



sustainable forests, communities, and economies for Arizona, Colorado, New Mexico

SWERI **Southwestern Ecological Restoration Institutes**

Working Together to Restore Ecological and Community Health: The Challenge and the Goal

The U.S. Forest Service estimates that 132 million acres of forested public and private land are at risk from unnatural fire. This situation poses a serious threat to the social and economic vitality of forested communities. Moreover, these lands fall short in their ability to provide wildlife habitat, a full complement of watershed values, and other ecosystem service benefits. The goal of the Southwest Forest Restoration Institutes (SWERI) is to help convert this potential liability into an asset.

Many managers, from resource specialists to land managers, recognize that thinning, burning, and other forest restoration techniques can be effective in restoring forest health and reducing the threat of unnatural fire in the frequent-fire forest types of the Interior West. A central question is how to use the best science in order to do restoration in the most effective and efficient way possible, while learning how to improve our treatments as we move forward. Although there are clear needs for the discovery of additional scientific information, the flood of existing scientific literature, the disconnected sources of information, and the complexity of environmental analysis can overwhelm the resources of practitioners, stakeholders, and decision-makers. Nevertheless, wildland ecosystems and their dependent human communities are the ultimate victims if managers cannot mobilize the critical information for rapid, thorough, and scientifically defensible environmental analysis. The SWERI are designed to provide accurate, scientific information for those purposes and to move the restoration process forward in a manner that helps to establish sustainable forests, aid communities in forested areas, and strengthen local and regional economies.

Congress, the States, and the Western Governors' Association Recognize the Need

Signed on October 5, 2004, the Southwest Forest Health and Wildfire Prevention Act established institutes in Arizona, Colorado, and New Mexico for the purpose of ensuring the best available science is used in the development, implementation, and monitoring of forest restoration treatments. Congressional intent clearly recognized that hazardous fuel reduction treatments should incorporate science-based restoration approaches that will simultaneously improve forest health, reduce the threat of unnatural wildfire, and provide economic and social benefits to forested communities. The Congress also recognized the importance of this work for all land management agencies. The U.S. Forest Service, U.S. Fish and Wildlife Service, Bureau of Land Management, Bureau of Indian Affairs, and National Park Service, therefore, contribute to the development and approval of the annual work plans for each institute.

The Act has also stimulated interest and support at the state level. The governors of Colorado, New Mexico, and Arizona along with the Southwest Ecological Restoration Institutes (SWERI) universities signed a charter formalizing the role of the states and universities to provide a framework for collaboration and implementation. The charter establishes the SWERI Coordinating Committee, which includes representatives of the three governors, the three state foresters, directors of the institutes, and a representative of the Western Governors Association.

Who We Are and What We Do

The SWERI include the Colorado Forest Restoration Institute at Colorado State University in Fort Collins, the Ecological Restoration Institute at Northern Arizona University in Flagstaff, and the New Mexico Forest & Watershed Restoration Institute at New Mexico Highlands University in Las Vegas, New Mexico. The purpose of the SWERI is to bring the unique strengths of the member universities—individually, collectively, and in cooperation with other institutions—to help support land managers and their collaborators as they work to achieve comprehensive ecological restoration treatments on the ground.

The SWERI are dedicated to developing relevant knowledge and delivering effective service. Communities, stakeholders, and land managers are the ultimate customers for these services. These groups identify information needs, inform effective methods of knowledge transfer, and, ultimately, report on the effectiveness of our work. They include, federal land management agencies, state governments, tribal governments, elected officials, local governments, collaborative community groups and environmentalists, the Western Governors' Association, and businesses.

Recent Projects

The following list is an example of joint projects undertaken by the SWERI:

- In 2006, the SWERI sponsored a workshop to explore the unique features of frequent-fire, old-growth forests in the western United States. The results of the workshop have been published in the on-line journal, *Ecology and Society*. The papers include perspectives on human history and cultural perspectives, appropriate definitions and unique characteristics of old-growth, and policy and management recommendations.
- In 2008, the SWERI convened a panel of scientists and land managers to develop a simple, yet robust, set of biophysical monitoring variables that can be simply measured by practitioners to adaptively inform management practices. This workshop was convened in response to concerns expressed by land managers that monitoring goals could not be met due to the amount of resource required to adequately track the effects land management treatments. A report of this workshop is available from the Ecological Restoration Institute.
- In 2008, personnel from the San Juan National Forest finished implementing a series of restoration treatments on Lower Middle Mountain in the national forest. The treatments were designed by scientists from the Colorado Forest Restoration Institute and the Ecological Restoration Institute. Ecologists from the two institutes are now monitoring the results of the treatments in this area of warm/dry mixed conifer forest. Initial indications suggest a generally successful response to thin/burn, “full restoration” treatments.
- In 2009, ecologists from the Colorado Forest Institute and the Ecological Restoration Institute, along with scientists from several federal agencies (BLM, DOD, NPS, USFS, USGS) and The Nature Conservancy completed research into the historical and modern disturbance regimes, stand structures, and landscape dynamics of pinyon-juniper vegetation in the western United States. A published article of this work appears in the May 2009 issue of *Rangeland Ecology & Management*.
- In 2009, the SWERI expect to partner with the U.S. Forest Service on a pilot project to develop and test prioritizing restoration-based, fuel-reduction treatments that use the best available science and a collaborative process. The pilot project would advance the consensus that exists with respect to science-based forest thinning from the theoretical realm to on-the-ground restoration. The first pilot project is expected to occur on four national forests in Arizona, with future landscape efforts expected in both New Mexico and Colorado.

These joint projects complement numerous projects undertaken individually by each of the institutes in order to serve their local and statewide constituencies. Among others, these projects include ecological and social science research, working in collaborative groups to advise on state and local forestry and land management policy, conducting on-site consultations, producing publications about topics of interest to stakeholders, holding conferences and workshops, and creating and maintaining databases and web sites to provide information outlets for interested parties.

FOR MORE INFORMATION

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