

USDA California Climate Hub News & Notes



**United States Department of Agriculture
California Climate Hub**

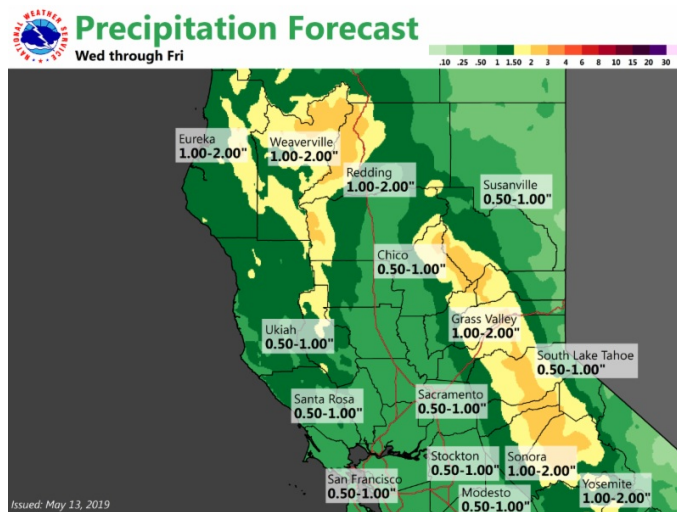
The USDA California Climate Hub within the Agricultural Research Service at the UC Davis John Muir Institute works with partners across federal and state agencies, universities, and industry to help enable climate-informed decision making and advance the adaptive capacity for California's working and managed agricultural, range, and forest lands. These newsletters are just one approach toward meeting this objective. We encourage you to get in touch with us if we can be of further service or assistance.

Visit the [USDA Climate Hub Website](#)

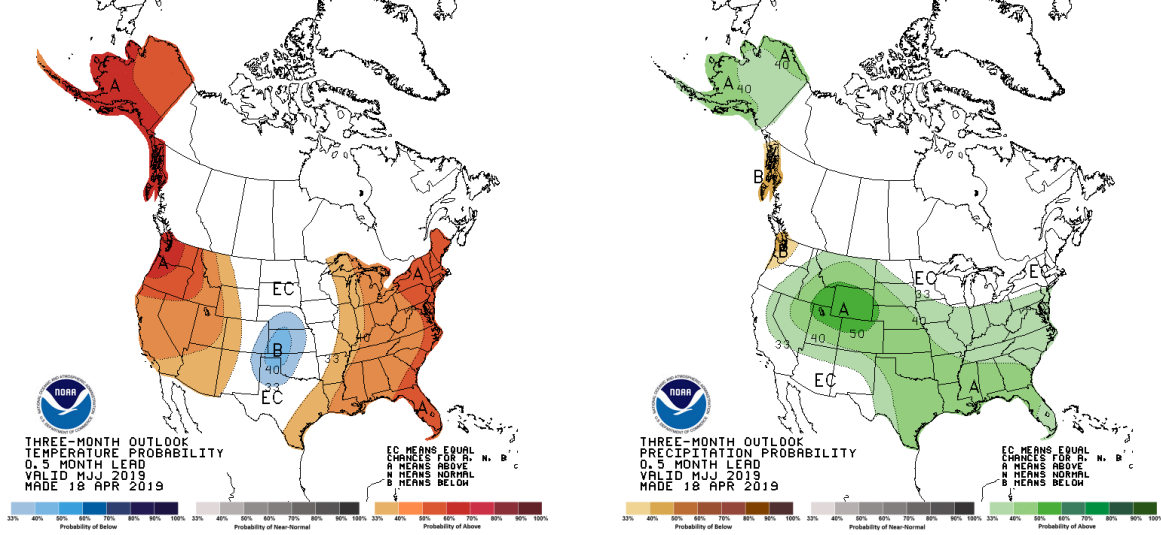
WINTER IS COMING

A series of winter-like storms are headed for California in the coming days -- with a harder hit to NorCal -- bringing soaking rains, mountain snow, and putting a damper on pollinator activity. The added moisture may delay peak wildfire season, but, [as noted in the Weather West's writeup of this event](#), wet springs are

historically linked to increased vegetation growth and subsequent severe late-season fires. Check out the Weather West blog post for an overview of the forecast, potential impacts, and the atmospheric conditions driving this wild weather.



Three-Month Climate Outlook



As we look forward to the start of summer, the NOAA Climate Prediction Center is calling for ~40-50% chance of above normal temperatures across most of California for this time of year. The precipitation forecast is perhaps less certain, with equal probability of below normal, above normal, or near-normal precipitation amounts – with the exception of ~33% chance of above normal precipitation in the Sierra during the May to July period.

Climate Prediction Center Seasonal Outlooks

California's 4th Climate Change Assessment: North Coast Region



California's North Coast is known for its rugged terrain, wild environments, ample precipitation, and rural nature. While the cooler temperatures, higher precipitation, and lesser human impact aid the region's climate change resiliency, warmer temperatures and greater precipitation fluctuations may stress North Coast ecosystems and their social services. The 4th California Climate Change

Assessment [North Coast Regional Report](#) highlights some of the impacts of anticipated climatic changes. Below are a few key findings; more detailed information can be found in the full report.

- Annual precipitation is anticipated to remain the same, but the wet season will shorten and storms will intensify. A longer dry season may increase plant and animal stress, while more intense rain storms may increase the risk of landslides and floods.

- **Snowpack** is projected to decline. Coupled with shorter but more intense wet seasons, **streamflow** is expected to be lower during summer dry season and higher during winter wet season.
- **Temperatures** will warm over the region, with larger increases in inland areas. Average annual **maximum temperatures** may increase by as much as 9°F by the end of the century.
- Drier and warmer summers mean a **longer fire season**, **more frequent fires**, and **more area at risk**.

North Coast Regional Climate Change Assessment

New Research May Improve Advanced Warning for Central Valley Heatwaves

California heatwaves have damaged crops, killed livestock, and stressed farm workers. With climate change expected to increase the frequency, intensity, and duration of extreme heat exposure, understanding the drivers of heatwaves



and improving our ability to forecast these events is an important step toward adapting to this new normal.

Published in *Advances in Atmospheric Sciences*, [a new paper](#) links atmospheric circulation patterns over the tropical Indian and eastern Pacific oceans with heatwaves in California's Central Valley. Researchers found a relationship between the onset of heatwaves in the Central Valley with certain active phases of the [Madden-Julian Oscillation](#) (MJO). When this pattern leads to especially strong tropical convection in the eastern Pacific, Central Valley heatwaves often follow approximately 1-2 weeks later. As scientists improve our understanding of these global weather connections, our ability to forecast weather extremes like heatwaves also improves. In fact, some scientists suggest that [forecasts for the onset of Central Valley heatwaves may be possible 3-5 weeks in advance](#) – lead time that would certainly benefit water resources managers and others across the agriculture sector.

Upcoming Webinar: Establishing Relationships Between

Wildfire and Drought Indices

The California-Nevada Drought Early Warning System (CA-NV DEWS) holds regular drought and climate outlook webinars. The May 28th webinar will also feature a discussion with Dan McEvoy from the Western Regional Climate Center (WRCC), lead author on [new research](#) examining the relationships between drought and key fire danger indices. This work suggests that drought indices can inform seasonal fire potential outlooks early in summer, and can provide value-added information for fire management groups.

Beyond this important discussion on fire and drought, the webinar will provide stakeholders and other interested parties in the region with timely information on current drought status and impacts, as well as a preview of current and developing climatic events (i.e. El Niño and La Niña).

The webinar will take place at 11 a.m. PT, Tuesday May 28, 2019. Please follow the button below to register.

[WEBINAR REGISTRATION](#)

Other Upcoming Events

(click on each for more info)

[Prescribed Fire on Private Lands Workshop](#)
[Georgetown, CA - May 17-18](#)

[Camp Fire Research Symposium](#)
[Chico, CA - June 4](#)

Stay in Touch

Let us know if you have news worthy items, outputs or products, or associated resources that may be of interest to the USDA California Climate Hub community. You can email items to [Steven Ostoja](#), USDA California Climate Hub Director, or to [Lauren Parker](#), USDA California Climate Hub Postdoctoral Fellow.



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