TABLE 1
VEGETATION MAPPING AND HABITAT ASSESSMENT SURVEY SUMMARY

2025 Survey Dates	Name of Biologists
El Capitan Preserve	
July 21–24, 29–30; August 4–6	Ryan Quilley, Zach Fenske, Desiree Johnson, Katie Quint
El Monte County Park	
July 18	Dillon Travis, Stefanie Lehner
Lakeside Linkage County Preserve	
July 14–16	Ryan Quilley, Desiree Johnson, Zach Fenske, Katie Quint
Louis A. Stelzer County Park	
July 16–17	Dillon Travis, Valeria Parra-Santoro, Stefanie Lehner
Oakoasis County Preserve	
July 7–9	Brenda McMillan, Dillon Travis, Douglas Gordon-Blackwood, Karla Alcaraz
Sycamore Canyon / Goodan Ranch County Preserve	
July 22–25, 29–31; August 6	Dillon Travis, Karla Alcaraz, Brenda McMillan, Amy Orduno-Baez, Stefanie Lehner, Valeria Parra-Santoro

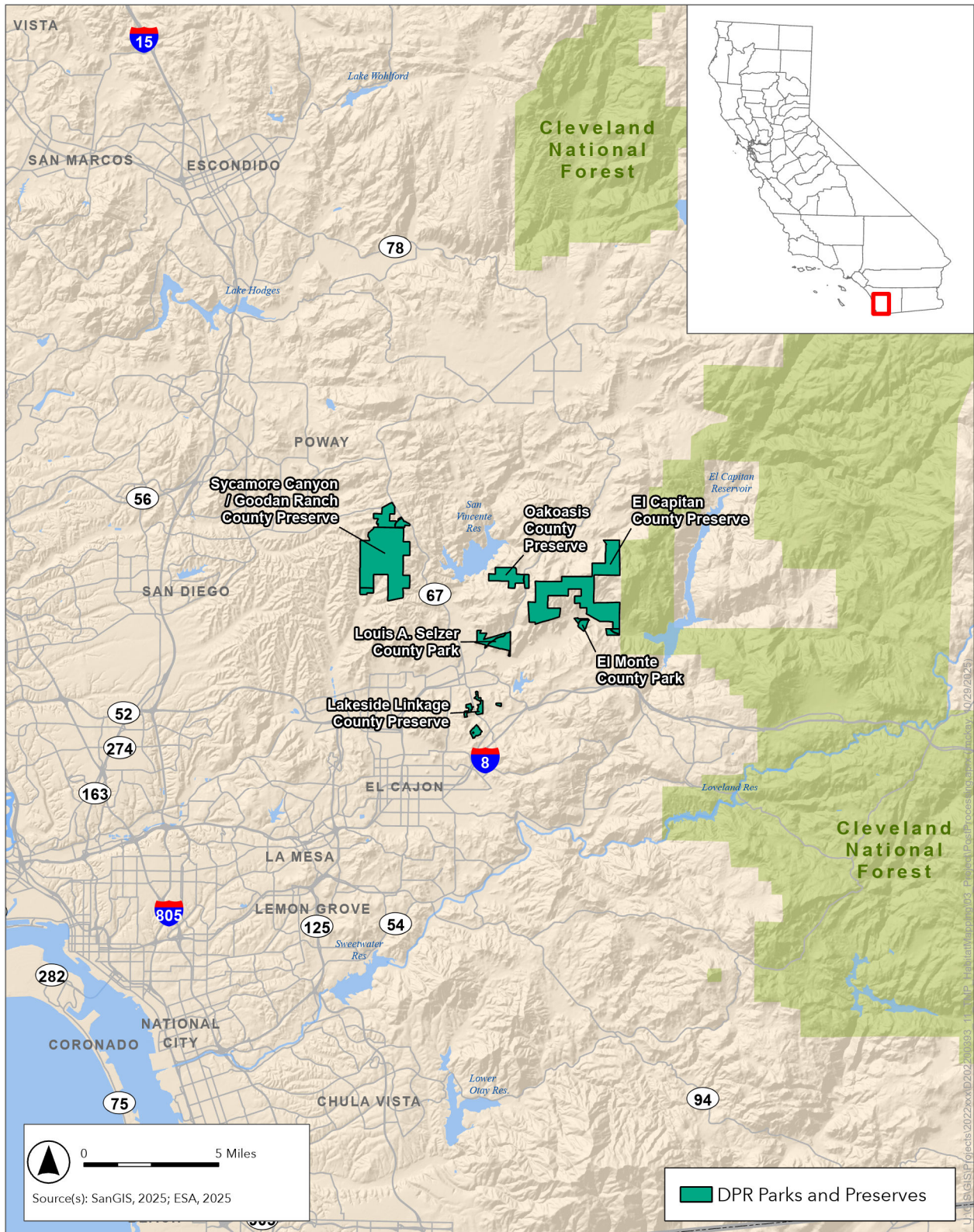


Figure 1
Project Location

Vegetation Mapping

ESA used object-based segmentation to create vegetation polygons using 4-band National Agriculture Imagery Program (NAIP) imagery (2020). Each polygon was verified in the field using a sub-meter accuracy Global Positioning System (GPS) unit and its land cover type was classified. Vegetation communities and cover types were classified based on the Vegetation Classification Manual for Western San Diego County (VCM) (Sproul et al. 2011) and the Holland (1986) classification system modified by Oberbauer (Oberbauer et al. 2008), in accordance with the County Department of Parks and Recreation (DPR) habitat identification guidelines (County of San Diego 2010) and the TMP. Acreages of vegetation communities and land cover types present within each of the preserves are provided in a table crosswalk format and depicted in each corresponding figure. The Holland-Oberbauer classification system classifies disturbed or developed areas in various categories that do not have a direct crosswalk under the VCM, which describes only native and naturalized vegetation types. To provide a higher level of detail using the VCM, these disturbed or developed land cover types were displayed under the alliance level in the crosswalk tables and associated figures. In addition, potential trails were categorized separately (Holland: 11300 Disturbed – Roads and Trails; VCM: Disturbed Roads and Trails) from other disturbed habitat (Holland 11000 Disturbed Habitat; VCM Disturbed Habitat). Figures also contain “County DPR Trails” line data, which was retrieved from the DPR Trail layer on SanGIS and contains trails that are open to the public, trails that are not open to the public (such as fire roads and internal access roads), and un-official non-County trails. Any disturbed roads and trails areas that do not align with the DPR Trail layer were defined as “Potentially Unauthorized Trails” on the figures and discussed in the threats assessment sections of the results. Scientific nomenclature and common names used in this report follow *The Jepson Manual: Vascular Plants of California*, Second Edition (Baldwin et al. 2012).

Invasive Non-Native Plant Observations

ESA biologists collected invasive non-native plant species data to assess new invasions or reinvasions within each preserve. Mapped data included highly invasive plant species described in the preserve resource management plans (RMPs), such as tamarisk (*Tamarix* sp.), pampas grass (*Cortaderia selloana*), fennel (*Foeniculum vulgare*), or specific highly invasive annuals, which might be controlled with appropriate management activities (e.g., stinkwort [*Dittrichia graveolens*]). Invasive non-native plant species that were ubiquitous throughout the preserves were not mapped, but their general locations are described in the invasive non-native plant species tables for each preserve. All occurrences that were feasible to map were identified using a GPS unit in the field. Surveys focused on areas where invasive non-native plant species were detected in the past, particularly along highly disturbed areas such as trails or recently burned areas, but also included any new occurrences detected during mapping.¹ Invasive non-native plant species detected within each of the preserves are provided in table format along with their corresponding California Invasive Plant Council (Cal-IPC) ranking and San Diego County Regional Priority Ranking (SDCRPR), general notes, and management recommendations. These occurrences are depicted in corresponding figures by preserve.

¹ Habitat assessments were conducted between July 7 and August 6, 2025. The surveys took place outside the suitable bloom period for many invasive plant species and sensitive rare plants, which may have limited their detectability during field observations.

Incidental Sensitive Plant and Wildlife Observations

ESA biologists mapped incidental special-status plant and wildlife species observations detected during vegetation mapping. These species are listed in tables along with their sensitivity status (federal, state, San Diego County Special-Status List, and the California Native Plant Society [CNPS] California Rare Plant Rank [CRPR] [CNPS Rare Plant Program 2025]) and an indication of whether they are covered species under the Multiple Species Conservation Program (MSCP) or the draft North County MSCP, as well as any relevant observations pertaining to the species occurrence. All species locations are depicted in corresponding figures by preserve.

Habitat Condition and Threats Assessment

Threats Assessment

ESA biologists conducted a general habitat condition and threats assessment during habitat mapping. Specific threats assessed included invasive non-native plants, unauthorized habitat disturbance (e.g., trails, dumping), evidence of fire, and plant disease (e.g., *Fusarium* dieback). Disturbances and stressors within each preserve were noted and described in tables by preserve, along with a brief discussion of the severity and extent within the preserve. The severity rank is based on the threats assessment format used for the San Diego Management and Monitoring Program (SDMMP) Rare Plant Inspect and Manage (IMG) protocol, where “1” indicates no sign of disturbance occurs within the preserve and “7” indicates that the disturbance occurs in greater than or equal to 75 percent of the preserve.

Type Conversion

The data collected as part of the vegetation mapping effort in this report was compared to the previous vegetation mapping effort conducted in 2015 and described in the *CMP Preserves Plant Surveys Report* (ICF International 2015) to detect potential type conversions within each preserve. The Holland-Oberbauer vegetation mapping was used to compare the acreages by habitat type, including developed, disturbed, herbaceous, scrub, chaparral, woodland, forest, riparian, and unvegetated (water). The calculated difference between the 2015 and the 2025 mapped acreage by total habitat type is provided in table format to depict the level of quantitative change within each preserve over the 10-year period. It should be noted, however, that this analysis has several limitations, including deviations in mapping that occur as a result of methodology advancements in field mapping technology and as a result of the individual perspective of the biologist; variations in community boundaries and feasibility of walking each vegetation community boundary; and compositional integrity and species composition variations from year to year. The fire history of each preserve (**Table 2**) was also referenced in the discussion of potential causes for changes in habitat types.

TABLE 2
FIRE HISTORY BY PRESERVE

Fire Name	Fire Year	Area of Preserve Burned (acres)
El Capitan County Preserve		
No name	1918	53.43
No name	1919	10.68
No name	1928	414.29
No Name	1929	1,369.16

Fire Name	Fire Year	Area of Preserve Burned (acres)
No Name	1942	1057.23
Barona #2	1956	1.20
Canyon	2002	9.94
Cedar	2003	2,711.44
El Monte	1995	373.17
Monte	1953	135.45
Monte	1974	0.17
Monte	2008	21.17
Monte	2010	168.05
Monte	2025	414.69
Morena Avenue	1981	577.37
Outside Origin #42	1956	1,481.66
Peutz	2013	88.59
Wildcat	1959	179.99
Wildcat	1961	24.99
Wildcat	1983	1.20
Wildcat	1991	10.82
Willow	1992	40.97
Witch	2007	160.47
El Monte County Park		
No name	1929	52.70
No Name	1942	5.67
Cedar	2003	57.67
El Monte	1970	26.96
El Monte #2	1954	0.02
Monte	2025	0.27
Lakeside Linkage County Preserve		
Assist #105	1987	3.00
Louis A. Stelzer County Park		
Cedar	2003	359.89
Hamlet	1953	155.37
Monte	1953	10.42
Morena Avenue	1981	360.00
Oakosis County Preserve		
Cedar	2003	388.37
Wildcat	1961	330.42
Sycamore Canyon / Goodan Ranch County Preserve		
No name	1913	106.66
No name	1938	400.12
Cedar	2003	2,503.44

Fire Name	Fire Year	Area of Preserve Burned (acres)
Elliot Reservation	1950	20.17
Goat Mtn.	1955	506.38
Rabbit	1971	136.94
Rocoso	1994	86.76
Sycamore	1985	572.45
Sycamore	2003	245.92
Sycamore #2	1986	32.13

Source: CAL FIRE et al. 2025

Results

A summary of results, by preserve, is provided in the following sections. Representative photographs of each preserve are provided in **Appendix A**.

El Capitan County Preserve

El Capitan County Preserve is an approximately 2,658-acre open space preserve located in Lakeside, an unincorporated community of central San Diego County. The preserve is north of Interstate 8, southeast of the San Vicente Reservoir, and along the eastern side of Wildcat Canyon Road. This preserve is located within the borders of both the MSCP (County of San Diego 1997) and the draft North County MSCP (County of San Diego 2024).

Vegetation Mapping

A total of 18 vegetation communities and 3 land cover types were identified via Holland-Oberbauer and 35 vegetation communities and 4 land cover types were identified via VCM for El Capitan County Preserve. These communities are depicted in **Figure 2a–Figure 2e** and **Figure 3a–Figure 3e** and provided in crosswalk format in **Table 3**. It should be noted that areas within the southwest corner of the preserve were very difficult to access; therefore, mapping in those areas is limited to what was visible from certain vantage points.

TABLE 3
VEGETATION COMMUNITIES CROSSWALK: EL CAPITAN COUNTY PRESERVE

Oberbauer-Modified Holland Code	San Diego Vegetation Classification Manual		Acreage
	Alliance Level	Association Level	
Scrub			
32500 Diegan Coastal Sage Scrub	4.1 Chamise Alliance	4.1.2 Chamise – California Buckwheat – California Sagebrush – Black Sage-Association	4.43
	4.13 San Diego Viguiera Alliance	4.13.1 San Diego Viguiera – California Sagebrush – California Buckwheat Association	15.88

San Diego Vegetation Classification Manual			
Oberbauer-Modified Holland Code	Alliance Level	Association Level	Acreage
	4.43 White Sage Alliance	4.43.2 White Sage – California Sagebrush Association	1.79
	4.7 California Sagebrush – California Buckwheat Alliance	4.7 California Sagebrush – California Buckwheat Alliance	10.23
		4.7.1 California Sagebrush – California Buckwheat – Laurel Sumac Association	324.67
32520 Diegan Coastal Sage Scrub: Inland Form	4.7 California Sagebrush – California Buckwheat Alliance	4.7 California Sagebrush – California Buckwheat Alliance	2.11
		4.7.1 California Sagebrush – California Buckwheat – Laurel Sumac Association	17.94
37120 Southern Mixed Chaparral	4.1 Chamise Alliance	4.1 Chamise Alliance	65.32
		4.1.2 Chamise-Buckwheat-California Sagebrush-Black Sage-Association	13.70
		4.1.4 Chamise – Woolly Leaf Ceanothus Association	184.60
	4.16 Chaparral Whitethorn Alliance	4.16 Chaparral Whitethorn Alliance	16.04
		4.16.1 Chaparral Whitethorn Association	11.49
	4.18 Woolly Leaf Ceanothus Alliance	4.18.1 Woolly Leaf Ceanothus Association	4.36
	4.2 Chamise-Mission Manzanita Alliance	4.2 Chamise-Mission Manzanita Alliance	2.11
		4.2.1 Chamise-Mission Manzanita Association	72.99
		4.2.2 Chamise – Mission Manzanita – Hoaryleaf Ceanothus Association	58.23
		4.2.3 Chamise – Mission Manzanita – Woolly Leaf Ceanothus Association	41.15
		4.2.6 Chamise - Mission Manzanita - Scrub Oak Association	135.11
	4.37 Scrub Oak Alliance	4.37.3 Scrub Oak - Chaparral Whitethorn Association	1.54
	4.38 Scrub Oak – Chamise Alliance	4.38 Scrub Oak - Chamise Alliance	45.49
		4.38.1 Scrub Oak - Chamise Association	61.60
	4.4 Eastwood Manzanita Alliance	4.4.1 Manzanita – Chamise Association	354.77
37130 Northern Mixed Chaparral	4.5 Big Berry Manzanita Alliance	4.5.1 Big Berry Manzanita – Chamise Association	149.62
37900 Scrub Oak Chaparral	4.37 Scrub Oak Alliance	4.37 Scrub Oak Alliance	16.12
		4.37.1 Scrub Oak Association	6.87
		4.37.2 Scrub Oak – Mountain Mahogany Association	1.01
		4.37.3 Scrub Oak – Chaparral Whitethorn Association	6.22

San Diego Vegetation Classification Manual			
Oberbauer-Modified Holland Code	Alliance Level	Association Level	Acreage
	4.38 Scrub Oak – Chamise Alliance	4.38 Scrub Oak – Chamise Alliance	73.92
		4.38.1 Scrub Oak – Chamise Association	1.98
	4.4 Manzanita Alliance	4.4.1 Manzanita – Chamise Association	0.20
37A00 Interior Live Oak Chaparral	OTH - Interior Live Oak - Canyon Live Oak Alliance	OTH - Interior Live Oak - Canyon Live Oak Alliance	132.06
37G00 Coastal Sage-Chaparral Transition	4.1 Chamise Alliance	4.1.2 Chamise – Buckwheat-California Sagebrush – Black Sage – Association	309.81
	4.2 Chamise – Mission Manzanita Alliance	4.2.6 Chamise – Mission Manzanita – Scrub Oak Association	0.69
	4.7 California Sagebrush – California Buckwheat Alliance	4.7.1 California Sagebrush – California Buckwheat – Laurel Sumac Association	1.26
63310 Mule Fat Scrub	4.11 Mule Fat Alliance	4.11.1 Mule Fat Association	0.91
Herbaceous			
40000 Grasslands, Vernal Pools, Meadows, and Other Herb Communities ^c	5.32 Bigelow's Spike Moss Alliance	5.32 Bigelow's Spike Moss Alliance	15.76
42200 Non-Native Grassland	5.21 Mediterranean California Naturalized Annual and Perennial Grassland Semi-Natural Stands	5.21 Mediterranean California Naturalized Annual and Perennial Grassland Semi-Natural Stands	5.39
	5.26 Crimson Fountain Grass Semi-Natural Stands	5.26 Crimson Fountain Grass Semi-Natural Stands	0.13
		5.26.1 Crimson Fountain Grass Semi-Natural Stands	5.87
	5.8 Rippgut Grass – Purple False Brome Semi-Natural Stands	5.8.2 Rippgut Grass Semi-Natural Stand Type	0.46
Riparian			
61310 Southern Coast Live Oak Riparian Forest	3.4 Western Sycamore Alliance	3.4.3 Western Sycamore – Coast Live Oak Association	1.58
	3.6 Coast Live Oak Alliance	3.6.4 Coast Live Oak – Poison Oak – Grass Association	11.94
	3.7 Engelmann Oak Alliance	3.7.2 Engelmann Oak – Coast Live Oak-Poison Oak – Grass Association	7.31
62500 Southern Riparian Woodland	3.6 Coast Live Oak Alliance	3.6.4 Coast Live Oak – Poison Oak – Grass Association	0.46
	3.9 Red Willow Alliance	3.9.1 Red Willow Association	5.03
63300 Southern Riparian Scrub	3.10 Arroyo Willow Alliance	3.10 Arroyo Willow Alliance	0.83
Woodland			
71160 Coast Live Oak Woodland	3.6 Coast Live Oak Alliance	3.6.1 Coast Live Oak – California Sagebrush Association	1.23
		3.6.4 Coast Live Oak – Poison Oak – Grass Association	6.99
	3.7 Engelmann Oak Alliance	3.7.2 Engelmann Oak – Coast Live Oak-Poison Oak – Grass Association	1.34

Oberbauer-Modified Holland Code	San Diego Vegetation Classification Manual		Acreage
	Alliance Level	Association Level	
71161 Open Coast Live Oak Woodland	3.6 Coast Live Oak Alliance	3.6.1 Coast Live Oak – California Sagebrush Association	4.16
		3.6.4 Coast Live Oak – Poison Oak – Grass Association	0.84
71162 Dense Coast Live Oak Woodland	3.6 Coast Live Oak Alliance	3.6.4 Coast Live Oak – Poison Oak – Grass Association	4.36
	3.7 Engelmann Oak Alliance	3.7.2 Engelmann Oak – Coast Live Oak-Poison Oak – Grass Association	4.58
71180 Engelmann Oak Woodland	3.7 Engelmann Oak Alliance	3.7.2 Engelmann Oak – Coast Live Oak-Poison Oak – Grass Association	8.50
71181 Open Engelmann Oak Woodland	3.7 Engelmann Oak Alliance	3.7.2 Engelmann Oak – Coast Live Oak-Poison Oak – Grass Association	0.67
Other^a			
11000 Disturbed Habitat	Disturbed Habitat	Disturbed Habitat	0.80
	Disturbed Habitat – Burned	Disturbed Habitat – Burned	414.71
11300 Disturbed – Roads and Trails	Disturbed Habitat – Trails or Roads	Disturbed Habitat – Trails or Roads	6.66
12000 Urban/Developed	Urban/Developed	Urban/Developed	1.78
TOTAL ACREAGE:^d			2,657.62

Notes:

- The San Diego Vegetation Classification Manual only classifies vegetated areas. The disturbed land cover types were described and displayed under the association level to provide additional detail in the mapping. This allows for changes in vegetation (e.g., unvegetated to vegetated) to be tracked over time.
- The San Diego Vegetation Classification Manual does not have a classification for ornamental, non-native woodlands. This type of vegetation was described as Urban/Developed in this report.
- 5.32.1 *Selaginella bigelovii* Alliance is grouped in the VCM under Chapter 5.0, Vegetation Dominated by Herbs; however, there is no community with direct correlation in the Oberbauer-Modified Holland Code, and the nearest refined selection is under 40000 – Grasslands, Vernal Pools, Meadows, and Other Herb Communities.
- Total may not match sum of individual acreages listed due to rounding.

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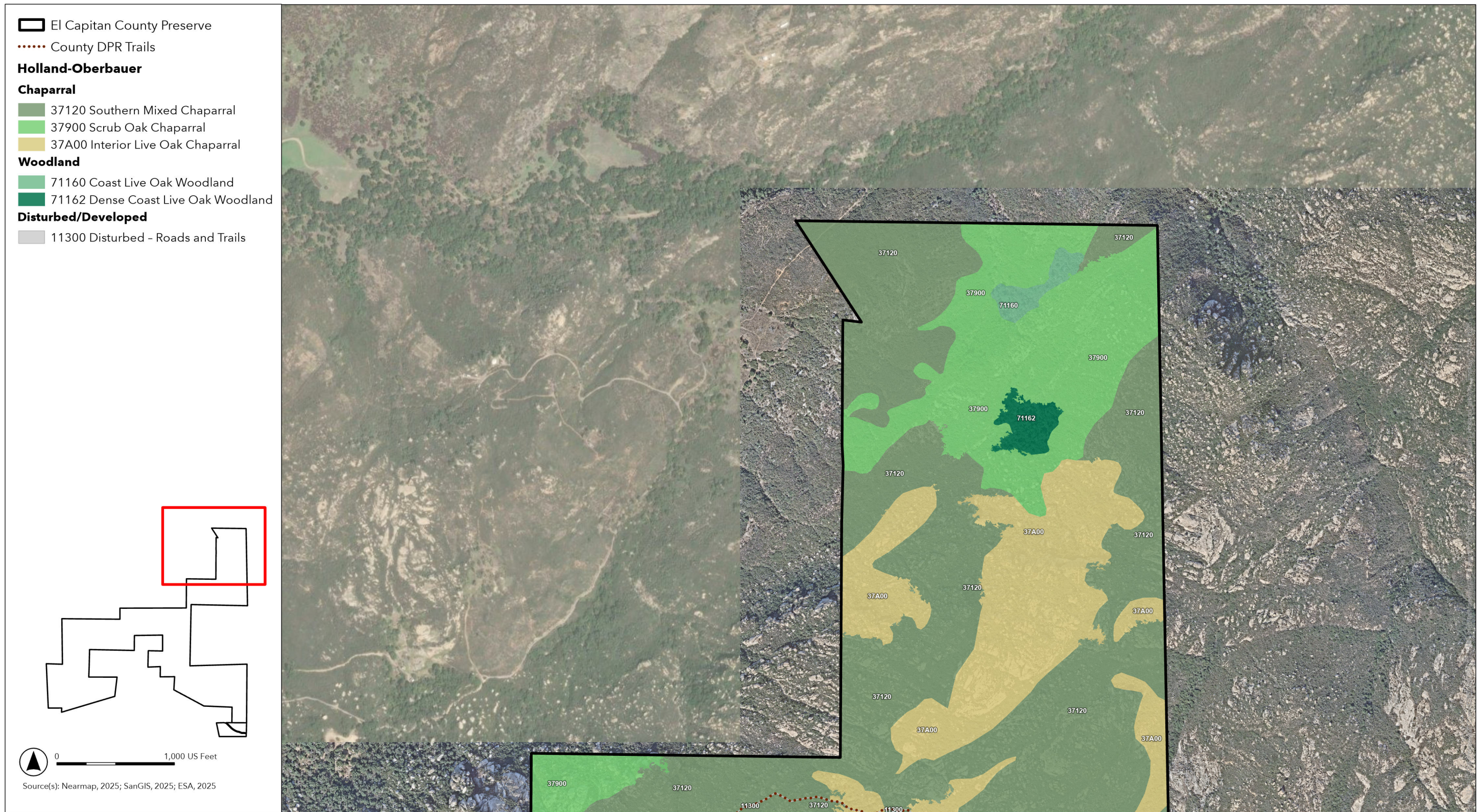


Figure 2a
Vegetation Communities - Holland-Oberbauer Classification
El Capitan County Preserve

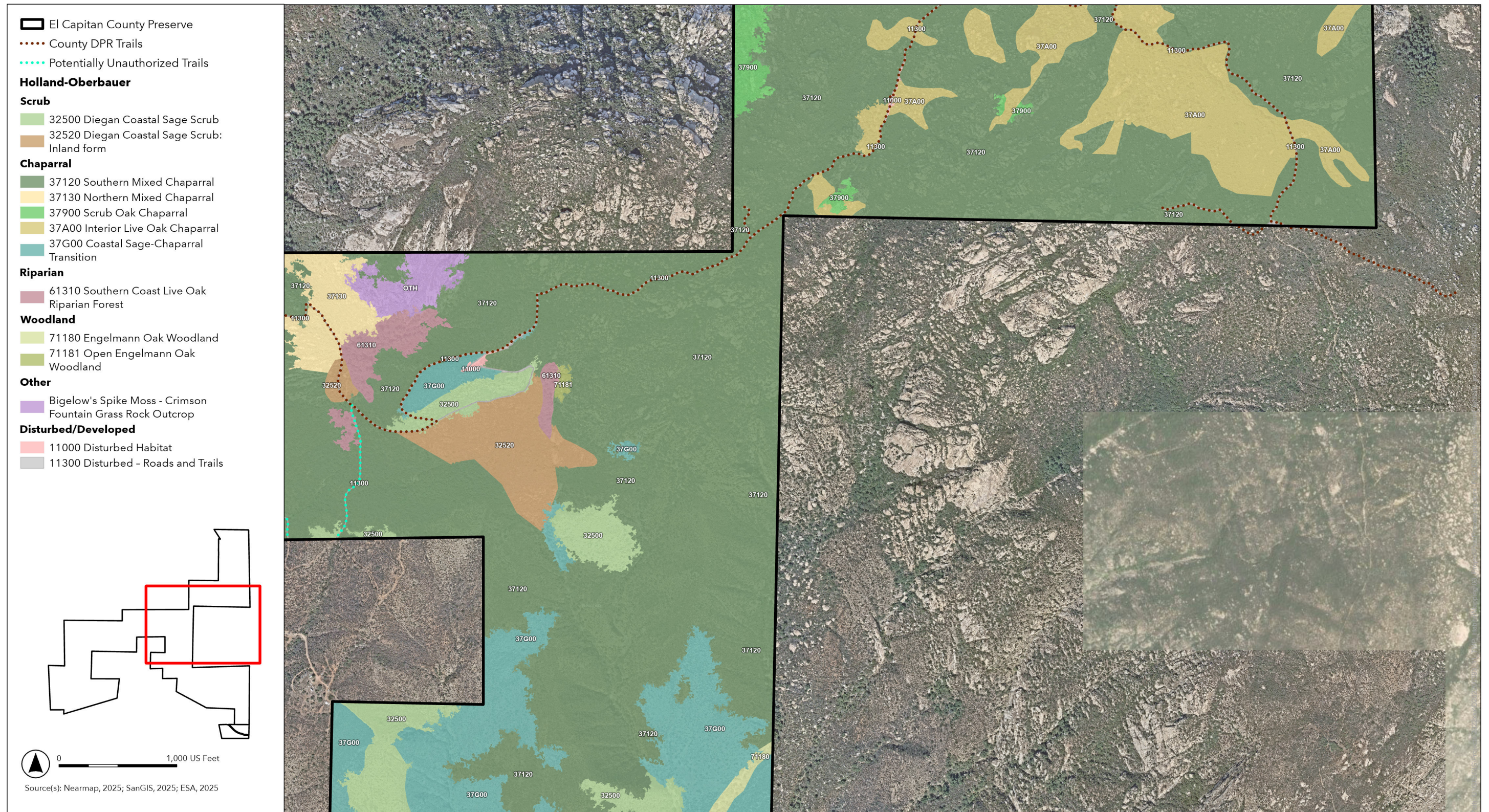


Figure 2b
Vegetation Communities - Holland-Oberbauer Classification
El Capitan County Preserve

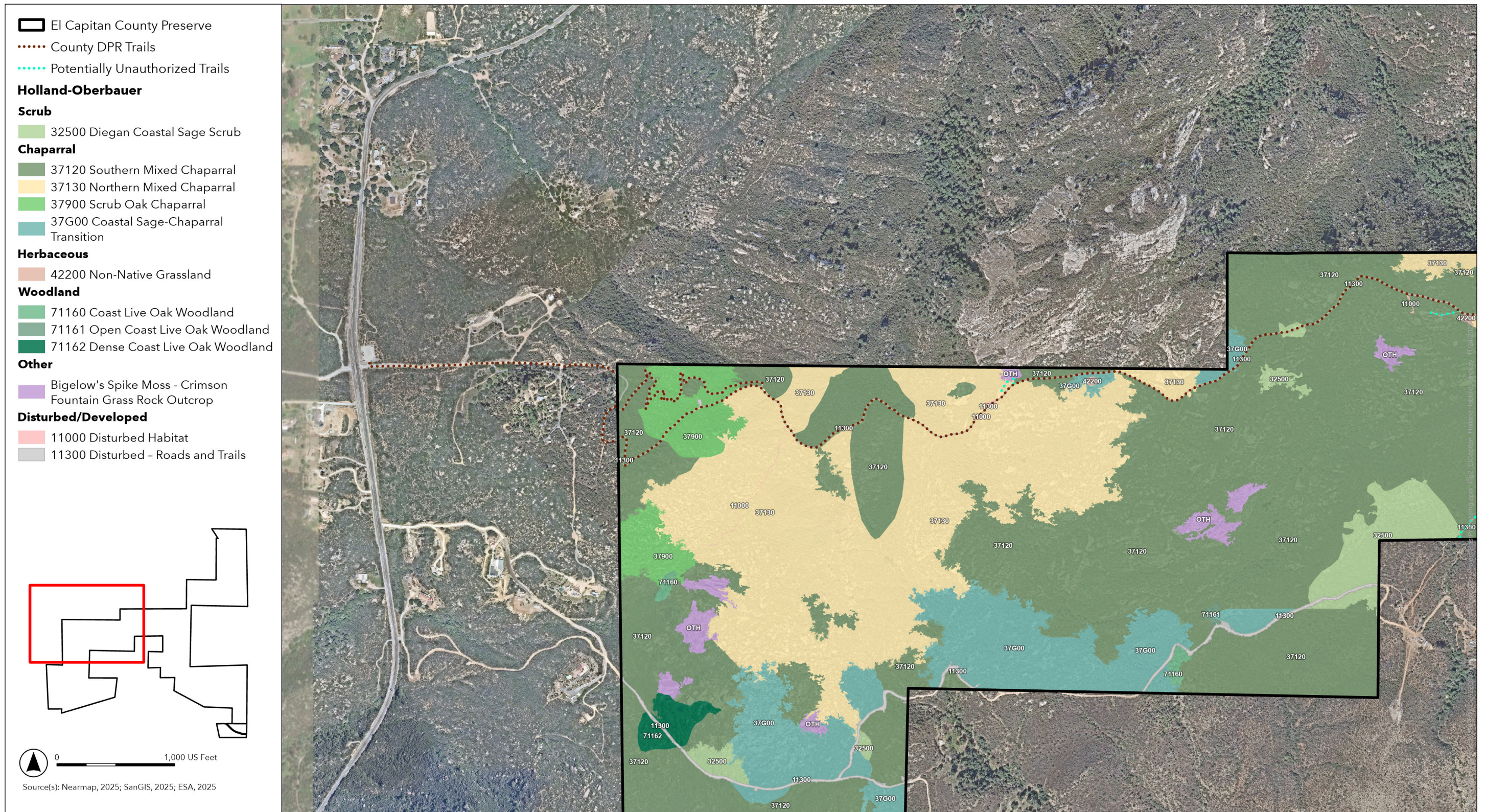


Figure 2c
Vegetation Communities - Holland-Oberbauer Classification
El Capitan County Preserve

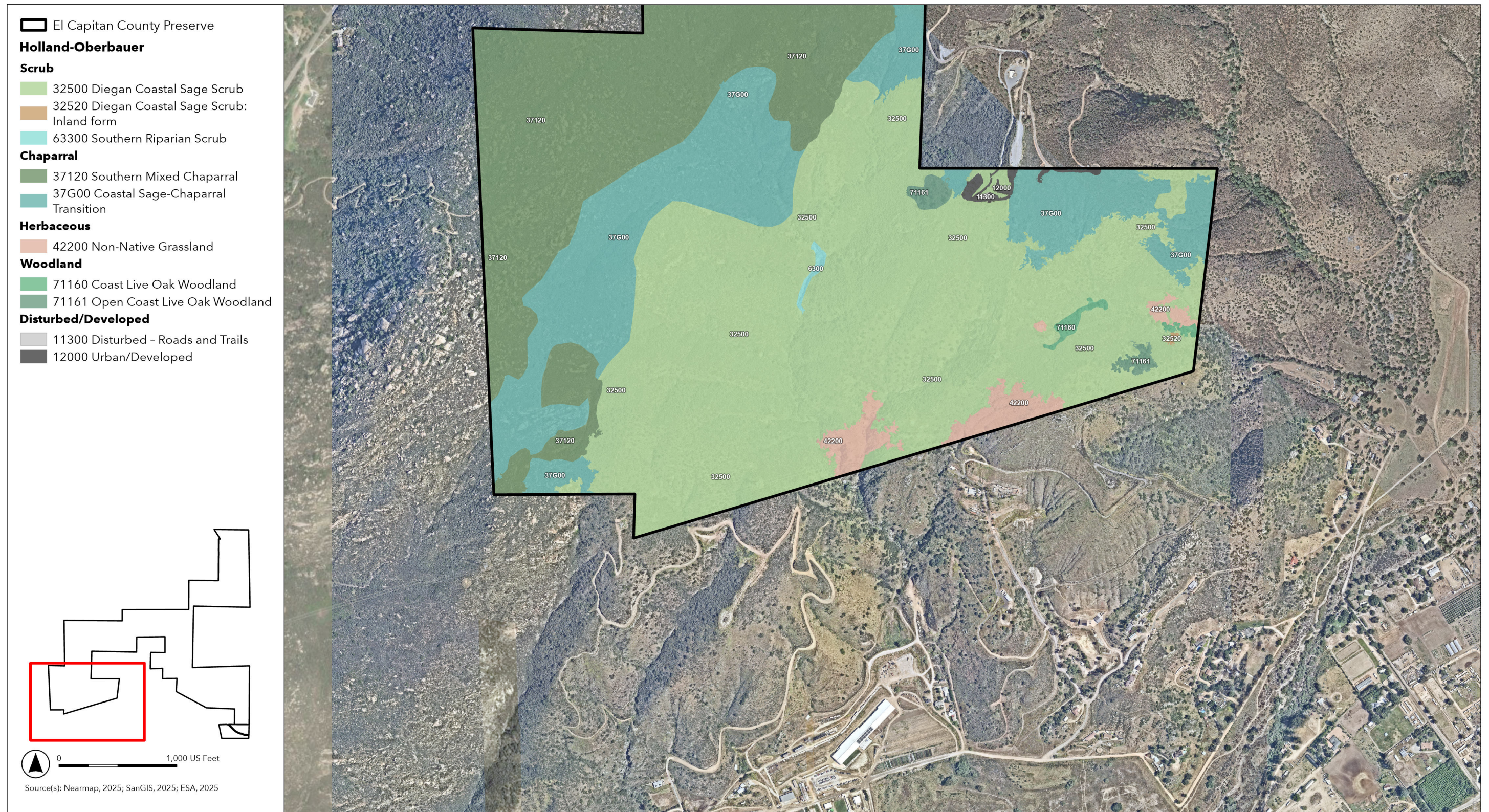


Figure 2d
Vegetation Communities - Holland-Oberbauer Classification
El Capitan County Preserve

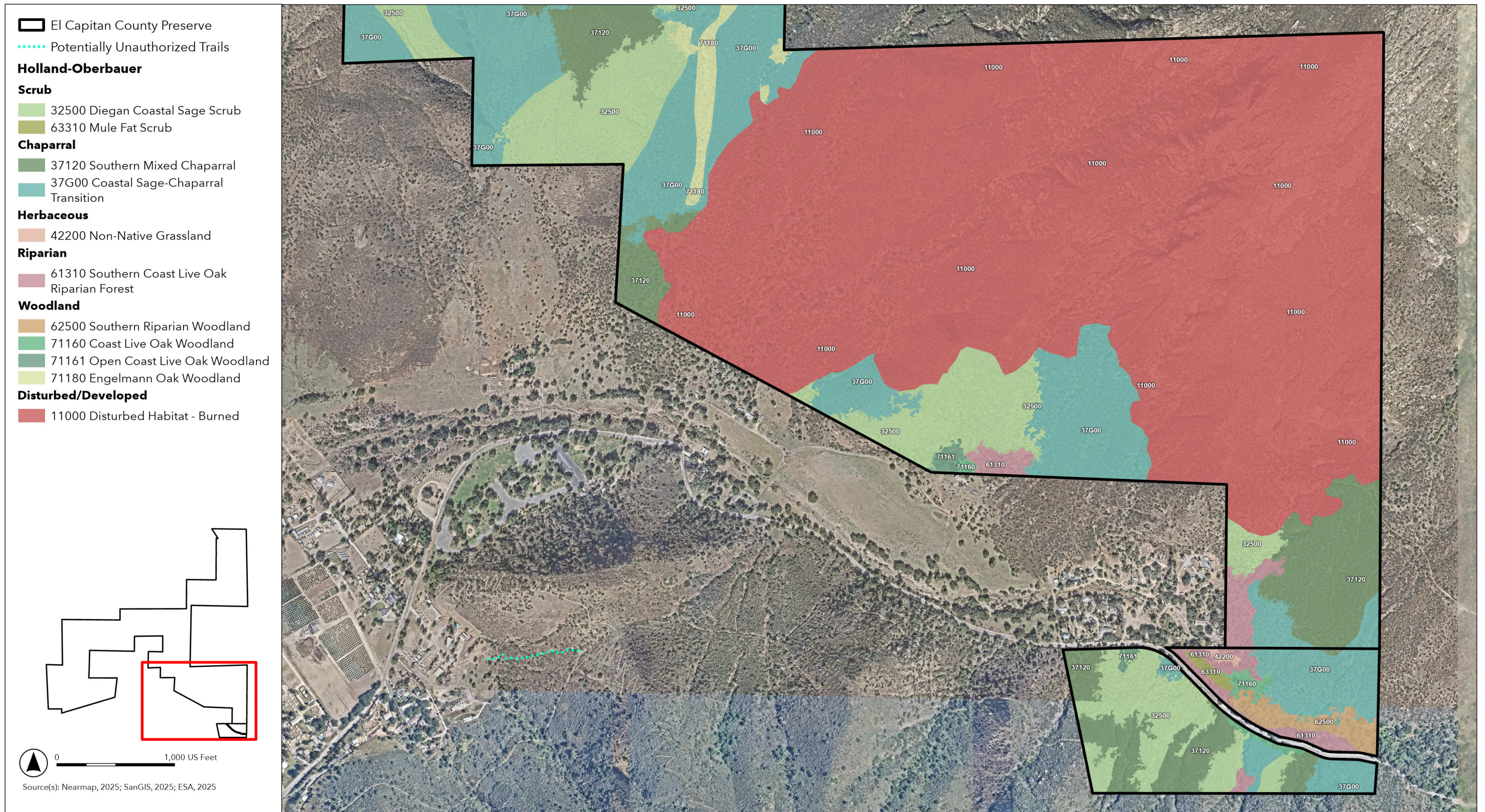


Figure 2e
Vegetation Communities - Holland-Oberbauer Classification
El Capitan County Preserve

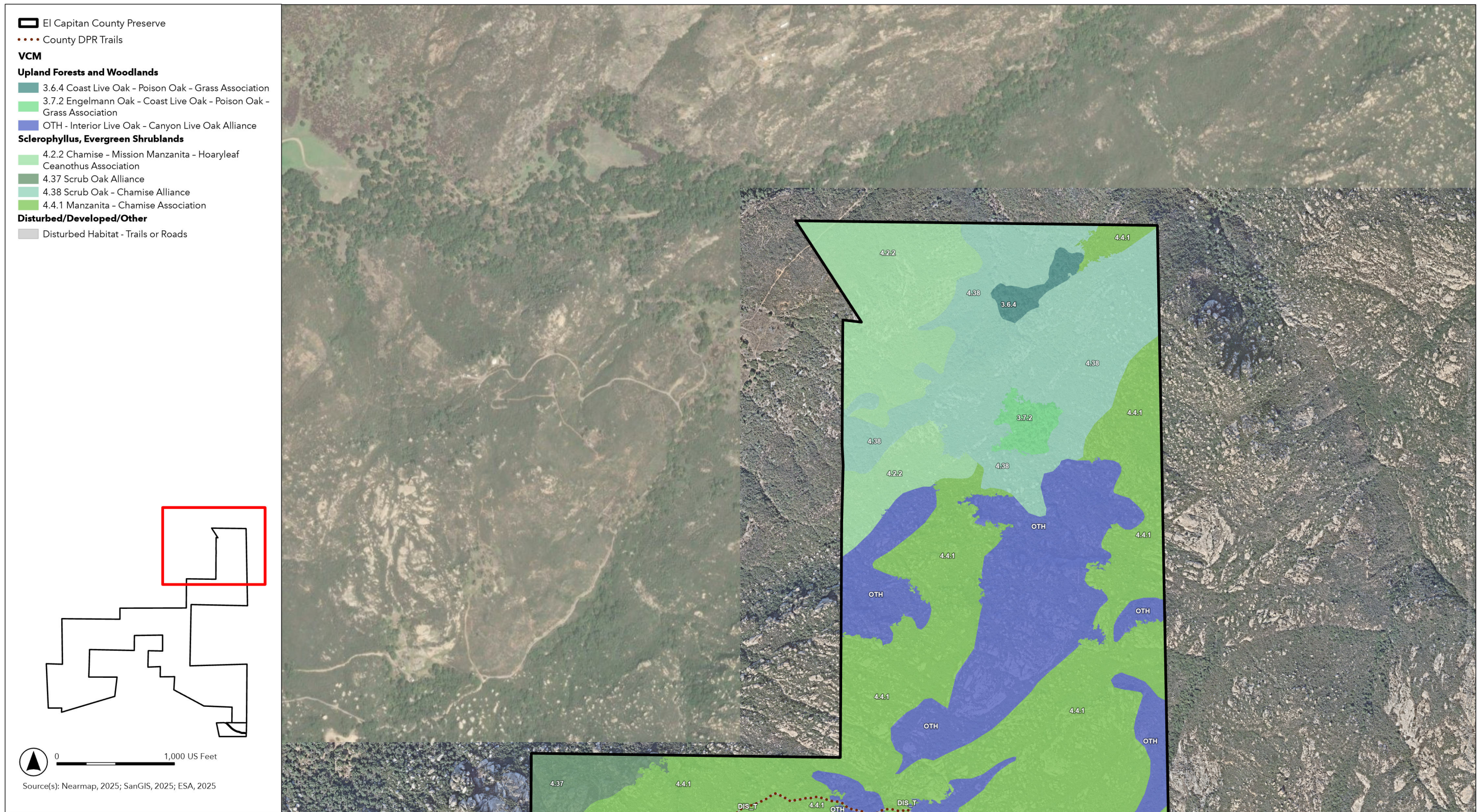


Figure 3a
 Vegetation Communities - Vegetation Classification Manual (VCM) for Western San Diego County
 El Capitan County Preserve

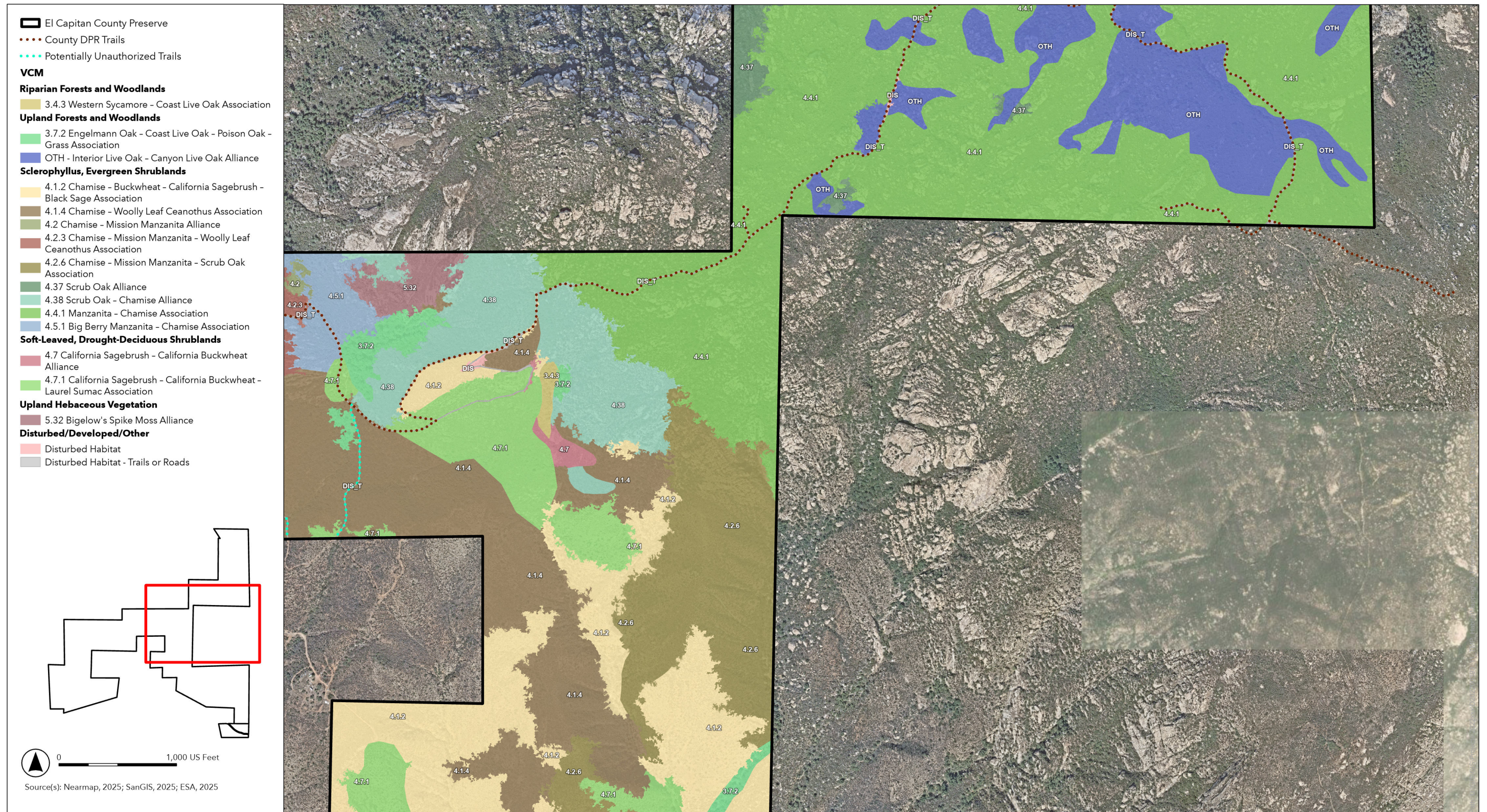


Figure 3b
Vegetation Communities - Vegetation Classification Manual (VCM) for Western San Diego County
El Capitan County Preserve

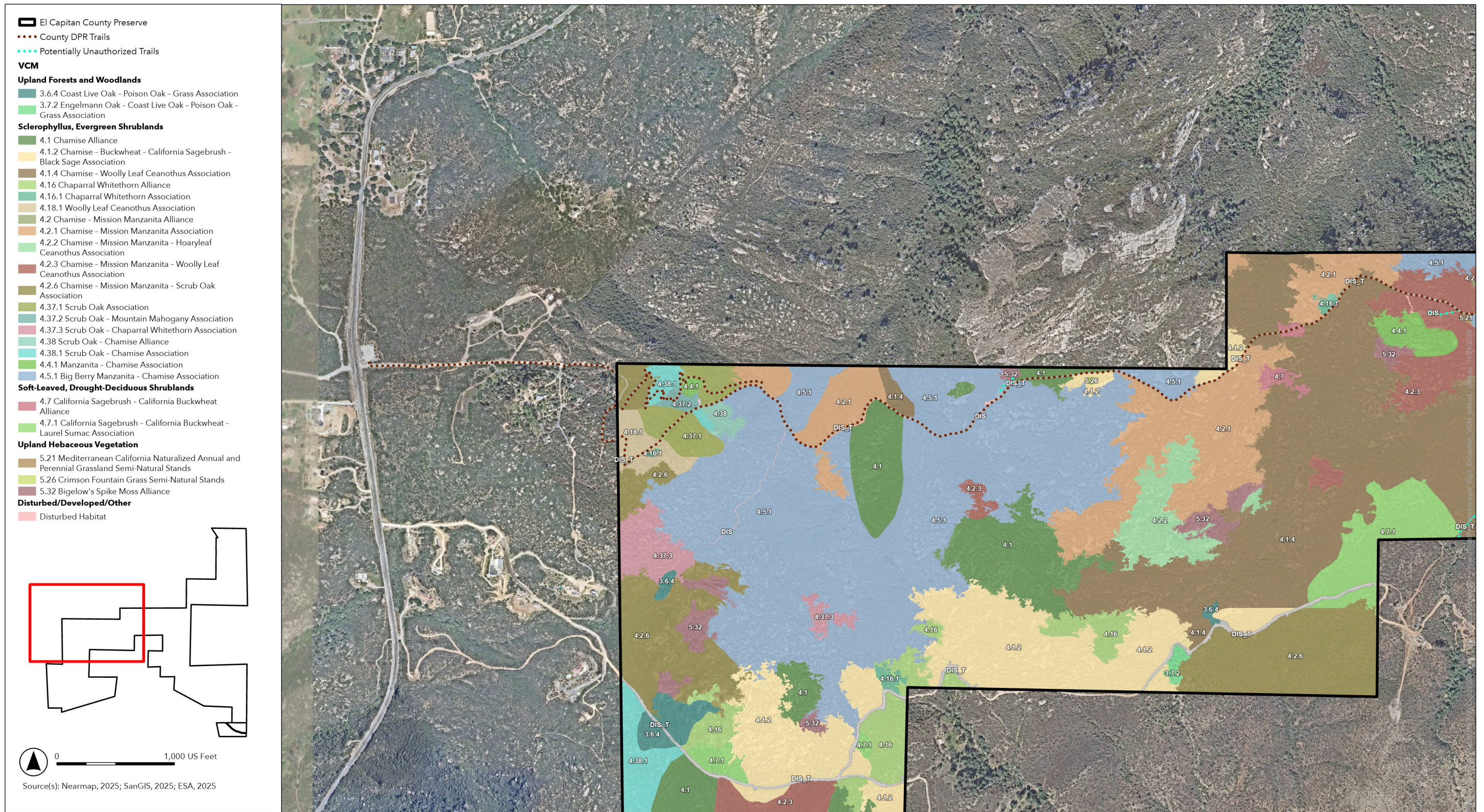


Figure 3c
Vegetation Communities - Vegetation Classification Manual (VCM) for Western San Diego County
El Capitan County Preserve

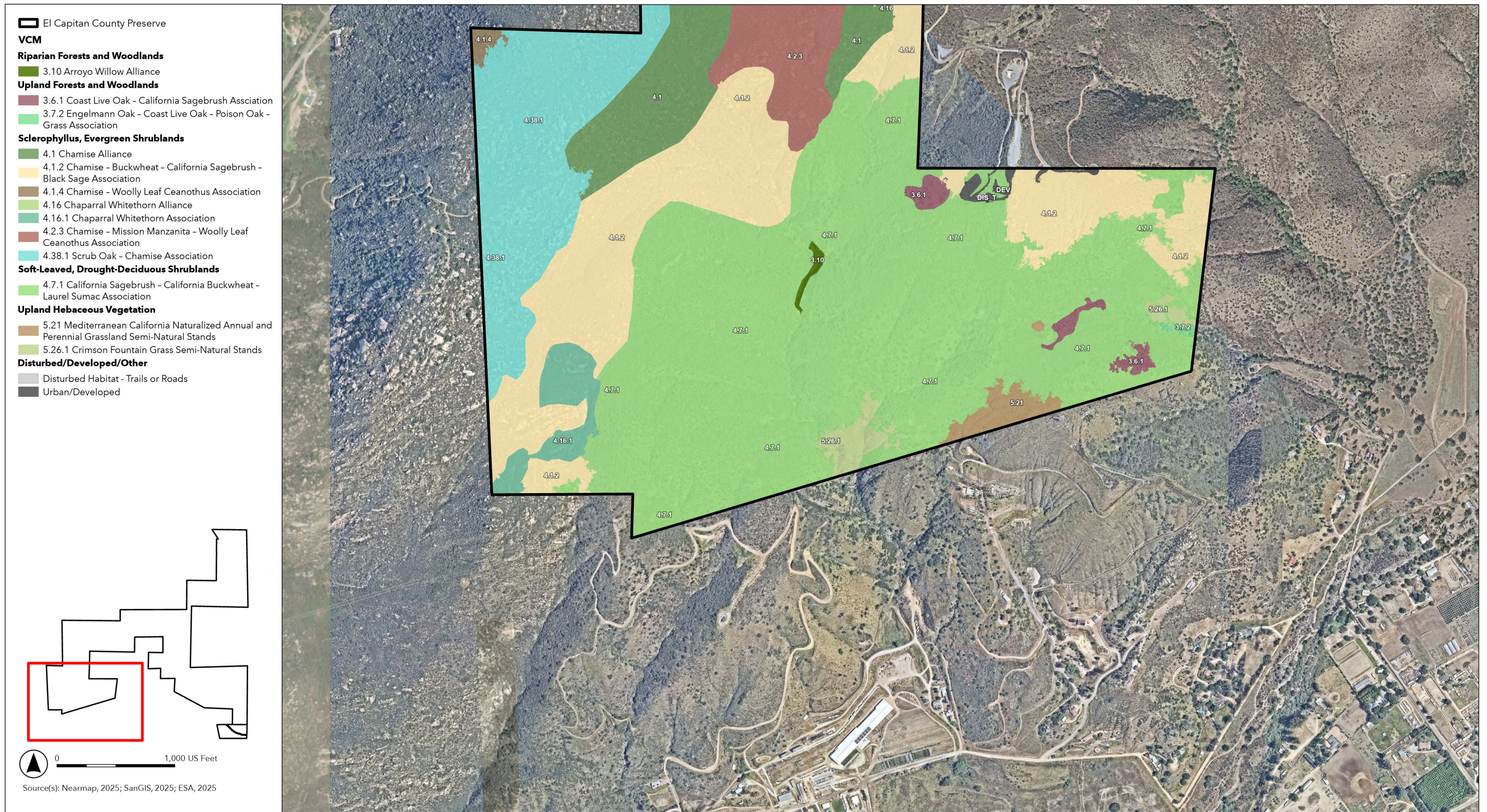


Figure 3d
Vegetation Communities - Vegetation Classification Manual (VCM) for Western San Diego County
El Capitan County Preserve

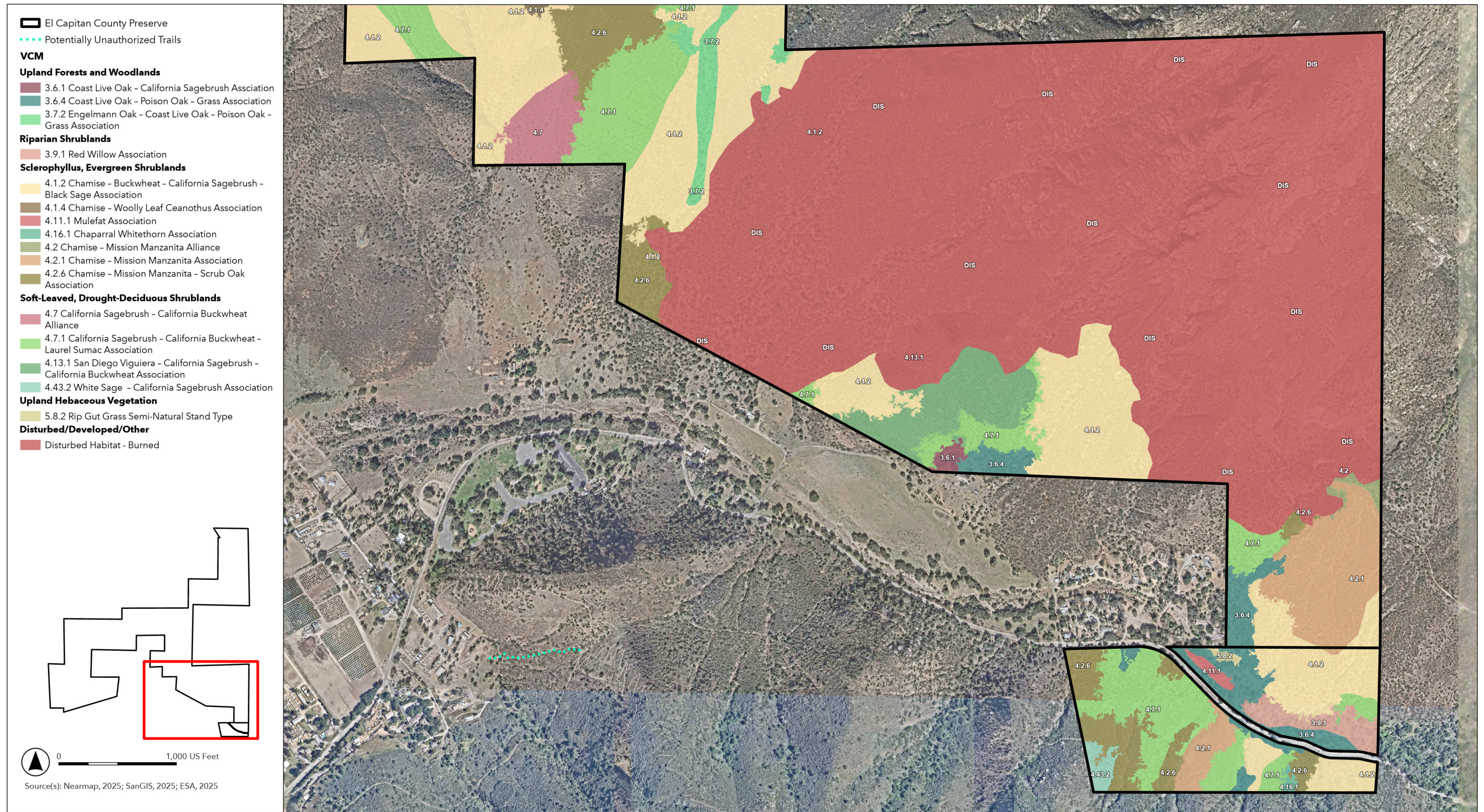


Figure 3e
Vegetation Communities - Vegetation Classification Manual (VCM) for Western San Diego County
El Capitan County Preserve

Invasive Non-Native Plant Observations

A total of 16 limited to high-risk invasive non-native plant species (as determined by Cal-IPC) were detected during field surveys on El Capitan County Preserve (**Table 4** and **Figure 4a–Figure 4e**) and an additional 2 (crown daisy [*Glebionus coronaria*] and devil’s thorn [*Emex spinosa*]) were observed within 100 feet of the preserve limits. Of these species, four were identified as having an SDCRPR. Invasive non-native plant species that were ubiquitous throughout the preserve were not mapped, but general locations are provided in **Table 4**. The Cal-IPC and SDCRPR were taken into consideration when determining the recommended action and should be referenced for specific treatment methods. The recommended actions for the species detected are as follows:

- **Remove.** One large Canary Island palm (*Phoenix canariensis*) was observed growing approximately 50 feet north of El Monte Road in the riparian area in the southeastern portion of the preserve. This species tends to grow in clusters that form a dense canopy and exclude light from reaching beneath them, leading to a loss of native plants (Cal-IPC 2025); therefore, this individual is recommended for removal, and follow-up visits are recommended to detect any seedlings. Also remove the single tamarisk (*Tamarix ramosissima*) occurring along El Cajon Trail edge as soon as possible to prevent seeds spreading downstream in the preserve.
- **Treat.** Pampas grass (*Cortaderia selloana*) is present as small infestations within the preserve and is recommended for prompt treatment due to this invasive non-native plant species threatening nearby rare plant species. Crimson fountain grass (*Pennisetum setaceum*) is abundant, particularly on south-facing, exposed slopes leading into El Monte Valley. Due to the difficulty in accessing this plant species from existing trails/roads, full on-foot treatment may not be feasible. Consider coordinating with contractors specializing in drone herbicide application for effective control in portions of the preserve that are difficult to access on foot.
- **Monitor.** The remaining 12 invasive non-native plant species observed within the preserve have become naturalized, and cost-effective comprehensive treatment is not feasible. Areas dominated by non-native annual and perennial grasses in the far southern portion of the preserve have the potential to be treated and restored to prevent further habitat degradation, after comprehensive mapping to determine focus areas for restoration. Monitoring the preserve for invasive non-native plant species annually may be beneficial at documenting isolated infestations that can be treated before spreading into new areas of the preserve.

TABLE 4
INVASIVE NON-NATIVE PLANT SPECIES: EL CAPITAN COUNTY PRESERVE

Scientific Name	Common Name	Cal-IPC Ranking	San Diego County Regional Priority Ranking	Notes	Management Recommendation
<i>Avena barbata</i> ^a	slender wild oat	Moderate	–	This species is widespread within the southern slopes of the preserve into El Monte Valley and is most abundant below 1,800 feet above sea level. This species is most abundant in disturbed, sage scrub and sage scrub – chaparral transitional habitats.	Monitor
<i>Brachypodium distachyon</i> ^a	purple false brome	Moderate	Very High – Level 1	This species was observed in isolated areas mainly within sage scrub, non-native grasslands, and disturbed areas within the southwestern portion of the preserve within El Monte Valley.	Monitor
<i>Brassica tournefortii</i>	Saharan mustard	High	–	A significant number of individuals were identified within sage scrub habitat in the southwestern boundary of the preserve.	Monitor
<i>Bromus diandrus</i> ^a	ripgut grass	Moderate	–	This species is widespread within the southern slopes of the preserve into El Monte Valley and is most abundant below 1,800 feet above sea level. This species is most abundant in disturbed, sage scrub and sage scrub – chaparral transitional habitats.	Monitor
<i>Bromus rubens</i> ^a	red brome	High	–	This species is widespread within the southern slopes of the preserve into El Monte Valley and is most abundant below 1,800 feet above sea level. This species is most abundant in disturbed, sage scrub and sage scrub – chaparral transitional habitats.	Monitor
<i>Centaurea melitensis</i> ^a	toçalote	Moderate	–	This species is widespread within the southern slopes of the preserve into El Monte Valley and is most abundant below 2,200 feet above sea level. This species is most abundant in disturbed, sage scrub and sage scrub – chaparral transitional habitats.	Monitor
<i>Cortaderia selloana</i>	pampas grass	High	–	Several dense patches were observed along trails throughout the northern portion of the preserve generally above 2,200 feet above sea level, within the hiking trail and drainages adjacent to the trail.	Remove
<i>Emex spinosa</i>	Devil's thorn	Moderate	Medium – Level 3	This species was not observed within the limits of the preserve; however, it was present along an access road within 100 feet of the preserve boundary and has the potential to spread into the preserve.	Monitor
<i>Ehrharta longiflora</i>	long-flowered veldt grass	Moderate	Medium – Level 3	Observed in patches on the lower slopes of El Monte Valley.	Treat

Scientific Name	Common Name	Cal-IPC Ranking	San Diego County Regional Priority Ranking	Notes	Management Recommendation
<i>Glebionis coronaria</i>	crown daisy	Limited	Low – Level 3	Not observed within the preserve; however, present along an access road, within 100 feet of the preserve, in the far southwest portion of the preserve. This species has the potential to spread into the preserve.	Monitor
<i>Hirschfeldia incana</i> ^a	short-pod mustard	Moderate	–	This species is widespread within the southern slopes of the preserve into El Monte Valley and is most abundant below 1,600 feet above sea level. This species is most abundant in disturbed, sage scrub and sage scrub – chaparral transitional habitats.	Monitor
<i>Nicotiana glauca</i> ^a	tree tobacco	Moderate	–	Occurs in isolated areas along the southern slopes of the preserve within El Monte Valley and is most abundant in non-native grassland habitats.	Remove
<i>Pennisetum setaceum</i>	crimson fountain grass	Moderate	–	Dense patches were identified on slopes throughout central areas within the preserve, particularly on southern-facing and exposed slopes from 2,800 feet above sea level, toward the bottom of El Monte Valley.	Monitor
<i>Phoenix canariensis</i>	Canary Island palm	Limited	–	One individual was identified within the riparian area adjacent to El Monte Road.	Remove
<i>Rumex crispus</i> ^a	curly dock	Limited	–	Dense patches were observed within portions of the San Diego River, riparian scrub habitat.	Treat
<i>Tamarix ramosissima</i>	tamarisk	High	–	One individual was observed along an authorized trail within the western portion of the preserve	Remove

Notes:

a. These species were detected within the preserve but not mapped; species were found to be widespread throughout the preserve.

Cal-IPC Ranking:

- **High** – These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate-to-high rates of dispersal and establishment. Most are widely distributed ecologically.
- **Moderate** – These species have substantial and apparent—but generally not severe—ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.
- **Limited** – These species are invasive, but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.
- **Alert** – An alert is listed on species with High or Moderate impacts that have limited distribution in California but may have the potential to spread much further.
- **Watch** – These species have been assessed as posing a high risk of becoming invasive in California in the future.

San Diego County Regional Priority Ranking (Cal-IPC, Dendra, CBI 2012):

- **Very High – Level 1 Surveillance.** Low effort required to achieve the goal of regional surveillance, early detection, rapid response.
- **High – Level 2 Eradication.** Moderate effort is required to achieve goal of eradication with a regionally coordinated control program.
- **Medium – Level 3 Containment.** Funding typically available for retreatments or control of small populations. Goal is eradication with coordinated programs by management unit or watershed.
- **Medium – Level 4 Directed Management.** Area may be managed effectively, with slow reinvasion. Goal is to control within reserve or sub-management unit to benefit NCCP resources.
- **Low – Level 5 Directed Suppression.** Control is typically of short-term benefit (rapid reinvasion) without active restoration. Goal is suppression, typically to allow recovery of the disturbed site, improve revegetation success, or benefit NCCP resources.

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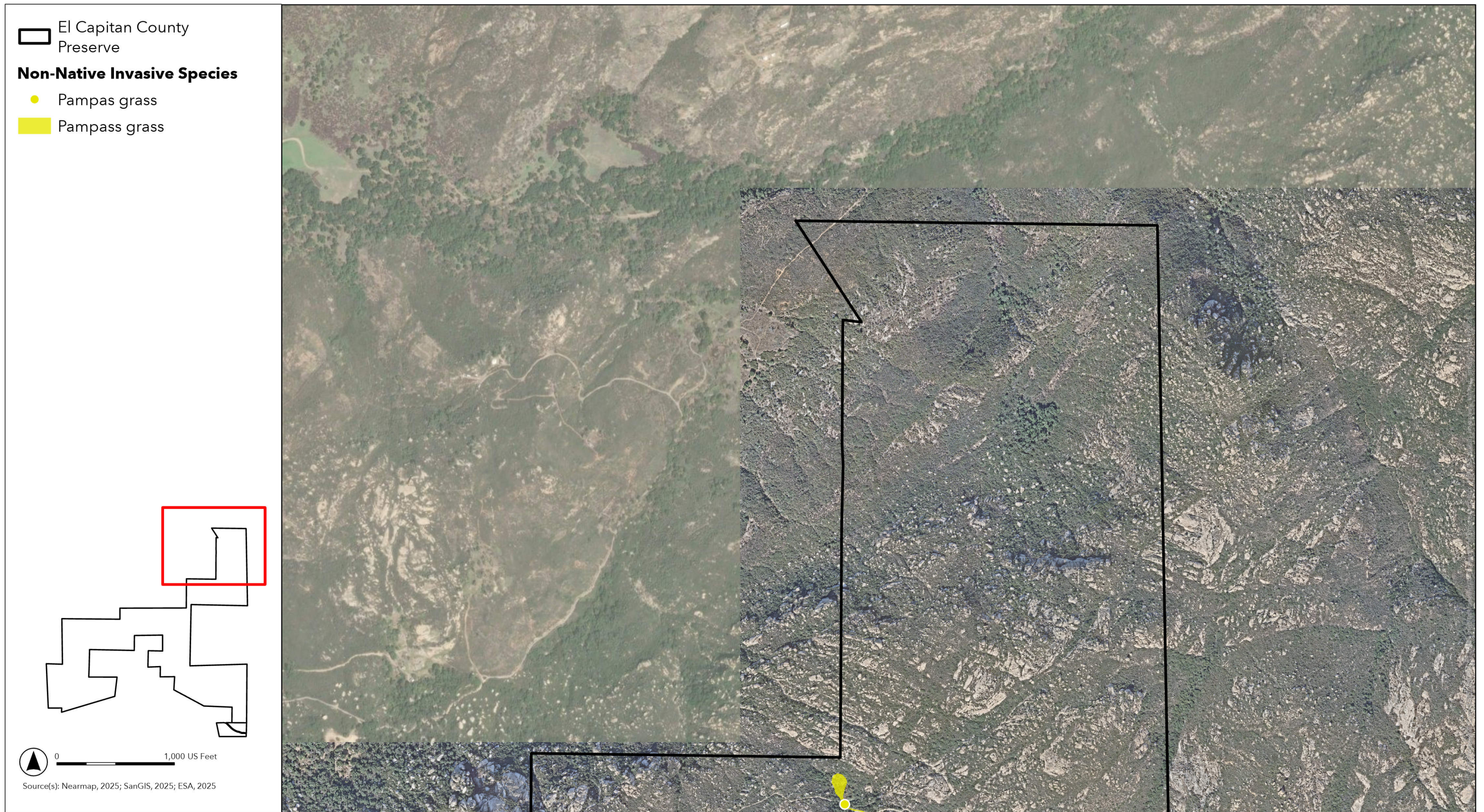


Figure 4a
 Invasive Non-Native Plant Observations
 El Capitan County Preserve

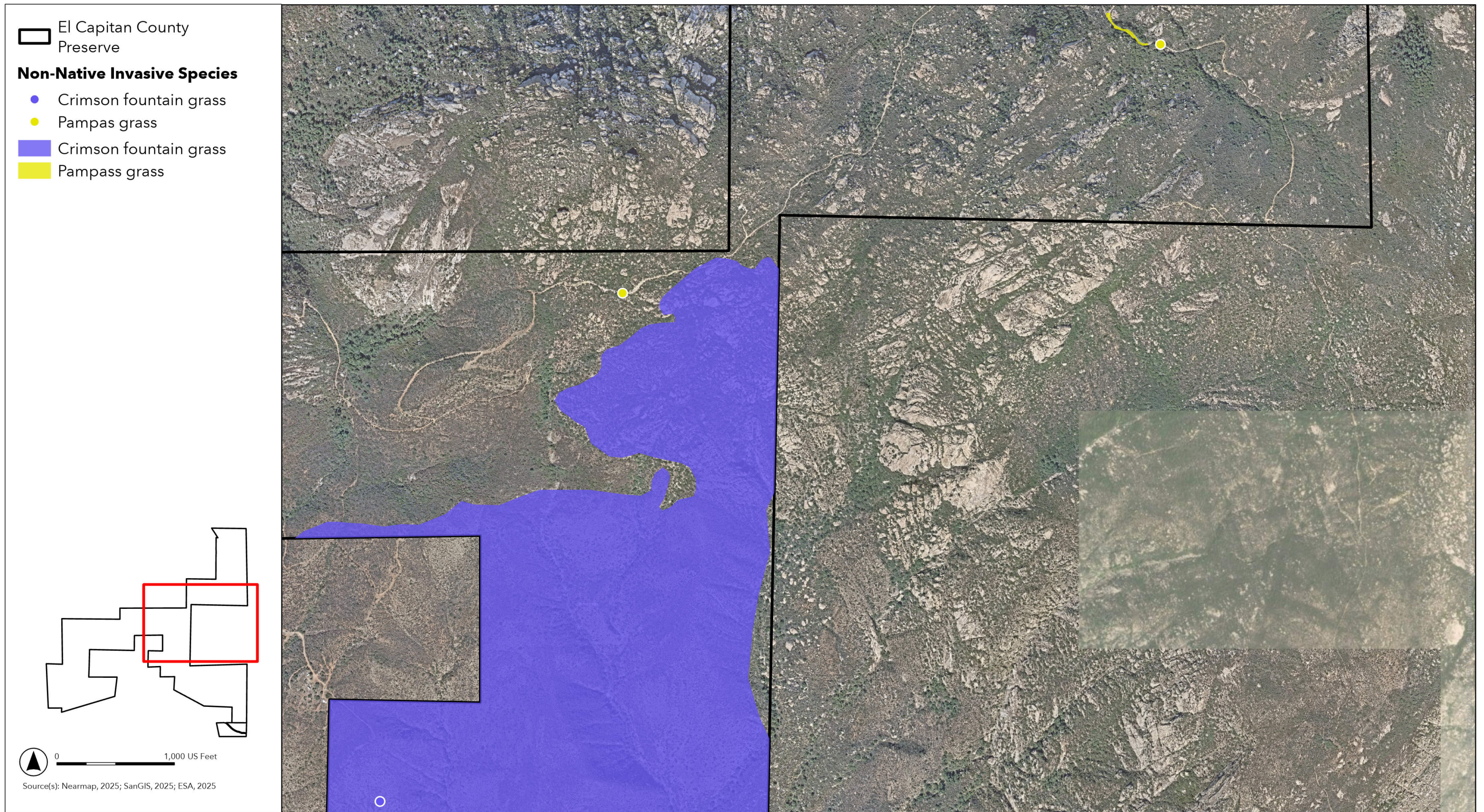


Figure 4b
 Invasive Non-Native Plant Observations
 El Capitan County Preserve

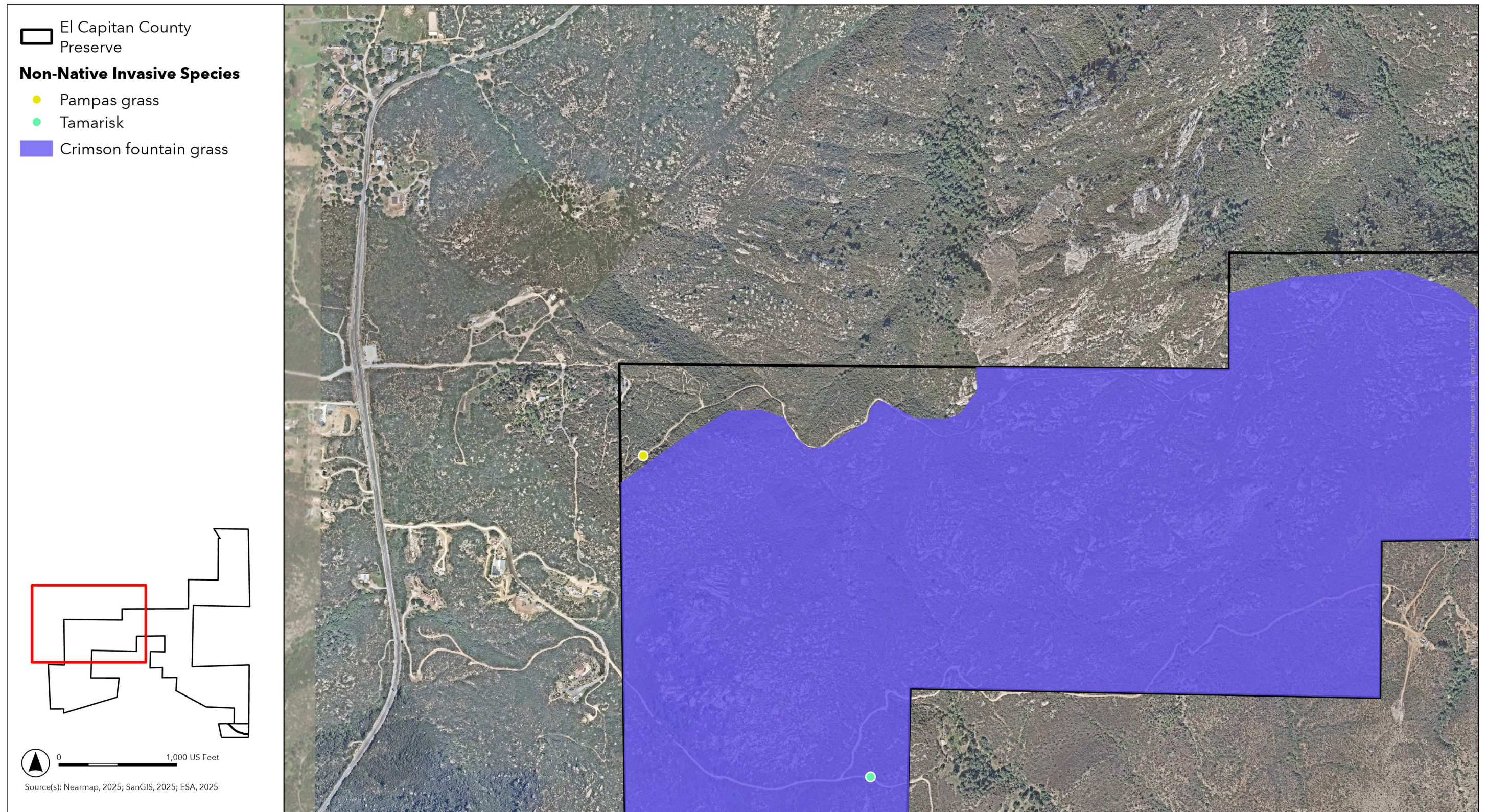


Figure 4c
 Invasive Non-Native Plant Observations
 El Capitan County Preserve

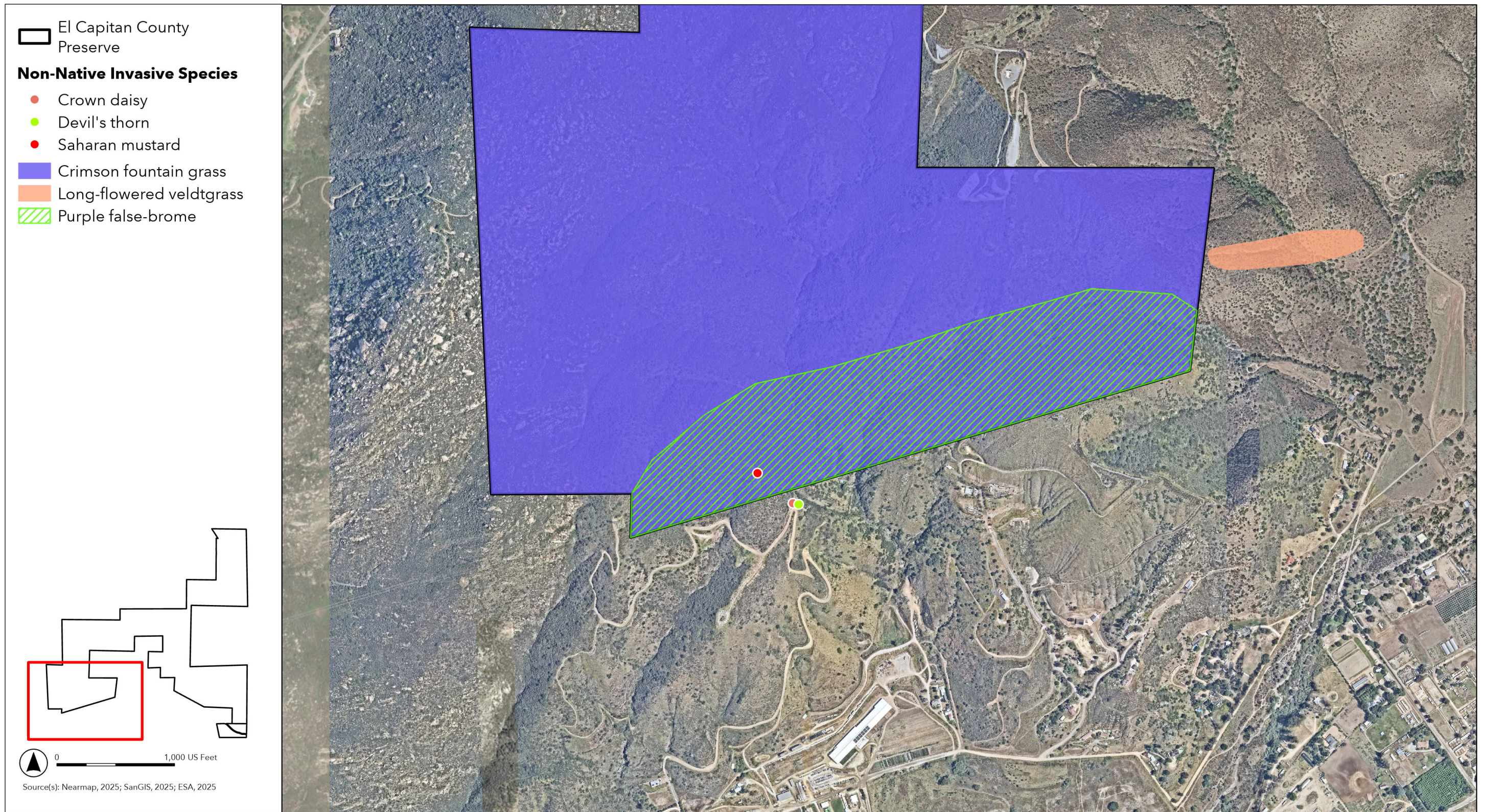


Figure 4d
 Invasive Non-Native Plant Observations
 El Capitan County Preserve

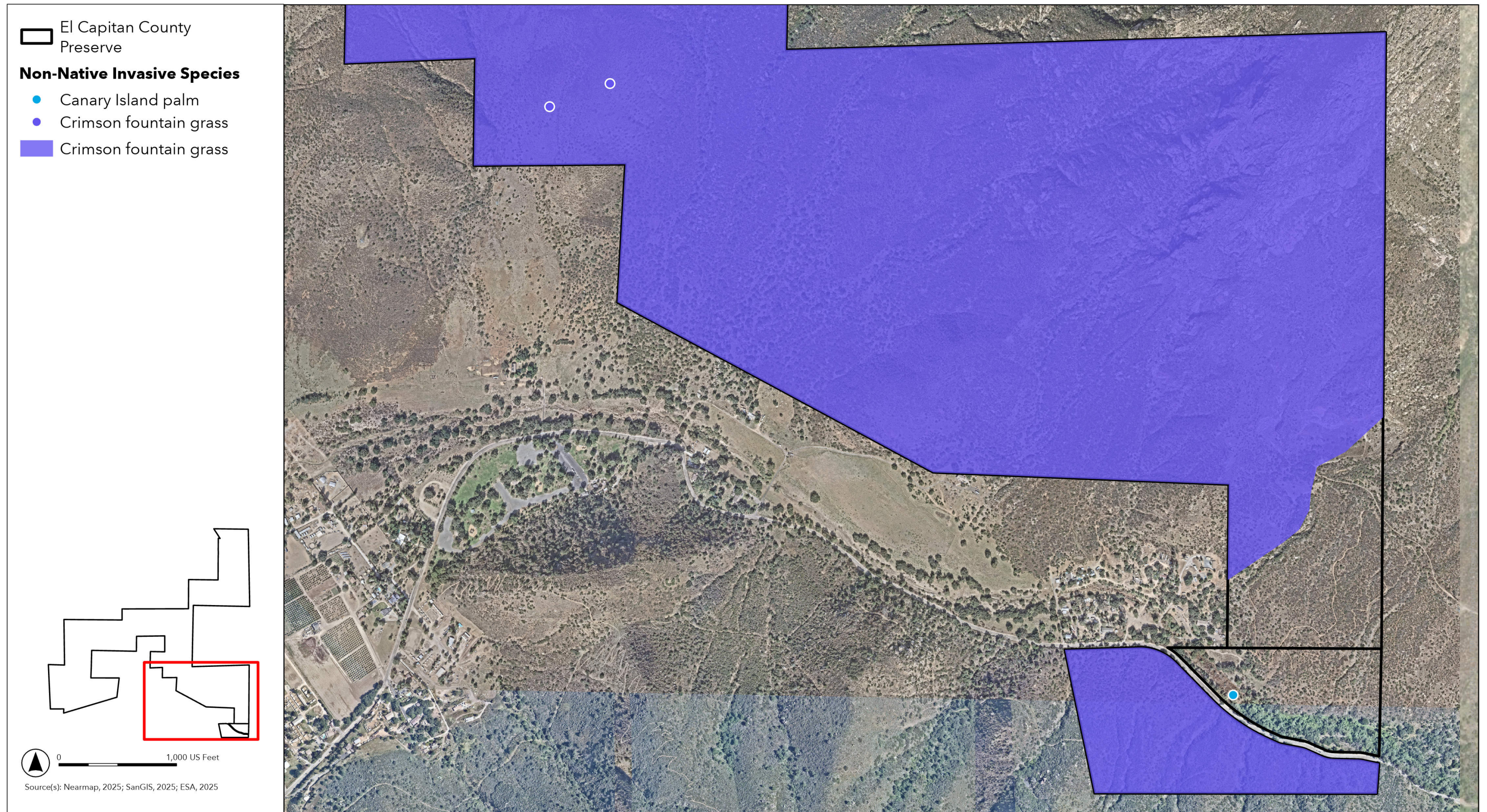


Figure 4e
 Invasive Non-Native Plant Observations
 El Capitan County Preserve

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Incidental Sensitive Plant and Wildlife Observations

Seven sensitive plant species and four sensitive wildlife species were incidentally detected and mapped during field surveys for El Capitan County Preserve (Table 5 and Figure 5a–Figure 5e).

TABLE 5
INCIDENTAL PLANT AND ANIMAL OBSERVATIONS: EL CAPITAN COUNTY PRESERVE

Scientific Name	Common Name	Federal/ State Status	San Diego County Special- Status List	MSCP- Covered Species	California Rare Plant Rank	Notes
Plants						
<i>Baccharis vanessae</i> ^a	Encinitas baccharis	FT/CE	List A	MSCP	1B.1	Observed along trails in the northeastern portion of the preserve. This is a previously unknown occurrence of the species and should be monitored accordingly.
<i>Ceanothus cyaneus</i>	Lakeside ceanothus	–/–	List A	MSCP	1B.2	Observed throughout the preserve.
<i>Horkelia truncata</i>	Ramona horkelia	–/–	List A	–	1B.3	Observed along trails in the northeastern portion of the preserve.
<i>Monardella hypoleuca</i> ssp. <i>lanata</i>	Felt leaved monardella	–/–	List A	MSCP	1B.2	Observed along trails in the northeastern portion of the preserve.
<i>Piperia cooperi</i>	Chaparral rein orchid	–/–	List D	–	4.2	Observed along trails in the northeastern portion of the preserve.
<i>Quercus engelmannii</i>	Engelmann oak	–/–	List D	–	4.2	Observed throughout the preserve, primarily within ravines.
<i>Ribes canthariforme</i>	Moreno currant	–/–	List A	–	1B.3	Observed along trails in the northeastern portion of the preserve.
Animals						
<i>Accipiter cooperii</i>	Cooper’s hawk	–/–	Group 1	MSCP	–	Observed flying over preserve.
<i>Aimophila ruficeps</i>	Southern California rufous-crowned sparrow	–/–	Group 1	MSCP	–	Observed in the eastern portion of the preserve.
<i>Haliaeetus leucocephalus</i>	Bald eagle	BGEPA/ CE	Group 1	MSCP	–	Observed flying over preserve.
<i>Cnemidophorus tigris stejnegeri</i>	Coastal western whiptail	–/–	–	–	–	Observed along the trail within the central portion of the preserve.

Notes:

a. This species was not previously identified in the preserve

Federal/State Status:

- FE – Federally Endangered
- FT – Federally Threatened
- BGEPA – Bald and Golden Eagle Protection Act
- CE – California Endangered
- CT – California Threatened
- SSC – CDFW Species Special Concern

San Diego County Special-Status List:

- LIST A (Plants rare, threatened or endangered in California and elsewhere)
- LIST B (Plants rare, threatened or endangered in California but more common elsewhere)
- LIST C (Plants which may be quite rare, but need more information to determine their true rarity status)
- LIST D (Plants of limited distribution and are uncommon, but not presently rare or endangered)
- CA rare (rare in California, but not listed)
- NE (MSCP Narrow Endemic)

Scientific Name	Common Name	Federal/ State Status	San Diego County Special- Status List	MSCP- Covered Species	California Rare Plant Rank	Notes
MSCP Covered Species:						
<ul style="list-style-type: none"> MSCP – South County MSCP 						
California Rare Plant Rank:						
<ul style="list-style-type: none"> 1A – Plants presumed extirpated in California and either rare or extinct elsewhere 1B – Plants rare, threatened, or endangered in California and elsewhere 2A – Plants presumed extirpated in California but common elsewhere 2B – Plants rare, threatened, or endangered in California but more common elsewhere 3 – Review List: Plants about which more information is needed 4 – Watch List: Plants of limited distribution 0.1 – Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat) 0.2 – Moderately threatened in California (20%-80% occurrences threatened/moderate degree and immediacy of threat) 0.3 – Not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known) 						
Other:						
<ul style="list-style-type: none"> Unk – Unknown due to timing of survey and life stage of individual 						

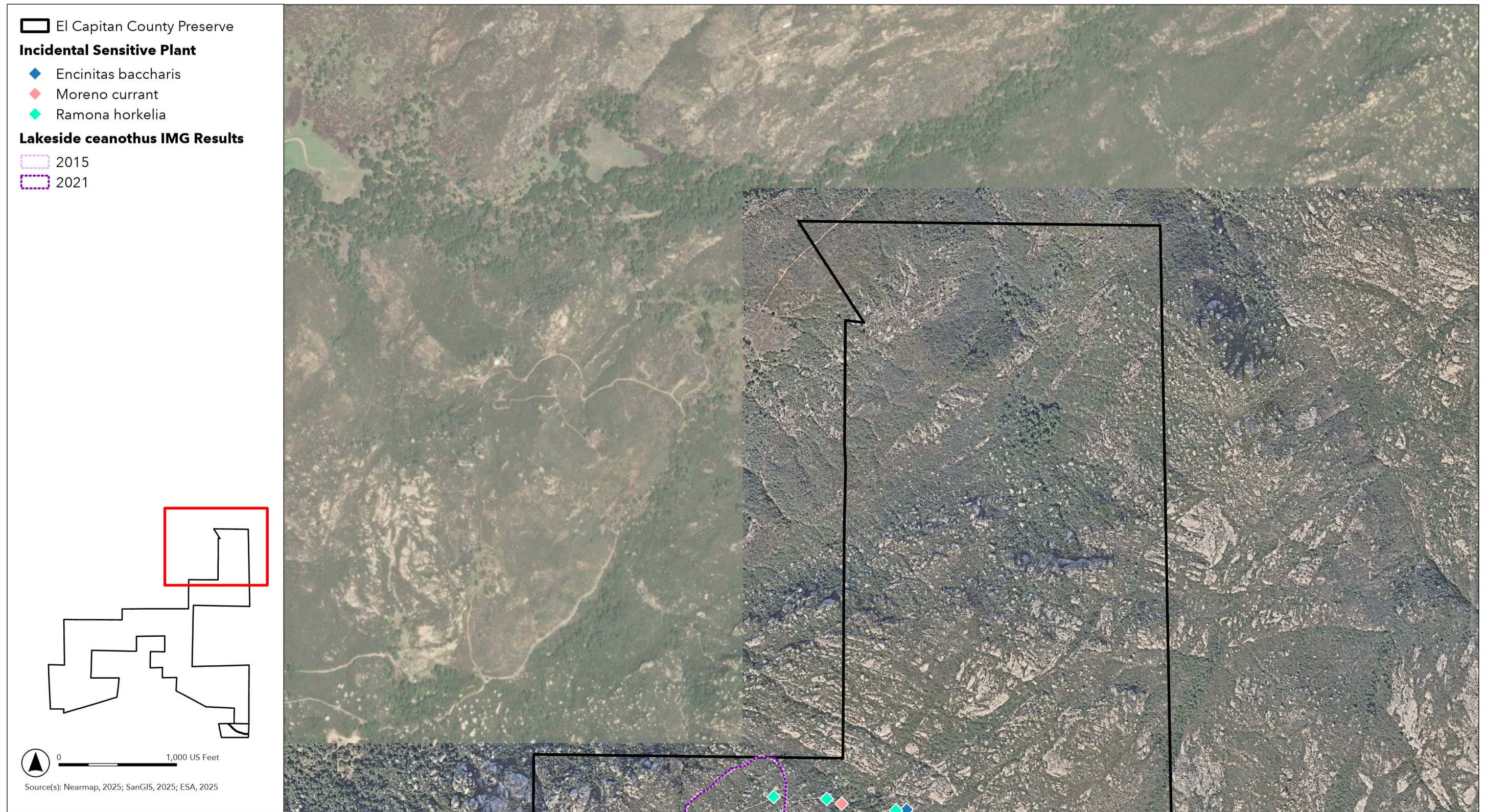


Figure 5a
 Incidental Sensitive Plant and Wildlife Observations
 El Capitan County Preserve

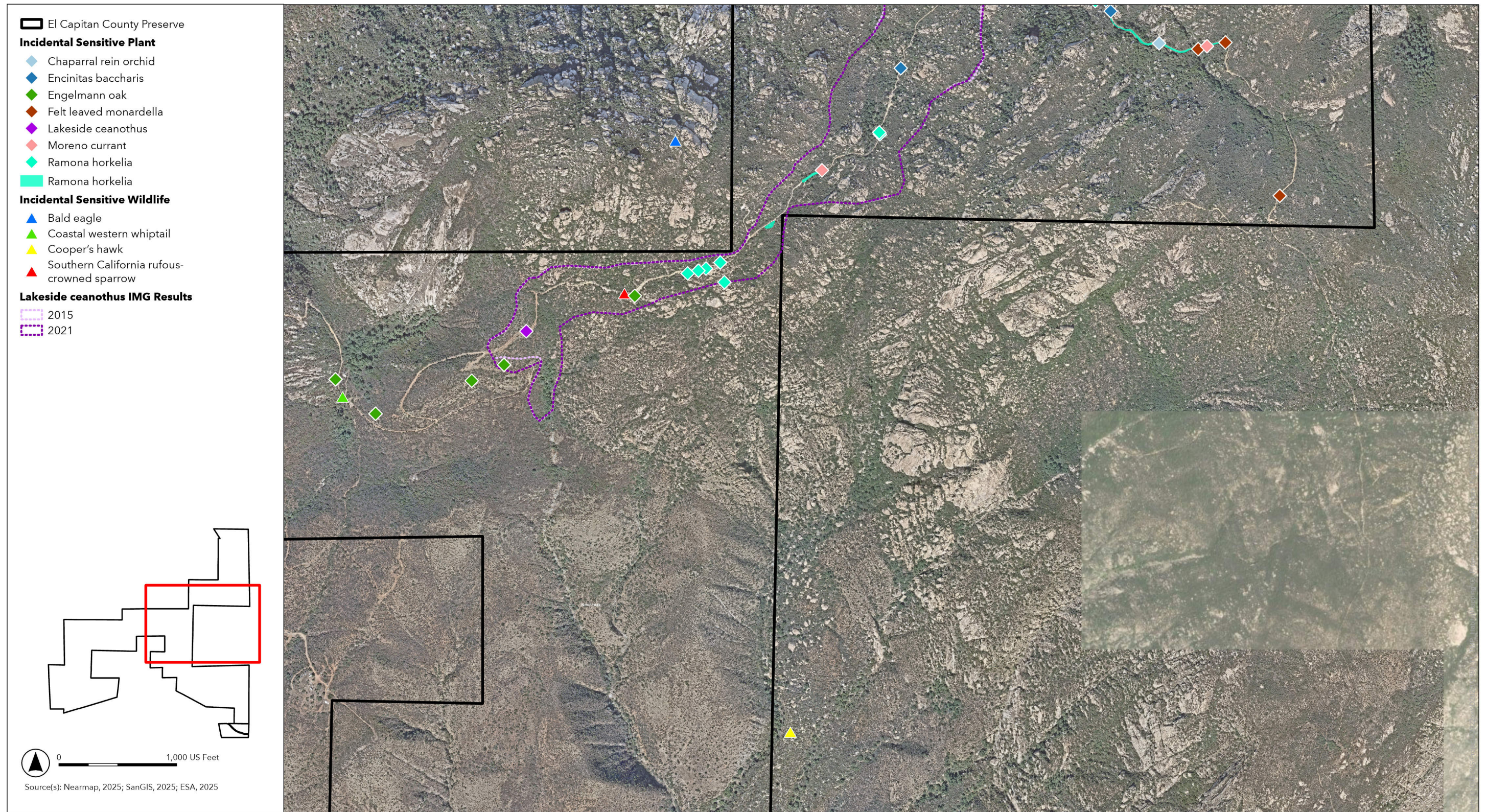


Figure 5b
Incidental Sensitive Plant and Wildlife Observations
El Capitan County Preserve

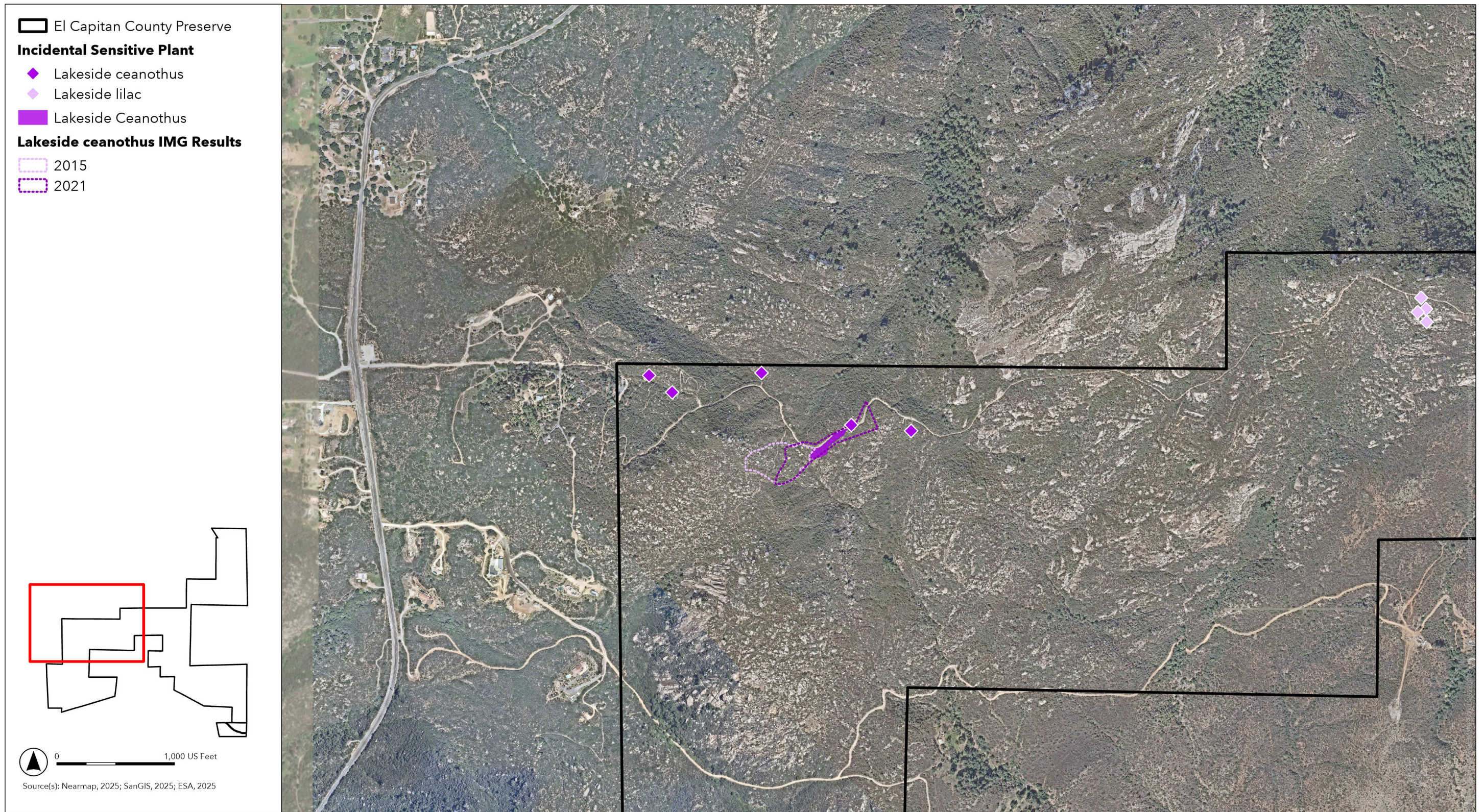


Figure 5c
 Incidental Sensitive Plant and Wildlife Observations
 El Capitan County Preserve

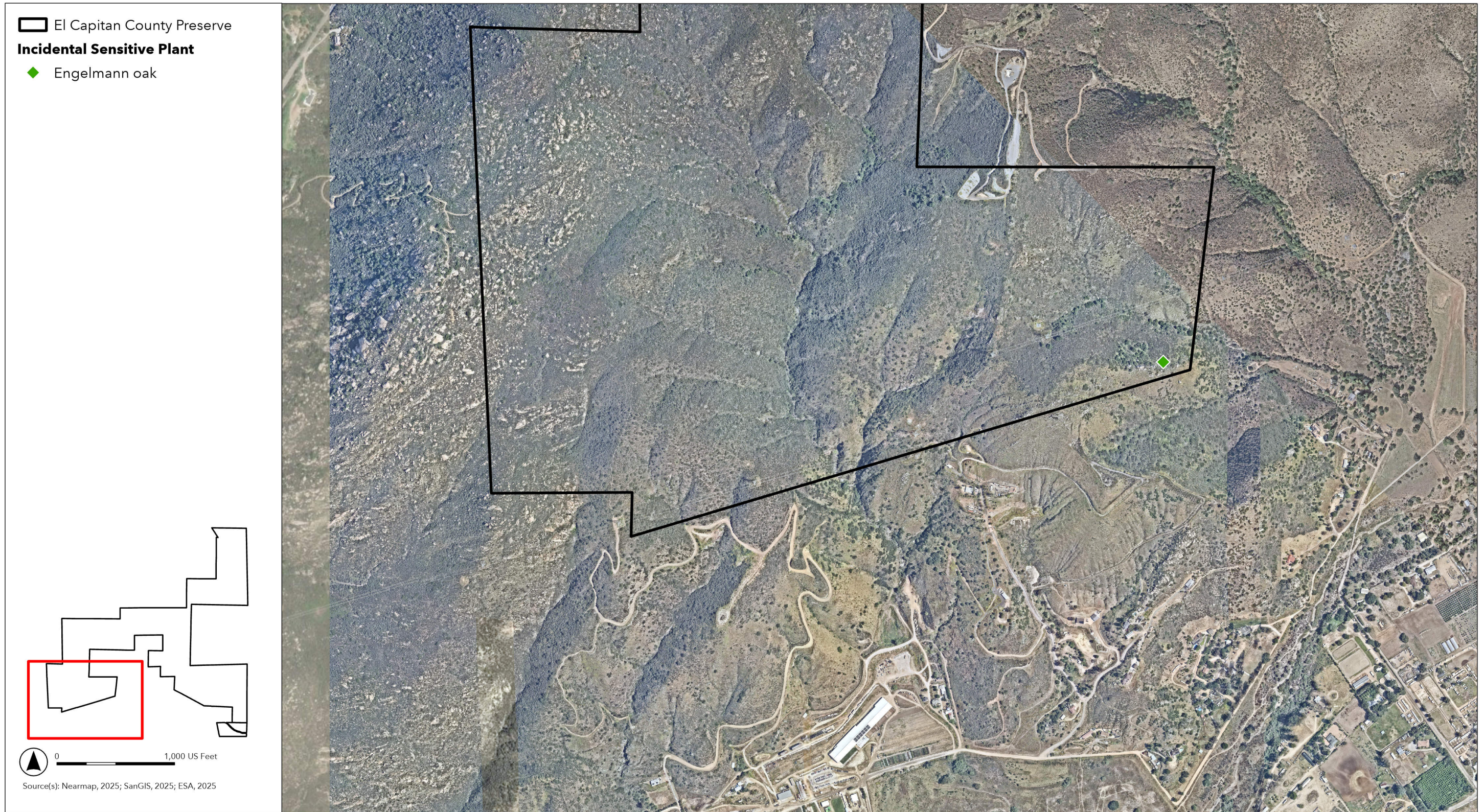


Figure 5d
Incidental Sensitive Plant and Wildlife Observations
El Capitan County Preserve

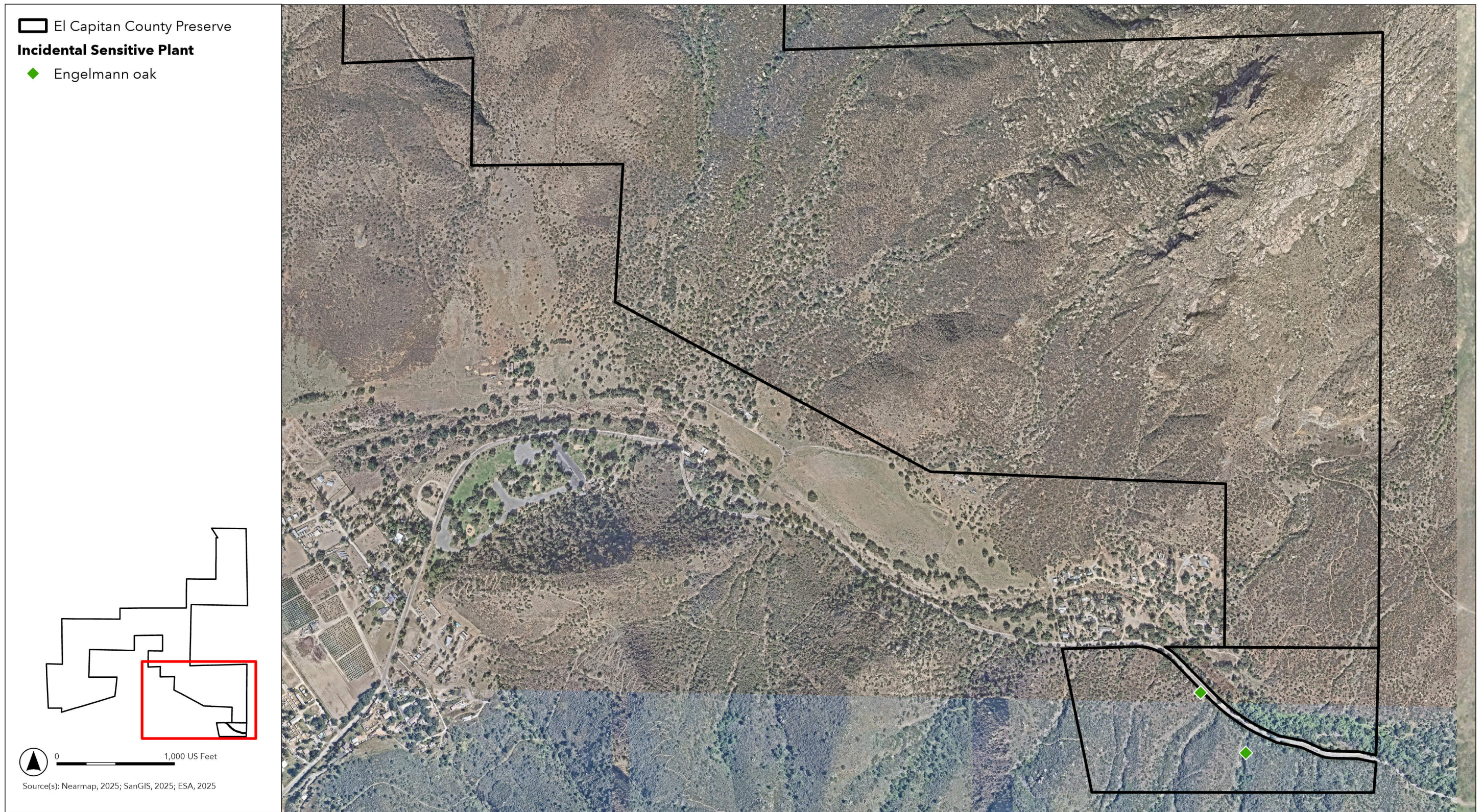


Figure 5e
Incidental Sensitive Plant and Wildlife Observations
El Capitan County Preserve

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Habitat Condition and Threats Assessment

Threats Assessment

Based on the field surveys, biologists took note of any major issues that could pose a threat to the vegetation communities within the El Capitan County Preserve. A list of primary threats identified in the (IMG protocol is presented in **Table 6**, along with a discussion of the severity of each threat within the preserve (presented as the extent within the preserve on a scale of 1 to 7).

TABLE 6
THREATS OVERVIEW: EL CAPITAN COUNTY PRESERVE

Disturbances/Stressors	Severity (Extent)	Discussion
Invasive non-native plant species (e.g., annual grasses and herbs)	4	Various invasive non-native annual and perennial plant species are scattered throughout the preserve. Crimson fountain grass and pampas grass appear to be the highest threat to native habitats within the preserve. Evidence of type conversion by these species was observed.
Altered fire regime or risk of catastrophic fire	4	Multiple fires have been recorded within the El Capitan Preserve, the most recent of which was the Monte Fire in 2025. The Monte Fire heavily damaged approximately 17% of the preserve area (425 acres), though chaparral habitats that dominate the burn area are expected to regenerate naturally, with likely higher abundance in non-native annual and perennial species for the first 10–15 years. Risk of future fires in El Capitan is very high and poses the most significant threat to the preserve.
Unauthorized human use (e.g., off-road vehicles, encampments, unauthorized trails, shooting, poaching, and/or dumping)	3	Minimal potentially unauthorized trails were observed in the preserve. One potentially unauthorized trail connects the residential development southwest of the preserve to the authorized trail in the western portion of the preserve. The remaining potentially unauthorized trails branch off the authorized trail in the north of the preserve to reach rocky outcroppings and overlooks or to provide shortcuts.
Shothole borer, gold-spotted oak borer, and <i>Fusarium</i> fungal invasion	–	The site was not assessed for invasive insect species or fungi. Limited amounts of host species present for shothole borer, gold-spotted oak borer, or <i>Fusarium</i> dieback. Several dead oak trees were observed within the preserve but cause of death was not determined.
Erosion	3	Erosion was observed in multiple locations on the preserve, though it appears to be causing minimal impact. The most significant erosion was observed in the form of deep erosional rills throughout the authorized main trail to the peak. An additional access road, presumably for access to utility poles near the preserve trailhead parking lot, was also observed with erosional riling. Significant erosion may occur during the 2025/2026 rain season within the Monte Fire burn area.
Small, isolated occurrences vulnerable to loss of genetic diversity and to extirpation due to environmental stochasticity or catastrophic disturbance.	3	A new population of Encinitas baccharis was observed during the habitat assessment and may be subject to extirpation because of fires or habitat loss.
Altered hydrology (e.g., urban runoff, flood control facilities)	3	Altered hydrology within the preserve is restricted to where the San Diego River flows through the preserve, downstream of the El Capitan Lake Dam.
Herbivory (e.g., seed, vegetation)	1	N/A
Detrimental edge effects from adjacent urban development	4	Edge effects were largely absent from the preserve due to limited urban development adjacent to preserve limits. The Monte Fire, which started within rural developed areas along El Monte Road, ultimately caused significant damage to 17% of the preserve.

Notes:

Disturbance Categories within Preserve:

1 – No sign of disturbance within preserve

2 – Disturbance does not occur within preserve, but is detected adjacent to preserve boundaries

Disturbances/Stressors	Severity (Extent)	Discussion
3 – Disturbance occurs in >0% to <10% of preserve		
4 – Disturbance occurs in 10% to <25% of preserve		
5 – Disturbance occurs in 25% to <50% of preserve		
6 – Disturbance occurs in 50% to <75% of preserve		
7 – Disturbance occurs in ≥75% of preserve		

Type Conversion

To detect potential type conversions within the preserve, Holland-Oberbauer vegetation mapping was used to compare the acreage of each habitat type that was previously mapped with the current acreage by habitat type (Table 7).

TABLE 7
TYPE CONVERSION ASSESSMENT BASED ON HOLLAND-OBERBAUER MAPPING: EL CAPITAN COUNTY PRESERVE

Habitat Type	Acres in 2015	Acres in 2025 ^a	Difference in Acreage	Acres Burned in 2025 Monte Fire
Disturbed/Developed	12.98	423.93	410.95	0.00
Chaparral	1,882.63	1,768.12 (32.11)	-114.50	184.85
Herbaceous	12.50	27.61 (0.22)	15.11	0.00
Riparian	177.71	20.82 (4.98)	-156.89	86.36
Scrub	452.02	378.78 (20.55)	-73.24	109.37
Woodland	53.59	38.16 (8.14)	-15.43	34.12

a. Acreage in parenthesis indicates areas not previously mapped in 2015.

Disturbed/developed habitat has increased from 12.98 acres in 2015 to 423.93 acres in 2025. This 410.95-acre increase is due to classifying the 2025 Monte Fire burn scar in the southeast corner of the preserve as disturbed habitat.

Chaparral communities decreased from 1,882.63 acres in 2015 to 1,768.12 acres in 2025. This 114.50-acre decrease is primarily due to reclassifying previously mapped 37120 southern mixed chaparral to disturbed habitat to define the 2025 burn scar in the southeast corner of the preserve. An additional 32.11 acres of chaparral habitat were mapped in 2025 that were not mapped in 2015, specifically in the southeastern corner of the preserve along El Monte Road.

Herbaceous communities increased from 12.50 acres in 2015 to 27.61 acres in 2025. This 15.11-acre increase is in part due to increased mapping accuracy, in addition to reclassifying previously mapped 37120 southern mixed chaparral and 71161 open coast live oak woodland to 42200 non-native grassland habitat. An additional 0.22 acres of herbaceous habitat were mapped in 2025 that were not mapped in 2015, specifically in the southeastern corner of the preserve along El Monte Road.

Riparian communities decreased from 177.71 acres in 2015 to 20.82 acres in 2025. This 156.89-acre decrease is primarily due to reclassifying previously mapped 32720 alluvial riparian scrub to 32500 Diegan coastal sage scrub and 37120 southern mixed chaparral in the southwestern portion of the preserve as this habitat type more accurately describes the vegetation community here. An additional

4.98 acres of riparian habitat were mapped in 2025 that were not mapped in 2015, specifically in the southeastern corner of the preserve along El Monte Road.

Scrub communities decreased from 452.02 acres in 2015 to 378.78 acres in 2025. This 73.24-acre decrease is due to classifying the 2025 Monte Fire burn scar in the southeast corner of the preserve as disturbed habitat. An additional 20.55 acres of scrub habitat were mapped in 2025 that were not mapped in 2015, specifically in the southeastern corner of the preserve along El Monte Road.

Woodland communities decreased from 53.59 acres in 2015 to 38.16 acres in 2025. This 15.43-acre decrease is due to classifying the 2025 Monte Fire burn scar in the southeast corner of the preserve as disturbed habitat. An additional 8.14 acres of woodland habitat were mapped in 2025 that were not mapped in 2015, specifically in the southeastern corner of the preserve along El Monte Road.

Adaptive Management Recommendations

Adaptive management recommendations were developed based on the general habitat condition and threats assessment conducted during habitat mapping for El Capitan County Preserve. Recommendations are provided for invasive non-native plant species management, habitat enhancement/restoration opportunities, encroachment, and monitoring. Recommendations are detailed in the following subsections, which were cross-referenced with the management directives and implementation measures described in the El Capitan Preserve Resource Management Plan (County of San Diego 2009b).

Invasive Non-Native Plant Species Management

As discussed in the invasive non-native plant observations section, several invasive non-native plant species were detected within the preserve. For each species, a recommended action was identified consisting of either removal, treatment, or monitoring, which should follow the preserve's RMP implementation measures IM B.2.1–IM B.3.3 (County of San Diego 2009b). Immediate removal of pampas grass and tamarisk is recommended. Due to the abundance of crimson fountain grass and occurrence on steep cliffs, total control of this species may not be practical. Final implementation of management activities and treatment methods shall be determined by the County based on priority.

Habitat Enhancement/Restoration Opportunities

- **Erosion.** The preserve appeared to be affected by erosion particularly in disturbed areas such as trails, adjacent to developed areas, and generally in areas where vegetation cover was low. The preserve would benefit from a focused assessment of erosion issues to better inform next steps, which may include stabilization methods in problem areas and/or revegetation of highly disturbed areas (i.e., conversion of unused roads to habitat). Erosion in the preserve was also detected in 2015 during the vegetation community mapping effort through the Comprehensive Monitoring Plan (ICF 2015).
- **Rare plants.** The preserve contained several sensitive plant species that would benefit from comprehensive mapping to determine management/restoration opportunities. Focused rare plant surveys are recommended to capture areas ideally suited for habitat enhancement and restoration, and those areas that may be extirpated by invasive non-native plant species. This could be accomplished through collaboration with SDMMMP. Consider seed collection and planting of Encinitas baccharis (*Baccharis vanessae*) in the vicinity of existing on-site population due to rarity and suitable habitat within the preserve. Reduction of pampas grass populations would directly benefit rare Ramona

horkelia (*Horkelia truncata*) and Encinitas baccharis that occur immediately adjacent to pampas grass infestations. If herbicide is used for treatment, abundant caution should be used to avoid potential overspray on rare plants nearby.

Encroachment

- **OHV usage.** Off-road vehicle use was not observed and does not appear to be a current threat to the preserve.
- **Access control.** Some potentially unauthorized trails were identified within the preserve. Ensure unauthorized trails are demarcated.

Monitoring

- **Invasive non-native plants.** Invasive non-native plant species mapping should be performed annually, if feasible, to inform treatment areas, assess new invasions or reinvasions, and determine effectiveness of treatments.
- **Public use.** El Capitan Preserve Trail has small amounts of erosion along the entire trail within the preserve. Previous repairs to the trail were visible during surveys but the trail may need continued maintenance or repair.
- **Catastrophic events.** Additional mapping and monitoring are recommended within the limits of the 2025 El Monte Fire, as feasible, since this area lacks trails and is steep, making it difficult to access on foot. Surveys should focus on determining the intensity of the burn, the progress of native plant regeneration/re-establishment, detection of any sensitive plants that may have been hard to detect before the fire, and the extent of invasive non-native plant encroachment, specifically pampas grass and crimson fountain grass, which occur near the burned area and may already exist in the seed bank. If detected, maintenance efforts should focus on these species, as they may increase fire intensity and frequency if they spread and outcompete native plants.

El Monte County Park

El Monte County Park is an approximately 88-acre day-use park located in Lakeside, an unincorporated community of central San Diego County. The park is north of Interstate 8, west of the El Capitan reservoir, and along El Monte Road. This park is located within the MSCP Plan Area (County of San Diego 1997).

Vegetation Mapping

A total of seven vegetation communities and two land cover types were identified via Holland-Oberbauer, and nine vegetation communities and two land cover types were identified via VCM for El Monte County Park. These communities are depicted in **Figure 6** and **Figure 7** and provided in crosswalk format in **Table 8**.

TABLE 8
VEGETATION COMMUNITIES CROSSWALK: EL MONTE COUNTY PARK

Oberbauer-Modified Holland Code	San Diego Vegetation Classification Manual		
	Alliance Level	Association Level	Acreage
Scrub			
32500 Diegan Coastal Sage Scrub	4.13 San Diego Viguiera Alliance	4.13.1 San Diego Viguiera – California Sagebrush – California Buckwheat Association	1.81
	4.23 California Buckwheat Alliance	4.23.1 California Buckwheat Association	2.41
	4.35 Laurel Sumac Alliance	4.35 Laurel Sumac Alliance	0.39
	4.7 California Sagebrush – California Buckwheat Alliance	4.7.1 California Sagebrush – California Buckwheat – Laurel Sumac Association	18.61
Herbaceous			
42200 Non-Native Grassland	3.6 Coast Live Oak Alliance	3.6.4 Coast Live Oak-Poison Oak-Grass Association	1.06
	5.8 Rippgut Grass – Purple False Brome Semi-Natural Stands	5.8.2 Rippgut Grass Semi-Natural Stand Type	7.84
	5.9 Red Brome Semi-Natural Stands	5.9.1 Red Brome Semi-Natural Stand Type	0.92
	Urban/Developed	Urban/Developed	4.47
42210 Non-Native Grassland: Broadleaf-Dominated	5.7 Black Mustard and Other Mustards Semi-Natural Stands	5.7 Black Mustard and Other Mustards Semi-Natural Stands	2.16
Riparian			
61310 Southern Coast Live Oak Riparian Forest	3.6 Coast Live Oak Alliance	3.6.4 Coast Live Oak – Poison Oak – Grass Association	8.81
Woodland			
71160 Coast Live Oak Woodland	3.6 Coast Live Oak Alliance	3.6 Coast Live Oak Association	1.89
71161 Open Coast Live Oak Woodland	3.6 Coast Live Oak Alliance	3.6 Coast Live Oak Association	12.05
		3.6.4 Coast Live Oak – Poison Oak – Grass Association	16.26
79000 Non-Native Woodland	Urban/Developed ^b	Urban/Developed ^b	0.75
Other^a			
11300 Disturbed Habitat – Roads and Trails	Disturbed Habitat – Trails or Roads	Disturbed Habitat – Trails or Roads	1.43
12000 Urban/Developed	Urban/Developed	Urban/Developed	6.38
TOTAL ACREAGE:^c			87.24

Notes:

- The San Diego Vegetation Classification Manual only classifies vegetated areas. The disturbed land cover types were described and displayed under the association level to provide additional detail in the mapping. This allows for changes in vegetation (e.g., unvegetated to vegetated) to be tracked over time.
- The San Diego Vegetation Classification Manual does not have a classification for ornamental, non-native woodlands. This type of vegetation was described as Urban/Developed in this report.
- Total may not match sum of individual acreages listed due to rounding.

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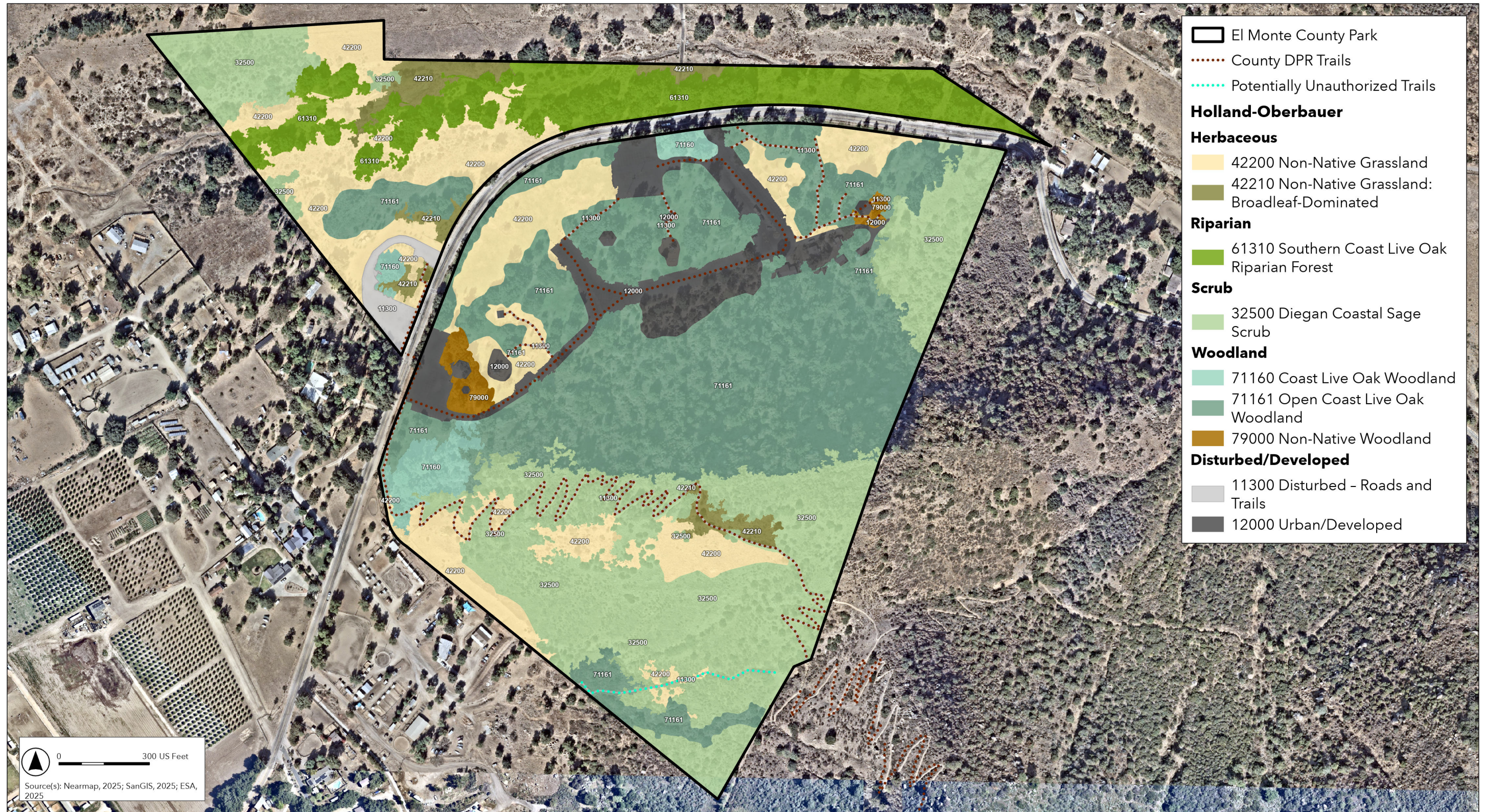


Figure 6
Vegetation Communities - Holland-Oberbauer Classification
El Monte County Park

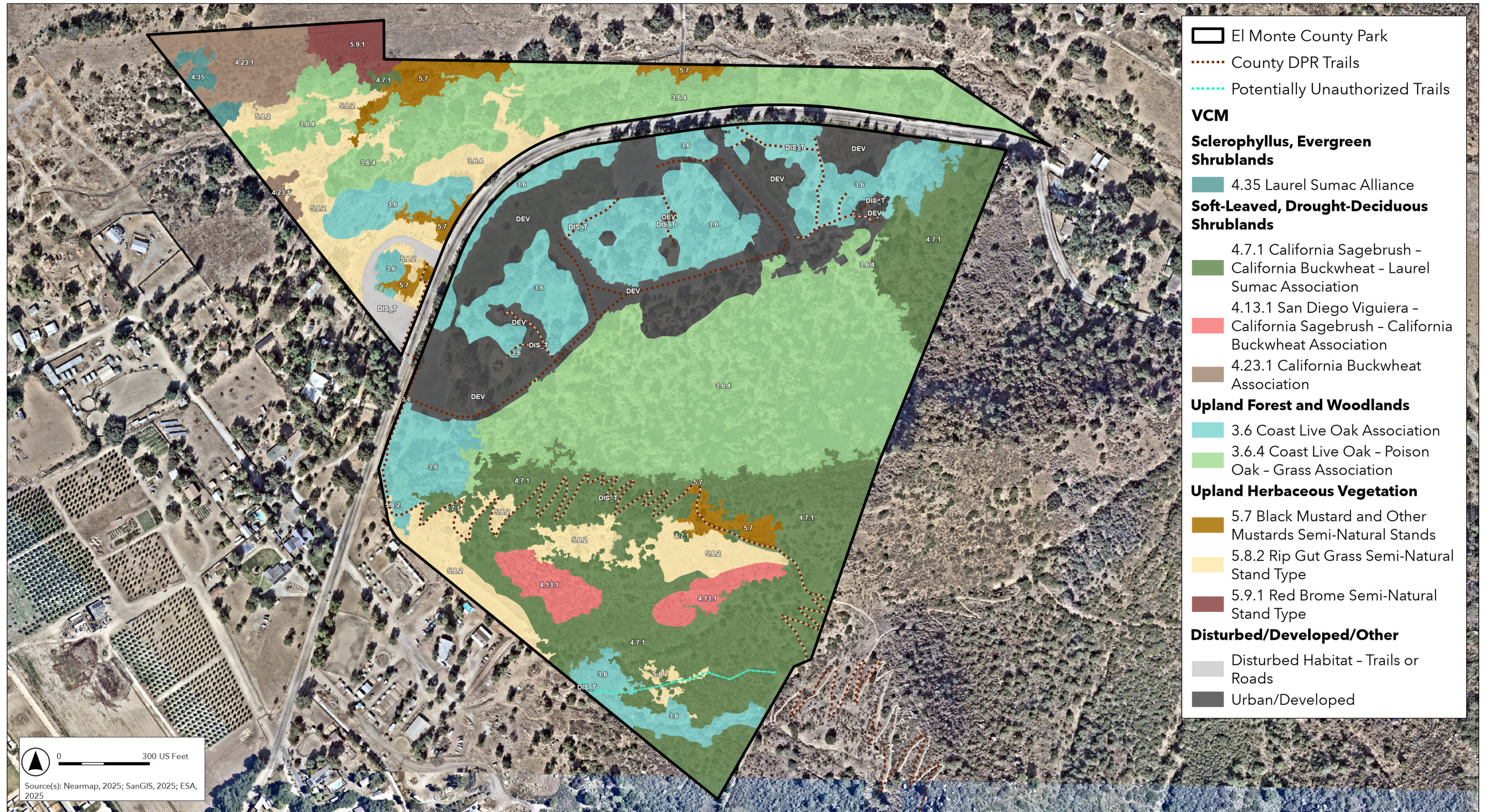


Figure 7
 Vegetation Communities - Vegetation Classification Manual (VCM) for Western San Diego County
 El Monte County Park

Invasive Non-Native Plant Observations

A total of 12 limited to high-risk invasive non-native plant species (as determined by Cal-IPC) were detected during field surveys within El Monte County Park (**Table 9** and **Figure 8**). Of these species, none were identified as having an SDCRPR. Invasive non-native plant species that were ubiquitous throughout the preserve were not mapped, but general locations are provided in **Table 9**. The Cal-IPC and SDCRPR were taken into consideration when determining the recommended actions and should be referenced for specific treatment methods. The recommended actions for the species detected are as follows.

- Remove.** One tamarisk was observed growing in the riparian area in the northwestern corner of the park. This species forms dense clusters within riparian habitats that can outcompete and exclude native plants and increase fire frequency (Cal-IPC 2025); therefore, this individual plant is recommended for removal, and follow-up visits are recommended to detect any seedlings. Similarly, Peruvian pepper trees (*Schinus molle*) have the potential to invade habitat, particularly in riparian corridors. Two trees were observed within the southeastern portion of the park and are recommended for removal. Lastly, castor bean (*Ricinus communis*) was documented within the riparian area in the northern portion of the park and is recommended for removal before the species becomes established.
- Treat.** Crimson fountain grass was identified in moderately sized infestations, specifically at rocky outcroppings on hilltops throughout the center of the park and are recommended for treatment. Comprehensive invasive non-native plant species mapping in conjunction with treatment is recommended to determine extent of this species within the park and to monitor the success/effectiveness of treatment. Currently, the most successful methods for control of this species are through manual removal and chemical control with systemic and broad-spectrum herbicides.
- Monitor.** Several species occurred in large numbers throughout the park, including slender wild oat (*Avena barbata*), ripgut grass (*Bromus diandrus*), soft brome (*Bromus hordeaceus*), red brome (*Bromus rubens*), tocalote (*Centaurea melitensis*), redstem filaree (*Erodium cicutarium*), short-pod mustard (*Hirschfeldia incana*), and tree tobacco (*Nicotiana glauca*); these species should continue to be monitored to detect any negative effects on surrounding native vegetation communities.

TABLE 9
INVASIVE NON-NATIVE PLANT SPECIES: EL MONTE COUNTY PARK

Scientific Name	Common Name	Cal-IPC Ranking	San Diego County Regional Priority Ranking	Notes	Management Recommendation
<i>Avena barbata</i>	slender wild oat	Moderate	–	Sparse but widespread throughout open areas and oak understories in the park.	Monitor
<i>Bromus diandrus</i> ^a	ripgut grass	Moderate	–	Nearly ubiquitous throughout open areas and oak understories in the park.	Monitor
<i>Bromus hordeaceus</i> ^a	soft brome	Limited	–	Uncommon but present within non-native grassland in the southern portion of the park.	Monitor
<i>Bromus rubens</i> ^a	red brome	High	–	Common in non-native grasslands and oak understories north of the San Diego River in the northern portion of the park.	Monitor

Scientific Name	Common Name	Cal-IPC Ranking	San Diego County Regional Priority Ranking	Notes	Management Recommendation
<i>Centaurea melitensis</i> ^a	tocalote	Moderate	–	Occurs in small patches within non-native grasslands in the southern portion of the park.	Monitor
<i>Erodium cicutarium</i> ^a	redstem filaree	Limited	–	Sparse but present within non-native grasslands throughout the park.	Monitor
<i>Hirschfeldia incana</i> ^a	short-pod mustard	Moderate	–	Occurs in small, dense patches and is also widespread throughout unmanaged areas of the park.	Monitor
<i>Nicotiana glauca</i> ^a	tree tobacco	Moderate	–	Sparse but widespread throughout the riparian area in the northern portion of the park.	Monitor
<i>Pennisetum setaceum</i>	crimson fountain grass	Moderate	–	Associated with rocky outcroppings in the southern portion of the park and several occurrences associated with riparian area in northern portion of the park.	Treat
<i>Ricinus communis</i>	castor bean	Limited	–	One individual present within the riparian area in the northern portion of the park.	Remove
<i>Schinus molle</i>	Peruvian pepper tree	Limited	–	Two individuals were observed within the managed western portion of the park and should be monitored for potential escape into the open space portion of the park.	Monitor
<i>Tamarisk</i> sp.	tamarisk	High	–	One individual observed within riparian area in the northern portion of park.	Remove

Notes:

a. These species were detected within the park but not mapped; species were found to be widespread throughout the park.

Cal-IPC Ranking:

- **High** – These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.
- **Moderate** – These species have substantial and apparent—but generally not severe—ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.
- **Limited** – These species are invasive, but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.
- **Alert** – An alert is listed on species with High or Moderate impacts that have limited distribution in California but may have the potential to spread much further.
- **Watch** – These species have been assessed as posing a high risk of becoming invasive in the future in California.

San Diego County Regional Priority Ranking (Cal-IPC, Dendra, CBI 2012):

- **Very High – Level 1 Surveillance.** Low effort required to achieve goal of regional surveillance, early detection, rapid response.
- **High – Level 2 Eradication.** Moderate effort required to achieve goal of eradication with regionally coordinated control program.
- **Medium – Level 3 Containment.** Funding typically available for retreatments or control of small populations. Goal is eradication with coordinated programs by management unit or watershed.
- **Medium – Level 4 Directed Management.** Area may be managed effectively, with slow reinvasion. Goal is to control within reserve or sub-management unit to benefit NCCP resources.
- **Low – Level 5 Directed Suppression.** Control is typically of short-term benefit (rapid reinvasion) without active restoration. Goal is suppression, typically to allow recovery disturbed site, improve revegetation success, or benefit NCCP resources.

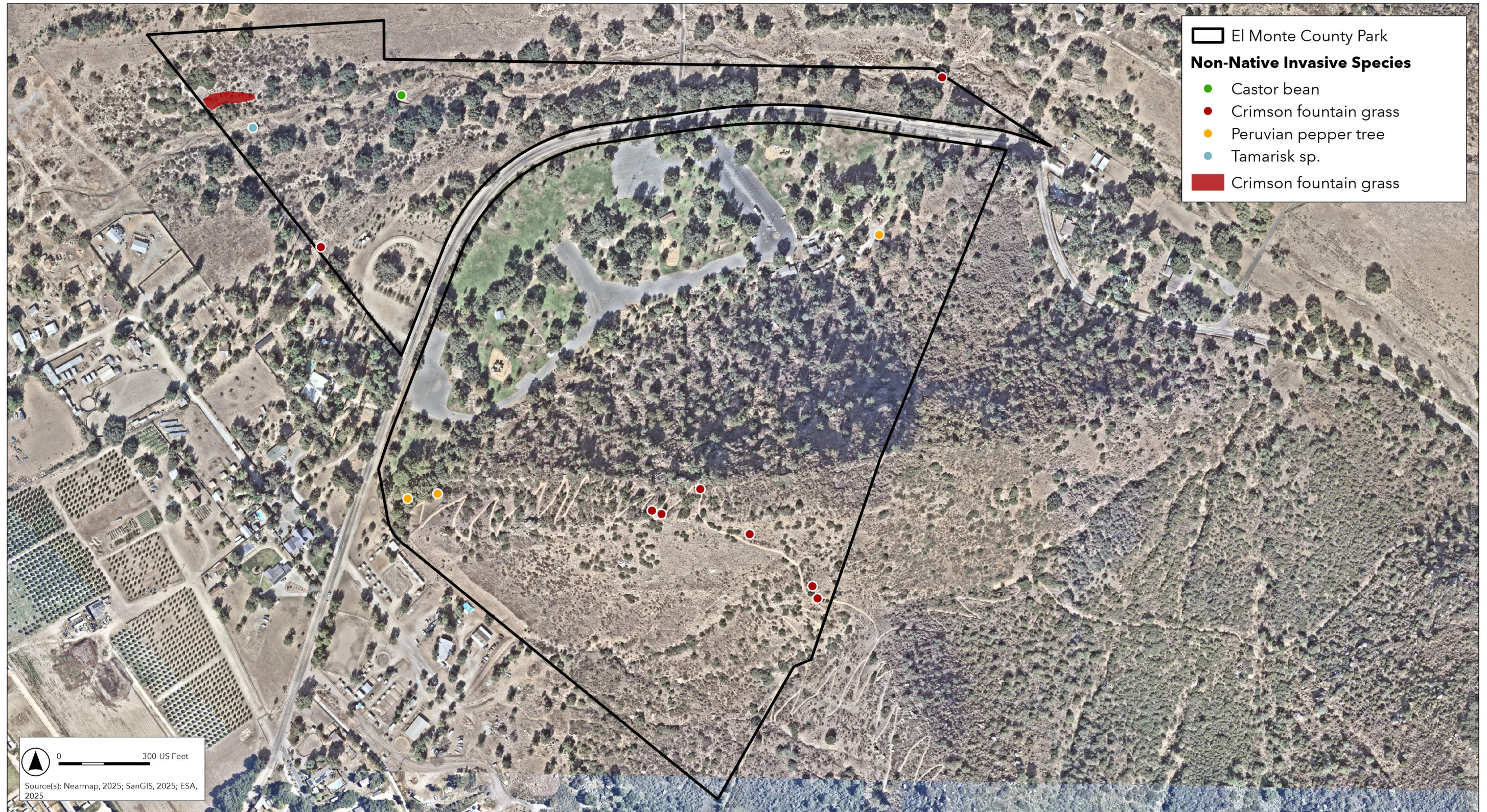


Figure 8
 Invasive Non-Native Plant Observations
 El Monte County Park

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Incidental Sensitive Plant and Wildlife Observations

Three sensitive plant species and two sensitive wildlife species were incidentally detected and mapped during field surveys for El Monte County Park (Table 10 and Figure 9).

TABLE 10
INCIDENTAL PLANT AND ANIMAL OBSERVATIONS: EL MONTE COUNTY PARK

Scientific Name	Common Name	Federal/State Status	San Diego County Special-Status List	MSCP-Covered Species	California Rare Plant Rank	Notes
Plants						
<i>Artemisia palmeri</i>	San Diego sagewort	—/—	List D	—	4.2	Growing in oak understory adjacent to the riparian area.
<i>Bahiopsis laciniata</i>	San Diego viguiera	—/—	List D	—	4.3	Observed in patches on slopes of the southern side of the park.
<i>Quercus engelmannii</i>	Engelmann oak	—/—	List D	—	4.2	Observed within oak woodlands and planted within the center of the park.
Animals						
<i>Cathartes aura</i>	Turkey vulture	—/—	Group 1	—	—	Observed flying over park.
<i>Sialia mexicana</i>	Western bluebird	—/—	Group 2	MSCP	—	Observed foraging within the center of the park.

Notes:

Federal/State Status:

- FE – Federally Endangered
- FT – Federally Threatened
- CE – California Endangered
- CT – California Threatened
- SSC – CDFW Species Special Concern

San Diego County Special-Status List:

- LIST A (Plants rare, threatened or endangered in California and elsewhere)
- LIST B (Plants rare, threatened or endangered in California but more common elsewhere)
- LIST C (Plants which may be quite rare, but need more information to determine their true rarity status)
- LIST D (Plants of limited distribution and are uncommon, but not presently rare or endangered)
- CA rare (rare in California, but not listed)
- NE (MSCP Narrow Endemic)

California Rare Plant Rank:

- 1A – Plants presumed extirpated in California and either rare or extinct elsewhere
- 1B – Plants rare, threatened, or endangered in California and elsewhere
- 2A – Plants presumed extirpated in California but common elsewhere
- 2B – Plants rare, threatened, or endangered in California but more common elsewhere
- 3 – Review List: Plants about which more information is needed
- 4 – Watch List: Plants of limited distribution
- 0.1 – Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
- 0.2 – Moderately threatened in California (20%-80% occurrences threatened / moderate degree and immediacy of threat)
- 0.3 – Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

Other:

- Unk – Unknown due to timing of survey and life stage of individual

Habitat Conditions and Threats Assessment

Threats Assessment

Based on the field surveys, biologists took note of any major issues that could pose a threat to the vegetation communities within El Monte County Park. A list of primary threats identified in the IMG

protocol is presented in **Table 11**, along with a discussion of the severity of each threat within the park (presented as the extent within the park on a scale of 1 to 7).

TABLE 11
THREATS OVERVIEW: EL MONTE COUNTY PARK

Disturbances/Stressors	Severity (Extent)	Discussion
Invasive non-native plant species (e.g., annual grasses and herbs)	5	Displacement of native plants by invasive grass and forb species represents the greatest threat to the park. Several ubiquitous species of invasive plant such as riggut brome, tree tobacco, and short-pod mustard are distributed evenly throughout the park.
Altered fire regime or risk of catastrophic fire	4	Areas where invasive plant species such as non-native grasses and forbs provide increased fuel during dry periods may present greater risk of fire, especially in the southern portion of the park.
Unauthorized human use (e.g., off-road vehicles, encampments, unauthorized trails, shooting, poaching, and/or dumping)	3	One moderately used potentially unauthorized trail was observed in the southern portion of the park that connects the adjacent horse ranch to the west of the park to the authorized trail system. The trail appeared to be primarily used by horses, which may widen the trail via vegetation trampling.
Shothole borer, gold-spotted oak borer, and <i>Fusarium</i> fungal invasion	–	The park was not assessed for invasive insect species or fungi. Suitable species are present within the park and may further be introduced due to nearby agriculture.
Erosion	1	No significant erosion was observed within the park.
Small, isolated occurrences vulnerable to loss of genetic diversity and to extirpation due to environmental stochasticity or catastrophic disturbance.	1	No isolated, vulnerable plant or animal species were documented within the park.
Altered hydrology (e.g., urban runoff, flood control facilities)	3	Water flow to the San Diego River, which is in the northern portion of the park, is directly controlled by the City of San Diego via the El Capitan Dam and Reservoir approximately one mile east of the park. Since the flow of water is managed, riparian habitats are likely no longer subjected to historical phenology pre-reservoir.
Herbivory (e.g., seed, vegetation)	1	No significant herbivory was documented within the park.
Detrimental edge effects from adjacent urban development	3	In the southern portion of the park, a fuel modification zone adjacent to residential properties is maintained by the County. Continuous vegetation removal has allowed invasive non-native grasses to dominate these areas, which may allow for further encroachment into the park.

Notes:

Disturbance Categories within Park:

- 1 – No sign of disturbance within park
- 2 – Disturbance does not occur within park, but is detected adjacent to park boundaries
- 3 – Disturbance occurs in >0% to <10% of park
- 4 – Disturbance occurs in 10 to <25% of park
- 5 – Disturbance occurs in 25 to <50% of park
- 6 – Disturbance occurs in 50 to <75% of park
- 7 – Disturbance occurs in ≥ 75% of park

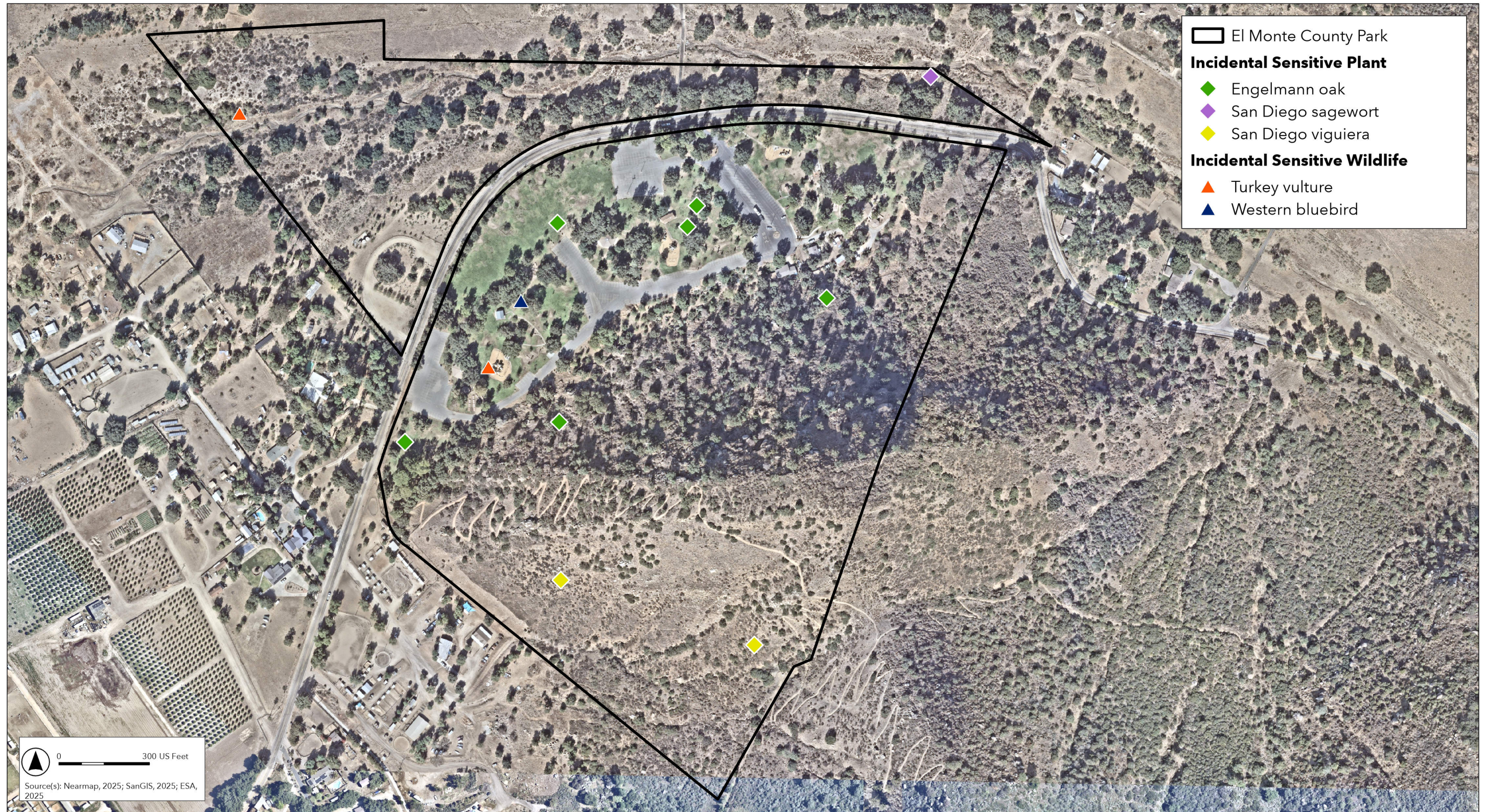


Figure 9
 Incidental Sensitive Plant and Wildlife Observations
 El Monte County Park

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Type Conversion

In order to detect potential type conversions within the park, Holland-Oberbauer vegetation mapping was used to compare the acreage of each habitat type that was previously mapped with the current acreage by habitat type (Table 12).

TABLE 12
TYPE CONVERSION ASSESSMENT BASED ON HOLLAND-
OBERBAUER MAPPING: EL MONTE COUNTY PARK

Habitat Type	Acres in 2015	Acres in 2025	Difference in Acreage
Disturbed/Developed	23.96	7.82	-16.14
Herbaceous	7.64	16.45	8.82
Riparian	17.56	8.81	-8.75
Scrub	18.13	23.22	5.09
Woodland	19.96	30.94	10.98

Disturbed habitat has decreased from 23.96 acres to 7.82 acres. This 16.14-acre decrease is primarily due to reclassifying much of the maintained park within the central portion of the park from a developed landcover type to 71161 open coast live oak woodland (3.6 coast live oak association) habitat as the tree canopy here was dominated by coast live oaks (*Quercus agrifolia*). A small portion (0.27 acres) in the northeastern corner of the park was burned in the 2025 Monte Fire and was classified as disturbed habitat.

Herbaceous communities increased from 7.64 acres in 2015 to 16.45 acres in 2025. This 8.82-acre increase is due to higher accuracy mapping and methodology, as previously mapped 32500 Diegan coastal sage scrub was found to include large stands of slender wild oat, mustards, and tocalote and were mapped more accurately as 42200 non-native grassland or 42210 non-native grassland: broadleaf-dominated habitats. In addition, some areas previously mapped as 61310 southern coast live oak riparian forest were updated to 42200 non-native grassland or 42210 non-native grassland: broadleaf-dominated habitats.

Riparian communities decreased from 17.56 acres in 2015 to 8.81 acres in 2025. This 8.75-acre decrease is due to higher accuracy mapping and methodology, as previously mapped 61310 southern coast live oak riparian forest were updated to 42200 non-native grassland or 42210 non-native grassland: broadleaf-dominated habitats to more accurately describe these areas.

Scrub communities increased from 18.13 acres in 2015 to 23.22 acres in 2025. This 5.09-acre increase is due to reclassifying previously mapped 71161 open coast live oak woodland in the eastern portion of the park to 32500 Diegan coastal sage scrub as it more accurately describes the area.

Lastly, woodland communities increased from 19.96 acres in 2015 to 30.94 acres in 2025. This 10.98-acre increase is due to reclassifying much of the park within the central portion of the park from a developed landcover type to 71161 open coast live oak woodland (3.6 coast live oak association).

Adaptive Management Recommendations

Adaptive management recommendations were developed based on the general habitat condition and threats assessment conducted during habitat mapping for El Monte County Park. Recommendations are provided for invasive non-native plant species management, habitat enhancement/restoration opportunities, encroachment, and monitoring. Recommendations are detailed in the following subsections, which were cross-referenced with the management directives and implementation measures described in the El Monte Park Resource Management Plan (County of San Diego 2009c).

Invasive Non-Native Plant Species Management

As discussed in the invasive non-native plant observations section, several invasive non-native plant species were detected within the park. For each species, a recommended action was identified consisting of either removal, treatment, or monitoring, which should follow the preserve RMP implementation measures IM B.2.1–IM B.3.3 (County of San Diego 2009c). Immediate removal of tamarisk and castor bean is recommended. Final implementation of management activities and treatment methods shall be determined by the County based on priority. Ornamental species—such as Peruvian pepper trees and others found in landscaped areas of the El Monte County Park section of the park—may escape cultivation and should be monitored for signs of invasion into park open spaces and riparian habitat.

Habitat Enhancement/Restoration Opportunities

- **Erosion.** No significant or problematic erosion was observed within the park.
- **Rare plants.** The park contained sensitive plant species that would benefit from comprehensive mapping to determine management/restoration opportunities. Focused rare plant surveys are recommended to capture areas ideally suited for habitat enhancement and restoration, and those areas that may be extirpated by invasive species. This could be accomplished through collaboration with SDMMP.

Encroachment

- **OHV usage.** No off-road vehicle use was observed within the park.
- **Access control.** Consider improved site access restriction in southwest portions of the park to restrict illegal equestrian site usage by adjacent horse ranches.

Monitoring

- **Invasive non-native plants.** Invasive non-native plant species mapping should be conducted annually, if feasible, to inform treatment areas, assess new invasions or reinvasions, and determine effectiveness of treatments.
- **Public use.** The trail in the southeast portion of the park that connects to the County Historic Flume Trail was overgrown and difficult to locate. Trail maintenance is recommended to ensure the public only uses authorized trails.
- **Catastrophic events.** Additional vegetation mapping efforts may be conducted as needed following catastrophic events such as wildfires.

Lakeside Linkage County Preserve

Lakeside Linkage County Preserve is an approximately 209-acre open space preserve located in the hills just north of the city of El Cajon and west of Lake Jennings Reservoir, in southwestern San Diego County. The preserve is composed of the following four non-contiguous properties: (1) western property, 46 acres located west of Los Cocheros Road between Calle Lucia Terrace on the south and a Private Drive south of Rock Crest Lane on the north; (2) central property, 77 acres located east of Los Cocheros Road between Ha-Hana Road on the south and extending slightly north of Casa Vista Road on the north; (3) eastern property, 11 acres located approximately one block northwest of the junction of Lakeview and East Lakeview Roads; and (4) southwest property, 75 acres located directly south of the western property. This preserve is located within the MSCP Plan Area (County of San Diego 1997).

Vegetation Mapping

A total of 6 vegetation communities and 3 land cover types were identified via Holland-Oberbauer and 14 vegetation communities and 3 land cover types were identified via VCM for Lakeside Linkage County Preserve. These communities are depicted in **Figure 10a–Figure 10d** and **Figure 11a–Figure 11d** and provided in crosswalk format in **Table 13**.

TABLE 13
VEGETATION COMMUNITIES CROSSWALK: LAKESIDE LINKAGE COUNTY PRESERVE

Oberbauer-Modified Holland Code	San Diego Vegetation Classification Manual		Acreage
	Alliance Level	Association Level	
Scrub			
32400 Maritime Succulent Scrub	4.7 California Sagebrush – California Buckwheat Alliance	4.7.2 California Sagebrush – California Buckwheat – Chaparral Pricklypear/Fingertips Association	5.16
32500 Diegan Coastal Sage Scrub	3.2 Eucalyptus Semi-Natural Stands	3.2 Eucalyptus Semi-Natural Stands	0.19
	4.13 San Diego Viguiera Alliance	4.13 San Diego Viguiera Alliance	2.21
		4.13.1 San Diego Viguiera – California Sagebrush – California Buckwheat Association	14.40
	4.22 California Brittlebush Alliance	4.22.1 California Brittlebush – California Sagebrush Association	0.11
	4.23 California Buckwheat Alliance	4.23.1 California Buckwheat Association	3.66
	4.6 California Sagebrush Alliance	4.6.2 California Sagebrush – Bush Monkeyflower Association	12.64
	4.7 California Sagebrush – California Buckwheat Alliance	4.7 California Sagebrush – California Buckwheat Alliance	125.70
	4.7.1 California Sagebrush – California Buckwheat – Laurel Sumac Association	17.77	
	5.21 Mediterranean California Naturalized Annual and Perennial Grassland Semi-Natural Stands	5.21 Mediterranean California Naturalized Annual and Perennial Grassland Semi- Natural Stands	0.04
32530 Diegan Coastal Sage Scrub: Baccharis-Dominated	4.12 Desert Broom Alliance	4.12.1 Desert Broom Association	0.69

Oberbauer-Modified Holland Code	San Diego Vegetation Classification Manual		
	Alliance Level	Association Level	Acreage
32800 Flat-topped Buckwheat	4.23 California Buckwheat Alliance	4.23 California Buckwheat Alliance	1.58
		4.23.1 California Buckwheat Association	0.68
		4.23.3 California Buckwheat – Rough Sweetbush Association	0.25
Herbaceous			
42200 Non-Native Grassland	5.21 Mediterranean California Naturalized Annual and Perennial Grassland Semi-Natural Stands	5.21 Mediterranean California Naturalized Annual and Perennial Grassland Semi- Natural Stands	6.28
42210 Non-Native Grassland: Broadleaf- Dominated	5.7 Black Mustard and Other Mustards Semi-Natural Stands	5.7 Black Mustard and Other Mustards Semi-Natural Stands	0.46
Other^a			
11000 Disturbed Habitat	Disturbed Habitat	Disturbed Habitat	11.11
11300 Disturbed Habitat – Roads and Trails	Disturbed Habitat – Trails or Roads	Disturbed Habitat – Trails or Roads	4.04
12000 Urban/Developed	Urban/Developed	Urban/Developed	2.11
TOTAL ACREAGE:^c			209.08

Notes:

- The San Diego Vegetation Classification Manual only classifies vegetated areas. The disturbed land cover types were described and displayed under the association level to provide additional detail in the mapping. This allows for changes in vegetation (e.g., unvegetated to vegetated) to be tracked over time.
- The San Diego Vegetation Classification Manual does not have a classification for ornamental, non-native woodlands. This type of vegetation was described as Urban/Developed in this report.
- Total may not match sum of individual acreages listed due to rounding.

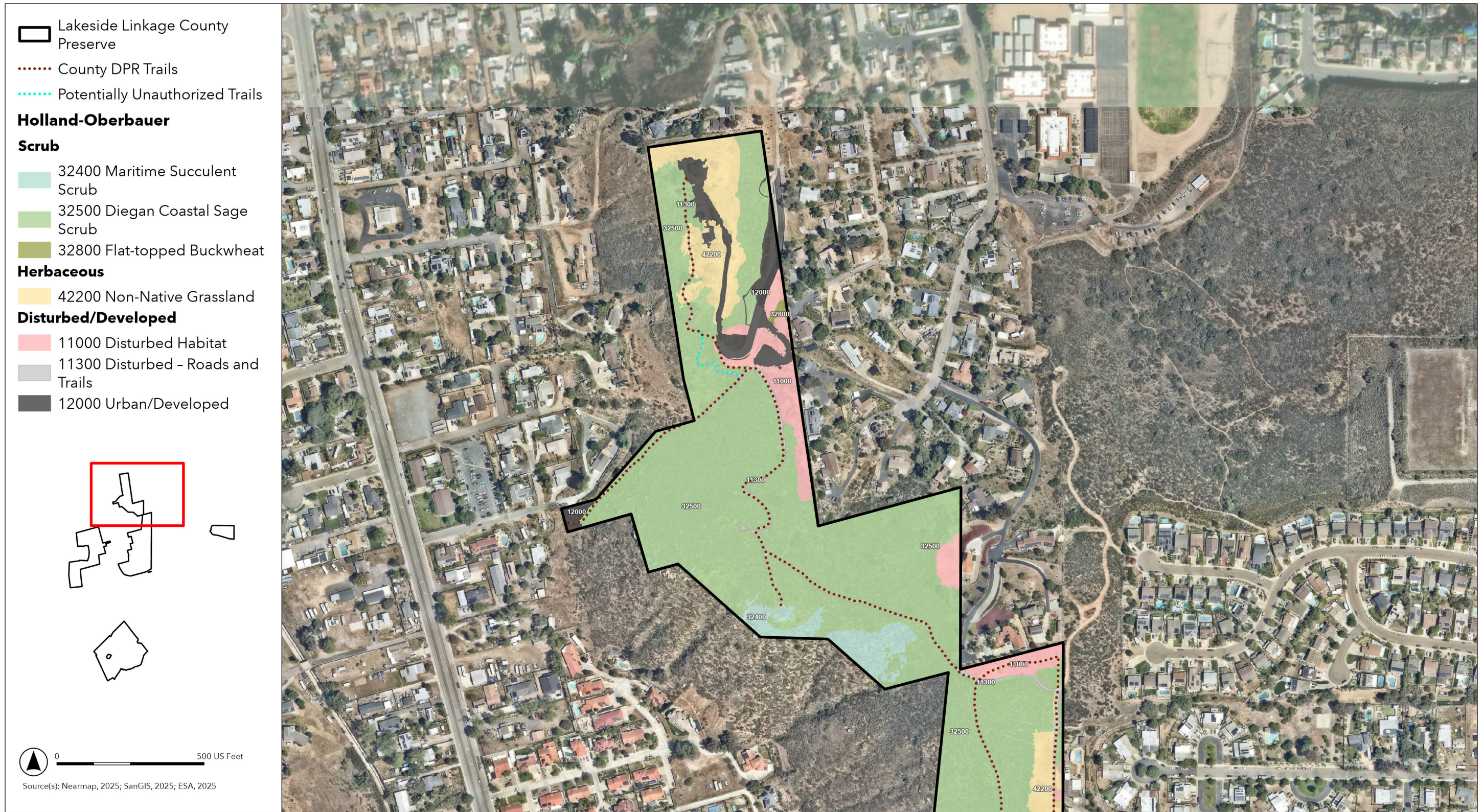


Figure 10a
Vegetation Communities - Holland-Oberbauer Classification
Lakeside Linkage County Preserve

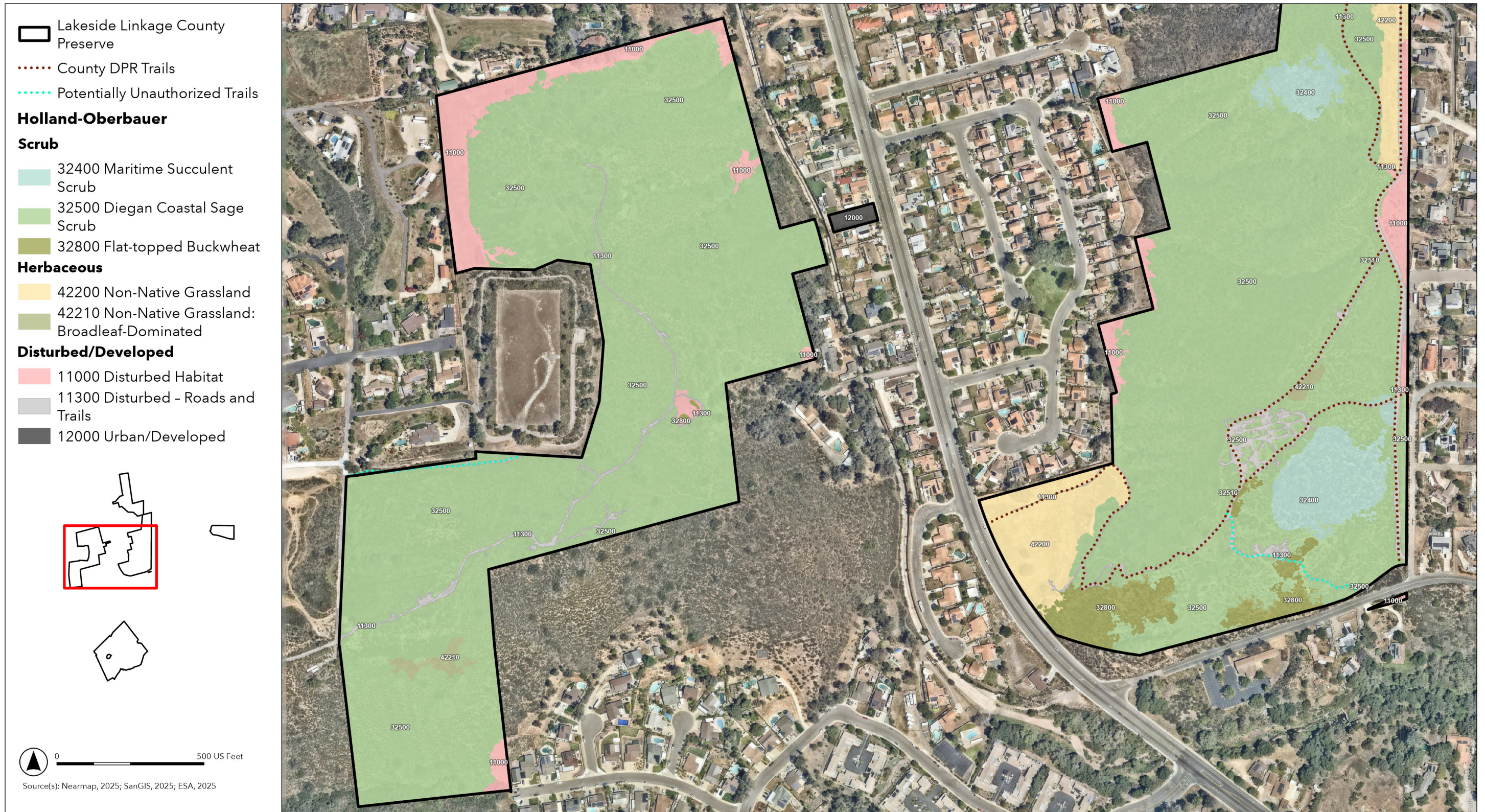


Figure 10b
Vegetation Communities - Holland-Oberbauer Classification
Lakeside Linkage County Preserve

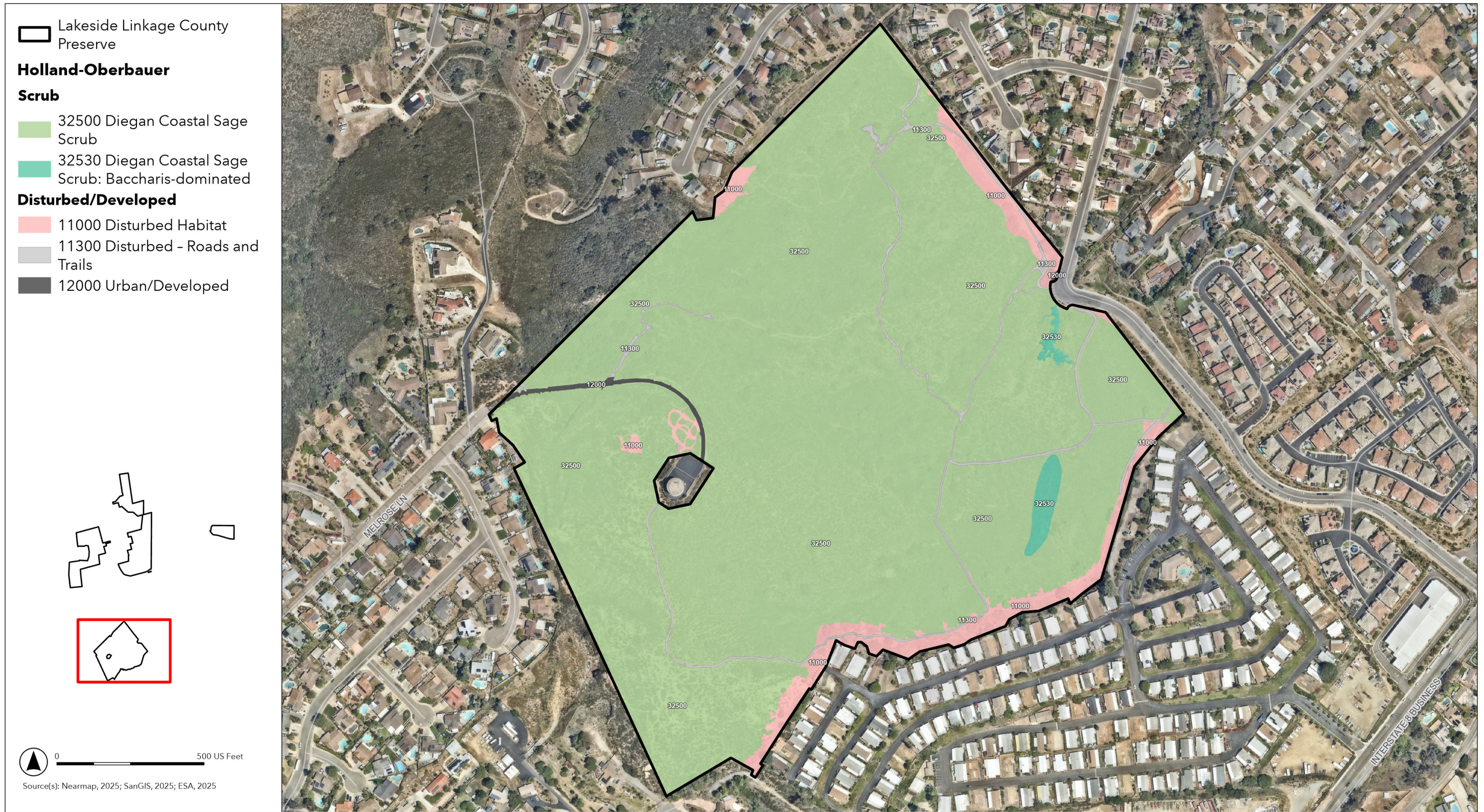


Figure 10c
Vegetation Communities - Holland-Oberbauer Classification
Lakeside Linkage County Preserve



Figure 10d
 Vegetation Communities - Holland-Oberbauer Classification
 Lakeside Linkage County Preserve

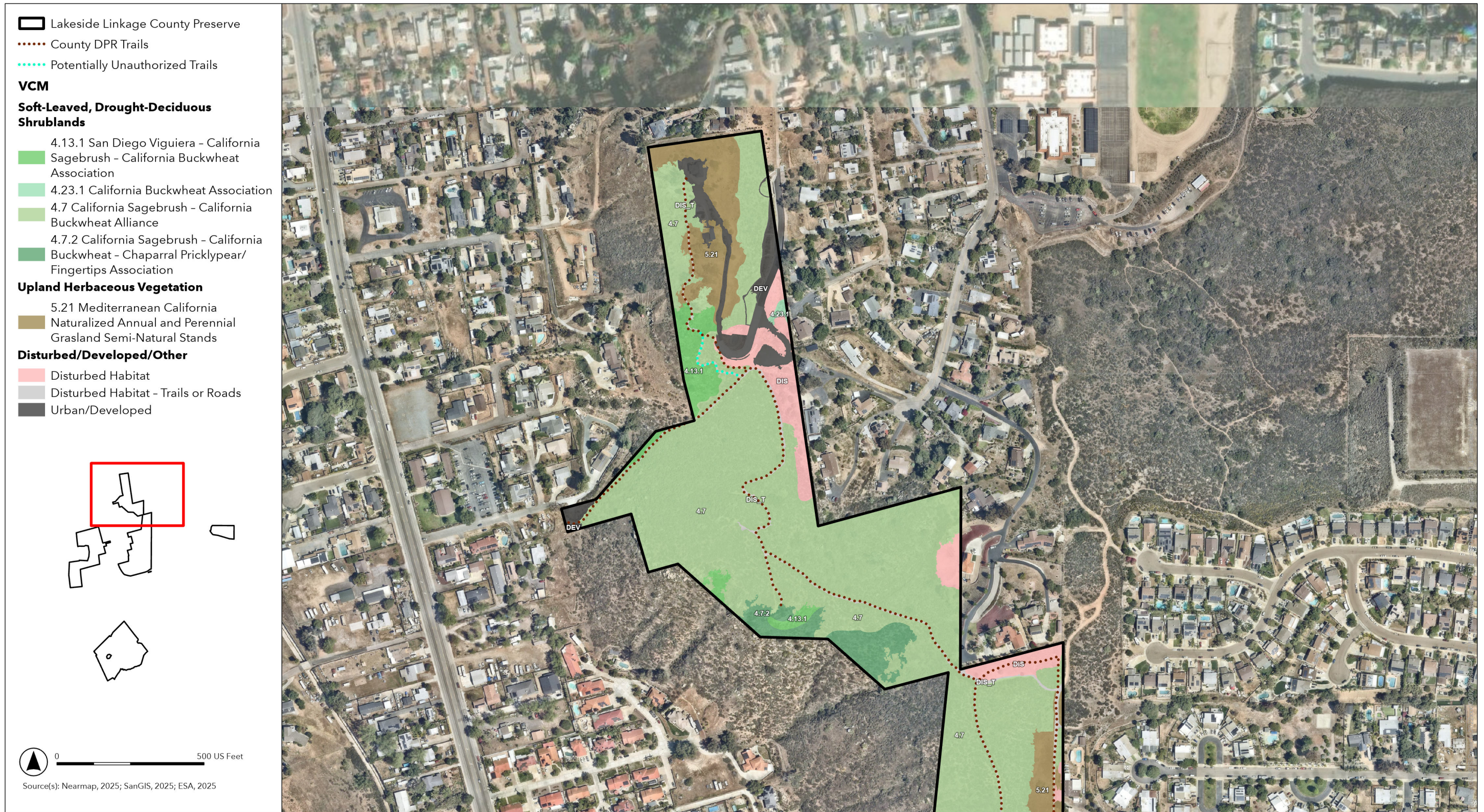


Figure 11a
 Vegetation Communities - Vegetation Classification Manual (VCM) for Western San Diego County
 Lakeside Linkage County Preserve

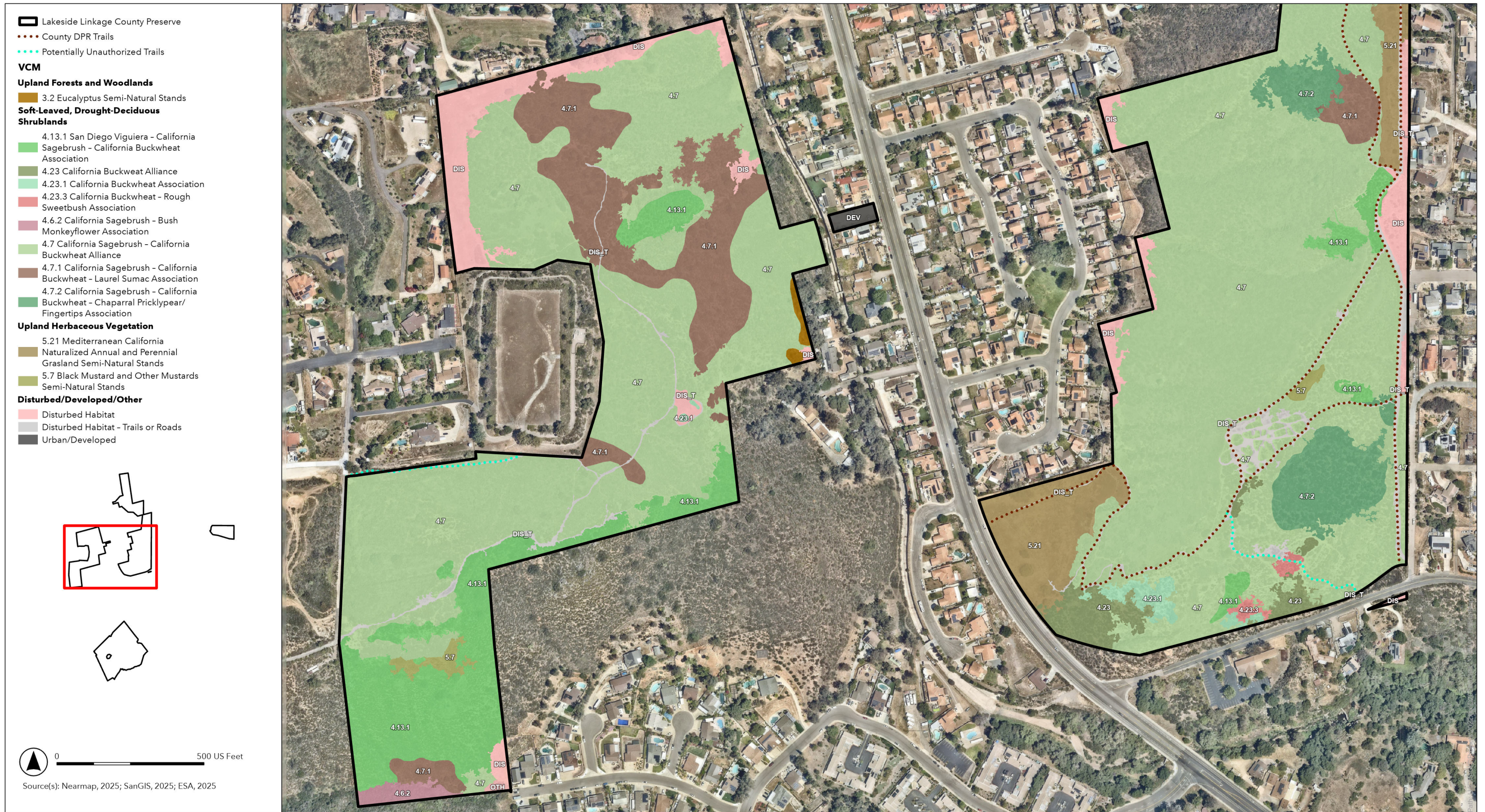


Figure 11b
Vegetation Communities - Vegetation Classification Manual (VCM) for Western San Diego County
Lakeside Linkage County Preserve

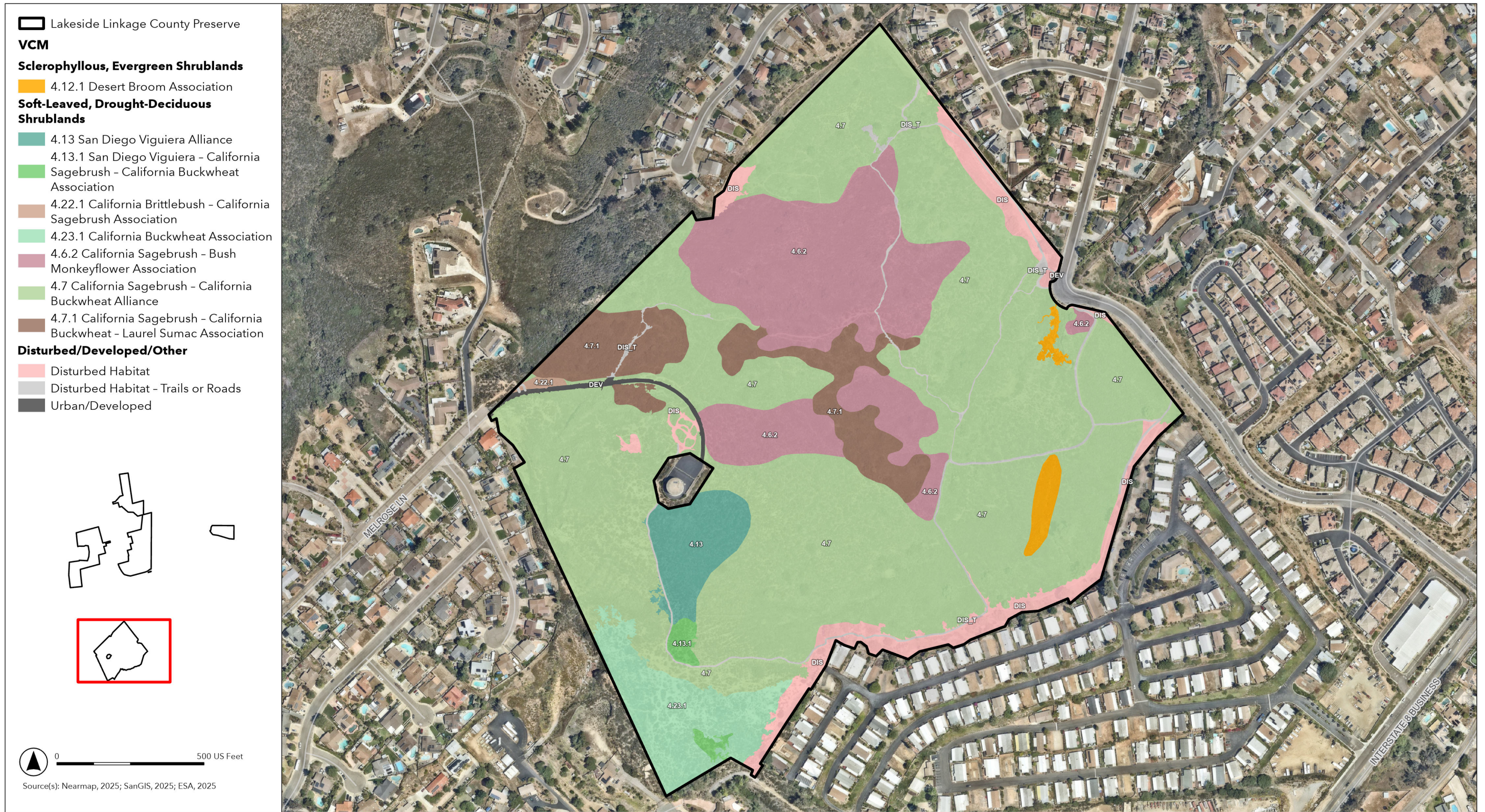


Figure 11c
Vegetation Communities - Vegetation Classification Manual (VCM) for Western San Diego County
Lakeside Linkage County Preserve



Figure 11d
Vegetation Communities - Vegetation Classification Manual (VCM) for Western San Diego County
Lakeside Linkage County Preserve

Invasive Non-Native Plant Observations

A total of 19 limited to high-risk invasive non-native plant species (as determined by Cal-IPC) were detected during field surveys for Lakeside Linkage County Preserve (**Table 14** and **Figure 12**). Of these species, one was identified as having an SDCRPR. Invasive non-native plant species that were ubiquitous throughout the preserve were not mapped, but general locations are provided in **Table 14**. The Cal-IPC and SDCRPR were taken into consideration when determining the management recommendation. The recommended actions for the species detected are as follows.

- Remove.** Brazilian pepper tree (*Schinus terebinthifolia*), Peruvian pepper tree, Mexican fan palm (*Washingtonia robusta*), eucalyptus (*Eucalyptus* spp.), and tree of heaven (*Ailanthus altissima*) tend to grow in clusters that form dense canopies that limit light penetration, which can lead to the loss of native plants and have the potential to invade habitat, particularly in riparian corridors. Several Peruvian and Brazilian pepper trees were observed adjacent to Terrace View Mobile Home Estates, bordering the southwest property of the preserve. One tamarisk was observed growing along the edge of Wellington Hill Drive in the southwest property of the preserve and another individual was observed within the eastern property of the preserve. Tree of heaven was the most abundant invasive tree species observed, and occurred in isolated areas throughout the preserve, primarily along the urban-wildland interface. Pepper tree, tree of heaven, Eucalyptus, and tamarisk readily resprout once cut; therefore, it is recommended that all these individuals are treated and removed (i.e., cut stump treatment, drill and kill, or basal bark treatment with herbicide).
- Treat.** Stinkwort, tree tobacco, black mustard (*Brassica nigra*), and crimson fountain grass all occurred as small infestations within the preserve and are recommended for treatment. Sahara mustard (*Brassica tournefortii*) was observed within a fuel break along the eastern edge of the central property and three individual castor bean plants were observed within the southwest property of the preserve and are also recommended for treatment. A small, isolated patch of Italian thistle (*Carduus pycnocephalus* ssp. *pycnocephalus*) was documented within the western property of the preserve. Comprehensive invasive non-native plant species mapping in conjunction with treatment is recommended to determine extent of each species within the preserve and to monitor the success/effectiveness of treatment within the preserve. Currently the most successful methods for control of these species are through manual removal and chemical control with systemic and broad-spectrum herbicides.
- Monitor.** Several invasive non-native and non-native plant species occur in large numbers throughout the preserve, including tocalote, red brome, ripgut brome, wild oat (*Avena* spp.), short-pod mustard, and European olive (*Olea europea*); these plants should continue to be monitored to detect any negative effects on surrounding native vegetation communities. Non-native annual grass species have been largely naturalized and may not be feasible for effective control without restoration efforts occurring following treatment. Therefore, areas with high abundance of these species may provide good opportunities for restoration areas within the preserve provided any treatment strategy also includes native plant establishment within treatment areas.

TABLE 14
INVASIVE NON-NATIVE PLANT SPECIES: LAKESIDE LINKAGE COUNTY PRESERVE

Scientific Name	Common Name	Cal-IPC Ranking	San Diego County Regional Priority Ranking	Notes	Management Recommendation
<i>Ailanthus altissima</i>	tree of heaven	Moderate	–	Several individuals were observed within fuel modification zones associated with adjacent residential developments in the southern, central, and westernmost properties.	Remove
<i>Avena barbata</i> ^a	slender wild oat	Moderate	–	Observed throughout the preserve.	Monitor
<i>Brassica nigra</i> ^a	black mustard	Moderate	–	Observed in patches in western property of the preserve.	Treat
<i>Brassica tournefortii</i>	Sahara mustard	High	–	Several individuals were observed within fuel modification zones associated with adjacent residential developments in the central property of the preserve.	Treat
<i>Bromus diandrus</i> ^a	ripgut grass	Moderate	–	Observed throughout the preserve.	Monitor
<i>Bromus rubens</i> ^a	red brome	High	–	Observed throughout the preserve.	Monitor
<i>Carduus pycnocephalus</i>	Italian thistle	Moderate	–	Several individuals were observed in the western property of the preserve.	Treat
<i>Centaurea melitensis</i> ^a	toçalote	Moderate	–	Observed throughout the preserve.	Monitor
<i>Dittrichia graveolens</i>	stinkwort	Moderate (Alert)	High - Level 4	Identified in disturbed areas and along trails within the central, southern, and westernmost properties of the preserve.	Treat
<i>Eucalyptus</i> sp.	eucalyptus	Limited	–	Observed within the central and southernmost properties of the preserve. in intact habitat and along preserve boundaries with residential developments.	Remove
<i>Hirschfeldia incana</i> ^a	short-pod mustard	Moderate	–	Observed in relatively low numbers throughout the preserve.	Monitor
<i>Nicotiana glauca</i>	tree tobacco	Moderate	–	Several individuals were observed within the non-native grassland of the central property of the preserve.	Remove
<i>Olea europaea</i>	European olive	Limited	–	Several individuals were observed within the southwest property of the preserve, primarily adjacent to residential development.	Monitor
<i>Pennisetum setaceum</i>	crimson fountain grass	Moderate	–	Observed in patches throughout the central property of the preserve.	Treat
<i>Ricinus communis</i>	castor bean	Limited	–	Three individuals were observed in the central property of the preserve.	Treat
<i>Schinus molle</i>	Peruvian pepper tree	Limited	–	Several individuals were identified throughout the western and southwest properties of the preserve.	Remove
<i>Schinus terebinthifolia</i>	Brazilian pepper tree	Moderate	–	Several individuals were observed in the western property of the preserve.	Remove

Scientific Name	Common Name	Cal-IPC Ranking	San Diego County Regional Priority Ranking	Notes	Management Recommendation
<i>Tamarix ramosissima</i>	tamarisk	High	–	Two individuals were observed within western and southwest properties of the preserve and one along the edge of Wellington Hill Drive in the southwest property of the preserve.	Remove
<i>Washingtonia robusta</i>	Mexican fan palm	Moderate	–	One individual was observed within fuel modification zones associated with adjacent residential development in the westernmost parcel of the preserve.	Remove

Notes:

a. These species were detected within the preserve but not mapped; species were found to be widespread throughout the preserve.

Cal-IPC Ranking:

- **High** – These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.
- **Moderate** – These species have substantial and apparent—but generally not severe—ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.
- **Limited** – These species are invasive, but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.
- **Alert** – An alert is listed on species with High or Moderate impacts that have limited distribution in California but may have the potential to spread much further.
- **Watch** – These species have been assessed as posing a high risk of becoming invasive in the future in California.

San Diego County Regional Priority Ranking (Cal-IPC, Dendra, CBI 2012):

- **Very High – Level 1 Surveillance.** Low effort required to achieve goal of regional surveillance, early detection, rapid response.
- **High – Level 2 Eradication.** Moderate effort required to achieve goal of eradication with regionally coordinated control program.
- **Medium – Level 3 Containment.** Funding typically available for retreatments or control of small populations. Goal is eradication with coordinated programs by management unit or watershed.
- **Medium – Level 4 Directed Management.** Area may be managed effectively, with slow reinvasion. Goal is to control within reserve or sub-management unit to benefit NCCP resources.
- **Low – Level 5 Directed Suppression.** Control is typically of short-term benefit (rapid re-invasion) without active restoration. Goal is suppression, typically to allow recovery disturbed site, improve revegetation success, or benefit NCCP resources.

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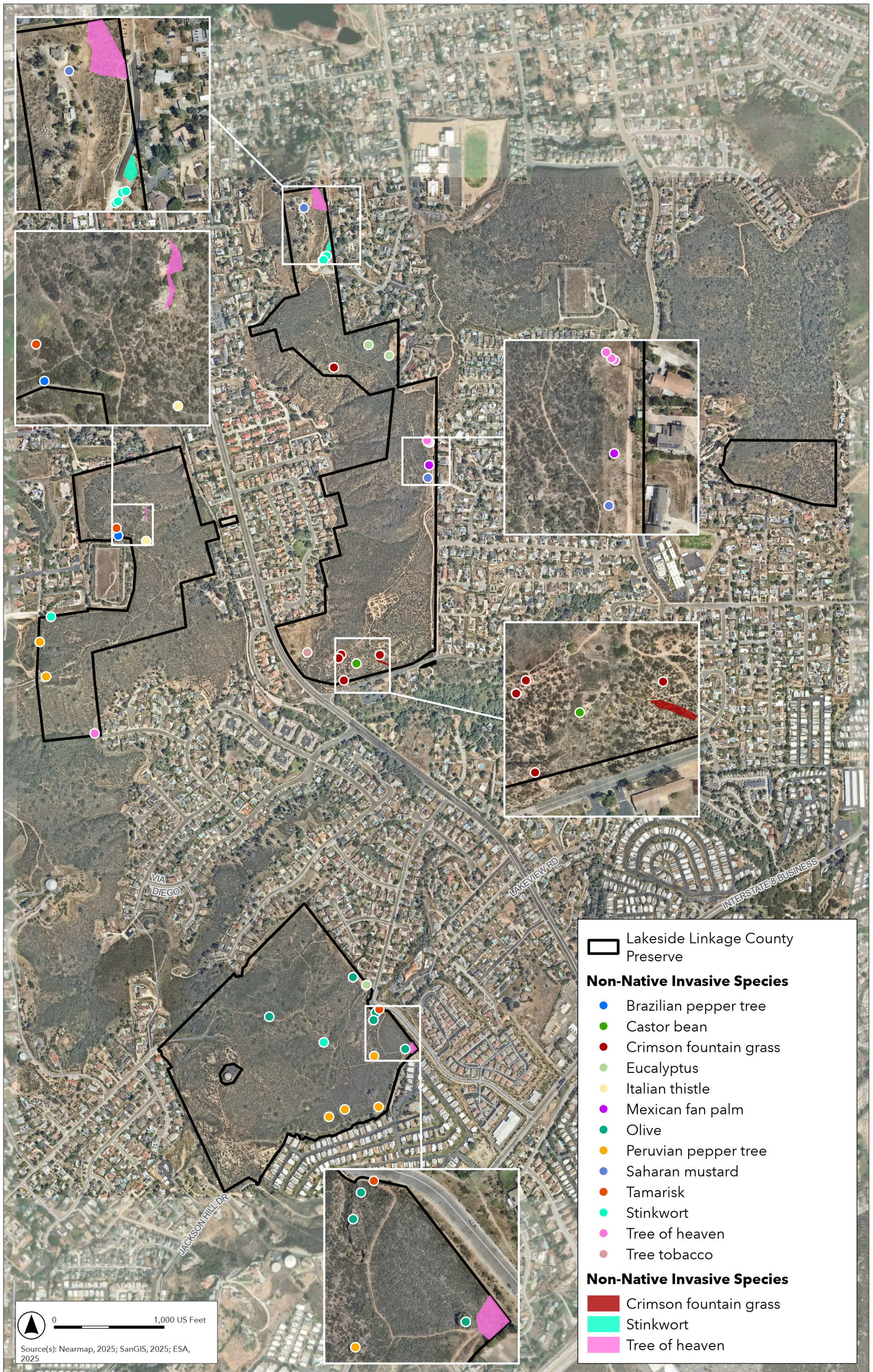


Figure 12
 Invasive Non-Native Plant Observations
 Lakeside Linkage County Preserve

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Incidental Sensitive Plant and Wildlife Observations

Two sensitive plant species and eight sensitive wildlife species were incidentally detected and mapped during field surveys for Lakeside Linkage County Preserve (Table 15 and Figure 13).

TABLE 15
INCIDENTAL PLANT AND ANIMAL OBSERVATIONS: LAKESIDE LINKAGE COUNTY PRESERVE

Scientific Name	Common Name	Federal/State Status	San Diego County Special-Status List	Draft North County MSCP-Covered Species	California Rare Plant Rank	Notes
Plants						
<i>Bahiopsis laciniata</i>	San Diego viguiera	–/–	List D	–	4.3	Observed in patches throughout all four properties.
<i>Juglans californica</i> ssp. <i>californica</i>	Southern California black walnut	–/–	List D	–	4.2	Observed in the central property.
Animals						
<i>Accipiter cooperii</i>	Cooper's hawk	–/–	Group 1	MSCP	–	Observed flying over the western property.
<i>Aimophila ruficeps</i>	Southern California rufous-crowned sparrow	–/–	Group 1	MSCP	–	Auditory observation within central property.
<i>Aspidoscelis hyperythra beldingi</i>	Belding's Orange throated whiptail	–/–	Group 2	MSCP	–	Observed in the two westernmost properties.
<i>Campylorhynchus brunneicapillus sandiegensis</i>	Coastal cactus wren	–/SSC	Group 1 NE	MSCP	–	Observed nesting and calling within central property.
<i>Danaus plexippus</i>	Monarch	FT/–	–	–	–	Observed flying in central property.
<i>Neotoma lepida intermedia</i>	San Diego desert woodrat	–/SSC	Group 2	–	–	Two middens were observed in the central property.
<i>Poliioptila californica californica</i>	Coastal California gnatcatcher	FT/ SSC	Group 1	MSCP	–	Several individuals were observed within the central and southernmost preserve properties.
<i>Sialia mexicana</i>	Western bluebird	–/–	Group 2	MSCP	–	Individuals were observed foraging within the central property.

Notes:

Federal/State Status:

- FE – Federally Endangered
- FT – Federally Threatened
- CE – California Endangered
- CT – California Threatened
- SSC – CDFW Species Special Concern

San Diego County Special-Status List:

- LIST A (Plants rare, threatened or endangered in California and elsewhere)
- LIST B (Plants rare, threatened or endangered in California but more common elsewhere)
- LIST C (Plants which may be quite rare, but need more information to determine their true rarity status)
- LIST D (Plants of limited distribution and are uncommon, but not presently rare or endangered)
- CA rare (rare in California, but not listed)
- NE (MSCP Narrow Endemic)

Scientific Name	Common Name	Federal/ State Status	San Diego County Special- Status List	Draft North County MSCP- Covered Species	California Rare Plant Rank	Notes
California Rare Plant Rank:						
<ul style="list-style-type: none"> • 1A – Plants presumed extirpated in California and either rare or extinct elsewhere • 1B – Plants rare, threatened, or endangered in California and elsewhere • 2A – Plants presumed extirpated in California but common elsewhere • 2B – Plants rare, threatened, or endangered in California but more common elsewhere • 3 – Review List: Plants about which more information is needed • 4 – Watch List: Plants of limited distribution • 0.1 – Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat) • 0.2 – Moderately threatened in California (20%–80% occurrences threatened / moderate degree and immediacy of threat) • 0.3 – Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known) 						
Other:						
<ul style="list-style-type: none"> • Unk – Unknown due to timing of survey and life stage of individual 						

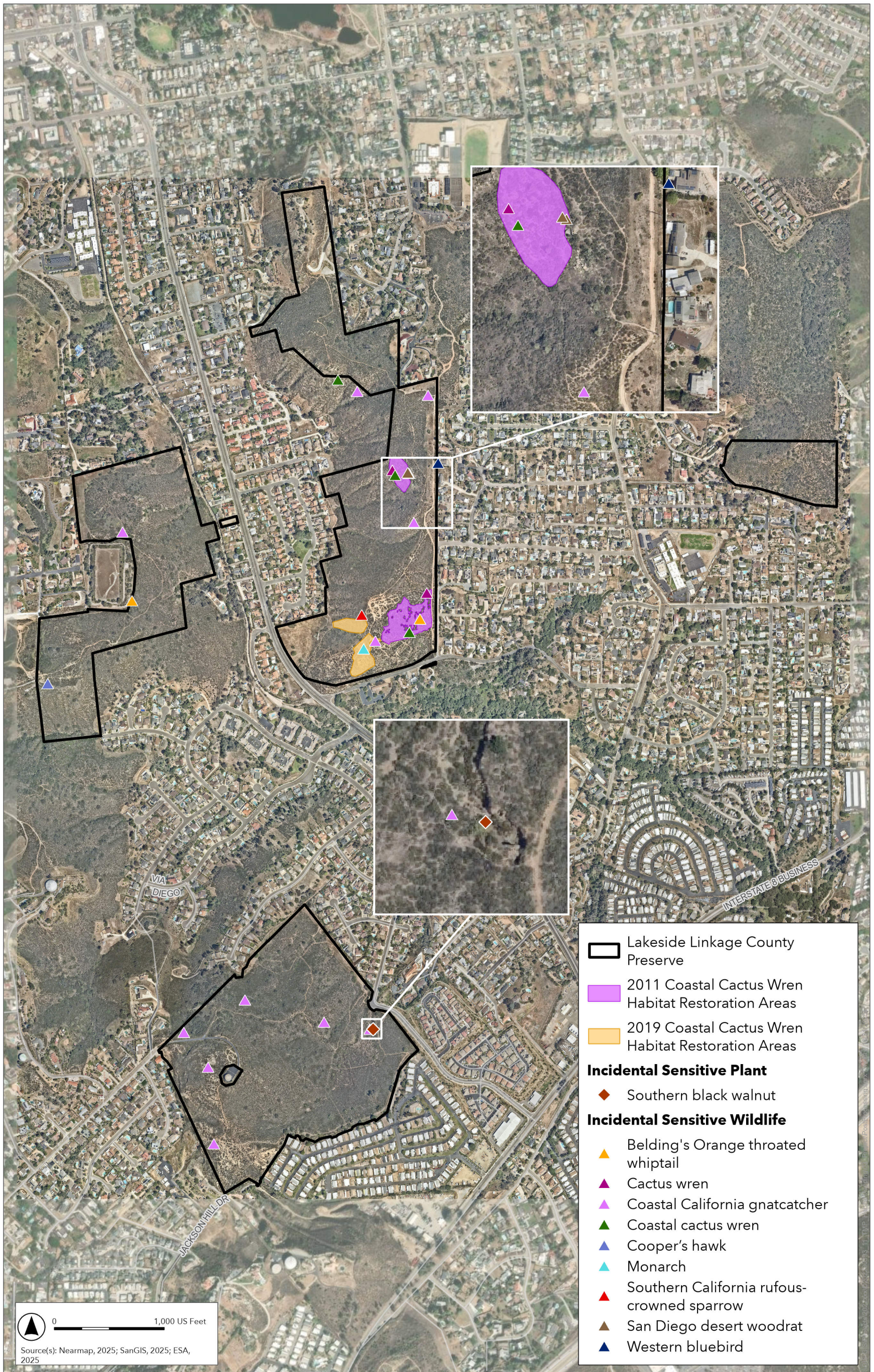


Figure 13
Incidental Sensitive Plant and Wildlife Observations
Lakeside Linkage County Preserve

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Habitat Conditions and Threats Assessment

Threats Assessment

Based on the field surveys, biologists took note of any major issues that could pose a threat to the vegetation communities within Lakeside Linkage County Preserve. A list of primary threats identified in the IMG protocol is presented in **Table 16** along with a discussion of the severity of each threat within the preserve (presented as the extent within the preserve on a scale of 1 to 7).

TABLE 16
THREATS OVERVIEW: LAKESIDE LINKAGE COUNTY PRESERVE

Disturbances/Stressors	Severity (Extent)	Discussion
Invasive non-native plant species (e.g., annual grasses and herbs)	4	The preserve is dominated by the coastal sage scrub vegetation community and has openings between shrubs often dominated by non-native annual plant species such as short-pod mustard, red brome, rigput brome, and tocalote. Other woody, perennial non-native plant species such as tree of heaven, Peruvian pepper tree, Brazilian pepper tree, European olive, Tamarisk, and Mexican fan palm were observed primarily along the urban interface of the preserve.
Altered fire regime or risk of catastrophic fire	6	Due to the location of the preserve along urban interface, presence of invasive non-native plant annuals, and steep slopes, the potential for catastrophic fire damage is high.
Unauthorized human use (e.g., off-road vehicles, encampments, unauthorized trails, shooting, poaching, and/or dumping)	5	The central property of the preserve contained a significant amount of potentially unauthorized trail use and residents were observed riding electric dirt bikes throughout this parcel during the surveys. An additional potentially unauthorized trail was observed in the westernmost property. Impacts on native habitat from unauthorized trail use are evident.
Shothole borer, gold-spotted oak borer, and <i>Fusarium</i> fungal invasion	–	Preserve was not assessed for invasive insect species or fungi. Limited amounts of host species present for shothole borer, gold-spotted oak borer, or <i>Fusarium</i> dieback.
Erosion	1	No significant or problematic erosion was detected within the preserve.
Small, isolated occurrences vulnerable to loss of genetic diversity and to extirpation due to environmental stochasticity or catastrophic disturbance.	–	Not observed
Altered hydrology (e.g., urban runoff, flood control facilities)	1	No altered hydrology was observed on the preserve.
Herbivory (e.g., seed, vegetation)	1	Not observed.
Detrimental edge effects from adjacent urban development	3	Most of the preserve boundary is surrounded by urban development, which presents risk of detrimental edge effects. The highest prevalence of disturbed habitat and invasive non-native plant species occurs along the preserve/urban development interface in all properties, indicating that edge effects are significant, increasing potential for new invasive non-native plant species, litter, and increased risk of unauthorized access.

Notes:

Disturbance Categories within Preserve:

- 1 – No sign of disturbance within preserve
- 2 – Disturbance does not occur within preserve, but is detected adjacent to preserve boundaries
- 3 – Disturbance occurs in >0% to <10% of preserve
- 4 – Disturbance occurs in 10 to <25% of preserve
- 5 – Disturbance occurs in 25 to <50% of preserve
- 6 – Disturbance occurs in 50 to <75% of preserve
- 7 – Disturbance occurs in ≥ 75% of preserve

Type Conversion

In order to detect potential type conversions within the preserve, Holland-Oberbauer vegetation mapping was used to compare the acreage of each habitat type that was previously mapped with the current acreage by habitat type (Table 17).

TABLE 17
TYPE CONVERSION ASSESSMENT BASED ON HOLLAND-OBERBAUER MAPPING: LAKESIDE LINKAGE COUNTY PRESERVE

Habitat Type	Acres in 2015/2021 ^a	Acres in 2025	Difference in Acreage
Disturbed/Developed	11.07	17.25	6.18
Herbaceous	5.87	9.25	3.38
Scrub	191.32	182.58	-8.74
Woodland	0.81	0	-0.81

a. Data are based on vegetation mapping conducted in the 3 northernmost parcels of the preserve in 2015 (ICF 2015) and in the southernmost parcel (Centex addition, acquired in 2018) in 2021 (Harris and Associates 2021).

Disturbed/developed habitat has increased from 11.07 acres in 2015 to 17.25 acres in 2025. This 6.18-acre increase may be due to increased mapping accuracy of trails, roads, structures, and fuel modification zones along the boundary of the preserve properties and residential communities.

Herbaceous communities increased from 5.87 acres in 2015 to 9.25 acres in 2025. This 3.38-acre increase is primarily due to reclassifying previously mapped 32500 Diegan coastal sage scrub and disturbed Diegan coastal sage scrub to 42200 non-native grassland or 42210 non-native grassland: broadleaf-dominated habitats, particularly in the northern and southern portions of the central property of the preserve.

Scrub communities decreased from 191.32 acres in 2015 to 182.58 acres in 2025. This 8.74-acre decrease is due to increased habitat mapping accuracy which reclassified previously mapped 32500 Diegan coastal sage scrub and disturbed Diegan coastal sage scrub to 42200 non-native grassland or 42210 non-native grassland: broadleaf-dominated habitats and disturbed/developed landcovers.

Woodland communities decreased from 0.81 acres in 2015 to 0 acres in 2025. This 0.81-acre decrease is due to reclassifying a previously mapped 11000 ornamental woodland in the western property of the preserve to a disturbed landcover, as many of the large ornamental plants in this area are no longer present.

Adaptive Management Recommendations

Adaptive management recommendations were developed based on the general habitat condition and threats assessment conducted during habitat mapping for Lakeside Linkage County Preserve. Recommendations are provided for invasive non-native plant species management, habitat enhancement/restoration opportunities, encroachment, and monitoring, which were cross-referenced with the management directives and implementation measures described in the Lakeside Linkage Preserve Resource Management Plan (County of San Diego 2010). Recommendations are detailed in the following subsections.

Invasive Non-Native Plant Species Management

As discussed in the invasive non-native plant observations section, several invasive non-native plant species were detected within the preserve. For each species, a recommended action was identified consisting of either removal, treatment, or monitoring, which should follow the preserve's RMP implementation measures IM B.2.1–IM B.3.3 (County of San Diego 2010). Near-term removal of Canary Island palm, Brazilian pepper tree, Peruvian pepper tree, Mexican fan palm, and eucalyptus, tree of heaven, tamarisk, and treatment of stinkwort, tree tobacco, black mustard, Sahara mustard, castor bean, and crimson fountain grass is recommended. Final implementation of management activities and treatment methods shall be determined by the County based on priority.

Habitat Enhancement/Restoration Opportunities

- **Erosion.** The preserve appeared to be affected by erosion particularly in disturbed areas such as trails, adjacent to developed areas, and generally in areas where vegetation cover was low. The central property would benefit from a focused assessment of erosion issues to better inform next steps, which may include regrading or recontouring in problem areas and/or revegetation of highly disturbed areas (i.e., conversion of unused roads to habitat). Erosion was also previously identified within the preserve in 2015 (ICF 2015).
- **Rare plants.** Two rare plant species were detected within the preserve, San Diego Viguiera (*Bahiopsis laciniata*) and Southern California black walnut (*Juglans californica* ssp. *Californica*). San Diego Viguiera is abundant in several areas of the preserve and does not currently need targeted management to sustain the population. General enhancement efforts to protect the species include restricting off-trail use and invasive non-native plant control. Southern California black walnut was detected within a drainage that is unlikely to be threatened by human disturbance; however, the individual could also be protected through general invasive non-native plant control, particularly the dense patch of tree of heaven that grows near this individual. There is moderate to high potential for other rare plant species to occur within the preserve. Due to the assessment occurring during July 2025, outside of the blooming periods for many of the rare plant species that may occur within the preserve, some species likely would not have been detected. Focused rare plant surveys during the appropriate blooming period are recommended, particularly around disturbed areas where habitat enhancement and restoration efforts would most benefit the species. This could be accomplished through collaboration with SDMMMP.

Encroachment

- **OHV usage.** Off-road vehicle use is present within the central property of the preserve and is causing degradation to native habitat types, particularly occupied coastal California gnatcatcher (*Polioptila californica*) coastal sage scrub habitat. Consider reinforcing access restrictions within the north-central parcel of the preserve. OHV usage was also detected in 2015 (ICF 2015).
- **Access control.** Consider reinforcing access restrictions within the north-central parcel of the preserve.

Monitoring

- **Invasive non-native plants.** Invasive non-native plant species mapping should be conducted annually, if feasible, to inform treatment areas, assess new invasions or reinvasions, and determine effectiveness of treatments.
- **Public use.** Several potentially unauthorized trails were observed within the preserve. These trails were also identified in 2015 (ICF 2015). Consider demarcating authorized and unauthorized trails to prevent additional habitat impacts from the public.
- **Catastrophic events.** Additional vegetation mapping efforts may be conducted as needed following catastrophic events such as wildfires.

Louis A. Stelzer County Park

Louis A. Stelzer County Park is an approximately 368-acre day-use park located in Lakeside, an unincorporated community of central San Diego County. The park is north of Interstate 8 along both sides of Wildcat Canyon Road just north of Willow Road. This park is located within the MSCP Plan Area (County of San Diego 1997).

Vegetation Mapping

A total of 11 vegetation communities and 3 land cover types were identified via Holland-Oberbauer and 18 vegetation communities and 3 land cover types were identified via VCM for Louis A. Stelzer County Park. These communities are depicted in **Figure 14** and **Figure 15** and provided in crosswalk format in **Table 18**.

TABLE 18
VEGETATION COMMUNITIES CROSSWALK: LOUIS A. STELZER COUNTY PARK

Oberbauer-Modified Holland Code	San Diego Vegetation Classification Manual		Acreage
	Alliance Level	Association Level	
Scrub			
32500 Diegan Coastal Sage Scrub	4.13 San Diego Viguiera Alliance	4.13 San Diego Viguiera Alliance	1.71
		4.13.1 San Diego Viguiera – California Sagebrush – California Buckwheat Association	1.33
	4.23 California Buckwheat Alliance	4.23.1 California Buckwheat Association	4.23
	4.7 California Sagebrush – California Buckwheat Alliance	4.7 California Sagebrush – California Buckwheat Alliance	0.16
		4.7.1 California Sagebrush – Buckwheat – Laurel Sumac Association	324.37
Chaparral			
37200 Chamise Chaparral	4.1 Chamise Alliance	4.1 Chamise Alliance	3.82

San Diego Vegetation Classification Manual			
Oberbauer-Modified Holland Code	Alliance Level	Association Level	Acreage
Herbaceous			
42200 Non-Native Grassland	5.26 Crimson Fountain Grass Semi-Natural Stands	5.26.1 Crimson Fountain Grass Semi-Natural Stands	2.32
	5.5 Wild Oat Semi-Natural Stands	5.5 Wild Oat Semi-Natural Stands	2.61
	5.8 Rippgut Grass – Purple False-Brome Semi-Natural Stands	5.8.2 Rippgut Grass Semi-Natural Stand Type	1.59
42210 Non-Native Grassland: Broadleaf-Dominated	5.7 Black Mustard and Other Mustards Semi-Natural Stands	5.7 Black Mustard and Other Mustards Semi-Natural Stands	0.12
Riparian			
61300 Southern Riparian Forest	3.4 Western Sycamore Alliance	3.4.3 Western Sycamore – Coast Live Oak Association	10.51
	3.6 Coast Live Oak Alliance	3.6 Coast Live Oak Association	0.26
		3.6.3 Coast Live Oak – Arroyo Willow Association	0.83
		3.6.4 Coast Live Oak – Poison Oak – Grass Association	0.52
61310 Southern Coast Live Oak Riparian Forest	3.4 Western Sycamore Alliance	3.4.3 Western Sycamore – Coast Live Oak Association	0.18
	3.6 Coast Live Oak Alliance	3.6.3 Coast Live Oak – Arroyo Willow Association	0.36
		3.6.4 Coast Live Oak – Poison Oak – Grass Association	0.76
61330 Southern Cottonwood-Willow Riparian Forest	3.5 Fremont's Cottonwood Alliance	3.5.1 Fremont's Cottonwood/Mule Fat Association	0.49
Woodland			
71160 Coast Live Oak Woodland	3.6 Coast Live Oak Alliance	3.6 Coast Live Oak Association	0.60
71161 Open Coast Live Oak Woodland	3.6 Coast Live Oak Alliance	3.6 Coast Live Oak Association	4.44
		3.6.2 Coast Live Oak / Scrub Oak Association	0.48
71181 Open Engelmann Oak Woodland	3.7 Engelmann Oak Alliance	3.7.1 Engelmann Oak/White Sage Association	0.15
79100 Eucalyptus Woodland	3.2 Eucalyptus Semi-Natural Stands	3.2 Eucalyptus Semi-Natural Stands	0.30
Other^a			
11000 Disturbed Habitat	Disturbed Habitat	Disturbed Habitat	0.37
11300 Disturbed Habitat – Roads and Trails	Disturbed Habitat – Trails or Roads	Disturbed Habitat – Trails or Roads	4.32
12000 Urban/Developed	Urban/Developed	Urban/Developed	1.06
TOTAL ACREAGE:^b			367.90

Notes:

- a. The San Diego Vegetation Classification Manual only classifies vegetated areas. The disturbed land cover types were described and displayed under the association level to provide additional detail in the mapping. This allows for changes in vegetation (e.g., unvegetated to vegetated) to be tracked over time.
- b. Total may not match the sum of individual acreages listed due to rounding.

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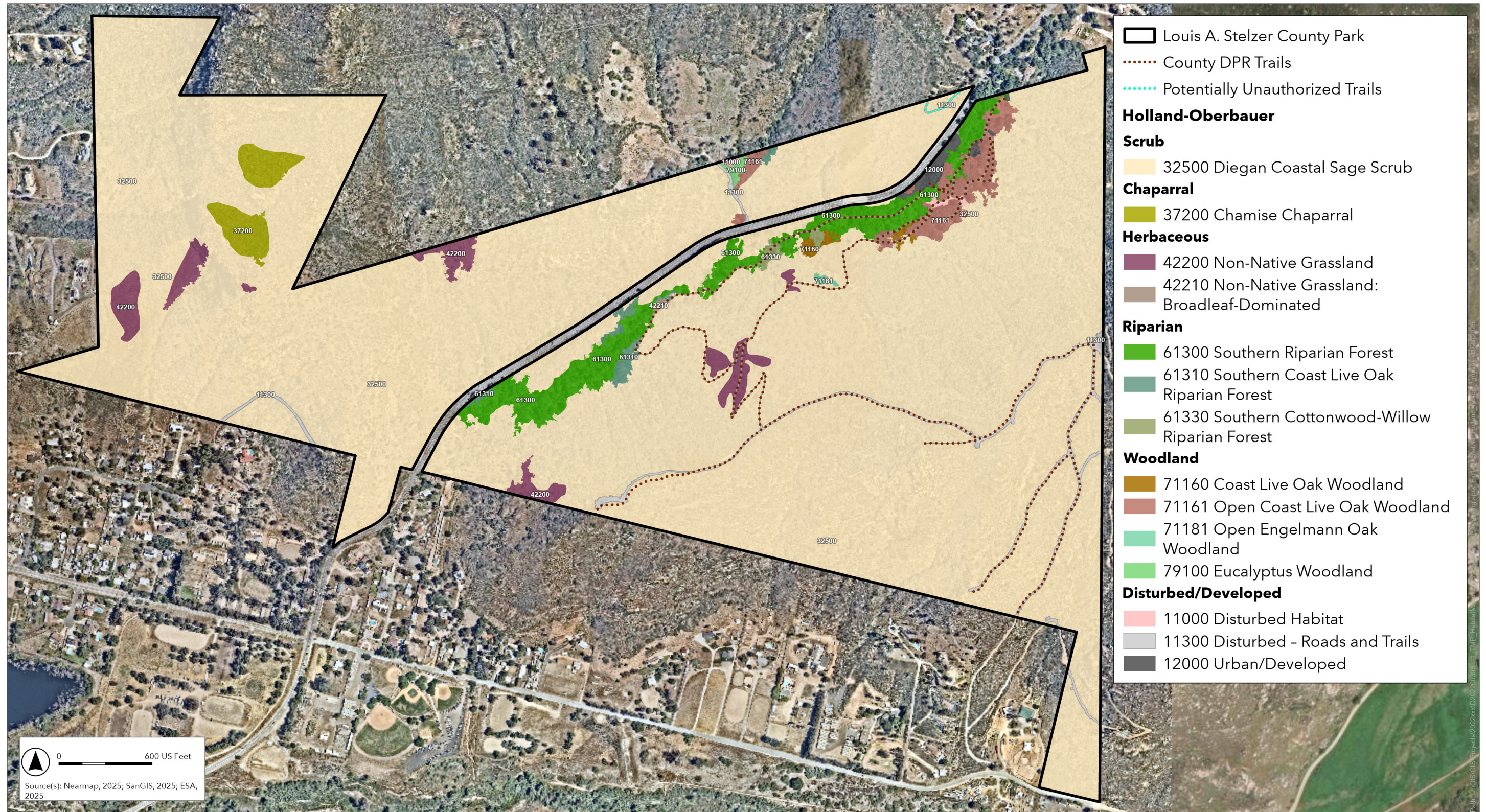


Figure 14
Vegetation Communities - Holland-Oberbauer Classification
Louis A. Stelzer County Park

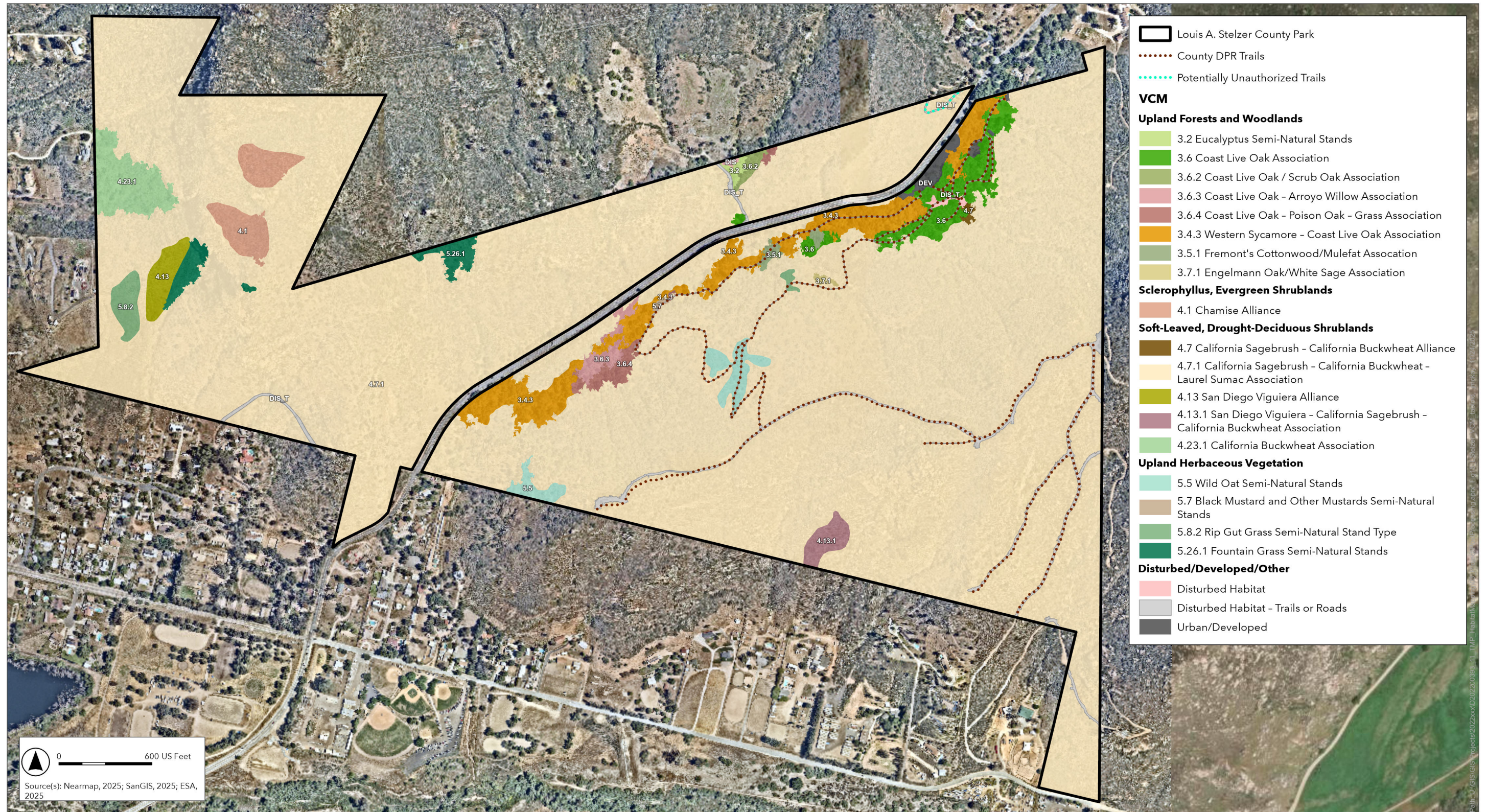


Figure 15
Vegetation Communities - Vegetation Classification Manual (VCM) for Western San Diego County
Louis A. Stelzer County Park

Invasive Non-Native Plant Observations

A total of 14 limited to high-risk invasive non-native plant species, including 1 watch species (as determined by Cal-IPC) were detected during field surveys for Louis A. Stelzer County Park (**Table 19** and **Figure 16**). Of these species, none were identified as having an SDCRPR. Invasive non-native plant species that were ubiquitous throughout the preserve were not mapped, but general locations are provided in **Table 19**. The Cal-IPC and SDCRPR were taken into consideration when determining the recommended actions and should be referenced for specific treatment methods. The recommended actions for the species detected are as follows.

- **Remove.** Several eucalyptus trees and one Peruvian pepper tree were located at the eastern boundary of the park, immediately adjacent to a dirt road off Wildcat Canyon Road. In addition, several tree tobacco individuals, castor beans, one tamarisk, and two Mexican fan palms were located within the riparian area that runs through the center of the park. Chemical control and/or mechanical removal of these species is recommended as they have a propensity to quickly spread, dominate, and degrade habitats.
- **Treat.** Crimson fountain grass was identified as small to large infestations, specifically at rocky outcroppings on hilltops throughout the park and are recommended for treatment. Comprehensive invasive non-native plant species mapping in conjunction with treatment is recommended to determine extent of this species within the park and to monitor the success/effectiveness of treatment. Currently the most successful methods for control of this species are through manual removal and chemical control with systemic and broad-spectrum herbicides.
- **Monitor.** Several grass species occurred in large numbers throughout the preserve, including slender wild oat, ripgut grass, red brome, tocalote, redstem filaree, short-pod mustard, wild mustard (*Sinapis* sp.), and should continue to be monitored to detect any negative effects on surrounding native vegetation communities.

TABLE 19
INVASIVE NON-NATIVE PLANT SPECIES: LOUIS A. STELZER COUNTY PARK

Scientific Name	Common Name	Cal-IPC Ranking	San Diego County Regional Priority Ranking	Notes	Management Recommendation
<i>Avena barbata</i>	slender wild oat	Moderate	–	Occurs in dense stands at two locations within the eastern portion of the park but is also sparsely present throughout open areas in scrub habitats and understory of oak woodlands in the northern portion of the park.	Monitor
<i>Bromus diandrus</i>	ripgut grass	Moderate	–	Observed in a dense patch adjacent to riparian habitat in the northern portion of the park and is associated with trails and road edges throughout the park.	Monitor
<i>Bromus rubens</i> ^a	red brome	High	–	Sparsely present within non-native grasslands in the southern portion of the park and within understory of oak woodlands in the northern portion of the park.	Monitor
<i>Centaurea melitensis</i> ^a	tocalote	Moderate	–	Scattered individuals found throughout the park and is associated with trails and roads.	Monitor

Scientific Name	Common Name	Cal-IPC Ranking	San Diego County Regional Priority Ranking	Notes	Management Recommendation
<i>Erodium cicutarium</i> ^a	redstem filaree	Limited	–	Observed throughout the park. Most common in open areas between shrubs in scrub habitats.	Monitor
<i>Eucalyptus</i> sp.	eucalyptus	Limited (Watch)	–	Present at the eastern boundary of the park, adjacent to a dirt road off Wildcat Canyon Road.	Remove
<i>Hirschfeldia incana</i> ^a	short-pod mustard	Moderate	–	One patch was located adjacent to the riparian area on the eastern side of the park and individuals can be found in open areas between shrubs in scrub habitats.	Monitor
<i>Nicotiana glauca</i> ^a	tree tobacco	Moderate	–	Scattered individuals were documented within the riparian area on the eastern side of the park.	Remove
<i>Pennisetum setaceum</i>	crimson fountain grass	Moderate	–	Associated with rocky outcroppings, trials, and riparian area. Occurs in especially dense stands on the hills located on the western side of the park.	Treat
<i>Ricinus communis</i>	castor bean	Limited	–	Scattered individuals were documented within the riparian area on the eastern side of the park.	Remove
<i>Schinus molle</i>	Peruvian pepper tree	Limited	–	One individual was documented at the eastern boundary of the park, adjacent to a dirt road off Wildcat Canyon Road.	Remove
<i>Sinapis</i> sp.	wild mustard	Limited	–	Sparsely present in open areas between shrubs in scrub habitats.	Monitor
<i>Tamarisk</i> sp.	tamarisk	High	–	One individual was observed within the riparian area on the eastern side of the park.	Remove
<i>Washingtonia robusta</i>	Mexican fan palm	Moderate	–	Two individuals were observed within the riparian area on the eastern side of the park.	Remove

Notes:

a. These species were detected within the park but not mapped; species were found to be widespread throughout the park.

Cal-IPC Ranking:

- **High** – These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.
- **Moderate** – These species have substantial and apparent—but generally not severe—ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.
- **Limited** – These species are invasive, but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.
- **Alert** – An alert is listed on species with High or Moderate impacts that have limited distribution in California but may have the potential to spread much further.
- **Watch** – These species have been assessed as posing a high risk of becoming invasive in the future in California.

San Diego County Regional Priority Ranking (Cal-IPC, Dendra, CBI 2012):

- **Very High – Level 1 Surveillance.** Low effort required to achieve goal of regional surveillance, early detection, rapid response.
- **High – Level 2 Eradication.** Moderate effort required to achieve goal of eradication with regionally coordinated control program.
- **Medium – Level 3 Containment.** Funding typically available for retreatments or control of small populations. Goal is eradication with coordinated programs by management unit or watershed.
- **Medium – Level 4 Directed Management.** Area may be managed effectively, with slow reinvasion. Goal is to control within reserve or sub-management unit to benefit NCCP resources.
- **Low – Level 5 Directed Suppression.** Control is typically of short-term benefit (rapid reinvasion) without active restoration. Goal is suppression, typically to allow recovery disturbed site, improve revegetation success, or benefit NCCP resources.

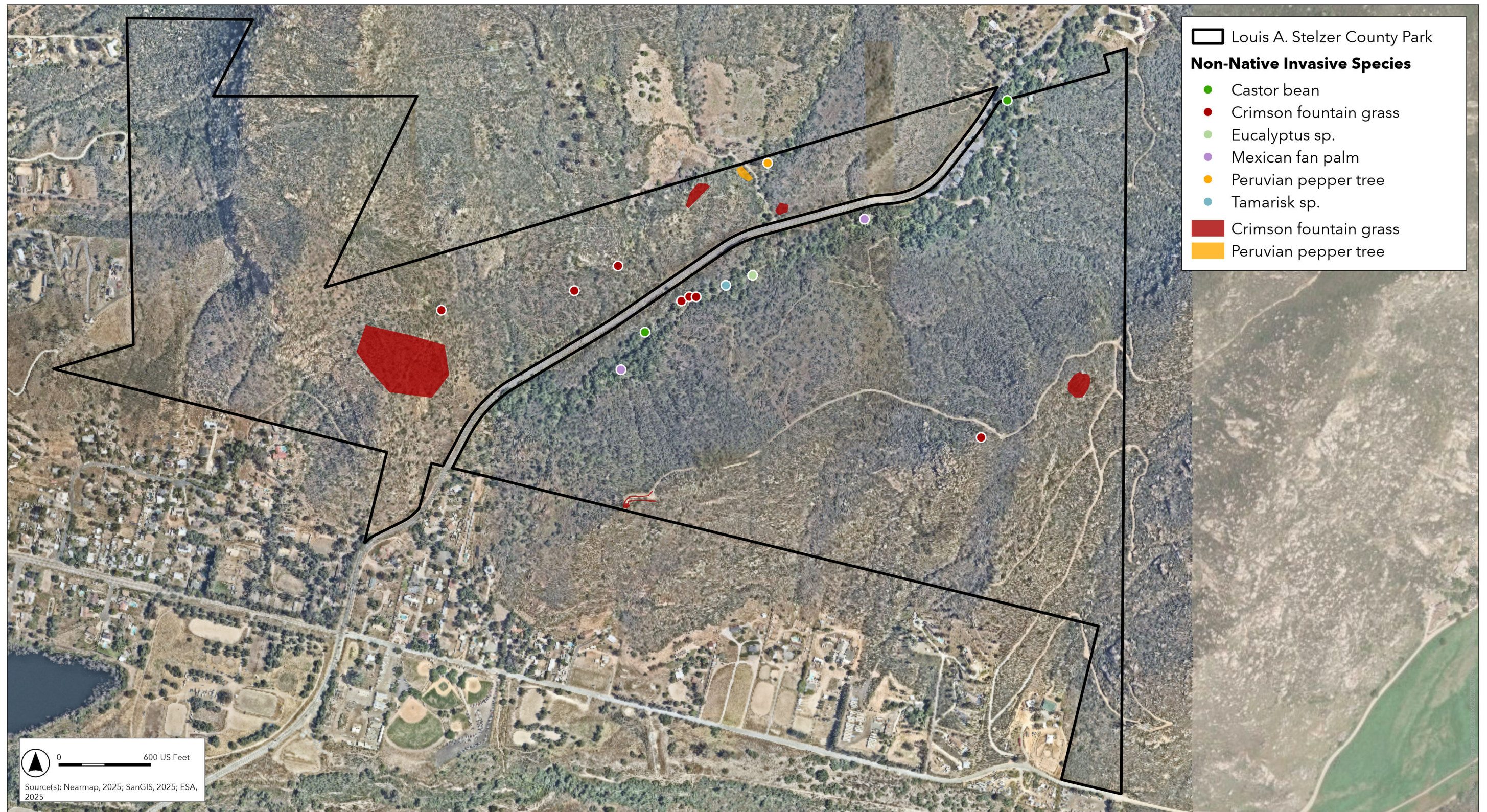


Figure 16
 Invasive Non-Native Plant Observations
 Louis A. Stelzer County Park

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Incidental Sensitive Plant and Wildlife Observations

Six sensitive plant species and one sensitive wildlife species were incidentally detected and mapped during field surveys for Louis A. Stelzer County Park (Table 20 and Figure 17).

TABLE 20
INCIDENTAL PLANT AND ANIMAL OBSERVATIONS: LOUIS A. STELZER COUNTY PARK

Scientific Name	Common Name	Federal/State Status	San Diego County Special-Status List	MSCP-Covered Species	California Rare Plant Rank	Notes
Plants						
<i>Artemisia palmeri</i>	San Diego sagewort	–/–	List D	–	4.2	A few individuals were observed in the riparian area in the eastern portion of the park.
<i>Bahiopsis laciniata</i>	San Diego viguiera	–/–	List D	–	4.3	Observed in patches on southern-facing slopes throughout the park.
<i>Ceanothus cyaneus</i>	Lakeside ceanothus	–/–	List A	MSCP	1B.2	Observed within chamise chaparral in the northwestern portion of the park.
<i>Selaginella cinerascens</i>	Ashy spike-moss	–/–	List D	–	4.1	Observed in small patches on rocky outcroppings throughout the park.
<i>Quercus engelmannii</i>	Engelmann oak	–/–	List D	–	4.2	Observed scattered throughout oak woodlands in the park.
<i>Juncus acutus</i> ssp. <i>leopoldii</i>	Southwestern spiny rush	–/–	List D	–	4.2	Several individuals were identified in a small patch in the riparian area.
Animals						
<i>Cathartes aura</i>	Turkey vulture	–/–	Group 1	–	–	Observed flying overhead during surveys throughout the park.

Notes:

Federal/State Status:

- FE – Federally Endangered
- FT – Federally Threatened
- CE – California Endangered
- CT – California Threatened
- SSC – CDFW Species Special Concern

San Diego County Special-Status List:

- LIST A (Plants rare, threatened or endangered in California and elsewhere)
- LIST B (Plants rare, threatened or endangered in California but more common elsewhere)
- LIST C (Plants which may be quite rare, but need more information to determine their true rarity status)
- LIST D (Plants of limited distribution and are uncommon, but not presently rare or endangered)
- CA rare (rare in California, but not listed)
- NE (MSCP Narrow Endemic)

California Rare Plant Rank:

- 1A – Plants presumed extirpated in California and either rare or extinct elsewhere
- 1B – Plants rare, threatened, or endangered in California and elsewhere
- 2A – Plants presumed extirpated in California but common elsewhere
- 2B – Plants rare, threatened, or endangered in California but more common elsewhere
- 3 – Review List: Plants about which more information is needed
- 4 – Watch List: Plants of limited distribution
- 0.1 – Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
- 0.2 – Moderately threatened in California (20%-80% occurrences threatened / moderate degree and immediacy of threat)
- 0.3 – Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

Other:

- Unk – Unknown due to timing of survey and life stage of individual

Habitat Conditions and Threats Assessment

Threats Assessment

Based on the field surveys, biologists took note of any major issues that could pose a threat to the vegetation communities within Louis A. Stelzer County Park. A list of primary threats identified in the IMG protocol is presented in **Table 21** along with a discussion of the severity of each threat within the park (presented as the extent within the park on a scale of 1 to 7).

TABLE 21
THREATS OVERVIEW: LOUIS A. STELZER COUNTY PARK

Disturbances/Stressors	Severity (Extent)	Discussion
Invasive non-native plant species (e.g., annual grasses and herbs)	5	Displacement of native plants by invasive grass species, specifically crimson fountain grass, represents the greatest threat to the park.
Altered fire regime or risk of catastrophic fire	5	Invasive grasses and forbs provide increased fuel loads during dry periods and may present greater risk of fire. Frequent fires can result in type conversion from Diegan sage scrub to non-native grasslands.
Unauthorized human use (e.g., off-road vehicles, encampments, unauthorized trails, shooting, poaching, and/or dumping)	3	One potentially unauthorized, low-use trail was identified in the northeastern portion of the park and is likely associated with adjacent residences.
Shothole borer, gold-spotted oak borer, and <i>Fusarium</i> fungal invasion	–	Site was not assessed for invasive insect species or fungi.
Erosion	1	No significant erosion was observed within the park.
Small, isolated occurrences vulnerable to loss of genetic diversity and to extirpation due to environmental stochasticity or catastrophic disturbance.	3	Southwestern spiny rush occurs in a small, isolated area within the riparian habitat where it appears that California wild grape (<i>Vitis californica</i>) is rapidly dominating the overheard canopy. California wild grape control may be necessary to maintain this southwestern spiny rush population.
Altered hydrology (e.g., urban runoff, flood control facilities)	1	Urban runoff from adjacent residential areas may be entering the riparian area, though this was not observed in July 2025.
Herbivory (e.g., seed, vegetation)	1	No significant herbivory was observed within the park.
Detrimental edge effects from adjacent urban development	2	Residential areas adjacent to the southern portion of the park immediately east of Wildcat Canyon Road are dominated by invasive non-native grasses and may serve as a source of seed for the continued encroachment of these grasses into the park.

Notes:

Disturbance Categories within Park:

- 1 – No sign of disturbance within park
- 2 – Disturbance does not occur within park, but is detected adjacent to park boundaries
- 3 – Disturbance occurs in >0% to <10% of park
- 4 – Disturbance occurs in 10 to <25% of park
- 5 – Disturbance occurs in 25 to <50% of park
- 6 – Disturbance occurs in 50 to <75% of park
- 7 – Disturbance occurs in ≥ 75% of park

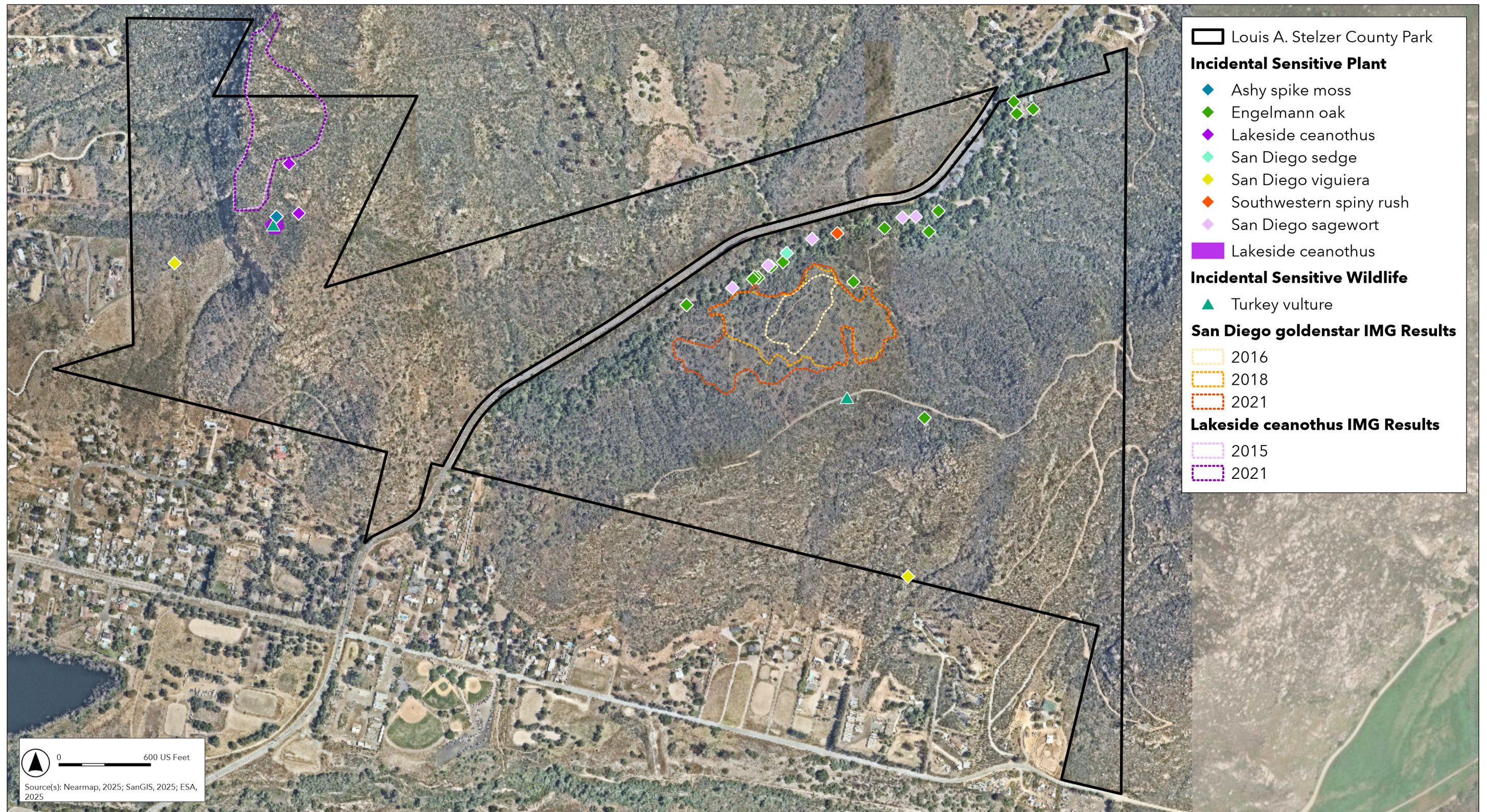


Figure 17
 Incidental Sensitive Plant and Wildlife Observations
 Louis A. Stelzer County Park

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Type Conversion

In order to detect potential type conversions within the park, Holland-Oberbauer vegetation mapping was used to compare the acreage of each habitat type that was previously mapped with the current acreage by habitat type (Table 22).

TABLE 22
TYPE CONVERSION ASSESSMENT BASED ON HOLLAND-
OBERBAUER MAPPING: LOUIS A. STELZER COUNTY PARK

Habitat Type	Acres in 2015	Acres in 2025	Difference in Acreage
Disturbed/Developed	5.07	5.76	0.68
Chaparral	0.00	3.82	3.82
Herbaceous	0.56	6.64	6.08
Riparian	25.78	13.91	-11.86
Scrub	335.79	331.80	-4.00
Woodland	0.69	5.97	5.28

Disturbed/developed landcover has increased from 5.07 acres in 2015 to 5.76 acres in 2025. This 0.68-acre increase is due to increased mapping accuracy of the parking lot, playground and structures associated with developed landcover types in the central portion of the park.

Chaparral communities increased from 0 acres in 2015 to 3.82 acres in 2025. This 3.82-acre increase is due to updating two small areas of 32500 Diegan coastal sage scrub where Lakeside ceanothus was observed to 37200 chamise chaparral, as this habitat type more accurately describes these areas and more sclerophyllous vegetation has matured over the past 10 years.

Herbaceous communities increased from 0.56 acres in 2015 to 6.64 acres in 2025. This 6.08-acre increase is due to reclassifying areas with high densities of slender wild oat, crimson fountain grass, and mustards in previously mapped 32500 Diegan coastal sage scrub habitat to 42200 non-native grassland or 42210 non-native grassland: broadleaf-dominated habitats.

Riparian communities decreased from 25.78 acres in 2015 to 13.91 acres in 2025. This 11.86-acre decrease is primarily due to reclassifying previously mapped upland areas around the playground and recreation area in the central portion of the park from 61310 southern coast live oak riparian forest to 71161 open coast live oak woodland, as this more accurately describes the area. In addition, some areas within the riparian corridor were updated from 61310 southern coast live oak riparian forest to 32500 Diegan coastal sage scrub habitat as this more accurately describes the vegetation present.

Scrub communities decreased from 335.79 acres in 2015 to 331.80 acres in 2025. This 4-acre difference (1%) is due to reclassifying previously mapped 32500 Diegan coastal sage scrub habitats to 42200 non-native grassland, 42210 non-native grassland: broadleaf-dominated, and 37200 chamise chaparral habitats.

Woodland communities increased from 0.69 acres in 2015 to 5.97 acres in 2025. This 5.28-acre increase is largely due to reclassifying previously mapped upland areas around the playground and recreation areas in addition to areas along the riparian corridor in the central portion of the park from 61310 southern coast live oak riparian forest to 71161 coast live oak woodland or 71161 open coast live oak woodland habitats.

Adaptive Management Recommendations

Adaptive management recommendations were developed based on the general habitat condition and threats assessment conducted during habitat mapping for Louis A. Stelzer County Park.

Recommendations are provided for invasive non-native plant species management, habitat enhancement/restoration opportunities, encroachment, and monitoring, which were cross-referenced with the management directives and implementation measures described in the Louis A. Stelzer Park Resource Management Plan (County of San Diego 2009d). Recommendations are detailed in the following subsections.

Invasive Non-Native Plant Species Management

As discussed in the invasive non-native plant observations section, several invasive non-native plant species were detected within the park. For each species, a recommended action was identified consisting of either removal, treatment, or monitoring, which should follow the park's RMP implementation measures IM B.2.1–IM B.3.3 (County of San Diego 2009d). Immediate removal of eucalyptus, tree tobacco, castor bean, tamarisk, and Mexican fan palm is recommended. Final implementation of management activities and treatment methods shall be determined by the County based on priority.

Habitat Enhancement/Restoration Opportunities

- **Erosion.** No significant or problematic erosion was observed within the park.
- **Rare plants.** The park contained several sensitive plant species that would benefit from comprehensive mapping to determine management/restoration opportunities. Focused rare plant surveys are recommended to capture areas ideally suited for habitat enhancement and restoration, and those areas that may be extirpated by invasive non-native plant species. This could be accomplished through collaboration with SDMMMP. In addition, significant gopher activity was observed within habitat that contains Lakeside ceanothus in 2015 (ICF 2015). While not directly observed in 2025, gophers are likely still present and may have a negative impact on the Lakeside ceanothus population.

Encroachment

- **OHV usage.** No off-road vehicle use was observed within the park. Vehicles associated with electrical utilities were observed on maintenance roads, but no habitat trampling was observed.
- **Access control.** Consider improved site access restriction in the northwest portion of the park to limit unauthorized trail usage by neighboring residences.

Monitoring

- **Invasive non-native plants.** Invasive non-native plant species mapping should be conducted annually, if feasible, to inform treatment areas, assess new invasions or reinvasions, and determine effectiveness of treatments.

- **Public use.** All authorized trails were in good condition. ESA biologists observed park rangers and a tree removal crew removing a fallen oak tree that was blocking access to the riparian trail.
- **Catastrophic events.** Additional vegetation mapping efforts may be conducted as needed following catastrophic events such as wildfires.

Oakoasis County Preserve

Oakoasis County Preserve is an approximately 442-acre open space preserve located in Lakeside, an unincorporated community of central San Diego County. It is located east of State Route 67 and west and east of the junction of Wildcat Canyon Road and Oakoasis Road, and southeast of the San Vicente Reservoir. This preserve is located within the MSCP Plan Area (County of San Diego 1997).

Vegetation Mapping

A total of 16 vegetation communities and 3 land cover types was identified via Holland-Oberbauer and 33 vegetation communities and 3 land cover types were identified via VCM for Oakoasis County Preserve. These communities are depicted in **Figure 18** and **Figure 19** and provided in crosswalk format in **Table 23**. It should be noted that areas within the northeast corner of the preserve were very difficult to access; therefore, mapping in those areas is limited to what was visible from certain vantage points.

TABLE 23
VEGETATION COMMUNITIES CROSSWALK: OAKOASIS COUNTY PRESERVE

Oberbauer-Modified Holland Code	San Diego Vegetation Classification Manual		Acreage
	Alliance Level	Association Level	
Scrub			
32500 Diegan Coastal Sage Scrub	4.2 Chamise – Mission Manzanita Alliance	4.2.3 Chamise – Mission Manzanita – Woolly Leaf Ceanothus Association	0.12
	4.23 California Buckwheat Alliance	4.23.1 California Buckwheat Association	2.36
	4.24 California Buckwheat – White Sage Alliance	4.24.1 California Buckwheat – White Sage Association	2.44
	4.7 California Sagebrush – California Buckwheat Alliance	4.7.1 California Sagebrush – California Buckwheat – Laurel Sumac Association	3.13
32520 Diegan Coastal Sage Scrub: Inland Form	4.24 California Buckwheat – White Sage Alliance	4.24 California Buckwheat – White Sage Association	0.14
32800 Flat-topped Buckwheat	4.23 California Buckwheat Alliance	4.23.1 California Buckwheat Association	1.17
Chaparral			
37120 Southern Mixed Chaparral	3.6 Coast Live Oak Alliance	3.6 Coast Live Oak Association	0.11
	4.1 Chamise Alliance	4.1 Chamise Alliance	0.14
		4.1.3 Chamise – Hoaryleaf Ceanothus Association	12.59
		4.1.4 Chamise – Woolly Leaf Ceanothus Association	111.48
	4.12 Broom Baccharis Alliance	4.12.1 Broom Baccharis Association	0.26
4.14 Hoaryleaf Ceanothus Alliance	4.14.1 Hoaryleaf Ceanothus Association	86.00	

San Diego Vegetation Classification Manual			
Oberbauer-Modified Holland Code	Alliance Level	Association Level	Acreage
	4.18 Woolly Leaf Ceanothus Alliance	4.18.1 Woolly Leaf Ceanothus Association	63.90
	4.2 Chamise – Mission Manzanita Alliance	4.2.1 Chamise-Mission Manzanita Association	44.35
		4.2.3 Chamise – Mission Manzanita – Woolly Leaf Ceanothus Association	0.52
		4.2.4 Chamise – Mission Manzanita – Wart Stemmed Ceanothus Association	0.22
	4.7 California Sagebrush – California Buckwheat Alliance	4.7.1 California Sagebrush – California Buckwheat – Laurel Sumac Association	0.27
	4.16 Chaparral Whitethorn Alliance	4.16.1 Chaparral Whitethorn Association	2.10
37121 Granitic Southern Mixed Chaparral	4.1 Chamise Alliance	4.1 Chamise Alliance	0.96
		4.1.4 Chamise – Woolly Leaf Ceanothus Association	47.01
	4.18 Woolly Leaf Ceanothus Alliance	4.18.1 Woolly Leaf Ceanothus Association	0.42
37820 Hoaryleaf Ceanothus Chaparral	4.1 Chamise Alliance	4.1.3 Chamise – Hoaryleaf Ceanothus Association	6.75
	4.14 Hoaryleaf Ceanothus Alliance	4.14.1 Hoaryleaf Ceanothus Association	0.91
37900 Scrub Oak Chaparral	3.6 Coast Live Oak Alliance	3.6.2 Coast Live Oak – Scrub Oak Association	0.31
		4.37 Scrub Oak Alliance	0.47
		4.37.1 Scrub Oak Association	0.74
		4.37.2 Scrub Oak – Mountain Mahogany Association	0.55
	4.38 Scrub Oak – Chamise Alliance	4.38.1 Scrub Oak – Chamise Association	6.83
Herbaceous			
4200 Valley and Foothill Grassland	5.22 Deer Grass Alliance	5.22 Deer Grass Alliance	0.07
42200 Non-Native Grassland	5.21 Mediterranean California Naturalized Annual and Perennial Grassland Semi-Natural Stands	5.21 Mediterranean California Naturalized Annual and Perennial Grassland Semi-Natural Stands	1.23
		5.8 Ripgut Grass – Purple False-Brome Semi-Natural Stands	0.14
42210 Non-Native Grassland: Broadleaf-Dominated	5.21 Mediterranean California Naturalized Annual and Perennial Grassland Semi-Natural Stands	5.21 Mediterranean California Naturalized Annual and Perennial Grassland Semi-Natural Stands	0.39
		5.7 Black Mustard and Other Mustards Semi-Natural Stands	0.16
		5.7.1 Black Mustard Semi-Natural Stand Type	1.67
42300 Wildflower Field	5.11 California Sand-Aster Provisional Alliance	5.11.1 California Sand-Aster Provisional Association	0.80
	5.13 Clustered Tarweed Alliance	5.13.1 Clustered Tarweed Association	1.66

San Diego Vegetation Classification Manual			
Oberbauer-Modified Holland Code	Alliance Level	Association Level	Acreage
Riparian			
61310 Southern Coast Live Oak Riparian Forest	3.6 Coast Live Oak Alliance	3.6 Coast Live Oak Association	3.04
		3.6.3 Coast Live Oak – Arroyo Willow Association	1.86
61330 Southern Cottonwood-Willow Riparian Forest	3.4 Western Sycamore Alliance	3.4.2 Western Sycamore – Fremont Cottonwood/Arroyo Willow Association	2.32
		3.5 Fremont's Cottonwood Alliance	1.40
Woodland			
71160 Coast Live Oak Woodland	3.6 Coast Live Oak Association	3.6 Coast Live Oak Association	2.18
		3.6.2 Coast Live Oak – Scrub Oak Association	2.30
		3.6.4 Coast Live Oak – Poison Oak – Grass Association	2.39
71161 Open Coast Live Oak Woodland	3.6 Coast Live Oak Association	3.6 Coast Live Oak Association	1.34
		3.6.4 Coast Live Oak-Poison Oak – Grass Association	0.16
		3.7 Engelmann Oak Alliance	0.13
71180 Engelmann Oak Woodland	3.7 Engelmann Oak Alliance	3.7 Engelmann Oak Alliance	4.15
		3.7.2 Engelmann Oak – Coast Live Oak – Poison Oak – Grass Association	4.48
	4.1 Chamise Alliance	4.1.4 Chamise – Woolly Leaf Ceanothus Association	1.84
Other^a			
11000 Disturbed Habitat	Disturbed Habitat	Disturbed Habitat	2.65
11300 Disturbed Habitat – Roads and Trails	Disturbed Habitat – Trails or Roads	Disturbed Habitat – Trails or Roads	6.21
12000 Urban/Developed	Urban/Developed	Urban/Developed	3.36
TOTAL ACREAGE:^b			442.19

Notes:

- a. The San Diego Vegetation Classification Manual only classifies vegetated areas. The disturbed land cover types were described and displayed under the association level to provide additional detail in the mapping. This allows for changes in vegetation (e.g., unvegetated to vegetated) to be tracked over time.
- b. Total may not match sum of individual acreages listed due to rounding.

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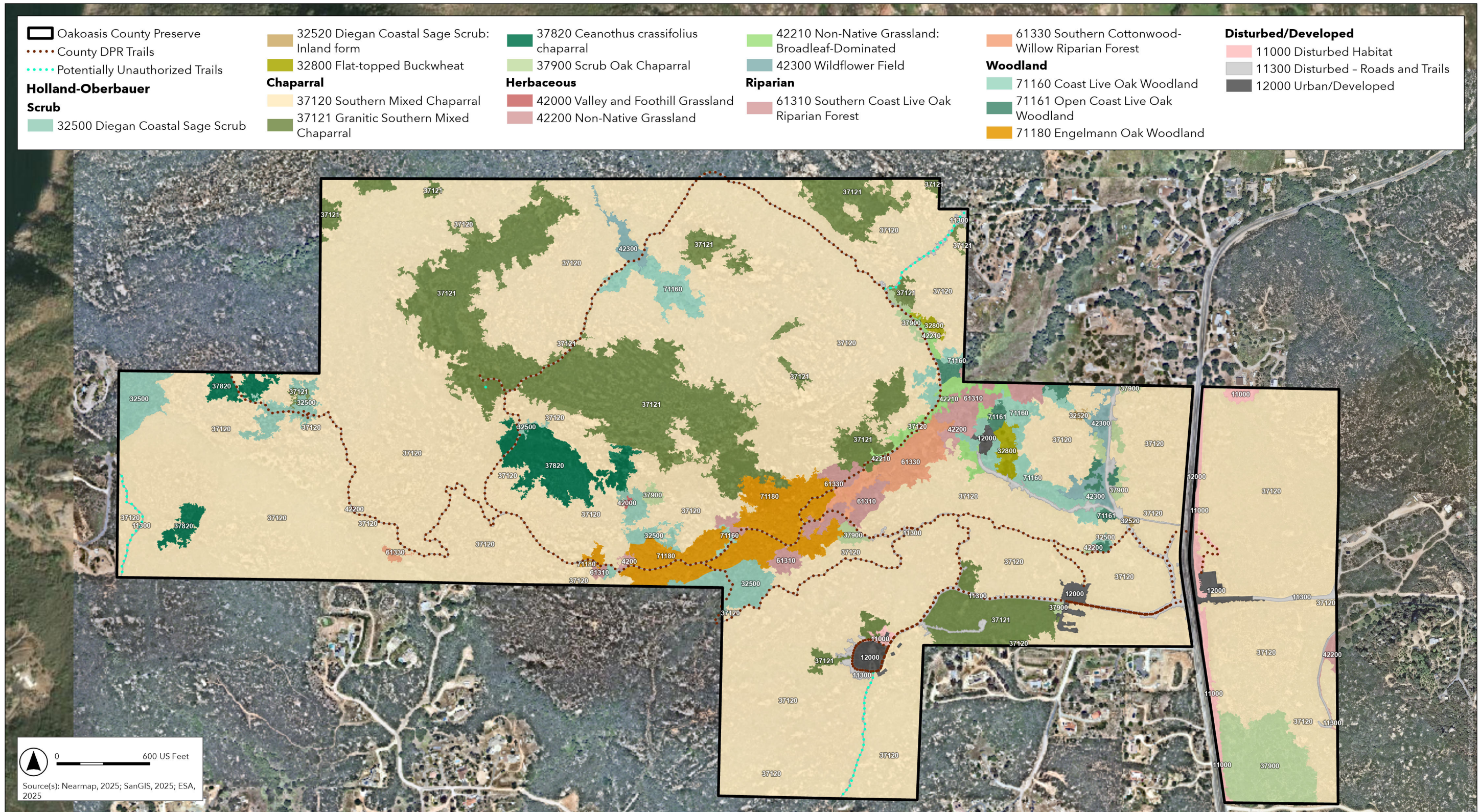


Figure 18
Vegetation Communities - Holland-Oberbauer Classification
Oakoasis County Preserve

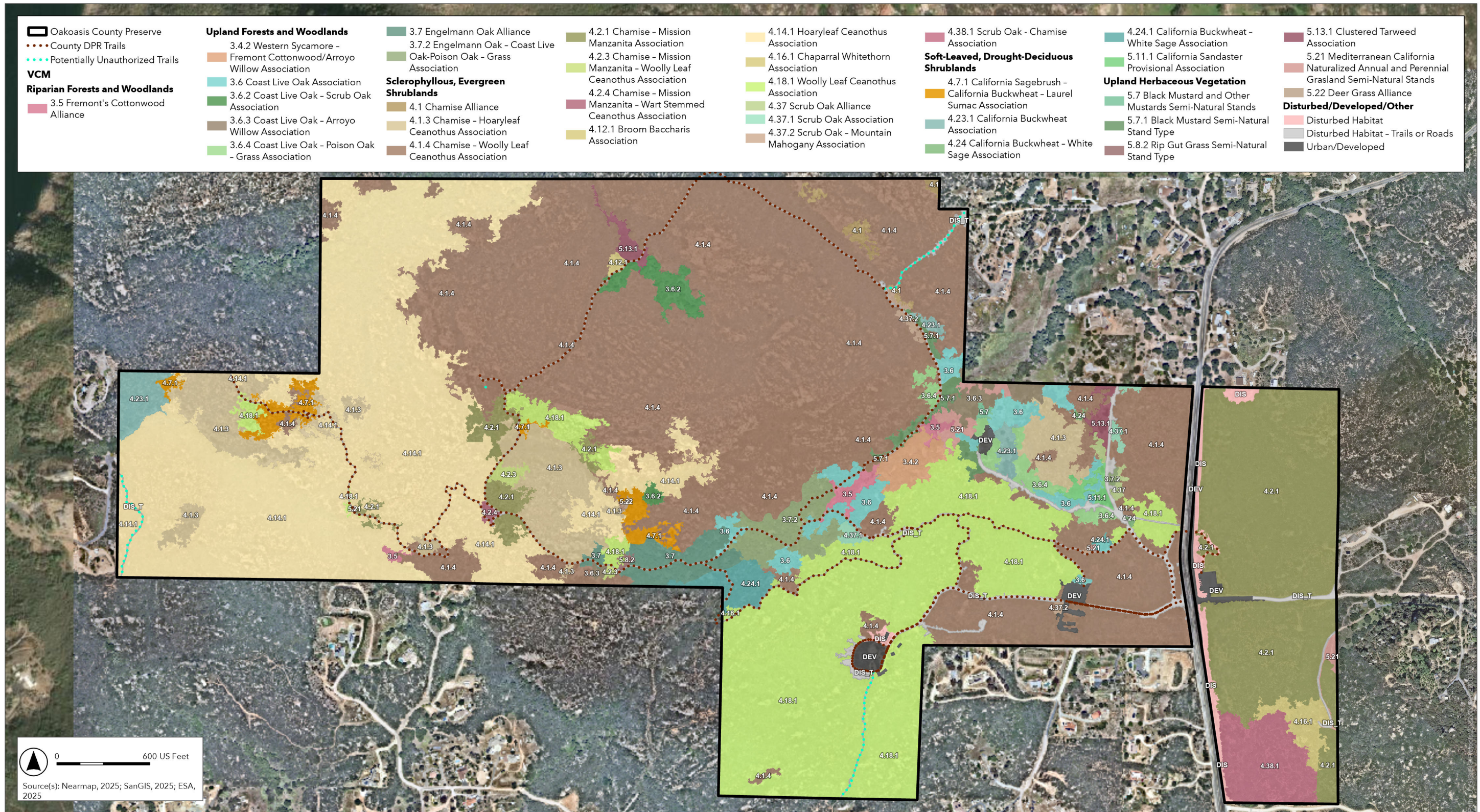


Figure 19
Vegetation Communities - Vegetation Classification Manual (VCM) for Western San Diego County
Oakoasis County Preserve

Invasive Non-Native Plant Observations

A total of 31 non-native plant species were detected during field surveys for Oakoasis County Preserve (Table 24 and Figure 20). Of these species, 13 were identified as limited to moderate-risk and 1 was identified as a watch invasive non-native plant species (as determined by Cal-IPC). In addition, 2 of these species were identified as having an SDCRPR. Invasive non-native plant species that were ubiquitous throughout the preserve were not mapped, but general locations are provided in Table 24. The Cal-IPC and SDCRPR were taken into consideration when determining the recommended actions and should be referenced for specific treatment methods. The recommended actions for the species detected are as follows.

- Remove.** One patch of Italian thistle consisting of about 50 individuals was observed near the eastern side of the preserve. This species can increase fire frequency and intensity in addition to decreasing native seed germination (Cal-IPC 2025); therefore, it is recommended for removal along with follow-up visits to detect any seedlings. A small patch of crown daisy was also detected within the preserve, and it is recommended for removal to stop further establishment along with follow-up visits to detect any seedlings. Lastly, lesser periwinkle (*Vinca minor*) was observed in a small patch within a non-native grassland in the preserve, and its removal is recommended to prevent further establishment.
- Treat.** Foxtail chess (*Bromus madritensis*), Bermuda grass (*Cynodon dactylon*), stinkwort, rye grass (*Festuca perennis*), natal grass (*Melinis repens* ssp. *repens*), crimson fountain grass, and prickly sow thistle (*Sonchus asper*) all occurred as small but prevalent infestations within the preserve and are recommended for treatment. Rye grass was observed in non-native grasslands and along trails and roads. Bermuda grass was identified along roads and trails and in disturbed areas. Stinkwort was found at multiple locations throughout the preserve, primarily on or adjacent to trails and roads. Natal grass was observed as two small patches along a trail in the center of the preserve. Crimson fountain grass occurs on many rocky outcroppings throughout the preserve and along authorized trails and roads. Prickly sow thistle was observed throughout the riparian areas of the preserve. The preserve would benefit from detailed invasive non-native plant species mapping (particularly species such as crimson fountain grass). Currently, the most successful methods for control of these species are through manual removal and chemical control with systemic and broad-spectrum herbicides.
- Monitor.** Several grass species occurred in large numbers throughout the preserve, including silver hair grass (*Aira caryophyllea*), mayweed (*Anthemis cotula*), slender wild oat, ripgut grass, soft brome, tocalote, caper spurge (*Euphorbia lathyris*), rattail sixweeks grass (*Festuca myuros*), bristly ox-tongue (*Helminthotheca echioides*), short-pod mustard, rough cat's-ear (*Hypochaeris radicata*), smooth cat's-ear (*Hypochaeris glabra*), prickly lettuce (*Lactuca serriola*), scarlet pimpernel (*Lysimachia arvensis*), horehound (*Marrubium vulgare*), sourclover (*Melilotus indicus*), bunny ears (*Opuntia microdasys*), rabbitfoot grass (*Polypogon monspeliensis*), curly dock (*Rumex crispus*), radish (*Raphanus sativus*), and London rocket (*Sisymbrium irio*) and should continue to be monitored to detect any negative effects on surrounding native vegetation communities.

TABLE 24
INVASIVE NON-NATIVE PLANT SPECIES: OAKOASIS COUNTY PRESERVE

Scientific Name	Common Name	Cal-IPC Ranking	San Diego County Regional Priority Ranking	Notes	Management Recommendation
<i>Aira caryophyllea</i> ^a	silver hair grass	–	–	Observed sporadically in open spaces throughout the preserve.	Monitor
<i>Anthemis cotula</i> ^b	mayweed	–	–	Present in open areas in mesic habitats.	Monitor
<i>Avena barbata</i> ^a	slender wild oat	Moderate	–	Sparsely present in open areas between shrubs in chaparral habitats.	Monitor
<i>Bromus diandrus</i> ^a	ripgut grass	Moderate	–	Observed in dense patches in oak woodland understories and within non-native grasslands and along roads and trails and in disturbed areas.	Monitor
<i>Bromus hordeaceus</i> ^a	soft brome	Limited	–	Present within non-native grasslands and open areas between shrubs throughout the preserve.	Monitor
<i>Bromus madritensis</i> ^a	Foxtail chess	High	–	Identified throughout the preserve within non-native grasslands and in open spaces between shrubs in chaparral habitats along roads and trails and in disturbed areas.	Treat
<i>Carduus pycnocephalus</i> ^a	Italian thistle	Moderate	–	Occurs as a dense patch within a non-native grassland in the eastern portion of the preserve.	Remove
<i>Centaurea melitensis</i> ^a	tocalote	Moderate	–	Observed throughout the preserve and generally associated with non-native grasslands and trail edges.	Monitor
<i>Cynodon dactylon</i> ^a	Bermuda grass	Moderate	–	Present in along roads and trails and in disturbed areas.	Treat
<i>Dittrichia graveolens</i>	stinkwort	Moderate (Alert)	High – Level 4	Identified throughout the preserve and associated with trails and roads.	Treat
<i>Euphorbia lathyris</i>	capeweed	Watch		Identified in small patch near house.	Monitor
<i>Festuca myuros</i> ^a	rattail sixweeks grass	Moderate	–	Identified throughout the preserve within non-native grasslands and in open spaces between shrubs in chaparral habitats.	Monitor
<i>Festuca perennis</i> ^a	rye grass	Moderate	–	Scattered throughout wetland/riparian areas.	Treat
<i>Glebionis coronaria</i>	crown daisy	Limited	Medium – Level 5	Observed in one small patch near picnic area of the preserve.	Remove
<i>Helminthotheca echinoides</i> ^a	bristly ox-tongue	Limited	–	Scattered throughout wetland/riparian areas.	Monitor
<i>Hirschfeldia incana</i> ^a	short-pod mustard	Moderate	–	Identified throughout the preserve within non-native grasslands and in open spaces between shrubs in chaparral habitats.	Monitor
<i>Hypochaeris radicata</i> ^a	rough cat's-ear	Moderate	–	Identified throughout the preserve within non-native grasslands and in open spaces between shrubs in chaparral habitats	Monitor

Scientific Name	Common Name	Cal-IPC Ranking	San Diego County Regional Priority Ranking	Notes	Management Recommendation
<i>Hypochaeris glabra</i> ^a	smooth cat's-ear	Moderate	–	Identified throughout the preserve within non-native grasslands and in open spaces between shrubs in chaparral habitats.	Monitor
<i>Lactuca serriola</i> ^a	prickly lettuce	–	–	Identified throughout the preserve within non-native grasslands, along roads and trails and in disturbed areas.	Monitor
<i>Lysimachia arvensis</i> ^a	scarlet pimpernel	–	–	Present in open areas between shrubs in chaparral habitats, along roads and trails and in disturbed areas.	Monitor
<i>Marrubium vulgare</i> ^a	horehound	Limited	–	Identified in the preserve within non-native grasslands, along roads and trails and in disturbed areas.	Monitor
<i>Mellilotus indicus</i> ^a	sourclover	–	–	Identified throughout the preserve within non-native grasslands and in open spaces between shrubs in chaparral habitats.	Monitor
<i>Melinis repens</i> ^a	natal grass	Watch	–	Observed in small patches within the western portion of the preserve.	Treat
<i>Opuntia microdasys</i>	bunny ears	-	-	Large patch along trail in center of the preserve.	Monitor
<i>Pennisetum setaceum</i>	crimson fountain grass	Moderate	–	Observed along trails and on rocky outcroppings throughout the preserve.	Treat
<i>Polypogon monspeliensis</i> ^a	rabbitfoot grass	Limited	–	Observed in the riparian areas	Monitor
<i>Rumex crispus</i> ^b	curly dock	Limited	–	Scattered throughout wetland/riparian areas.	Monitor
<i>Raphanus sativus</i> ^b	radish	Limited	–	Observed in the riparian areas.	Monitor
<i>Sisymbrium irio</i> ^a	London rocket	Limited	–	Identified throughout the preserve within non-native grasslands and in open spaces between shrubs in chaparral habitats.	Monitor
<i>Sonchus asper</i> ^b	prickly sow thistle	–	–	Scattered throughout wetland/riparian and other mesic areas.	Treat
<i>Vinca minor</i>	lesser periwinkle	–	–	Observed in a small patch adjacent to non-native grasslands in the eastern portion of the preserve.	Remove

Notes:

- a. These species were detected within the preserve but not mapped; species were found to be widespread throughout the preserve.
b. These species detected within preserve but not mapped.

Cal-IPC Ranking:

- **High** – These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.
- **Moderate** – These species have substantial and apparent—but generally not severe—ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.
- **Limited** – These species are invasive, but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

Scientific Name	Common Name	Cal-IPC Ranking	San Diego County Regional Priority Ranking	Notes	Management Recommendation
<ul style="list-style-type: none"> • Alert – An alert is listed on species with High or Moderate impacts that have limited distribution in California but may have the potential to spread much further. • Watch – These species have been assessed as posing a high risk of becoming invasive in the future in California. 					
San Diego County Regional Priority Ranking (Cal-IPC, Dendra, CBI 2012):					
<ul style="list-style-type: none"> • Very High – Level 1 Surveillance. Low effort required to achieve goal of regional surveillance, early detection, rapid response. • High – Level 2 Eradication. Moderate effort required to achieve goal of eradication with regionally coordinated control program. • Medium – Level 3 Containment. Funding typically available for retreatments or control of small populations. Goal is eradication with coordinated programs by management unit or watershed. • Medium – Level 4 Directed Management. Area may be managed effectively, with slow reinvasion. Goal is to control within reserve or sub-management unit to benefit NCCP resources. • Low – Level 5 Directed Suppression. Control is typically of short-term benefit (rapid reinvasion) without active restoration. Goal is suppression, typically to allow recovery disturbed site, improve revegetation success, or benefit NCCP resources. 					

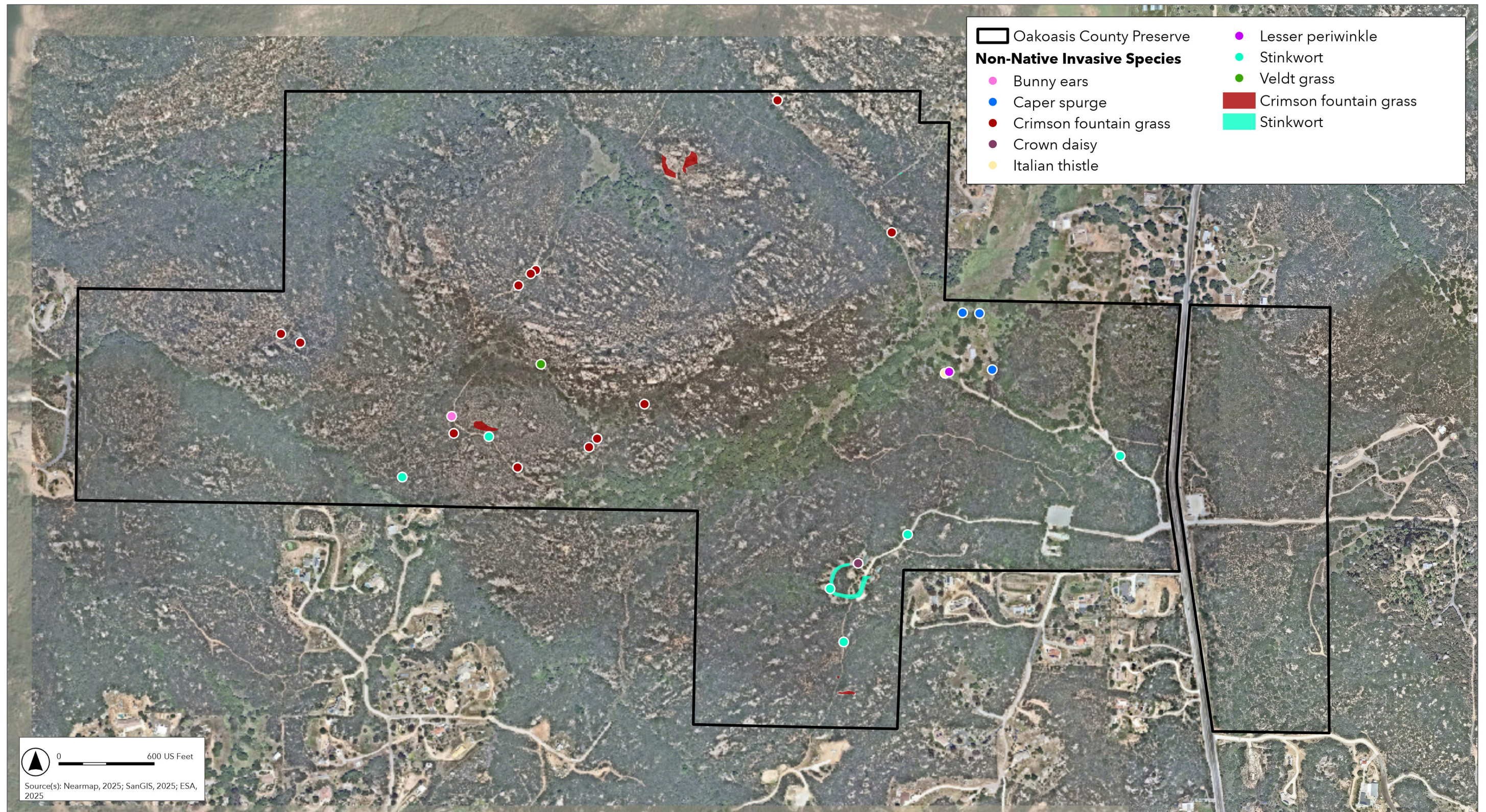


Figure 20
 Invasive Non-Native Plant Observations
 Oakoasis County Preserve

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Incidental Sensitive Plant and Wildlife Observations

Five sensitive plant and seven sensitive animal species were incidentally detected and mapped during field surveys for Oakoasis County Preserve (Table 25 and Figure 21).

TABLE 25
INCIDENTAL PLANT AND ANIMAL OBSERVATIONS: OAKOASIS COUNTY PRESERVE

Scientific Name	Common Name	Federal/ State Status	San Diego County Special- Status List	MSCP- Covered Species	California Rare Plant Rank	Notes
Plants						
<i>Amaranthus palmeri</i>	Palmer's amaranth	–/–	–	–	4.2	Observed in the southcentral portion of the preserve.
<i>Artemisia palmeri</i>	San Diego sagewort	–/–	List D	–	4.2	Several individuals were identified in oak understories adjacent to riparian/wetland habitats.
<i>Ceanothus cyaneus</i>	Lakeside ceanothus	–/–	List A	MSCP	1B.2	Several individuals were identified in the northern portion of the preserve within chamise-woolly leaf ceanothus habitat.
<i>Lepidium virginicum robinsonii</i>	Robinson's pepper grass	–/–	List A	–	4.3	Small patch observed within northeastern portion of the preserve.
<i>Quercus engelmannii</i>	Engelmann oak	–/–	List D	–	4.2	Observed throughout oak woodlands within the center of the preserve.
<i>Selaginella cinerascens</i>	Ashy spike-moss	–/–	List D	–	4.1	Prevalent throughout the preserve on rocky outcroppings. Significant occurrences were mapped, but the plant likely occurs in other areas.
Animals						
<i>Aspidoscelis hyperythra beldingi</i>	Belding's orange throated whiptail	–/–	Group 2	MSCP	–	Observed along trail.
<i>Bombus crotchii</i>	Crotch's bumble bee	–/CE	–	–	–	Observed foraging behavior on wild radish (<i>Raphanus sativus</i>).
<i>Buteo lineatus</i>	Red-shouldered hawk	–/–	Group 1	–	–	Observed flying overhead during surveys.
<i>Cathartes aura</i>	Turkey vulture	–/–	Group 1	–	–	Observed flying overhead during surveys throughout the preserve.
<i>Accipiter cooperii</i>	Cooper's hawk	–/–	Group 1	MSCP	–	Observed flying over the eastern portion of the preserve.
<i>Danaus plexippus</i>	Monarch	FT/–	–	–	–	Observed flying throughout the preserve.
<i>Neotoma sp.^a</i>	Woodrat	–/–	Group 2	–	–	One woodrat nest was observed in the preserve.
<i>Odocoileus hemionus fuliginatus</i>	Southern mule deer	–/–	Group 2	MSCP	–	Observed foraging in northeast corner of the preserve.
<i>Sialia mexicana</i>	Western bluebird	–/–	Group 2	MSCP	–	Observed foraging within the park in the center of the preserve.

Scientific Name	Common Name	San Diego			California Rare Plant Rank	Notes
		Federal/State Status	County Special-Status List	MSCP-Covered Species		
Notes:						
a. This woodrat nest observation was included as it may be <i>Neotoma lepida intermedia</i> , a Group 2 species on the County of San Diego Sensitive Animal List						
Federal/State Status:						
<ul style="list-style-type: none"> • FE – Federally Endangered • FT – Federally Threatened • CE – California Endangered • CT – California Threatened • SSC – CDFW Species Special Concern 						
San Diego County Special-Status List:						
<ul style="list-style-type: none"> • LIST A (Plants rare, threatened or endangered in California and elsewhere) • LIST B (Plants rare, threatened or endangered in California but more common elsewhere) • LIST C (Plants which may be quite rare, but need more information to determine their true rarity status) • LIST D (Plants of limited distribution and are uncommon, but not presently rare or endangered) • CA rare (rare in California, but not listed) • NE (MSCP Narrow Endemic) 						
California Rare Plant Rank:						
<ul style="list-style-type: none"> • 1A – Plants presumed extirpated in California and either rare or extinct elsewhere • 1B – Plants rare, threatened, or endangered in California and elsewhere • 2A – Plants presumed extirpated in California but common elsewhere • 2B – Plants rare, threatened, or endangered in California but more common elsewhere • 3 – Review List: Plants about which more information is needed • 4 – Watch List: Plants of limited distribution • 0.1 – Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat) • 0.2 – Moderately threatened in California (20%-80% occurrences threatened / moderate degree and immediacy of threat) • 0.3 – Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known) 						
Other:						
<ul style="list-style-type: none"> • Unk – Unknown due to timing of survey and life stage of individual 						

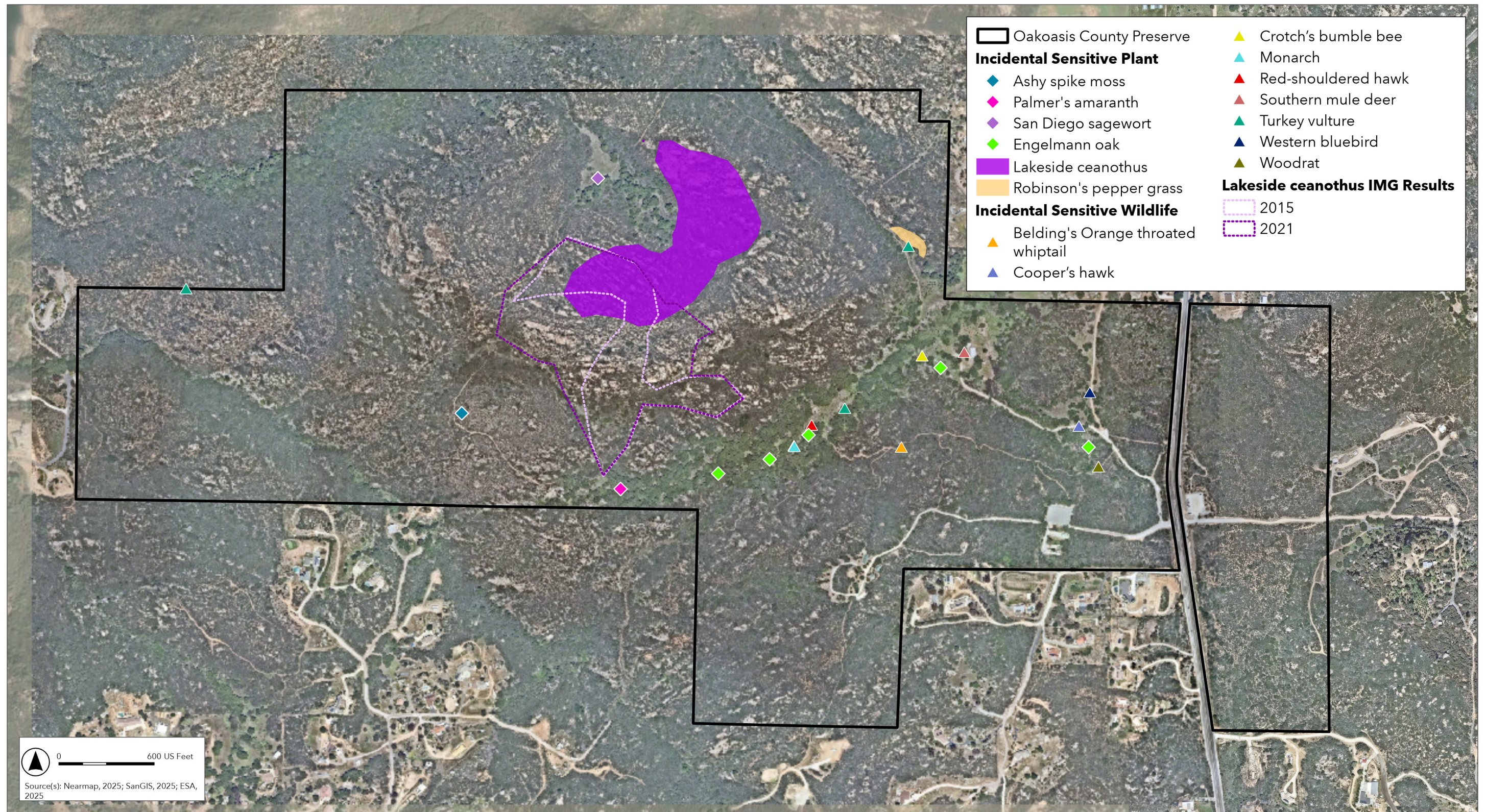


Figure 21
Incidental Sensitive Plant and Wildlife Observations
Oakoasis County Preserve

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Habitat Conditions and Threats Assessment

Threats Assessment

Based on the field surveys, biologists took note of any major issues that could pose a threat to the vegetation communities within Oakoasis County Preserve. A list of primary threats identified in the IMG protocol is presented in **Table 26** along with a discussion of the severity of each threat within the preserve (presented as the extent within the preserve on a scale of 1 to 7).

TABLE 26
THREATS OVERVIEW: OAKOASIS COUNTY PRESERVE

Disturbances/Stressors	Severity (Extent)	Discussion
Invasive non-native plant species (e.g., annual grasses and herbs)	4	Short-pod mustard, tocalote, thistles, and non-native grasses are found throughout the preserve and are likely the greatest threat to native plant communities.
Altered fire regime or risk of catastrophic fire	6	Mature chaparral and sage scrub plants, along with large stands of dead biomass in shrub and woodland understories, indicate a buildup of flammable material. The presence of non-native grasses and forbs between shrubs further suggests that the preserve faces a high risk of catastrophic wildfire. Vegetation thinning, invasive non-native plant removal, and controlled burns are recommended to minimize the likelihood of catastrophic fire and conversions of intact habitat into invasive non-native plant dominated communities.
Unauthorized human use (e.g., off-road vehicles, encampments, unauthorized trails, shooting, poaching, and/or dumping)	3	Three potentially unauthorized trails were identified: one at the western boundary, one at the eastern boundary, and one at the southern boundary of the preserve. These trails begin in adjacent residential areas, and all appear to be moderately used.
Shothole borer, gold-spotted oak borer, and <i>Fusarium</i> fungal invasion	–	Site was not assessed for invasive insect species or fungi.
Erosion	3	Minor erosion was documented on an authorized trail in the southern portion of the preserve. A combination of rainfall and trail use is likely causing further erosion.
Small, isolated occurrences vulnerable to loss of genetic diversity and to extirpation due to environmental stochasticity or catastrophic disturbance.	1	A large Lakeside ceanothus population was identified within the preserve. This mature population is likely threatened by fire, as a large amount of dead standing biomass was also observed within the understory of this habitat.
Altered hydrology (e.g., urban runoff, flood control facilities)	3	An unnamed ephemeral stream runs east to west through the center of the preserve. Rural residential and agricultural communities in addition to irrigated on-site oak planting areas upstream are producing runoff that feeds the stream, likely altering the hydrology of riparian and wetland habitats compared to their historical phenology.
Herbivory (e.g., seed, vegetation)	1	No significant herbivory was observed.
Detrimental edge effects from adjacent urban development	1	No significant edge effects from adjacent residential areas were observed, aside from potentially unauthorized trails which are described above.

Notes:

Disturbance Categories within Preserve:

- 1 – No sign of disturbance within preserve
- 2 – Disturbance does not occur within preserve, but is detected adjacent to preserve boundaries
- 3 – Disturbance occurs in >0% to <10% of preserve
- 4 – Disturbance occurs in 10 to <25% of preserve
- 5 – Disturbance occurs in 25 to <50% of preserve
- 6 – Disturbance occurs in 50 to <75% of preserve
- 7 – Disturbance occurs in ≥ 75% of preserve

Type Conversion

In order to detect potential type conversions within the preserve, Holland-Oberbauer vegetation mapping was used to compare the acreage of each habitat type that was previously mapped with the current acreage by habitat type (**Table 27**).

TABLE 27
TYPE CONVERSION ASSESSMENT BASED ON HOLLAND-
OBERBAUER MAPPING: OAKOASIS COUNTY PRESERVE

Habitat Type	Acres in 2015	Acres in 2025 ^a	Difference in Acreage
Disturbed/Developed	9.88	12.23	2.34
Chaparral	366.90	386.89 (31.99)	19.99
Herbaceous	4.72	6.11	1.39
Riparian	20.45	8.63	-11.82
Scrub	1.20	9.36	8.15
Woodland	7.03	18.97	11.94

a. Acreage in parenthesis indicates areas not previously mapped in 2015.

Disturbed/developed habitat has increased from 9.88 acres in 2015 to 12.23 acres in 2025. This 2.34-acre increase may be due to increased mapping accuracy and methodology, specifically around the campground in the southern portion of the preserve and the staging area on the east side of Wildcat Canyon Road.

Chaparral communities increased from 366.90 acres in 2015 to 386.89 acres in 2025. This 19.99-acre increase is primarily due to the mapping of an additional property in the northwest corner of the preserve (31.99 acres). The portion of the preserve not mapped in 2015 was not part of the TMP at the time of the vegetation mapping efforts. In addition, portions of the riparian area were reclassified from 61310 southern coast live oak riparian forest to 37120 southern mixed chaparral and 71180 Engelmann oak woodland habitats, which more accurately describe these habitats.

Herbaceous communities increased from 4.72 acres in 2015 to 6.11 acres in 2025. This 1.39-acre increase is primarily due to increased mapping accuracy and methodology as well as the reclassification of 37120 southern mixed chaparral habitat in the eastern portion of the preserve to 42300 wildflower field habitat.

Riparian communities decreased from 20.45 acres in 2015 to 8.63 acres in 2025. This 11.82-acre decrease is largely due to reclassifying 61310 southern coast live oak riparian forest in the riparian area within the center of the preserve to 37120 southern mixed chaparral and 71180 Engelmann oak woodland habitats.

Scrub communities increased from 1.20 acres in 2015 to 9.36 acres in 2025. This 8.15-acre increase is due to increased mapping accuracy and methodology, as previously mapped areas of 37120 southern mixed chaparral in the southern and western portions of the preserve were reclassified as 32500 Diegan coastal sage scrub and 32520 Diegan coastal sage scrub: inland form, which more accurately describe these habitats.

Woodland habitats increased from 7.03 acres in 2015 to 18.97 acres in 2025. This 11.94-acre increase is primarily due to reclassifying 61310 southern coast live oak riparian forest in the riparian area to 71180 Engelmann oak woodland habitat in addition to reclassifying 32500 Diegan coastal sage scrub in the eastern portion of the preserve adjacent to the ranger housing to 71160 coast live oak woodland and 71161 open coast live oak woodland habitats.

Adaptive Management Recommendations

Adaptive management recommendations were developed based on the general habitat condition and threats assessment conducted during habitat mapping for Oakoasis County Preserve. Recommendations are provided for invasive non-native plant species management, habitat enhancement/restoration opportunities, encroachment, and monitoring. Recommendations are detailed in the following subsections, which were cross-referenced with the management directives and implementation measures described in the Oakoasis Preserve Resource Management Plan (County of San Diego 2009a).

Invasive Non-Native Plant Species Management

As discussed in the invasive non-native plant observations section, several invasive non-native plant species were detected within the preserve. For each species, a recommended action was identified consisting of either removal, treatment, or monitoring, which should follow the preserve's RMP implementation measures IM B.2.1-B.3.3 (County of San Diego 2009a). Immediate removal of stinkwort, crimson fountain grass, Italian thistle and crown daisy is recommended. Dense patches of tocalote and non-native grasses should be treated when encountered and when adjacent to coast live oak woodlands and sensitive plant species populations. Final implementation of management activities and treatment methods shall be determined by the County based on priority.

Habitat Enhancement/Restoration Opportunities

- **Erosion.** The preserve appeared to be affected by erosion particularly in disturbed areas on and adjacent to trails in the south. The preserve may benefit from a focused assessment of erosion issues to better inform next steps, which may include regrading or recontouring in problem areas and/or revegetation of highly disturbed areas (i.e., conversion of unauthorized trails to habitat).
- **Rare plants.** The preserve contains several sensitive plant species that would benefit from comprehensive mapping to determine management/restoration opportunities. Focused rare plant surveys are recommended to capture areas ideally suited for habitat enhancement and restoration, and those areas that may be extirpated by invasive non-native plant species. This could be accomplished through collaboration with SDMMMP. Plant root damage that may have been caused by feral pig activity was identified in 2015 (ICF 2015). While not observed in 2025, this may still be a potential issue.

Encroachment

- **OHV usage.** Off-road vehicle use was evident along the trail in the northeast corner of the preserve that terminates at the border with a residential area. It is recommended that a gate or vehicle restricting devices be installed on the trail at the preserve's northeast boundary.

- **Access control.** Consider improved site access restrictions in the south, southwest and northeast portions of the preserve to restrict unauthorized trail usage and creation. This may include posting clear signage reminding the public to remain on authorized trails.

Monitoring

- **Invasive non-native plants.** Invasive non-native plant species mapping should be conducted annually, if feasible, to inform treatment areas, assess new invasions or reinvasions, and determine effectiveness of treatments.
- **Public use.** The trail that leads from the preserve's campsite to the southern boundary has small amounts of erosion. Maintenance and repair are recommended to prevent further erosion.
- **Catastrophic events.** Additional vegetation mapping efforts may be conducted as needed following catastrophic events such as wildfires.

Sycamore Canyon/Goodan Ranch County Preserve

Sycamore Canyon/Goodan Ranch County Preserve consists of approximately 2,847 acres. The original 2,272-acre preserve was considered a baseline preserve when the MSCP was adopted in 1997. Several additions to the preserve have been acquired by DPR over the past 20 years. These include the acquisition of the Sycamore South and Sycamore North (formerly known as Hagey) properties in 2010–2011; acquisition of the Southern Parcel in 2013; acquisition of the Northern and Southern Additions (formerly known as the Wu and Cielo properties, respectively) in 2015; acquisition of the San Vicente Connector parcels, which are east of SR 67, between 2003 and 2018; and acquisition of the Southern Gap parcels in 2019 and 2020. The preserve is located at 13920 Highway 67, Lakeside and 16281 Sycamore Canyon Road in Poway within eastern San Diego County. This preserve is located within the MSCP Plan Area (County of San Diego 1997).

The 2025 mapping effort mapped approximately 2,761 acres, which included the northern parcel accessed from Calle de Rob, which abuts the Goodan Ranch parcel to the south (369 acres), the Goodan Ranch parcel located in the center of the preserve (2,318 acres) and a small parcel in the southern portion of the preserve, which abuts the Goodan Ranch parcel to the north (70 acres).

Vegetation Mapping

A total of 20 vegetation communities and 4 land cover types were identified via Holland-Oberbauer and 48 vegetation communities and 4 land cover types were identified via VCM for Sycamore Canyon/Goodan Ranch County Preserve. These communities are depicted in **Figure 22a–Figure 22c** and **Figure 23a–Figure 23c** and provided in crosswalk format in **Table 28**. It should be noted that areas within the northwest corner and the southern portions of the preserve were very difficult to access; therefore, mapping in those areas is limited to what was visible from certain vantage points.

TABLE 28
VEGETATION COMMUNITIES CROSSWALK: SYCAMORE CANYON/GODAN RANCH COUNTY PRESERVE

Oberbauer-Modified Holland Code	San Diego Vegetation Classification Manual		
	Alliance Level	Association Level	Acreage
Scrub			
32000 Coastal Scrub	4.29 Menzies' Goldenbush Alliance	4.29.1 Menzies' Goldenbush Provisional Association	2.95
32000 Coastal Scrub	4.29 Menzies' Goldenbush Alliance	4.29.1 Menzies' Goldenbush Provisional Association	2.95
	4.35 Laurel Sumac Alliance	4.35 Laurel Sumac Association	0.23
32500 Diegan Coastal Sage Scrub	4.12 Broom Baccharis Provisional Alliance	4.12.1 Broom Baccharis Association	0.56
	4.23 California Buckwheat Alliance	4.23.1 California Buckwheat Association	5.66
	4.35 Laurel Sumac Alliance	4.35 Laurel Sumac Alliance	0.49
		4.35.1 Laurel Sumac – Deerweed Alliance	0.30
	4.43 White Sage Alliance	4.43.2 White Sage – California Sagebrush Association	0.57
		4.44 Black Sage Alliance	4.44 Black Sage Alliance
	4.44.1 Black Sage – California Buckwheat Association		21.20
	4.44.2 Black Sage – Laurel Sumac Association		2.71
	4.7 California Sagebrush – California Buckwheat Alliance	4.7 California Sagebrush – California Buckwheat Alliance	1.15
		4.7.1 California Sagebrush – California Buckwheat – Laurel Sumac Association	39.91
4.8 California Sagebrush – Black Sage Alliance	4.8.1 California Sagebrush – Black Sage Association	0.65	
32520 Diegan Coastal Sage Scrub: Inland Form	4.1 Chamise Alliance	4.1.2 Chamise – California Buckwheat – California Sagebrush – Black Sage-Association	42.98
	4.2 Chamise – Mission Manzanita Alliance	4.2.1 Chamise – Mission Manzanita Association	1.25
	4.23 California Buckwheat Alliance	4.23.1 California Buckwheat Association	3.30
	4.24 California Buckwheat – White Sage Alliance	4.24.1 California Buckwheat – White Sage Association	2.99
	4.43 White Sage Alliance	4.43.1 White Sage Provisional Association	0.71
	4.44 Black Sage Alliance	4.44 Black Sage Alliance	1.72
		4.44.1 Black Sage – California Buckwheat Association	26.34
		4.44.2 Black Sage – Laurel Sumac Association	5.01
	4.6 California Sagebrush Alliance	4.6.1 California Sagebrush Association	6.56
	4.7 California Sagebrush – California Buckwheat Alliance	4.7 California Sagebrush – California Buckwheat Alliance	1.50
4.7.1 California Sagebrush – California Buckwheat – Laurel Sumac Association		230.85	
32530 Diegan Coastal Sage Scrub: Baccharis-dominated	4.12 Broom Baccharis Provisional Alliance	4.12 Broom Baccharis Provisional Alliance	0.41
		4.12.1 Broom Baccharis Association	3.67

San Diego Vegetation Classification Manual				
Oberbauer-Modified Holland Code	Alliance Level	Association Level	Acreege	
37120 Southern Mixed Chaparral	4.1 Chamise Alliance	4.1 Chamise Alliance	2.06	
		4.1.2 Chamise – California Buckwheat – California Sagebrush – Black Sage – Association	13.85	
		4.1.3 Chamise – Hoaryleaf Ceanothus Association	26.78	
		4.1.4 Chamise – Woolly Leaf Ceanothus Association	1,374.96	
		4.18.1 Woolly Leaf Ceanothus Alliance	4.18.1 Woolly Leaf Ceanothus Association	60.31
		4.2 Chamise – Mission Manzanita Alliance	4.2.1 Chamise – Mission Manzanita Association	46.88
			4.2.3 Chamise – Mission Manzanita – Woolly Leaf Ceanothus Association	9.64
			4.2.6 Chamise – Mission Manzanita – Scrub Oak Association	1.71
		4.20 Smooth Mountain Mahogany Alliance	4.20.1 Smooth Mountain Mahogany Provisional Association	5.61
		4.37 Scrub Oak Alliance	4.37.1 Scrub Oak Association	0.51
			4.37.2 Scrub Oak – Mountain Mahogany Association	0.74
		4.38 Scrub Oak – Chamise Alliance	4.38.1 Scrub Oak – Chamise Association	0.54
		4.7 California Sagebrush – California Buckwheat Alliance	4.7.1 California Sagebrush – California Buckwheat – Laurel Sumac Association	8.81
37200 Chamise Chaparral	4.1 Chamise Alliance	4.1 Chamise Alliance	224.80	
		4.1.4 Chamise – Woolly Leaf Ceanothus Association	6.62	
37900 Scrub Oak Chaparral	3.6 Coast Live Oak Alliance	3.6.2 Coast Live Oak-Scrub Oak Association	4.25	
	4.37 Scrub Oak Alliance	4.37.1 Scrub Oak Association	25.69	
		4.37.2 Scrub Oak – Mountain Mahogany Association	11.71	
	4.38 Scrub Oak – Chamise Alliance	4.38.1 Scrub Oak – Chamise Association	2.16	
37G00 Coastal Sage- Chaparral Transition	4.1 Chamise Alliance	4.1.2 Chamise – California Buckwheat – California Sagebrush – Black Sage – Association	272.65	
		4.1.4 Chamise – Woolly Leaf Ceanothus Association	12.89	
	4.2 Chamise – Mission Manzanita Alliance	4.2.1 Chamise – Mission Manzanita Association	3.38	
	4.7 California Sagebrush – California Buckwheat Alliance	4.7.1 California Sagebrush – California Buckwheat – Laurel Sumac Association	0.44	
	Herbaceous			
42100 Native Grassland	5.22 Deer Grass Alliance	5.22.1 Deer Grass Association	0.16	
	5.24 Purple Needlegrass Alliance	5.24.1 Purple Needlegrass Association	10.60	
42110 Valley Needlegrass Grassland	5.24 Purple Needlegrass Alliance	5.24.1 Purple Needlegrass Association	11.80	

San Diego Vegetation Classification Manual			
Oberbauer-Modified Holland Code	Alliance Level	Association Level	Acreege
42200 Non-Native Grassland	3.7 Engelmann Oak Alliance	3.7.2 Engelmann Oak-Coast Live Oak/Western Poison Oak/Grass Association	0.10
	4.43 White Sage Alliance	4.43.1 White Sage Provisional Association	0.59
	4.7 California Sagebrush – California Buckwheat Alliance	4.7.1 California Sagebrush – California Buckwheat -Laurel Sumac Association	0.39
	5.21 Mediterranean California Naturalized Annual and Perennial Grassland Semi- Natural Stands	5.21 Mediterranean California Naturalized Annual and Perennial Grassland Semi-Natural Stands	5.97
	5.26 Fountain Grass Semi-Natural Stands	5.26.1 Fountain Grass Semi-Natural Stands	0.06
	5.8 Riggut Grass – Purple False-Brome Semi-Natural Stands	5.8 Brome – Purple False Brome Semi-Natural Stands	4.19
		5.8.1 Purple False-Brome Semi-Natural Stand Type	32.19
5.8.2 Riggut Grass Semi-Natural Stand Type		12.38	
5.9 Red Brome Semi-Natural Stands	5.9.1 Red Brome Semi-Natural Stand Type	0.38	
42210 Non-Native Grassland: Broadleaf- Dominated	5.21 Mediterranean California Naturalized Annual and Perennial Grassland Semi- Natural Stands	5.21 Mediterranean California Naturalized Annual and Perennial Grassland Semi-Natural Stands	49.56
	5.7 Black Mustard and Other Mustards Semi-Natural Stands	5.7 Black Mustard and Other Mustards Semi- Natural Stands	3.95
42300 Wildflower Field	5.13 Clustered Tarweed Alliance	5.13 Clustered Tarweed Alliance	0.63
		5.13.1 Clustered Tarweed Association	1.71
	5.8 Riggut Grass – Purple False-Brome Semi-Natural Stands	5.8.1 Purple False – Brome Semi-Natural Stand Type	38.80
Riparian			
61300 Southern Riparian Forest	3.4 Western Sycamore Alliance	3.4.3 Western Sycamore – Coast Live Oak Association	4.02
	3.6 Coast Live Oak Alliance	3.6 Coast Live Oak Association	0.13
		3.6.3 Coast Live Oak – Arroyo Willow Association	2.27
61310 Southern Coast Live Oak Riparian Forest	3.4 Western Sycamore Alliance	3.4.3 Western Sycamore – Coast Live Oak Association	9.76
	3.6 Coast Live Oak Alliance	3.6.3 Coast Live Oak – Arroyo Willow Association	0.57
61330 Southern Cottonwood-Willow Riparian Forest	3.4 Western Sycamore Alliance	3.4.1 Western Sycamore – Mule Fat Association	0.20
63320 Southern Willow Scrub	3.10 Arroyo Willow Alliance	3.10.1 Arroyo Willow Association	2.48
11200 Disturbed Wetland	Other – Disturbed Wetland	Other – Disturbed Wetland	1.66

San Diego Vegetation Classification Manual			
Oberbauer-Modified Holland Code	Alliance Level	Association Level	Acreage
Woodland			
71160 Coast Live Oak Woodland	3.4 Western Sycamore Alliance	3.4.3 Western Sycamore – Coast Live Oak Association	0.14
	3.6 Coast Live Oak Alliance	3.6 Coast Live Oak Association	0.60
		3.6.1 Coast Live Oak – California Sagebrush Association	0.29
71161 Open Coast Live Oak Woodland	3.6 Coast Live Oak Alliance	3.6 Coast Live Oak Association	2.47
		3.6.1 Coast Live Oak – California Sagebrush Association	2.25
		3.6.2 Coast Live Oak – Scrub Oak Association	7.39
		3.6.4 Coast Live Oak – Poison Oak – Grass Association	0.43
Other^a			
11000 Disturbed Habitat	Disturbed Habitat	Disturbed Habitat	2.81
11300 Disturbed Habitat – Roads and Trails	Disturbed Habitat – Trails or Roads	Disturbed Habitat – Trails or Roads	24.67
12000 Urban/Developed	Urban/Developed	Urban/Developed	1.64
18100 Orchards/Vineyards	Other – Agriculture	Other – Agriculture	1.69
TOTAL ACREAGE:^c			2,760.75

Notes:

- a. The San Diego Vegetation Classification Manual only classifies vegetated areas. The disturbed land cover types were described and displayed under the association level to provide additional detail in the mapping. This allows for changes in vegetation (e.g., unvegetated to vegetated) to be tracked over time.
- b. The San Diego Vegetation Classification Manual does not have a classification for ornamental, non-native woodlands. This type of vegetation was described as Urban/Developed in this report.
- c. Total may not match sum of individual acreages listed due to rounding.

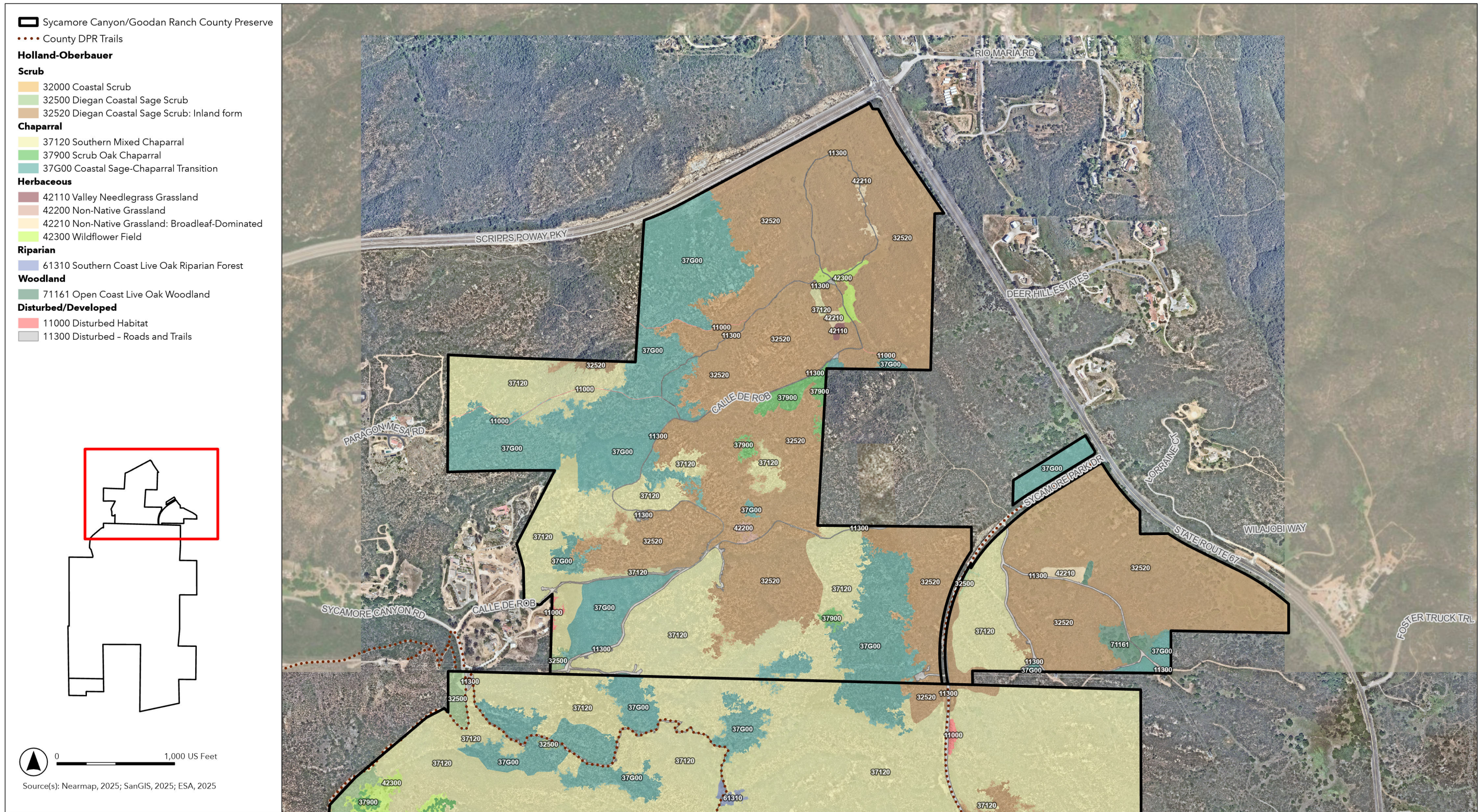


Figure 22a
 Vegetation Communities - Holland-Oberbauer Classification
 Sycamore Canyon/Goodan Ranch County Preserve

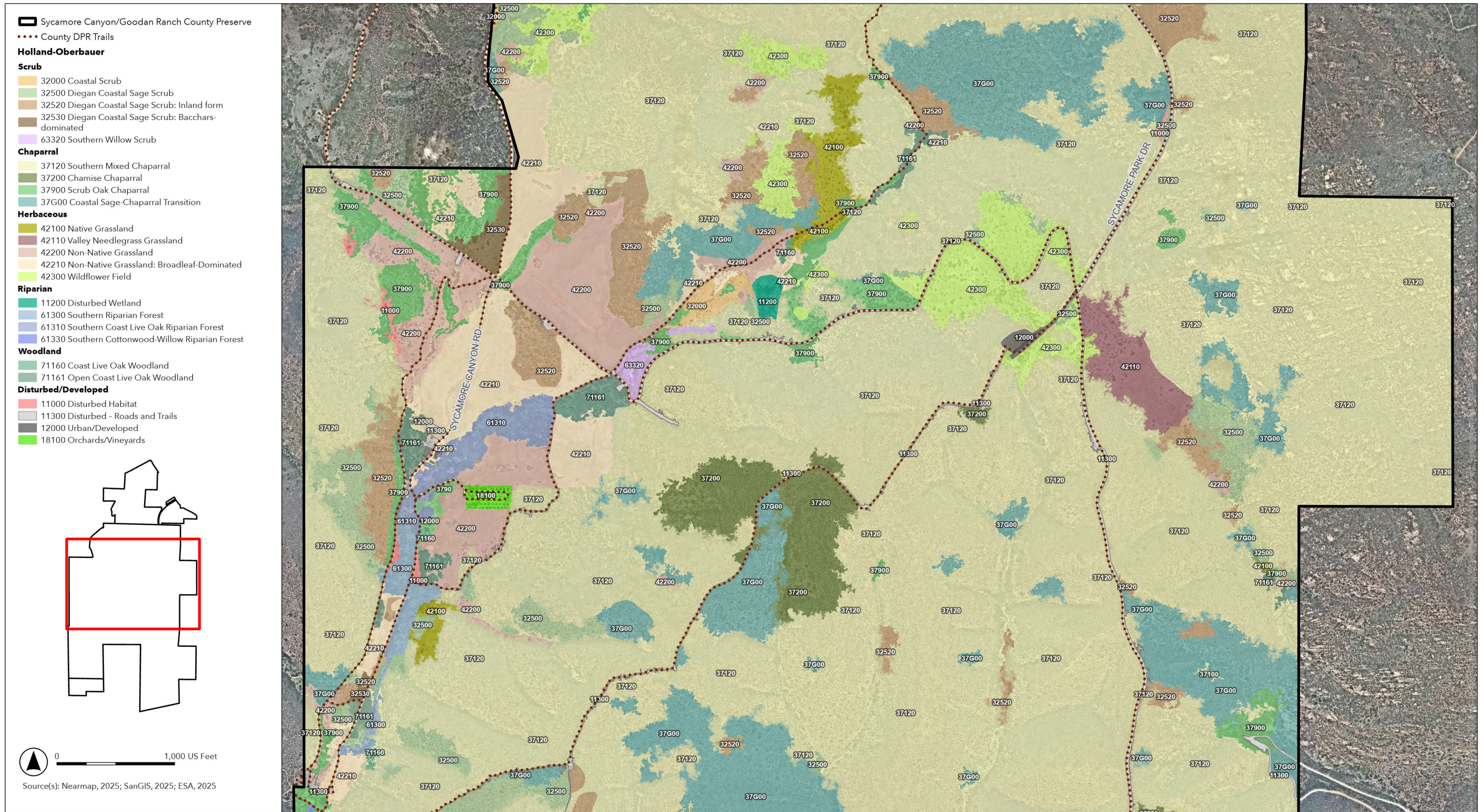


Figure 22b
 Vegetation Communities - Holland-Oberbauer Classification
 Sycamore Canyon/Goodan Ranch County Preserve

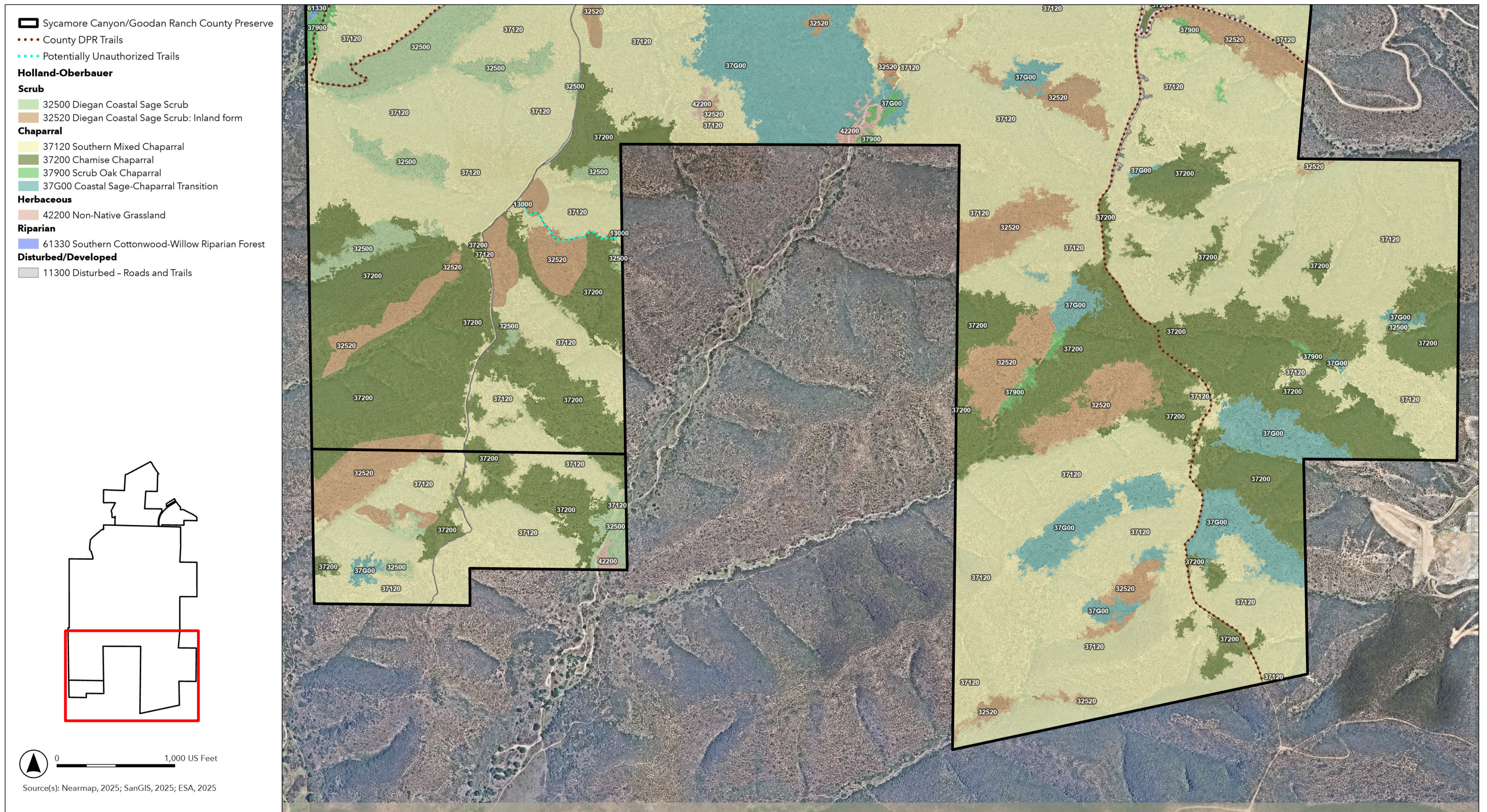


Figure 22c
 Vegetation Communities - Holland-Oberbauer Classification
 Sycamore Canyon/Goodan Ranch County Preserve

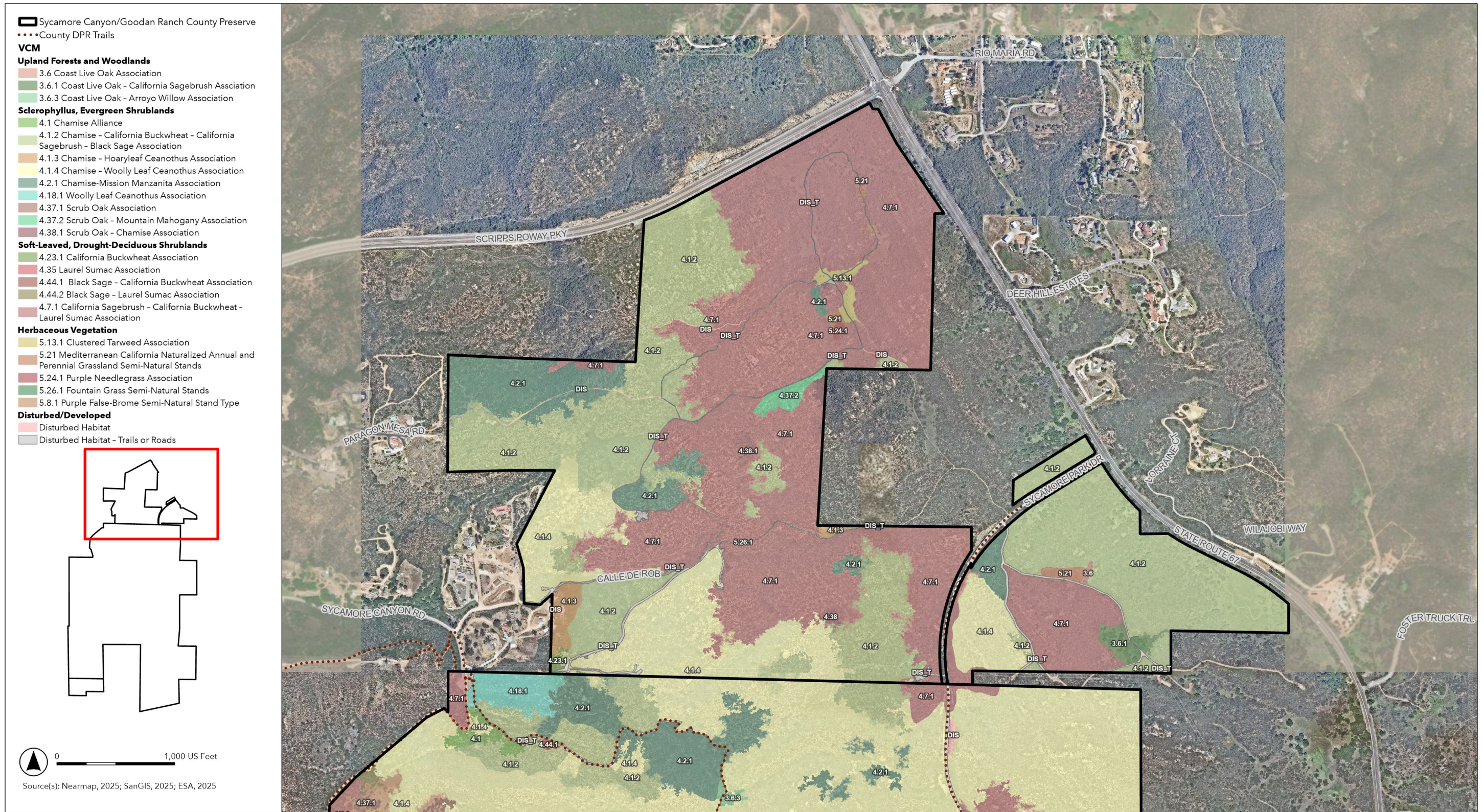


Figure 23a
 Vegetation Communities - Vegetation Classification Manual (VCM) for Western San Diego County
 Sycamore Canyon/Goodan Ranch County Preserve

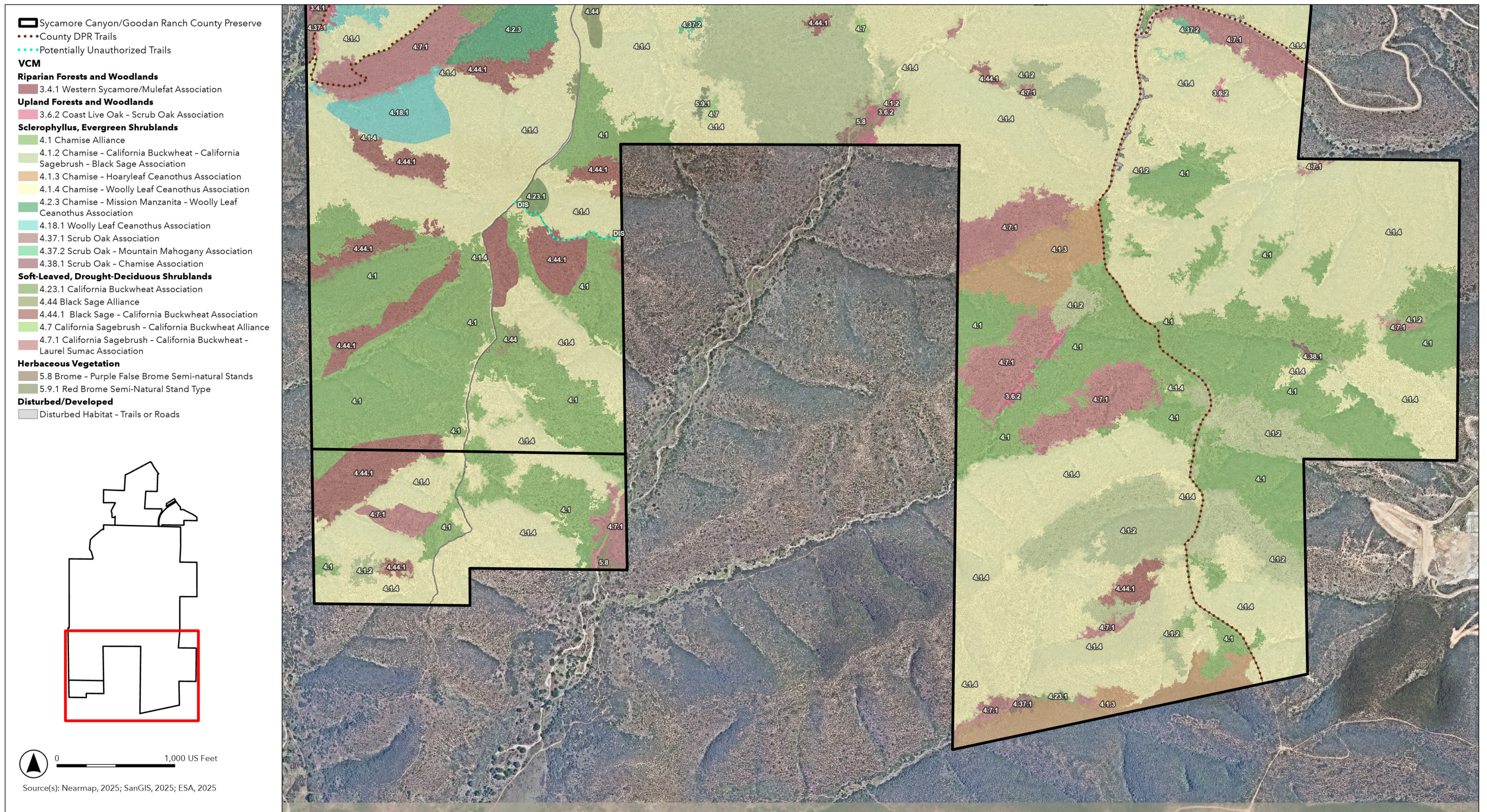


Figure 23c
Vegetation Communities - Vegetation Classification Manual (VCM) for Western San Diego County
Sycamore Canyon/Goodan Ranch County Preserve

Invasive Non-Native Plant Observations

A total of 25 limited to high-risk invasive non-native plant species (as determined by Cal-IPC) were detected during field surveys for Sycamore Canyon/Goodan Ranch County Preserve. (**Table 29** and **Figure 24a–Figure 24c**). Of these species, 5 were identified as having an SDCRPR. Invasive non-native plant species that were ubiquitous throughout the preserve were generally not mapped, but location descriptions are provided in **Table 29**. Seven species with dense or large populations were mapped for prioritization for treatment/removal during field surveys for Sycamore Canyon/Goodan Ranch County Preserve. The Cal-IPC and SDCRPR were taken into consideration when determining the recommended actions and should be referenced for specific treatment methods. The RMP for the preserve includes management directives that provide guidance for invasive non-native plant species removal and control in Section 5.3.2 (County of San Diego 2025). The recommended actions for the invasive non-native plant species detected are as follows.

- Remove.** Invasive non-native plant species removal is recommended for highly invasive plant species and individual plant species or patches that are easily accessed to prevent spread within the preserve. Eight highly invasive species were found within the preserve that should be removed: purple false-brome (*Brachypodium distachyon*), artichoke thistle (*Carduus cardunculus*), stinkwort, natal grass, fennel (*Foeniculum vulgare*), tamarisk, crimson fountain grass, and eucalyptus. Purple false-brome was found throughout the preserve in non-native grasslands and it is treated annually in areas that support San Diego thornmint (*Acanthomintha ilicifolia*). This species is highly invasive and overtakes wildflower fields and native grasslands; therefore, it should continue to be treated and removed throughout the preserve. Tamarisk was observed within the coast live oak woodland growing south of the Ranger Station. This species tends to form a dense ground cover of needles which prevents light from reaching beneath them, leading to a loss of native plants; therefore, these species are recommended for removal along with follow-up visits to detect any seedlings. Eucalyptus trees were found in scattered stands in the preserve. This species can invade drainages and can form dense stands if left untreated; therefore, removal is recommended along with follow-up visits to detect any seedlings. Crimson fountain grass was found in patches along roads, trails and within rocky outcrops in chaparral and coastal sage scrub habitats. This species invades shrublands and outcompetes native bunch grasses and subshrubs; therefore, it should be removed with follow-up visits to detect any seedlings.
- Treat.** Invasive non-native plant species recommended for treatment include small patches of invasive plant species and annual plant species that respond to mowing, including species such as stinkwort, fennel, artichoke thistle, and natal grass, which occurred as small infestations within the property and are recommended for treatment. Fennel is found in non-native grasslands and disturbed habitats in the center of the preserve. Stinkwort was observed within the preserve in small but dense patches adjacent to the old stock pond east of the Ranger Station and scattered along trails/maintenance roads. Stinkwort was vegetative and not yet flowering when observed; however, seedling patches were associated with mature plants from the previous season and thus it is safe to assume that a seed bank is present in this area. Comprehensive invasive non-native plant species mapping in conjunction with treatment is recommended to determine extent of each plant species within the preserve and to monitor the success/effectiveness of treatment. The preserve provides habitat for several sensitive and listed plant species that would benefit from detailed invasive non-native plant species mapping (particularly species such as stinkwort, artichoke thistle, and fennel).

Currently the most successful methods for control of these species include manual removal and chemical control with systemic and broad-spectrum herbicides.

- Monitor.** Monitoring is recommended for invasive non-native plant species that occur in extensive patches or are found throughout the preserve. Monitoring should also include treatment when feasible to help prevent spread into the preserve. Several invasive non-native plant species occurred in large numbers throughout the preserve, including black mustard, tocalote, short-pod mustard, redstem filaree, brome grasses (*Bromus* spp.), and rattail sixweeks grass. These invasive non-native plant species should continue to be monitored to detect any negative effects on surrounding native vegetation communities. Black mustard and short-pod mustard are highly invasive non-native plant species occurring throughout the preserve, and represent good target opportunities to treat, after comprehensive mapping to determine focus areas for restoration. Management Directive (MD) B.1 in the RMP (County of San Diego 2025) directly addresses the need for restoration opportunities assessments within the preserve and should be consulted as new or expanding invasive non-native plant species are detected within the preserve.

TABLE 29
INVASIVE NON-NATIVE PLANT SPECIES: SYCAMORE CANYON/GOODAN RANCH COUNTY PRESERVE

Scientific Name	Common Name	Cal-IPC Ranking	San Diego County Regional Priority Ranking	Notes	Management Recommendation
<i>Atriplex semibaccata</i>	Australian saltbush	Moderate	–	Identified throughout the preserve within non-native grasslands and in disturbed habitats.	Monitor
<i>Avena barbata</i> ^a	slender wild oat	Moderate	–	Identified throughout the preserve within non-native grasslands and in open spaces between shrubs in chaparral habitats along roads and trails and in disturbed areas.	Monitor
<i>Brassica nigra</i>	black mustard	Moderate	–	Identified throughout the preserve within non-native grasslands and along roads and trails and in disturbed areas.	Treat
<i>Brachypodium distachyon</i>	purple false-brome	Moderate	Very High – Level 4	Identified throughout the preserve within non-native grasslands and on clay lens' associated with San Diego thornmint.	Treat
<i>Bromus diandrus</i> ^a	rippgut grass	Moderate	–	Observed in dense patches in oak woodland understories and within non-native grasslands and along roads and trails and in disturbed areas.	Monitor
<i>Bromus hordeaceus</i>	soft chess	Limited	–	Identified throughout the preserve within non-native grasslands along roads and trails and in disturbed areas.	Monitor
<i>Bromus rubens</i> ^a	foxtail chess	High	–	Identified throughout the preserve within non-native grasslands and in open spaces between shrubs in chaparral habitats along roads and trails and in disturbed areas.	Monitor

Scientific Name	Common Name	Cal-IPC Ranking	San Diego County Regional Priority Ranking	Notes	Management Recommendation
<i>Carduus cardunculus</i> ^b	artichoke thistle	High	Very High – Level 3	Identified in areas around San Diego thornmint management locations in the preserve.	Remove
<i>Centaurea melitensis</i> ^a	tocalote	Moderate	–	Observed throughout the preserve and generally associated with non-native grasslands and trail edges.	Treat
<i>Cynodon dactylon</i> ^a	Bermuda grass	Moderate	–	Present along maintenance roads and trails and in disturbed areas.	Treat
<i>Dittrichia graveolens</i>	stinkwort	Moderate (Alert)	High – Level 4	Seedlings spreading downwind of mature population associated with an ephemeral basin located between Cardiac Hill and Martha's Grove Trail.	Remove
<i>Ehrharta</i> sp. ^b	veldt grass	Moderate	Medium – Level 3	Identified along trails within the eastern section of the preserve.	Treat
<i>Erigeron bonariensis</i> ^a	flax-leaved horseweed	–	–	Identified throughout the preserve within non-native grasslands, in disturbed habitats and along maintenance roads and trails.	Monitor
<i>Erodium botrys</i> ^a	filaree	–	–	Identified throughout the preserve within non-native grasslands and in open spaces	Monitor
<i>Eucalyptus</i> spp.	eucalyptus	Limited (Watch)	–	Identified in localized stands within the preserve between Sycamore Canyon Road and Martha's Grove Trails, and in the northern portion of the preserve east of Calle de Rob.	Remove
<i>Festuca myuros</i> ^a	rat-tail fescue	Moderate	–	Identified throughout the preserve within non-native grasslands and in open spaces between shrubs in chaparral habitats.	Monitor/Treat when co-occurring with sensitive plants
<i>Foeniculum vulgare</i>	fennel	Moderate	Very High – Level 4	Identified in small patches within non-native grasslands along Sycamore Park Drive.	Remove
<i>Geranium carolinianum</i> ^b	Carolina geranium	–	–	Scattered throughout wetland/riparian areas in the understory	Monitor
<i>Hedypnois cretica</i> ^b	crete weed	–	–	Identified throughout the preserve within non-native grasslands and in disturbed habitats.	Monitor
<i>Hirschfeldia incana</i> ^a	short-pod mustard	Moderate	–	Identified throughout the preserve within non-native grasslands and in disturbed habitats.	Treat
<i>Hypochaeris glabra</i> ^a	smooth cat's-ears	Limited	–	Identified throughout the preserve within non-native grasslands and in open spaces between shrubs in chaparral habitats	Monitor
<i>Lamarckia aurea</i> ^b	goldentop grass	–	–	Identified scattered along maintenance roads and trails and in disturbed habitat areas.	Monitor

Scientific Name	Common Name	Cal-IPC Ranking	San Diego County Regional Priority Ranking	Notes	Management Recommendation
<i>Lysimachia arvensis</i> ^a	scarlet pimpernel	–	–	Present in open areas between shrubs in coastal sage scrub habitats, along maintenance roads and trails and in disturbed areas with mesic soils.	Monitor
<i>Marrubium vulgare</i> ^b	white horehound	Limited	–	Identified throughout the preserve within non-native grasslands and in disturbed habitats.	Monitor
<i>Medicago polymorpha</i> ^a	California burclover	Limited	–	Identified throughout the preserve within non-native grasslands and in disturbed habitats.	Monitor
<i>Melinis repens</i> ^b	natal grass	Watch (high risk)	–	Observed in small patches within the western portion of the preserve.	Monitor/Treat patches adjacent to creeks, sensitive resources.
<i>Olea europaea</i>	olive	Limited	–	Growing in a historic grove southeast of the historic ranch house	Monitor/Treat seedlings
<i>Pennisetum setaceum</i>	crimson fountain grass	Moderate	–	Growing along maintenance roads, trails and among rocky outcrops in Diegan coastal sage scrub and chaparral communities.	Remove
<i>Polypogon monspeliensis</i> ^b	rabbitfoot grass	Limited	–	Observed in the riparian areas and areas with mesic soils	Monitor
<i>Rumex crispus</i> ^b	curly dock	Limited	–	Scattered throughout wetland/riparian areas	Treat
<i>Schismus barbatus</i> ^a	Mediterranean grass	Limited	–	Identified throughout the preserve within non-native grasslands and in open spaces between shrubs in chaparral and coastal sage scrub habitats.	Treat
<i>Sisymbrium</i> sp. ^a	sisymbrium	Limited	–	Identified throughout the preserve within non-native grasslands and in disturbed habitats.	Monitor
<i>Sonchus asper</i> ^b	prickly sow thistle	–	–	Scattered throughout wetland/riparian and other mesic areas in the preserve.	Monitor
<i>Tamarix ramosissima</i> ^b	saltcedar	High	–	Found scattered in oak woodlands southeast of Ranger Station	Remove
<i>Vinca major</i> ^b	greater periwinkle	Moderate	–	Observed in a small patch adjacent to non-native grasslands in the eastern portion of the preserve.	Treat patches along creeks/Monitor

Notes:

a. These species were detected within the preserve but not mapped; species were found to be widespread throughout the preserve.

b. These species were detected within the preserve but not mapped.

Cal-IPC Ranking:

- **High** – These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.
- **Moderate** – These species have substantial and apparent—but generally not severe—ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.
- **Limited** – These species are invasive, but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

Scientific Name	Common Name	Cal-IPC Ranking	San Diego County Regional Priority Ranking	Notes	Management Recommendation
<ul style="list-style-type: none"> • Alert – An alert is listed on species with High or Moderate impacts that have limited distribution in California but may have the potential to spread much further. • Watch – These species have been assessed as posing a high risk of becoming invasive in the future in California. 					
San Diego County Regional Priority Ranking (Cal-IPC, Dendra, CBI 2012)					
<ul style="list-style-type: none"> • Very High – Level 1 Surveillance. Low effort required to achieve goal of regional surveillance, early detection, rapid response. • High – Level 2 Eradication. Moderate effort required to achieve goal of eradication with regionally coordinated control program. • Medium – Level 3 Containment. Funding typically available for retreatments or control of small populations. Goal is eradication with coordinated programs by management unit or watershed. • Medium – Level 4 Directed Management. Area may be managed effectively, with slow reinvasion. Goal is to control within reserve or sub-management unit to benefit NCCP resources. • Low – Level 5 Directed Suppression. Control is typically of short-term benefit (rapid reinvasion) without active restoration. Goal is suppression, typically to allow recovery disturbed site, improve revegetation success, or benefit NCCP resources. 					

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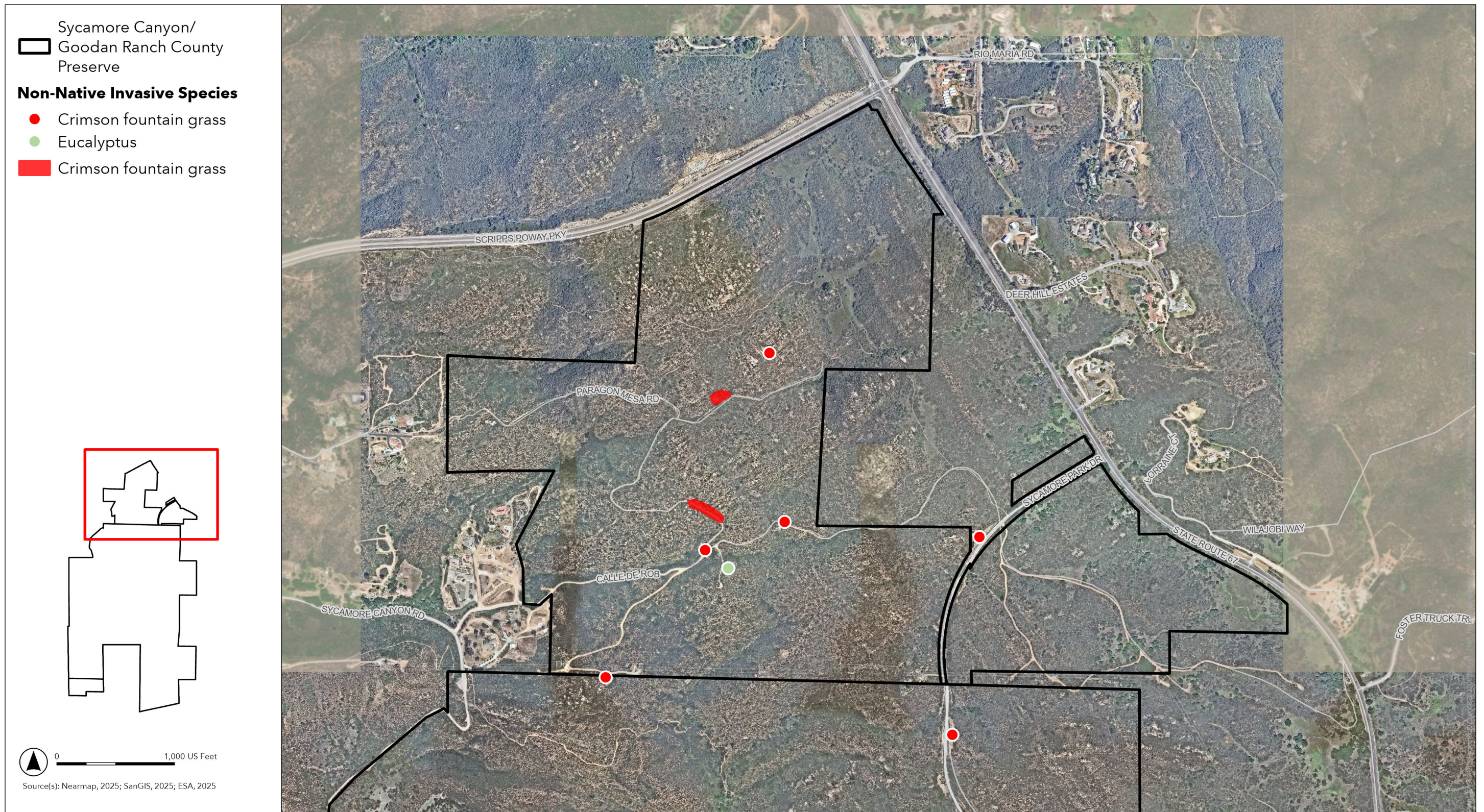


Figure 24a
Invasive Non-Native Plant Observations
Sycamore Canyon/Goodan Ranch County Preserve



Figure 24b
Invasive Non-Native Plant Observations
Sycamore Canyon/Goodan Ranch County Preserve



Figure 24c
Invasive Non-Native Plant Observations
Sycamore Canyon/Goodan Ranch County Preserve

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Incidental Sensitive Plant and Wildlife Observations

Ten sensitive plant species and seven sensitive wildlife species were incidentally detected and mapped during field surveys for Sycamore Canyon/Goodan Ranch County Preserve (**Table 30** and **Figure 25a–Figure 25c**).

TABLE 30
INCIDENTAL PLANT AND ANIMAL OBSERVATIONS: SYCAMORE CANYON/GOODAN RANCH COUNTY PRESERVE

Scientific Name	Common Name	Federal/ State Status	San Diego	South County	California Rare Plant Rank	Notes
			County Special- Status List	MSCP- Covered Species		
Plants						
<i>Acanthomintha ilicifolia</i>	San Diego thornmint	FT/CE	List A	MSCP	1B.1	Found on clay lenses in native and non-native grasslands
<i>Asclepias fascicularis</i>	Narrow-leaf milkweed	–/–	–	–	–	Monarch butterfly host plant. Scattered plants were observed in the preserve.
<i>Convolvulus simulans</i>	Small-flowered morning glory	–/–	List D	–	4.2	Found on clay lenses in native and non-native grasslands
<i>Dudleya variegata</i>	Variiegated dudleya	–/–	List A	MSCP	1B.2	Found on clay lenses in native and non-native grasslands
<i>Ferocactus viridescens</i>	San Diego barrel cactus	–/–	List B	MSCP	2B.1	Found on clay lenses in native and non-native grasslands associated with San Diego thornmint.
<i>Harpagonella palmeri</i>	Palmer's grapplinghook	–/–	List D	–	4.2	Found on clay lenses in native and non-native grasslands associated with San Diego thornmint
<i>Holocarpha virgata</i> ssp. <i>elongata</i>	Graceful tarplant	–/–	List C	–	4.2	Found in scattered patches in mesic areas in the western areas of the preserve
<i>Monardella viminea</i>	Willow monardella	FE/CE	List A	MSCP	1B.1	Known to occur scattered patches within an unnamed drainage in Clark Canyon.
<i>Quercus engelmannii</i>	Engelmann oak	–/–	List D	–	4.2	Observed scattered throughout oak woodlands in the preserve.
<i>Selaginella cinerascens</i>	Ashy spike-moss	–/–	List D	–	4.1	Patches found throughout the preserve and along trail.
Animals						
<i>Accipiter cooperii</i>	Cooper's hawk	–/–	Group 1	MCSP	–	Meandering west.
<i>Aspidoscelis hyperythra beldingi</i>	Belding's orange-throated whiptail	–/–	Group 2	MSCP	–	Observed foraging along the edge of shrubs in coastal sage scrub habitats.
<i>Cathartes aura</i>	Turkey vulture	–/–	Group 1	–	–	Observed flying overhead during surveys throughout the preserve.
<i>Danaus perplexans</i>	Monarch	FT/–	–	–	–	A pair was observed flying within the center of the preserve, northeast of the ranger station.
<i>Odocoileus hemionus fuginatus</i>	Southern mule deer	–/–	Group 2	MCSP	–	Observed along the edge of a drainage in southern mixed chaparral.

Scientific Name	Common Name	Federal/ State Status	San Diego	South County	California Rare Plant Rank	Notes
			County Special- Status List	MSCP- Covered Species		
<i>Phrynosoma blainvillii</i>	Coast horned lizard	-/SSC	Group 2	MSCP	-	Juveniles were observed on trail.

Notes:

Federal/State Status:

- FE – Federally Endangered
- FT – Federally Threatened
- CE – California Endangered
- CT – California Threatened
- SSC – CDFW Species Special Concern

San Diego County Special-Status List:

- LIST A (Plants rare, threatened or endangered in California and elsewhere)
- LIST B (Plants rare, threatened or endangered in California but more common elsewhere)
- LIST C (Plants which may be quite rare, but need more information to determine their true rarity status)
- LIST D (Plants of limited distribution and are uncommon, but not presently rare or endangered)
- CA rare (rare in California, but not listed)
- NE (MSCP Narrow Endemic)

California Rare Plant Rank:

- 1A – Plants presumed extirpated in California and either rare or extinct elsewhere
- 1B – Plants rare, threatened, or endangered in California and elsewhere
- 2A – Plants presumed extirpated in California but common elsewhere
- 2B – Plants rare, threatened, or endangered in California but more common elsewhere
- 3 – Review List: Plants about which more information is needed
- 4 – Watch List: Plants of limited distribution
- 0.1 – Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
- 0.2 – Moderately threatened in California (20%-80% occurrences threatened / moderate degree and immediacy of threat)
- 0.3 – Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

Other:

- Unk – Unknown due to timing of survey and life stage of individual

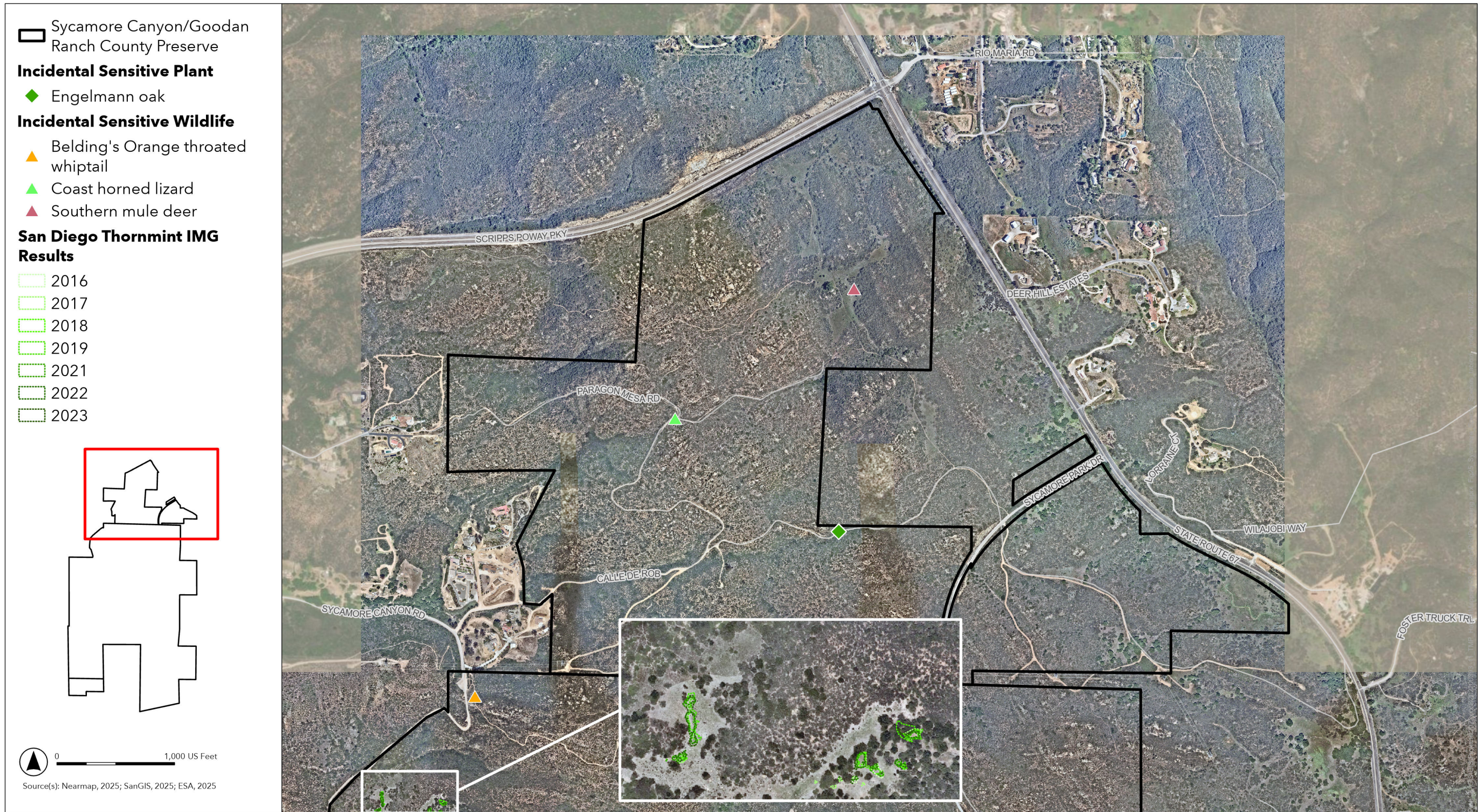


Figure 25a
 Incidental Sensitive Plant and Wildlife Observations
 Sycamore Canyon/Goodan Ranch County Preserve

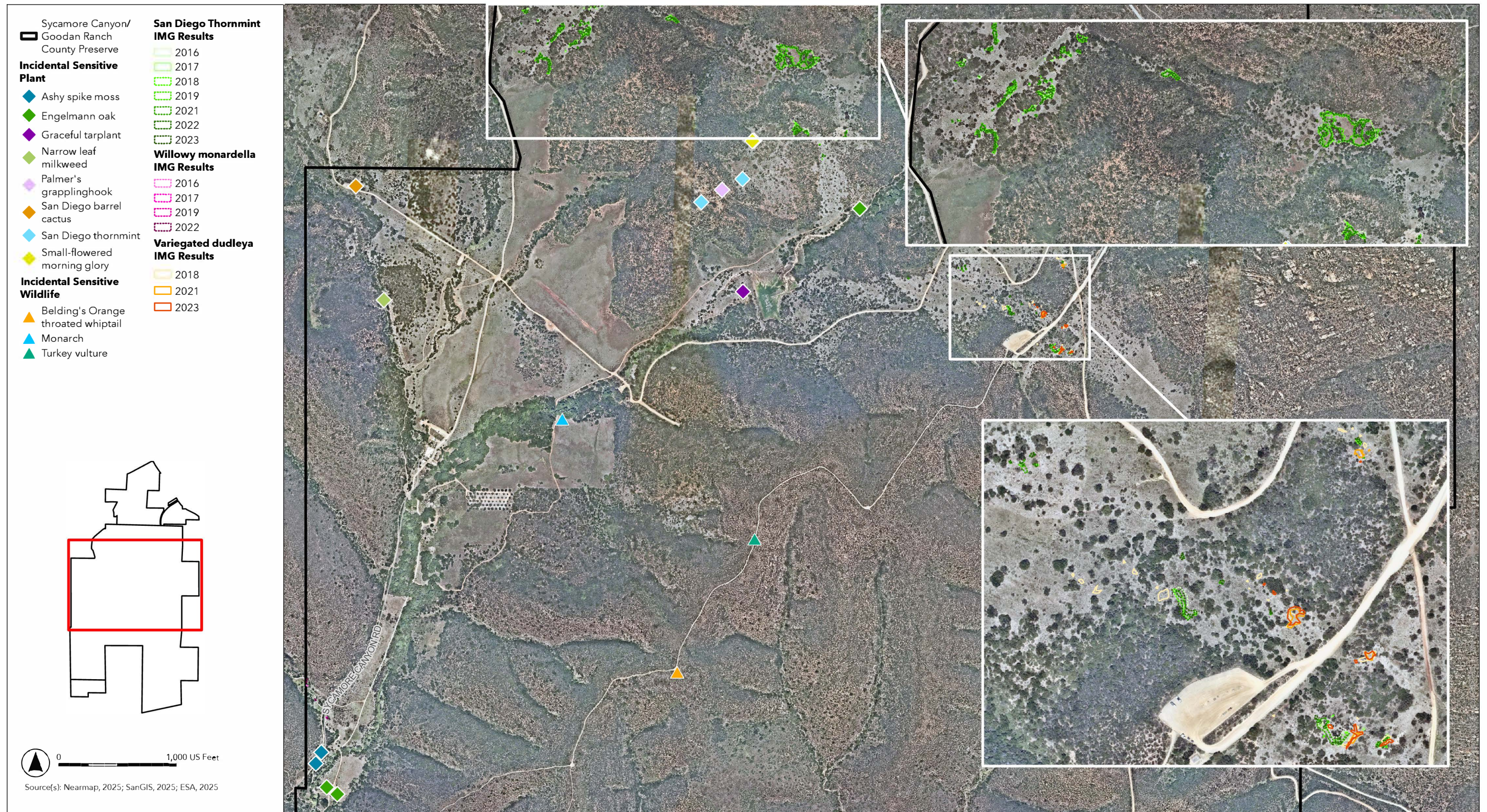


Figure 25b
Incidental Sensitive Plant and Wildlife Observations
Sycamore Canyon/Goodan Ranch County Preserve

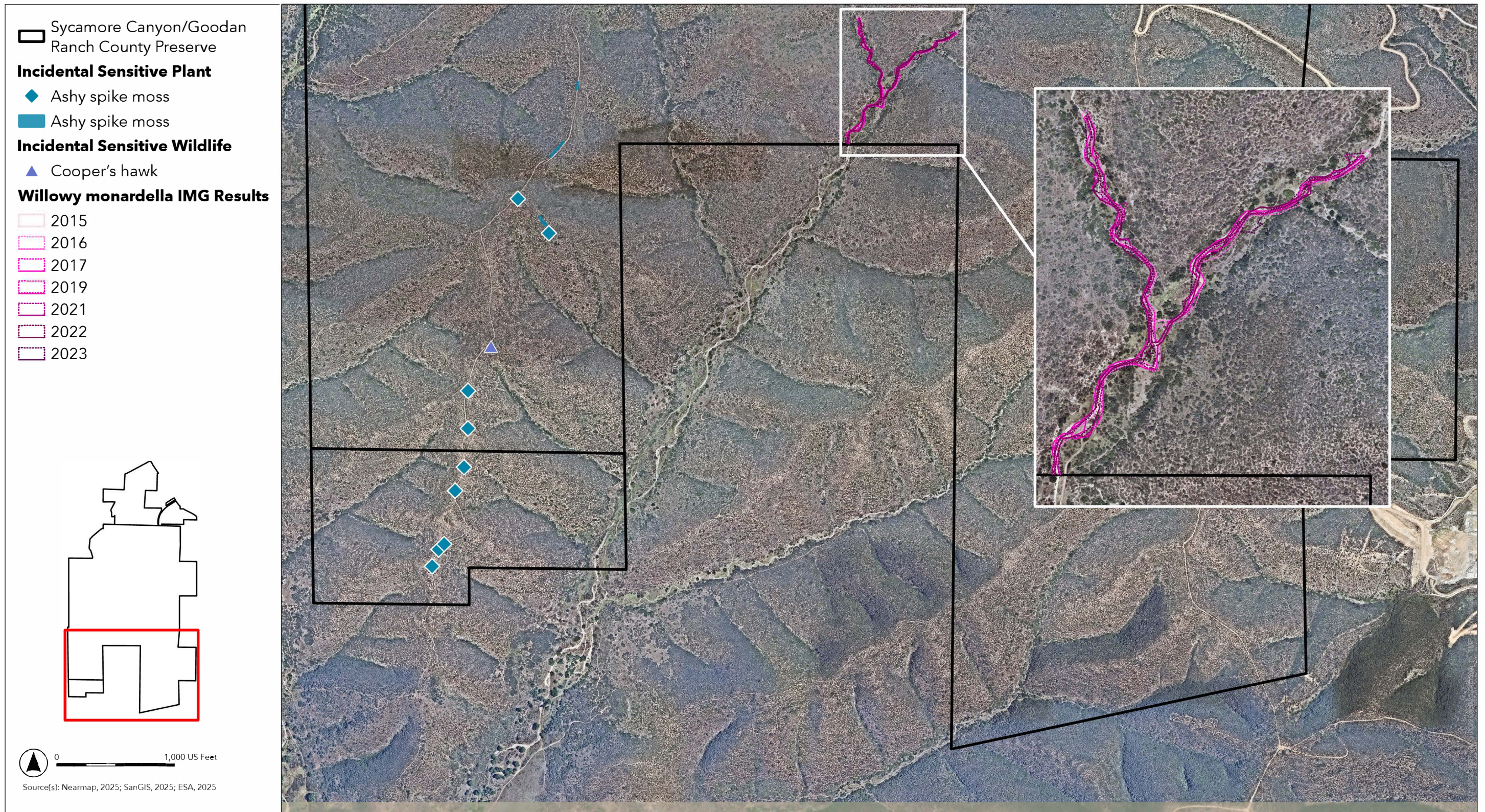


Figure 25c
 Incidental Sensitive Plant and Wildlife Observations
 Sycamore Canyon/Goodan Ranch County Preserve

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Habitat Conditions and Threats Assessment

Threats Assessment

Based on the field surveys, biologists took note of any major issues that could pose a threat to the vegetation communities within Sycamore Canyon/Goodan Ranch County Preserve. A list of primary threats identified in the IMG protocol is presented in **Table 31** along with a discussion of the severity of each threat within the preserve (presented as the extent within the preserve on a scale of 1 to 7) based on field conditions observed during vegetation mapping.

TABLE 31
THREATS OVERVIEW: SYCAMORE CANYON / GOODAN RANCH COUNTY PRESERVE

Disturbances/Stressors	Severity (Extent)	Discussion
Invasive non-native plant species (e.g., annual grasses and herbs)	5	Invasive grasses and forbs provide increased fuel loads during dry periods and may present greater risk of fire. Frequent fires can result in type conversion from Diegan coastal sage scrub to non-native grasslands. Stinkwort, short-pod mustard, tocalote, purple false-brome and other non-native grasses are found throughout the preserve and are likely the greatest threat to native plant communities.
Altered fire regime or risk of catastrophic fire	7	Mature chapparal and sage scrub plants and large stands of dead biomass in the shrub and woodland understories coupled with the presence of non-native grasses and forbs between shrubs suggest that the preserve is at a high risk of catastrophic fire. Vegetation thinning, invasive non-native plant removal, and controlled burns are recommended to minimize the likelihood of catastrophic fire and conversions of intact habitat into invasive non-native plant dominated communities.
Unauthorized human use (e.g., off-road vehicles, encampments, unauthorized trails, shooting, poaching, and/or dumping)	3	Signs of unauthorized trail access, including an unauthorized biking trail, were observed in the southwestern portion of the preserve, leading east of the official trail.
Shothole borer, gold-spotted oak borer, and <i>Fusarium</i> fungal invasion	–	Site was not assessed for invasive insect species or fungi.
Erosion	3	Erosion was observed in the northeastern portion of the preserve where the old roadbed was seen with a collapsed side.
Small, isolated occurrences vulnerable to loss of genetic diversity and to extirpation due to environmental stochasticity or catastrophic disturbance.	4	San Diego thornmint, variegated dudleya and willow monardella are found in small populations within the preserve. These species are more vulnerable to habitat disturbance and competition from invasive non-native plant species than other plant species within the preserve and populations size and density is directly related to available resources and habitat quality.
Altered hydrology (e.g., urban runoff, flood control facilities)	4	An unnamed intermittent creek follows Sycamore Canyon Road flowing west. Portions of the floodplain are developed or are adjacent to disturbed and developed areas which can alter how water enters the system during storm events. Willow monardella occurs in an unnamed drainage in Clark Canyon and is highly susceptible to altered flow regimes.
Herbivory (e.g., seed, vegetation)	1	Not observed.
Detrimental edge effects from adjacent urban development	1	Most of the preserve boundary is surrounded by undisturbed open space, which presents little to no risk of detrimental edge effects. The eastern boundary is directly adjacent to State Route 67 and in some sections there are networks of unpaved utility access roads that cross outside and inside the boundaries of the preserve which may influence edge effects from invasive non-native plant species, litter, and increased risk of unauthorized access.

Disturbances/Stressors	Severity (Extent)	Discussion
Notes:		
Disturbance Categories within Preserve:		
1 – No sign of disturbance within preserve		
2 – Disturbance does not occur within preserve, but is detected adjacent to preserve boundaries		
3 – Disturbance occurs in >0% to <10% of preserve		
4 – Disturbance occurs in 10 to <25% of preserve		
5 – Disturbance occurs in 25 to <50% of preserve		
6 – Disturbance occurs in 50 to <75% of preserve		
7 – Disturbance occurs in ≥ 75% of preserve		

Type Conversion

In order to detect potential type conversions within the preserve, Holland-Oberbauer vegetation mapping was used to compare the acreage of each habitat type that was previously mapped with the current acreage by habitat type (**Table 32**); however, since the 2015 vegetation mapping effort, additional parcels have been acquired, thus increasing the overall acreage of the preserve. The 2025 vegetation mapping effort encompasses a larger area than the previous mapping efforts.

TABLE 32
TYPE CONVERSION ASSESSMENT BASED ON HOLLAND-OBERBAUER MAPPING:
SYCAMORE CANYON/GOODAN RANCH COUNTY PRESERVE

Habitat Type	Acres in 2015	Acres in 2025 ^a	Difference in Acreage
Disturbed/Developed	28.47	30.80 (0.14)	2.34
Chaparral	1,964.17	2,116.99 (36.63)	152.82
Herbaceous	145.55	173.43 (0.60)	27.88
Riparian	26.17	18.61	-7.56
Scrub	538.95	407.37 (5.26)	-131.58
Woodland	14.81	13.55	-1.25

a. Acreage in parenthesis indicates areas not previously mapped in 2015.

Disturbed/developed habitat has increased from 28.47 acres in 2015 to 30.8 acres in 2025. This 2.34-acre increase may be due to increased mapping accuracy and methodology, specifically along trails and around the visitor center in the center of the preserve. An additional 0.14 acres of disturbed/developed habitat were mapped in 2025 that were not mapped in 2015, specifically in the southwestern corner and northern portion of the preserve.

Chaparral communities increased from 1,964.17 acres in 2015 to 2,116.99 acres in 2025. This 152.82-acre increase of chaparral within the preserve is primarily due to the conversion of 32500 Diegan coastal sage scrub habitat to 37200 chamise chaparral and 37G00 coastal sage–chaparral transition communities likely following the 2003 Cedar Fire in the preserve. An additional 36.63 acres of chaparral habitat were mapped in 2025 that were not mapped in 2015, specifically in the southwestern corner and northern portion of the preserve.

Herbaceous communities increased from 145.55 acres in 2013 to 173.43 acres in 2025. This 27.88-acre increase may be contributed to post-fire successional establishment of herbaceous communities in areas of unique soil types and open areas within shrublands throughout the preserve. Higher accuracy mapping and methodology may also contribute to a more refined approach to mapping these communities. In addition, 0.60 acres of herbaceous habitat were mapped in 2025 that were not mapped in 2015, specifically in the southwestern corner and northern portion of the preserve.

Riparian communities decreased from 26.17 acres in 2015 to 18.61 acres in 2025. Potential factors for this 7.56-acre decrease may include increased mapping accuracy and methodology, a loss of diverse tree cover within riparian areas associated with drought, encroaching shrublands, and a non-native grassy understory that reduces tree seedling survivorship.

Scrub communities decreased from 538.95 acres in 2015 to 407.37 in 2025. A 131.58-acre decrease in scrub habitats within the preserve is primarily due to the conversion of 32500 Diegan coastal sage scrub habitat to 37200 chamise chaparral and 37600 coastal sage- chaparral transition communities likely following the 2003 Cedar Fire in the preserve. In addition, 5.26 acres of scrub habitat were mapped in 2025 that were not mapped in 2015, specifically in the southwestern corner and northern portion of the preserve.

Woodland communities decreased from 14.81 acres in 2015 to 13.55 acres in 2025. Potential factors for this 1.25-acre decrease may include increased mapping accuracy and methodology, a loss of diverse tree cover within woodland areas associated with drought, encroaching shrublands and a non-native grassy understory that reduces tree seedling survivorship.

Adaptive Management Recommendations

Adaptive management recommendations were developed based on the general habitat condition and threats assessment conducted during habitat mapping for Sycamore Canyon/Goodan Ranch County Preserve. Recommendations are provided for invasive nonnative plant species management, habitat enhancement/restoration opportunities, encroachment, and monitoring, which were cross-referenced with the management directives and implementation measures described in the Resource Management Plan for Sycamore Canyon/Goodan Ranch County Preserve (County of San Diego 2025). Recommendations are detailed in the following subsections.

Invasive Non-Native Plant Species Management

As discussed in the invasive non-native plant observations section, several invasive non-native plant species were detected within the preserve. For each species, a recommended action was identified consisting of either removal, treatment, or monitoring, which should follow the preserve RMP implementation measures IM A.1.3, B.1.2, and B.2 (County of San Diego 2025). Immediate removal of artichoke thistle, stinkwort, eucalyptus, fennel, tamarisk, and crimson fountain grass is recommended. Dense patches of tocalote and non-native grasses should be treated when encountered and when adjacent to coast live oak woodlands and sensitive species populations. In addition, thatch removal and treatment of purple false-brome is recommended on an annual basis. Final implementation of management activities and treatment methods shall be determined by the County based on priority.

Habitat Enhancement/Restoration Opportunities

- **Erosion.** The preserve did not appear to be affected by erosion particularly in disturbed areas such as adjacent to developed areas, and in areas where vegetation cover was low. One area of erosion was noted along an access road. Erosion was previously identified in 2015 (ICF 2015). The RMP includes management directives that provide guidance for trail and access road maintenance in Section 5.4.3 (County of San Diego 2025).
- **Rare plants.** The preserve contains several sensitive plant species that would benefit from comprehensive mapping to determine management/restoration opportunities as outlined in RMP MD A.2 (County of San Diego 2025). Focused rare plant surveys are recommended to continue for San Diego thornmint, willowy monardella (*Monardella viminea*), and variegated dudleya (*Dudleya variegata*) to capture areas ideally suited for habitat enhancement and restoration, and those areas that may be extirpated by invasive non-native plant species. Additional surveys for CRPR plants such as graceful tarplant (*Holocarpha virgata* ssp. *elongata*) and San Diego barrel cactus (*Ferocactus viridescens*) are recommended to explore areas suited for habitat enhancement and restoration, invasive non-native plant species control, and those areas that may be extirpated by invasive non-native plant species. This could be accomplished through collaboration with SDMMMP and following RMP management directives (County of San Diego 2025).

Encroachment

- **OHV usage.** No unauthorized off-road vehicle use was detected within lands surrounding portions of the preserve; however, due to the network of utility roads in and adjacent to the preserve, unauthorized off-road vehicle use could occur. OHV usage was previously identified within the preserve in 2015 (ICF 2015). Monitoring preserve access points with County gates should occur on a regular basis to capture unauthorized off-road vehicle before damage to the preserve resources occurs.
- **Access control.** Continue to monitor gates and access points and add signage to reinforce site access restriction in areas that support sensitive resources, habitat enhancement and restoration areas, and closed trails.

Monitoring

- **Invasive non-native plants.** Invasive non-native plant species mapping should be conducted annually, if feasible, to inform treatment areas, assess new invasions or reinvasions, and determine effectiveness of treatments. The RMP includes management directives that provide guidance for invasive non-native plant species removal and control are found in Section 5.3.2 (County of San Diego 2025).
- **Public use.** One potentially unauthorized trail was identified within the southern portion of the preserve. This trail was previously identified within the preserve in 2015 (ICF 2015). The preserve is a popular location for hiking and mountain biking. Public use and education should continue to be present at trail heads, the visitor center and around historic areas.
- **Catastrophic events.** Additional vegetation mapping efforts may be conducted as needed following catastrophic events such as wildfires.

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Appendix A

Representative Photographs



PHOTO 1: 4.1 Chamise Alliance/Chamise Chaparral within the northwestern portion of the preserve.



PHOTO 2: Patches of Crimson Fountain grass within rocky outcrops in 4.2.2 Chamise-Mission Manzanita-Ramona Lilac Association/ 37120 Southern Mixed Chaparral habitat in the north-central portion of the preserve.



PHOTO 3: Overview of Monte Fire burn scar from above, facing southeast.

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Figure 1a

Representative Photographs: El Capitan County Preserve





PHOTO 4: 3.6.4 Coast Live Oak-Poison Oak-Grass Association/61310 Southern Coast Live Oak Riparian Forest along the San Diego River in the southeastern portion of the preserve.



PHOTO 5: 4.2.2 Chamise-Mission Manzanita-Hoaryleaf Ceanothus Association/37120 Southern Mixed Chaparral Habitat in far northwest of preserve.



PHOTO 6: Federally Threatened, State Endangered *Encinitas baccharis* along the main trail in the north-central portion of the preserve. This individual is currently threatened by nearby pampas grass.

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Figure 1b
Representative Photographs: El Capitan County Preserve





PHOTO 1: Rip gut brome, short-pod mustard, and crimson fountain grass growing in 5.8.2 Rip Gut Grass Semi-Natural Stand Type/ 42210 Non-Native Grassland habitat in the southwestern corner of the park.



PHOTO 2: Short-pod mustard and tocalote growing adjacent to 4.13.1 San Diego Viguiera- California Sagebrush- California Buckwheat Association/ 32500 Diegan Coastal Sage Scrub habitat in the southern portion of the park.



PHOTO 3: Playground and park in the central portion of the park.

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Figure 2a
Representative Photographs: El Monte County Park





PHOTO 4: Portion of the San Diego River in the eastern portion of the park. The riparian area contains castor bean, short-pod mustard, tamarisk and non-native grass species.



PHOTO 5: Playground and 3.6.4 Coast Live Oak- Poison Oak- Grass Association/ 71161 Open Coast Live Oak Woodland habitat in the central portion of the park.



PHOTO 6: Burn scar of the Monte Fire in the easternmost corner of the park.

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Figure 2b
Representative Photographs: El Monte County Park





PHOTO 1: Coastal pricklypear growing within 4.7.2 California Sagebrush-California Buckwheat- Chaparral Pricklypear/ Fingertips Association/ 32400 Maritime Succulent Scrub habitat in the central parcel of the preserve.



PHOTO 2: Unauthorized trails within the southern portion of the central parcel of the preserve.



PHOTO 3: Fuel modification zone along eastern boundary of the central parcel of the preserve.

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Figure 3a
Representative Photographs: Lakeside Linkage County Preserve





PHOTO 4: Tree of heaven growing within 4.6.2 California Sagebrush-Bush Monkeyflower Association/32500 Diegan Coastal Sage Scrub Habitat.



PHOTO 5: Trash present within the southernmost parcel of the preserve.



PHOTO 6: 4.6.2 California Sagebrush-Bush Monkeyflower Association/32500 Diegan Coastal Sage Scrub Habitat.

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Figure 3b
Representative Photographs: Lakeside Linkage County Preserve





PHOTO 1: Short-pod mustard and crimson fountain grass present in 4.7.1 California sagebrush- California Buckwheat- Laurel Sumac Association/ 32500 Diegan Coastal Sage Scrub habitat in the western portion of the park.



PHOTO 2: Lakeside ceanothus present in 4.1 Chamise Alliance/ 37200 Chamise Chaparral habitat in the western portion of the park.



PHOTO 3: Large stand of slender wild oat in 5.5 Wild Oat Semi-Natural Stands/ 42200 Non-Native Grassland habitat along trails in the eastern portion of the park.



PHOTO 4: Large stand of crimson fountain grass under electrical infrastructure along a utility road in the eastern portion of the park.

Figure 4a

Representative Photographs: Louis A. Stelzer County Park



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PHOTO 5: Engelmann oak in 3.7.1 Engelmann Oak/White Sage Association/ 71181 Open Engelmann Oak Woodland in the central portion of the park.



PHOTO 6: Vandalism on rocks in the western portion of the park.



PHOTO 7: California wild grape dominating some of the riparian area within the central portion of the park.

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Figure 4b

Representative Photographs: Louis A. Stelzer County Park





PHOTO 1: 4.18.1 Woolly Leaf Ceanothus Association/ 37120 Southern Mixed Chaparral habitat in the southern portion of the preserve.



PHOTO 2: 3.5 Fremont Cottonwood Alliance/ 61330 Southern Cottonwood- Willow Riparian Forest habitat within the central portion of the preserve.



PHOTO 3: 3.6 Coast Live Oak Association/ 71160 Coast Live Oak Woodland in the eastern portion of the preserve.

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Figure 5a
Representative Photographs: Oakoasis County Preserve





PHOTO 4: Significant erosion adjacent to the trail in the southern portion of the preserve.



PHOTO 5: Potentially unauthorized trail connecting adjacent property to the southern portion of the preserve.



PHOTO 6: Lakeside ceanothus present in 4.1.4 Chamise- Woolly Leaf Ceanothus Association/ 37120 Southern Mixed Chaparral in the northern portion of the preserve.

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Figure 5b
Representative Photographs: Oakoasis County Preserve





PHOTO 1: Preserve overview facing southwest.



PHOTO 2: 5.24.1 Purple Needlegrass Association/42100 Native Grasslands and 4.37.1 Scrub Oak Association/37900 Scrub Oak chaparral in southeastern portion of the preserve



PHOTO 3: 5.8.1 Purple False-Brome Semi Natural Stand/42200 Non-Native Grassland in western portion of the preserve

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Figure 6a
Representative Photographs: Sycamore Canyon/Goodan Ranch County Preserve





PHOTO 4: 4.7 California Sagebrush- California Buckwheat Alliance/ 32500 Diegan Coastal Sage Scrub in the central portion of the preserve.



PHOTO 5: 4.1.4 Chamise-Mountain Mahogany Association/37120 Southern Mixed Chaparral covered hills in central portion of the preserve.



PHOTO 6: 3.4.3 Western Sycamore-Coast Live Oak Association/61310 Southern Riparian Forest along unnamed creek in southern portion of the preserve.

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Figure 6b
Representative Photographs: Sycamore Canyon/Goodan Ranch County Preserve

