

CALIFORNIA-NEVADA DROUGHT OUTLOOK

DECEMBER 2019



▲ Fig 1. U.S. Drought Monitor for Dec. 5. Source: droughtmonitor.unl.edu

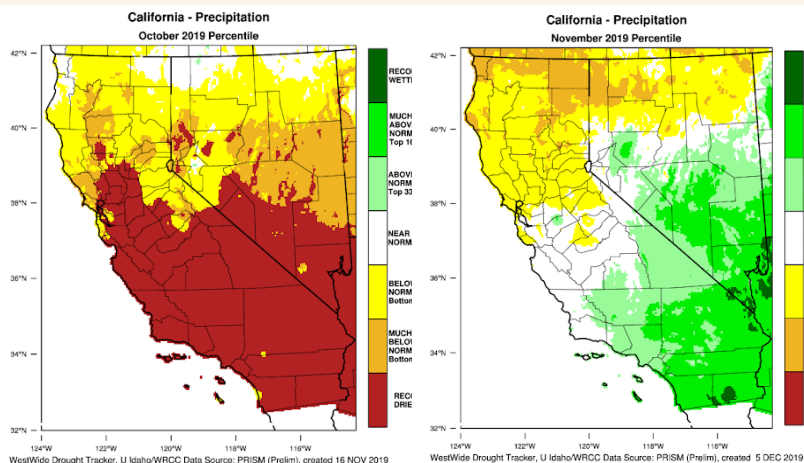
Current Drought Conditions

The 2020 water year (Oct. 2019 - Sept. 2020) started dry in California-Nevada and led to the presence of dry or drought conditions across the region, first in southern Nevada followed by expansion of abnormally dry conditions across both states, according to the U.S. Drought Monitor. Recent precipitation has removed abnormally dry conditions (D0) in parts of southern California and moderate drought (D1) in southern Nevada. As of Dec. 5, 2019, ~82% of the region is in D0 or D1 conditions. Conditions will likely continue to improve with December precipitation.

Regional Climate Update

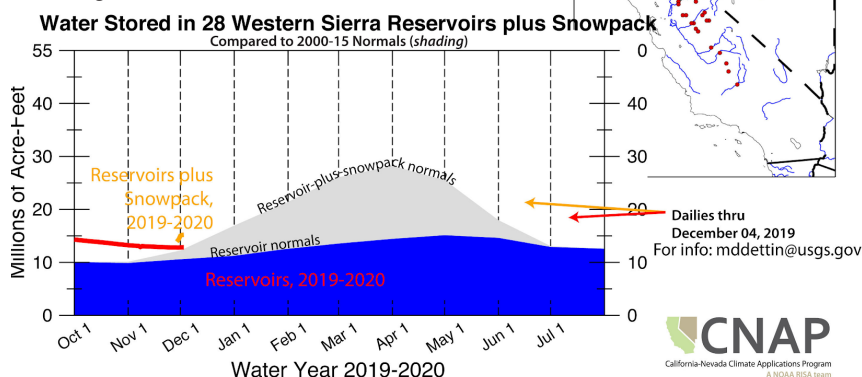
Parts of California and Nevada experienced record driest conditions in October (Fig. 2), with nearly the entire region below 1895 - 2010 normals. Early November also remained dry. Several drought impacts were seen from this early dryness including elevated fire potential until the first soaking rains and impacts to rangeland health. The first significant precipitation event brought beneficial rain and snow to Southern California and Nevada, and parts of the eastern Sierra. Rain and snow have continued, and by the end of November central-southern California-Nevada are now above normal. Precipitation has continued into December and improved drought conditions.

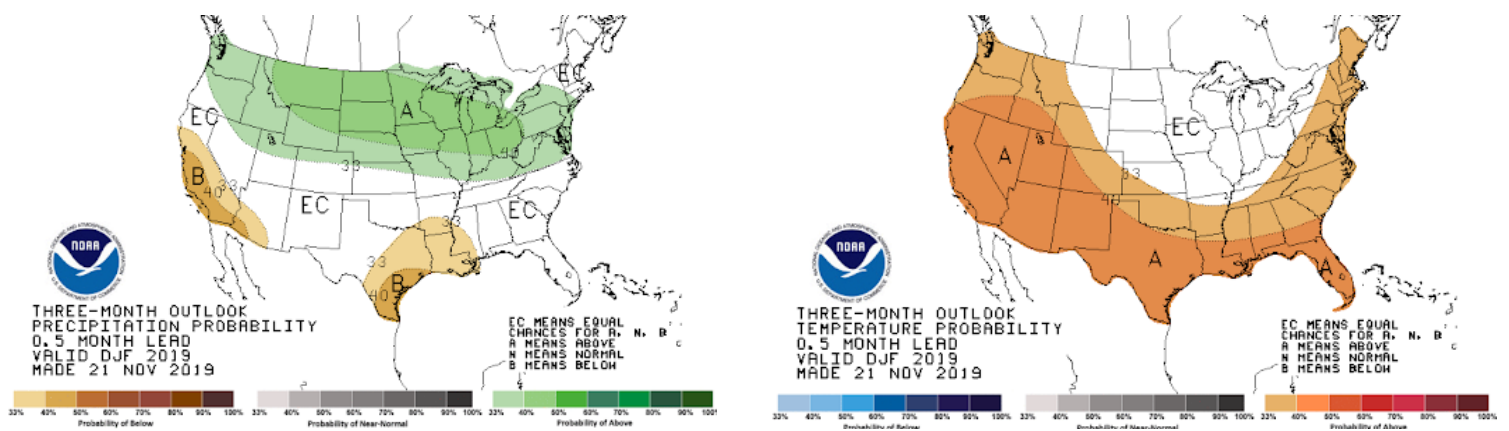
Major reservoir levels remained above normal even with a dry start to the water year. At the time of the webinar (Nov. 25th), low Sierra snowpack levels remained. But by the end of November and into early December, the snowpack start plus reservoir conditions (Fig. 3) began to show to be above normal. However snowpack conditions across the Sierra's remain below normal, more notably in the Northern Sierra (as of Dec. 6th).



▲ Fig. 2. Precipitation percentile for Oct. and Nov. 2019 Source: [West Wide Drought Tracker](http://WestWideDroughtTracker.com)

▼ Fig. 3. Time series from Oct 2019 through July 2020 shows: 2000-2015 average (normal) reservoir amount in blue (totals from 28 western Sierra reservoirs with locations shown in red dots on the map); reservoir normals plus normal snowpack with time (in grey); the current reservoir levels (red line); current reservoir levels plus snowpack (in orange). Source: [CNAP](http://CNAP.org)





▲ Fig. 4. Temperature and precipitation probabilities for December to January, 2019. Source: [Climate Prediction Center](#). A = chances of Above Normal, EC = equal chances of Above, Below, or Normal, B = chances of Below Normal.

Drought & Climate Outlook

Precipitation: As of Nov. 21, the seasonal (December - February) precipitation outlooks show odds tilted towards below normal over much of California and equal chances of above, below, and normal precipitation over the rest of California-Nevada. Seasonal drought conditions were also predicted to be removed in southern Nevada (as did happen as of Dec. 3) with development likely in the central California coast.

Temperature: Warm temperatures are favored over California-Nevada through early winter with >40% chance of above-normal December-February temperatures (Fig. 4).

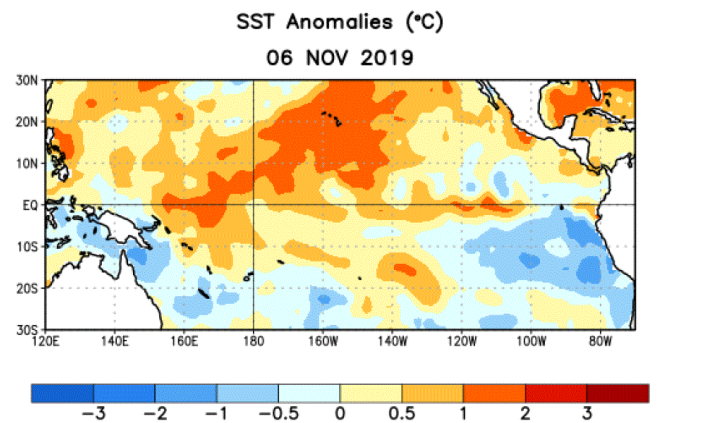
ENSO: ENSO neutral conditions continued through the end of summer with near-to-above average sea surface temperatures across most of the central and eastern equatorial Pacific Ocean (Fig. 5). [NOAA's ENSO alert system](#) status is currently Not Active and ENSO neutral is favored during the winter 2019-20 (~70% chance), continuing through spring 2020 (60-65% chance). For more information, check out the [NOAA ENSO blog](#).

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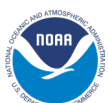
▲ Figure 5. Average sea surface temperature (SST) anomalies (°C) for the week centered on November 6, 2019. Anomalies are computed with respect to the 1981-2010 base period weekly means. Source: [NWC CPC](#)

Preparing Your Winter Toolkit

In addition to providing an overview of the current conditions and outlook for the rest of a fall into winter, this webinar also provided tools listeners can use to prepare for, monitor, and respond to the climate conditions this winter. A list of tools with hyperlinks that were shared on the webinar can be found here: <https://www.drought.gov/drought/calendar/events/california-nevada-drought-climate-outlook-webinar-november-25-2019>

About this Outlook

On November 25, 2019, NIDIS and its partners held this webinar as part of a series of drought and climate outlook webinars designed to provide stakeholders in the region with timely information on current drought status and impacts, as well as a preview of current and developing climatic events. A video of this webinar can be accessed here: <https://www.drought.gov/drought/calendar/events/california-nevada-drought-climate-outlook-webinar-november-25-2019>



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