

Water and Climate Update

January 17, 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.

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Blizzard conditions, heavy rain, and mudslides impact California



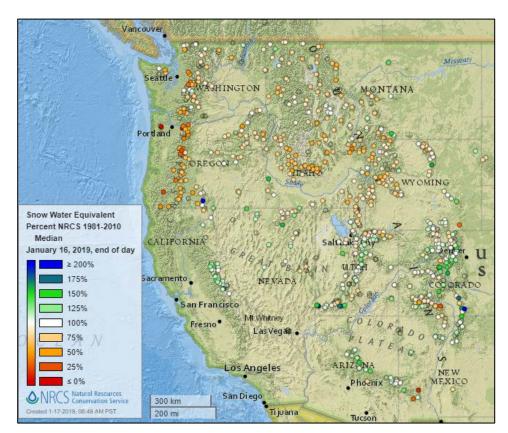
California was battered this week by a strong, Pacific storm bringing heavy rain, mountain blizzards, flooding, and mudslides. Rainfall exceeded 10 inches in the last two days at one location south of San Francisco. Evacuations were ordered in mudslide-prone areas that experienced extreme fires this year. Blizzard warnings were in effect for the central and southern Sierra Nevada, where many feet of snow blanketed the mountains closing highways and slowing or stopping traffic. The map shows the two-day increase in snowpack depth at SNOTEL sites in the central Sierra Nevada. The storm is forecast to end later today with over six feet of snow falling in some areas. This major storm is expected to impact the remainder of the continental U.S. in the coming days.

Related:

Mudslides, floods, blizzards, 6 feet of snow, 110-mph winds: California nightmare – USA Today
After 19-car pileup, I-15 reopens at Cajon Pass as winter storm wallops California – LA Times (CA)
Mudslide blocks SB Highway 17 in Santa Cruz Mountains – KRON4 News (CA)
Mudslide on Highway 101 in Sausalito causes major traffic delays – sfgate.com (CA)
Latest Pacific Ocean storm pounds California with rain, snow – ABC News
The Latest: Storm pounds California with rain and snow – sfgate.com (CA)

Snow

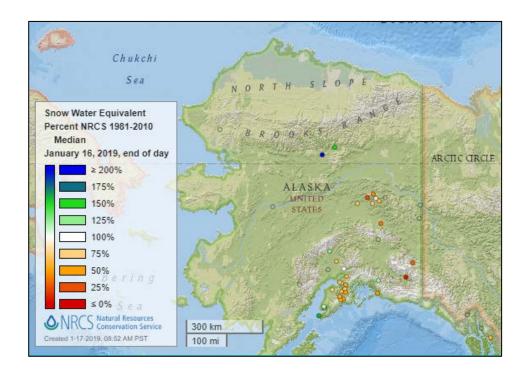
Current Snow Water Equivalent, NRCS SNOTEL Network



Snow water equivalent percent of median map

See also:

Snow water equivalent values (inches) map

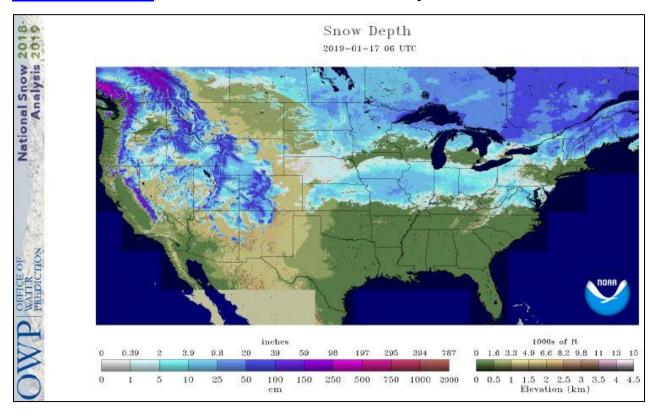


Alaska snow water equivalent percent of median map

See also:

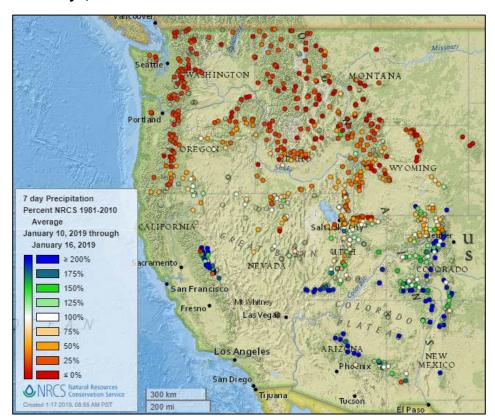
Alaska snow water equivalent values (inches) map

<u>Current Snow Depth</u>, National Weather Service Snow Analysis



Precipitation

Last 7 Days, NRCS SNOTEL Network



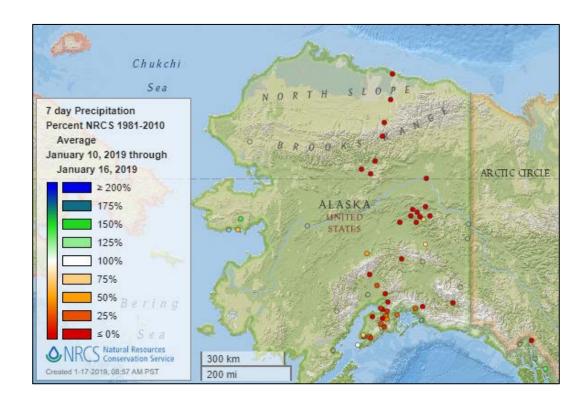
7-day precipitation percent of average map

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



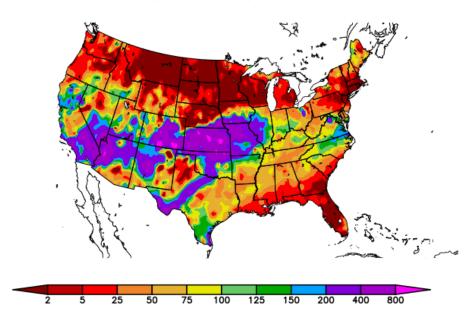
Last 7 Days, National Weather Service (NWS) Networks

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 (%) 1/10/2019 - 1/16/2019



Generated 1/17/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

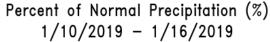
Last 7 Days, National Weather Service (NWS) Networks

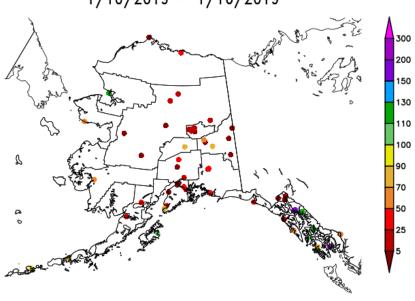
Source: Regional Climate Centers

7-day precipitation anomaly map for Alaska.

See also:

7-day total precipitation values (inches) map



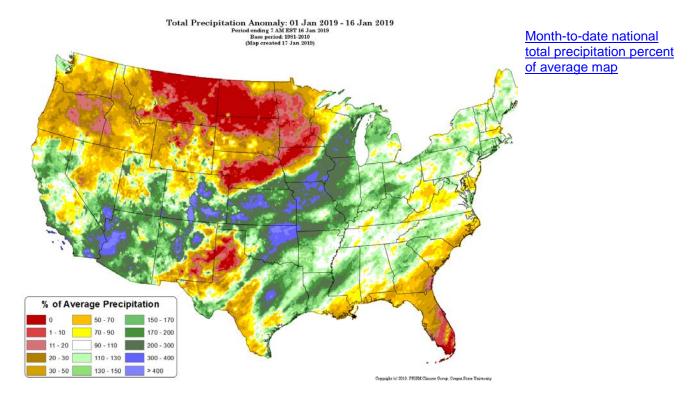


Generated 1/17/2019 at HPRCC using provisional data.

NOAA Regional Climate Centers

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

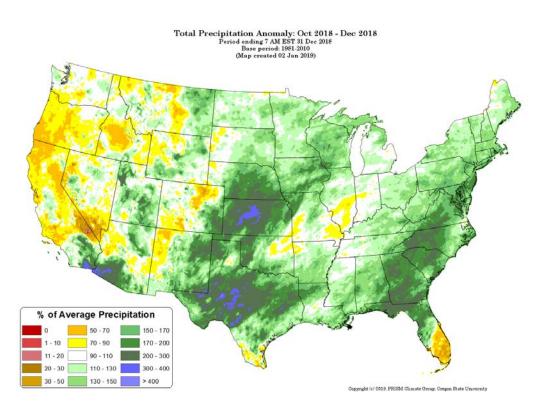
Source: PRISM



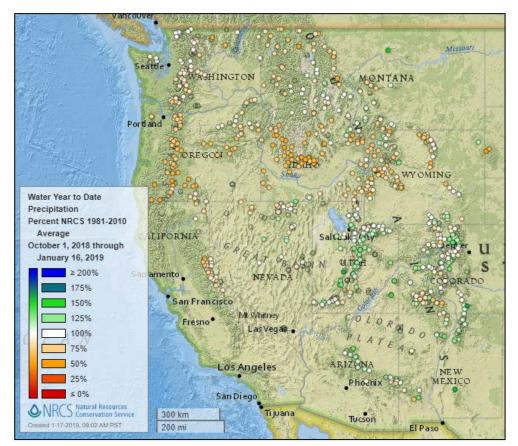
Last 3 Months, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

October through
December 2018
total precipitation
percent of
average map

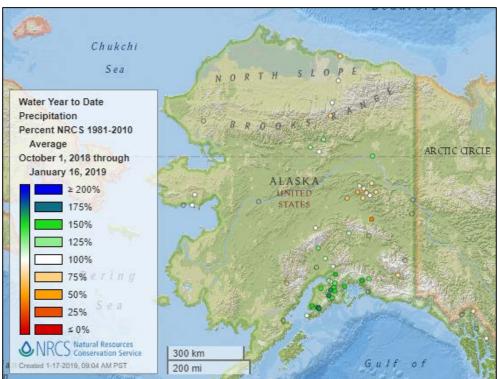


Water Year-to-Date, NRCS SNOTEL Network



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

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



Alaska 2019
water year-todate
precipitation
percent of
average map

See also: Alaska 2019 water yearto-date precipitation values (inches) map

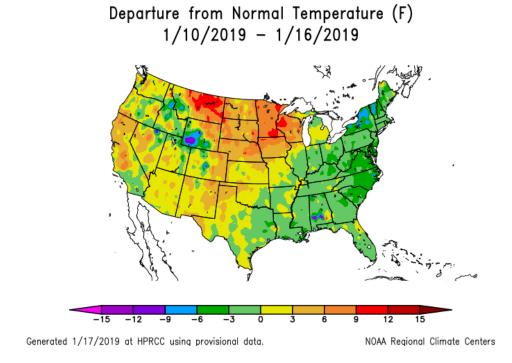
Temperature

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



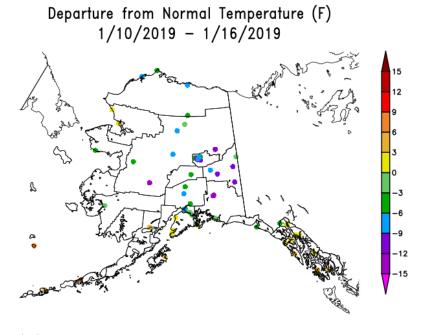
Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

7-day temperature anomaly map for Alaska.

See also:

7-day temperature (° F) map



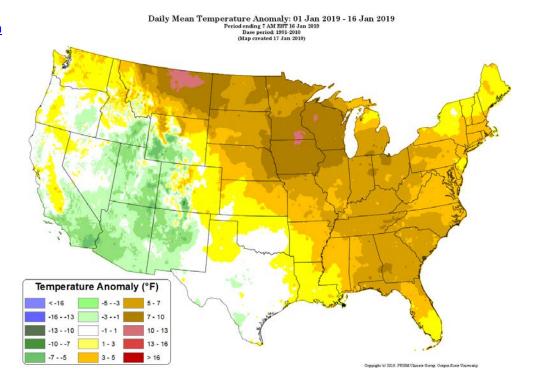
Generated 1/17/2019 at HPRCC usina provisional data.

NOAA Reaional Climate Centers

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

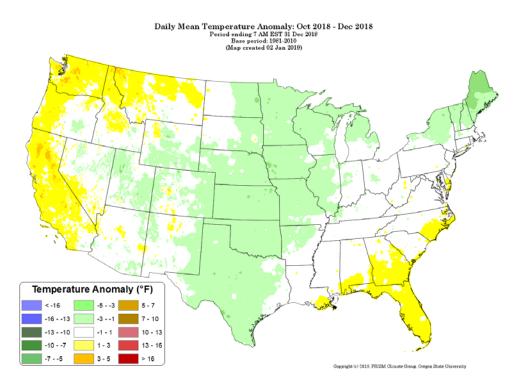
Source: PRISM

Month-to-date national daily mean temperature anomaly map



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

Source: PRISM

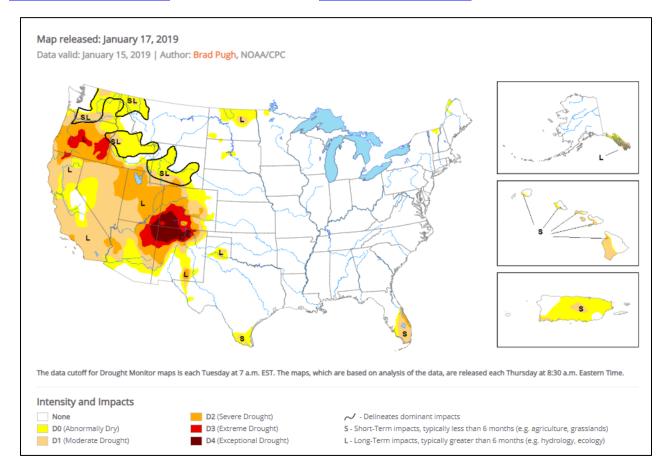


October through
December 2018 daily
mean temperature
anomaly map

Drought

U.S. Drought Monitor Select map below.

U.S. Drought Portal Comprehensive drought resource.



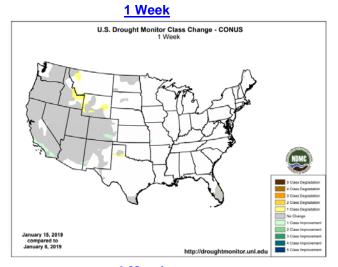
Current National Drought Summary, January 17, 2019

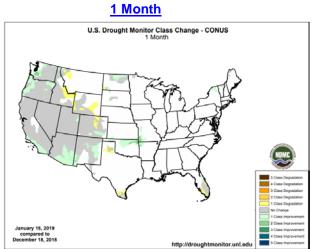
Author: Brad Pugh, NOAA/CPC

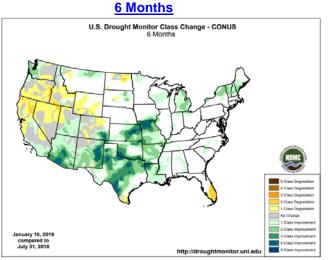
"A mixture of rain and snow accompanied a low pressure system from the Great Lakes to New England during early January. An upper-level low and its associated surface low tracked across the central and eastern U.S. from January 11 to 13. More than 4 inches of snow blanketed areas from Kansas east to the middle Mississippi Valley, Ohio Valley, and mid-Atlantic. Snowfall reports of up to 20 inches were reported from northern Missouri, while 8 to 13 inches of snow occurred in the Washington, D.C. metro area. Periods of onshore flow continued to affect the West Coast although precipitation generally averaged below normal across the Pacific Northwest during the past week. A vigorous upper-level low approached southern California on January 14, bringing heavy snow (6 to 12 inches) to elevations above 5,000 feet and locally heavy rain (more than 1 inch) from the Los Angeles area south to San Diego."

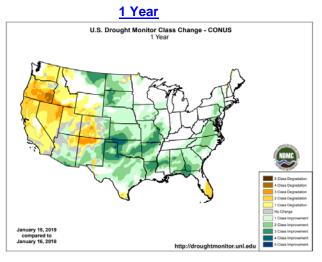
Changes in Drought Monitor Categories over Time

Source: National Drought Mitigation Center









Changes in drought conditions over the last 12 months

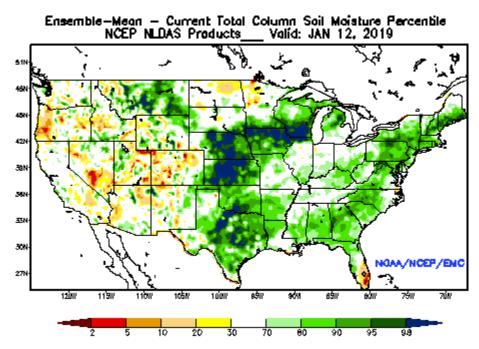
Highlighted Drought Resources

- 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

Other Climatic and Water Supply Indicators

Soil Moisture

Source: NOAA National Centers for Environmental Prediction



Modeled soil moisture percentiles as of January 12, 2019

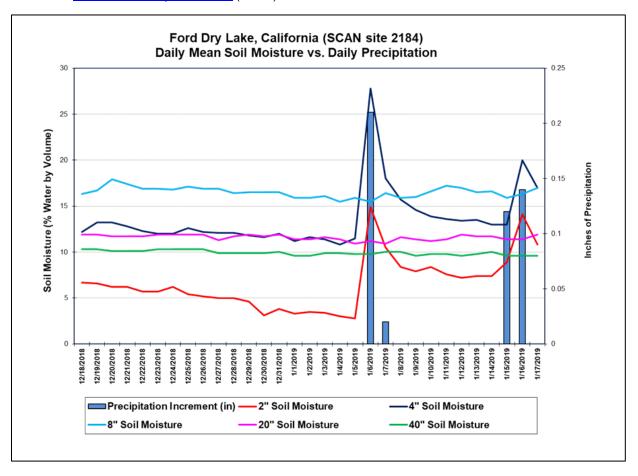
NEW! Soil Moisture Percent of Saturation

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



Soil Moisture Data

Source: NRCS Soil Climate Analysis Network (SCAN)



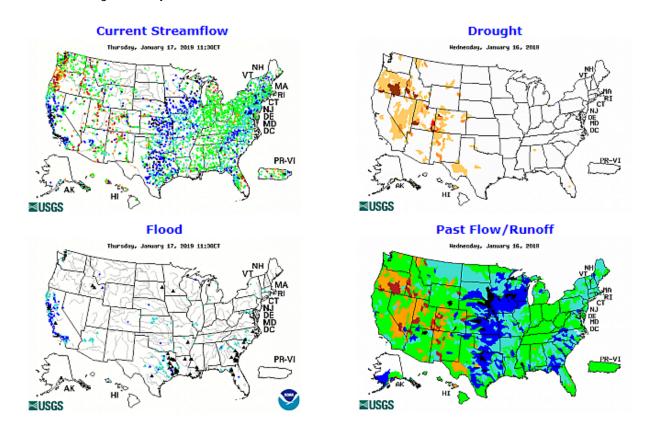
This chart shows the precipitation and soil moisture for the last 30 days at the <u>Ford Dry Lake SCAN site</u> in California. From January 15 to 16, accumulated precipitation totaled 0.26 inches followed by an increase in soil moisture at the 2-, 4-, 8-, and 20-inch sensor levels.

Soil Moisture Data Portals

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

Streamflow, Drought, Flood, and Runoff

Source: U.S. Geological Survey

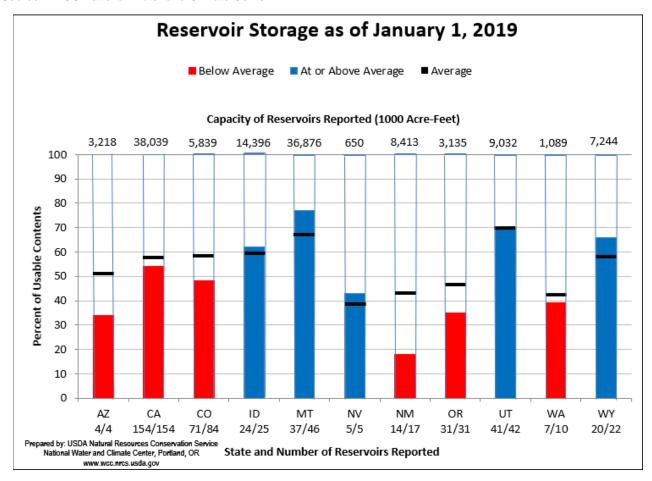


WaterWatch: Streamflow, drought, flood, and runoff conditions

Reservoir Storage

Western States Reservoir Storage

Source: NRCS National Water and Climate Center



January 1, 2019 Reservoir Storage: Chart | Dataset

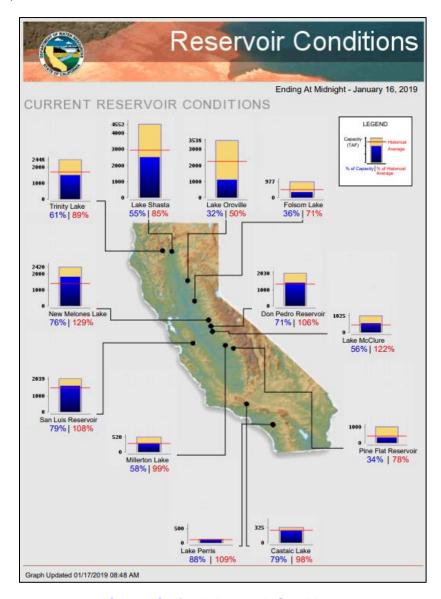
Hydromet Tea Cup Reservoir Depictions

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

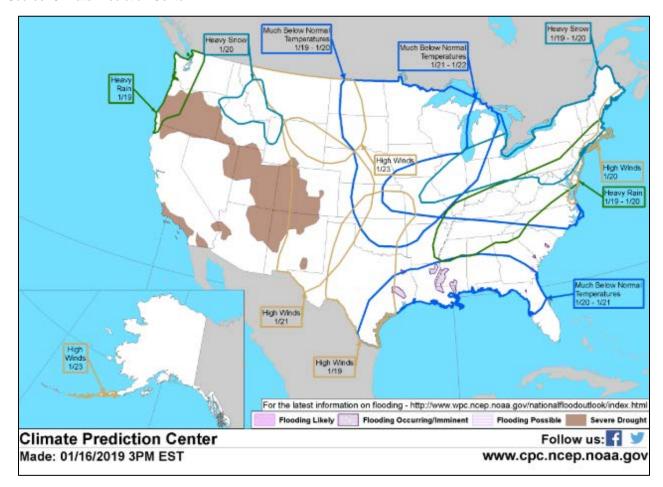


Current California Reservoir Conditions

Short- and Long-Range Outlooks

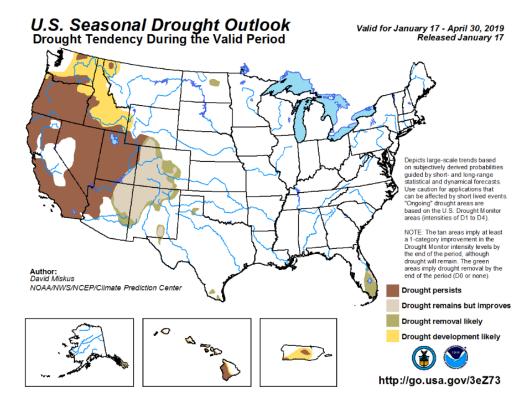
Weather Hazards Outlook: <u>January 19 – January 23, 2019</u>

Source: Climate Prediction Center



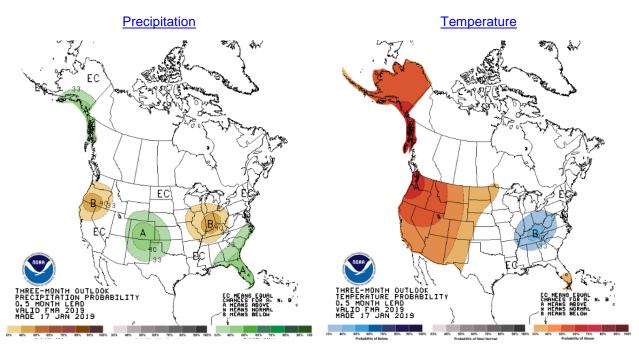
Seasonal Drought Outlook: <u>January 17 – April 30, 2019</u>

Source: National Weather Service



Climate Prediction Center 3-Month Outlook

Source: National Weather Service



February-March-April (FMA) 2019 precipitation and temperature outlook summaries

Water and Climate Update

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>.