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Welcome to the Southwest Climate Hub's Newsletter

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What's Happening at The Hub:

- [Cooperative Extension Outreach to Stakeholders in NV](#)
- [CA Subhub to Report on Safeguarding State's Agriculture](#)
- [Hub Collaboration Increasing](#)

Cooperative Extension Outreach to Stakeholders in NV

University of Nevada Cooperative Extension (UNCE) will present evening classes in rural Nevada this fall to introduce the concepts of Climate-Smart Agriculture. Farmers, ranchers, and natural resource managers will hear about predictions for the coming winter from a National Weather Service forecaster and then consider various strategies to deal successfully with weather variability. They will be asked to contribute their ideas for increasing the resiliency of agriculture to extreme weather events and to suggest ideas for needed research on new methods and practices. In addition, the UNCE launched the ["Living With Drought" website](#) earlier this year. Several drought workshops have already been held for agricultural producers in the state.

UNCE is also addressing the flip side of weather extremes by coordinating a multi-agency team effort to present Northern Nevada's first Flood Awareness Week, November 10-15, 2014. The team has launched a new website, [NevadaFloods.org](#), and is planning a TV, radio and billboard campaign to direct the public to the website. Its purpose is to educate Nevada residents about the



UPCOMING EVENTS

Keyline® Practice: Soil Health and Drought-Resilience for 21st Century Farms and Landscapes

October 3-5, 2014

Chico, CA

→ [Find out more](#)

American Geophysical Union

December 15-19, 2014

San Francisco, CA

→ [Find out more](#)

NRCS RCA Round Table Meetings

Fall 2014

Davis, CA & Phoenix, AZ

→ [Find out more](#)

American Meteorological Society

January 4-8, 2015

Phoenix, AZ

→ [Find out more](#)

NOAA Climate Prediction Applications Workshop

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floods. Extension and its partners are reaching out to floodplain managers in many counties and towns to help them organize local educational activities about flooding. Nevada Governor Brian Sandoval has committed to issuing a Flood Awareness Week proclamation at the kick-off press conference in Reno in October.

[CA Subhub to Report on Safeguarding State's Agriculture](#)

On Tuesday, September 2, Kerri Steenwerth, co-Director of the California Subhub, was invited to speak before the State Board of Food and Agriculture. Dr. Steenwerth presented an overview of the SW Hub and Subhub mission and goals. Sandra Schubert of the California Department of Food and Agriculture and Dr. Barbara Allen-Diaz, Vice President of the University of California's Division of Agriculture and Natural Resources indicated that their organizations will partner with the Subhub to roll out the Safeguarding California Plan for reducing climate risk.

Despite the availability of funds for aggressive greenhouse gas emissions reductions, there has yet been any significant actions taken to address the challenge of adapting to climate change impacts. However, state agencies have begun laying the groundwork to help gird California's businesses, residents, and environment from the impacts of extreme weather and shifting climate trends.

One recent milestone reached is the final release of '[Safeguarding California](#)' update to the 2009 Climate Change Action Plan. This will guide agencies' work on issues related to climate adaptation over the next several years. Loss of funding for land conservation, loss of farmland, and water scarcity are factors that will affect the viability of California's agriculture. The plan outlines a way to build upon existing programs and policies.

Hub Collaboration Increasing

In August, Randy Johnson, national leader for Climate Hubs, visited the Southwest Climate Hub in Las Cruces, NM. He met with Cooperative Extension and learned about our education, extension, and science programs, as well as met with staff.

Director of the Southwest Climate Hub, Al Rango, attended the Desert Landscape Conservation Cooperatives (LCC) meeting in Santa Fe to discuss areas of future collaboration between the Hub and the LCC. Rango and Deputy Director Caiti Steele will be visiting with cooperators in Hawaii this month. We will share a report on the visit in the October newsletter.

National Association of Environmental Professionals Annual Conference

April 13-17, 2015

Honolulu, HI

→ [Find out more](#)

Western Snow Conference

April 20-23, 2015

Grass Valley, CA

→ [Find out more](#)

ASABE 1st Climate Change Symposium: Adaptation and Mitigation

May 3-5, 2015

Chicago, IL

→ [Find out more](#)



MEET OUR PARTNERS

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Key Partners



RECENT NEWS

Hawaii County Was Just Declared a Natural Disaster Area

The USDA has designated Hawaii County as a primary natural

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in the designated areas are eligible for low interest emergency (EM) loans from USDA's Farm Service Agency. → [Read more here](#)

CA Adaptation Forum

California Subhub members attended the inaugural [California Adaptation Forum](#) in Sacramento on August 19-20, which attracted over 800 participants. The Forum focused on climate adaptation across a wide range of sectors, including energy and transportation infrastructure, freshwater resources, agriculture and rangelands, coastal zones, and protected areas.

Hosted by the [Local Government Commission](#), the Forum highlighted adaptation opportunities at the local scale but also discussed state and regional initiatives. At the day-long "Tools Salon" on August 19, California Subhub Co-Director Kerri Steenwerth and Outreach Coordinator Amber Kerr presented a [poster](#) about the Subhub and met potential collaborators from the CA Landscape Conservation Cooperative, the SW Climate Science Center, and other institutions. The next Forum will be in two years.

Update from the CA Subhub

In July, Peter Stine (USFS) presented at the quarterly meeting of the California Food and Agriculture Council where he introduced the USDA Climate Hubs and the California Subhub. Members of the Subhub learned about USDA programs that address climate adaptation.

On August 8, members of the Subhub attended the Public Workshop for the 4th California Climate Assessment in Sacramento. Agencies within the State Government presented proposals for developing efforts to support original, regionally-relevant climate research to support California's continued leadership on actions to address climate change, and safeguard California's people, economy and resources.

Ecological Society of America Annual Meeting Recap

The effect of climate change on Southwest forests was a key topic of discussion at the Ecological Society of America Annual Meeting (Sacramento, CA, August 11-15, 2014). Although likely temperature changes are well-understood, short- and long-term changes in precipitation are still uncertain and are further compounded by complex interactions with management regimes, wildfire, insect attack, and disease. Following are some research highlights:

- **Dan Cayan** (Scripps Institute of Oceanography) and co-authors discussed the importance and difficulty of accurately representing extreme events when downscaling output from global climate models to regional scales. → [Read more here](#).



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change of different California ecoregions. Their models suggested that in some ecoregions, vegetation shifts would be driven by temperature changes, while in others, changes in fire regimes would be the key factor. → [Read more here](#).

- **Jon Keeley** (USGS) asked whether drought and rising temperatures are increasing the frequency of "megafires" in California. He saw no evidence of this in Northern California, but an increase in large fires in Southern California. → [Read more here](#).
- **Anthony Westerling** (UC Merced) looked at forest fire patterns in the western US (including the Sierra Nevada and Rocky Mountains) and concluded that fire frequency has significantly increased in recent decades, with an especially notable increase in large fires. → [Read more here](#).

New Climate Change Educational Materials

Teaching Resources are now available for the [Southwest](#) and for [Hawaii](#) and [the Pacific Islands](#). At the [Third National Climate Assessment Downloads and Materials](#), you can download the entire Assessment, overview, and highlight brochures by region ([Southwest](#) and [Hawaii](#)) and presentations and graphics for each sector: [Water Resources](#), [Agriculture](#), and [Forests](#).

The Story Group created *Americans on the Front Lines of Climate Change* series. Several videos from this series cover [The Southwest](#), [Hawaii](#), [Drought](#), [Adaptation](#) and [Agriculture](#).

In addition, *Science for a Hungry World: Agriculture and Climate Change* is a video produced by NASA that explores the relationship between climate and agriculture.

→ [Watch the video here](#)

The Farm Foundation Meets with Farmers and Ranchers

Farm Foundation is organizing a series of regional 'roundtable' meetings to assist public participation in the USDA-Natural Resource Conservation Service's 2016 Soil and Water Conservation Act (RCA) congressional report. The first Southwest Region meeting focuses on California and will be held in Davis on October 6, 2014. A second meeting for AZ, NM, NV, and UT is planned for the Phoenix area in mid-November 2014. A third meeting for Hawaii is planned for late November / mid-December. Attendees will include farmers and ranchers who serve in leadership positions of various boards and committees. They include state technical committees, conservation districts, and who are interested in contributing to the 2016 report. Contact Sheldon Jones for more information about attending any of these meetings.

→ **Email:** Sheldon@farmfoundation.org

Food Resilience Theme Available on Climate.Data.Gov

Regional Integrated Sciences and Assessments Program



Education



Communications



The following are external tools & resources, not affiliated with the SW Hub.

- [Tech Resources Pledged to Support Climate Data Initiative](#)
- [AZ Monsoon Monitoring Map](#)
- [NM Monsoon Monitoring Map](#)
- [California Climate & Agriculture Network](#)
- [Climate Adaptation Knowledge Exchange \(CAKEx\)](#)
- [NCA Videos](#)
- [NCA Impacts - SW](#)
- [NCA Impacts - Hawaii](#)
- [NCA Impacts - Ag](#)

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of the food system. To date, there are 143 datasets available related to agricultural goods. Examples of available data include soils maps, production and distribution of commodities, and drought information.

→ [Search datasets here](#)

Tech Companies Step Up to Help Climate Change Scientists

Technology giants including Microsoft, Amazon Web Services, and IBM are committing resources to climate change researchers working to strengthen and secure the global food system. Fueled in part by the White House's update [Climate Data Initiative](#), resources include free cloud-computing, workshops, live data feeds, and free access to supercomputing resources to those that are working to boost climate preparedness and resilience in the agricultural sector.

→ [Read more here](#)

[Datasets](#)

- [Climate.gov NCA Teaching Resources](#)
- [COMET Climate Variability and Change Course Material](#)
- [Climate Change Resource Center](#)

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Fruit Growers Adapt to Warmer Winters, Drought

Recent studies suggest that warmer temperatures, and the associated reduced winter chilling period, could render California's climate unsuitable for growing a variety of fruits and nuts.

→ [Read more here](#)

Snowpack Regimes of the Western US

Recent studies have illustrated that changes in the snow/rainfall apportionments and snow accumulation and melt patterns may occur as a consequence of changes in climate in the region.

→ [Read more here](#)

Seasonal Not Annual Rainfall Determines Grassland Biomass Response to Carbon Dioxide

Large annual variation in the stimulation of above-ground biomass by elevated carbon dioxide in a mixed C₃/C₄ temperate grassland can be predicted accurately using seasonal rainfall totals.

→ [Read more here](#)

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