

# EL NIÑO & THE SOUTHWEST DROUGHT STATUS UPDATE

OCTOBER 26, 2018



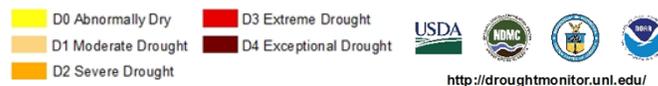
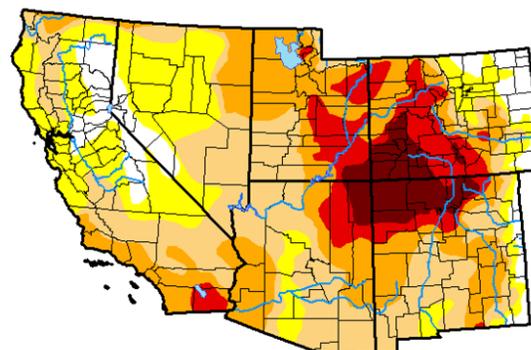
## Conditions Favor El Niño this Winter: Significant drought expected to lessen in parts of the Southwest and persist in others.

- From October 2017 to September 2018, the Southwestern U.S. experienced below-normal to record-low precipitation.
- Long-term precipitation deficits and record-high temperatures have contributed to very low streamflows and reservoir levels.
- Conditions favor the development of El Niño this winter, but significant drought is expected to persist in most of Utah and Colorado.

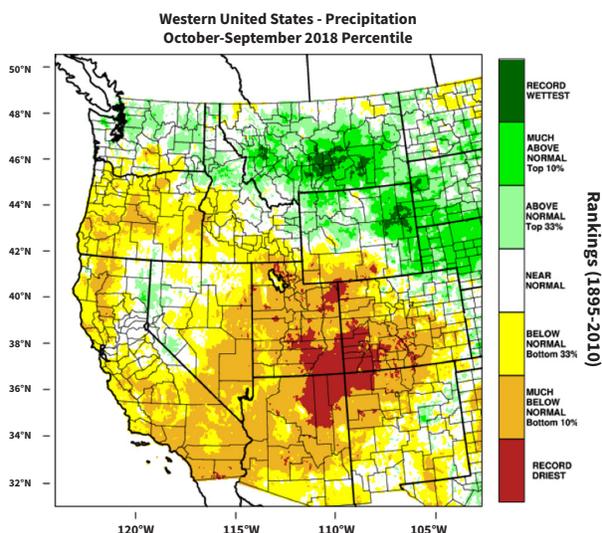
### WATER YEAR (OCTOBER 2017-SEPTEMBER 2018)

- **Water Year precipitation** was below-normal to record-driest (Fig. 2).
- **Water Year mean temperature** was much above-normal to warmest on record (Fig. 3)

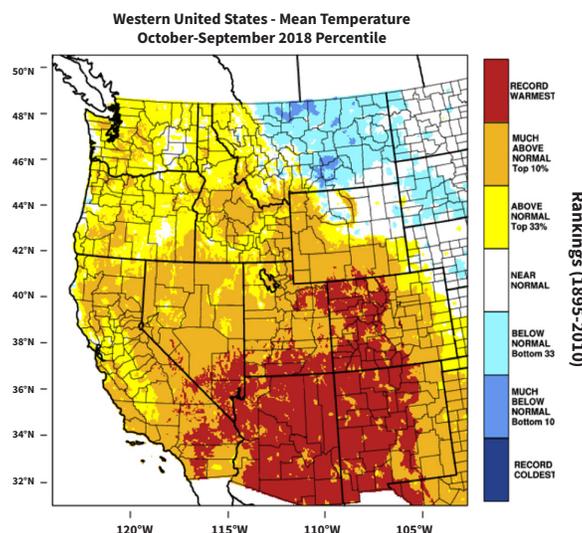
### U.S. Drought Monitor Southwest October 23, 2018 (Released Thursday, Oct. 25, 2018)



▲ Fig 1. US Drought Monitor for the Southwest region, October 23, 2018



▲ Fig 2. October 2017-September 2018 Water Year Precipitation Percentile Rankings. Source: WestWide Drought Tracker, University of Idaho, Western Regional Climate Center

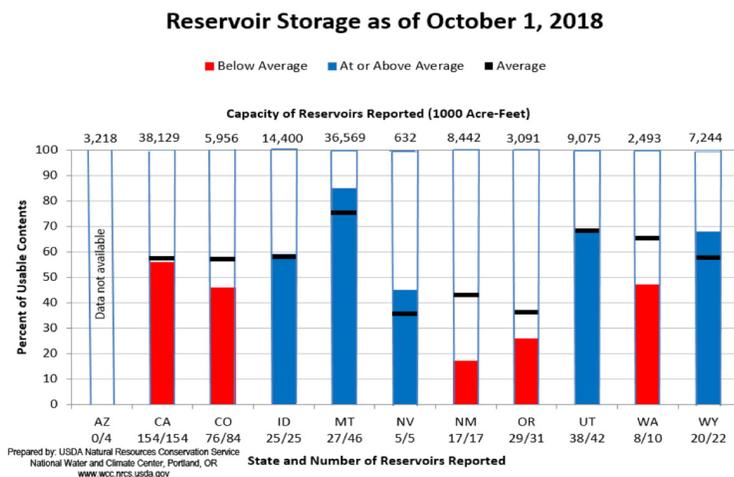


▲ Fig 3. Water Year Mean Temperature Percentile Rankings. Source: WestWide Drought Tracker, University of Idaho, Western Regional Climate Center

## DROUGHT IMPACTS

- **Utah State of Emergency** declared due to drought on 15 October 2018.
- **Hydrologic impacts:** Substantial precipitation deficits over the last 12-24 months have led to very low streamflows in western Colorado, northern New Mexico, and Utah. Natural flows on the Rio Grande River dried up in July.
- **Reservoir levels** are well-below average in New Mexico and below average in Arizona and Colorado (Fig. 4).

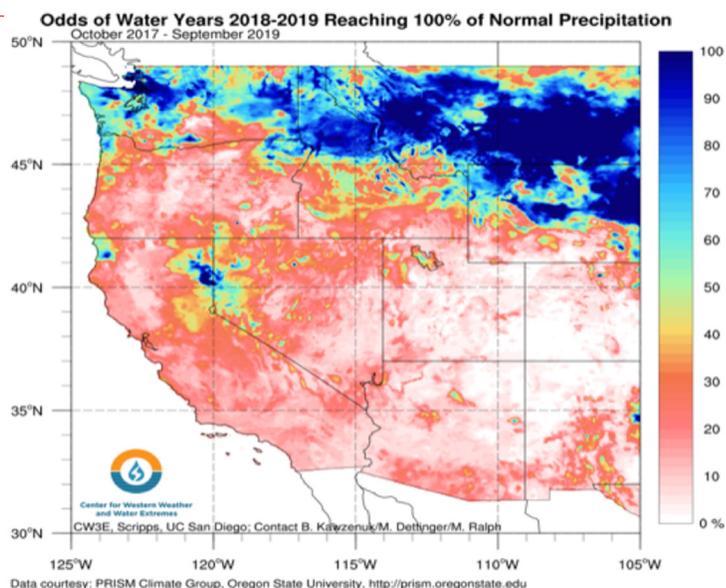
**Fig 4.** Reservoir Storage as of October 1 2018. Source: USDA Natural Resources Conservation Service National Water and Climate Center



## OUTLOOK

- There is a 70-75% chance of El Niño this winter; it is too soon to predict how strong El Niño may become. Weak to moderate El Niño events have more variation in precipitation than strong El Niño events.
- The odds of reaching 100% normal precipitation for October 2017 to September 2019 are low (Fig. 5).
- Significant drought expected to persist in Utah and Colorado and northern Arizona and New Mexico.

**Fig 5.** Across most of the region, odds are low of reaching 100% normal precipitation for the period of Oct 2017 to Sept 2019. Source: PRISM Climate Group, Oregon State University



## Special Thanks

This drought status report was developed from a webinar presented on 24 October 2018 by Dr. Gerry Bell, Meteorologist, NOAA's Climate Prediction Center, and Dave Simeral, Associate Research Scientist - Climatology, Western Regional Climate Center, Desert Research Institute.

Drought and Climate Outlook Webinars are offered for regional Drought Early Warning Systems. More information can be found at: <https://www.drought.gov/drought/calendar/webinars>

