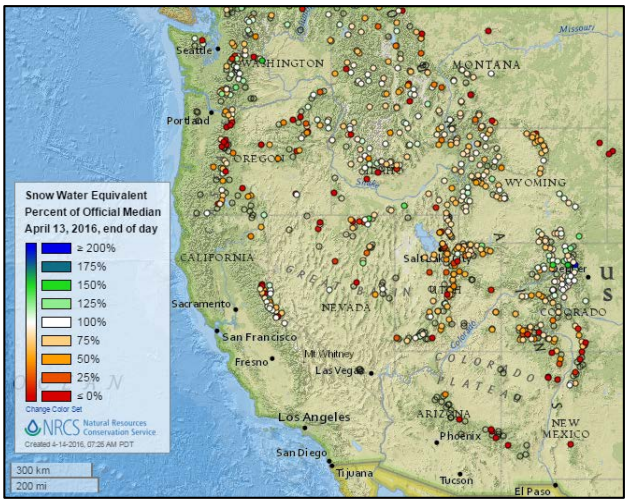
United States Department of Agriculture

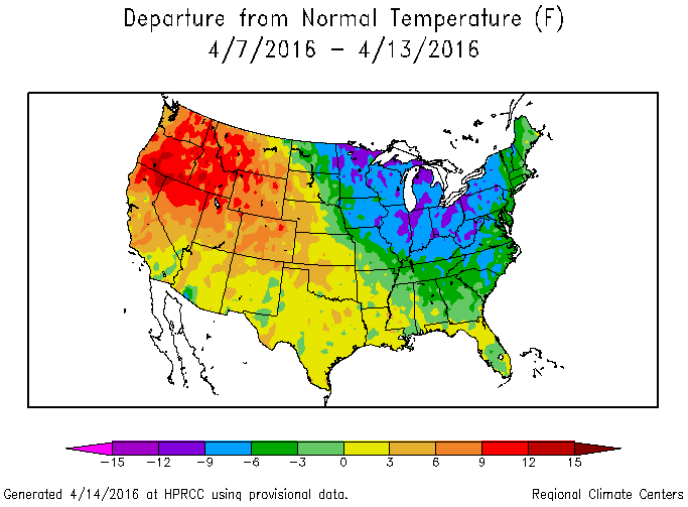
Water and Climate Update

April 14, 2016

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

Weekly Highlight: Warm, dry weather initiates snowmelt across the West



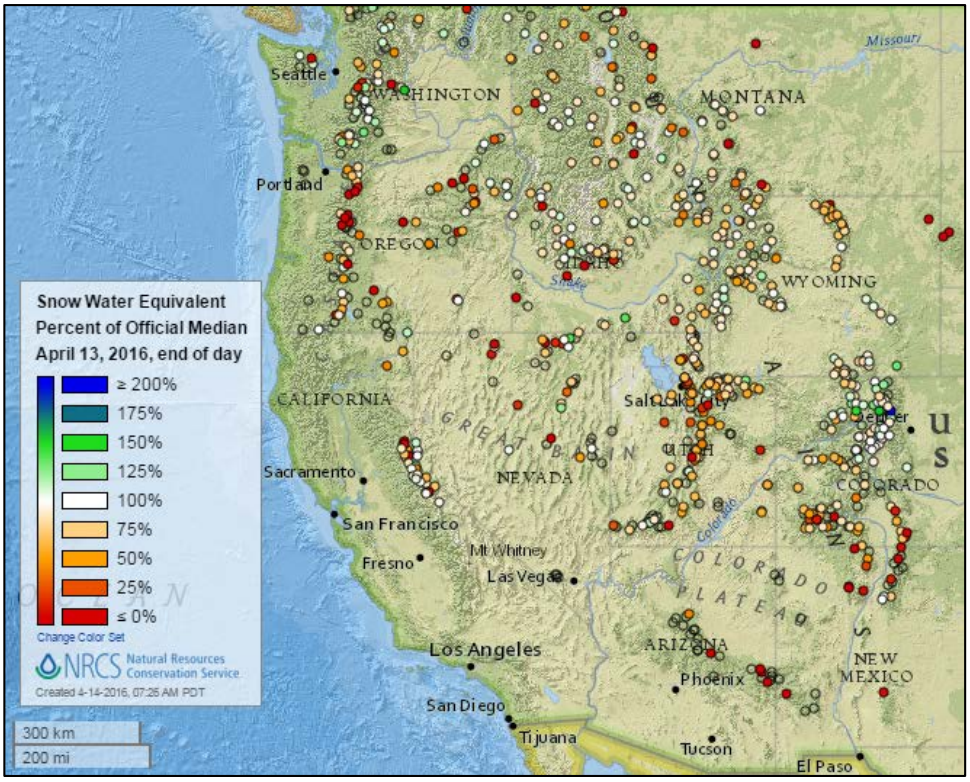


The current **snow water equivalent** percent of median map shows that, overall, the West was near or below median. Last week, **temperatures** in parts of the Pacific Northwest were 12 degrees warmer than normal. This recent warm, dry weather has prompted a decline in percent of median across the West.

By contrast, cooler than normal temperatures were reported in a large area around the Great Lakes, including the Northeast, Mid-Atlantic states, and into the South.

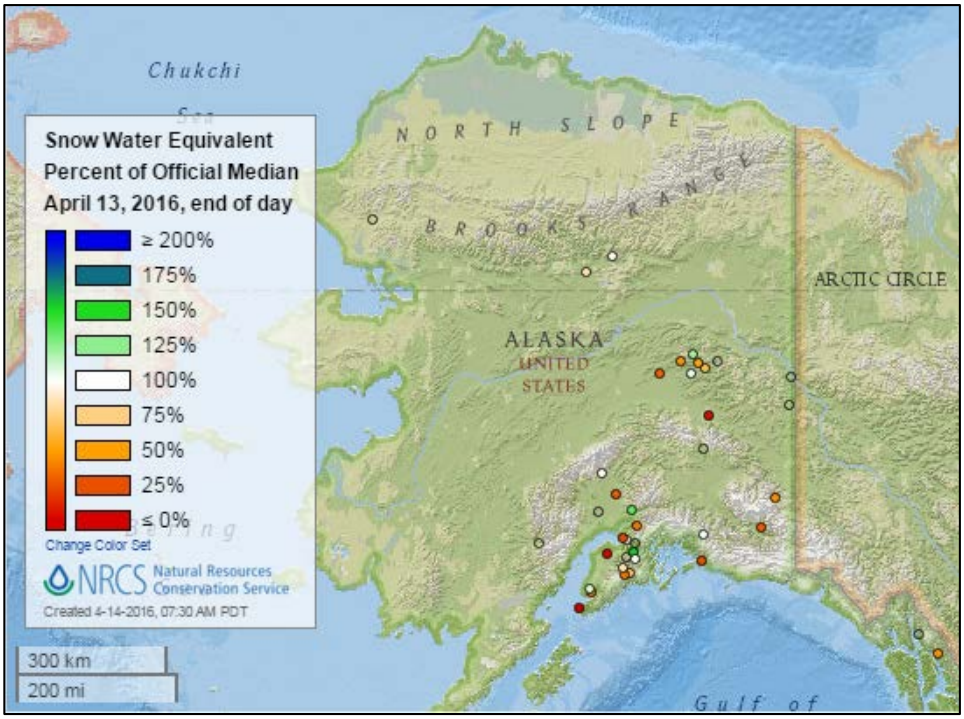
Snow

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. Many stations at lower elevations have little to no snow at this time.

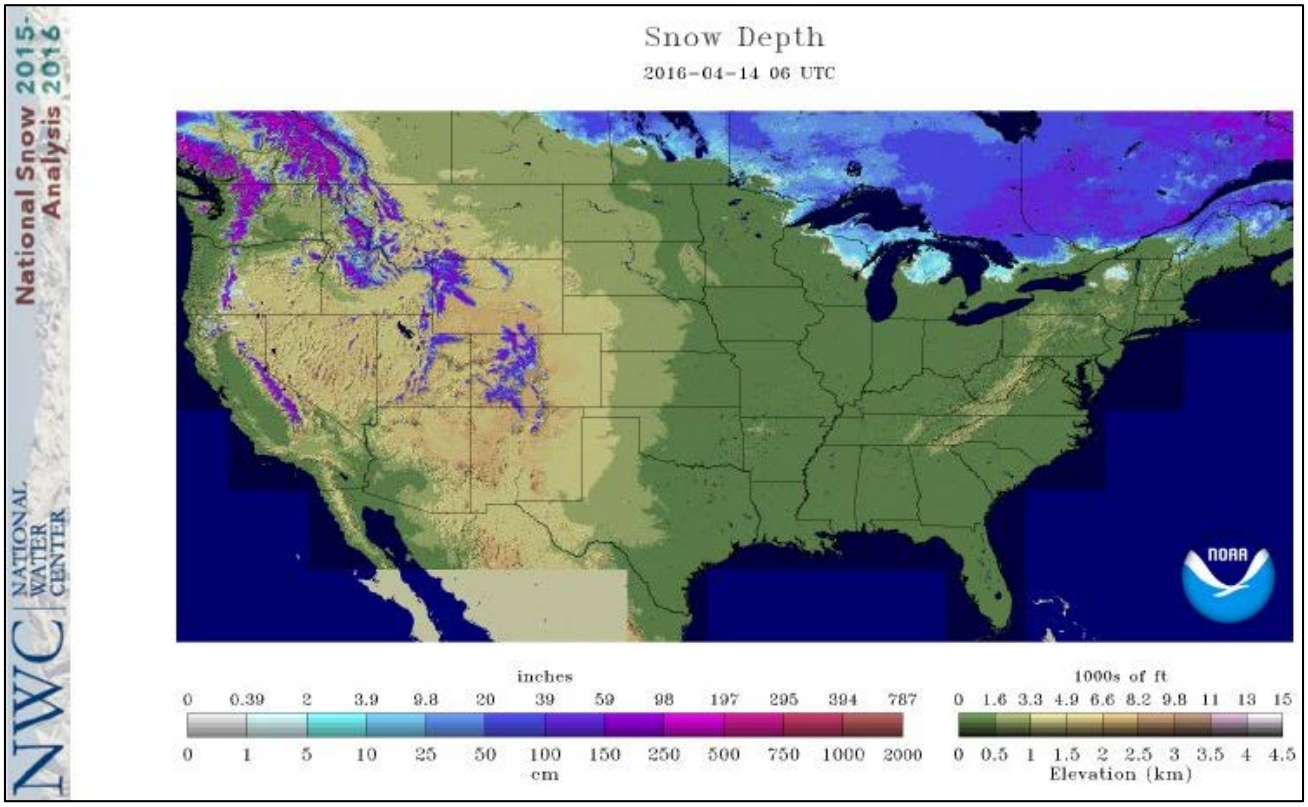
See also: Current snow water equivalent **values (inches)** map.



The Alaska current snow water equivalent **percent of median** map shows some stations reporting a snowpack decrease 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.

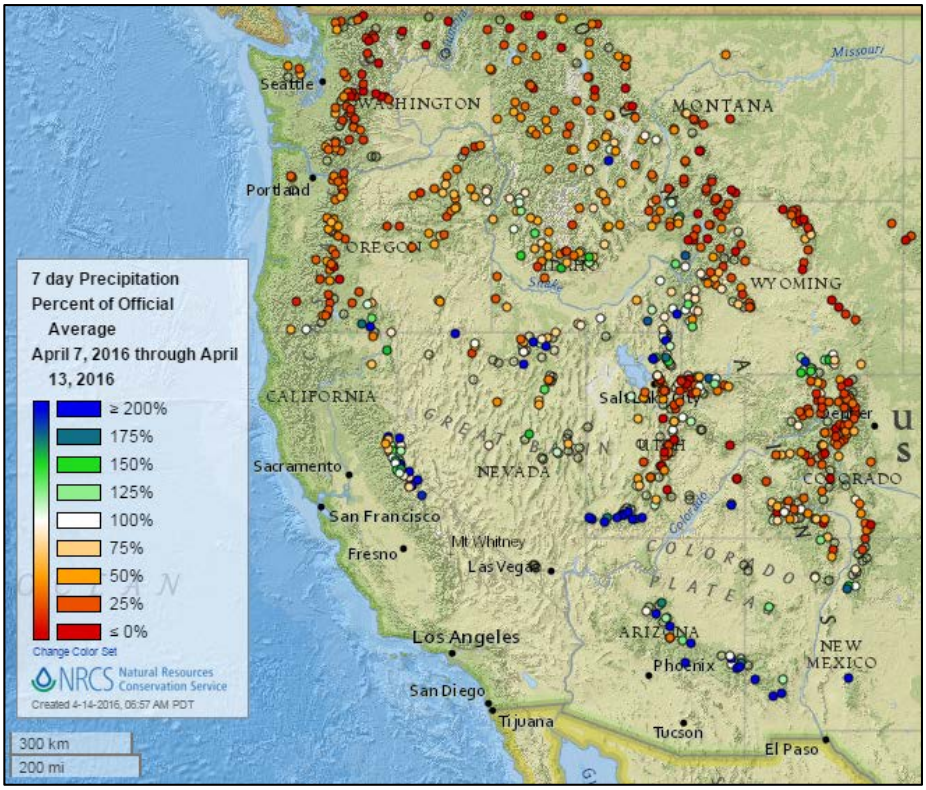
Current Snow Depth, National Weather Service (NWS) Networks



The NOAA National Operational Hydrologic Remote Sensing Center's current **snow depth** map shows new snow across the Great Lakes region, the northern Catskill Mountains, and northern New England. Snow has melted in the valleys across the West and central Great Plains from a week ago.

Precipitation

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

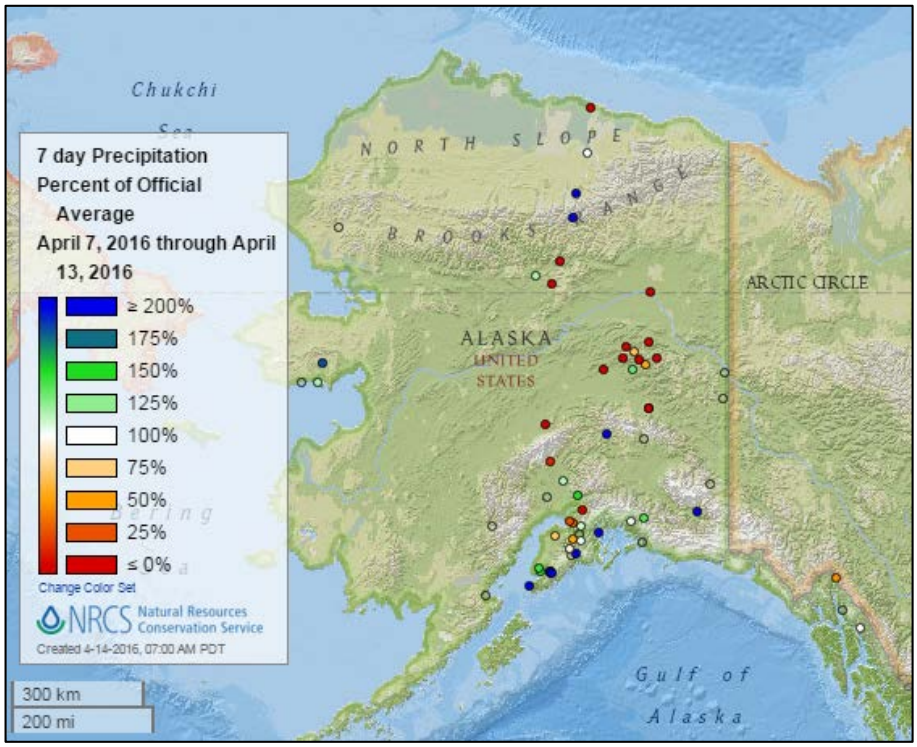


The 7-day precipitation **percent of average** map shows another large contrast from last week, with much of the West reporting little to no precipitation. The only above average precipitation was in the Sierra Nevada, the Southwest, and southern Utah.

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

The Alaska 7-day precipitation **percent of average** map shows stations reporting a wetter than average week in the Brooks Range and at scattered stations across the southern part of the state. Most of the central part of the state, and a few stations elsewhere reported a dry week.

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

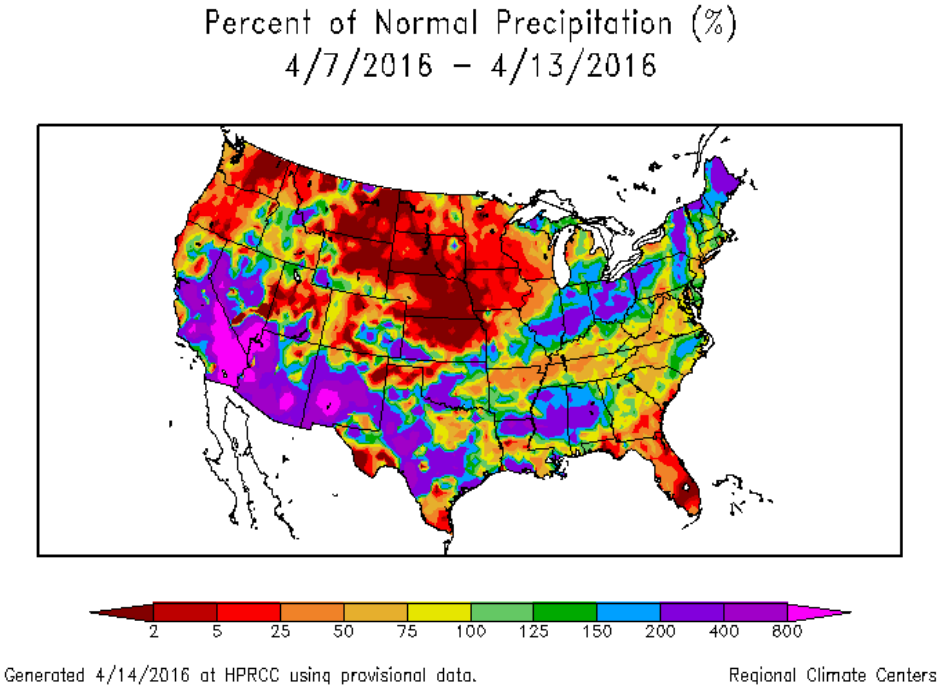


Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

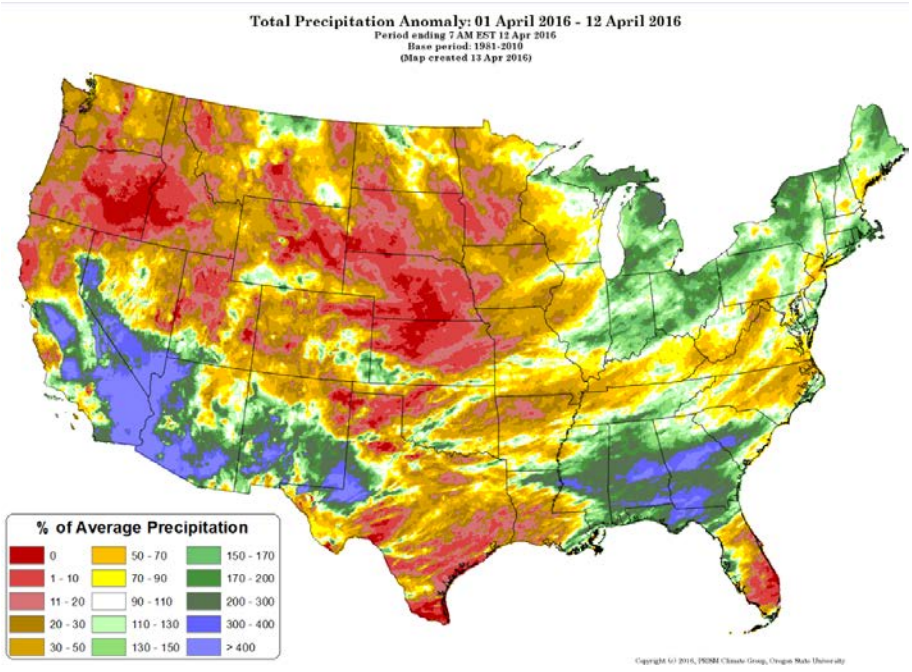
The 7-day precipitation **percent of normal** map for the continental U.S. shows normal to above normal conditions across much of southern West and eastern U.S. Areas with well above normal precipitation were in southern California and the Southwest. Most of the Pacific Northwest, northern Great Plains, southern and southwest Texas, and Florida had a below normal to dry week.

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



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

Source: PRISM



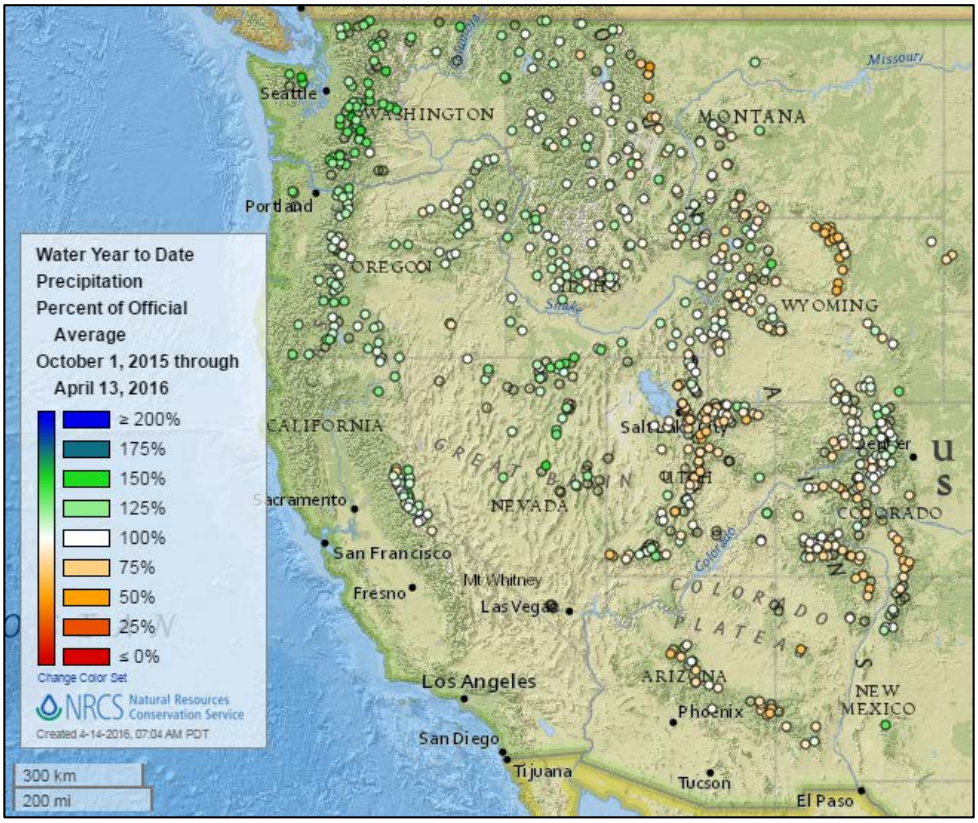
The April national month-to-date precipitation **percent of average** map shows much of the Southeast, Great Lakes, and eastern Southwest had well above normal precipitation. The Great Plains, northern areas of the West, and Florida were drier than normal.

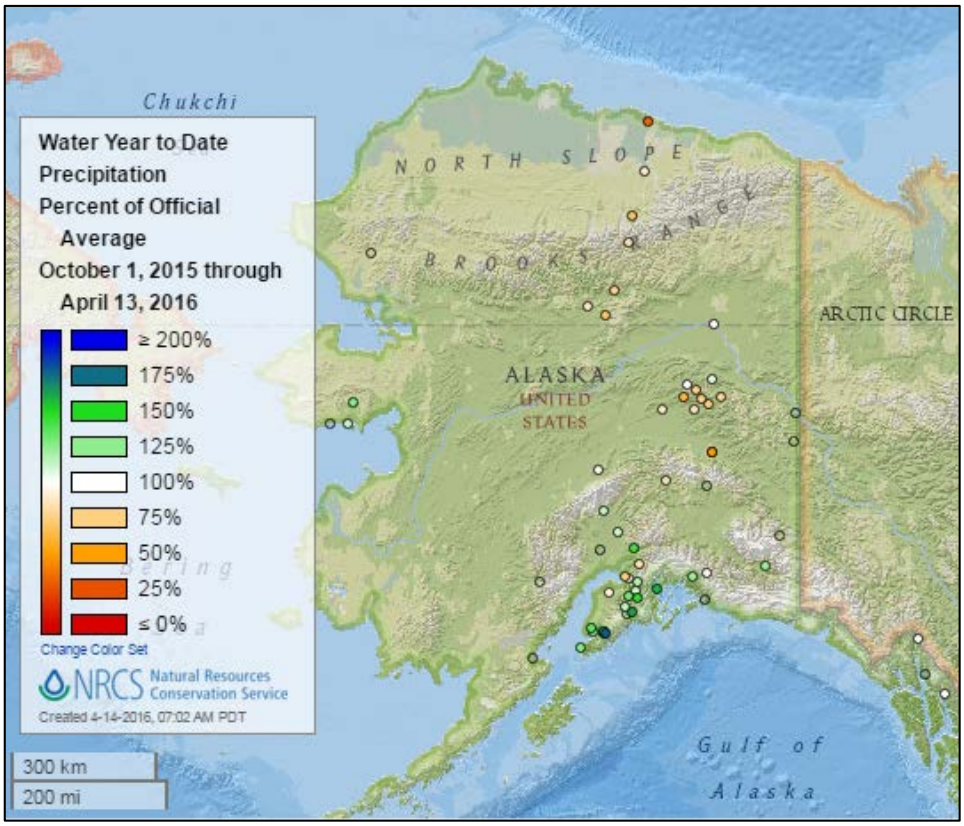
See also: April month-to-date total precipitation **values (inches)** map.

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 Washington. Areas of below average precipitation occurred in the Southwest, Utah, the Big Horn Mountains of Wyoming, and northern Montana.

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 state reported below average to average precipitation. The southern part of the state reported near normal or above normal precipitation, especially in the Kenai Peninsula.

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

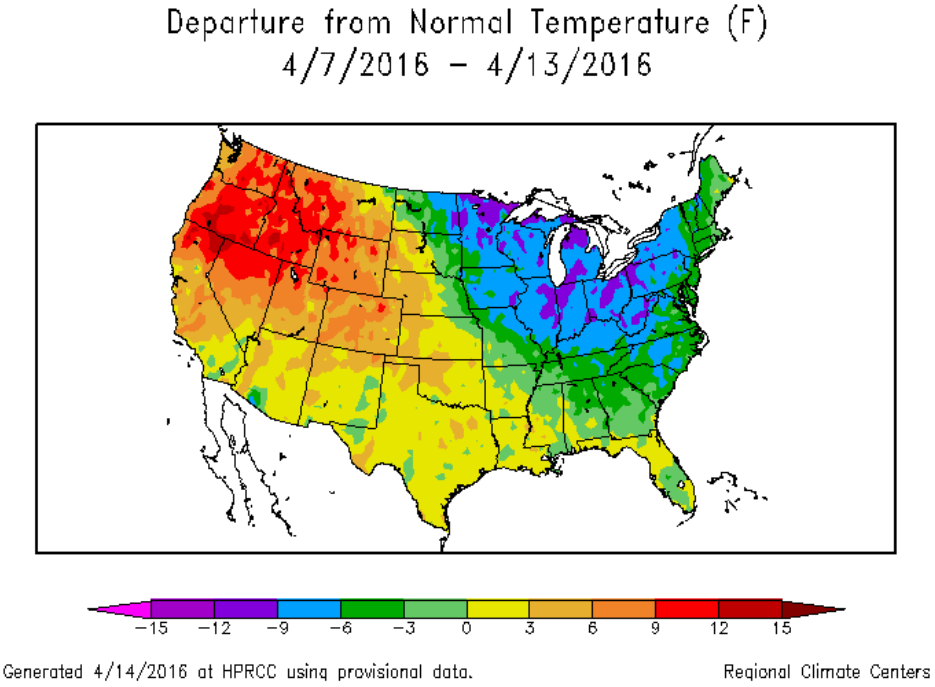
Temperature

Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

The 7-day **temperature anomaly** map shows the country was warmer than normal in the West. Temperatures in the Pacific Northwest were 12 degrees warmer than normal. Cooler than normal temperatures were reported in a large area around the Great Lakes, including the Northeast, Mid-Atlantic states, and into the South. The coolest anomalies in the Great Lakes were more than 9 degrees cooler than normal.

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

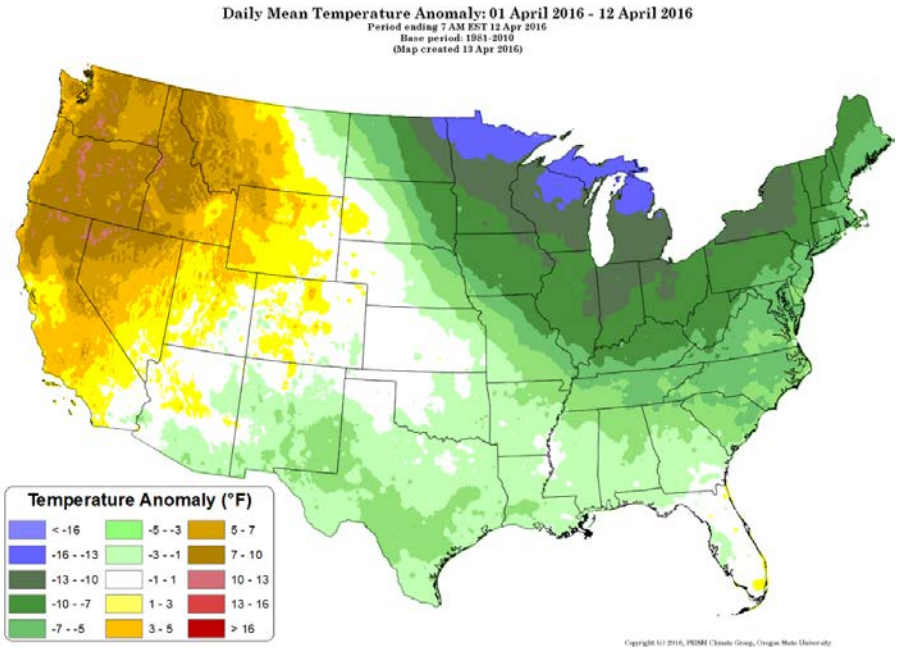


Month-to-Date, All Available Data Including SNOTEL and NWS Networks

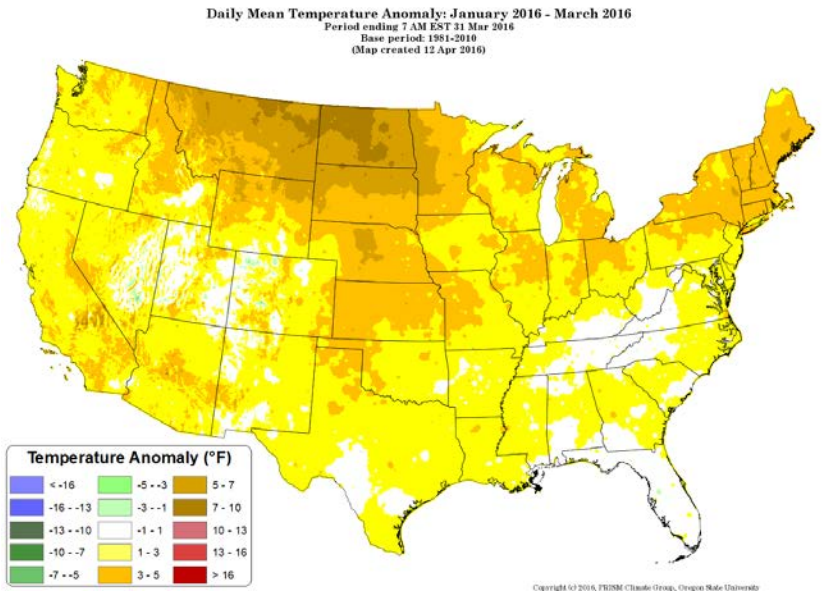
Source: PRISM

The April month-to-date **daily mean temperature anomaly** map shows above normal temperatures in the West. Much of the U.S. reported slightly cooler than normal temperatures so far this month, with the coolest anomalies in the western Great Lakes region where anomalies were over 16 degrees cooler than normal.

See also: April month-to-date **daily mean temperature (° F)** map.



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

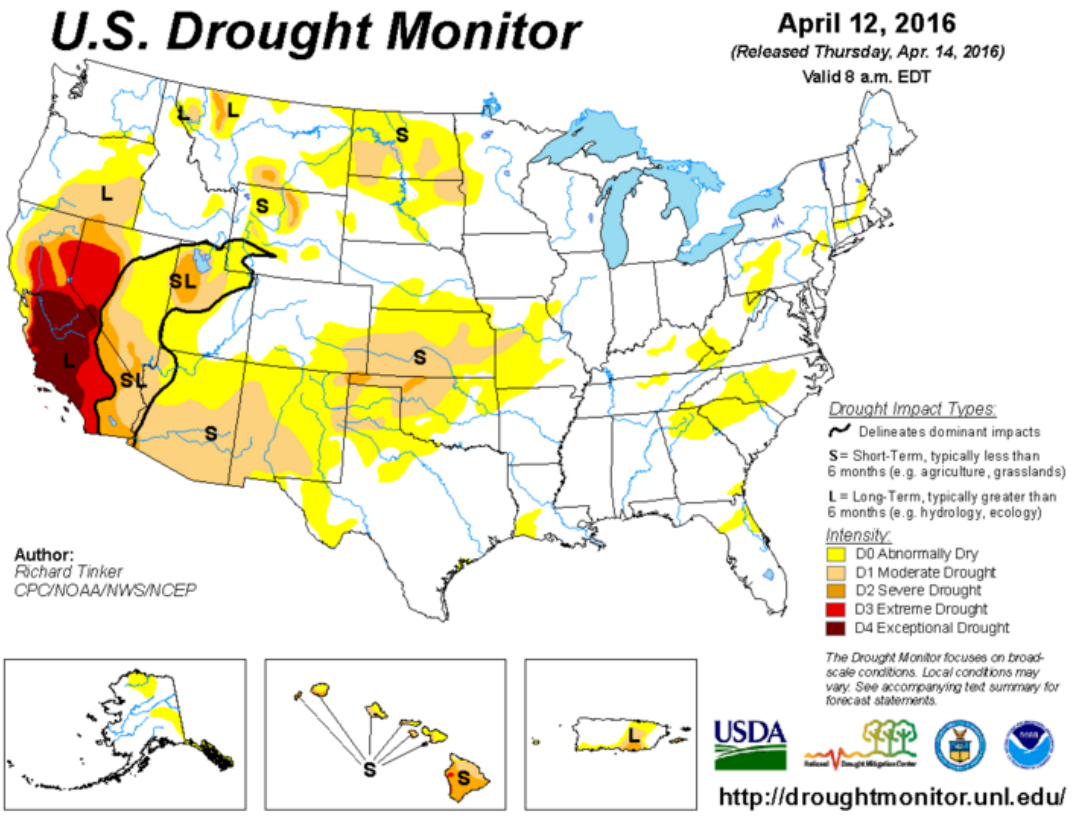


The January through March national **daily mean temperature anomaly** map shows that most of the country was warmer than normal. The warmest departures from normal were across the northern Plains. The central West and Southeast were near normal during this time.

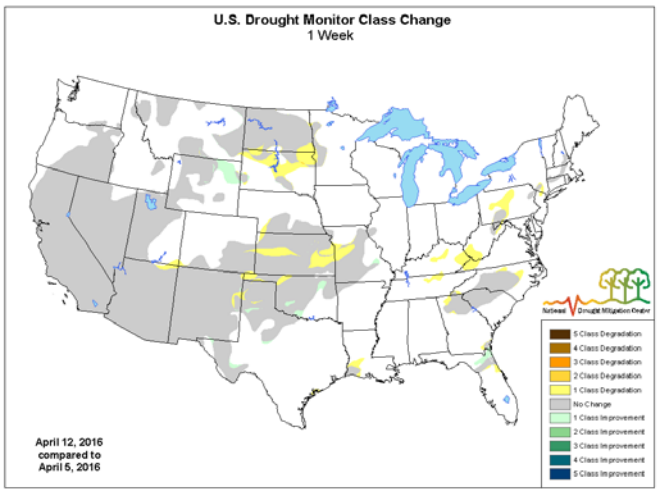
Drought

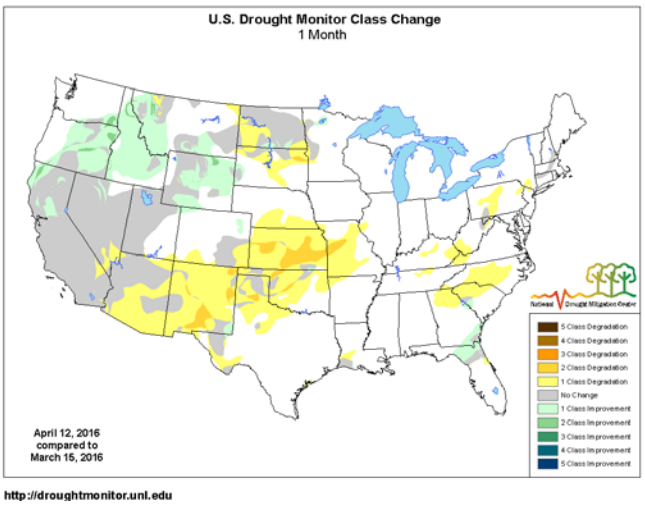
U.S. Drought Portal Comprehensive drought resource.

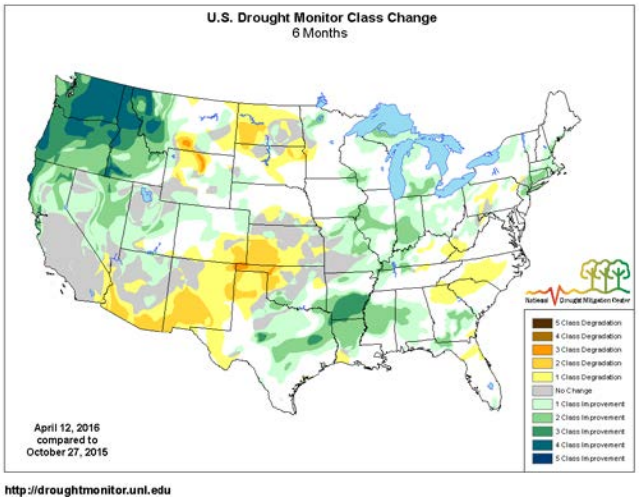
U.S. Drought Monitor See map below. Drought conditions continue in the western states, including the exceptional drought in California and Nevada.

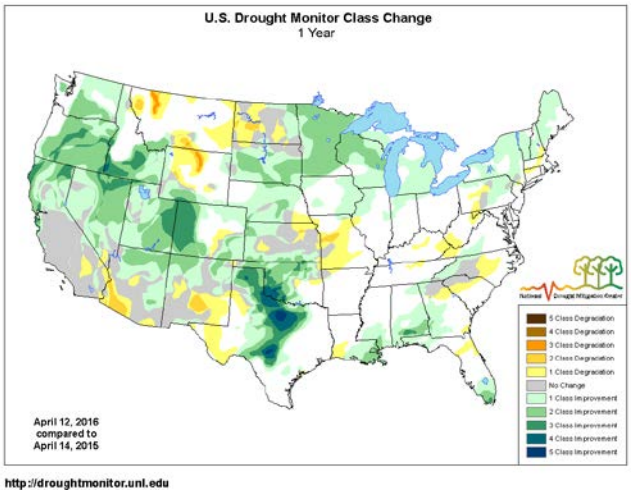


Changes in Drought Monitor Categories over Time









Click any map to enlarge it.

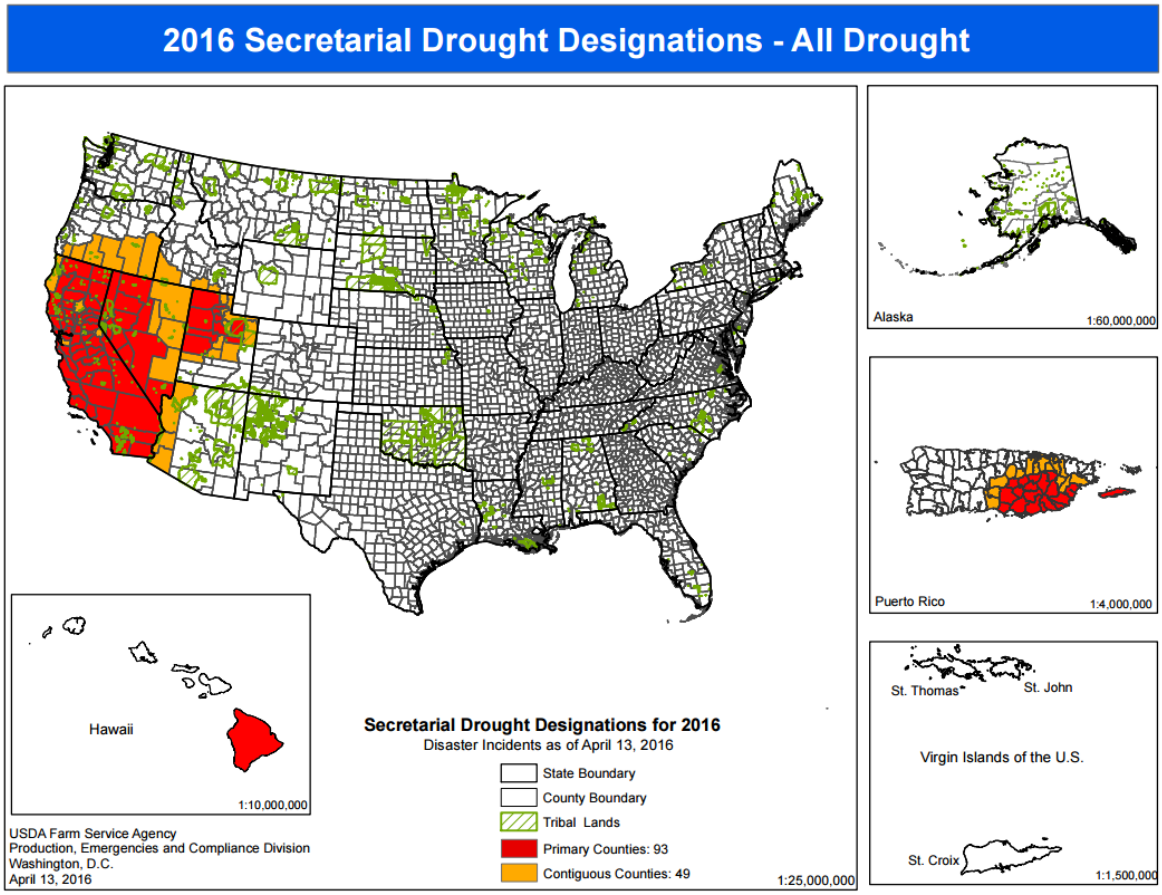
Drought conditions continue to improve over much of the country. Over the past 6-12 months, conditions have improved in the south-central U.S., Mississippi River Valley, Great Plains, and Pacific Northwest. The remainder of the West has shown improvement, but long-term severe drought persists in California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

Current National Drought Summary, April 12, 2016

Author: Richard Tinker, NOAA/NWS/NCEP/CPC

“This week was generally uneventful in those parts of the country experiencing abnormal dryness and drought, with only a few patchy areas received 1 to 3 inches of precipitation. As a result, dryness and drought either remained unchanged or deteriorated where it existed.”

USDA 2016 Secretarial Drought Designations

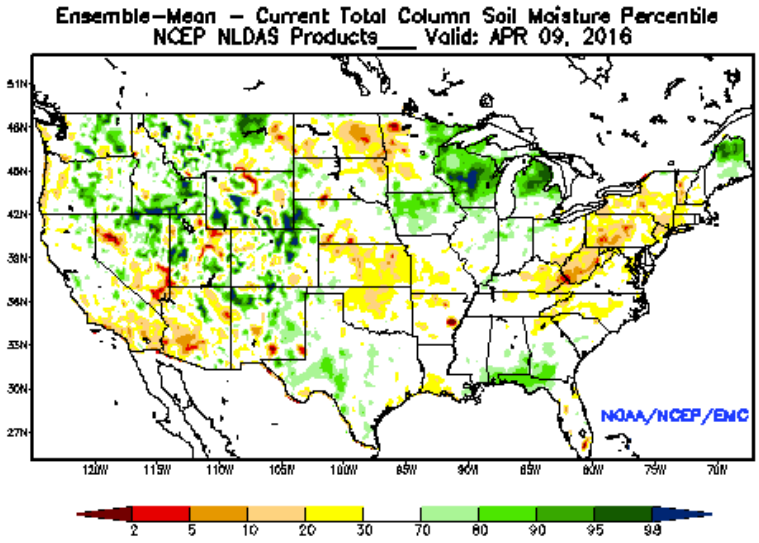


Highlighted Drought Resources

- 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

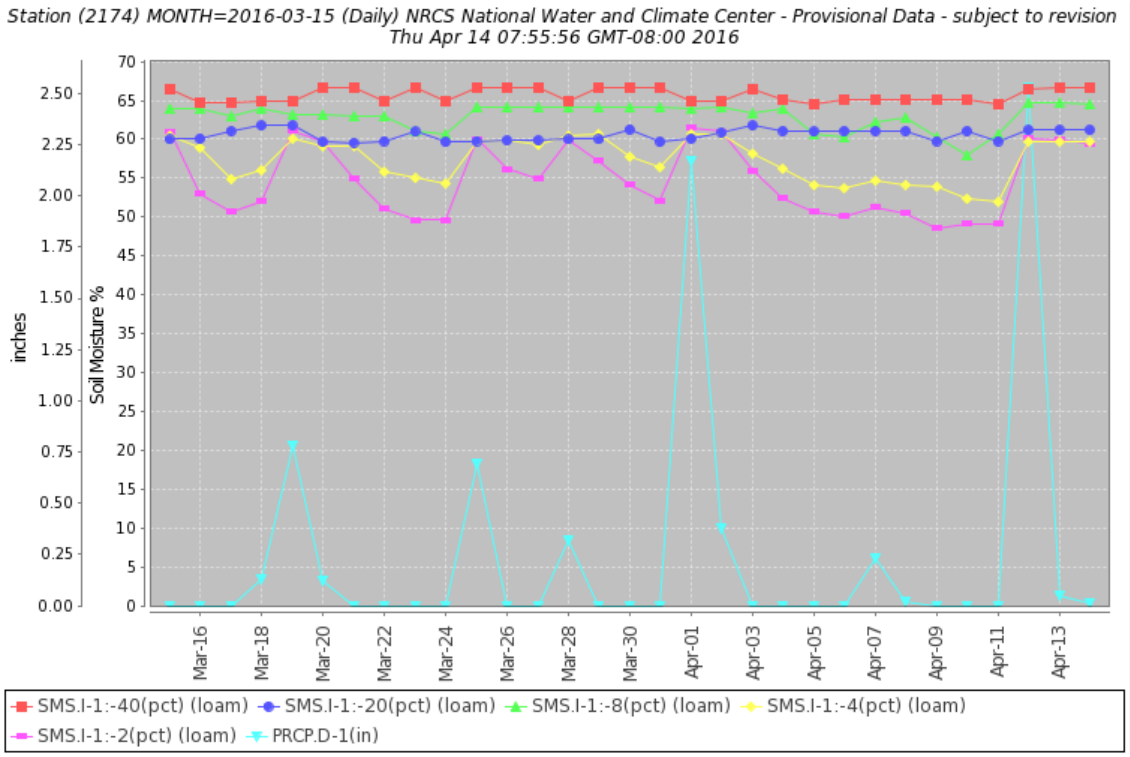
Soil Moisture



The modeled **soil moisture percentiles** as of April 9, 2016 show the Great Lakes, parts of the western Great Plains, and western mountains have the largest areas of wet soil conditions.

Scattered areas of dryness are in the Southwest and in much of the eastern U.S.

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



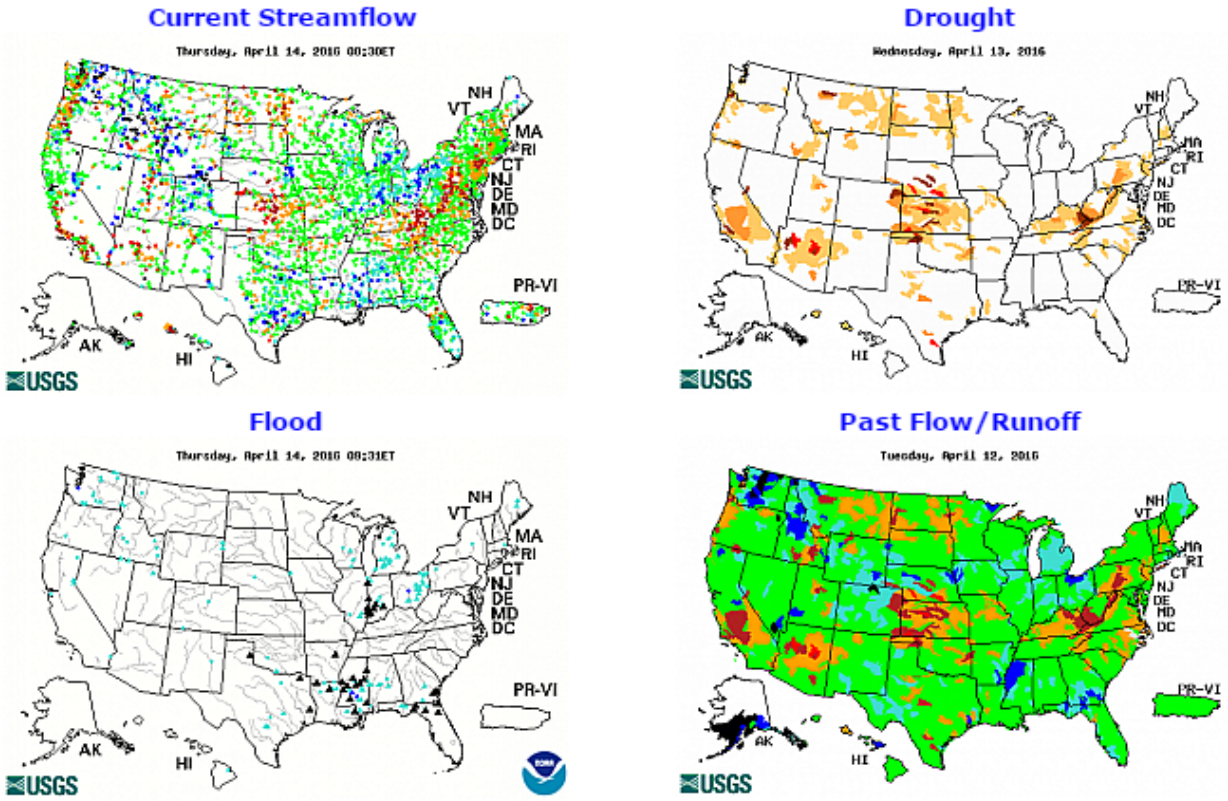
This graph shows soil moisture (at 2-, 4-, 8-, 20-, and 40-inch depths) and precipitation for the past 30 days at the Dee River Ranch SCAN Site 2174 in Alabama. The heavy precipitation events in the past 30 days resulted in soil moisture increases at the 2-, 4-, and 8-inch sensor depths, with the 20- and 40-inch depth sensors near or at saturation.

Soil Moisture Data Portals

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

Streamflow

Source: USGS



Select any individual map to enlarge and display a legend

The **current streamflow** map shows stations continue to report above flood stage conditions at locations throughout the lower Mississippi River Valley due to many recent storms. Northern Florida and southern Georgia continue to have river gages with lingering above flood stage conditions. Some gages in the West, Great Lakes, South, and Southeast are reporting above normal streamflow at this time.

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

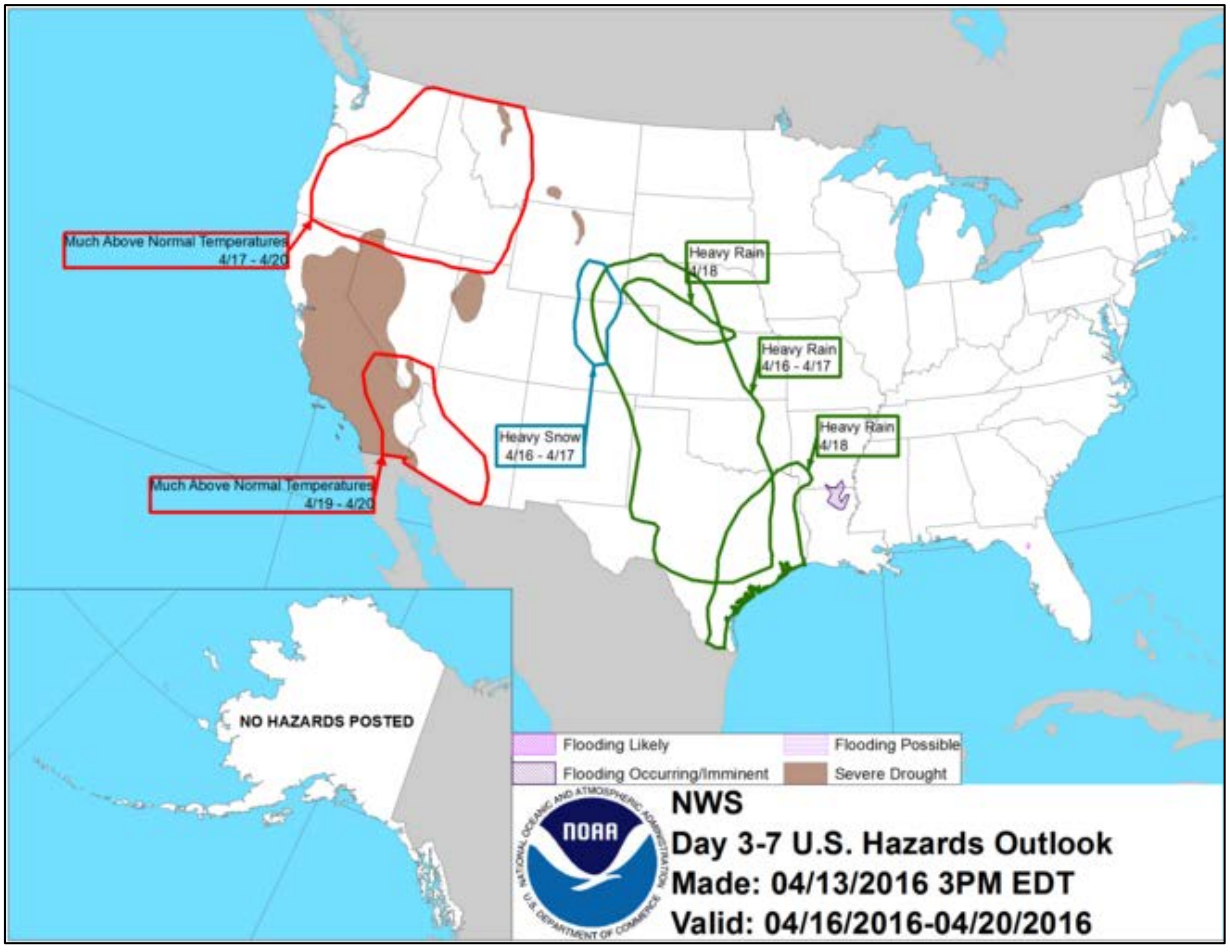
Short- and Long-Range Outlooks

Agricultural Weather Highlights

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

National Outlook, April 14, 2016: "A storm system arriving along the northern Pacific Coast will drift eastward before stalling across the nation's mid-section by week's end. The slow-moving storm will produce multiple days of heavy precipitation across the Plains. Five-day rainfall totals could reach 2 to 6 inches across the central and southern Plains. Other weather hazards could include severe thunderstorms on the central and southern Plains; heavy snow across central sections of the Rockies and High Plains; and the possibility of high winds, blowing dust, and wildfires in the Southwest. In stark contrast, an extended period of dry weather—accompanied by a warming trend—should promote a rapid pace of fieldwork in most areas from the Mississippi Valley eastward, including much of the Midwest. The NWS 6- to 10-day outlook for April 19 – 23 calls for the likelihood of near- to above-normal temperatures and near- to below-normal precipitation across most of the nation. Colder-than-normal conditions will be limited to portions of the lower Rio Grande Valley and northern New England, while wetter-than-normal weather will be confined to an area stretching from the southern half of the Plains into the lower Southeast."

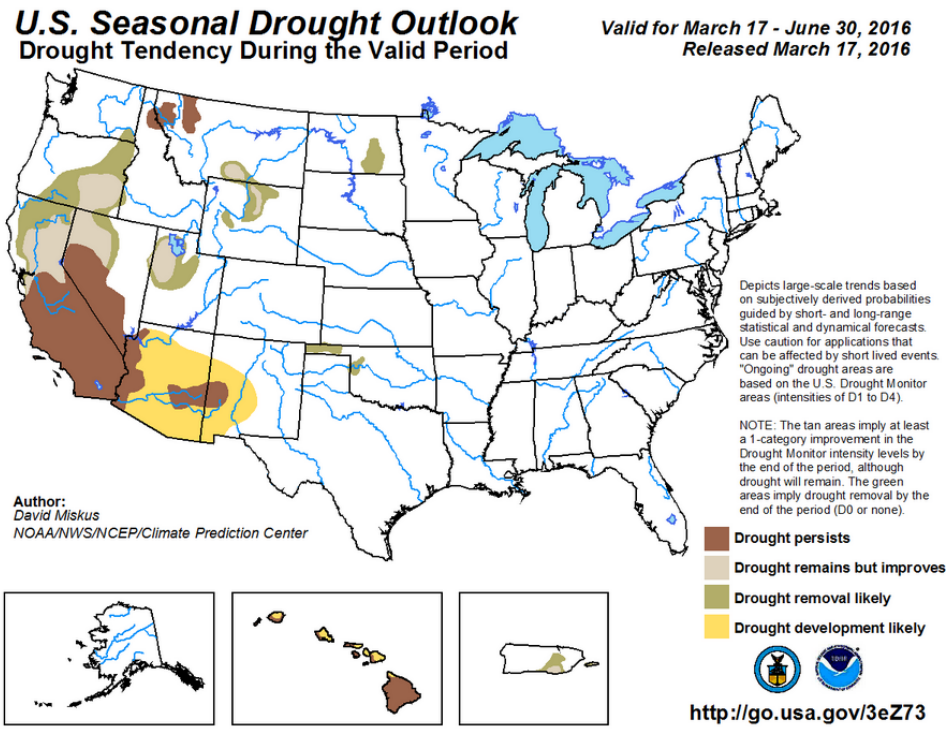
National Weather Hazard Outlook



The NWS Climate Prediction Center's outlook for **weather hazards** shows heavy rain is expected in the central U.S. Heavy snow is expected in the central Rocky Mountains. Much above normal temperatures are forecast in the Pacific Northwest and Southwest. Flooding is occurring in northern Louisiana, southern Arkansas, and likely in northern Florida. The severe drought continues in parts of the West.

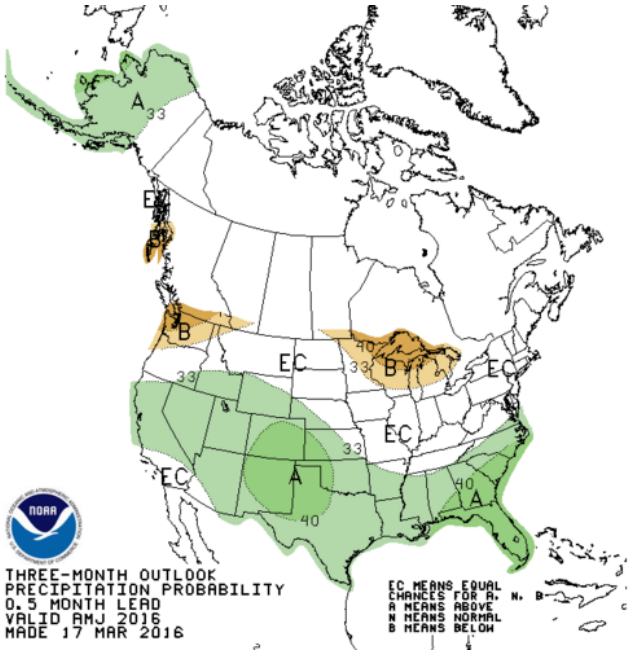
Seasonal Drought Outlook

During the next three months, **drought** will persist on the Big Island in Hawaii, the northern Rockies, southern California, western Nevada, Arizona, and New Mexico. Drought may develop on the other islands in Hawaii and the Southwest. Elsewhere, most drought designations are expected to improve or be removed.

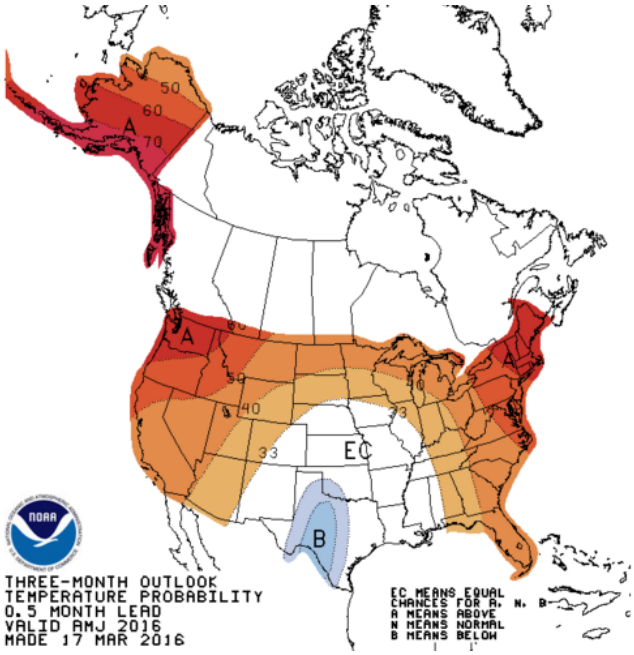


NWS Climate Prediction Center 3-Month Outlook

Precipitation



Temperature



Outlook Summary

NWS Climate Prediction Center:

The April-May-June (AMJ) 2016 precipitation outlook: "The AMJ and MJJ 2016 precipitation outlooks follow a pattern that is on average associated with El Niño. Enhanced chances for above-median precipitation are forecast for AMJ and MJJ 2016 from northern and central California, across the central Rockies and southwest, into the central and southern Great Plains, and for AMJ into the gulf and southern Atlantic coasts. Equal chances are indicated for southern California and southwestern Arizona, where climatological precipitation is very low during this season. Below-median precipitation is most likely through MJJ for northern regions of the Pacific Northwest and the western Great Lakes. A slightly increased chance of above-median precipitation is forecast for western and northern Alaska into summer by dynamical models, resulting from anomalously open sea ice and warm, open-ocean temperatures.

During autumn of 2016 and winter of 2016-17, the increasing likelihood of developing la Niña conditions is the primary factor for increased probabilities of below-median precipitation across the southern tier of the contiguous U.S. and the southern coast of Alaska, and increased probabilities of above-median precipitation for the Pacific Northwest, Ohio Valley, and central Great Lakes."

The April-May-June (AMJ) 2016 temperature outlook: "The AMJ temperature outlook is similar to the outlook from a month ago, with some increase in probabilities, consistent with shorter lead times and dynamical model forecasts. All temperature tools predict increased probabilities of above-normal temperatures across the northern half of the continental U.S. Through the early spring, consistent with an El Niño. Equal chances of below-normal and above-normal, or increased chances of below-normal are indicated in parts of the south-central contiguous U.S. Increased chances of above-normal temperatures continue across much of the contiguous U.S. and Alaska through the summer into autumn, as indicated by model forecasts, influenced by the combined signals of global sea surface temperature anomalies and a warming climate on decadal timescales.

Increased chances for above-normal temperatures forecast across parts of the southern contiguous U.S. and a slight increase in the probability for below-normal temperatures across the northern U.S. from NDJ 2016 through AMJ 2017 are based largely on the impacts of likely La Niña conditions. An increased probability of above-normal temperatures for the north slope of Alaska during the autumn is due to the likelihood of anomalously open sea ice and the feedback between sea ice coverage and changes in the climate state."

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**.