3. RECOMMENDATIONS FOR WEED MANAGEMENT AREAS

This chapter includes sections for 14 WMAs, ranging from Lassen County Special Weed Action Team in the north to Kern WMA in the south, and including the Eastern Sierra WMA. For each WMA, we recommend a set of top priority opportunities based on statewide risk maps. Species selected as region-wide recommendations in chapter 2 are included as priorities for each WMA unless there are no nearby infestations. Other species with particular spatial opportunities in the WMA may be included. For instance, the southernmost reach of a particular species in the Sierra Nevada may represent an important opportunity to prevent spread.

Each section includes a table showing statistics and opportunity ratings for all species considered in this report as well as maps for top priority species for that WMA. These recommendations are not meant to be definitive. WMAs should refer to the table and full species maps in chapter 4 to determine additional local priorities. (In addition, as described in chapter 1, this study does not include every invasive plant species of potential concern in the Sierra Nevada.) Some species may be judged a top priority in a given WMA based on local impacts. Others may be judged a top priority by specific natural resource management entities within a WMA. For instance, common velvet grass (*Holcus lanatus*) is a top priority for managers in Sequoia-Kings Canyon National Park, but may be less of a priority for natural resource managers at lower elevation in the foothills.

Some WMAs fall completely within the Sierra Nevada ecoregion, while others are only partly within it. Sacramento WMA and Northern San Joaquin Valley WMA are not included although small portions fall within the Sierra Nevada. (See map in chapter 1.) Statistics for each WMA are calculated for the entire WMA, including any portion outside the Sierra Nevada region. Maps follow the species order of the table.

These recommendations focus on the southern portion of Lassen SWAT that is within the Sierra Nevada region (see map in chapter 1). Statistics in the table are based on all of Lassen County.

Eradication is recommended for species that have limited occurrence within the WMA. Of the species examined, the following are priority eradication opportunities for Lassen SWAT:

diffuse knapweed (*Centaurea diffusa*)

rush skeletonweed (*Chondrilla juncea*) – one quad on the southern edge

dyer's woad (*Isatis tinctoria*)

Containment is recommended for species that are more widespread, where eradication may not be a realistic goal. The following species are priority containment opportunities for Lassen SWAT:

Russian knapweed (*Acroptilon repens*)

musk thistle (*Carduus nutans*) – population in southeast part of Lassen WMA, in coordination with efforts in Plumas/Sierra WMA

spotted knapweed (*Centaurea maculosa*) – present in low abundance

yellow starthistle (*Centaurea solstitialis*) – several quads are under management and others have been eradicated

Scotch thistle (*Onopordum acanthium*) – prevent spread from the north and east

Scotch broom (*Cytisus scoparius*) – work with Plumas/Sierra WMA

Dalmatian toadflax (*Linaria genistifolia* subsp. *dalmatica*)

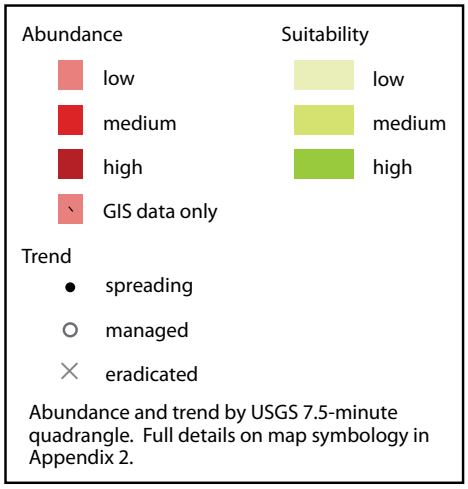
Surveillance is recommended to prevent spread into the Sierra region of Lassen SWAT:

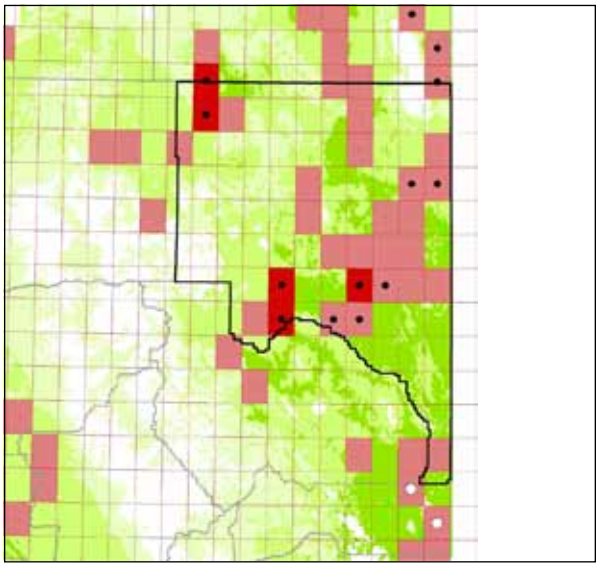
stinkwort (*Dittrichia graveolens*) – prevent new populations in the northern Sierra

French broom (*Genista monspessulana*)

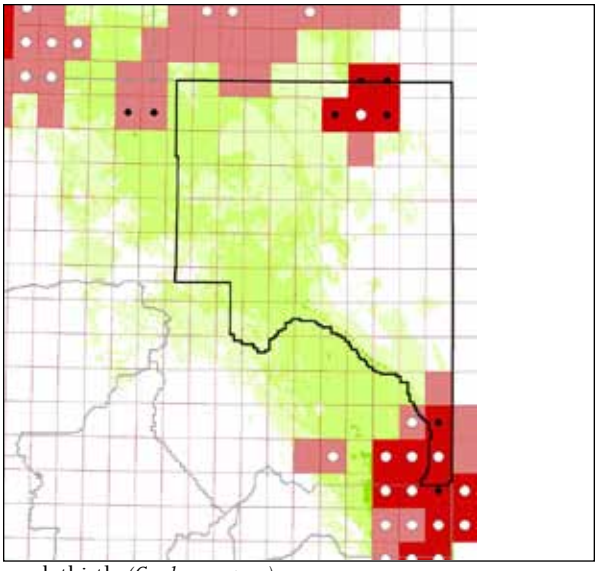
Spanish broom (*Spartium junceum*)

yellow toadflax (*Linaria vulgaris*)

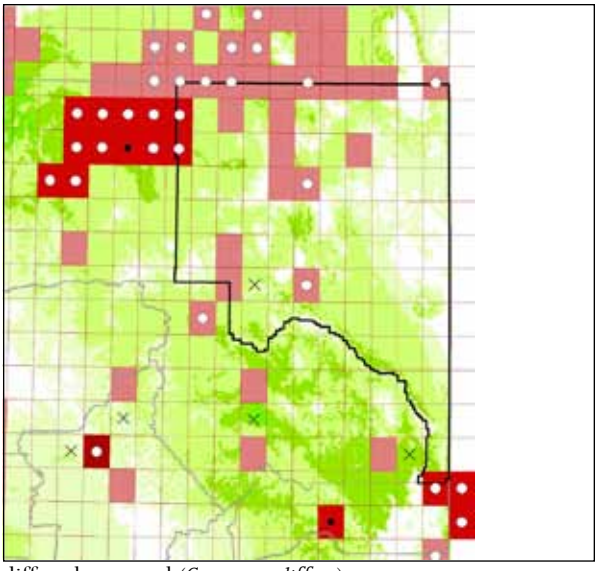




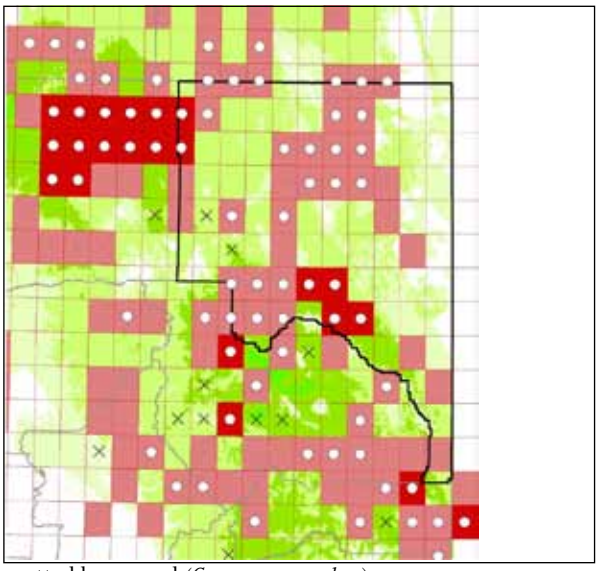
Russian knapweed (*Acroptilon repens*)



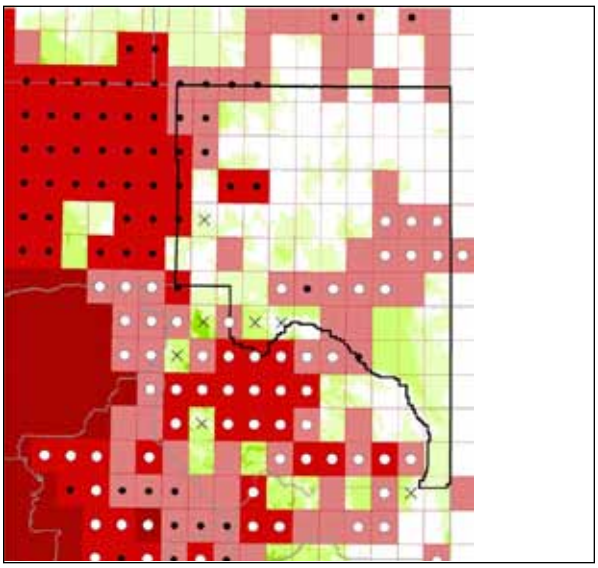
musk thistle (*Carduus nutans)*



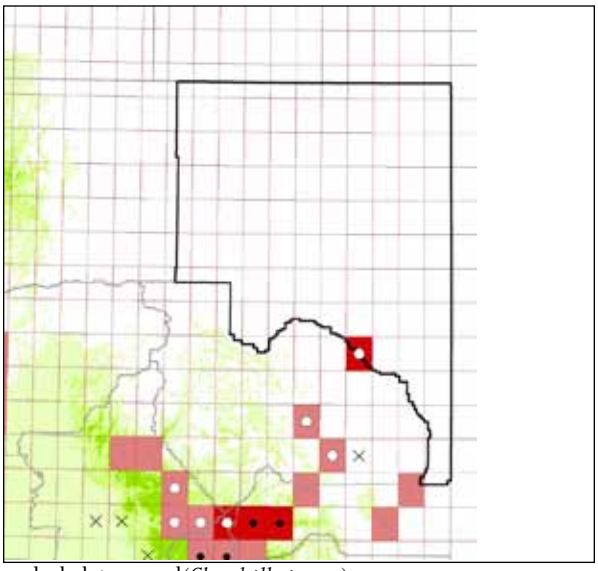
diffuse knapweed (*Centaurea diffusa*)



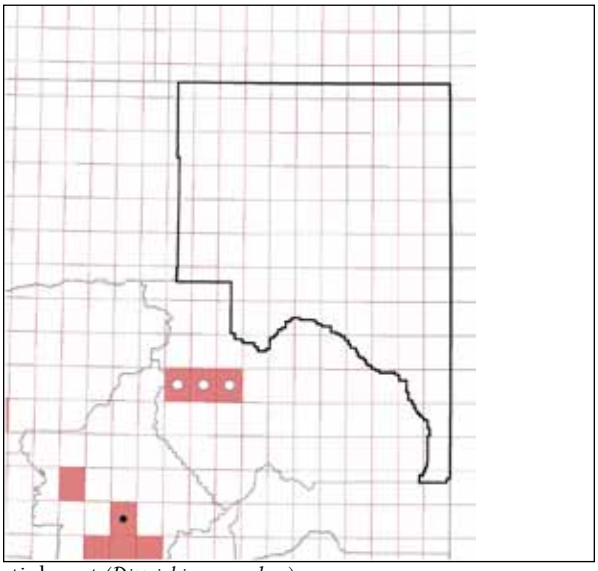
spotted knapweed (*Centaurea maculosa*)



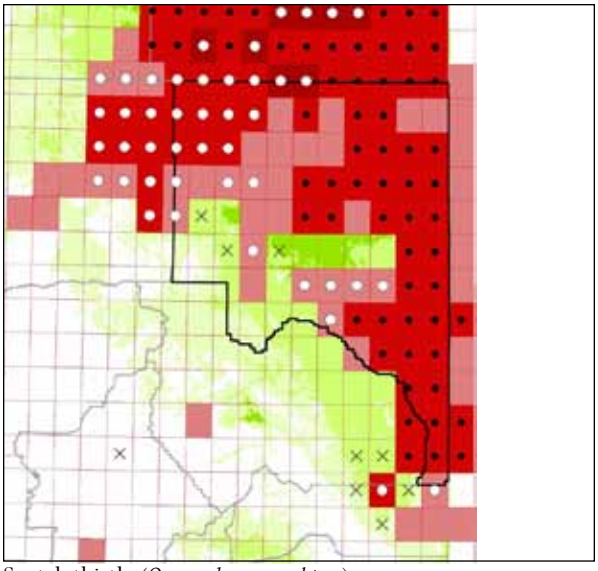
yellow starthistle (*Centaurea solstitialis*)



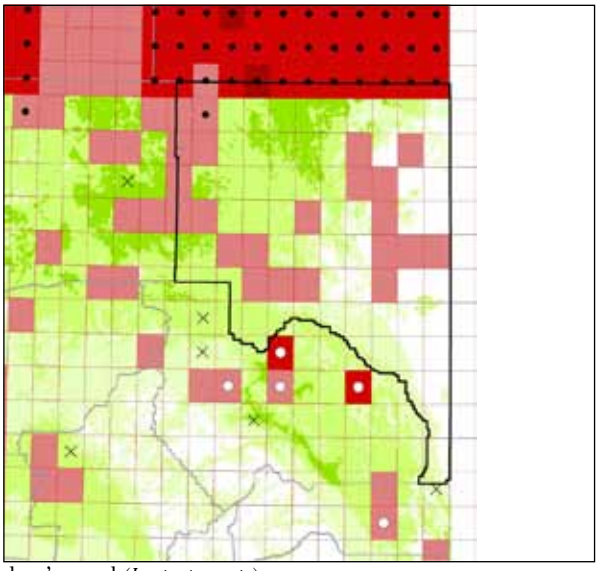
rush skeletonweed(*Chondrilla juncea*)



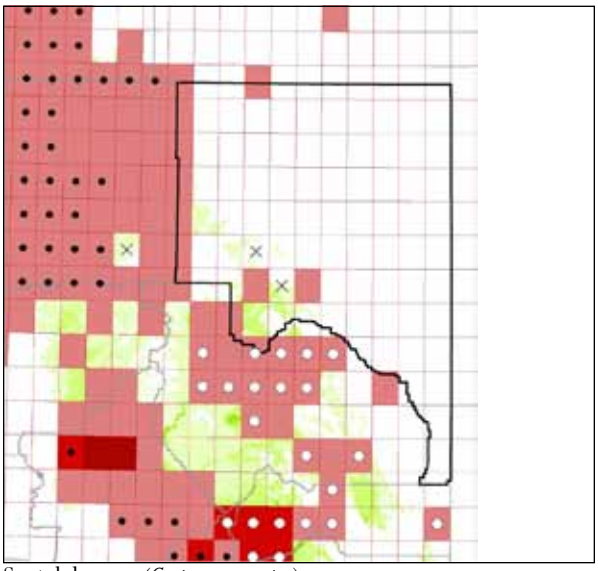
stinkwort (*Dittrichia graveolens*)



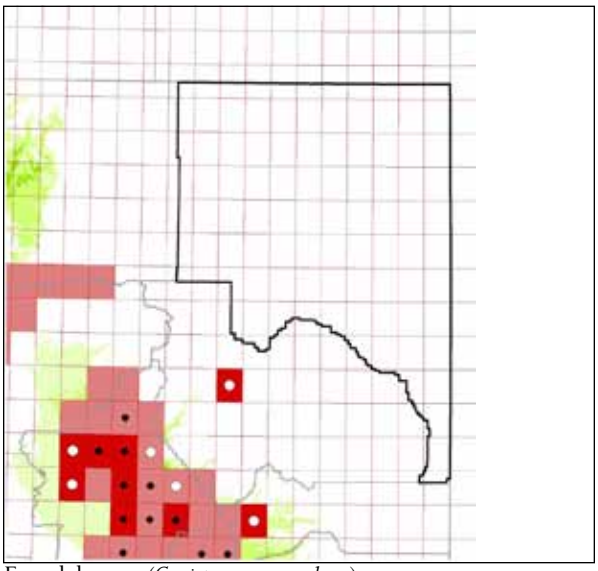
Scotch thistle (*Onopordum acanthium*)



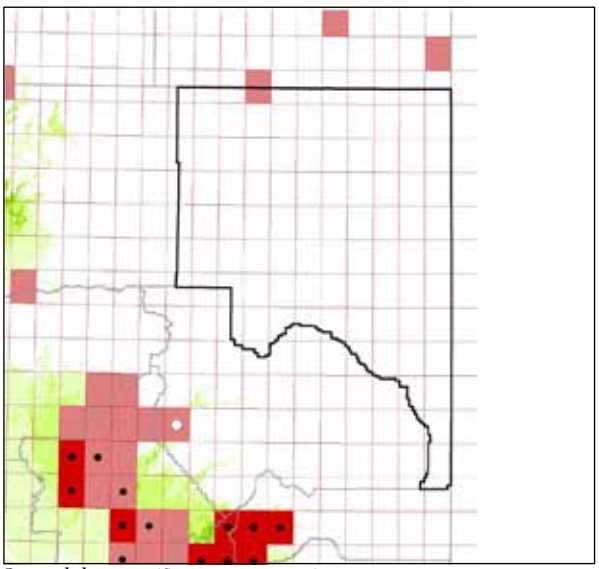
dyer's woad (*Isatis tinctoria*)



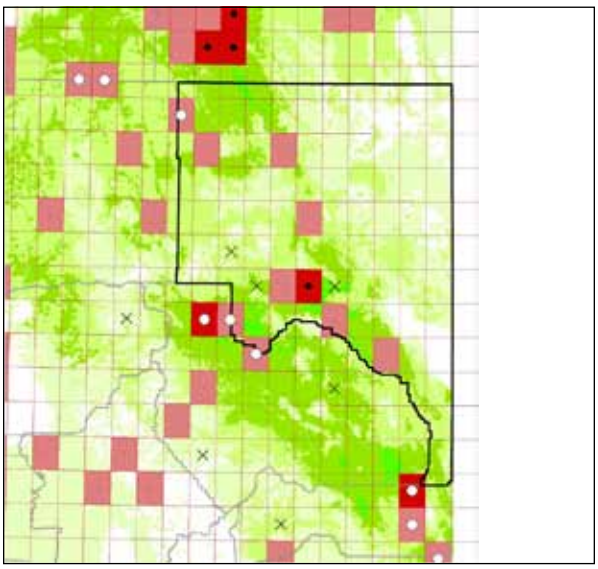
Scotch broom (*Cytisus scoparius*)



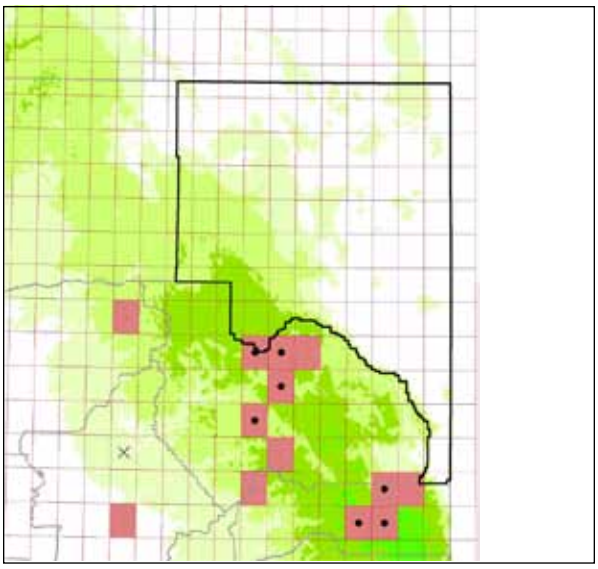
French broom (*Genista monspessulana*)



Spanish broom (*Spartium junceum*)



Dalmatian toadflax (*Linaria genistifolia* subsp. *dalmatica)*



yellow toadflax (*Linaris vulgaris*)

Management opportunities and statistics for the Lassen SWAT

Priority	Species	Opportunities			Statistics							
		Eradication	Containment	Surveillance	% Infested	% Suitable Infested	% Spreading	% Managed	% Eradicated	% Suitable 2010	% Suitable 2050	Suitability Change
	Family Apiaceae											
	Poison-hemlock	-	M	-	24	100	48	0	0	3	41	↑↑
	Family Asteraceae											
●	**Russian knapweed**	**-**	**H**	**-**	**28**	**28**	**34**	**3**	**0**	**94**	**98**	**-**
●	**Musk thistle**	**-**	**H**	**-**	**15**	**16**	**41**	**18**	**0**	**71**	**56**	**↓**
	Italian thistle & slenderflower thistle	-	-	M	1	-	0	0	0	-	-	-
	Woolly distaff thistle	-	-	M	0	-	-	-	0	0	0	-
●	**Diffuse knapweed**	**H**	**-**	**-**	**20**	**20**	**9**	**9**	**1**	**85**	**100**	**↑**
●	**Spotted knapweed**	**-**	**H**	**-**	**40**	**41**	**0**	**9**	**2**	**90**	**100**	**-**
	Tocalote	-	-	M	0	-	-	-	0	-	-	-
●	**Yellow starthistle**	**-**	**H**	**-**	**36**	**38**	**46**	**12**	**4**	**55**	**97**	**↑**
●	**Rush skeletonweed**	**H**	**-**	**-**	**2**	**50**	**0**	**0**	**0**	**1**	**14**	**↑↑**
	Canada thistle	-	M	-	82	82	35	0	0	99	96	-
	Bull thistle	-	L	-	100	100	0	0	0	61	99	↑
●	**Stinkwort**	**-**	**-**	**M**	**0**	**-**	**-**	**-**	**0**	**0**	**0**	**-**
	Ox-eye daisy	-	M	-	9	29	20	0	0	16	43	↑↑
●	**Scotch thistle**	**-**	**H**	**-**	**78**	**78**	**49**	**1**	**4**	**98**	**89**	**-**
	Family Boraginaceae											
	Houndstongue	-	-	M	3	-	67	0	0	-	-	-
	Family Brassicaceae											
	Lens-podded white-top & hoary cress	-	M	-	61	-	7	0	0	-	-	-
●	**Dyer's woad**	**H**	**-**	**-**	**30**	**32**	**35**	**3**	**1**	**76**	**97**	**↑**
	Charlock mustard	-	-	L	0	-	-	-	0	-	-	-

	FAMIY DIPSACACEAE	M	-	-								
	Common teasel & fuller's teasel				9	71	0	0	1	1	9	↑↑
	FAMILY FABACEAE	-	H	-								
●	**Scotch broom**				**14**	**59**	**13**	**19**	**2**	**9**	**41**	**↑↑**
●	**French broom**	**-**	**-**	**M**	**0**	**-**	**-**	**-**	**0**	**0**	**0**	**-**
●	**Spanish broom**	**-**	**-**	**H**	**1**	**100**	**0**	**0**	**0**	**0**	**21**	**↑↑**
	Black locust	-	L	-	10	-	0	0	0	-	-	-
	Red sesbania	-	-	L	0	-	-	-	0	0	0	-
	Gorse	-	-	-	0	-	-	-	0	0	0	-
	FAMILY POACEAE											
	Giant reed	-	-	L	0	-	-	-	0	0	0	-
	Annual false-brome	-	-	L	0	-	-	-	0	0	0	-
	Japanese brome	L	-	-	17	-	45	0	0	-	-	-
	Red brome	-	M	-	64	100	3	0	0	23	60	↑↑
	Jubatagrass	-	-	L	2	-	0	0	0	-	-	-
	Pampasgrass	-	-	L	3	-	0	0	0	0	0	-
	Orchardgrass	-	L	-	64	100	0	0	0	26	65	↑↑
	Common velvet grass	-	M	-	4	11	0	0	0	17	72	↑↑
	Mediterranean barley	-	M	-	24	-	0	0	0	-	-	-
	Hare barley	-	M	-	25	-	0	0	0	-	-	-
	Italian ryegrass	-	M	-	12	-	0	0	0	0	0	-
	FAMILY POLYGONACEAE											
	Japanese knotweed	-	-	-	0	-	-	-	0	-	-	-
	Giant knotweed	-	-	-	0	-	-	-	0	-	-	-
	FAMILY SCROPHULARIACEAE											
●	**Dalmatian toadflax**	**-**	**H**	**-**	**10**	**10**	**18**	**27**	**3**	**90**	**100**	**-**
●	**Yellow toadflax**	**-**	**-**	**H**	**3**	**3**	**67**	**0**	**0**	**47**	**70**	**↑**
	FAMILY SIMAROUBACEAE											
	Tree-of-heaven	-	-	L	3	38	0	0	0	2	25	↑↑
	FAMILY SOLANACEAE											
	Tree tobacco	-	-	L	0	-	-	-	0	0	0	-

Opportunities: H = high priority, M = medium, L = low

% Infested: portion of USGS quads in the area in which the species is present in wildlands

% Suitable Infested: portion of quads in the area with suitable climate that are currently infested

% Spreading: portion of infested quads in which the species is spreading

% Managed: portion of infested quads where species is under management

% Eradicated: portion of all quads in the area in which the species has been eradicated

% Suitable in 2010: portion of area with current climatic suitability of at least a level of "low" or higher

% Suitable in 2050: of area with projected 2050 climatic suitability of at least a level of "low" or higher

Suitability change:
↑ = a 15% - 99% increase from 2010 to 2050
↑↑= an increase of greater than 100%
↓ = a decrease of greater than 15%

Plumas/Sierra Weed Management Area

These recommendations focus on the portion of Plumas/Sierra WMA that is within the Sierra Nevada region (see map in chapter 1). Statistics are based on all of the Plumas and Sierra counties.

Eradication is recommended for species that have limited occurrence within the WMA. Of the species examined, the following are priority eradication opportunities for Plumas/Sierra WMA:

diffuse knapweed (*Centaurea diffusa*)

Scotch thistle (*Onopordum acanthium*) – guard against incursion from the northeast

dyer's woad (*Isatis tinctoria*) – prevent spread further south

Dalmatian toadflax (*Linaria genistifolia* subsp. *dalmatica*)

stinkwort (*Dittrichia graveolens*) – prevent new populations in the northern Sierra

Containment is recommended for species that are more widespread, where eradication may not be a realistic goal. The following species are priority containment opportunities for Plumas/Sierra WMA:

Russian knapweed (*Acroptilon repens*)

musk thistle (*Carduus nutans*) – much of the county has suitable climate

spotted knapweed (*Centaurea maculosa*) – climate is highly suitable

yellow starthistle (*Centaurea solstitialis*) – prevent spread to higher elevations and into Nevada as part of the YST Leading Edge Project

rush skeletonweed (*Chondrilla juncea*) – coordinate with Nevada/Placer WMA

Scotch broom (*Cytisus scoparius*)

French broom (*Genista monspessulana*)

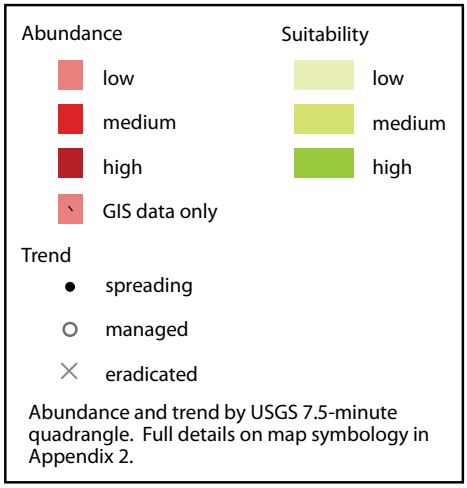
Spanish broom (*Spartium junceum*)

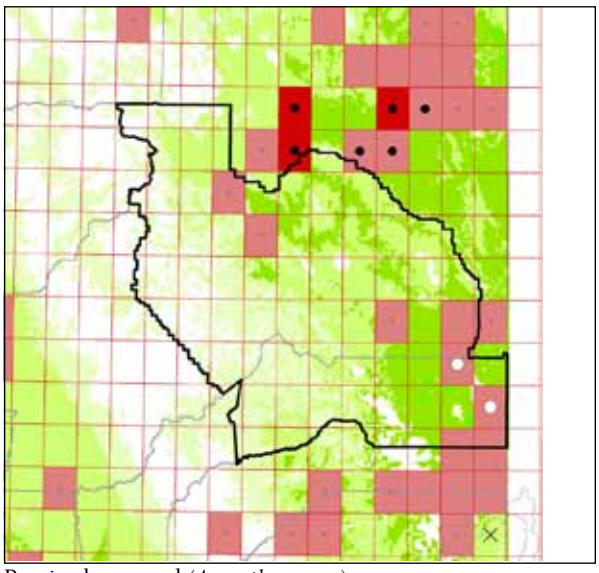
yellow toadflax (*Linaria vulgaris*)

Surveillance is recommended to prevent spread into Plumas/Sierra WMA:

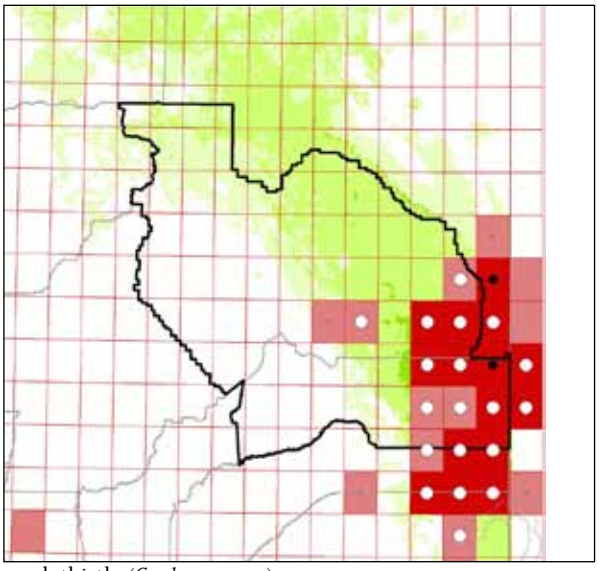
red sesbania (*Sesbania punicea*) – present in Yuba County

giant reed (*Arundo donax*)

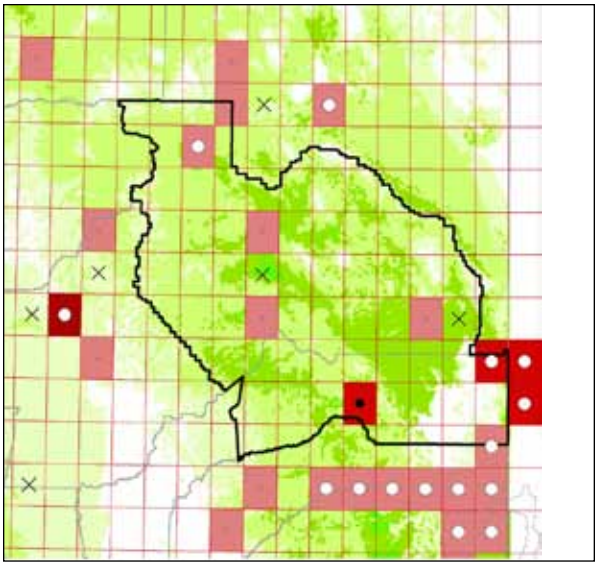




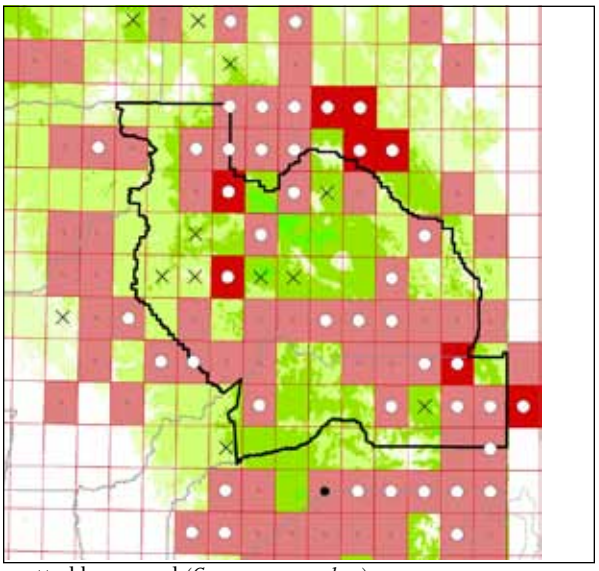
Russian knapweed (*Acroptilon repens*)



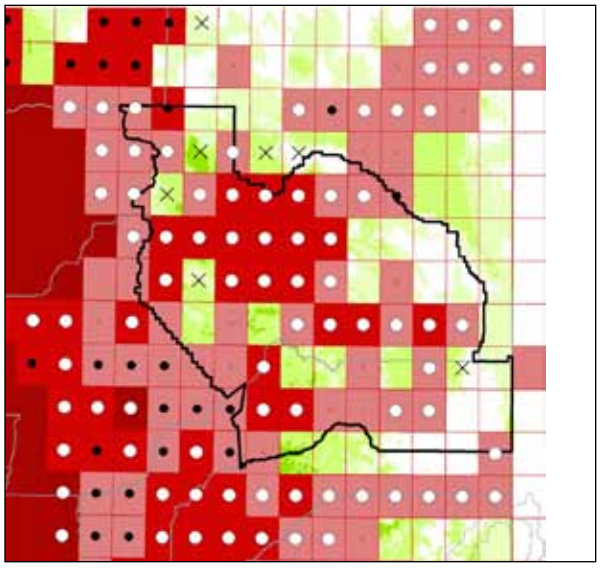
musk thistle (*Carduus nutans*)



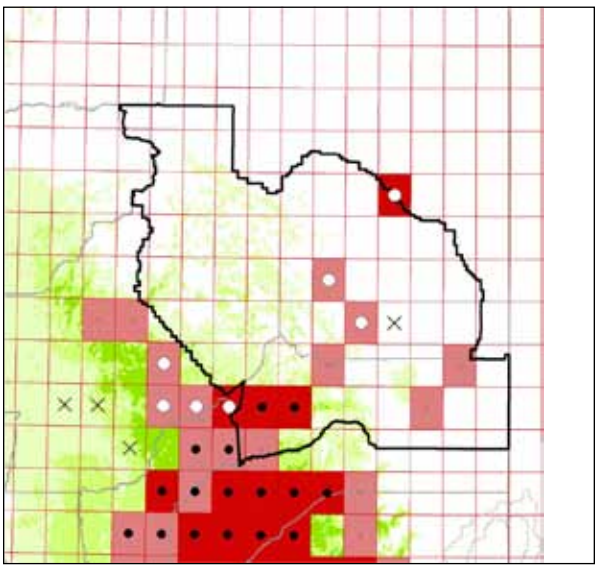
diffuse knapweed (*Centaurea diffusa*)



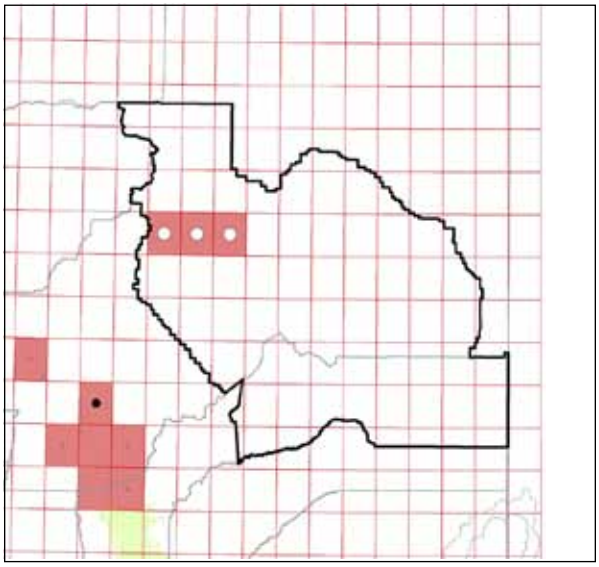
spotted knapweed (*Centaurea maculosa*)



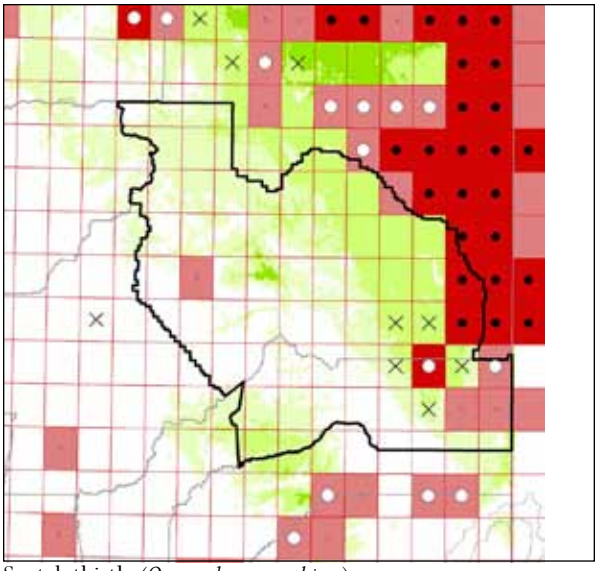
yellow starthistle (*Centaurea solstitialis*)



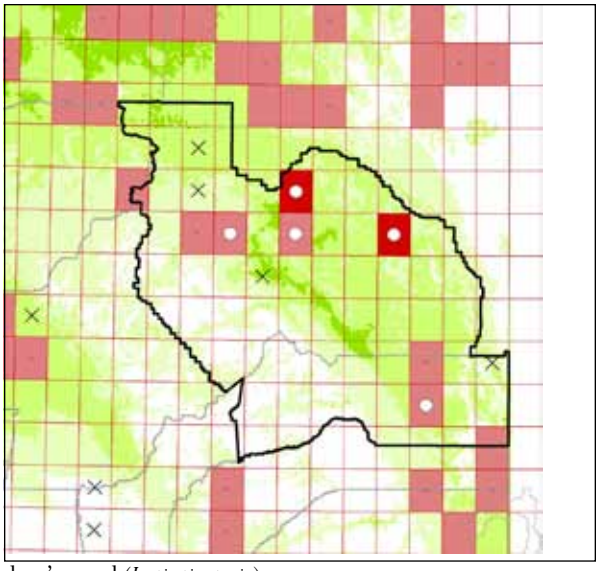
rush skeletonweed (*Chondrilla juncea*)



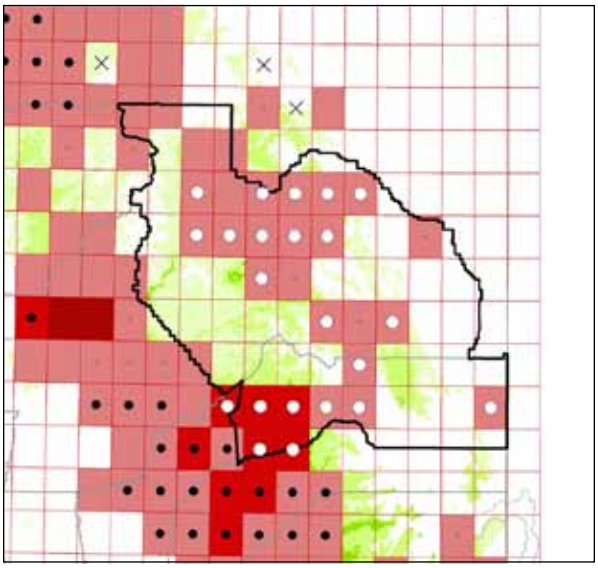
stinkwort (*Dittrichia graveolens*)



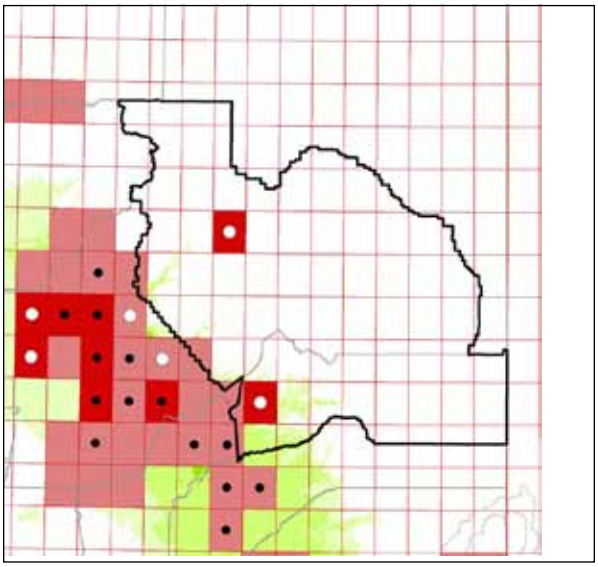
Scotch thistle (*Onopordum acanthium*)



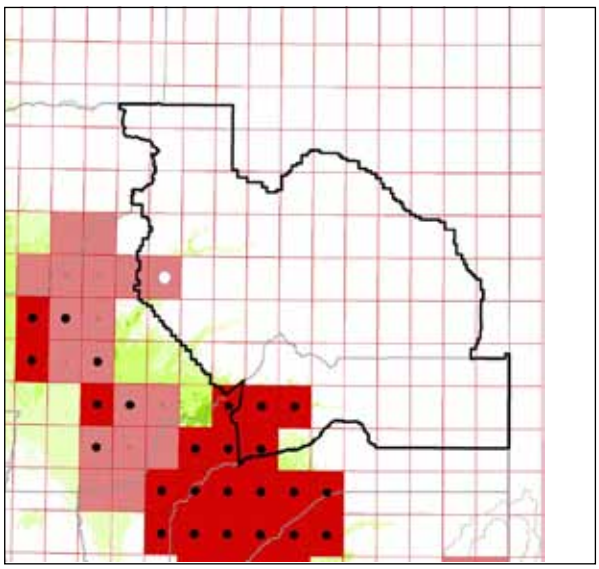
dyer's woad (*Isatis tinctoria*)



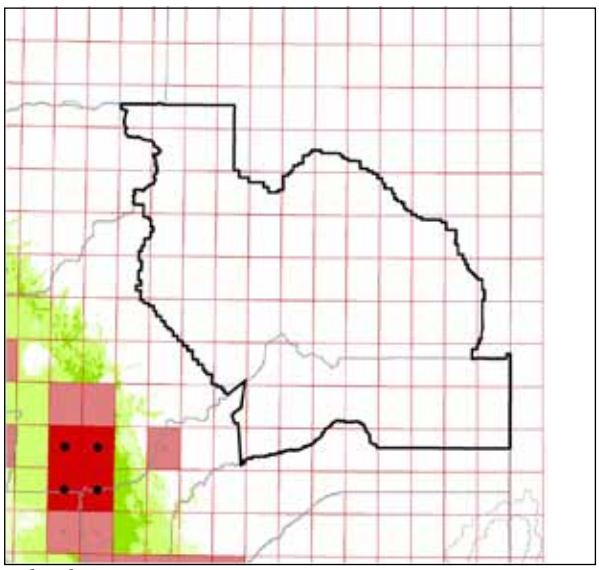
Scotch broom (*Cytisus scoparius*)



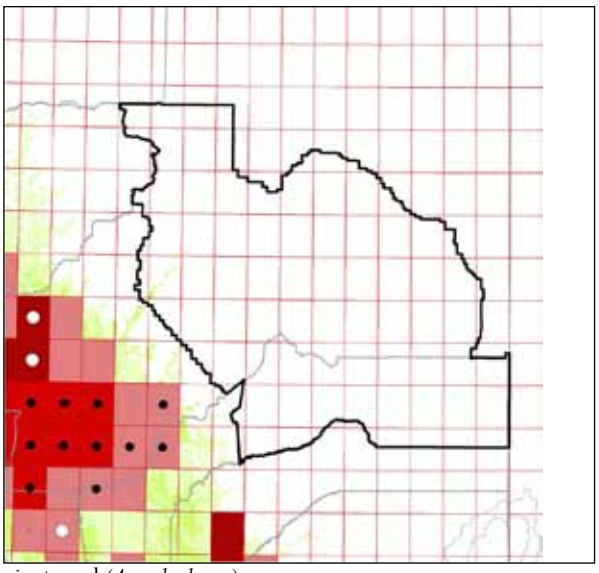
French broom (*Genista monspessulana*)



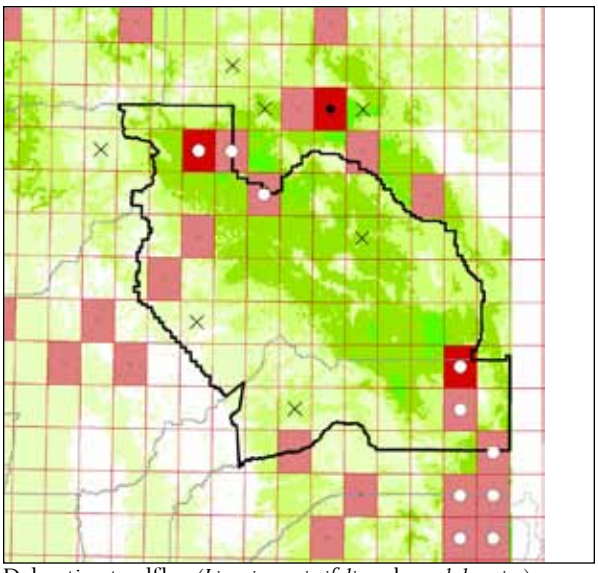
Spanish broom (*Spartium junceum*)



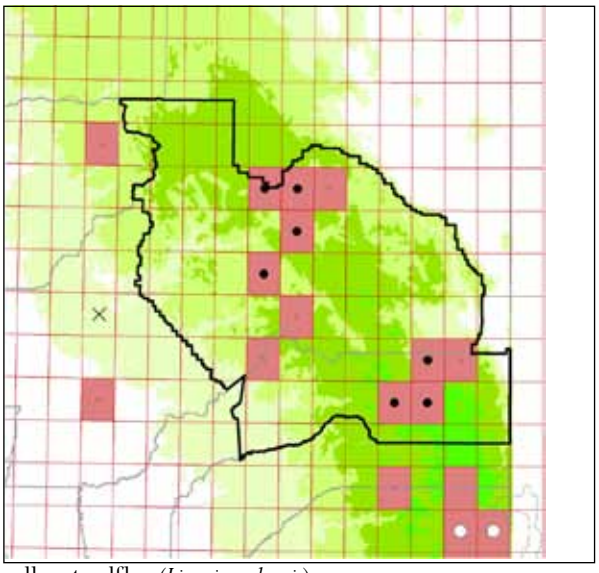
red sesbania (*Sesbania punicea*)



giant reed (*Arundo donax*)



Dalmatian toadflax (*Linaria genistifolia* subsp. *dalmatica*)



yellow toadflax (*Linaria vulgaris*)

Management opportunities for the Plumas/Sierra WMA

Priority	Species	Opportunities			Statistics							
		Eradication	Containment	Surveillance	% Infested	% Suitable Infested	% Spreading	% Managed	% Eradicated	% Suitable 2010	% Suitable 2050	Suitability change
	Family Apiaceae											
	Poison-hemlock	-	M	-	26	100	5	5	0	3	25	↑↑
	Family Asteraceae											
●	**Russian knapweed**	**-**	**H**	**-**	**13**	**13**	**18**	**18**	**0**	**82**	**98**	**↑**
●	**Musk thistle**	**-**	**H**	**-**	**21**	**28**	**39**	**50**	**0**	**58**	**13**	**↓**
	Italian thistle & slenderflower thistle	-	-	M	2	-	50	0	0	-	-	-
	Woolly distaff thistle	-	-	M	0	0			0	0	2	-
●	**Diffuse knapweed**	**H**	**-**	**-**	**12**	**12**	**40**	**40**	**2**	**94**	**99**	**-**
●	**Spotted knapweed**	**-**	**H**	**-**	**47**	**47**	**5**	**38**	**8**	**99**	**100**	**-**
	Tocalote	-	-	M	1	-	0	0	0	-	-	-
●	**Yellow starthistle**	**-**	**H**	**-**	**62**	**62**	**42**	**53**	**6**	**81**	**100**	**↑**
●	**Rush skeletonweed**	**-**	**H**	**-**	**14**	**23**	**33**	**25**	**1**	**26**	**85**	**↑↑**
	Canada thistle	-	M	-	80	80	25	12	0	100	77	↓
	Bull thistle	-	L	-	100	100	20	9	0	93	99	-
●	**Stinkwort**	**M**	**-**	**-**	**4**	**-**	**0**	**100**	**0**	**0**	**3**	**-**
	Ox-eye daisy	-	M	-	27	29	22	0	0	78	59	↓
●	**Scotch thistle**	**H**	**-**	**-**	**16**	**17**	**50**	**14**	**6**	**66**	**73**	**-**
	Family Boraginaceae											
	Houndstongue	-	-	M	2	-	0	0	0	-	-	-
	Family Brassicaceae											
	Lens-podded white-top & hoary cress	-	M	-	23	-	60	5	1	-	-	-
●	**Dyer's woad**	**H**	**-**	**-**	**11**	**11**	**11**	**56**	**5**	**79**	**67**	**-**
	Charlock mustard	M	-	-	1	-	100	0	0	-	-	-
	Famiy Dipsacaceae											
	Common teasel & fuller's teasel	-	M	-	13	33	55	0	0	6	0	↓
	Family Fabaceae											
●	**Scotch broom**	**-**	**H**	**-**	**41**	**49**	**51**	**66**	**0**	**53**	**93**	**↑**
●	**French broom**	**-**	**H**	**-**	**8**	**32**	**14**	**29**	**0**	**10**	**29**	**↑↑**
●	**Spanish broom**	**-**	**H**	**-**	**8**	**27**	**71**	**14**	**0**	**9**	**65**	**↑↑**
	Black locust	-	L	-	13	-	0	0	0	-	-	-
●	**Red sesbania**	**-**	**-**	**M**	**0**	**-**	**-**	**-**	**0**	**0**	**0**	**-**
	Gorse	-	-	L	0	-	-	-	0	0	8	-
	Family Poaceae											
●	**Giant reed**	**-**	**-**	**H**	**0**	**0**	**0**	**0**	**0**	**1**	**8**	**↑↑**
	Annual false-brome	-	-	L	1	50	0	0	0	0	1	↑↑
	Japanese brome	-	L	-	17	-	0	0	0	-	-	-
	Red brome	-	M	-	34	66	48	0	0	18	18	-
	Jubatagrass		-	M	0	-	-	-	0	-	-	-
	Pampasgrass	M	-	-	2	-	0	0	0	0	1	-
	Orchardgrass	-	L	-	99	100	0	0	0	88	98	-

	Common velvet grass	-	M	-	19	20	0	0	0	72	97	↑
	Mediterranean barley	-	M	-	93	-	0	0	0	-	-	-
	Hare barley	-	M	-	94	-	0	0	0	-	-	-
	Italian ryegrass	-	M	-	35	100	7	0	0	3	3	-
	FAMILY POLYGONACEAE											
	Japanese knotweed	-	-	L	0	-	-	-	0	-	-	-
	Giant knotweed	-	-	-	0	-	-	-	0	-	-	-
	FAMILY SCROPHULARIACEAE											
●	**Dalmatian toadflax**	**H**	**-**	**-**	**13**	**13**	**9**	**36**	**4**	**94**	**100**	**-**
●	**Yellow toadflax**	**-**	**H**	**-**	**13**	**13**	**64**	**0**	**0**	**95**	**99**	**-**
	FAMILY SIMAROUBACEAE											
	Tree-of-heaven	-	M	-	11	41	100	0	0	3	31	↑↑
	FAMILY SOLANACEAE											
	Tree tobacco	-	-	L	0	-	-	-	0	0	0	-

Opportunities: H = high priority, M = medium, L = low

% Infested: portion of USGS quads in the area in which the species is present in wildlands

% Suitable Infested: portion of quads in the area with suitable climate that are currently infested

% Spreading: portion of infested quads in which the species is spreading

% Managed: portion of infested quads where species is under management

% Eradicated: portion of all quads in the area in which the species has been eradicated

% Suitable in 2010: portion of area with current climatic suitability of at least a level of "low" or higher

% Suitable in 2050: of area with projected 2050 climatic suitability of at least a level of "low" or higher

Suitability change:
↑ = a 15% - 99% increase from 2010 to 2050
↑↑= an increase of greater than 100%
↓ = a decrease of greater than 15%

Butte Weed Management Area

These recommendations focus on the portion of Butte WMA within the Sierra Nevada ecoregion, which is approximately the eastern half of the county (see map in chapter 1). Statistics are based on all of Butte County.

Eradication is recommended for species that have limited occurrence within the Sierra portion of the WMA. Of the species examined, the following are priority eradication opportunities for Butte WMA:

dyer's woad (*Isatis tinctoria*)

red sesbania (*Sesbania punicea*)

Dalmatian toadflax (*Linaria genistifolia* subsp. *dalmatica*)

yellow toadflax (*Linaria vulgaris*)

Containment is recommended for species that are more widespread, where eradication may not be a realistic goal. The following species are priority containment opportunities for Butte WMA:

spotted knapweed (*Centaurea maculosa*)

yellow starthistle (*Centaurea solstitialis*) – widespread, focus on preventing spread to uninvaded sensitive habitats

rush skeletonweed (*Chondrilla juncea*) – watch for spread from the south

stinkwort (*Dittrichia graveolens*)

Scotch broom (*Cytisus scoparius*)

French broom (Genista monspessulana)

Spanish broom (Spartium junceum)

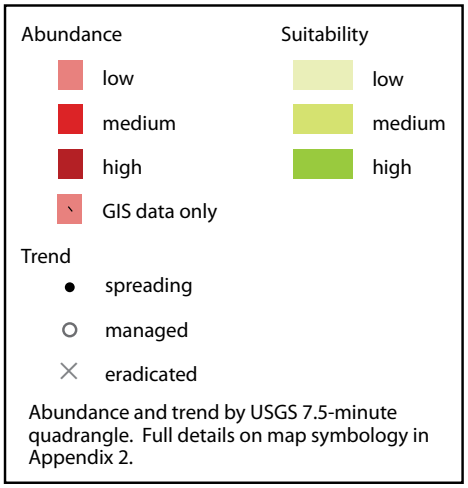
giant reed (*Arundo donax*)

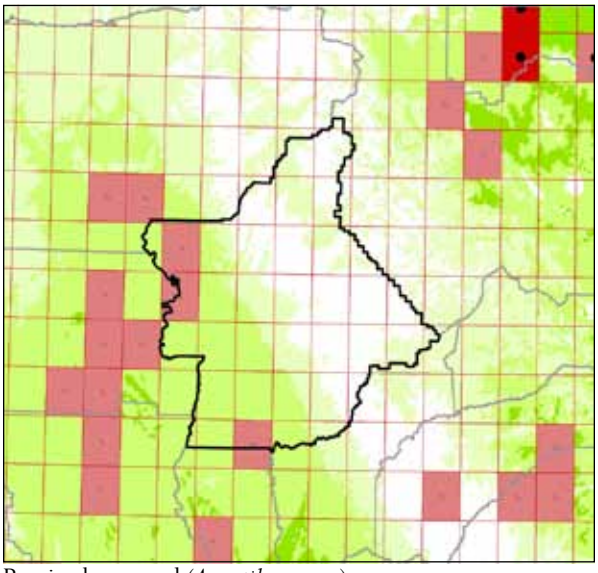
Surveillance is recommended to prevent spread into the Sierra portion of WMA:

Russian knapweed (*Acroptilon repens*) – GIS data indicates one quad to the southwest

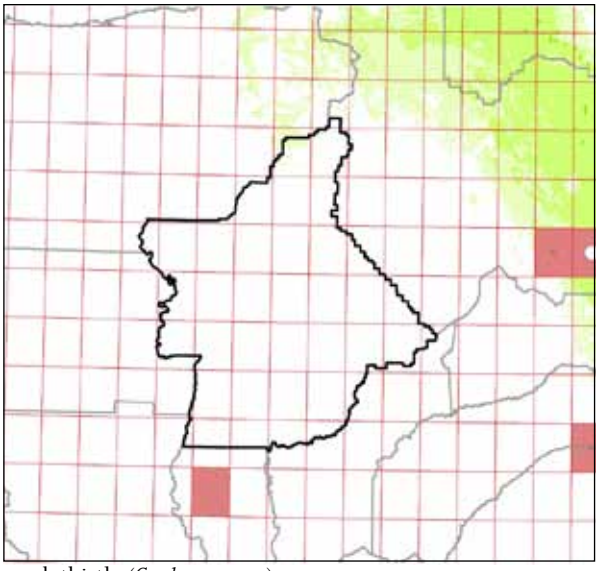
musk thistle (*Carduus nutans*) – one quad infested in northern Sutter County

Scotch thistle (*Onopordum acanthium*) – not yet in Sierra portion of WMA

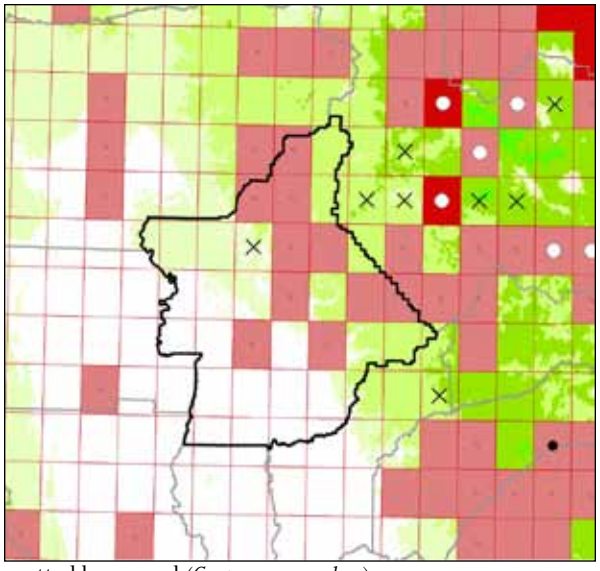




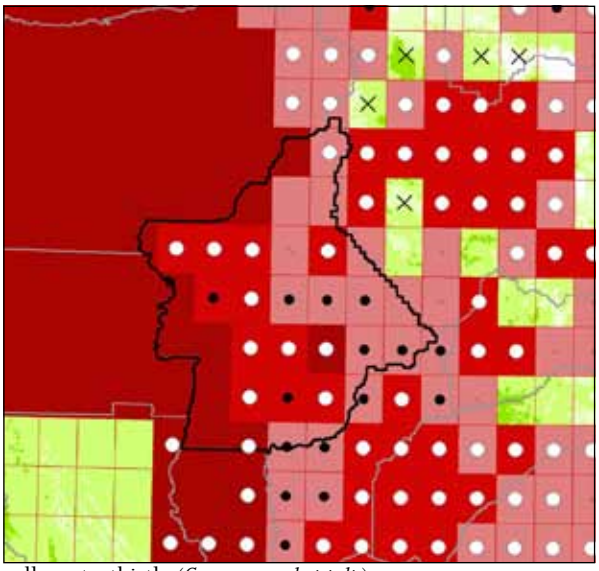
Russian knapweed (*Acroptilon repens*)



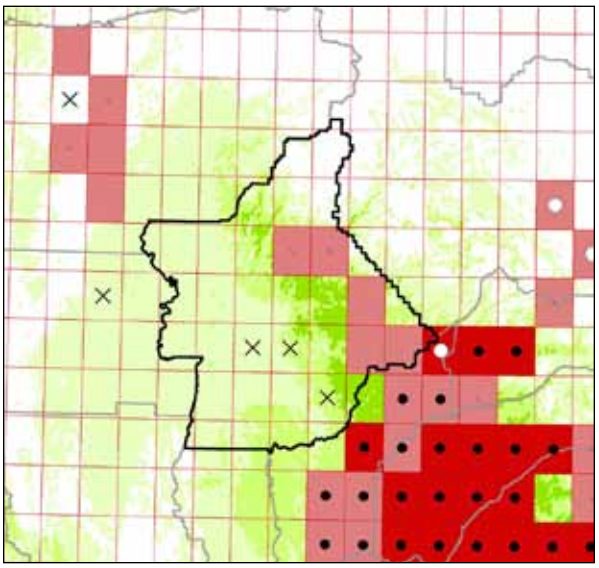
musk thistle (*Carduus nutans*)



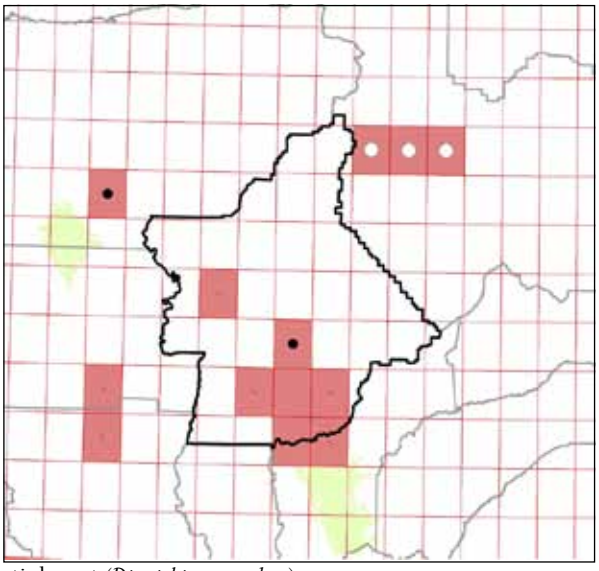
spotted knapweed (*Centaurea maculosa*)



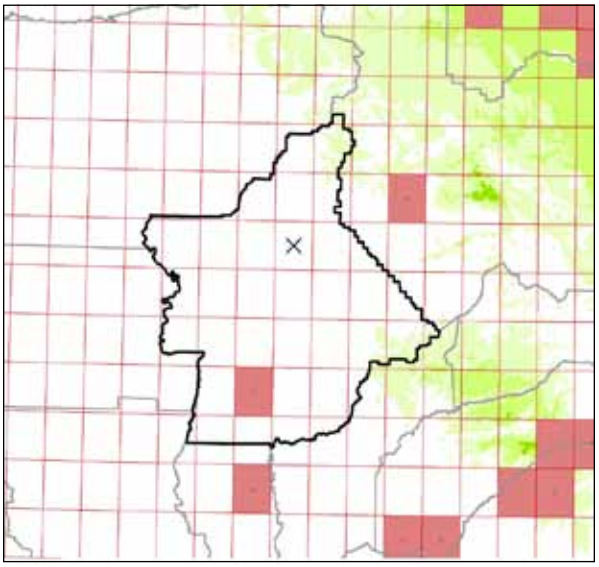
yellow starthistle (*Centaurea solstitialis*)



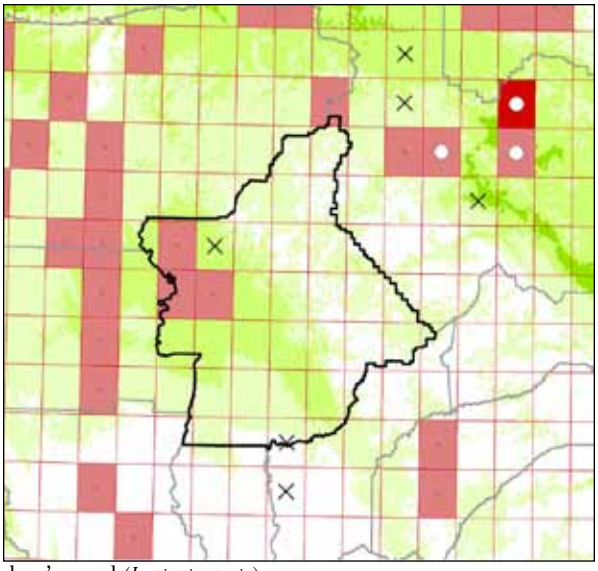
rush skeletonweed (*Chondrilla juncea*)



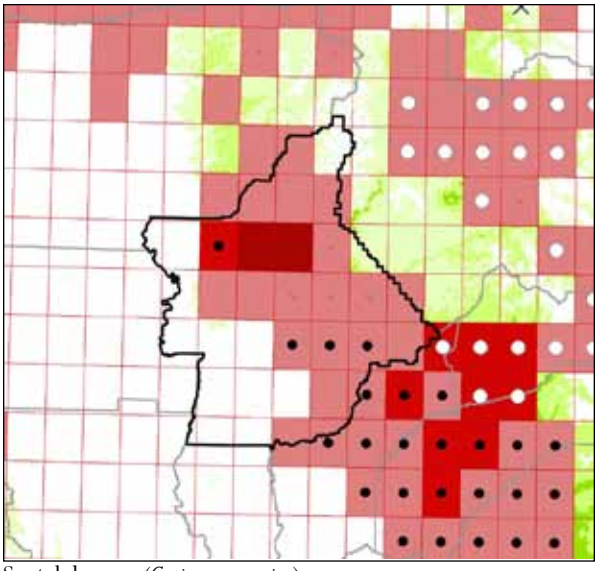
stinkwort (*Dittrichia graveolens*)



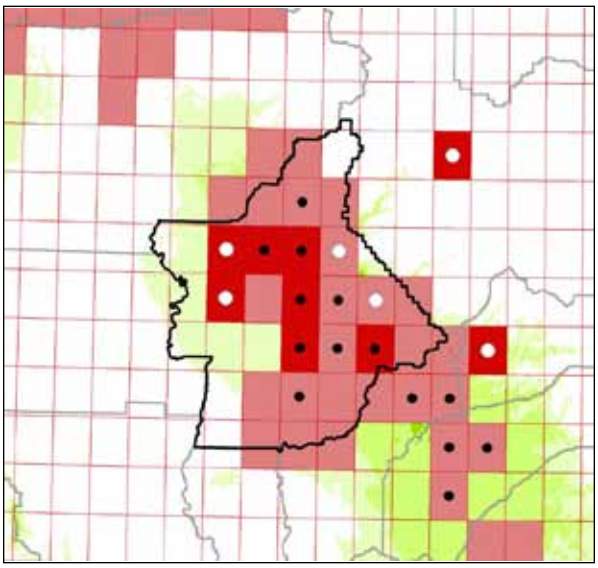
Scotch thistle (*Onopordum acanthium*)



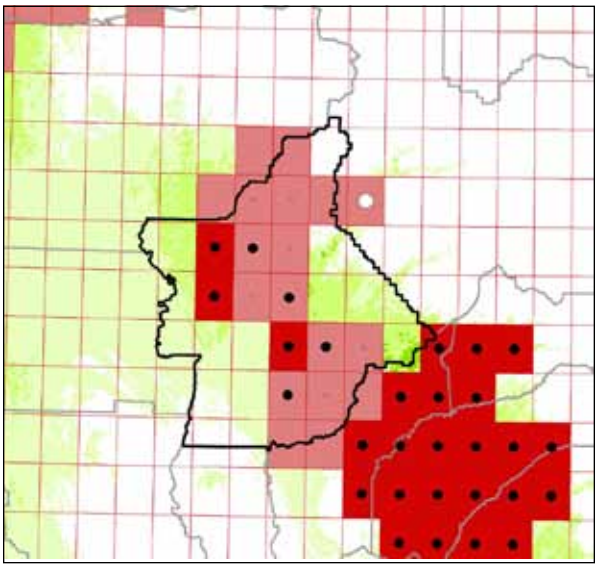
dyer's woad (*Isatis tinctoria*)



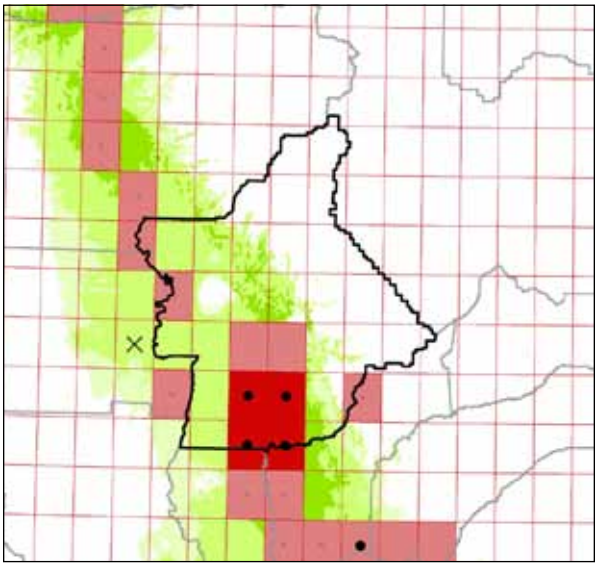
Scotch broom (*Cytisus scoparius*)



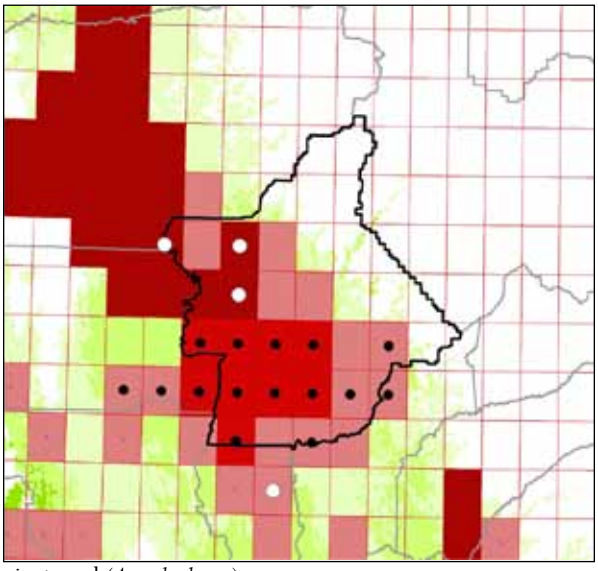
French broom (*Genista monspessulana*)



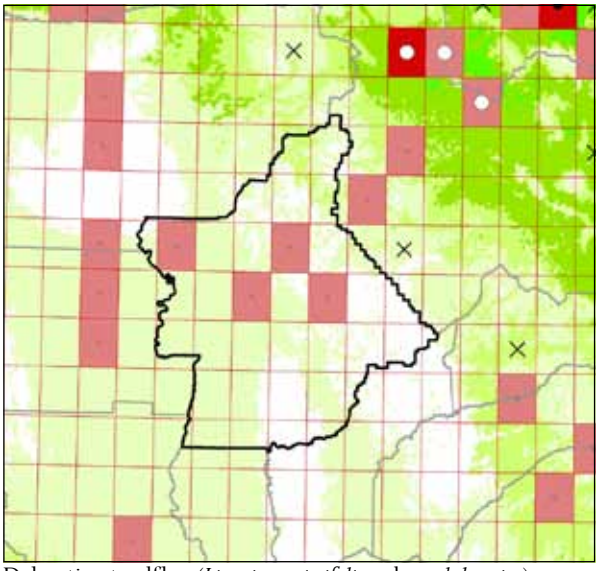
Spanish broom (*Spartium junceum*)



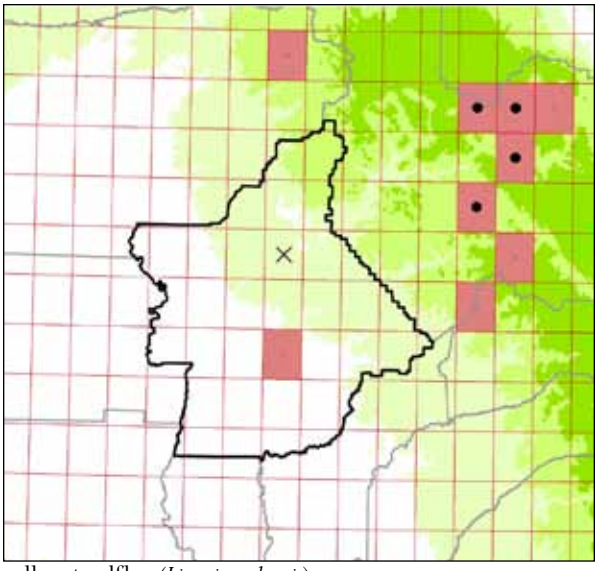
red sesbania (*Sesbania punicea*)



giant reed (*Arundo donax*)



Dalmatian toadflax (*Linaria genistifolia* subsp. *dalmatica*)



yellow toadflax (*Linaria vulgaris*)

Management opportunities for the Butte WMA

Priority	Species	Opportunities			Statistics							
		Eradication	Containment	Surveillance	% Infested	% Suitable Infested	% Spreading	% Managed	% Eradicated	% Suitable 2010	% Suitable 2050	Suitability change
	Family Apiaceae											
	Poison-hemlock	-	M	-	46	60	14	0	0	51	20	↓
	Family Asteraceae											
●	**Russian knapweed**	**-**	**-**	**M**	**10**	**19**	**0**	**0**	**0**	**66**	**100**	**↑**
●	**Musk thistle**	**-**	**-**	**M**	**0**	**0**	**-**	**-**	**0**	**1**	**0**	**-**
	Italian thistle & slenderflower thistle	-	M	-	60	-	38	0	0	-	-	-
	Woolly distaff thistle	-	-	L	0	0	-	-	0	1	34	↑↑
	Diffuse knapweed	-	-	M	6	6	33	0	4	83	37	↓
●	**Spotted knapweed**	**-**	**H**	**-**	**27**	**35**	**0**	**0**	**2**	**58**	**59**	**-**
	Tocalote	-	M	-	44	-	5	0	0	-	-	-
●	**Yellow starthistle**	**-**	**H**	**-**	**98**	**98**	**21**	**4**	**0**	**100**	**100**	**-**
●	**Rush skeletonweed**	**-**	**H**	**-**	**15**	**15**	**29**	**14**	**6**	**87**	**100**	**-**
	Canada thistle	-	M	-	27	50	0	0	2	41	10	↓
	Bull thistle	-	L	-	100	100	2	0	0	100	100	-
●	**Stinkwort**	**-**	**M**	**-**	**17**	**89**	**13**	**13**	**0**	**5**	**0**	**↓**
	Ox-eye daisy	-	M	-	94	100	0	0	0	41	39	-
●	**Scotch thistle**	**-**	**-**	**M**	**2**	**8**	**0**	**0**	**2**	**6**	**33**	**↑↑**
	Family Boraginaceae											
	Houndstongue	-	-	M	2	-	0	0	0	-	-	-
	Family Brassicaceae											
	Lens-podded white-top & hoary cress	-	M	-	46	-	41	0	0	-	-	-
●	**Dyer's woad**	**H**	**-**	**-**	**10**	**11**	**0**	**0**	**2**	**75**	**16**	**↓**
	Charlock mustard	L	-	-	23	-	0	0	0	-	-	-

	FAMILY DIPSACACEAE											
	Common teasel & fuller's teasel	-	M	-	52	53	0	0	0	75	62	↓
	FAMILY FABACEAE											
●	**Scotch broom**	**-**	**H**	**-**	**54**	**74**	**27**	**4**	**0**	**52**	**100**	**↑**
●	**French broom**	**-**	**H**	**-**	**58**	**67**	**32**	**0**	**0**	**64**	**96**	**↑**
●	**Spanish broom**	**-**	**H**	**-**	**46**	**49**	**41**	**0**	**0**	**73**	**98**	**↑**
	Black locust	-	L	-	58	-	11	0	0	-	-	-
●	**Red sesbania**	**H**	**-**	**-**	**23**	**33**	**36**	**0**	**2**	**54**	**66**	**↑**
	Gorse	-	-	L	2	50	0	0	0	1	84	↑↑
	FAMILY POACEAE											
●	**Giant reed**	**-**	**H**	**-**	**56**	**66**	**63**	**0**	**0**	**67**	**81**	**↑**
	Annual false-brome	-	M	-	44	57	14	0	0	64	63	-
	Japanese brome	-	L	-	46	-	0	0	0	-	-	-
	Red brome	-	M	-	90	90	58	0	0	88	84	-
	Jubatagrass	-	M	-	17	-	0	0	0	-	-	-
	Pampasgrass	-	M	-	48	85	0	0	0	21	64	↑↑
	Orchardgrass	-	L	-	98	100	0	0	0	100	100	-
	Common velvet grass	-	M	-	46	46	0	0	0	99	99	-
	Mediterranean barley	-	M	-	88	-	0	0	0	-	-	-
	Hare barley	-	M	-	90	-	0	0	0	-	-	-
	Italian ryegrass	M	-	-	94	98	4	0	0	77	72	-
	FAMILY POLYGONACEAE											
	Japanese knotweed	-	-	-	0	-	-	-	0	-	-	-
	Giant knotweed	-	-	L	2	-	0	0	0	-	-	-
	FAMILY SCROPHULARIACEAE											
●	**Dalmatian toadflax**	**H**	**-**	**-**	**8**	**9**	**0**	**0**	**2**	**67**	**79**	**↑**
●	**Yellow toadflax**	**H**	**-**	**-**	**2**	**3**	**0**	**0**	**2**	**47**	**100**	**↑↑**
	FAMILY SIMAROUBACEAE											
	Tree-of-heaven	-	M	-	67	71	44	0	0	74	88	↑
	FAMILY SOLANACEAE											
	Tree tobacco	-	-	M	35	90	0	0	0	12	17	↑

Opportunities: H = high priority, M = medium, L = low

% Infested: portion of USGS quads in the area in which the species is present in wildlands

% Suitable Infested: portion of quads in the area with suitable climate that are currently infested

% Spreading: portion of infested quads in which the species is spreading

% Managed: portion of infested quads where species is under management

% Eradicated: portion of all quads in the area in which the species has been eradicated

% Suitable in 2010: portion of area with current climatic suitability of at least a level of "low" or higher

% Suitable in 2050: of area with projected 2050 climatic suitability of at least a level of "low" or higher

Suitability change:
↑ = a 15% - 99% increase from 2010 to 2050
↑↑= an increase of greater than 100%
↓ = a decrease of greater than 15%

The recommendations below focus on the portion of Yuba/SutterWMA within the Sierra Nevada ecoregion, which is approximately the eastern half of Yuba County (see map in chapter 1). Statistics are based on all of Yuba and Sutter counties.

Eradication is recommended for species that have limited occurrence within the Sierra portion of the WMA. Of the species examined, the following are priority eradication opportunities for Yuba/Sutter WMA:

red sesbania (*Sesbania punicea*) – one quad in Sierra, more in Valley region

Containment is recommended for species that are more widespread, where eradication may not be a realistic goal. The following species are priority containment opportunities for Yuba/Sutter WMA:

yellow starthistle (*Centaurea solstitialis*) – widespread, focus on preventing spread to uninvaded sensitive habitats

rush skeletonweed (*Chondrilla juncea*) – prevent further spread

stinkwort (*Dittrichia graveolens*) – GIS data indicates one quad at the edge of the Sierra region

Scotch broom (*Cytisus scoparius*)

French broom (*Genista monspessulana*)

Spanish broom (*Spartium junceum*)

giant reed (*Arundo donax*)

Surveillance is recommended to prevent spread into the Sierra portion of the WMA:

Russian knapweed (*Acroptilon repens*) – present in the Central Valley portion of the WMA

musk thistle (*Carduus nutans*) – one quad infested in northern Sutter County

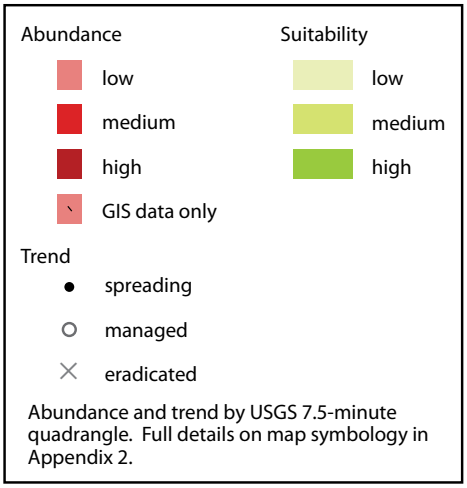
spotted knapweed (*Centaurea maculosa*) – present to the east and south

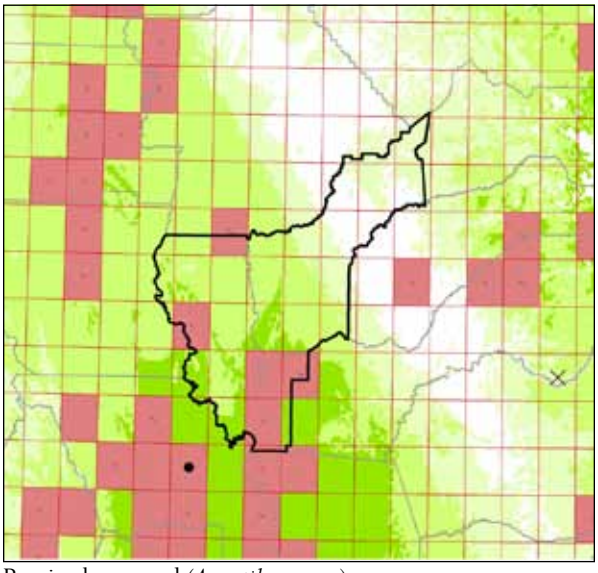
Scotch thistle (*Onopordum acanthium*)

dyer's woad (*Isatis tinctoria*) – GIS data indicates presence to south

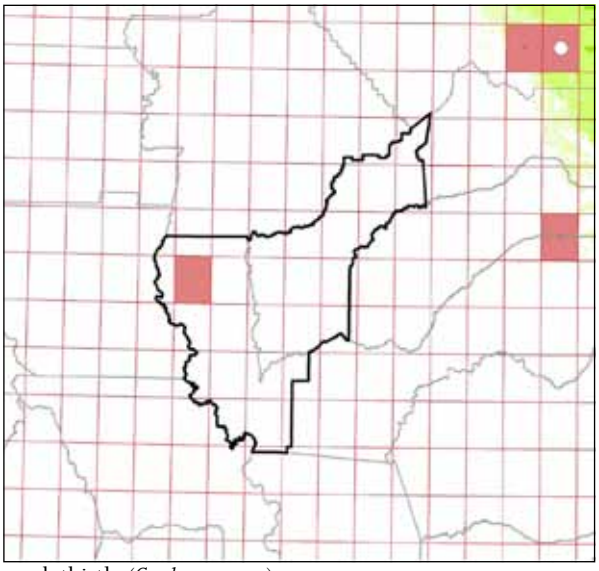
Dalmatian toadflax (*Linaria genistifolia* subsp. *dalmatica*)

yellow toadflax (*Linaria vulgaris*)

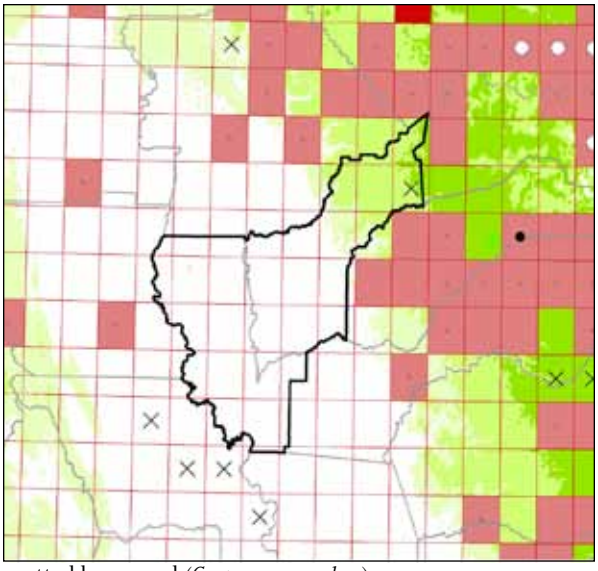




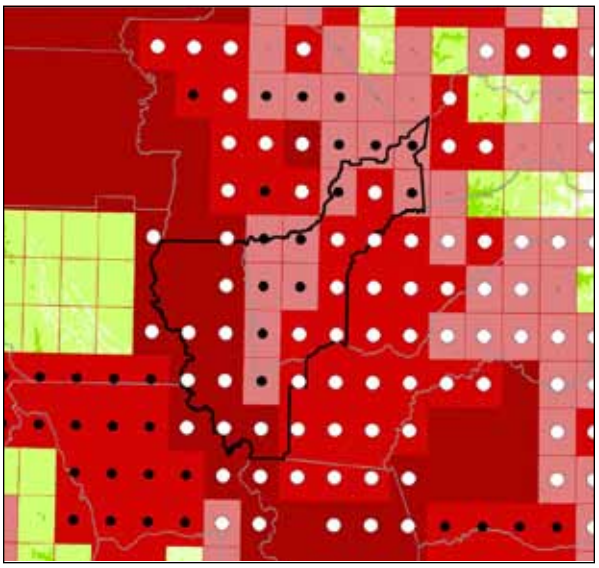
Russian knapweed (*Acroptilon repens*)



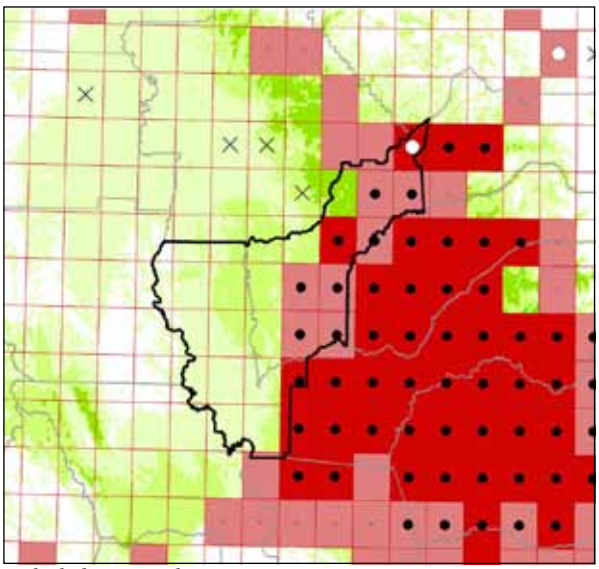
musk thistle (*Carduus nutans*)



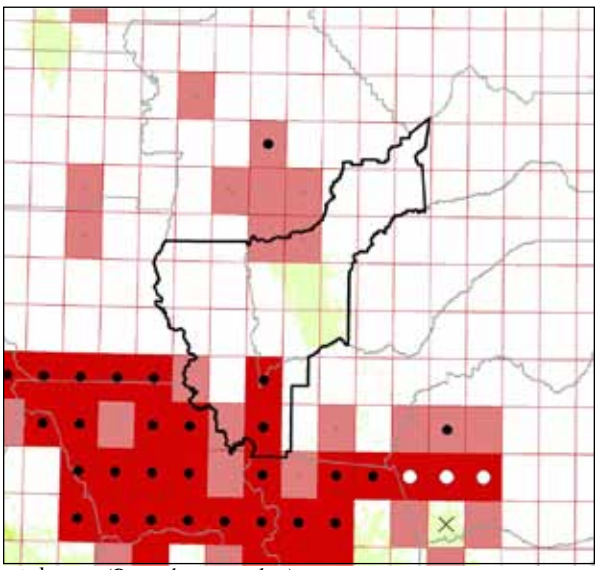
spotted knapweed (*Centaurea maculosa*)



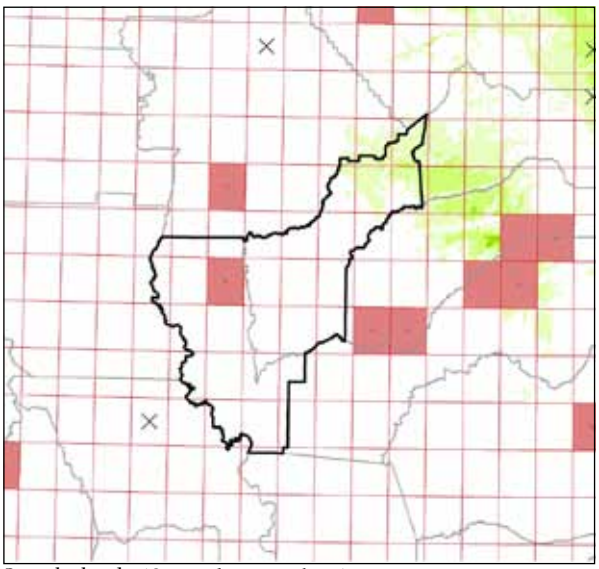
yellow starthistle (*Centaurea solstitialis*)



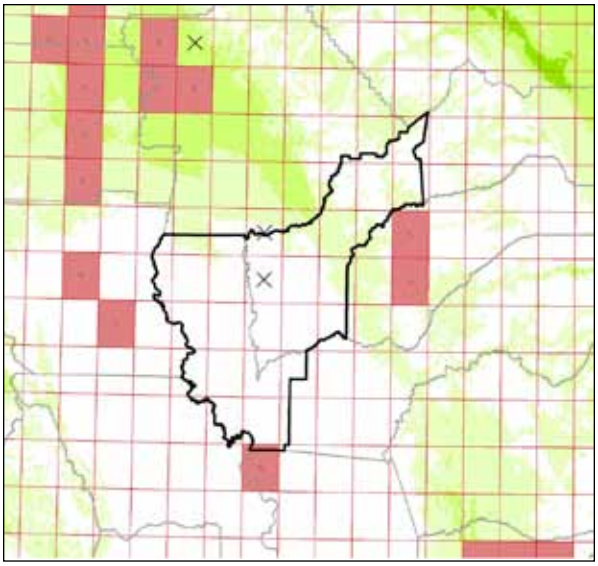
rush skeletonweed (*Chondrilla juncea*)



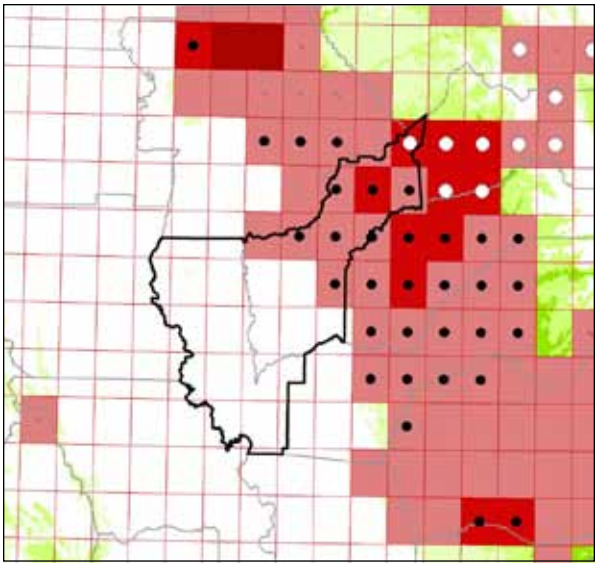
stinkwort (*Dittrichia graveolens*)



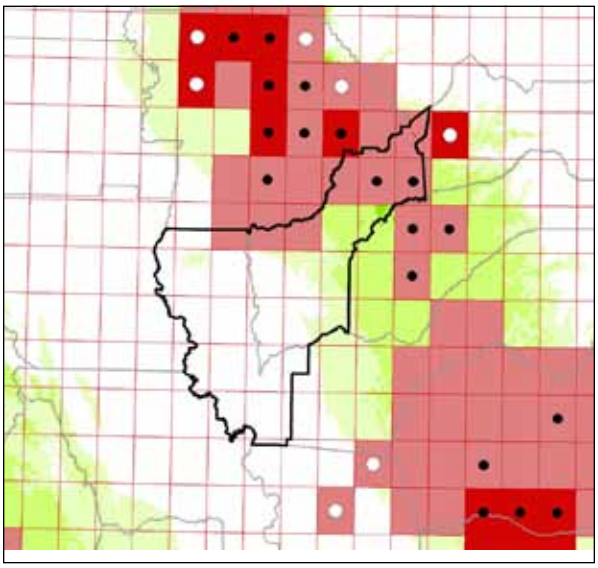
Scotch thistle (*Onopordum acanthium*)



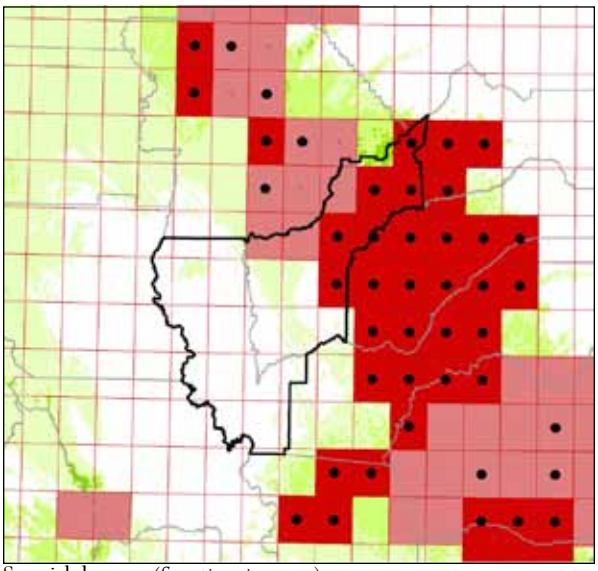
dyer's woad (*Isatis tinctoria*)



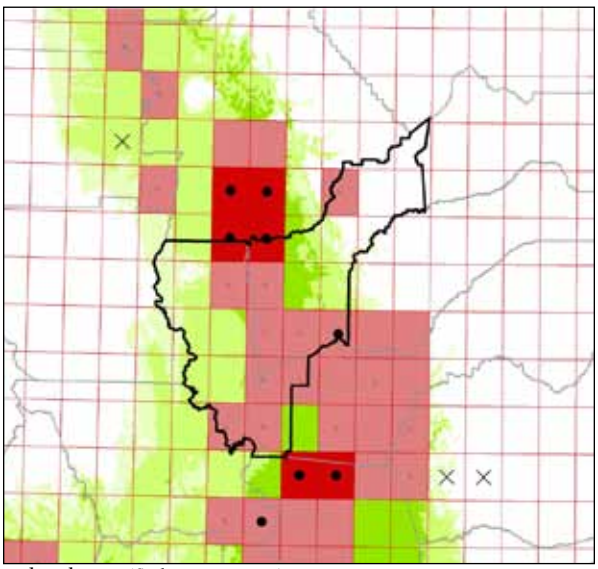
Scotch broom (*Cytisus scoparius*)



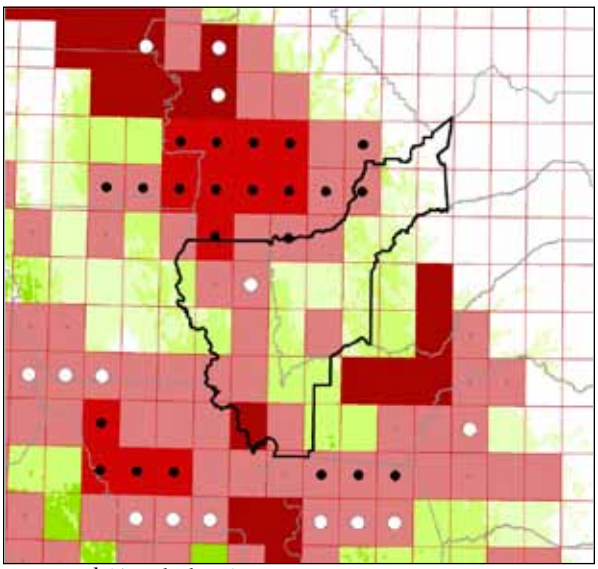
French broom (*Genista monspessulana*)



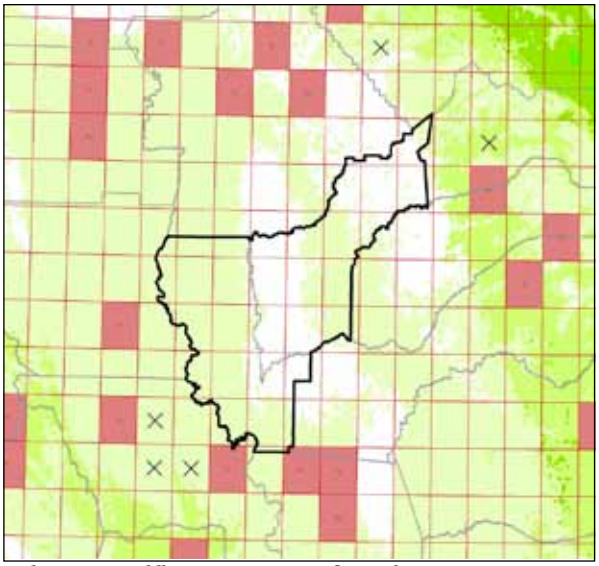
Spanish broom (*Spartium junceum*)



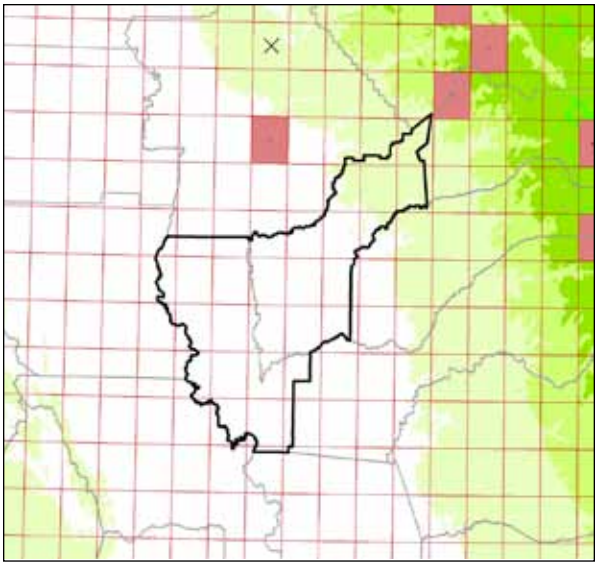
red sesbania (*Sesbania punicea*)



giant reed (*Arundo donax*)



Dalmatian toadflax (*Linaria genistifolia* subsp. *dalmatica*)



yellow toadflax (*Linaria vulgaris*)

Management opportunities for the Yuba/Sutter WMA

Priority	Species	Opportunities			Statistics							
		Eradication	Containment	Surveillance	% Infested	% Suitable Infested	% Spreading	% Managed	% Eradicated	% Suitable 2010	% Suitable 2050	Suitability Change
	Family Apiaceae											
	Poison-hemlock	-	M	-	54	91	0	0	0	68	14	↓
	Family Asteraceae											
●	**Russian knapweed**	**-**	**-**	**M**	**19**	**33**	**0**	**0**	**0**	**86**	**100**	**↑**
●	**Musk thistle**	**-**	**-**	**M**	**0**	**-**	**-**	**-**	**0**	**0**	**0**	**-**
	Italian thistle & slenderflower thistle	-	M	-	60	-	55	0	0	-	-	-
	Woolly distaff thistle	-	-	M	0	0	-	-	3	3	23	↑↑
	Diffuse knapweed	-	-	M	3	4	0	0	3	65	27	↓
●	**Spotted knapweed**	**-**	**-**	**H**	**5**	**20**	**0**	**0**	**3**	**31**	**34**	**-**
●	**Tocalote**	**-**	**M**	**-**	**41**	**-**	**60**	**0**	**0**	**-**	**-**	**-**
●	**Yellow starthistle**	**-**	**H**	**-**	**78**	**100**	**59**	**0**	**0**	**100**	**100**	**-**
●	**Rush skeletonweed**	**-**	**H**	**-**	**38**	**54**	**79**	**7**	**0**	**97**	**100**	**-**
	Canada thistle	-	M	-	8	23	0	0	0	32	0	↓
	Bull thistle	-	L	-	76	100	43	0	0	100	100	-
●	**Stinkwort**	**-**	**M**	**-**	**24**	**90**	**33**	**0**	**0**	**13**	**0**	**↓**
	Ox-eye daisy	-	M	-	51	100	0	0	0	15	2	↓
●	**Scotch thistle**	**-**	**-**	**M**	**3**	**13**	**0**	**0**	**0**	**11**	**19**	**↑**
	Family Boraginaceae											
	Houndstongue	-	-	-	0	-	-	-	0	-	-	-
	Family Brassicaceae											
	Lens-podded white-top & hoary cress	-	M	-	27	-	10	0	0	-	-	-
●	**Dyer's woad**	**-**	**-**	**H**	**5**	**13**	**0**	**0**	**0**	**26**	**2**	**↓**
	Charlock mustard	-	-	L	16	-	0	0	0	-	-	-

	FAMIY DIPSACACEAE											
	Common teasel & fuller's teasel	-	M	-	35	50	0	0	0	85	76	-
	FAMILY FABACEAE											
●	**Scotch broom**	**-**	**H**	**-**	**30**	**92**	**73**	**18**	**0**	**36**	**100**	**↑↑**
●	**French broom**	**-**	**H**	**-**	**24**	**56**	**33**	**0**	**0**	**48**	**100**	**↑↑**
●	**Spanish broom**	**-**	**H**	**-**	**27**	**46**	**60**	**0**	**0**	**51**	**100**	**↑**
	Black locust	-	L	-	65	-	4	0	0	-	-	-
●	**Red sesbania**	**H**	**-**	**-**	**35**	**52**	**31**	**0**	**0**	**73**	**81**	**-**
	Gorse	-	-	L	0	0	-	-	3	1	96	↑↑
	FAMILY POACEAE											
●	**Giant reed**	**-**	**H**	**-**	**46**	**63**	**35**	**0**	**0**	**85**	**96**	**-**
	Annual false-brome	-	M	-	24	36	11	0	0	79	79	-
	Japanese brome	-	L	-	19	-	0	0	0	-	-	-
	Red brome	-	M	-	54	77	15	0	0	97	96	-
	Jubatagrass	-	-	M	11	-	0	0	0	-	-	-
	Pampasgrass	-	-	M	46	100	0	0	0	5	78	↑↑
	Orchardgrass	-	L	-	73	100	0	0	0	100	100	-
	Common velvet grass	-	M	-	32	48	0	0	0	89	100	-
	Mediterranean barley	-	M	-	62	-	0	0	0	-	-	-
	Hare barley	-	M	-	65	-	0	0	0	-	-	-
	Italian ryegrass	M	-	-	78	100	35	0	0	88	84	-
	FAMILY POLYGONACEAE											
	Japanese knotweed	-	-	L	0	-	-	-	0	-	-	-
	Giant knotweed	-	-	-	0	-	-	-	0	-	-	-
	FAMILY SCROPHULARIACEAE											
●	**Dalmatian toadflax**	**-**	**-**	**H**	**5**	**8**	**0**	**0**	**0**	**62**	**94**	**↑**
●	**Yellow toadflax**	**-**	**-**	**H**	**0**	**0**	**-**	**-**	**0**	**24**	**100**	**↑↑**
	FAMILY SIMAROUBACEAE											
	Tree-of-heaven	-	M	-	65	89	71	0	0	87	98	-
	FAMILY SOLANACEAE											
	Tree tobacco	-	-	M	27	83	0	0	0	20	42	↑↑

Opportunities: H = high priority, M = medium, L = low

% Infested: portion of USGS quads in the area in which the species is present in wildlands

% Suitable Infested: portion of quads in the area with suitable climate that are currently infested

% Spreading: portion of infested quads in which the species is spreading

% Managed: portion of infested quads where species is under management

% Eradicated: portion of all quads in the area in which the species has been eradicated

% Suitable in 2010: portion of area with current climatic suitability of at least a level of "low" or higher

% Suitable in 2050: of area with projected 2050 climatic suitability of at least a level of "low" or higher

Suitability change:
↑ = a 15% - 99% increase from 2010 to 2050
↑↑= an increase of greater than 100%
↓ = a decrease of greater than 15%

Eradication is recommended for species that have limited occurrence within the WMA. Of the species examined, the following are priority eradication opportunities for Nevada/Placer WMA:

dyer's woad (*Isatis tinctoria*) – prevent spread further south

Containment is recommended for species that are more widespread, where eradication may not be a realistic goal. The following species are priority containment opportunities for the Nevada/Placer WMA:

Russian knapweed (*Acroptilon repens*) – prevent spread north or south

musk thistle (*Carduus nutans*) – already a main priority in Nevada County

spotted knapweed (*Centaurea maculosa*) – climate is highly suitable

yellow starthistle (*Centaurea solstitialis*) – prevent spread to higher elevations and into Nevada as part of the YST Leading Edge Project

rush skeletonweed (*Chondrilla juncea*) – prevent spread to the north

Scotch thistle (*Onopordum acanthium*) – eradicate existing populations to prevent further spread south

Scotch broom (*Cytisus scoparius*) – spreading

French broom (*Genista monspessulana*) – spreading

Spanish broom (*Spartium junceum*)

red sesbania (*Sesbania punicea*) – only at western edge so far

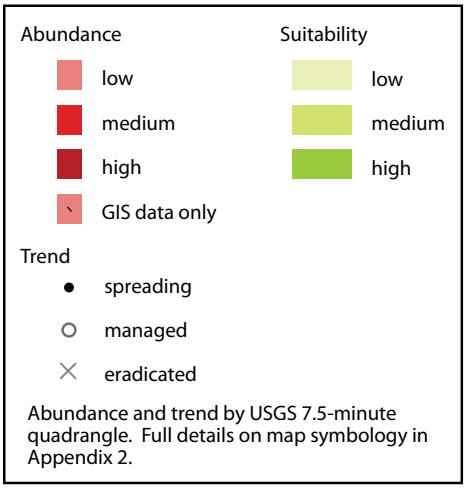
giant reed (*Arundo donax*)

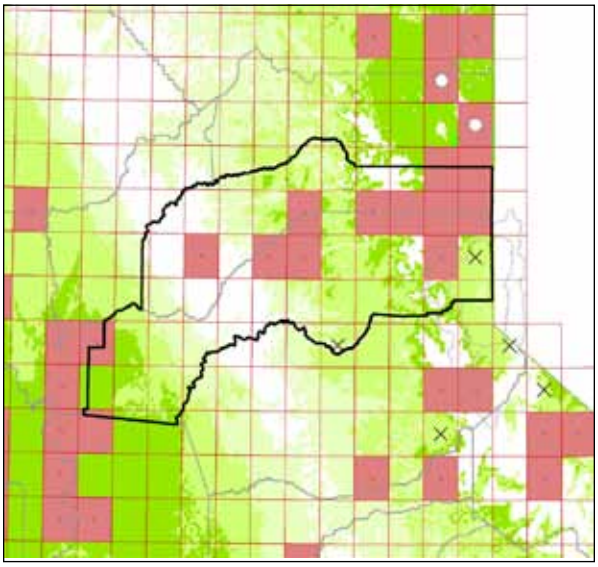
Dalmatian toadflax (*Linaria genistifolia* subsp. *dalmatica*)

yellow toadflax (*Linaria vulgaris*)

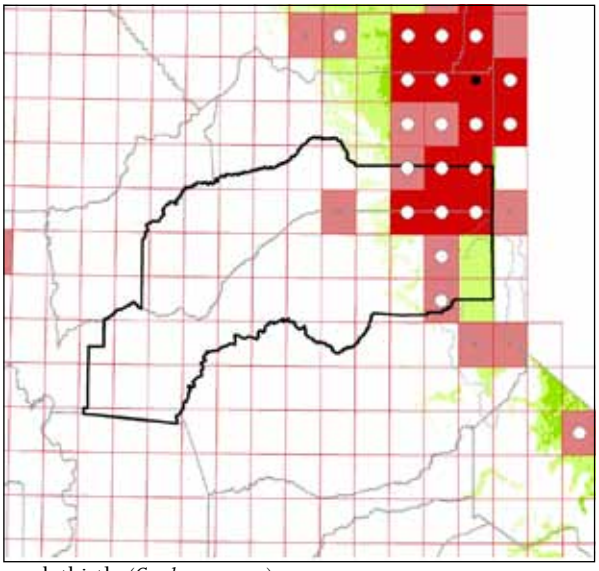
Surveillance is recommended to prevent spread into the Nevada/Placer WMA:

stinkwort (*Dittrichia graveolens*) – present on the western edge of the WMA

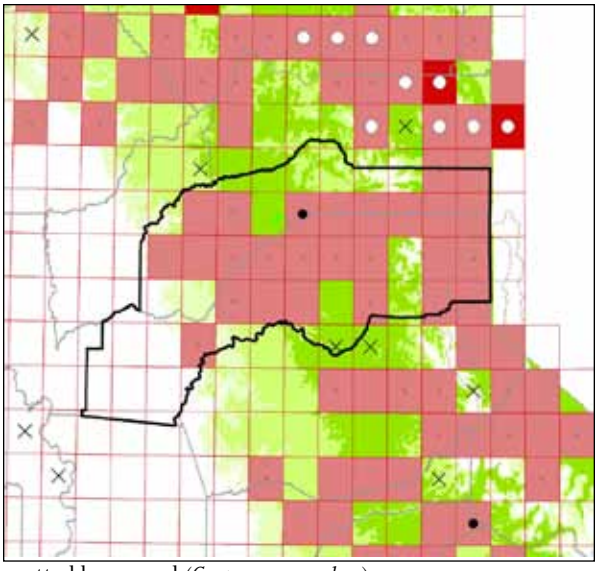




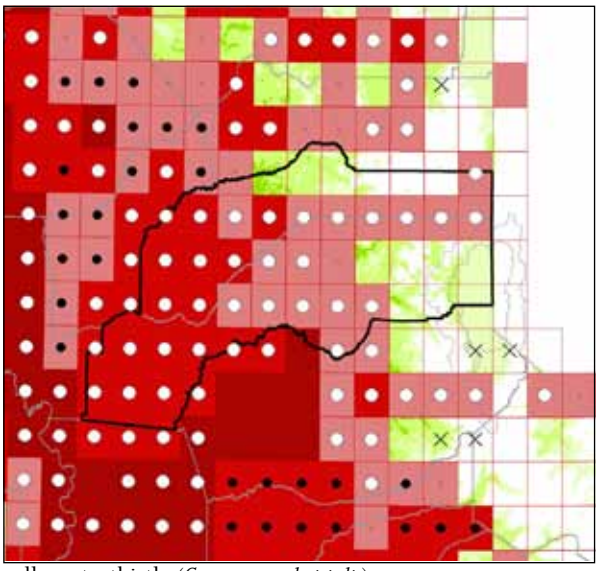
Russian knapweed (*Acroptilon repens*)



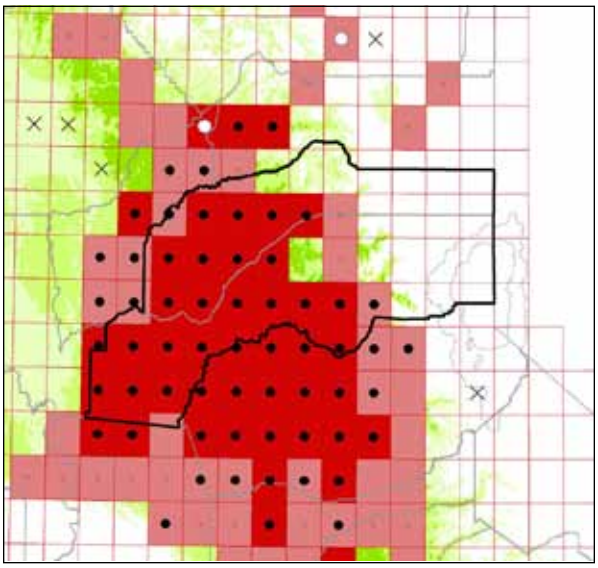
musk thistle (*Carduus nutans*)



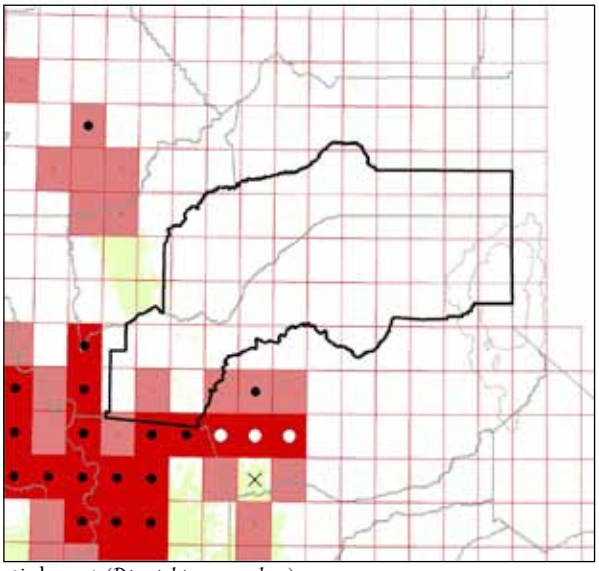
spotted knapweed (*Centaurea maculosa*)



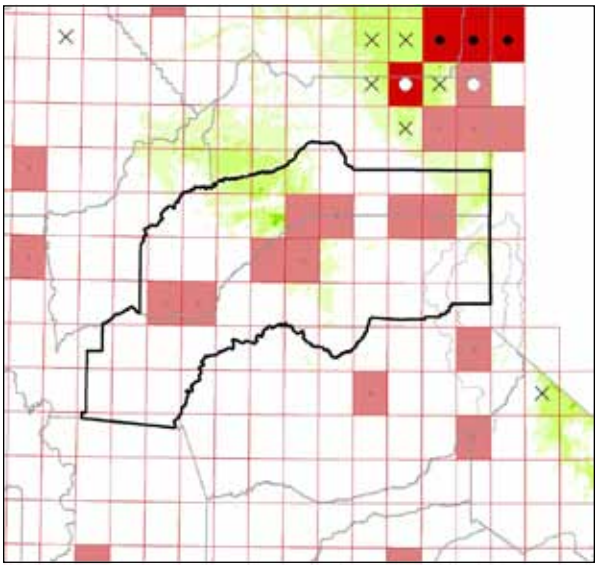
yellow starthistle (*Centaurea solstitialis*)



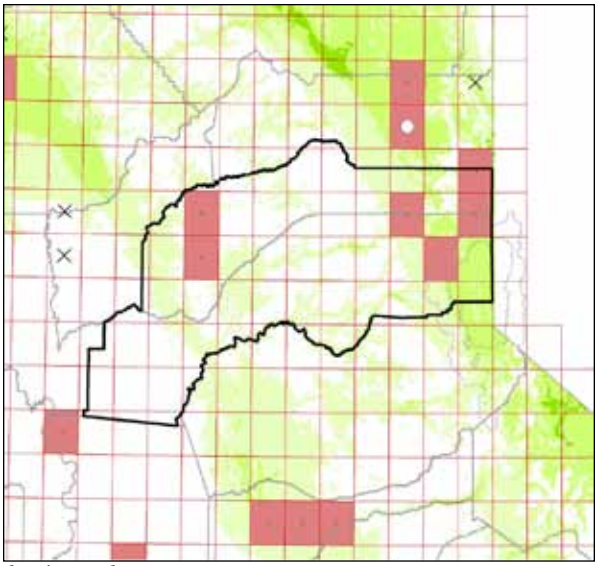
rush skeletonweed (*Chondrilla juncea*)



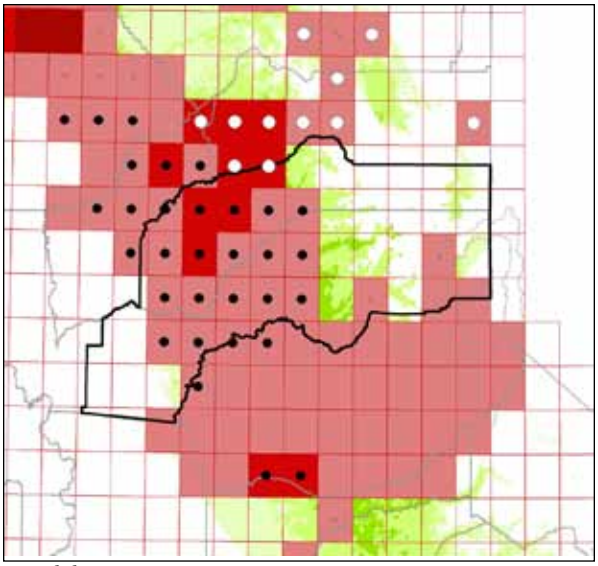
stinkwort (*Dittrichia graveolens*)



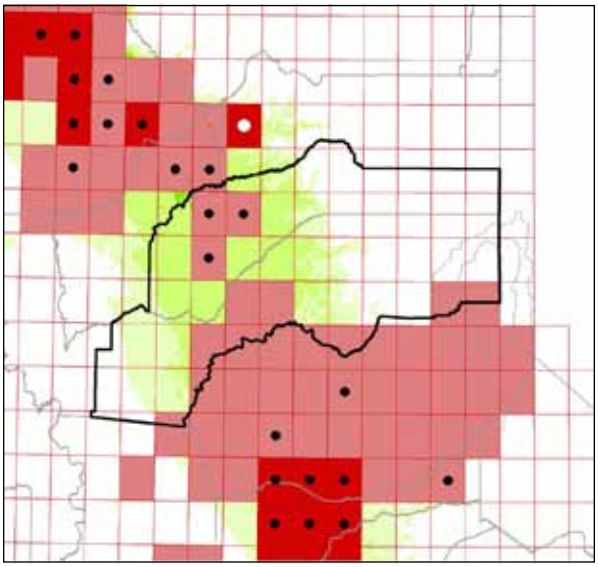
Scotch thistle (*Onopordum acanthium*)



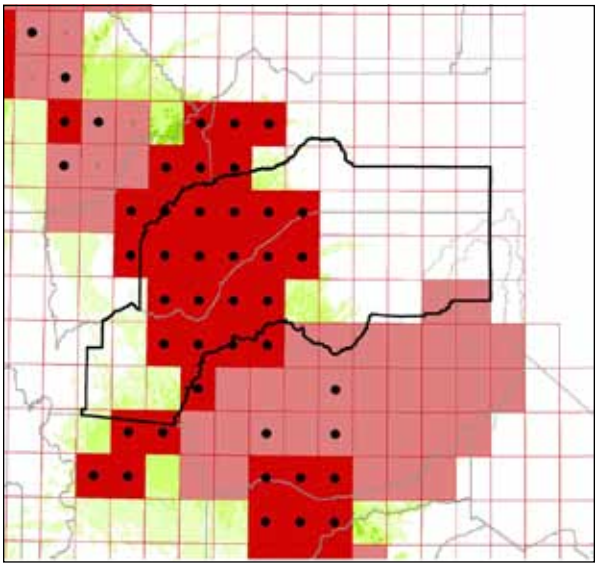
dyer's woad (*Isatis tinctoria*)



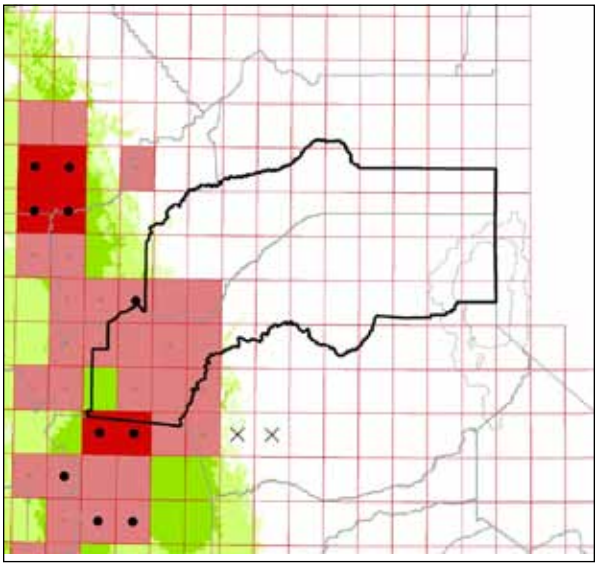
Scotch broom (*Cytisus scoparius*)



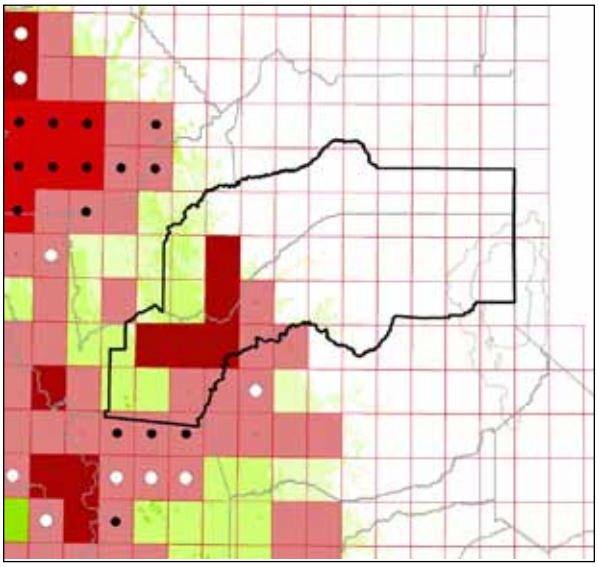
French broom (*Genista monspessulana*)



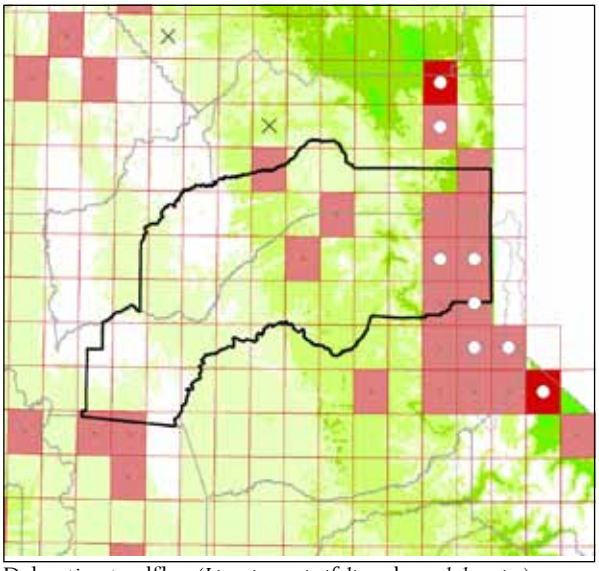
Spanish broom (*Spartium junceum*)



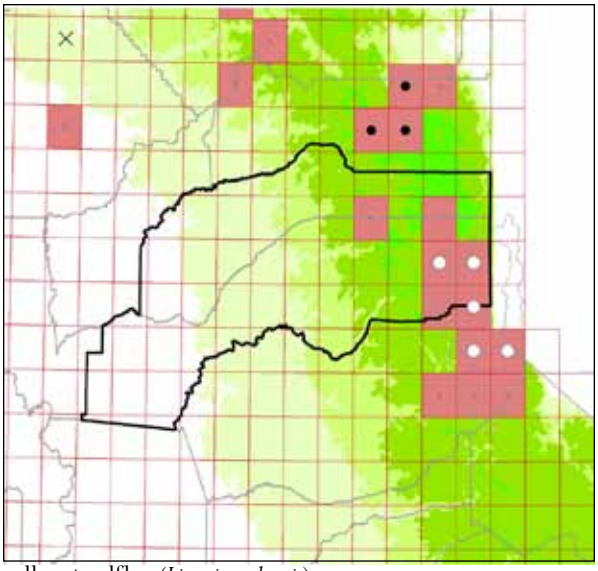
red sesbania (*Sesbania punicea*)



giant reed (*Arundo donax*)



Dalmatian toadflax (*Linaria genistifolia* subsp. *dalmatica*)



yellow toadflax (*Linaria vulgaris*)

Management opportunities for the Nevada/Placer WMA

Priority	Species	Opportunities			Statistics							
		Eradication	Containment	Surveillance	% Infested	% Suitable Infested	% Spreading	% Managed	% Eradicated	% Suitable 2010	% Suitable 2050	Suitability Change
	Family Apiaceae											
	Poison-hemlock	-	M	-	51	91	0	0	0	32	3	↓
	Family Asteraceae											
●	**Russian knapweed**	**-**	**H**	**-**	**21**	**21**	**0**	**0**	**3**	**78**	**100**	**↑**
●	**Musk thistle**	**-**	**H**	**-**	**14**	**45**	**0**	**0**	**0**	**17**	**3**	**↓**
	Italian thistle & slenderflower thistle	M	M	-	48	-	97	0	0	-	-	-
	Woolly distaff thistle	M	-	-	3	67	0	0	2	1	16	↑↑
	Diffuse knapweed	-	M	-	22	23	7	0	0	70	68	-
●	**Spotted knapweed**	**-**	**H**	**-**	**43**	**51**	**4**	**0**	**3**	**75**	**75**	**-**
●	**Tocalote**	**-**	**M**	**-**	**37**	**-**	**91**	**0**	**0**	**-**	**-**	**-**
●	**Yellow starthistle**	**-**	**H**	**-**	**79**	**79**	**52**	**0**	**0**	**89**	**99**	**-**
●	**Rush skeletonweed**	**-**	**H**	**-**	**67**	**78**	**91**	**0**	**0**	**76**	**100**	**↑**
	Canada thistle	-	M	-	16	22	0	0	6	60	22	↓
	Bull thistle	-	L	-	100	100	92	0	0	96	100	-
●	**Stinkwort**	**-**	**-**	**M**	**10**	**40**	**50**	**17**	**0**	**4**	**19**	**↑↑**
	Ox-eye daisy	-	M	-	49	59	0	0	0	61	30	↓
●	**Scotch thistle**	**-**	**H**	**-**	**13**	**24**	**0**	**0**	**0**	**19**	**41**	**↑↑**
	Family Boraginaceae											
	Houndstongue	-	-	-	0	-	-	-	0	-	-	-
	Family Brassicaceae											
	Lens-podded white-top & hoary cress	-	M	-	19	-	0	0	0	-	-	-
●	**Dyer's woad**	**H**	**-**	**-**	**10**	**12**	**0**	**0**	**0**	**40**	**16**	**↓**
	Charlock mustard	-	-	L	2	-	0	0	0	-	-	-

	FAMIY DIPSACACEAE											
	Common teasel & fuller's teasel	-	M	-	21	28	23	0	0	45	33	↓
	FAMILY FABACEAE											
●	**Scotch broom**	**-**	**H**	**-**	**59**	**67**	**76**	**14**	**0**	**61**	**99**	**↑**
●	**French broom**	**-**	**H**	**-**	**29**	**39**	**28**	**0**	**0**	**55**	**73**	**↑**
●	**Spanish broom**	**-**	**H**	**-**	**51**	**68**	**81**	**0**	**0**	**54**	**79**	**↑**
	Black locust	-	L	-	56	-	0	0	0	-	-	-
●	**Red sesbania**	**-**	**H**	**-**	**24**	**68**	**20**	**0**	**0**	**27**	**40**	**↑**
	Gorse	-	M	-	5	100	0	0	2	0	48	↑↑
	FAMILY POACEAE											
●	**Giant reed**	**-**	**H**	**-**	**24**	**43**	**20**	**0**	**0**	**40**	**58**	**↑**
	Annual false-brome	-	M	-	18	33	55	0	0	38	39	-
	Japanese brome	-	L	-	10	-	0	0	0	-	-	-
	Red brome	-	M	-	62	98	10	0	0	50	44	-
	Jubatagrass	-		M	14	-	0	0	0	-	-	-
	Pampasgrass	-	M	-	40	100	0	0	0	11	35	↑↑
	Orchardgrass	-	L	-	100	100	0	0	0	100	100	-
	Common velvet grass	-	M	-	41	41	15	0	0	77	93	↑
	Mediterranean barley	-	M	-	57	-	0	0	0	-	-	-
	Hare barley	-	M	-	56	-	0	0	0	-	-	-
	Italian ryegrass	M	-	-	44	67	86	0	0	46	44	-
	FAMILY POLYGONACEAE											
	Japanese knotweed	M	-	-	2	-	0	0	0	-	-	-
	Giant knotweed	-	-	L	0	-	-	-	0	-	-	-
	FAMILY SCROPHULARIACEAE											
●	**Dalmatian toadflax**	**-**	**H**	**-**	**19**	**19**	**25**	**25**	**0**	**79**	**90**	**-**
●	**Yellow toadflax**	**-**	**H**	**-**	**10**	**12**	**50**	**50**	**0**	**70**	**100**	**↑**
	FAMILY SIMAROUBACEAE											
	Tree-of-heaven	-	M	-	57	75	94	3	0	57	68	↑
	FAMILY SOLANACEAE											
	Tree tobacco	-	-	M	3	17	0	0	0	10	4	↓

Opportunities: H = high priority, M = medium, L = low

% Infested: portion of USGS quads in the area in which the species is present in wildlands

% Suitable Infested: portion of quads in the area with suitable climate that are currently infested

% Spreading: portion of infested quads in which the species is spreading

% Managed: portion of infested quads where species is under management

% Eradicated: portion of all quads in the area in which the species has been eradicated

% Suitable in 2010: portion of area with current climatic suitability of at least a level of "low" or higher

% Suitable in 2050: of area with projected 2050 climatic suitability of at least a level of "low" or higher

Suitability change:
↑ = a 15% - 99% increase from 2010 to 2050
↑↑= an increase of greater than 100%
↓ = a decrease of greater than 15%

These recommendations focus on terrestrial species and do not address aquatic invasive plants in the LTBWCG.

Eradication is recommended for species that have limited occurrence within the WMA. Of the species examined, the following are priority eradication opportunities for the Lake Tahoe Basin:

Russian knapweed (*Acroptilon repens*)

yellow starthistle (*Centaurea solstitialis*)

Scotch thistle (*Onopordum acanthium*) – GIS data indicates presence in a couple of quads

dyer's woad (*Isatis tinctoria*)

tree-of-heaven (*Ailanthus altissima*)

Containment is recommended for species that are more widespread, where eradication may not be a realistic goal. The following species are priority containment opportunities for LTBWCG:

musk thistle (*Carduus nutans*)

spotted knapweed (*Centaurea maculosa*)

Scotch broom (*Cytisus scoparius*)

French broom (*Genista monspessulana*)

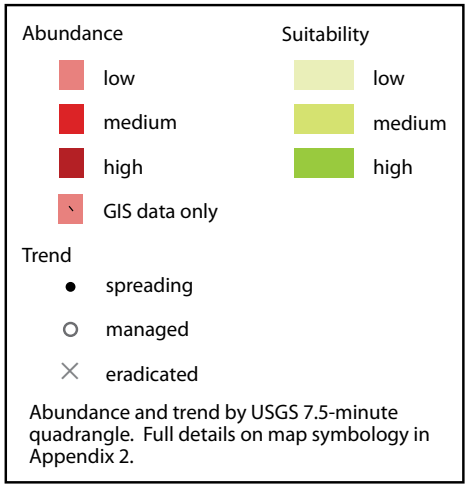
Spanish broom (*Spartium junceum*)

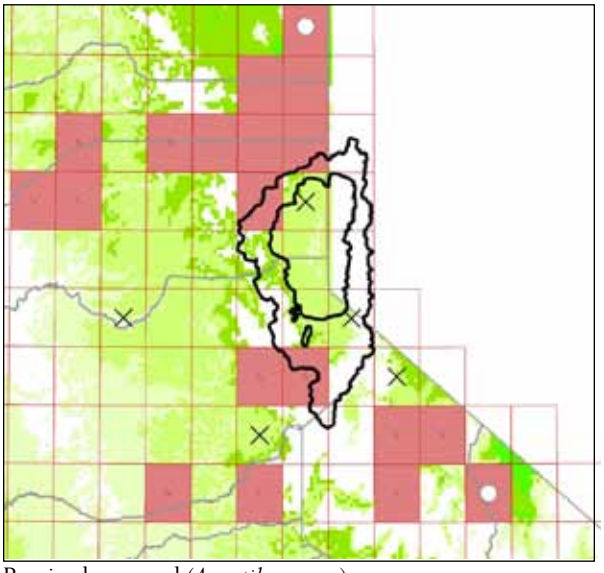
Dalmatian toadflax (*Linaria genistifolia* subsp. *dalmatica*)

yellow toadflax (*Linaria vulgaris*)

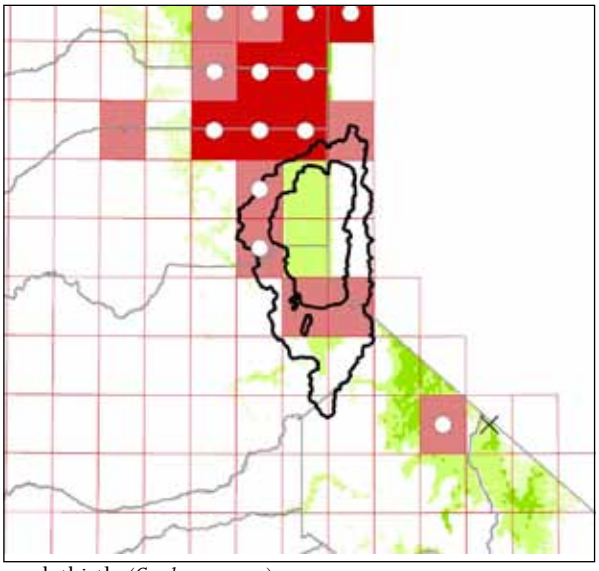
Surveillance is recommended to prevent spread into the WMA:

rush skeletonweed (*Chondrilla juncea*) – spreading just west of the Basin

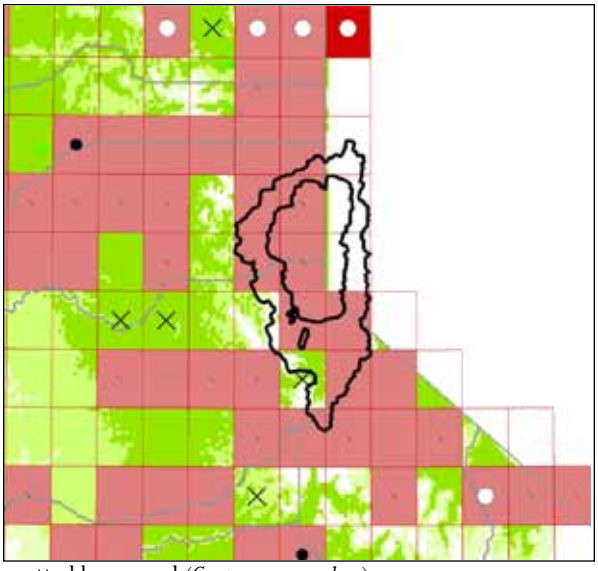




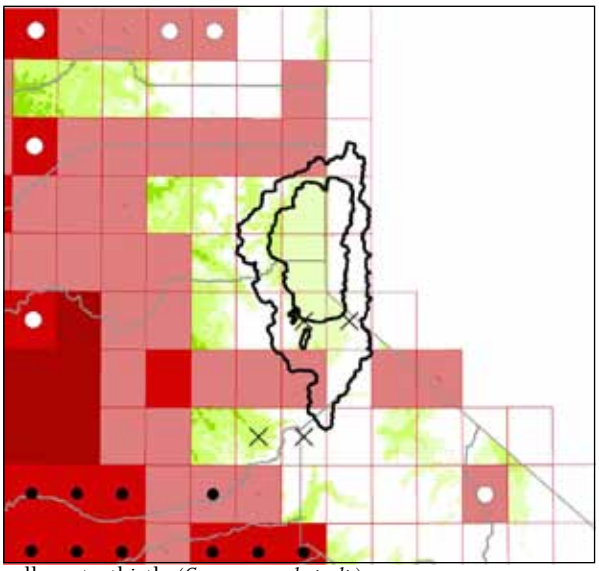
Russian knapweed (*Acroptilon repens*)



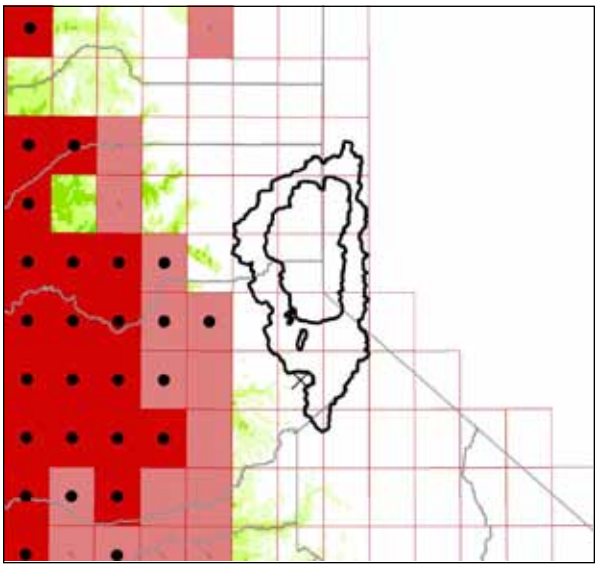
musk thistle (*Carduus nutans*)



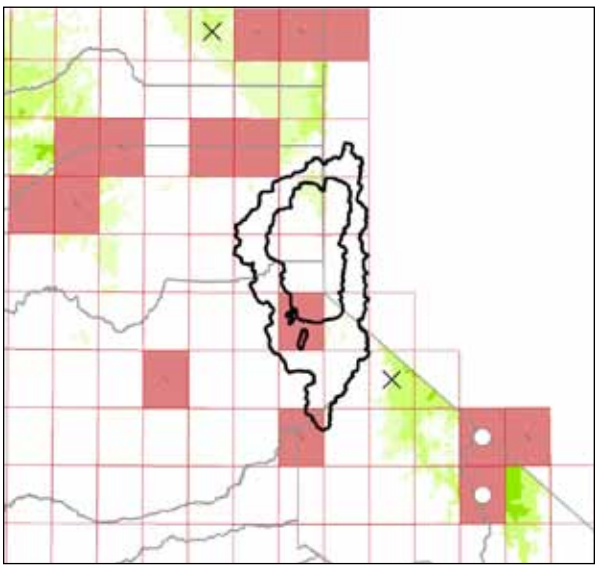
spotted knapweed (*Centaurea maculosa*)



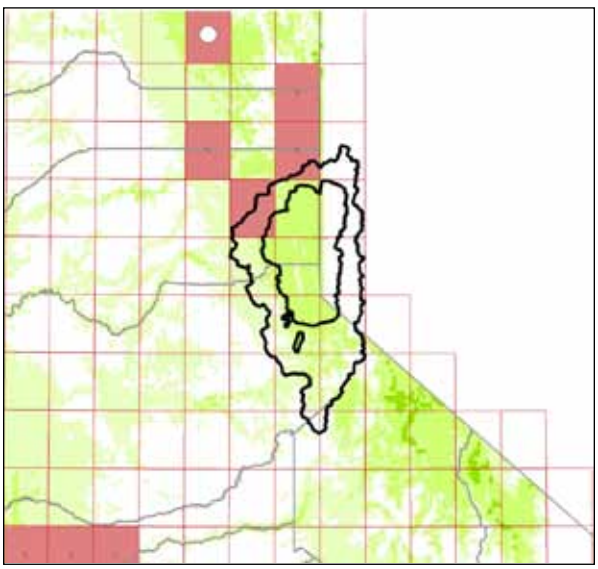
yellow starthistle (*Centaurea solstitalis*)



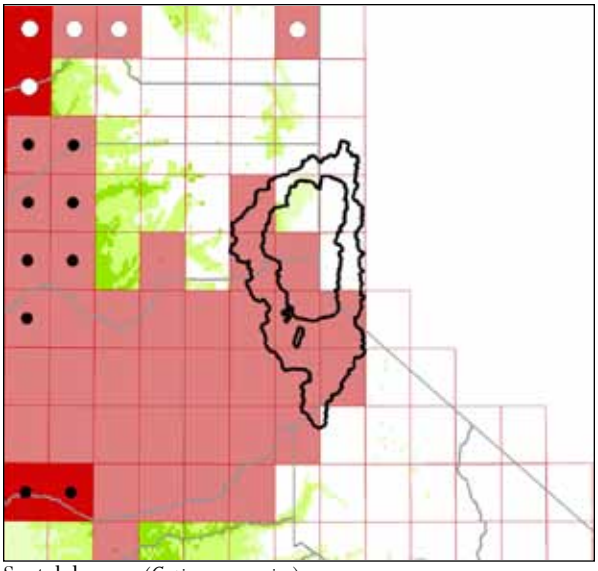
rush skeletonweed (*Chondrilla juncea*)



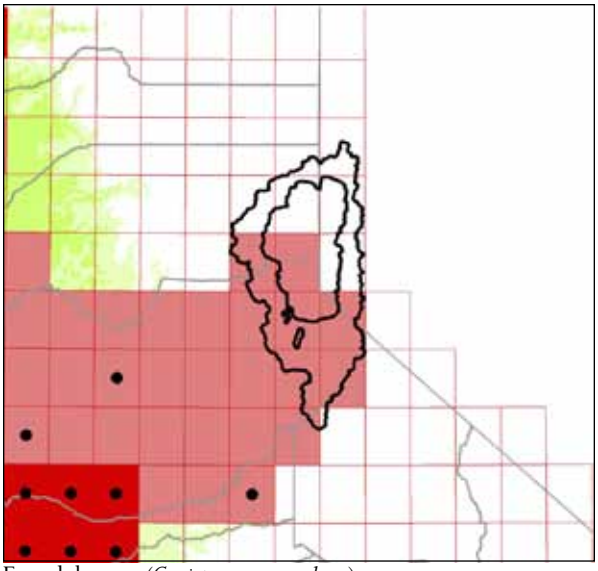
Scotch thistle (*Onopordum acanthium*)



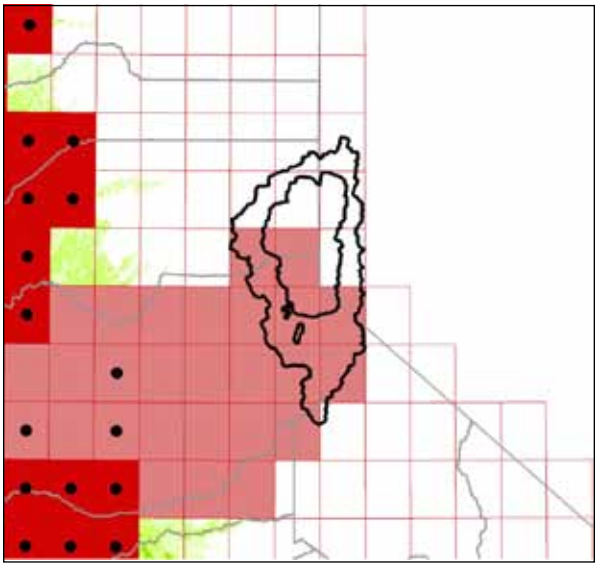
dyer's woad (*Isatis tinctoria*)



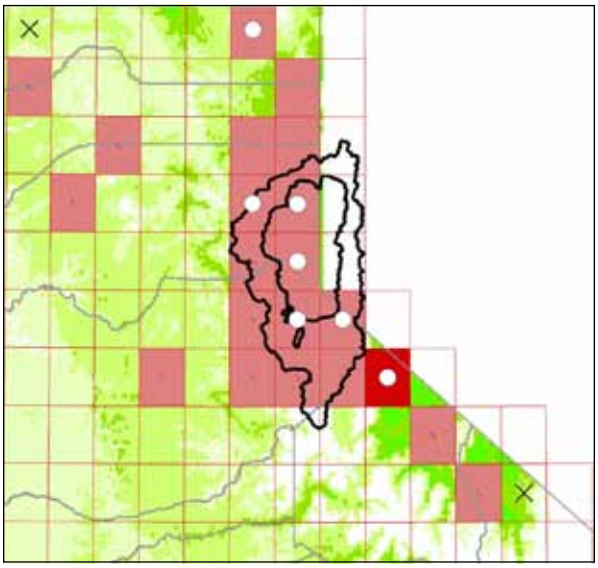
Scotch broom (*Cytisus scoparius*)



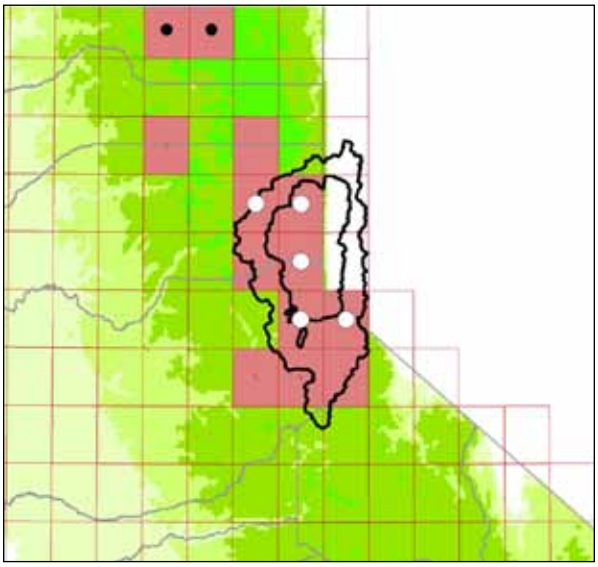
French broom (*Genista monspessulana*)



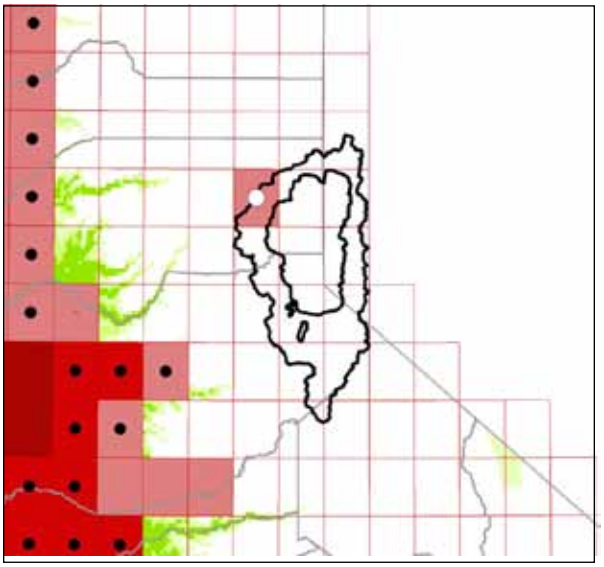
Spanish broom (*Spartium junceum*)



Dalmatian toadflax (*Linaria genistifolia* subsp. *dalmatica*)



yellow toadflax (*Linaria vulgaris*)



tree-of-heaven (*Ailanthus altissima*)

Management opportunities for the Lake Tahoe Basin Weed Coordinating Group

Priority	Species	Opportunities			Statistics							
		Eradication	Containment	Surveillance	% Infested	% Suitable Infested	% Spreading	% Managed	% Eradicated	% Suitable 2010	% Suitable 2050	Suitability Change
	Family Apiaceae											
	Poison-hemlock	-	M	-	11	100	0	0	0	1	7	↑↑
	Family Asteraceae											
●	**Russian knapweed**	**H**	**-**	**-**	**22**	**27**	**0**	**0**	**17**	**62**	**99**	**↑**
●	**Musk thistle**	**-**	**H**	**-**	**33**	**40**	**0**	**0**	**0**	**46**	**5**	**↓**
	Italian thistle & slenderflower thistle	-	-	M	0	-	-	-	0	-	-	-
	Woolly distaff thistle	-	-	L	0	-	-	-	0	0	0	-
	Diffuse knapweed	-	M	-	50	60	0	0	17	88	100	-
●	**Spotted knapweed**	**-**	**H**	**-**	**67**	**80**	**0**	**0**	**6**	**79**	**100**	**↑**
	Tocalote	-	-	M	0	-	-	-	0	-	-	-
●	**Yellow starthistle**	**H**	**-**	**-**	**22**	**27**	**0**	**0**	**17**	**50**	**80**	**↑**
●	**Rush skeletonweed**	**-**	**-**	**H**	**0**	**0**	**-**	**-**	**6**	**4**	**97**	**↑↑**
	Canada thistle	-	M	-	44	47	0	0	0	87	82	-
	Bull thistle	-	L	-	94	94	65	0	0	78	99	↑
	Stinkwort	-	-	L	0	-	-	-	0	0	20	-
	Ox-eye daisy	-	M	-	50	53	22	0	0	76	82	-
●	**Scotch thistle**	**H**	**-**	**-**	**11**	**29**	**0**	**0**	**6**	**10**	**31**	**↑↑**
	Family Boraginaceae											
	Houndstongue	-	-	-	0	-	-	-	0	-	-	-
	Family Brassicaceae											
	Lens-podded white-top & hoary cress	M	-	-	11	-	0	0	0	-	-	-
●	**Dyer's woad**	**H**	**-**	**-**	**11**	**13**	**0**	**0**	**0**	**74**	**59**	**↓**
	Charlock mustard	-	-	L	0	-	-	-	0	-	-	-
	Famiy Dipsacaceae											
	Common teasel & fuller's teasel	M	-	-	11	100	100	50	0	1	0	-
	Family Fabaceae											
●	**Scotch broom**	**-**	**H**	**-**	**56**	**71**	**0**	**0**	**0**	**21**	**90**	**↑↑**
●	**French broom**	**-**	**H**	**-**	**50**	**-**	**0**	**0**	**0**	**0**	**1**	**-**
●	**Spanish broom**	**-**	**H**	**-**	**50**	**-**	**0**	**0**	**0**	**0**	**26**	**-**
	Black locust	-	-	L	0	-	-	-	0	-	-	-
	Red sesbania	-	-	-	0	-	-	-	0	0	0	-
	Gorse	-	-	L	0	-	-	-	0	0	0	-
	Family Poaceae											
	Giant reed	-	-	L	0	-	-	-	0	0	0	-
	Annual false-brome	-	-	L	0	-	-	-	0	0	0	-
	Japanese brome	-	-	L	0	-	-	-	0	-	-	-
	Red brome	-	M	-	78	100	0	0	0	3	2	-
	Jubatagrass	-	M	-	6	-	0	0	0	-	-	-
	Pampasgrass	-	M	-	6	-	0	0	0	0	0	-

	Orchardgrass	-	L	-	72	87	0	0	0	92	100	-
	Common velvet grass	-	-	M	22	27	50	0	0	43	70	↑
	Mediterranean barley	-	-	M	0	-	-	-	0	-	-	-
	Hare barley	-	-	M	0	-	-	-	0	-	-	-
	Italian ryegrass	-	-	M	0	0	NA	NA	0	0	0	-
	FAMILY POLYGONACEAE											
	Japanese knotweed	-	-	-	0	-	-	-	0	-	-	-
	Giant knotweed	-	-	-	0	-	-	-	0	-	-	-
	FAMILY SCROPHULARIACEAE											
●	**Dalmatian toadflax**	**-**	**H**	**-**	**67**	**80**	**50**	**50**	**0**	**79**	**100**	**↑**
●	**Yellow toadflax**	**-**	**H**	**-**	**50**	**60**	**56**	**56**	**0**	**99**	**100**	**-**
	FAMILY SIMAROUBACEAE											
●	**Tree-of-heaven**	**H**	**-**	**-**	**6**	**100**	**0**	**100**	**0**	**0**	**7**	**↑↑**
	FAMILY SOLANACEAE											
	Tree tobacco	-	-	L	0	-	-	-	0	0	0	-

Opportunities: H = high priority, M = medium, L = low

% Infested: portion of USGS quads in the area in which the species is present in wildlands

% Suitable Infested: portion of quads in the area with suitable climate that are currently infested

% Spreading: portion of infested quads in which the species is spreading

% Managed: portion of infested quads where species is under management

% Eradicated: portion of all quads in the area in which the species has been eradicated

% Suitable in 2010: portion of area with current climatic suitability of at least a level of "low" or higher

% Suitable in 2050: of area with projected 2050 climatic suitability of at least a level of "low" or higher

Suitability change:
↑ = a 15% - 99% increase from 2010 to 2050
↑↑= an increase of greater than 100%
↓ = a decrease of greater than 15%

Eradication is recommended for species that have limited occurrence within the WMA. Of the species examined, the following are priority eradication opportunities for El Dorado WMA:

Russian knapweed (*Acroptilon repens*)

musk thistle (*Carduus nutans*)

Scotch thistle (*Onopordum acanthium*) – GIS data indicates presence in a couple of quads

Containment is recommended for species that are more widespread, where eradication may not be a realistic goal. The following species are priority containment opportunities for El Dorado WMA:

spotted knapweed (*Centaurea maculosa*) – GIS data indicates scattered throughout county

yellow starthistle (*Centaurea solstitialis*) – prevent spread to higher elevations as part of YST Leading Edge Project

rush skeletonweed (*Chondrilla juncea*)

stinkwort (*Dittrichia graveolens*)

Scotch broom (*Cytisus scoparius*)

French broom (*Genista monspessulana*)

Spanish broom (*Spartium junceum*)

red sesbania (*Sesbania punicea*) – GIS data shows presence at the western edge of the county

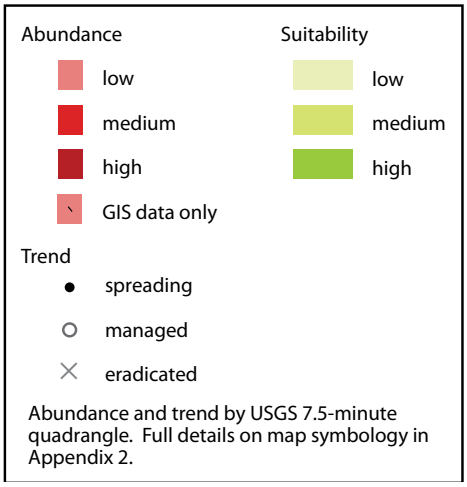
giant reed (*Arundo donax*)

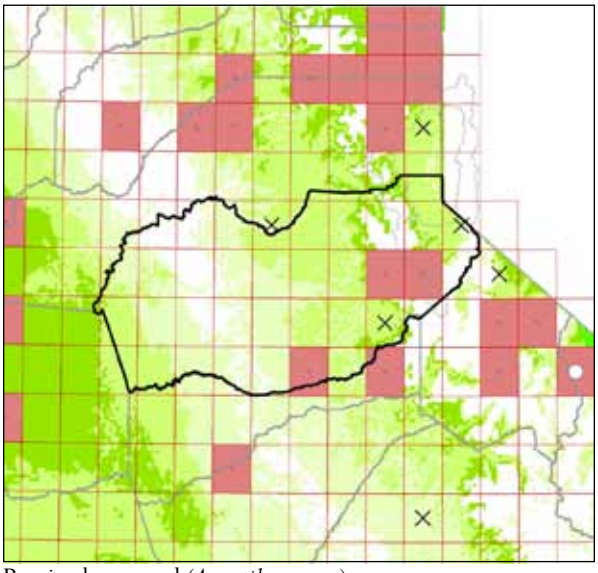
Dalmatian toadflax (*Linaria genistifolia* subsp. *dalmatica*)

yellow toadflax (*Linaria vulgaris*)

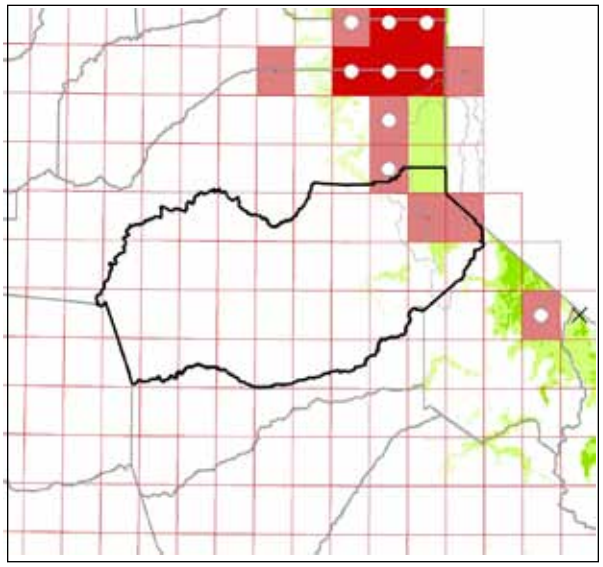
Surveillance is recommended to prevent spread into El Dorado WMA:

dyer's woad (*Isatis tinctoria*) – GIS data indicate presence to the south

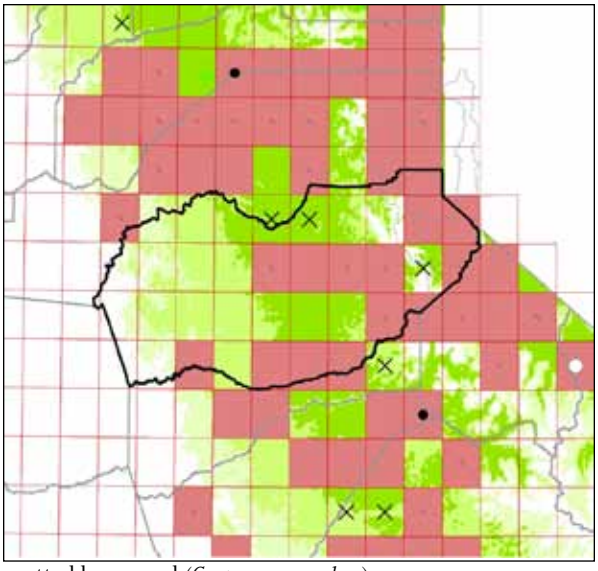




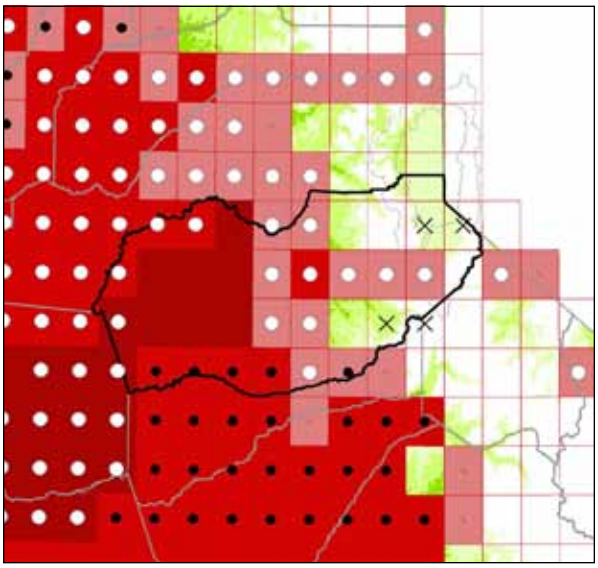
Russian knapweed (*Acroptilon repens*)



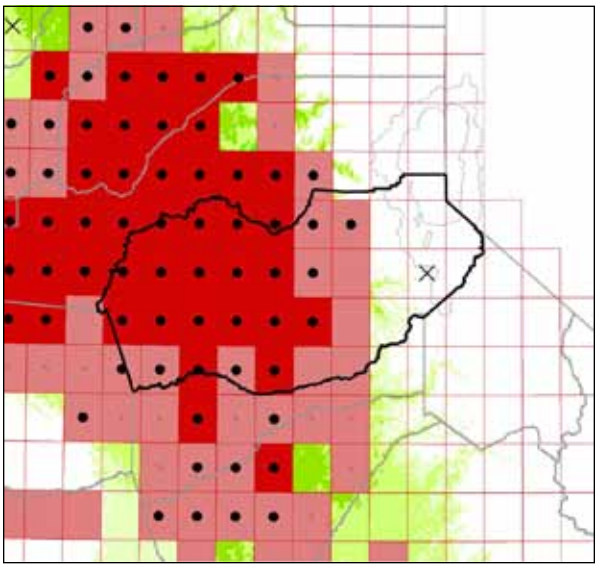
musk thistle (*Carduus nutans*)



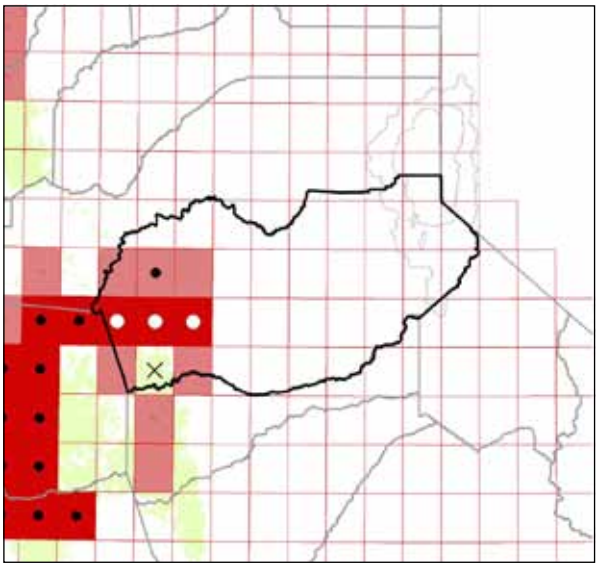
spotted knapweed (*Centaurea maculosa*)



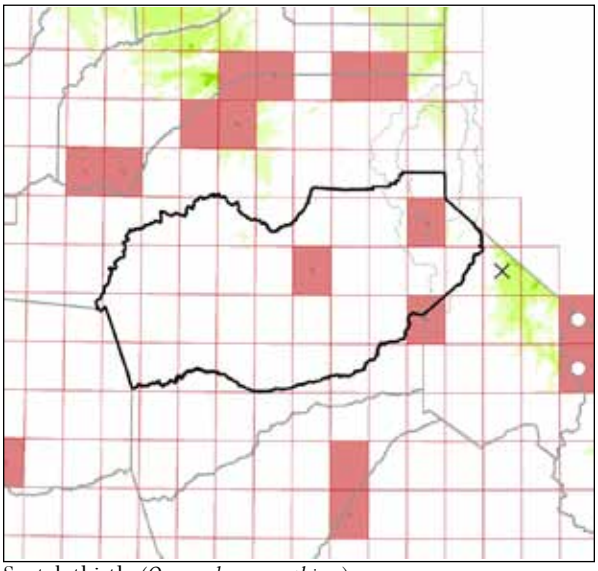
yellow starthistle (*Centaurea solstitialis*)



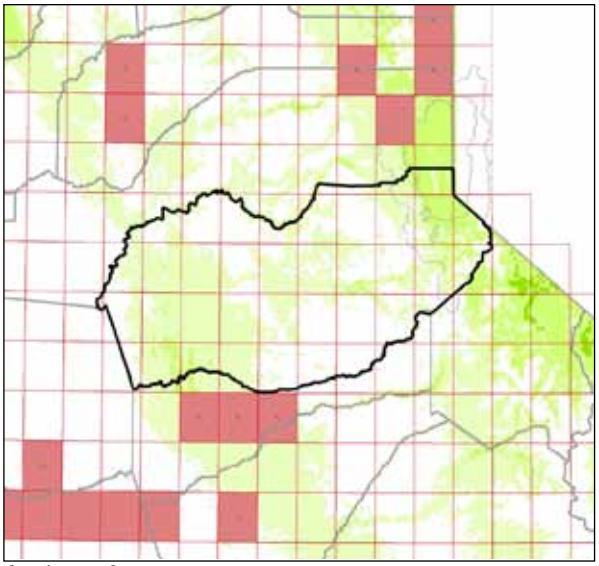
rush skeletonweed (*Chondrilla juncea*)



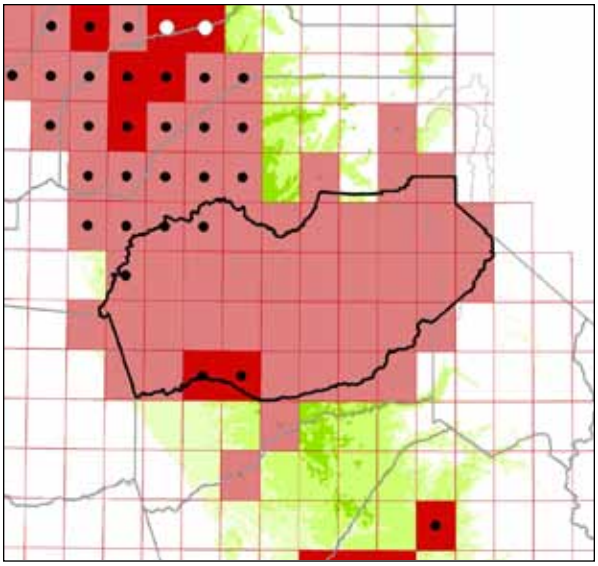
stinkwort (*Dittrichia graveolens*)



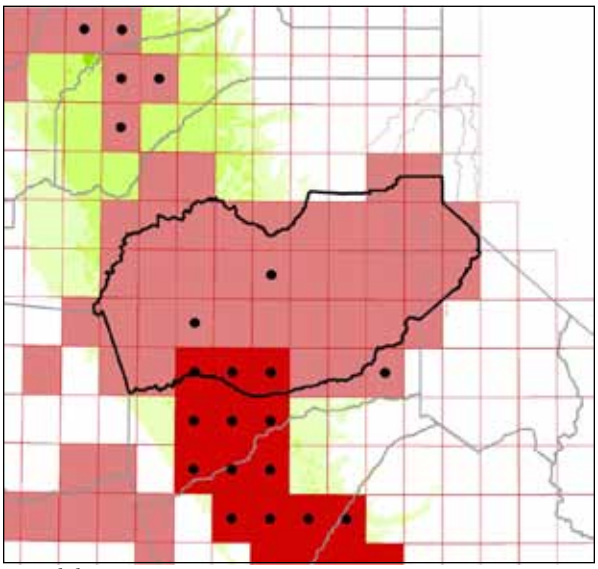
Scotch thistle (*Onopordum acanthium*)



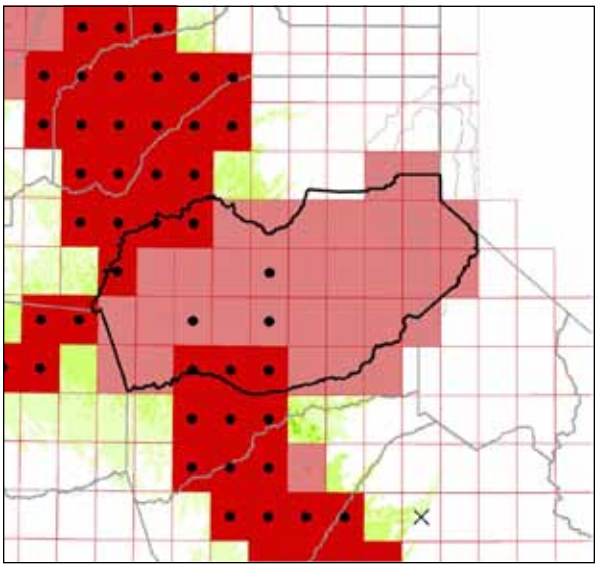
dyer's woad (*Isatis tinctoria*)



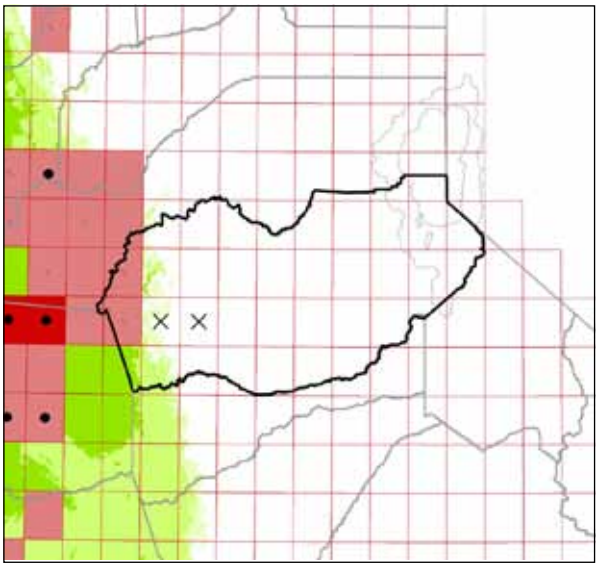
Scotch broom (*Cytisus scoparius*)



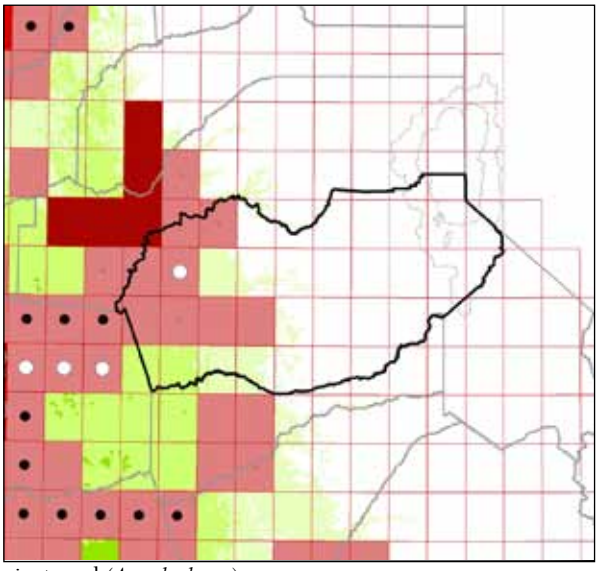
French broom (*Genista monspessulana*)



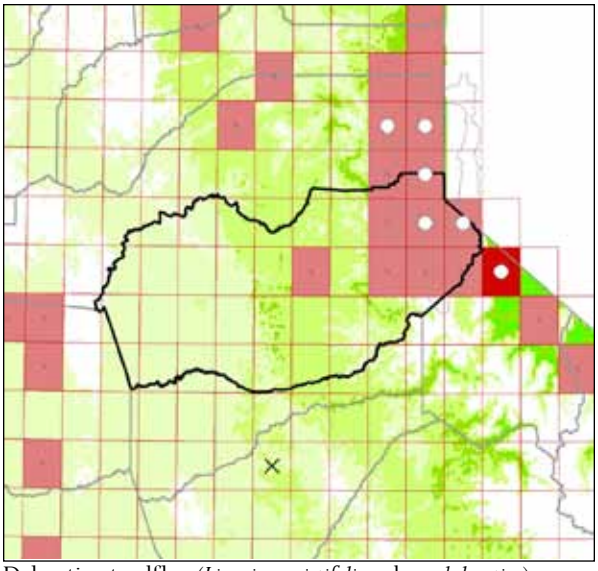
Spanish broom (*Spartium junceum*)



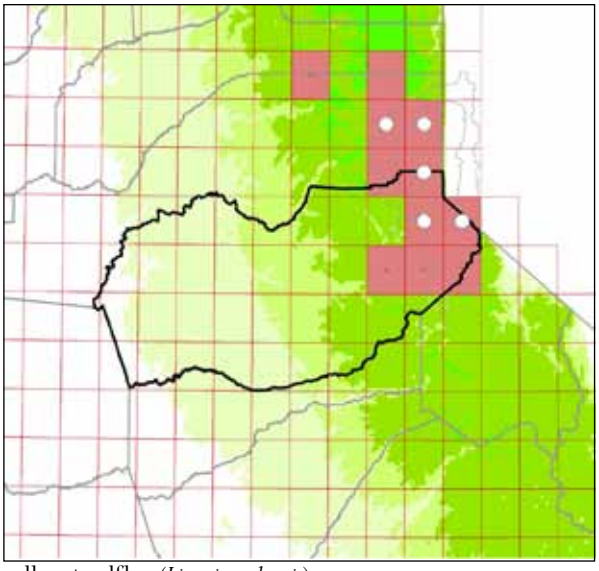
red sesbania (*Sesbania punicea*)



giant reed (*Arundo donax*)



Dalmatian toadflax (*Linaria genistifolia* subsp. *dalmatica*)



yellow toadflax (*Linaria vulgaris*)

Management opportunities for the El Dorado WMA

Priority	Species	Opportunities			Statistics							
		Eradication	Containment	Surveillance	% Infested	% Suitable Infested	% Spreading	% Managed	% Eradicated	% Suitable 2010	% Suitable 2050	Suitability Change
	Family Apiaceae											
	Poison-hemlock	-	M	-	24	58	0	0	0	23	5	↓
	Family Asteraceae											
●	**Russian knapweed**	**H**	**-**	**-**	**9**	**9**	**0**	**0**	**7**	**77**	**100**	↑
●	**Musk thistle**	**H**	**-**	**-**	**7**	**20**	**0**	**0**	**0**	**8**	**0**	↓
	Italian thistle & slenderflower thistle	-	M	-	24	-	100	0	0	-	-	-
	Woolly distaff thistle	-	-	M	0	-	-	-	0	0	17	-
	Diffuse knapweed	-	M	-	28	29	0	0	7	90	72	↓
●	**Spotted knapweed**	**-**	**H**	**-**	**44**	**46**	**0**	**0**	**9**	**84**	**83**	**-**
●	**Tocalote**	**-**	**M**	**-**	**26**	**-**	**42**	**0**	**0**	**-**	**-**	**-**
●	**Yellow starthistle**	**-**	**H**	**-**	**72**	**73**	**36**	**0**	**9**	**86**	**94**	**-**
●	**Rush skeletonweed**	**-**	**H**	**-**	**70**	**82**	**84**	**0**	**2**	**74**	**100**	↑
	Canada thistle	-	M	-	26	34	0	0	0	50	20	↓
	Bull thistle	-	L	-	98	98	93	0	0	94	100	-
●	**Stinkwort**	**-**	**M**	**-**	**20**	**100**	**56**	**33**	**2**	**3**	**33**	↑↑
	Ox-eye daisy	-	M	-	39	41	56	0	0	75	36	↓
●	**Scotch thistle**	**H**	**-**	**-**	**7**	**43**	**0**	**0**	**0**	**1**	**48**	↑↑
	Family Boraginaceae											
	Houndstongue	-	-	-	0	-	-	-	0	-	-	-
	Family Brassicaceae											
	Lens-podded white-top & hoary cress	M	-	-	7	-	0	0	0	-	-	-
●	**Dyer's woad**	**-**	**-**	**H**	**0**	**0**	**-**	**-**	**0**	**49**	**19**	↓
	Charlock mustard	-	-	L	0	-	-	-	0	-	-	-

	FAMILY DIPSACACEAE											
	Common teasel & fuller's teasel	-	M	-	15	25	14	14	2	40	25	↓
	FAMILY FABACEAE											
●	**Scotch broom**	**-**	**H**	**-**	**94**	**98**	**19**	**0**	**0**	**75**	**97**	↑
●	**French broom**	**-**	**H**	**-**	**89**	**100**	**15**	**0**	**0**	**53**	**70**	↑
●	**Spanish broom**	**-**	**H**	**-**	**89**	**100**	**29**	**0**	**0**	**56**	**76**	↑
	Black locust	-	L	-	22	-	0	0	0	-	-	-
●	**Red sesbania**	**-**	**H**	**-**	**9**	**40**	**0**	**0**	**4**	**15**	**42**	↑↑
	Gorse	-	-	L	0	-	-	-	0	0	38	-
	FAMILY POACEAE											
●	**Giant reed**	**-**	**H**	**-**	**22**	**42**	**10**	**0**	**0**	**35**	**51**	↑
	Annual false-brome	-	M	-	22	46	100	0	0	35	35	-
	Japanese brome	-	L	-	11	-	0	0	0	-	-	-
	Red brome	-	M	-	94	100	9	0	0	41	25	↓
	Jubatagrass	-	M	-	13	-	0	0	0	-	-	-
	Pampasgrass	-	M	-	24	100	0	0	0	8	26	↑↑
	Orchardgrass	-	L	-	91	93	0	0	0	98	100	-
	Common velvet grass	-	M	-	54	56	56	0	0	78	88	-
	Mediterranean barley	-	M	-	28	-	0	0	4	-	-	-
	Hare barley	-	M	-	30	-	21	0	0	-	-	-
	Italian ryegrass	-	M	-	33	65	20	0	0	53	42	↓
	FAMILY POLYGONACEAE											
	Japanese knotweed	-	-	-	0	-	-	-	0	-	-	-
	Giant knotweed	-	-	L	2	-	0	0	0	-	-	-
	FAMILY SCROPHULARIACEAE											
●	**Dalmatian toadflax**	**-**	**H**	**-**	**20**	**20**	**33**	**33**	**0**	**89**	**77**	**-**
●	**Yellow toadflax**	**-**	**H**	**-**	**15**	**16**	**43**	**43**	**0**	**89**	**100**	**-**
	FAMILY SIMAROUBACEAE											
	Tree-of-heaven	-	M	-	52	75	67	0	0	55	65	↑
	FAMILY SOLANACEAE											
	Tree tobacco	M	-	-	4	22	0	0	0	9	1	↓

Opportunities: H = high priority, M = medium, L = low

% Infested: portion of USGS quads in the area in which the species is present in wildlands

% Suitable Infested: portion of quads in the area with suitable climate that are currently infested

% Spreading: portion of infested quads in which the species is spreading

% Managed: portion of infested quads where species is under management

% Eradicated: portion of all quads in the area in which the species has been eradicated

% Suitable in 2010: portion of area with current climatic suitability of at least a level of "low" or higher

% Suitable in 2050: of area with projected 2050 climatic suitability of at least a level of "low" or higher

Suitability change:
↑ = a 15% - 99% increase from 2010 to 2050
↑↑= an increase of greater than 100%
↓ = a decrease of greater than 15%

Eradication is recommended for species that have limited occurrence within the WMA. Of the species examined, the following are priority eradication opportunities for Alpine WMA:

Russian knapweed (*Acroptilon repens*) – GIS data indicates presence in several quads

musk thistle (*Carduus nutans*)

yellow starthistle (*Centaurea solstitialis*) – eradicate eastern populations, prevent spread from west

Scotch thistle (*Onopordum acanthium*) – GIS data indicates presence in several quads

Containment is recommended for species that are more widespread, where eradication may not be a realistic goal. The following species are priority containment opportunities for Alpine WMA:

spotted knapweed (*Centaurea maculosa*) – GIS data indicates scattered throughout county

Scotch broom (*Cytisus scoparius*)

French broom (*Genista monspessulana*)

Spanish broom (*Spartium junceum*)

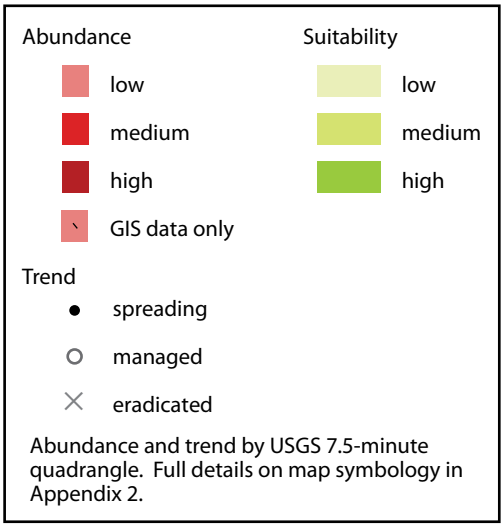
Dalmatian toadflax (*Linaria genistifolia* subsp. *dalmatica*)

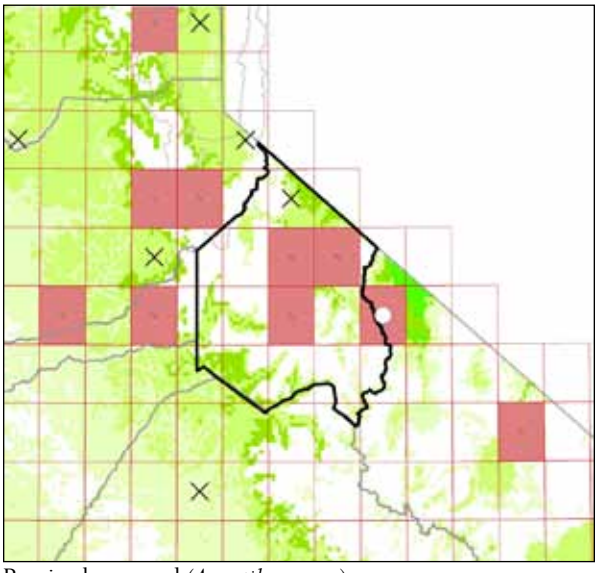
Surveillance is recommended to prevent spread into Alpine WMA:

rush skeletonweed (*Chondrilla juncea*)

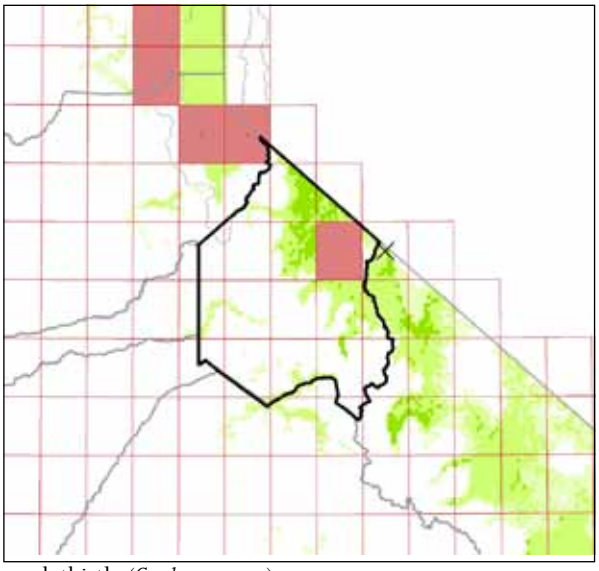
dyer's woad (*Isatis tinctoria*)

yellow toadflax (*Linaria vulgaris*) – GIS data indicates presence at northern edge of county

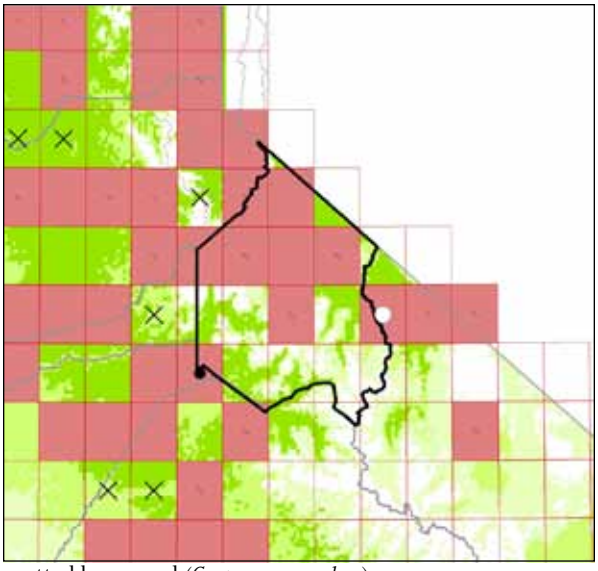




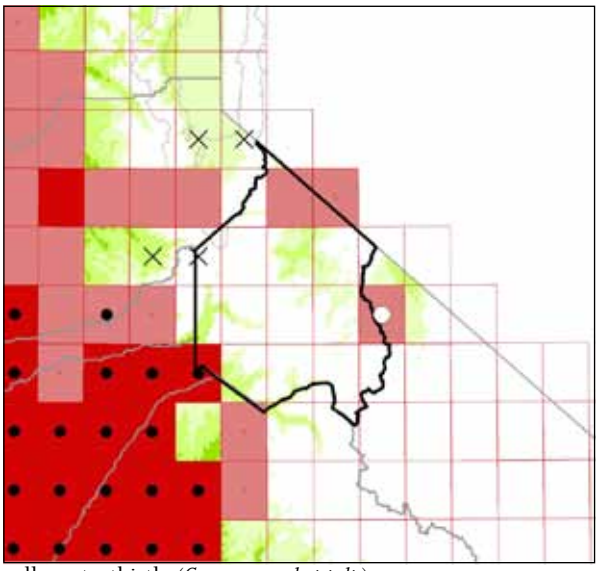
Russian knapweed (*Acroptilon repens*)



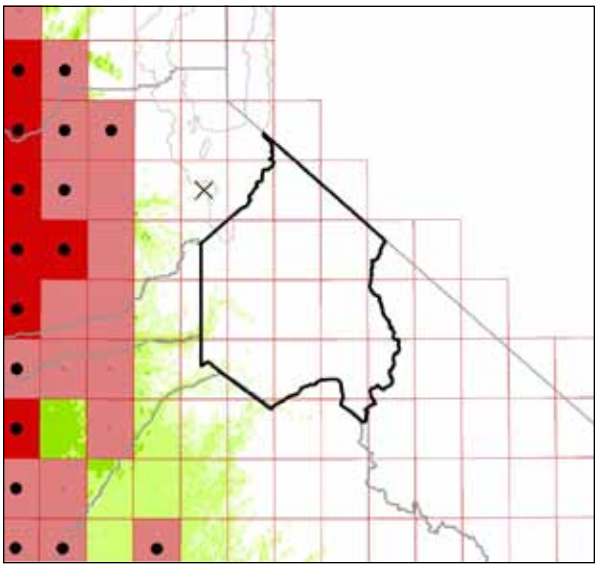
musk thistle (*Carduus nutans*)



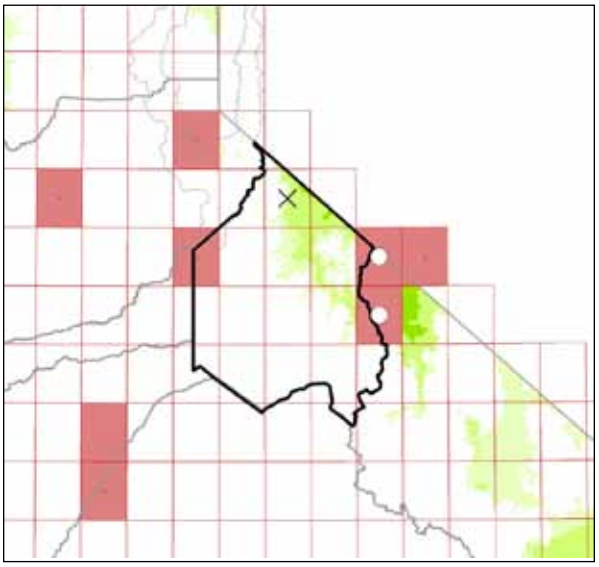
spotted knapweed (*Centaurea maculosa*)



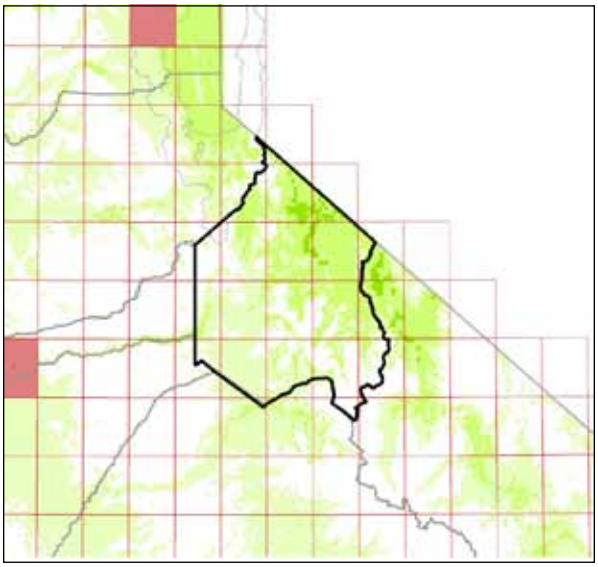
yellow starthistle (*Centaurea solstitialis*)



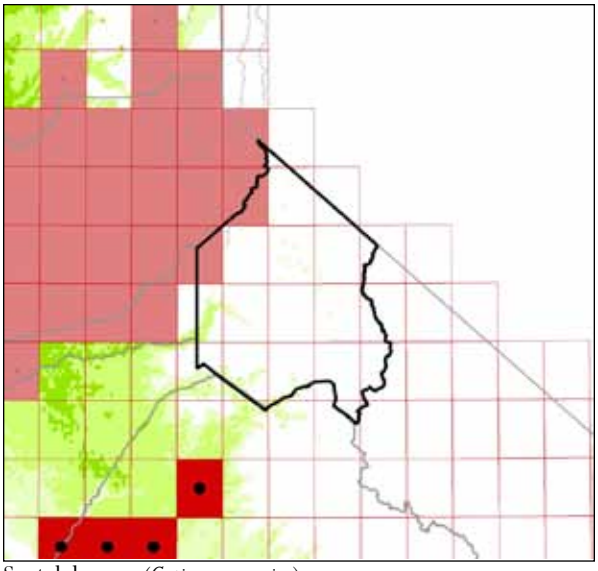
rush skeletonweed (*Chondrilla juncea*)



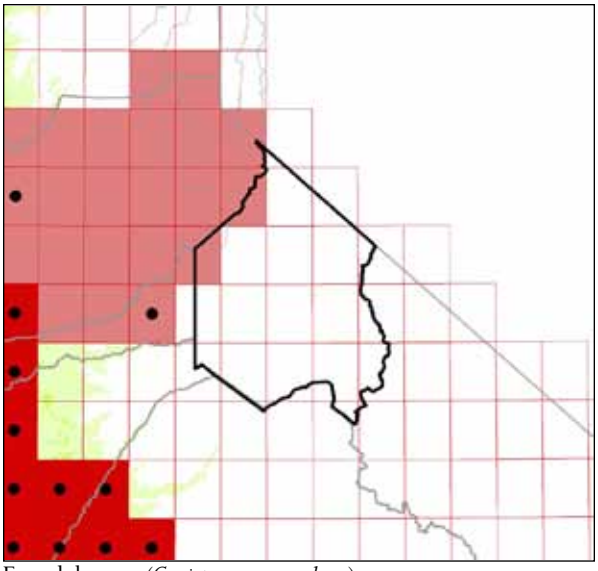
Scotch thistle (*Onopordum acanthium*)



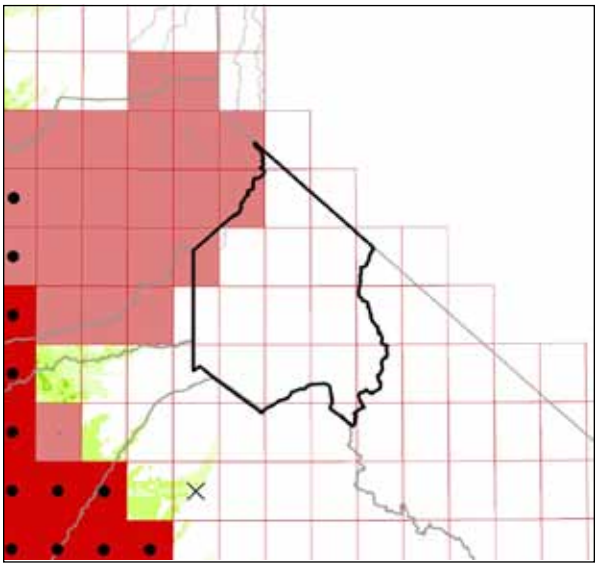
dyer's woad (*Isatis tinctoria*)



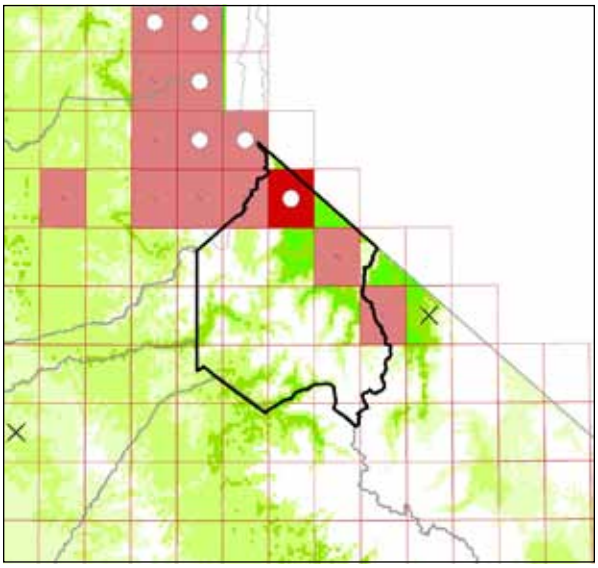
Scotch broom (*Cytisus scoparius*)



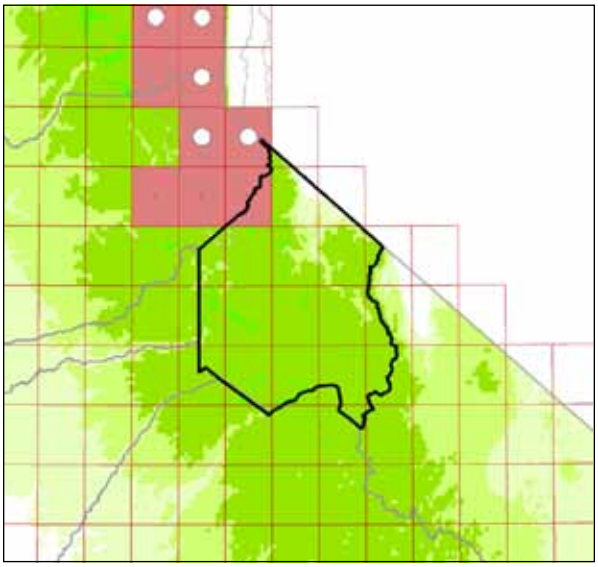
French broom (*Genista monspessulana*)



Spanish broom (*Spartium junceum*)



Dalmatian toadflax (*Linaria genistifoloria* subsp. *dalmatica*)



yellow toadflax (*Linaria vulgaris*)

Management opportunities for Alpine Weed Management Area

Priority	Species	Opportunities			Statistics							
		Eradication	Containment	Surveillance	% Infested	% Suitable Infested	% Spreading	% Managed	% Eradicated	% Suitable 2010	% Suitable 2050	Suitability change
	Family Apiaceae											
	Poison-hemlock	-	-	M	0	0	-	-	0	1	10	↑↑
	Family Asteraceae											
●	**Russian knapweed**	**H**	**-**	**-**	**17**	**18**	**0**	**25**	**8**	**50**	**93**	**↑**
●	**Musk thistle**	**H**	**-**	**-**	**8**	**10**	**0**	**0**	**4**	**31**	**6**	**↓**
	Italian thistle & slenderflower thistle	-	-	M	0	-	-	-	0	-	-	-
	Woolly distaff thistle	-	-	L	0	-	-	-	0	0	0	-
	Diffuse knapweed	-	M	-	42	42	0	0	8	80	100	↑
●	**Spotted knapweed**	**-**	**H**	**-**	**46**	**50**	**0**	**9**	**0**	**76**	**100**	**↑**
	Tocalote	-	-	M	0	-	-	-	0	-	-	-
●	**Yellow starthistle**	**H**	**-**	**-**	**21**	**24**	**20**	**20**	**8**	**32**	**70**	**↑↑**
●	**Rush skeletonweed**	**-**	**-**	**H**	**0**	**0**	**-**	**-**	**0**	**7**	**89**	**↑↑**
	Canada thistle	-	M	-	46	48	9	18	0	69	87	↑
	Bull thistle	-	L	-	92	100	77	0	0	64	96	↑
	Stinkwort	-	-	L	0	-	-	-	0	0	13	-
	Ox-eye daisy	-	-	M	4	5	0	0	0	53	74	↑
●	**Scotch thistle**	**H**	**-**	**-**	**13**	**25**	**0**	**67**	**4**	**15**	**16**	**-**
	Family Boraginaceae											
	Houndstongue	-	-	-	0	-	-	-	0	-	-	-
	Family Brassicaceae											
	Lens-podded white-top & hoary cress	-	-	M	0	-	-	-	0	-	-	-
●	**Dyer's woad**	**-**	**-**	**H**	**0**	**0**	**-**	**-**	**0**	**67**	**65**	**-**
	Charlock mustard	-	-	L	0	-	-	-	0	-	-	-
	Famiy Dipsacaceae											
	Common teasel & fuller's teasel	-	-	M	4	17	0	100	0	2	1	-
	Family Fabaceae											
●	**Scotch broom**	**-**	**H**	**-**	**13**	**20**	**0**	**0**	**0**	**11**	**78**	**↑↑**
●	**French broom**	**-**	**H**	**-**	**13**	**100**	**0**	**0**	**0**	**0**	**2**	**↑↑**
●	**Spanish broom**	**-**	**H**	**-**	**13**	**100**	**0**	**0**	**0**	**0**	**25**	**↑↑**
	Black locust	-	-	L	0	-	-	-	0	-	-	-
	Red sesbania	-	-	-	0	-	-	-	0	0	0	-
	Gorse	-	-	-	0	-	-	-	0	0	0	-
	Family Poaceae											
	Giant reed	-	-	L	0	-	-	-	0	0	0	-
	Annual false-brome	-	-	L	0	-	-	-	0	0	0	-
	Japanese brome	L	-	-	4	-	0	0	0	-	-	-
	Red brome	-	M	-	83	100	5	0	0	5	4	↓
	Jubatagrass	-	-	M	0	-	-	-	0	-	-	-
	Pampasgrass	-	-	M	0	-	-	-	0	0	0	-
	Orchardgrass	-	L	-	75	82	0	0	0	92	97	-

	Common velvet grass	-	M	-	13	14	0	0	0	35	77	↑↑
	Mediterranean barley	-	-	M	0	-	-	-	0	-	-	-
	Hare barley	-	-	M	0	-	-	-	0	-	-	-
	Italian ryegrass	-	-	M	0	0	-	-	0	1	0	-
	FAMILY POLYGONACEAE											
	Japanese knotweed	-	-	-	0	-	-	-	0	-	-	-
	Giant knotweed	-	-	-	0	-	-	-	0	-	-	-
	FAMILY SCROPHULARIACEAE											
●	**Dalmatian toadflax**	**-**	**H**	**-**	**21**	**22**	**40**	**40**	**0**	**63**	**97**	**↑**
●	**Yellow toadflax**	**-**	**-**	**H**	**8**	**9**	**50**	**50**	**0**	**99**	**100**	**-**
	FAMILY SIMAROUBACEAE											
	Tree-of-heaven	-	-	M	4	20	100	0	0	1	14	↑↑
	FAMILY SOLANACEAE											
	Tree tobacco	-	-	L	0	-	-	-	0	0	0	-

Opportunities: H = high priority, M = medium, L = low

% Infested: portion of USGS quads in the area in which the species is present in wildlands

% Suitable Infested: portion of quads in the area with suitable climate that are currently infested

% Spreading: portion of infested quads in which the species is spreading

% Managed: portion of infested quads where species is under management

% Eradicated: portion of all quads in the area in which the species has been eradicated

% Suitable in 2010: portion of area with current climatic suitability of at least a level of "low" or higher

% Suitable in 2050: of area with projected 2050 climatic suitability of at least a level of "low" or higher

Suitability change:
↑ = a 15% - 99% increase from 2010 to 2050
↑↑= an increase of greater than 100%
↓ = a decrease of greater than 15%

Amador Weed Management Area

Eradication is recommended for species that have limited occurrence within the WMA. Of the species examined, the following are priority eradication opportunities for Amador WMA:

Russian knapweed (*Acroptilon repens*)

Containment is recommended for species that are more widespread, where eradication may not be a realistic goal. The following species are priority containment opportunities for Amador WMA:

spotted knapweed (*Centaurea maculosa*) – GIS data indicates scattered throughout county

yellow starthistle (*Centaurea solstitialis*) – prevent spread to higher elevations as part of YST Leading Edge Project

rush skeletonweed (*Chondrilla juncea*)

dyer's woad (*Isatis tinctoria*) – GIS data indicates presence in several quads

stinkwort (*Dittrichia graveolens*)

Scotch broom (*Cytisus scoparius*)

French broom (*Genista monspessulana*)

Spanish broom (*Spartium junceum*)

giant reed (*Arundo donax*)

Surveillance is recommended to prevent spread into Amador WMA:

musk thistle (*Carduus nutans*)

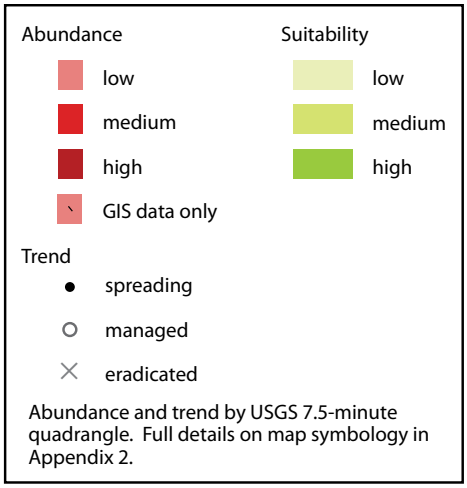
woolly distaff thistle (*Carthamus lanatus*)

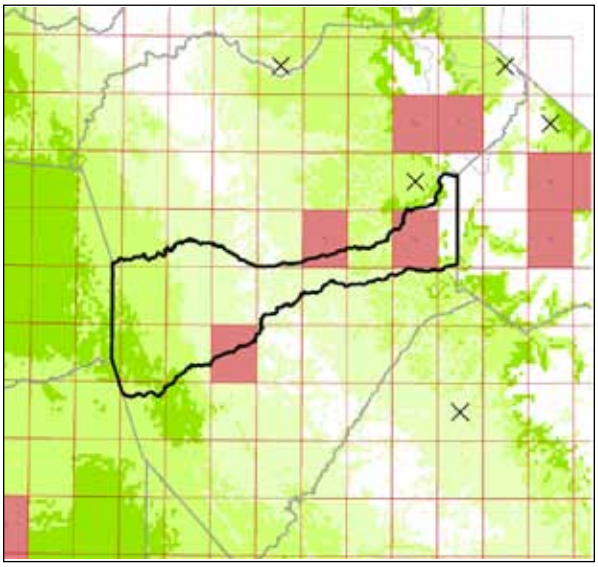
Scotch thistle (*Onopordum acanthium*) – GIS data indicates one quad at eastern edge

red sesbania (*Sesbania punicea*) – modeling indicates suitable habitat at western side, near valley populations

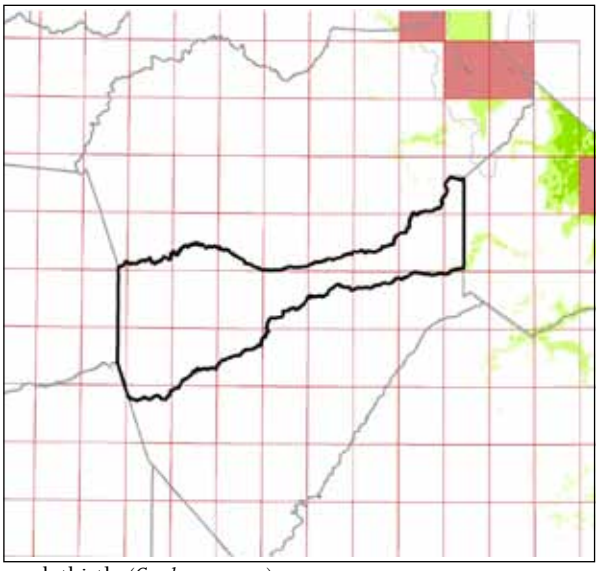
Dalmatian toadflax (*Linaria genistifolia* subsp. *dalmatica*)

yellow toadflax (*Linaria vulgaris*)

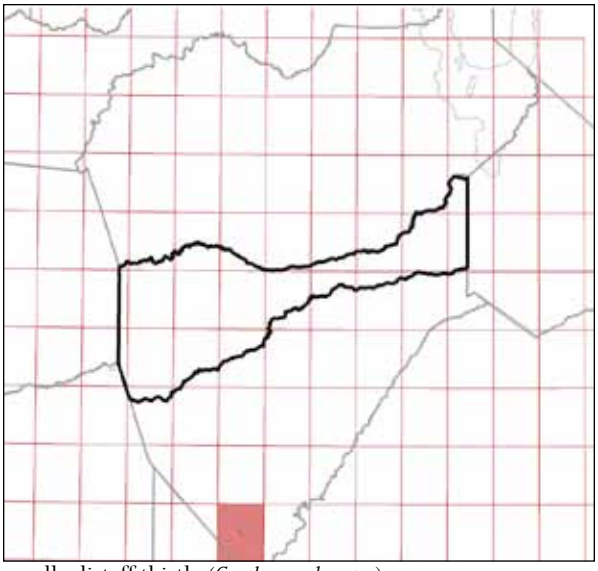




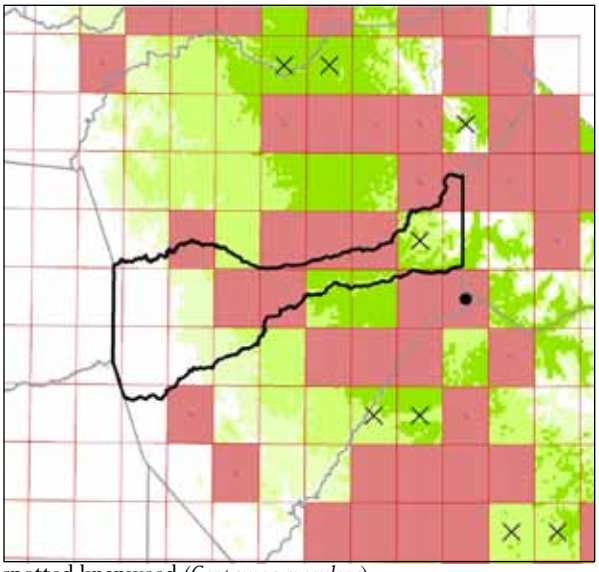
Russian knapweed (*Acroptilon repens*)



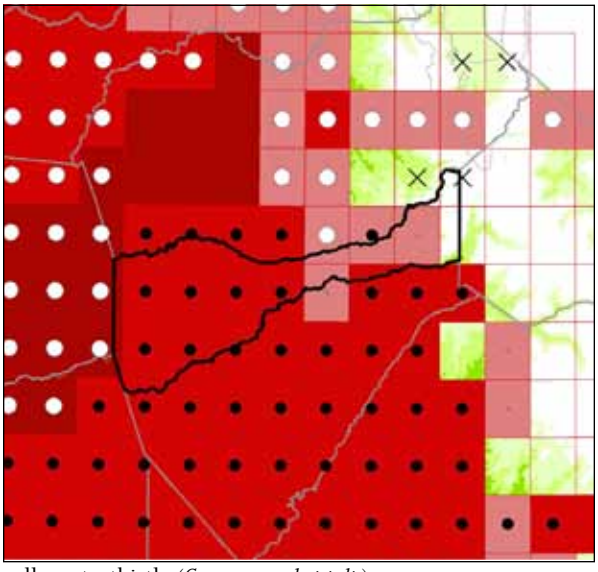
musk thistle (*Carduus nutans*)



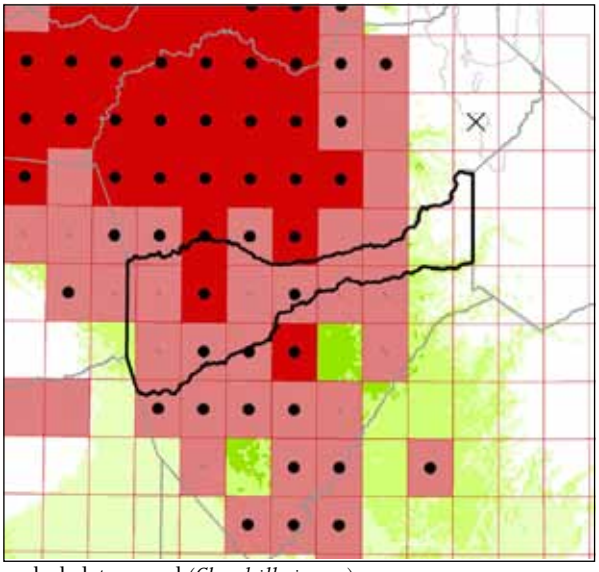
woolly distaff thistle (*Carthamus lanatus*)



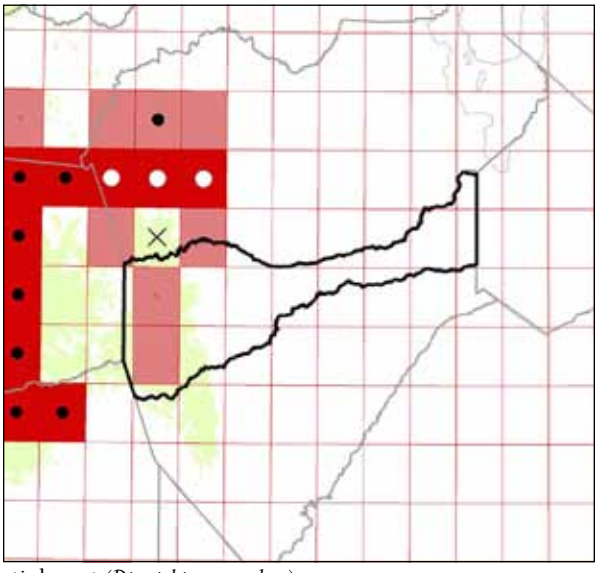
spotted knapweed (*Centaurea maculosa*)



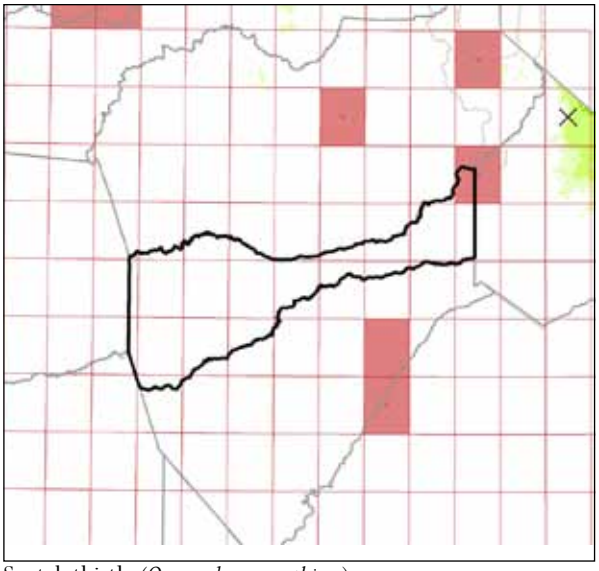
yellow starthistle (*Centaurea solstitialis*)



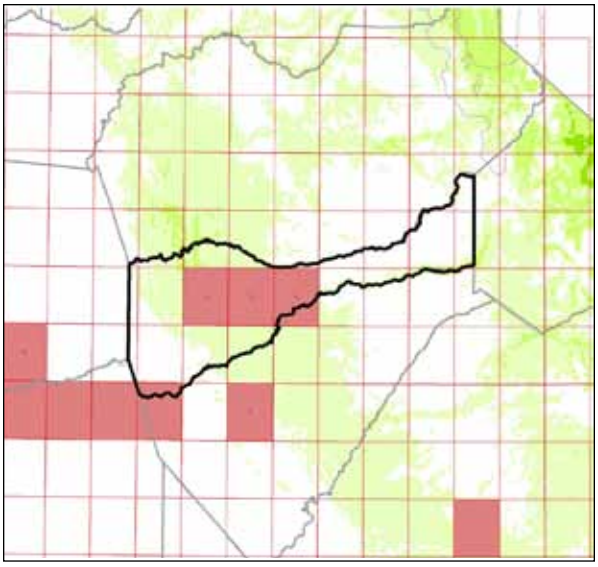
rush skeletonweed (*Chondrilla juncea*)



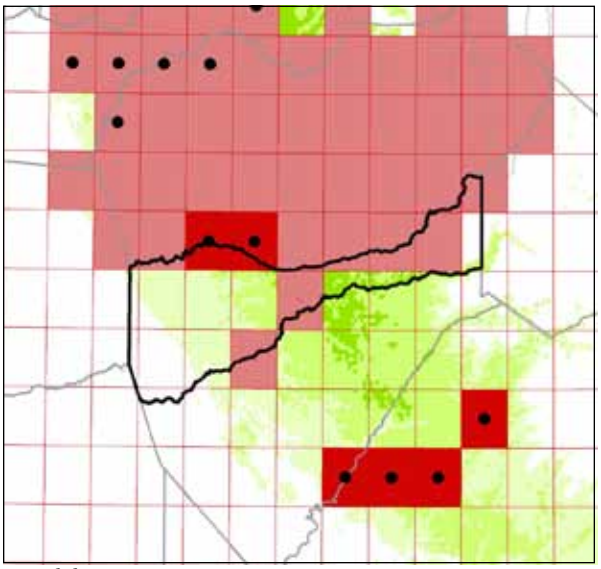
stinkwort (*Dittrichia graveolens*)



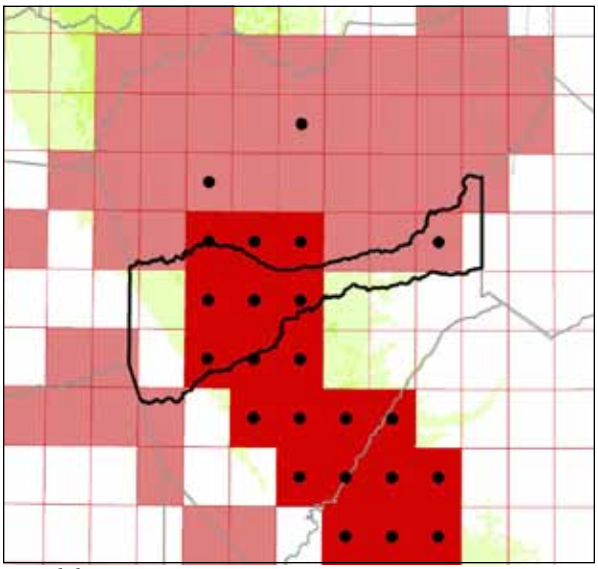
Scotch thistle (*Onopordum acanthium*)



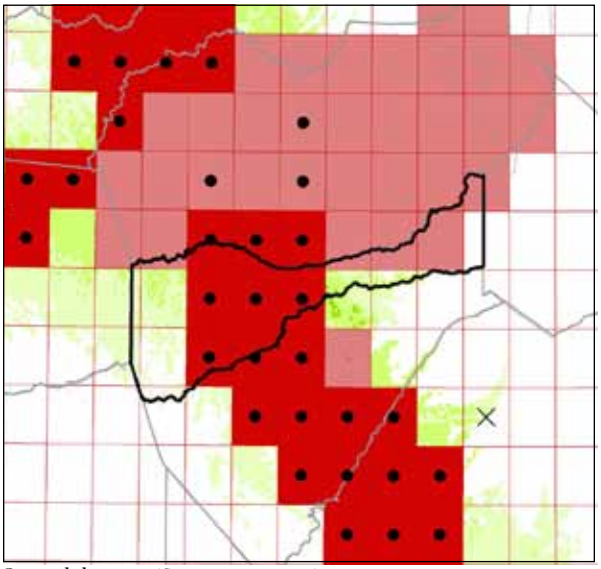
dyer's woad (*Isatis tinctoria*)



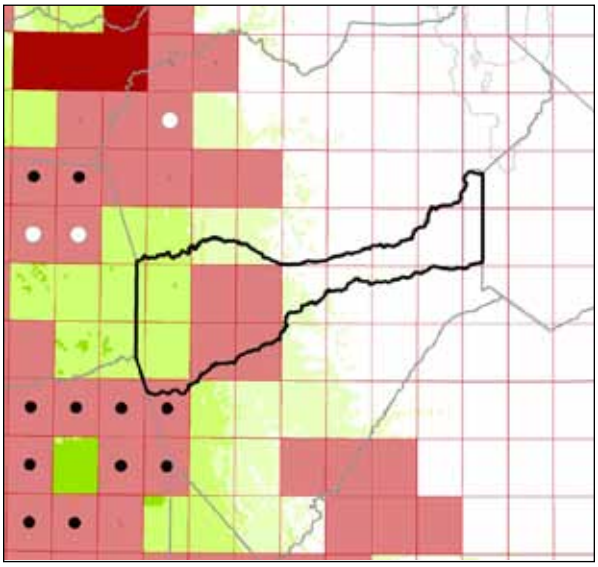
Scotch broom (*Cytisus scoparius*)



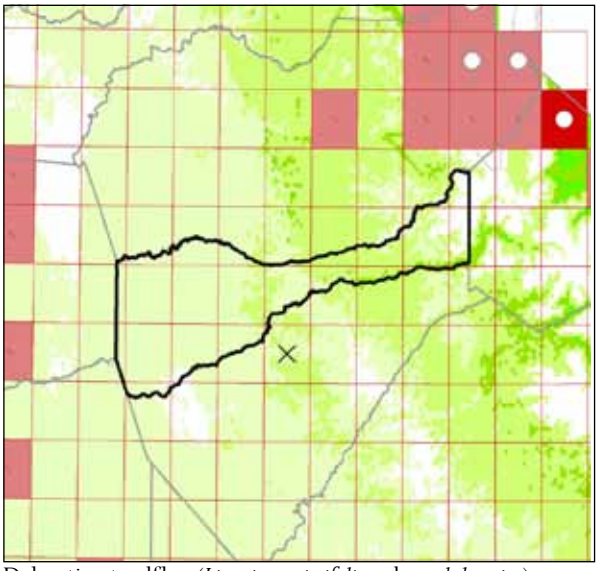
French broom (*Genista monspessulana*)



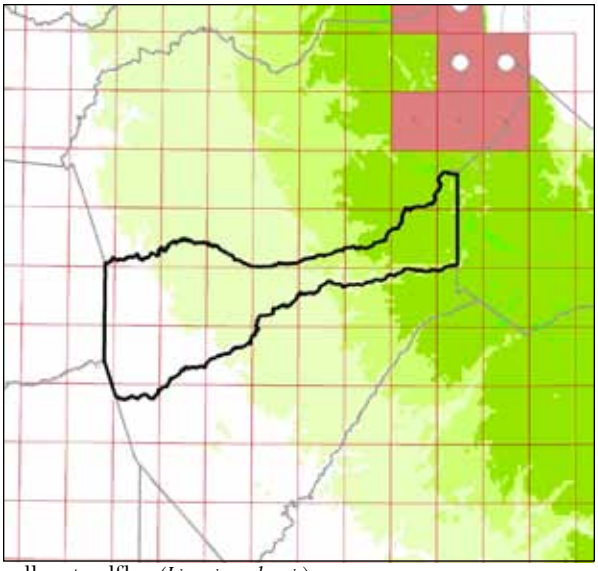
Spanish broom (*Spartium junceum*)



giant reed (*Arundo donax*)



Dalmatian toadflax (*Linaria genistifolia* subsp. *dalmatica*)



yellow toadflax (*Linaria vulgaris*)

Management opportunities for the Amador WMA

Priority	Species	Opportunities			Statistics							
		Eradication	Containment	Surveillance	% Infested	% Suitable Infested	% Spreading	% Managed	% Eradicated	% Suitable 2010	% Suitable 2050	Suitability change
	Family Apiaceae											
	Poison-hemlock	M	-	-	29	44	50	0	0	44	20	↓
	Family Asteraceae											
●	**Russian knapweed**	**H**	**-**	**-**	**11**	**11**	**0**	**0**	**4**	**89**	**100**	**-**
●	**Musk thistle**	**-**	**-**	**M**	**0**	**0**	**-**	**-**	**0**	**1**	**0**	**-**
	Italian thistle & slenderflower thistle	-	M	-	68	-	100	0	0	-	-	-
●	**Woolly distaff thistle**	**-**	**-**	**M**	**0**	**-**	**-**	**-**	**0**	**0**	**9**	**-**
	Diffuse knapweed	-	M	-	25	25	0	0	0	98	51	↓
●	**Spotted knapweed**	**-**	**H**	**-**	**39**	**48**	**0**	**0**	**4**	**63**	**60**	**-**
●	**Tocalote**	**-**	**M**	**-**	**54**	**-**	**87**	**0**	**0**	**-**	**-**	**-**
●	**Yellow starthistle**	**-**	**H**	**-**	**89**	**89**	**88**	**0**	**7**	**92**	**96**	**-**
●	**Rush skeletonweed**	**-**	**H**	**-**	**71**	**71**	**60**	**0**	**0**	**88**	**100**	**-**
	Canada thistle	M	-	-	11	20	0	0	0	36	7	↓
	Bull thistle	-	L	-	100	100	100	0	0	97	100	-
●	**Stinkwort**	**-**	**M**	**-**	**14**	**33**	**0**	**0**	**4**	**22**	**27**	**↑**
	Ox-eye daisy	-	M	-	11	15	100	0	0	49	27	↓
●	**Scotch thistle**	**-**	**-**	**H**	**4**	**-**	**0**	**0**	**0**	**0**	**41**	**-**
	Family Boraginaceae											
	Houndstongue	-	-	-	0	-	-	-	0	-	-	-
	Family Brassicaceae											
	Lens-podded white-top & hoary cress	M	-	-	11	-	0	0	0	-	-	-
●	**Dyer's woad**	**-**	**H**	**-**	**18**	**21**	**0**	**0**	**0**	**40**	**13**	**↓**
	Charlock mustard	L	-	-	14	-	0	0	0	-	-	-

	FAMILY DIPSACACEAE											
	Common teasel & fuller's teasel	M	-	-	11	13	0	0	0	61	48	↓
	FAMILY FABACEAE											
●	**Scotch broom**	**-**	**H**	**-**	**43**	**48**	**17**	**0**	**0**	**65**	**99**	↑
●	**French broom**	**-**	**H**	**-**	**68**	**91**	**53**	**0**	**0**	**50**	**84**	↑
●	**Spanish broom**	**-**	**H**	**-**	**57**	**70**	**56**	**0**	**0**	**60**	**88**	↑
	Black locust	-	L	-	14	-	100	0	0	-	-	-
●	**Red sesbania**	**-**	**-**	**H**	**0**	**0**	**-**	**-**	**0**	**33**	**66**	↑↑
	Gorse	-	-	L	4	-	0	0	0	0	63	-
	FAMILY POACEAE											
●	**Giant reed**	**-**	**H**	**-**	**21**	**29**	**33**	**0**	**0**	**58**	**71**	↑
	Annual false-brome	-	M	-	43	63	67	0	0	61	61	-
	Japanese brome	-	-	L	7	-	0	0	0	-	-	-
	Red brome	-	M	-	86	100	67	0	0	66	49	↓
	Jubatagrass	-	-	M	18	-	0	0	0	-	-	-
	Pampasgrass	-	-	M	14	80	0	0	0	7	30	↑↑
	Orchardgrass	-	L	-	68	68	0	0	0	99	100	-
	Common velvet grass	-	M	-	68	68	21	0	0	89	91	-
	Mediterranean barley	-	M	-	54	-	0	0	7	-	-	-
	Hare barley	-	M	-	54	-	80	0	0	-	-	-
	Italian ryegrass	-	M	-	71	80	0	0	0	67	59	-
	FAMILY POLYGONACEAE											
	Japanese knotweed	-	-	-	0	-	-	-	0	-	-	-
	Giant knotweed	-	-	-	0	-	-	-	0	-	-	-
	FAMILY SCROPHULARIACEAE											
●	**Dalmatian toadflax**	**-**	**-**	**H**	**0**	**0**	**-**	**-**	**4**	**92**	**74**	↓
●	**Yellow toadflax**	**-**	**-**	**H**	**0**	**0**	**-**	**-**	**0**	**64**	**100**	↑
	FAMILY SIMAROUBACEAE											
	Tree-of-heaven	-	M	-	71	80	85	0	0	73	79	-
	FAMILY SOLANACEAE											
	Tree tobacco	M	-	-	11	23	0	0	4	30	15	↓

Opportunities: H = high priority, M = medium, L = low

% Infested: portion of USGS quads in the area in which the species is present in wildlands

% Suitable Infested: portion of quads in the area with suitable climate that are currently infested

% Spreading: portion of infested quads in which the species is spreading

% Managed: portion of infested quads where species is under management

% Eradicated: portion of all quads in the area in which the species has been eradicated

% Suitable in 2010: portion of area with current climatic suitability of at least a level of "low" or higher

% Suitable in 2050: of area with projected 2050 climatic suitability of at least a level of "low" or higher

Suitability change:
↑ = a 15% - 99% increase from 2010 to 2050
↑↑= an increase of greater than 100%
↓ = a decrease of greater than 15%

Eradication is recommended for species that have limited occurrence within the WMA. Of the species examined, the following are priority eradication opportunities for CSPAW:

Scotch thistle (*Onopordum acanthium*) – GIS data indicates one quad at eastern edge

dyer's woad (*Isatis tinctoria*) – GIS data indicates presence in several quads

Containment is recommended for species that are more widespread, where eradication may not be a realistic goal. The following species are priority containment opportunities for CSPAW:

spotted knapweed (*Centaurea maculosa*)

yellow starthistle (*Centaurea solstitialis*) – prevent spread to higher elevations as part of YST Leading Edge Project

rush skeletonweed (*Chondrilla juncea*)

Scotch broom (*Cytisus scoparius*)

French broom (*Genista monspessulana*)

Spanish broom (*Spartium junceum*)

giant reed (*Arundo donax*)

Surveillance is recommended to prevent spread into CSPAW:

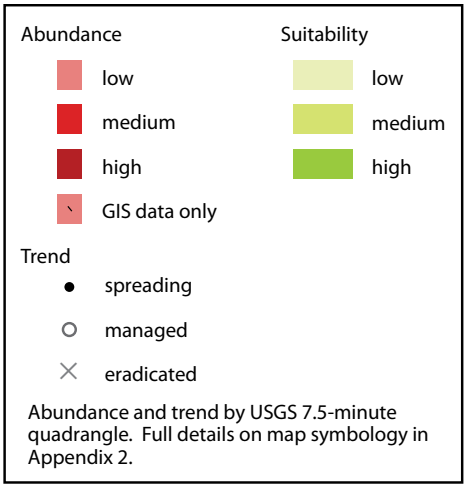
Russian knapweed (*Acroptilon repens*) – GIS data indicates presence at the edge of the WMA

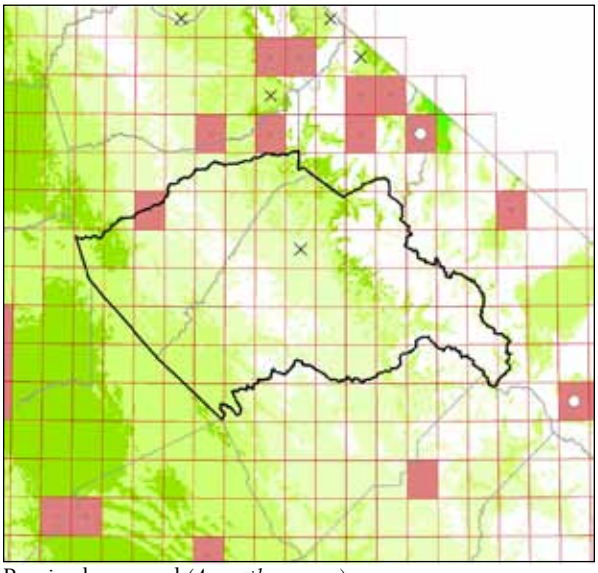
stinkwort (*Dittrichia graveolens*)

red sesbania (*Sesbania punicea*) – one quad at western edge of the WMA

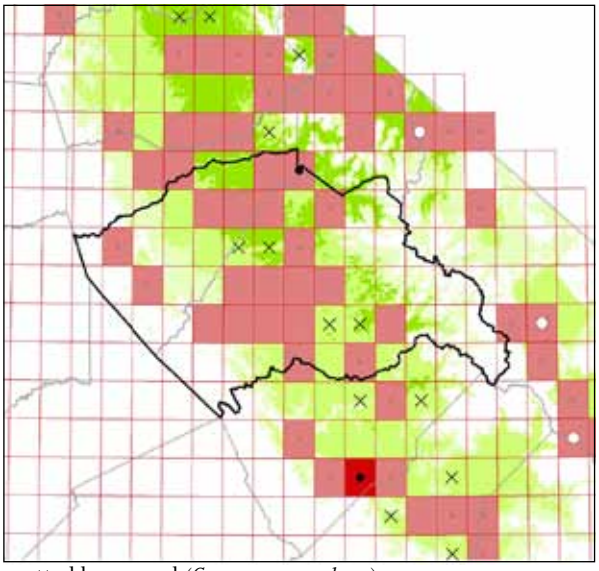
Dalmatian toadflax (*Linaria genistifolia* subsp. *dalmatica*) – suitable range, could spread from north

yellow toadflax (*Linaria vulgaris*) – suitable range, could spread from north

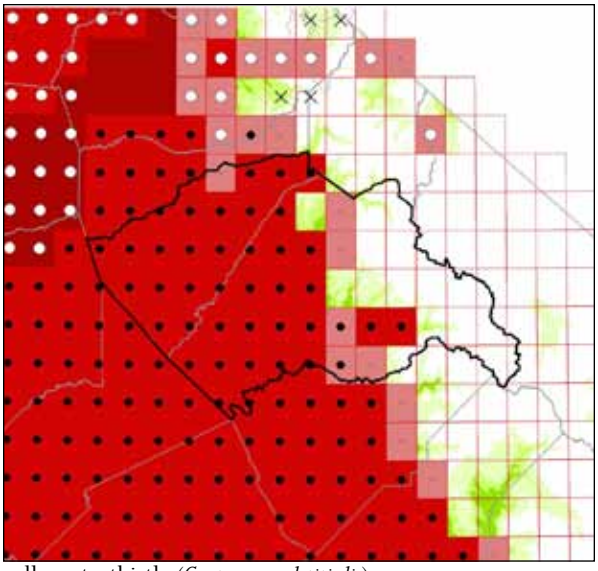




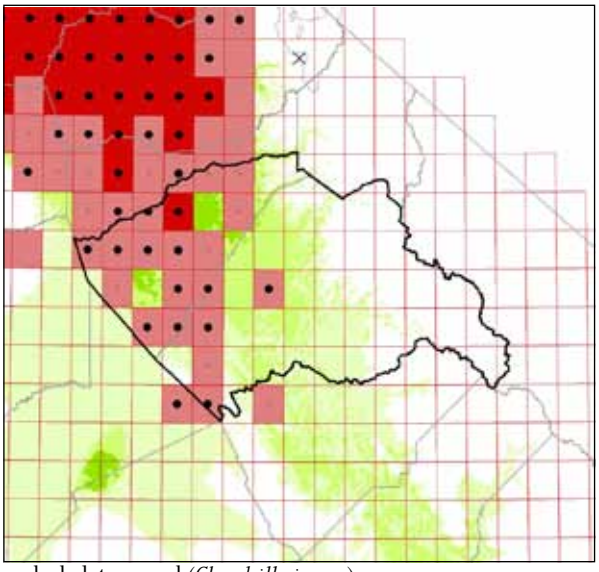
Russian knapweed (*Acroptilon repens*)



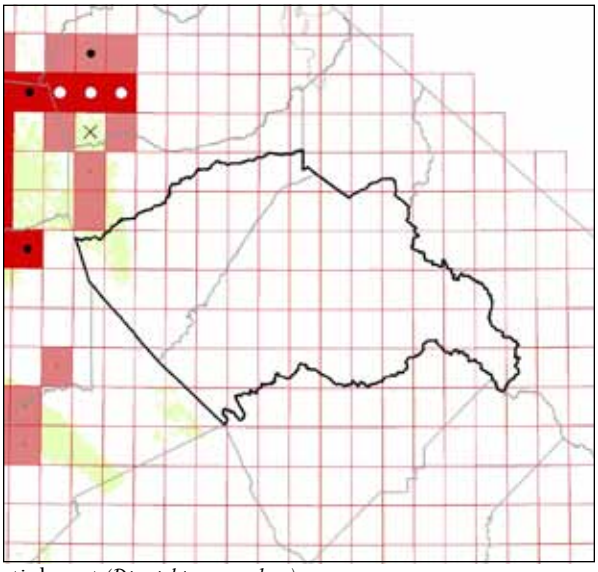
spotted knapweed (*Centaurea maculosa*s)



yellow starthistle (*Centaurea solstitialis*)

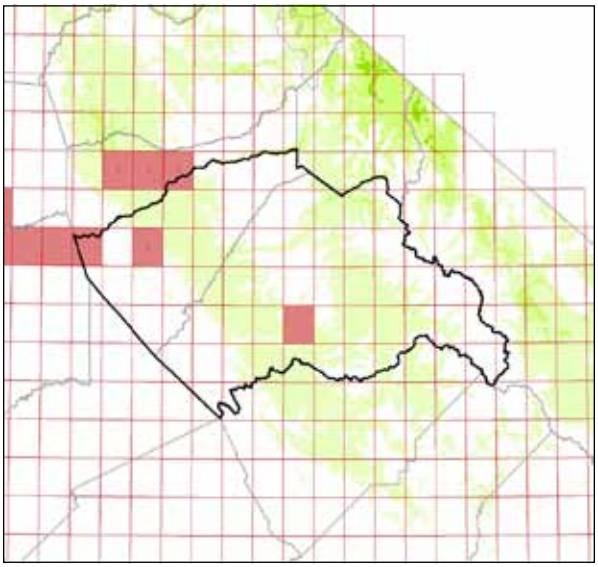


rush skeletonweed (*Chondrilla juncea*)

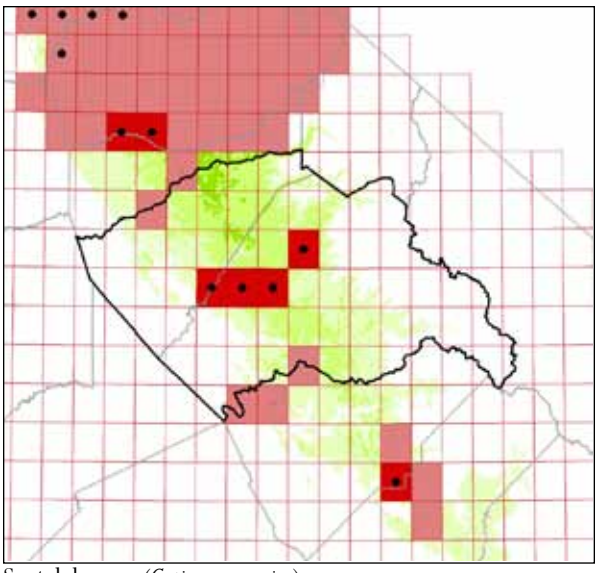


stinkwort (*Dittrichia graveolens)*

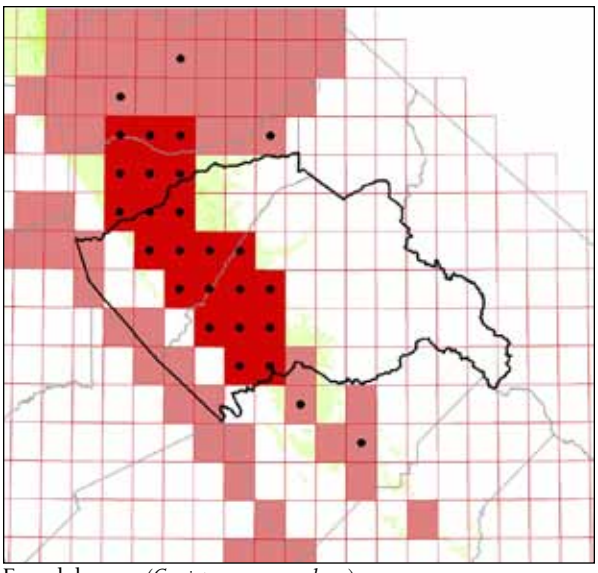
Scotch thistle (*Onopordum acanthium*)



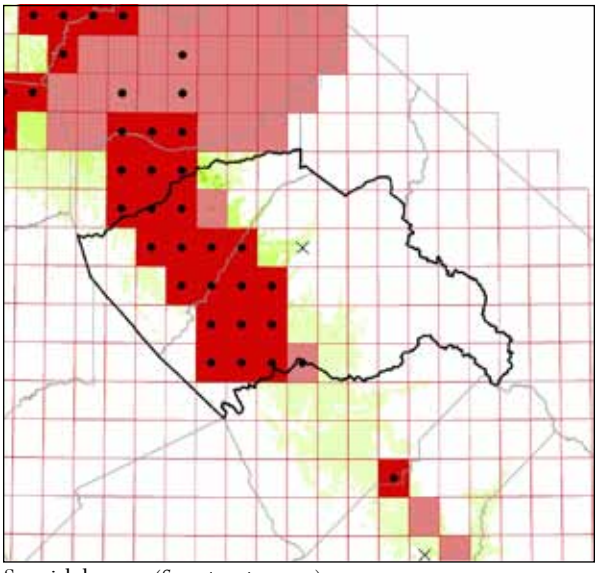
dyer's woad (*Isatis tinctoria*)



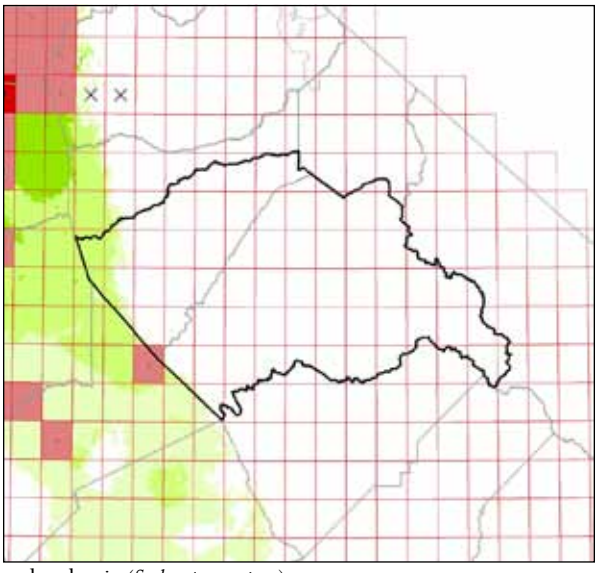
Scotch broom (*Cytisus scoparius*)



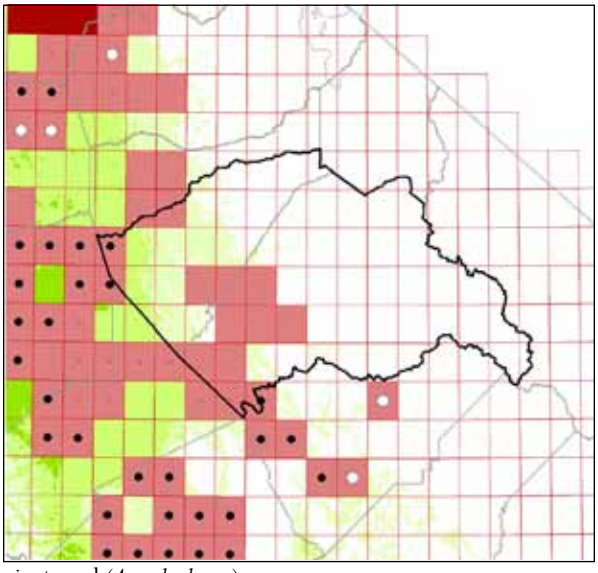
French broom (*Genista monspessulana*)



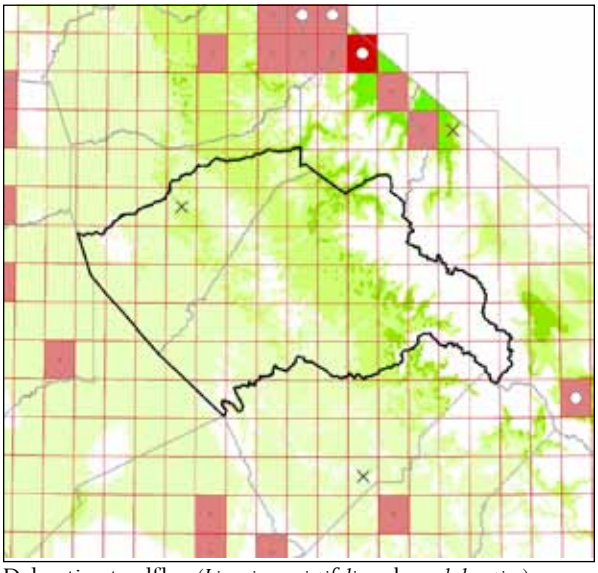
Spanish broom (*Spartium junceum*)



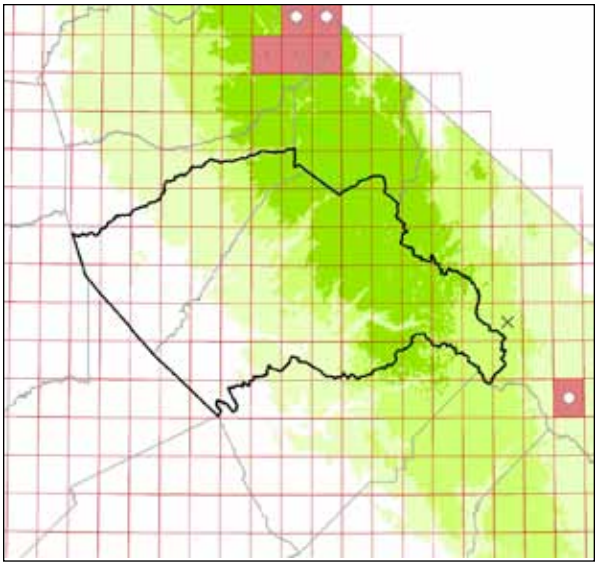
red sesbania (*Sesbania punicea*)



giant reed (*Arundo donax*)



Dalmatian toadflax (*Linaria genistifolia* subsp. *dalmatica*)



yellow toadflax (*Linaria vulgaris*)

Management opportunities for Central Sierra Partnership Against Weeds

Priority	Species	Opportunities			Statistics							
		Eradication	Containment	Surveillance	% Infested	% Suitable Infested	% Spreading	% Managed	% Eradicated	% Suitable 2010	% Suitable 2050	Suitability Change
	Family Apiaceae											
	Poison-hemlock	-	M	-	18	34	79	0	0	26	8	↓
	Family Asteraceae											
●	**Russian knapweed**	**-**	**-**	**M**	**1**	**1**	**0**	**0**	**1**	**70**	**89**	↑
●	**Musk thistle**	**-**	**-**	**L**	**0**	**0**	**-**	**-**	**0**	**4**	**0**	**-**
	Italian thistle & slenderflower thistle	-	M	-	49	-	100	0	0	-	-	-
	Woolly distaff thistle	M	-	-	3	-	50	0	0	0	0	-
	Diffuse knapweed	-	M	-	8	8	0	0	0	80	63	↓
●	**Spotted knapweed**	**-**	**H**	**-**	**28**	**31**	**0**	**0**	**5**	**66**	**76**	↑
	Tocalote	-	M	-	46	-	92	0	0	-	-	-
●	**Yellow starthistle**	**-**	**H**	**-**	**65**	**73**	**92**	**0**	**0**	**71**	**78**	**-**
●	**Rush skeletonweed**	**-**	**H**	**-**	**29**	**35**	**70**	**0**	**0**	**61**	**90**	↑
	Canada thistle	M	-	-	4	5	100	0	1	36	32	-
	Bull thistle	-	L	-	95	99	91	0	0	77	91	↑
●	**Stinkwort**	**-**	**-**	**M**	**0**	**0**	**-**	**-**	**0**	**3**	**16**	↑↑
	Ox-eye daisy	-	M	-	6	8	60	0	1	43	26	↓
●	**Scotch thistle**	**H**	**-**	**-**	**3**	**50**	**0**	**0**	**0**	**0**	**25**	↑↑
	Family Boraginaceae											
	Houndstongue	-	-	-	0	-	-	-	0	-	-	-
	Family Brassicaceae											
	Lens-podded white-top & hoary cress	M	-	-	3	-	0	0	0	-	-	-
●	**Dyer's woad**	**H**	**-**	**-**	**5**	**6**	**0**	**0**	**0**	**40**	**21**	↓
	Charlock mustard	-	L	-	22	-	0	0	0	-	-	-

	FAMILY DIPSACACEAE											
	Common teasel & fuller's teasel	M	-	-	1	2	0	0	0	37	22	↓
	FAMILY FABACEAE											
●	**Scotch broom**	**-**	**H**	**-**	**11**	**17**	**44**	**0**	**0**	**44**	**67**	↑
●	**French broom**	**-**	**H**	**-**	**33**	**72**	**65**	**0**	**0**	**23**	**60**	↑↑
●	**Spanish broom**	**-**	**H**	**-**	**25**	**46**	**95**	**0**	**1**	**31**	**67**	↑↑
	Black locust	-	L	-	10	-	88	0	0	-	-	-
●	**Red sesbania**	**-**	**-**	**H**	**1**	**7**	**0**	**0**	**0**	**9**	**36**	↑↑
	Gorse	M	-	-	1	-	0	0	0	0	30	-
	FAMILY POACEAE											
●	**Giant reed**	**-**	**H**	**-**	**20**	**41**	**19**	**0**	**0**	**27**	**47**	↑
	Annual false-brome	-	M	-	23	46	44	0	0	38	34	-
	Japanese brome	-	L	-	10	-	0	0	0	-	-	-
	Red brome	-	M	-	60	77	45	0	0	51	34	↓
	Jubatagrass	-	M	-	15	-	0	0	1	-	-	-
	Pampasgrass	-	M	-	17	-	0	0	0	0	8	-
	Orchardgrass	-	L	-	37	37	0	0	0	96	96	-
	Common velvet grass	-	M	-	30	36	0	0	0	63	83	↑
	Mediterranean barley	-	M	-	30	-	0	0	0	-	-	-
	Hare barley	-	M	-	29	-	78	0	0	-	-	-
	Italian ryegrass	-	M	-	38	55	0	0	0	46	40	-
	FAMILY POLYGONACEAE											
	Japanese knotweed	-	-	-	0	-	-	-	0	-	-	-
	Giant knotweed	-	-	-	0	-	-	-	0	-	-	-
	FAMILY SCROPHULARIACEAE											
●	**Dalmatian toadflax**	**-**	**-**	**H**	**0**	**0**	**-**	**-**	**1**	**71**	**67**	**-**
●	**Yellow toadflax**	**-**	**-**	**H**	**0**	**0**	**-**	**-**	**1**	**72**	**97**	↑
	FAMILY SIMAROUBACEAE											
	Tree-of-heaven	-	M	-	44	64	100	0	0	50	58	↑
	FAMILY SOLANACEAE											
	Tree tobacco	M	-	-	11	50	33	0	0	4	10	↑↑

Opportunities: H = high priority, M = medium, L = low

% Infested: portion of USGS quads in the area in which the species is present in wildlands

% Suitable Infested: portion of quads in the area with suitable climate that are currently infested

% Spreading: portion of infested quads in which the species is spreading

% Managed: portion of infested quads where species is under management

% Eradicated: portion of all quads in the area in which the species has been eradicated

% Suitable in 2010: portion of area with current climatic suitability of at least a level of "low" or higher

% Suitable in 2050: of area with projected 2050 climatic suitability of at least a level of "low" or higher

Suitability change:
↑ = a 15% - 99% increase from 2010 to 2050
↑↑= an increase of greater than 100%
↓ = a decrease of greater than 15%

These recommendations focus on the portion of the Sierra-San Joaquin Noxious Weed Alliance that falls within the Sierra Nevada ecoregion. This includes Mariposa County and the eastern portions of Madera and Fresno counties (see map in chapter 1) Statistics are based on all of Mariposa, Madera and Fresno counties.

Eradication is recommended for species that have limited occurrence within the Sierra portion of the WMA. Of the species examined, the following are priority eradication opportunities for this WMA:

Russian knapweed (*Acroptilon repens*)

diffuse knapweed (*Centaurea diffusa*)

rush skeletonweed (*Chondrilla juncea*) – only one quad within Sierra but several more quads under management in western Fresno County

Dalmatian toadflax (*Linaria genistifolia* subsp. *dalmatica*)

Containment is recommended for species that are more widespread, where eradication may not be a realistic goal. The following species are priority containment opportunities for this WMA:

Italian and slenderflower thistles (*Carduus pycnocephalus, C. tenuiforus*) – prevent spread further south

spotted knapweed (*Centaurea maculosa*) – GIS data indicates several quads, would be good to verify these populations

yellow starthistle (*Centaurea solstitialis*) – prevent spread to higher elevations as part of YST Leading Edge Project

Scotch broom (*Cytisus scoparius*)

French broom (*Genista monspessulana*)

Spanish broom (*Spartium junceum*)

giant reed (*Arundo donax*)

Surveillance is recommended to prevent spread into the Sierra portion of the WMA:

woolly distaff thistle (*Carthamus lanatus*)

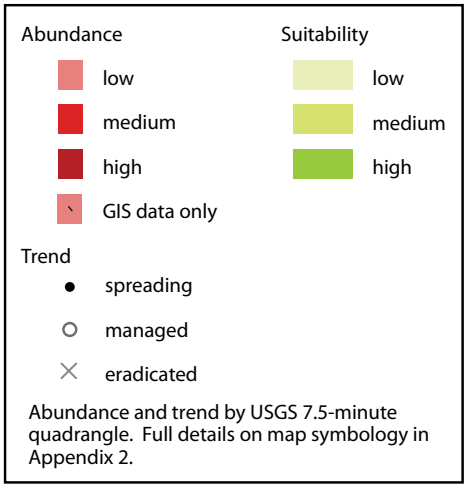
stinkwort (*Dittrichia graveolens*) – one quad in Mariposa County outside Sierra portion

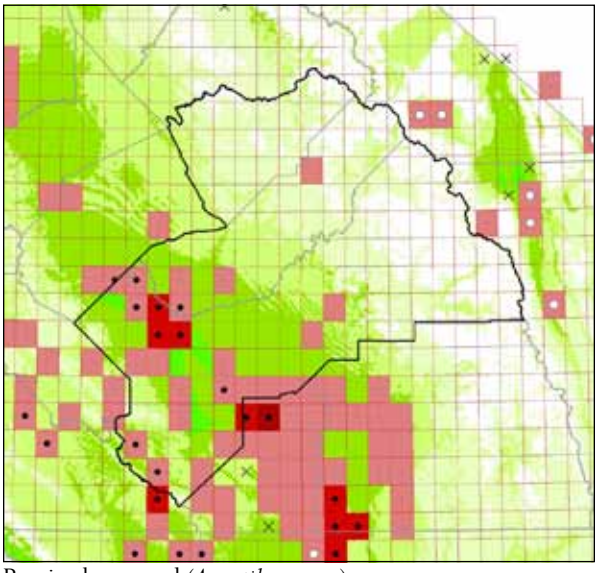
Scotch thistle (*Onopordum acanthium*) – GIS data indicates several quads near the southern border of the WMA

dyer's woad (*Isatis tinctoria*) – one quad just outside northern edge of WMA

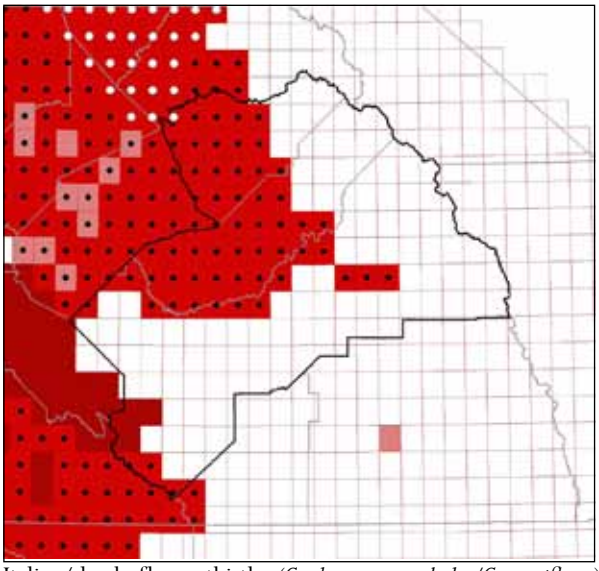
red sesbania (*Sesbania punicea*) – spreading in Fresno and Madera counties just outside the Sierra region

yellow toadflax (*Linaria vulgaris*)

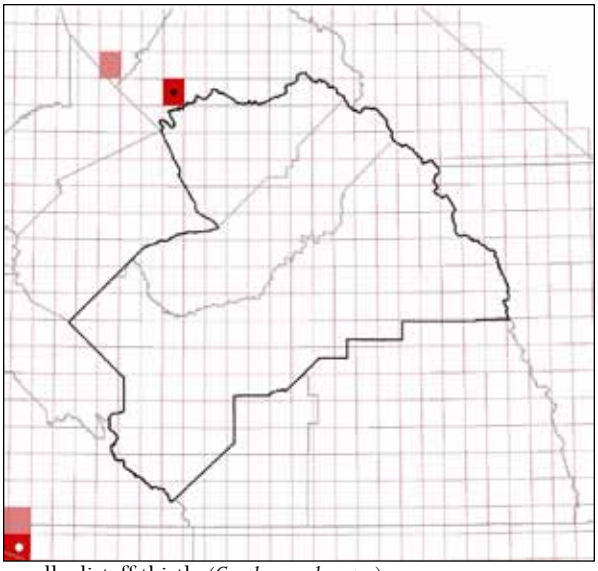




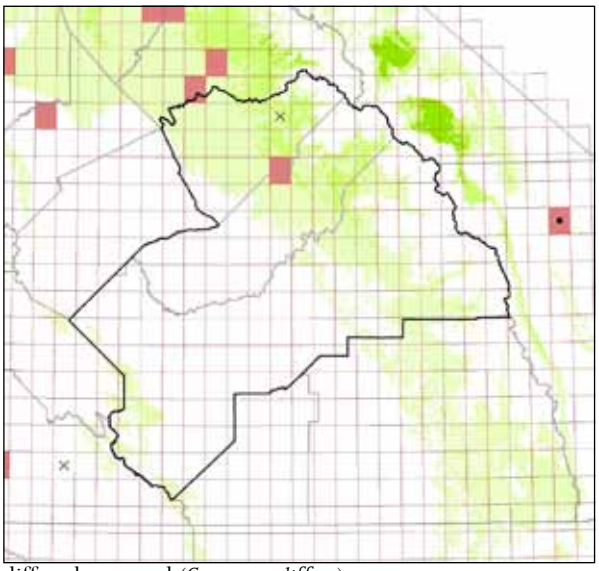
Russian knapweed (*Acroptilon repens*)



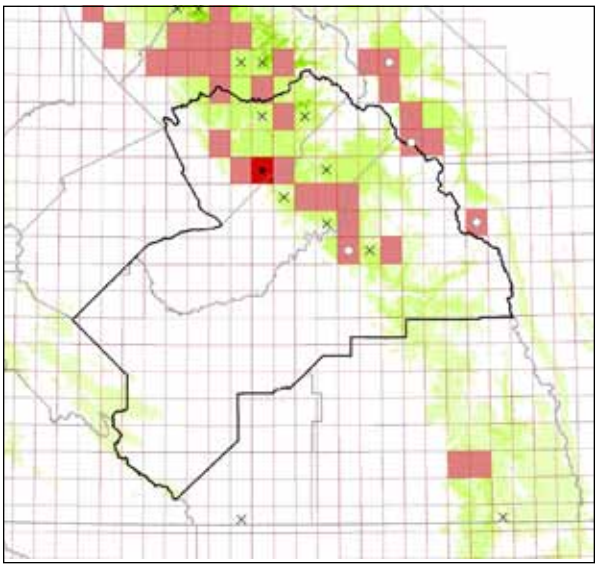
Italian/slenderflower thistles (*Carduus pycnocephalus/C. tenuiflorus*)



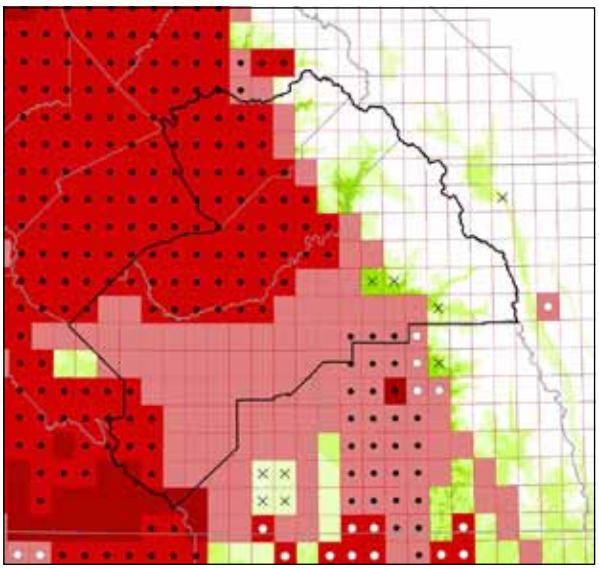
woolly distaff thistle (*Carthamus lanatus*)



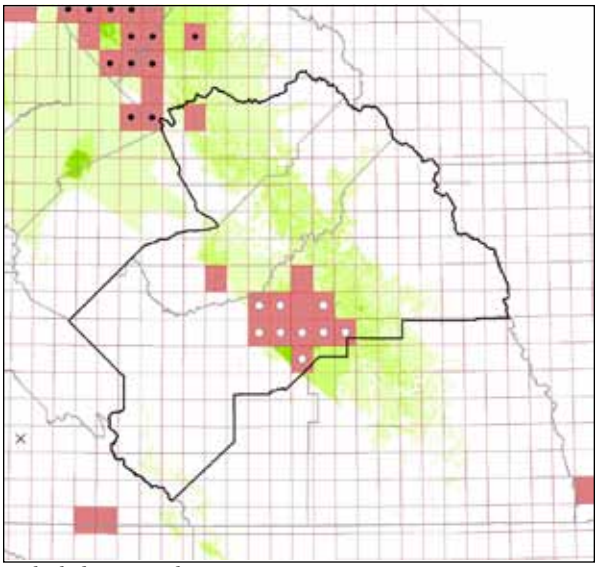
diffuse knapweed (*Centaurea diffusa*)



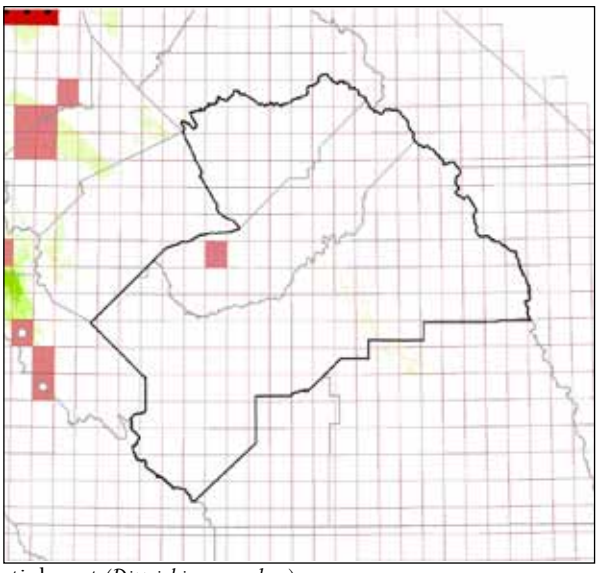
spotted knapweed (*Centaurea maculosa*)



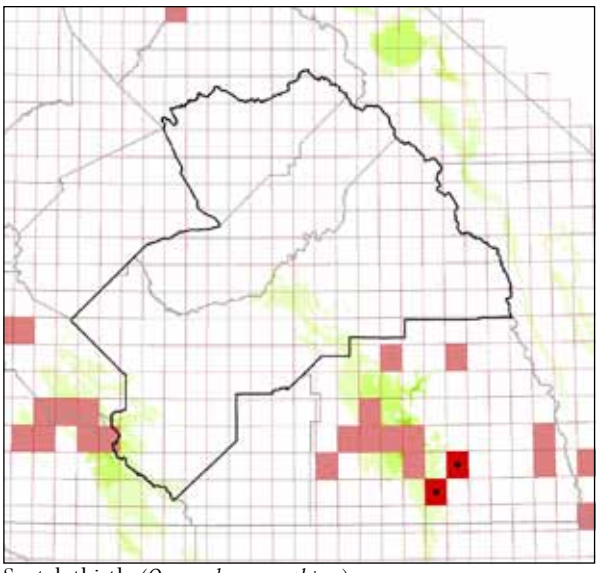
yellow starthistle (*Centaurea solstitialis*)



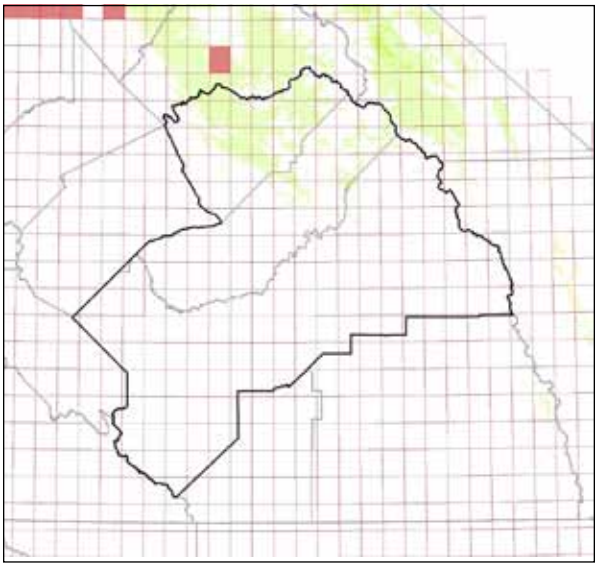
rush skeletonweed (*Chondrilla juncea*)



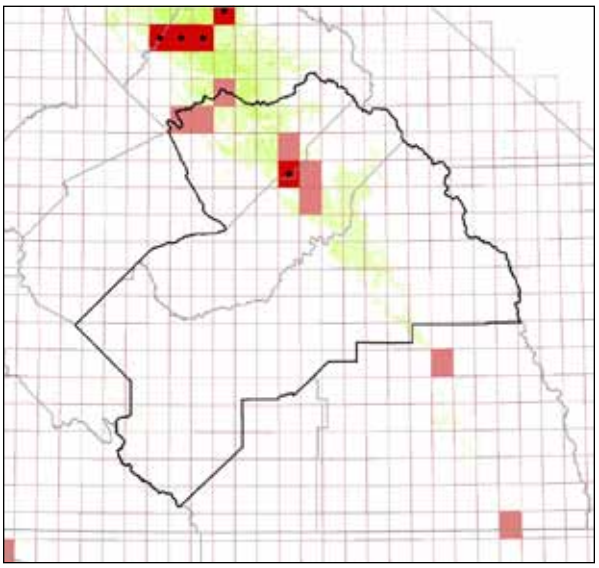
stinkwort (*Dittrichia graveolens*)



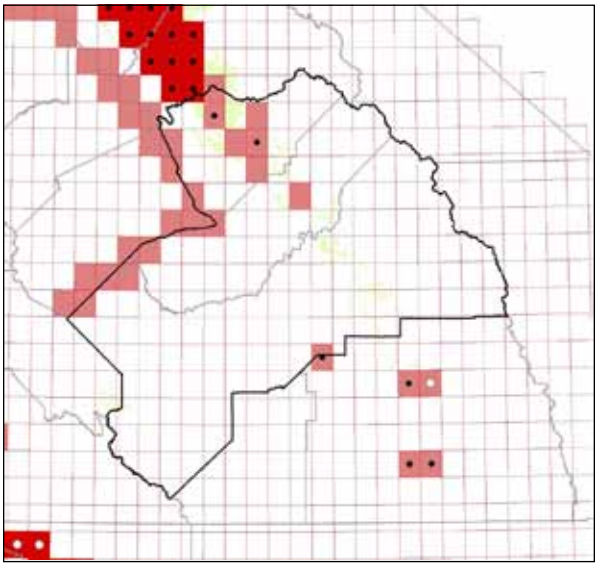
Scotch thistle (*Onopordum acanthium*)



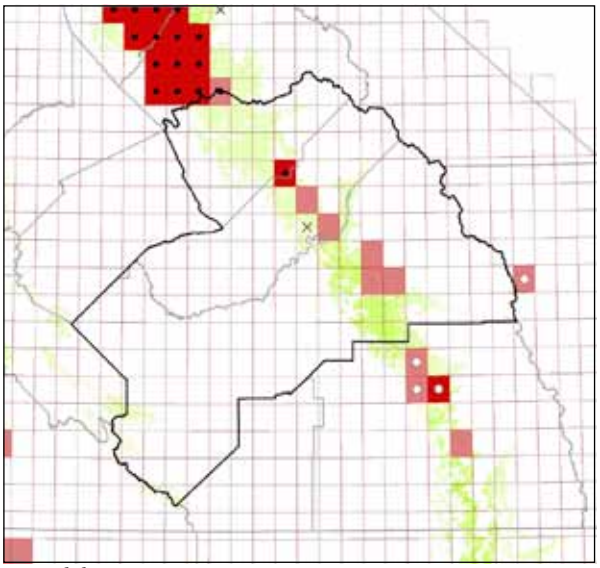
dyer's woad (*Isatis tinctoria*)



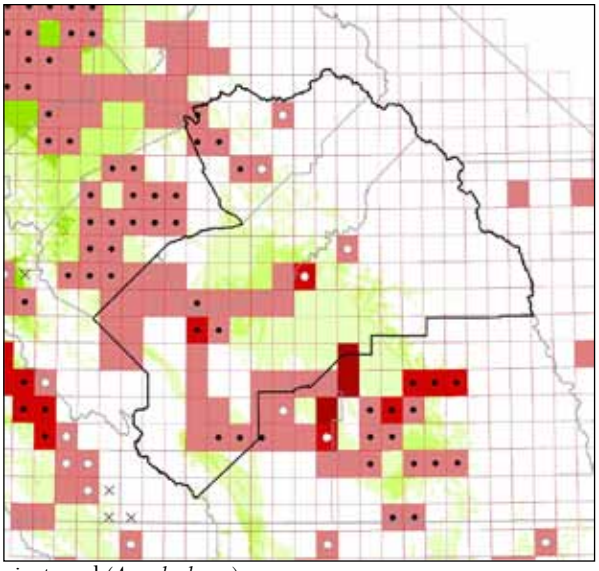
Scotch broom (*Cytisus scoparius*)



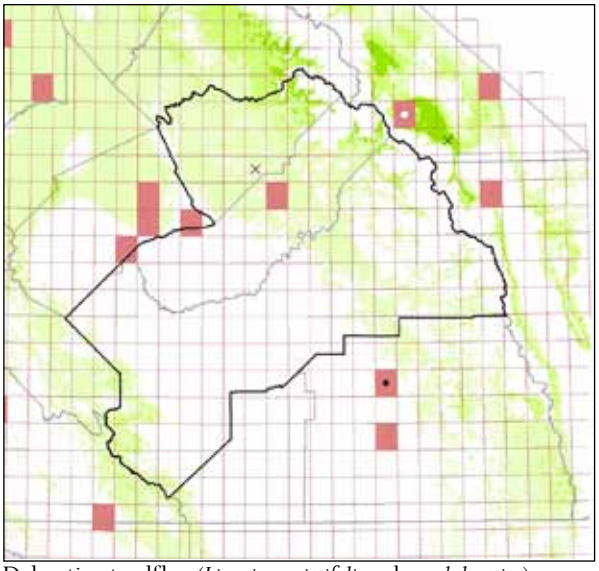
French broom (*Genista monspessulana*)



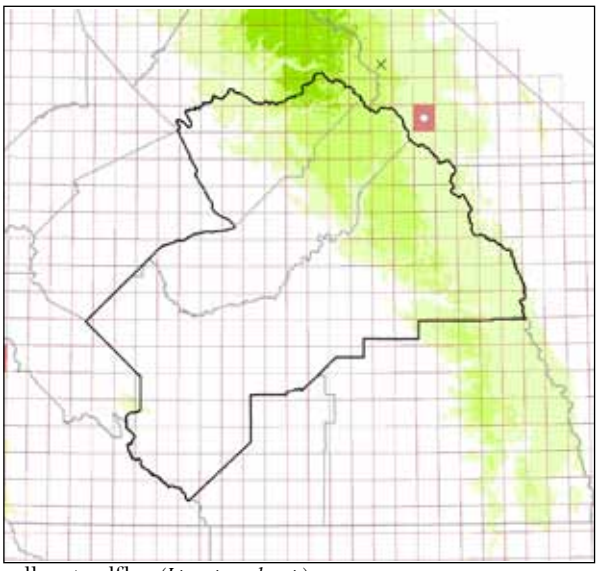
Spanish broom (*Spartium junceum*)



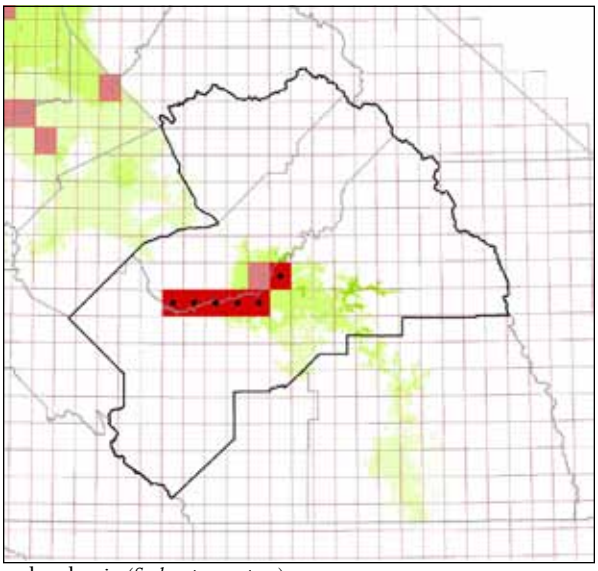
giant reed (*Arundo donax*)



Dalmatian toadflax (*Linaria genistifolia* subsp. *dalmatica*)



yellow toadflax (*Linaria vulgaris*)



red sesbania (*Sesbania punicea*)

Management opportunities for Sierra-San Joaquin Noxious Weed Alliance

Priority	Species	Opportunities			Statistics							
		Eradication	Containment	Surveillance	% Infested	% Suitable Infested	% Spreading	% Managed	% Eradicated	% Suitable 2010	% Suitable 2050	Suitability Change
	Family Apiaceae											
	Poison-hemlock	-	M	-	51	100	14	1	0	22	2	↓
	Family Asteraceae											
●	**Russian knapweed**	**H**	**-**	**-**	**16**	**16**	**33**	**0**	**0**	**79**	**87**	**-**
	Musk thistle	-	-	L	0	0	-	-	0	1	0	-
●	**Italian thistle & slenderflower thistle**	**-**	**H**	**-**	**32**	**-**	**100**	**0**	**0**	**-**	**-**	**-**
●	**Woolly distaff thistle**	**-**	**-**	**M**	**0**	**-**	**-**	**-**	**0**	**0**	**0**	**-**
●	**Diffuse knapweed**	**H**	**-**	**-**	**1**	**2**	**0**	**0**	**1**	**32**	**29**	**-**
●	**Spotted knapweed**	**-**	**H**	**-**	**8**	**14**	**6**	**19**	**3**	**30**	**42**	**↑**
●	**Tocalote**	**-**	**M**	**-**	**52**	**-**	**55**	**0**	**0**	**-**	**-**	**-**
●	**Yellow starthistle**	**-**	**H**	**-**	**69**	**74**	**48**	**1**	**2**	**78**	**78**	**-**
●	**Rush skeletonweed**	**H**	**-**	**-**	**7**	**11**	**7**	**64**	**0**	**32**	**53**	**↑**
	Canada thistle	M	-	-	2	3	33	33	1	18	11	↓
	Bull thistle	-	L	-	92	100	6	2	0	44	84	↑
●	**Stinkwort**	**-**	**-**	**M**	**1**	**13**	**0**	**0**	**0**	**0**	**2**	**↑↑**
	Ox-eye daisy	-	M	-	8	21	18	0	1	15	13	↓
●	**Scotch thistle**	**-**	**-**	**H**	**1**	**2**	**0**	**0**	**0**	**6**	**8**	**↑**
	Family Boraginaceae											
	Houndstongue	-	-	-	0	-	-	-	0	-	-	-
	Family Brassicaceae											
	Lens-podded white-top & hoary cress	M	-	-	6	-	0	31	1	-	-	-
●	**Dyer's woad**	**-**	**-**	**H**	**0**	**0**	**-**	**-**	**0**	**9**	**5**	**↓**
	Charlock mustard	-	L	-	39	-	3	0	0	-	-	-
	Family Dipsacaceae											
	Common teasel & fuller's teasel	-	M	-	24	61	0	0	1	11	9	↓
	Family Fabaceae											
●	**Scotch broom**	**-**	**H**	**-**	**3**	**12**	**14**	**0**	**0**	**12**	**29**	**↑↑**
●	**French broom**	**-**	**H**	**-**	**11**	**55**	**17**	**0**	**0**	**4**	**26**	**↑↑**
●	**Spanish broom**	**-**	**H**	**-**	**4**	**12**	**33**	**11**	**1**	**14**	**56**	**↑↑**
	Black locust	-	L	-	5	-	40	0	0	-	-	-
●	**Red sesbania**	**-**	**-**	**H**	**3**	**12**	**86**	**0**	**0**	**11**	**39**	**↑↑**
	Gorse	-	-	-	0	-	-	-	0	0	18	-
	Family Poaceae											
●	**Giant reed**	**-**	**H**	**-**	**21**	**32**	**24**	**0**	**0**	**30**	**44**	**↑**
	Annual false-brome	M	-	-	3	11	0	0	0	12	6	↓
	Japanese brome	L	-	-	2	-	0	0	0	-	-	-
	Red brome	-	M	-	52	53	8	0	0	79	65	↓
	Jubatagrass	M		-	10	-	0	0	0	-	-	-
	Pampasgrass	-	M	-	12	-	0	0	0	0	1	-
	Orchardgrass	-	L	-	70	100	13	1	0	50	74	↑

	Common velvet grass	-	M	-	39	71	1	3	0	30	49	↑
	Mediterranean barley	-	M	-	43	-	1	0	0	-	-	-
	Hare barley	-	M	-	45	-	1	0	0	-	-	-
	Italian ryegrass	-	M	-	74	100	19	0	0	39	50	↑
	FAMILY POLYGONACEAE											
	Japanese knotweed	-	-	-	0	-	-	-	0	-	-	-
	Giant knotweed	-	-	-	0	-	-	-	0	-	-	-
	FAMILY SCROPHULARIACEAE											
●	**Dalmatian toadflax**	**H**	**-**	**-**	**2**	**2**	**0**	**0**	**1**	**33**	**68**	**↑↑**
●	**Yellow toadflax**	**-**	**-**	**M**	**0**	**0**	**-**	**-**	**0**	**38**	**54**	**↑**
	FAMILY SIMAROUBACEAE											
	Tree-of-heaven	-	M	-	33	52	67	0	0	40	70	↑
	FAMILY SOLANACEAE											
	Tree tobacco	-	M	-	47	100	1	0	0	7	41	↑↑

Opportunities: H = high priority, M = medium, L = low

% Infested: portion of USGS quads in the area in which the species is present in wildlands

% Suitable Infested: portion of quads in the area with suitable climate that are currently infested

% Spreading: portion of infested quads in which the species is spreading

% Managed: portion of infested quads where species is under management

% Eradicated: portion of all quads in the area in which the species has been eradicated

% Suitable in 2010: portion of area with current climatic suitability of at least a level of "low" or higher

% Suitable in 2050: of area with projected 2050 climatic suitability of at least a level of "low" or higher

Suitability change:
↑ = a 15% - 99% increase from 2010 to 2050
↑↑= an increase of greater than 100%
↓ = a decrease of greater than 15%

These recommendations focus on the portion of Tulare WMA within the Sierra Nevada ecoregion (see map in chapter 1). Statistics are based on all of Tulare County.

Eradication is recommended for species that have limited occurrence within the WMA. Of the species examined, the following are priority eradication opportunities for Tulare WMA:

spotted knapweed (*Centaurea maculosa*)

Scotch broom (*Cytisus scoparius*)

French broom (*Genista monspessulana*)

Containment is recommended for species that are more widespread, where eradication may not be a realistic goal. The following species are priority containment opportunities for Tulare WMA:

yellow starthistle (*Centaurea solstitialis*) – prevent spread to higher elevations as part of YST Leading Edge Project

Scotch thistle (*Onopordum acanthium*)

Spanish broom (*Spartium junceum*)

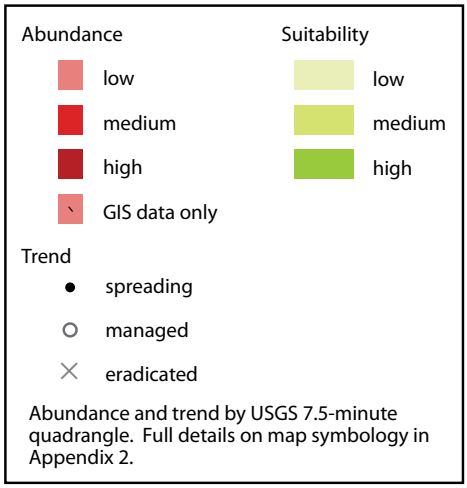
giant reed (*Arundo donax*)

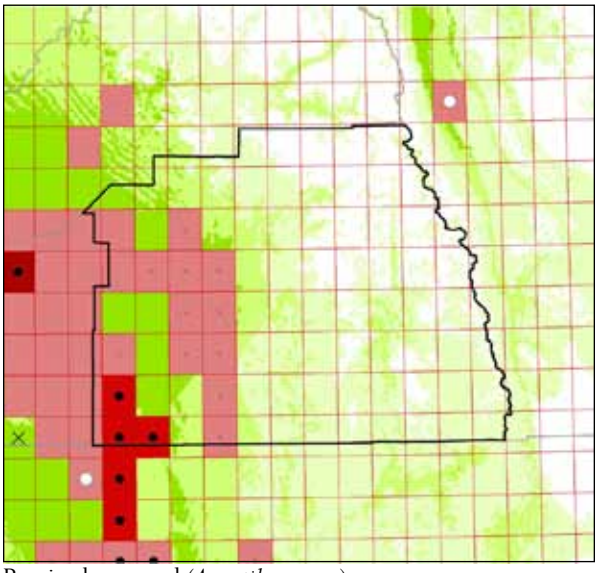
Surveillance is recommended to prevent spread into the WMA:

Russian knapweed (*Acroptilon repens*)

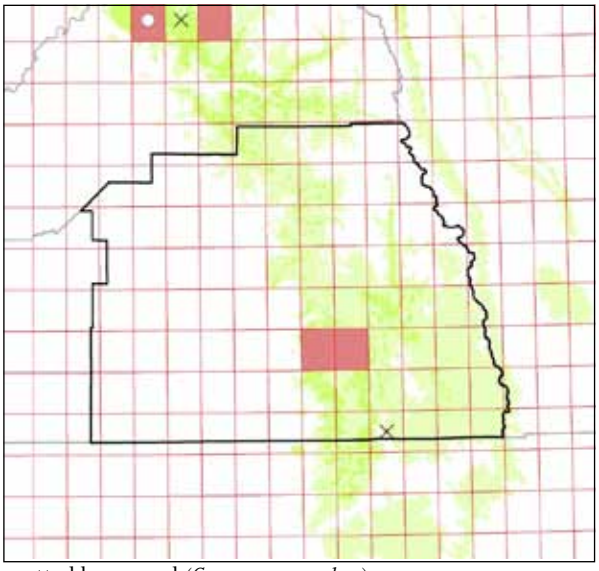
rush skeletonweed (*Chondrilla juncea*) – several quads infested in southern Fresno County and western Inyo County

Dalmatian toadflax (*Linaria genistifolia* subsp. *dalmatica*) – one quad infested on edge of Sierra region in Tulare WMA

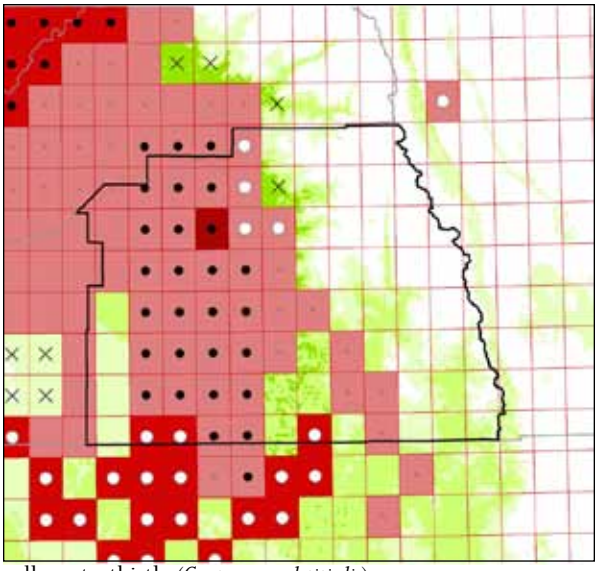




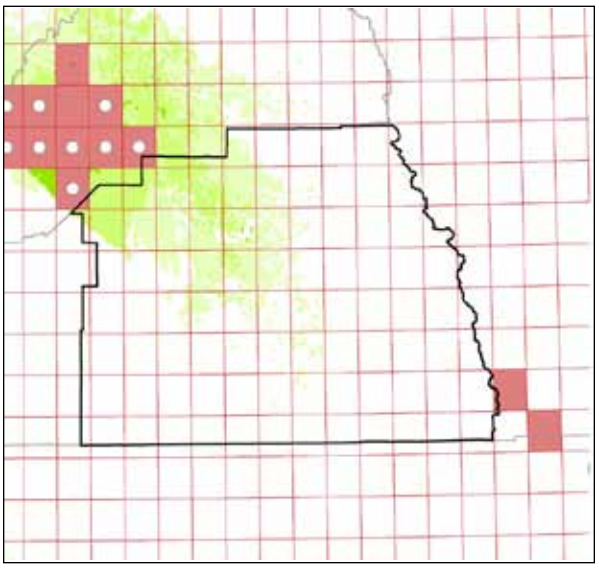
Russian knapweed (*Acroptilon repens*)



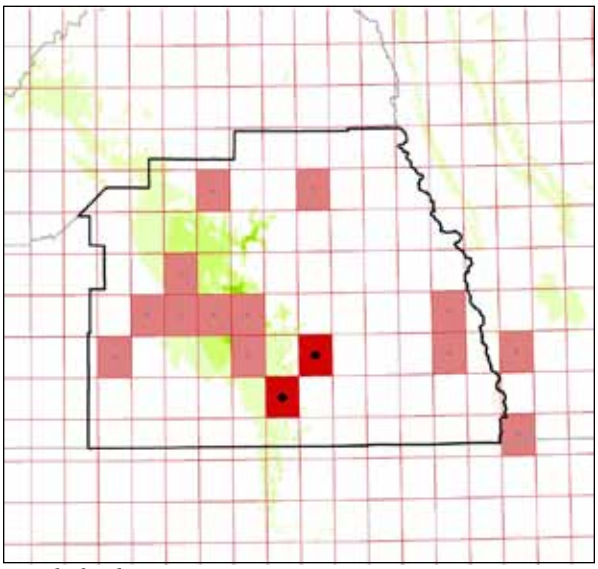
spotted knapweed (*Centaurea maculosa*)



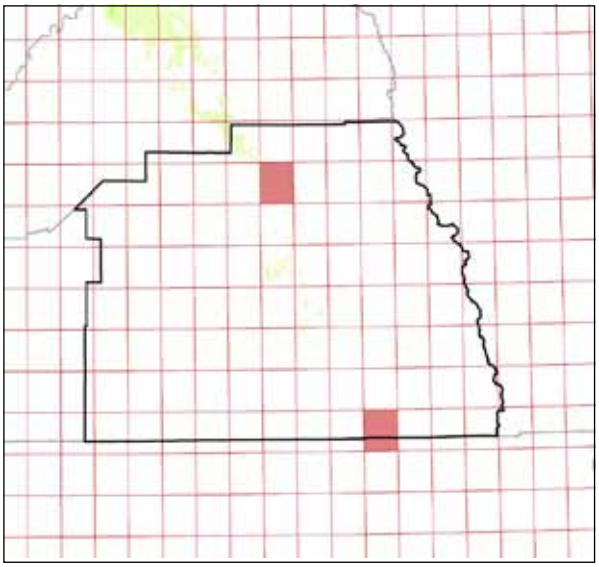
yellow starthistle (*Centaurea solstitialis*)



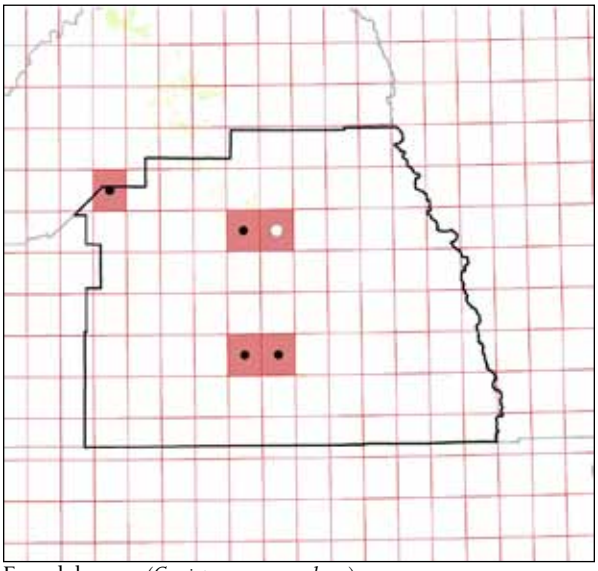
rush skeletonweed (*Chondrilla juncea*)



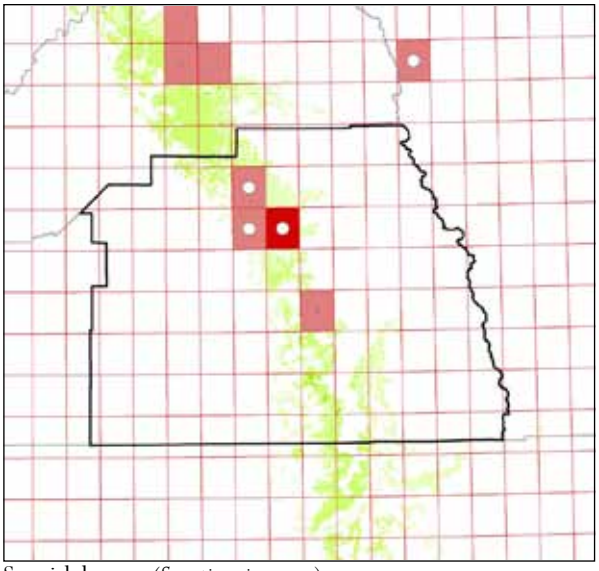
Scotch thistle (*Onopordum acanthium*)



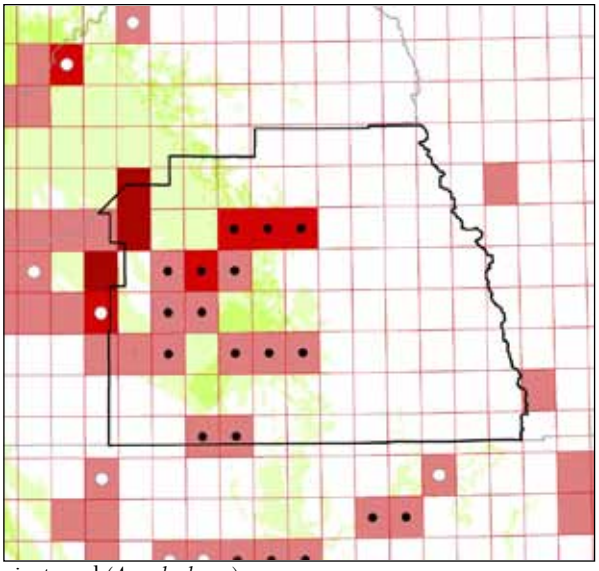
Scotch broom (*Cytisus scoparius*)



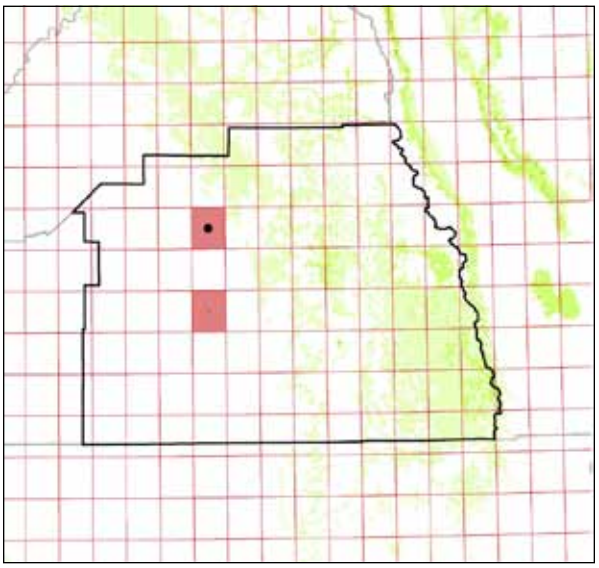
French broom (*Genista monspessulana*)



Spanish broom (*Spartium junceum*)



giant reed (*Arundo donax*)



Dalmatian toadflax (*Linaria genistifolia* subsp. *dalmatica*)

Priority	Species	Opportunities			Statistics							
		Eradication	Containment	Surveillance	% Infested	% Suitable Infested	% Spreading	% Managed	% Eradicated	% Suitable 2010	% Suitable 2050	Suitability Change
	Family Apiaceae											
	Poison-hemlock	-	M	-	26	58	81	0	0	26	0	↓
	Family Asteraceae											
●	**Russian knapweed**	**-**	**-**	**H**	**22**	**22**	**14**	**0**	**0**	**79**	**88**	**-**
	Musk thistle	-	-	L	0	0	-	-	0	0	0	-
	Italian thistle & slenderflower thistle	-	-	M	1	-	0	0	0	-	-	-
	Woolly distaff thistle	**-**	**-**	**L**	0	-	-	-	0	0	0	-
	Diffuse knapweed	-	-	L	0	0	-	-	0	30	26	-
●	**Spotted knapweed**	**H**	**-**	**-**	**2**	**3**	**0**	**0**	**1**	**35**	**45**	↑
●	**Tocalote**	**-**	**M**	**-**	**49**	**-**	**16**	**0**	**0**	**-**	**-**	**-**
●	**Yellow starthistle**	**-**	**H**	**-**	**52**	**55**	**60**	**14**	**1**	**79**	**86**	**-**
●	**Rush skeletonweed**	**-**	**-**	**H**	**3**	**7**	**0**	**67**	**0**	**20**	**22**	**-**
	Canada thistle	M	-	-	1	2	100	0	0	8	4	↓
	Bull thistle	-	M	-	39	46	15	10	0	59	90	↑
	Stinkwort	-	-	L	0	0	-	-	0	1	0	↓
	Ox-eye daisy	-	-	M	8	19	0	0	0	7	19	↑↑
●	**Scotch thistle**	**-**	**H**	**-**	**14**	**31**	**14**	**0**	**0**	**17**	**7**	**↓**
	Family Boraginaceae											
	Houndstongue	-	-	-	0	-	-	-	0	-	-	-
	Family Brassicaceae											
	Lens-podded white-top & hoary cress	-	-	M	3	-	0	0	1	-	-	-
	Dyer's woad	-	-	L	0	0	-	-	0	0	0	↓
	Charlock mustard	-	-	L	13	-	92	0	0	-	-	-
	Family Dipsacaceae											
	Common teasel & fuller's teasel	-	-	M	6	12	0	0	0	14	20	↑
	Family Fabaceae											
●	**Scotch broom**	**H**	**-**	**-**	**2**	**17**	**0**	**0**	**0**	**1**	**23**	**↑↑**
●	**French broom**	**H**	**-**	**-**	**5**	**63**	**80**	**20**	**0**	**0**	**15**	**↑↑**
●	**Spanish broom**	**-**	**H**	**-**	**4**	**11**	**0**	**75**	**0**	**13**	**51**	**↑↑**
	Black locust	L	-	-	3	-	0	0	0	-	-	-
	Red sesbania	-	-	L	0	0	-	-	0	11	31	↑↑
	Gorse	-	-	-	0	-	-	-	0	0	5	-
	Family Poaceae											
●	**Giant reed**	**-**	**H**	**-**	**21**	**37**	**67**	**0**	**0**	**30**	**51**	**↑**
	Annual false-brome	-	-	M	0	0	-	-	0	5	1	↓

	Common velvet grass	-	M	-	11	18	46	9	0	37	55	↑
	Mediterranean barley	-	M	-	53	-	11	0	0	-	-	-
	Hare barley	-	M	-	64	-	9	0	0	-	-	-
	Italian ryegrass	-	M	-	47	71	75	0	0	38	23	↓
	FAMILY POLYGONACEAE											
	Japanese knotweed	-	-	-	0	-	-	-	0	-	-	-
	Giant knotweed	-	-	-	0	-	-	-	0	-	-	-
	FAMILY SCROPHULARIACEAE											
●	**Dalmatian toadflax**	**-**	**-**	**H**	**2**	**3**	**50**	**0**	**0**	**24**	**74**	**↑↑**
	Yellow toadflax	-	L	-	0	0	-	-	0	34	56	↑
	FAMILY SIMAROUBACEAE											
	Tree-of-heaven	-	M	-	49	79	94	2	0	34	74	↑↑
	FAMILY SOLANACEAE											
	Tree tobacco	-	-	M	21	51	10	0	0	21	43	↑↑

Opportunities: H = high priority, M = medium, L = low

% Infested: portion of USGS quads in the area in which the species is present in wildlands

% Suitable Infested: portion of quads in the area with suitable climate that are currently infested

% Spreading: portion of infested quads in which the species is spreading

% Managed: portion of infested quads where species is under management

% Eradicated: portion of all quads in the area in which the species has been eradicated

% Suitable in 2010: portion of area with current climatic suitability of at least a level of "low" or higher

% Suitable in 2050: of area with projected 2050 climatic suitability of at least a level of "low" or higher

Suitability change:
↑ = a 15% - 99% increase from 2010 to 2050
↑↑= an increase of greater than 100%
↓ = a decrease of greater than 15%

These recommendations focus on the portion of Kern WMA within the Sierra Nevada ecoregion (see map in chapter 1). Statistics are based on all of Kern County.

Eradication is recommended for species that have limited occurrence within the WMA. Of the species examined, the following are priority eradication opportunities for Kern WMA:

Russian knapweed (*Acroptilon repens*)

Dalmatian toadflax (*Linaria genistifolia* subsp. *dalmatica*)

Containment is recommended for species that are more widespread, where eradication may not be a realistic goal. The following species are priority containment opportunities for Kern WMA:

yellow starthistle (*Centaurea solstitialis*) – prevent spread to higher elevations as part of YST Leading Edge Project

giant reed (*Arundo donax*)

Surveillance is recommended to prevent spread into the WMA:

spotted knapweed (*Centaurea maculosa*)

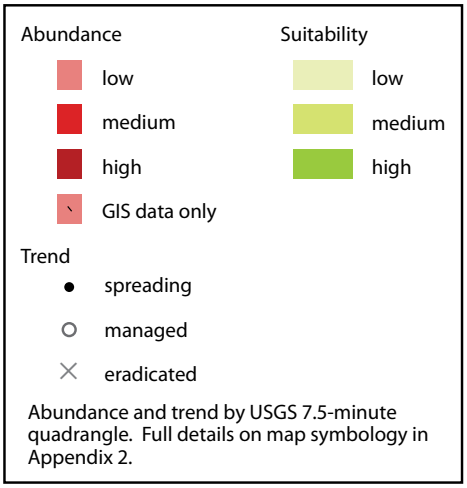
rush skeletonweed (*Chondrilla juncea*) – several quads infested in southern Fresno County and western Inyo County

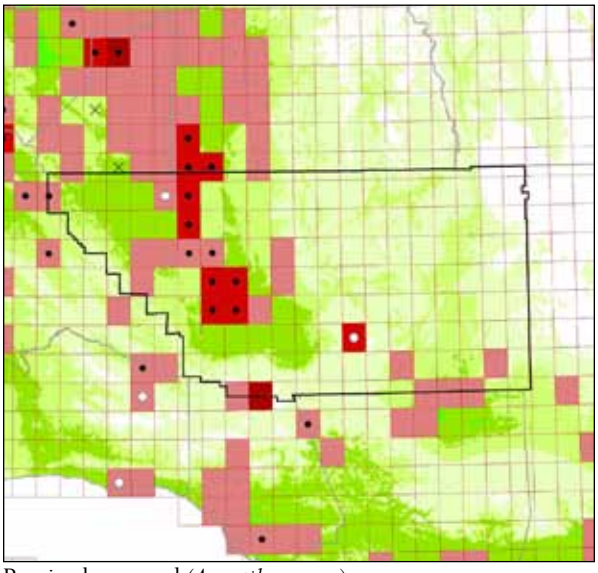
Scotch thistle (*Onopordum acanthium*)

Scotch broom (*Cytisus scoparius*)

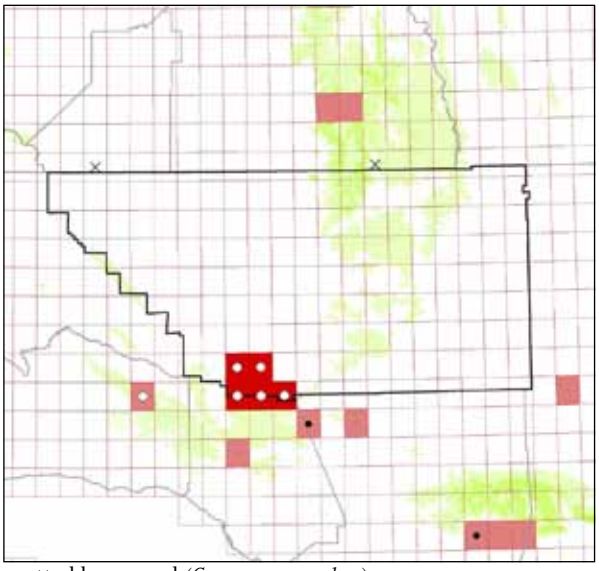
French broom (*Genista monspessulana*)

Spanish broom (*Spartium junceum*)

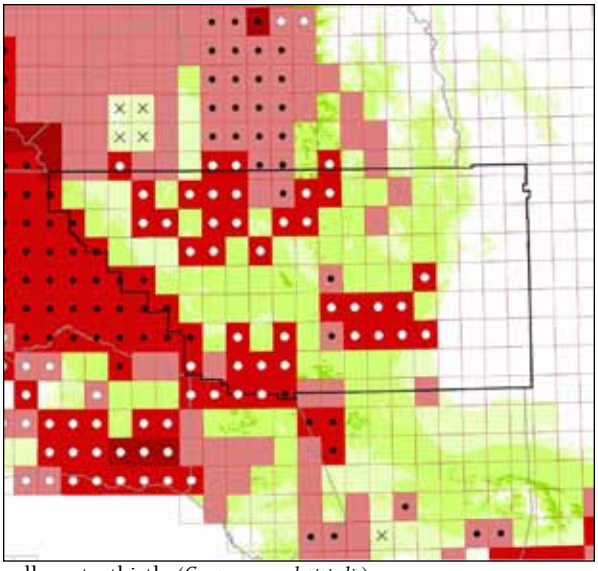




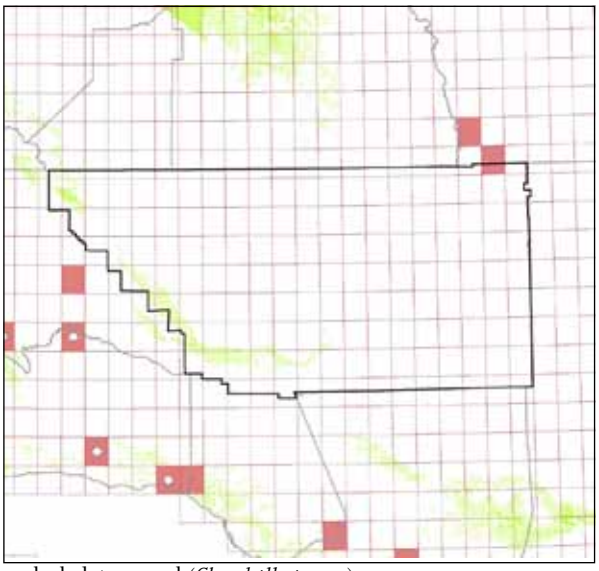
Russian knapweed (*Acroptilon repens*)



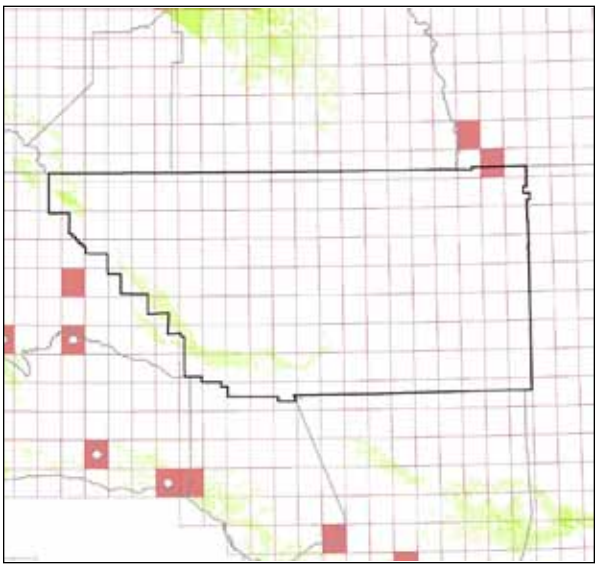
spotted knapweed (*Centaurea maculosa*)



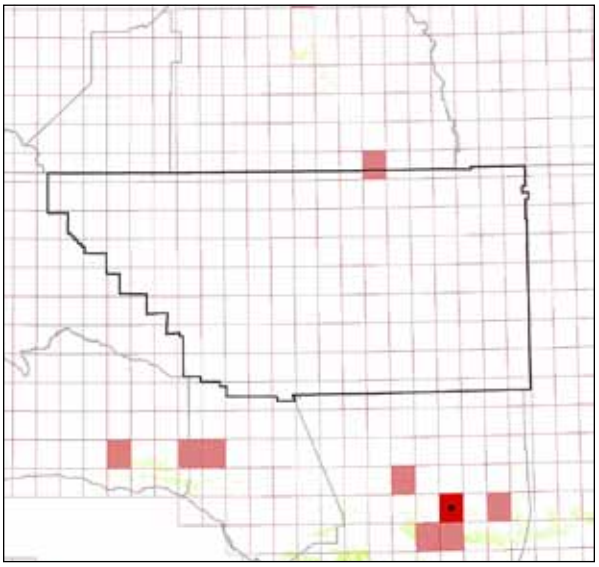
yellow starthistle (*Centaurea solstitialis*)



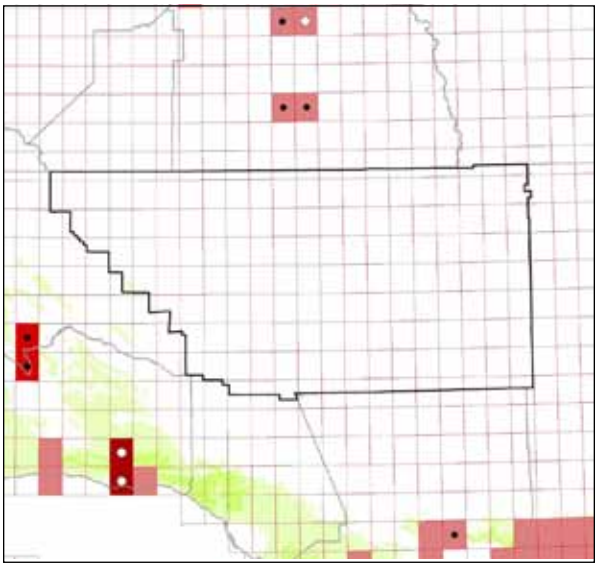
rush skeletonweed (*Chondrilla juncea*)



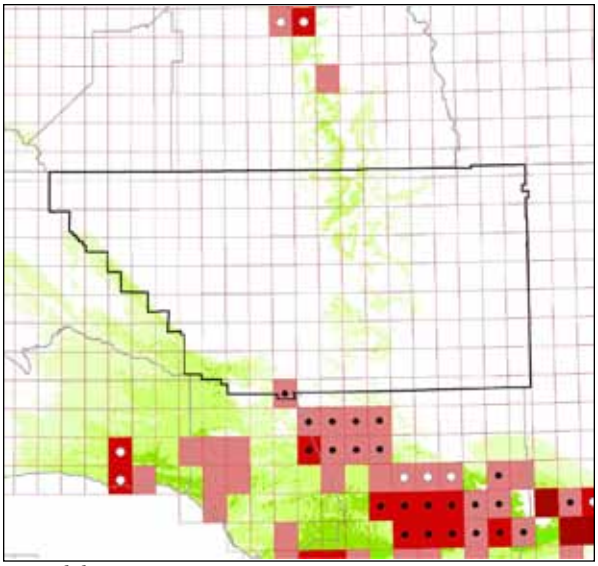
Scotch thistle (*Onopordum acanthium*)



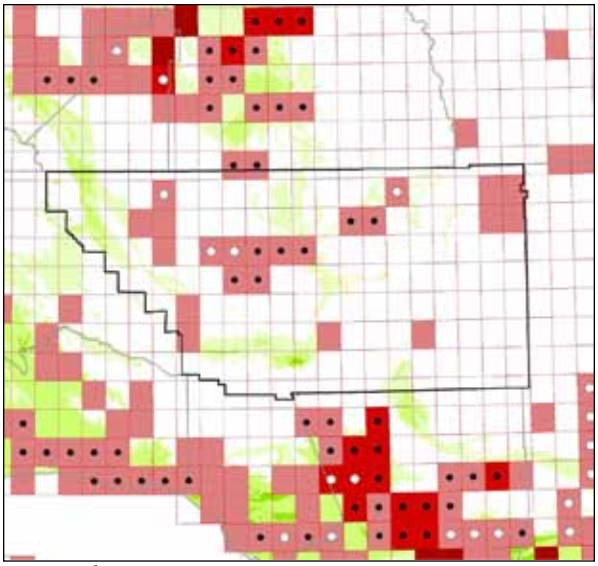
Scotch broom (*Cytisus scopariuss*)



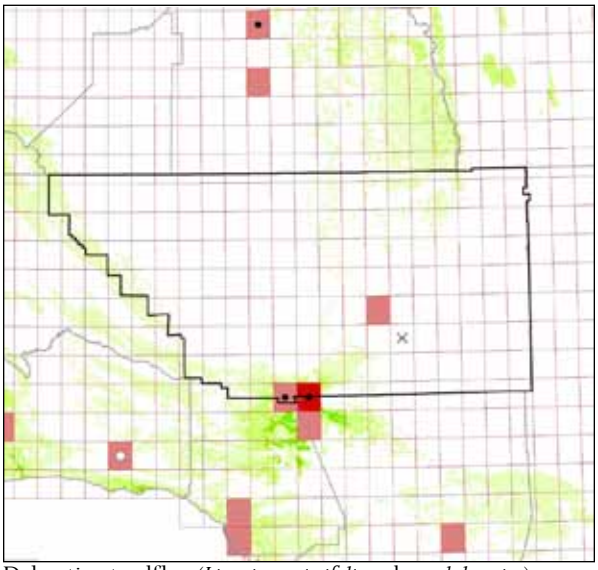
French broom (*Genista monspessulana*)



Spanish broom (*Spartium junceum*)



giant reed (*Arundo donax*)



Dalmatian toadflax (*Linaria genistifolia* subsp. *dalmatica*)

Management opportunities for Kern WMA

Priority	Species	Opportunities			Statistics							
		Eradication	Containment	Surveillance	% Infested	% Suitable Infested	% Spreading	% Managed	% Eradicated	% Suitable 2010	% Suitable 2050	Suitability change
	Family Apiaceae											
	Poison-hemlock	-	M	-	9	19	33	0	0	14	8	↓
	Family Asteraceae											
●	**Russian knapweed**	**H**	**-**	**-**	**18**	**19**	**43**	**7**	**1**	**94**	**85**	**-**
	Musk thistle	-	-	L	0	-	-	-	0	0	0	-
	Italian thistle & slenderflower thistle	-	M	-	3	-	20	0	0	-	-	-
	Woolly distaff thistle	**-**	**-**	**L**	0	-	-	-	0	0	0	-
	Diffuse knapweed	-	-	L	0	0	-	-	0	7	2	↓
●	**Spotted knapweed**	**-**	**-**	**H**	**3**	**8**	**100**	**100**	**1**	**15**	**14**	**-**
	Tocalote	-	M	-	98	-	11	3	0	-	-	-
●	**Yellow starthistle**	**-**	**H**	**-**	**41**	**46**	**52**	**55**	**0**	**82**	**65**	**↓**
●	**Rush skeletonweed**	**-**	**-**	**M**	**1**	**3**	**0**	**0**	**0**	**3**	**10**	**↑↑**
	Canada thistle	M	-	-	1	3	100	0	0	2	0	**-**
	Bull thistle	-	M	-	27	46	4	13	0	41	70	↑
	Stinkwort	-	-	L	0	0	-	-	0	0	1	**-**
	Ox-eye daisy	-	-	L	4	46	0	0	0	1	2	**-**
●	**Scotch thistle**	**-**	**-**	**H**	**1**	**8**	**0**	**50**	**0**	**1**	**7**	**↑↑**
	Family Boraginaceae											
	Houndstongue	-	-	-	0	-	-	-	0	-	-	-
	Family Brassicaceae											
	Lens-podded white-top & hoary cress	M	-	-	4	-	17	0	0	-	-	-
	Dyer's woad	-	-	L	0	-	-	-	0	0	0	-
	Charlock mustard	-	-	L	12	-	16	0	0	-	-	-
	Family Dipsacaceae											
	Common teasel & fuller's teasel	M	-	-	4	10	17	0	0	9	25	↑↑
	Family Fabaceae											
●	**Scotch broom**	**-**	**-**	**H**	**1**	**-**	**0**	**0**	**0**	**0**	**6**	**-**
●	**French broom**	**-**	**-**	**M**	**0**	**0**	**-**	**-**	**0**	**0**	**9**	**↑↑**
●	**Spanish broom**	**-**	**-**	**H**	**0**	**0**	**-**	**-**	**0**	**12**	**69**	**↑↑**
	Black locust	-	L	-	4	-	17	0	0	-	-	-
	Red sesbania	-	-	-	0	0	-	-	0	1	11	↑↑
	Gorse	-	-	-	0	-	-	-	0	0	2	-
	Family Poaceae											
●	**Giant reed**	**-**	**H**	**-**	**15**	**28**	**42**	**17**	**0**	**14**	**50**	**↑↑**
	Annual false-brome	-	-	L	1	7	0	0	0	1	6	↑↑
	Japanese brome	-	-	L	1	-	0	0	0	-	-	-
	Red brome	-	-	-	100	100	0	0	0	98	90	-
	Jubatagrass	-	M	-	4	-	0	0	1	-	-	-
	Pampasgrass	-	M	-	6	-	0	0	1	0	3	-
	Orchardgrass	-	L	-	5	9	0	0	0	28	34	↑

	Common velvet grass	-	M	-	4	8	0	0	0	21	31	↑
	Mediterranean barley	-	M	-	26	-	19	0	0	-	-	-
	Hare barley	-	M	-	76	-	6	0	0	-	-	-
	Italian ryegrass	-	M	-	18	35	13	0	0	21	33	↑
	FAMILY POLYGONACEAE											
	Japanese knotweed	-	-	-	0	-	-	-	0	-	-	-
	Giant knotweed	-	-	-	0	-	-	-	0	-	-	-
	FAMILY SCROPHULARIACEAE											
●	**Dalmatian toadflax**	**H**	**-**	**-**	**2**	**4**	**33**	**33**	**1**	**12**	**42**	**↑↑**
	Yellow toadflax	-	L	-	0	0	-	-	0	2	15	↑↑
	FAMILY SIMAROUBACEAE											
	Tree-of-heaven	-	M	-	39	62	80	3	1	36	80	↑↑
	FAMILY SOLANACEAE											
	Tree tobacco	-	M	-	72	100	0	0	0	16	48	↑↑

Opportunities: H = high priority, M = medium, L = low

% Infested: portion of USGS quads in the area in which the species is present in wildlands

% Suitable Infested: portion of quads in the area with suitable climate that are currently infested

% Spreading: portion of infested quads in which the species is spreading

% Managed: portion of infested quads where species is under management

% Eradicated: portion of all quads in the area in which the species has been eradicated

% Suitable in 2010: portion of area with current climatic suitability of at least a level of "low" or higher

% Suitable in 2050: of area with projected 2050 climatic suitability of at least a level of "low" or higher

Suitability change:
↑ = a 15% - 99% increase from 2010 to 2050
↑↑= an increase of greater than 100%
↓ = a decrease of greater than 15%

Eastern Sierra Weed Management Area

These recommendations focus on the far western portions of Inyo and Mono County on the eastern slope of the Sierra Nevada (see map in chapter 1). Statistics are based on all of Inyo and Mono counties.

Eradication is recommended for species that have limited occurrence within the Sierra portion of the WMA. Of the species examined, the following are priority eradication opportunities for Eastern Sierra WMA:

Russian knapweed (*Acroptilon repens*)

diffuse knapweed (*Centaurea diffusa*)

yellow starthistle (*Centaurea solstitialis*)

Scotch thistle (*Onopordum acanthium*)

Spanish broom (*Spartium junceum*)

Dalmatian toadflax (*Linaria genistifolia* subsp. *dalmatica*)

yellow toadflax (*Linaria vulgaris*)

tree-of-heaven (*Ailanthus altissima*)

rush skeletonweed (*Chondrilla juncea*)

Containment is recommended for species that are more widespread, where eradication may not be a realistic goal. The following species are priority containment opportunities:

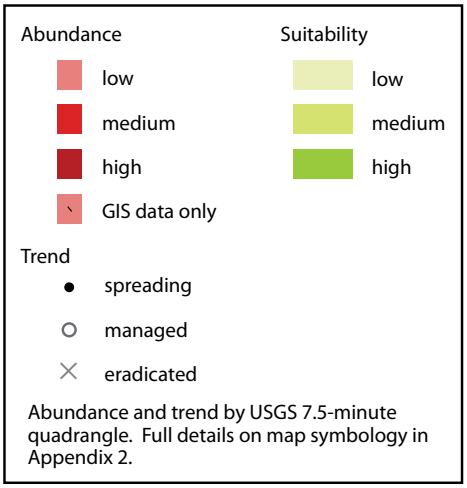
spotted knapweed (*Centaurea maculosa*)

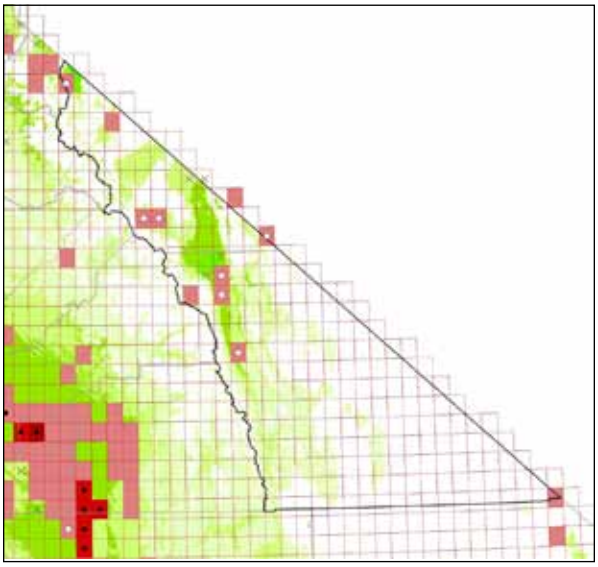
red brome (*Bromus madritensis* subsp *rubens*)

Surveillance is recommended to prevent spread for the following species:

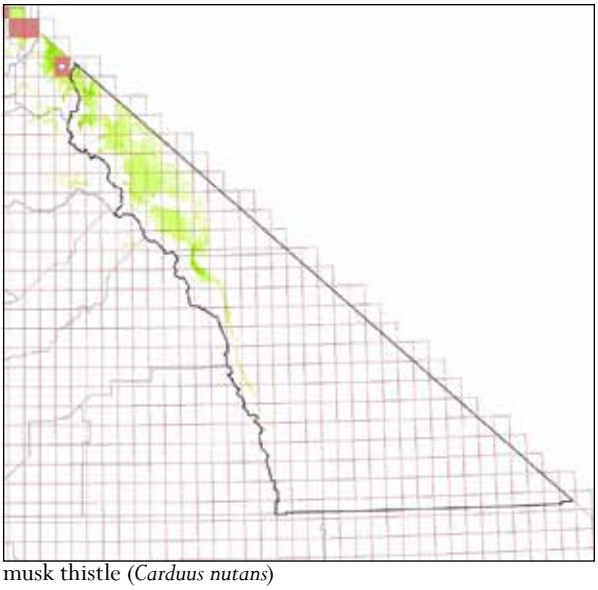
musk thistle (*Carduus nutans*)

dyer's woad (*Isatis tinctoria*)

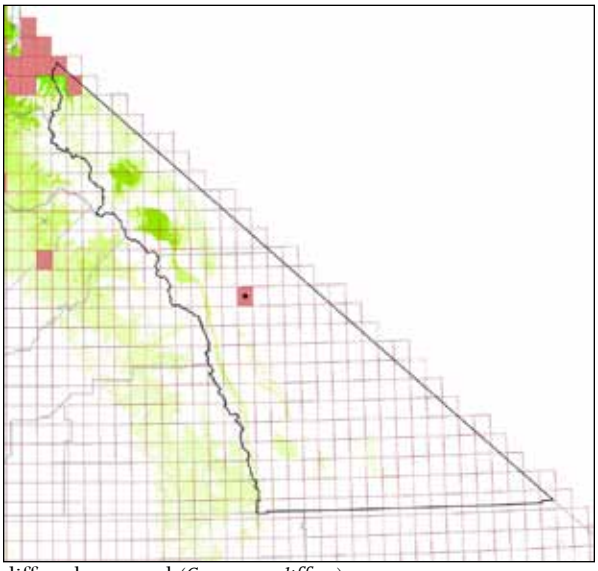




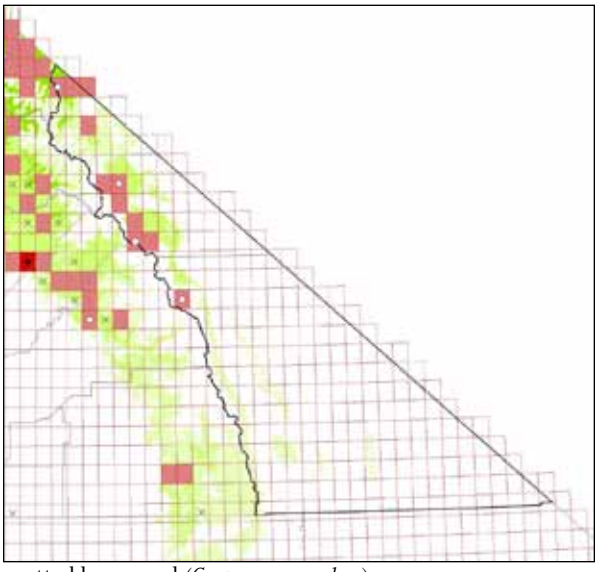
Russian knapweed (*Acroptilon repens*)



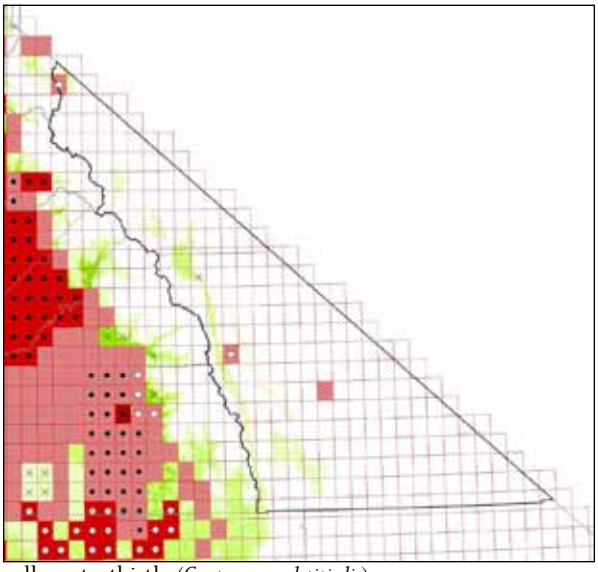
musk thistle (*Carduus nutans*)



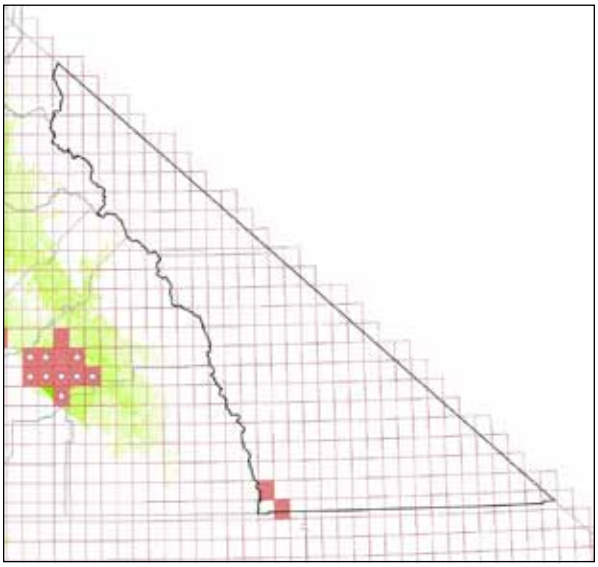
diffuse knapweed (*Centaurea diffusa*)



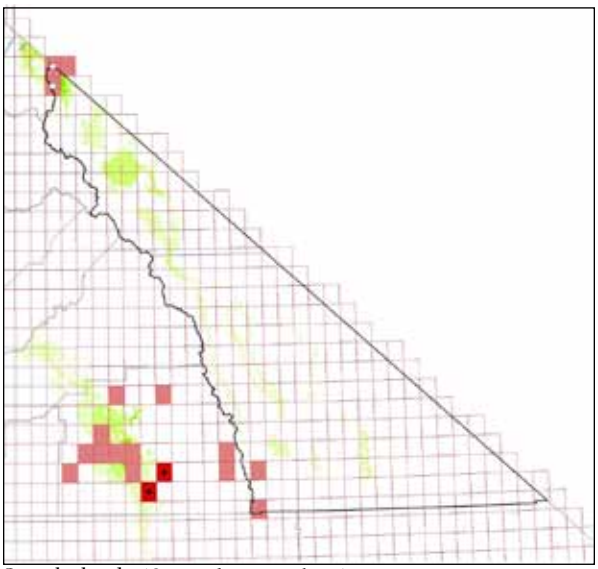
spotted knapweed (*Centaurea maculosa*)



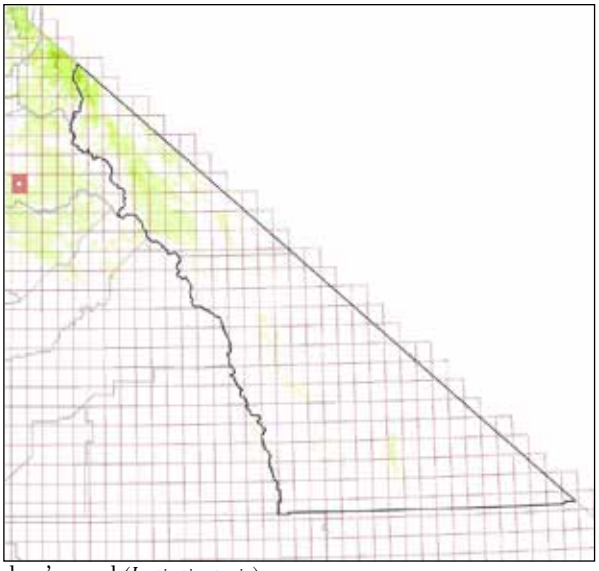
yellow starthistle (*Centaurea solstitialis*)



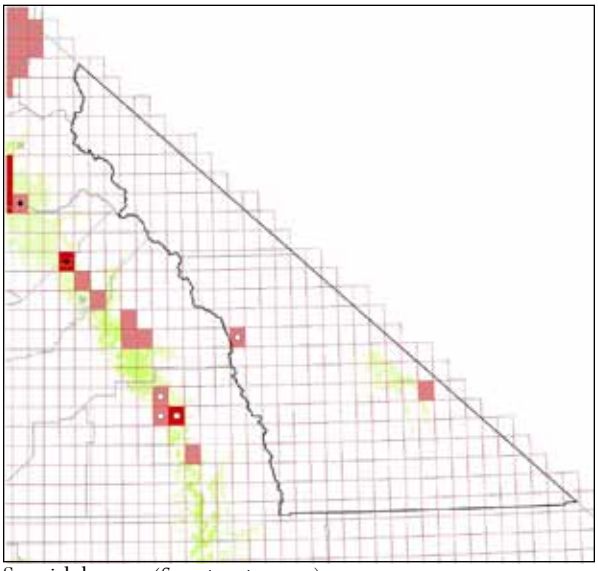
rush skeletonweed (*Chondrilla juncea*)



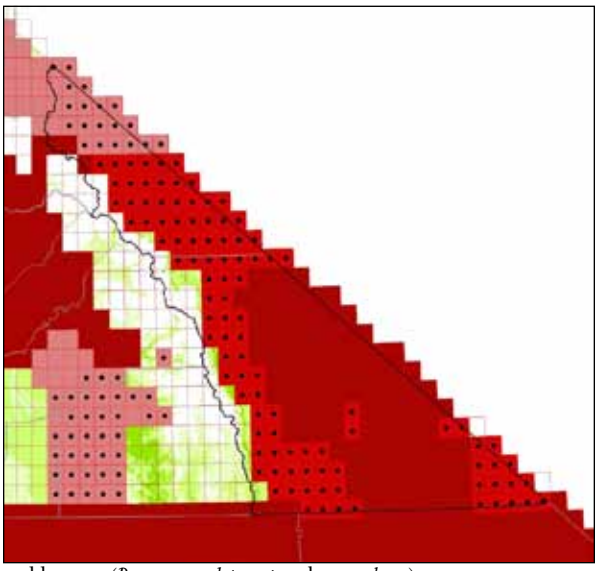
Scotch thistle (*Onopordum acanthium*)



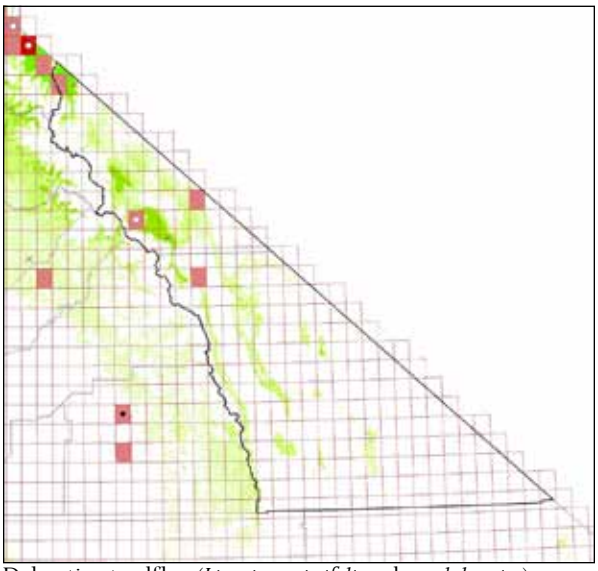
dyer's woad (*Isatis tinctoria*)



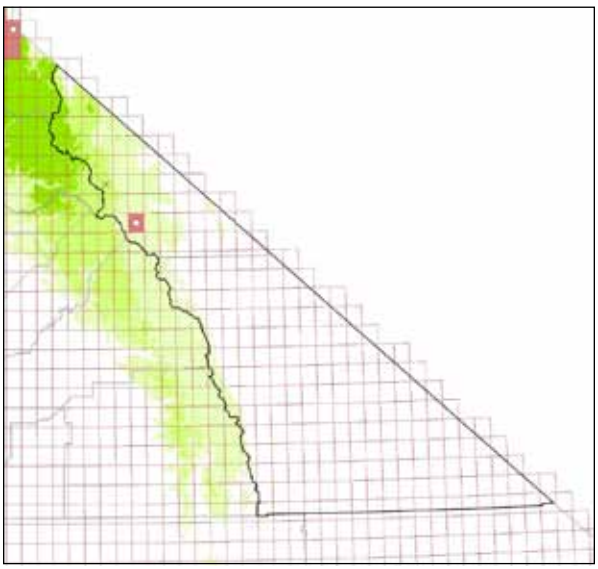
Spanish broom (*Spartium junceum*)



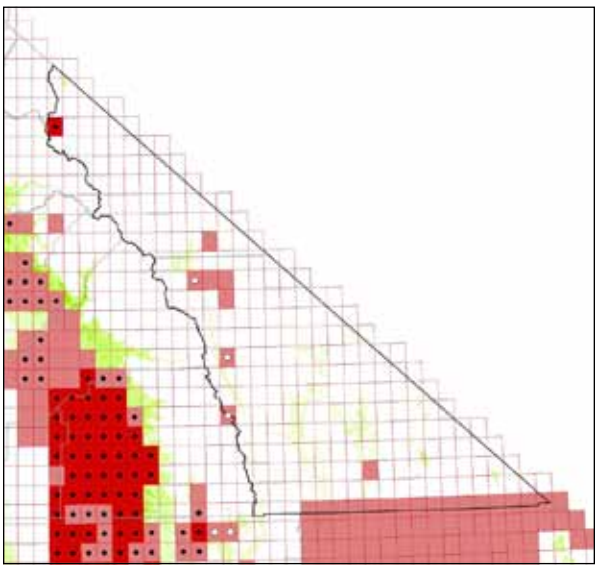
red brome (*Bromus madritensis* subsp. *rubens*)



Dalmatian toadflax (*Linaria genistifolia* subsp. *dalmatica*)



yellow toadflax (*Linaria vulgaris*)



tree-of-heaven (*Ailanthus altissima*)

Management opportunities for the Eastern Sierra WMA

Priority	Species	Opportunities			Statistics							
		Eradication	Containment	Surveillance	% Infested	% Suitable Infested	% Spreading	% Managed	% Eradicated	% Suitable 2010	% Suitable 2050	Suitability change
	Family Apiaceae											
	Poison-hemlock	-	-	M	7	100	0	95	0	0	4	-
	Family Asteraceae											
●	**Russian knapweed**	**H**	**-**	**-**	**4**	**5**	**0**	**64**	**1**	**37**	**58**	**↑**
●	**Musk thistle**	**-**	**-**	**H**	**0**	**0**	**-**	**-**	**0**	**11**	**6**	**↓**
	Italian thistle & slenderflower thistle	-	-	L	0	-	-	-	0	-	-	-
	Woolly distaff thistle	**-**	**-**	**L**	0	-	-	-	0	0	0	-
●	**Diffuse knapweed**	**H**	**-**	**-**	**1**	**2**	**33**	**0**	**0**	**16**	**33**	**↑↑**
●	**Spotted knapweed**	**-**	**H**	**-**	**4**	**9**	**0**	**36**	**0**	**16**	**35**	**↑↑**
	Tocalote	-	-	M	2	-	0	0	0	-	-	-
●	**Yellow starthistle**	**H**	**-**	**-**	**1**	**4**	**0**	**67**	**0**	**8**	**18**	**↑↑**
●	**Rush skeletonweed**	**M**	**-**	**-**	**1**	**10**	**0**	**0**	**0**	**0**	**6**	**↑↑**
	Canada thistle	M	-	-	4	9	0	82	0	14	16	↑
	Bull thistle	-	L	-	95	100	4	0	0	19	27	↑
	Stinkwort	-	-	-	0	-	-	-	0	0	0	-
	Ox-eye daisy	M	-	-	1	5	0	0	0	1	13	↑↑
●	**Scotch thistle**	**H**	**-**	**-**	**2**	**5**	**0**	**40**	**0**	**9**	**7**	**↓**
	Family Boraginaceae											
	Houndstongue	-	-	-	0	-	-	-	0	-	-	-
	Family Brassicaceae											
	Lens-podded white-top & hoary cress	M	-	-	3	-	0	75	0	-	-	-
●	**Dyer's woad**	**-**	**-**	**M**	**0**	**0**	**-**	**-**	**0**	**11**	**18**	**↑**
	Charlock mustard	-	-	-	0	-	-	-	0	-	-	-
	Famiy Dipsacaceae											
	Common teasel & fuller's teasel	M	-	-	1	6	0	67	0	1	7	↑↑
	Family Fabaceae											
	Scotch broom	-	-	L	0	0	-	-	0	0	5	↑↑
	French broom	-	-	L	0	-	-	-	0	0	0	-
●	**Spanish broom**	**H**	**-**	**-**	**1**	**11**	**0**	**50**	**0**	**2**	**35**	**↑↑**
	Black locust	-	-	L	8	-	0	0	0	-	-	-
	Red sesbania	-	-	-	0	-	-	-	0	0	0	-
	Gorse	-	-	-	0	-	-	-	0	0	0	-
	Family Poaceae											
	Giant reed	M	-	-	3	33	0	0	0	2	13	↑↑
	Annual false-brome	-	-	L	0	-	-	-	0	0	0	-
	Japanese brome	-	-	L	1	-	0	0	0	-	-	-
●	**Red brome**	**-**	**H**	**-**	**85**	**100**	**95**	**0**	**0**	**68**	**72**	**-**
	Jubatagrass	-	-	M	0	-	0	0	0	-	-	-
	Pampasgrass	-	-	M	1	36	0	0	0	1	9	↑↑
	Orchardgrass	-	L	-	9	24	0	4	0	20	35	↑

	Common velvet grass	-	M	-	1	7	0	0	0	4	35	↑↑
	Mediterranean barley	-	-	M	0	-	-	-	0	-	-	-
	Hare barley	-	-	M	8	-	0	0	0	-	-	-
	Italian ryegrass	-	-	L	0	0	-	-	0	0	0	-
	FAMILY POLYGONACEAE											
	Japanese knotweed	-	-	-	0	-	-	-	0	-	-	-
	Giant knotweed	-	-	-	0	-	-	-	0	-	-	-
	FAMILY SCROPHULARIACEAE											
●	**Dalmatian toadflax**	**H**	**-**	**-**	**1**	**3**	**0**	**25**	**1**	**20**	**50**	**↑↑**
●	**Yellow toadflax**	**H**	**-**	**-**	**0**	**1**	**0**	**100**	**0**	**24**	**35**	**↑**
	FAMILY SIMAROUBACEAE											
●	**Tree-of-heaven**	**H**	**-**	**-**	**9**	**23**	**4**	**12**	**0**	**5**	**29**	**↑↑**
	FAMILY SOLANACEAE											
	Tree tobacco	-	-	L	0	100	0	0	0	0	5	↑↑

Opportunities: H = high priority, M = medium, L = low

% Infested: portion of USGS quads in the area in which the species is present in wildlands

% Suitable Infested: portion of quads in the area with suitable climate that are currently infested

% Spreading: portion of infested quads in which the species is spreading

% Managed: portion of infested quads where species is under management

% Eradicated: portion of all quads in the area in which the species has been eradicated

% Suitable in 2010: portion of area with current climatic suitability of at least a level of "low" or higher

% Suitable in 2050: of area with projected 2050 climatic suitability of at least a level of "low" or higher

Suitability change:
↑ = a 15% - 99% increase from 2010 to 2050
↑↑= an increase of greater than 100%
↓ = a decrease of greater than 15%