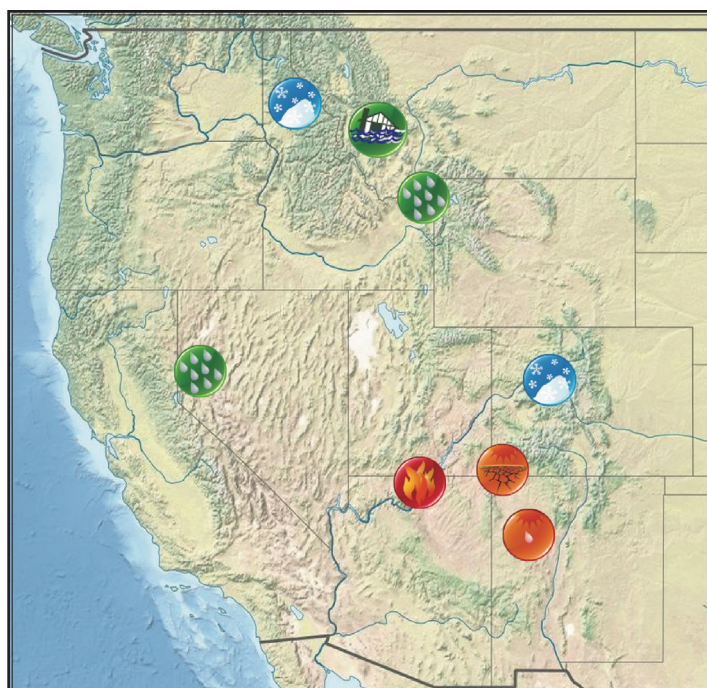


Significant Events for March-May 2018

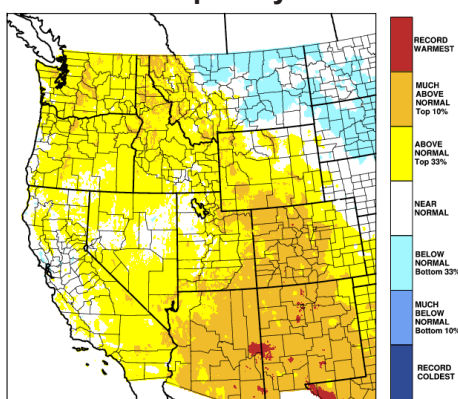


Mar-Apr-May Highlights

- Spring precipitation was above normal in a broad swath from central CA northeast into MT
- Well below normal precipitation across much of the Four Corners states; AZ and NM 10th driest spring
- Drought conditions deteriorated and expanded in the Four Corners region, southern CA, eastern OR
- Apr 1 snowpack <75% of median across the Colorado Basin, Great Basin, and Sierra Nevada; above median in Pacific Northwest and Missouri River Basin
- Following record winter snowpack, many Northwest rivers experienced severe snowmelt flooding with above normal spring temperatures
- Early start to fire season in AZ, southwest UT
- ENSO-neutral conditions currently present, El Niño slightly favored to develop in autumn but current predictability is low

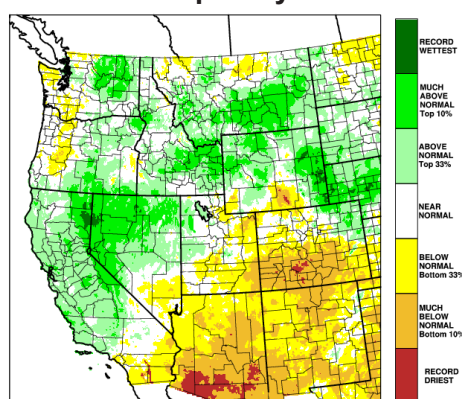
Regional Overview for March-May 2018

Mean Temperature Percentile Mar-Apr-May 2018



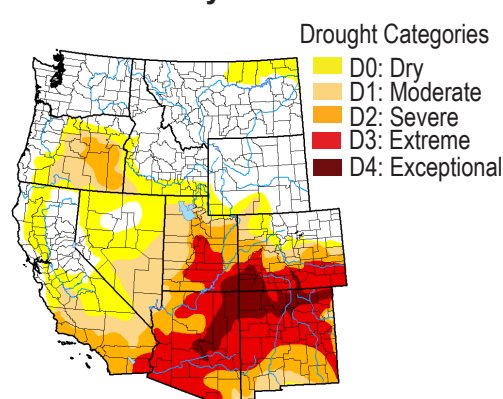
Frequent March and May storms kept spring temperatures near normal for CA and the Great Basin. In the Northwest, March and April were near to slightly cooler than normal, while May was much warmer than normal. Several NW locations reported their warmest May on record. The Four Corners region observed well above normal spring temperatures, exacerbating drought conditions.

Precipitation Percentile Mar-Apr-May 2018



Many areas of the West experienced above normal spring precipitation. Several atmospheric rivers made landfall in CA during March, their impacts extending into the Great Basin. Northern CA and much of the Northwest observed above normal April precipitation. In May, a series of closed low pressure systems brought above normal rainfall to the Great Basin and Inland NW.

US Drought Monitor May 29 2018



At the end of May, 32% of the West was classified as experiencing severe to exceptional drought and 4% as exceptional drought. During the spring season, drought conditions degraded in the Four Corners region as well as eastern OR. Some amelioration of drought conditions occurred in CA's northern Sierra Nevada and Central Valley, northeastern MT, and small portions of all states excepting AZ.

Regional Impacts for March-May 2018

Drought, Flooding and Water Resources

Late March storm caused flooding and damage to roadways in central CA, 10 people rescued from Salinas River

In early March, avalanches killed 3 people in WA Cascades and trapped others; over a dozen people were trapped in avalanches at Sierra Nevada resorts

Due to late season precipitation, CA State Water Project Allocations increased to 35% in late May
L. Powell Apr-Jul forecast inflow 42% of average

Agriculture

Spring planting delayed in MT due to late season storms and persistent snow on the ground

Foresters in OR anticipate high risk for tree mortality due to beetle infestation following a drier than normal winter and spring in much of the state

NM ranchers likely to cull their herds due to water and feed shortages associated with drought

Wildfire

Tinder Fire in eastern AZ (Apr/May) burned over 16,000 acres and destroyed 33 homes

Stateline Fire in northeastern NM (Mar) burned over 28,000 acres in NM and bordering states

Snowmelt Flooding in Northwest

Following a large, and in some cases, record breaking, snowpack in the Northwest US and western Canada, many areas experienced significant snowmelt flooding due to warm spring temperatures

and periods of above normal precipitation. Floodwaters have washed out roads, inundated fields, and threatened

or damaged homes. Images above show flooding on the Clark Fork River near Missoula, MT. On May 11th, the Clark Fork reached its 2nd highest level on record. Flooding issues were also noted on the Milk and Yellowstone rivers in MT; the governor declared a Statewide Flood Emergency in May. Central and eastern WA also experienced snowmelt flood issues. On May 10, the WA governor declared a State of Emergency for 20 counties in this area

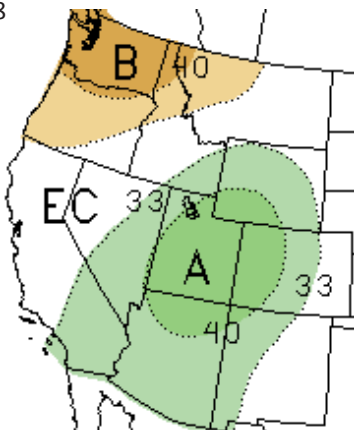
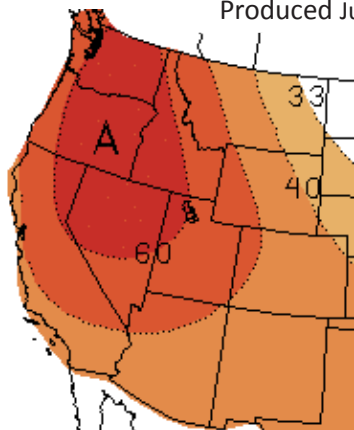


Regional Outlook for Jul-Aug-Sep 2018

CPC Temperature Outlook

CPC Precipitation Outlook

Produced Jun 21 2018



A = Above normal B = Below normal EC = Equal chances. Numbers indicate percent chance of temperatures in warmest/coolest one-third and precipitation in wettest/driest one-third.

CPC outlooks suggest a 40-60% chance of above normal temperatures across the West during Jul-Sep, with the greatest likelihoods across the Intermountain West. In the Northwest, outlooks favor (33-40% chance) below normal precipitation. Across much of the Southwest, above normal precipitation is favored (33-40% chance). This is consistent with the tendency of East Pacific tropical cyclones to affect this region during a developing El Niño. ENSO-neutral conditions are favored through summer, with a 50% chance of El Niño conditions developing in autumn, increasing to a 65% chance in winter.

Western Region Partners

Western Regional Climate Center
wrcc.dri.edu

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.ncdc.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.wrth.noaa.gov/