



Natural Resources Conservation Service
P.O. Box 2890
Washington, D.C. 20013

Weekly Water and Climate Update
Thursday, March 12, 2015

Table listing various topics and their corresponding page numbers, including Snow, Precipitation, National Weather Hazards, and National Drought Summary.



A brief glimpse of winter 2015 on Mt. Bachelor, Oregon as NRCS surveyors measure record low snowpack. Photo courtesy of Kurt Moffitt (NRCS Oregon)

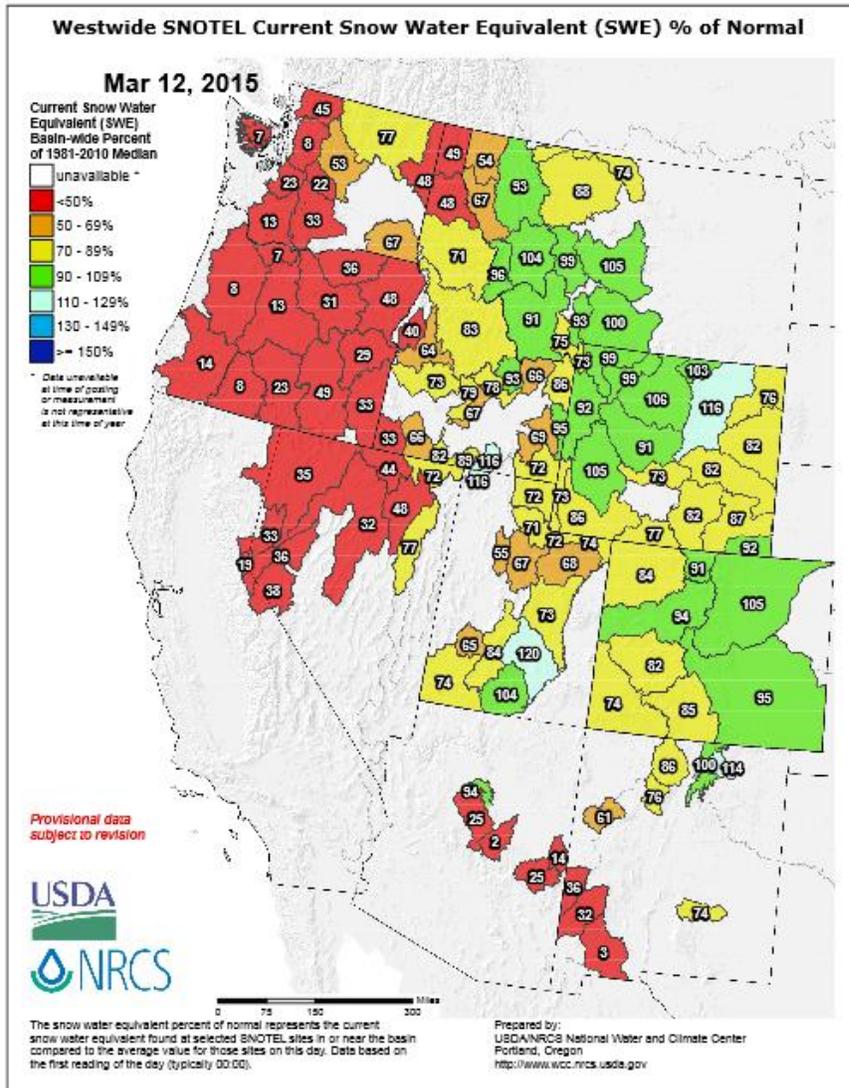
disturbances will produce as much as 1 to 3 inches of precipitation from the Pacific Northwest to the northern Rockies. Warm weather will continue to dominate much of the U.S., particularly from the Pacific Coast to the northern and central Plains and the upper Midwest.

Contact: Brad Rippey, Agricultural Meteorologist, USDA/OCE/WAOB, Washington, D.C. (202-720-2397)
Website: http://www.usda.gov/oce/weather/pubs/Daily/TODAYSWX.pdf

The Natural Resources Conservation Service provides leadership in a partnership effort to help people conserve, maintain, and improve our natural resources and environment

Weekly Water and Climate Update

Snow



The [Westwide SNOTEL Current Snow Water Equivalent \(SWE\) % of Normal map](#) shows the largest snowpack deficits (red areas) in the Cascades and Olympics and eastern Washington, all of Oregon, the Sierra Nevada in California, as well as most of Nevada, southeast Arizona, southwest New Mexico, and two basins in Idaho. Still less than normal, but not quite as low, are snowpacks in eastern Washington, much of Idaho, most of Utah, eastern Nevada, western Colorado, parts of Wyoming, central New Mexico, and a few basins in Montana (orange and yellow areas).

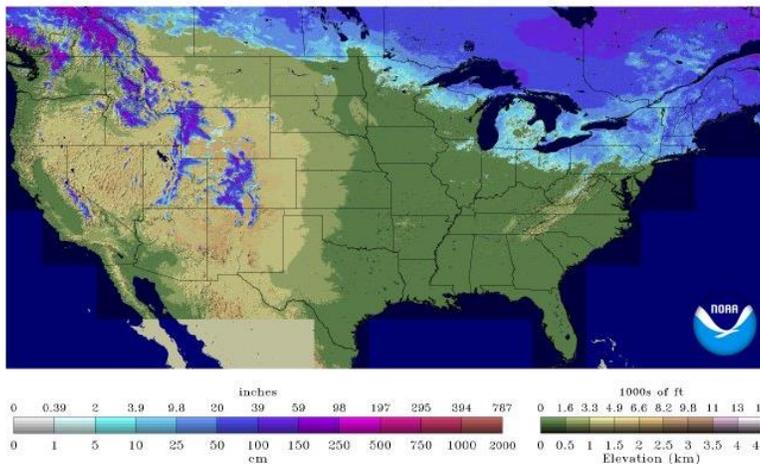
The snowpack in much of Montana, northwestern Wyoming, eastern Colorado, southeast Utah, and northern New Mexico are near normal.

One basin in Wyoming, one in southern Idaho, two basins in Utah, and one basin in New Mexico currently have above normal SWE values (light blue areas).

National Snow 2014 Analysis 2015

Snow Depth

2015-03-12 06 UTC



The snow depth map as reported from the [NWS NOHRSC](#) for March 12, 2015, shows a large reduction in snow cover from last week. The snow cover was 53% and is now 14.1% of the continental U.S. This includes snow across many of the mountains in the West, the upper Midwest, and the Northeast. The snow depth has also been reduced in the Northeast and across the northern tier states.

Weekly Water and Climate Update

Precipitation

2015, an unusual year...

So far this winter, the snowpack in the Cascades and Sierra Nevada are at or near record lows. The precipitation for the water year (Oct. 1 – today) in the Cascades and Sierra Nevada is near to slightly below normal (see map on page 5.). The overriding influence in these unusual circumstances of having a very low snowpack but with near normal precipitation is the persistent warm temperatures that have dominated the snowpack processes.

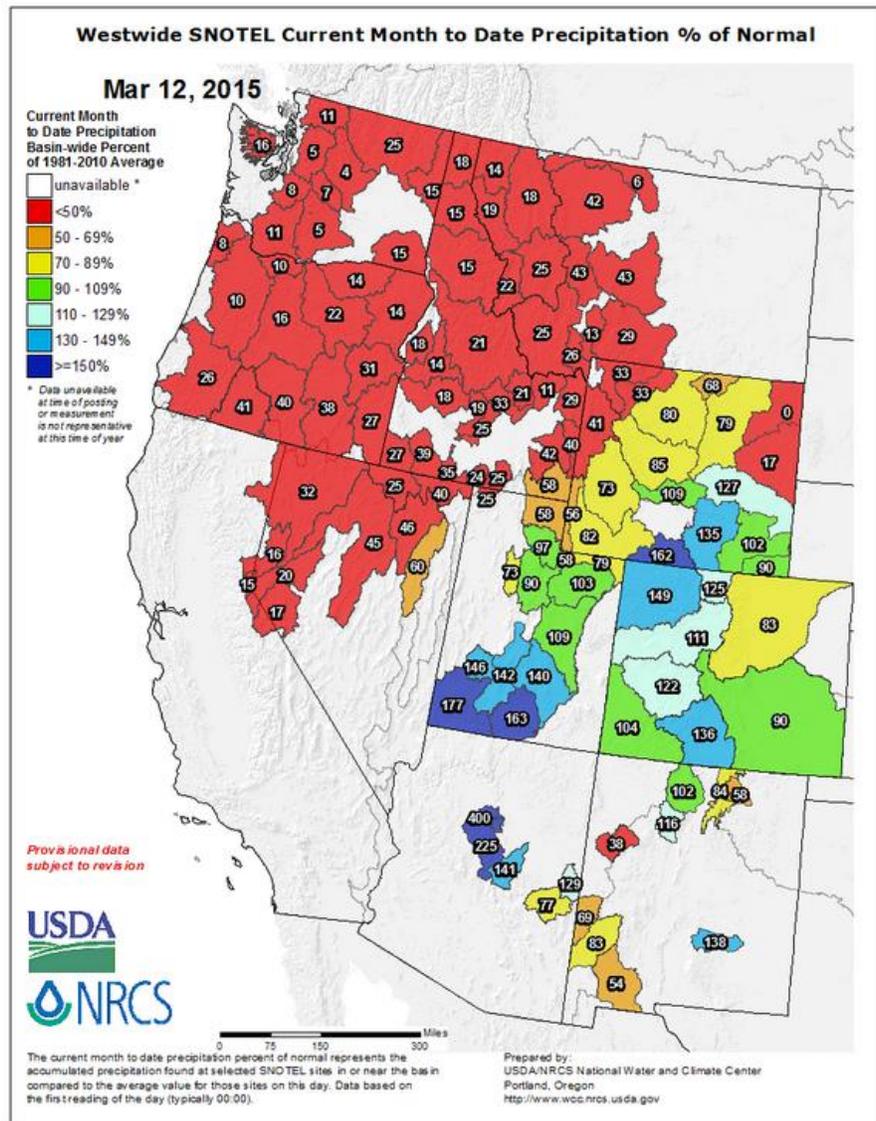
Freezing levels have remained well above the elevation of many SNOTEL sites, and snow has been confined to the highest elevations which are a very small percent of the area of the watersheds in the Pacific Northwest and Sierra Nevada. The average precipitation, especially in the Cascades of Oregon and Washington and down to the northern Sierra and Trinity Alps of California, has helped to improve any soil moisture, groundwater, and reservoir deficits. This has helped to offset the current effects of the low snow conditions that the area has experienced but may provide future deficits in spring and summer streamflow with little to no snow support for normal snowmelt runoff water.

In the West, the [SNOTEL](#) precipitation percent of normal map for the first twelve days in March shows that the recent weather pattern has produced wet conditions in the east and southeast region of the West. Well above normal precipitation occurred in southern Wyoming, Utah, Colorado, Arizona, and two basins in New Mexico (blue areas).

The western and northwest portions of the West received much less than normal precipitation for the first part of March. Basins with much below average conditions were reported in Washington, Oregon, California, Nevada, Idaho, Montana, parts of Wyoming, northern Utah, and northeast and southeast New Mexico (red and orange areas).

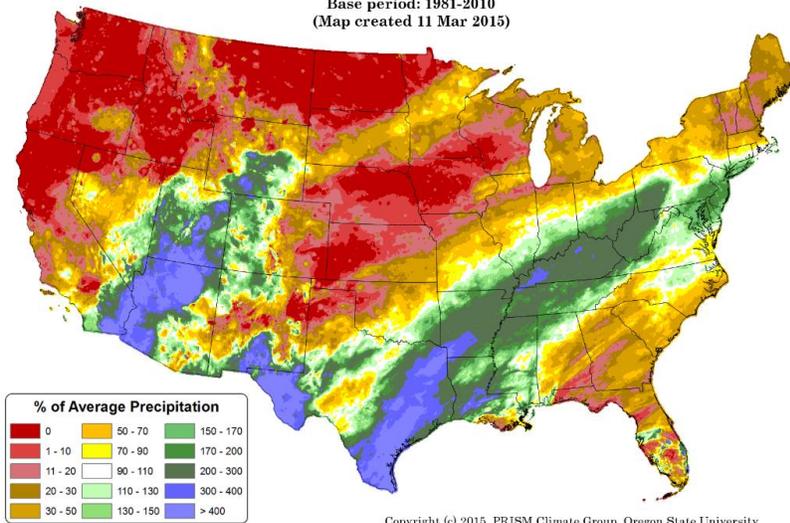
The percent of average may be exaggerated over a short period of time and dependent on normal conditions for this time of year.

Click on most maps in this report to enlarge and see the latest available update.



Weekly Water and Climate Update

Total Precipitation Anomaly: 01 March 2015 - 10 March 2015
 Period ending 7 AM EST 10 Mar 2015
 Base period: 1981-2010
 (Map created 11 Mar 2015)



Copyright (c) 2015, PRISM Climate Group, Oregon State University

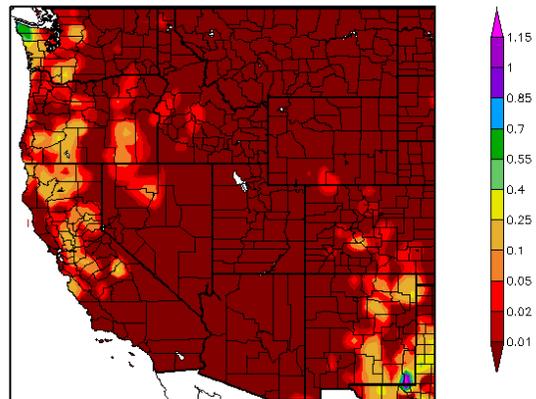
For the first part of March 2015, the national total [precipitation anomaly](#) pattern reveals some higher than normal precipitation, primarily in the Southwest, southern California, southern New Mexico, western and eastern Texas, northeast to Kentucky. There was little or no precipitation in a large area of the West, northern and central Plains, the Southeast and northern New England states (red and dark orange areas).

This preliminary daily PRISM precipitation anomaly map contains all available network data, including SNOTEL data, and is updated periodically as additional data become available and are quality controlled.

The [ACIS 7-day](#) total precipitation map for the western U.S. shows precipitation in only a few areas of the West. The highest areas of significant precipitation were in Southeast New Mexico and the Olympic Peninsula of Washington. Light and widely scattered precipitation was also reported in Oregon, Washington, western Idaho, northern California, northern Nevada, Colorado, and New Mexico.

Little to no precipitation fell across most of the West this week (dark red).

Precipitation (in)
 3/5/2015 - 3/11/2015



Generated 3/12/2015 at HPRCC using provisional data.

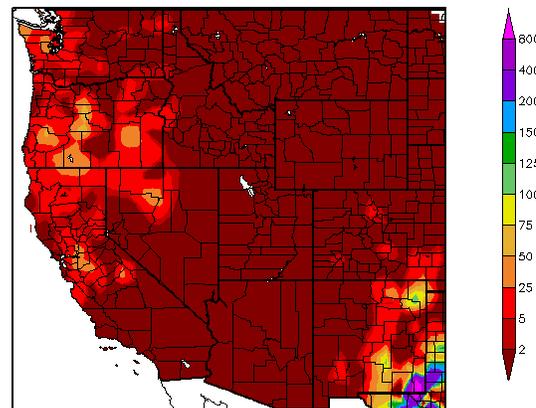
Regional Climate Centers

This ACIS percent of normal [map](#) of the West for the last seven days reflects precipitation scattered across few areas of the region. The heaviest percent of normal precipitation fell in southeast New Mexico. (Purple areas).

Very dry conditions for the week were in most of the West, including southern California, eastern Washington, Idaho, Montana, Wyoming, Utah, Arizona, most of Nevada, most of Colorado, and western New Mexico (red areas).

Percent of normal precipitation may be exaggerated in areas where the average for this seven-day period is at or near zero.

Percent of Normal Precipitation (%)
 3/5/2015 - 3/11/2015

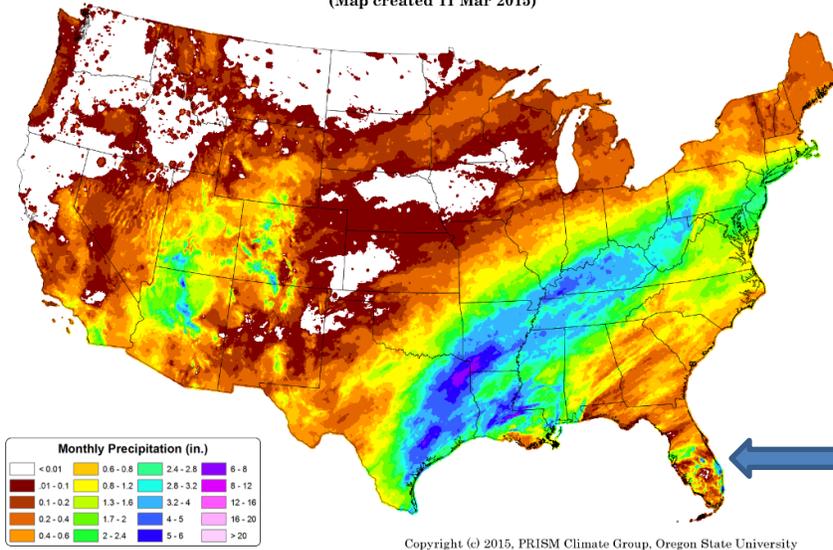


Generated 3/12/2015 at HPRCC using provisional data.

Regional Climate Centers

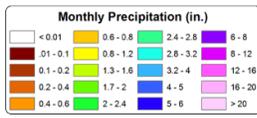
Weekly Water and Climate Update

Total Precipitation: 01 March 2015 - 10 March 2015
 Period ending 7 AM EST 10 Mar 2015
 (Map created 11 Mar 2015)



For the first part of March 2015, the [total precipitation](#) across the continental U.S. was heaviest in east Texas, Louisiana, Arkansas, and Florida. Precipitation also fell over other parts of the Ohio Valley, and a few scattered areas in the Southwest. In contrast, much of the Pacific Northwest, California, northern and central Great Plains, upper Midwest, and a few small areas in the Southeast and northern New England were mainly dry.

See [Go Hydrology](#) for current and forecast conditions over southern Florida.



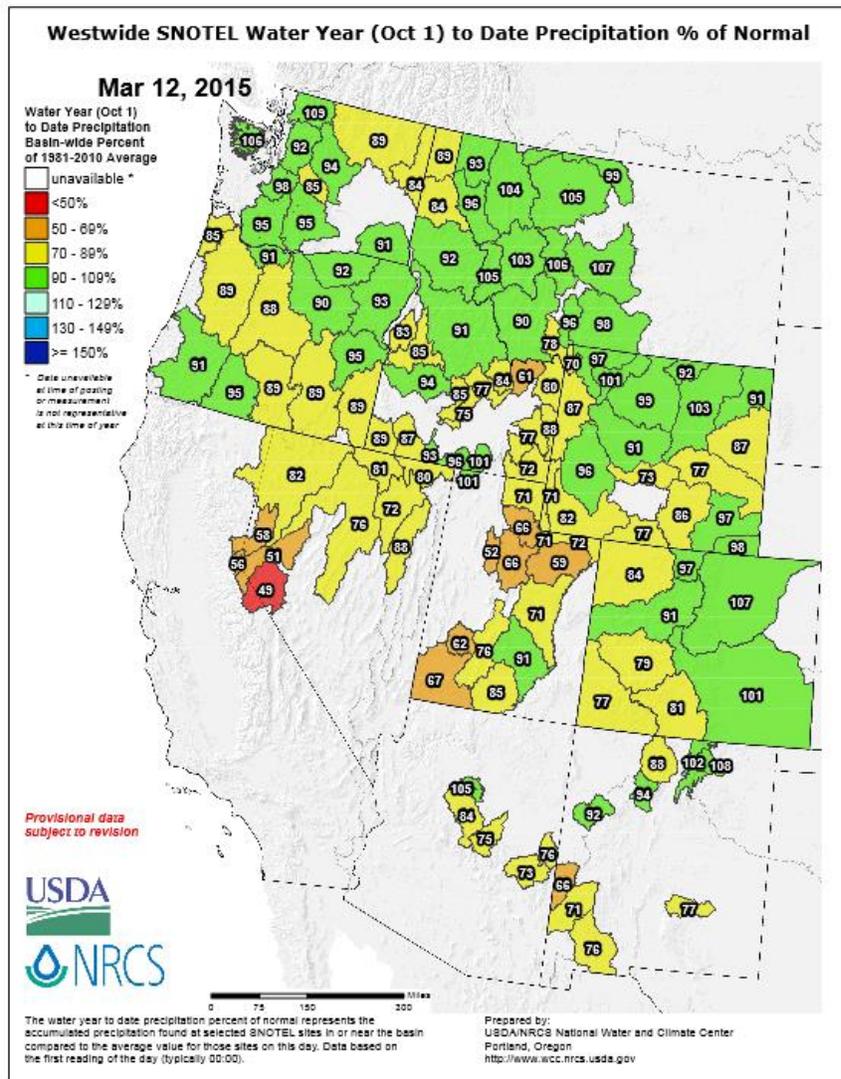
Copyright (c) 2015, PRISM Climate Group, Oregon State University

For the [2015 Water Year](#) that began on October 1, 2014, there are no precipitation surpluses in the West.

Many basins across the West have near normal conditions for this part of the Water Year (mapped in green). These include most of Montana, northern Wyoming, eastern Colorado, most of Washington, parts of Oregon, Idaho and one basin in Utah and Arizona, and northern New Mexico.

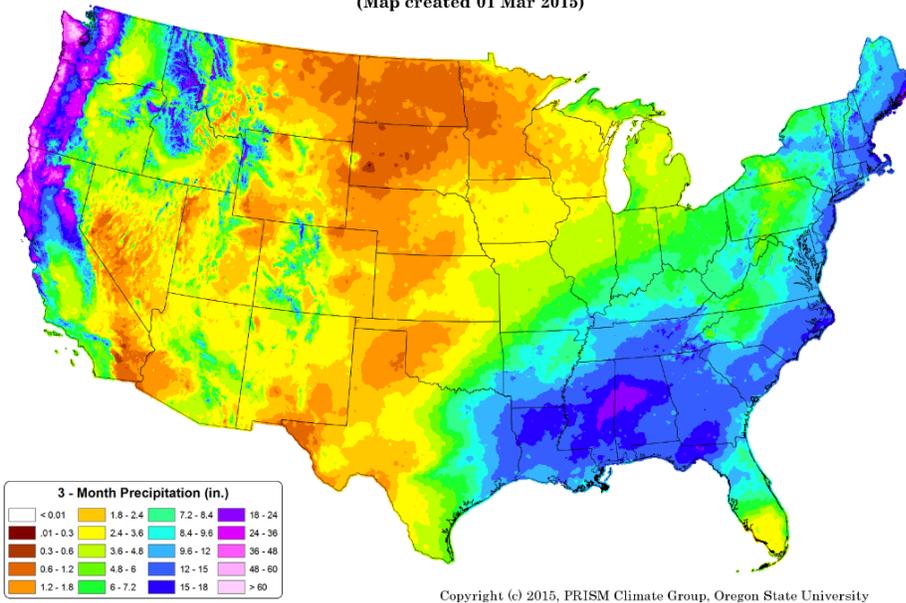
A many areas have less than normal precipitation for the Water Year. These include basins in southern and northern Idaho, southern and western Wyoming, western Colorado, most of Utah, California, all of Nevada, most of Arizona, southern New Mexico, much of Oregon, and eastern Washington (mapped in yellow and orange).

The Walker Basin in the Sierra Nevada of California and Nevada is now less than 50 % of normal precipitation for the water year.



Weekly Water and Climate Update

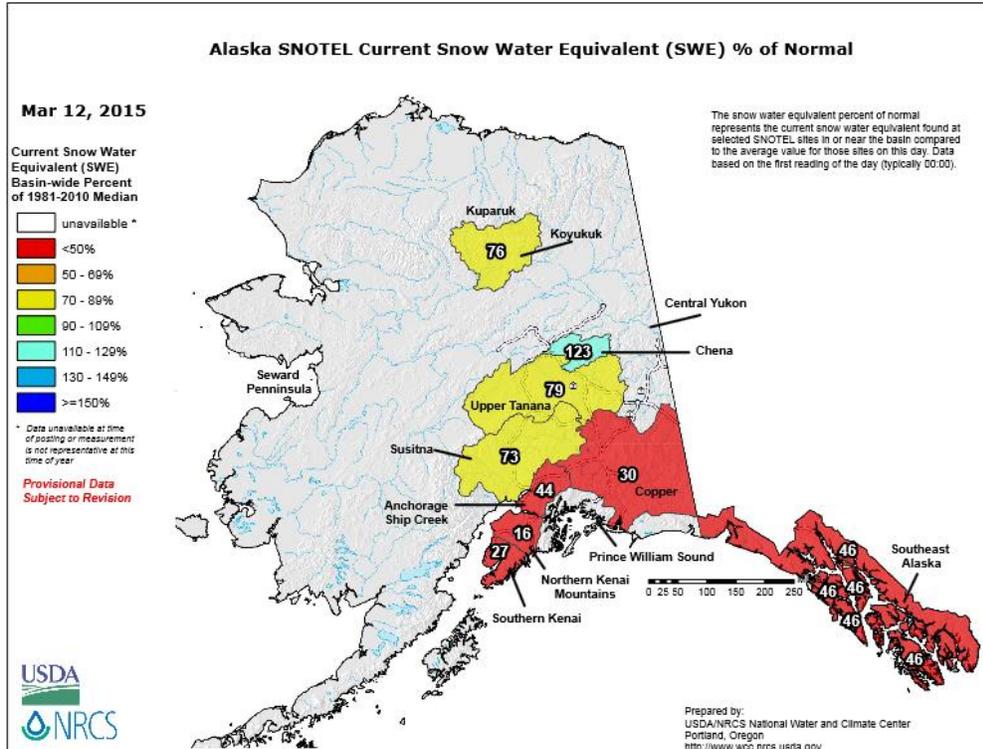
Total Precipitation: December 2014 - February 2015
 Period ending 7 AM EST 28 Feb 2015
 (Map created 01 Mar 2015)



The national map of the [three-month period](#) (December - February) shows that the eastern half of the nation received precipitation in the range from 4.8 inches to greater than 18 inches. Parts of the West, especially in the mountains, also received significant precipitation. The highest amounts over 48 inches were recorded in northern California, Oregon and Washington.

In contrast to the eastern U.S. and Pacific coast, parts of the West and much of the Midwest received totals of less than 1.8 inches.

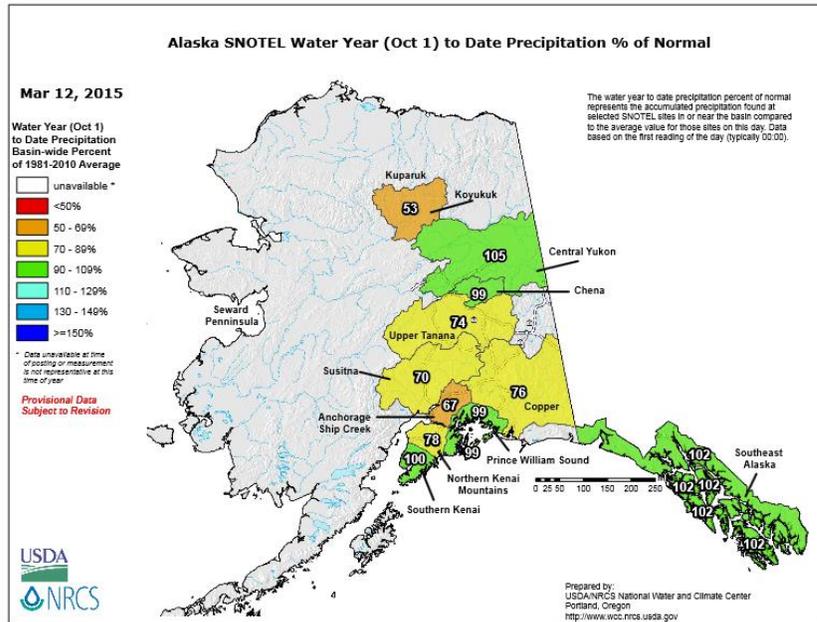
NEW! Alaska Snow Water Equivalent and Precipitation Conditions



The [Alaska SNOTEL current SWE map](#) shows less than average conditions across most of the state, with the exception of the Chena basin. The areas with much below normal snowpack are on the Kenai Peninsula, and the Copper and Anchorage/Ship Creek, and Southeast basins. See the [Alaska update report](#) for individual station data.

Weekly Water and Climate Update

The [Alaska Water Year to Date Precipitation](#) map shows near average conditions for the southern and southeast parts of the state, whereas parts of interior Alaska is drier than average. The Koyukuk basin is at 53% of average for the Water Year. See the [Alaska update report](#) for individual station data.

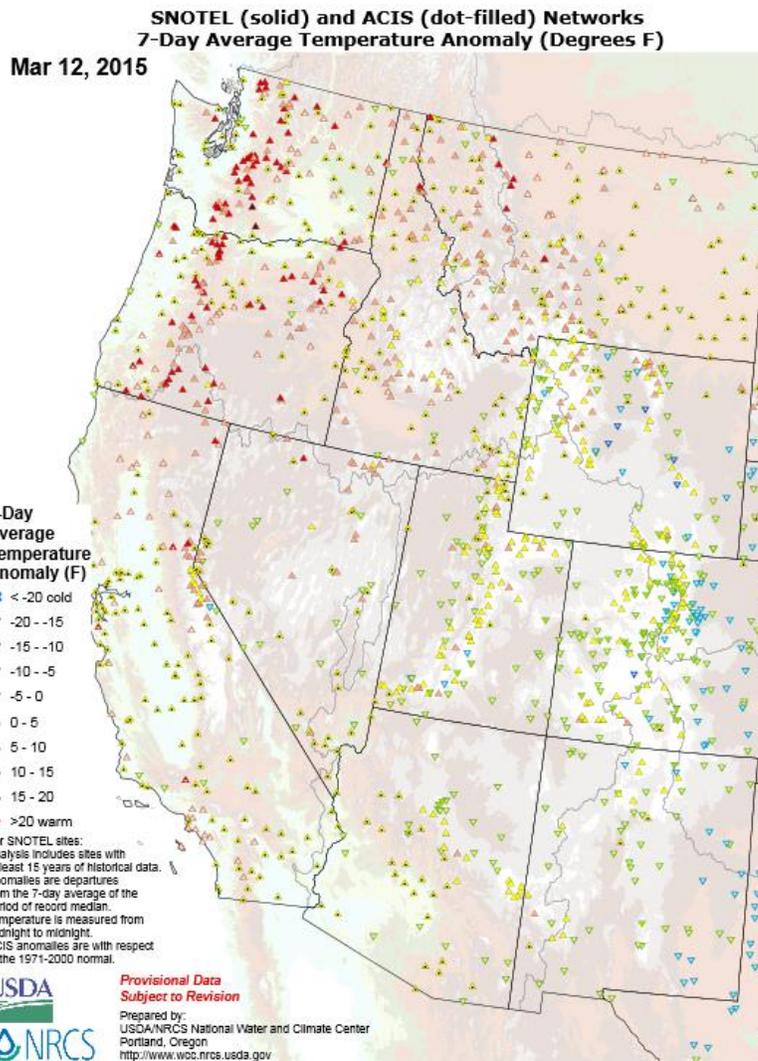


Temperature

The SNOTEL and ACIS [7-day temperature anomaly](#) map for the western U.S. shows most of the areas in Pacific Northwest to Montana were above normal for the week. The highest anomalies were in Washington, Oregon, northern Idaho and Montana, with a few scattered warm temperatures in northern California and northern Nevada. The highest anomaly was in southern Washington, where anomalies were +15-20 degrees F. Wyoming, Utah, Nevada, Colorado, New Mexico and Nevada also had a few stations with warm temperature departures from normal.

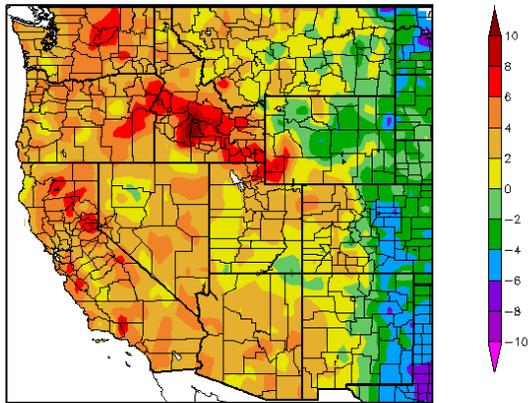
There were many stations with near normal temperatures across the West.

There were cool anomalies in and east of the Rocky Mountains and into the Great Plains, in Wyoming, Colorado and New Mexico. The coolest anomalies were located in Wyoming and one station in Colorado, where stations were in the -10-15 degree F cool anomaly category. A handful of cool anomalies were seen in Utah and California.



Weekly Water and Climate Update

Departure from Normal Temperature (F)
2/10/2015 – 3/11/2015



Generated 3/12/2015 at HPRCC using provisional data.

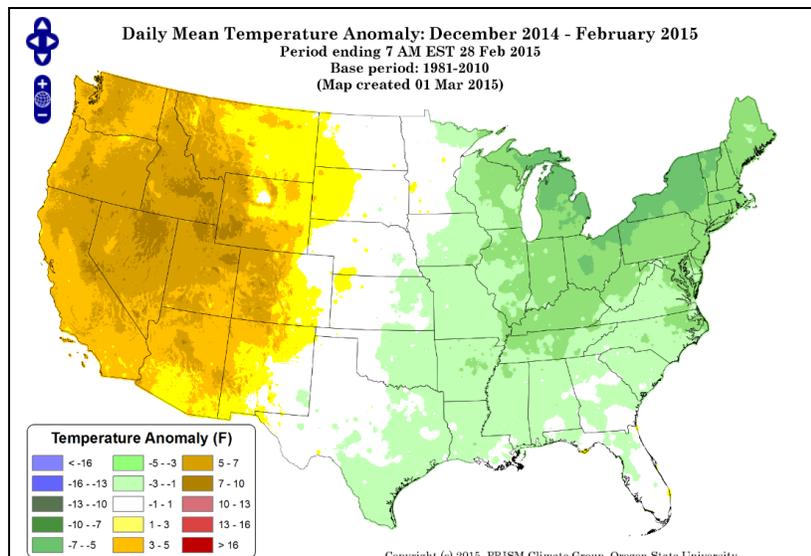
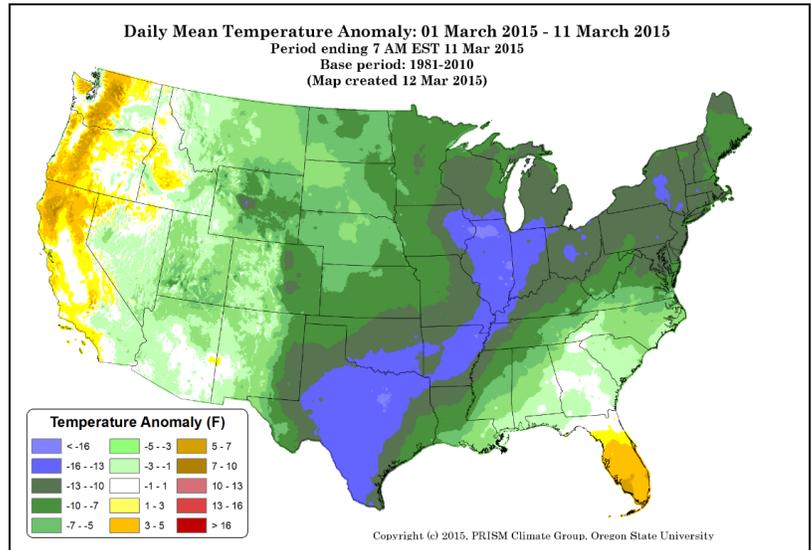
Regional Climate Centers

The [ACIS](#) map of the 7-day average temperature anomalies in the West ending March 11 shows that the West was near normal in much of the region. The greatest positive temperature departures occurred in central Idaho ($>+10^{\circ}\text{F}$). Other warm temperatures were scattered across most of the West. There were negative temperature departures in and east of the Rockies, which spanned from Canada to Mexico. The coolest anomalies were reported in central Colorado, and eastern New Mexico ($<-6^{\circ}\text{F}$).

Also, see [Dashboard](#) and the [Westwide Drought Tracker](#)

This preliminary [PRISM](#) temperature map contains all available network data, including SNOTEL data, and will be updated periodically as additional data become available and are quality controlled.

Thus far in March 2015, the national daily mean temperature anomaly [map](#) shows a persistent large, cool region over the central and eastern part of the country, with several coldest anomaly temperatures in Texas, Arkansas, Illinois and Iowa ($<-16^{\circ}\text{F}$). In contrast, above normal temperatures were recorded along the west coast in Washington, Oregon, California and into Idaho and Nevada, and also Florida. Washington, Oregon, and northern California had the highest anomalies ($>+7^{\circ}\text{F}$).



The December - February national daily mean temperature anomalies for the U.S. in this [climate map](#) shows the western U.S. had slightly to above normal temperatures ($>+7^{\circ}\text{F}$). The central and southeast sections of the country reported normal to slightly cooler than normal temperatures for this period, with the coolest temperatures in a large area covering most of the Midwest and eastern U.S. The coolest anomalies were in the Northeast and north central states, primarily along the Canadian border ($<-5^{\circ}\text{F}$).

Weekly Water and Climate Update

Weather and Drought Summary

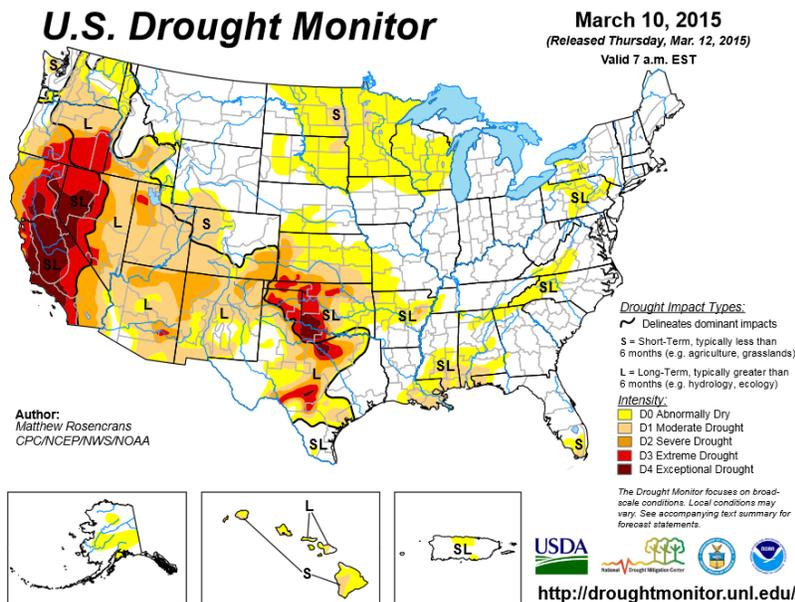
[National Drought Summary](#) – March 10, 2015

The following **Weather and Drought Summary** is provided by this week's NDMC Drought Author, Matthew Rosencrans, NOAA/NWS/NCEP/CPC.

USDM Map Services: contains [archived maps](#)

“For the contiguous 48 states, the U.S. Drought Monitor showed 31.60 percent of the area in moderate drought or worse, compared with 31.88 percent a week earlier. Drought now affects 71,090,448 people, compared with 72,996,934 a week earlier.

For all 50 U.S. states and Puerto Rico, the U.S. Drought Monitor showed 26.45 percent of the area in moderate drought or worse, compared with 26.73 percent a week earlier. Drought now affects 71,447,348 people, compared with 73,435,472 a week earlier.”



See: Latest Drought [Impacts](#) during the past week.

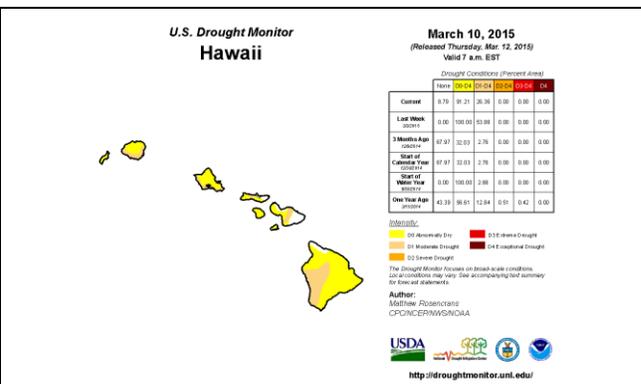
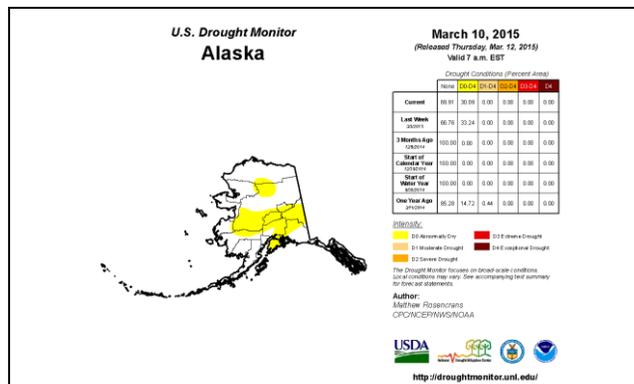
[Current Drought Monitor](#) weekly summary. The exceptional D4 levels of drought are scattered across CA, NV, TX, and OK.

The latest [drought indicator blend and component percentiles](#) spreadsheet is a great resource for climate division drought statistics. This link is for the latest [Drought Outlook](#) (forecast). See [climatological rankings](#).

For more drought news, see [Drought Impact Reporter](#).
New: [ENSO Blog](#).

Drought Management Resources:

- ✓ <http://www.usda.gov/oce/weather/Drought/AgInDrought.pdf>
- ✓ [Watch AgDay TV](#)
- ✓ [Drought Impacts Webinar Series](#)
- ✓ [NIDIS Quarterly Climate Impacts and Outlook](#)
- ✓ [The Spring 2014 edition of DroughtScope](#)
- ✓ [U.S.Crops in Drought](#)

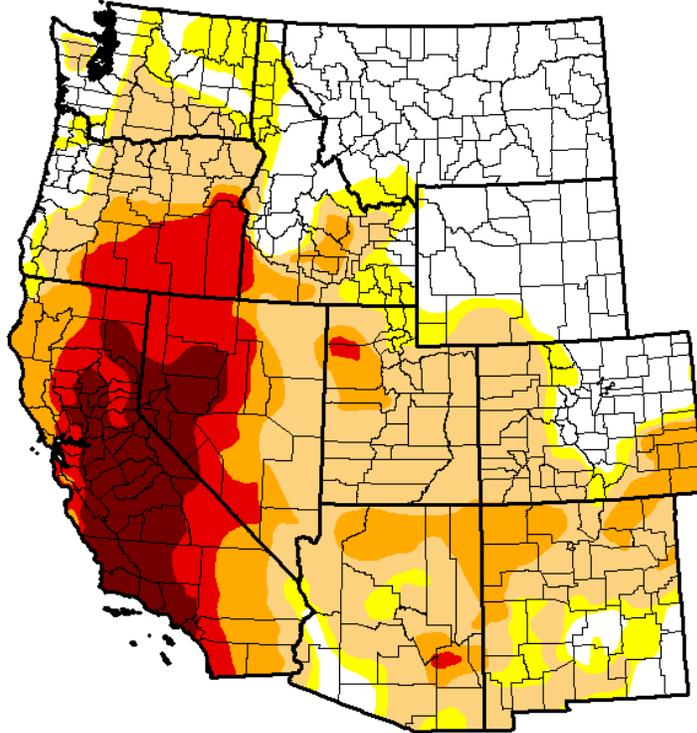


“The [49th](#) and [50th](#) States show normal to moderate drought conditions. D0 decreased in Alaska this week. D0 and D1 decreased in Hawaii this week. A comprehensive narrative describing drought conditions across other parts of the nation can be found toward the end of this document. For drought impacts definitions for the figures that follow, click [here](#).”

Weekly Water and Climate Update

U.S. Drought Monitor West

March 10, 2015
(Released Thursday, Mar. 12, 2015)
Valid 7 a.m. EST



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	29.72	70.28	59.80	29.93	16.62	7.04
Last Week <i>3/3/2015</i>	29.95	70.05	59.79	29.48	16.62	7.04
3 Months Ago <i>12/9/2014</i>	34.32	65.68	55.16	34.01	18.98	8.45
Start of Calendar Year <i>12/31/2014</i>	34.76	65.24	54.48	33.50	18.68	5.40
Start of Water Year <i>9/30/2014</i>	31.48	68.52	55.57	35.65	19.95	8.90
One Year Ago <i>3/11/2014</i>	27.09	72.91	58.65	40.20	15.27	3.61

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:

*Matthew Rosenkrans
CPC/NCEP/NWS/NOAA*



<http://droughtmonitor.unl.edu/>

There was a slight decrease in D1 and the drought-free area for the week. The D0 and D2 categories slightly increased in the West this week. D3 and D4 remained unchanged.
Click to enlarge maps

Risk Management Web Resources

Drought Monitor for the [Western States](#). Drought Impact Reporter for [New Mexico](#), [California Data Exchange Center](#) & [Flood Management Intermountain West Climate Dashboard](#)
[California Sierra Nevada-related snow pack](#)

U.S. [Impacts](#) during the past week:

- OR - [Catastrophic wildfires expected in Southern Oregon this summer](#) – Mar 6
- NC - [Drought panel lists Asheville, WNC as ‘abnormally dry’](#) – Feb 28
- WA - [State officials prepare for potential drought, request \\$9 million](#) – Mar 6

Weekly Water and Climate Update

State with D-4 Exceptional Drought

U.S. Drought Monitor California

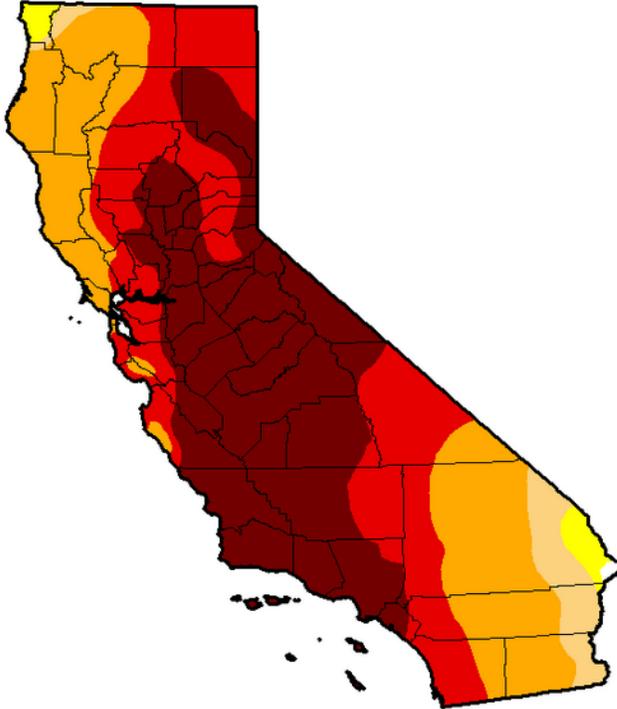
March 10, 2015

(Released Thursday, Mar. 12, 2015)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.16	99.84	98.11	93.44	67.46	39.92
Last Week <i>3/2/2015</i>	0.16	99.84	98.10	93.44	67.46	39.92
3 Months Ago <i>12/9/2014</i>	0.00	100.00	99.72	94.42	79.69	55.08
Start of Calendar Year <i>12/01/2014</i>	0.00	100.00	98.12	94.34	77.94	32.21
Start of Water Year <i>9/30/2014</i>	0.00	100.00	100.00	95.04	81.92	58.41
One Year Ago <i>3/11/2014</i>	0.01	99.99	94.56	90.81	65.89	22.37



Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:

Matthew Rosencrans
CPC/NCEP/NWS/NOAA



<http://droughtmonitor.unl.edu/>

There was no change in the drought categories in California for the week.

[CA Drought Information Resources](#)

[Drought News from California:](#)

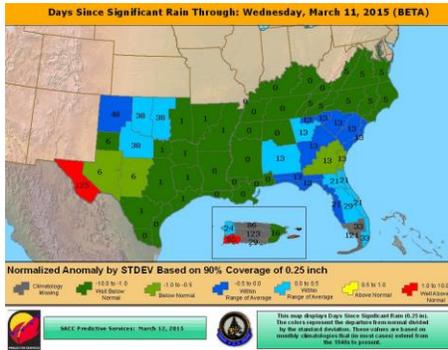
- [2014 California drought was bad. 2015 will be worse](#) – Mar 3
- [Business coalition forms in response to California drought](#) – Mar 5
- [California drought likely a fixture, says Stanford study](#) – Mar 2
- [El Niño arrives weak and late, and won't help against the drought](#) – Mar 5
- [A dry January pulled down water conservation rate in California](#) – Mar 5
- [Fresno agencies seeing more people in need of energy, food help](#) – Mar 4
- [California officials to supply just 20 percent of water](#) – Mar 2
- [California shuts down oil wells to protect ground water](#) – Mar 3
- [California survey finds Sierra snowpack far below normal](#) – Mar 3
- [Central Valley, Delta water rights under scrutiny](#) – Mar 1
- ['Devastating' water news for Merced County farmers](#) – Mar 3

Weekly Water and Climate Update

Texas Drought [Website](#).
[Texas Reservoirs](#).
[Texas Drought Monitor Coordination Conference Call](#): on Monday's 2:00 PM - 3:00 PM CST

Texas Drought News:

[City secures rights to use Wichita River for drinking water – Mar 3](#)

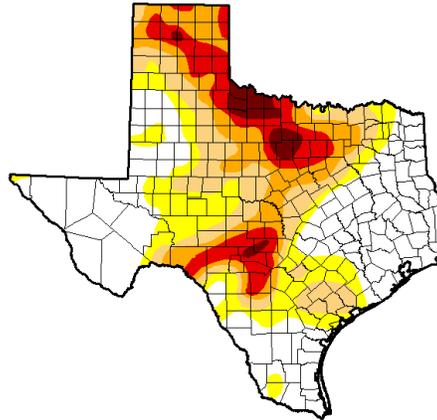


[Days since Significant Rain Summary](#)

State with D-4 Exceptional Drought

U.S. Drought Monitor Texas

March 10, 2015
 (Released Thursday, Mar. 12, 2015)
 Valid 7 a.m. EST



	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	42.15	57.85	41.05	25.89	12.76	2.97
Last Week 3/2/2015	38.78	61.22	43.02	26.89	13.29	3.37
3 Months Ago 12/6/2014	33.63	66.37	43.39	23.32	10.05	2.57
Start of Calendar Year 12/31/2014	34.37	65.63	44.68	25.73	11.70	3.17
Start of Water Year 9/30/2014	28.92	71.08	49.95	29.54	11.26	2.69
One Year Ago 3/11/2014	15.44	84.56	62.80	34.39	11.46	1.49

Intensity:
 D0 Abnormally Dry D3 Extreme Drought
 D1 Moderate Drought D4 Exceptional Drought
 D2 Severe Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
 Matthew Rosencrans
 CPC/NCEP/NWS/NOAA



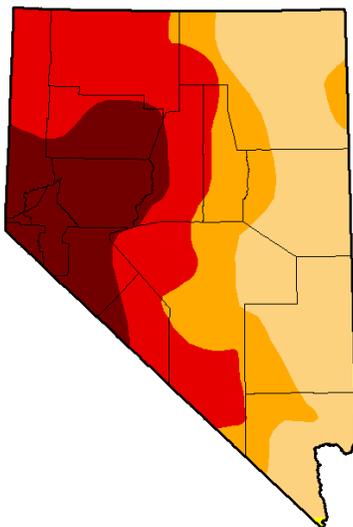
<http://droughtmonitor.unl.edu/>

There was a decrease in all drought categories in Texas this past week. The drought free areas increased for the week.

State with D-4 Exceptional Drought

U.S. Drought Monitor Nevada

March 10, 2015
 (Released Thursday, Mar. 12, 2015)
 Valid 7 a.m. EST



	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	99.93	67.23	47.96	18.38
Last Week 3/2/2015	0.00	100.00	99.93	63.84	47.96	18.38
3 Months Ago 12/6/2014	0.00	100.00	97.04	68.25	48.38	11.89
Start of Calendar Year 12/31/2014	0.00	100.00	96.98	68.25	48.38	11.89
Start of Water Year 9/30/2014	0.00	100.00	97.04	68.89	48.38	11.89
One Year Ago 3/11/2014	0.00	100.00	99.32	72.95	33.46	5.37

Intensity:
 D0 Abnormally Dry D3 Extreme Drought
 D1 Moderate Drought D4 Exceptional Drought
 D2 Severe Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

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<http://droughtmonitor.unl.edu/>

There was an increase in the D2 drought category in Nevada for the week.

Nevada Drought News:

[It's mammon against Mormons in western water fight – Mar 6](#)

Weekly Water and Climate Update

Related Area News:

[2014 Kansas Drought Report and Summary](#)

- [Past 30 days precipitation totals](#)
- [Past 30 days precipitation percent of normal](#)
- [Calendar Year precipitation totals](#)
- [Calendar Year Precip percent of normal](#)
- [Short Crop ET](#)

Oklahoma Drought News:

[Low water levels at Skiatook Lake force adjustments by marina, Army Corps of Engineers](#) – Mar 3

State with D-4 Exceptional Drought

U.S. Drought Monitor Oklahoma

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Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	2.17	97.83	70.50	47.81	28.29	5.75
Last Week <small>3/2/2015</small>	1.48	98.52	65.55	47.81	28.29	5.75
3 Months Ago <small>12/8/2014</small>	24.48	75.52	62.05	40.86	21.67	5.71
Start of Calendar Year <small>12/02/2014</small>	25.63	74.37	62.03	40.84	21.74	5.70
Start of Water Year <small>9/30/2014</small>	8.55	91.45	73.31	58.13	20.92	4.64
One Year Ago <small>3/12/2014</small>	0.00	100.00	80.67	31.42	14.67	4.40

Intensity:

<ul style="list-style-type: none"> D0 Abnormally Dry D1 Moderate Drought D2 Severe Drought 	<ul style="list-style-type: none"> D3 Extreme Drought D4 Exceptional Drought
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Author:
Matthew Rosenkrans
CPC/NCEP/NWS/NOAA

<http://droughtmonitor.unl.edu/>

There was a very slight decrease in the D1 and an increase in D2 drought categories in Oklahoma this past week. The drought free area increased slightly.

U.S. Population in Drought

Number of people in each drought category in the U.S. for the week ending March 10, 2015						
Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
2015-03-10	192,930,796	112,466,659	71,090,448	47,361,278	35,318,538	20,402,987
2015-03-03	191,859,878	113,537,577	72,996,935	47,500,841	36,991,274	21,787,305

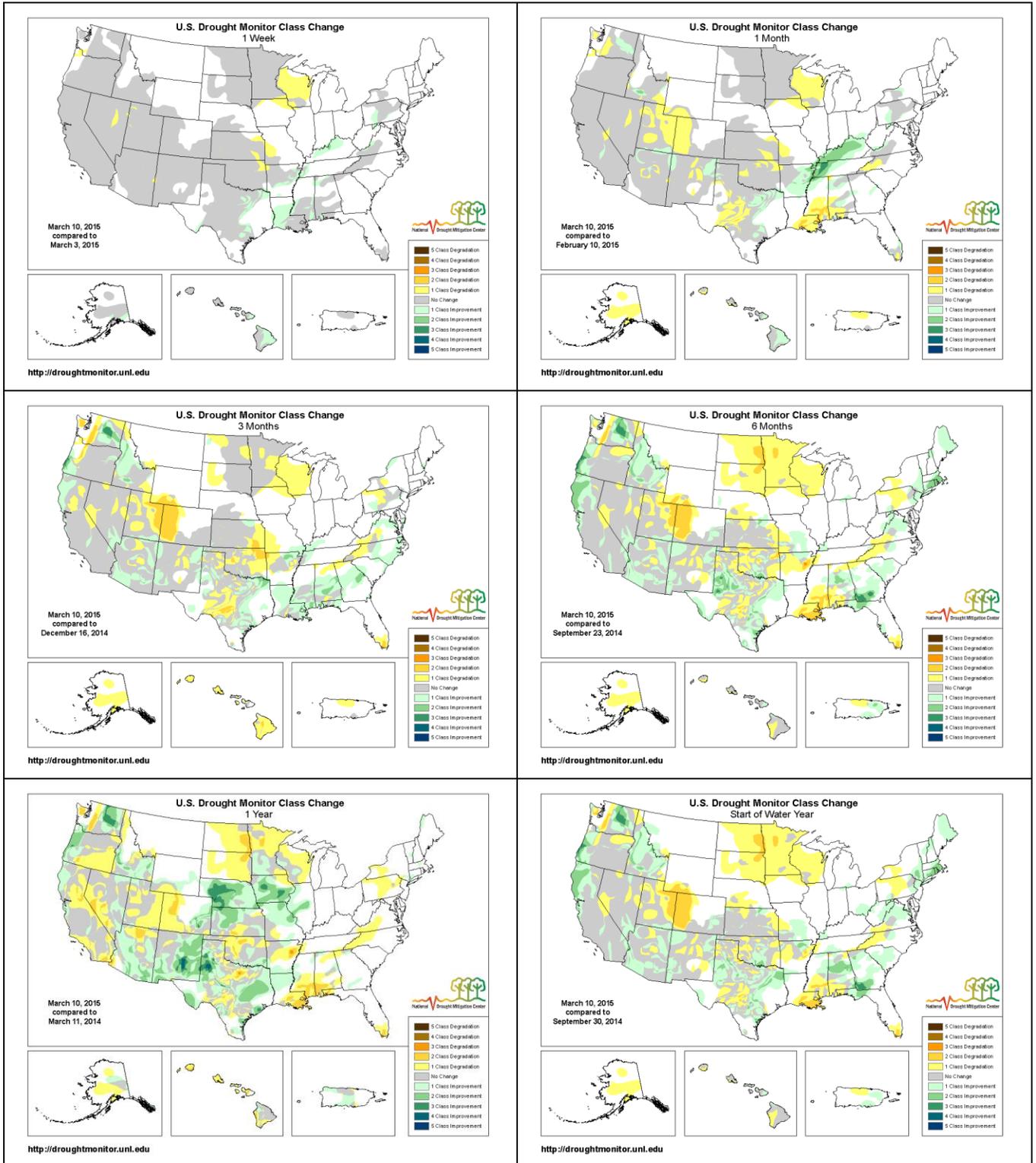
Population figures affected by drought in the U.S. Drought Monitor website show that, for this week, more than 71,000,000 people in the United States were in a drought-affected area, which is a decrease by over 1.9 million people from last week.

Population Statistics Methodology:
The U.S. Drought Monitor population statistics are calculated at the county level, and aggregated to the state, regional, and national levels. The population densities have been calculated for each county. The proportion of the physical area of the county that is in drought is multiplied by the uniform population density in order to obtain a number for each county. The county values are then summed at the state, regional, and national level.

Weekly Water and Climate Update

Changes in Drought Monitor Categories

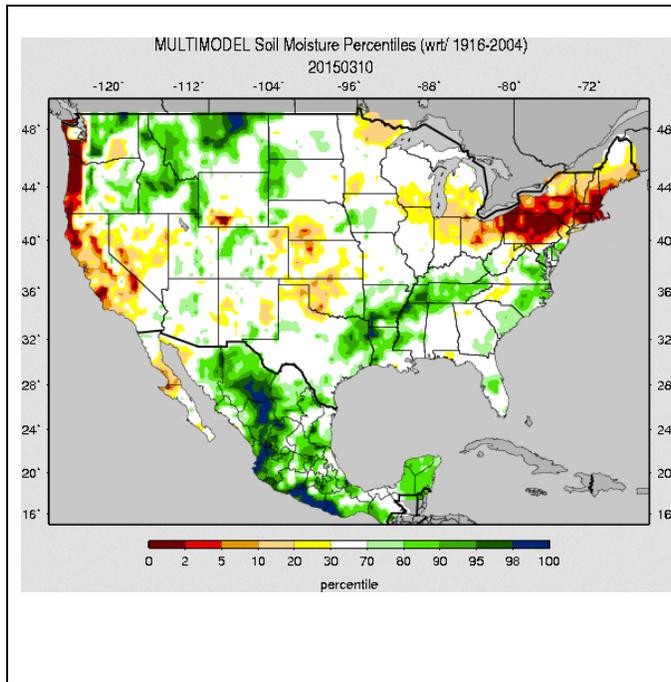
Over Various Time Periods



Click on any of these maps to enlarge. Note how the conditions over the upper Great Plains and Ohio Valley have degraded between 6 to 12 months (middle right to lower left maps). However, also note that since a year ago, conditions over parts of the Northeast, the South, parts of the southern Great Plains and the Pacific coast states have improved (lower left map).

Weekly Water and Climate Update

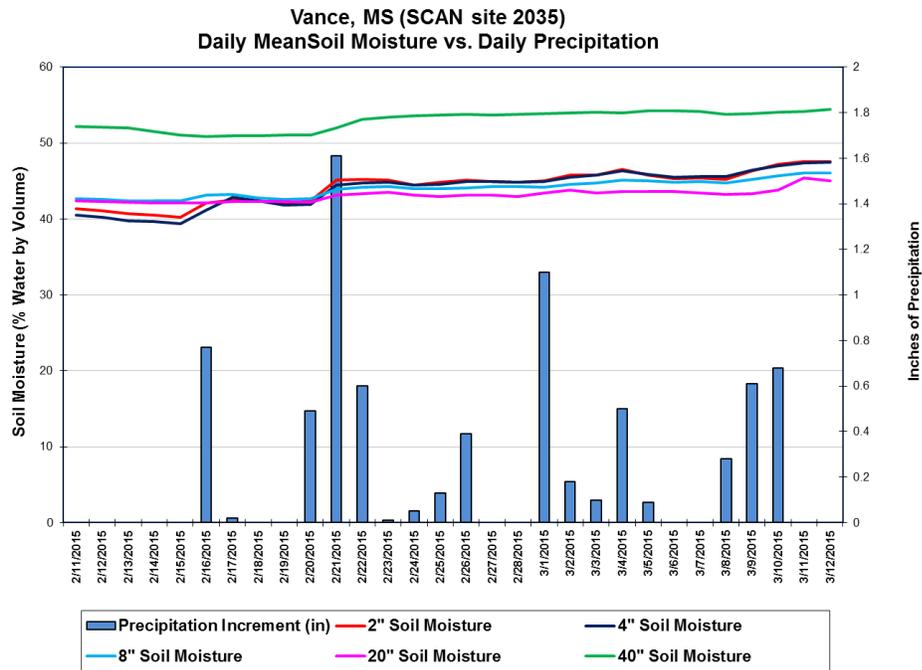
Soil Moisture



The national soil moisture model ranking in [percentile](#) as of March 10, 2015, shows dryness over most of the Northeast and along the West coast. The driest areas are in western Washington, western Oregon, Nevada, California, southern Wyoming, Ohio, Pennsylvania, New York, Connecticut, Massachusetts, and New Hampshire. Moist soils dominated north-central Montana, eastern Washington, Idaho, east Texas, Louisiana, Arkansas, northern Mississippi, and into west Tennessee. Slightly moist soils were also scattered elsewhere throughout the South, Southeast, Southwest and Plains. Much of the country has frozen conditions, so soil moisture conditions may not be representative.

Useful Hydrological Links: [Crop Moisture Index](#); [Palmer Drought Severity Index](#); [Standardized Precipitation Index](#); [Surface Water Supply Index](#); [Weekly supplemental maps](#); [Minnesota Climate Working Group](#); [Experimental High Resolution Drought Trigger Tool](#); [NLDAS Drought Monitor](#); [Soil Moisture](#)

Soil Climate Analysis Network (SCAN)

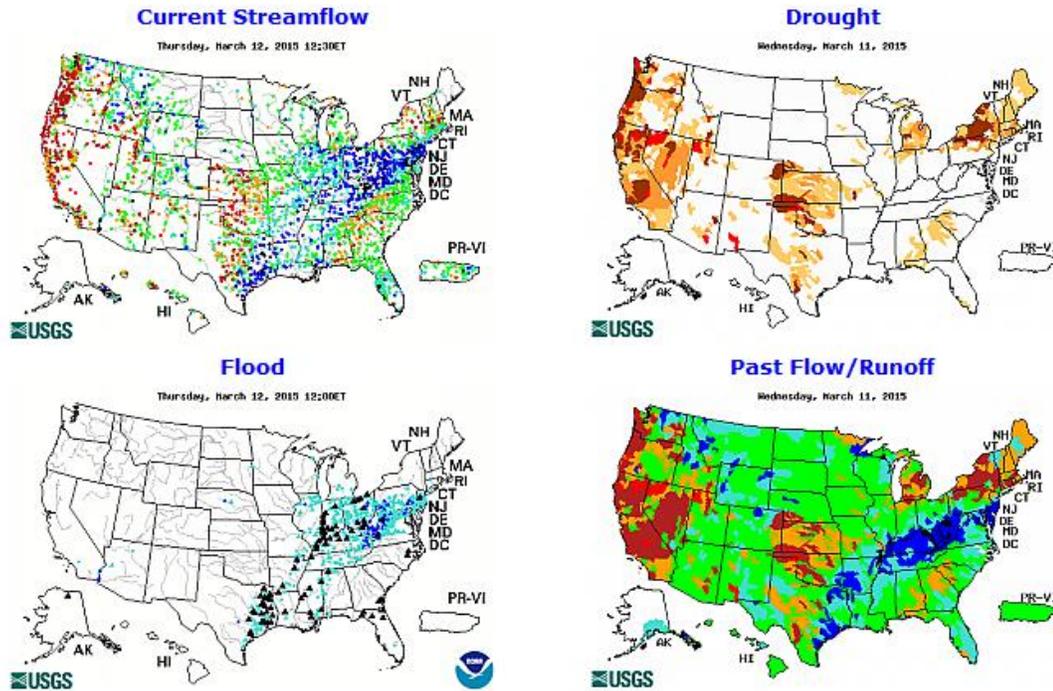


This NRCS resource shows soil moisture data for the last month at [Vance \(SCAN Site 2035\)](#) in Mississippi. The area had precipitation many times late in the past month (blue bars). This rainfall resulted in an increase in soil moisture at all depth sensors from the precipitation events, and has kept the soil moisture in a fairly steady state.

Useful Agriculture Links: [Vegetation Drought Response Index](#); [Evaporative Stress Index](#); [Vegetation Health Index](#); [NDVI Greenness Map](#); [GRACE-Based Surface Soil Moisture](#); [North American Soil Moisture Network](#); [Monthly Wild Fire Forecast Report](#).

Weekly Water and Climate Update

Streamflow



Gages in several regions of the U.S. are reporting much above normal streamflow. Some gages in the northern states are now frozen, so may not relate to the precipitation and snow conditions in that area. There are a vast number of rivers above flood stage at this time. These include rivers in eastern Texas, Louisiana, Mississippi, Arkansas, Tennessee, Kentucky, Illinois, Indiana, Ohio, Pennsylvania, West Virginia, New Jersey, North Carolina, Georgia, and Florida.

National Long-Range Outlook



Click map to enlarge and update

Currently the Upper Midwest part of the map has not been calculated for the long range flood outlook (dark gray dots).

According to the National Weather Service, during the next three months, there is a risk of flooding in much of the eastern U.S. The Southeast and the Midwest have gages with a slight to higher risk of flooding. Currently, **2** gages have a greater than 50% chance to experience major flooding; **25** gages for moderate flooding; and **246** gages for minor flooding.

These numbers represent a **14** gage decrease in the greater than 50 percent chance of minor flooding category since last week.

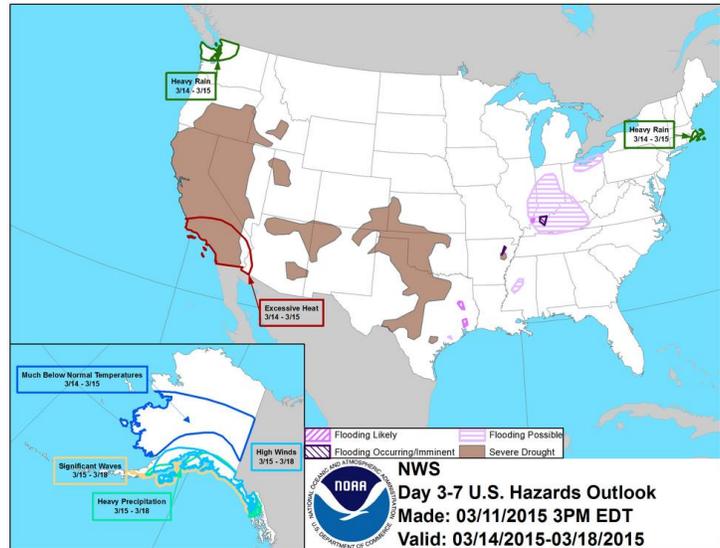
Weekly Water and Climate Update

National [Weather Hazards](#)

The National Weather Service map of national weather hazards for the next 3 – 7 days forecasts heavy rain in northwest Washington and eastern Massachusetts (3/14-15). Flooding is possible in Ohio, Indiana, Illinois, Kentucky, and central Mississippi. Flooding is likely in east Texas. Flooding is occurring in northeast Arkansas and western Kentucky. Excessive heat is expected in southern California (3/14-15).

In Alaska, significant waves are forecast for the southern coastal area (3/15-18). High winds and heavy rain are forecast for this area and inland (3/15-18) and interior Alaska is forecast to have much below normal temperatures (3/14-15).

Severe drought remains a large issue in much of the south-central and western U.S.



[National Drought Summary for March 10, 2015](#)

Prepared by the Drought Monitor Author: Matthew Rosencrans, NOAA/NWS/NCEP/CPC.

Summary

“Two low-pressure systems brought significant rains to portions of the contiguous U.S. from the Southern Great Plains to the mid-Atlantic. Elsewhere, most of the rest of the reporting stations around the country reported little to no precipitation, continuing the dry conditions across much of the western states. Moderate rains have brought much needed drought relief to Hawaii, which much of central Alaska remained without precipitation. The eastern portions of Puerto Rico continued to receive light rains, while western portions of the island remain dry.

Alaska, Hawaii and Puerto Rico

Only light precipitation fell over northeastern Puerto Rico, while the western end of the island remained without significant precipitation. The rains that did occur did not fall over the currently depicted, abnormally dry area. Recent wet weather across Hawaii led to a reduction in drought and dryness. The rains have fallen primarily over the eastern areas of Molokai, east-facing slopes of Maui, and portions of the Big Island. As a result, drought conditions were paired back and the designation has been changed from short-term to long-term, reflecting the longer-term issues with water storage and the recent, wetter period.

Middle and Lower Mississippi Valleys, and Gulf Coast

The two low-pressure systems that impacted the eastern portions of the contiguous 48 states brought significant rains to these regions, although some portions of northwest Arkansas and neighboring states largely missed out on the heaviest rains. The ongoing dryness continued across northwest Arkansas, eastern Kansas, and northeast Oklahoma. Moderate drought is now indicated in the SPI values at many time frames, United State Geologic Survey (USGS) streamflow gauges, and North American Land Data Assimilation System (NLDAS) soil moisture models. This area will need to be monitored closely in the coming weeks.

Reports from Oklahoma suggest localized effects from the dry conditions. Areas of Oklahoma are still almost 4 inches behind in overall rainfall and the subsoil has not completely recovered from the past droughts. There are some areas in Sequoyah County, locally, near the river that have soils holding water and those are the lowest areas and prone to flood. Adair County is the driest of the three counties covered by the FSA representative for that region. Some of the ponds started to decrease in levels the last month or so in Adair, Cherokee and northern Sequoyah Counties.

Weekly Water and Climate Update

With rains of up to 6.51 inches reported across eastern Texas, drought conditions have improved, so some of the D0-D3 areas were trimmed back across northeastern Texas. Across southeastern Texas, recent rains prompted the removal of severe drought (D2) and some trimming of the moderate drought (D1) and abnormal dryness (D0).

Heavier rains farther east also helped alleviate ongoing dryness across Louisiana and Mississippi. Rainfall totals ranged from 0.6 inch to over 2.5 inches across southwest and central Louisiana, while precipitation amounts were generally lighter across Mississippi. Due to the generally more entrenched drought conditions across southern Mississippi and southern Alabama, only small reductions in coverage were made to the moderate drought (D1) areas over Mississippi and Alabama.

Northern Plains and upper Midwest

No precipitation fell last week and temperatures were below average (1.0 to 6.1 degrees F). The cold temperatures and frozen soil continue to mitigate most impacts from no precipitation, as does the 2-5 inches of snow water equivalent (SWE) that is locked in the snowpack. Abnormal dryness was expanded across northeastern Iowa and most of Wisconsin to reflect the ongoing lack of precipitation, but tempered by the snowpack considerations across northern Michigan and Wisconsin.

Across Minnesota, precipitation totals since 1 Oct 2014 are 2.5 to 3.5 inches below average. The accumulated total values would rank somewhere between the 5th and 25th percentile, supporting anywhere from a D2 to a D1 classification, but mitigated by the frozen soils and lack of moisture demand during this time of year.

Southwest

A few stations in New Mexico reported light precipitation (0.01 to 0.15 inch), but most of the Southwest remained dry this week. Westwide SNOTEL reports of SWE much below average across southwest New Mexico and eastern Arizona prompted the expansion of severe drought (D2) across Navajo and Apache Counties in Arizona and Catron County in New Mexico.

The High Plains, Rockies, and Intermountain West

No significant precipitation fell across much of this region during this past week, through the data cutoff time on Tuesday morning. The past week was slightly cooler than average for the Upper Colorado River Basin, and fairly seasonal in terms of precipitation. Another large slug or two of moisture like what was realized at the end of February will be necessary in order for basin-wide snowpack numbers to achieve median status by peak season. East of the divide conditions were much cooler than average and mostly dry with less than a tenth of an inch of precipitation across most of the region. On short timescales eastern Colorado is not at a deficit precipitation-wise with the exception of the northeast corner of the state, which is still holding onto average soil moisture conditions. With the cold temperatures keeping things dormant, lack of substantial winds, and recent snowfall events the recent dryness east of the divide this week should be relatively inconsequential. No changes were made to the drought depiction as precipitation was not far off of normal.

The lack of winter storms across the Great Basin prompted the intensification of drought conditions across eastern Nevada and western Utah. SPI values out through 9 months indicate conditions at least as intense as D1, with shorter time period SPI values indicating even more intense conditions.

The mid-Atlantic and Northeast

Light to moderate rains (1.0 – 3.5 inches) fell across portions of the Central Appalachians and southern portions of the Northeast. As a result, abnormal dryness (D0 from West Virginia to central Pennsylvania was reduced in coverage. Farther south, the same storm systems spread between 1.0 and 2.3 inches of precipitation over the western Virginia, prompting the removal of D0 along the Virginia-West Virginia border counties on the Virginia side.

The Ohio and Tennessee River Valleys

Significant rain and frozen precipitation (1.0 – 3.3 inches, liquid and liquid equivalent) fell across southern Indiana, Ohio, and Kentucky. Streamflows are now above average and the only remaining, significant deficits are evident in 3-month Standardized Precipitation Index (SPI-3) values. Soil moisture models also indicate a saturated soil profile, so a complete amelioration of drought was prudent over that region.

The Pacific Northwest and California

Weekly Water and Climate Update

The winter continues to be dry for much of this region as no significant rains fell this past week. Abnormally dry conditions expanded across northwest Oregon to near Tillamook. The rest of the area remained unchanged, but will be monitored closely in the coming weeks.

Looking Ahead

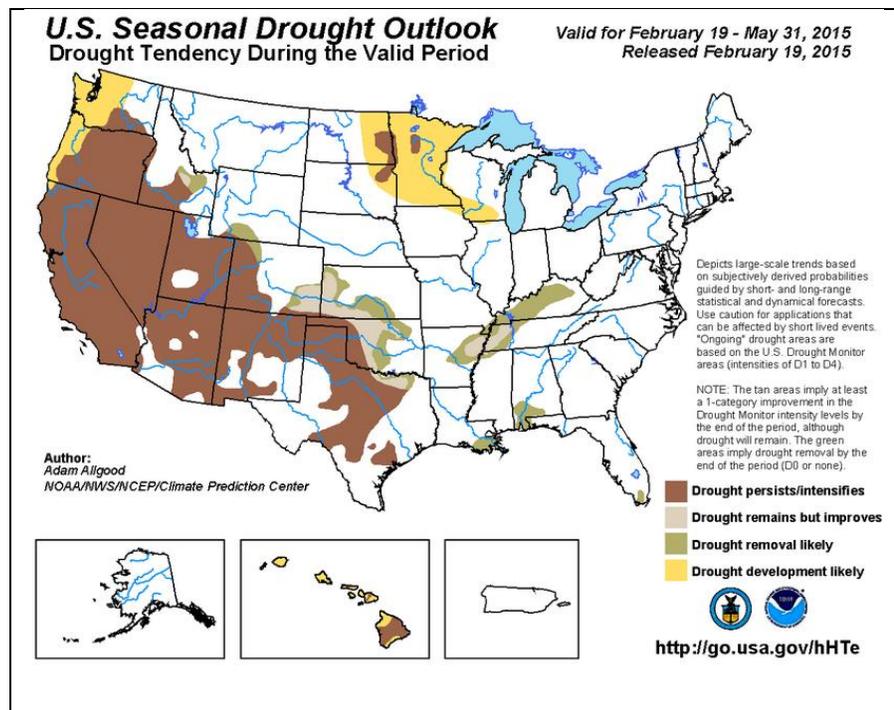
Through March 17, two low-pressure systems are forecast to impact the contiguous 48 states during the next 5 days. One is forecast to move across the northern tier while another is forecast to bring significant rains (more than 3.0 inches) to the Gulf Coast and Lower Mississippi Valley. These two systems are forecast to phase over the northeast, with precipitation spreading from west to east across that region. Some flow into the front range of the Rockies, with upper-level support is likely to bring some spring snows to southwest Colorado.

For the ensuing 5 days (Mar 17 -21), below median precipitation is favored along the west coast, and from the Great Lakes to the Southeast, while an upper-level trough supports above median precipitation over the Southwest, most of the Rockies, and portions of the southern and central Great Plains. Western and Southern Alaska are expected to experience an active weather pattern with above median precipitation.”

Supplemental Drought Information

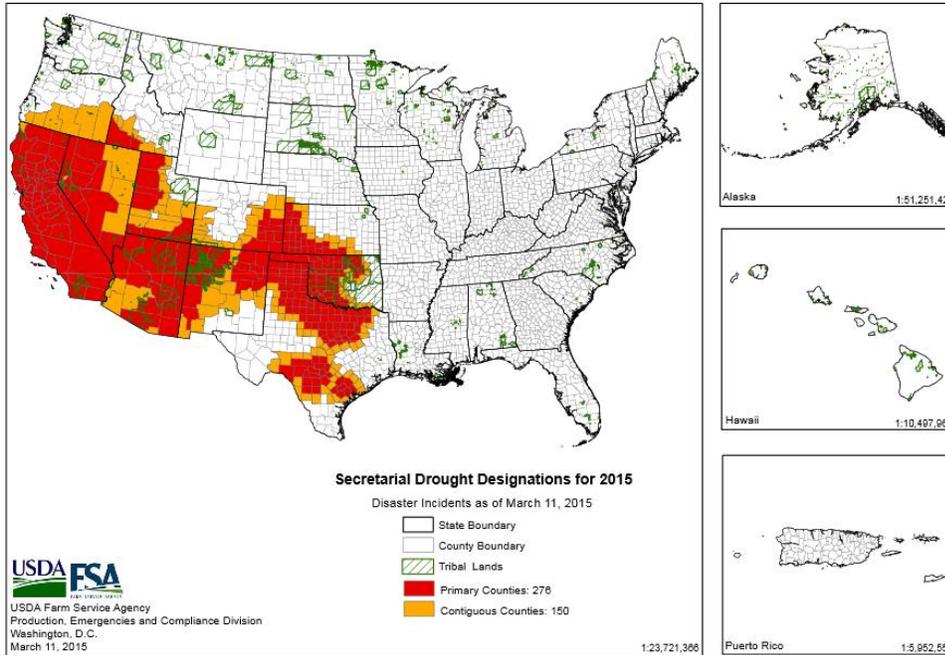
National Seasonal Drought Outlook

Nationally, [drought](#) is expected to persist or intensify over much of the West and south-central U.S., including California, Nevada, Oregon, Washington, Idaho, Utah, Arizona, New Mexico, Texas, Oklahoma, Nebraska, Colorado, and Hawaii. Improvements are expected in parts of Kentucky, Tennessee, Arkansas, Oklahoma, Nebraska, Texas, and a few smaller areas elsewhere. The areas of drought that are likely to develop further are in the upper Midwest, the Pacific Northwest, and parts of Hawaii.



2015 USDA Secretarial Drought Designations

2015 Secretarial Drought Designations - All Drought

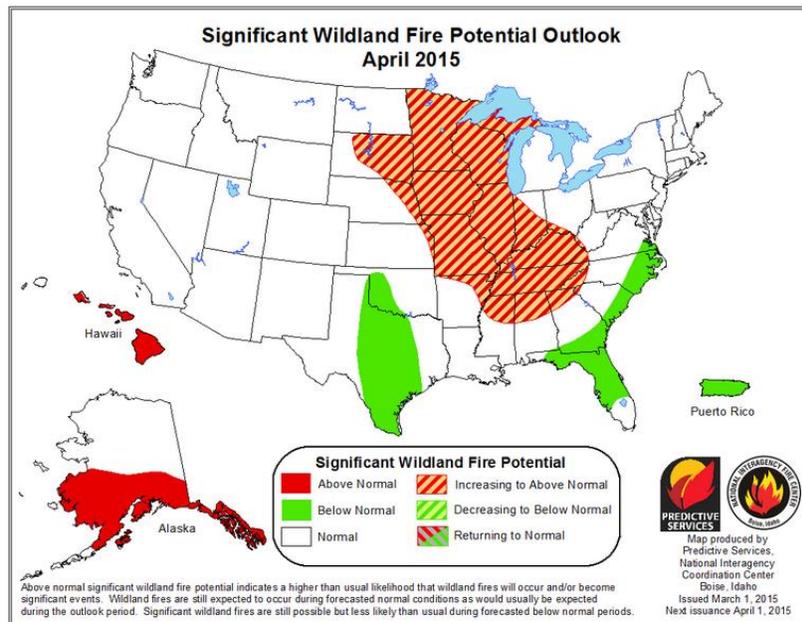


Refer to the USDA Drought Assistance [website](#) and [National Sustainable Agriculture Information Service](#).

Read about the new [USDA Regional Climate Hubs](#).

[New useful resource: NASS Quick Stats](#)

National Fire Potential Outlook



April Fire Forecast

In April, much of the U.S. has normal [fire potential](#).

A large area of the central U.S. has increasing to above normal fire potential for April. Below normal fire potential for March 2015 (in green on the map) is forecast for Texas and the Southeast to the Mid-Atlantic States, and in Puerto Rico.

The southern half of Alaska and most of the Hawaiian Islands have above normal fire potential.

Weekly Water and Climate Update

Additional Maps

U.S. Maps PowerPoint presentation: <http://dmcommunity.unl.edu/maps/US-Maps.ppt>.

Regional zooms of ACIS station data percent-of-normal precipitation: <http://dmcommunity.unl.edu/maps/All-CONUS-ACIS-PNP.pptx>.

National Water and Climate Center (NWCC) Surface Water Supply Index (SWSI) maps: <http://www.wcc.nrcs.usda.gov/wsf/swsi.html>

Supplemental Drought-Agriculture News

Download [archived](#) “U.S. Crops in Drought” files.

The following is a collection of drought-related news stories from the past seven days or so. Impact information from these articles is entered into the [Drought Impact Reporter](#). A number of these articles will also be posted on the [Drought Headlines](#) page at the NDMC website. The list is compiled by Denise D. Gutzmer, Drought Impact Specialist, at the National Drought Mitigation Center.

“Predicted \$3 billion in California ag losses

Agricultural losses from the California drought could reach \$3 billion in 2015, an increase from about \$2.2 billion in 2014, according to a UC Davis professor.

Slim snow survey results

Surveyors found 6.7 inches of snow with a water equivalent of 0.9 inches near Echo Summit. The traditional end of the wet season on April 1 is rapidly approaching with little precipitation in sight.

Five percent increase in State Water Project allocation

The State Water Project increased its allocation estimate to 20 percent of contracted amounts, up from its January estimate of 15 percent. While the uptick is an improvement, this amount would be the SWP's second lowest water delivery since 1990.

Water rights holders must offer proof of rights or face curtailment

The State Water Resources Control Board ordered the owners of 1,061 water rights within the Sacramento and San Joaquin River watersheds to offer proof of their riparian water rights or face curtailment. In July 2014, the California Department of Water Resources and U.S. Bureau of Reclamation claimed that south and central Delta diverters were taking more than their water rights allowed, prompting the SWRCB to take this action. The proof must be submitted by March 6.

Closing of oil and gas wells to protect water quality in Kern County, California

Twelve oil and gas wells in the Central Valley were ordered to be shut down to protect ground water quality. Production was stopped voluntarily at 10 Kern County oil wells, and two others were given cease-and-desist orders. No contamination has been detected so far.

San Joaquin Valley families dealing with hunger, struggle to pay utility bills

The variability of seasonal employment and drought has sapped work opportunities and limited monthly income for workers in the San Joaquin Valley, making it harder for families to get by. As a result, the Fresno Economics Opportunities Commission and Salvation Army have been helping people pay utility bills. The Community Food Bank provides food assistance to 280,000 people monthly.

Backsliding on water conservation effort

Water use in January 2015 was 8.8 percent lower than the previous January, down from a successful December conservation rate of 22.2 percent, surpassing the governor's conservation goal of 20 percent. Per capita water consumption was 73 gallons in January, up from 67 gallons in December.

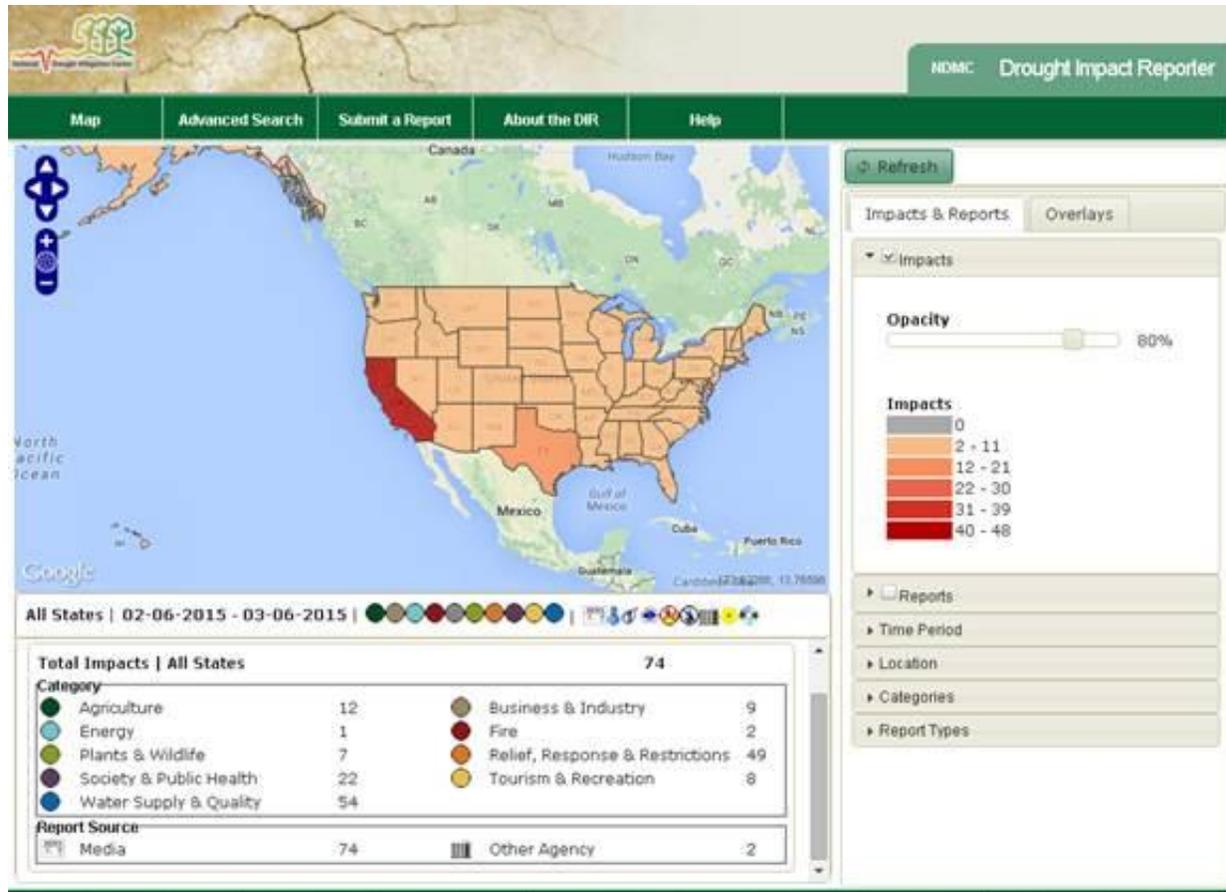
Skiatook Lake in northeastern Oklahoma

The low water level of Skiatook Lake brought changes to access points and docks. Two boat ramps were closed, and buoys were added to the west end of the lake to alert boaters to shallow areas. A marina had to relocate five docks and its fuel dock.

Weekly Water and Climate Update

North Carolina water managers to monitor water supplies

The North Carolina Drought Management Advisory Council designated counties in the western part of the state and the Piedmont region as being abnormally dry following three months of below normal rainfall. Officials controlling water supplies in the drier parts of the state were urged by the Drought Management Advisory Council to closely monitor water supplies.”



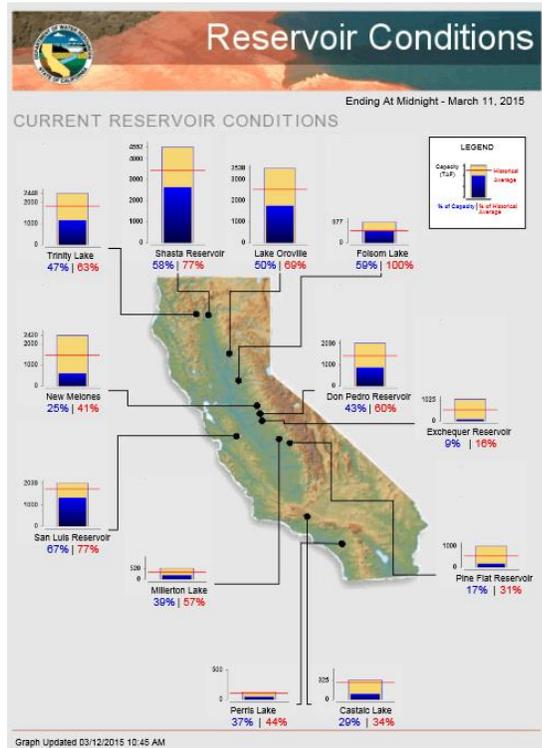
Tea Cup Reservoir Depictions

- <http://www.usbr.gov/uc/water/basin/> ← Upper Colorado
- http://www.usbr.gov/uc/wcao/water/basin/tc_gr.html; ← Upper Snake
- <http://www.usbr.gov/pn/hydromet/burtea.html> ← Upper Colorado
- http://www.usbr.gov/uc/water/basin/tc_cr.html ← Upper Colorado
- <http://www.usbr.gov/pn/hydromet/select.html> ← Pacific Northwest
- <http://www.sevierriver.org/reservoirs/teacup-diagram-of-reservoirs/> ← Sevier River Water (UT)

Weekly Water and Climate Update

California Reservoir Conditions

[California Major Reservoir conditions from the CA Department of Water Resources](#)

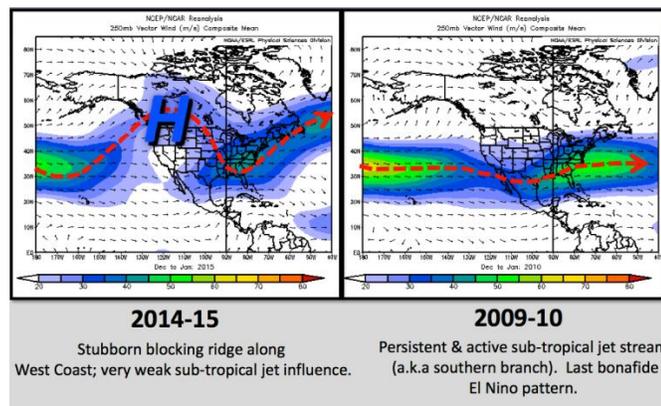


State Activities

[State government drought activities](#) can be tracked through their drought plans. NRCS Snow Survey and Water Supply Forecasting (SSWSF) Program State Office personnel are participating in state drought committee meetings and providing the committees and media with appropriate SSWSF information. Additional information describing the [tools](#) available from the Drought Monitor can also be found at the [U.S. Drought Portal](#).

Persistent weather pattern dominates the U.S.

Here is a graphic from the National Weather Service on the persistent weather pattern and mean jet stream position that has affected the U.S. for much of this winter. The current year was originally forecast to be in an El Niño pattern, which hasn't occurred. The current year's weather pattern on the left is in contrast to the normal El Niño pattern on the right that occurred in 2009-2010.



Weekly Water and Climate Update

More Information

The National Water and Climate Center (NWCC) [Homepage](#) provides the latest available snowpack and water supply information. This document is available [weekly](#). CONUS Water and Climate Updates from 2007 are available online. Reports from 2001-2006 are available on request.

This report uses data and products provided by the Interagency Drought Monitor Consortium members and the National Interagency Fire Center.

/s/

David W. Smith

Deputy Chief, Soil Science and Resource Assessment