

Monitoring Invasive Plant Management



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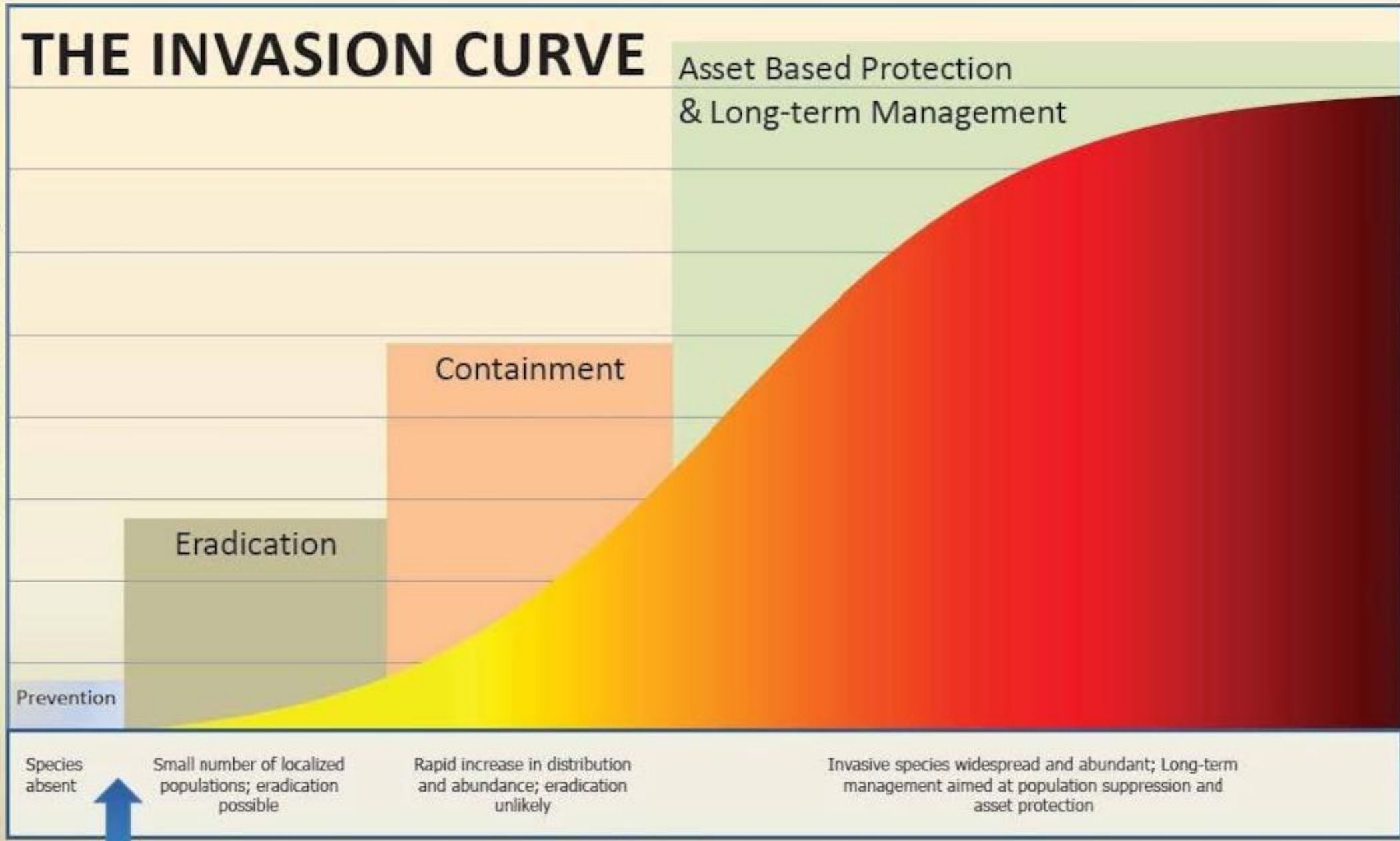
CALIFORNIA INVASIVE PLANT COUNCIL

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THE INVASION CURVE

AREA INFESTED →

CONTROL COSTS →



Species absent

Small number of localized populations; eradication possible

Rapid increase in distribution and abundance; eradication unlikely

Invasive species widespread and abundant; Long-term management aimed at population suppression and asset protection



Introduction

TIME →

Cal-IPC Regional EDRR Targets



- CDFA-rated
- Present in less than 10% of the region
- Under management by most counties in the region



| Region | No. Counties | Area (sq. miles) | No. EDRR Targets |
|--------------------|--------------|------------------|------------------|
| Bay Area | 9 | 6,907 | 17 |
| Central Coast | 3 | 5,114 | 8 |
| Central Sierra | 5 | 6,282 | 7 |
| Channel Islands | 3 | 351 | 37 |
| Desert | 1 | 20,057 | - |
| East Sierra | 2 | 13,230 | 12 |
| North Central | 3 | 13,233 | 18 |
| No. Central Valley | 6 | 7,996 | 18 |
| North Coast | 2 | 4,763 | 11 |
| North Sierra | 6 | 8,139 | 14 |
| Northeast | 2 | 8,459 | 5 |
| Northwest | 2 | 4,574 | 8 |
| Sierra San Joaquin | 3 | 9,544 | 3 |
| So. Central Coast | 2 | 6,034 | 7 |
| So. Central Valley | 3 | 4,821 | 7 |
| South Coast | 2 | 5,901 | 10 |
| South Sierra | 3 | 14,346 | 6 |
| Southeast | 3 | 15,590 | 5 |
| Southwest | 3 | 12,204 | 22 |

Most Common EDRR Targets

| Species | Common Name | Count of Regions Listed as an EDRR target |
|--|--------------------|---|
| <i>Linaria dalmatica</i> ssp. <i>dalmatica</i> | dalmatian toadflax | 9 |
| <i>Centaurea stoebe</i> ssp. <i>micranthos</i> | spotted knapweed | 8 |
| <i>Onopordum acanthium</i> | Scotch thistle | 8 |
| <i>Chondrilla juncea</i> | rush skeletonweed | 7 |
| <i>Cynara cardunculus</i> | artichoke thistle | 5 |



GOAL: Visit and manage each EDRR population each year



South Coast: Los Angeles and Ventura Counties

Southwest: Orange, western Riverside, and San Diego Counties



Bay Area: Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma Counties

Regional Comparison

| Region | No. of Counties | Area (acres) | No. of EDRR Species | No. of Populations in 2023 | Percent of Populations Visited in 2023 | Percent of Populations Managed in 2023 |
|---------------|------------------------|---------------------|----------------------------|-----------------------------------|---|---|
| Bay Area | 9 | 4,789,672 | 15 | 279 | 22% | 4% |
| South Coast | 2 | 3,701,108 | 9 | 226 | 18% | <1% |
| Southwest | 3 | 4,425,057 | 15 | 714 | 10% | 3% |

Percentage EDRR Populations Visited in 2023



Counting EDRR Populations

Included Calflora records from 2010 - 2024. This included observation records, survey records, herbarium records, and iNaturalist records

Desert knapweed (*Volutaria tubuliflora*) in the Anza Borrego area was not included in the count. Japanese knotweed (*Fallopia japonica*) in Marin County was not included in the count.

History stacks were counted as a single population.

Populations of the same species within 25 meters of each other were counted as a single population.

We removed CalWeedMapper records, which are redundant with other data.

Our count totals are lower than a direct Calflora search.

Tracking Management

We count a population as managed when there is a record from the current year (ideally appended to a history stack for that population) with the **“Management Status”** field marked as either:

- **“Under management”** (ideally with details in the “Notes” field)
- **“Searched for, not found”** if management has been recorded in previous years (we assume that this is post-treatment monitoring)

(Note that “Searched for, not found” is also used when investigating the site of an old Calflora observation to see if the plant is truly there now.)

Herbarium Records

- These populations may no longer exist and may inflate the number of EDRR populations
- Visiting these records and creating new Calflora observations with a completed management status will help us to more accurately represent EDRR management

| Region | No. of Herbarium Records | Percent of Populations that are Isolated Herbarium Records |
|---------------|---------------------------------|---|
| Bay Area | 71 | 16% |
| South Coast | 26 | 6% |
| Southwest | 84 | 4% |

iNaturalist Records

- iNaturalist records make up a significant percentage of EDRR records
- These records may come from the community. It is important to stay aware of these records and verify these records.

| Region | Percentage of iNaturalist Records |
|-------------|-----------------------------------|
| Bay | 3% |
| South Coast | 69% |
| Southwest | 35% |

Regional EDRR Management Highlights

Almost half of Orange County's visits to EDRR populations in 2023 included management.

The South Coast and the Southwest regions have less than 10% of isolated herbarium records as populations.

Help track regional EDRR populations

- 1. Keep records in Calflora** – aim for every EDRR population, every year
- 2. Use history stacking*** – append new records for each visit
- 3. Mark management status*** – and leave details in “Notes” field
- 4. Sign up for email alerts*** – and follow up on new observations

***Training videos** available from recent webinars at:

www.cal-ipc.org/solutions/mapping/



Spotted knapweed
(*Centaurea stoebe ssp. micranthos*)

Thank you!

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