

## Fire Research at the Aldo Leopold Wilderness Research Institute

### Identifying fire benefits and risks for wildland fuels and fire planning

**The Issue...** Federal land managers need to evaluate and incorporate an understanding of the benefits and risks of fuels management and fire programs into planning activities. Unfortunately, disconnects between fire and resource planning – in communication, terminology and reporting units, priorities and temporal scale – often discourage use of wildland fire and exacerbate hazardous fuels build-up.

**The Research...** To bridge this gap, we have developed a protocol managers can use to identify key areas of fire risk and systematically determine where and under what conditions fire will benefit ecological conditions while reducing fuels. Information about fire weather, vegetation, and fire behavior is used to build a library of maps that display the expected fire behavior under critical fire weather conditions and resulting effects on different social and ecological values. An important feature of this protocol is that fire effects are expressed in terms meaningful to both fire managers and land managers, thereby bridging a common communication gap that exists between those two groups

**What we can do with it...** The map library can be used to a) identify areas where opportunities exist for achieving resource benefits on a wildfire incident, b) assist in planning fuels reduction projects, c) provide critical information for Resource Management Plans, and d) monitor and report progress towards goals. With better-informed decisions, managers can focus suppression resources where fires pose clear risks, and avoid costly expenditures where fires confer resource benefits.

#### Where we stand...

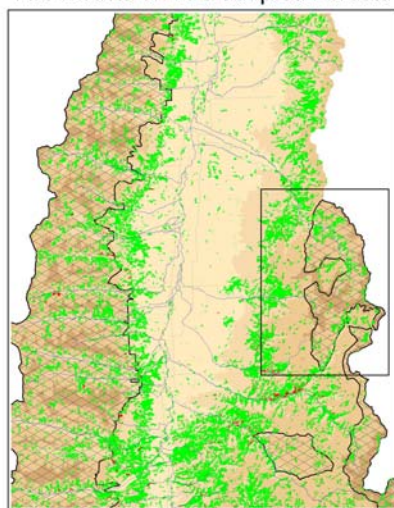
We are working with managers on the Bitterroot National Forest and Yosemite National Park to refine the protocol and training materials.

Additional analyses and background materials are posted on our website. Visit us:

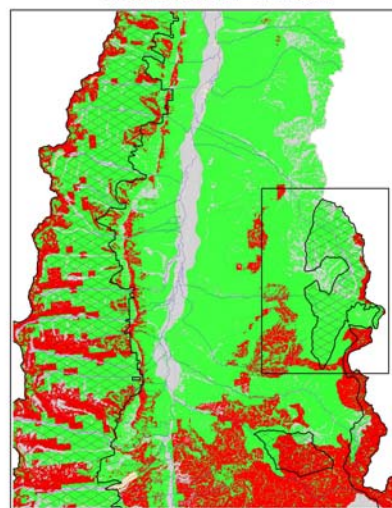
<http://leopold.wilderness.net/research/fprojects/F001.htm>,

or contact Anne Black 406-329-2126, [aebblack@fs.fed.us](mailto:aebblack@fs.fed.us) for more information.

Fire Effects on Fire-adapted Forests



Soil Erosion Potential



■ Uncharacteristic  
■ Characteristic

■ High Risk  
■ Low Risk

□ Wilderness and unroaded areas

Maps such as these provide managers with quick, accurate and user-friendly information to support wildland fire decisions.