



# Drought Update Report

NWS Reno

Issued: 04/22/2021

Schedule: Monthly during periods of extreme drought designation



---

## Drought conditions persist and expand

**Synopsis:** The absence of any major spring storms has continued into mid-April, with precipitation generally ranging from 30 to 50% of average for the past 30 days (Figure 1), with similar numbers since March 1st. Maximum snowpack was observed in most basins in late March ranging from 60 to 80% of normal peaks. While the timing of peak snow water equivalent (SWE) was just a few days earlier than normal, melt rates have been high (figure 2). For the combined Tahoe, Truckee, Carson, Waker basins, nearly 50% of the peak SWE has already melted based on SNOTEL measurements, and this is among the top 3 years for greatest SWE losses for these dates since SNOTEL observations began in the early 80s. This rapid and early melt has improved mountain soil moisture conditions significantly, but SNOTEL observations still indicate drier than normal conditions (Figure 3). Despite the early and rapid snowmelt, current streamflows are generally near or below average on unregulated rivers. Evaporative Demand has been above normal for the Sierra and Southern Nevada, but near normal for Northern Nevada and NE California (Figure 4). Water year to date observed streamflow volumes range from ~ 20 to 50% of normal. April to July runoff forecasts have continued to creep down with the dry spring and now range from ~10 to 40% of normal (Figure 5). The US Drought Monitor indicated degrading conditions in NE California and Western Nevada. Currently the entire NWS Reno service area is classified in severe to extreme drought (Figure 6).

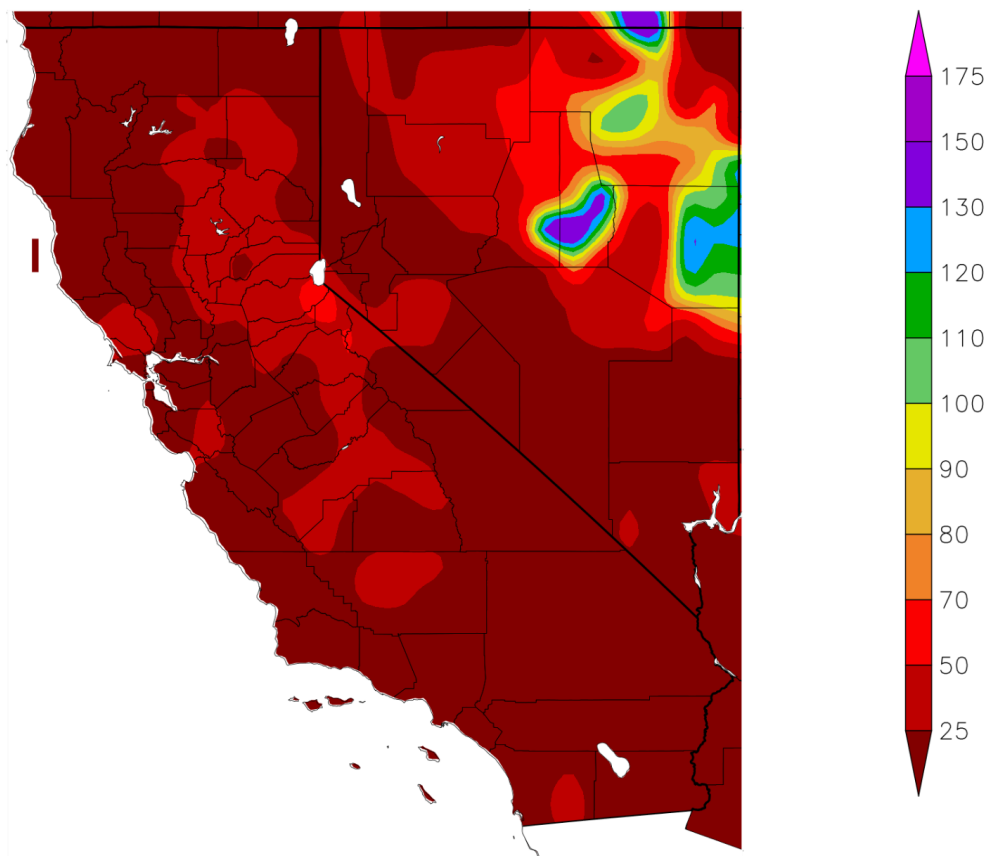
**Summary of Impacts:** Major impacts to agriculture and ranching. Reports include: Reduced irrigation water, early irrigation shut off, many stock ponds and springs dry, reduced hay crops, reduced forage, animal stress, reduced stock weights, and reduced grazing on public lands. Recreational impacts include: Early closure of winter recreation areas and low streamflows. Impacts reported in 2020: Extreme fire behavior and numerous rapidly spreading late fall fires, Hazardous air quality from smoke during summer and early fall, campfire ban in both California and Nevada and temporary California National Forest closure due to extreme fire danger. Note: Please report any new or missing drought impacts [here](#).

**Drought Mitigation Actions:** On March 5th, the USDA declared 14 counties in Nevada and 50 counties in California [primary natural disaster areas due to drought](#). The designation increases access to federal assistance for farm operators. On April 19th Storey county was added to the list of primary natural disaster areas due to drought. Previously reported actions include: Hauling water, moving livestock, selling livestock, supplemental feed, previous campfire restrictions, closure of recreational areas, heavy reliance on snowmaking at ski areas. Note: Please report any new or missing drought mitigation actions to the email below.

**Local Drought Outlook:** A moderate storm Sunday and Monday is expected to bring mountain snow and valley rains. While certainly not a drought buster, any rain and snow will be beneficial and help keep drought

conditions from worsening. The [8-14 day outlook from the CPC](#) leans towards warmer and drier conditions late in the month and into early May. Subseasonal ensemble weather models are favoring below normal precipitation for May. The [May through July outlook](#) also favors warmer conditions throughout the area, and below normal precipitation to the north, and equal chances to the south, perhaps indicating more favorable monsoon conditions than than the “nonsoon” of 2020 (Figure 7). Absent a strong monsoon, drought conditions are likely to persist and/or increase in magnitude.

## Percent of Normal Precipitation (%) 3/17/2021 – 4/15/2021



Generated 4/16/2021 at HPRCC using provisional data.

NOAA Regional Climate Centers

Figure 1. [30 Day Precipitation as percent of average.](#)

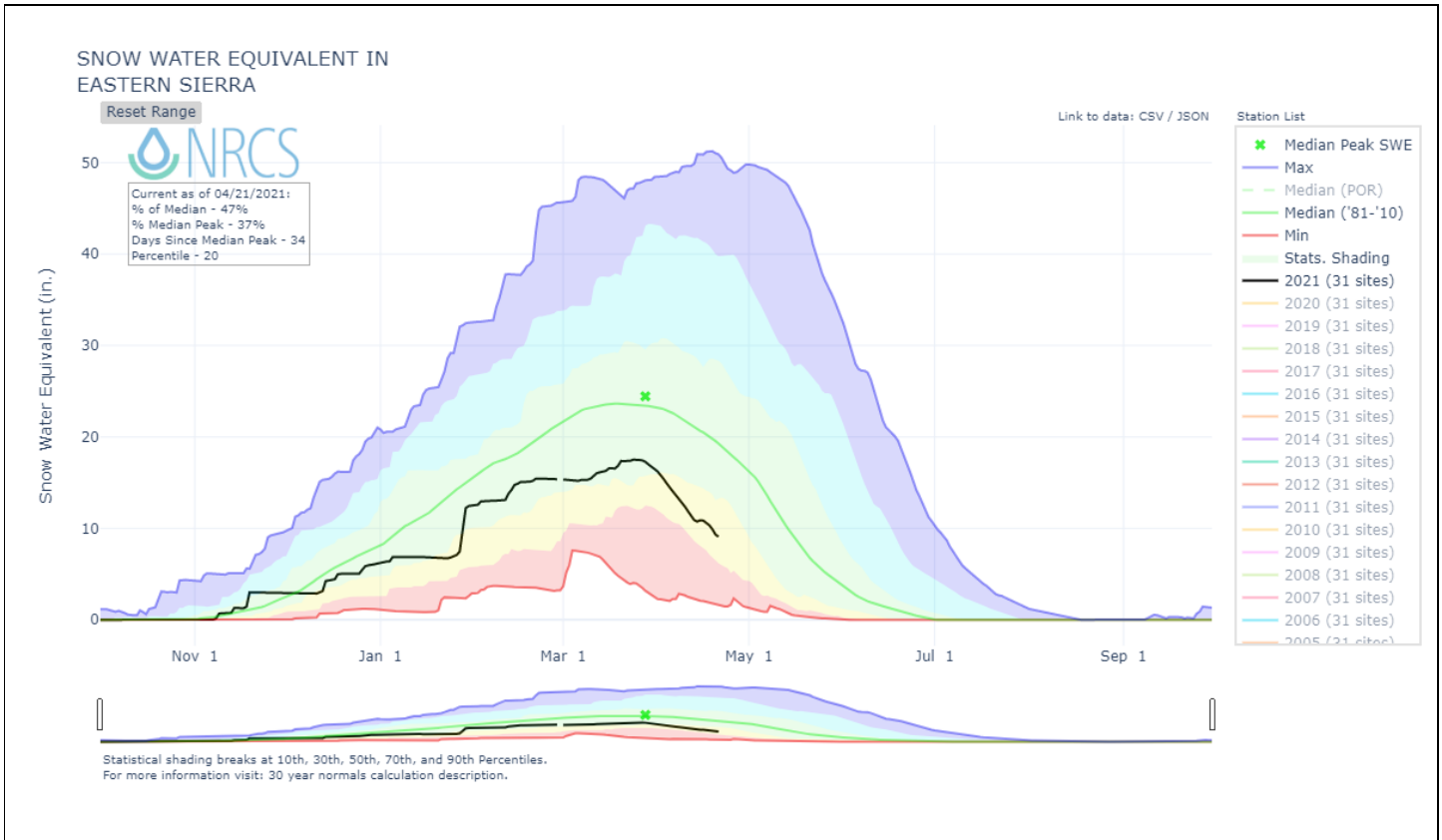


Figure 2. [SNOTEL](#) Snow Water Equivalent (SWE) for Tahoe, Truckee, Carson, and Walker basins.

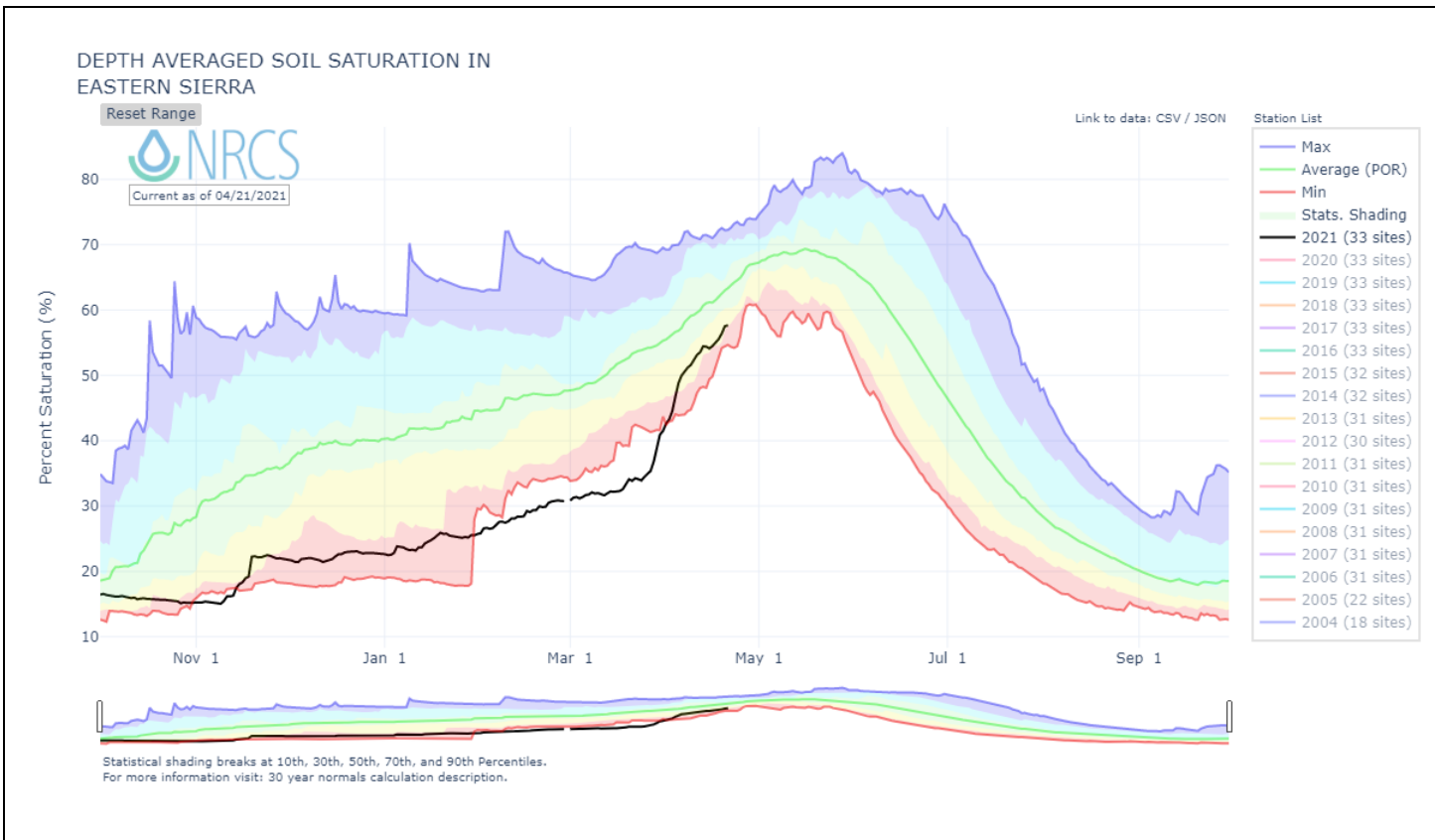


Figure 3. Average [SNOTEL](#) soil moisture for the combined Truckee, Carson, and Walker Basins. Note the relatively short period of record (2004-2021).

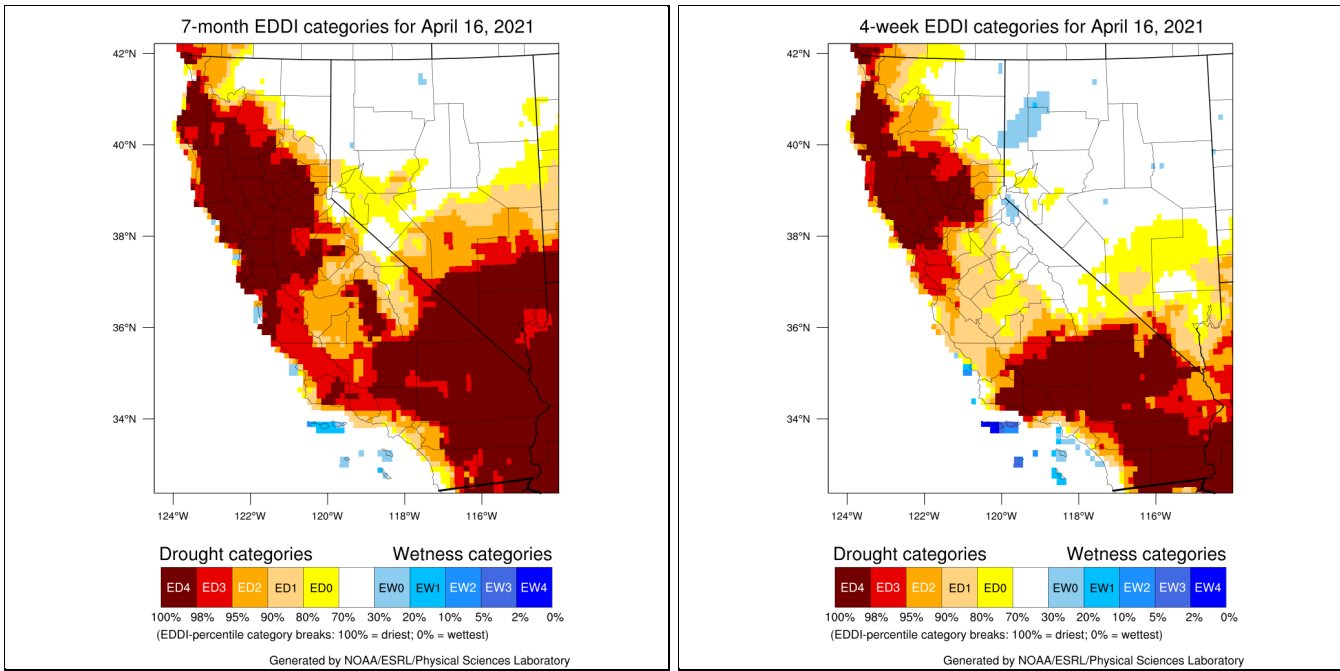


Figure 4. [Evaporative Demand Drought Index](#) for the past 7 months on the left, and last 4 weeks on the right.

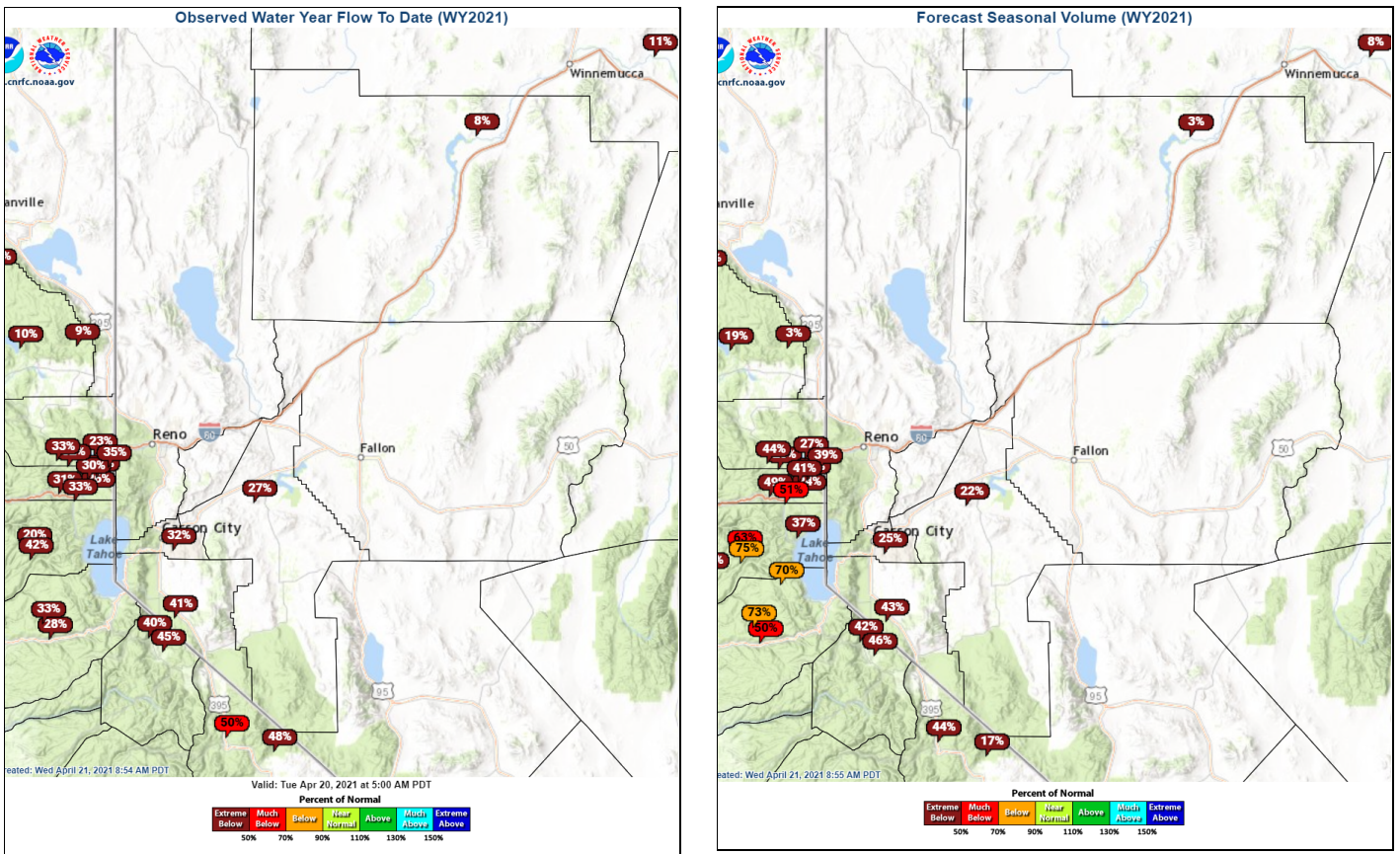


Figure 5. [CNRFC](#) Water Year 2021 Observed Streamflow volume to date and April-July 2021 Forecast.

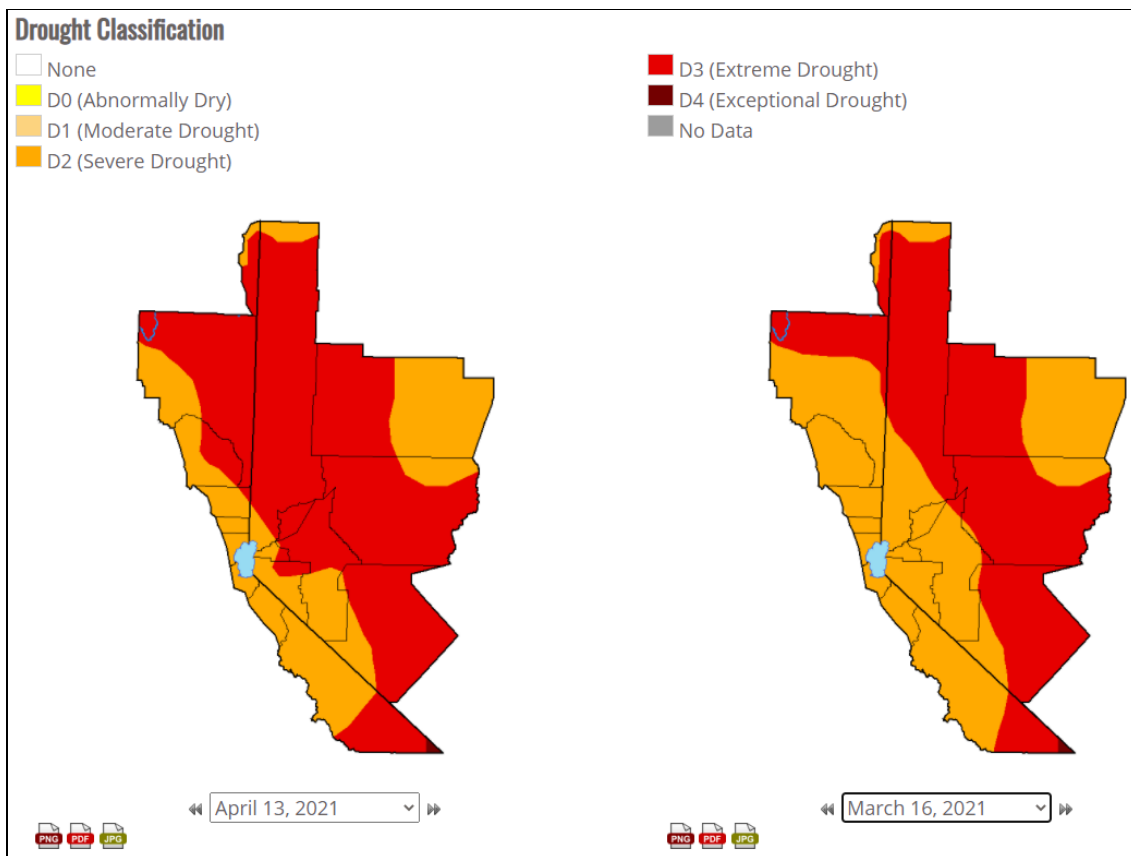


Figure 6. [USDM comparison](#) of drought most current drought conditions on the left, and Mid-March on Right.

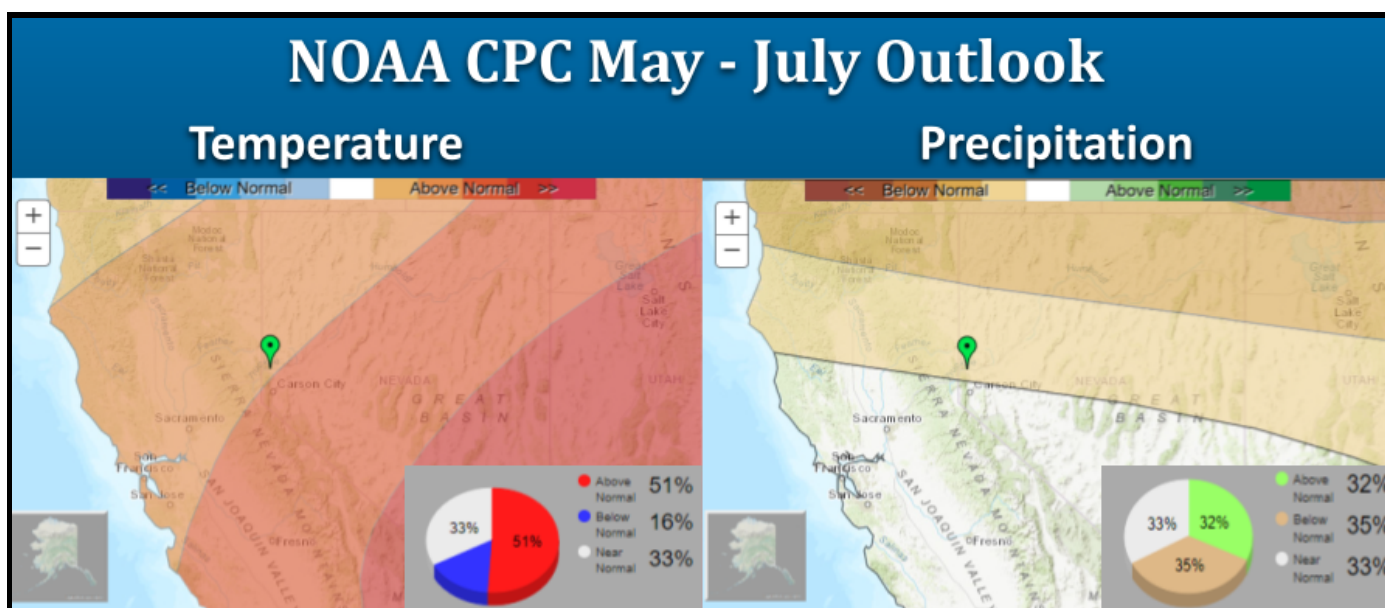


Figure 7. [NOAA Climate Prediction Center](#) May - July precipitation and temperature probability outlook. Pie charts based on Reno. Issued 4/15/21

**Weblinks:**

[Drought Monitor](#)

[New Drought.gov](#)

[NOAA CPC Drought page](#)

[CNAP Drought tracker](#)

[California Nevada River Forecast Center](#)

[WRCC Drought Tracker](#)

[WRCC Enso page](#)

[Evaporative Demand Drought Index](#)

[US Seasonal Drought Outlook](#)

Contact NWS Reno

2350 Raggio Parkway

Reno, NV 89512

775-673-8100

<https://www.weather.gov/rev/>

tim.bardsley@noaa.gov