



Wildfire Risk Reduction, Fuels Treatment, and Federal Land Management Planning: Incorporating Risk Analysis into Landscape- and Project-level Planning

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by

Jay O'Laughlin, Professor and Director
College of Natural Resources Policy Analysis Group
University of Idaho, Moscow

*For information on WFLC see <http://www.forestsandrangelands.gov/leadership/index.shtml>;
for the Cohesive Strategy see <http://www.forestsandrangelands.gov/strategy/index.shtml>.

Introduction. The Quadrennial Fire Review (QFR 2009) points out that biomass accumulation is one of the driving forces affecting wildfire, which is outpacing planned fuel treatments and underscoring the need to place fuels treatments strategically in conjunction with fire activity. The QFR's Integrated Fuels Portfolio in Support of Land Management Objectives and its four driving factors are appropriate.* However, project-level analyses and interactions with stakeholders consistent with the National Environmental Policy Act (NEPA) are a prerequisite for biomass removal. Furthermore, in response to GAO (2004) comments, risk assessment can be built into land and resource management planning at the landscape- and project levels.

Planning Tools. The tools identified in the following outline can help support landscape- and project-level plans for reducing wildfire risks.[†] Emphasis is on enhancing communications among risk assessors, managers, and stakeholders via increased transparency that risk analysis can provide (O'Laughlin 2010). The main points are to include risk analysis throughout the planning and decision-making process, and not treat it as something optional that could be added on.

A. Land/Resource Management Plan (L/RMP): National Forest Management Act of 1976 (NFMA) or Federal Lands Policy Management Act of 1976 (FLPMA)

1. Determine desired future forest (or rangeland) condition via interaction with stakeholders, especially via Community Wildfire Protection Plans (see CWPP 2010; also see JFSP 2009a; SAF 2008, point 3).
2. Within large landscapes, identify and prioritize sub-watersheds (~20,000 acres) for management, using LANDFIRE data in a logic framework and decision model. The application of such a model to a 4.8 million acre landscape in Utah provides a transparent multi-factor risk assessment prioritization method that could feed directly into management planning (see Hessburg et al. 2007[‡]; also see USDA Forest Service, Northern Region 2008; SAF 2008, point 4).
3. Use forest inventory and analysis (FIA) or other inventory data for priority areas with appropriate forest growth model(s) to project future forest inventory with several management scenarios.
4. Identify forest growing stock volume “gap” between current conditions and desired future conditions on priority areas.

*Four factors are driving future fuels management programs: strategic placement of treatments, leveraging funds, supporting biomass industries, and utilizing w

5. Identify and describe “gaps” for overstocked stands in terms of a schedule for timber and/or forest biomass to be removed.
6. Using CROP data (Coordinated Resource Offering Protocol; see CROP 2010), estimate and “levelize” the amount of timber and/or forest biomass that will be made available over the 10-15 year life of the plan to help private contractors and entrepreneurs develop and finance plans for resource utilization.*
7. Amend Land/Resource Management Plan (L/RMP) to reflect results from this analysis.

B. Fire Management Plan

1. Based on L/RMP analysis, amend the

7. To improve communication with stakeholders, develop risk assessment diagrams (see O’Laughlin 2010), maps (see Ager et al. 2007, JFSP 2009e), and other communication devices that display projected pre- and post-wildfire conditions with and without proposed management action (see JFSP 2009c, 2009f; McDaniel 2009; SPOTS 2010).
8. Interact with stakeholders to determine resources at risk; i.e., what do people care about?
 - Describe risks under current conditions, using either quantitative data and models or qualitative expert-based approach
 - Describe additional risks posed by management actions
 - Describe risk reduction benefits from proposed management actions
9. As may be appropriate, use Healthy Forest Restoration Act of 2003 (HFRA) and other Healthy Forest Initiative (HFI) tools (see Healthy Forests Field Guide 2004).
10. As may be appropriate, develop stewardship contract to attain end results (see Stewardship Contracting 2010).
 - Use 10-year planning horizon to help contractors and entrepreneurs secure financing to remove hazardous fuels and utilize biomass (see Woody Biomass 2010; also JFSP 2009b). The Lakeview Federal Stewardship Unit of the Fremont-Winema National Forest (2010) in Oregon has the only 10-year contract in the Pacific Northwest and it could be renewed via a 20-year Memorandum of Understanding parties signed in 2007.

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