

Project Summary

The Placer County Agriculture Department (PCAD) will eradicate previously identified infestations of spotted knapweed, diffuse knapweed, Dalmatian toadflax, Scotch thistle and musk thistle in the upper regions of the Truckee, Yuba, Bear and American River watersheds in the Sierra Nevada Mountains. Annual surveys of forests and meadows in the project area will be conducted to identify and eradicate incipient infestations to prevent establishment and spread. An integrated pest management approach will be utilized to eradicate infestations, infestations will be mapped with GPS/GIS, and progress will be monitored quantitatively.

Project Goal

The goal of this project is to improve meadow and forest health in the Sierra Nevada within Placer County by eradicating California Department of Food and Agriculture A-rated noxious weeds. The PCAD will achieve this goal by:

- eradicating previously identified infestations totaling 20 acres of spotted knapweed, diffuse knapweed, Dalmatian toadflax, Scotch thistle and musk thistle;
- conducting thorough surveys of the project area to detect and eradicate new infestations before they become established and begin to spread, and;
- collaborating with project cooperators to access properties to conduct surveys, detect infestations and coordinate eradication activities.

Environmental Setting

The project area encompasses the oak woodlands and mixed conifer forests of eastern Placer County extending from Auburn in the Sierra Nevada foothills to the California-Nevada border (excluding the Tahoe Basin). Specific focus will be given to the I-80 and Bear River corridors which serve as major thoroughfares for the movement of noxious weeds into the Sierra Nevada.

Project Scope

California Department of Food and Agriculture A-rated noxious weeds are invasive plants that are currently found in limited distribution in California and are deemed detrimental to native biodiversity and silviculture. They spread aggressively, exclude native plants and animals, disrupt agricultural and ecological functions and limit recreation opportunities. In the Sierra Nevada, A-rated weeds compete with forest regeneration and increase fuel loads and wildfire potential. Musk and Scotch thistle, in particular, grow to heights of 6 to 10 feet and form dense impenetrable stands that may serve as fuel ladders for wildfires. Identifying, controlling and eradicating infestations prior to large-scale establishment in meadow and forest environments is both cost-effective and ecologically prudent.

The PCAD has identified 16 net acres of spotted knapweed, 3 net acres of Scotch thistle, 1 net acre of musk thistle, ¼ net acre diffuse knapweed and .1 net acre Dalmatian toadflax. Sierra Nevada Conservancy funding will support the department's goal of eradicating these infestations in Upper Truckee, Yuba, Bear and American River watersheds. Funding will also be used to annually survey forest lands and properties directly adjacent to forest lands including 50 linear miles of I-80, 8 linear miles of PG&E right-of-way properties, Bear Valley and the Squaw Valley, Alpine Meadows and Northstar ski areas.

The scope of work includes utilizing an integrated pest management approach to eradicate known noxious weed infestations, conducting surveys for incipient infestations, mapping infestations with GPS/GIS, and quantitatively monitoring progress. Infestations and appropriate treatment methods will be assessed on a site-specific basis. In some situations weeds will be removed mechanically, while in others, herbicide applications may be more appropriate and effective. Survey, mapping and treatment work will be carried out by PCAD staff and is ready to commence immediately.

This project represents the continuation, and in many cases culmination, of efforts to identify, control and eradicate spotted knapweed, diffuse knapweed, Scotch thistle and musk thistle infestations in the Sierra Nevada region of Placer County. The California Department of Food and Agriculture, the U.S. Department of Agriculture, the U.S. Fish and Wildlife Service and Placer County have provided financial support to this project since 2000. Support from the SNC through 2015 will enable the PCAD to complete the eradication efforts that began in 2000. The PCAD will then be able to transition to a cost-effective preventative maintenance program in which annual surveys are conducted to detect and readily eradicate new infestations.

Workplan and Schedule

- **Task 1:** Work with project cooperators to renew annual permissions to access properties and schedule weed survey and eradication work (April 2012, 2013, 2014, 2015).
- **Task 2:** Conduct mechanical and herbicide treatments of known spotted knapweed, diffuse knapweed, Scotch thistle and musk thistle infestations (August – October 2012; June – October 2013-2015).
- **Task 3:** Conduct surveys throughout project area to detect incipient A-rated noxious weed infestations (August – October 2012; June – October 2013-2015).
- **Task 4:** Monitor progress of eradication efforts (August – October 2012; June – October 2013-2015).
- **Task 5:** Compile and submit 6-month progress reports (November 2012 – May 2015).
- **Task 6:** Compile and submit final project report (December 2015).

| DETAILED PROJECT DELIVERABLES | TIMELINE |
|--|--|
| Coordinate with project cooperators to obtain annual permissions and permits | April 2012, 2013, 2014, 2015 |
| Prioritize eradication efforts for upcoming field season | May 2012, 2013, 2014, 2015 |
| Conduct treatments of known infestation sites | August – October 2012 June – October 2013-2015 |
| Conduct surveys throughout project area for new infestations | August – October 2012 June – October 2013-2015 |
| Monitor project progress | August – October 2012 June – October 2013-2015 |
| Compile and submit 6-month progress reports | November 2012 and every 6 months thereafter through May 2015 |
| Compile and submit final project report | December 2015 |

Restrictions, Technical/Environmental Documents and Agreements

Restrictions: None

Agreements: Weed survey and eradication activities will take place on a wide variety of properties throughout the project area. The PCAD annually renews permissions with property owners prior to conducting weed survey and eradication work. Tenure for the purpose of project activities will be established with property owners upon grant authorization.

Regulatory Requirements/Permits:

- **Caltrans Encroachment Permit:** The PCAD annually acquires an Encroachment Permit from Caltrans to conduct noxious weed survey and eradication activities within state highway rights-of way within Placer County.
- **California Environmental Quality Act (CEQA):** The PCAD carries out weed eradication activities under the authority of the California Food and Agricultural Code. As a regulatory agency taking actions assure the maintenance, restoration, enhancement and protection of the environment this project is categorically exempt under CEQA Section 15308.

Organizational Capacity

The PCAD is the lead agency in Placer County which carries out regulatory activities to detect and eradicate noxious weeds. The PCAD has an established track record of identifying and controlling A-rated weed infestations, including eradicating spotted knapweed infestations along the I-80 corridor and severely reducing Scotch thistle populations in the Bear Valley area. The PCAD also enforces a yellow starthistle no-spread line which prevents infestations from expanding into the Sierra Nevada.

The PCAD has a permanent staff consisting of six Agricultural Inspectors and seasonal Agricultural Aides. Each inspector is licensed with the California Department of Food and Agricultural in Pesticide Regulation, Pest Prevention and Plant Regulation and Integrated Pest Management.

The PCAD maintains 4-wheel drive trucks, ATVs, a 50- gallon power sprayer, backpack sprayers, shovels, weed wrenches, GPS equipment, ArcGIS mapping software and personal protective equipment.

Cooperation and Community Support

The PCAD's noxious weed eradication program is supported by Caltrans, California State Parks, Nevada County Agriculture Department, California Department of Food and Agriculture, University of California Cooperative Extension, PG&E, U.S. Forest Service, Northstar Community Services District, Truckee River Watershed Council, and the Squaw Valley and Alpine Meadows ski areas. The Placer County Department of Agriculture has long-standing relationships with each of these groups and agencies.

The PCAD is also the coordinating agency of the Nevada-Placer Weed Management Area Group which is comprised of many of the aforementioned project supporters and functions as a forum to share information and collaborate on projects. Supporters of this project will assist the PCAD in identifying new infestations. The Truckee River Watershed Council utilizes a publically accessible website to report, confirm and track new findings. The Watershed Council then relays this information to the PCAD.

Long-Term Management and Sustainability

After project completion in the fall of 2015, a long-term strategy of conducting annual weed surveys will be required. This will be necessary to ensure that the project's eradication activities have completely exhausted weed seed banks and because of the geography of the project area. The east-west I-80 corridor which runs through the project area will continue to be an avenue for weed transport, especially from west bound traffic originating in Nevada, eastern Oregon, Idaho, Montana and other areas heavily infested with the A-rated weeds we are trying to exclude. After existing infestations have been eradicated within the project timeframe, the PCAD will continue to carry out annual surveys and treatments when necessary to ensure long-term project success.

Performance Measures

1. *Number and Diversity of People Reached*

The project spans a broad geographic area extending from Auburn in the Sierra Nevada foothills all the way to the California-Nevada state line. Weed eradication work will take place on multiple properties, many of which are in remote areas, and along rights-of way throughout eastern Placer County. The scope of the project makes it impossible to definitively identify the number of people will be reached. However, public and private lands will benefit from the project's weed eradication activities. This includes the diversity of recreational areas such as ski resorts, Caltrans and PG&E rights-of way which traverse public and private lands, as well as residential properties.

2. *Number and Value of New, Improved or Preserved Economic Activities*

The project does not generate new or improved economic activities as much as it prevents negative economic costs. That is, noxious weeds degrade ecosystem functions, quality and value of working landscapes and are a costly burden for landowners and agencies to eradicate. This project functions as a centralized, focused service to a broad range of stakeholders, in addition to the general public who utilize and benefit from natural resources in the Sierra Nevada.

3. *Resources Leveraged for the Sierra Nevada*

- The PCAD will provide an estimated \$47,000 of in-kind support to the project including equipment, vehicle mileage and maintenance, tools, and herbicide. The PCAD will also contribute an additional \$25,000 in administrative and supervisory in-kind support.
- Project cooperators Nevada County Agriculture Department and PG&E will contribute an estimated \$56,000 in-kind support between 2012-2015. The Nevada County Department of Agriculture and PG&E staff will help PCAD staff survey and treat Scotch thistle and spotted knapweed in the Bear Valley region of the project area.
- The Truckee River Watershed Council Weed Warriors will contribute 1,000 hours of project support values at \$20,000. The Weed Warriors conduct surveys and operate a website with a noxious weed reporting tool. Confirmed infestation sites are then relayed to the PCAD for eradication treatments.

4. *Number and Type of Jobs Created*

Between 2012 and 2015 the project will support a PCAD .50 full-time equivalent Agricultural Aide and a .10 full-time equivalent Agricultural Inspector.

5. *Acres of Land Improved/Restored*

The project will restore over 20 net acres of lands currently infested with noxious weeds in the Truckee, Yuba, Bear and American River watersheds. Additional lands will be restored as new infestations are detected and treated for eradication. Gross acres of land restored, net acres of weeds treated and eradicated, and percent reduction in net infested acres per weed species will be reported.