

Integrated Pest Management (IPM)

# Annual IPM Report for 2023

- IPM Overview
- Program & Training Updates
- 2023 Herbicide Use Trends
- IPM Goals & Case Studies

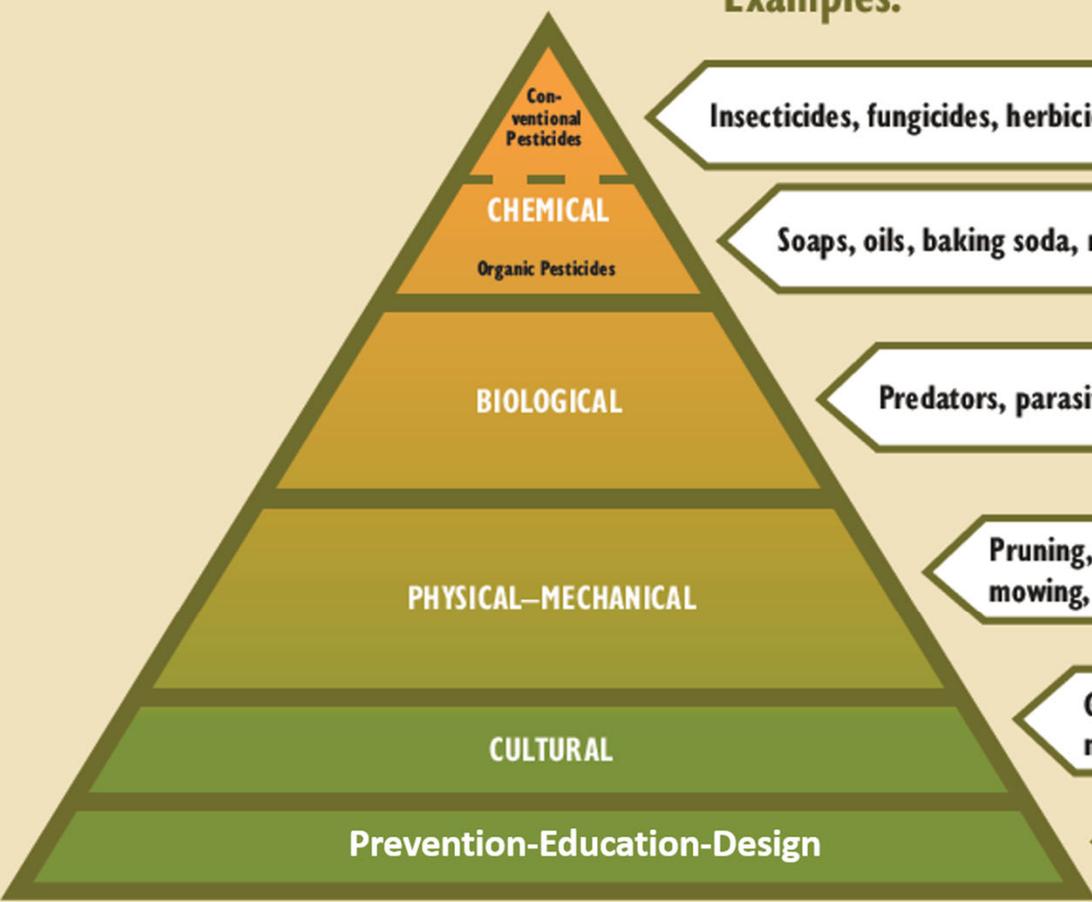
*Presentation to the Natural & Cultural Resources Committee*

*July 31, 2024*

*Pamela Beitz, IPM Specialist*

# The IPM Philosophy & Practice

## IPM TACTICS



### Examples:

- Insecticides, fungicides, herbicides
- Soaps, oils, baking soda, repellents
- Predators, parasites, nematodes
- Pruning, weeding, mulch, mowing, traps, barriers, flaming
- Grazing, mulching, native plants
- Site & plant selection, sanitation, rotations



## Trainings & Guidelines

- Annual Online IPM Training: Staff
- Educational video
  - Soil Pathogen Prevention
- In-Park Nursery BMPs
  - Soil Pathogen Reduction BMPs

## Science Based Technical Support

- Site Visits
- IPM Park Plans
  - Digitizing, memorializing, prioritization
  - GIS Dashboard display



# Mechanical Pest Management

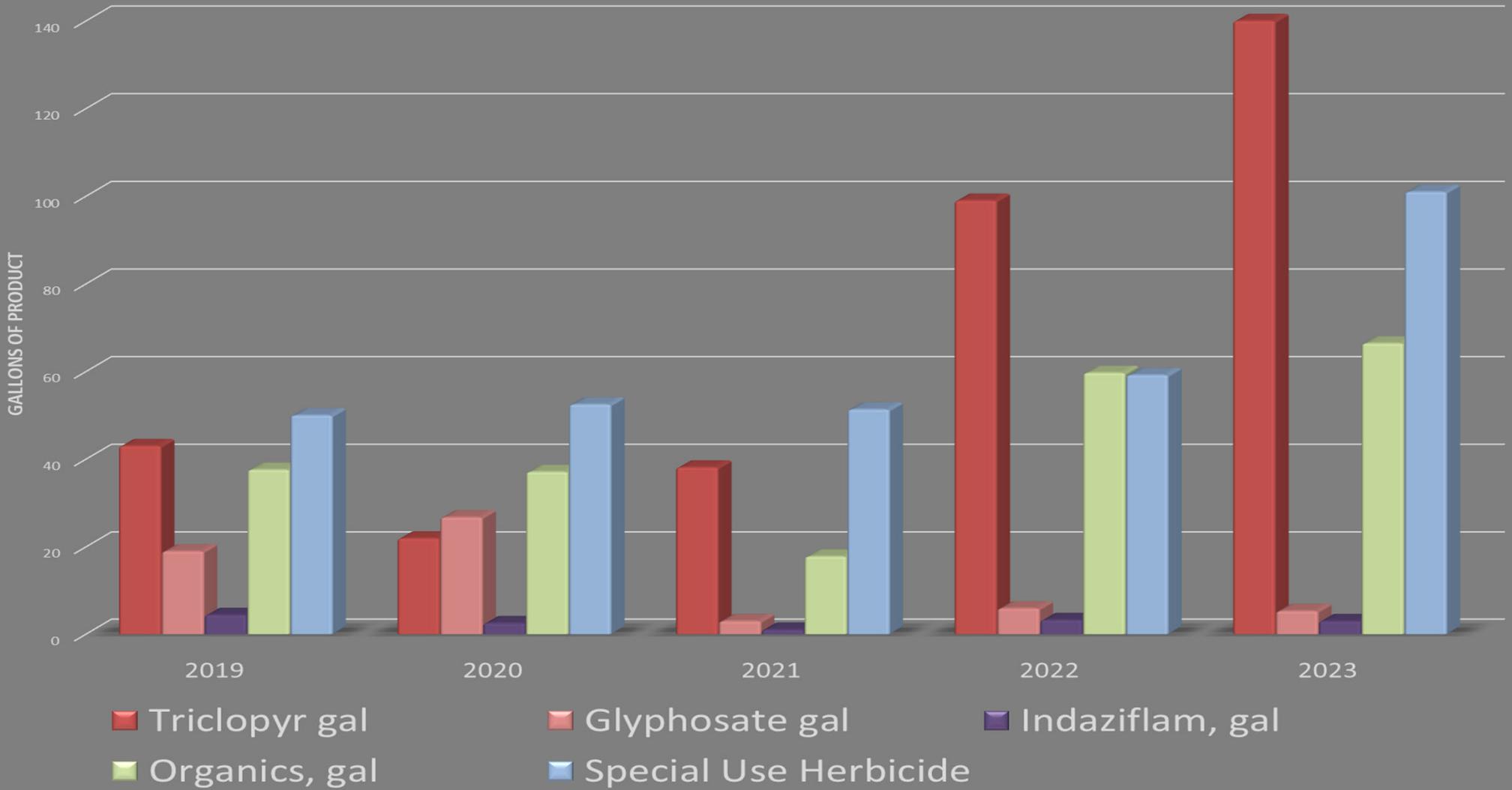
- Pests include yellow jackets, gophers, vegetation
- Practices include trapping, mowing, brushing, line trimming, mulching, tree removal, volunteer work
- Difficult to track & compare these mechanical efforts
- Grazing of 87,075 acres is second vegetation management tool

# Pesticide Use Trends

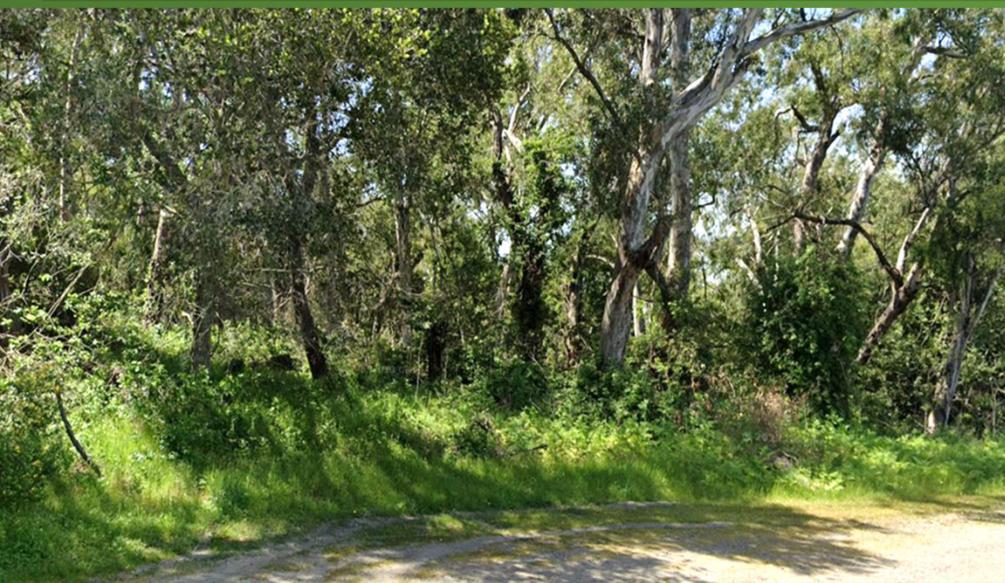
- Chemical use is controlled, regulated, monitored and documented
- Require training and approval before chemical use is permitted
- Maintain database of all chemical use
- Yearly Report provides transparency
- Tracking usage for effectiveness



# Five Year Trend in Herbicide Use



# Triclopyr Use (Garlon Products)



Anthony Chabot – BEFORE

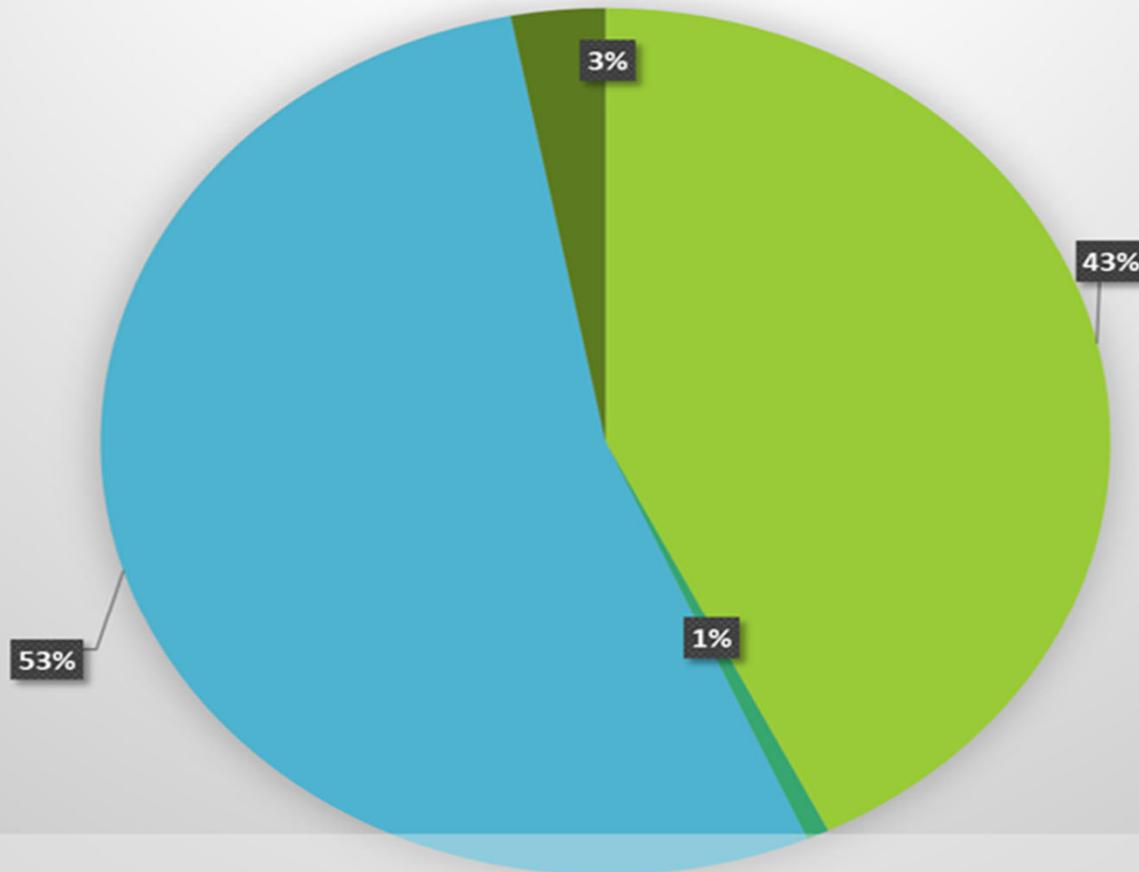


Anthony Chabot - AFTER

- **Broadleaf selective herbicide-no effect on grasses**
- **Approved for use in environments near humans & wildlife**
- **Powerful habitat enhancement tool**
- **Most effective woody treatment product**

## 2023 Triclopyr Products (Garlon, Vastlan, Pathfinder II)

174 gallons of product used in 2023



■ Ecological Health

■ Fire Safety

■ Forest Health

■ Recreation

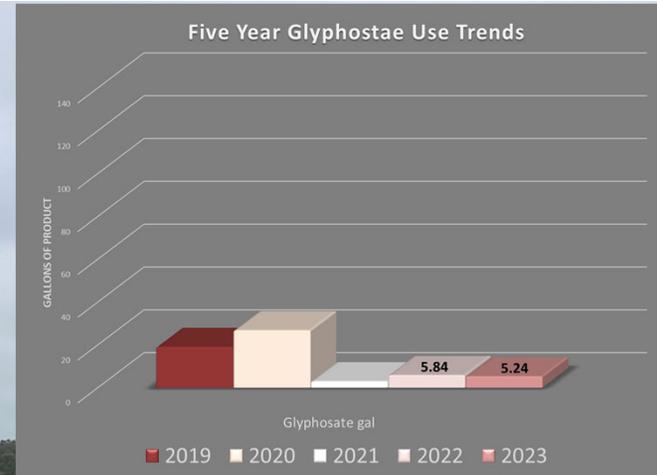
# Glyphosate – Prohibited in Developed Areas

Resolution #2019-07-187

## Developed Areas:

- Picnic Areas
- Campgrounds
- Swim beaches
- Playgrounds
- Lawns
- Trails

# Glyphosate Use



**Areas with No Public Access**  
Landscape Scale Restoration Projects  
Pampas & Harding Grasses  
Perennial pepperweed, broadleaf weeds

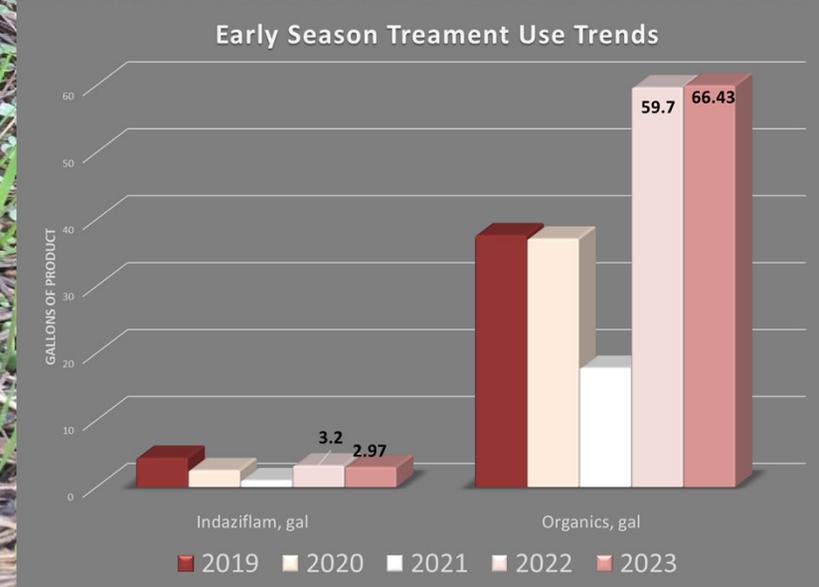
# Early Season Fall Weed Treatment Products

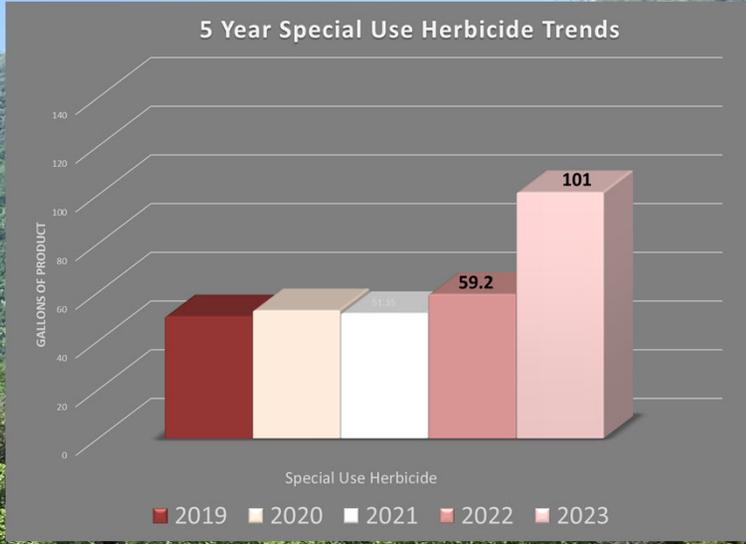
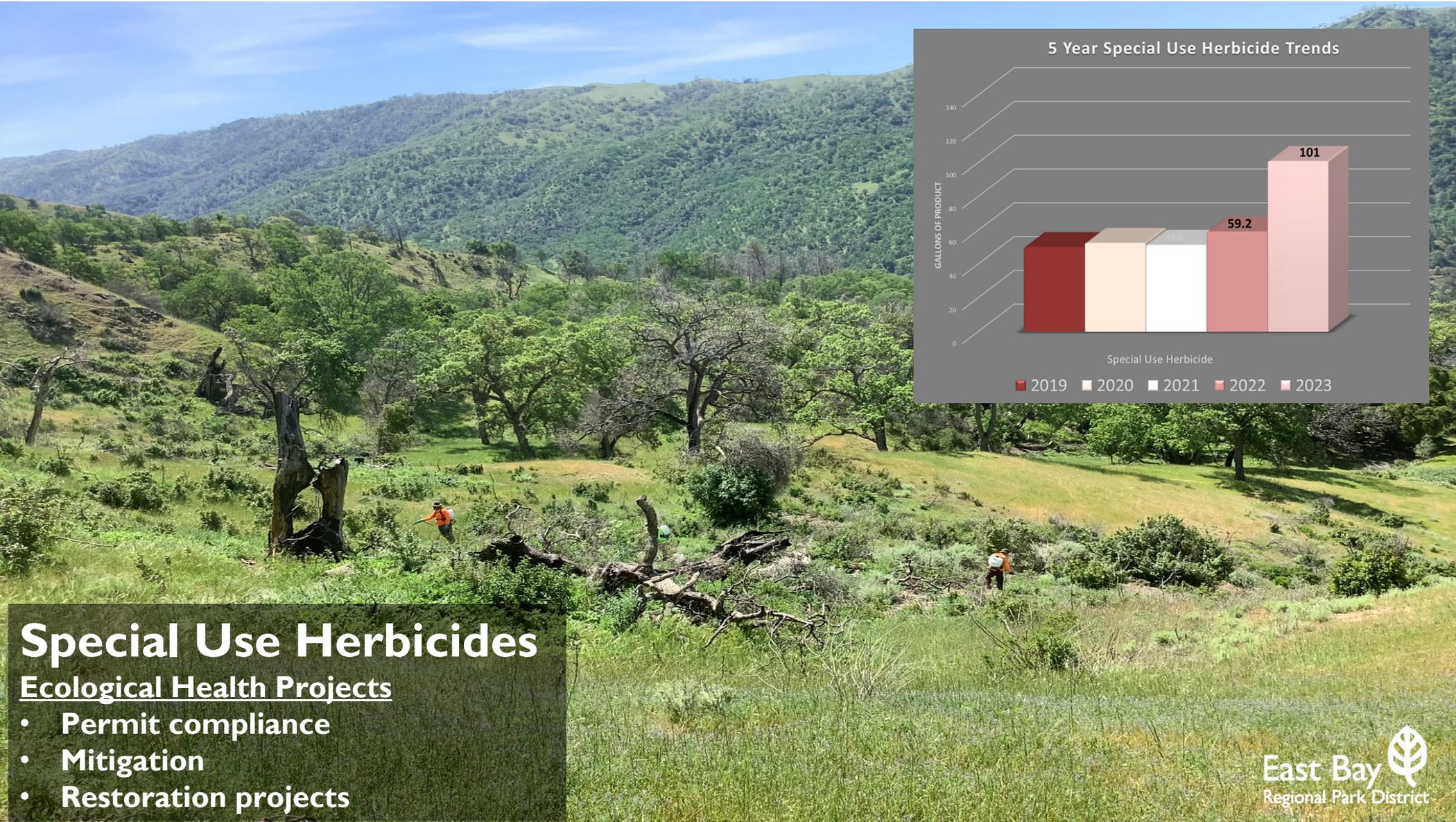
**Fire Safety**- high risk for ignition  
fire pits, BBQs, gravel parking lots,  
curb stops, road edges

## **Hybrid Approach**

Mechanical in some areas  
Conventional pre-emergent &  
organic burn-down

Effectiveness relies on timing &  
consistency



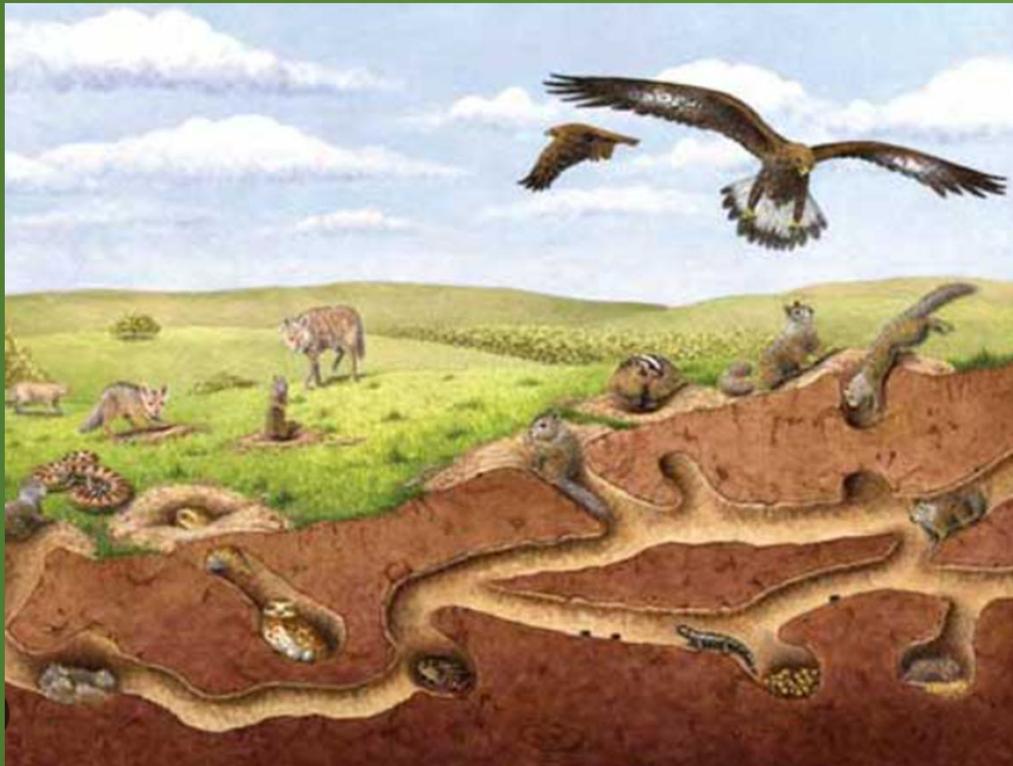


# Special Use Herbicides

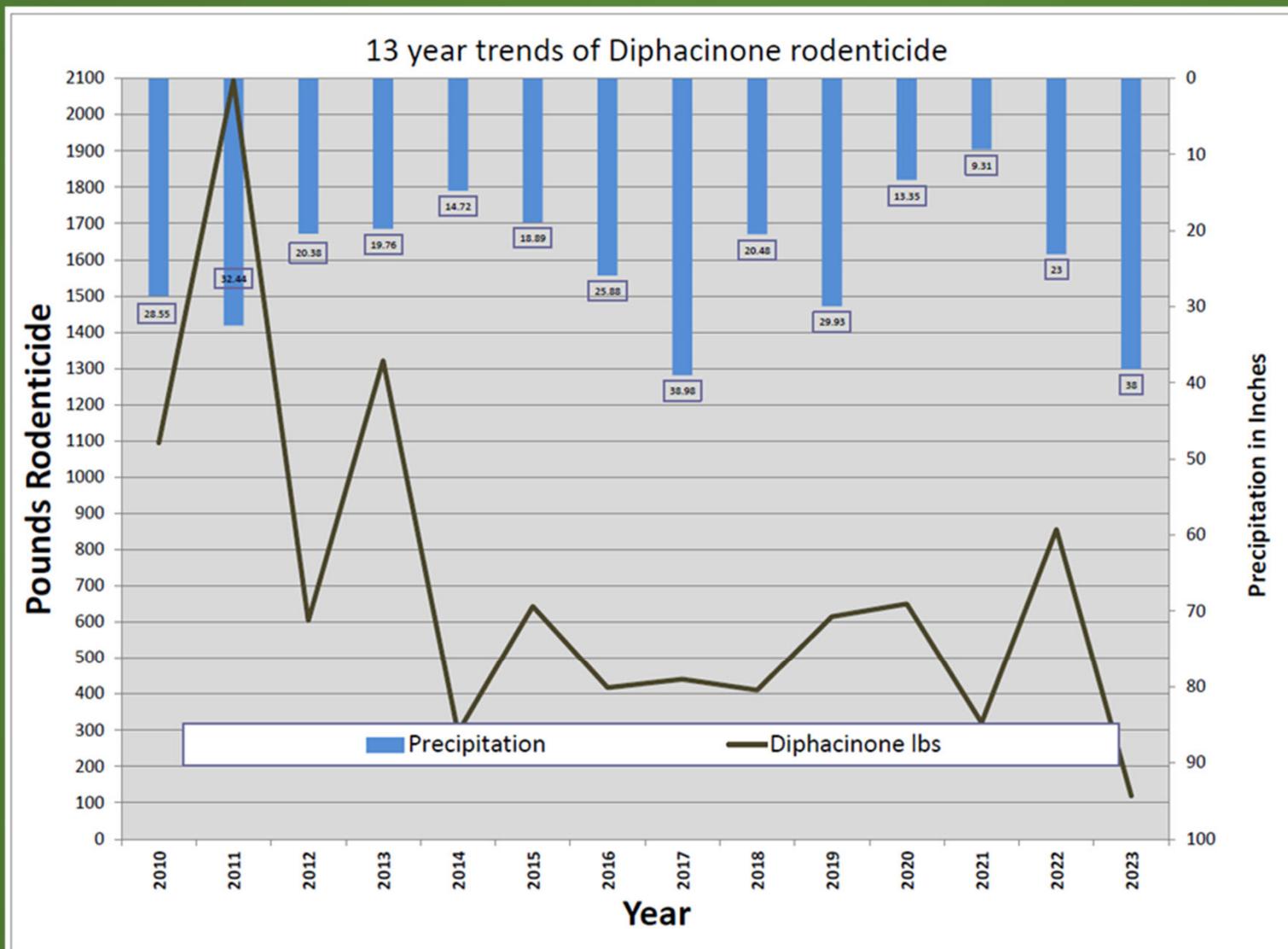
## Ecological Health Projects

- Permit compliance
- Mitigation
- Restoration projects

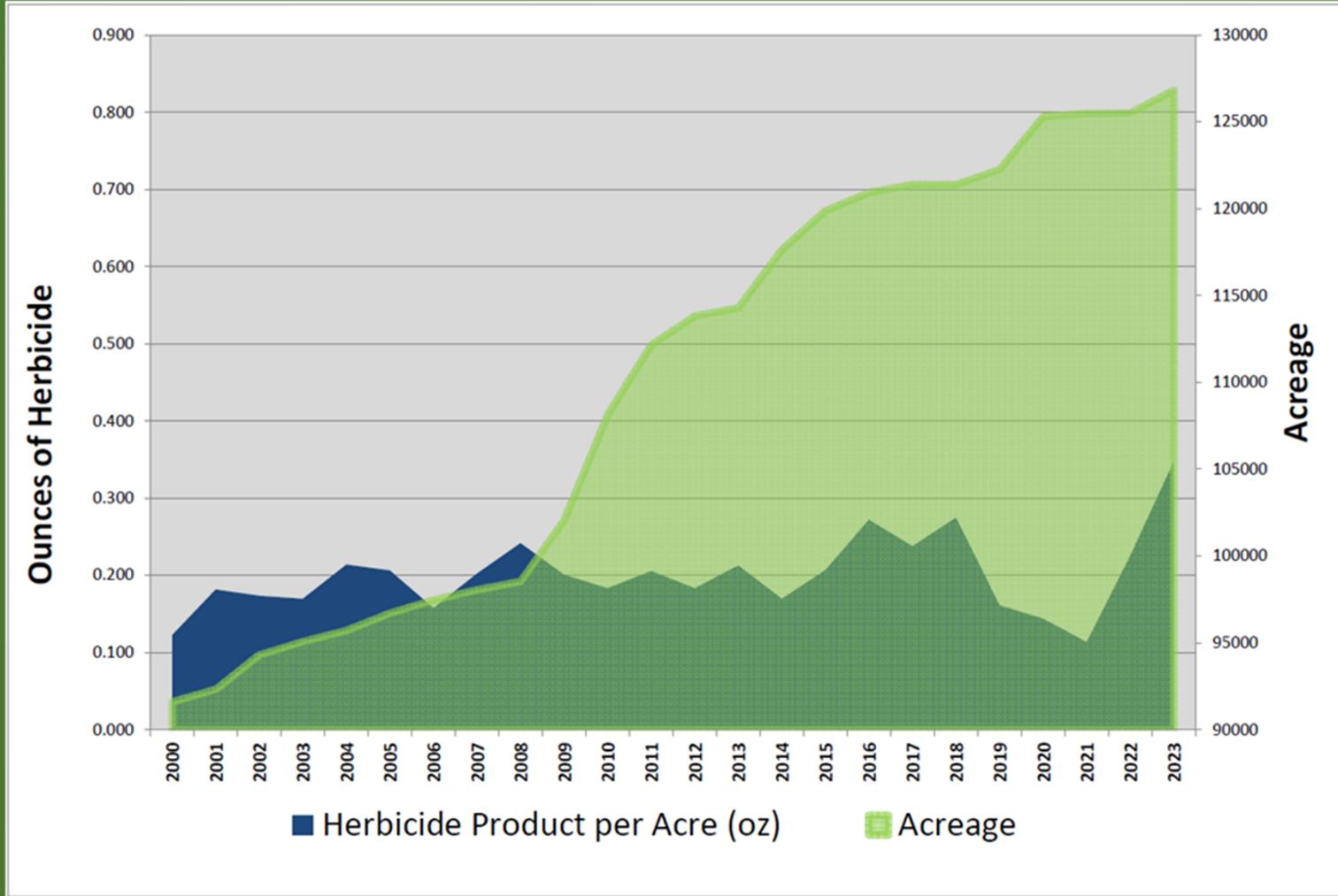
# Ground Squirrels: Ecosystem Engineer & Pest



UC Statewide IRM Project  
© 2000 Regents, University of California



# Integrated Management in Parklands



# IPM Goals & Case Studies

## Public Health

- Harmful Algal Blooms
- Structural Pest Control
- Stinging Insects-Wasps & Mosquitos

## Fire Safety

- Fire strips on roads & trails
- Ignition areas around fire pits, BBQs, parking lots & structures

## Recreation

- Trail access & Hazardous Trees Removal
- Turf Management & Landscaping/Gardens

## Ecological Function

- Resource Projects
- Habitat Enhancement
- Environmental Programs

## Healthy Forests

- Eucalyptus plantation thinning
- Brush & weed control in Fuel Treatment Areas

# Public Health: Yellow Jackets

**Harmful Algal Blooms**  
**Structural Pest Control**  
**Vector Borne Diseases**  
**Yellow Jackets**

*Trapping to reduce conflicts*  
*Flagging & Avoidance*  
*Insecticide for Ground Nests*



# Fire Safety

*Protection of District Structures*  
*Zone 0: no vegetation zone*

*Protection of Parklands*  
*High Ignition Sources*

*Bare Ground Applications*  
*<5% vegetation*

# Ecological Function

## 27 Years of Noxious Rangeland Weed Control

- Regional approach to controlling artichoke & purple star thistles
- Approximately 50 net acres across the entire district treated in 2023
- Board Approved New Vegetation Ecologist position
- Starting in 2025 – mapping & collecting data, prioritizing restoration

# Safe & Accessible Recreation

- 3 local high schools
- 260 student-hours of activities to improve and maintain disc-golf course and Monarch habitat



# Healthy Forests

## 2<sup>nd</sup> Year of Operation Broom Bust in Hill Parks!!

- Regional approach to controlling this ladder fuel
- 94 acres across 7 Parks:
  - Anthony Chabot, Claremont Canyon, Leona Canyon, Miller Knox, Sibley, Tilden, and Wildcat Canyon.
- Mechanical cutting, resprouting then herbicide application
- More complex and dense stands were treated in 2023

# Program Directions for 2024

## Prevention Programs

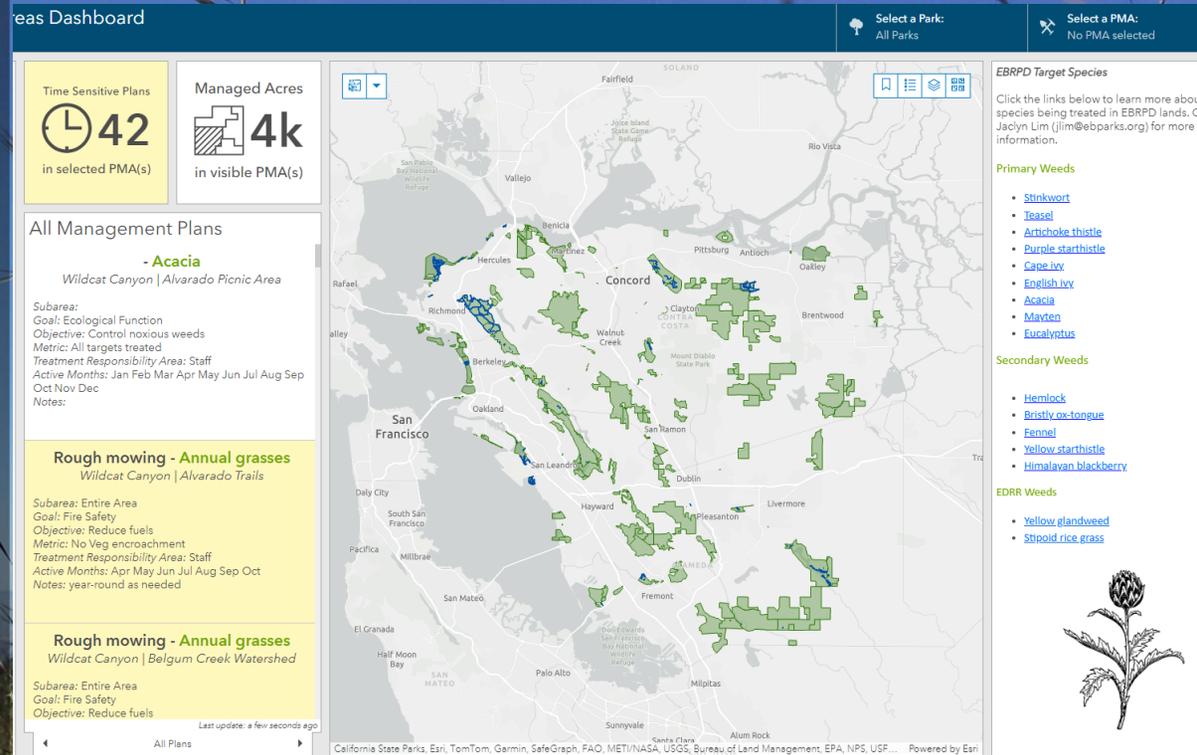
Invasive Shot Hole Borer Surveillance  
Continue Pathogen Education & Training  
Increase use of Prevention

## Habitat Enhancement & Mitigation

Cape Ivy Treatment Areas– New & Ongoing  
Perennial Pepperweed Treatment – New & Ongoing  
Noxious Rangeland Weeds: Mapping, Prioritizing & Strategizing

## Continue Building IPM Park Plans

Digitize Park Maintenance Areas (PMA)  
Viewable on park view  
Prioritize activities for Maintenance & Habitat Enhancement



**THANK YOU!**



**Questions?**