

TITLE: Ecological Impacts of Invasive species after Fire

LOCATION: Wallowa Whitman National Forest, R6

DURATION: Year 1 of 3-year project **FUNDING SOURCE:** Fire Plan EM

PROJECT LEADER: Leigh Dawson, WWNF Noxious Weed Coordinator, 541-426-5535, lddawson@fs.fed.us

COOPERATORS:

Wallowa Resources (WR) – Grande Ronde Noxious Weeds Manager
Oregon Department of Agriculture (ODA)
Tri County and Tri State Weed Board (WB)
The Nature Conservancy (TNC)
University of Idaho
Pacific NW Research Station - LaGrande

PROJECT OBJECTIVES:

- Determine the extent and the direction of spread of known noxious weed sites located within the 2005 fire perimeter
- Survey for new noxious weed sites within 2005 fire perimeter
- Evaluate relation between weed response and fire intensity/severity
- Monitor CVS plots within 2005 fire perimeter for noxious weeds
- Monitor for survival of biological agents released within but prior to 2005 fires

JUSTIFICATION:

This is a new FHM grant proposal resulting from a previous FY04 Evaluation Monitoring project. As part of the initial FY04 project, a total of 18 Current Vegetation Survey (CVS) plots were evaluated. We discovered that weeds were not necessarily recorded in the initial reading of the CVS plots. In more recent CVS plot readings, weeds were often identified within the survey boundaries but lacked specifics as to density and extent of spread. In addition, they were frequently misidentified. Therefore, as part of the initial FHM project, all CVS plots evaluated emphasized weed identification, density, extent, and noted weed infestations in close proximity. Several of the CVS plots that were monitored as part of this initial project fell within the 2005 fire perimeter of the Tryon Ranch Complex. We would like to continue monitoring these plots as well as a sample set of non burn plots with weeds to evaluate the existence and rate of spread.

Several of the weed infestations burned within the 2005 fire perimeter contained biological control agents. This includes four release sites on Yellow Starthistle, one on Dalmatian Toadflax, and one on Clary Sage. We would like to

monitor the survival of these agents within the Tryon Complex and the Granite Creek Complex.

DESCRIPTION:

a. Background:

The Tryon Complex burned approximately 42,000 acres in August, 2005. This was a wildland suppression fire. The majority of the fire was of low to moderate burn intensity. Both fires were suppressed utilizing minimal ground disturbance. The majority of the suppression was accomplished via air support and backburning. There are approx. 1,300 acres of A-listed noxious weeds within the Tryon Complex. We have submitted a BAER report requesting funding for treatment of these sites. This FHM proposal would supplement the BAER efforts by evaluating existence and rate of spread utilizing existing CVS data.

The Granite Creek Complex burned approx. 36,000 acres in August and Sept., 2005. This complex was managed as a wildland use fire, therefore it is not eligible for BAER or suppression rehabilitation support.

Both 2005 fire perimeters contain biological release sites. We would like to monitor for the persistence of the biological agents, and try to see if there is any correlation between survival and burn intensity or burn period.

Of the numerous weed sites located within the Granite Complex, one of particular interest is Clary Sage. We have been monitoring this species for two years to determine its level of invasiveness. One site was burned and the other was unburned but within close proximity to the fire's edge. We would like to continue to monitor, and evaluate the rate of spread in and out of the fire perimeter.

b. Methods:

The Tryon Ranch Complex will utilize the existing CVS plots from the initial FY04 FHM grant proposal. As part of this project, plot data was parceled into a computer spreadsheet so that we could include corresponding weed and fire data. We will continue plot monitoring and evaluation in accordance with the protocol already established. The field monitoring will occur between April through July, 2006 and again the following year. Data will be collected on Dell pocket PC's and entered into the appropriate spreadsheet. Analysis will be done in Sept., 2007.

The Granite Creek Complex will consist of monitoring existing weed sites to determine existence, density, and rate of spread. Data will be entered into the existing NRIS database.

The weed sites within the 2005 fire perimeters that were being managed via biological control agents will be monitored. We will note existence, density, and spread from original release site. This will need to occur in June 2006 and 2007. Exact timing is subject to weather conditions. A two year monitoring plan is requested since little is known about the effects of fire on biological agents.

c. Products:

This project will result in a spreadsheet and report which displays the status of pre and post fire weed sites. It will compare rate of spread between weed sites affected by fire and weed sites not recently affected by fire. The report will also discuss any detectible correlation between the biological control agents, weed site status and burn intensity.

d. Schedule of Activities:

This project will continue working with the partners listed above to further our working relations and our knowledge about fire effects on weeds. Several of our partners are working with the interface between fire and weeds.

- Sept. 30, 2005. Complete Phase I (FY04) of this project. This will provide an analysis and discussion of CVS plot data. All data has been entered into the NRIS, national weed data base. A GIS layer of weed inventories within fire areas is now available. It will also provide background information on priority weeds and their response to fire. As part of the initial project, we evaluated weed response to disturbance and possible rehabilitation alternatives based on CVS data and additional background information. This information was utilized in the Tryon Ranch Complex BAER report. It will provide the baseline data for this FY06-07 project.
- March, 2006. Set up field crews and support logistics.
- April – July, 2006. Field monitoring of CVS plots, known weed sites, and biological release sites.
- August – Sept., 2006. Data analysis and preparation for FHM conference.
- Year two (2007). Repeat year one to August, 2007.
- Aug.-Sept, 2007. Final analysis of field data. Document finding. Prepare and attend the FHM conference.

e. Progress/Accomplishments:

To date, a total of 18 CVS plots have been read and are presently being analyzed. All data has been entered into the National Resource Information System. This represents the International Data Standards for the Inventory, Mapping, and Monitoring of Invasive Plants. As a result of this data, a special component (map) displaying all known noxious weed sites is also available. This information has been shared with our partners to allow integrated weed management at a landscape scale. A draft table displaying priority weeds and

their response to fire is presently being finalized. Additionally, project results are being utilized in a decision matrix currently in development that will assist resource managers with decisions involving the use of noxious weed prevention and site rehabilitation techniques.

COSTS:

	Item	Requested FHM EM Funding	Other-Source Funding	Source
FY06-07				
Administration	Salary	\$10,000	\$5,000 2,000 2,000	Wallowa County ODA WR, TNC, WB
	Overhead		10,000	USFS-BAER
	Travel	2,500- FY07 Conference		
Procurements	Contracting	500		
	Equipment	500		
	Supplies	500	\$2,500	ODA-bio agents