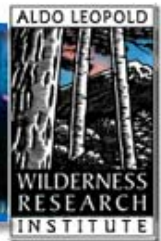


Wildland Fuels Management: evaluating risks and benefits



Frequently Asked Questions...

2. How can this information be used?

Overview... From the Map Libraries* numerous decision-support products can be developed. Here, we describe three –

1. Planning (Long-term, Broad-scale): simulation of future landscape conditions under alternative management scenarios.
2. Fire Management Plan (Mid-term, Broad-scale): WFU fire management units derived from generalized benefits maps.
3. Incident Support (Short-term, Fine-scale): map of maximum fire perimeter and indicating areas of opportunity, benefit and values at risk.

*Map Libraries contain fire behavior and associated fire effects maps for a suite of fire management weather conditions.

1. Future landscapes...

Landscape Dynamic Simulation Models are used to generate information on the effect of various long term fire and land management strategies on: wildlife, aquatic resources, vegetation, future fire risk and behavior, and other parameters within the map libraries. Here we show treatment areas, resulting fire behavior and resulting fire behavior as a function of the 'natural fire behavior' for a single decade.

These analyses help managers and the public understand the opportunities, consequences, and feasibility of various land, fuel and fire management strategies.

2. Fire Management Plan...

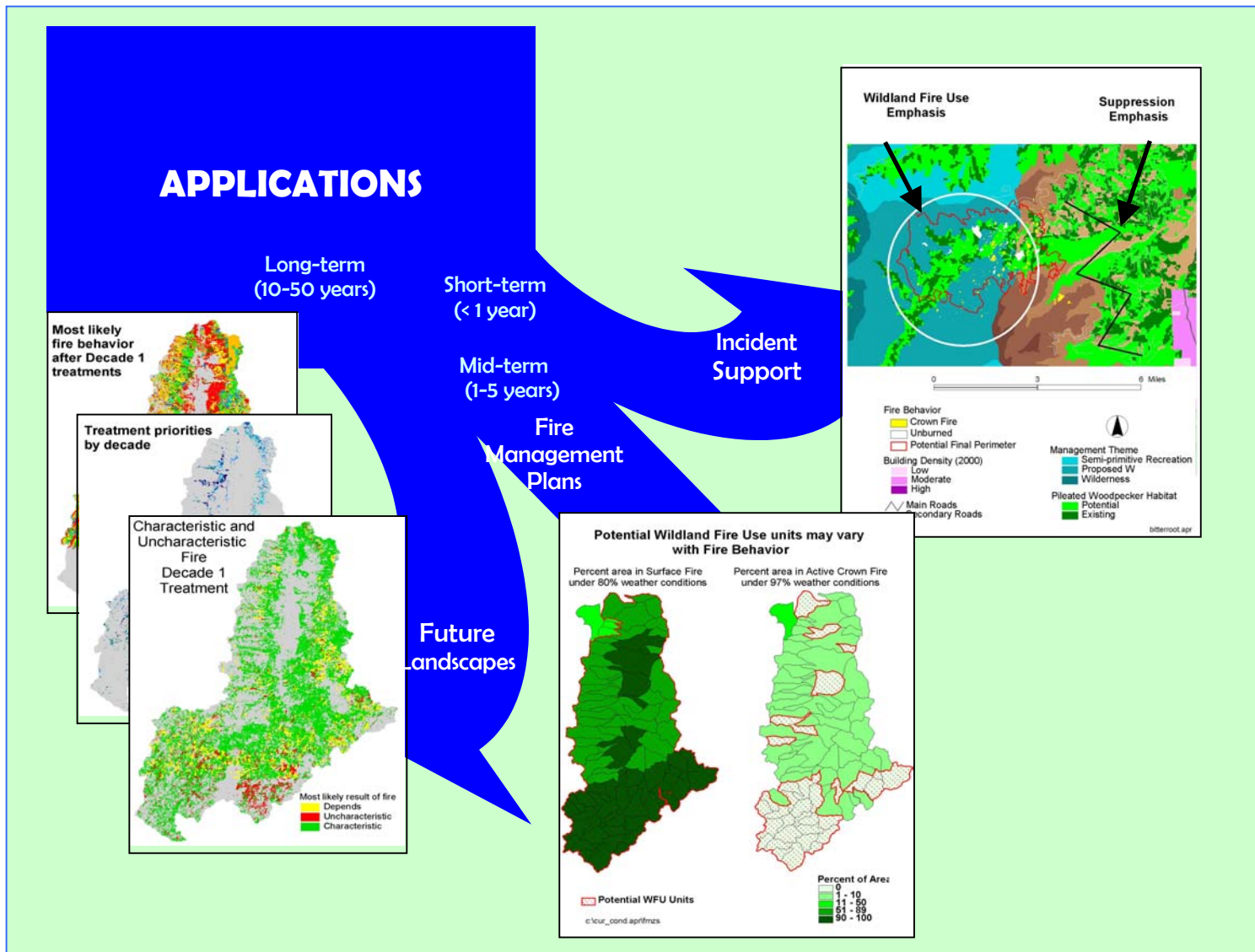
The map libraries can also be used to support development of Fire Management Plans. In this example, we calculated the percentage of each subwatershed (6th HUC) in a) low severity fire under moderate fire weather conditions and b) active crown fire under severe fire weather conditions. Subwatersheds with a high percentage of lands in a) and low percentage in b) we classed as candidates for Wildfire Use zones. These subwatersheds could be used to summarize benefits and risks from the map library; with the resulting maps and analysis included in the Fire Management Plan. This identification of fire management strategies sensitive to both social and ecological values.

A similar type of analysis, in conjunction with fuels and social data could be used to help prioritize stands and areas for prescribed fire.

3. Incident Support...

Map libraries of fire effects provide important information for incident support.

- a. Cost containment may be assisted by overlaying predicted fire perimeters on predicted effects maps for the extant fire weather conditions.
- b. Identification and quantification of non-monetary benefits, such as changes in Condition Class or habitat restoration, is quick and easy making integration into a Go/No-Go, WFIP, or WFSA practical.



For more information contact: Anne Black, 406-329.2126, aebblack@fs.fed.us
 And visit our website: <http://leopold.wilderness.net/research/fprojects/F001.htm> where we post examples and demonstrations.

Fire Research at the Aldo Leopold Wilderness Research Institute

The Aldo Leopold Wilderness Research Institute is helping managers devise effective strategies for managing fire and fuels across the full spectrum of lands extending from wilderness outward to the wildland urban interface. Our research encompasses the ecological and social sciences and is focused on three areas: 1) understanding natural fire regimes and their alteration by management, 2) developing information and tools to improve fire and fuel management planning, and 3) anticipating consequences of management alternatives.

For a complete list of fire-related research activities at the Leopold Institute, visit <http://leopold.wilderness.net/research/fire.htm>, or contact Carol Miller, 406-542-4198, cmiller04@fs.fed.us.

FEATURED PROJECTS
 Leopold Institute

Wildland Fuels Management:
 evaluating risks *and* benefits



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