

## **FROM AWARENESS TO ACTION: CONDUCTING A VULNERABILITY ASSESSMENT AND DEVELOPING ADAPTATION STRATEGIES FOR FOCAL RESOURCES OF THE SIERRA NEVADA (4D)**

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The natural landscapes of the Sierra Nevada provide a range of natural resources and ecosystem services on which millions of people rely, including a large portion of the state's water supply, and important cultural and recreational amenities. However, projected climate change in the region is expected to significantly impact the natural systems on which wildlife and human communities both depend. Projected changes are likely to result in myriad impacts, including reduced and/or lost habitats and connectivity; shifts in species distribution and abundance; changes in vegetation communities; increased frequency and intensity of fires and area burned; and significant changes in water availability and supply. In addition, climate change is likely to exacerbate many of the current stressors – such as air pollution, resource extraction, invasive species, and residential development encroachment – already facing Sierra Nevada ecosystems. Managers and conservation planners in the region are now faced with the challenge of developing and implementing strategies that support natural resources and ecosystems under these new and variable conditions. In response to this challenge, EcoAdapt, with support through the California Landscape Conservation Cooperative (CA LCC), is facilitating the development of a large-scale vulnerability assessment and associated adaptation strategies for resources of management focus in the Sierra Nevada. The objectives of this project are to: (1) assess the vulnerability of regional focal resources to climate change, (2) use spatial analysis and expert input to prioritize conservation areas or actions, and (3) identify implementable management responses to climate change in the Sierra Nevada. The project includes two, multi-day workshops for scientists, managers and conservation practitioners. The first workshop, focused on the vulnerability assessment, will be held March 5-7, 2013. The second workshop, focused on adaptation planning, will be held in mid- to late May 2013. Scientists and managers are being involved as equals throughout this process in order to create user-generated information and tools targeting those engaged in Forest Planning and other conservation and land management efforts in the Sierra Nevada region. This project represents a continuation of the planning process led by Region 5 of the USDA Forest Service to develop a work plan to conduct a vulnerability assessment for focal resources and to generate an adaptation strategy, but will extend to all lands rather than just Forest Service lands. Major partners on this project include the Forest Service, Geos Institute, Conservation Biology Institute, and TACCIMO.

Key words: vulnerability assessment, climate change adaptation, forest planning, spatial analysis