



Can wildland fire use (WFU) restore historical fire regimes in wilderness and other unroaded lands?

Project Summary

JFSP 2002 Principal Investigator Workshop

Project Title: Can wildland fire use (WFU) restore historical fire regimes in wilderness and other unroaded lands?

Project Location: Multiple study areas including Selway-Bitterroot Wilderness (MT/ID), Gila Wilderness (NM), Yosemite National Park (CA), Sequoia-Kings Canyon National Park (CA), Greater Yellowstone Ecosystem (WY).

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Description of Project:

Unroaded areas provide unique opportunities for applying wildland fire use (WFU) as a fuels management strategy and as a method for restoring historical fire regimes.

This project develops an approach to assess the feasibility of WFU as a strategy for restoring historical fire regimes in wilderness and on other unroaded lands. The information developed by this project will directly support the development of fire management plans. We will use 6-8 unroaded landscapes (e.g., wilderness areas and national parks) as study areas to develop our analysis approach. We will determine where WFU can be considered given the current conditions of fuels in the study area and the risks to ecological and social values both within and outside the wilderness or park. In areas where a WFU program can be considered, we will assess the availability of natural ignitions for restoring historical fire regimes and propose management options for those areas where natural ignitions are insufficient for accomplishing management objectives. We will conduct two rounds of site visits to each study area where fire management staff will provide input to the GIS maps and WFU zone delineation in the form of expert knowledge.

Status Report:

We have focused on addressing the challenges of using the lightning ignition data available from the National Interagency Fire Management Information Database (NIFMID). The spatial location of ignitions in this dataset is highly uncertain and the length of the data record is relatively short. We have developed a procedure for augmenting these data and minimizing the reliance on uncertain spatial locations by generating ignition density surfaces as a function of environmental conditions across the landscape. In addition, we have reprogrammed the model that will be used to estimate the probability of burning to make it more widely applicable and easier to use in multiple study areas. We have selected the following study areas: Selway-Bitterroot Wilderness, Gila Wilderness, Yosemite National Park, Sequoia-Kings Canyon National Park, and Greater Yellowstone Ecosystem. In addition, we will be identifying a study site in Florida and possibly another in the Sapphire Mountains of Montana. These sites will be selected based on availability of fuels data.

Issues/Concerns affecting the project:

The project is within budget. The GIS analyst was not hired until May 2002, 7 months after the anticipated start date of the project. As such, we are requesting a 5-month no-cost extension from September 30, 2003 to March 1, 2004 to ensure adequate opportunities for the second round of site visits with managers and writing of reports.

For more information contact: Carol Miller, 406-542-4198, cmiller04@fs.fed.us
Visit our website: <http://leopold.wilderness.net/research/fprojects/F002.htm>.

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>

FEATURED PROJECTS

Leopold Institute

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<http://leopold.wilderness.net/research/fprojects/F002.htm>