



# Southwest Climate Science Center



# Region Explanation

## LANDSCAPE CONSERVATION COOPERATIVE IN THE SOUTHWEST AREA



### SOUTHWEST CLIMATE ALLIANCE

- 1 University of Arizona
- 2 Desert Research Institute (NV)
- 3 University of California - Davis
- 4 University of California - Los Angeles
- 5 Scripps Institute of Oceanography
- 6 University of Colorado - Boulder

### CENTER AFFILIATES

- Arizona State University
- Northern Arizona University
- University of California, Merced
- University of Nevada, Las Vegas
- NASA Ames Research Center
- U.S. Institute for Environmental Conflict Resolution

# Goals

To foster and support the highest-quality climate and biological sciences by connecting the scientific strengths of the USGS with those of the SW CSC partner universities.

To coordinate and collaborate with users and other providers of climate information to ensure that the research pursued by CSC-affiliated scientists results in tools, techniques, models, and actionable information to facilitate robust decision making by resource managers, policy-makers, and other stakeholders.

To build enduring relationships with stakeholders that enable meaningful collaboration, clear communication, and effective translation of scientific results.



# Research Themes

The SW CSC operates under a five-year strategic plan that guides the center in support of research that is regionally critical, relevant to decision makers working at a range of scales, and nationally synthesized.

## Current Themes Include:

**CLIMATE SCIENCE** • Increase understanding of climate change, variability, and extremes and how they interact to improve modeling capabilities at geographical and time scales relevant to resource managers.

**HYDROCLIMATE, WATER SUPPLY, AND AQUATIC HABITATS** • Improve knowledge about how climate change, variability, and extreme events such as severe drought and floods may affect water availability for humans and habitats and how changed ecosystems, in turn, affect ecosystem services such as water quantity, quality, and availability.

**ECOLOGICAL RESPONSES TO CLIMATE CHANGE AND VARIABILITY** • Develop better understanding of how changing and variable climate affects species populations, ecological communities, ecosystems, and landscape patterns across spatial and temporal scales. Enhanced understanding ultimately facilitates the identification of management strategies that reduce resource vulnerability to rapid change.

**DEVELOPING, IMPLEMENTING, AND EVALUATING 'BEST PRACTICES' FOR SCIENTIST-STAKEHOLDER ENGAGEMENT** • Engage in active research that improves the relevance and usability of climate science by developing effective methods of communication, collaboration, and engagement.

**DEVISING EFFECTIVE MONITORING APPROACHES** • Assist agencies and stakeholder groups in the design, development, and implementation of monitoring strategies that will help close critical data gaps to assess climate variability and change across the southwestern landscape and better evaluate the effectiveness of management actions.

# Partnership

The SW CSC is a collaborative partnership of USGS scientists, DOI resource-management agencies, and a consortium of six academic institutions from across the region. The scientific strengths of the SW CSC rely on the substantial expertise of USGS researchers and of the partner academic institutions:

**University of Arizona; University of California, Davis; University of California, Los Angeles; Scripps Institution of Oceanography (University of California, San Diego); University of Colorado; and Desert Research Institute (University of Nevada),**

along with several other affiliated institutions. Collectively, these institutions provide a large base of climate-science knowledge and research capabilities that can focus on the critical resource-management issues facing many of the region's stakeholders.

# Stakeholder Collaboration Process

To ensure that SW CSC-supported climate research focuses on the most critical issues and conducts use-inspired science, a Stakeholder Advisory Committee (SAC) was established in 2011. The SAC comprises representatives from federal and state resource-management agencies and tribes and has a critical role both in communicating science needs to the SW CSC and in guiding the science planning process. The SAC also works closely with SW CSC scientists to convey results back to agency staff to implement actions in the field.

Research funding decisions are made in consultation with a panel of scientists and resource management professionals representing federal and state agencies and non-governmental organizations.

The geographic focus area of the SW CSC includes large portions of five Landscape Conservation Cooperatives (LCCs), including California, Desert, Great Basin, North Pacific and Southern Rockies. The LCCs are a network of public-private partnerships created under DOI Secretarial Order 3289 that act as a direct link to resource managers within DOI agencies. An important responsibility of LCCs is to identify the key science needs of a wide variety of land-management stakeholders within their areas. The SW CSC leverages the efforts and collective knowledge of the LCCs as principal conduits for communication about resource managers' science needs.

Working with natural and cultural resource managers to develop and deliver scientific information, tools, and techniques to anticipate, monitor, and adapt to climate change.

## Climate Science Centers



The US Department of the Interior (DOI) recognizes and embraces the unprecedented challenges of maintaining our nation's rich natural and cultural resources in the 21st century. To address these challenges, Secretary Ken Salazar signed Secretarial Order 3289 on September 14, 2009, entitled Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources. The order established eight Climate Science Centers (CSCs) across the continental United States, Alaska, and the Pacific Islands for the purpose of integrating DOI science and management expertise with expertise from academic institutions to support strategic adaptation and mitigation efforts on public and private lands across the United States and internationally.

# Contact

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**Federal site:** [doi.gov/csc/southwest](http://doi.gov/csc/southwest)  
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## PARTNERS



## AFFILIATES

