

**San Diego Association of Governments (SANDAG)
Memorandum of Understanding (MOU) #5004552**

**Strategic Control of Invasive Weed Species
4th Quarter Report - FY 2024-25: Report #42 for Project**

April 1st, 2025 – June 30th, 2025

Project: County of San Diego, Department of Agriculture, Weights & Measures –
Strategic Removal of Invasive Weed Species

To: Kim Smith
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Project:

Invasive plants are considered one of the biggest threats to endangered species and their habitats. A strategic plan for managing non-native invasive plant species in San Diego County was completed in 2012 through a SANDAG contract to the Conservation Biology Institute (CBI) (<http://sdmmp.com>). The Invasive Plant Strategic Plan (IPSP) is designed to develop a strategic approach towards the eradication and management of invasive plants in the San Diego region. The IPSP is meant to work in conjunction with the Management Strategic Plan for Conserved Lands in Western San Diego County (MSP) ([Management Strategic Plan](#)).

This Scope of Work will require the contractor to focus on the management of invasive plants identified in Levels 1, 2, and 3 of the IPSP. The following tasks have been identified as necessary to implement this effort:

This quarterly report covers work funded through the SANDAG Contract, which allowed work to occur from April 1st to June 30th, 2025.

TASK 1 – Invasive Plant Species Coordinator:

Level of Effort: (25%) of overall contract

Right of Entry (ROE) work and coordination with property owners and crews:

Coordination with property owners, land managers and AWM crew occurred throughout the quarter. This supported work this quarter and preparation for the next quarter.

The coordinator worked on multiple species at sites across the county:

Current work sites were visited and assessed. The coordinator pulled and bagged plants at some sites.

Regulatory permits:

No new work.

Report preparation:

The quarterly report was prepared and submitted. Work on the contract completion and annual work plan report also continued and was finalized. The report and workplan were submitted.

Mapping and occurrence data:

Reviewing iNaturalist EDRR observations (confirming and correcting IDs), as well as mapping and surveying for new populations occurred. GIS coverage of all sites was updated (points). GIS coverage of all work was updated (polygons).

Work plan:

Work crew species and sites to be treated was updated periodically. Work on the contract completion and annual work plan report also occurred and was completed.

TASK 2 – AWM: Invasive Plant Level 1 Management

Level of Effort: (<10%) of overall contract.

Level 1 Management Species are EDRR targets that were **not known to occur** in the county when the IPSP was written (2012).

Crews surveyed and treated two level 1 species this quarter: barbed goatgrass and desert knapweed. Maps for site show treated areas (red polygons) and surveyed areas as white lines which track pathways used by crews to survey and control plants. AWM IPC carried out optimal plant control, either hand pulling or using pesticide applications, protected the natural environment by preventing off-site movement of pesticides, and utilized Best Management Practices (BMPs) that prevented unintentional discharges to surface waters. For each site, AWM IPC followed the following procedures:

1. Identified the pest species to be treated.
2. Reviewed site conditions, such as soil texture, slope, standing water, irrigation or storm drains.
3. Identified and avoided streamside management areas and surface waters to prevent drift and application of pesticides not labeled for aquatic use onto surface waters.
4. Identified most appropriate method of control based on integrated pest management methods, designed to minimize the scale and number of pesticide applications.
5. Applied the least persistent and least toxic pesticide that effectively mitigates the target pest.

Table 1. Summary of treatments performed by AWM on Level 1 species this quarter.

Scientific Name	Common Name	# of Sites Worked	Acres Surveyed	Acres Treated	Plants Controlled
<i>Aegilops triuncialis</i>	Barbed Goatgrass	1	5.5	1.3	2,250
<i>Volutaria tubuliflora</i>	Desert Knapweed	3	2.6	0.4	950



Table 2. Summary of treatments performed by AWM on *Aegilops triuncialis* (Barbed Goatgrass).

Work Site	Common Name	# of Work Cycles	Acres Surveyed	Acres Treated	Plants Controlled
Site #2 Lake Cuyamaca	Barbed Goatgrass	1	5.5	1.3	2,250

***Aegilops triuncialis* (Barbed Goatgrass): Site #2 Lake Cuyamaca**

A AWM crew of one to two individuals controlled Barbed Goatgrass over 12 days between May 7th and June 9th 2025. The crew started treatments early, so that plants were not setting seed by the time treatments ended, but this made treatments harder as plants were often at basal growth stage, making detection more difficult and time consuming (distinguishing targets from other annual and perennial grasses). The crew spot treated plants with post-emergent. This remains the only site in the County, but control has been very challenging.

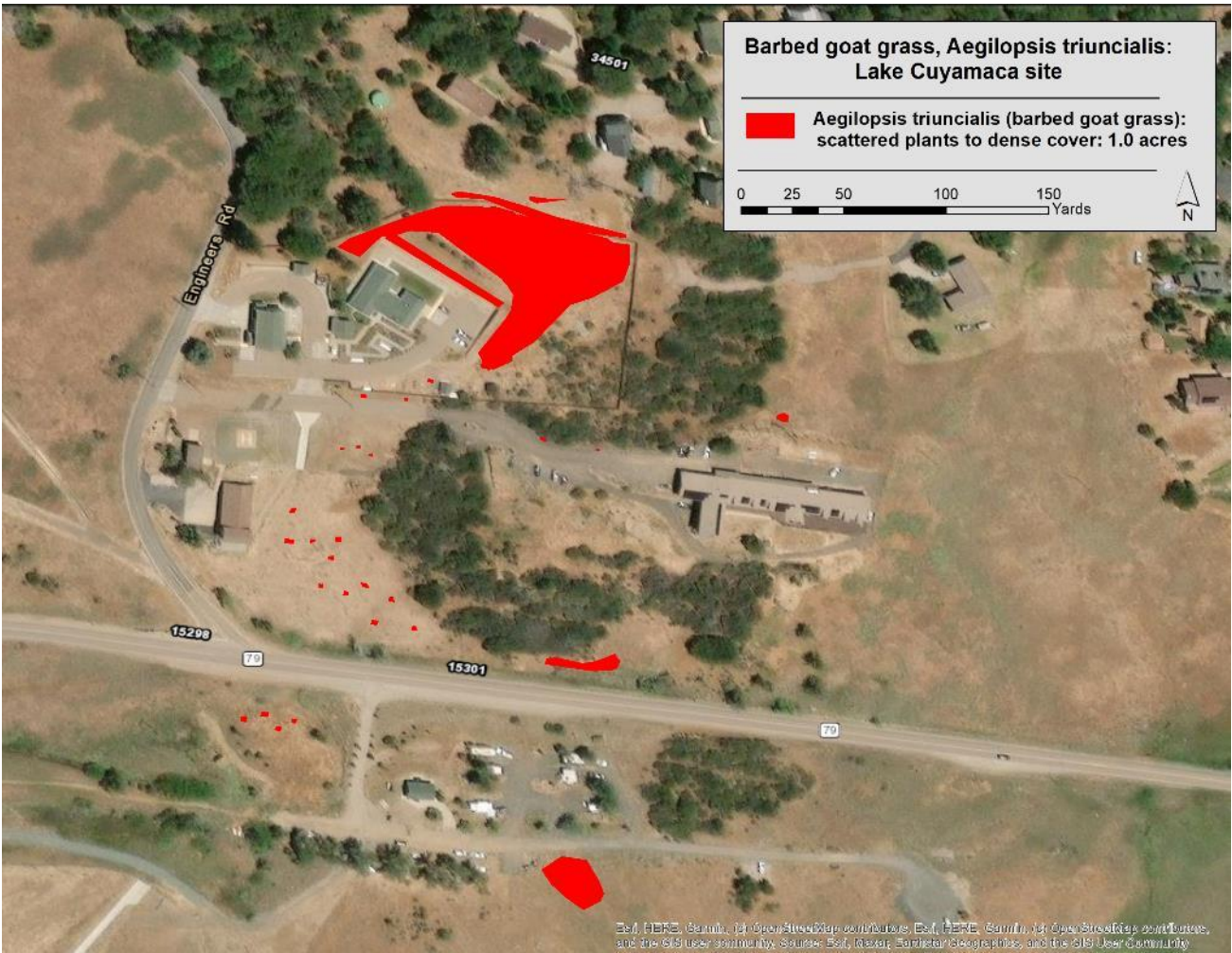


Table 3. Summary of treatments performed by AWM on *Volutaria tubuliflora* (Desert Knapweed).

Site Name	Common Name	# of Work Cycles	Acres Surveyed	Acres Treated	Plants treated
Site #3 Campo Rd	Desert Knapweed	1	0.2	0.1	15

One AWM worker visited this site on April 7th 2025. A total of 15 plants were pulled, bagged and disposed of.



Table 4. Summary of treatments performed by AWM on *Volutaria tubuliflora* (Desert Knapweed).

Site Name	Common Name	# of Work Cycles	Acres Surveyed	Acres Treated	Plants treated
Site #4 Willow Glen Dr, El Cajon	Desert Knapweed	1	0.4	0.1	135

One AWM worker visited this site on April 7th 2025. A total of 5 plants were pulled, bagged and disposed of at the Willow Glen Drive site that has been treated in previous years. A new site was also visited to the west at Cottonwood golf course. A total of 130 plants were pulled, bagged and disposed of at this new site.

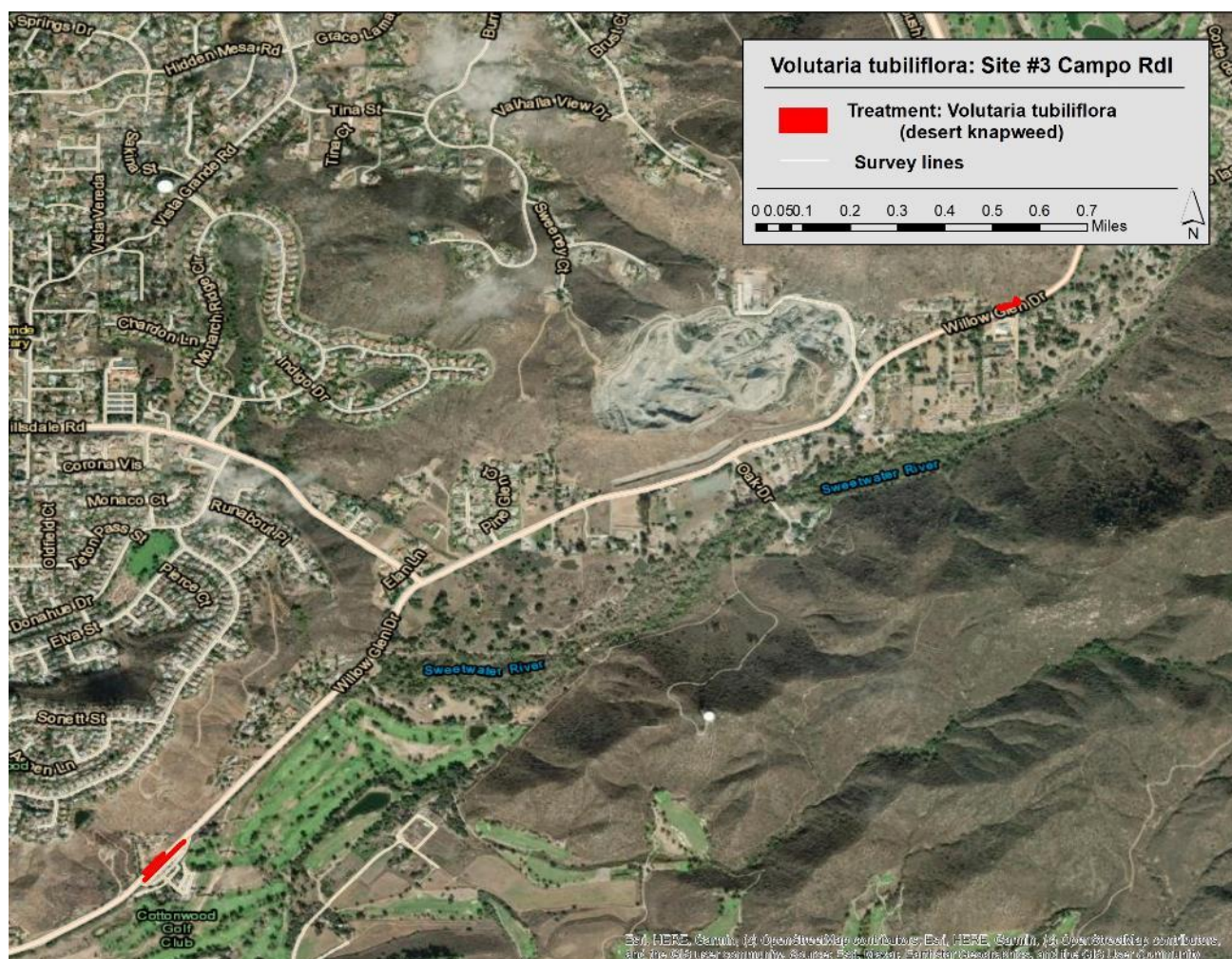
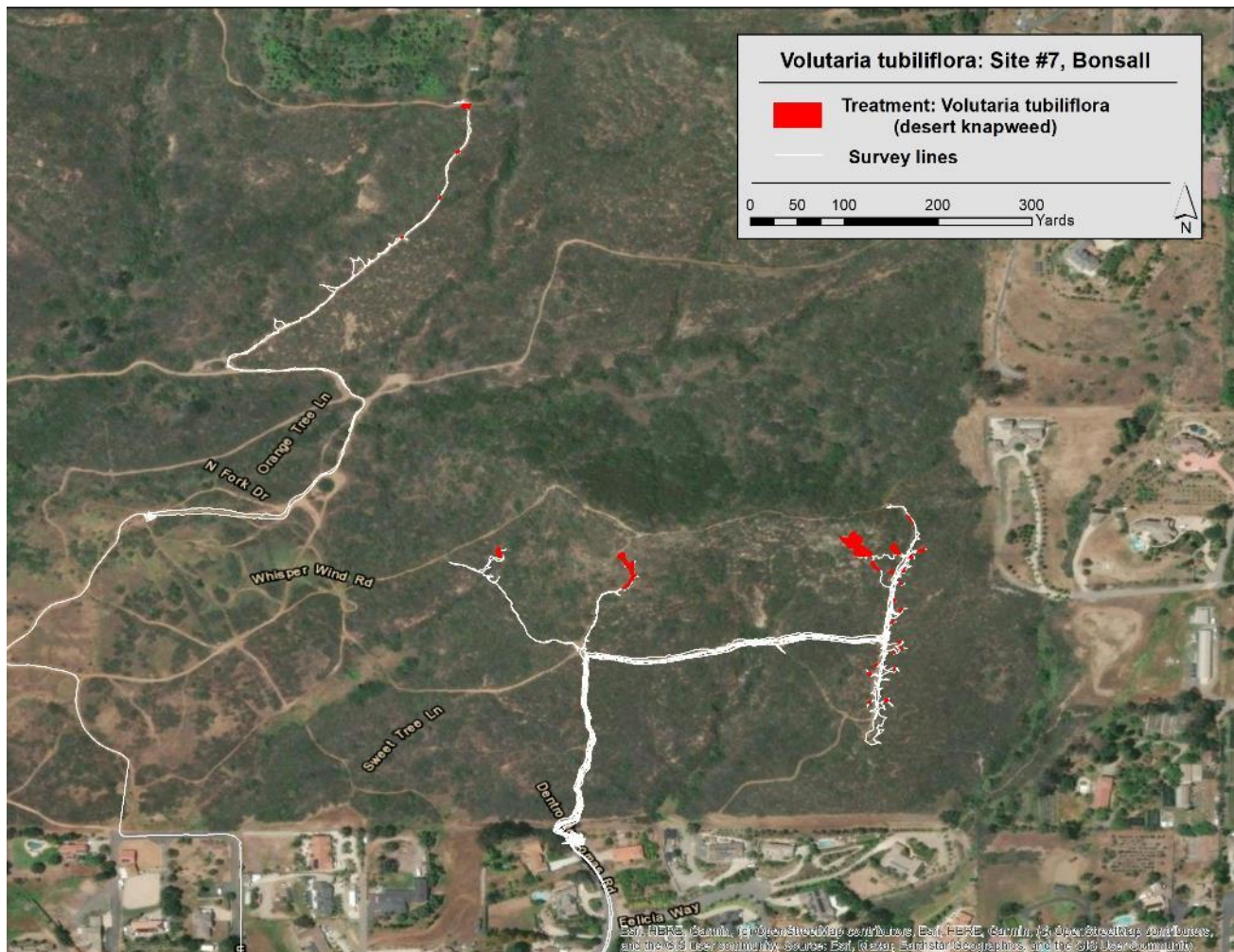


Table 5. Summary of treatments performed by AWM on Volutaria tubuliflora (desert knapweed).

Site Name	Common Name	# of Work Cycles	Acres Surveyed	Acres Treated	Plants treated
Site #7 Bonsall	Desert Knapweed	1	2.0	0.2	800

One AWM worker visited this site over three days between April 14th to the 24th 2025. A total of 800 plants were treated with pre and post emergent. This is a newer site, pre-emergent was applied in the winter, but plants were still expressed.



TASK 3 – AWM: Invasive Plant Level 2 Management.

Level of Effort: (>40%) of overall contract

Level 2 Management Species are EDRR targets that were of limited distribution in the county when the IPSP was written (2012).

Crews surveyed and treated four invasive weed species (Ward’s Weed, Yellow Starthistle, Spotted Knapweed, and Canary Island Saint John’s Wort) at four sites this quarter. AWM IPC made optimal pesticide applications, protected the natural environment by preventing off-site movement of pesticides, and utilized Best Management Practices (BMPs) that prevented unintentional discharges to surface waters. For each site, AWM IPC followed the following procedures:

1. Identified the pest species to be treated.
2. Reviewed site conditions, such as soil texture, slope, standing water, irrigation or storm drains.
3. Identified and avoided streamside management areas and surface waters to prevent drift and application of pesticides not labeled for aquatic use onto surface waters.
4. Identified most appropriate method of control based on integrated pest management methods, designed to minimize the scale and number of pesticide applications.
5. Applied the least persistent and least toxic pesticide that effectively mitigates the target pest.

Table 6. Summary of treatments performed by AWM on Level 2 species this quarter.

Scientific Name	Common Name	# of Sites Worked	Acres Surveyed	Acres Treated	Plants Controlled
<i>Carrichtera annua</i>	Ward’s Weed	1	2.3	0.8	10,900
<i>Centaurea solstitialis</i>	Yellow Starthistle	1	1.0	0	0
<i>Centaurea stoebe</i>	Spotted Knapweed	1	0.3	0.1	175
<i>Hypericum canariense</i>	Canary Island St. John's Wort	1	5.8	0.6	530



Carrichtera annua, Ward's Weed, Site #2 Bressi Ranch

Table 7. Summary of treatments performed by AWM on *Carrichtera annua*, Ward's Weed.

Site Name	Common Name	# of Work Cycles	Acres Surveyed	Acres Treated	Plants treated
Site #2 Bressi Ranch, Carlsbad	Wards Weed	1	2.3	0.8	10,900

The Bressi Ranch (City of Carlsbad) Ward's Weed site is a very large site (>200 acres) covering rolling hills with many property owners (city, open space, and private yards). A group collaboration has been working on the site since 2019: City of Carlsbad and The Nature Collective are working on the northern and western portions of the site and County AWM has worked on the southern and eastern portions of the site. CNLM is taking the lead on the eastern La Costa Greens site.

The County AWM crew treated the spring flush of plants at Bressi Ranch. One member worked five days between April 3rd to the 11th 2025. Over 10,900 seedlings were treated with pre and post emergent herbicide. The seedbank is still expressing itself following the late rains that started in February.



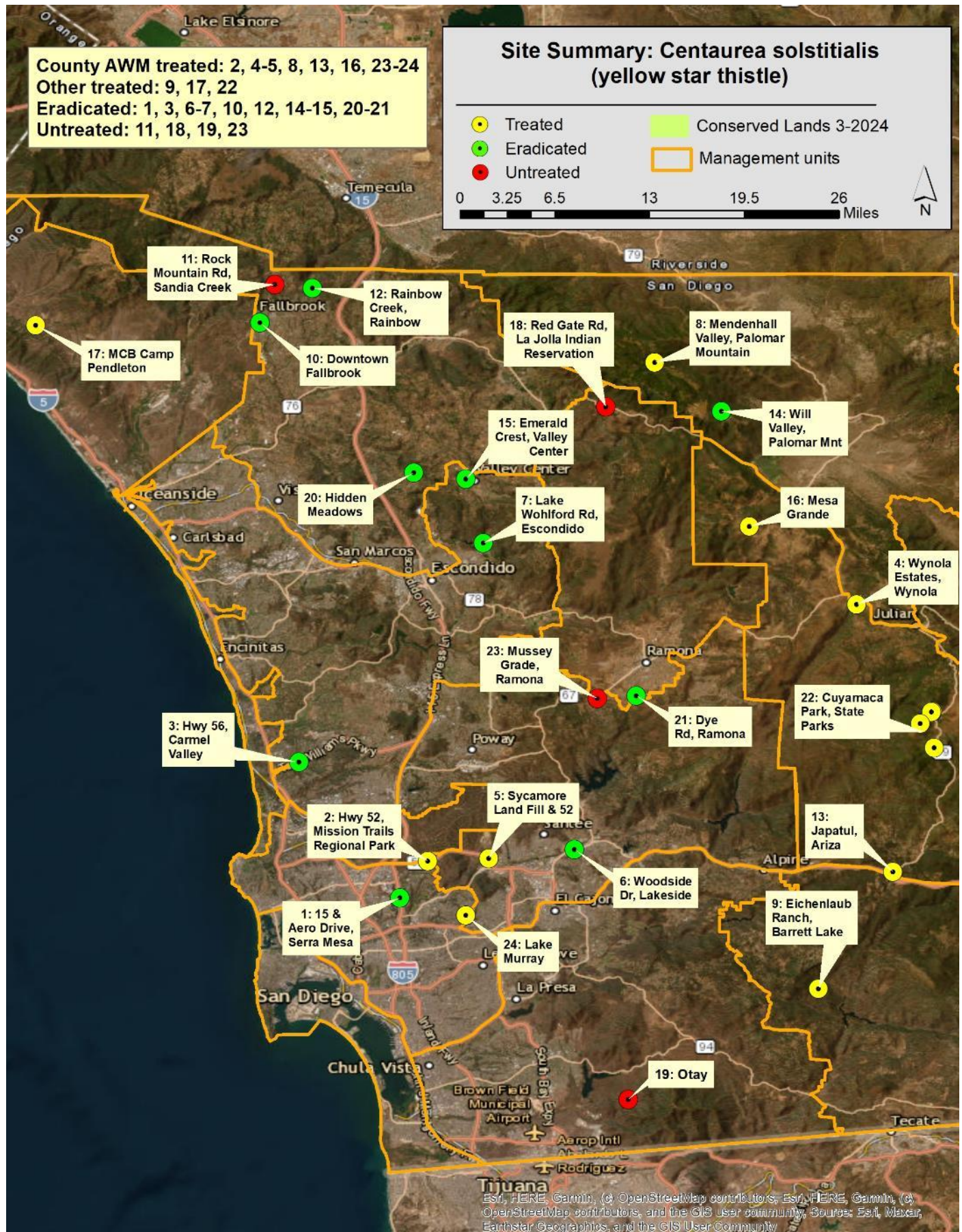


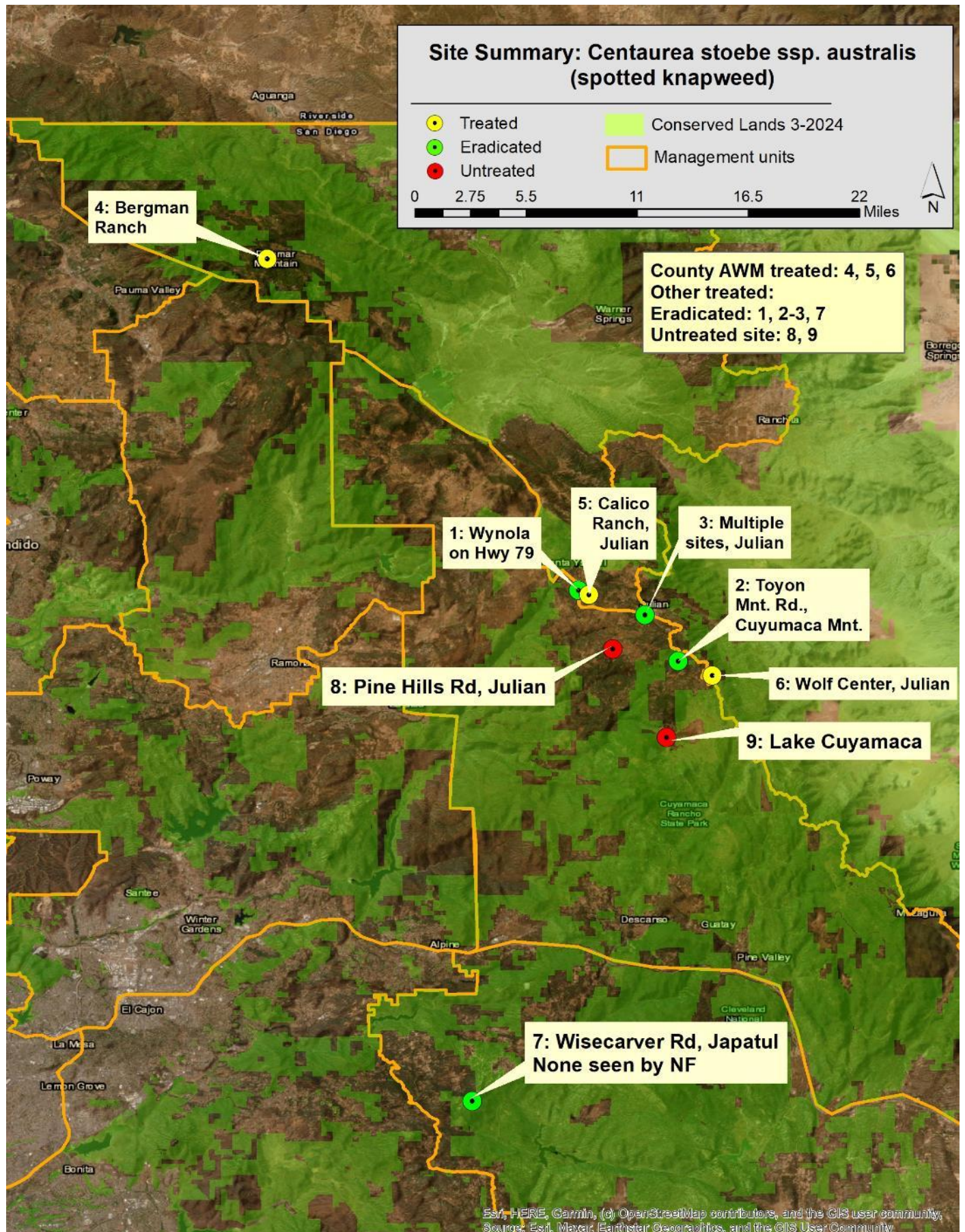
Table 8. Summary of treatments performed by AWM on *Centaurea solstitialis* (Yellow Starthistle).

Site Name	Common Name	# of Work Cycles	Acres Surveyed	Acres Treated	Plants treated
Site #2 Mission Trails Park	Yellow Starthistle	1	1.0	0	0

***Centaurea solstitialis*, Yellow Starthistle: Site #4, Wynola**

A crew of one individual visited the site over one day on May 22nd 2025. No plants were observed. A second area with a report from iNaturalist was also surveyed, no plants were observed.





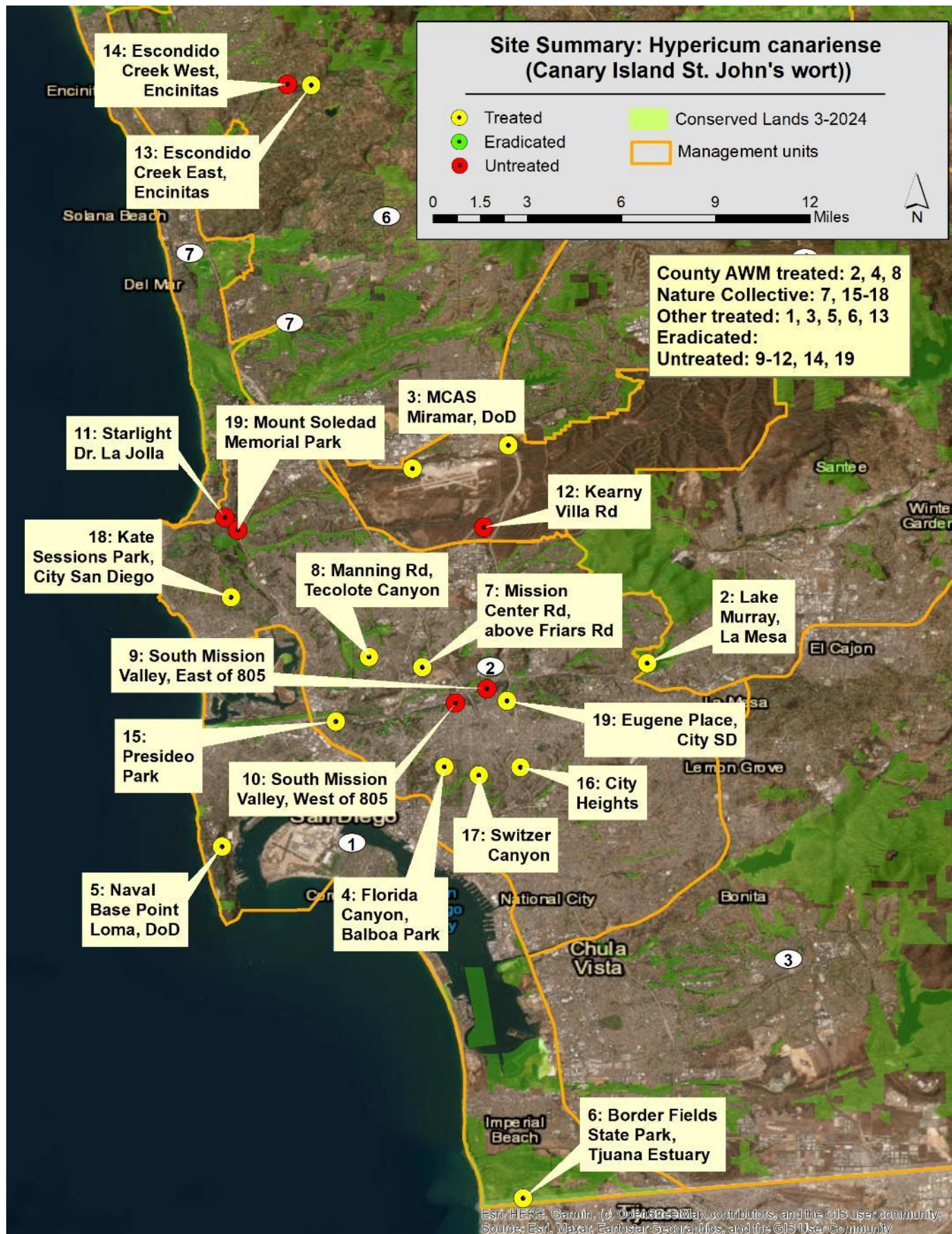
Centaurea stoebe, Spotted Knapweed: Site #6 Wolf Center, Julian

Table 9. Summary of treatments performed by AWM on *Centaurea stoebe* (Spotted Knapweed).

Site Name	Common Name	# of Visits	Acres Surveyed	Acres Treated	Plants treated
Site #6, Wolf Center	Spotted Knapweed	1	0.3	0.1	175

175 plants were treated with a post emergent by a crew of one over one day on June 27th 2025. Additional days of work will occur this quarter.





Hypericum canariense, Canary Island St. John's Wort: Site #4 Balboa Park

Table 10. Summary of treatments performed by AWM on *Hypericum canariense*, Canary Island St. John's Wort.

Site Name	Common Name	# of Visits	Acres Surveyed	Acres Treated	Plants treated
Site #4, Balboa Park	Canary Island St. John's Wort	1	5.8	0.6	530

530 small plants and seedlings were foliar treated with herbicide (Garlon 4 Ultra). A crew of one to three individuals visited the site over six days from May 23rd to June 30th 2025. Plants are drying up due to the low rainfall, work may be suspended on this year's crop of seedlings. Cover is greatly reduced (>95% cover reduction), but there were many scattered seedlings still emerging.



TASK 4 – AWM: Invasive Plant Level 3 Management.

Level of Effort: (<20%) of overall contract

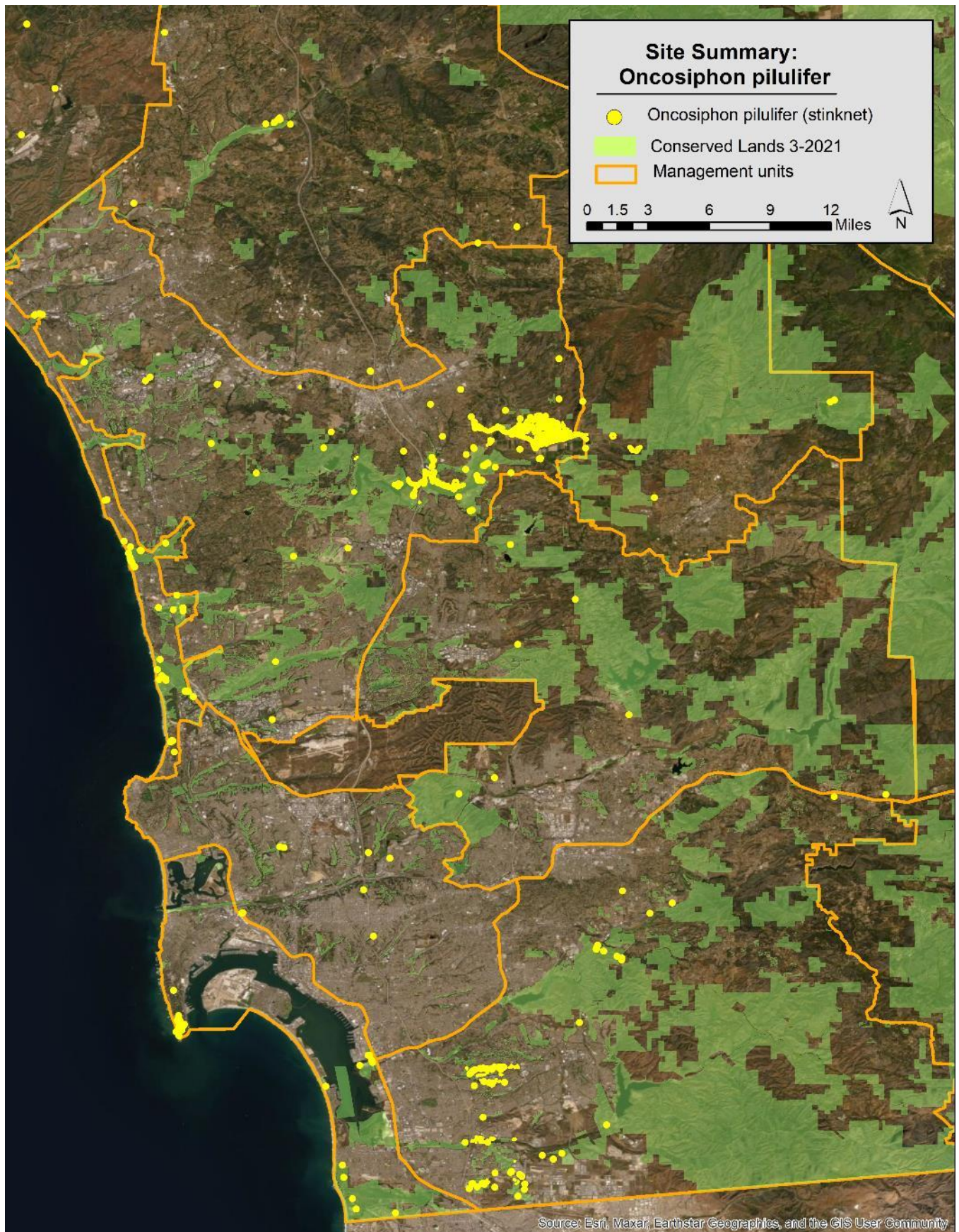
Level 3 Management Species are invasive non-native targets that of a wider distribution in the county (they cannot be eradicated), but still limited enough that they can be contained to portions of the county or they may be eradicated from watersheds or large landscape level units, when the IPSP was written (2012). These species may also be worked on to suppress them in high resource value areas.

Crews surveyed and treated one invasive weed species (stinknet) at two sites this quarter. AWM IPC made optimal pesticide applications, protected the natural environment by preventing off-site movement of pesticides, and utilized Best Management Practices (BMPs) that prevented unintentional discharges to surface waters. For each site, AWM IPC followed the following procedures:

1. Identified the pest species to be treated.
2. Reviewed site conditions, such as soil texture, slope, standing water, irrigation or storm drains.
3. Identified and avoided streamside management areas and surface waters to prevent drift and application of pesticides not labeled for aquatic use onto surface waters.
4. Identified most appropriate method of control based on integrated pest management methods, designed to minimize the scale and number of pesticide applications.
5. Applied the least persistent and least toxic pesticide that effectively mitigates the target pest.

Table 11. Summary of treatments performed by AWM on Level 3 species this quarter.

Scientific Name	Common Name	# of Sites Worked	Acres Surveyed	Acres Treated	Plants Controlled
<i>Oncosiphon pilulifer</i>	Stinknet	2	4.1	0.9	4,090

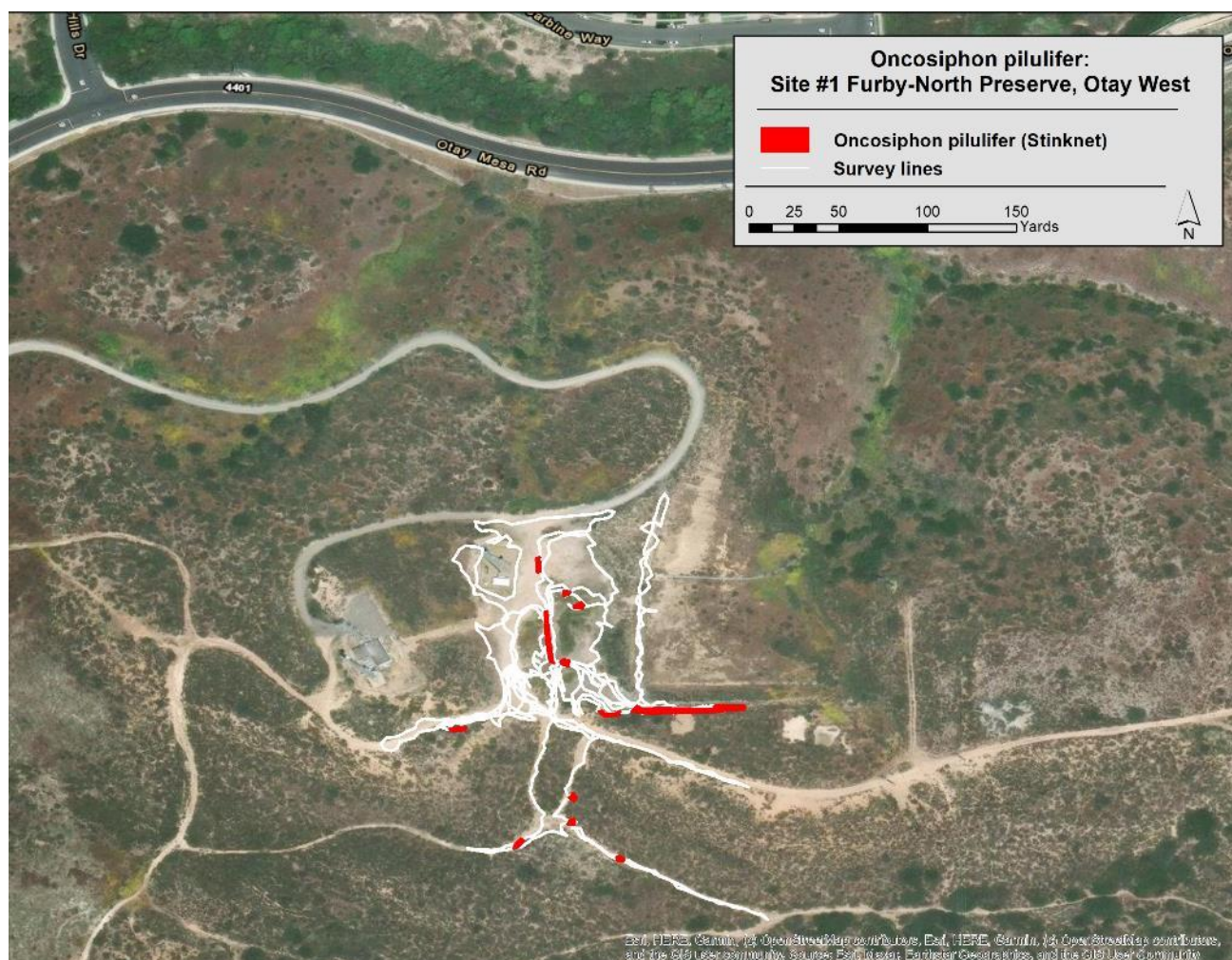


Oncosiphon pilulifer, Stinknet: Site #1 Furby North Preserve, Otay

Table 12. Summary of treatments performed by AWM on *Oncosiphon pilulifer* (Stinknet).

Site Name	Common Name	# of Work Cycles	Acres Surveyed	Acres Treated	Plants Controlled
Site #1 Furby North Preserve	Stinknet	1	1.3	0.2	350

The County AWM crew did a second round of treatments (following up on pre-emergent work earlier in the season) at Furby North Preserve. One crew member worked two days on April 28th and 29th. The site was treated with pre-emergent and post emergent herbicide.

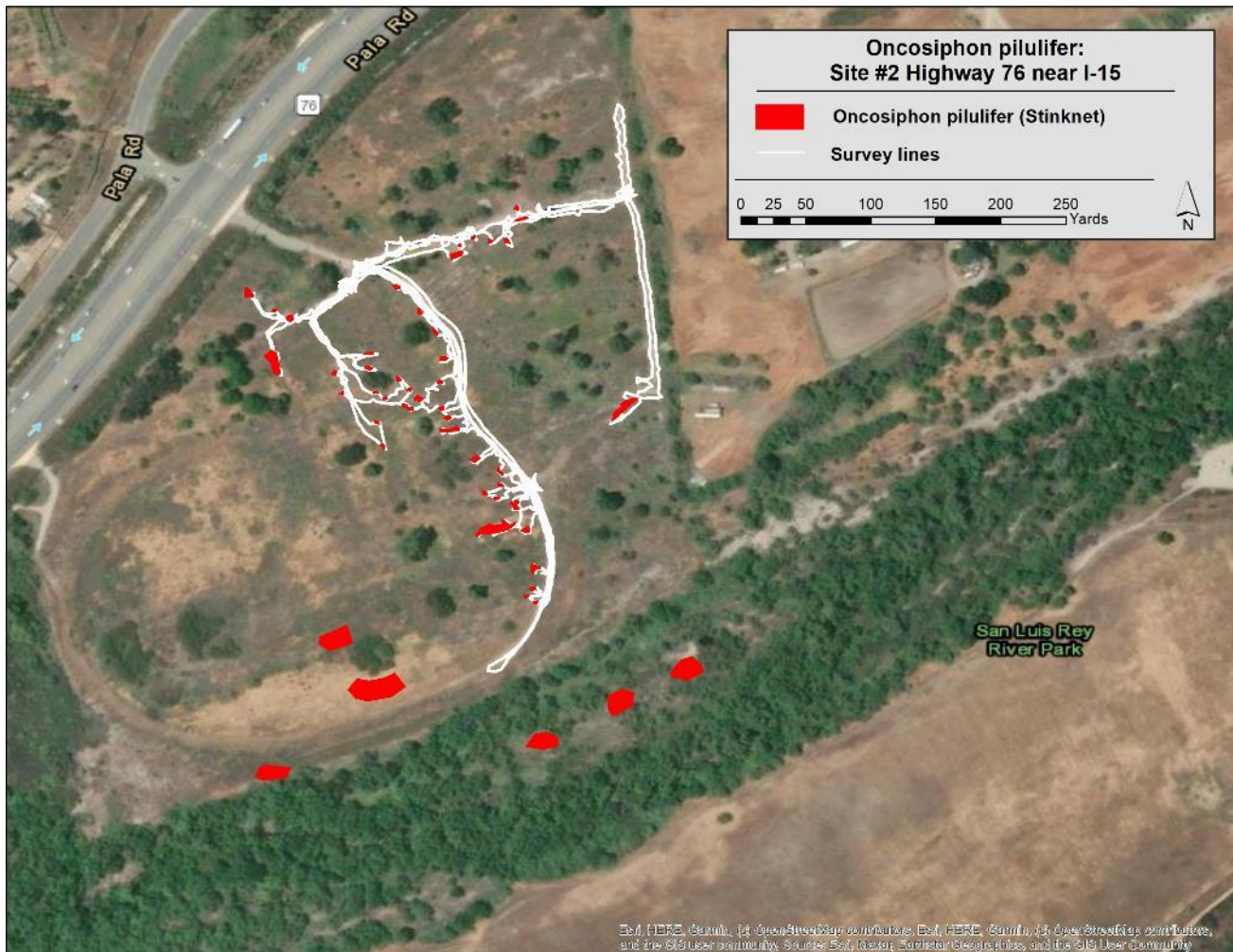


Oncosiphon pilulifer, Stinknet: Site #2 Highway 76 near I-15

Table 13. Summary of treatments performed by AWM on *Oncosiphon pilulifer* (Stinknet).

Site Name	Common Name	# of Work Cycles	Acres Surveyed	Acres Treated	Plants Controlled
Site #2 Highway 76 near I-15	Stinknet	1	2.8	0.7	3,740

The County AWM crew did a second round of treatments (following up on pre-emergent work earlier in the season) at Furby North Preserve. One crew member worked five days between April 30th and May 6th. The site was treated with pre-emergent and post emergent herbicide.



TASK 5 – Coordinator: Tracking and Updating Invasive Species for Priority Removal.

Level of Effort: (5%) of overall contract

- Co-ordination to continue control of Ward's Weed in Carlsbad.
- Co-ordination with the City of San Diego, considering control of *Myoporum acuminatum*, and work on stinknet and Canary Island St John's Wort.
- Surveying of reports from iNaturalist.
- Co-ordination and updates of AWM SANDAG funded work with San Diego Weed Management Area at annual meeting (presentation at annual meeting).
- Presentation at the SDMMP Land Managers annual meeting.
- Co-ordination to survey and control European and Algerian Sea Lavender species in South San Diego Bay. Managers from FWS, DoD, SDMMP and CBI discussed expanded and coordinated surveying and treatment.

Work Anticipated for 4th Quarter Period, July 1st – September 31st 2025:

This work will be under a new Agreement.

Task 1 – Invasive Plant Species Coordinator:

- Coordinate ROE work with AWM, update database.
- Monitor and coordinate with AWM during implementation.
- Survey and map sites as needed.
- Prepare quarterly report, contract annual report and GIS data updates.

Task 2 – AWM: Invasive Plant Level 1 Management.

- Survey, map, and treat any reported sightings of target Level 1 plants.
- Re-treatment of sites: no work planned.
- Supervision of staff, provide training, guidance, and preparation for field work.
- Collect GIS treatment polygons and survey routes (lines) of targeted weeds.

Task 3 – AWM: Invasive Plant Level 2 Management.

- Survey, map, and treat any reported sightings of target Level 2 plants: Spotted Knapweed, Yellow Starthistle, and Limonium sp.
- Re-treatment of sites: French Broom, Canary Island St John's Wort, Yellow Starthistle, and Spotted Knapweed.
- Supervision of staff, provide training, guidance, and preparation for field work.

- Coordinate and finalize tracking methods for work completed.
- Initiate and continue work outlined in work plan.
- Obtain signed ROEs.
- Collect GIS treatment polygons and survey routes (lines) of targeted weeds.

Task 4 – AWM: Invasive Plant Level 3 Management.

- Re-treatments of stinknet: no work planned this quarter.

Task 5 – Coordinator: Tracking and Updating Invasive Species for Priority Removal.

- Continue coordination with: Department of Defense, California State Parks, City Department of Parks and Recreation, San Diego Weed Management Area and County of Orange CNPS EDRR invasives group.
- Continue to aggregate data and track new prospective EDRR target species.
- Present at SDWMA annual meeting and other meetings as requested.
- Provide population status of EDRR regional targets to CDFA statewide assessment.
- Work with the Natural History Museum ‘Urban Canyons Survey Project’, provide EDRR materials to facilitate reporting of EDRR targets.