



# Nature Collective

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**San Diego Association of Governments**

**Veldt Grass II**

**Final Report**

**Reporting Period: February 12, 2019 – June 6, 2021**

**SANDAG Contract Number: 5005513**

## **Executive Summary**

Nature Collective implemented, monitored and managed a perennial veldt grass control program to effectively control the spread of the invasive plant species within the Lake Drive Property (Figure 1). Nature Collective supervised multiple chemical application efforts during the approximately two-year contract. The project was successfully completed. Perennial veldt grass cover at the project site is currently less than five percent. It is expected that continued monitoring and control efforts will be needed.

## **Project Background**

Nature Collective sought to begin Phase 2 of control and management of perennial veldt grass (*Ehrharta calycina*) in the newly acquired Lake Drive Property, adjacent to San Elijo Lagoon Ecological Reserve (Reserve). This invasive non-indigenous grass species occurs in Diegan coastal sage scrub and southern maritime chaparral habitats. Due to its highly invasive nature, it is capable of invading new areas and increasing its prevalence in the adjacent Reserve, potentially displacing several high priority Management Strategic Plan (MSP) plant and animal species. Priority MSP plant and animal species also occur in the Lake Drive Property, immediately threatened by perennial veldt grass. Nature Collective proposed to treat the existing range of perennial veldt grass in the Lake Drive Property and continue to monitor the spread or efficacy thereof. Perennial veldt grass is currently under MSP management level 3 for invasive non-indigenous plants, and further evaluation and management information for the species would be valuable. The proposed project will provide crucial information regarding this species and the potential for its control and eradication in San Diego County.

## Project Goals

The main goals of this project are:

1. to control veldt grass infestations within the Lake Drive Property and prevent their proliferation to other areas; and
2. to monitor treatment effectiveness on the target species.

## Work Performed by Task

### Task 1-Baseline Surveys

Budget: \$395.64

Spent: \$395.64

Match for Task: \$0

Nature Collective established baseline data of perennial veldt grass cover at the project site

### Task 2-Invasive Species Treatments

Budget: \$52,155.36

Spent: \$51,525.63

Match for Task: \$0

Nature Collective coordinated with sub-contractors and supervised the initial treatments and retreatments efforts to control perennial veldt grass and to reduce its overall cover at the project site. The site received three rounds of treatments with the first round February-June 2019, the second round January 2020, and the final round in March-April 2021. There had been a round of treatments planned in March-April 2020 that was cancelled due to the Covid-19 shutdown.

Date	Task
2/25/2019	Herbicide Treatments
4/10/2019	Herbicide Treatments
4/19/2019	Herbicide Treatments
4/26/2019	Herbicide Treatments
5/3/2019	Herbicide Treatments
5/17/2019	Herbicide Treatments
5/24/2019	Herbicide Treatments
5/31/2019	Herbicide Treatments
6/7/2019	Herbicide Treatments
6/14/2019	Herbicide Treatments
1/28/2020	Herbicide Treatments
1/29/2020	Herbicide Treatments
1/30/2020	Herbicide Treatments
3/5/2021	Herbicide Treatments
4/28/2021	Herbicide Treatments
4/29/2021	Herbicide Treatments

**Table 1: Invasive Species Treatment Record**

**Task 3- Monitoring**

Budget: \$2,540.00

Spent: \$2,540.67

Match for Task: \$0

NATURE COLLECTIVE collected and analyzed field data such as percent coverage and efficacy of treatments.

**Task 4- Mapping**

Budget: \$2,675.00

Spent: \$2,672.59

Match for Task: \$0

Nature Collective created maps showing the spread and distribution of the veldt grass. By comparing annual data a decrease in the density of veldt grass is observed as the treatments take effect.

**Task 5-Project Management**

Budget: \$6,016

Spent: \$6,019.67

Match for Task: \$0

Nature Collective coordinated with managed staff and the subcontractor ACS, and provided overall project oversight.

**Task 6- Administrative**

Budget: \$5,904.00

Spent: \$5,904.00

Match for Task: \$0

Nature Collective produced invoices, progress reporting, and final report.

**Conclusions**

The project met its main goals by significantly reducing perennial veldt grass cover and avoiding its spread to other sensitive ecological areas such as the San Elijo Lagoon Ecological Reserve. Continued monitoring and management of this invasive species will be needed in order to maintain its cover below the target threshold of five percent.

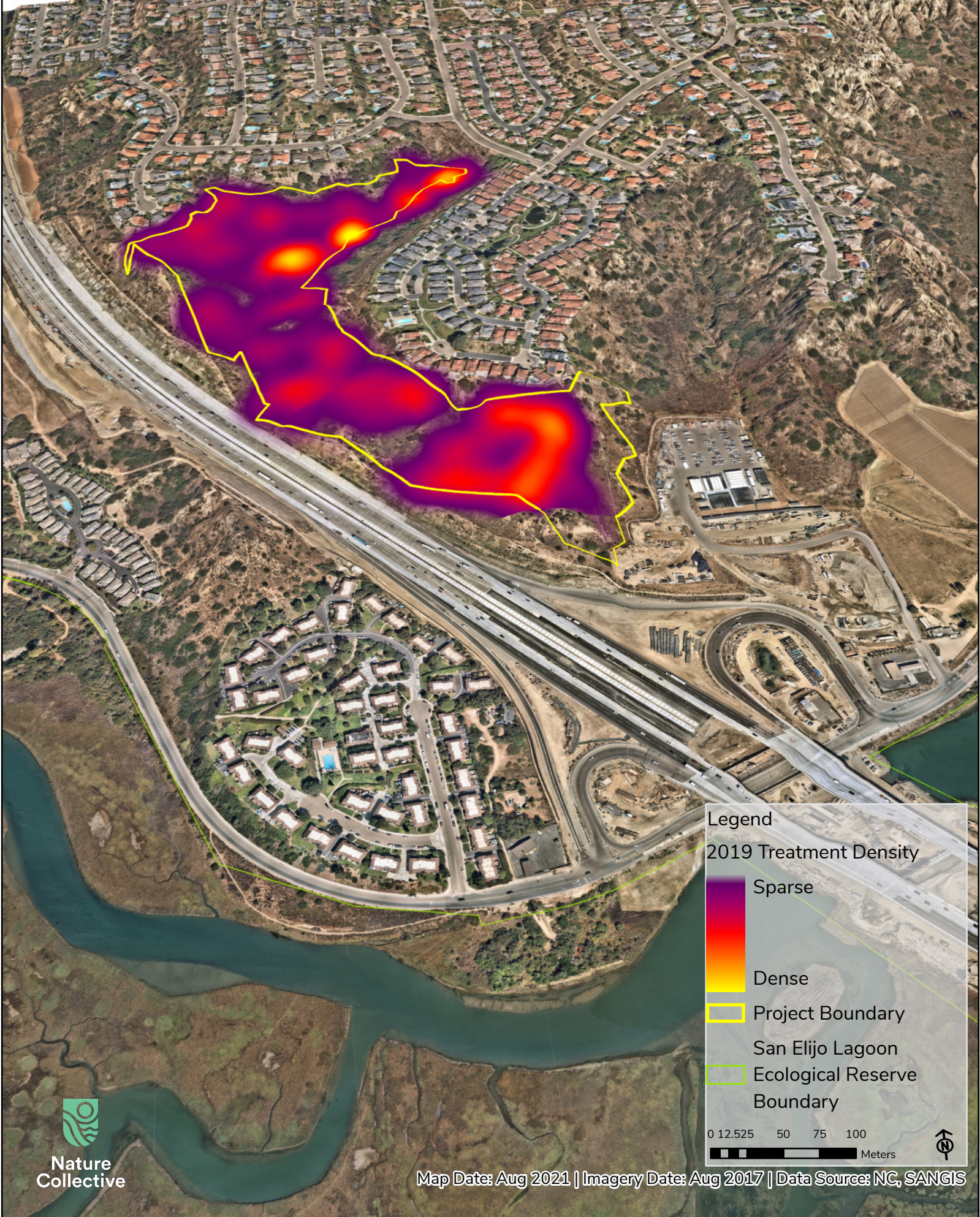
## **Appendices:**

Appendix A: Perennial Veldt Grass Maps

Appendix B: Project Photographs



**Appendix A: Overview Map - Project Site at Lake Drive Property**



Legend

2019 Treatment Density

- Sparse
- Dense

Project Boundary

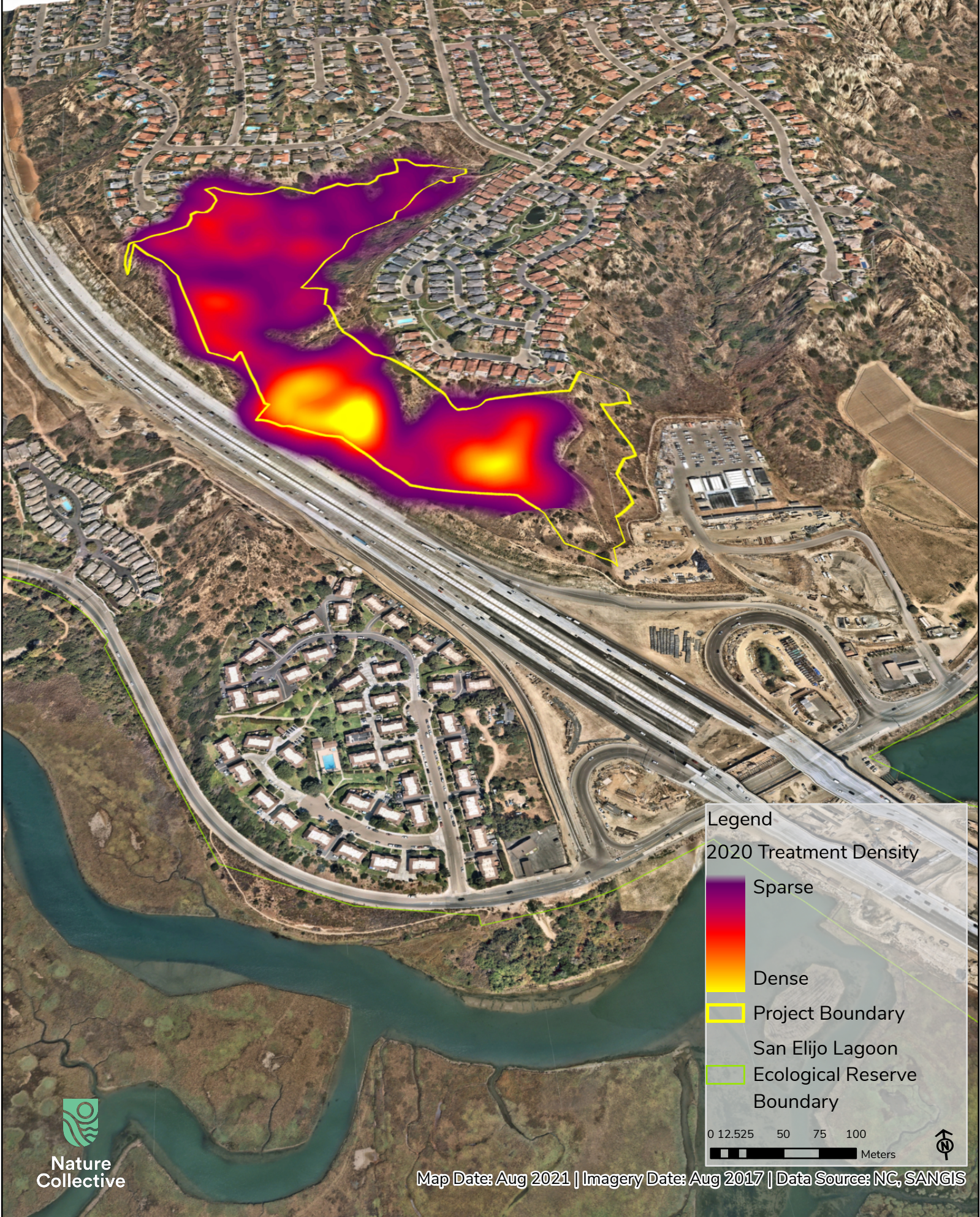
San Elijo Lagoon Ecological Reserve Boundary

0 12.525 50 75 100 Meters



Map Date: Aug 2021 | Imagery Date: Aug 2017 | Data Source: NC, SANGIS

Appendix A: 2019 Treatment Area for *Ehrharta calycina*



Legend

2020 Treatment Density

- Sparse
- Dense

Project Boundary

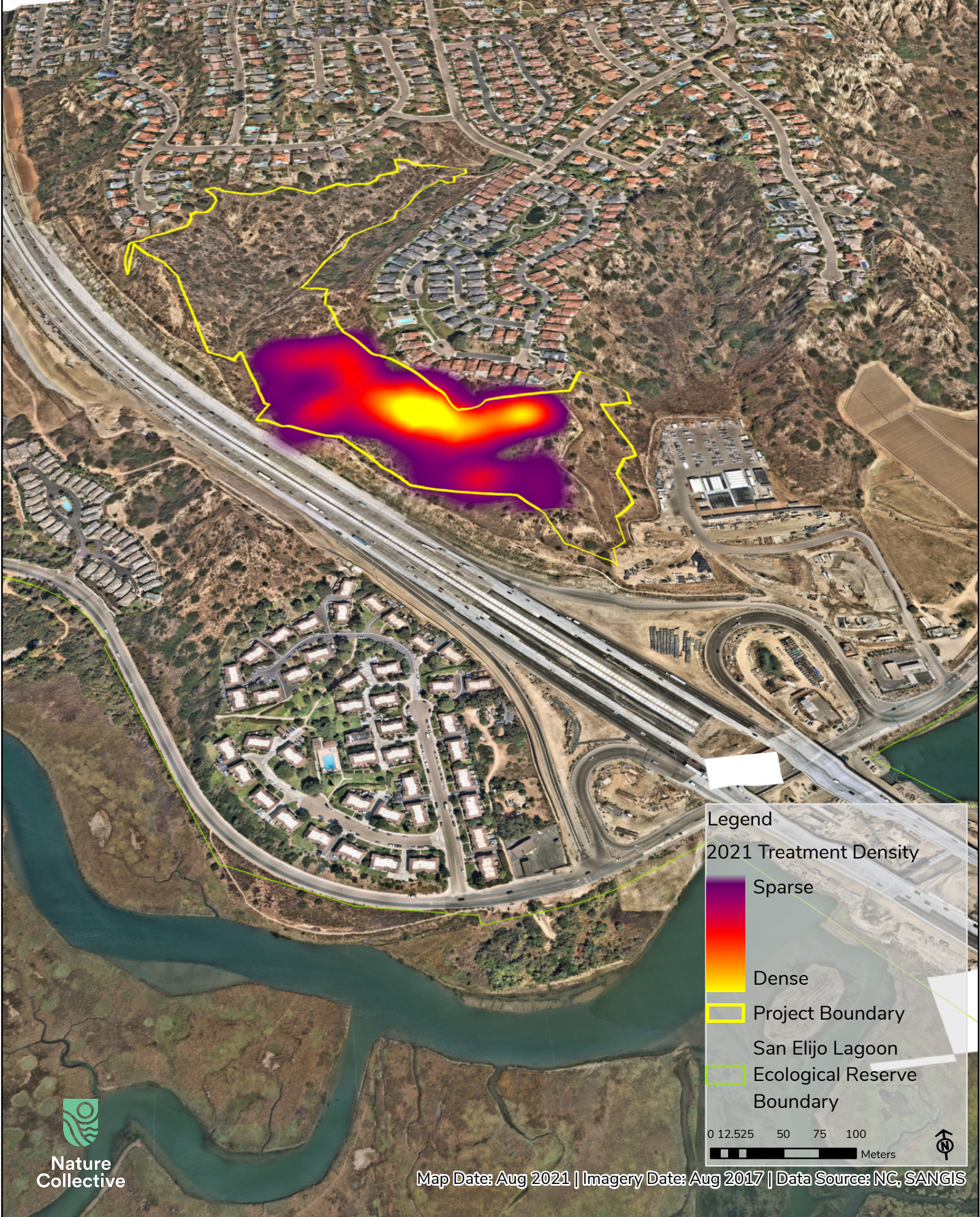
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Appendix A: 2020 Treatment Area for *Ehrharta calycina*



Legend

2021 Treatment Density

- Sparse
- Dense

Project Boundary

San Elijo Lagoon Ecological Reserve Boundary

0 12.525 50 75 100 Meters



Map Date: Aug 2021 | Imagery Date: Aug 2017 | Data Source: NC, SANGIS

Appendix A: 2021 Treatment Area for *Ehrharta calycina*

**EMP 9 Lake Drive Veldt Grass Treatment—Photo Point #1**



2019



2021

**EMP 9 Lake Drive Veldt Grass Treatment—Photo Point #2**



2019



2021

EMP 9 Lake Drive Veldt Grass Treatment—Photo Point #3



2019



2021

## EMP 9 Lake Drive Veldt Grass Treatment—2021 Site Photographs



EMP 9 Lake Drive Veldt Grass Treatment—2021 Photographs

