

Strategic and Tactical Fuel Treatment Evaluation Tools

Highlight Contact

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Relation to Strategic Plan

The work reported here supports objectives in Portfolio C: Social fire science, Element C3: Organizational effectiveness; Portfolio D: Integrated fire and fuels management research, Element D3: Biomass utilization, product development and forest operations associated with fire and fuels management activities; and Portfolio E: Develop and deliver knowledge and tools to policymakers, wildland fire managers, and communities, Element E1: Synthesis and tool development.

Background

Strategic identification and local placement of fuel treatments are significant regional and local forest management problems addressed by two tools developed by Forest Service Research and Development.

Approach

The two tools described below were developed by teams composed of Forest Service and university research scientists and national forest experts. Specialist contributed expertise on silvicultural systems, fire hazard and fire hazard reduction, forest inventory data, harvesting systems and harvest cost estimation, economic evaluation, mathematical modeling, and Web-based modeling.

Products and Tools

Fuel Treatment Evaluator (FTE) 3.0 (Miles et al. 2006) is a Web-based tool that helps analysts identify forest areas in the West with high fire hazard, simulate alternative thinning treatments to meet hazard reduction targets, and estimate kinds and amounts of wood biomass removed and costs of removal (Skog et al. 2006). The tool addresses the key problem of identifying locations where biomass removals could cover the costs of thinning treatments to reduce hazard (see fig. 1).

My Fuel Treatment Planner (myFTP) (Fight 2006) is a user friendly tool that assists managers in estimating costs, net revenues, economic effects, and surface fuels associated with various fuel reduction treatments. The spreadsheet application

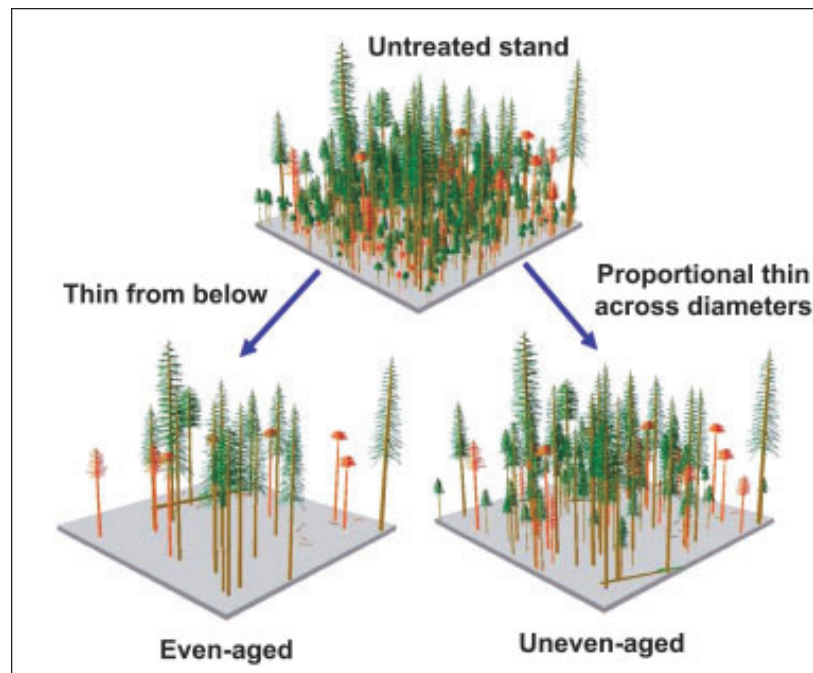


Figure 1—Forest treatment alternatives used by the Fuel Treatment Evaluator 3.0.

is simple to use yet based on years of data. MyFTP provides insights on how to think through economic analyses and interacts compatibly with existing planning tools (see fig. 2).

Results and Applications

The FTE 3.0 has been used to identify opportunities for using wood biomass from thinnings to generate electric power (1) across the Western United States for the Western Governors Association (Skog and Barbour 2006) and (2) in parts of Oregon for the Oregon Forest Resources Institute (OFRI 2006).

MyFTP has been incorporated into the analytical process for the FIRESHED program, which is used for all Forest Service fire hazard reduction projects in California, is being piloted at 10 other locations around the Western United States, is now available for general use, and has been incorporated into national training required for fuel specialist certification.

Principal Investigators

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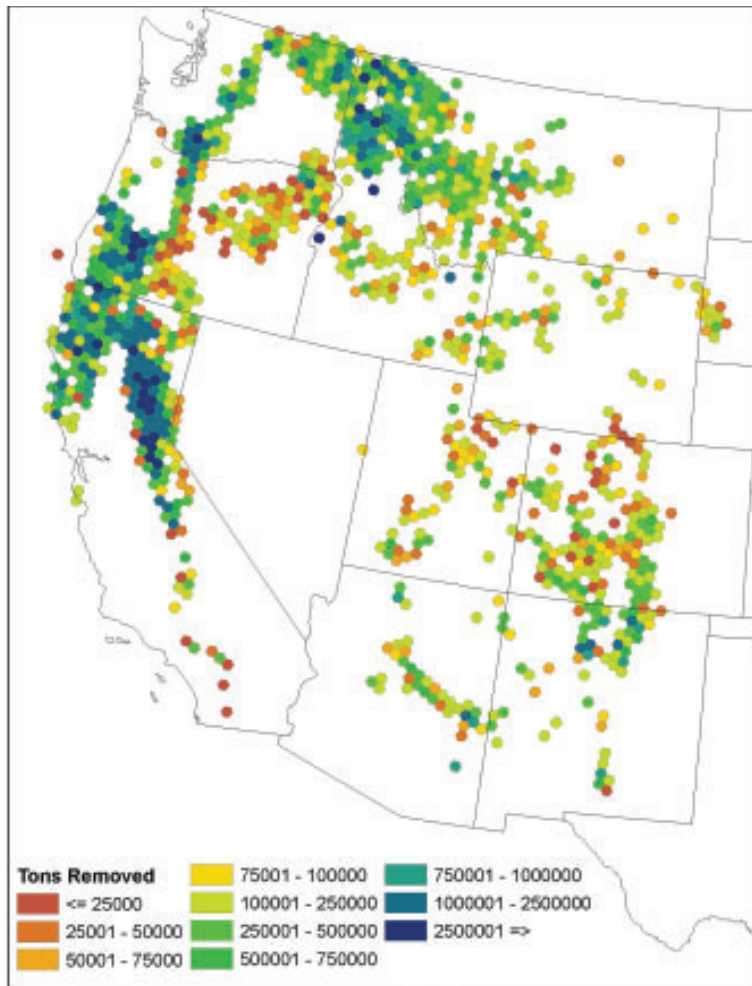


Figure 2—Biomass removed (oven dry tons) from simulated thinnings by 160,000-acre hexagon for uneven-age fuel-hazard-reduction treatments.

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Key Partners

Forest Management, Washington office, Forest Service; Clean and Diversified Energy Advisory Committee for the Western Governors Association (WGA report); Mason, Bruce & Girard, Inc. (Oregon Forest Resources Institute report);

National Forest System: Pacific Northwest Region (Region 6); Northern Region (Region 1); University of Washington Stand Management Cooperative; University of California, Davis

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Additional Reading

- Biesecker, R.L.; Fight, R.D. 2006.** My fuel treatment planner: a user guide. Gen. Tech. Rep. PNW-GTR-663. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 31 p. http://www.fs.fed.us/pnw/pubs/pnw_gtr663.pdf. (May 2007).



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