



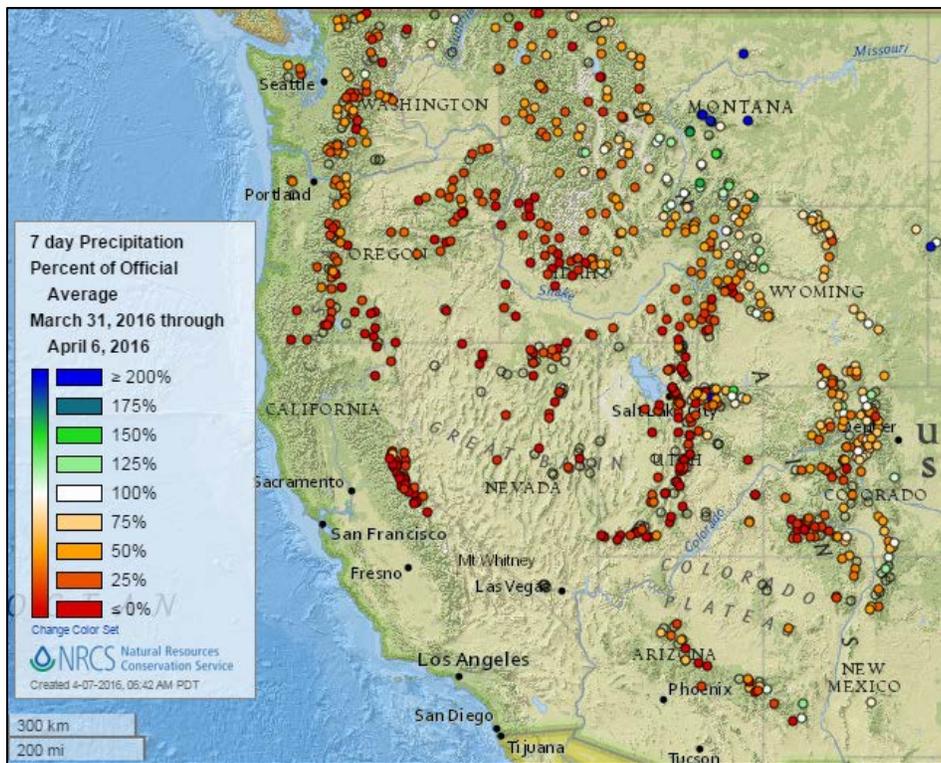
# Water and Climate Update

April 7, 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.

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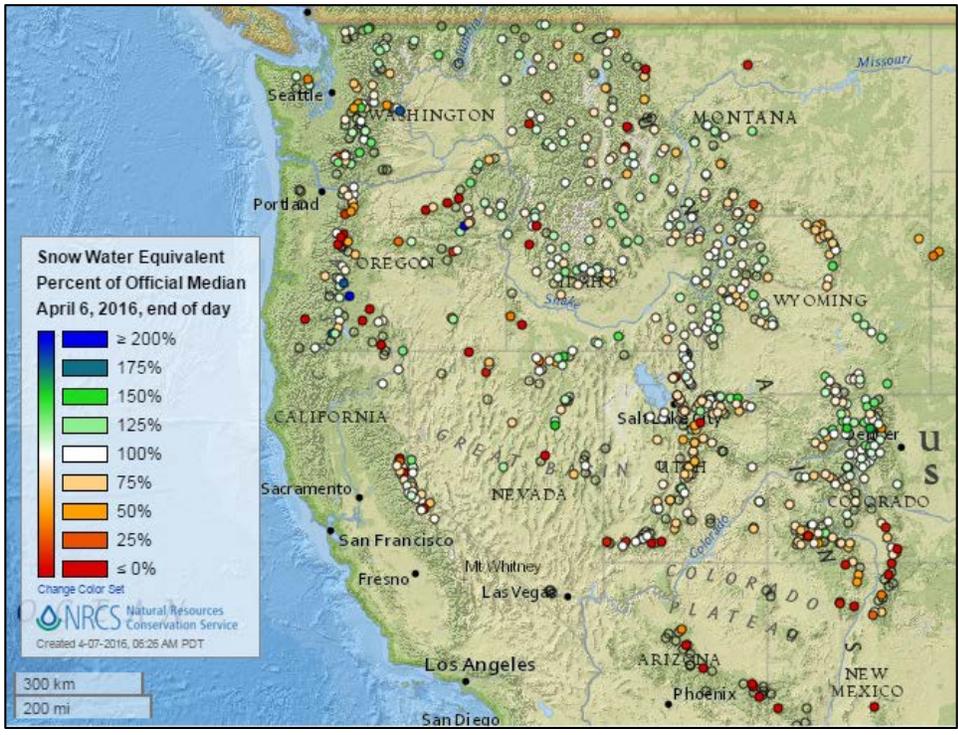
## Weekly Highlight: Unusually dry conditions across the West this week



The 7-day precipitation [percent of average](#) map shows a large contrast from last week with much of the West reporting little to no precipitation. The only above average precipitation was in a small area east of the northern Rockies and in the Black Hills of South Dakota.

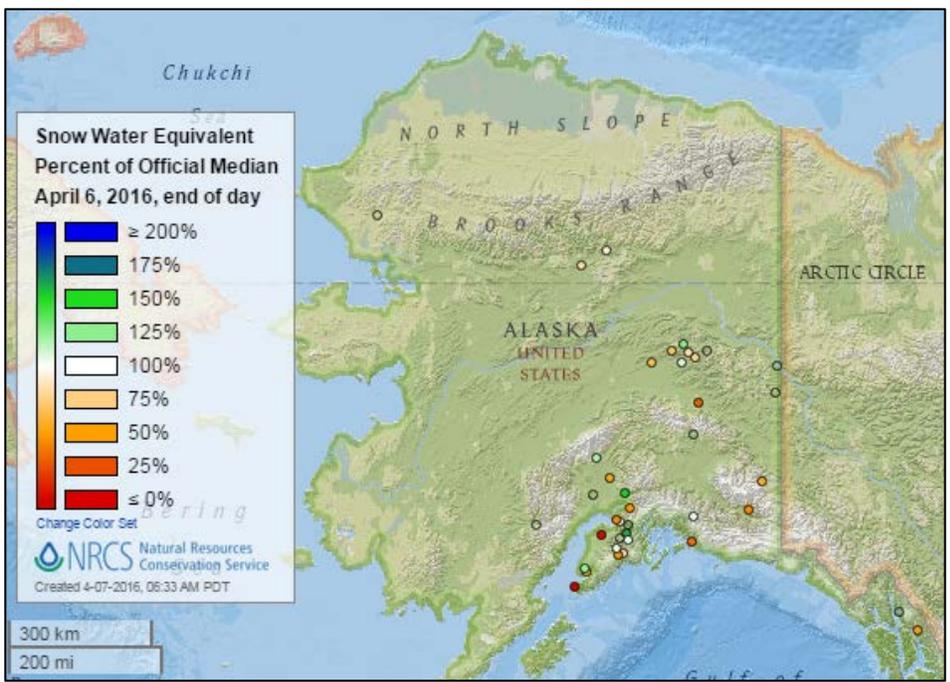
Snow

Current Snow Water Equivalent, NRCS SNOTEL Network



The current snow water equivalent [percent of median](#) map shows that, overall, the West is near average. There was little change from last week. Stations in the Southwest and in the southern Rockies were below median. A few stations across the West report values above median. Some stations in the Southwest and at low elevations have melted out.

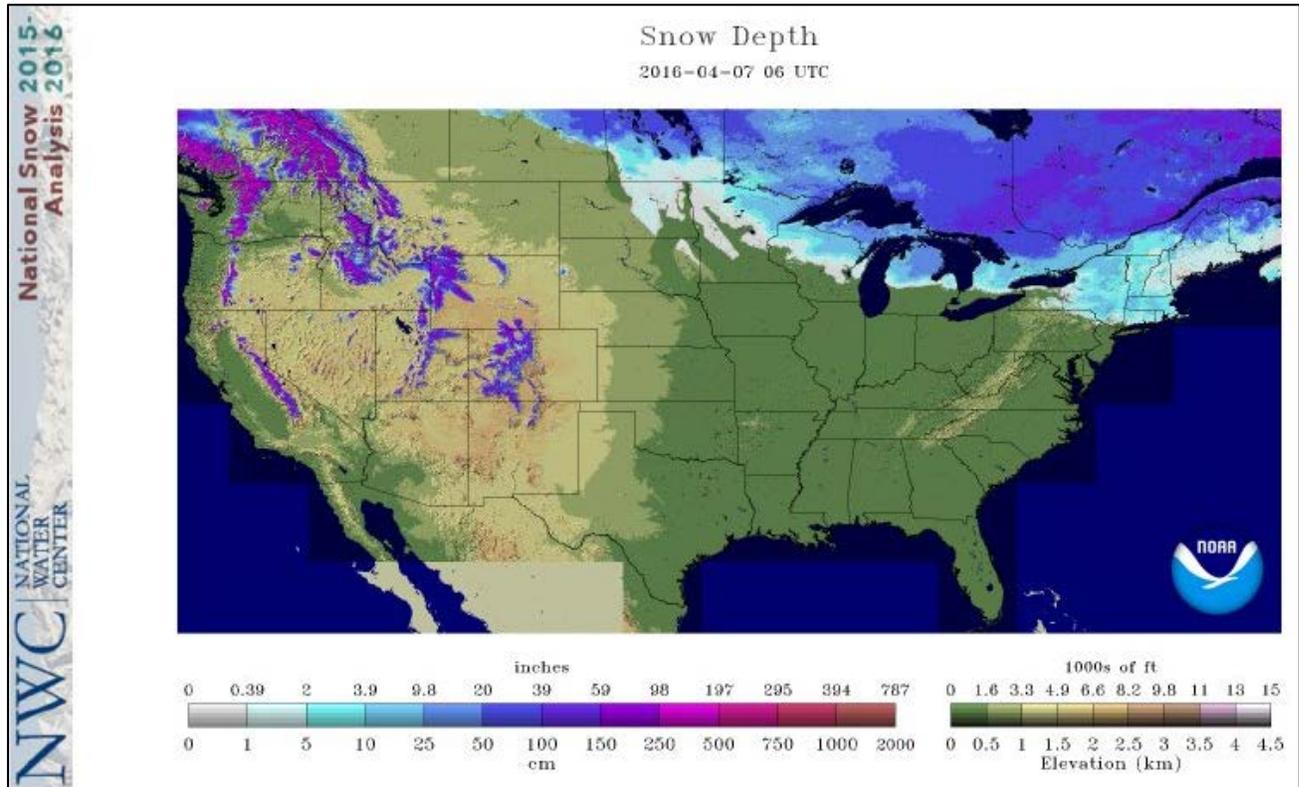
See also: Current snow water equivalent [values \(inches\)](#) map.



The Alaska current snow water equivalent [percent of median](#) map shows some stations reporting a snowpack decrease from a week ago. The snowpacks in all regions are mixed from slightly above to below median across the state.

See also: Alaska current snow water equivalent [values \(inches\)](#) map.

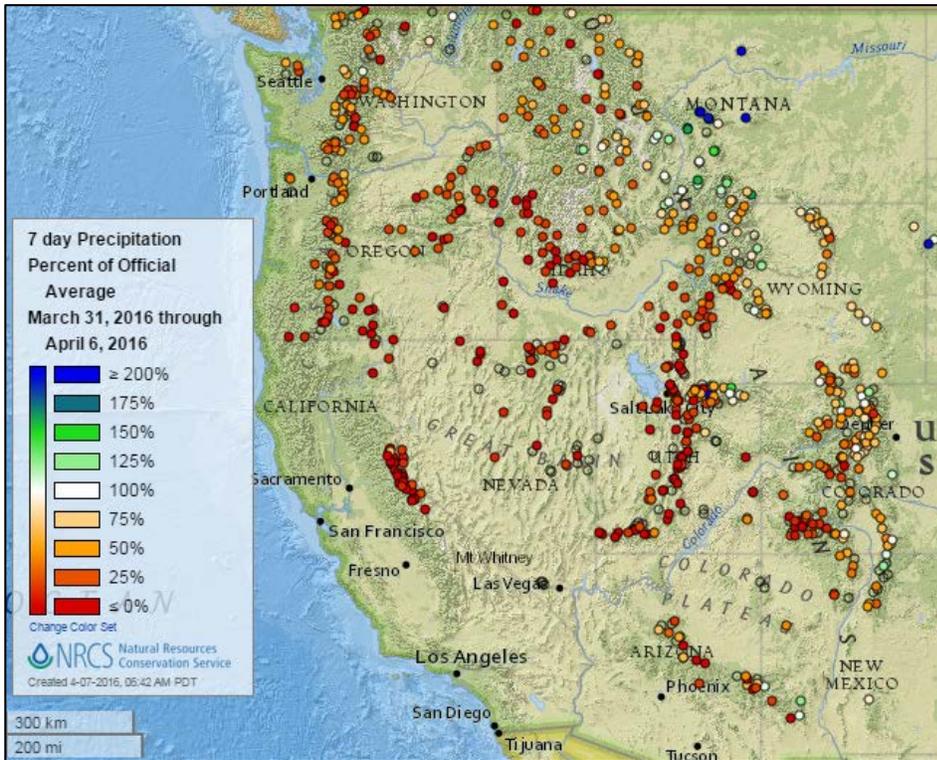
Current Snow Depth, National Weather Service (NWS) Networks



The NOAA National Operational Hydrologic Remote Sensing Center's current [snow depth](#) map shows new snow across the northern Plains, the Great Lakes region, and New England. Snow has melted in the valleys across northern Nevada, southern Idaho, northern Utah, much of Wyoming, and northern Colorado.

## Precipitation

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

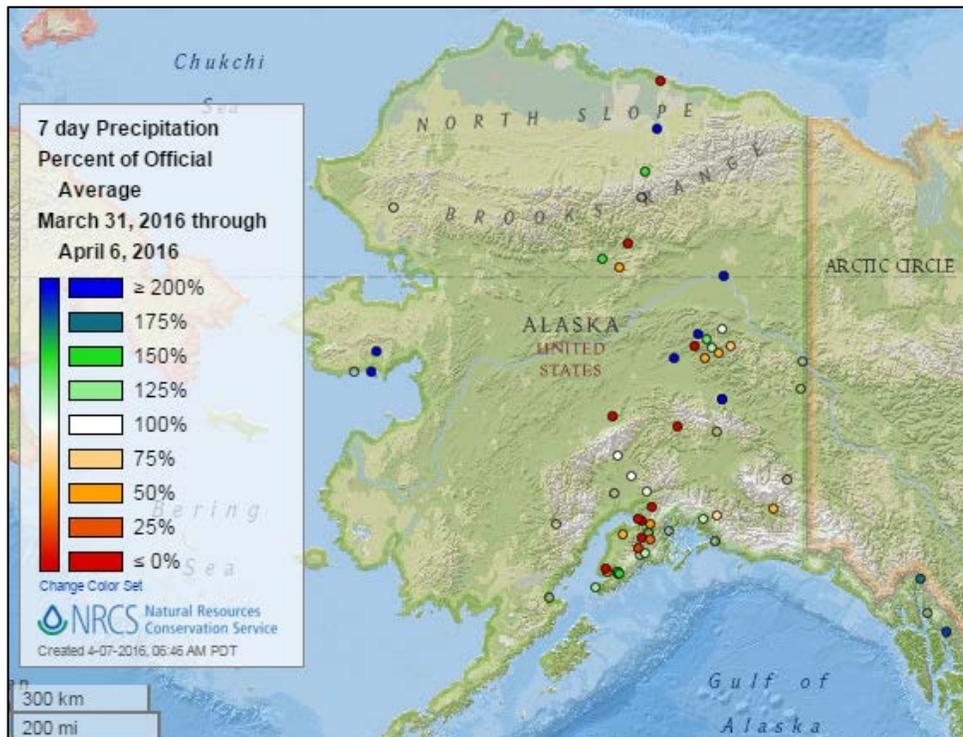


The 7-day precipitation [percent of average](#) map shows a large contrast from last week with much of the West reporting little to no precipitation. The only above average precipitation was in a small area east of the northern Rockies and in the Black Hills of South Dakota. Some stations in the eastern Rockies reported an average week.

See also: 7-day total precipitation [values \(inches\)](#) map.

The Alaska 7-day precipitation [percent of average](#) map shows stations reporting a highly variable mix of dry to wetter than average conditions across most of the state.

See also: Alaska 7-day total precipitation [values \(inches\)](#) map.

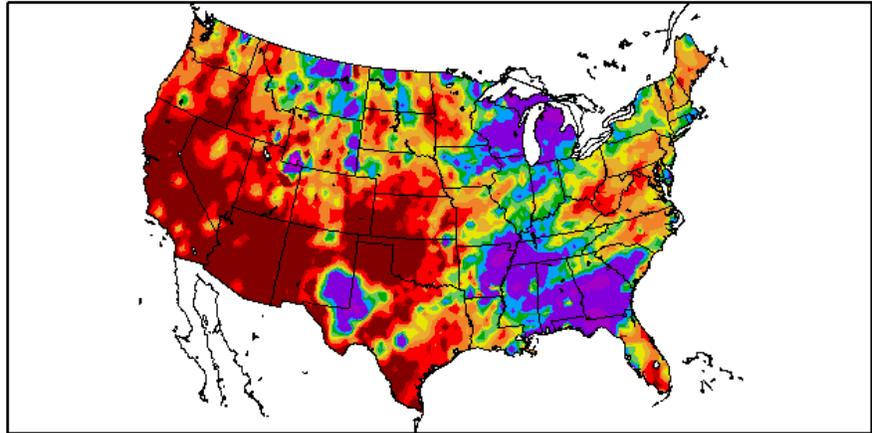


Last 7 Days, National Weather Service (NWS) Networks

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 northern and eastern U.S. Areas with well above normal precipitation were in the north central West, across the Great Lakes, the eastern Southwest, and the Southeast. Most of the West, southern Great Plains, and Southwest had a below normal to dry week.

Percent of Normal Precipitation (%)  
3/31/2016 – 4/6/2016



Generated 4/7/2016 at HPRCC using provisional data.

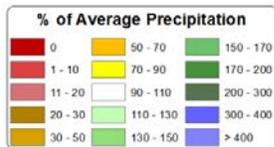
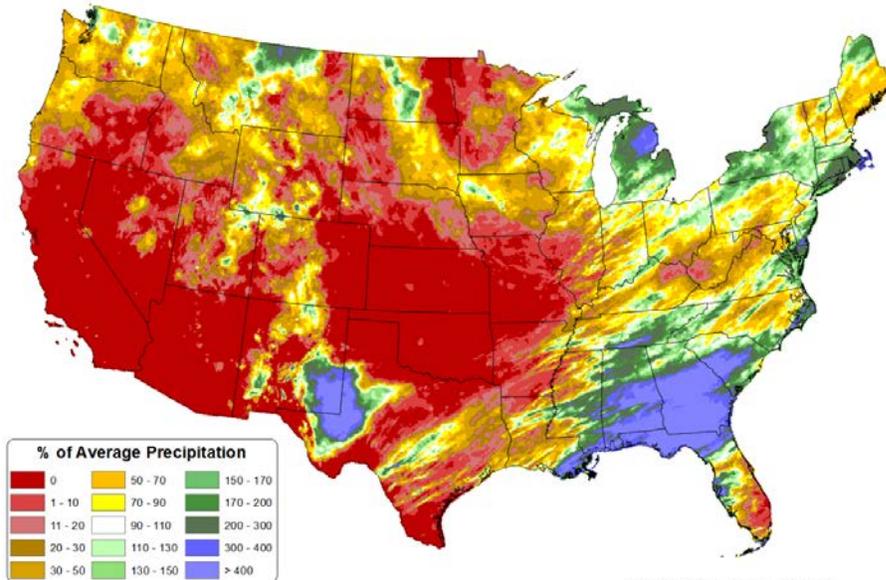
Regional Climate Centers

See also: 7-day total precipitation [values \(inches\)](#) map.

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

Source: PRISM

Total Precipitation Anomaly: 01 April 2016 - 05 April 2016  
Period ending 7 AM EST 05 Apr 2016  
Base period: 1981-2010  
(Map created 06 Apr 2016)



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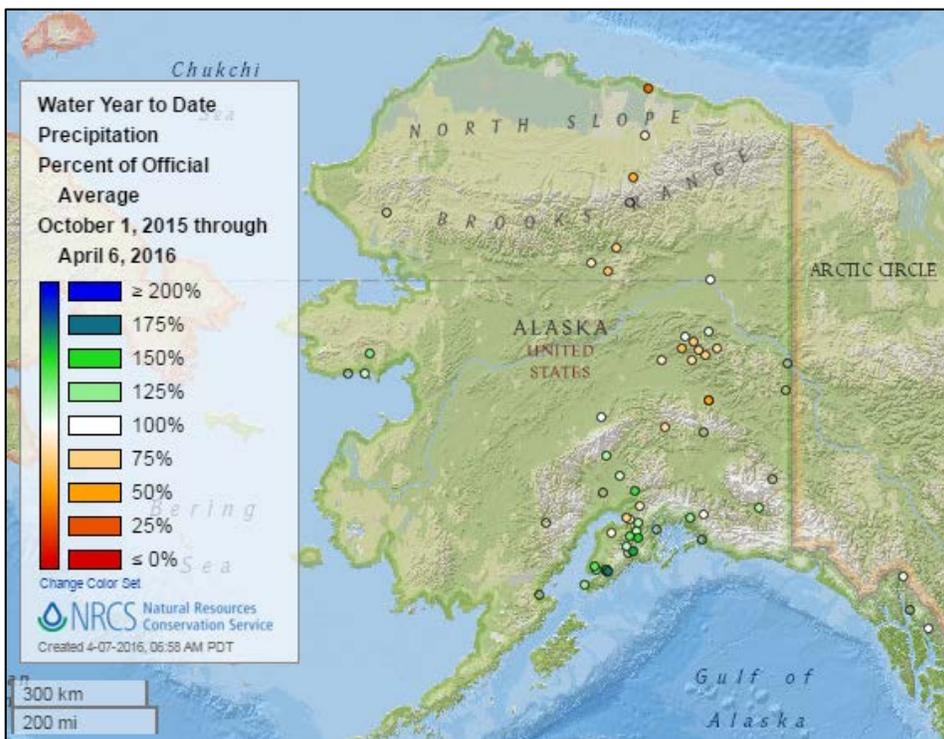
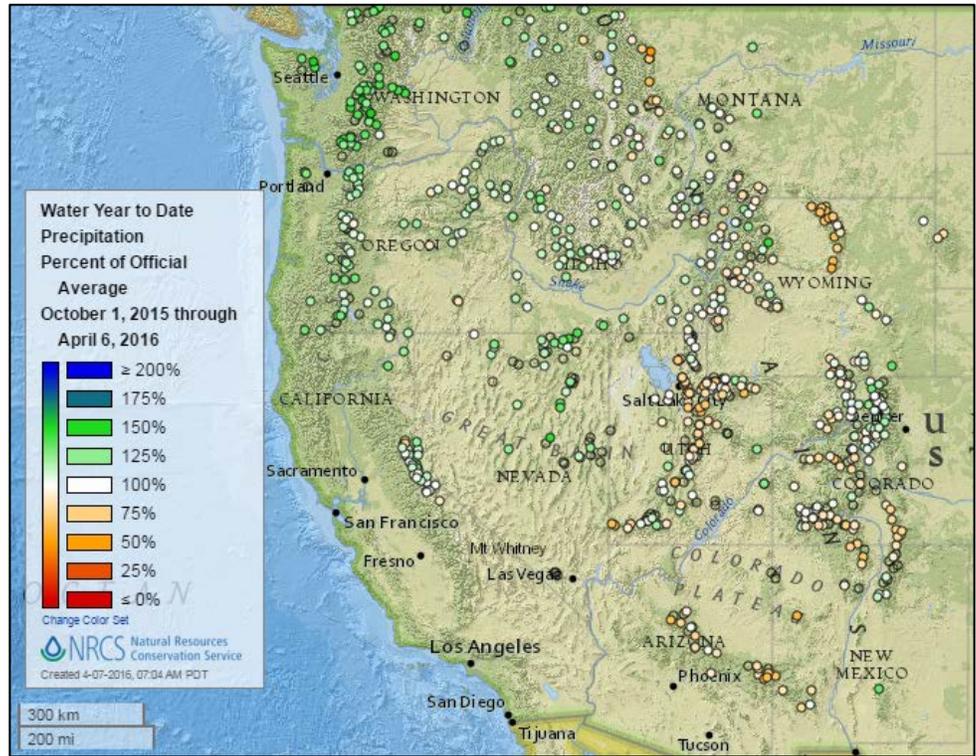
The April national month-to-date precipitation [percent of average](#) map shows much of the Southeast, Great Lakes, and eastern Southwest had well above normal precipitation. The Great Plains, and most of the West have been drier than normal.

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.

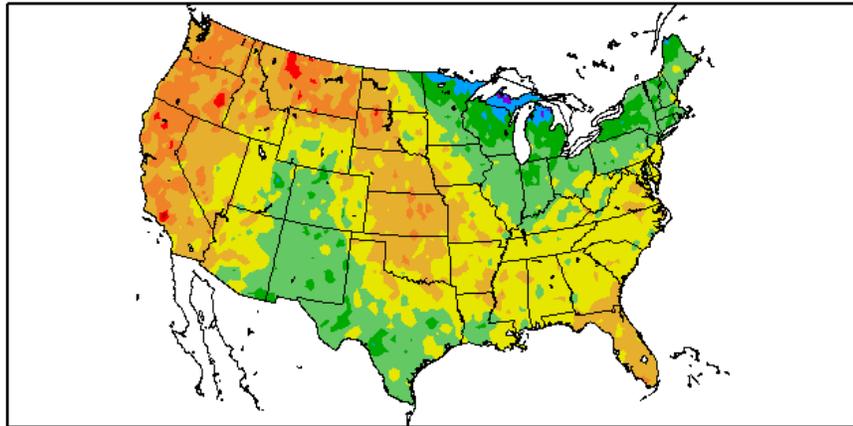
## Temperature

### 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, central Great Plains, and Southeast. Cooler than normal temperatures were reported in the Great Lakes, Northeast, central Rockies, Southwest, and much of Texas. The coolest anomalies were in the western Great Lakes.

Departure from Normal Temperature (F)  
3/31/2016 – 4/6/2016



Generated 4/7/2016 at HPRCC using provisional data.

Regional Climate Centers

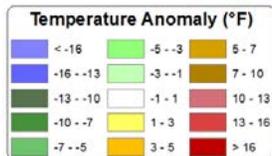
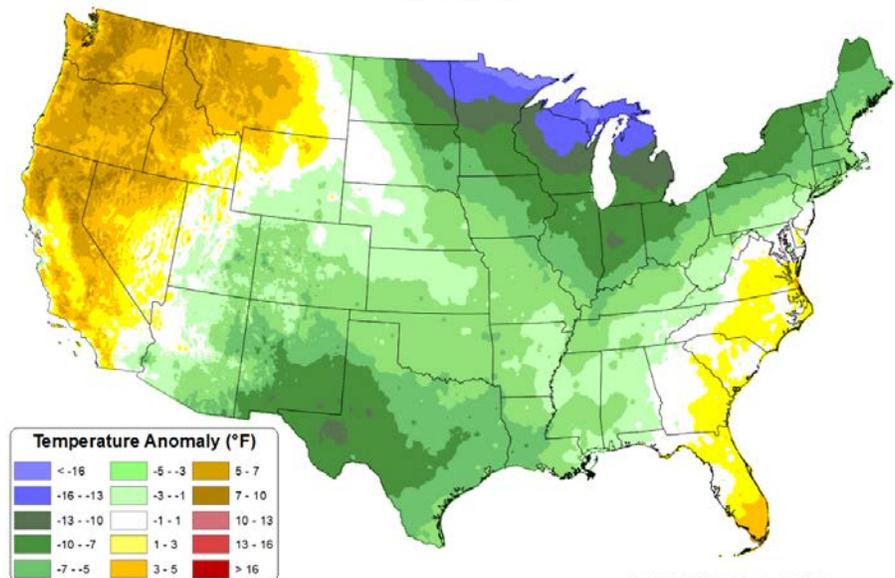
See also: 7-day [temperature \(°F\)](#) map.

### 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 and southern Florida. 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.

Daily Mean Temperature Anomaly: 01 April 2016 - 05 April 2016  
Period ending 7 AM EST 05 Apr 2016  
Base period: 1981-2010  
(Map created 06 Apr 2016)

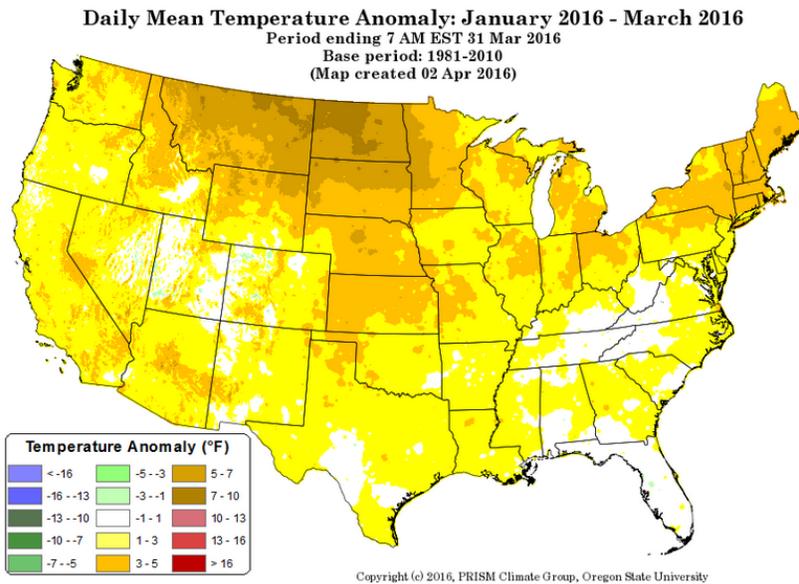


Copyright © 2016, PRISM Climate Group, Oregon State University

See also: April month-to-date [daily mean temperature \(°F\)](#) map.

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

Source: PRISM

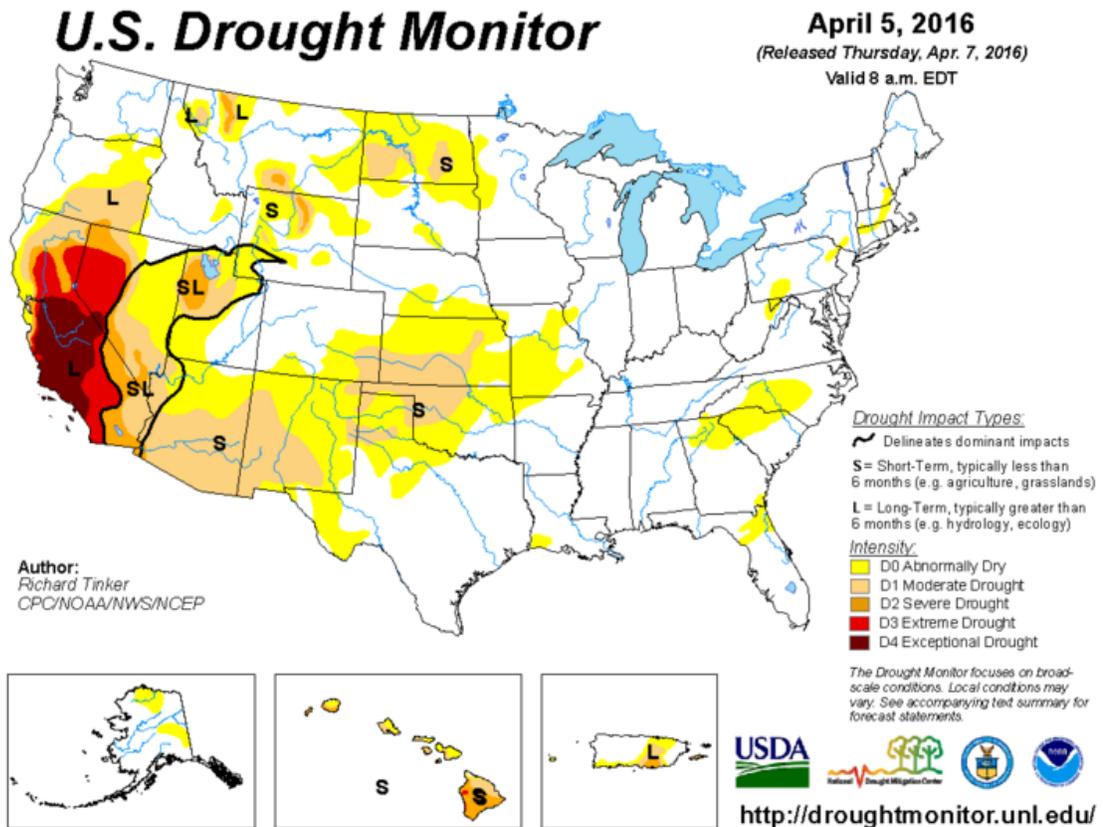


The January through March national **daily mean temperature anomaly** map shows that most of the country was warmer than normal. The warmest departures from normal were across the northern Plains. The central West and Southeast were near normal during this time.

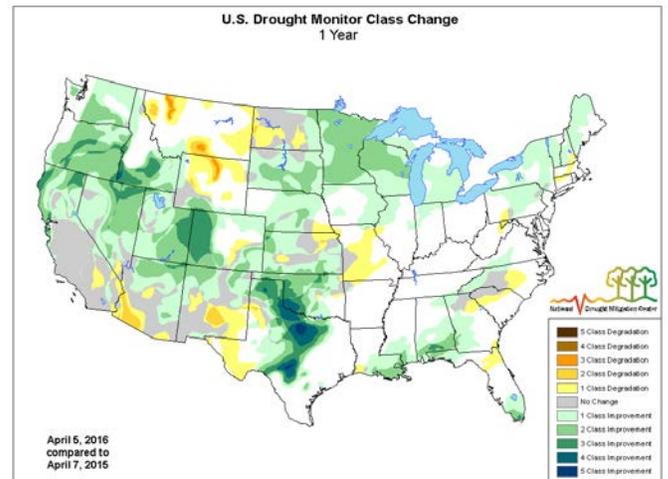
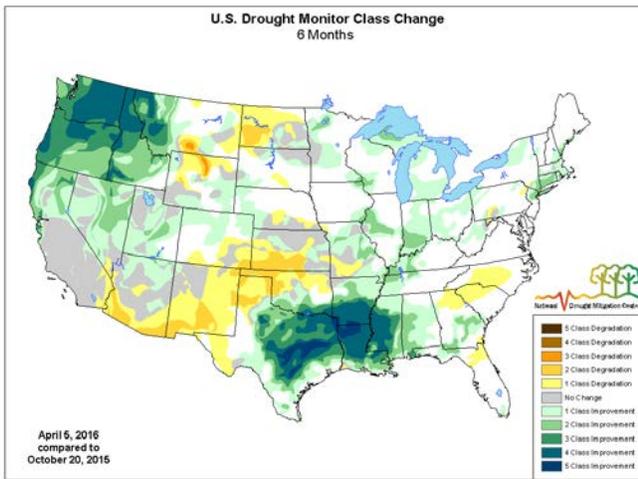
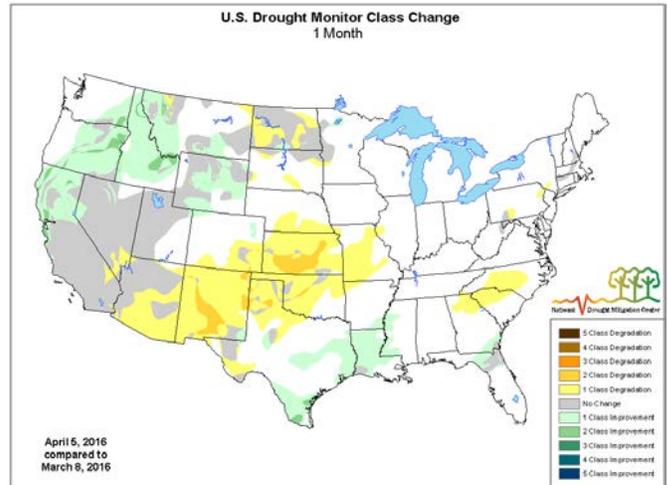
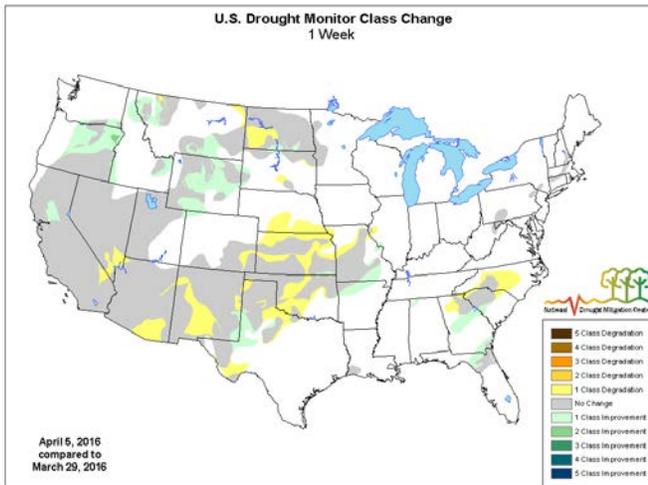
## Drought

[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.

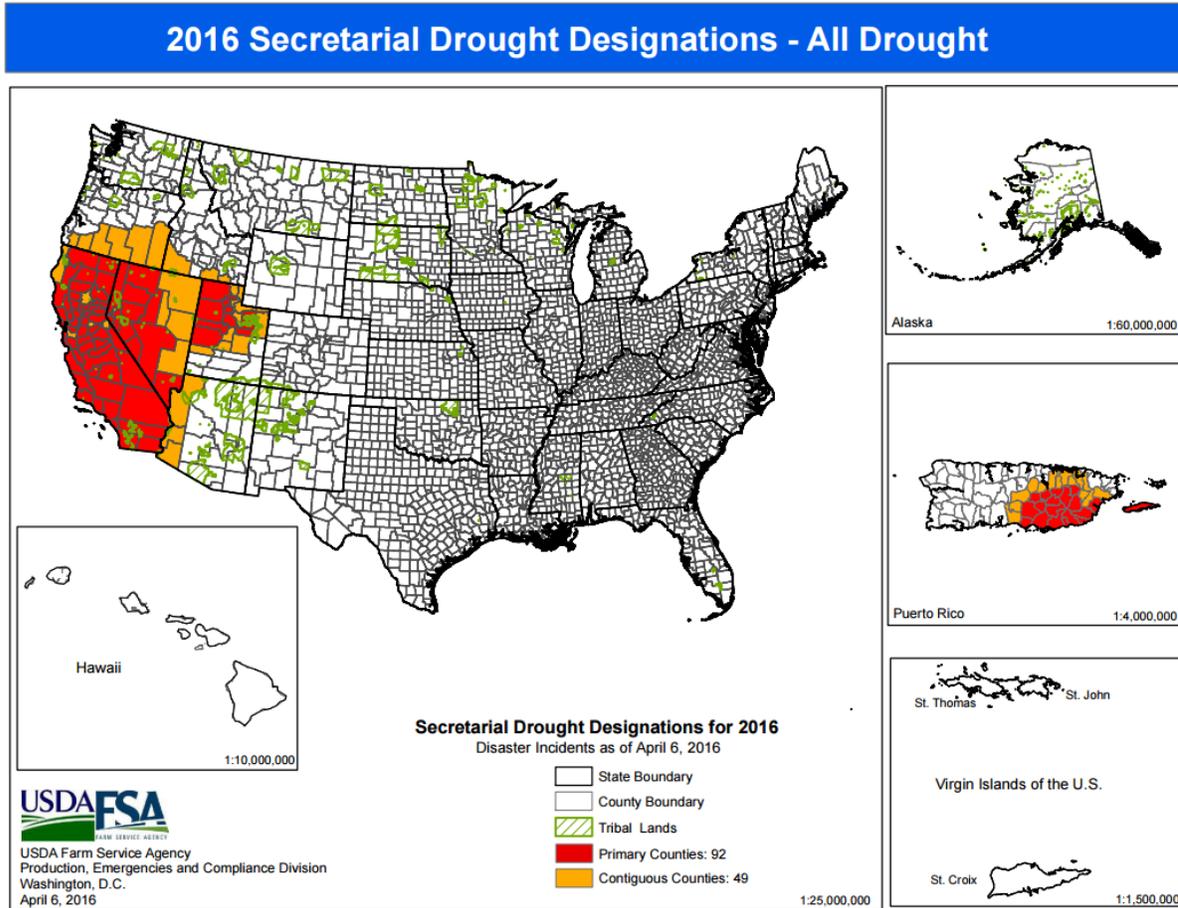
**Drought conditions** continue to improve over much of the country. Over the past 6-12 months, conditions have improved in the south central U.S., the Great Plains, and the Pacific Northwest. The remainder of the West has shown improvement, but long-term severe drought persists in California and Nevada.

### Current National [Drought Summary](#), April 5, 2016

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

“The week’s heaviest precipitation fell on a swath from central Arkansas and adjacent Missouri southeastward across the Gulf Coast states. Between 2 and 6 inches fell on most of this region, easing some areas of abnormal dryness. Meanwhile, heavy snow blanketed parts of Wyoming and adjacent locales, with nearly 3 feet piling up on some spots in the higher elevations. This precipitation, along with assessments of a variety of monthly data recently updated through March, led to broad reductions in the extent and severity of drought and dryness in much of the interior Northwest, northern Intermountain West, and northern half of the Rockies, though patches of severe drought remain. Sharply dry conditions abetted the persistence or worsening of dryness and drought in the southern Rockies and most of the Plains, with strong winds and low relative humidity exacerbating conditions in the southern Plains toward the end of the period. Changeable conditions, alternating between spring-like and wintery, brought moderate precipitation to the central Appalachians and Northeast which had no significant effect on the abnormally dry areas in that region..”

USDA Secretarial [Drought Designations](#)

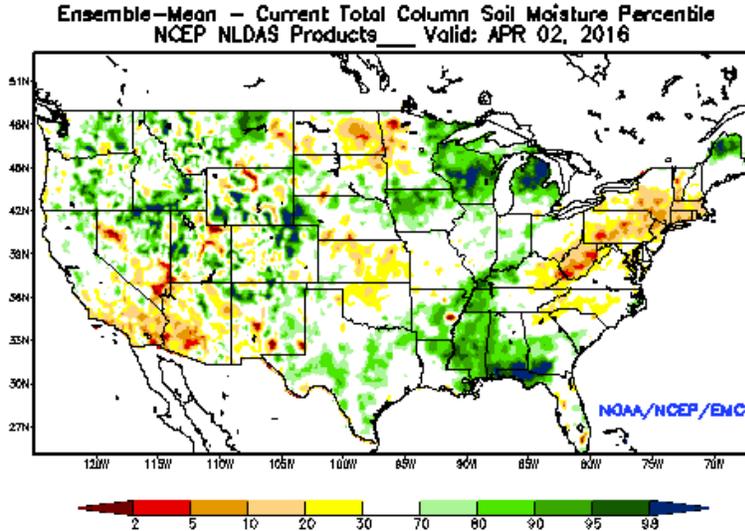


**Highlighted Drought Resources**

- [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

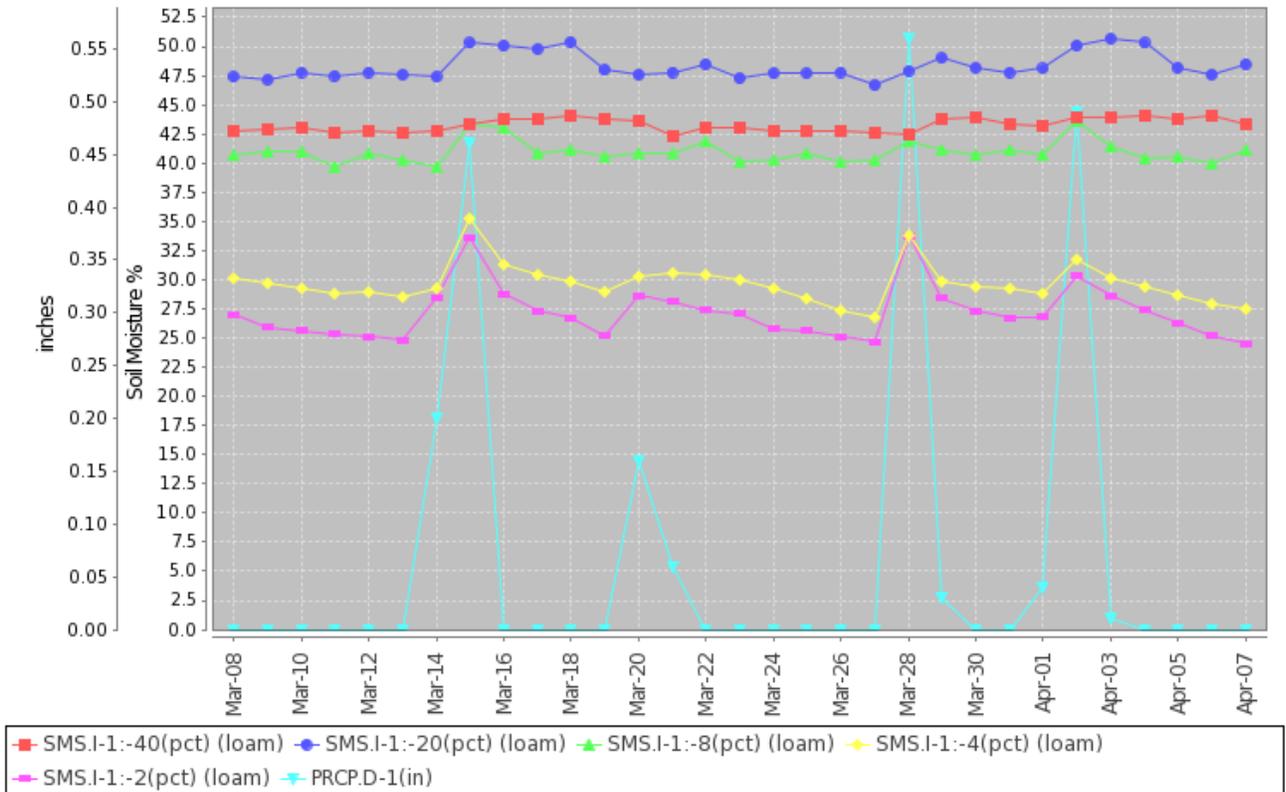
### Soil Moisture



The modeled [soil moisture percentiles](#) as of April 2, 2016 show the lower Mississippi River Valley, Great Lakes, parts of the central 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 \(SCAN\)](#)

Station (2089) MONTH=2016-03-08 (Daily) NRCS National Water and Climate Center - Provisional Data - subject to revision Thu Apr 07 09:06:23 GMT-08:00 2016



This graph shows soil moisture (at 2-, 4-, 8-, 20-, and 40-inch depths) and precipitation for the past 30 days at the [Reynolds Homestead SCAN site 2089](#) in Virginia. The precipitation events in the past 30 days resulted in soil moisture increases at the 2-, 4-, 8- and 20-inch sensor depths, with a slight increase at the 40-inch depth sensor, due to the largest precipitation event.

## Soil Moisture Data Portals

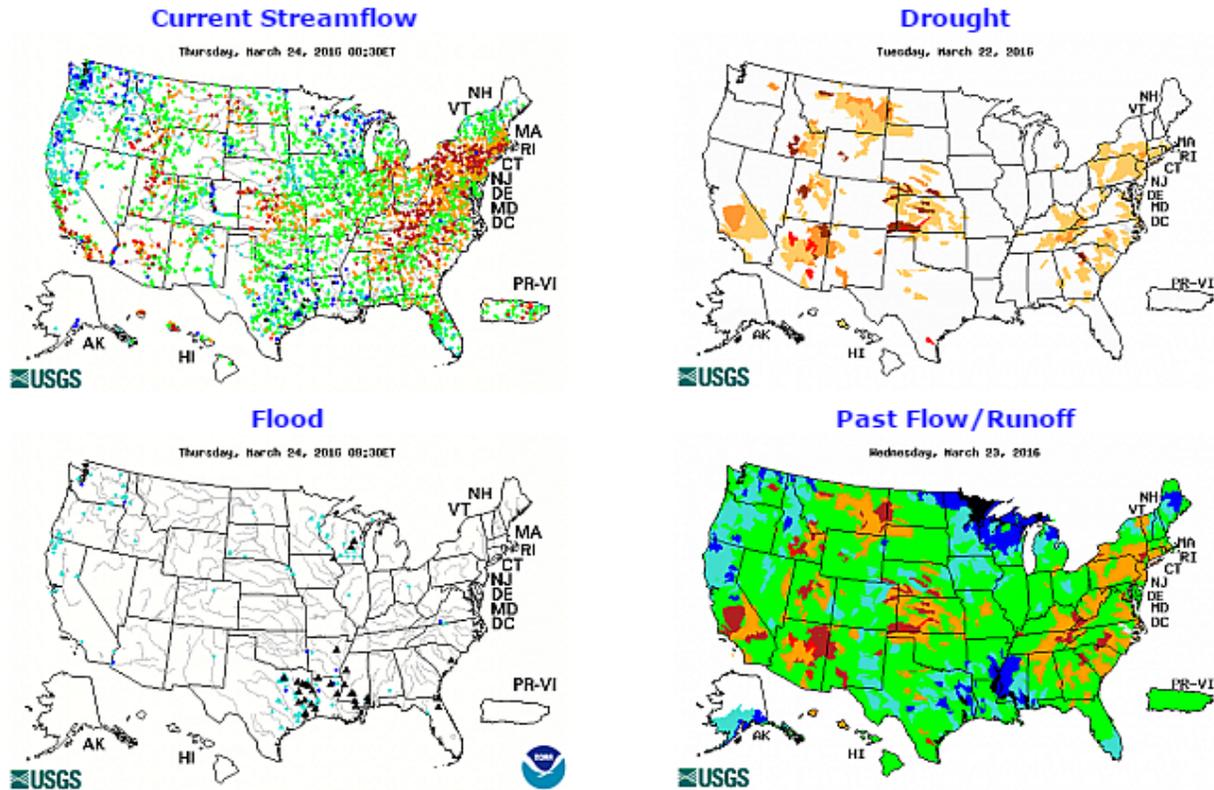
[CRN Soil Moisture](#)

[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 a few locations in the upper Midwest and throughout the lower Mississippi River Valley due to many recent storms. Northern Florida continues 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](#)

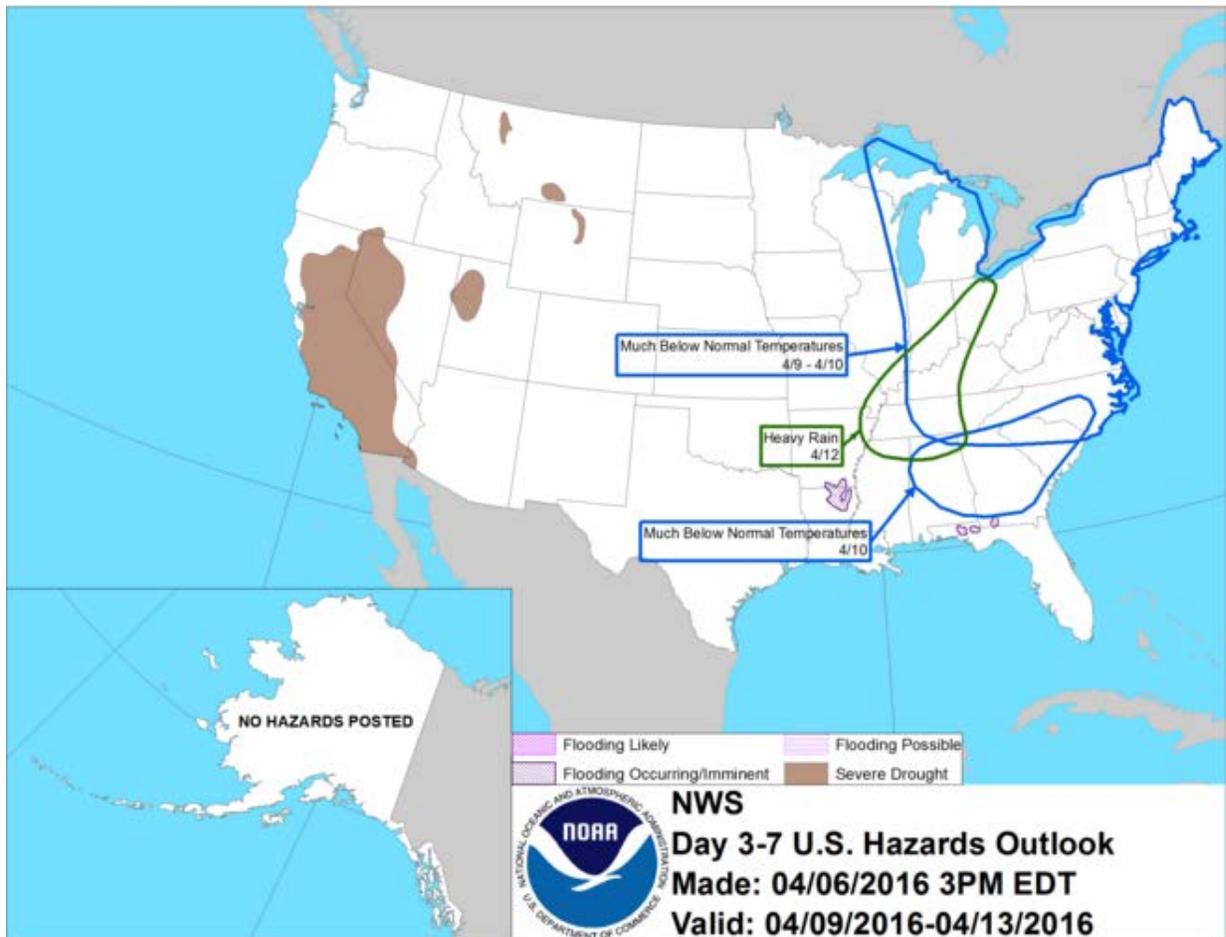
## Short- and Long-Range Outlooks

### Agricultural Weather Highlights

Author: Eric Luebehusen, Agricultural Meteorologist, USDA/OCE/WAOB

**National Outlook, April 7, 2016:** “A storm centered over the lower Great Lakes region will drift northeastward. Late-week rainfall could reach 1 to 4 inches in the Northeast, while northern New England may experience some flooding later today into Friday. Another blast of cold air and snow showers will trail the storm, leading to another round of freezes during the weekend in the Midwest and as far south as the Mid-Atlantic States. In contrast, record-setting warmth will spread from the Northwest to the northern High Plains, persisting into the weekend. Meanwhile, the threat of wildfires will persist across parts of the central and southern Plains, although improving conditions (and some rain) will arrive early next week. Elsewhere, increasingly showery weather can be expected in the nation’s southwestern quadrant, with isolated 1- to 3-inch totals possible during the next 5 days in southern California. The NWS 6- to 10-day outlook for April 12 – 16 calls for below-normal temperatures in the Southwest and the nation’s northeastern quadrant, while warmer-than-normal weather can be expected across the Deep South and from the Pacific Northwest to the northern High Plains. Meanwhile, near- to above-normal precipitation across most of the U.S. will contrast with drier-than-normal conditions in the upper Midwest.”

### National Weather Hazards



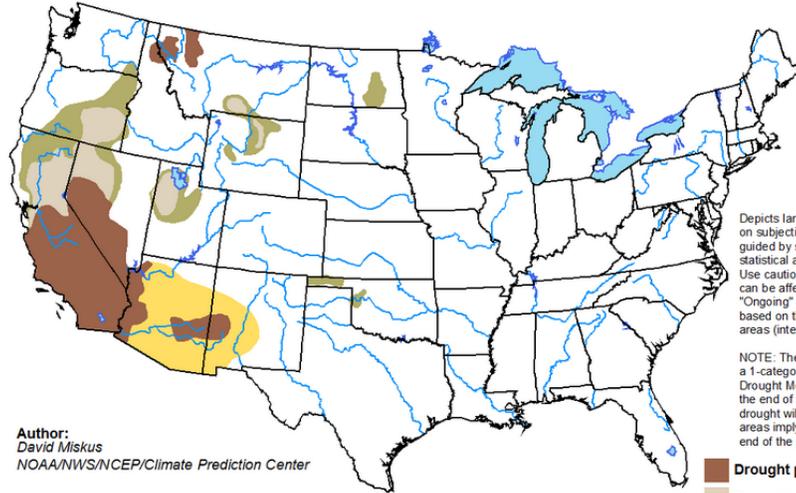
The NWS Climate Prediction Center’s outlook for [weather hazards](#) over the next week shows that much of the East will experience much below normal temperatures. Heavy rain is expected in the Ohio Valley and central Mississippi River Valley. Flooding is occurring in northern Louisiana, southern Arkansas, and along the northern Florida border. 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.

**U.S. Seasonal Drought Outlook**  
Drought Tendency During the Valid Period

Valid for March 17 - June 30, 2016  
Released March 17, 2016



Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

Author:  
David Miskus  
NOAA/NWS/NCEP/Climate Prediction Center

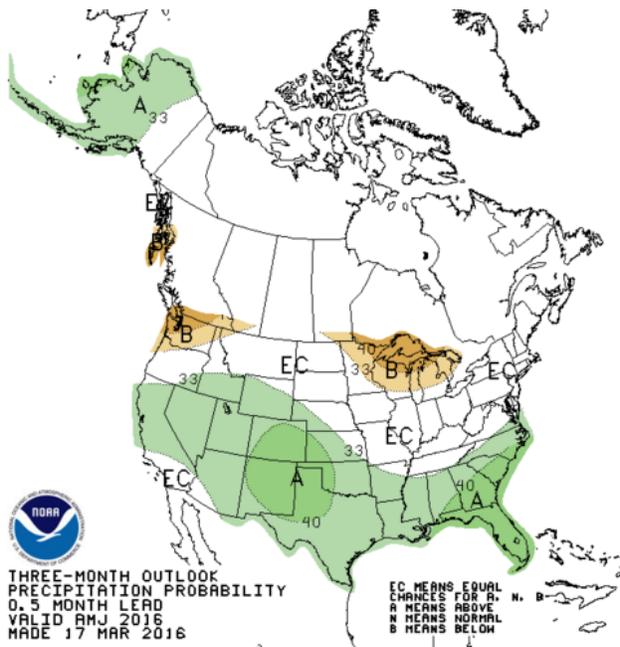
- Drought persists
- Drought remains but improves
- Drought removal likely
- Drought development likely



<http://go.usa.gov/3eZ73>

NWS Climate Prediction Center 3-Month Outlook

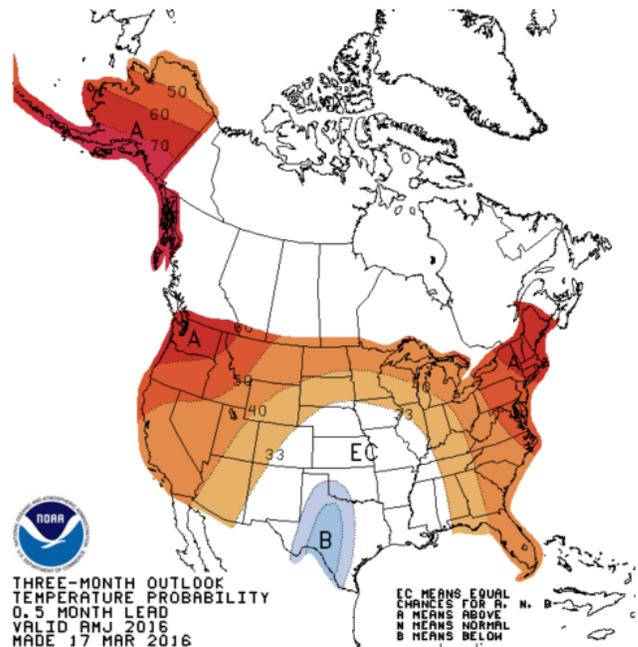
Precipitation



THREE-MONTH OUTLOOK  
PRECIPITATION PROBABILITY  
0.5 MONTH LEAD  
VALID AMJ 2016  
MADE 17 MAR 2016

EC MEANS EQUAL  
CHANCES FOR A, N, B  
A MEANS ABOVE  
N MEANS NORMAL  
B MEANS BELOW

Temperature



THREE-MONTH OUTLOOK  
TEMPERATURE PROBABILITY  
0.5 MONTH LEAD  
VALID AMJ 2016  
MADE 17 MAR 2016

EC MEANS EQUAL  
CHANCES FOR A, N, B  
A MEANS ABOVE  
N MEANS NORMAL  
B MEANS BELOW

### 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](#).