

As directed by the Klamath Basin Fisheries Task Force since 1993, the **SRRC has taken a lead role in enlisting stakeholder cooperation for coordinating watershed/ fisheries restoration throughout the Salmon River Subbasin.** Through our cooperative restoration work, emphasizing education, we've come to better understand the **important role that the native plant community plays in the health of the Salmon River Wildland Ecosystem.**

There are many examples nationwide of the degradation that noxious weeds can cause when left unattended. In 1994 the SRRC launched a program to manage prioritized noxious weeds. An expanding group of community restorationists have been dedicated to preventing degradation, by safely and effectively controlling prioritized noxious weeds before they spread out of control. The SRRC has developed a multifaceted detailed strategy to manage noxious weeds in a manner that highlights the recovery of healthy native plant communities. We call it **The Salmon River Cooperative Noxious Weed Program** and it includes **13 Steps to Recovery.** Each Step includes a background of past and present conditions and prescribes actions to be taken for each species; steps are interrelated.

- 13 Step Program**

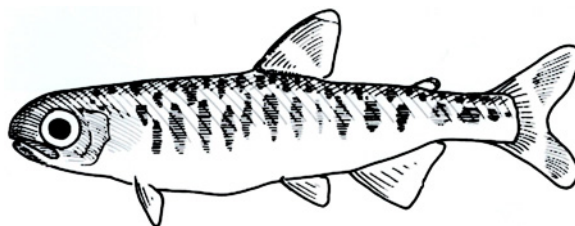
 - Step#1 Cooperation**
 - Step#2 Planning**
 - Step#3 Education/Outreach**
 - Step#4 Prevention**
 - Step#5 Mapping/Assessment**
 - Step#6 Adaptive Management**
 - Step#7 Groundwork**
 - Step#8 Inventory**
 - Step#9 Revegetation**
 - Step#10 Monitoring**
 - Step#11 Evaluation/Recommendations**
 - Step#12 Support**
 - Step#13 Reporting**

The success of the CNWP has been largely due to multi-stakeholder **cooperation.** In addition to the overwhelming support from the local community, this project has attracted many managers/regulators and resource user groups associated with fisheries and water quality management. Through CNWP strategic **planning,** the noxious weed program employs a systematic and thorough approach. **Adaptive management** techniques incorporate **evaluations and recommendations** to ensure that the program continues to improve. Stakeholders take part in **educational** activities as well as **groundwork.**

It is vital that we have accurate location information, which we track through **mapping.** Every plant dug is recorded in the **inventory** of the year's plants. **Revegetation** optimally occurs on its own after invasives are removed. Native plants are grown, however, to augment natural succession. **Monitoring** has been conducted with cooperators as a group, as well as by a third-party independent company. **Support** is solicited from various public and private sources. As part of grant agreements, numerous **reports** are created.

A species rating matrix was developed to identify the highest priority species to manage. The prioritizing matrix helps **prevention** efforts, as it identifies new species to watch for, such as: Leafy Spurge, Dalmatian Toadflax, and Canada Thistle. New species found and managed since 2002, include Perennial Whitetop, Italian Thistle, Goatshead and Meadow knapweed.

We've learned that when prevention fails, early detection and aggressive response to invasives is the best route to successful eradication.



**This project demonstrates
an alternative to pesticide use
for managing noxious weeds
in the Salmon River and elsewhere.**



CONTAIN – REDUCE – ELIMINATE - REVEGETATE

Salmon River Restoration Council

Cooperative Noxious Weed Program



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What's Wrong with Noxious Weeds in the Wildland Ecosystem Setting?

Scotch Broom, Spotted knapweed, Starthistle and other nonnative species have spread along human transportation routes to invade millions of acres in the West. Noxious weeds crowd out other species, can dominate entire landscapes, and continue to claim new land rapidly. These plant invasions prevent recovery of disturbed riparian habitat, increase fire risks, decrease food available to wildlife, alter other important ecological processes and may lower water tables. Noxious weed invasion affects food webs, and can lead to endangerment of native species. Nationally, invasive species infest **4,600** acres of new land daily.

What are the Impacts to Water and Fish?

Noxious weed presence decreases ecosystem health along rivers, streams and in forests. These aggressive alien plants can monopolize disturbed areas and prevent the succession of native plants, halting recovery of disturbed habitat and increasing sediment runoff. Riparian shade can be reduced. **Noxious weeds are problematic for water quality, fisheries and watershed health.** Pesticides are a standard method used by the agricultural community to control noxious weeds. It has been well documented that many of the **pesticides used can be toxic to anadromous salmonids**, causing sublethal effects such as: increased stress, altered swimming ability, disruption of schooling behavior, and changes in migration patterns. Pesticides also can disrupt the immune system of anadromous salmonids, mimic or block important sex hormones and indirectly affect fish by interfering with their food supply or habitat.

Alternatives to pesticide methods of noxious weed control are important to the long-term health of anadromous fisheries.

What can we do about it?

The Salmon River Cooperative Noxious Weed Program (CNWP) has drastically reduced knapweed populations at all of the known sites on the Salmon River. There are 271 individual locations of known knapweed infestation and each one receives treatment three times during the season (summer). Each plant dug is recorded, making a comprehensive history for each site.



Working at the "Mother Site"

Knapweed sites are located primarily along roads, trails and streams. Crews treat approximately 60 miles of Salmon River flood plain & riparian habitat, 125 miles of roads and 40 miles of trail. We are steadily moving towards our goal of eradicating spotted and other knapweed varieties from the Salmon River. Independent monitoring results show a dramatic reduction in population size and density.



ACTIVITIES

- Workshops •Workdays •Distributing information (posters, newsletters, handouts, web page & brochures)
- Field trips •Presentations

PARTICIPANTS

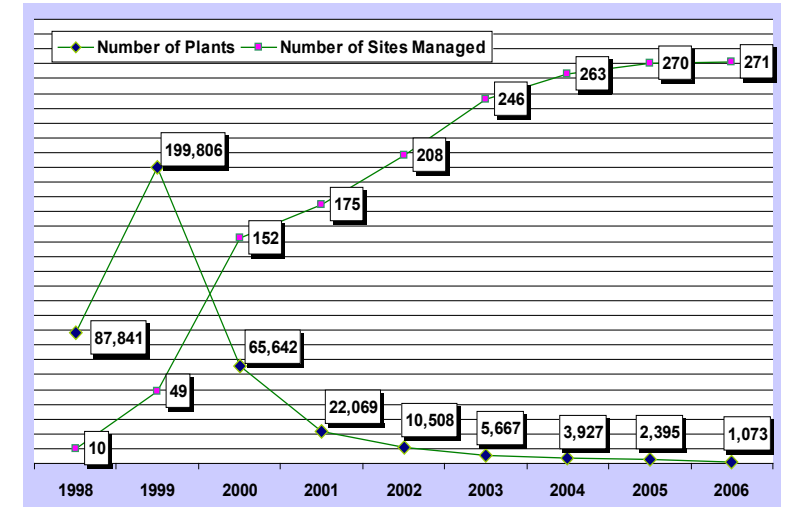
- Forks of Salmon & Junction Schools
- Karuk Tribe DNR •USFS-Fire & Road Crews
- CA Dept of Fish & Game •Siskiyou Co. Road Crew
- Siskiyou Co. & CA Dept of Agriculture •AmeriCorps
- Fishermen & Guides Assoc. •Horse Packing Outfitters
- Whitewater River Guides •Inter-Tribal Salmon Camp
- Klamath River Outdoor School •Otter Bar Lodge
- Yreka Homeless Shelter •Environmental Groups
- Resource Users (loggers, miners, cattlemen)



left - Weeders bagging seed heads for safe disposal.

The Salmon River community has shown a strong desire to accomplish this project without the use of pesticides as a forest management tool.

The Continuing Decline of Knapweed (*centaurea maculosa*) on the Salmon River



Knapweed Success Stories!!!

109 of the sites had 0 plants on them in 2004

271 Spotted knapweed sites were being managed by the end of '06

Fall '05 USFS Monitoring identified 0 plants going to seed

Over 1,500 volunteer person days have been recorded since 1997!

SRRC received approximately \$80K in support since 1997 with \$53K from the USFS via the Siskiyou Resource Advisory Committee.