

Healthy Forest



NORTHERN ARIZONA UNIVERSITY

September 1, 2009

ABOR TRIF Strategic Initiative Award: \$1.15M

During the last 120 years, southwestern ponderosa pine forests have radically changed. These ecosystem changes are a result of livestock grazing, high-grade logging, fire suppression, and some forms of recreation. Some of the specific changes include decreased wildlife diversity, increased densities of small stunted trees, increased threats of large-scale insect infestation of trees, change from frequent (every 2-8 years), low-intensity ground/grass fires (which serve to cycle nutrients and promote ecosystem health), to increasingly large catastrophic "crown" fires, and increasing threats to property and human lives. Scientists, environmentalists, public land-management agencies, and decision-makers agree that restoration of southwestern ponderosa pine forests is critical. Ecologically based restoration is the most effective approach we can take to reestablish the ecological integrity, or completeness, of the forest while protecting human communities. It is an approach that is informed by science and establishes as its primary goal the restoration of fully functional ecosystems that are linked to sustainable use by humans.



An ERI administrator, examines a large catface on a severely burnt ponderosa pine. Catfaces are triangle-shaped tree wounds caused by fires burning away the bark and cambium of a tree.

Ecological restoration is not a recipe for ecosystem management. Rather, it is a broad conceptual framework for helping ecosystems recover more nearly natural structure and function while providing for continued use by humans.

The Ecological Restoration Institute (ERI) at Northern Arizona University (NAU) is engaged in research, outreach and education in ecological restoration of western forests. The ERI works to help land management agencies

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Project's most relevant ABOR issues:

- Increase Student Participation in University Education
- Enhance the Quality of Student Education
- Increase Affordable Education for Students
- Provide an Educated, Competitive Workforce
- Optimize University Resource

INTRODUCTION (CONT'D)

and communities by providing comprehensive focused studies, monitoring and evaluating research, and technical support. The goals of ERI go beyond scientific discovery to the meaningful application of scientific knowledge that makes a difference for western forests. The ERI is nationally recognized as a leader in solving problems of degraded forest health and unnatural wildfire through science-based approaches, and continues to gain federal and state support for its projects. This funding has facilitated a wide array of research work by ERI staff, students, and partners. The ERI has also directly benefited southwestern communities by providing technical expertise to policy-makers, professional land managers, and community members seeking to restore ecological integrity and reduce fire risks in the region's forests.

Mission: To serve as an objective leader in research, scholarship, and education, and in collaborative efforts to plan and implement restoration treatments for frequent-fire forest and woodland landscapes of the Interior West.



An ERI Ecology Research Team member, seeding an interspace in an area of pinyon-juniper.

OPERATIONAL STRATEGIES AND GOALS

In June, 2007, the Forest Health Advisory Council and the Forest Health Oversight Council released "A Statewide Strategy for Restoring Arizona's Forests." In order for this statewide strategy to be successful, coordinated action is needed by federal agencies, communities, businesses, citizens and decisions makers. ERI will continue to play a leadership role in these initiatives.

In 2009, ERI's accomplishments included:

- Hosted the Southwest Ecological Restoration Institutes (SWERI) Biophysical Monitoring Workshop, in which the participants agreed upon an efficient, yet robust set of biophysical variables that can be used by practitioners to adaptively inform management practices and monitor the effectiveness of restoration/land treatments.
- Consulted with tribal natural resource managers and their federal counterparts to develop plans for providing assistance to develop fire management plans for all tribes in Arizona.
- Conducted a web-based survey to determine whether ERI publications and web site are meeting the needs of parties interested in the restoration of frequent-fire forests in Arizona and the Interior West. Survey results are being applied to refine ERI outreach efforts to better serve resource managers and forest stakeholders
- Completed a multi-year research/management project with the Kaibab National Forest designed to apply ecological information for reducing wildfire hazards in the vicinity of Grand Canyon Village and Tusayan, Arizona. ERI scientists tested practical alternatives for reducing fuels in pinyon-juniper ecosystems, the most widespread forest type in Arizona, while maintaining key elements including ancient trees and native plants.

The ERI is a nationally acclaimed program with a proven track record of working with others to restore forests, identify economic development opportunities and develop strategies for community protection. Financial support from the ABOR Innovation Fund has allowed NAU to provide scientific support and leadership to address these problems throughout Arizona.



Whether natural or man-made, fire has a significant impact on strategies for maintaining forest health.

FINANCIALS

The state funding provided to the ERI in the past has enabled state resources to be leveraged with federal funding to make significant advancements towards restoring Arizona’s forests. The Innovation Fund support will permit the ERI to increase the scope and extent of our outreach activities. NAU was awarded \$1.15 million to allow ERI to expand its research, education and outreach activities so that the benefits of forest health are made available to the people, communities, and governments of Arizona. The funding will be allocated over three fiscal years beginning in fiscal year 2009.

The majority of the budget is dedicated to supporting the personnel required to carry out the research, education, and outreach activities articulated in this plan. The remaining budget supports the travel to communities and national forests, supplies and equipment necessary to complete the goals. This funding will leverage other state and federal funds to maximize leverage and value to all NAU-ERI customers (people, communities, and governments).

Budget Summary

	FY 2005 Actual	FY 2006 Actual	FY 2007 Actual	FY 2008 Actual	FY 2009 Rev Budget	FY 2009 Actual	FY 2010 Rev Budget	FY 2011 Rev Budget
REVENUE								
Carry Forward	\$0	\$0	\$0	\$0	\$0	\$0	\$95,187	\$0
New TRIF Revenue	\$0	\$0	\$0	\$0	\$271,441	\$274,169	\$293,469	\$292,938
TOTAL REVENUE	\$0	\$0	\$0	\$0	\$271,441	\$274,169	\$388,656	\$292,938
OPERATING BUDGET								
Personal Services	\$0	\$0	\$0	\$0	\$216,000	\$160,935	\$305,000	\$280,000
Operating	\$0	\$0	\$0	\$0	\$55,441	\$18,047	\$83,656	\$12,938
TOTAL EXPENDITURES	\$0	\$0	\$0	\$0	\$271,441	\$178,982	\$388,656	\$292,938



The ERI was formally established by the Arizona Board of Regents in 1997 and by federal legislation in 2004. The ERI is funded by a combination of programmatic state and federal funding and through competitive grants programs.

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LEARN MORE

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