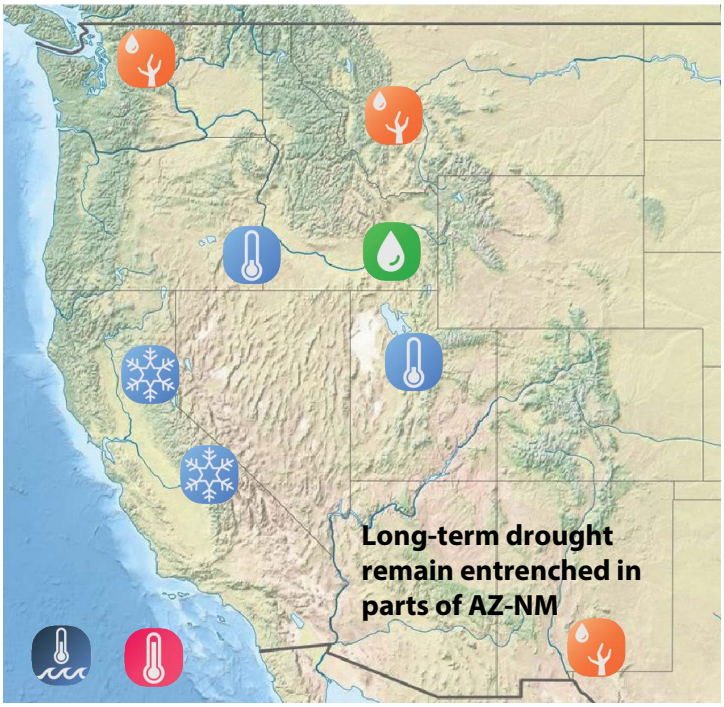
Quarterly Climate Impacts and Outlook

Western Region

June 2024

Significant Events for Mar-Apr-May 2024

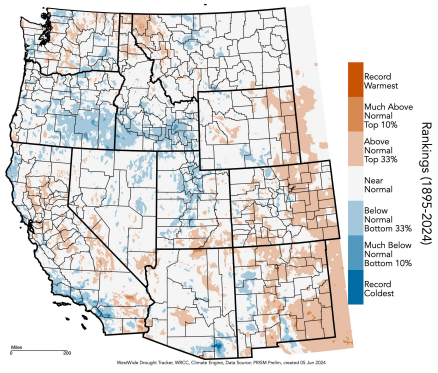


Mar-Apr-May Highlights

- A 4-day blizzard impacted the Sierra Nevada in early March dumping 5-7 feet of snow in some locations.
- Cold May for much of the northern Intermountain West with temperatures 2-6 degrees F below normal in Utah, Idaho, and Oregon.
- Wettest March on record for parts of southern Idaho.
- Drought intensified in Washington, northern Idaho, and western Montana.
- El Niño weakened throughout Spring and the March-May Oceanic Niño Index was 0.7 degrees Celsius. Transition to ENSO neutral is underway with La Niña conditions forecasted by late summer.

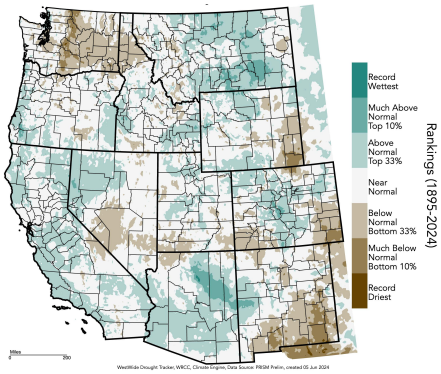
Regional Overview for Mar-Apr-May 2024

Mean Temperature Percentile
Mar-Apr-May 2024



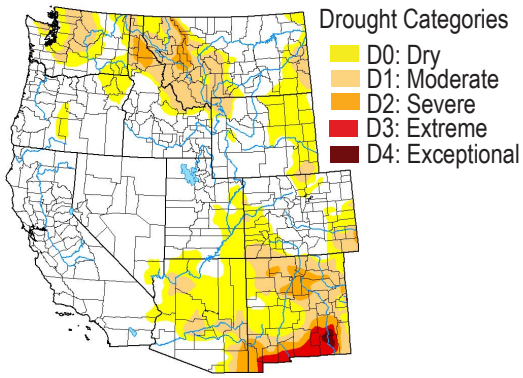
Spring temperatures were generally near normal or below normal for most of the West. Southeast Oregon, southern Idaho, northern Utah, and the south coast of California saw temperatures 2-4 degrees Fahrenheit below normal. Eastern New Mexico, parts of central California, and parts of Washington, northern Idaho, and western Montana saw slightly above normal temperatures.

Precipitation Percentile
Mar-Apr-May 2024



Precipitation was near-to-above normal for most of the West with north-central Arizona and southeast Montana much above normal. The east slope of the Washington Cascades and southeast New Mexico had a notably dry Spring with many locations seeing less than 50% of normal precipitation. Several SNOTEL stations in Washington saw record low spring precipitation.

US Drought Monitor
June 4 2024



At the end of Spring 19% of the West was in drought. One percent of the region was in extreme or exceptional drought and this was confined to southern New Mexico. Overall, drought conditions improved throughout spring for much of the West. Drought expansion was limited to Washington, northeast New Mexico, and small parts of Montana and Idaho.

Contacts: D. McEvoy (mcevoyd@dri.edu)

Regional Impacts for Mar-Apr-May 2024

Fisheries

Salmon fishing was banned for a second year in a row on California rivers due to major population declines partly caused by the 2020-2022 regional hot drought.

Flooding

Excessive rainfall, more than two inches in one hour, impacted southern California in late March causing flooding that closed highway 101 and left drivers stranded.

Wildfire

The Wildcat fire started May 18 in the mountains to the Northeast of Phoenix and burned just over 14,000 acres. A portion of the Tonto National Forest was shut down and visitors were escorted out of the area.

Agriculture

Junior water rights holders in the Yakima basin, Washington will get about 50% of allotment due to drought.

Drought and Water Supply

Colorado River water shortages continue with Lake Mead at 34% of capacity and still below the the Tier I shortage threshold. Water year inflows into Lake Powell are forecasted to be 81% of normal.

Low Snowpack in Washington and the Northern Rockies Reduces Water Supply and Raises Drought Concerns

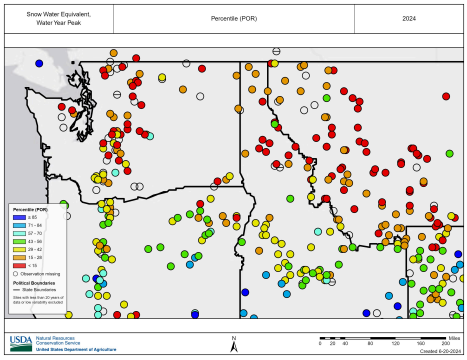


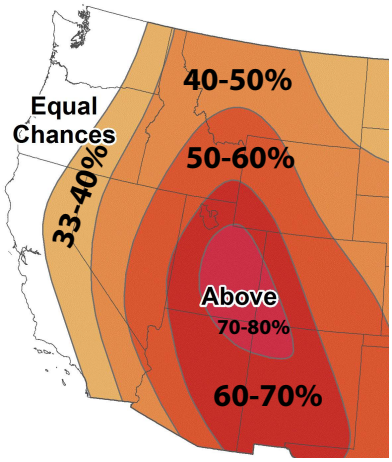
Image: Water year peak snow water equivalent (SWE) percentiles at USDA NRCS SNOTEL stations. Red dots are locations with peak SWE less than the 15th percentile.

Source: USDA

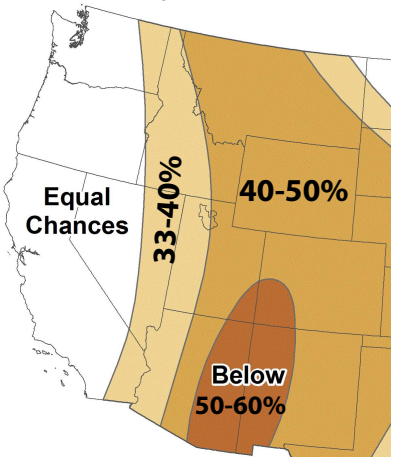
Snow drought developed early in the winter and persisted through spring in Washington, northern Idaho, and western Montana driven by a combination of dry and warm conditions. Snowpack was well below normal and 13 SNOTEL stations in Montana saw record low peak SWE. Summer runoff is forecast to be about 55-75% percent of normal which could limit agricultural water allocations for some growers. Washington announced a statewide drought declaration in mid-April and the CPC seasonal drought outlook shows summer drought develpment likely for much of the region.

Regional Outlook for Jul-Aug-Sep 2024

CPC Temperature Outlook



CPC Precipitation Outlook



Numbers indicate percent chance of temperatures in warmest/coolest one-third and precipitation in wettest/driest one-third. Outlook produced June 2024.

The CPC outlook for July-September favors above normal temperatures for most of the West except for parts of Washington, Oregon, and California where equal chances of above or below normal temperatures are expected. The Four Corners states have the highest odds for above normal temperatures with probabilities of 60-80%. Below normal precipitation is favored for the Four Corners states, Idaho, and Montana with the highest probabilities (50-60%) in Arizona and New Mexico. Equal chances for above or below normal precipitation are forecast for most of Nevada, California, Oregon, and Washington.

Western Region Partners

Western Regional Climate Center
wrcc.dri.edu/my

National Integrated Drought Information System (NIDIS) - drought.gov

Western Governors' Association
westgov.org

Western States Water Council
westgov.org/wswc

NOAA/ESRL Physical Sciences Division
esrl.noaa.gov/psd

NOAA Climate Prediction Center
www.cpc.ncep.noaa.gov

National Centers for Envir. Info. (NCEI)
www.ncei.noaa.gov

USDA/NRCS National Water and Climate Center - www.wcc.nrcs.usda.gov

National Interagency Fire Center
www.nifc.gov

Western Water Assessment
wwa.colorado.edu

Climate Assessment for the Southwest
climas.arizona.edu

California Nevada Applications Program
cnap.ucsd.edu

Climate Impacts Research Consortium
pnwclimate.org/resources

NWS Western Region Forecast Offices
www.wrh.noaa.gov/