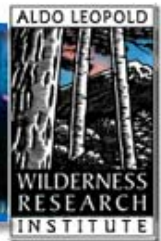


Wildland Fuels Management: evaluating risks and benefits



Frequently Asked Questions...

1. What types of information does this process generate?

Inputs...

Information on historic fire weather, existing vegetation and fuels condition is used by a series of existing computer tools (FireFamily+, FARSITE, and FLAMMAP)...

Outputs...

...to build a GIS library of maps that display the expected fire behavior under critical fire weather conditions and resulting effects on different social and ecological values. Specific information includes:

- annual probability of fire from natural and/or human starts (using the BurnPro model)
- likely fire behavior under a spectrum of weather parameters (using FLAMMAP),
- likely secondary fire effects on vegetation,
- likely effect of fire on wildlife targets and information for ES consultations
- areas of uncharacteristic fire severity,
- areas where fire is desirable - move systems towards desired conditions
- priority stands for treatment, and
- areas of ecological feasibility for wildfire use, prescribed fire or mechanical treatment.

Uses ...

The map library can be used to:

1. Identify areas where opportunities exist for achieving resource benefits on a wildfire or prescribed fire incident. With better-informed decisions, managers can focus suppression resources where fires pose clear risks, and avoid costly expenditures where fires confer resource benefits.
2. Assist in planning fuels reduction projects by identifying where fire effects are uncharacteristic or undesirable as well as where fire effects are characteristic or desirable.
3. Provide critical information for Land/Resource Management Plans by quantifying and mapping areas of risk and benefit under various fire weather situations in the present and in the future.
4. Monitor and report progress towards land management goals.

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.

Project overview...

We have developed a process that allows managers to systematically determine where and under what conditions fire may create benefits or pose threats to identified ecological conditions or management targets. An important feature of this protocol is that fire effects are expressed in terms meaningful to both fire and resource staff. The process is spatially explicit (ArcView and/or ArcMap); uses existing, local datasets; incorporates the latest fire and vegetation research; provides model defaults to facilitate adaptation to local conditions; and generates information for a variety of planning scales from long-range to site-specific.

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.

The Aldo Leopold Wilderness Research Institute is the only Federal research group in the United States dedicated to the development and dissemination of knowledge needed to improve management of wilderness, parks, and similarly protected areas. We provide a national center for scientists from different disciplines and backgrounds to address the wilderness research needs of land management agencies and organizations. The Leopold Institute was formally established in 1993 by the U.S. Forest Service and is administered by the Rocky Mountain Research Station. We operate under an agreement with the U.S. Forest Service, U.S. Geological Survey, Bureau of Land Management, U.S. Fish and Wildlife Service, and the National Park Service. Support for our fire research program includes funding from the National Fire Plan, Joint Fire Sciences Program, and the Bitterroot Ecosystem Management Research Program.

FEATURED PROJECTS

Leopold Institute

Wildland Fuels Management:
evaluating risks *and* benefits



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