

# Where the Weeds Are: Setting Regional Management Priorities for Invasive Plants

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[home](#) [maps](#) [how to](#) [spatial data](#) [plant profiles](#) [about](#) [contact](#)

### Map the Spread

CalWeedMapper provides a dynamic tool for mapping invasive plant distribution at the landscape level using expert knowledge. [Learn more about how to use the maps >>](#)

### Submit Spatial Data

Contribute your GIS or observation data to Calflora for plant occurrences. [Learn more about submitting spatial data and how our systems work together >>](#)

### News and Events

- » 20th Annual Cal-IPC Symposium
- » We're in Beta! Send us feedback.
- » Strategic Planning Meetings

## CalWeedMapper enables natural resource managers, scientists and others to:

- ✓ **Create** maps and reports of invasive plant distribution
- ✓ **Identify** management opportunities in a county, WMA or region
- ✓ **Update** species distribution data



[go to maps >>](#)

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# Introducing CalWeedMapper!

- A partnership between Cal-IPC and Calflora, this new site contains data from Cal-IPC's statewide mapping effort and is hosted through Calflora.
- Combines expert knowledge data and occurrence (GIS) data into one system.



# <http://calweedmapper.calflora.org>

1. Data
2. Management Opportunities
3. Commenting & updating
4. Modeling potential spread

The screenshot shows the CalWeedMapper BETA website. At the top is a navigation bar with links: home, maps, how to, spatial data, plant profiles, about, and contact. Below the navigation bar is a large green banner with a stylized dandelion seed head and the text "CalWeedMapper BETA".

**Map the Spread**  
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**News and Events**  
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**CalWeedMapper enables natural resource managers, scientists and others to:**

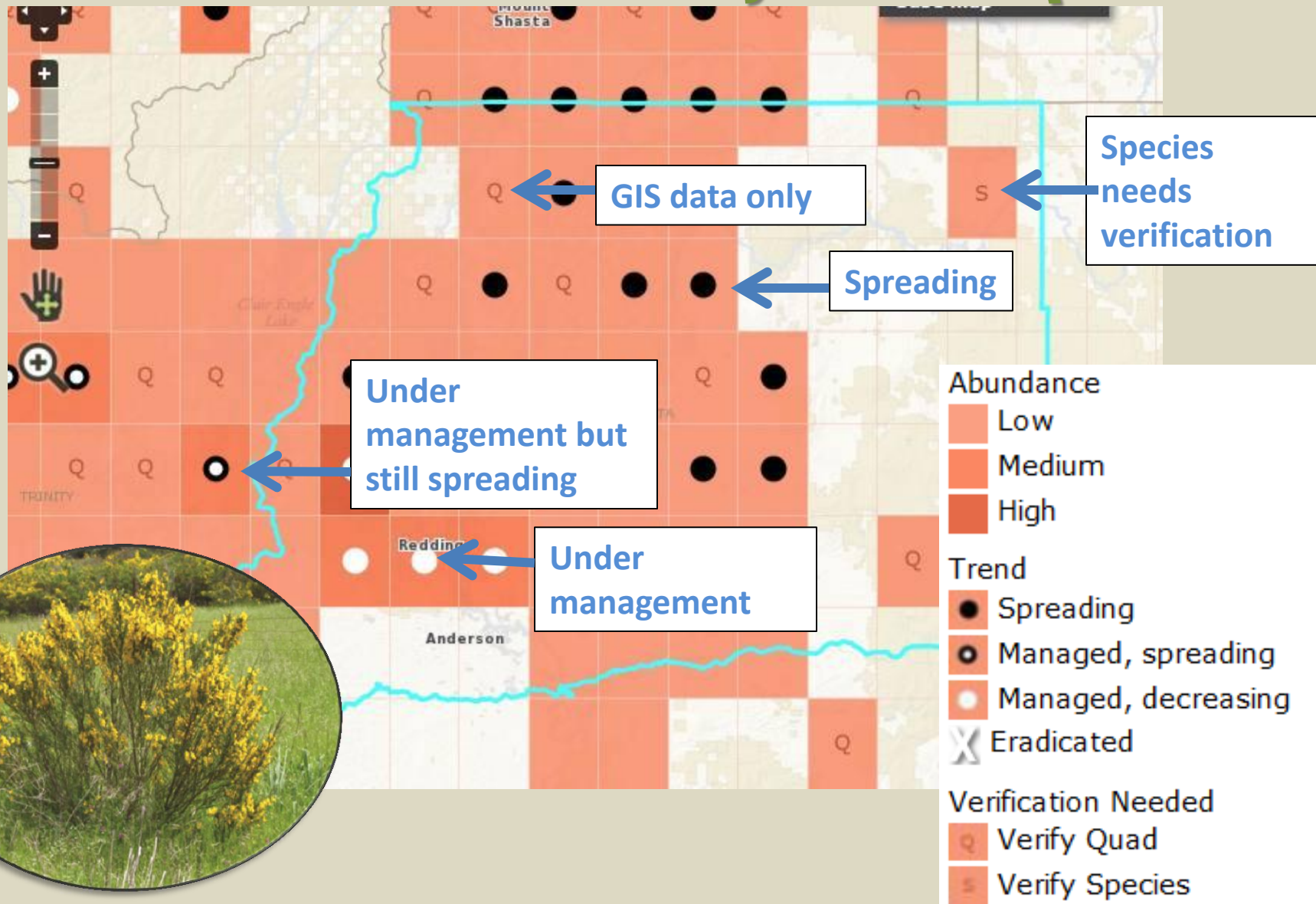
- ✓ **Create** maps and reports of invasive plant distribution
- ✓ **Identify** management opportunities in a county, WMA or region
- ✓ **Update** species distribution data

[go to maps >>](#)

The interface also features a map of California with red dots indicating invasive plant locations, and a sidebar with various filters and legends.

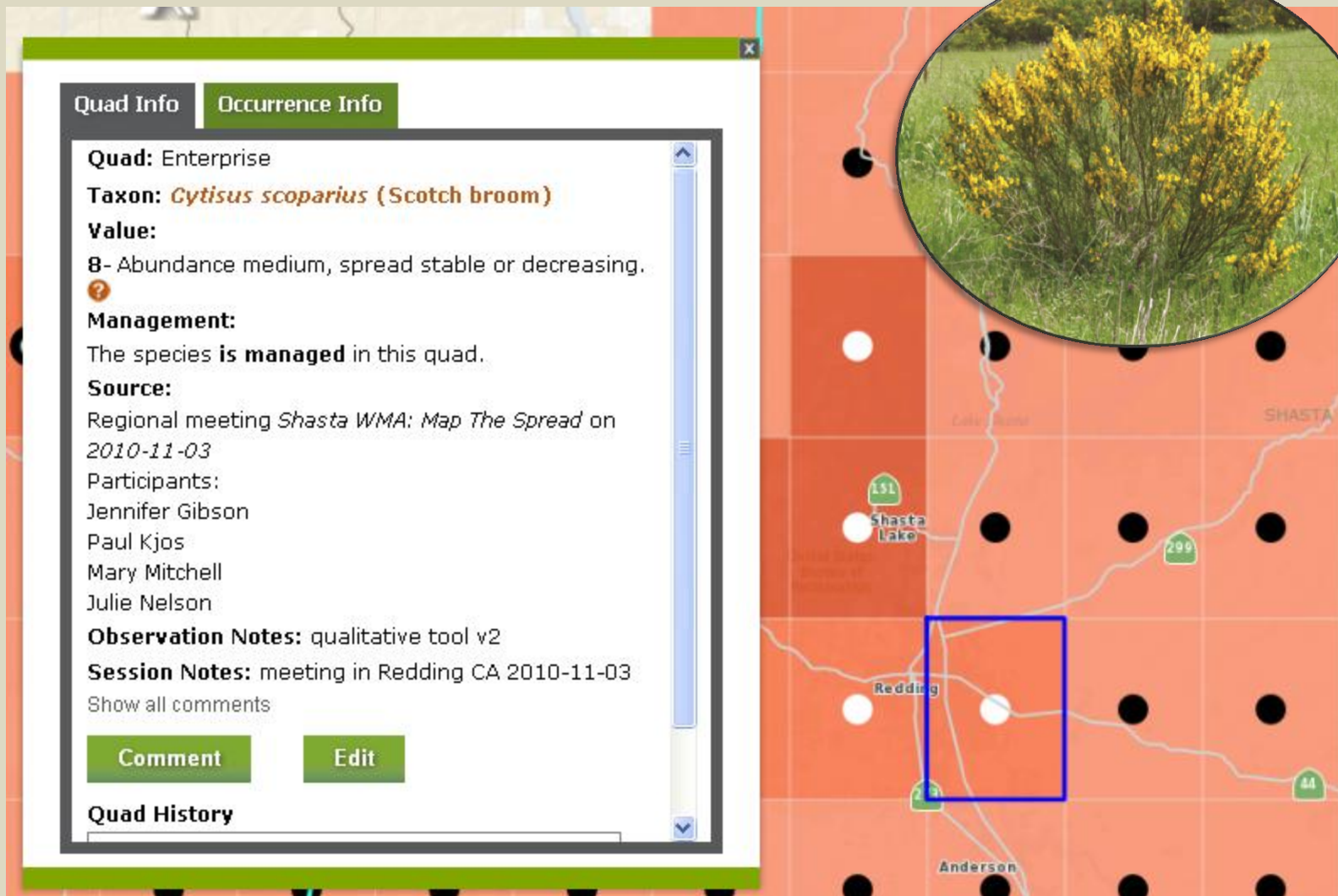
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# DATA: Distribution by USGS Quad





# DATA: Quad Information



**Quad Info** | Occurrence Info

**Quad:** Enterprise

**Taxon:** *Cytisus scoparius* (Scotch broom)

**Value:**  
B- Abundance medium, spread stable or decreasing.

**Management:**  
The species **is managed** in this quad.

**Source:**  
Regional meeting *Shasta WMA: Map The Spread* on 2010-11-03  
Participants:  
Jennifer Gibson  
Paul Kjos  
Mary Mitchell  
Julie Nelson

**Observation Notes:** qualitative tool v2

**Session Notes:** meeting in Redding CA 2010-11-03

Show all comments

[Comment](#) [Edit](#)

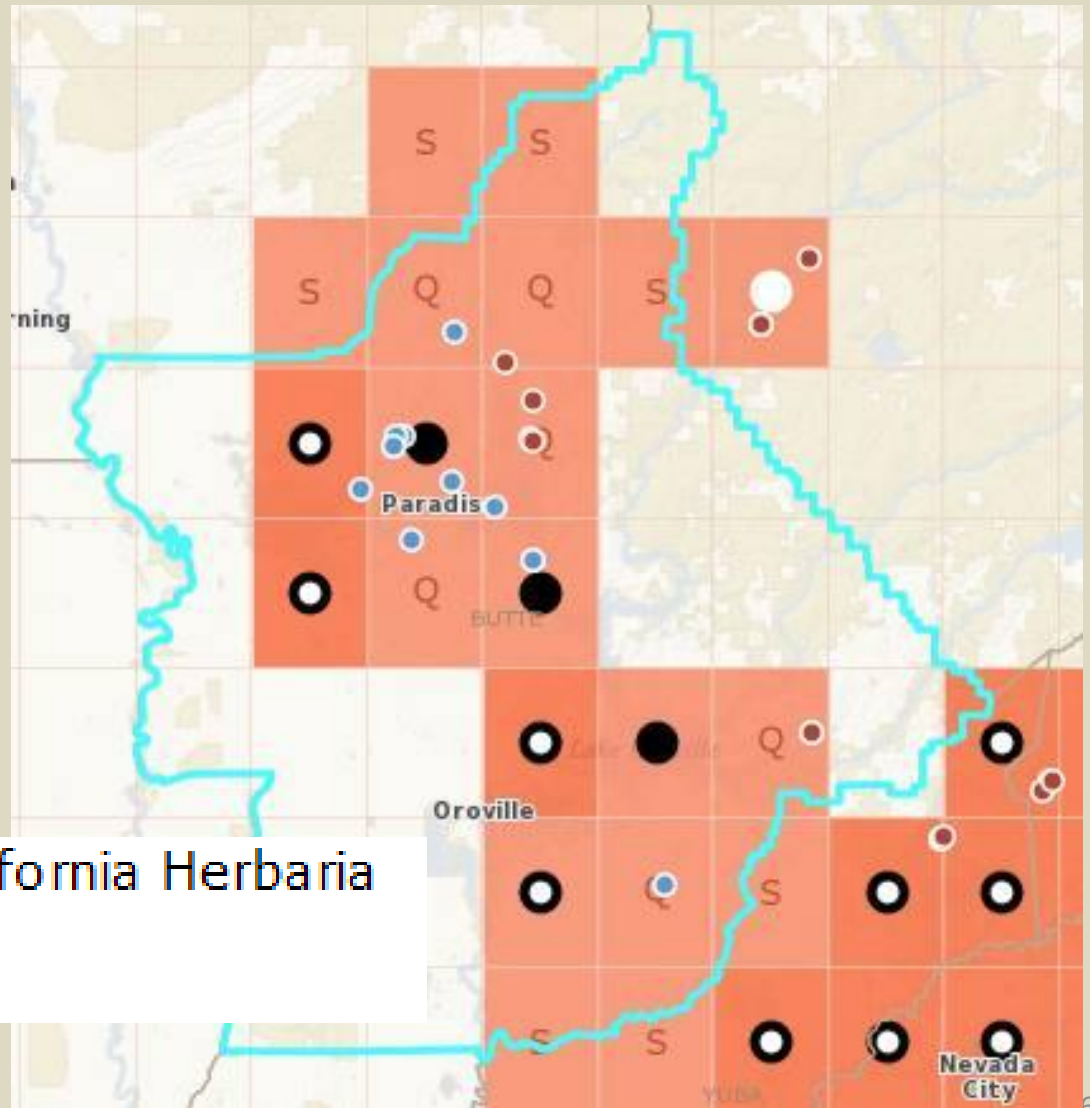
**Quad History**

Shasta Lake  
Redding  
Anderson  
SHASTA  
299  
44  
151

# DATA: Occurrence (Point) Data

- Allows verification of expert knowledge and vice versa
- “Q” indicates where a GIS point was collected but experts did not know species was there

● Consortium of California Herbaria  
● Calflora



# Management Opportunities

Intended to be used with existing local priorities and projects.  
Based mostly on **current distribution** and prioritized by Cal-IPC  
**statewide rating**.

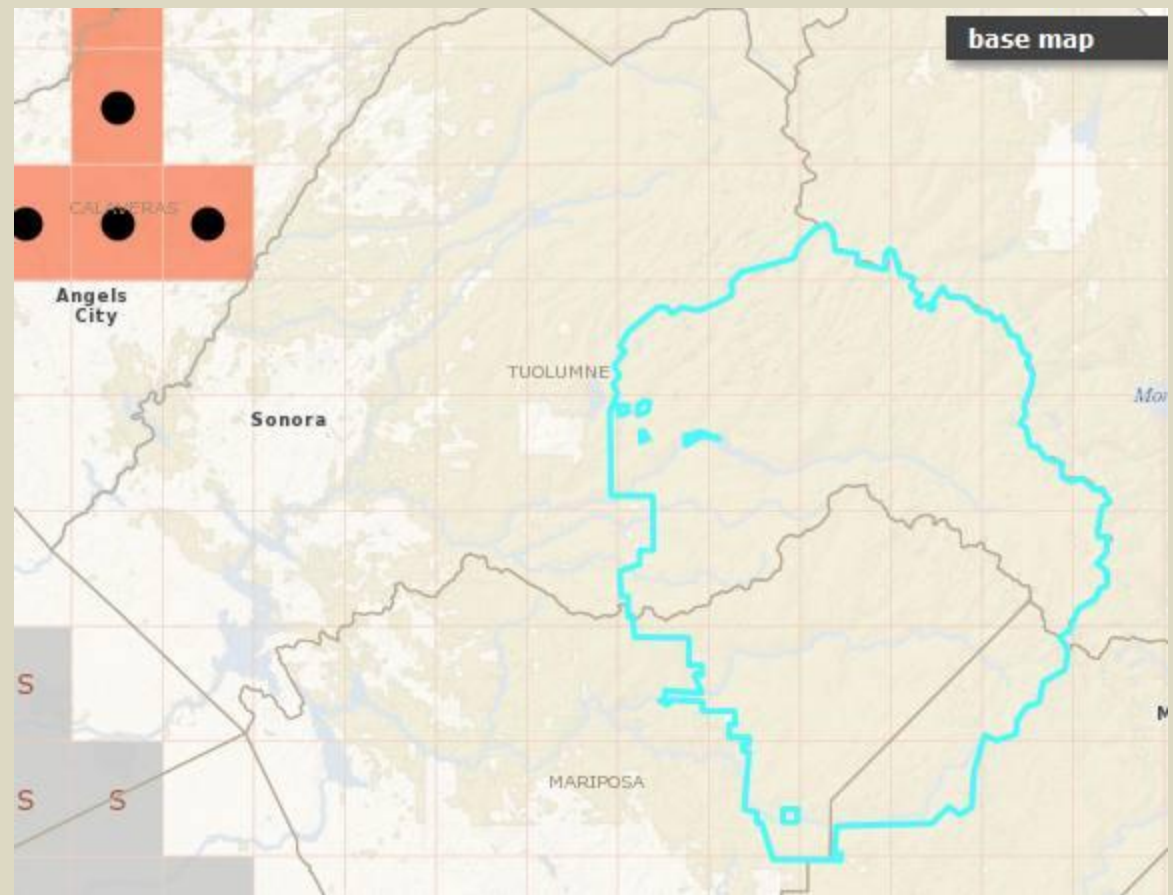
**Surveillance:** Survey to detect new infestations of species not yet present but nearby

**Eradication:** Complete removal of infestations (isolated quads)

**Containment:** Limit spread from existing populations

# Surveillance

Leafy spurge outside Yosemite National Park.  
Species not present but within 50 miles.

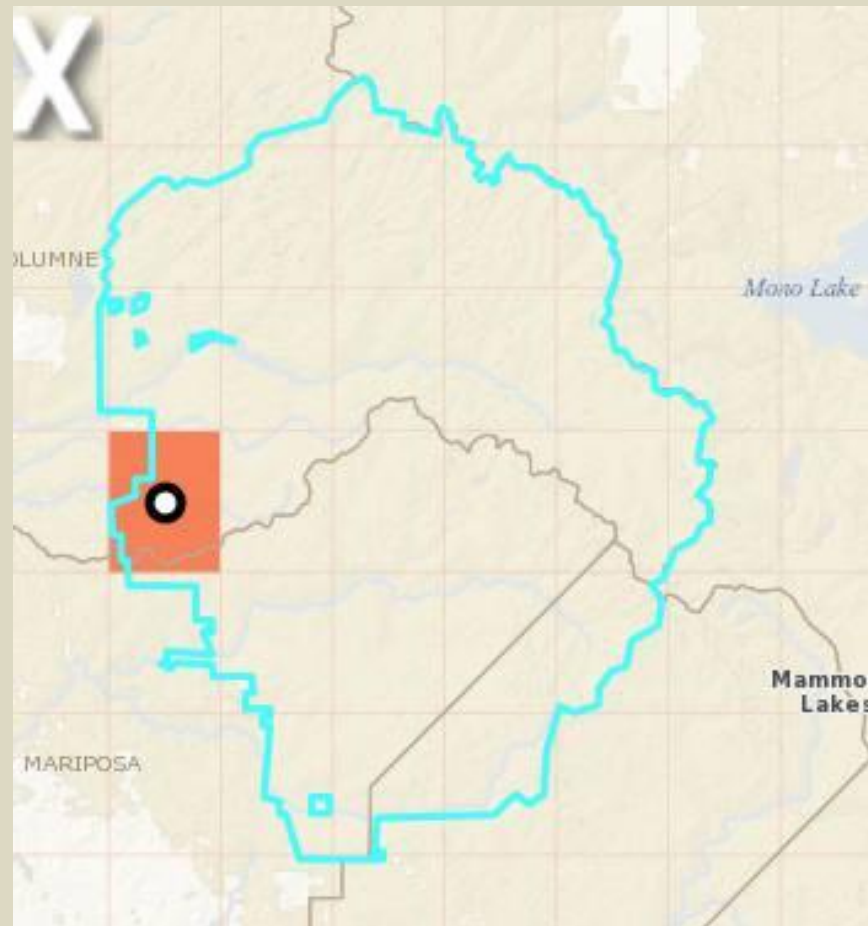




# Eradication

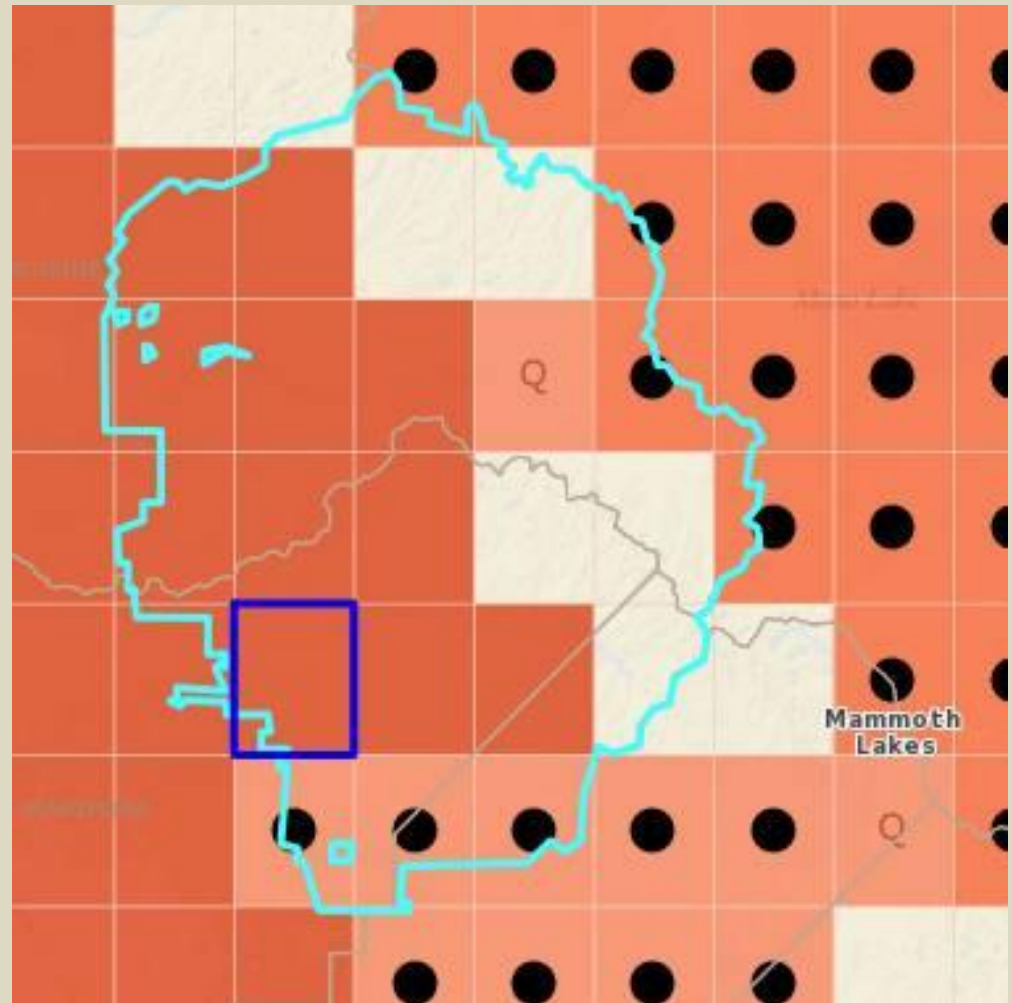
Canada thistle in Yosemite National Park.

Species present in only one quad, isolated from others.



# Containment

## Cheatgrass in Yosemite National Park



# Regional Species Map Report



## REGIONAL SPECIES MAP REPORT: NEVADA/PLACER WMA *Centaurea maculosa* (spotted knapweed)

Cal-IPC Rating: High  
Other ratings: CDFA, Bay Area (BAEDN) priority target

**Species Description:** *Centaurea maculosa* (spotted knapweed) is a biennial to short-lived perennial (family Asteraceae). It can be found in disturbed open sites, grasslands, overgrazed rangelands, roadsides and logged areas. It crowds out native species and forage for livestock, and can invade undisturbed native bunchgrass stands. An individual plant may produce as many as 40,000 seeds.

### Report

Additional information: See Cal-IPC's [Plant Profiles](#) or California's [Taxon](#)

**Abundance**  
low  
median  
high

### Trend

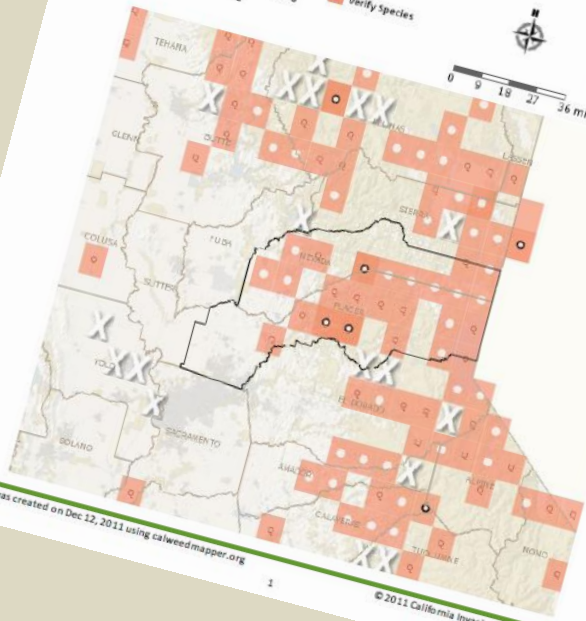
Spreading  
Managed, increasing  
Managed, decreasing  
Eradicated

**Verification Needed**  
Verify Quad  
Verify Species



Photo: © Nappi at the University of California

Abundance and trend by USGS 7.5-minute quadrangle. See 7 on Maps for additional information on map legend.



This report was created on Dec 12, 2011 using calweedmapper.org

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## REGIONAL SPECIES MAP REPORT: NEVADA/PLACER WMA *Centaurea maculosa* (spotted knapweed)

### How To Use This Report

This report provides distribution and suitability maps that can be used in conjunction with the Report on Management Opportunities as a starting place for setting regional priorities. The maps show the spatial factors that determine surveillance, eradication, and containment opportunities.

Suitability maps can be used to further assess the potential for an invasive plant species to spread into a new area. Predicted change in future suitability allow natural resource managers to prepare for new conditions, and may be used to elevate or demote the priority of a particular species in a particular area.

For current distribution, we interviewed local experts to determine abundance, spread and management by USGS 7.5-minute quadrangle (approximately 8 mi x 6 mi). We also incorporated occurrence data from Calflora, the Consortium of California Herbaria, and other collected datasets. Future suitability range is based on commonly used scenarios from the Intergovernmental Panel on Climate Change. Details about methods can be found at CalWeedMapper under About.

### Suitable Range



2010



2050

This report was created on Dec 12, 2011 using calweedmapper.calflora.org

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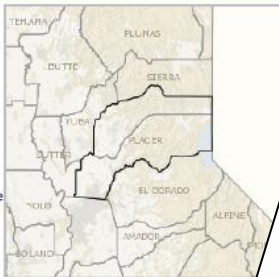
# Regional Report

INVASIVE SPECIES MANAGEMENT OPPORTUNITIES IN  
Nevada/Placer WMA

This report summarizes invasive plant management opportunities in Nevada/Placer WMA. Opportunities are determined from maps of each species' current distribution and suitable range. Species are listed by three types of management opportunity:

- **Surveillance** – surveying to detect new infestations
- **Eradication** – complete removal of infestations
- **Containment** – limiting further spread of infestations

Below is a sample of top-ranked opportunities in Nevada/Placer WMA. This information should be combined with local knowledge to set local priorities (see "Using the Report" at the end of this document.) Click on a plant's name below to view a map of that species.



### Top Opportunities:

This is a summary of some top-ranked opportunities in Nevada/Placer WMA. Table 1 in this report contains details on a complete list of invasive plant management opportunities.

**Surveillance:**



Photo: © Regents of the University of California  
*Alternanthera philoxeroides*  
alligator weed



Photo courtesy of: Cal-IPC  
*Brassica tournefortii*  
Saharan mustard, African mustard



Photo: © Regents of the University of California  
*Cortaderia jubata*  
Jubatagrass



Photo: © Regents of the University of California  
*Euphorbia esula*  
leafy spurge



Photo © Legends  
Salv  
High

**Eradication:**



Phyto © Regents of the University of California  
*Ulex europaeus*  
QRSE



Photo: © Regents of the University of California  
*Acacia dealbata*  
silver wattle

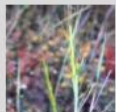


Photo © Regents of the University of California  
*Carthamus lanatus*  
woolly distaff thistle



Photo courtesy of Janet Garcia  
*Cynara cardunculus*  
artichoke thistle

**Containment:**



Phyto: © Regents of the University of California  
*Anglops triuncialis*  
barb poatgrass



Photo: © Regents of the University of California  
*Arundo donax*  
giant reed



Photo: © Regents of the University of California  
*Bromus madritensis* ssp. *rubens*  
red brome



Photo © Regents of the University of California  
*Bromus tectorum*  
downy brome, cheatgrass

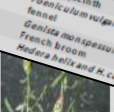


Photo: © Regents of the University of California  
*Centaurea maculosa*  
spotted knapweed

This report was created on Dec 12, 2011 using [calweedmapper.calflora.org](http://calweedmapper.calflora.org)

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**Cal WeedMapper**

### INVASIVE SPECIES MANAGEMENT OPPORTUNITIES IN Nevada/Placer WMA

#### Surveillance Opportunities

These opportunities entail regular surveys to detect new infestations of species not known to be present in the region. The strategic potential depends on the proximity of nearby infestations and the suitability of the area. The table below includes species occurring within 50 miles of the selected region.

Grouped by Statewide Cal-IPC Rating

Species	Suitable Range	
	2010	2050
Plant Species:		
Grouped by Statewide Cal-IPC Rating		

**Cal WeedMapper**

### INVASIVE SPECIES MANAGEMENT OPPORTUNITIES IN Nevada/Placer WMA

#### Eradication Opportunities

Eradication entails complete removal of all infestations in the area. These opportunities result from a small number of isolated infestations. The strategic importance of an eradication opportunity can be further assessed based on the degree of isolation as well as the suitability of the surrounding area. Determining the feasibility of eradication requires surveying infestations in the field.

Current Species Distribution

Species	Suitable Range	
	2010	2050
Grouped by Statewide Cal-IPC Rating		

**Cal WeedMapper**

### INVASIVE SPECIES MANAGEMENT OPPORTUNITIES IN Nevada/Placer WMA

#### Containment Opportunities

Containment entails limiting the spread from existing infestations. These opportunities result from larger groups of infested quads. The strategic importance of a containment opportunity can be further assessed based on how distinct the boundaries of the infestation are, how isolated it is, and the suitability of the surrounding area. Determining the feasibility of containment requires surveying infestations in the field.

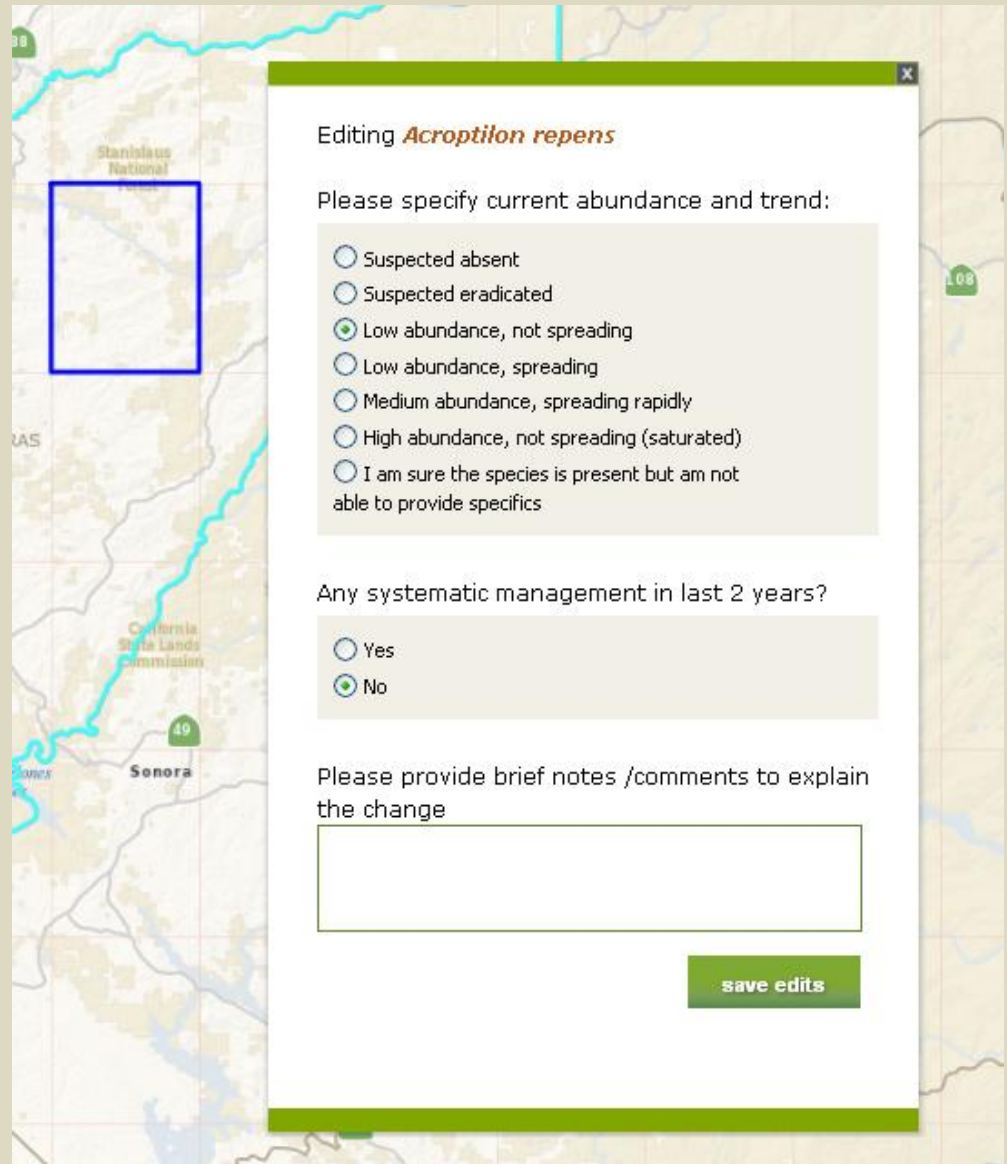
Current Species Distribution (number of quads out of 62 total)

Species	Current Species Distribution				Suitable Range	
	Infested	Spreading	Managed	Eradicated	2010	2050
Grouped by Statewide Cal-IPC Rating						
16 Species:						
Grouped by Statewide Cal-IPC Rating						



# Commenting & Updating

- Users can comment or add new information
- Cal-IPC gives a log-in
- At a WMA meeting or individually



The screenshot displays a web application for managing species data. On the left, a map shows the Stanislaus National Forest area with a blue rectangular selection box. On the right, a form titled "Editing *Acroptilon repens*" is open. The form includes a section for "Please specify current abundance and trend:" with seven radio button options. The third option, "Low abundance, not spreading", is selected. Below this is a section for "Any systematic management in last 2 years?" with two radio button options: "Yes" and "No", where "No" is selected. At the bottom, there is a text input field for "Please provide brief notes /comments to explain the change" and a green "save edits" button.

Editing *Acroptilon repens*

Please specify current abundance and trend:

- ☐ Suspected absent
- ☐ Suspected eradicated
- ☒ Low abundance, not spreading
- ☐ Low abundance, spreading
- ☐ Medium abundance, spreading rapidly
- ☐ High abundance, not spreading (saturated)
- ☐ I am sure the species is present but am not able to provide specifics

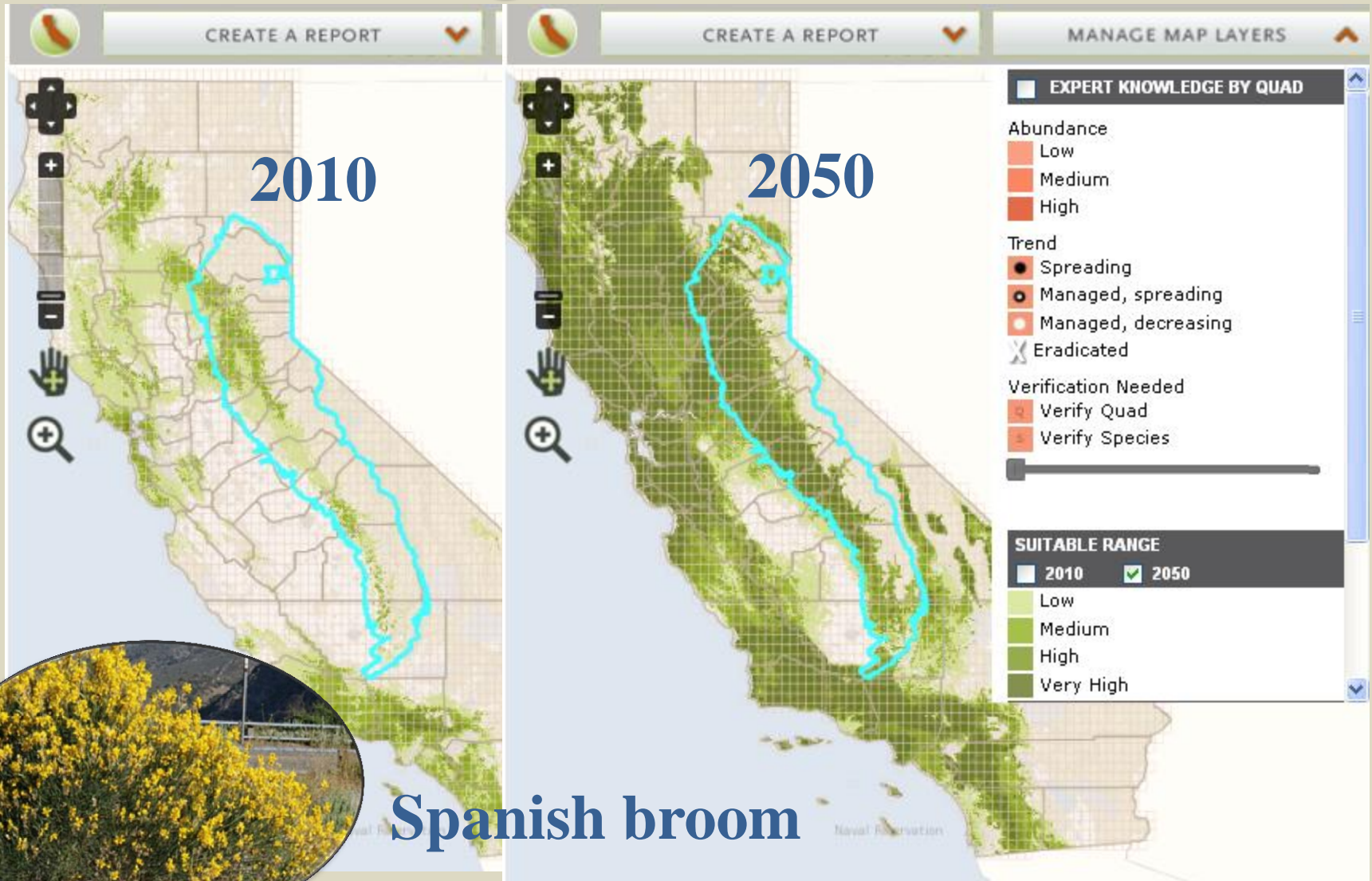
Any systematic management in last 2 years?

- ☐ Yes
- ☒ No

Please provide brief notes /comments to explain the change

save edits

# Modeling Potential Spread



**Live Demo?**