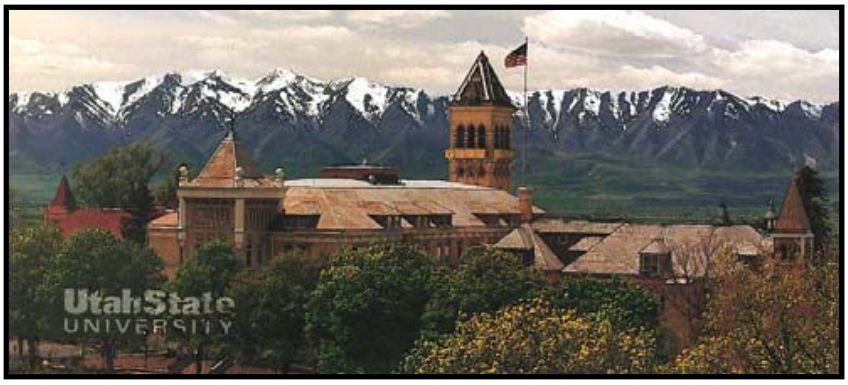
The College of Natural Resources at Utah State University invites applications for two MS Fellowships to begin Fall 2012



Natural resource professionals face ecological changes occurring at unprecedented scales and rates due to a combination of historical management activities and climate change. In the Interior West, many forest ecosystems are at, or near, tipping points with respect to ecological integrity. Phenomena such as large-scale insect outbreaks, rapid aspen die-offs, and geographically and temporally synchronized severe fires are occurring across the region. Impacts may exceed historical resilience limits of forests, resulting in irreversible ecosystem state changes with pronounced socioeconomic impacts. This situation creates an acute need for a new generation of forest resource managers and scientists skilled in a variety of emerging technologies, able to incorporate rapidly changing research and data into decision-making, and able to communicate effectively with a variety of stakeholders. In response to this need, we have initiated an integrated graduate training program and invite applications for two MS Fellowships to begin January 2012.

Our goal is to create a small cohort of graduate students whose research will be linked under the theme "*Managing for Resilience in Forested Ecosystems of the Intermountain West*". This program will use emerging research tools, common coursework, seminars and specific shared extension projects to provide the student fellows with skills and knowledge necessary for effective science-based input to management decisions about forested landscapes undergoing or threatened with large-scale change. Current topics related to management, adaptation, resilience and human dimensions of forest ecosystems and their components in a changing climate will be emphasized. Student fellows will participate in several outreach projects in cooperation with USU Extension Forestry during their time at USU including the planning of a Restoring the West regional conference, and publication of at least one article each in the Utah Forest News. The student fellows will also benefit from coordinated mentoring by an Advisory Board of faculty members who have active research programs in dynamic forested landscapes. The Advisory Board includes faculty in the Wildland Resources and Environment and Society departments in the College of Natural Resources - Dr. Karen Mock, Dr. Jim Long, Dr. Mike Kuhns, and Dr. Zhao Ma; and Dr. Barbara Bentz with the USFS Rocky Mountain Research Station, and Dr. Paul Rogers with the USU-affiliated Western Aspen Alliance.

MS fellowships will be $17,000 per year for 2 years (Fall 2012 through Spring 2014). Student health insurance will be subsidized. Fellows may apply for tuition awards through the Department of Wildland Resources. Support for student training is provided by USDA National Needs Graduate Fellowship Competitive Grant No. 2011-38420-20087 from the National Institute of Food and Agriculture. The full proposal is available on the Wildland Resources Departmental website. Utah State University is an equal opportunity employer and we **strongly encourage applications from groups who are underrepresented in natural resources professions**. Fellowship candidates are required to be a citizen or national of the United States of America.

Research projects will be developed through discussions among the student fellows, their supervisory committees, and faculty Advisory Board members. Research topics will be related to management, adaptation, and resilience of forest ecosystems and their components in a changing climate. Research projects will capitalize on the strengths and skills of the advisory board members and may include topics such as:

- Forecasting climate- and human-induced disturbances and their interactions, and cumulative effects on structure and dynamics of montane forests,
- Assessing "tipping points" in human systems and economies that are linked to forest ecosystem thresholds,
- Assessing wildlife responses to forest ecosystem thresholds,
- Determining below-ground indicators of and responses to forest ecosystem thresholds,

- Assessing resilience and dynamics in aspen-dominated forests in changing climatic and land management conditions, including the temporal and spatial dynamics of clones, sexual reproduction, and forest types,
- Assessing interactions of overstory, understory, and below ground components in forest ecosystems as affected by management and climate change,
- Developing silvicultural systems to build and maintain resistance and resilience to a range of environmental challenges,
- Assessing forest landowner perceptions of and responses to increasing drought, insect outbreak and fire under changing climatic conditions,
- Determining the ecological and non-ecological factors affecting the decision-making process of forestry institutions and assessing how these institutions prioritize various aspen regeneration, bark beetle control, and other aspects of forest management and conservation,
- Developing policy infrastructures for promoting the adaptive capacity of forest landowners and managers to cope with a changing climate.

Additional Information: With approximately 180 undergraduate and 80 graduate students, USU's Wildland Resources Department has one of the largest and most active graduate research programs at USU, and is widely recognized for research that addresses natural resource ecology, management and conservation issues in the Intermountain West. The Department is associated with the USU Ecology Center, the Utah Agricultural Experiment Station, and the USFS Rocky Mountain Research Station, and enjoys strong collaborative links across the Logan campus with the Departments of Watershed Sciences, Environment and Society, Biology, Mathematics and Statistics, and Plants, Soils and Climate, among others. Additional information about the College of Natural Resources can be found at http://www.cnr.usu.edu. Logan is a valley community of about 125,000 people nestled in between the Wellsville Mountains and Bear River Range in northeastern Utah. The many ski resorts, lakes, rivers, and mountains in the region make it one of the finest outdoor recreation environments in the nation. The campus is 90 miles north of Salt Lake City. With views of a natural area reserve from campus, the pristine natural environment of the area makes Logan one of America's most attractive and affordable university towns (http://www.tourcachevalley.com/).

Application: To apply for one of the MS Fellowships, please submit the following materials to Dr. Karen Mock via email (karen.mock@usu.edu):

- A resume describing your education, employment, and publication/presentation history,
- A list of three references (and their contact information),
- A copy of your academic transcripts (unofficial) and GRE scores,
- A cover letter describing your research interests, why you would be a good candidate for this Fellowship, and how you found the Fellowship advertisement.

We will begin screening candidates on **March 5, 2012**, and will continue until suitable candidates are found. Formal application to the USU graduate school will ultimately be required for selected candidates.