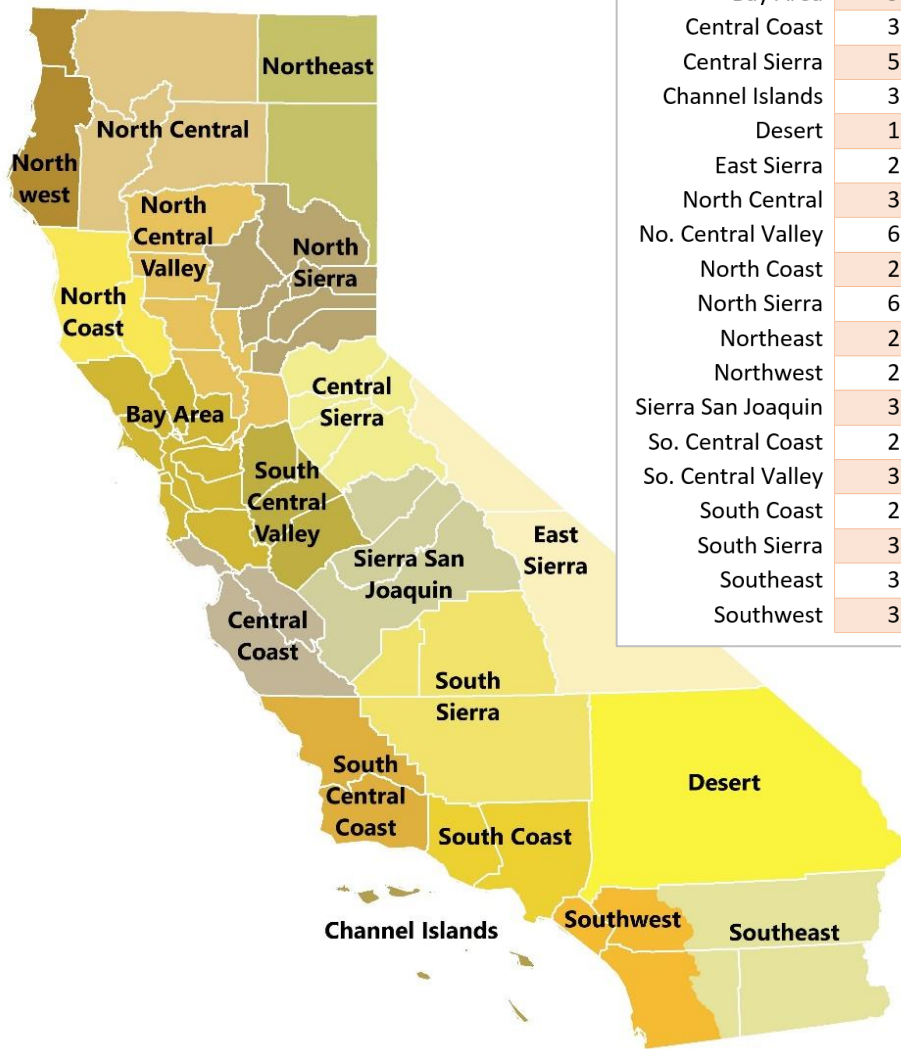


# Regional Invasive Plant EDRR Targets

October 2021



Region (alphabetically)	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

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 Nikki Valentine, Cal-IPC Conservation Specialist,  
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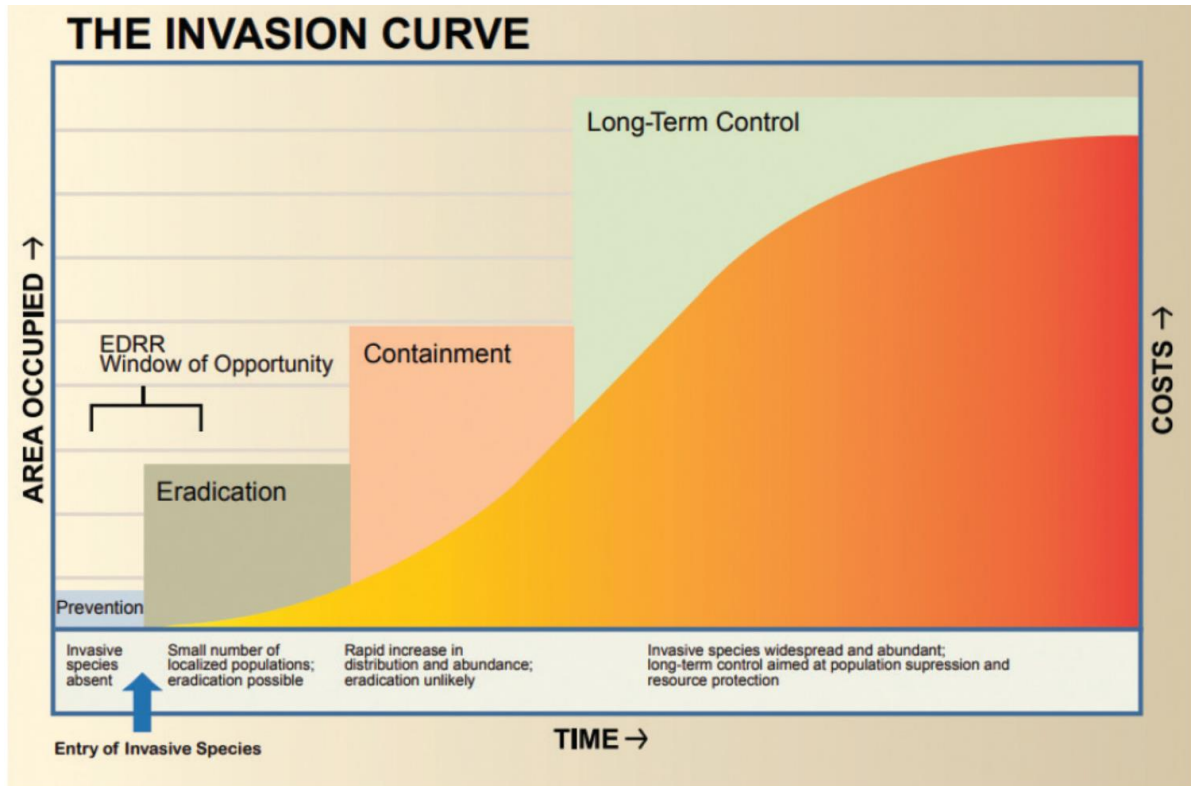


CALIFORNIA DEPARTMENT OF  
FOOD & AGRICULTURE



## Counties across California are working to control a range of invasive plant species.

Some of these species are considered **EDRR targets**. EDRR stands for early detection and rapid response, an approach of addressing new problem species before they become widespread. Working on EDRR target species is one of the most effective ways to reduce the impact of invasive plants. EDRR addresses invasive plants “early on the invasion curve” during the window of opportunity when containment, even eradication, remain viable and cost-effective options.



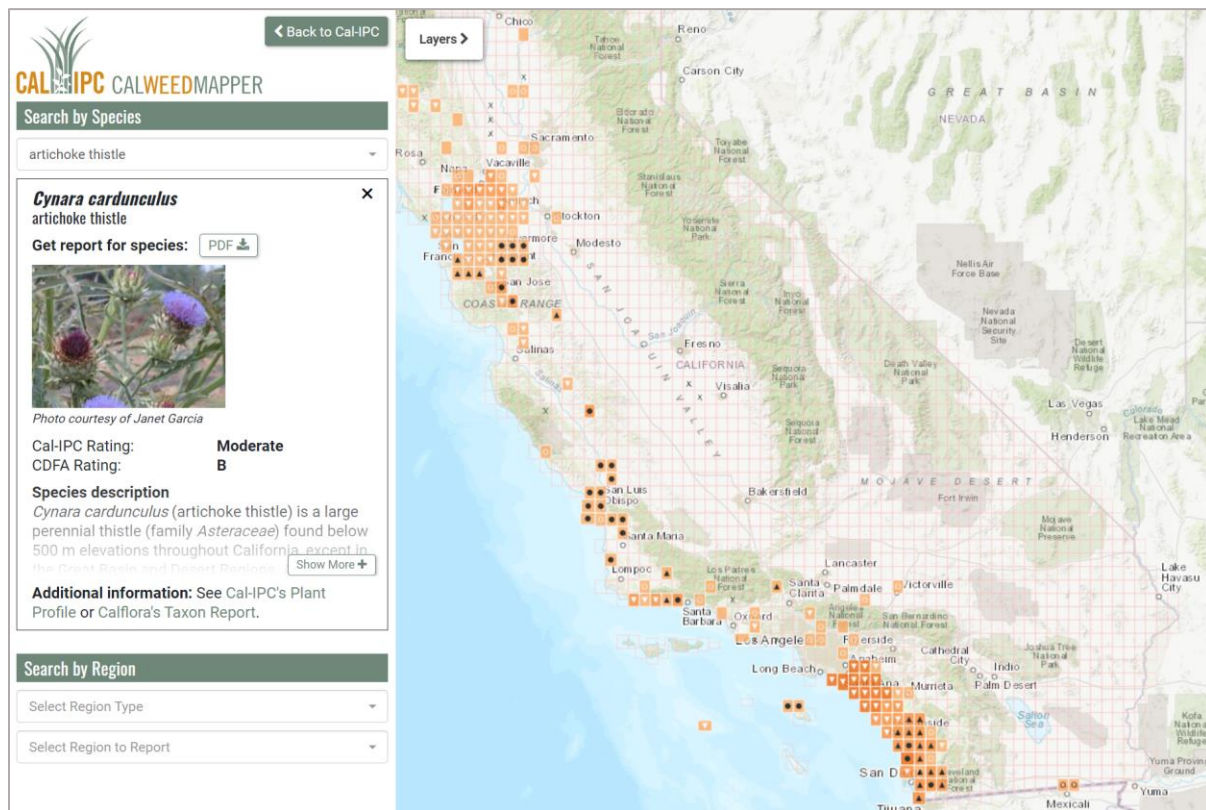
We surveyed **County Agricultural Commissioners (CACs)** and collaborative **Weed Management Areas (WMAs)** in regions across the state to find out what EDRR target species they are working on. We focused on weed species that are present in less than 10% of the region as the most likely targets for an EDRR approach. The summary tables in this report show the results. (More detailed spreadsheets for each region are available as well.) These tables illustrate the important work going on across the state. There are, of course, more potential EDRR target species that are not being working on due to insufficient resources.

To be successful, EDRR requires working across jurisdictional boundaries at the landscape level. That is what makes collaborative WMAs so important. They bring together all the agencies, landowners, and stakeholders needed to stop the spread of invasive plants in a region.

### Invasive plant EDRR in California helps...

- Safeguard our natural infrastructure
- Strengthen climate resiliency
- Protect our water resources
- Decrease wildfire risk
- Preserve biodiversity
- Maintain our agricultural production
- Provide recreational opportunities

This work supports many of the state’s goals, from the 30x30 Initiative to the Climate Plan to the Wildlife Action Plan. For more, [see this 2020 report](#) on the importance of invasive plant EDRR in California. To see the spread of these and other invasive plants in California, see the online maps at [CalWeedMapper](#).

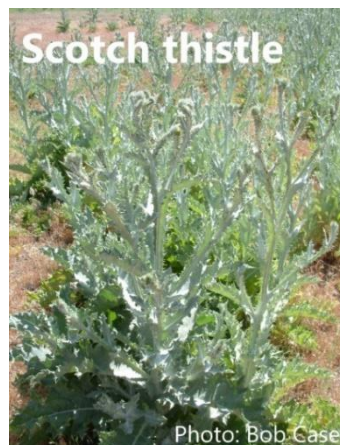
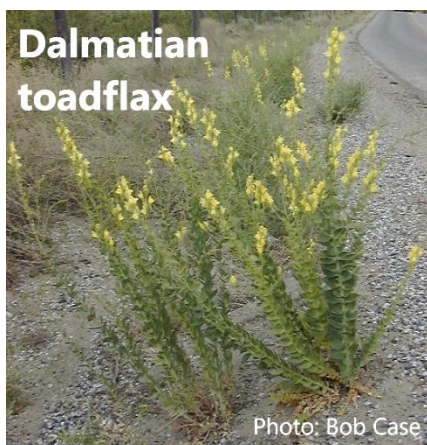


## Regional EDRR summaries

The tables on the following pages show the current EDRR targets in each region. The regions are organized alphabetically. For more information, contact the project leads listed on the first page. Below we list the most common target species across the regions, with photos of a few.

### **Most frequent targets:**

- spotted knapweed (14 regions)
- Dalmatian toadflax (10)
- Scotch thistle (10)
- yellow starthistle (8)
- skeleton weed (8)
- Canada thistle (8)
- perennial pepperweed (8)
- diffuse knapweed (7)
- giant reed (6)
- artichoke thistle (6)



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

<b>CAC Regional Target</b>	<b>WMA Regional Target</b>	<b>Species</b>	<b>Common Name</b>	<b>CDFA Rating</b>	<b>Cal-IPC Rating</b>
Containment	Containment	<i>Oncosiphon pilulifer</i>	stinknet	Q	High
Containment	Containment	<i>Centaurea stoebe</i> ssp. <i>micranthos</i>	spotted knapweed	W	High
Containment	Control	<i>Helianthus tuberosus</i>	Jerusalem artichoke	-	Watch
Control	Containment	<i>Onopordum illyricum</i>	Illyrian thistle	W	Watch
Control	Control	<i>Limonium duriusculum</i>	European sea lavender	B	Moderate
Control	Control	<i>Centaurea iberica</i>	Iberian starthistle	W	
Control		<i>Cuscuta japonica</i>	Japanese dodder	W	
Control		<i>Centaurea diffusa</i>	diffuse knapweed	W	Moderate
Control		<i>Limnobium spongia</i>	South American spongeplant	W	High-Alert
Control*	Control	<i>Fallopia japonica</i>	Japanese knotweed	A	Mod-Alert
Control*	Control	<i>Chondrilla juncea</i>	rush skeletonweed	W	Moderate
Control*		<i>Arctotheca calendula</i>	fertile capeweed	A	Mod-Alert
Control*		<i>Linaria dalmatica</i> ssp. <i>dalmatica</i>	Dalmatian toadflax	W	Moderate
	Control	<i>Crupina vulgaris</i>	bearded creeper	A	Limited
	Control	<i>Spartina anglica</i>	common cordgrass	W	Mod-Alert
	Control	<i>Cestrum parqui</i>	green cestrum	-	Watch
	Partial Control	<i>Genista monosperma</i>	bridal broom	W	Mod-Alert

**Containment:** We do not allow any net spread of this plant.

**Control:** We control this plant, but not enough for region-wide containment.

**Control\*:** This plant is currently controlled by the majority of counties in the region but not all.

**Partial Control:** A few populations in the region are being controlled but there is no focused control effort.

## Central Coast: Monterey, San Benito, and Santa Cruz Counties

CAC Regional Target	WMA Regional Target	Species	Common Name	CDFA Rating	Cal-IPC Rating
Containment	Containment	<i>Chondrilla juncea</i>	skeleton weed	W	Moderate
Containment	Containment	<i>Stipa brachychaeta</i>	punagrass	W	Watch
Containment	Containment	<i>Onopordum acanthium</i>	Scotch thistle	W	High
Control		<i>Cytisus striatus</i>	Portugese broom	B	Moderate
Control		<i>Cynara cardunculus</i>	artichoke thistle	W	Moderate
Control		<i>Cirsium arvense</i>	Canada thistle	W	Moderate
Control*		<i>Tribulus terrestris</i>	puncture vine	W	Limited
	Control	<i>Brassica tournefortii</i>	Sahara mustard	C	High

**Containment:** We do not allow any net spread of this plant.

**Control:** We control this plant, but not enough for region-wide containment.

**Control\*:** This plant is currently controlled by the majority of counties in the region but not all.

## Central Sierra: Alpine, Amador, Calaveras, El Dorado, and Tuolumne Counties

CAC Regional Target	WMA Regional Target	Species	Common Name	CDFA Rating	Cal-IPC Rating
Containment		<i>Carduus acanthoides</i>	plumeless thistle	W	Limited
Containment		<i>Onopordum acanthium</i>	Scotch thistle	W	High
Containment		<i>Ulex europaeus</i>	gorse	W	High
Containment		<i>Lythrum salicaria</i>	purple loosestrife	W	High
Containment		<i>Centaurea calcitrapa</i>	purple starthistle	W	Moderate
Containment		<i>Isatis tinctoria</i>	dyer's woad	W	Moderate
Control		<i>Carthamus lanatus</i>	woolly distaff thistle	W	High

**Containment:** We do not allow any net spread of this plant.

**Control:** We control this plant, but not enough for region-wide containment.

## East Sierra: Inyo and Mono Counties

CAC Regional Target	WMA Regional Target	Species	Common Name	CDFA Rating	Cal-IPC Rating
Containment	Containment	<i>Linaria dalmatica</i>	dalmatian toadflax	W	Moderate
Containment	Containment	<i>Elymus caput-medusae</i>	medusahead	W	High
Containment	Containment	<i>Alhagi maurorum</i>	camelthorn	W	Moderate
Containment	Containment	<i>Centaurea solstitialis</i>	yellow starthistle	W	High
Containment	Containment	<i>Tamarix parviflora</i>	smallflower tamarisk	W	High
Control	Control	<i>Onopordum acanthium</i>	Scotch thistle	W	High
Control	Control	<i>Centaurea diffusa</i>	diffuse knapweed	W	Moderate
Control	Control	<i>Acroptilon repens</i>	Russian knapweed	W	Moderate
Control	Control	<i>Centaurea maculosa</i>	spotted knapweed	W	High
Control	Control	<i>Arundo donax</i>	giant reed	W	High
Control	Control	<i>Cirsium arvense</i>	Canada thistle	W	Moderate
Control	Control	<i>Lepidium appelianum</i>	hairy whitetop	W	Limited

**Containment:** We do not allow any net spread of this plant.

**Control:** We control this plant, but not enough for region-wide containment.

## North Central: Shasta, Siskiyou, and Trinity Counties

CAC Regional Target	WMA Regional Target	Species	Common Name	CDFA Rating	Cal-IPC Rating
Containment		<i>Fallopia japonica</i>	Japanese knotweed	A	Mod-Alert
Containment		<i>Cynara cardunculus</i>	artichoke thistle	W	Moderate
Containment		<i>Centaurea calcitrapa</i>	purple starthistle	W	Moderate
Containment		<i>Dittrichia graveolens</i>	stinkwort	W	Mod-Alert
Containment		<i>Chondrilla juncea</i>	skeleton weed	W	Moderate
Control		<i>Aegilops cylindrica</i>	jointed goatgrass	W	Watch
Control		<i>Sesbania punicea</i>	scarlet wisteria	W	High
Control		<i>Salvia aethiopsis</i>	Mediterranean sage	W	Limited
Control		<i>Euphorbia oblongata</i>	eggleaf spurge	W	Limited
Control		<i>Aegilops triuncialis</i>	barb goatgrass	W	High
Control		<i>Centaurea jacea</i> ssp. <i>pratensis</i>	meadow knapweed	W	Mod-Alert
Control		<i>Acroptilon repens</i>	Russian knapweed	W	Moderate
Control		<i>Tribulus terrestris</i>	puncture vine	W	Limited
Control		<i>Euphorbia virgata</i>	leafy spurge	W	High
Control		<i>Linaria vulgaris</i>	yellow toadflax	-	Moderate
Control		<i>Phytolacca americana</i>	common pokeweed	-	Limited
Control		<i>Silybum marianum</i>	milk thistle	-	Limited
Control*		<i>Arundo donax</i>	giant reed	W	High

**Containment:** We do not allow any net spread of this plant.

**Control:** We control this plant, but not enough for region-wide containment.

**Control\*:** This plant is currently controlled by the majority of counties in the region but not all.



**North Central Valley: Colusa, Glenn, Sacramento, Sutter, Tehama, and Yolo Counties**

CAC Regional Target	WMA Regional Target	Species	Common Name	CDFA Rating	Cal-IPC Rating
Control		<i>Linaria dalmatica</i> <i>ssp. dalmatica</i>	Dalmatian toadflax	W	Moderate
Control		<i>Carduus nutans</i>	musk thistle	W	Moderate
Control		<i>Onopordum acanthium</i>	Scotch thistle	W	High
Control		<i>Limnobium spongia</i>	South American spongeplant	W	High
Control		<i>Carthamus lanatus</i>	woolly distaff thistle	W	High
Control		<i>Solanum eleangifolium</i>	white horsenettle	W	
Control		<i>Carduus acanthoides</i>	plumeless thistle	W	Limited
Control		<i>Centaurea stoebe</i> <i>ssp. micranthos</i>	spotted knapweed	W	High
Control		<i>Euphorbia oblongata</i>	oblong spurge	W	Limited
Control		<i>Cynara cardunculus</i>	artichoke thistle	W	Moderate
Control		<i>Acroptilon repens</i>	Russian knapweed	W	Moderate
Control		<i>Centaurea diffusa</i>	diffuse knapweed	W	Moderate
Control		<i>Isatis tinctoria</i>	dyer's woad	W	Moderate
Control		<i>Linaria vulgaris</i>	yellow toadflax, butter and eggs	-	Moderate
Control		<i>Cynoglossum officinale</i>	houndstongue	-	Moderate
Control		<i>Ludwigia peploides</i>	creeping water- primrose	-	High
Control*		<i>Parentucellia viscosa</i>	yellow glandweed, sticky parentucellia	-	Limited
Control*		<i>Eichhornia crassipes</i>	water hyacinth	-	High

**Containment:** We do not allow any net spread of this plant.

**Control:** We control this plant, but not enough for region-wide containment.

**Control\*:** This plant is currently controlled by the majority of counties in the region but not all.

## North Coast: Lake and Mendocino Counties

CAC Regional Target	WMA Regional Target	Species	Common Name	CDFA Rating	Cal-IPC Rating
Containment		<i>Galega officinalis</i>	professorweed	A	Watch
Containment		<i>Lepidium appelianum</i> (= <i>Cardaria pubescens</i> )	hairy whitetop	W	Limited
Containment		<i>Chondrilla juncea</i>	skeleton weed	W	Moderate
Containment		<i>Onopordum acanthium</i>	Scotch thistle	W	High
Containment		<i>Isatis tinctoria</i>	dyer's woad	W	Moderate
Containment		<i>Cynara cardunculus</i>	artichoke thistle	W	Moderate
Control		<i>Fallopia sachalinensis</i>	giant knotweed	A	Mod-Alert
Control		<i>Acaena novae-zelandiae</i>	biddy-biddy	W	Watch
Control		<i>Linaria dalmatica</i> ssp. <i>dalmatica</i>	dalmatian toadflax	W	Moderate
Control		<i>Lythrum salicaria</i>	purple loosestrife	W	High
Control		<i>Ulex europaeus</i>	gorse	W	High

**Containment:** We do not allow any net spread of this plant.

**Control:** We control this plant, but not enough for region-wide containment.

## North Sierra: Butte, Nevada, Placer, Plumas, Sierra, and Yuba Counties

CAC Regional Target	WMA Regional Target	Species	Common Name	CDFA Rating	Cal-IPC Rating
Containment		<i>Euphorbia myrsinites</i>	myrtle spurge	A	
Containment		<i>Halogeton glomeratus</i>	halogeton	B	Moderate
Containment		<i>Carduus acanthoides</i>	plumeless thistle	W	Limited
Containment		<i>Berteroa incana</i>	hoary alyssum	W	Watch
Containment		<i>Carthamus lanatus</i>	woolly distaff thistle	W	High
Containment		<i>Ulex europaeus</i>	gorse	W	High
Containment		<i>Euphorbia virgata</i> (= <i>Euphorbia esula</i> )	leafy spurge	W	High
Containment		<i>Centaurea virgata</i> ssp. <i>squarrosa</i>	squarrose knapweed	W	Moderate
Containment		<i>Centaurea calcitrapa</i>	purple starthistle	W	Moderate
Containment		<i>Linaria dalmatica</i> ssp. <i>dalmatica</i>	Dalmatian toadflax	W	Moderate
Control		<i>Aegilops cylindrica</i>	jointed goatgrass	W	Watch
Control		<i>Cynara cardunculus</i>	artichoke thistle	W	Moderate
Control		<i>Potentilla recta</i>	sulphur cinquefoil	W	
Control		<i>Euphorbia oblongata</i>	oblong spurge	W	Limited

**Containment:** We do not allow any net spread of this plant.

**Control:** We control this plant, but not enough for region-wide containment.

## Northeast: Lassen and Modoc Counties

CAC Regional Target	WMA Regional Target	Species	Common Name	CDFA Rating	Cal-IPC Rating
Containment		<i>Centaurea calcitrapa</i>	purple starthistle	W	Moderate
Containment		<i>Centaurea virgata</i> ssp. <i>squarrosa</i>	squarrose knapweed	W	Moderate
Control		<i>Carduus acanthoides</i>	plumeless thistle	W	Limited
Control		<i>Chondrilla juncea</i>	skeleton weed	W	Moderate
Control		<i>Euphorbia virgata</i> (= <i>Euphorbia esula</i> )	leafy spurge	W	High

**Containment:** We do not allow any net spread of this plant.

**Control:** We control this plant, but not enough for region-wide containment.

## Northwest: Del Norte and Humboldt Counties

CAC Regional Target	WMA Regional Target	Species	Common Name	CDFA Rating	Cal-IPC Rating
Containment	Containment	<i>Fallopia xbohemica</i>	Bohemian knotweed	A	Watch
Containment	Control	<i>Carthamus lanatus</i>	woolly distaff thistle	W	High
Containment	Partial control	<i>Limnobium spongia</i>	South American spongeplant	W	High
Control		<i>Watsonia meriana</i>	bulbil watsonia	-	Limited
	Containment	<i>Tamarix ramosissima</i>	saltcedar	W	High
	Containment	<i>Lepidium latifolium</i>	perennial pepperweed	W	High
	Control	<i>Euphorbia oblongata</i>	eggleaf spurge	W	Limited
	Control	<i>Lythrum salicaria</i>	purple loosestrife	W	High

**Containment:** We do not allow any net spread of this plant.

**Control:** We control this plant, but not enough for region-wide containment.

**Partial Control:** A few populations in the region are being controlled but there is no focused control effort.

## Sierra San Joaquin: Fresno, Madera, and Mariposa Counties

CAC Regional Target	WMA Regional Target	Species	Common Name	CDFA Rating	Cal IPC Rating
Control		<i>Chondrilla juncea</i>	skeleton weed	W	Moderate
Control		<i>Centaurea maculosa</i>	spotted knapweed	W	High
Control		<i>Lepidium latifolium</i>	perennial pepperweed	W	High

**Control:** We control this plant, but not enough for region-wide containment.

## South Central Coast: Santa Barbara and San Luis Obispo Counties

CAC Regional Target	WMA Regional Target	Species	Common Name	CDFA Rating	Cal IPC Rating
Control		<i>Euphorbia virgata</i>	leafy spurge	W	High
Containment		<i>Ononis alopecuroides</i>	foxtail restharrow	W	Limited
Containment		<i>Linaria dalmatica</i>	dalmatian toadflax	W	Moderate
Containment		<i>Onopordum acanthium</i>	Scotch thistle	W	High
Containment		<i>Cirsium arvense</i>	Canada thistle	W	Moderate
Control		<i>Limonium duriusculum</i>	European sea lavender	B	Moderate
Control		<i>Emex spinosa</i>	devil's thorn	-	Moderate

**Containment:** We do not allow any net spread of this plant.

**Control:** We control this plant, but not enough for region-wide containment.

## South Central Valley: Merced, San Joaquin, and Stanislaus Counties

CAC Regional Target	WMA Regional Target	Species	Common Name	CDFA Rating	Cal IPC Rating
Containment		<i>Arctotheca calendula</i>	fertile capeweed	A	Moderate
Containment		<i>Alternanthera philoxeroides</i>	alligatorweed	A	High
Containment		<i>Centaurea maculosa</i>	spotted knapweed	W	High
Containment		<i>Salvinia molesta</i>	giant salvinia	W	High
Containment		<i>Limnobium spongia</i>	South American spongeplant	W	High
Containment		<i>Chorispora tenella</i>	purple mustard	W	-
Containment		<i>Arctotheca prostrata</i>	capeweed	-	Moderate

**Containment:** We do not allow any net spread of this plant.

## South Coast: Los Angeles and Ventura Counties

CAC Regional Target	WMA Regional Target	Species	Common Name	CDFA Rating	Cal-IPC Rating
Containment	Containment	<i>Halogeton glomeratus</i>	Halogeton	B	Moderate
Containment	Containment	<i>Linaria dalmatica</i>	dalmatian toadflax	W	Moderate
Containment	Containment	<i>Onopordum acanthium</i>	Scotch thistle	W	High
Containment	Containment	<i>Centaurea maculosa</i>	spotted knapweed	W	High
Containment	Containment	<i>Pancratium maritimum</i>	sea daisy	-	-
Containment	Control	<i>Alternanthera philoxeroides</i>	alligatorweed	A	High
Containment	Control	<i>Aegilops cylindrica</i>	goat grass	W	Watch
Containment	Control	<i>Carthamus lanatus</i>	woolly distaff thistle	W	High
Containment	Control	<i>Chondrilla juncea</i>	skeleton weed	W	Moderate
Control	Control	<i>Araujia sericifera</i>	bladderflower	W	Watch

**Containment:** We do not allow any net spread of this plant.

**Control:** We control this plant, but not enough for region-wide containment.

## South Sierra: Kern, Kings, and Tulare Counties

CAC Regional Target	WMA Regional Target	Species	Common Name	CDFA Rating	Cal IPC Rating
Control		<i>Alternanthera philoxeroides</i>	alligatorweed	A	High
Control		<i>Halogeton glomeratus</i>	Halogeton	B	Moderate
Control		<i>Peganum harmala</i>	African-rue	W	Watch
Control		<i>Linaria dalmatica</i>	dalmatian toadflax	W	Moderate
Control		<i>Centaurea maculosa</i>	spotted knapweed	W	High
Control		<i>Onopordum acanthium</i>	Scotch thistle	W	High

**Control:** We control this plant, but not enough for region-wide containment.

**Southeast:** Imperial, eastern Riverside, and eastern San Diego Counties

CAC Regional Target	WMA Regional Target	Species	Common Name	CDFA Rating	Cal IPC Rating
Containment		<i>Genista monspessulana</i>	French broom	C-W	High
Containment		<i>Alhagi maurorum</i>	camelthorn	W	Moderate
Control		<i>Volutaria tubuliflora</i>	desert knapweed	A	Limited
Control		<i>Aegilops triuncialis</i>	barb goatgrass	W	High
Control		<i>Centaurea solstitialis</i>	yellow starthistle	W	High

**Containment:** We do not allow any net spread of this plant.

**Control:** We control this plant, but not enough for region-wide containment.

**Southwest:** Orange, western Riverside, and western San Diego Counties

CAC Regional Target	WMA Regional Target	Species	Common Name	CDFA Rating	Cal IPC Rating
Containment	Control	<i>Volutaria tubuliflora</i>	desert knapweed	A	Limited
Containment		<i>Carrichtera annua</i>	Ward's weed	A	Moderate
Containment		<i>Hypericum canariense</i>	Canary Island St. Johnswort	B	Moderate
Containment		<i>Hypericum perforatum</i>	St. John's wort	C-W	Limited
Containment		<i>Centaurea maculosa</i>	spotted knapweed	W	High
Containment		<i>Euphorbia terracina</i>	carnation spurge	W	Limited
Control	Partial Control	<i>Parthenium hysterophorus</i>	Santa Maria feverfew	A	Watch
Control		<i>Cenchrus echinatus</i>	Southern sandbur	B	Watch
Control		<i>Tamarix aphylla</i>	athel	B	Limited
Control		<i>Senecio linearifolius</i>	fireweed groundsel	W	Watch
Control		<i>Sesbania punicea</i>	scarlet wisteria	W	High
Control		<i>Aegilops triuncialis</i>	barb goatgrass	W	High
Control		<i>Araujia sericifera</i>	bladderflower	W	Watch
	Containment	<i>Arctotheca calendula</i>	fertile capeweed	A	Moderate
	Containment	<i>Genista monosperma</i>	bridal veil broom	W	Moderate
	Containment	<i>Elymus caput-medusae</i>	medusahead	W	High
	Control	<i>Euphorbia virgata</i>	leafy spurge	W	High
	Partial Control	<i>Acacia baileyana</i>	cootamundra wattle	-	Watch
	Partial Control	<i>Eucalyptus cladocalyx</i>	sugargum	-	Watch
	Partial Control	<i>Kochia scoparia</i>	kochia	-	Limited
	New	<i>Saponaria officinalis</i>	bouncing-bet	-	Limited
	New	<i>Briza maxima</i>	big quakinggrass	-	Limited

**Containment:** We do not allow any net spread of this plant.

**Control:** We control this plant, but not enough for region-wide containment.

**Partial Control:** A few populations in the region are being controlled but there is no focused control effort.

**New:** Beginning control of this plant.