New snow across northern Great Plains and Rockies this week

A cold, late April storm has provided more snow in a wide area of the western and central U.S. The NOAA National Operational Hydrologic Remote Sensing Center’s current snow depth map shows new snow over a large area in the northern Great Plains and central Rockies. New snow is also evident in the Sierra Nevada, Great Basin, and Northeast.
Snow

Current Snow Water Equivalent, NRCS SNOTEL Network

The current snow water equivalent percent of median map shows that, overall, the West is near or below median. Recent warm, dry weather has prompted a decline in percent of median across the West. Much of the central Rockies remain near or above median, but some stations in northern Colorado, Wyoming, and northeastern Utah are well above median.

See also: Current snow water equivalent values (inches) map.

The Alaska current snow water equivalent percent of median map shows little change from a week ago. Many stations in the central and southern part of the state have little to no snow at this time.

See also: Alaska current snow water equivalent values (inches) map.
Precipitation

Last 7 Days, Western Mountain Sites (NRCS SNOTEL Network)

The 7-day precipitation percent of average map shows a swath of the central West received much above average precipitation this week. This includes northern and central California east to Wyoming. The Northwest, northern Rockies, southern Rockies, and the Southwest saw mainly less than average precipitation for the week.

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

The Alaska 7-day precipitation percent of average map shows most of Alaska had a drier than average week, with the exception of some stations in central Alaska and the Kenai Peninsula.

See also: Alaska 7-day total precipitation values (inches) map.
Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

The 7-day precipitation percent of normal map for the continental U.S. shows mainly dry conditions in the Southwest and scattered dryness elsewhere. Much above normal precipitation was reported across the northern tier states, northern California and into the Great Basin, Great Lakes, and southeast Texas. Central Wyoming reported the highest percent of normal for the week.

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

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

Source: PRISM

The April national month-to-date precipitation percent of average map shows generally dry conditions for the Northwest, Midwest, Northeast, and Florida. The central U.S., from Montana and North Dakota south into Texas, had well above normal precipitation. Also well above normal precipitation is reported in southern California and southern Nevada.

See also: April month-to-date total precipitation values (inches) map.
Water Year-to-Date, Western Mountain Sites (NRCS SNOTEL Network)

The 2016 water year-to-date precipitation percent of average map shows average to above average precipitation at most stations in the West. Areas of below average precipitation occurred in the Southwest, eastern Rockies, and the Big Horn Mountains of Wyoming.

See also: 2016 water year-to-date total precipitation values (inches) map.

The Alaska 2016 water year-to-date precipitation percent of average map shows much of the Interior reported below average to average precipitation. The southern part of the state reported near average or above average precipitation, especially in the Kenai Peninsula.

See also: Alaska 2016 water year-to-date precipitation values (inches) map.
**Temperature**

**Last 7 Days, National Weather Service (NWS) Networks**

The 7-day temperature anomaly map shows the country was warmer than normal in the Pacific Northwest and much of the Midwest to the East. Cooler than normal temperatures were reported along the northern border states from Montana to Maine, and in California and Nevada.

*See also:* 7-day temperature (°F) map.

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

The April month-to-date daily mean temperature anomaly map shows above normal temperatures in the Northwest. Much of the U.S. reported near normal temperatures or slightly cooler than normal temperatures in the Great Lakes and Northeast.

*See also:* April month-to-date daily mean temperature (°F) map.
The January through March national daily mean temperature anomaly map shows that most of the country was warmer than normal. The warmest departures from normal were across the northern Plains. Parts of the central West and Southeast were near normal during this time.

Drought

**U.S. Drought Portal** Comprehensive drought resource.

**U.S. Drought Monitor** See map below. Drought conditions continue in the western states, including the exceptional drought in California.
Changes in Drought Monitor Categories over Time

Drought conditions continue to improve over much of the country. Over the past 6-12 months, conditions have improved in the south-central U.S., Mississippi River Valley, Great Plains, and much of the Pacific Northwest. The remainder of the West has shown improvement, but long-term drought persists in the Southwest.

Current National Drought Summary, April 26, 2016

Author: Richard Heim, NOAA/NCEI

“A large upper-level ridge of high pressure spanned the Lower 48 States (CONUS) this USDM week, bringing warmer-than-normal temperatures to most of the CONUS. But Pacific low pressure systems undercut the ridge, dumping rain and snow over many areas. This USDM week (April 19-25) ended up with above-normal precipitation across parts of the west coast, intermountain basin, and northern Rockies; much of the Plains; and parts of the coastal Carolinas. The week was drier than normal across parts of the Pacific Northwest and central Plains, and much of the Southwest, Midwest, and eastern U.S. east of the Mississippi River. Heavy precipitation in the Plains soaked into parched ground, with U.S. Department of Agriculture (USDA) reports of topsoil moisture improving 20 to 40 percent over the last two weeks from Texas to Montana. But continued dry weather in the east further dried soils, resulting in 20 to 40 percent increases in topsoil rated short or very
short of moisture from South Carolina to Vermont. Consequently, drought and abnormal dryness contracted across parts of the Plains but expanded in the East. As this USDM week ended Tuesday morning, additional storm systems were poised to move across the CONUS."

**USDA 2016 Secretarial Drought Designations**

**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

The modeled soil moisture percentiles as of April 23, 2016 show the Great Plains, western mountains, and south-central U.S. have the largest areas of wet soil conditions, with much of Texas showing large soil moisture percentages due to recent storms and flooding. The largest areas of dryness are in the eastern U.S. Some areas of dryness continue in the Northwest and Southwest.

Soil Moisture Data: NRCS Soil Climate Analysis Network (SCAN)

This graph shows soil moisture (at 2-, 4-, 12-, 20-, and 40-inch depths) and precipitation for the past 30 days at the SCAN Site Waimea Plain (2099) on the Big Island in Hawaii. All sensors show some response to the larger precipitation events.
Soil Moisture Data Portals
CRN Soil Moisture
Texas A&M University North American Soil Moisture Database
University of Washington Experimental Modeled Soil Moisture

Streamflow

The current streamflow map shows stations continue to report above flood stage conditions at locations in the lower Mississippi River Valley, lower Missouri River, and some tributaries. Many gages in the central U.S. are reporting above normal streamflow at this time. Streamflow across the Northeast is below normal.

Current Reservoir Storage

National Water and Climate Center Reservoir Data

U.S. Bureau of Reclamation Hydromet Tea Cup Reservoir Depictions:

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

California Reservoir Conditions
Short- and Long-Range Outlooks

Agricultural Weather Highlights

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

National Outlook, April 28, 2016: “Slow-moving storm systems will continue drifting eastward across the U.S., with the last significant storm in the series expected to reach the central and southern Plains by April 29-30 and the Mid-Atlantic States by May 1. Five-day precipitation totals could reach 1 to 3 inches from the central Rockies to the Mid-Atlantic region and 2 to 5 inches in the mid-South and portions of the western and central Gulf Coast States. Meanwhile, another round of late-season snow will blanket the central Rockies and environs. In fact, cool weather will continue to dominate the nation, except for lingering warmth across the South. During the weekend, however, warm weather will return to the Pacific Northwest and begin to spread eastward. The NWS 6- to 10-day outlook for May 3 – 7 calls for the likelihood of below-normal temperatures across much of the South, East, and lower Midwest, while warmer-than-normal weather can be expected in southern Florida and from the Pacific Coast to the northern Plains. Meanwhile, near- to below-normal precipitation across most of the U.S. will contrast with wetter-than-normal conditions from California to the Four Corners region and along the Gulf and Atlantic Coasts.”

National Weather Hazard Outlook

The NWS Climate Prediction Center's outlook for weather hazards shows heavy rain is expected in the Ohio River and central and lower Mississippi River Basin. Severe weather is expected in eastern Texas and Louisiana. Heavy snow is expected in south-central Colorado, and much above normal temperatures are expected in the Pacific Northwest and Southwest. Flooding is likely or occurring at several places in the central Plains and southern U.S., including a large area of eastern Texas. The severe drought continues in parts of the West.
Seasonal Drought Outlook

During the next three months, drought will persist on the Big Island in Hawaii, California, western Nevada, northern Utah, Arizona, and New Mexico. Elsewhere, most drought designations are expected to improve or be removed.

NWS Climate Prediction Center 3-Month Outlook:

Precipitation

Temperature
Outlook Summary

NWS Climate Prediction Center:

The May-June-July (MJJ) 2016 precipitation outlook: “The MJJ 2016 precipitation outlook favors above-median precipitation for a region stretching from northern California eastward to include much of the Interior West, parts of the Southwest, southern Plains, and Southeast. Residual El Niño impacts support the highlighted area across much of the West and southern Plains while dynamical and statistical model guidance favor areas in the Southeast. It is important to note that these probabilities are quite modest and represent only a slight tilt to the above-median category, especially across the Southeast CONUS. Below-median precipitation is most likely for northern regions of the Pacific Northwest and the western Great Lakes consistent with any remaining El Niño influence and dynamical model guidance. An increased chance of above-median precipitation is also forecast for western and northern Alaska through JJA 2016 by dynamical models, resulting from anomalously open sea ice and warm open ocean temperatures.”

The May-June-July (MJJ) 2016 temperature outlook: “The suite of temperature outlooks this month are similar to those released last month as the general thinking over the outlook period remains generally unchanged, although potential La Niña impacts were considered earlier than in previous sets of outlooks.

Overall for temperature, changes were primarily minor adjustments for the first several leads where probabilities are modified somewhat in some areas based on the latest calibrated dynamical model guidance and current soil moisture conditions. For MJJ 2016, calibrated model guidance and in some areas positive departures in soil moisture support a slightly adjusted region of equal chances (EC) and a slight decrease in probabilities for above normal temperatures for some locations in the northern Plains, upper Mississippi Valley, and Great Lakes. Probabilities for above normal temperatures were increased for parts of the far West and Southwest CONUS based on dynamical model guidance, long term trends, and below average winter and early spring precipitation.”

More Information

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