

Special Technology Development Program Progress Report

PROJECT NUMBER: R6-2000-2

PROJECT TITLE: Predicting Insect-Caused Tree Mortality Following Prescribed Burning in Ponderosa Pine Communities of Eastern Oregon.

PROJECT STATUS: Continuing (funds are being requested for the next fiscal year to continue the project)

EXPECTED PROJECT DURATION: 5 years

EXPECTED COMPLETION DATE OF THE PROJECT: FY 04

SUBJECT: Insect Technical Committee, insect/fire interaction, bark beetles

STATUS OF SUBJECT SPECIES: native

PROJECT OBJECTIVES:

- 1) Develop management guidelines which predict tree mortality due to insects after prescribed burning, based on stand and tree characteristics, fire season and severity, and resident insect levels.
- 2) Identify measures to minimize fire injuries that are most likely to lead to subsequent insect mortality.
- 3) Collect data which will lead to the development of a probability model of post-fire insect caused mortality that will be compatible with the Fire and Fuels Extension (FFE) of the Forest Vegetation Simulator (FVS) model.

BRIEF DESCRIPTION OF THE PROJECT:

The primary activities this first year were to select six pairs of units designated for fall 2000 and spring 2001 underburning and to take pre-fire tree and beetle data on them. We were successful in selecting and collecting data for four pairs of burn units this summer. However, two pairs of units (one pair on the Prairie City RD and one pair on the Long Creek RD) that we had scheduled to use will not be burned this fall because the planning on them has not been completed as expected. Plans were not completed and signed for a variety of reasons including the recent addition of lynx to planning assessments, and critical planning personnel moving or being detailed to other assignments. Other areas were sought, but none were found that both were designated for fall 2000/spring 2001 burning and met other site requirements (eg. size of units, uniformity between burn units within a pair, tree size).

Maintaining the six replicate pairs as originally planned would greatly strengthen the statistical basis and predictive capabilities of this work. We are confident we could add two pairs of units for fall 2001/spring 2002 underburning. In addition to units on the Prairie City, Bear Valley, and Long Creek RD's that are currently undergoing planning activities, there are several units on the Snow Mountain and Burns RD's where planning has been completed and the burns are already scheduled to occur. The silviculturist and fuels planners on Snow Mountain and Burns RD's are extremely cooperative and very interested in supporting this work. We request that the unused FY 00 STDP funds being returned due to the lack of project areas, be restored in FY 01 so that the pre-fire assessments can be completed on an additional two pairs of burns.

CHANGES TO ORIGINAL PROJECT SCOPE OR OBJECTIVES: none

ADDITIONS TO ORIGINAL PROJECT SCOPE OR OBJECTIVES:

A pair of units scheduled for burning in fall 2000/spring 2001 is located on the Snow Mountain RD of the Ochocho NF. Though this does not change the number of units being assessed, it does increase cooperation and interest in this project to another eastside Forest. It also widens the breath of the habitat the project covers and thus increases confidence that results will be applicable to eastside ponderosa pine communities in general.

FHP LEAD CONTACT:

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PRINCIPAL INVESTIGATOR:

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COOPERATORS:

<u>Name</u>	<u>Affiliation (Office or Dept.)</u>	<u>Phone, E-mail, Fax</u>
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COOPERATOR INVOLVEMENT:

<u>Name</u>	<u>Roles</u>	<u>Time Commitment</u>
B. Lynch, M. Tatum, M. Loewen, G. Mackey & K. Higle	Locate burning units Contribute crews for assessments Collect fuels & fire information Conduct prescribed fires	Silviculturist/fuels planner: 1 person wk/yr/RD Assessment crews: 4 person wks/yr/RD
Tommy Gregg	Construct stand tables	2 weeks
Kathy Sheehan	Develop predictive model	2 weeks

PRODUCTS AND DUE DATES:

- 1) The primary product will be burn management guidelines for insects in ponderosa pine stands that are ready for prescribed burning; this will be produced in 2005/6.
- 2) Refined data on insect caused tree mortality following prescribed burning in ponderosa pine systems; produced throughout the project and presented at workshops for entomology, fire and land management users.
- 3) A probability model of post-fire insect-caused tree mortality in ponderosa pine type; will be produced in 2006/7.

STATUS OF PRODUCTS/PRESENTATIONS: No products or presentations are expected at this time.

ACCOMPLISHMENTS TO DATE:

Products: none

Publications: none

Technology Transfer: none

FIRST FISCAL YEAR FUNDED: 2000

FUNDS OBLIGATED FROM BEGINNING OF PROJECT THROUGH CURRENT FISCAL YEAR:

	Item	Requested Funding	Expended Funding	Unused Funding
FIRST YEAR (FY00)				
Administration	Salary	\$19,272	\$12,972	\$ 6,300
	Overhead	\$ 4,240	\$ 3,040	\$ 1,200
	Travel	\$12,960	\$ 8,960	\$ 4,000
Procurements	Contracting	0	0	0
	Equipment	\$ 5,000	\$ 5,000	0
	Supplies	\$ 2,000	\$ 2,000	0
	Vehicle	\$ 3,339	\$ 1,839	\$ 1,500
Year Totals		\$46,811	\$33,811	\$13,000
CURRENT YEAR (FY 00)		Requested FHP STDP Funding	Other Source Funding	Source
Administration	Salary	\$19,272	\$17,520	PNW Res Sta
			\$ 7,140	4 RD's
	Overhead	\$ 4,340	\$ 8,760	PNW Res Sta
			\$ 1,823	4 RD's
	Travel	\$12,960	\$ 2,160	PNW Res Sta
Procurements	Contracting	0		
	Equipment	\$ 5,000		
	Supplies	\$ 2,000		
	Vehicle	\$ 3,339	\$ 2,232	PNW Res Sta
			\$ 1,136	4 RD's
Year Totals		\$46,811	\$40,771	
PROJECT TOTALS		\$46,811	\$40,771	PNW & RD's

FUNDS NOT USED FROM PREVIOUS FISCAL YEAR:

There are unused funds because we completed pre-fire surveys in four rather than six pairs of units. District planning activities were not completed in time for fall 2000 burning in two pairs of plots and adequate substitutes could not be located this summer (see **Brief Description of Project**). We request that the unused funds be added to the FY 01 allocation so that next year we can conduct pre-fire surveys in two pairs of units scheduled to be burned in fall 2001/spring 2002. The statistical design of this work will be severely weakened if we have fewer than the planned six replicates.

Fiscal Year	STDP Funding Allocated	Funds Obligated	Funds Unused
2000	\$46,811	\$33,811	\$13,000

EXPECTED BUDGET FOR NEXT FISCAL YEAR:

	Item	Requested FHP STDP Funding	Other-Source Funding	Source
Administration	Salary	\$17,532	\$18,224	PNW Res Sta
			\$ 7,432	4 RD's
	Overhead	\$ 3,858	\$ 9,112	PNW Res Sta
			\$ 1,898	4 RD's
	Travel	\$11,440	\$ 1,716	PNW Res Sta
Procurements	Contracting	0		
	Equipment	0		
	Supplies	\$ 500		
	Vehicle	\$ 2,950	\$ 1,782	PNW Res Sta
			\$ 1,216	4 RD's
Totals		\$36,280	\$41,380	PNW & RD's

DIFFERENCE BETWEEN ORIGINAL AND AMENDED REQUESTS AND JUSTIFICATION: In addition to the FY 01 funds requested in the original proposal, \$13,000 is requested in FY 00 carry over funds to conduct pre-fire surveys in two pairs of areas scheduled to be burned in fall 2001/spring 2002. In addition to the original FY 01 request, FY 00 carry over is necessary to complete the study design in a manner that will retain optimal statistical integrity and referential capabilities.

STDP FUNDING NEEDED:

Total estimated additional future funding needed beyond the current fiscal year:

Estimated STDP funding needed in remaining years of the project by fiscal year. Show separately the funding to be requested/provided from other sources.

Fiscal Year	STDP Funding	Other-Source Funding	Source
2001	\$36,280	\$41,380	PNW & RD's
2002	\$30,174	\$41,895	PNW & RD's
2003	\$31,634	\$42,126	PNW & RD's
2004	\$33,104	\$45,870	PNW & RD's