

# Siskiyou County Noxious and Invasive Weed 2008 Supplemental Project Proposal

## **Contract Lead Person and Contact Person**

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## **Contract Confirmation:**

One contract with the Siskiyou County Weed management area will be required.

## **WMA Structure and Partners:**

The Siskiyou County Weed Management Area (WMA) is a powerful, well established and organized cooperative task force focused on the control and eradication of noxious weeds. The Siskiyou County Department of Agriculture (SCDA) has a long history of weed management work and has been the main contact for the WMA.

Current partners include:

- Siskiyou County Department of Agriculture
- Klamath, Shasta-Trinity, Rogue, Siskiyou and Modoc National Forests
- California Department of Food and Agriculture
- California Department of Transportation
- Rocky Mountain Elk Foundation
- Bureau of Land Management
- Bureau of Reclamation
- Natural Resources Conservation Services
- Siskiyou County Farm Bureau
- Salmon River Restoration Council
- California Department of Fish and Game
- U.S. Fish and Wildlife
- Klamath Basin National Wildlife Refuges
- California Department of Forestry
- University of California Extension
- Northern California Resource Center
- California Conservation Corps, Yreka Center

## **Past Performance of WMA and Partners in Weed Control:**

The WMA has been very proactive in its quest to detect, control and eradicate noxious weeds within the County. The cooperative effort between agencies greatly increased when the WMA was established and more funding became available to actually complete desired tasks. The WMA has been meeting twice per year, once in the early spring before the weed season and once in the fall.

Under AB1168 & SB1740 we have undertaken the following projects:

- Integrated weed management of Spotted knapweed, Scott Valley and Salmon River
- Integrated weed management of Squarrose knapweed, Hawkinsville and McAdams Creek
- Integrated weed management of Leafy spurge
- Survey and map Leafy spurge on Scott and Klamath rivers.
- SB1740 supplemental project for leading edge control of perennial pepperweed in Tulelake and Butte Valley
- Purple Loosestrife treatment in Tulelake/Lower Klamath wildlife refuges
- Monitoring of Spotted knapweed
- Increased seasonal staff for inventory and treatment

Other cooperative projects completed by the Siskiyou Weed Management Area:

- Salmon River Restoration Council's extensive weed management project (multi-species)
- The County Ag Dept. carries out a comprehensive weed detection program on behalf of the whole county.
- Held annual weed tours through 2005. Bi-annual weed tours from 2005 to present.
- Weed management booth at the Siskiyou County Fair. Information and specimens available for public.
- Youth weed education in classrooms and at the Annual Siskiyou County Ag Day.
- Published weed information inserts for dispersal with local newspapers.
- Republished a weed identification manual produced by northeastern counties.
- Made public presentations on weed management objectives and weed awareness.
- Received two RAC grants for noxious weed control.
- Meadow knapweed eradication project.
- East County noxious weed eradication project.

**In 2007 The SCDA treated 770 acres and worked 78,400 acres.**

**The USFS treated/worked 1400 acres.**

**The SRRC treated 25 acres and worked 320 acres.**

### **General In-kind contributions:**

In-kind contributions for general weed management are made by many cooperators. The most significant are the US Forest Service, Salmon River Restoration Council, Bureau of Land Management, US Fish and Wildlife Service, California Department of Food and Agriculture and the California Department of Fish and Game. In-kind contributions are listed in the budget section.

## **Proposed Projects**

When considering projects for this proposal, we evaluated which project areas would be deficient in funding for adequate treatments in 08/09. The selected projects are cooperative projects due to a checkerboard patten of land ownership. The funding sources from partners are not stable and there are currently insufficient resources to continue the positive progress we have made on these projects. Projects vary from one of the largest in the state (Musk thistle) to smaller endangered species protection projects. We have made very large investments managing these infestations to date. 98% of the funds requested will be utilized to put contract crews in the field during the peak of the season. The contract crews are beneficial because:

- Contract crews are supplied with vehicles, fuel, backpacks and crew leaders
- Contract crews are motivated and have past experience in the specific projects targeted in this proposal
- Our crews can focus on the treatment of priority pioneer infestations and the leading edge areas
- Contract crews require minimal supervision from our staff
- Allows sites to be worked at least twice per year
- Most importantly, without funding for contract crews, we will loose momentum on these important projects.

**Survey Component:** Early detection of new infestations is critical! **A unique and specialized survey prioritization model has been developed by our GIS specialist to enhance our survey and detection efforts.**

Factors increasing weed introduction include disturbance such as logging, fire, new roads, and property development projects. Also highways, waterways, old weed sites and utility lines are examples of input data for this computer model. The model will prioritize areas with the greatest risk of noxious weed infestation. An example of a high priority site might be an old burn area that was previously infested with Scotch thistle where a new road was built for a timber thinning operation. The geospatial data would overlap on a map indicating several factors enhancing weed establishment in that specific area making it a high priority for survey. Each project will have a strong survey component. The USFS and SCDA staff has made many new finds and are very committed to effective survey methods. Trimble Nomad and GeoExplorer 3 GPS units will be used to capture survey data.

**Project Title: Project 1– Endangered Species Protection**

**Project fund request \$4,320**

**Project Goal:**

- The goal is to protect two rare and endangered species currently being threatened by invasive noxious weeds. Knapweed (*Centaurea maculosa* and *Centaurea squarrosa*), Dyer's woad (*Itatis tinctoria*) and Yellow starthistle (*Centaurea solstitialis*) are encroaching on sensitive plant locations.

**Project long-term benefits and endangered species information:**

The Mariposa lily (*Calochortus persistens*), candidate for the Federal Endangered Species list, and the Yreka phlox (*Phlox hirsuta*), placed on the Federal Endangered Species list in 2000, are in jeopardy. The Mariposa lily occurs along a five mile stretch of Gunsight Ridge and on Cottonwood Peak near Yreka. Yreka phlox is established in several sites around Yreka. **These are the only known locations of these plants in the world!** The main threat to these rare and endangered species is competition from invasive noxious weeds.

Dyer's woad, Yellow starthistle and knapweeds are extremely competitive and have the potential to displace the Mariposa lily and the Yreka phlox if left unchecked. Dyer's woad is well adapted to the rocky, sparsely vegetated habitat that both species occupy, and grows from cracks in solid rock where few other plants could exist. It is our responsibility as stewards of the land, to help protect and preserve these two Siskiyou county endemic plants. Both the recovery plan for the Yreka phlox, and the conservation agreement for the Mariposa lily include weed control as a primary conservation action. We must act now while we still have viable populations of the endangered plants.

**Project Objectives and Methods – list milestones and performance measures:**

**Task 1)** Test plot results have indicated that herbicide application is the most efficacious method of control. Applications will be made to create a buffer zone inhibiting the invasion pressure of Dyer's woad on the Mariposa lily. There is no National Environmental Policy Act (NEPA) documentation authorizing chemical treatment on USFS land; therefore; herbicides will be limited to private land and administrative sites on USFS land. SCDA crews and contract crews will be making the herbicide applications. Hand crews will be utilized to mechanically remove weeds within the actual Mariposa lily and Yreka Phlox sites.

**Performance measures:** Photo points have been established that document progress to date, and will continue for the life of the project. Areas treated (net/gross) will be closely monitored with graphs and % change available. **Maps showing endangered species and invading noxious weed locations are attached.**

**Project Title: Project 2 – Musk/Scotch thistle containment/leading edge      Project fund request \$24,480**

Musk and Scotch thistle were expanding their range in Siskiyou County until 2004 when a containment effort was funded by USFS RAC funds. Our goals are to:

- Focus on satellite Musk and Scotch thistle sites and stop the advance of the leading edge
- Eradicate pioneer infestations
- Continue to reduce the main infestation at Black Butte, limiting the main seed source

**What are the project's long-term benefits and/or region-wide positive impacts:**

- Musk/Scotch thistle is spread by many vectors. Birds and rodents eat and store seeds. Vehicles/animals/hikers transport seeds many miles to new sites. Decreasing the infested area will limit the amount of seed spread.
- The Mount Shasta Wilderness Area is currently free of musk and scotch thistle. It would be beneficial to keep it that way. If the thistles become established there, control work will be much more difficult without vehicular assistance.
- Promote conifer seedling survival and natural vegetation by reducing competition of noxious weeds.
- Help preserve the aesthetic value, maintaining recreational popularity of the Mount Shasta area.
- The project area is located in the headwaters of the Shasta and Sacramento Rivers. Musk thistle is moving towards the steep and rugged Sacramento River canyon where control will be very difficult. The general health of these watersheds will be protected by controlling this A-rated noxious weed.

**Priority Topic Area Being Addressed**

This project addresses priority area #2. A containment strategy has carefully considered and established (see maps attached). Pioneer Musk infestations will be eradicated.

**Project Objectives and Methods – list milestones and performance measures:**

**Task 1).** The SCDA will target all satellite Musk and Scotch sites. The leading edge east of Weed (city) will be treated utilizing contract crews. Biological control agents established on private and Forest Service land have reduced the population density. The Shasta Trinity National Forest has made an effort to reduce Musk thistle populations along roads using mechanical methods.

**Task 2).** The SCDA will survey and treat outlying pioneer infestations in the McCloud area. These sites are encroaching into the McCloud and Pit River drainages. **The goal for these pioneer infestations is eradication!**

**Task 3).** The SCDA and USFS will continue to survey areas for new infestations. Any new sites will be mapped and treated. All survey and weed location data will be managed by the SCDA with GIS data management technology.

**Task 4).** Work with private and public land owners to create a more unified effort regarding Musk thistle control. **Performance measures:** We will track acres treated very closely and will provide data such as % change and graphs so a yearly comparison can be made. **Maps of the Musk/Scotch project area are attached.**

**Project Title: Project 3 – Hawkinsville/McAdams Creek Squarrose, Diffuse and Spotted knapweed containment Leading edge. Project request \$21,166**

**Project Goal:**

Our goal is control and reduction of the Hawkinsville/McAdams Creek sites and eradication of pioneer infestations. Progress is being made. Where solid fields of Squarrose knapweed once occurred, an occasional plant can now be found. **We must be as persistent as the weeds we are trying to eradicate.**

**What are the project’s long-term benefits and/or region-wide positive impacts:**

Eradication of the three knapweed species from Hawkinsville and McAdams Creek will:

- Enhance the productivity and health of forest and rangeland by reducing competition with noxious weeds.
- Help re-establish native vegetation by eliminating allelopathic knapweeds.
- Help maintain Siskiyou County’s exceptionally diverse ecology including the nearby rare and endangered species in Project 1 above.
- Improve water quality by reducing erosion potential and decreasing stream sediment.
- Improve the wildlife habitat and winter range for local deer herds and upland game species.
- Increase the land value within the treatment area.

**Priority Topic Area Being Addressed (from request for proposal announcement):**

This project addresses priority area #1, the eventual and complete eradication of three "A-rated" pests in the project area.

**Project Objectives and Methods – list milestones and performance measures:**

**Objective:** Knapweed detection and eradication will be conducted on private and public lands. The Siskiyou County Department of Agriculture (SCDA) will lead this project on private land. The Klamath National Forest botanist will be directing activities on USFS land. A licensed Pest Control Operator (PCO) will be retained to treat major sites with backpack crews. These crews will be directed by County staff. County crews will focus on outlying sites utilizing ATV’s and backpack sprayers. USFS staff and available fire crews or contract crews will be doing mechanical removal on USFS land. USFS and County staff will cooperatively survey adjacent land and road systems. New sites will be mapped with GPS and treated. All known sites will be visited at least twice to increase detection and control. Materials to be used will be Milestone or Transline and a 2-4-D product (except Hawkinsville grape area) with spreader. An aquatic formulation of glyphosate may be used for stream-side treatments. Mechanical removal will be utilized on USFS land and environmentally sensitive sites on private land.

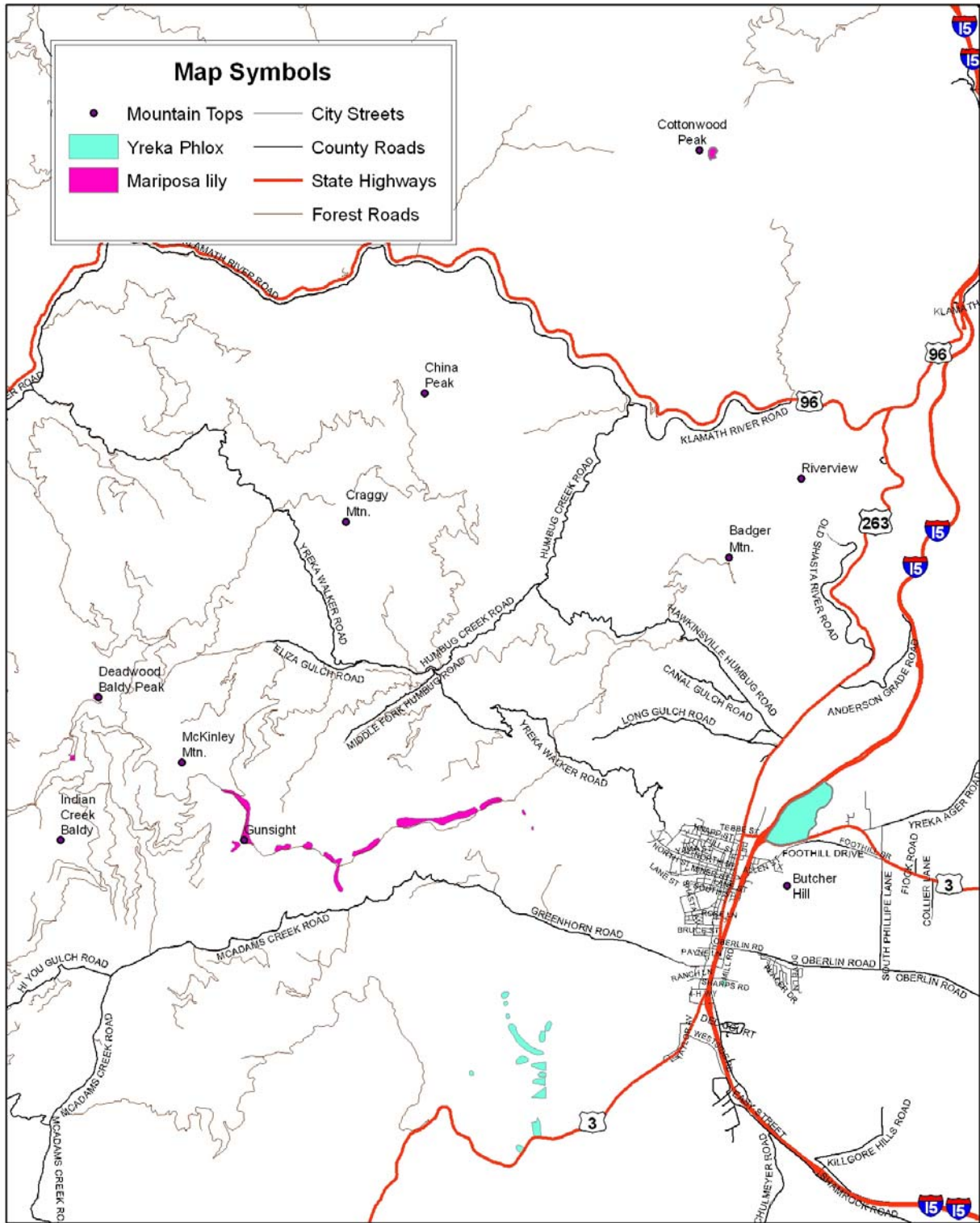
It is essential to visit sites at least twice each year. Often the natural vegetation is dense and green early in the year and detection of knapweed can be difficult. Later in the season most of the annual grasses have dried up, making the knapweed more visible. Knapweeds also germinate through the spring and summer, sometimes flowering in the first year, so early treatment may miss late germinants.

**Task 1:** The USFS and SCDA staff will conduct surveys cooperatively and treat new sites as soon as possible.

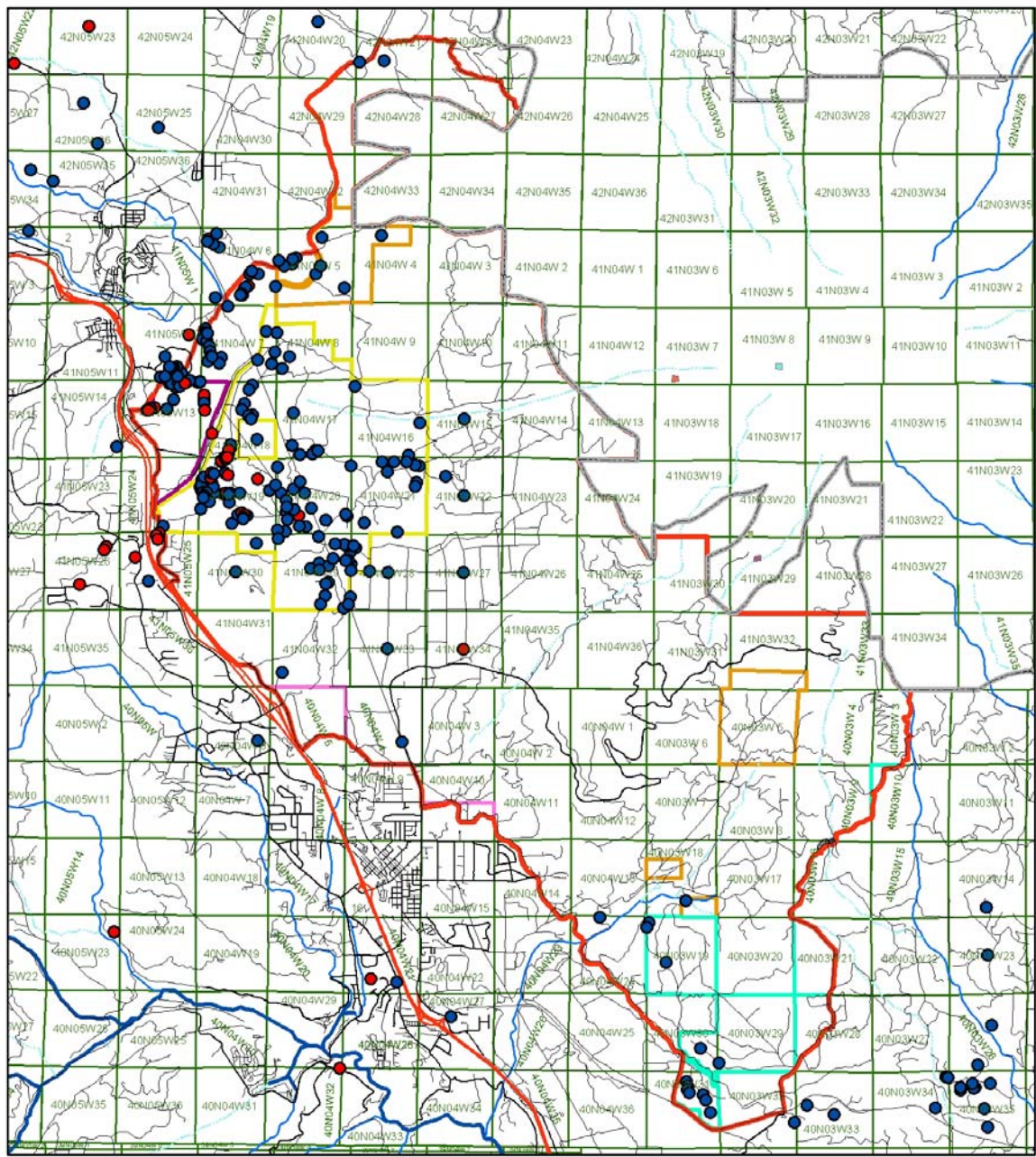
**Task 2:** Contract crews supervised by SCDA staff will treat sites within the project area that are private ownership. The SCDA staff will treat all known outlying infestations and new detections of knapweed on private property within the project area. The USFS will treat infestations of knapweed on USFS land within the project area.

**Task 3:** Maps of the project sites will be updated with the locations of newly detected knapweed sites.

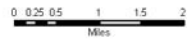
**Performance measures:** We will track acres treated (net/gross) very closely and will provide data such as % change and graphs so a yearly comparison can be made. **Maps showing the project areas are attached.**



**Project 1**



Map prepared by the Idaho Department of Agriculture, Office of the State Geologist, Boise, Idaho. The map is a compilation of various data sources and is not a survey. It is intended for informational purposes only. The Idaho Department of Agriculture is not responsible for any errors or omissions on this map.



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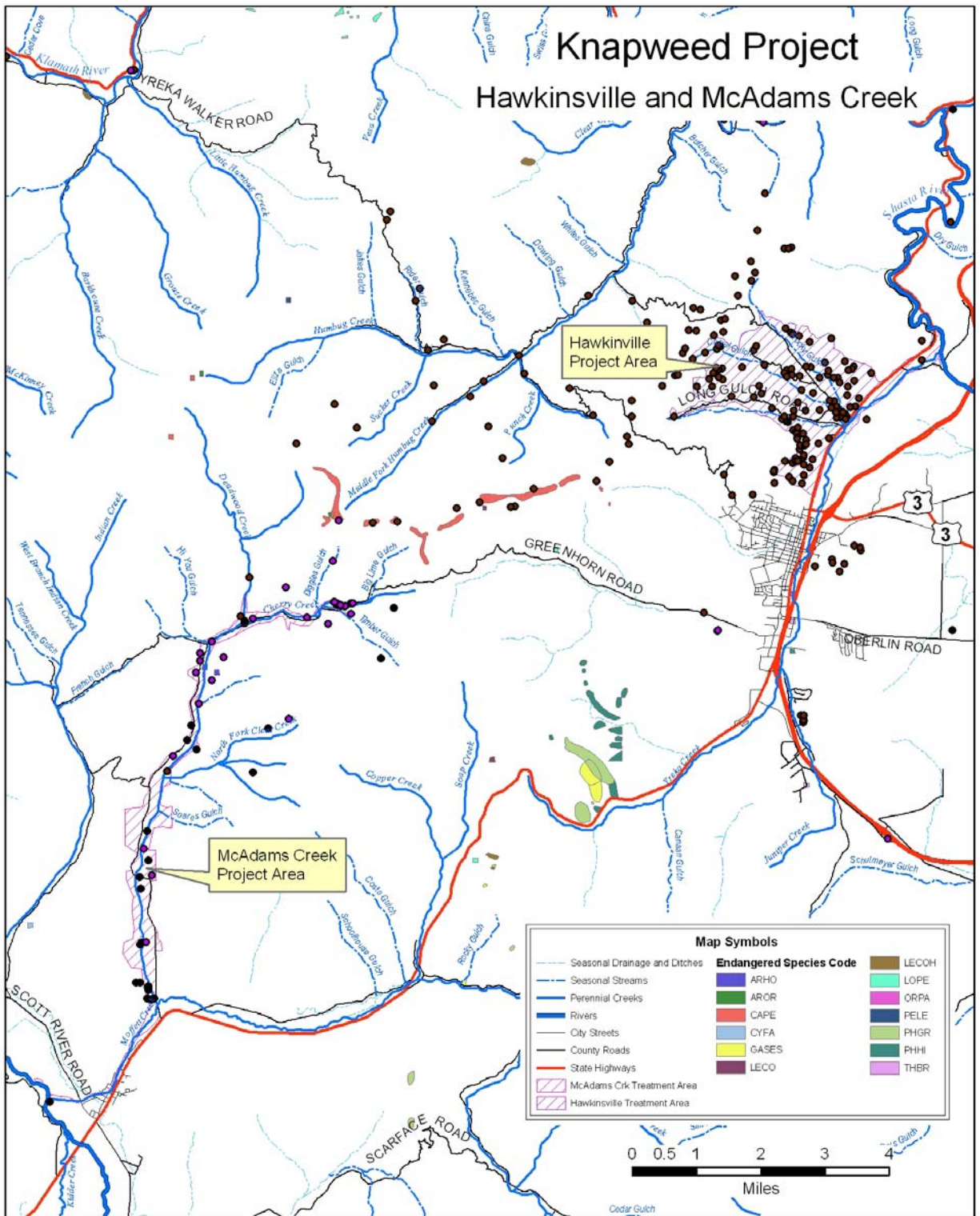


### Musk Thistle Project Area

Area of Musk Boundary  
3275 Acres  
0.728 Acres of private  
property within boundary

Map Symbols	
● (Red)	Drives & Road
● (Blue)	Section Stripes
● (Green)	Perennial Creeks
● (Yellow)	Propagated Rivers
● (Orange)	Revised Easement
● (Purple)	CRS Easement
● (Pink)	CRS Easement
● (Light Blue)	CRS Easement
● (Light Green)	CRS Easement
● (Light Purple)	CRS Easement
● (Light Orange)	CRS Easement
● (Light Yellow)	CRS Easement
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## Project 2



### Project 3