

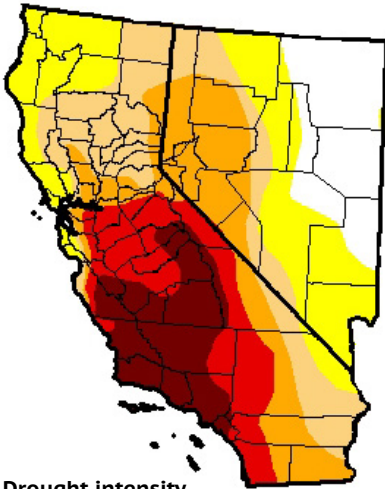


NATIONAL INTEGRATED DROUGHT INFORMATION SYSTEM

CALIFORNIA-NEVADA DROUGHT OUTLOOK

AUGUST 2016

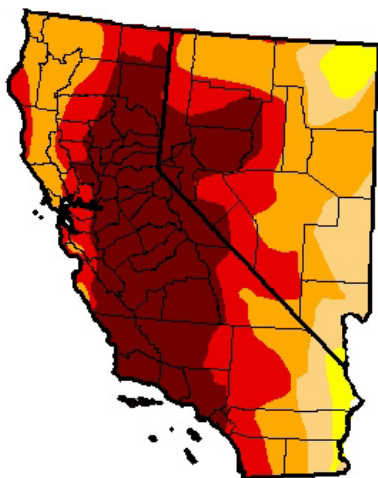
U.S. DROUGHT MONITOR FOR AUGUST 23, 2016



Drought intensity

- D0: Abnormally dry
- D1: Moderate drought
- D2: Severe drought
- D3: Extreme drought

U.S. DROUGHT MONITOR FOR AUGUST 25, 2015



<http://droughtmonitor.unl.edu/>

CURRENT CONDITIONS

While drought conditions in some portions of the region like Northern California and northeast Nevada have improved since this same time last year, much of California and Nevada is still in the midst of a prolonged and record-breaking drought. The central coast and southern regions of California continue to experience high temperatures and dry conditions, which have further exacerbated the wildfire season.

Despite improved precipitation as compared to 2015, the region as a whole continues to experience a large precipitation deficit. June of 2016 brought pockets of much needed precipitation to the Great Basin and Northern California. This in addition to near average snowfall over the winter contributed to improved reservoir levels in Northern California with some reaching above or nearing average storage levels.

In 2015 California's 8 and 5 station indices were both at record low levels, but in 2016 the 8-station index was above and the 5-station was near average. A new 6-station index in the Tulare Basin recorded levels near, but still below average for 2016. While these increased accumulations do not make up for the accumulated precipitation deficit over the last four years of drought they are an important improvement because of the importance of precipitation in the Sierra Nevada on water resources for the state.

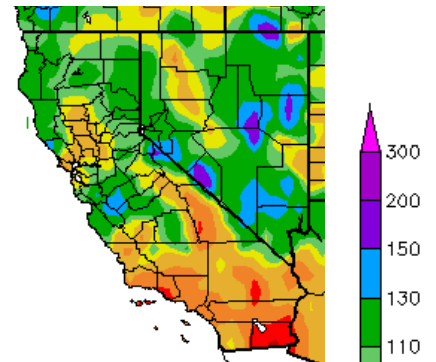
CLIMATE OUTLOOK

As last year's El Niño continues to deteriorate and cooler than normal sea surface temperatures (SST) are observed in the tropical Pacific Ocean, the chances of a La Niña developing are 57%. While the odds of a La Niña developing are greater than normal (by approximately 60%), it is important to note that there is also a 38% chance of a neutral year (neither El Niño or La Niña) (27% higher than normal).

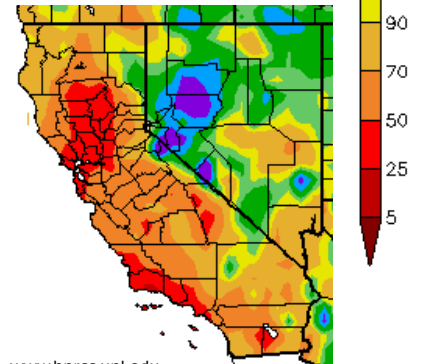
If a La Niña does develop it is expected to be a relatively weak event. Each La Niña is different, but on average they result in 15-20% drier than average conditions in Southern California, modestly drier conditions in Southern Nevada and wetter than average in Northern Nevada. There is not a consistent signal for Northern California where much of the states water resources originate. This means added uncertainty for seasonal forecasts for the region and the associated impacts on water resources for the state as a whole.

The effect of La Niña on winter precipitation is strongest in Southern California where drier than normal conditions tend to develop. If a typical La Niña does develop this region has been one of the slowest to recover from the current drought and a La Niña could

% NORMAL PRECIPITATION JANUARY-JULY 2016

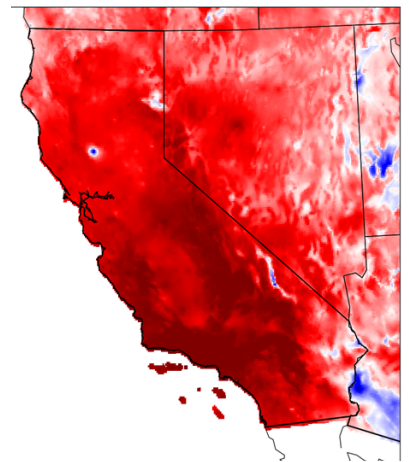


% NORMAL PRECIPITATION JANUARY-DECEMBER 2015



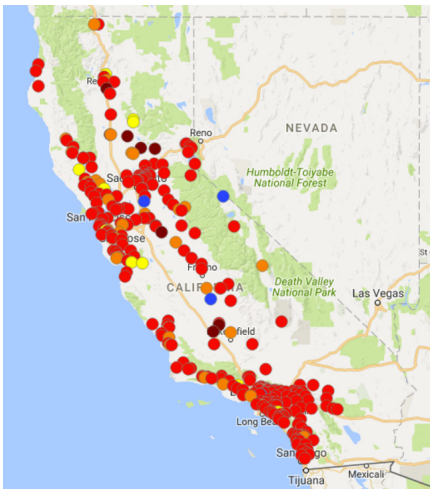
www.hprcc.unl.edu

THE MISSING YEARS: PRECIPITATION DEFICITS OVER FOUR WINTERS 2011-12/14-15



EXCESS + 2 YEARS DEFICIT - 2 YEARS

Expressed in Units of Average Annual Precipitation. Based on PRISM. Courtesy Paul Iniguez, NWS Phoenix.



California actions in response to drought

- Mandatory water restrictions
- Voluntary water restrictions
- Drought emergency/water shortage declared
- Agricultural reductions
- Other actions

See an interactive version of this map at <http://www.acwa.com/content/drought-map>

California continues to encourage an ethic of water conservation. In the summer of 2016 the state campaign "Save Our Water" launched a new campaign "Water Conservation, It's for Life" to encourage the public to incorporate water-efficient behaviors into their lifestyle for the long term.

CONTRIBUTORS

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ABOUT THIS OUTLOOK

On August 24, 2016 NIDIS and its partners held a California-Nevada DEWS Drought & Climate Outlook Webinar as part of a series of regular drought and climate outlook webinars designed to 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 like La Niña.

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The presentations from this webinar can be accessed here: <https://www.drought.gov/drought/calendar/events/california-nevada-drought-early-warning-system-drought-climate-outlook-webinar-aug>

potentially exacerbate those conditions.

While driven by different factors, it is interesting to note that the last four years of drought in the region have been drier than an average La Niña, especially for the northern portions of California and Nevada.

IMPACTS & UPDATES

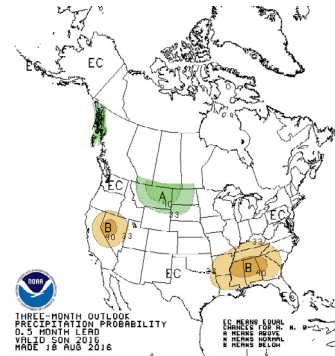
California: As part of Governor Brown's Executive Order for Water Conservation (B-37-16) on August 16, 2016 the California State Water Resources Control Board (SWRCB) released the results of stress tests conducted by 379 water suppliers across the state. Assuming a repeat of the last 3 years dry conditions, 36 water suppliers indicated a potential supply shortage in 2019. Statewide water conservation efforts continue, in June of 2016 statewide water conservation was measured at 21.5%, just under the target of 25%.

Since January of 2014, 122 of the 176 projects approved for emergency funding by SWRCB for interim replacement drinking water systems have been executed. Most recently, the California Department of Water Resources began connecting homes in unincorporated East Porterville to the City of Porterville's

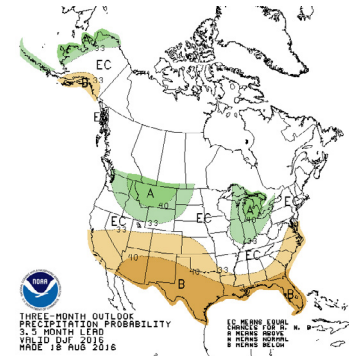
water system. This new distribution system will replace private wells that were either dry or contaminated. The Department of Social Services continues distribution of emergency food assistance in farmworker communities suffering high unemployment due to drought. Recent distributions were made in Fresno, Kings, Tulare, Kern, Merced, San Luis Obispo, Santa Cruz and Sutter counties.

The prolonged and unprecedented drought, above average temperatures and exacerbated bark beetle infestations have resulted in vast tree mortality across large regions of California. In response Governor Brown established a Tree Mortality Task Force comprised of state and federal agencies, local governments, utilities, and various stakeholders that will coordinate emergency protective actions, and monitor ongoing conditions. Tree mortality has increase wildfire potential. CALFIRE has reported 4,084 fires covering 150,498 acres in 2016 through August 20 on non-federally managed lands. Current active responses are focused on three large state-jurisdiction fires in or near Big Sur (Soberanes Fire), San Luis Obispo county (Chimney Fire) and Santa Barbara (Rey Fire).

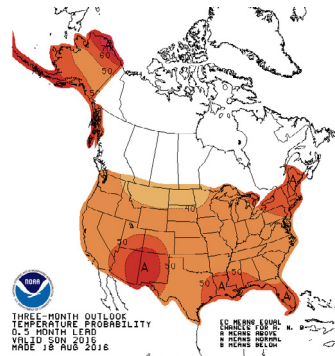
**OUTLOOK: PRECIPITATION
SEPT-OCT-NOV**



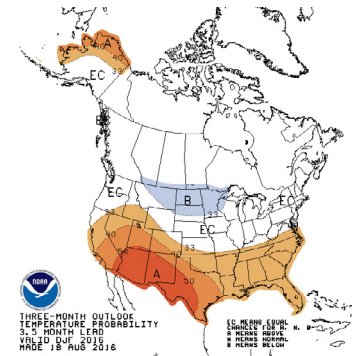
DEC-JAN-FEB



**OUTLOOK: TEMPERATURE
SEPT-OCT-NOV**



DEC-JAN-FEB



<http://www.cpc.ncep.noaa.gov/>

