Monthly Climate Report

NWS Reno NV

Issued: 11/11/2024

Weather Synopsis & Highlights:

After a warm start to the month with a cool finish, October ended with average temperatures between 3 to 6 degrees above average, which was in the top-10 percent warmest (Figure 1). Precipitation ended between 20-50% of average for much of the eastern Sierra. The inner-basins and ranges, northern Washoe County, and Lassen County finished between 70-120% of average (Figure 2).

October began with a prolonged stretch of very warm conditions with highs in the lower 90s for western NV valleys and lower 80s for Sierra communities, including record highs at Reno on the 2nd and 3rd, and at South Lake Tahoe on the 3rd. Highs continued to run about 10-15 degrees above average through the 11th. A Red Flag Warning was in effect on the 4th due to gusty winds and low humidity. Other than a few very sparse showers and isolated thunderstorms, which produced more wind than rain on the 5th and 6th, the first half of October was dry.

The second half of October began with sharply contrasting weather as a pair of much colder weather systems moved across the region. The first storm brought a solid area of wetting rainfall to nearly all of eastern CA and western NV on the 16th, with widespread reports of 0.25-0.75” across most of the eastern Sierra, northeast CA, and western NV from US-50 northward. Lighter rainfall amounts occurred south of US-50 and into eastern Mono County. A second cold front dropped southward on the 17th, bringing a round of scattered showers, thunderstorms, and a rain/snow mix to the higher Sierra (Photo 1). Rainfall amounts were more localized within the shower bands, with amounts generally between 0.05-0.30” along with multiple reports of small pea-sized hail. Temperatures plunged with highs only in the 50s for most of the region on the 17th and 18th with areas of dense fog in Truckee Meadows on the 17th (Photo 2). Freeze Warnings were in effect with widespread sub-freezing conditions on the mornings of the 18th and 19th, ending the growing season across lower elevations.

Dry conditions prevailed from the 19th through 24th, with temperatures warming to near average by the 20th and then pushing above average into the 70s from the 21st through 23rd, as a high pressure ridge built over CA-NV. A dry cold front brought temperatures back to below average on the 24th, before rebounding into the 70s again for the 26th-27th.

A stronger cold front brought strong wind gusts of 45-55 mph to far western NV on the 27th, with Sierra ridge top gusts of 70-100 mph. This system also brought light snow up to 3” in the Sierra, with a small area of lake-effect snow near the southwest shores of Lake Tahoe (Photo 3). Another quick moving weather system brought up to 4” of snow to the higher Sierra elevations around Tahoe (Photo 4) in the early morning hours of the 31st. These two weather systems abruptly ended the period of relatively warm weather for late October, with highs only in the lower-mid 50s across western NV for the final 4 days of the month, including the coolest Halloween in Reno since 2004!

Hydrology:

The 2025 water year has started with a bit more of a whimper than a roar. Generally dry conditions in the mountains with modest rains near mid month kept most rivers and streams near to somewhat below normal flows for the month (Figure 3). Soil moisture conditions are now near normal in the Truckee/Carson and Walker combined basins, and below normal in the Humboldt basin (Figure 4). Fall soil moisture before significant snowpack accumulation is important as it impacts the runoff efficiency in the spring and summer. Water year to date streamflow volumes are generally below average on the east side of the Sierra, and much below normal along the Humboldt (Figure 5). Reservoir conditions are above normal for this time of year in all major systems, but most dramatically in Lake Tahoe and Rye Patch in the lower Humboldt (Figure 6).

Drought Update:

Drought conditions (Figure 7) for northern Washoe and Lassen counties improved from moderate drought (D1) to abnormally dry (D0) due to above average precipitation in that particular area. Elsewhere, there was no change in the drought category, with the entire Hydrologic Service Area in abnormally dry (D0) conditions as of the end of October. At this moment, reservoir levels, soil moistures, and stream flows are keeping the area from more significant long term drought. However, if dry conditions continue into November, an expansion of moderate drought (D1) may be warranted across portions of the HSA.

Additional Information on Drought and Climate:

Report Drought conditions here
Nevada statewide Drought update
NV Living with Drought
Drought Monitor
New Drought.gov
California Nevada Drought Early Warning System
NOAA CPC Drought page
CNAP Drought tracker
California Nevada River Forecast Center
WRCC Drought Tracker
WRCC Enso page
WRCC Monthly Climate Summaries
Evaporative Demand Drought Index
US Seasonal Drought Outlook

Contact NWS Reno Climate Team
rev.climate@noaa.gov 775-673-8100
https://www.weather.gov/rev/

Photos:

Photo 1: A mix of rain and snow over Mount Rose Highway on the 17th. Courtesy of Nevada DOT.

Photo 2: Morning fog developed across Truckee Meadows on the 17th with visibilities as low as ⅛ of a mile. Photo courtesy of NV Energy on ALERTWest.

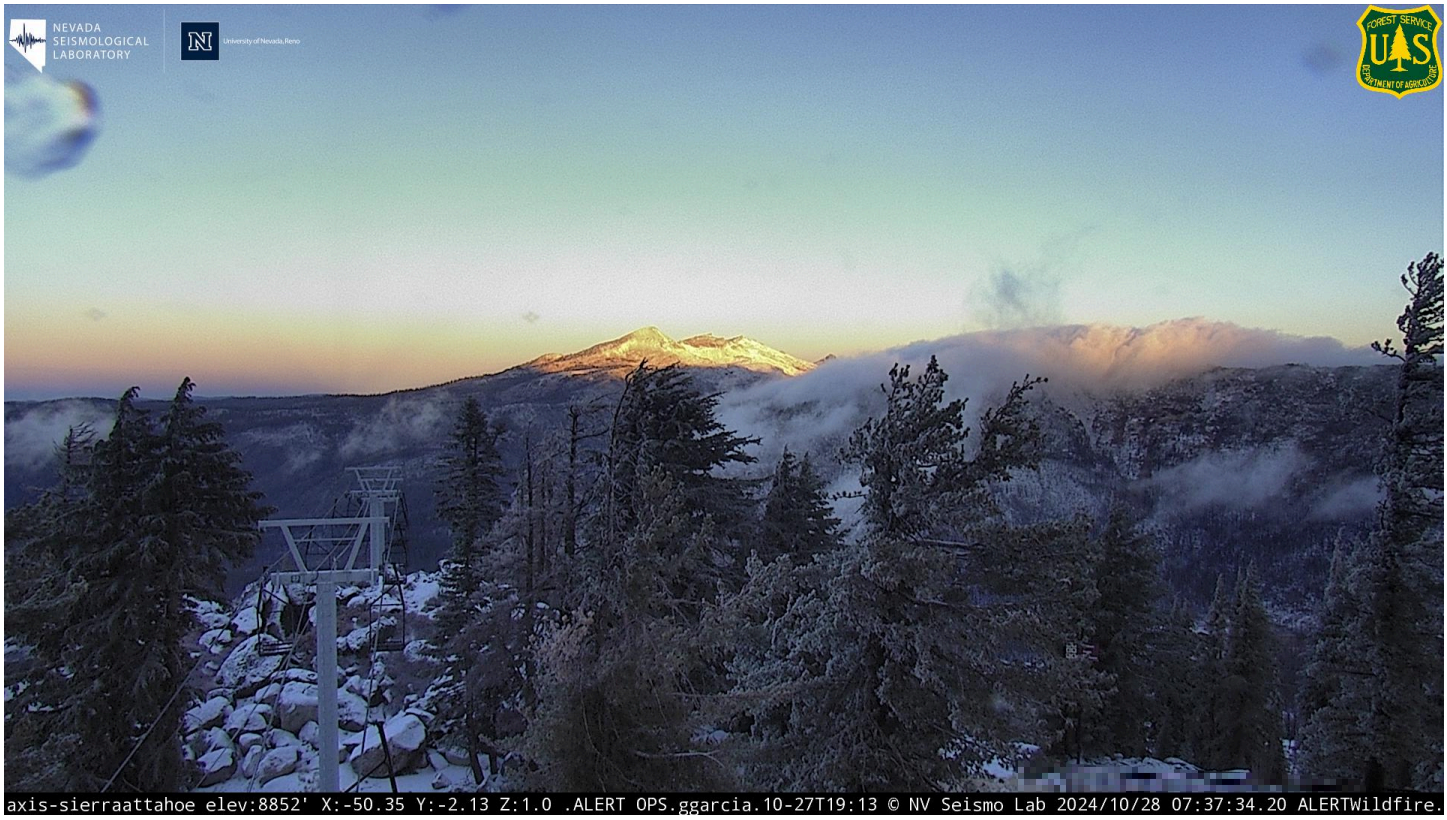

Photo 3: Snowfall across the Sierra on the 28th. Photo courtesy NV Seismological Laboratory on ALERTWest.

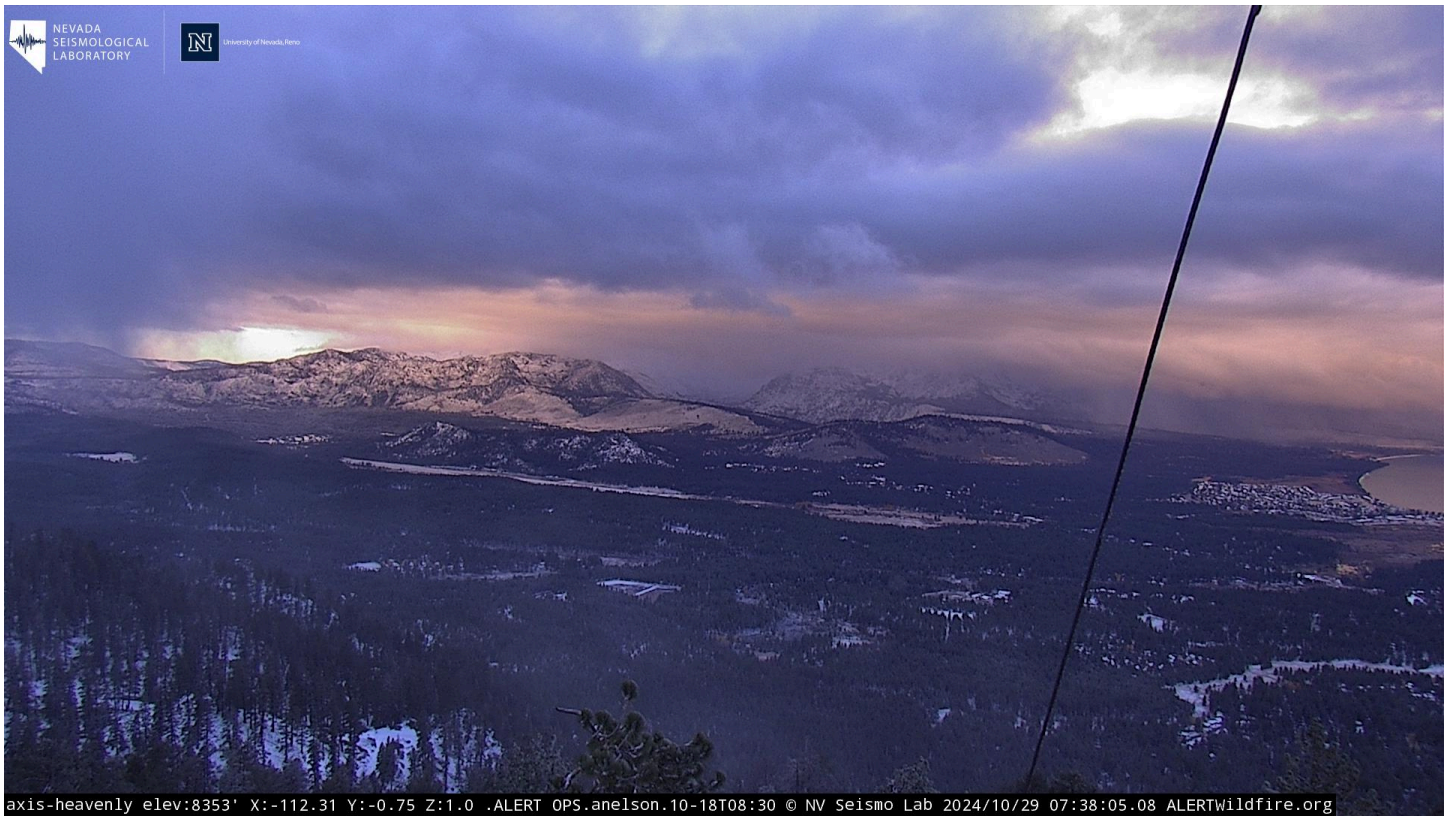

Photo 4: Light snowfall over the Sierra continued into the 29th. Photo courtesy NV Seismological Laboratory on ALERTWest.

Figures:

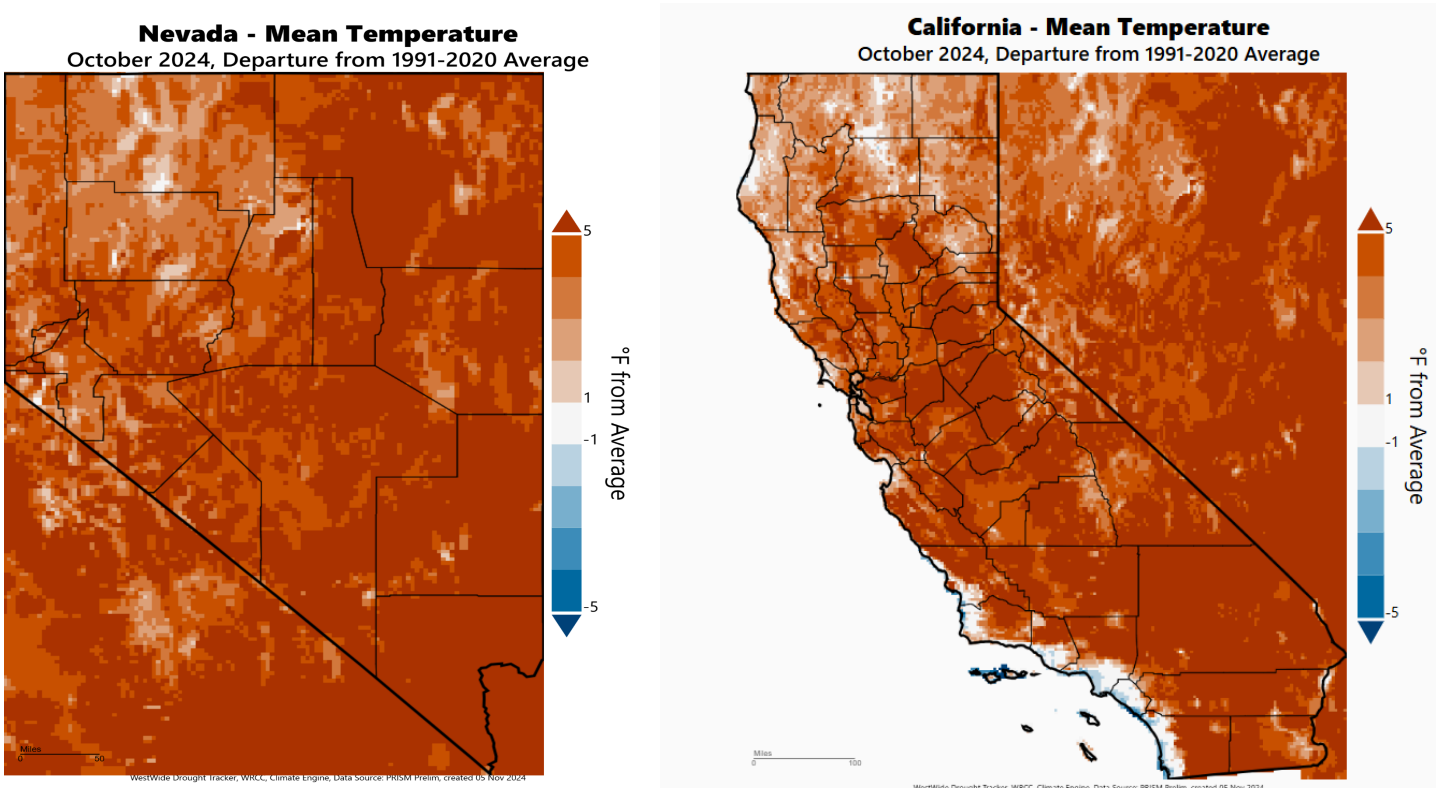

Figure 1: Nevada (left) and California (right) departure from normal temperatures for October 2024.(WWDT)

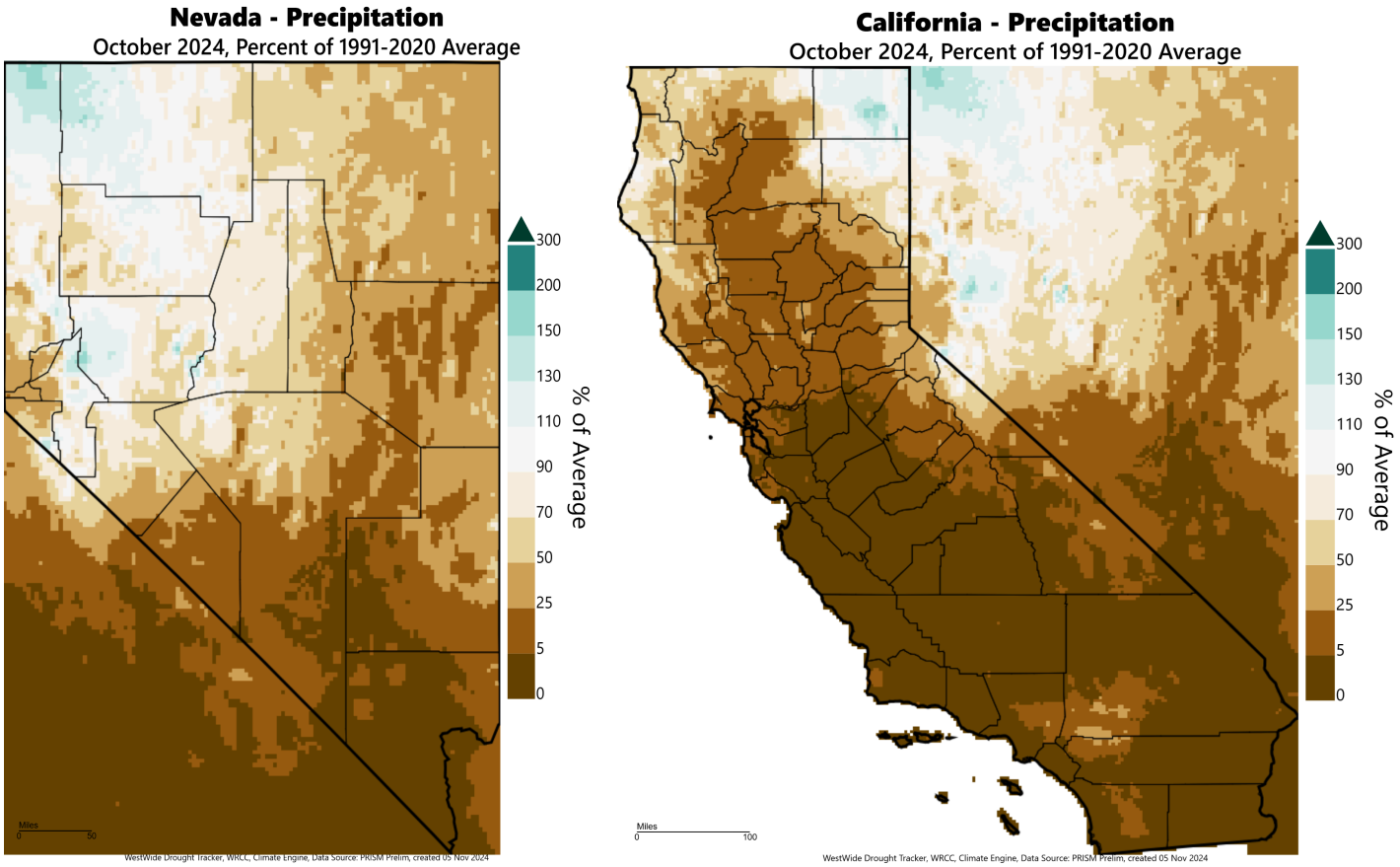

Figure 2: Nevada (left) and California (right) percent of normal precipitation for October 2024. (WWDT)

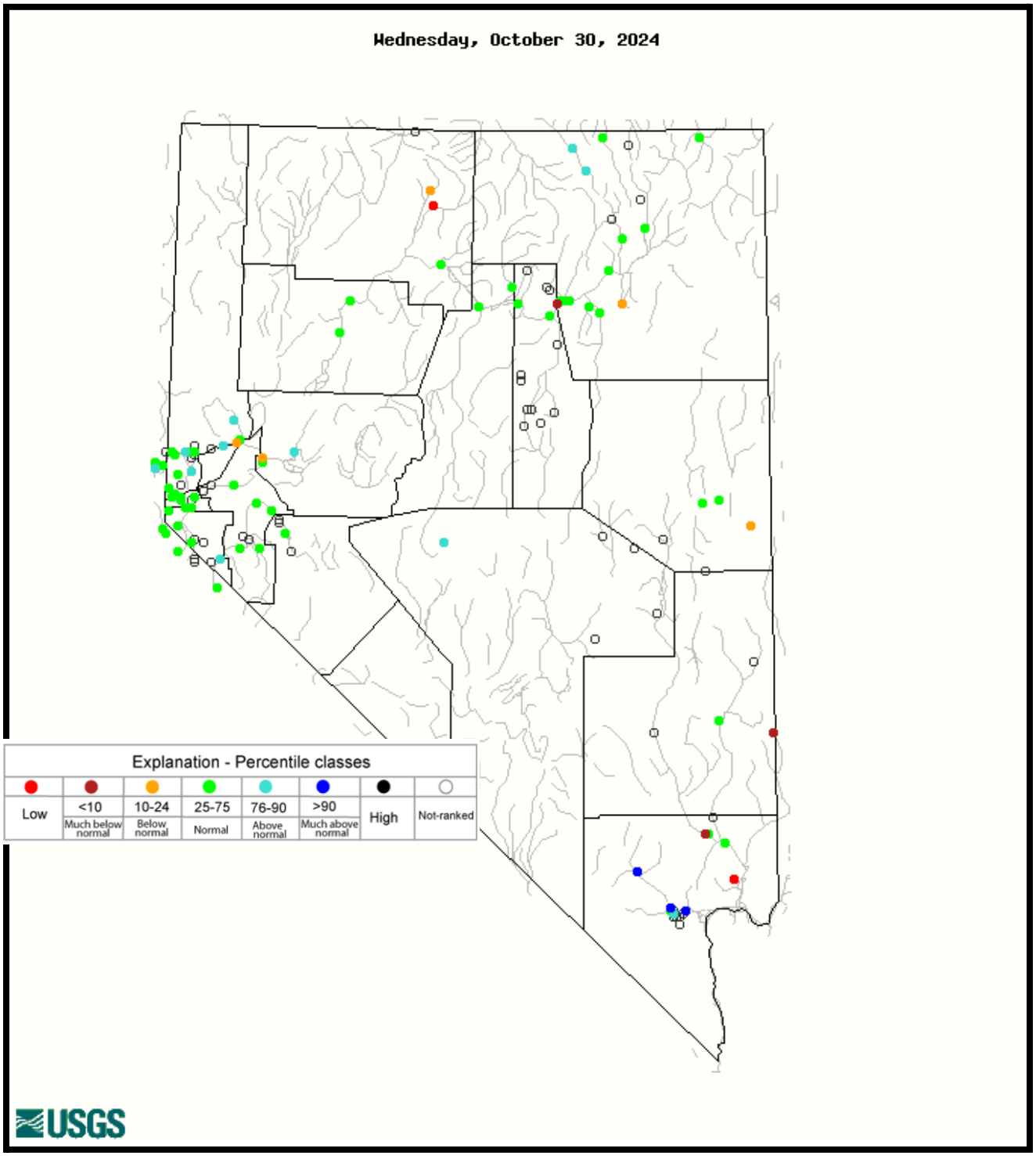

Figure 3: [USGS 28 day average streamflow]

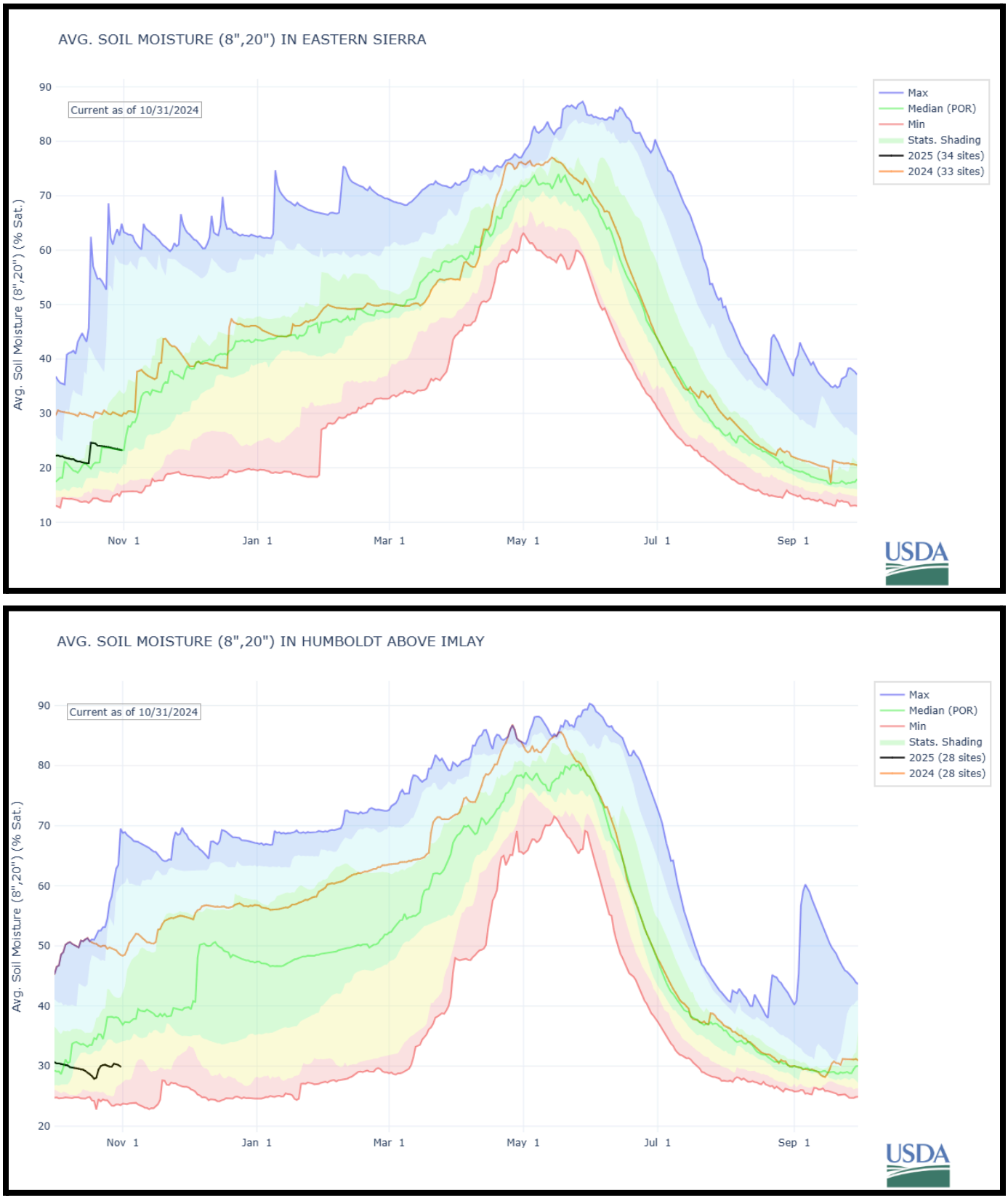

Figure 4: NRCS SNOTEL soil moisture for the combined Tahoe, Truckee, Carson and Walker basins (upper), and Humboldt basin (lower) indicated in black for the first month of water year 2025. Water year 2024 is plotted in orange for additional perspective.

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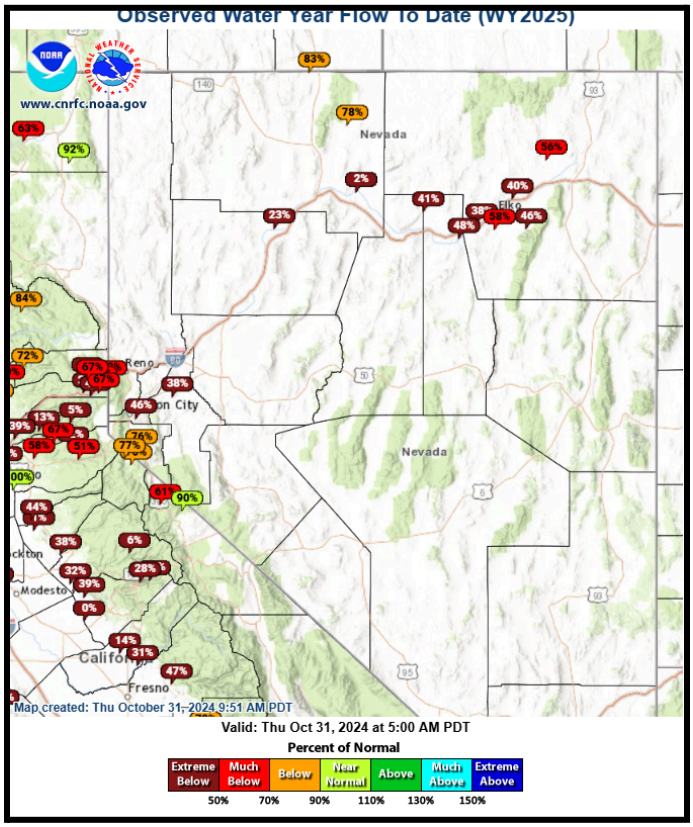

Figure 5. CNRFC Water year 2025 observed flow to date

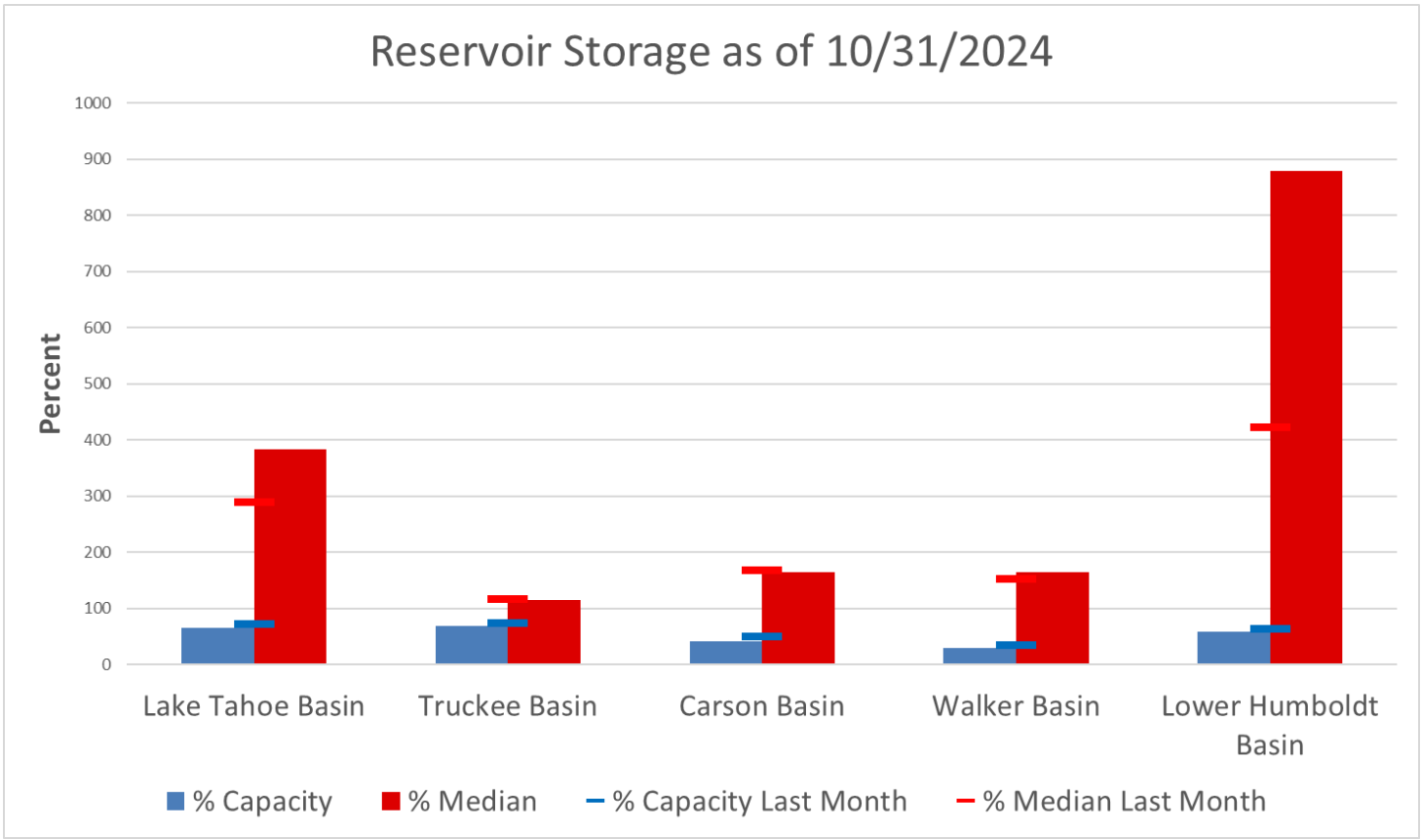

Figure 6. End of October reservoir storage relative to capacity and **median*** for this month and last month. (*note reference was recently update to NRCS 1991-2020 median values)

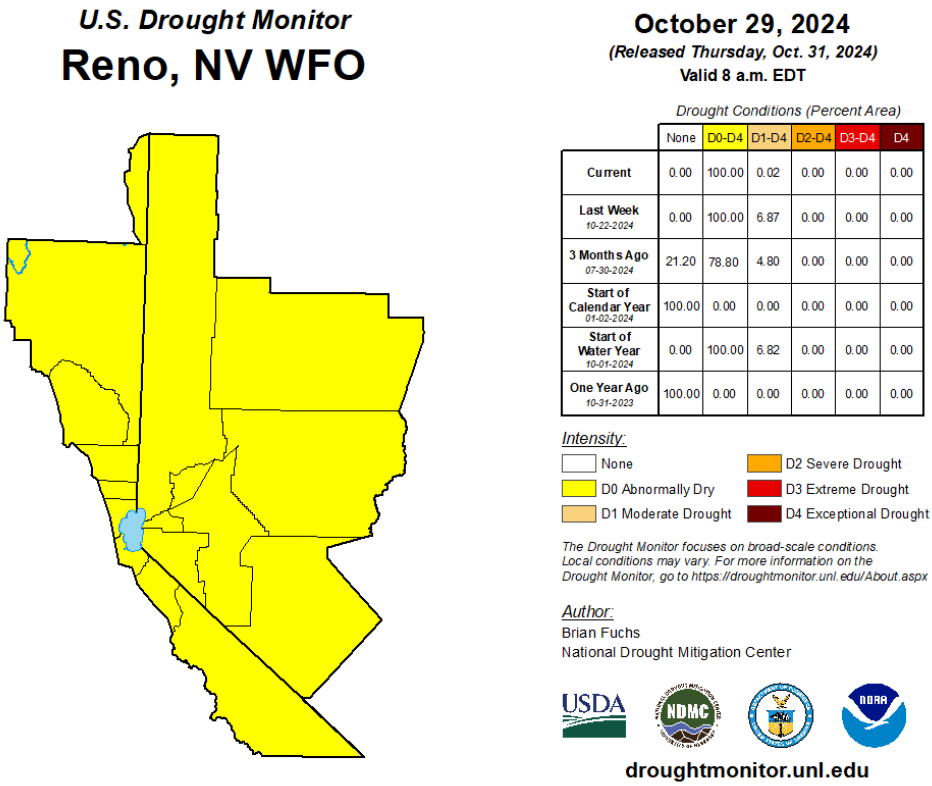

Figure 7: Late October Drought Monitor Status. A small area of Moderate drought (D1) in Northern Washoe and NE Lassen counties was removed last month leaving the entire NWS Reno area in Abnormally Dry (D0). Check for updates at: Drought Monitor.