TITLE: Ecological Impacts of Invasive Species after Fire

LOCATION: Wallowa Whitman National Forest, R6

DURATION: Year 2 of 2 year project **FUNDING SOURCE:** Fire Plan

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

COOPERATORS: County Weed Boards (Baker, Wallowa, Union)
Tri State Cooperative Weed Management Area (CWMA)
Tri County CWMA
Oregon Department of Agriculture (ODA)
Oregon Department of Fish and Wildlife (ODFW)
Wallowa Resources (non profit)
The Nature Conversancy (TNC)

PROJECT OBJECTIVES:

1. Continue inventory and monitoring of vegetation survey plots (CVS) and fire monitoring plots located within fire perimeters
2. Continue inventories of existing weed sites to determine change in composition and spread as a result of fire activity
3. Evaluate relation between weed response and fire intensity
4. Continue monitoring for the presence of biological agents in fire activity areas

JUSTIFICATION: < How does project address Evaluation Monitoring selection criteria?>

This is the second and final year for a FHM grant. Generally, the project objectives have included evaluating pre fire vegetation composition, including weeds, with post fire vegetation to determine the change in weed composition and rate of spread. The project location is Hells Canyon National Recreation Area. This area experiences frequent fires. It is also home to thousands of acres of weed infestations.

The initial FHM project recognized that the Current Vegetation Surveys and Forest Health Inventory plots did not identify invasive plants. Therefore we began rereading a selected representation of CVS plots, within fire perimeters, that would identify invasive plants. At the conclusion of this project these plots will be read for plant composition, including weeds, for a total of four years.

In addition, we are monitoring sites for the presence of biological agents within fire perimeters. Several of the Yellow Starthistle sites and one Dalmation Toadflax site had pre fire biological releases. To date, the biological treatment effectiveness has been minimal. The release sites have been influenced, at least once, by past fire activity. Therefore, we are evaluating the effects of fire on these agents.

This information will be utilized in developing weed management strategies, future plans for Burned Area Emergency Restoration (BAER), grants, and other funding and management opportunities.

DESCRIPTION:

a. Background:

This past year several additional monitoring plots were established in the 2005 fire perimeter areas. These plots were done utilizing the Noxious Weed Monitoring format from the Integrated Weed Management Plan for the Wallowa Whitman National Forest (WWNF). This part of the project was done in conjunction with parallel BAER funding.

We are also continuing to reread selected CVS monitoring plots The data resulting from this monitoring will then be analyzed to determine change in vegetation composition. We will also analyze this data to determine the rate of spread for certain invasive species within fire perimeters.

In addition, the data collected from the biological monitoring efforts will also be analyzed. Hopefully, it will demonstrate the presence or survival of biological agents post fire as well as their ability to multiply after fire.

We have worked closely and received recommendations on invasive plant monitoring and biological control monitoring from our partners. This is especially true in developing effective monitoring for rate of spread for invasive plants and biological controls.

b. Methods:

The vegetation monitoring included CVS, ecological, and BAER plots. Originally, we utilized only CVS plots but due to the lack of pre fire noxious weed data we decided to expand our monitoring efforts. As possible, we are utilizing guidance as defined in the Final Environmental Impact Statement for the Pacific Northwest Region Invasive Plant Program.

Inventory was accomplished by digital aerial sketch mapping and ground surveys. A large percentage of the inventory was accomplished with parallel projects. For instance, several of the monitoring plots are located in the remote areas of Hells Canyon Wilderness requiring a seven hour horseback trip. Inventory, and reading of monitoring plots, was accomplished during a Rocky Mountain Elk grant/contract inspection trip. All weed sites encountered were recorded on Garmin GPS units. These sites are entered into NRIS and GIS databases. We analyze this information internally but also share this information with partners. This effort contributes to the CWMA and enables managers to develop weed strategies, such as confinement areas, on a larger scale.

The biological monitoring is being done in partnership with Oregon Department of Agriculture (ODA). It utilizes the direction outlined in the Final EIS for WWNF but also incorporates recommendations from ODA. Monitoring will include presence of biological agent, density, and spread from the original release site. This information will be compared to the data from the original release.

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c. Products: <Brief description of products to be produced by project.>

Several products will be generated as a result of this project. They include:

1. A map displaying all monitoring plots and inventoried noxious weed sites within the project area. This will be used for determining future management strategies.
2. Updated NRIS and GIS databases.
3. A chart displaying the results from the analysis. This will include vegetative composition change from pre fire to post fire. A summary of influencing factors will accompany this table.
4. A chart displaying rate of weed spread via monitoring.
5. A chart displaying results of biological monitoring accompanied by a summary report.

Most importantly, all information resulting from this project will be shared with our partners. It may also include a presentation at the annual Tri State Corporate Weed Management Area (CWMA) meeting where partner attendance is high. This would generate additional feedback and further increase our working knowledge for invasive plant management.

d. Schedule of Activities: <Listing of major activities & timelines>.
We will continue to work with partners to further our working relations and our knowledge about fire effects on weeds.

Fall, 2006 – Continue monitoring and inventory efforts. There are several fall contracts within the project area requiring inspections, and thus will compliment our FHM efforts. One such project is located on the Snake River where partners ODA, Tri County (CWMA), & Tri State CWMA will be present, which increases knowledge, efficiency, and results.

Prepare for annual FHM conference.

March -Sept.2007 – Continue monitoring and inventory efforts.

August – Sept., 2007 –Complete update in NRIS/GIS data bases.

Complete final analysis of field data. This will include generating tables and summary results as stated in **Products** of this report.

Complete project presentations for FHM conference.

e. Progress/Accomplishments: <Brief description of progress/accomplishments for multi-year projects.>

During FY2006, we completed inventory of the Tryon Fire Complex utilizing Digital Aerial Sketch mapping. As a result of this inventory, several new sites were discovered

This year, two additional CVS plots, located within the Tryon Fire Complex, were added to the project data. The original 18 CVS plots were also reread during this field season. As a result of parallel funding, a total of 22 additional monitoring plots were established within the Tryon fire perimeter. Two ecological plots from the Granite Fire Complex and one monitoring plot from the Turner Fire will also be included for final analysis.

To date, all data has been entered into NRIS and GIS databases. It has also been entered on an Excell spreadsheet which will used for analysis purposes.

Completion of presentation materials for FHM conference, scheduled for Feb. 2007.

COSTS:

	Item	Requested FHM EM Funding	Other-Source Funding	Source
YEAR				
Administration	Salary	10,000	2,000 1,000 1,000 10,000	ODA TNC WR BAER
	Overhead		10,000	BAER
	Travel	2,500 FHM conf.		
Procurements	Contracting	1,000		
	Equipment			
	Supplies	500		