

Fuels Planning: Science Synthesis and Integration

Economic Uses Fact Sheet: 8

Prescribed Fire Costs



Pacific Northwest
Research Station



North Central
Research Station

Synthesizing Scientific Information for Fire and Fuels Project Managers

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Fuels planning: Science synthesis and integration, an interagency research/management partnership to support the Ten-Year Fire Plan, led by Russell T. Graham, RMRS, and Sarah M. McCaffrey, NCRS.

How Much Will It Cost to Use Prescribed Fire?

Although the use of prescribed fire as a management tool is widespread, there is great variability and uncertainty in the treatment costs. Given specific site variables and management objectives, how much will it cost to use prescribed fire? Researchers at the University of Montana and the Pacific Northwest (PNW) Research Station, USDA Forest Service, have developed a tool for answering this question.



Implementing a prescribed burn. The FASTRACS program can assist with predicting the cost of a prescribed burn based on local variables (photo credit: Tom Iraci).

The data for the analysis come from the FASTRACS (Fuel Analysis, Smoke Tracking, and Report Access Computer System) program of the Pacific Northwest Region of the USDA Forest Service, drawing on information from Oregon and Washington during 2000 to 2002, after implementation of the National Fire Plan. The FASTRACS database is used primarily for planning, tracking, and reporting fuel management related activities; and the data include

information on physical site characteristics, weather, fuels descriptions, and managerial factors. As for all decisionmaking, the results should be viewed in context to your particular management scenario. The more similar your situation is to cases from the FASTRACS database, the more relevant the comparison will be.

Factors Affecting Prescribed Fire Cost

- Fuel type
- Treatment method
- Size of area to be treated
- Steepness of slopes
- Fire regime type
- Site elevation
- Management objectives
- Whether the site is a designated protection area (DPA)
- Whether the site is in the wildland-urban interface (WUI)

By taking into account the above variables, you can get an estimate of the per-acre cost of prescribed fire using FASTRACS. Table 1 shows examples of four landscape scenarios and the estimated prescribed fire cost for each.

Table 1—Four examples of prescribed fire cost estimates.

Variables	Estimated cost per acre
500-acre area, brush/grass	\$31
1,000 feet elevation	
5 percent slope	
No WUI	
Ecosystem restoration	
Underburn	
Natural fuels	
2,000-acre area, ponderosa pine	\$86
2,500 feet elevation	
25 percent slope	
WUI	
Forest health	
Underburn	
Natural fuels	
200-acre area, mixed conifer	\$174
3,000 feet elevation	
15 percent slope	
DPA	
No WUI	
Fuel reduction	
Broadcast burn	
Whole tree removal	
100-acre area, Douglas-fir	\$12
4,000 feet elevation	
10 percent slope	
No WUI	
Fuel reduction	
Burn machine piles	
Max log 4x4	

The PNW Research Station has developed an interactive, computer-based calculator that can help with estimating the costs of these and other types of fuel treatments. The calculator, called My Fuel Treatment Planner (MyFTP), is the basis for fact sheet RMRS RN-20-4WWW.

References

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Economics Team Fact Sheets

Look for fact sheet topics from the Economics Team including prescribed fire costs, harvesting, log hauling, NEPA and other regulations, wood utilization, economic impacts on communities, markets for wood, and harvest equipment requirements.

Fuels Planning: Synthesis and Integration

This fact sheet is one in a series being produced as part of a larger project supported by the USDA Forest Service to synthesize new knowledge and information relevant to fire and fuels management. Fact sheets address topics related to stand structure, environmental impacts, economics, and human responses to these factors. Information in the fact sheets is targeted for the dry forests of the Inland West, but is often applicable across broad regions of the country. For more information, please visit our Web site at:

www.fs.fed.us/fire/tech_transfer/synthesis/synthesis_index