

# Detailed Surveying on Vegetative Shifts for Climate Change Studies

August 2010

## Fact Sheet

### The Issue

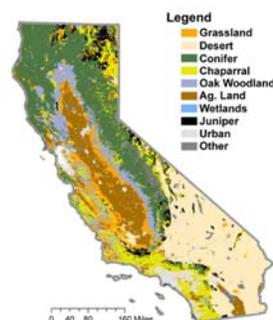
As climate change occurs, shifts in vegetation across the landscape of California are expected. These changes in vegetation will have critical effects on land temperature, water resources, wildlife habitat, and biodiversity. This in turn will affect people and our use of natural resources, including water availability, land development, recreation, and energy. A better understanding of how vegetation change might occur will help guide efforts in mitigating the effects of future climate change. One effective method of predicting future climate-induced vegetation change is to study how vegetation change occurred in the past in relation to climate. Vegetation plots have been used extensively in terrestrial landscape studies, and re-surveys of these vegetation plots are one of the most robust ways in which land cover change can be described. Resurveys have proven useful in documenting vegetation shifts associated with climate change.

### Project Description

One of the most valuable resources available to climate change studies in California includes the approximately 16,000 vegetation plots surveyed in the state during the 1930s, under the Wieslander Vegetation Type Mapping project (VTM). Some of these plots have already been resurveyed, and additional resurveys will take place within the scope of this project.

The goals of this project include:

- Production of a VTM vegetation plot resurvey database, along with a minimum of 180 new VTM vegetation plot resurveys along Sierra Nevada elevational transects
- Analysis of change at all VTM resurveys and how it corresponds with climate change
- Analysis of all VTM plots compared to a collection of contemporary plots for regions where sufficient samples are available in both time periods
- Promotion of the usefulness of resurveying VTM plots among partnering agencies
- Review of all vegetation plot protocols currently in use in California for inventory, mapping and monitoring efforts
- Development of vegetation plot survey protocols for use in climate change studies
- Use of new protocols to survey a minimum of two vegetation plots for every PIER-funded weather station
- Promotion of new vegetation plot monitoring protocols with at least five other groups that monitor or manage natural lands



Vegetation map of California. (Image Credit: UC Davis)

### PIER Program Objectives and Anticipated Benefits for California

The work from this project will provide a better capacity to link historical trends from previous vegetation surveys to ongoing monitoring efforts. This project seeks to improve the scientific understanding of the historical changes in landscape vegetation and to prepare the state of California for effective monitoring of California's forested regions under climate change. Understanding how vegetation may change in the future is important for the development of realistic climate projections for California, which are needed to understand potential changes in energy demand and generation. This project supports California's goal in evaluating the economic and ecological consequences of climate change, as well as adaptation and mitigation strategies to preserve and to improve quality of life.

### Project Specifics

Contract Number: PIR-08-006  
Contractor: UC Davis  
Contract Amount: \$199,997  
Contract Term: January 2009 to July 2011

For more information, please contact:

Sarah Pittiglio  
California Energy Commission  
PIER Program, Environmental Area  
Phone: 916-654-3962  
E-mail: [SPittigl@energy.state.ca.us](mailto:SPittigl@energy.state.ca.us)

### Disclaimer

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Chief Deputy Director: Claudia Chandler

California Energy Commission  
Public Interest Energy Research  
1516 Ninth Street  
Sacramento, CA 95814-5512

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