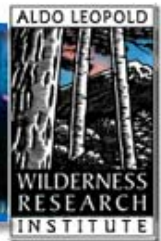


## Wildland Fuels Management: evaluating risks and benefits



### Frequently Asked Questions...

#### # 6. How can I aggregate or balance conflicting management goals?

##### *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.

##### *Decision Support ...*

Undoubtedly, during the planning or implementation process, conflicts between opportunities, risks and constraints will arise. There are a variety of well-documented strategies available that can be used to rationalize and document these difficult balances. In addition, there are existing tools that might be adaptable for your uses. Check to see if internal procedures might already be in place that you can plug into. The Nature Conservancy's program SITES is one such possibility. This is an optimization tool for biodiversity planning, so finds the set of areas that offers the best solution given a set of user-defined criteria on targets and constraints (such as cost) and the relative importance of those targets and constraints. Another program, Asset Analyzer, was originally developed by the California Department of Forestry for use in fire planning. The tool was adapted for use across the southern Sierra's by the Southern Sierra Geographic Information Center and can be found on their web site.

In general, one must assign weights to each input layer (ecological targets and constraints) that reflect the preferences of the decision-makers – be they the public for long-range planning alternatives, the management team charged with developing the Fire Management Plan, the line officer responsible for making the go/no go decision, or the incident commander in charge of tactics and strategies. One can then use economic theory or sum the weighted values to arrive at a determination of overall priority. Interpretation of the resulting maps can be challenging.

For more information contact: Anne Black, 406-329.2126, [aebblack@fs.fed.us](mailto:aebblack@fs.fed.us)

And visit our website: <http://leopold.wilderness.net/research/fprojects/F001.htm> where we post examples and demonstrations.

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## Project overview...

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### 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](mailto: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



<http://leopold.wilderness.net/research/fprojects/F001.htm>