A NEW PARTNERSHIP

IS EMERGING IN THE SIERRA NEVADA MOUNTAINS



USDA Forest Service

USDI Fish and Wildlife Service

University of California

University of Minnesota

CA Resources Agency

CA Department of Forestry and Fire Protection

CA Department of Water Resources

CA Department of Fish and Game

AN EXPERIMENTAL ADAPTIVE MANAGEMENT PROCESS

ne hundred years of successful fire suppression in the Sierra Nevada, coupled with recent drought and related insect attacks, have resulted in forests that have far more dead wood and crowded small trees than normal. These conditions have put the forests at risk of catastrophic fire endangering human lives, personal property, and dynamic forest ecosystems with the potential to drastically affect water, wildlife habitat, air quality, economies, communities and quality of life.

An innovative solution to this problem is to remove some trees and dead wood in strategically located patches of the forest. These disconnected patches, called strategically placed area treatments, would affect only 25-30% of the forested landscape while reducing the risk of fire for the entire area.

Despite the soundness of the scientific foundation for these treatments (as demonstrated by computer models), the treatments have never been tested. So there is uncertainty regarding their effect on fire behavior and concern regarding potential impacts on forest health, wildlife and water resources. The identification of the appropriate management strategy to reduce fuels

and restore or maintain resilient forests has been the central debate over national forest management for over 20 years. This debate has also weakened relationships among the interests and has made development of long term solutions challenging.

To solve this dilemma, a team of scientists and land managers from various agencies are working together to develop and implement an experimental adaptive management process to test the application of these fuel reduction treatments. The process includes innovative public participation. This process acknowledges that the onthe-ground effects of these treatments remain uncertain. The scientists are conducting research in an open and transparent process that incorporates the knowledge and ideas from all the partners and the public. Some test plots will be treated and monitored, while others would be left alone to provide a comparison. By evaluating expected and observed results in an open and inclusive manner, and adjusting the treatments based on the information gathered, this process is expected to bring broader agreement about the best ways to reduce large wildfires while protecting other important resources.

Years and years of planning projects by the Forest Service have attempted to address the fire risk dilemma in the Sierra Nevada. However, none have provided a lasting solution that was acceptable to a full range of stakeholders.

The Sierra Nevada Adaptive Management Program was first identified in the agency's 2001 Sierra Nevada Forest Plan Amendment. The management plan was revised in the 2004 Sierra Nevada Forest Plan Amendment to allow greater flexibility in fuels reduction and fire protection treatment options, such as the removal of somewhat larger trees during treatments. Controversy over the potential

logging of larger trees gave rise to an interagency partnership of state and federal agencies that sought to find a solution to the conflict. The agencies have now engaged the University of California as a credible, independent third party to draft an Adaptive Management Workplan to assist in meeting the 2004 plan's goal.

STEPS IN ADAPTIVE FOREST MANAGEMENT

- ♣ Choose current management goals.
- ♣ Gather and synthesize existing knowledge into working model(s) to make initial predictions about the consequences of the treatments on fire behavior and other resources.
- ♣ Design and implement fuel reduction projects.
- ♣ Monitor and evaluate the results of the fuel reduction work.
- ♣ Use what is learned to improve the working models to better predict the consequences of the treatments.
- ♣ Discuss results in forums with agencies and stakeholders.
- Adjust future management as indicated by the results from community discussions and scientific research.
- ♣ Begin the process again starting at step one.

Assimilate
Knewledge & Model

Analyze & Model

Plan Programs & Adjust Management

Adjust Management

Implement Forest
Treatments

Observe & Measure

SNAMP GOALS

Develop new ways for:

- ♣ the public to effectively engage the Forest Service.
- ♣ Forest Service management to evaluate new information from all stakeholders,
- third-party scientists to help with researching and redesigning of management practices
- federal, state, local agencies, and stake-holders to protect our forests from catastrophic fires while simultaneously improving forest health, water, and wildlife habitat.

This program is a seven-year project based on a regimen of pre-treatment monitoring, treatment, and post-treatment monitoring.

Because dynamic living forests are as complex as the communities around them, we cannot yet create accurate models that will allow us to predict the effects of treatments on fire behavior and other forest resources. Therefore, we are going to make our best estimates about the effects of treatments on the environment, measure what happens before, dur-

ing and after the treatments, and then use the new information to improve our model predictions for future work. In addition, management strategies and on-the-ground activities may be modified as these model predictions are refined.

A University of California science team, working closely with the agency partners, has created a workplan to describe the overall research strategy. The research strategy will be executed over a seven year period. This work will include monitoring the effects of the Forest Service's prescribed-fire and mechanical fuel treatments on two 30,000 acre sites. This research and monitoring strategy will assess the impact of the treatments on the following four themes:



California Spotted Owl

Fire and Forest Health -fire behavior, tree survival and growth, and secondary effects on forest health through insect or disease interactions.

Wildlife -the responses of the Pacific fisher and the California Spotted Owl.

Water Resources -water flows and stream water quality through measurement of stream flow, water quality, aquatic habitat, and aquatic biota.

Public Participation -participatory adaptive management strategies.



Pacific Fisher

This project provides a stronger public participation.

In addition to stakeholder engagement in the development of the workplan, the participating state and federal agencies and UC science team have begun a process with stakeholders to define critical adaptive management questions. They will also work with stakeholders to identify on-the-ground conditions or circumstances, commonly known as "triggers," which can precipitate a change in Forest

Service treatment strategies and activities. Our working premise is that we will have continual stakeholder participation and feedback during this adaptive management program. To encourage this exchange, we are committed to making all of the information about the project accessible to all participants. We are also committed to having transparent decision making.

Join us in carrying out this exciting new approach to stewardship of our public lands.

Through this innovative project we are hoping to create new ways of engaging communities in the development of forest management techniques that meet the social, economic, and resource needs of local, regional, and national stakeholders. In order to break into this new territory, we need your support. There are many ways to participate:

★ We need people with a variety of viewpoints, backgrounds,

and knowledge to participate in the process. Their knowledge of the existing ecosystem, and their engagement during each phase of the program is critical for the program's success.

♣ We need the full engagement of the local community in this project. We would like individuals and organizations to validate the importance of this project and their commitment to it by providing funding that will

supplement the multiple sources of state and federal funding for the project.

★ We need observers from other areas or locales to monitor the progress of the project, to learn from it, and help us figure out how to apply it in their areas.

The full workplan, as well as stakeholder comments and scientist's responses, are posted on the SNAMP website: http://snamp.cnr.berkeley.edu

Produced in cooperation with the following agencies:



















The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.