United States Department of Agriculture

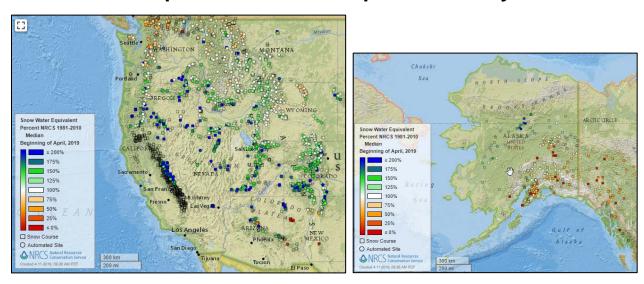
Water and Climate Update

April 11, 2019

The Natural Resources Conservation Service produces this weekly report using data and products from the <u>National Water and Climate Center</u> and other agencies. The report focuses on seasonal snowpack, precipitation, temperature, and drought conditions in the U.S.

Snow2	Other Climatic and Water Supply Indicators13
Precipitation3	Short- and Long-Range Outlooks18
Temperature8	More Information20
Drought10	

April 1 western snowpack summary



The April 1 snowpack in the West shows the central latitudes from the southern Cascades and Sierra Nevada to the central Rockies have generally above normal to much above normal snowpack. The small areas of below normal snowpack are restricted to Washington, northern Idaho, and northern Montana. The dwindling snowpack in the Southwest has little to no snow in central to southern New Mexico and Arizona. Southern and eastern Alaska into the southern Yukon Territory have below normal to much below normal snowpack for this time of year, with a few stations reporting record low snow. The snowpack in Alaska is above normal in a small area south of the Brooks Range near the Arctic Circle.

Related:

<u>State Water Officials: Sierra Snowpack 'A California Water Supply Dream'</u> KPIX5 (CA)
<u>Sierra Snowpack at 156% as Some CA Ski Resorts Get Over 550 Inches of Snow This Season</u> – KTLA5

(CA)

Water outlook strong for Tahoe Basin – The record Currier (NV)

Snow still piling up in the mountains - Elko Daily Free Press (NV)

Utah's snowpack gives water managers a reason to celebrate - KSL.com (UT)

March brings record low snowfall to mountains - Daily Inter Lake (MT)

Mountain snowpack hovering near normal after dry March - Montana Standard (MT)

Colorado's epic snowfall helps ease drought conditions, but state not out of the woods - Lamar Ledger (CO)

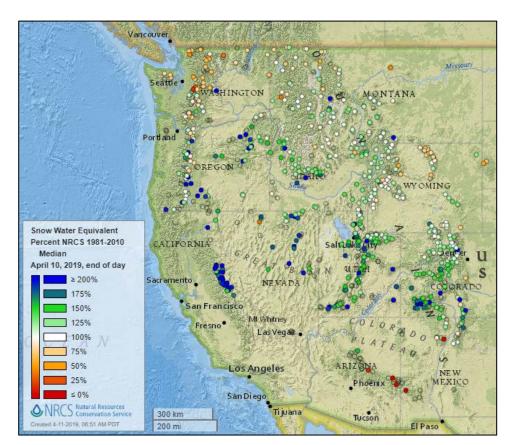
Oregon snowpack holds steady, despite drier March - KTVZ.com (OR)

Less snowpack may impact region this summer - Skagit Valley Herald (WA)

Warm March leads to numerous new records statewide – KTVA (AK)

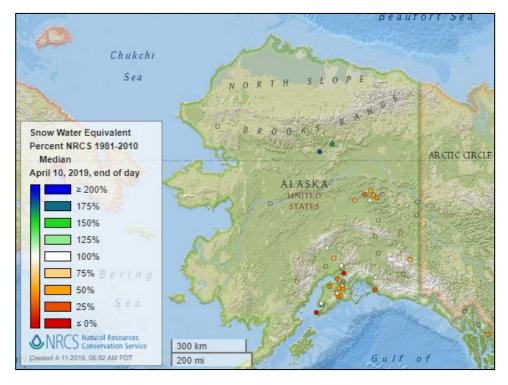
Snow

Current Snow Water Equivalent, NRCS SNOTEL Network



Snow water equivalent percent of median map

See also: Snow water equivalent values (inches) map



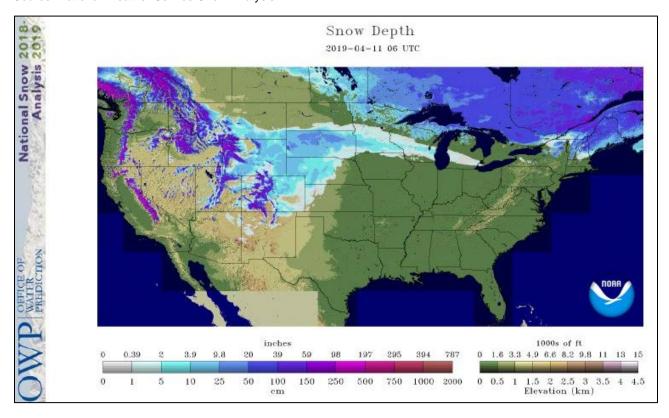
Alaska snow water equivalent percent of median map

See also:

Alaska snow water equivalent values (inches) map

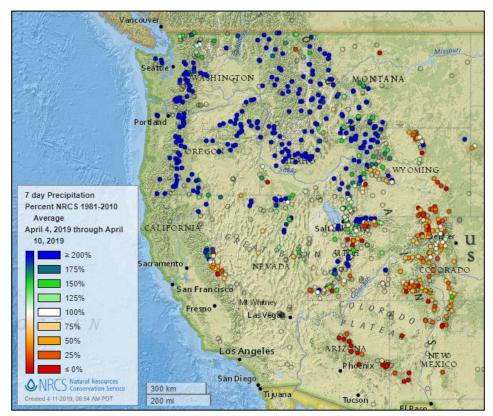
Current Snow Depth

Source: National Weather Service Snow Analysis



Precipitation

Last 7 Days, NRCS SNOTEL Network



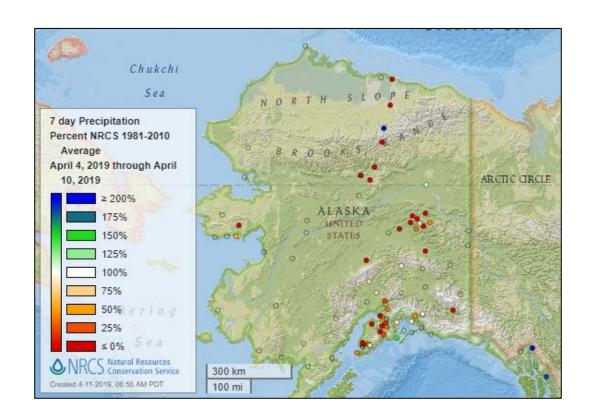
7-day precipitation percent of average map

See also:

7-day total precipitation values (inches) map

Alaska 7-day precipitation percent of average map

See also: Alaska 7-day total precipitation values (inches) map



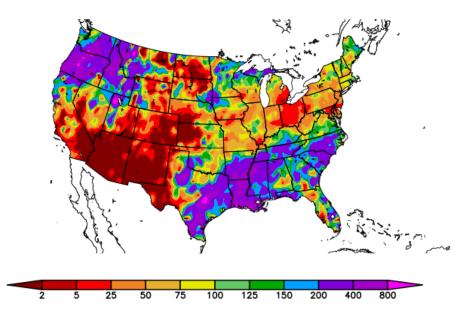
Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

7-day precipitation percent of normal map for the continental U.S.

See also: 7-day total precipitation values (inches) map

Percent of Normal Precipitation (%) 4/3/2019 - 4/9/2019



Generated 4/10/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

Last 7 Days, National Weather Service (NWS) Networks

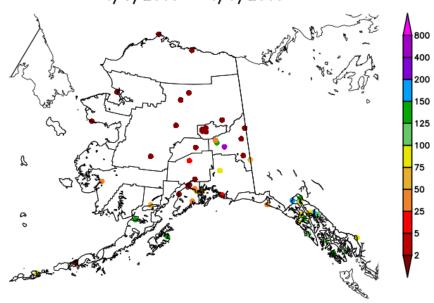
Source: Regional Climate Centers

7-day precipitation anomaly map for Alaska.

See also:

7-day total precipitation values (inches) map

Percent of Normal Precipitation (%) 4/3/2019 - 4/9/2019



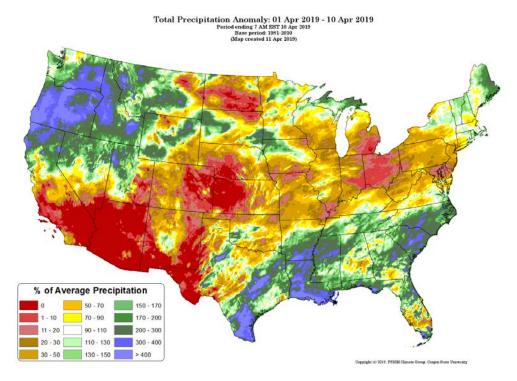
Generated 4/10/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

4/11/2019

Month-to-Date, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

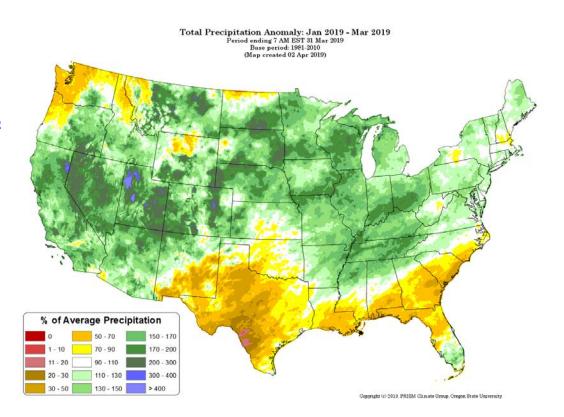


Month-to-date national total precipitation percent of average map

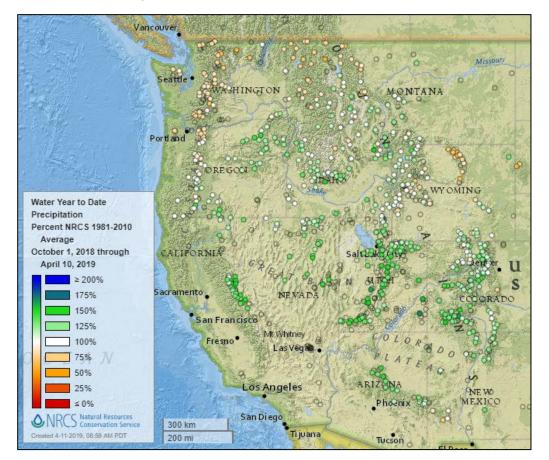
Last 3 Months, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

January through March 2019 total precipitation percent of average map

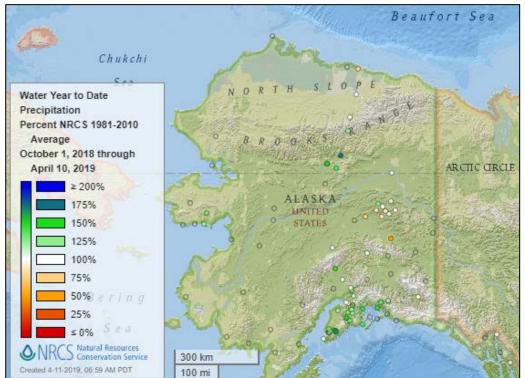


Water Year-to-Date, NRCS SNOTEL Network



2019 water year-to-date precipitation percent of average map

See also:
2019
water year-todate
precipitation
values (inches)
map



Alaska 2019
water yearto-date
precipitation
percent of
average map

See also:
Alaska 2019
water year-todate
precipitation
values (inches)
map

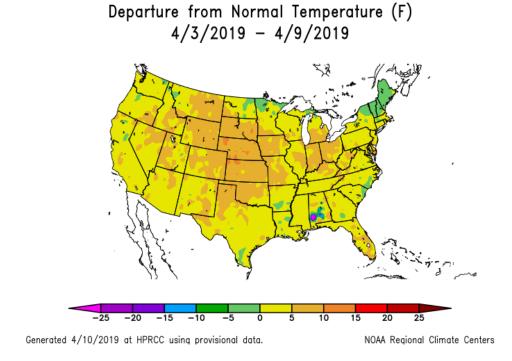
Temperature

Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

7-day temperature anomaly map for the contiguous U.S.

See also: 7-day temperature (° F) map



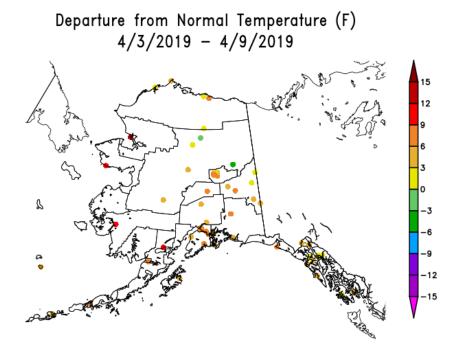
Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

7-day temperature anomaly map for Alaska.

See also:

7-day temperature
(° F) map



Generated 4/10/2019 at HPRCC usina provisional data.

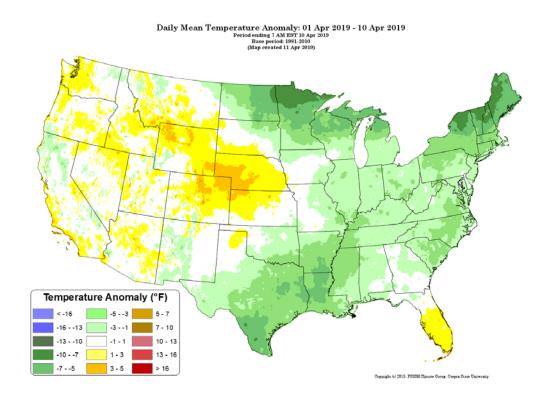
NOAA Regional Climate Centers

4/11/2019

Month-to-Date, All Available Data Including SNOTEL and NWS Networks

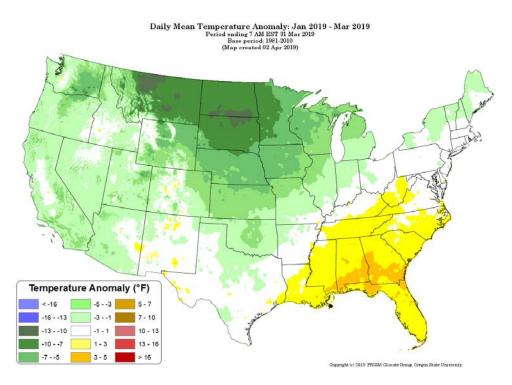
Source: PRISM

Month-to-date national daily mean temperature anomaly map



Last 3 Months, All Available Data Including SNOTEL and NWS Networks

Source: PRISM



January through March 2019 daily mean temperature anomaly map

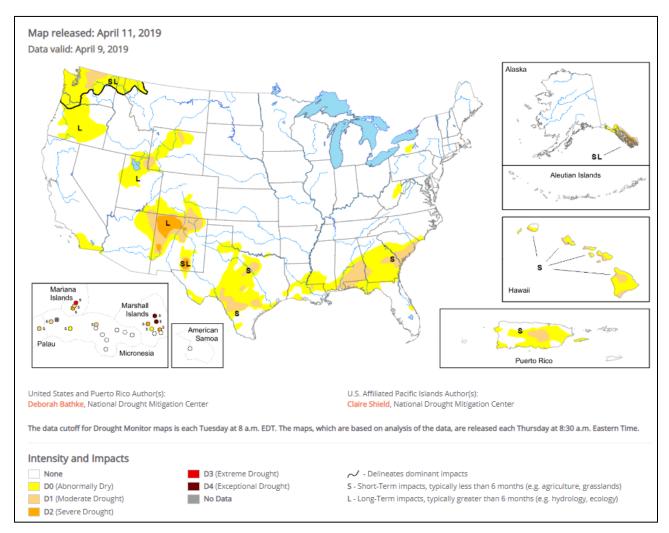
Drought

U.S. Drought Monitor

Source: National Drought Mitigation Center

U.S. Drought Portal

Source: NOAA



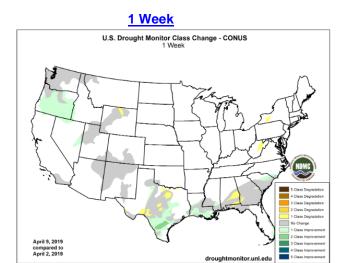
Current National Drought Summary, April 11, 2019

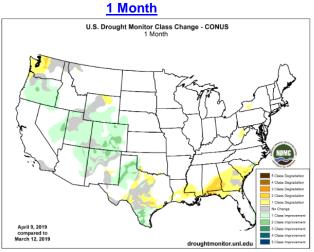
Source: National Drought Mitigation Center

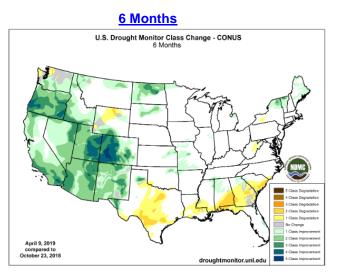
"After a dry March, a series of storms brought much needed precipitation to the Pacific Northwest, staving off further degradations in Washington and resulting in local flooding and broad drought improvements in Oregon. Elsewhere, the West remained largely status quo with the only degradation in drought conditions occurring in the Big Horn Mountains where snowpack has been well below normal all winter. The South and Southeast saw a mixture of improvements and degradations. Locally heavy rainfall brought improvements to parts of Texas, Louisiana, and the Carolinas while areas such as southeastern Alabama saw an expansion of moderate drought. Much of the remainder of the country remains largely free of drought and abnormal dryness."

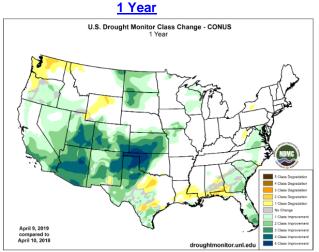
Changes in Drought Monitor Categories over Time

Source: National Drought Mitigation Center









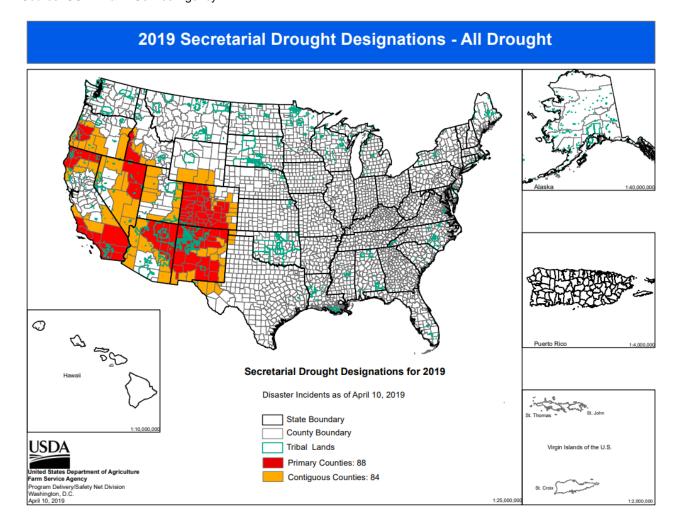
Changes in drought conditions over the last 12 months for the contiguous U.S.

Highlighted Drought Resources

- Drought Impact Reporter
- Quarterly Regional Climate Impacts and Outlook
- U.S. Drought Portal Indicators and Monitoring
- U.S. Population in Drought, Weekly Comparison
- USDA Disaster and Drought Information

Secretarial Drought Designations

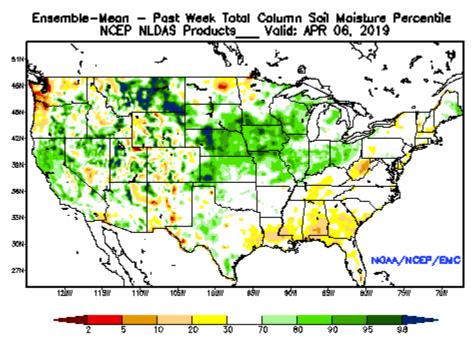
Source: USDA Farm Service Agency



Other Climatic and Water Supply Indicators

Soil Moisture

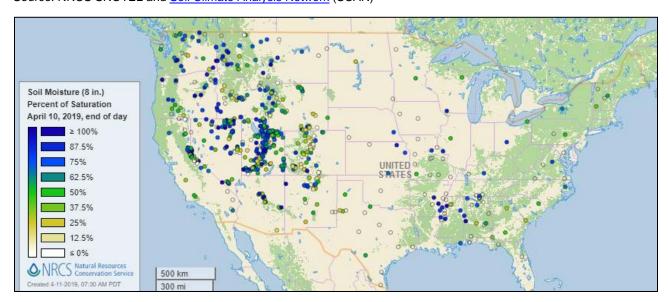
Source: NOAA National Centers for Environmental Prediction



Modeled soil moisture percentiles as of April 6, 2019

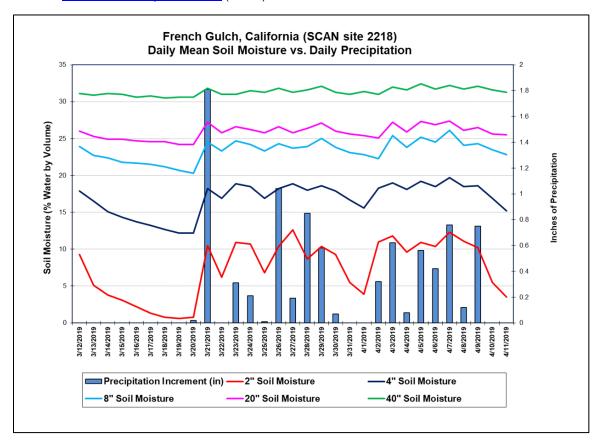
Soil Moisture Percent of Saturation

Source: NRCS SNOTEL and Soil Climate Analysis Network (SCAN)



Soil Moisture Data

Source: NRCS Soil Climate Analysis Network (SCAN)



This graph shows the precipitation and soil moisture for the last 30 days at the <u>French Gulch SCAN site</u> in northern California. This site is in an area that has experienced a large amount of rainfall in the last month. Between April 2-9, the accumulated precipitation totaled 3.63 inches followed by an overall increase in soil moisture at all sensor levels.

Soil Moisture Data Portals

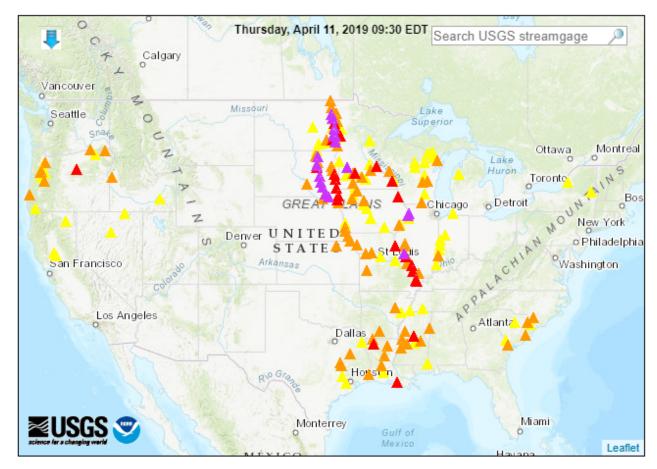
- CRN Soil Moisture
- Texas A&M University North American Soil Moisture Database
- <u>University of Washington Experimental Modeled Soil Moisture</u>

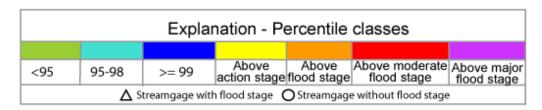
Streamflow, Drought, Flood, and Runoff

Source: U.S. Geological Survey

Map of flood and high flow conditions

(18 in major flood, 25 in moderate flood, 72 in minor flood, 65 in near flood)



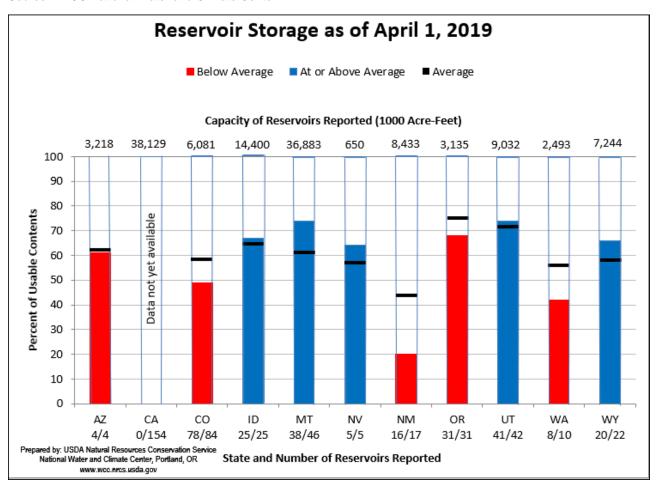


WaterWatch: Streamflow, drought, flood, and runoff conditions

Reservoir Storage

Western States Reservoir Storage

Source: NRCS National Water and Climate Center



April 1, 2019 Reservoir Storage: Chart | Dataset

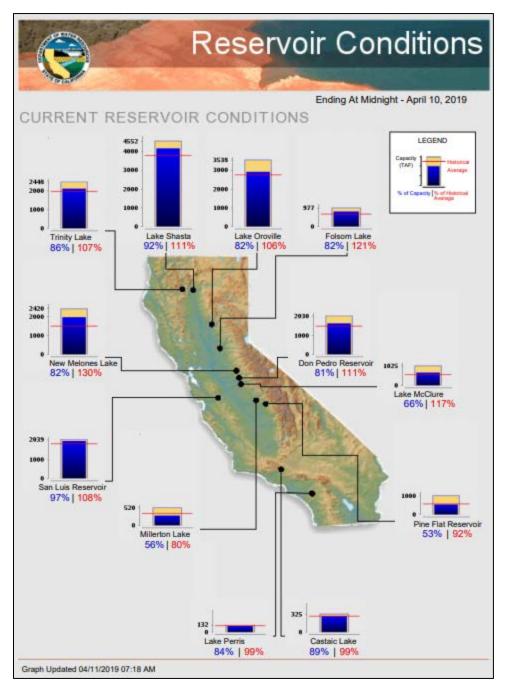
Hydromet Tea Cup Reservoir Depictions

Source: U.S. Bureau of Reclamation

- Upper Colorado
- Pacific Northwest/Snake/Columbia
- Sevier River Water, Utah
- Upper Missouri, Kansas, Oklahoma, Texas

Current California Reservoir Conditions

Source: California Department of Water Resources



Current California Reservoir Conditions

Short- and Long-Range Outlooks

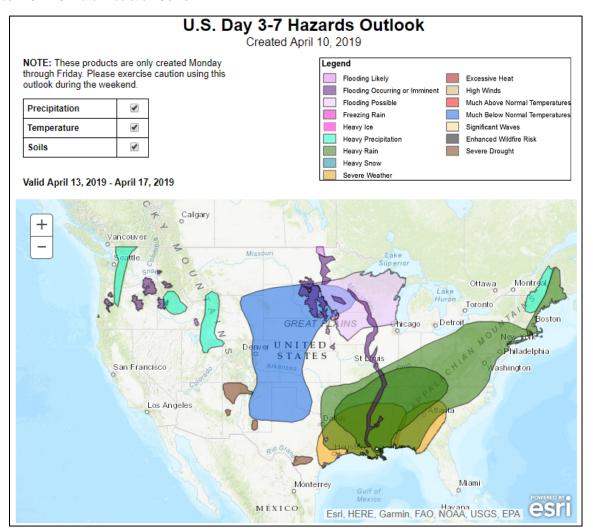
Agricultural Weather Highlights

Author: Brad Rippey, Agricultural Meteorologist, USDA/OCE/WAOB

National Outlook, Thursday, April 11, 2019: "A powerful, slow-moving spring storm currently centered near the lowa-Missouri-Nebraska triple point will drift northeastward, crossing the upper Great Lakes region on Friday. For the remainder of today, wind-driven precipitation—mostly snow and freezing rain—will maintain harsh conditions for livestock and curtail travel across the northern and western Corn Belt. Meanwhile, severe thunderstorms will sweep across portions of the mid-South and lower Midwest. By Friday, weather conditions will begin to improve across the northern Plains and upper Midwest. However, cold weather in the storm's wake will result in possible freezes through the weekend on the High Plains as far south as Texas' northern panhandle. During the weekend, a new storm system will cross the South, East, and lower Midwest, delivering as much as 1 to 3 inches of rain. In addition, strong weekend thunderstorms may affect the South. The NWS 6- to 10-day outlook for April 16 – 20 calls for near- or below normal temperatures from the Rockies to the Mississippi Valley, while warmer-than-normal weather will prevail in the Atlantic Coast States and the Far West. Meanwhile, below-normal precipitation in California and environs should contrast with wetter-than-normal conditions in the Four Corners States and the eastern half of the U.S."

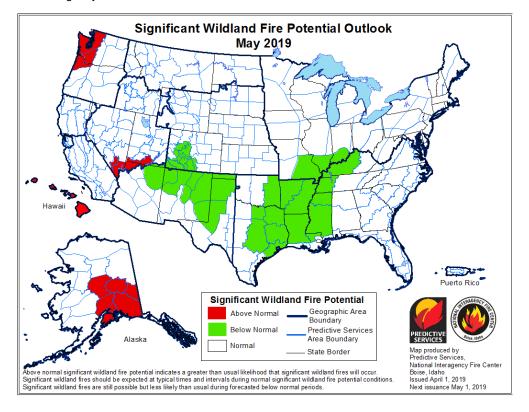
Weather Hazards Outlook: April 13 – April 17, 2019

Source: NOAA Climate Prediction Center



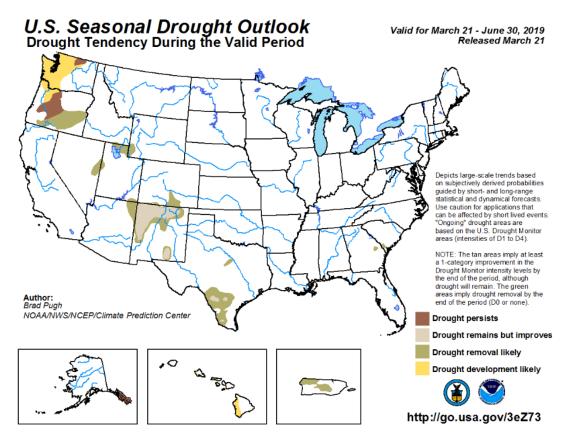
Significant Wildland Fire Potential Outlook

Source: National Interagency Fire Center



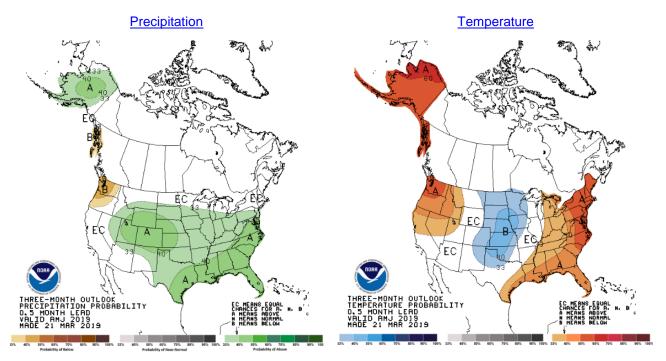
Seasonal Drought Outlook: March 21 - June 30, 2019

Source: National Weather Service



Climate Prediction Center 3-Month Outlook

Source: National Weather Service



April-May-June (AMJ) 2019 precipitation and temperature outlook summaries

More Information

The NRCS <u>National Water and Climate Center</u> publishes this weekly report. We welcome your feedback. If you have questions or comments, please <u>contact us</u>.