Final Report
Riparian Habitat Restoration Phase 1
Lawrence and Barbara Daley Preserve

San Diego County, California

October 16, 2012

Prepared for:

SANDAG San Diego Association of Governments, SANDAG

PARKS AND RECREATION COUNTY OF SAN DIEGO County of San Diego, Department Parks and Recreation

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Project Summary

Project Name: Lawrence and Barbara Daley Preserve Restoration Project Phase 1

Ownership County of San Diego

Type of Activity Riparian restoration

Start date: April 2011

Project Goals: Develop a site specific restoration plan, secure permits for weed removal and restoration activities, remove and control invasive species.

Target Species: California gnatcatcher (*Polioptila californica*), yellow breasted chat (*Icteria virens*), arroyo toad (*Anaxyrus californicus*), and other neo-tropical migratory birds.

Completion date: September 2012

Key Milestones:

- Developed a site specific restoration plan which includes the methodology for implementation
- Mapped and quantified weed removal efforts
- Removed over an acre of invasive weeds including giant reed, castor bean, eucalyptus, canary island date palm, and tobacco tree
- Assisted San Diego County of Parks and Recreation in securing USACE RPG 41, CEQA Mitigated Negative Declaration, and 1600 permits

April 2011, giant reed along Dulzura Creek

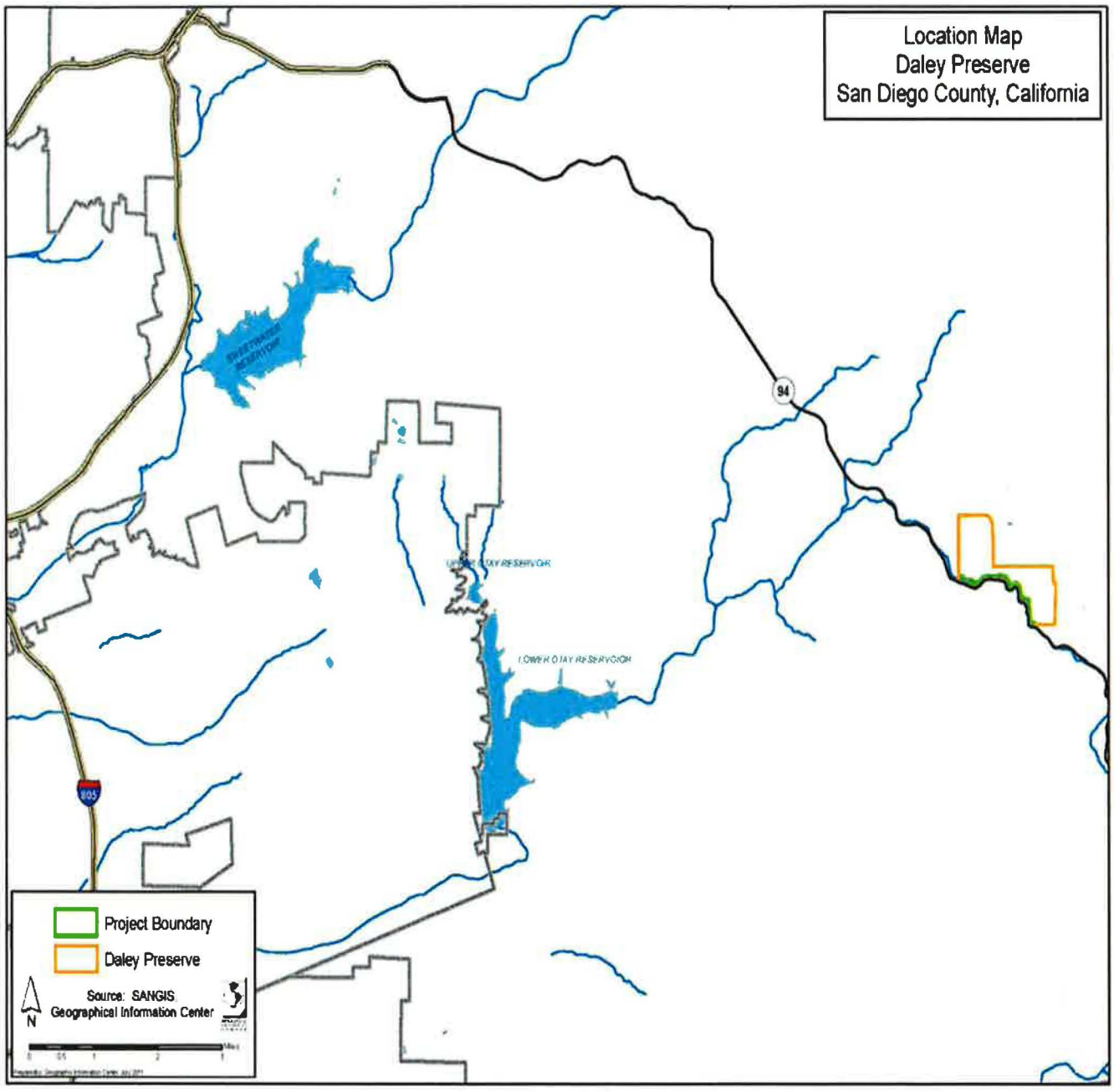
September 2012, giant reed removed, and treated

Funding

A $129,180 grant was provided by the San Diego Association of Governments (SANDAG) through the Environmental Mitigation Program (EMP) of the TransNet Extension Ordinance.

Location and Size

The 55-acre Daley Preserve Project Area is located in the south-east portion of the Otay River watershed in San Diego County, California. The project site is directly north and east of Highway 94 and south of Honey Springs Road. The preserve is surrounded by open space lands owned by the California Department of Fish and Game (CDFG) and the Bureau of Land Management (BLM), with the exception of a small rural residential development directly to the north and the community of Dulzura upstream to the east.



Introduction

River Partners implemented Phase 1 of a comprehensive riparian restoration and enhancement plan of 55 acres on the County of San Diego's Lawrence and Barbara Daley Preserve (Preserve). A major goal of Phase 1 was to remove invasive non-natives plants in order to enhance the local habitat and promote ecosystem health in the downstream portion of the watershed by limiting the amount of invasive seeds and propagules being transported. In addition, a comprehensive restoration plan was designed in order to direct future restoration efforts of native vegetation (Phase 2). Restoring native vegetation to riparian and coastal scrub habitat, while targeting the desired habitat structure of the California gnatcatcher (*Polioptila californica*), yellow-breasted chat (*Icteria virens*), and other neo-tropical migratory birds will greatly expand their available habitat and resources as well as thwart the re-colonization of non-native invasive species.

Project Goals and Objectives:

- Remove invasive non-native plant species
- Preserve and enhance wildlife habitat,
- Develop a site specific restoration plan
- Secure necessary permits for enhancement and future restoration activities

The Daley Preserve Project is important because it contains patches of both live oak riparian forest (MSCP Tier I habitat) and Diegan coastal sage scrub (MSCP Tier II habitat). Biological surveys have shown that Dulzura Creek is also an important wildlife movement corridor, as well as breeding and foraging grounds for several MSCP covered species such as the coastal California gnatcatcher. The enhancement and restoration of 55 acres of riparian and coastal scrub habitat along Dulzura Creek will improve the quality and continuity of habitat for a variety of neo-topical migratory and resident birds, including several threatened and endangered species, as well as other native wildlife. Additionally, the project is a valuable component to the success of downstream restoration efforts in that it is important to remove invasive species and restore native vegetation in upstream reaches in order to suppress the subsequent re-infestation of invasive species and their spread downstream.

California gnat catcher is a primary target species for the Lawrence and Barbara Daley Preserve restoration project

Project Implementation

- Completed site assessment including the evaluation of soil texture, stratification and depth to water table, as well as the past land -use and current site conditions.
- Ground-truthed the invasive species mapping effort by Technology Associates which was compiled as part of the Resource Management Plan for the Preserve in May 2011.
- Conducted breeding bird surveys within the active breeding season (January 15th to September 15th) prior to vegetation removal in order to avoid impacts to breeding birds on site.
- Managed three separate field crews of California Conservation Corps members (48 members in all) to work on invasive weed removal and control efforts for approximately seven weeks in total.
- Removed over an acre of eucalyptus trees, giant reed, castor bean, fennel, tamarisk, tree tobacco, and canary island date palms and treated stumps with waterway approved Habitat® and Ranger Pro® herbicides to minimize resprouting.

Project Implementation Continued...

- Chemically treated 10 acres of non-native grasses and bull thistle with waterway approved Habitat® and Ranger Pro®.
- A second herbicide application of Habitat® and Ranger® was sprayed on all the areas of non-native removal in order to prevent a re-infestation from resprouts.
- Weed removal activities were mapped in order to document the effort and assist in follow-up treatments and surveys of the areas (see attached maps).

River Partners staff assessed giant reed removal area for re-sprouts.

CCC field crew spraying giant reed resprouts

CCC crew in Dulzura Creek cleared of giant

Restoration Challenges

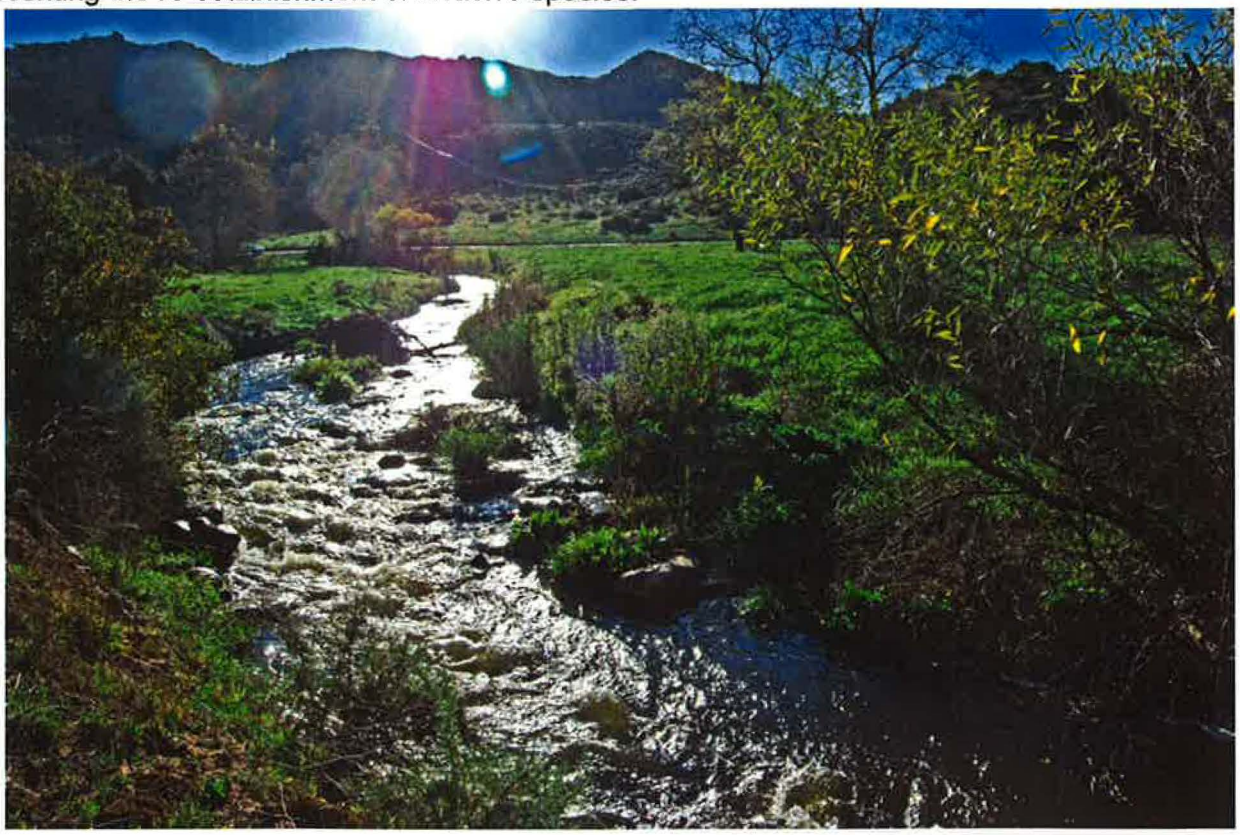
- Steep topography and limited access points made it impossible for equipment to reach most of the site to mechanically remove and treat invasive plant species.
- Hiking with equipment, including chainsaws and backpack sprayers, was required to access the treatment areas for hand removal and herbicide treatment .
- All cleared plant material had to be hauled out of the floodway by hand in order to prevent any material from entering the water course.
- Approximately 10 acres of non-native annual grasses and mustard were mowed on the south side of Dulzura Creek within the proposed Habitat Restoration Area. However, a buffer was left untouched around a breeding pair of red-tailed hawks that were documented during a breeding bird survey prior to the mowing event.

Rough, steep terrain within the Preserve made it challenging to access most of the site.

Long-term management recommendations

Once funding is secured, Phase 2 of the project should be implemented according the restoration plan (River Partners 2011). This consists of using modern farming techniques to efficiently and rapidly establish riparian vegetation, while continually controlling invasive species to prevent re-establishment. Based upon the site assessment and the habitat requirements of targeted wildlife species, the restoration design includes planting the site with three native vegetative communities: Southern Riparian Woodland, Southern Willow Scrub, and Diegan Coastal Sage Scrub. These habitats will expand the available resources and possible breeding territory for several threatened and endangered species including the California gnat catcher (*Popioptila californica*) and yellow-breasted chat (*Icteria virens*), as well as multiple other wildlife species.

In the interim, San Diego Department of Parks and Recreation should continue treating the areas where invasive species were removed in order to prevent their re-establishment. Waterway approved Habitat® and Ranger Pro® can be effective at controlling resprouts of all treated invasive species. Routine site visits should take place in order to assess the control areas and any resprouting in order to determine a timely herbicide application schedule. Once funding is secured, restoration of native species will also aid in preventing the re-establishment of invasive species.

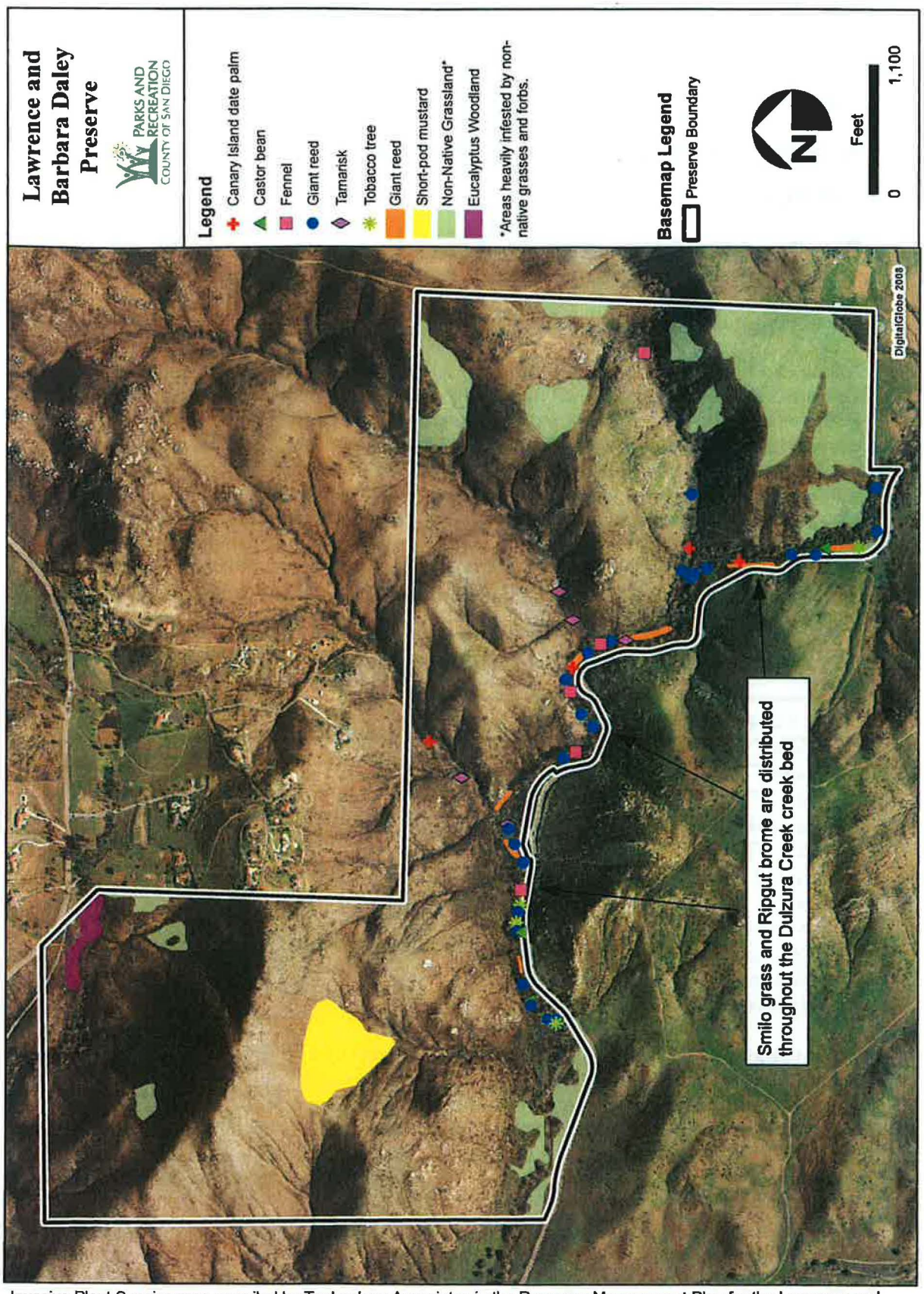


Dulzura Creek after invasive removal and control efforts.

Conclusions

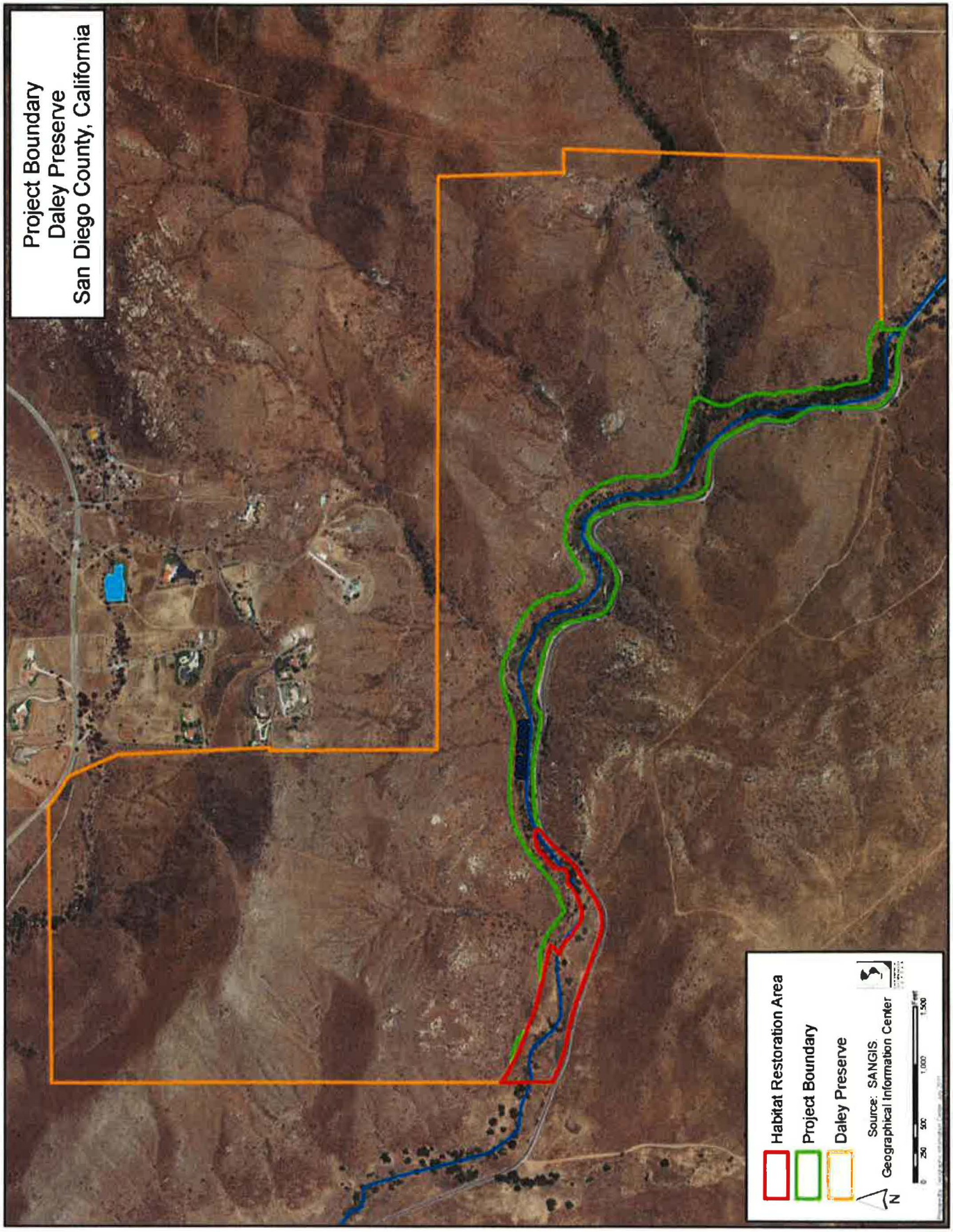
The Lawrence and Barbara Daley Restoration Project Phase 1 was successful in securing necessary permits, creating a site specific restoration implementation plan, and removing and controlling non-native invasive plant species. Initial site preparation has been conducted and the site is ready to proceed into Phase 2 of the restoration plan.

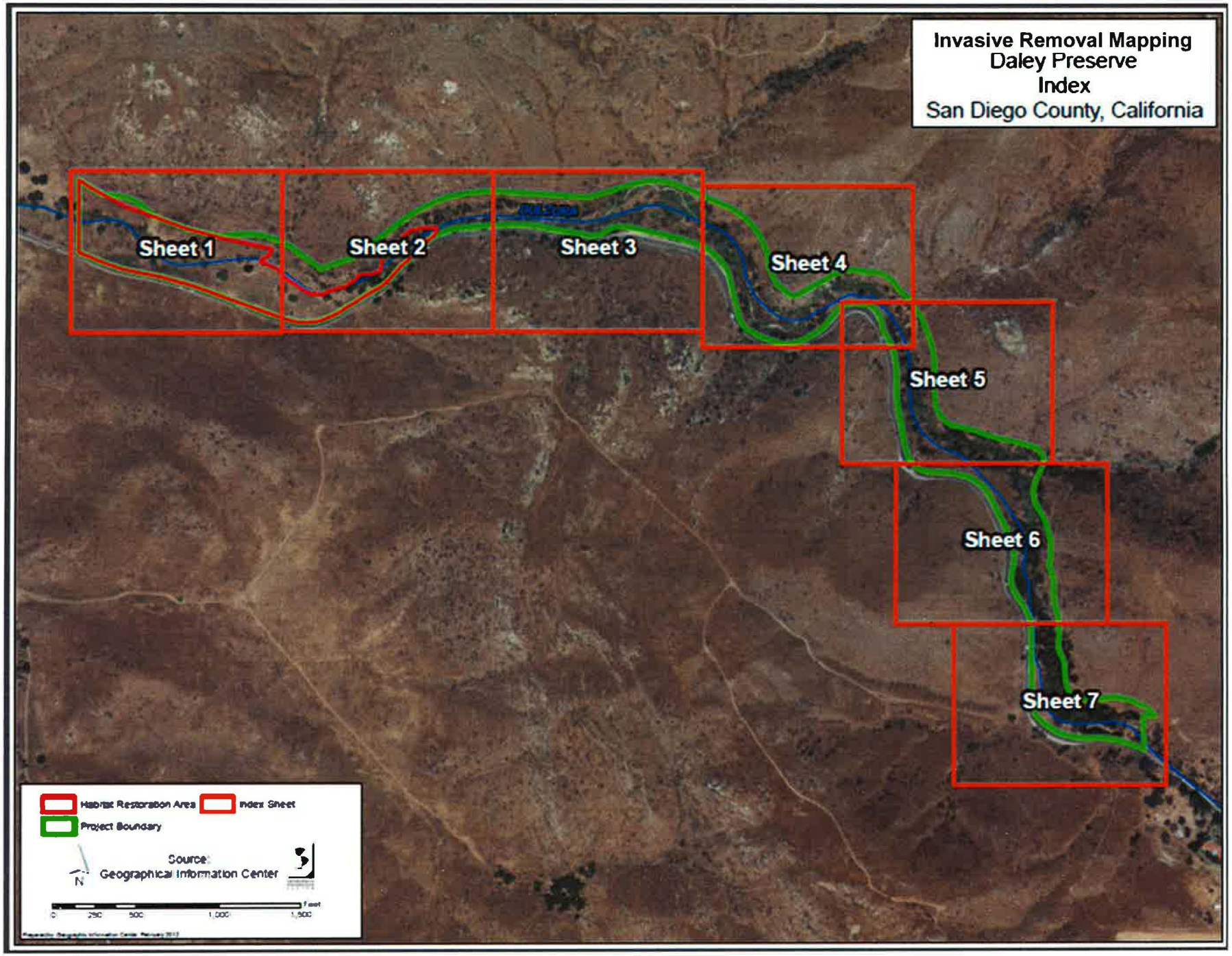
Project Maps



Invasive Plant Species map compiled by Technology Associates in the Resource Management Plan for the Lawrence and Barbara Daley Preserve , San Diego County (2011)

Project Maps




Invasive Removal Mapping
Daley Preserve
Index
San Diego County, California
Sheet 1
Sheet 2
Sheet 3
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Sheet 5
Sheet 6
Sheet 7
Habitat Restoration Area
Index Sheet
Project Boundary
Source:
Geographical Information Center
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1,000
1,500
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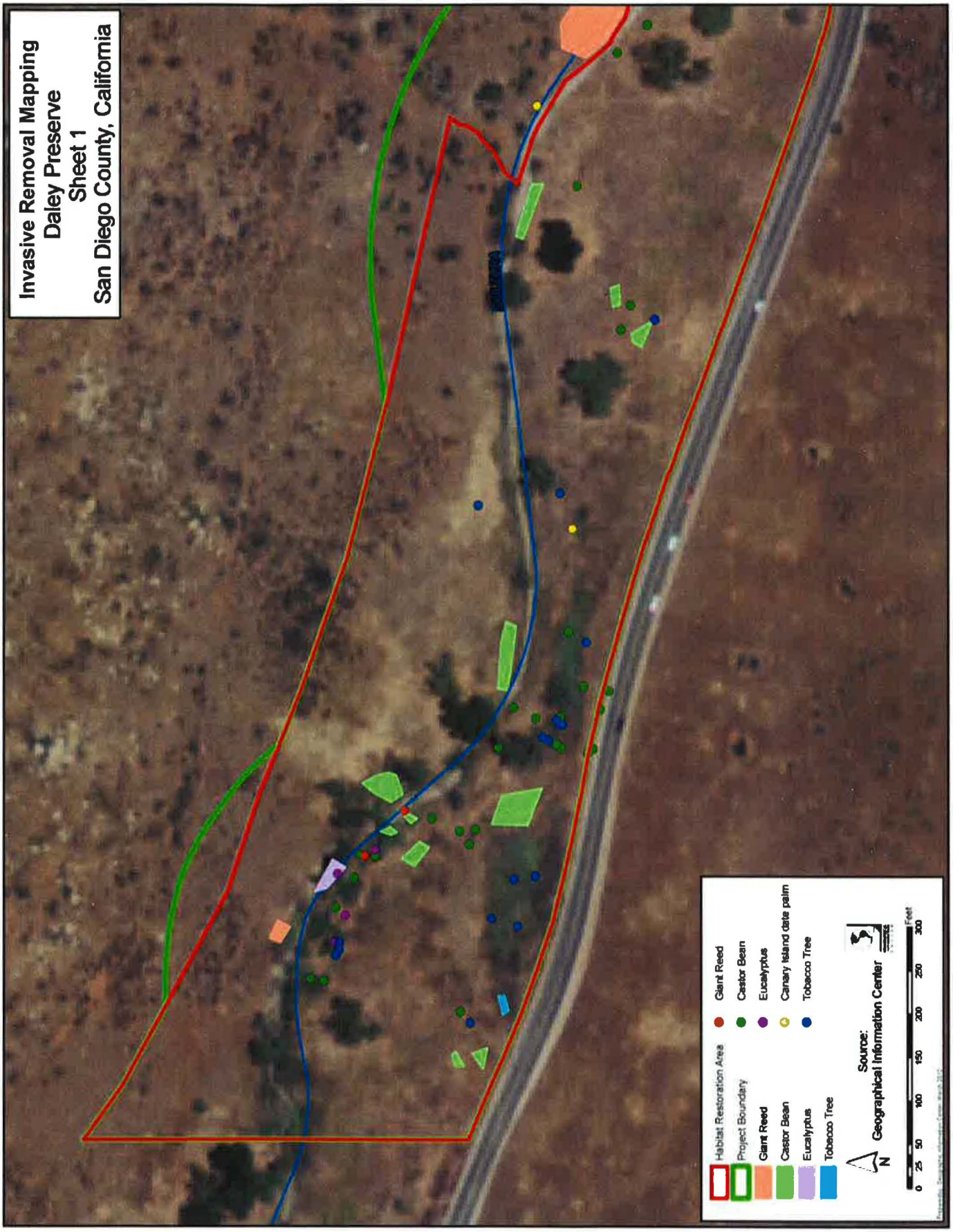
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Castor Bean
Eucalyptus
Tobacco Tree
Giant Reed
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Eucalyptus
Canary Island date palm
Tobacco Tree
Source:
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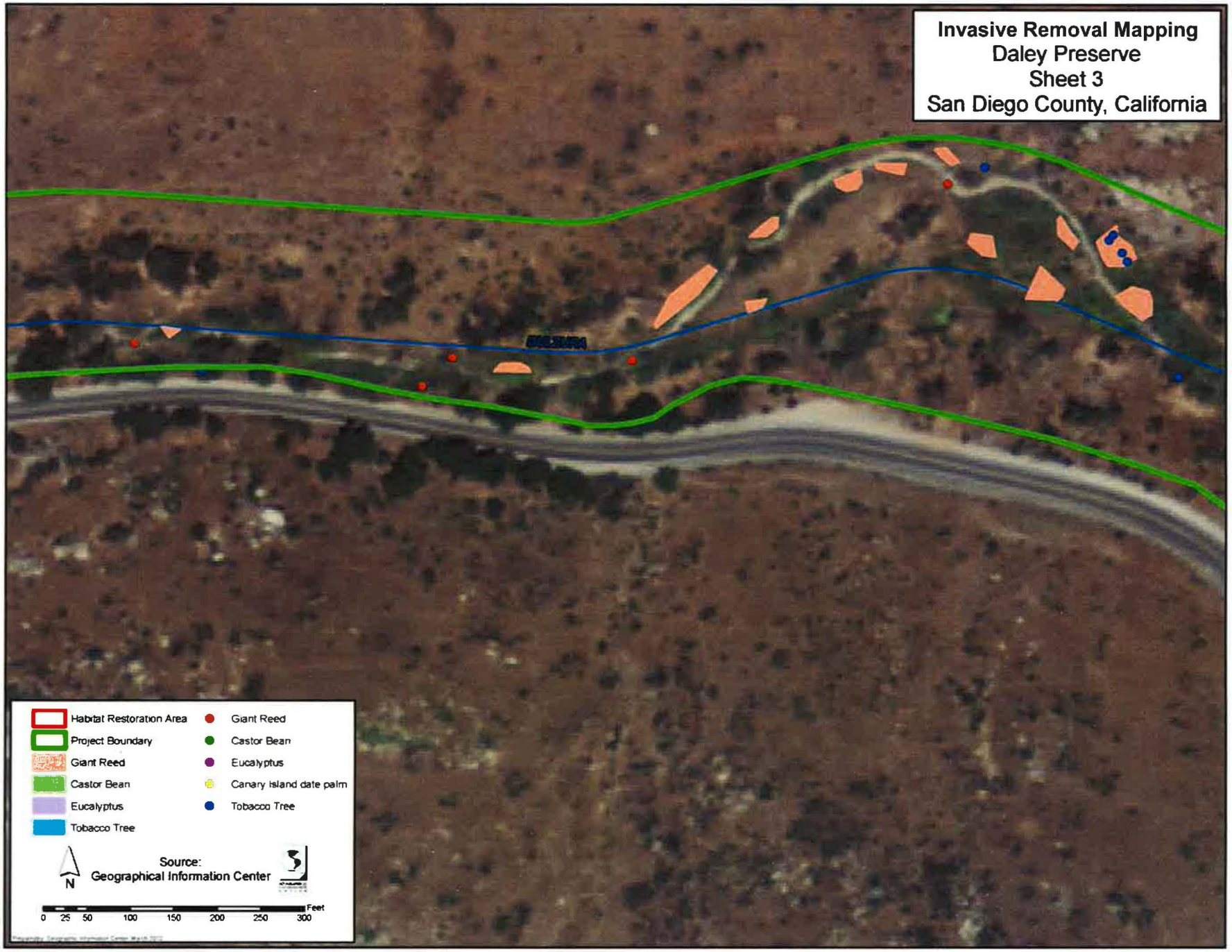
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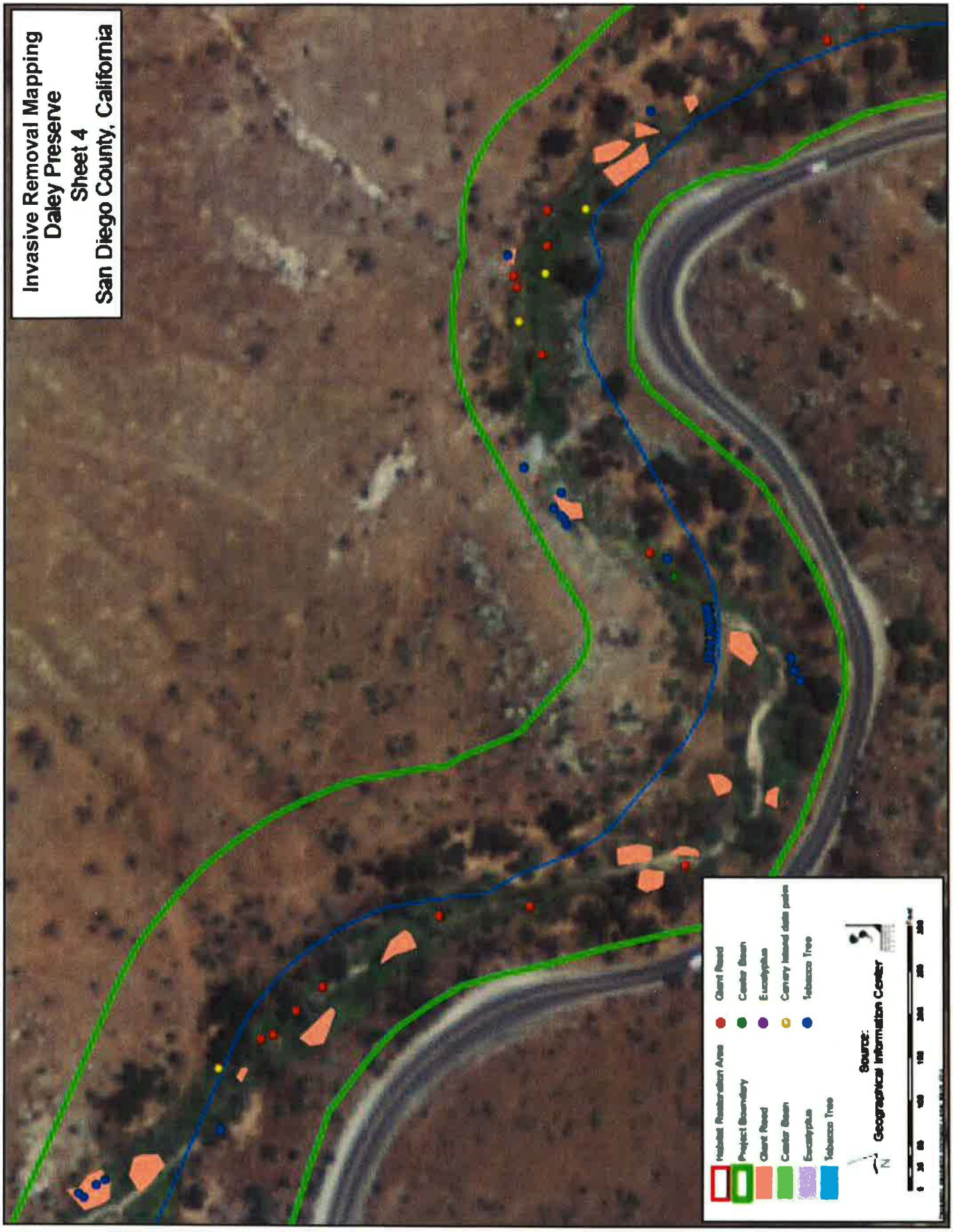
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Canary Island date palm
Tobacco Tree
Source:
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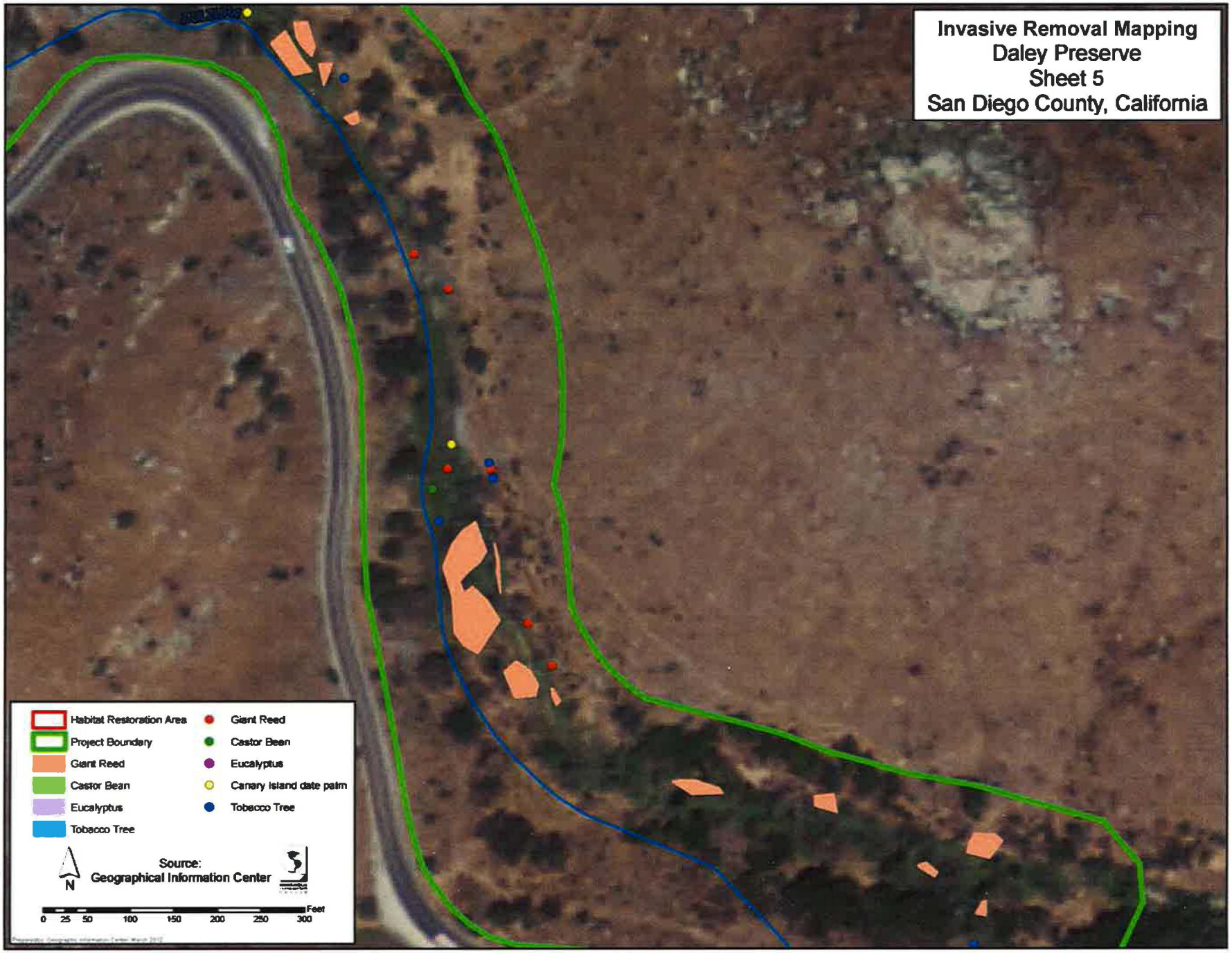
Invasive Removal Mapping
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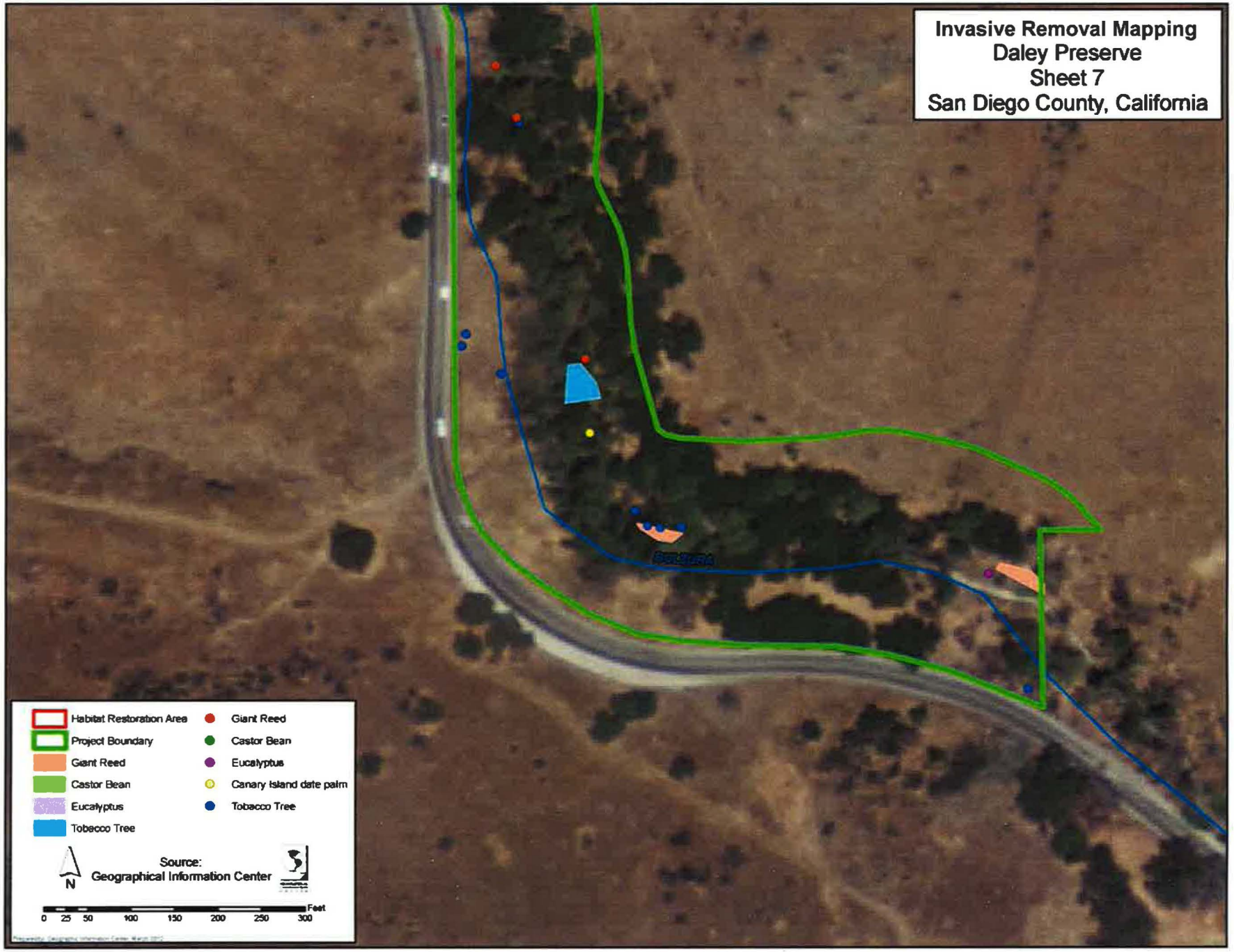
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Feet

References

County of San Diego, 2011. Draft Resource Management Plan for Lawrence and Barbara Daley Preserve, San Diego County. June, 2011. Department of Parks and Recreation, San Diego, CA.

River Partners, 2011. Riparian Restoration Plan for the Lawrence and Barbara Daley Preserve Riparian Restoration Project. Chico, CA.

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