



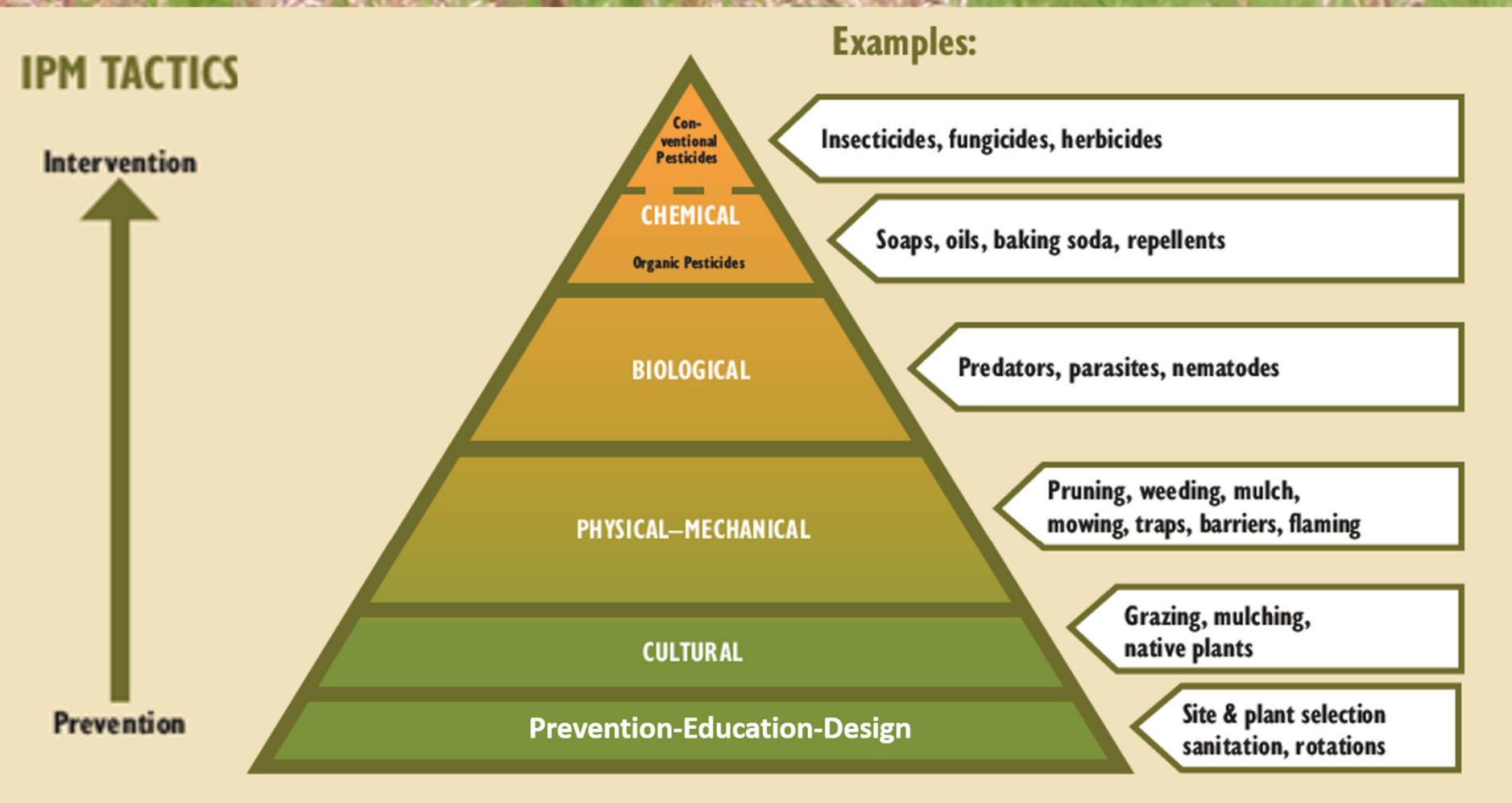
Integrated Pest Management (IPM)

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





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

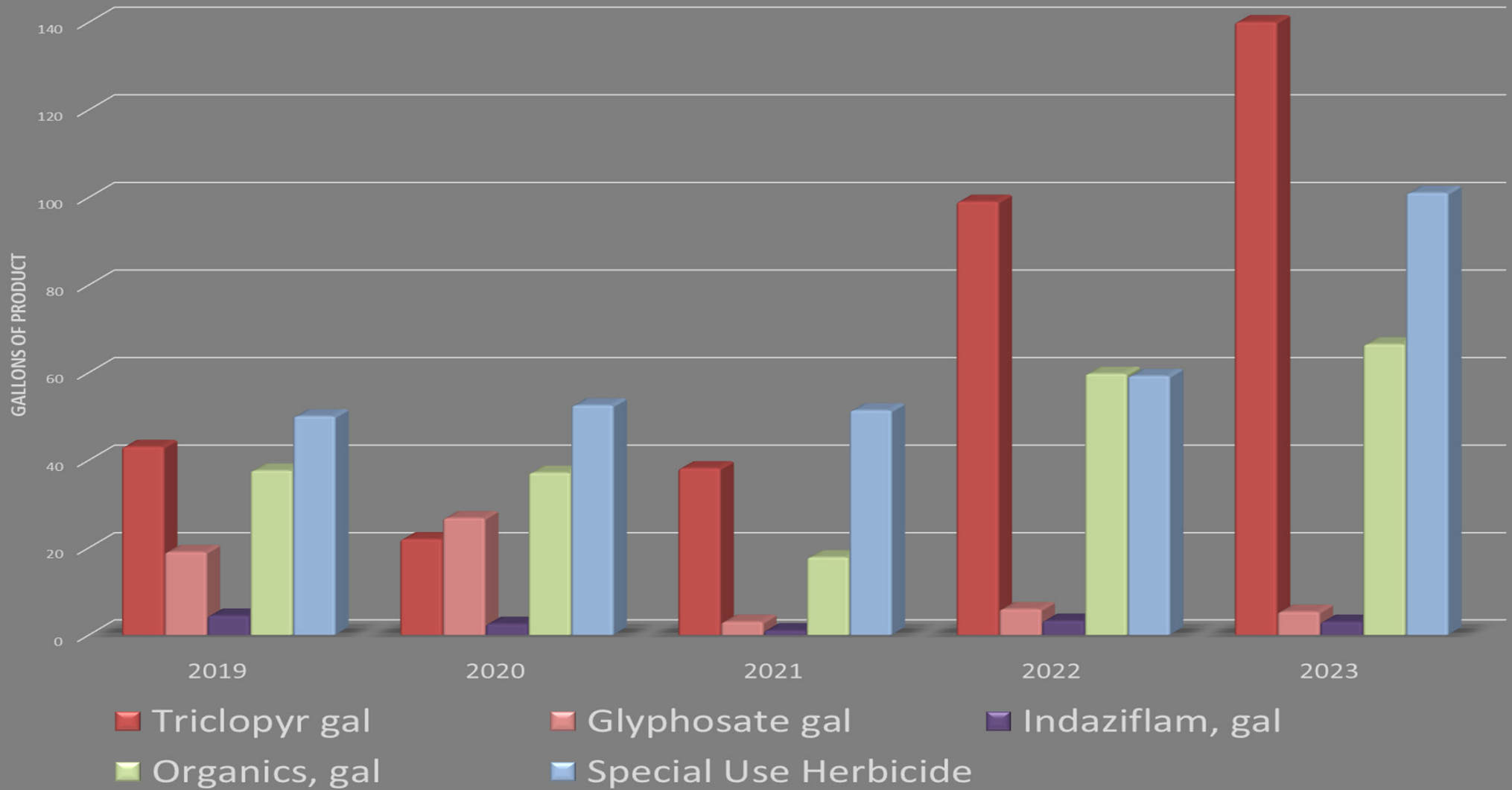
- Pests include yellow jackets, gophers, vegetation
- Practices include trapping, mowing, brushing, line trimming, mulching, tree removal, volunteer work
- Difficult to track & compare these mechanical efforts
- Grazing of 87,075 acres is second vegetation management tool



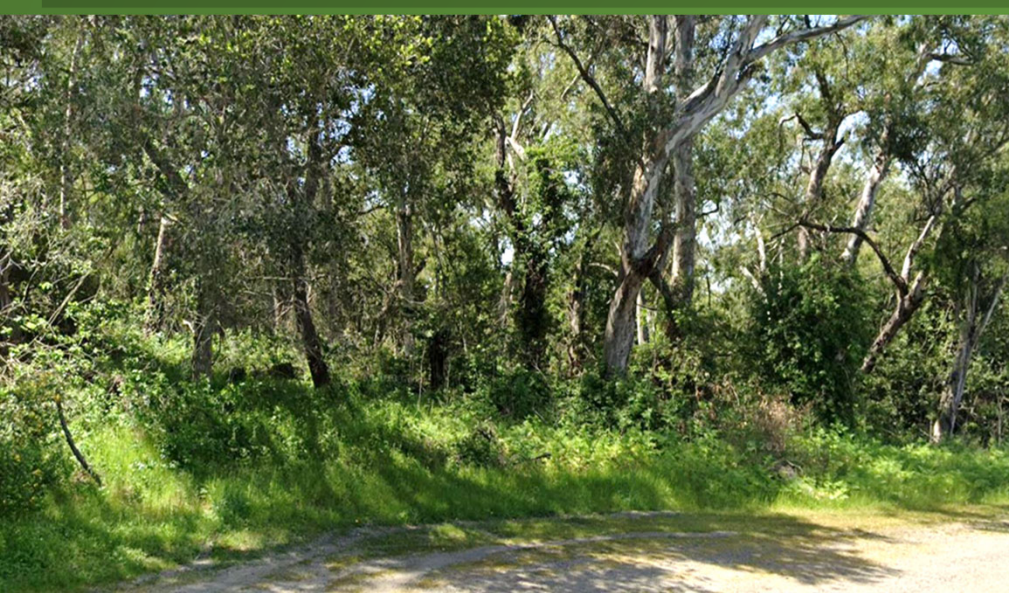
Pesticide Use Trends

- 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

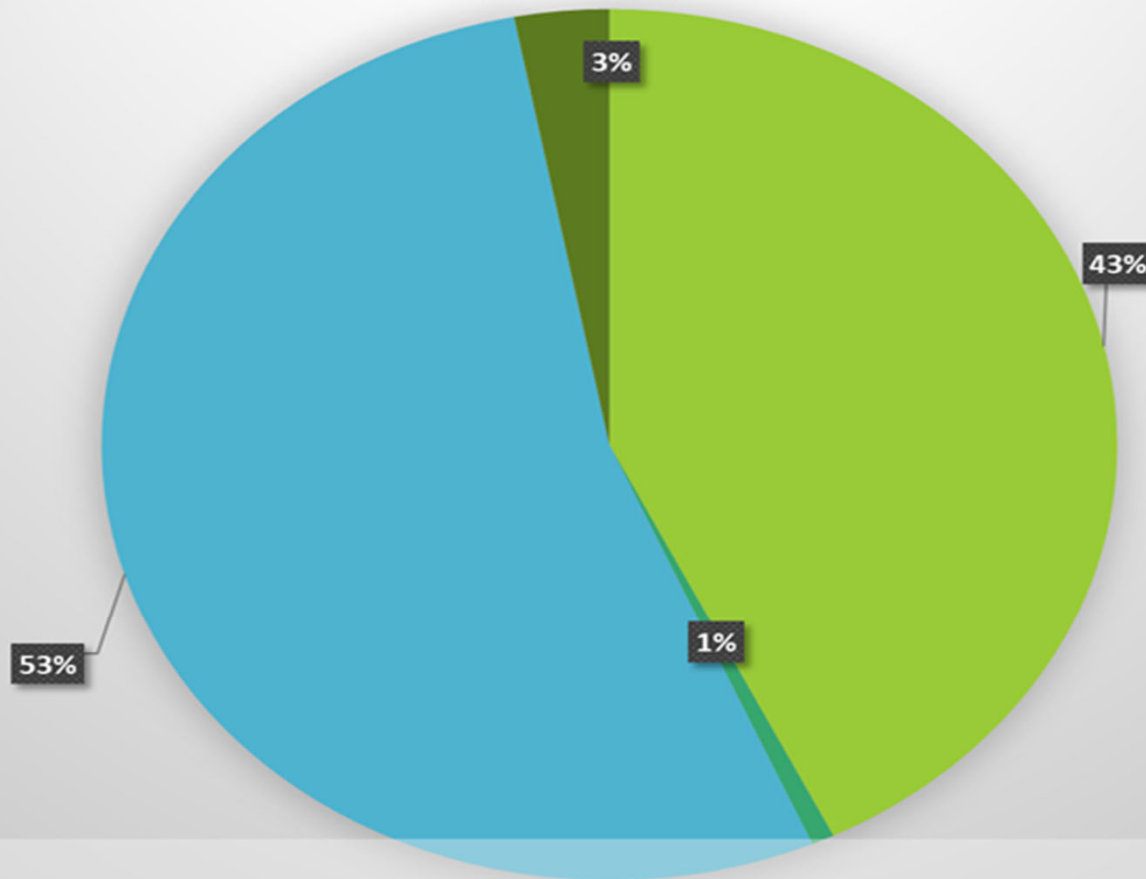


Anthony Chabot - AFTER

- **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

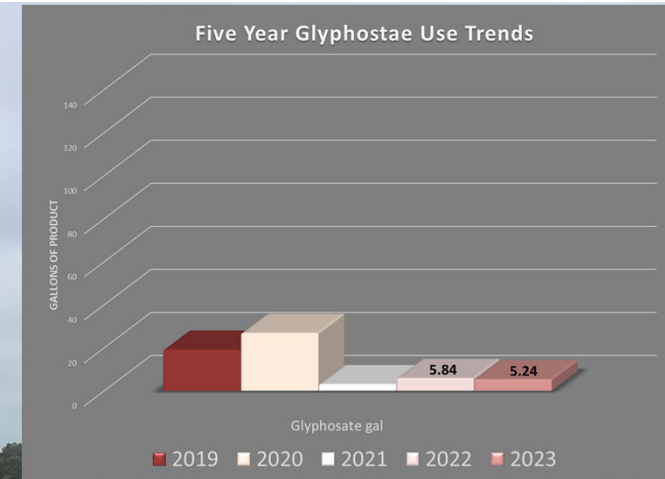
Resolution #2019-07-187

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

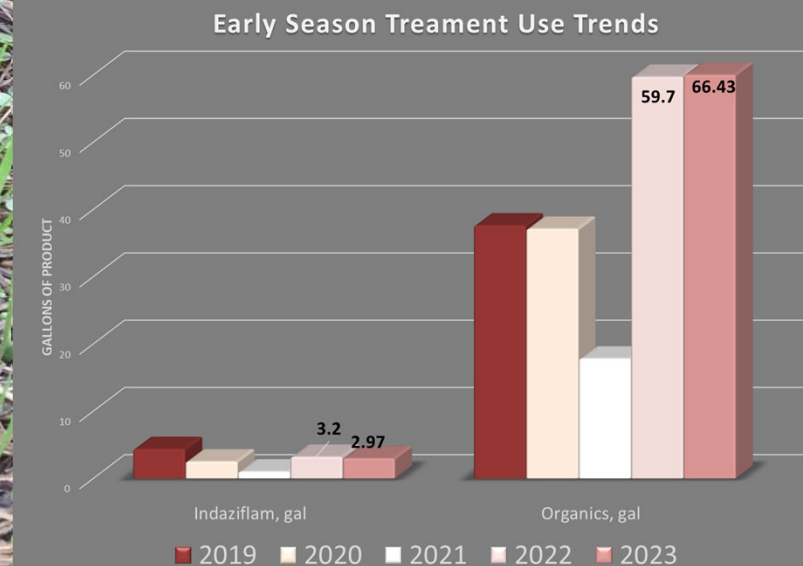
Early Season Fall Weed Treatment Products

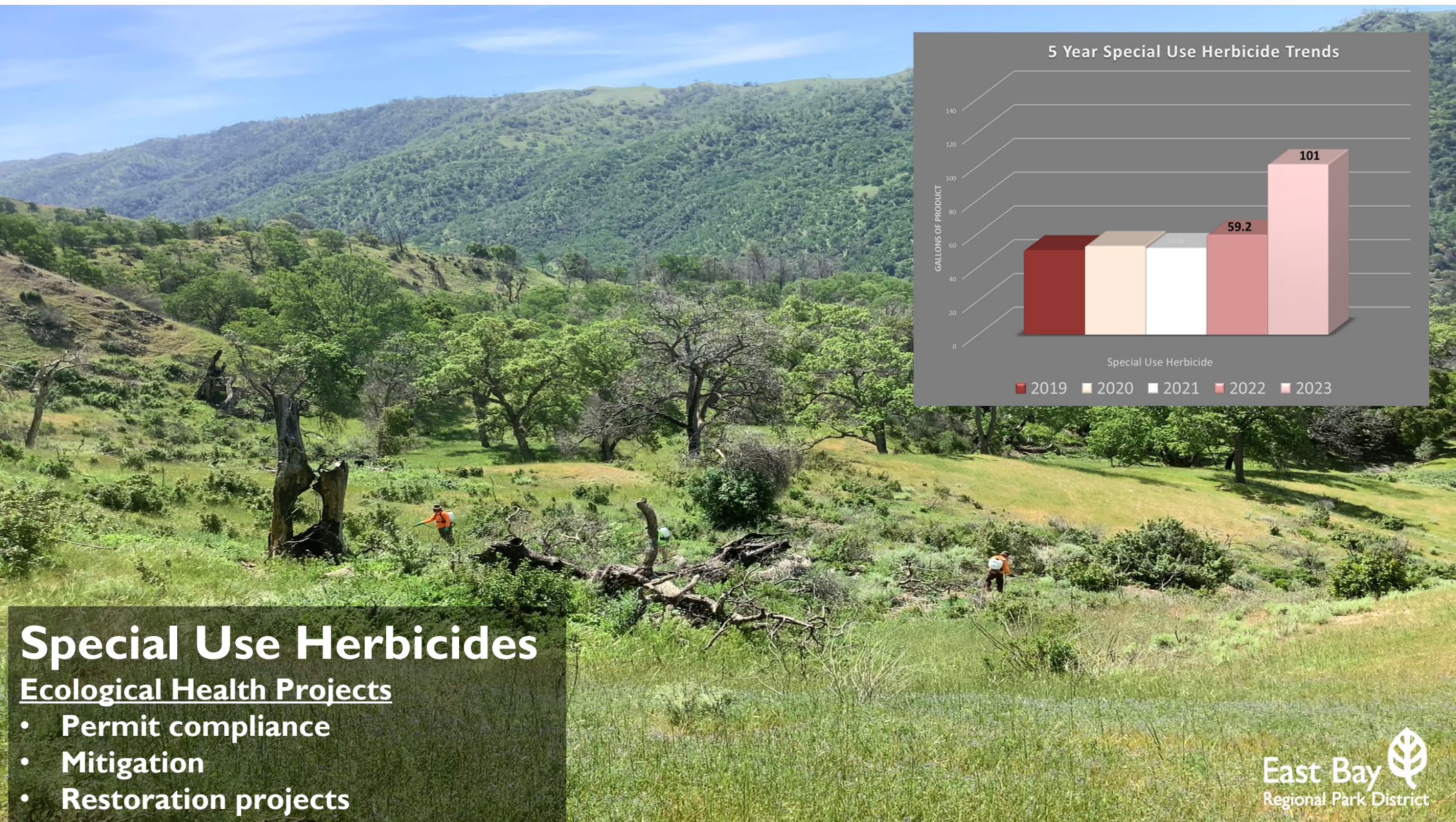
Fire Safety- high risk for ignition
fire pits, BBQs, gravel parking lots,
curb stops, road edges

Hybrid Approach

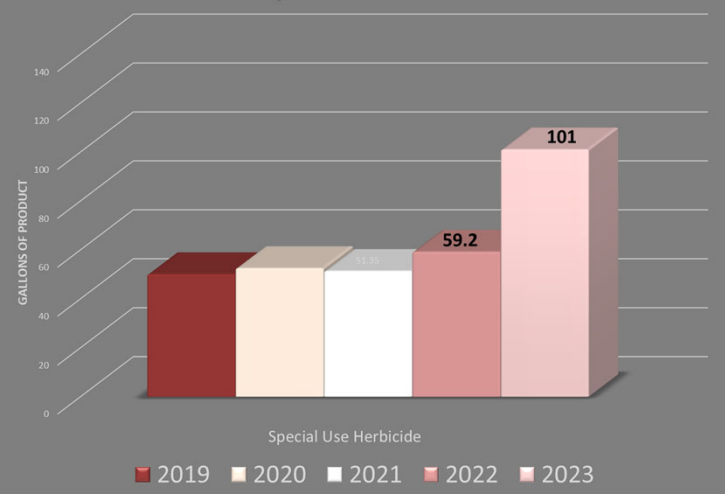
Mechanical in some areas
Conventional pre-emergent &
organic burn-down

Effectiveness relies on timing &
consistency





5 Year Special Use Herbicide Trends

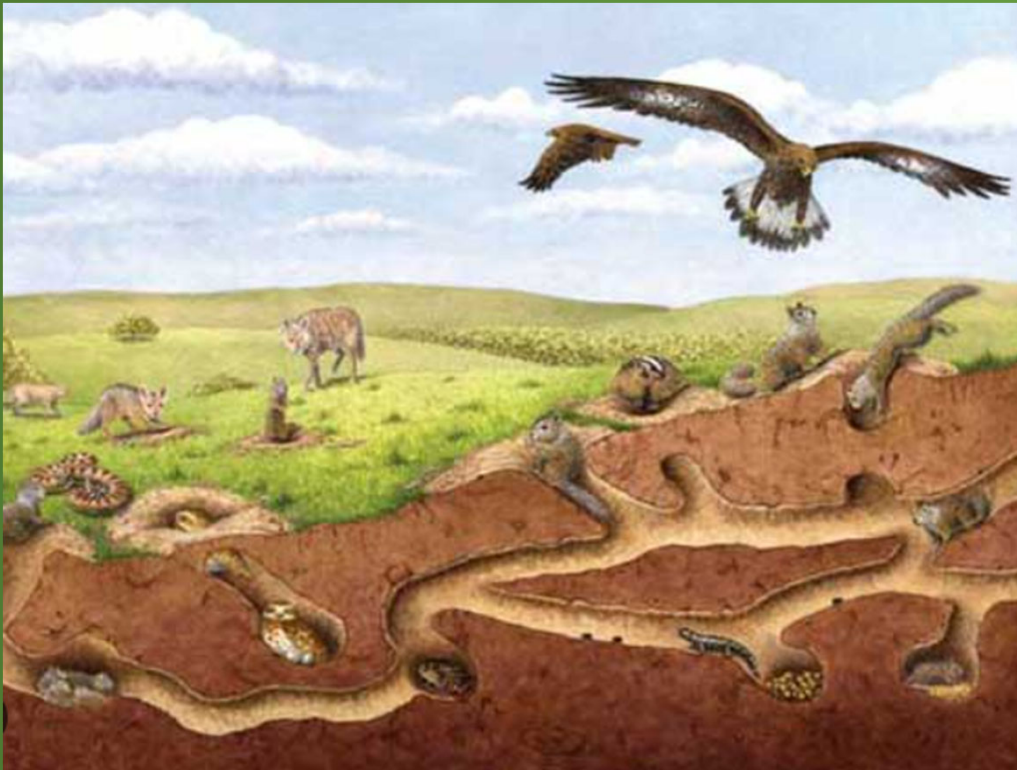


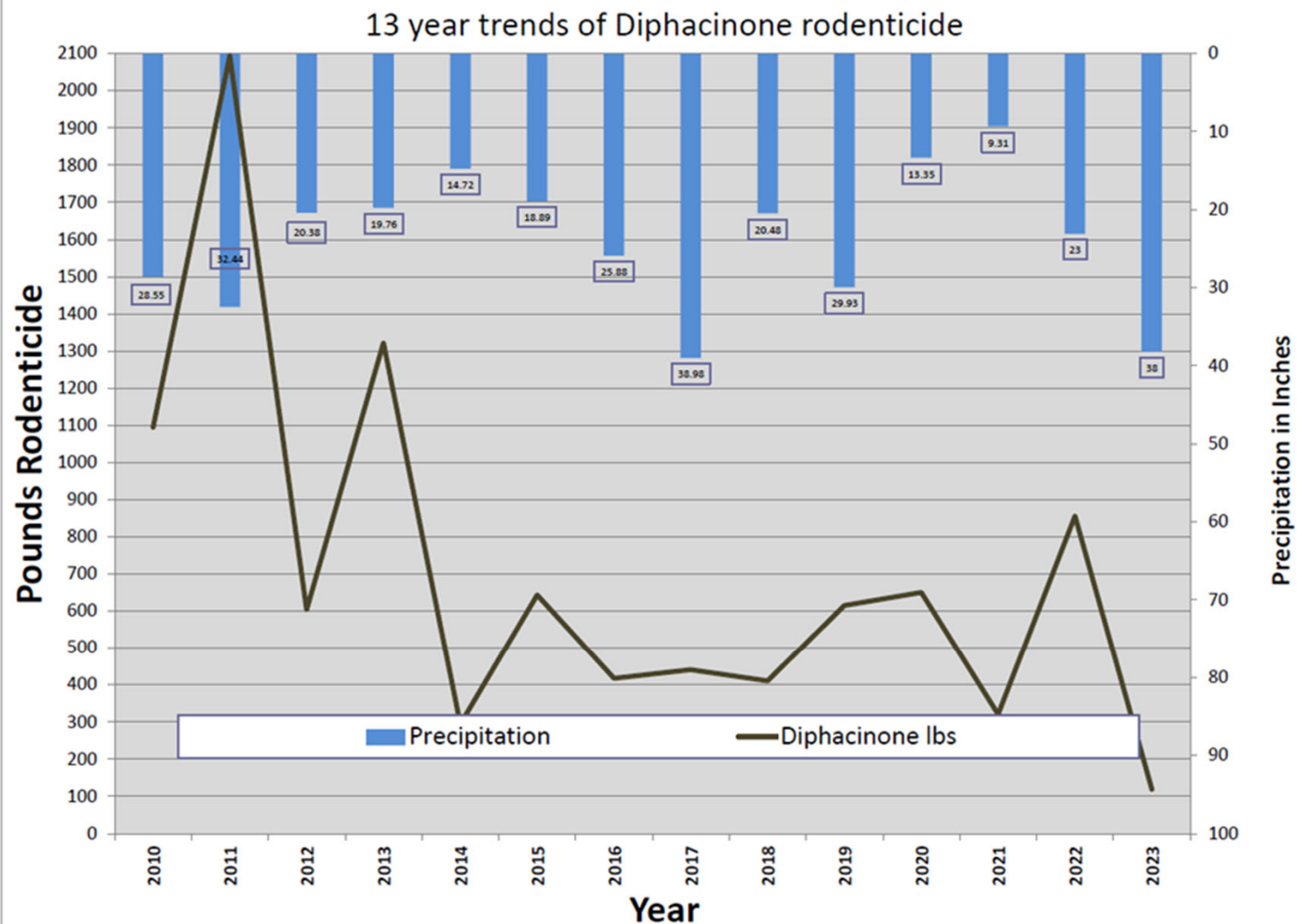
Special Use Herbicides

Ecological Health Projects

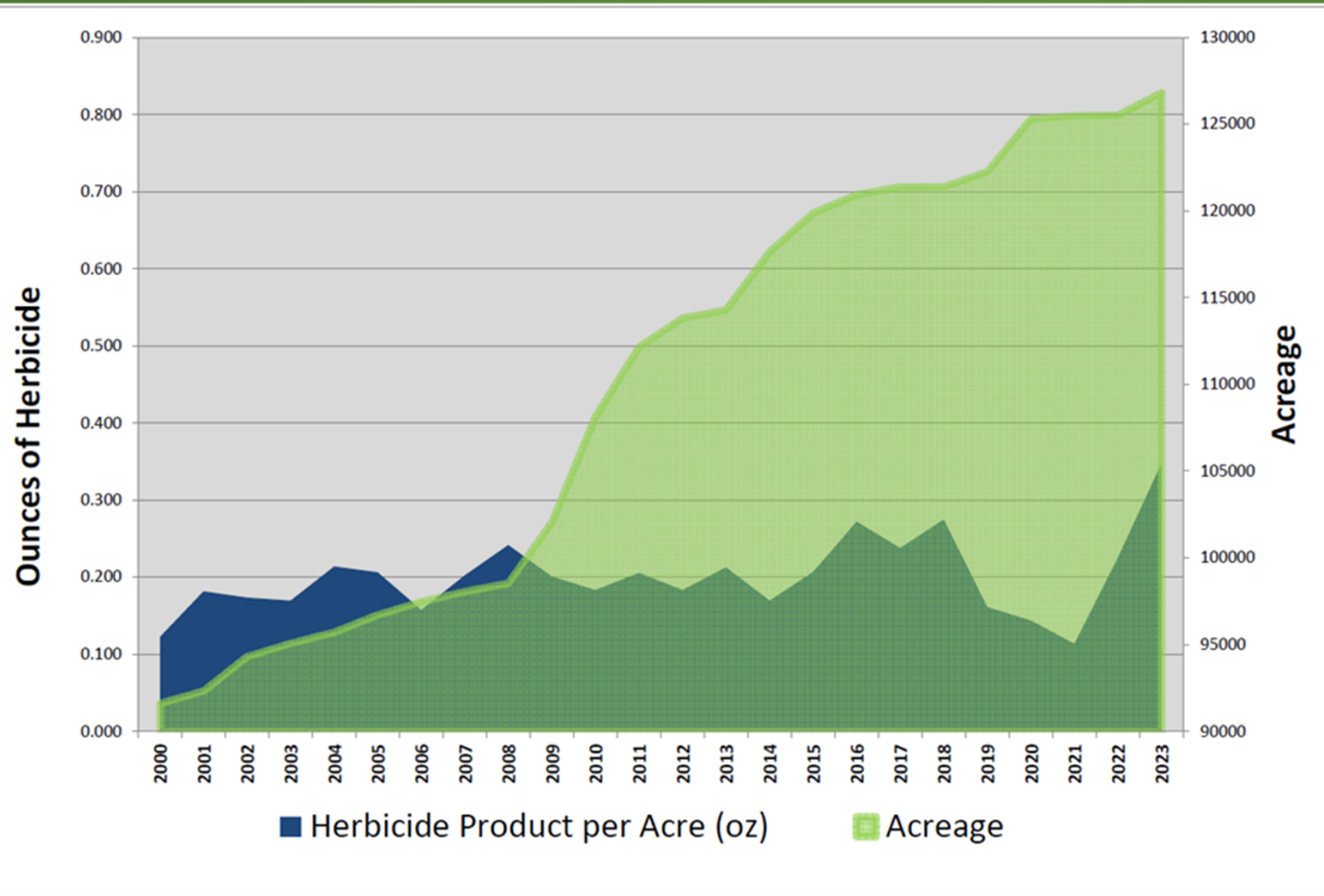
- Permit compliance
- Mitigation
- Restoration projects

Ground Squirrels: Ecosystem Engineer & Pest





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

2nd 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

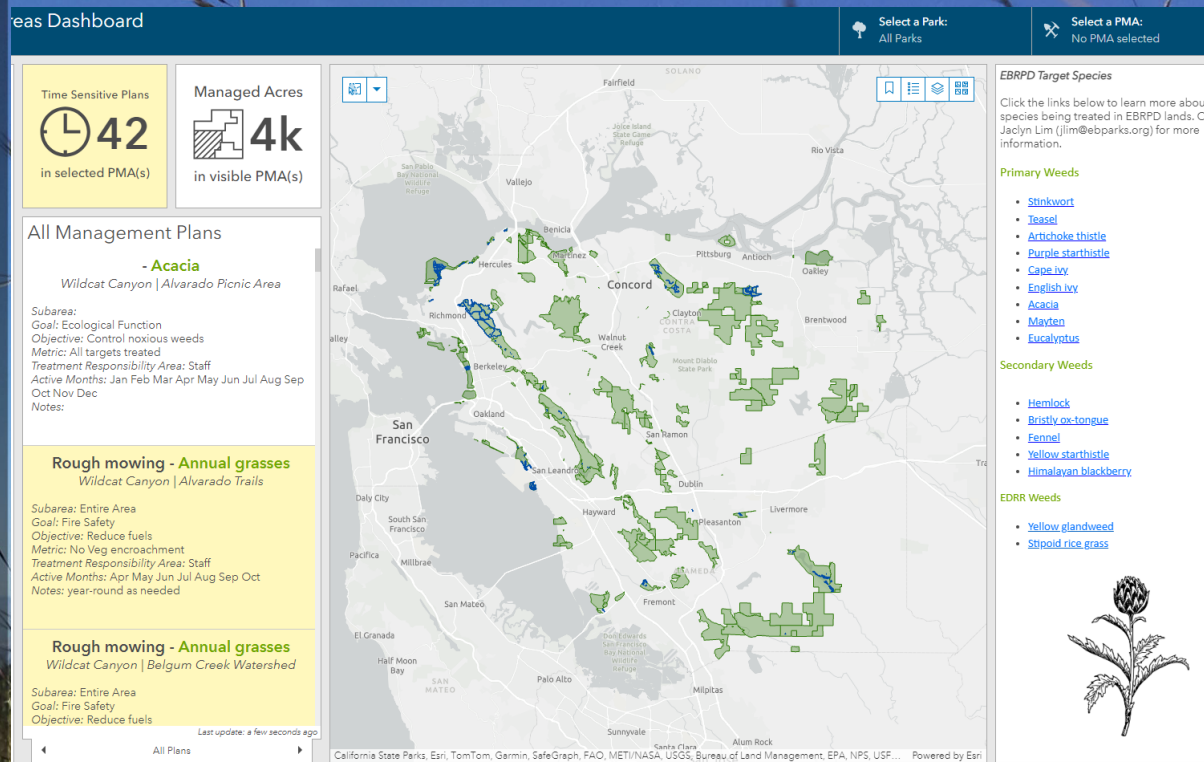
Invasive Shot Hole Borer Surveillance
Continue Pathogen Education & Training
Increase use of Prevention

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?