

Public Utilities Department

Hodges Reservoir-Bernardo Bay Cactus Wren Habitat Restoration Grant Project

San Diego Management & Monitoring Program

December 12th, 2018

Overview

- **SANDAG Transnet Environmental Mitigation Grant Program**
 - Restores habitat for this CA Species of Special Concern
 - 20 acre restoration of cactus burnt in 2007 Witch Creek Fire
 - Eighth cycle of funding
 - \$ 50K award
 - 1 year grant



Bernardo Bay Cactus Wren Habitat Restoration Project

- Collaborative Effort
 - City of San Diego Public Utilities Department
 - Sandag
 - San Dieguito River Park JPA
 - San Dieguito River Valley Conservancy
 - San Diego Zoo Global ICR



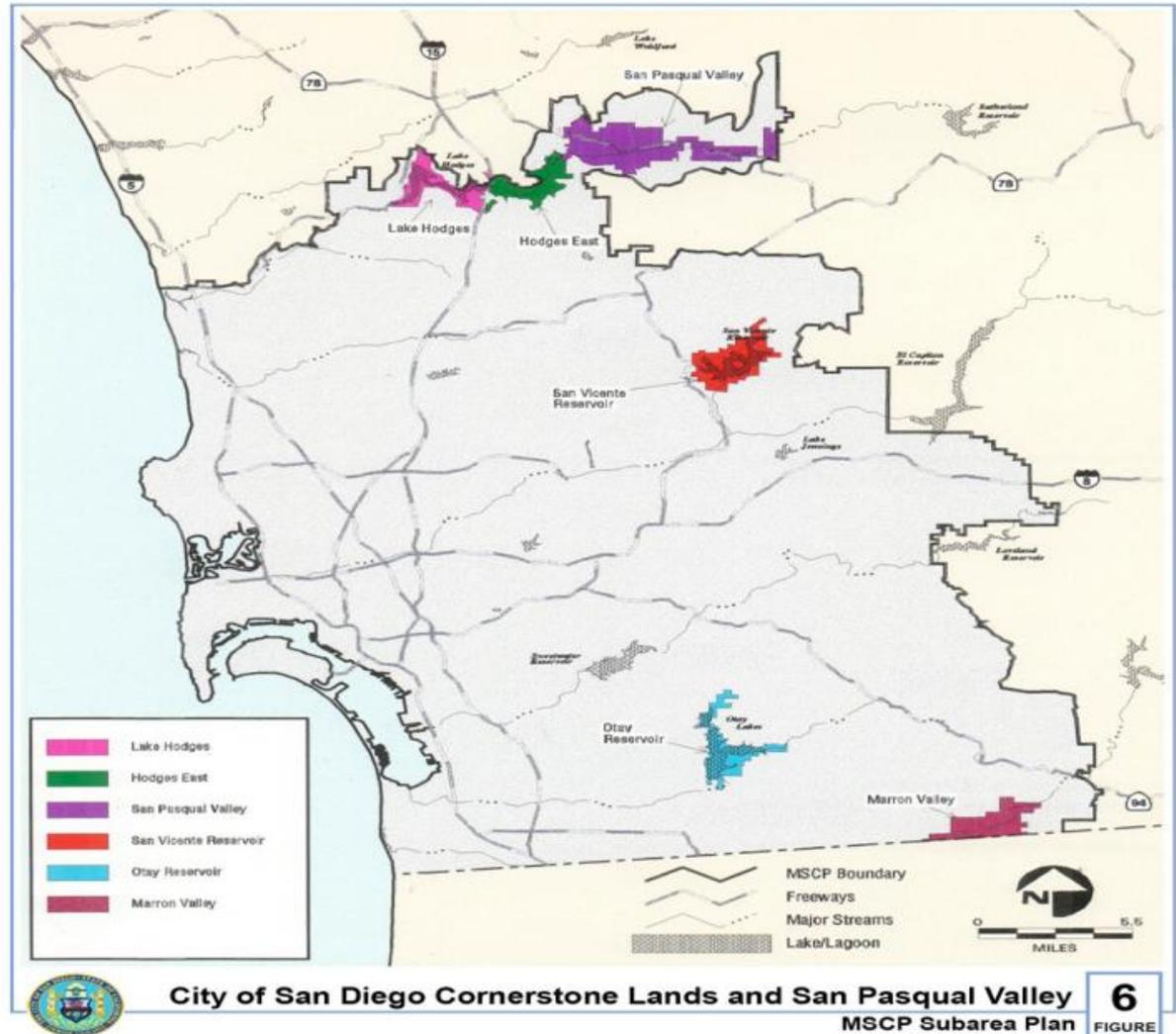
Why Restore Bernardo Bay Cactus Wren Habitat?

- Re-establish habitat and connectivity to eastern core habitats areas.
- Cactus wren is one of three target species in CA's NCCP
- Close off unauthorized trails
- Stabilize soil to minimize erosion and filter runoff into source water reservoir



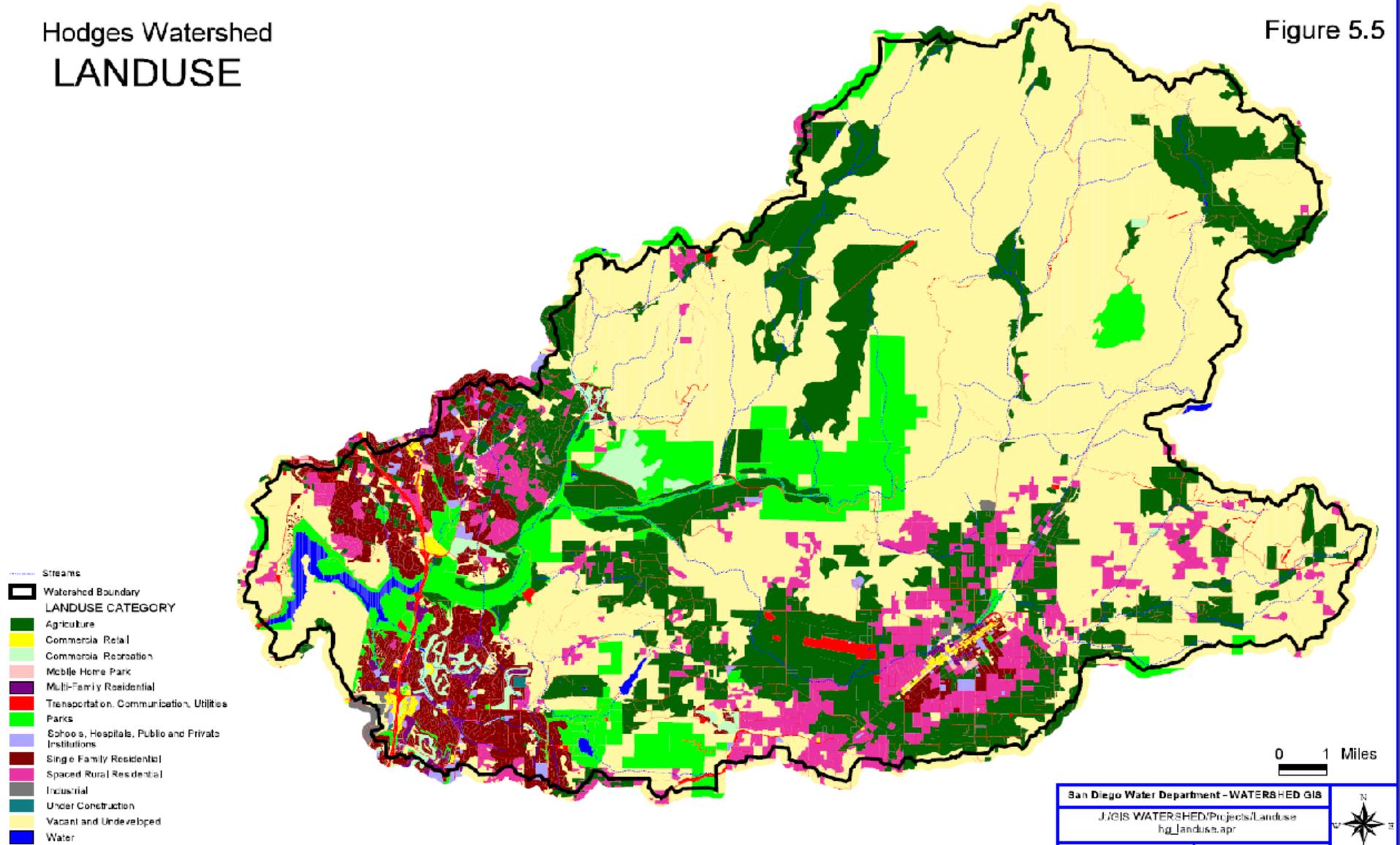
City of San Diego MSCP Subarea Plan

- Cornerstone lands and San Pasqual Valley
- Over 10,400 acres of these lands are core high value biological resource areas
- These water lands are considered the essential building blocks for creating a viable habitat preserve system



Hodges Watershed LANDUSE

Figure 5.5



- Streams
- Watershed Boundary
- LANDUSE CATEGORY**
- Agriculture
- Commercial Retail
- Commercial Recreation
- Mobile Home Park
- Multi-Family Residential
- Transportation, Communication, Utilities
- Parks
- Schools, Hospitals, Public and Private Institutions
- Single Family Residential
- Spaced Rural Residential
- Industrial
- Under Construction
- Vacant and Undeveloped
- Water

0 1 Miles

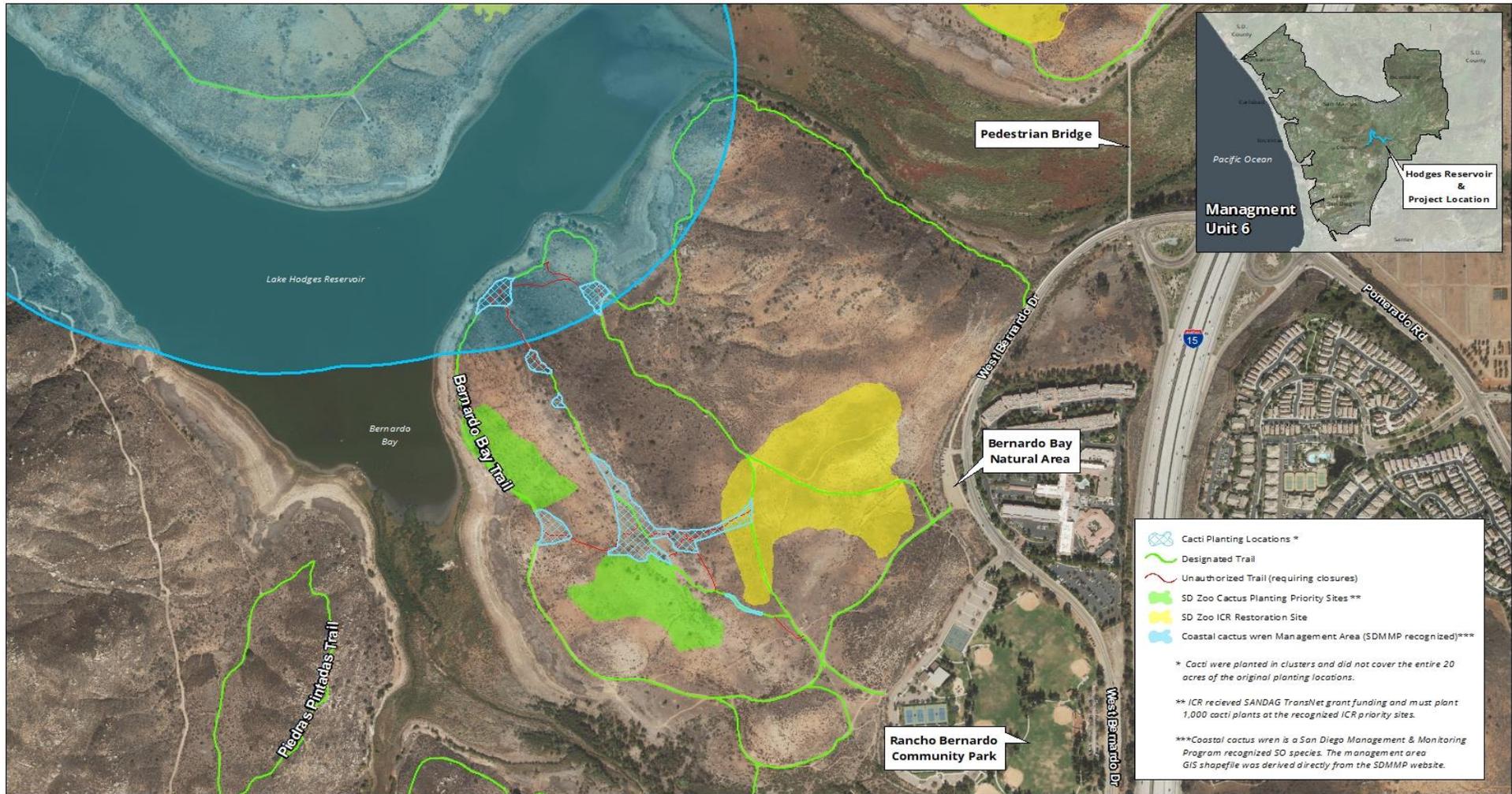
San Diego Water Department - WATERSHED GIS	
J:\GIS\WATER\Projects\Landuse\hg_Landuse.apr	
January 31, 2007	Prepared by Jason Kozlowski



San Diego Water Department - WATERSHED GIS. This map is a computer-generated graphic and does not constitute a contract. The user assumes all responsibility for the use of this information. The user agrees to hold the San Diego Water Department harmless from any and all claims, damages, and expenses, including reasonable attorneys' fees, arising from the use of this information. The user further agrees to indemnify and hold the San Diego Water Department harmless from any and all claims, damages, and expenses, including reasonable attorneys' fees, arising from the use of this information. The user further agrees to hold the San Diego Water Department harmless from any and all claims, damages, and expenses, including reasonable attorneys' fees, arising from the use of this information.



Project Map



SANDAG EMP Land Management Grant Bernardo Bay Unauthorized Trail Closures & Cactus Wren Planting

Soil and Topographic Conditions

- Hard clay and rocky substrate on steep slopes
- Potting soil with perlite softened root structure



Cactus Planting Comparisons

- Moisture from one rain event and daily fog moisture

October 20, 2017



November 19, 2017



Supplemental Planting of Cuttings from Herbivory and Vandalism

- Wildlife consume the cactus pads and spread the cuttings closer to original planting site.
- Pads get stuck in animal fur and transport the pad farther away.
- Consistent vandalism in same locations on unofficial trails.
- Weeds were suppressed due to short rain season.



Supplemental Watering of Cactus During Dry Season

- Contractors and staff watered during dry season.
- Cactus pads were thin and desiccated



Unauthorized Trail Closures

San Dieguito River Park Sign



City PUD Sign & Fencing



General Watershed & Resources Protection Sign



Cactus Pads Healing and Surviving from Herbivory, Vandalism, and Dryness

October 20, 2017



December 4, 2018



Awarded 9th Cycle Sandag Transnet San Pasqual Valley Cactus Wren Habitat Restoration Project-100 Acres for 5 Years

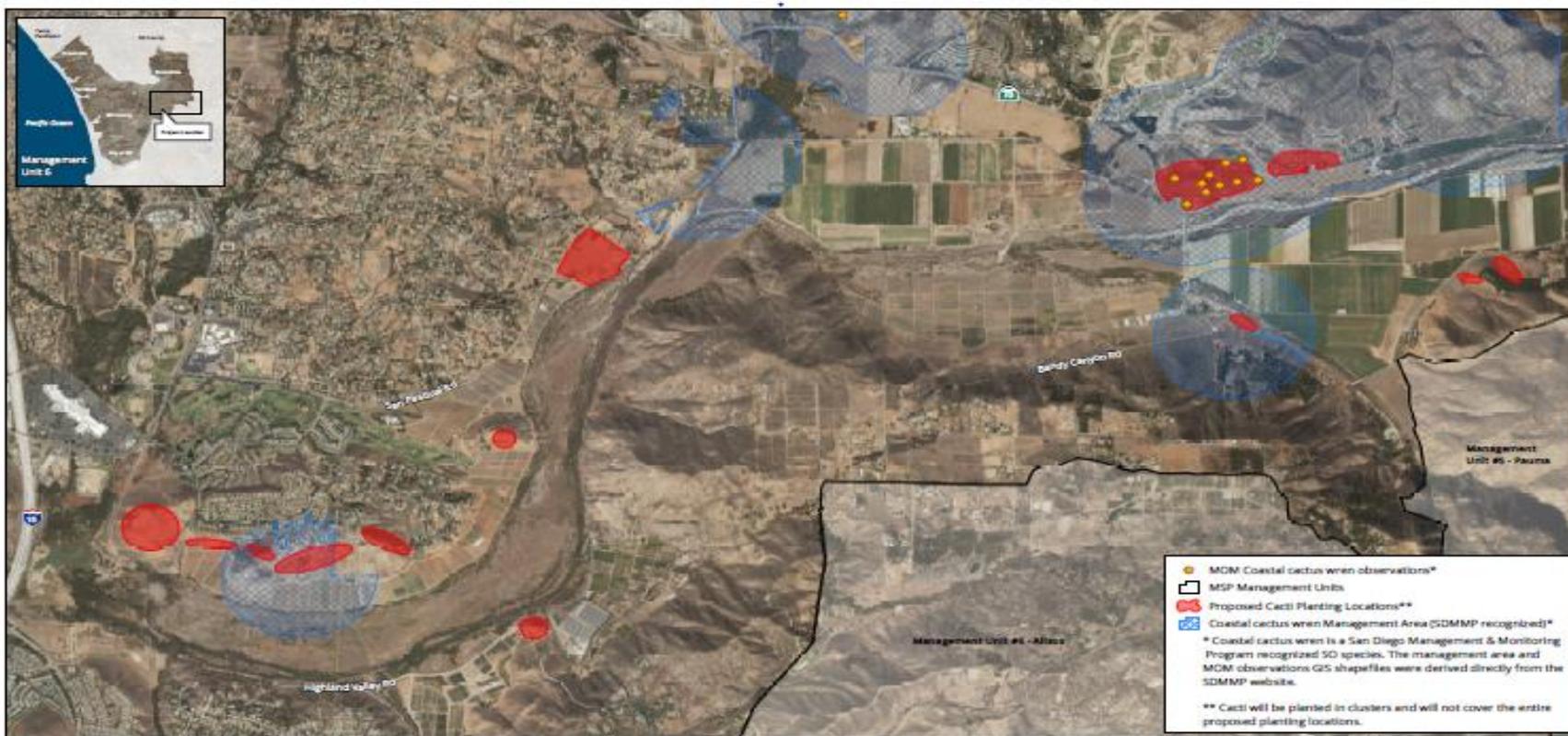


Exhibit A

Coastal Cactus Wren Habitat Restoration in San Pasqual Valley