

Welcome!

Habitat Management Plan (HMP) Annual Meeting

March 13, 2019

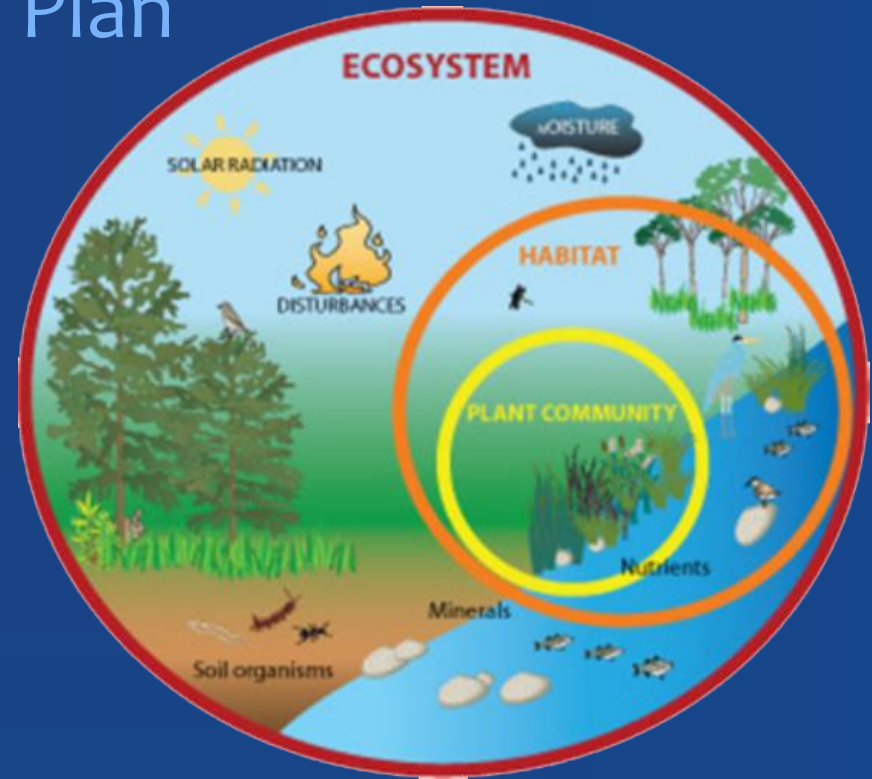
Agenda

- Welcome and introductions
- Overview of the HMP
- 2018 Summary
- Preserve manager presentations
- Q&A

What is the HMP?

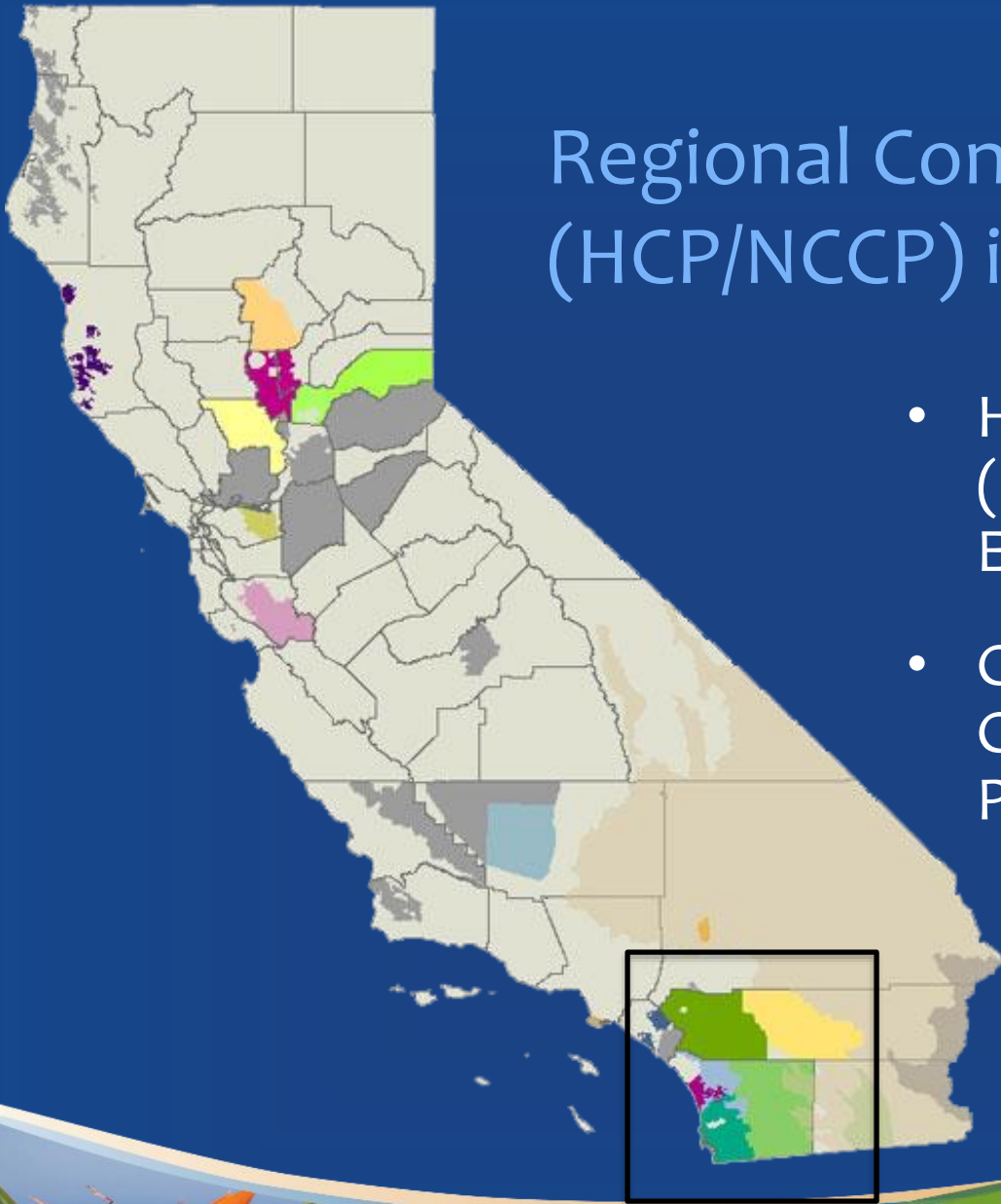
Regional Conservation Plan

- Ecosystem based landscape-scale
- Protects multiple species and habitats across political boundaries



Regional Conservation Plans (HCP/NCCP) in California

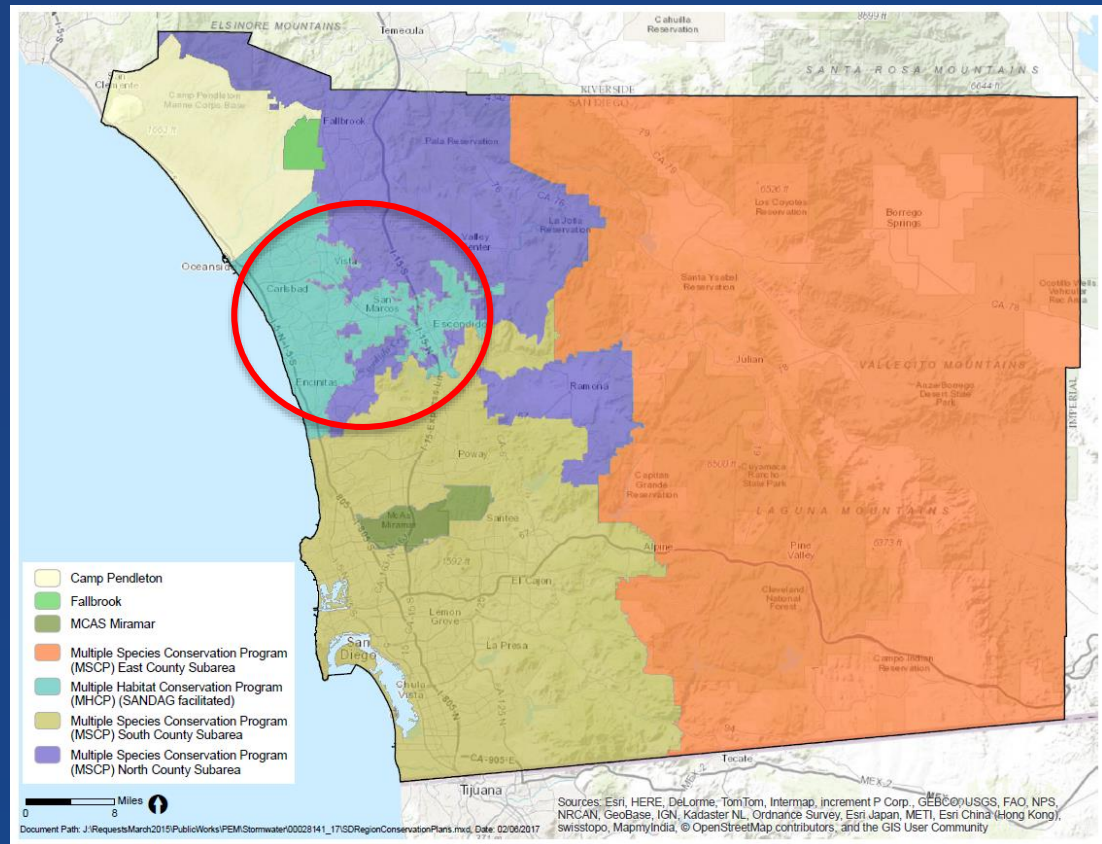
- Habitat Conservation Plan (HCP) under the federal Endangered Species Act
- California Natural Communities Conservation Planning Act (NCCP)



HMP Overview

San Diego Conservation Plans

Multiple Habitat Conservation Program (MHCP)



HMP Overview

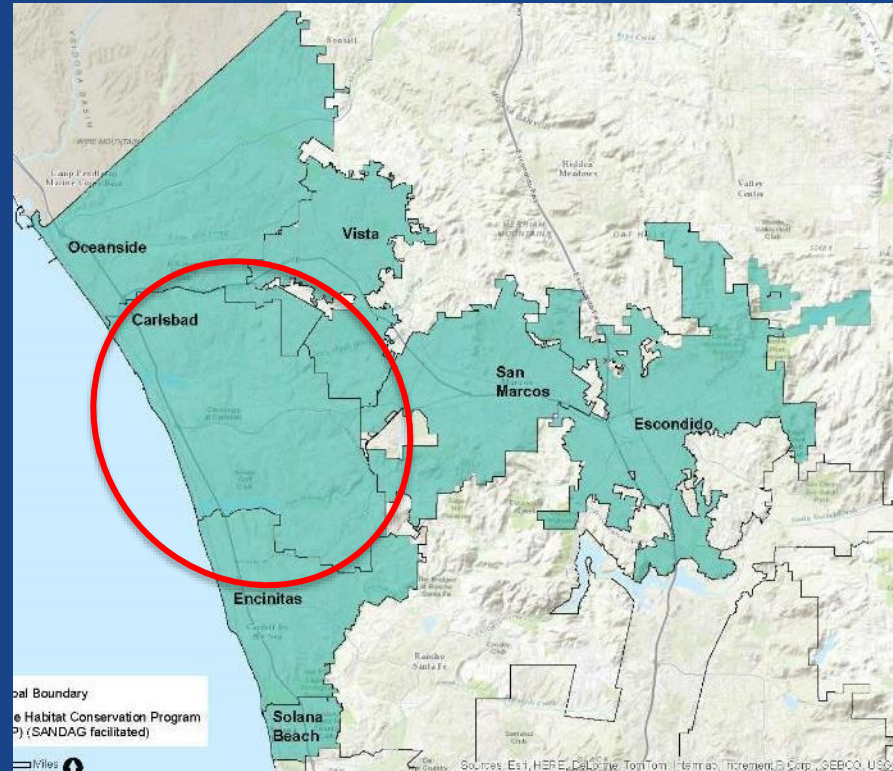
Multiple Habitat Conservation Plan (MHCP)



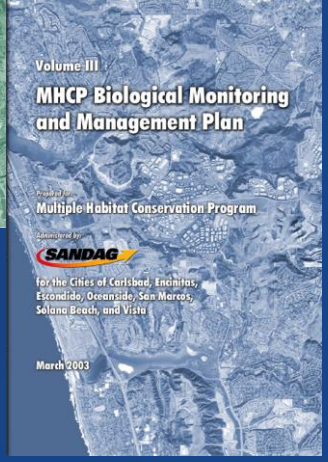
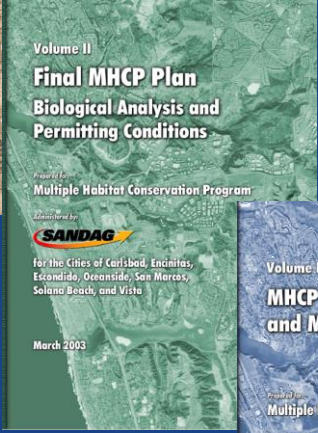
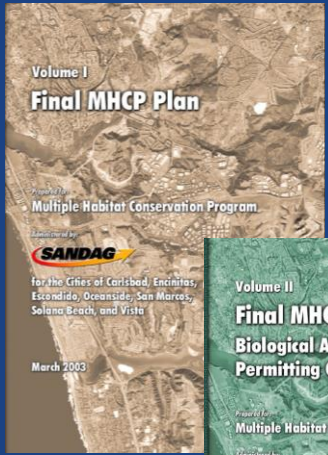
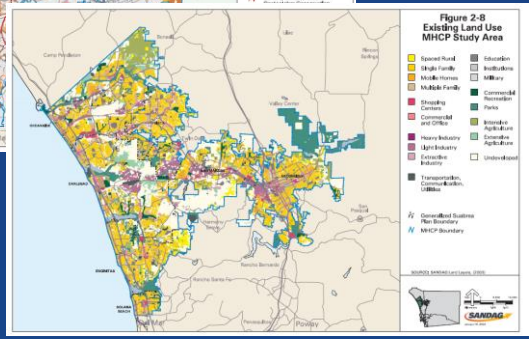
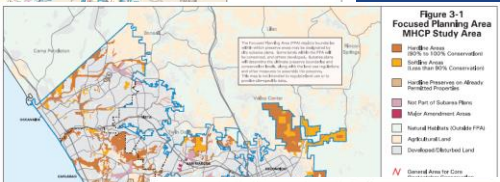
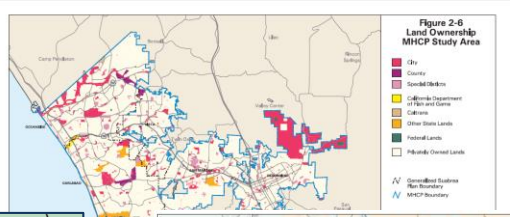
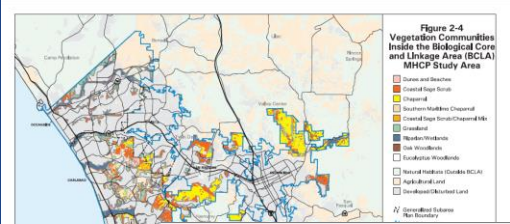
MHCP

The HMP is a subarea
plan under the MHCP
=implementation Plan

Only approved plan in
North County

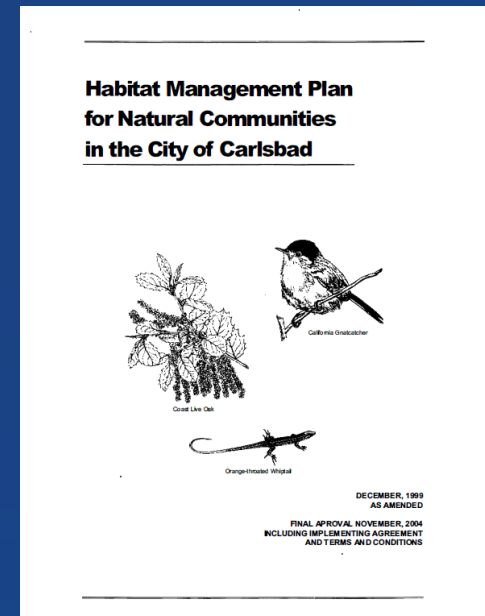


HMP History Planning began in 1990



HMP = city-specific plan under the MHCP

- Stakeholders: Wildlife Agencies, City staff, biological experts, env. groups, building industry, public
- Researched species requirements
- Data collection and mapping to determine current conditions
- Projected city's growth
- Sufficient habitat to conserve species even after build-out?



HMP Goals

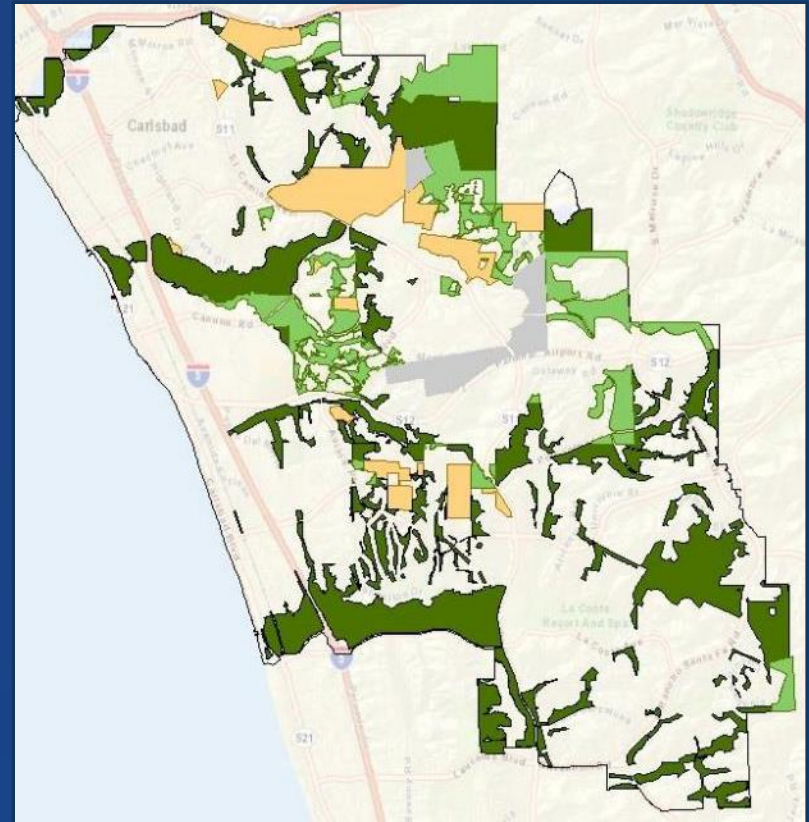
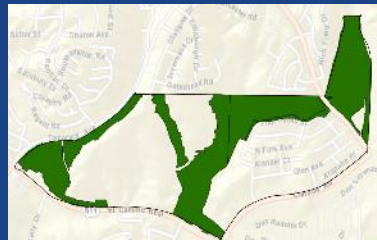
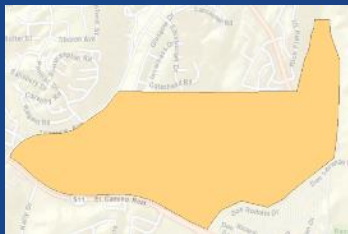
- Conserve full suite of native vegetation communities
- Protect native plants and animals into the future
- Conserve large, interconnected blocks of habitat
- Maintain functional wildlife movement corridors and habitat linkages within and beyond the city
- Provide a framework for preserve system management and monitoring
- Streamline permitting process



HMP Preserve Baseline (2004)

Target preserve areas

1.  Existing Preserves
2.  Proposed Hardline
3.  Standards Areas

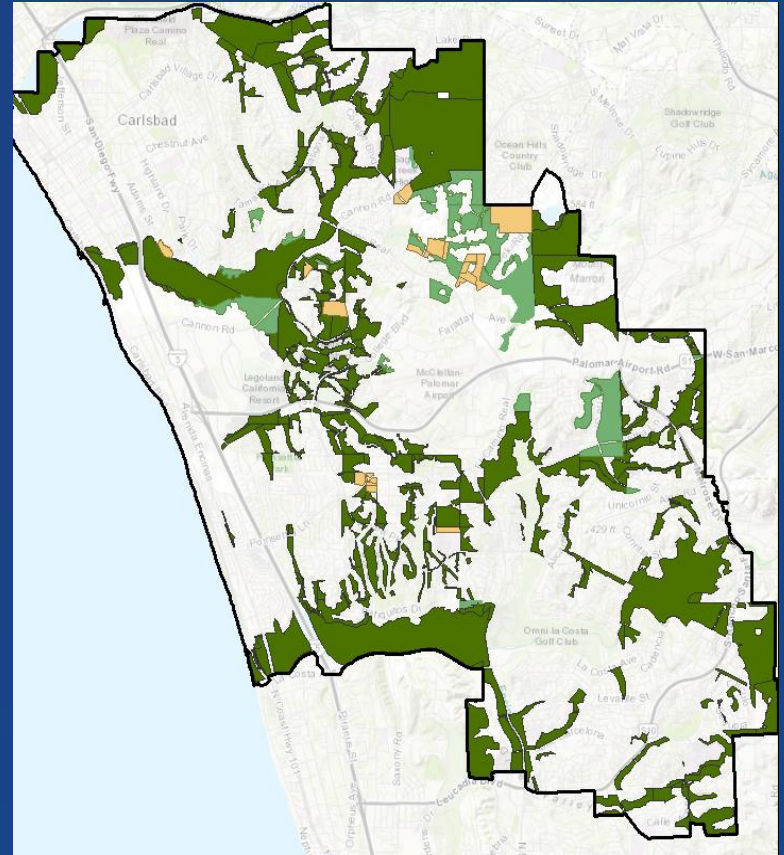


HMP Overview

HMP Preserve System





- Permanently preserved, 6,187 acres (96% of target)

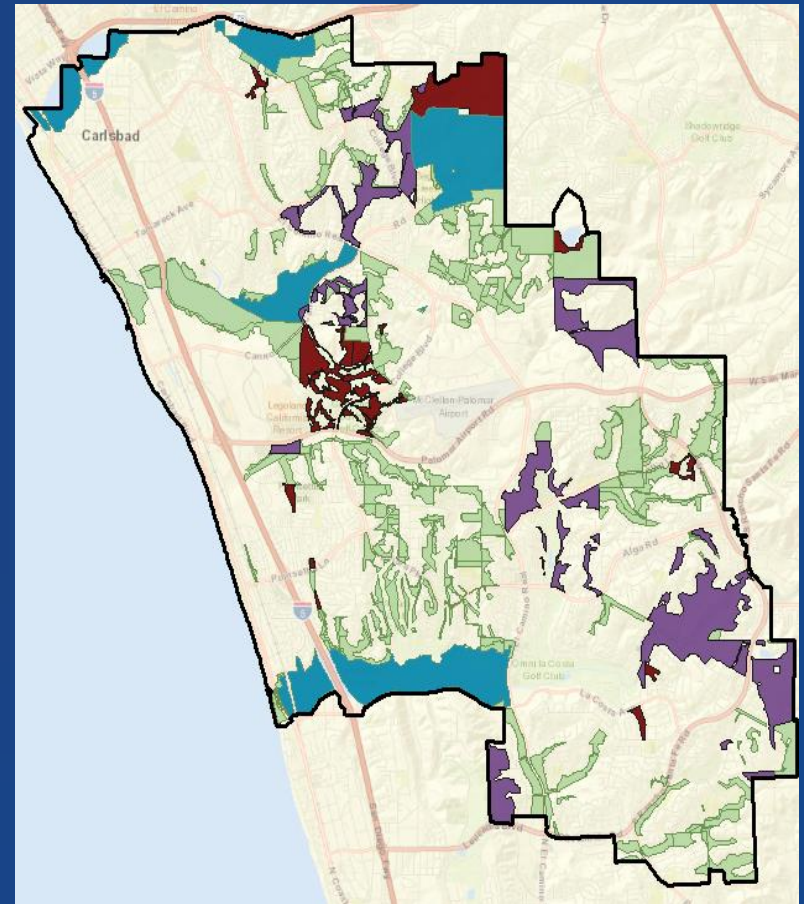
Current Condition



HMP Overview

Landownership

-  CDFW Ecological Reserves 25%
-  Center for Natural Lands Management (CNLM) 24%
-  City of Carlsbad 10%
-  Other
 - Private HOAs 25%
 - San Diego Habitat Conservancy
 - Urban Corps Habitat Services
 - Future preserves
 - Other



2018 HMP Annual Report

(Nov 1, 2017-Oct 31, 2018)



Plan Administration

- Regulatory tracking and preserve assembly
- Agency coordination
- Environmental compliance

Management and Monitoring

- Coordination with preserve managers
- Species and habitat monitoring/management
- Regional monitoring/mgmt. coordination

Financing

- HMP mitigation fees (*in-lieu* fee program)
- Long-term management endowments



New Preserves in 2018

- Poinsettia 61
- Aviara Park
- Veteran's Park (addition)



Conservation

It's a team effort

- Preserve managers (boots on the ground)
- Parks & Rec – trails, access control, city-owned preserves, volunteer program, public outreach
- Ranger program (PD) - enforcement, public outreach
- Code Enforcement – enforcement
- Planning Division – HMP compliance, preserve assembly
- Fire Department – fuel management, fire prevention
- Police Department, Homeless Outreach Team



Conservation

It's a team effort

Non-Governmental Organizations (NGOs)

- Preserve Calavera
- Batiquitos Lagoon Foundation
- Buena Vista Audubon Society
- Buena Vista Lagoon Foundation
- Agua Hedionda Lagoon Foundation



Threats to the Preserve System

Invasive Species

- A variety of plant & animal species
- Outcompete native species
- Loss of native biodiversity
- Thrive in difficult or disturbed conditions



Invasive Species

Polyphagous and Kuroshio Shot Hole Borer

- Bores holes into trees bringing fungus with it
- Creates galleries under the bark where it cultivates the fungus
- Fungus kills the tree by stopping flow of water and nutrients
- Attacks >300 species of trees, including many native riparian species
- <https://ucanr.edu/sites/pshb/>



Invasive Species

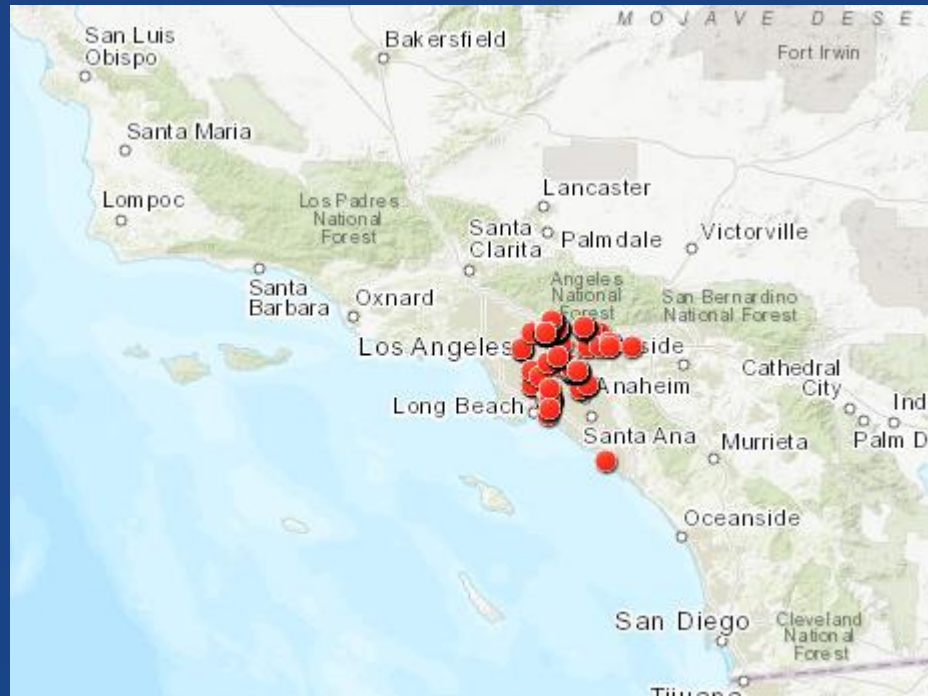
Shot Hole Borer-Fusarium Dieback Disease



Invasive Species

Shot Hole Borer Locations

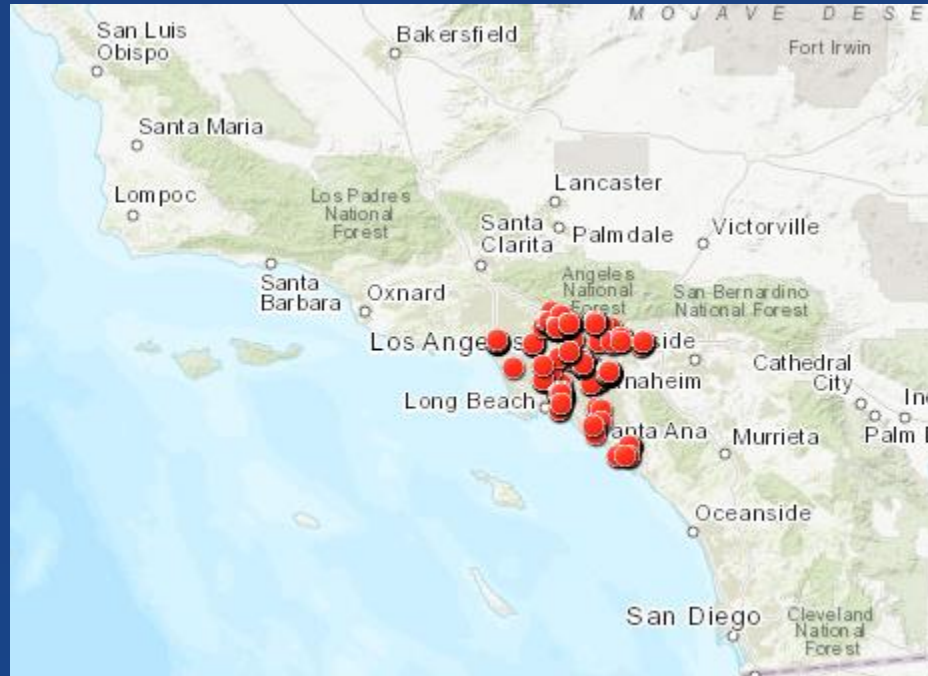
2012



Invasive Species

Shot Hole Borer Locations

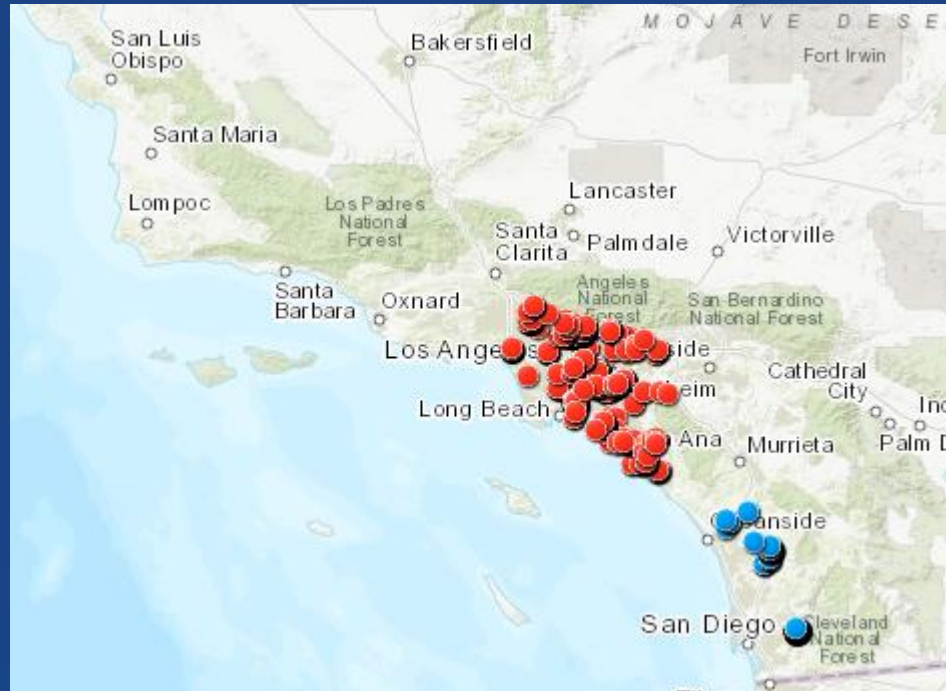
2013



Invasive Species

Shot Hole Borer Locations

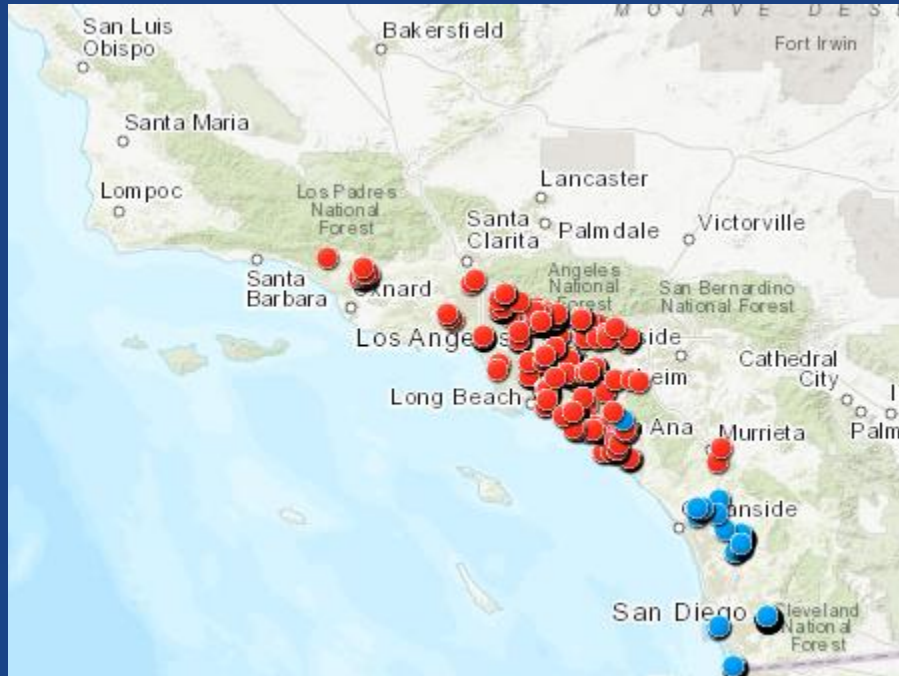
2014



Invasive Species

Shot Hole Borer Locations

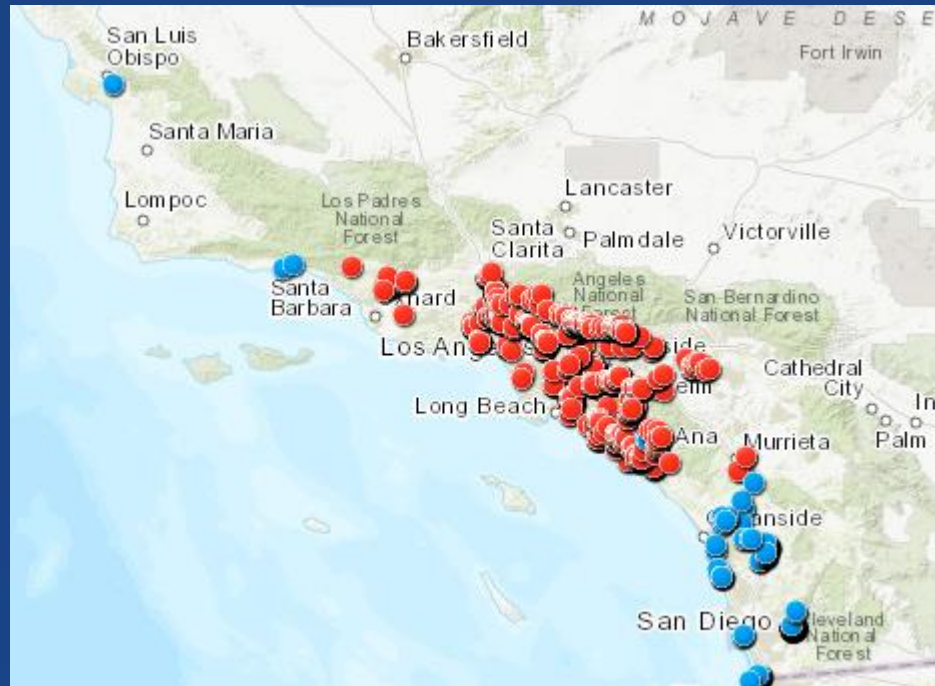
2015



Invasive Species

Shot Hole Borer Locations

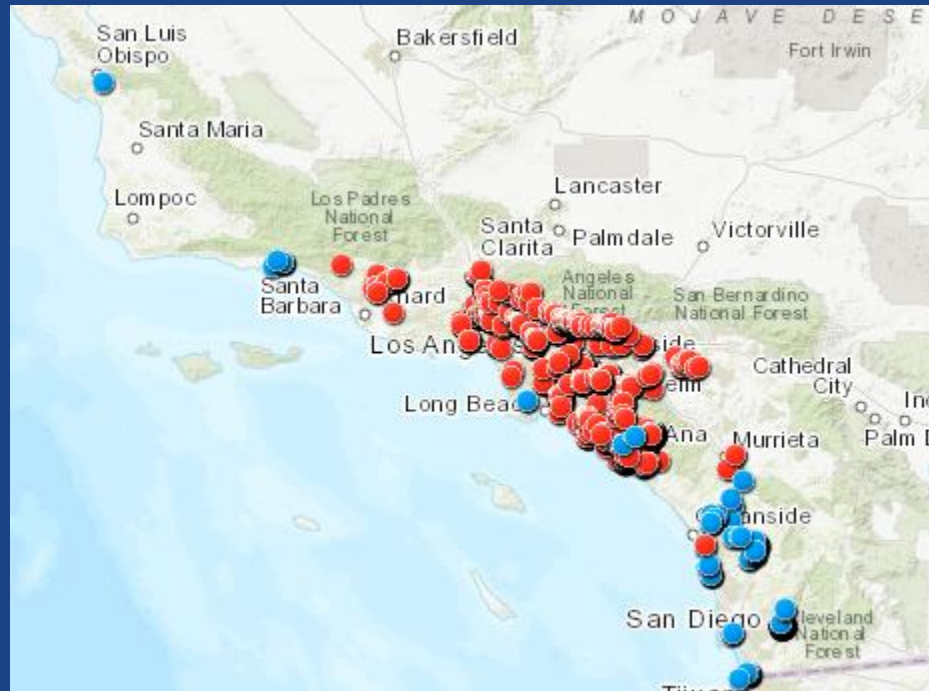
2016



Invasive Species

Shot Hole Borer Locations

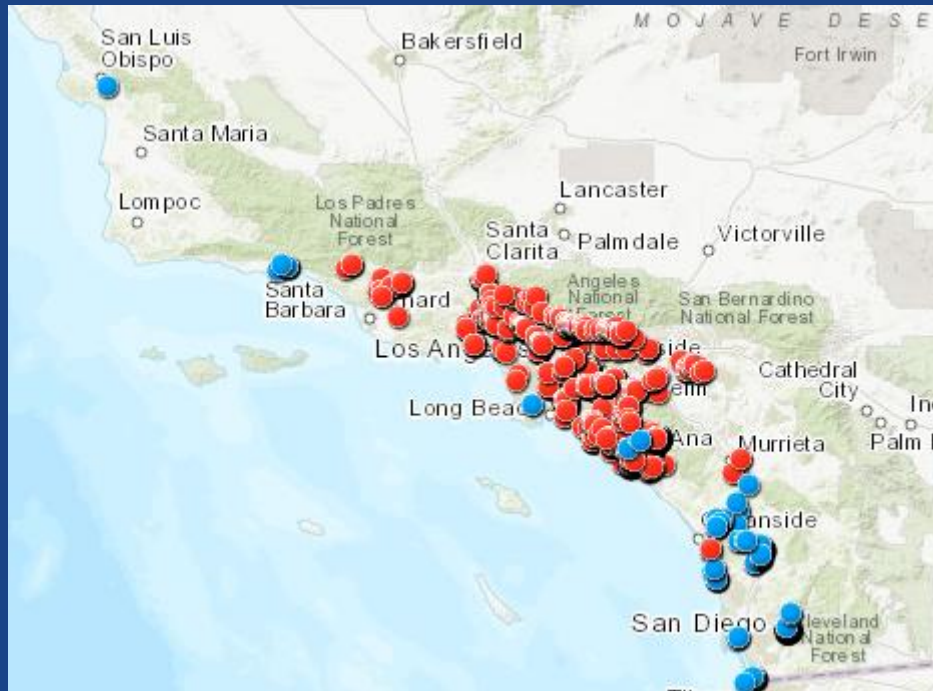
2017



Invasive Species

Shot Hole Borer Locations

2018



Invasive Species

Ward's Weed



Invasive Species

Ward's Weed

Initially discovered
in Carlsbad in 2007

Thought to be only
location in North
America

Now we know it
occurs in three
other locations

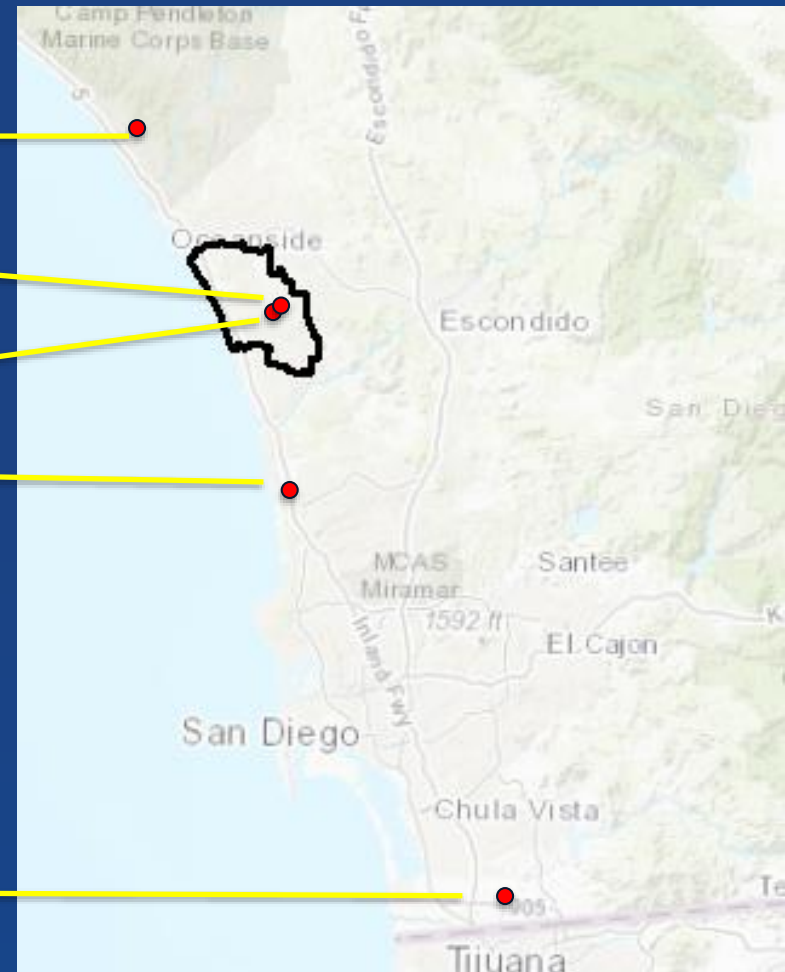
Camp Pendleton

Bressi Ranch

Rancho La Costa

Del Mar

Otay Mesa



Invasive Species

Ward's Weed

2017 mapping In Carlsbad

Spreads quickly – can produce 30,000 seeds per square meter per year

2 seed banks – in the soil, and dried on the plant

Regional high priority for eradication

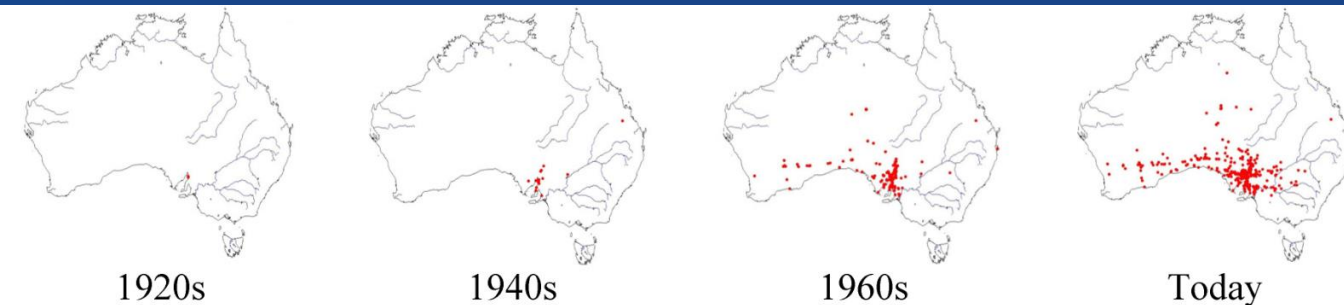


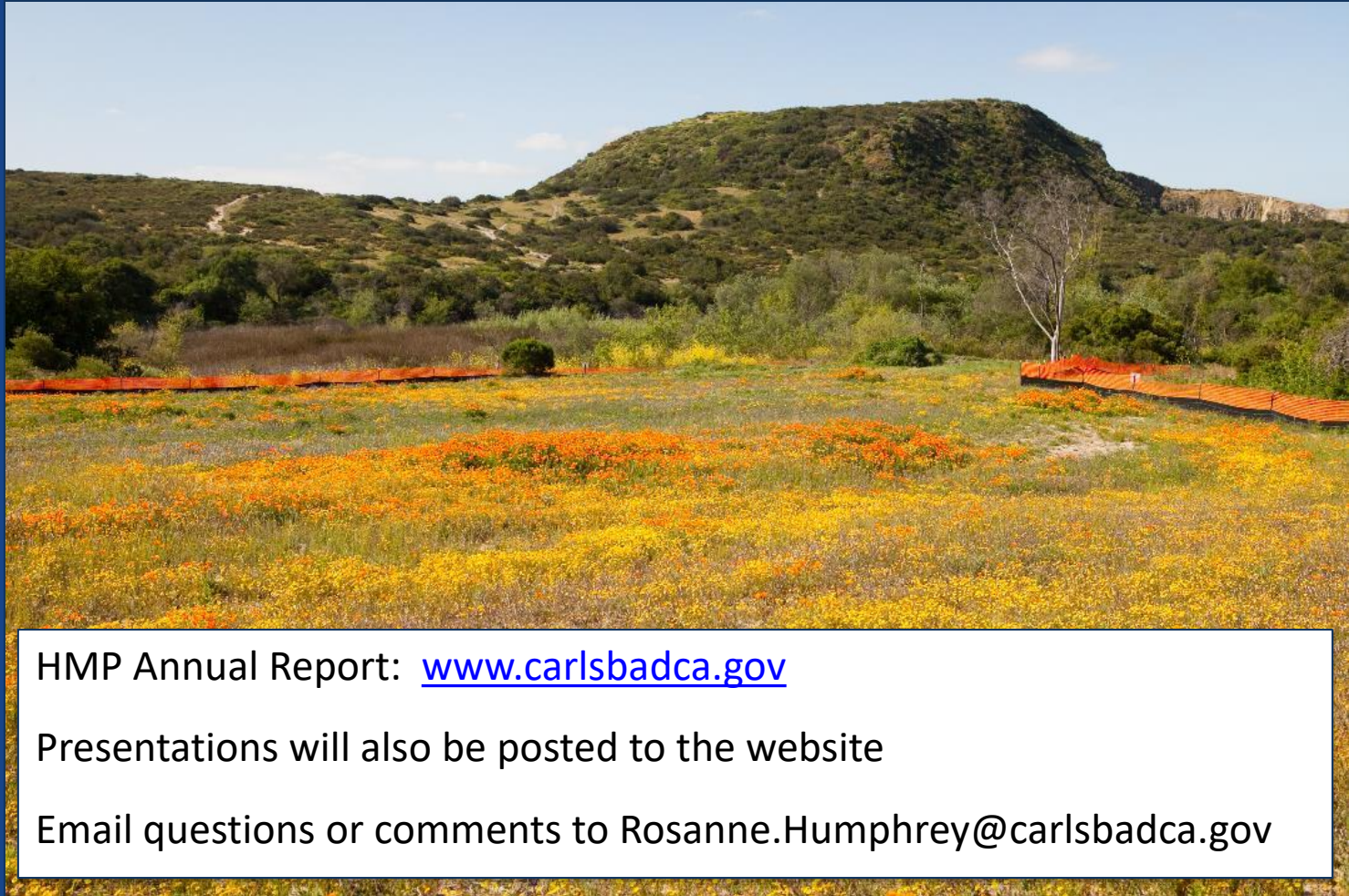
Figure 1. The spread of *C. annua* over time as shown by herbarium records

Regional Coordination

- Rare Plant monitoring
- Regional wildlife movement studies
- Monitoring/management strategic plans-SD County
- Genetic studies – variety of species
- Invasive species research
- Pollinator studies
- Climate change – projections and management
- Post-fire –habitat recovery; effects on wildlife
- Monitoring methods
- Effects of recreation on species/habitats

San Diego Management and Monitoring Program, U.S. Geological Society, San Diego State University, University of California, Climate Science Alliance, U.S. Fish and Wildlife Service

Thank you!



HMP Annual Report: www.carlsbadca.gov

Presentations will also be posted to the website

Email questions or comments to Rosanne.Humphrey@carlsbadca.gov