

# LANDSCAPE MODELING OF MOUNTAIN BIG SAGEBRUSH RESPONSE TO FIRE REGIME

Preferred Start Date: January, 2007 (or earlier)

## Project Description:

Little is known concerning historical fire regimes associated with mountain big sagebrush dominated landscapes of the Intermountain West. The objectives of this Joint Fire Science Program funded project are to: (1) use proximal fire-scarred trees to estimate fire frequency for mountain big sagebrush communities; (2) develop estimates of post-fire sagebrush recovery using a chronosequence approach; and (3) use these data sources to model long-term response of mountain big sagebrush to alternative fire regime scenarios. A PhD student is sought to focus on the third objective. This will involve development and application of simulation models to test the appropriateness of shrubland fire frequency estimates for spatiotemporal dynamics of sagebrush distribution, and for assessing the relative importance of spatially heterogeneous burn severity patterns for post-fire succession. Co-investigators on the project include Stan Kitchen (Research Botanist with the USFS Shrub Sciences Laboratory) and Peter Weisberg (landscape ecologist at UNR). The PhD student will be housed at UNR and mentored by Dr. Weisberg.

## Requirements:

Applicants should have a Master's degree in a relevant scientific discipline (e.g. Ecology, Natural Resources, Geography, Biology, Range Science/Management, Forestry), as well as interest and aptitude for dynamic landscape modeling, and strong quantitative skills. Prior experience with vegetation in arid/semi-arid systems would be highly desirable. Programming skills are highly desirable, as is previous experience in GIS applications and spatial analysis. Minimum academic requirements are a GPA of 3.4 and a combined GRE score of 1200.

The assistantship includes a graduate stipend of \$20,000/year, pays health insurance benefits, and covers the cost of tuition. Additional information on graduate study at the University of Nevada - Reno can be found at: <http://www.vpr.unr.edu/grad2/>. Additional information on the Ecology, Evolution and Conservation Biology interdisciplinary PhD program can be found at: <http://www.eecb.unr.edu/>.

To Apply: Your application should include a cover letter describing research interests and experiences, a resume or CV, copies of publications (if relevant), an unofficial copy of transcripts, and contact information for three references. These materials should be sent (electronically or by mail) to: Peter Weisberg, Department of Natural Resources and Environmental Science, University of Nevada-Reno, 1000 Valley Road / Mail Stop 186, Reno NV 89557. email: [pweisberg@cabnr.unr.edu](mailto:pweisberg@cabnr.unr.edu).

For more information about the project, contact:  
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