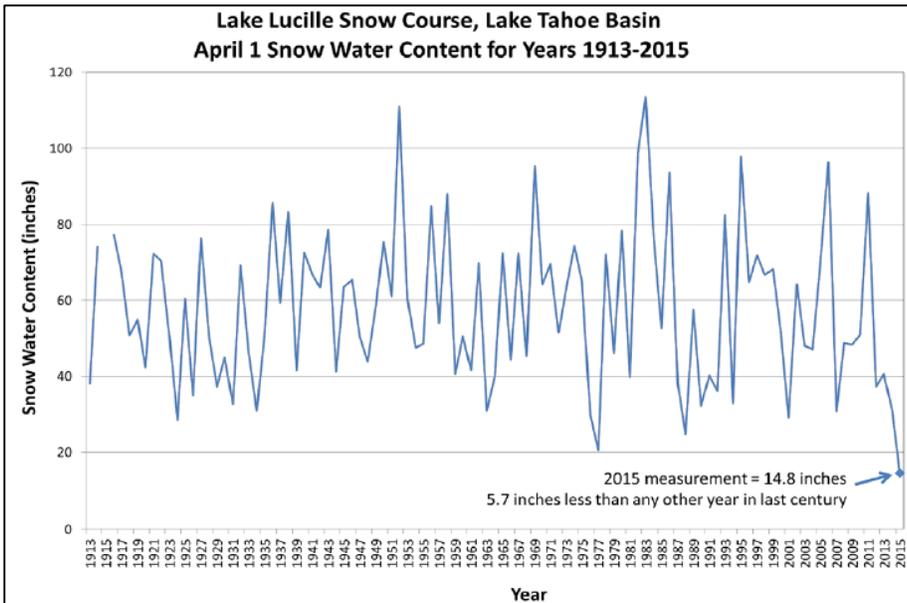




Natural Resources Conservation Service  
P.O. Box 2890  
Washington, D.C. 20013

## Weekly Water and Climate Update Thursday, April 16, 2015

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### Lowest Snowpack in a Century

The April 1 snowpack in the Sierra Nevada on the California/Nevada border is the lowest in over 100 years of snow water measurements.

**National Outlook:** “Stormy weather will continue over the next few days from the southern Plains to the Gulf Coast, maintaining the potential for strong thunderstorms. Additional rainfall of 3 inches or more is expected to worsen coastal flooding from Texas to

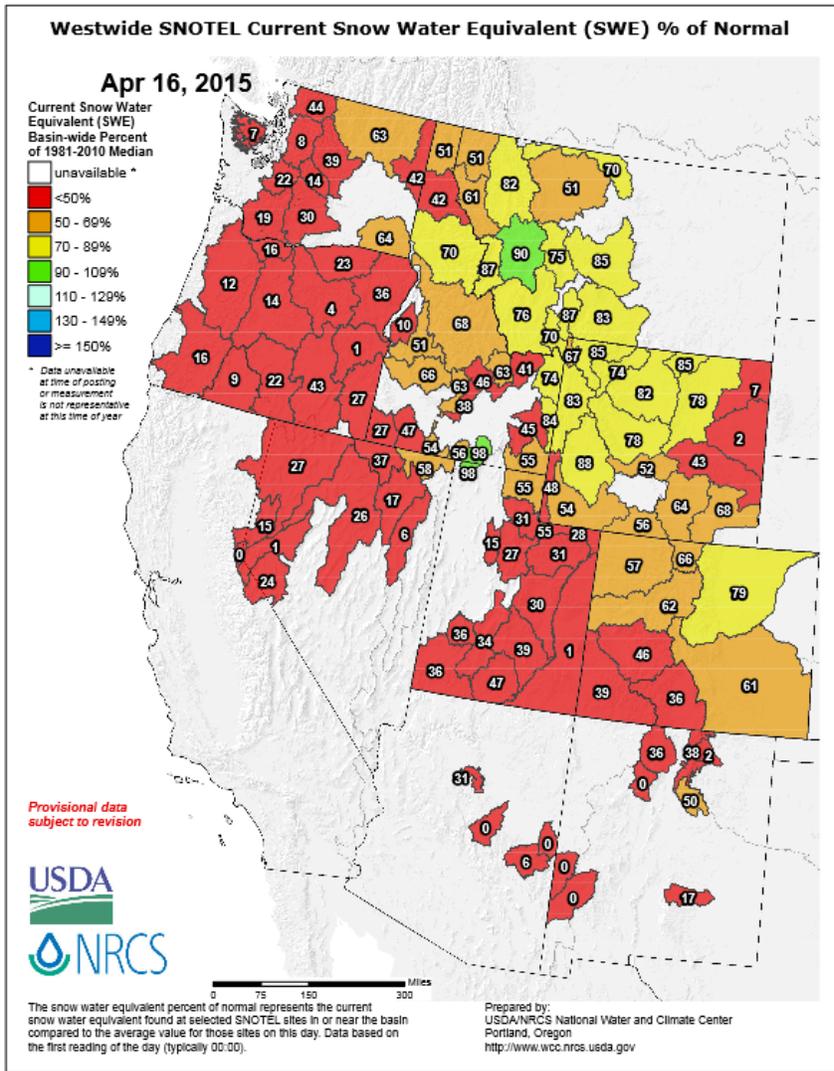
Mississippi. Showers will gradually push eastward from the central Plains to the Midwest, with rain reaching the Southeast over the weekend. Five-day rainfall totals in excess of 2 inches are expected from Nebraska to the Carolinas. Beneficial rain should also spread northward into Minnesota, providing timely moisture for emerging spring grains and the upcoming summer crop season. However, cold weather (nighttime lows below freezing) behind the exiting storm will slow germination in the upper Midwest. In contrast, daytime highs will approach the upper 80s °F in parts of the San Joaquin Valley. The NWS 6- to 10-day outlook for April 21-25 depicts above-normal precipitation from California to the southern Plains, the eastern Gulf Coast, and New England. Drier conditions are expected from Washington to the upper Mississippi Valley. Unseasonable warmth is forecast from the Rockies to the Pacific Coast, and in Florida. Near- to below-normal temperatures are expected elsewhere, with the highest likelihood of cooler-than-normal weather centered over the Great Lakes.”

Contact: Mark Brusberg, Agricultural Meteorologist, USDA/OCE/WAOB, Washington, D.C. (202-720-2012)  
**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 are in record territory for many basins, especially in the Cascades and Sierra Nevada where single-digit percent of normal conditions prevail. Very low snowpacks (red areas) are reported in most of Washington, all of Oregon, Nevada, California, Arizona, much of Idaho, parts of New Mexico, four basins in Wyoming, three basins in Colorado, and most of Utah. Below normal snowpacks (orange and yellow areas) are also located in eastern Washington, Idaho, Colorado, Wyoming, Montana, and one basin each in northern New Mexico, northern Utah, and northeast Nevada.

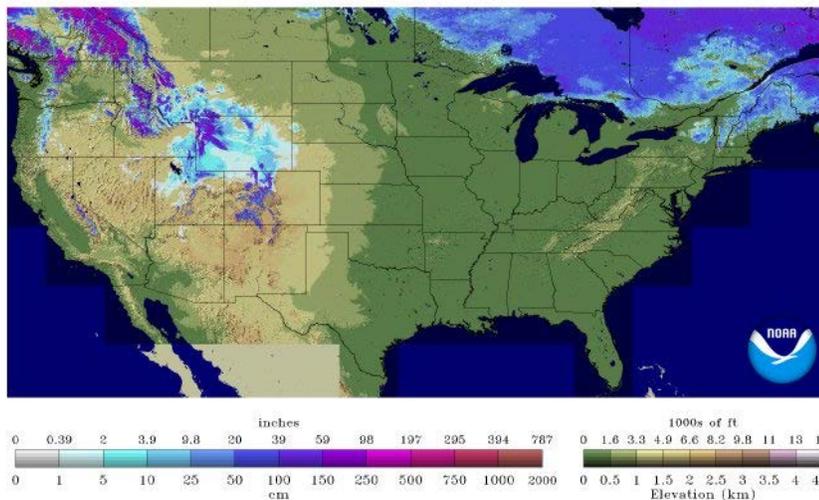
The snowpack in one basin in western Montana, one in northwest Utah, and one in southeast Idaho are near normal.

There are no basins in the West reporting above average conditions.

National Snow 2014-Analysis 2015

### Snow Depth

2015-04-16 06 UTC



The snow depth map as reported from the [NWS NOHRSC](#) for April 16, 2015, shows a decrease in snow cover from last week. Snow now covers 9.3% of the continental U.S. This includes snow across many of the mountains in the West, northern Michigan, and the Northeast.

# Weekly Water and Climate Update

## Precipitation

### 2015, an unusually warm year...

Most of this winter, temperatures have persistently remained above to much above normal across much of the West. This has had a dramatic effect on the snowpack. This was well-noted in the Cascades and Sierra Nevada where the snowpack was much below normal for most of the winter. The Sierra Nevada precipitation for the water year (Oct. 1 – today) has remained well below normal. A few cool storms in the Cascades (see have resulted in small improvements in the snowpack conditions in this region. The overriding influence in these unusual circumstances of having a low snowpack but near normal precipitation is the persistent warm temperatures that have dominated the snowpack processes.

Freezing levels for most storm events have remained well above the elevation of many SNOTEL sites. The near to slightly below average water year precipitation (see map on page 5), especially in the Cascades of Oregon and Washington, has helped to improve any soil moisture, groundwater, and reservoir deficits. Warm temperatures and very little precipitation in the Sierra Nevada have provided for an extreme record-breaking snow season. Any precipitation that has fallen across the region has helped to offset the current effects of the low snow conditions that these areas have experienced but may not be enough to offset future deficits in snowmelt runoff for spring and summer streamflow.

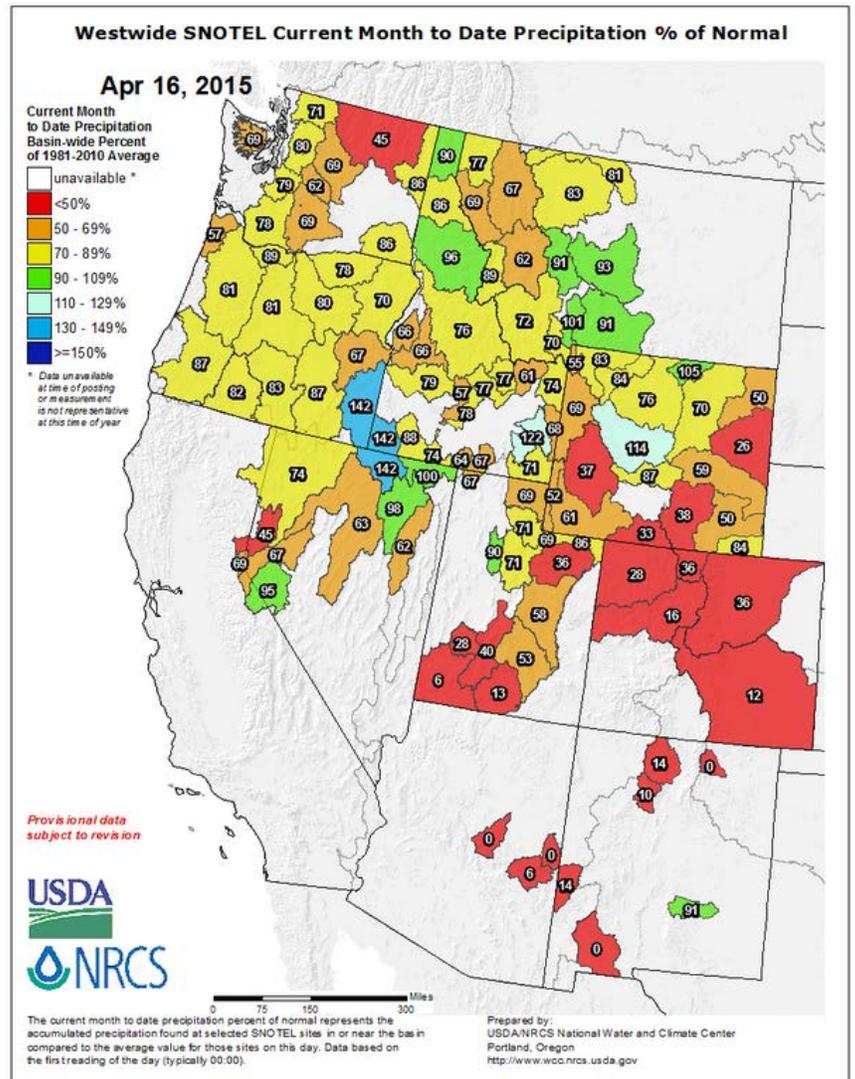
In the West, the [SNOTEL](#) precipitation percent of normal map for the first half of April shows a variety of conditions. There have been scattered wet conditions in southeastern Oregon, northern Nevada, southwest and southeast Idaho, and central Wyoming (blue areas).

Near normal conditions were reported in parts of northern Idaho, central Montana, northern Wyoming, Nevada, California, central Utah, and southern New Mexico (green areas).

Less than normal precipitation so far in April was reported in most basins in Washington, Idaho, Montana, Wyoming, Utah, Nevada, California, and Oregon (orange and yellow areas).

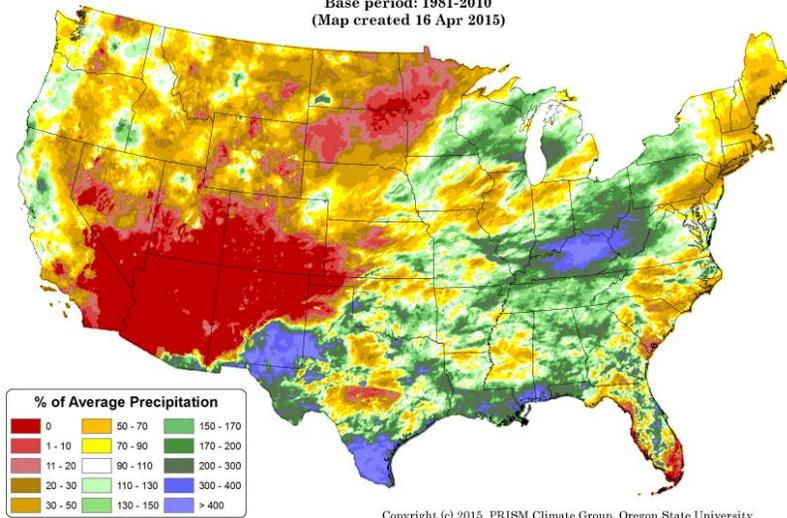
Little to no precipitation was reported in parts of northern Washington, Wyoming, Arizona, Colorado, New Mexico, and on the California/Nevada border (red area).

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



# Weekly Water and Climate Update

Total Precipitation Anomaly: 01 April 2015 - 15 April 2015  
 Period ending 7 AM EST 15 Apr 2015  
 Base period: 1981-2010  
 (Map created 16 Apr 2015)



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

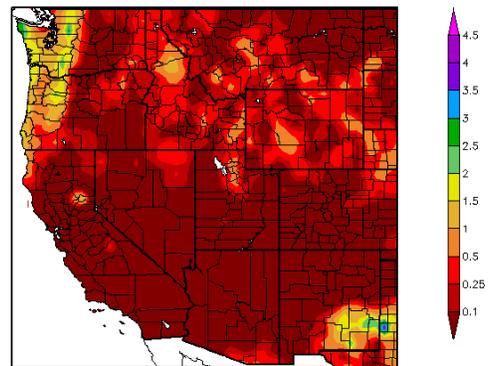
So far in April, the national total [precipitation anomaly](#) pattern reveals some higher than normal precipitation, primarily in southern Illinois, Kentucky, West Virginia, several areas of Texas, southeast New Mexico, southern Louisiana, and southern Mississippi. There was little or no precipitation in most of the Southwest, the northern Great Plains, and parts of Florida (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 the Northwest in the Cascades and the Washington Olympic Peninsula, and in southeast New Mexico. There were several areas in these states that saw greater than two inches of precipitation (mapped in green). Light and widely scattered precipitation was also reported in Oregon, Washington, Idaho, Montana, northern California, northern Nevada, northern Utah, Wyoming, and northern Colorado.

Little to no precipitation fell in many areas of the West this week (dark red). The largest contiguous dry area covered southern California, southern Nevada, most of Utah, Arizona, northern New Mexico, and most of Colorado.

Precipitation (in)  
 4/9/2015 - 4/15/2015



Generated 4/16/2015 at HPRCC using provisional data.

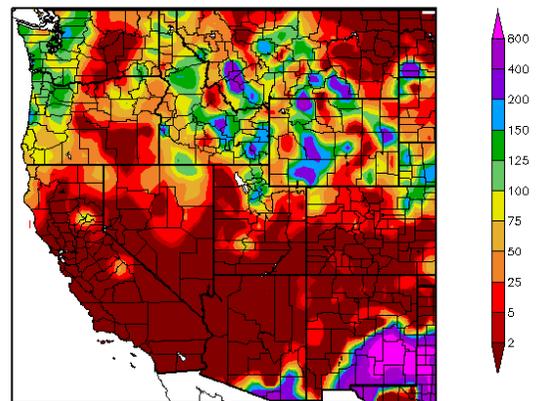
Regional Climate Centers

This ACIS percent of normal [map](#) of the West for the last seven days reflects precipitation along the northern tier states, and the southern border. The heaviest percent of normal precipitation fell in southeast New Mexico (magenta areas).

Very dry conditions for the week were reported in southeast California, southern Nevada, southern Utah, northern Arizona, northern New Mexico, southern Colorado, and a few scattered dry areas elsewhere (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 (%)  
 4/9/2015 - 4/15/2015

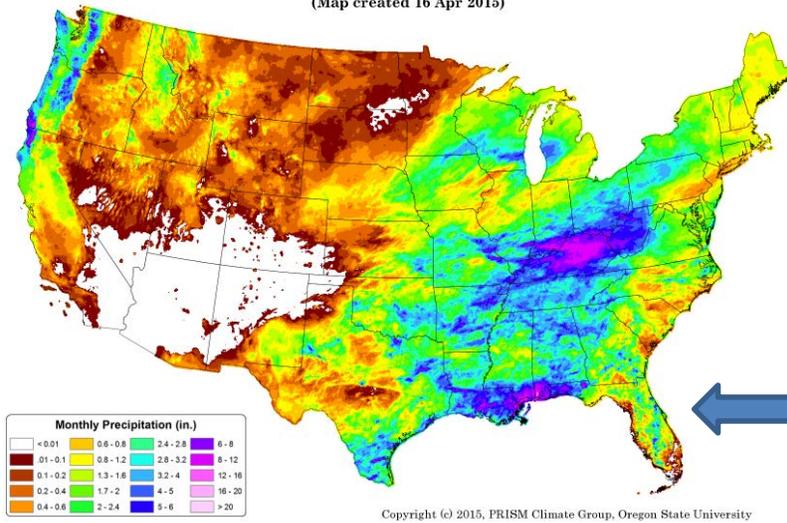


Generated 4/16/2015 at HPRCC using provisional data.

Regional Climate Centers

## Weekly Water and Climate Update

Total Precipitation: 01 April 2015 - 15 April 2015  
 Period ending 7 AM EST 15 Apr 2015  
 (Map created 16 Apr 2015)



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

For the first half of April 2015, the [total precipitation](#) across the continental U.S. was heaviest in northwest California and southwest Oregon, Kentucky, southern Louisiana to southern Alabama, southern Indiana, southern Ohio, and West Virginia. Scattered precipitation also fell elsewhere. In contrast, much of the Southwest and northern Great Plains were mainly dry.

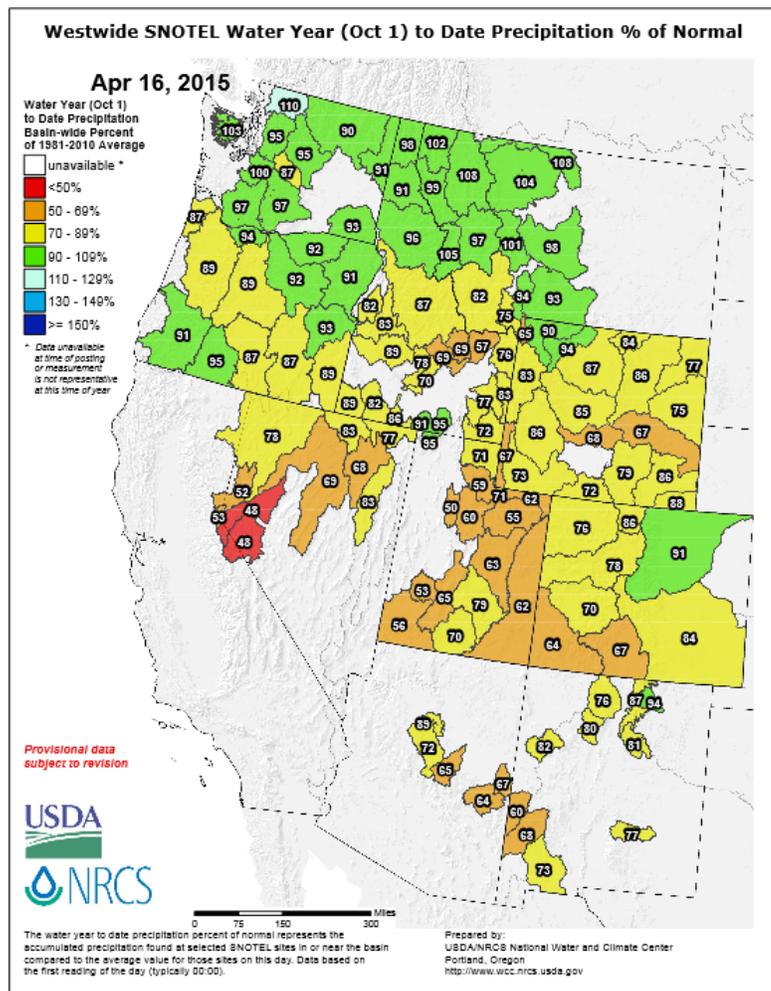
See [Go Hydrology](#) for current and forecast conditions over southern Florida.

For the [2015 Water Year](#) that began on October 1, 2014, there was one basin with a precipitation surplus in the West. The north Cascades basin in northwest Washington is just slightly above normal at this time.

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

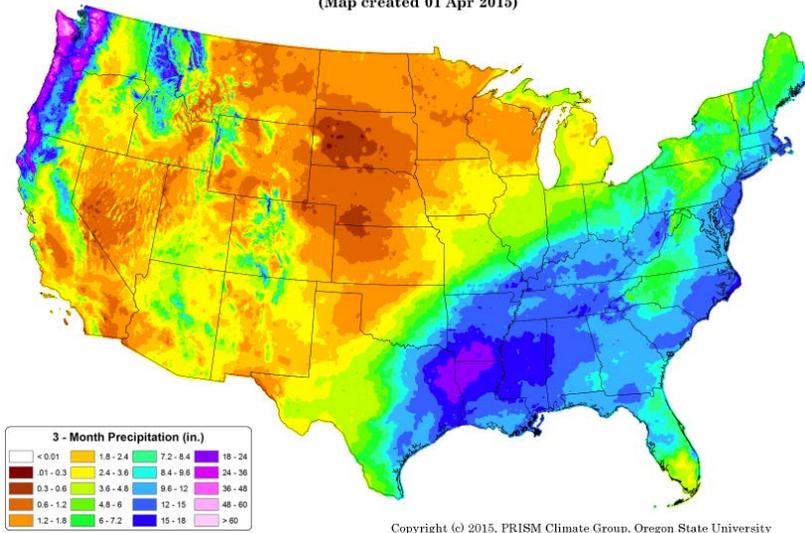
Several areas have less than normal precipitation for the Water Year. These include basins in southern Idaho, most of Wyoming, most of Colorado, most of Utah, California, Nevada, Arizona, most of New Mexico, northwest to southeast Oregon, and parts of Washington and Montana (mapped in yellow and orange).

Two basins that cross the California and Nevada border are reporting less than 50% of normal precipitation for the Water Year (red area).



# Weekly Water and Climate Update

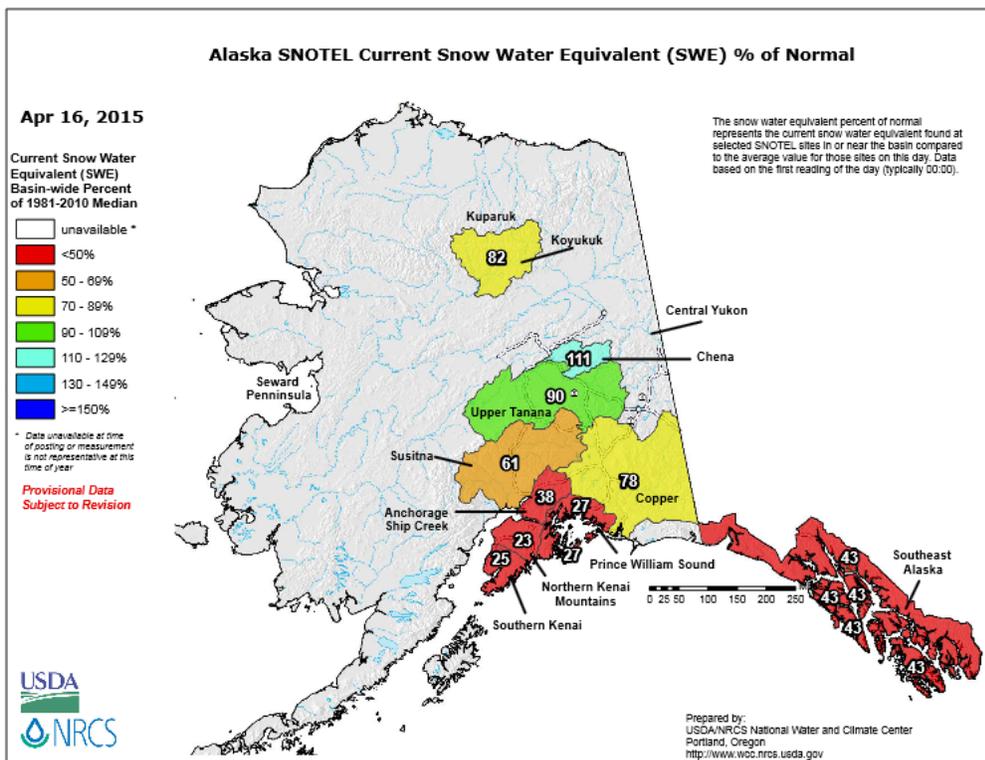
Total Precipitation: January 2015 - March 2015  
 Period ending 7 AM EST 31 Mar 2015  
 (Map created 01 Apr 2015)



The national map of the [three-month period](#) (January - March) shows that the southcentral to the northeast region of the nation received precipitation from 2.4 inches to greater than 18 inches. Parts of the West, especially in the mountains, also received significant precipitation. The highest amounts over 60 inches were recorded in northern California, Oregon, and the Washington mountains.

In contrast to the eastern U.S. and Pacific coast, parts of the West, the Plains, and much of the Midwest received totals of less than 2.4 inches.

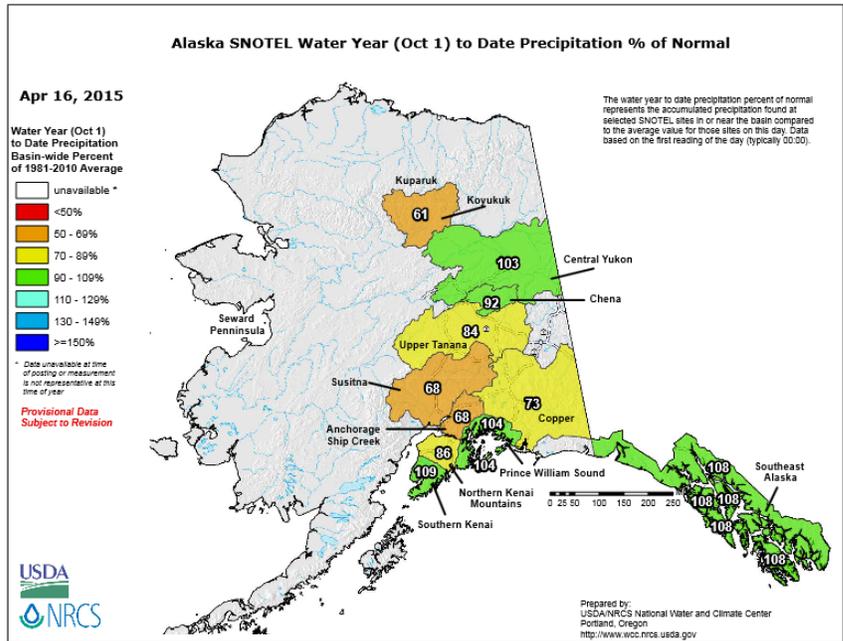
## Alaska Snow Water Equivalent & Precipitation Conditions



The [Alaska SNOTEL current SWE percent of normal map](#) shows below normal conditions across most of the state, with the exception of the Chena Basin, which is above normal, and the Upper Tanana, which is near normal. The areas with much below normal snowpack are on the Kenai Peninsula, 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 Percent of Normal](#) map shows near normal conditions for the southern and southeast parts of the state, and for two basins in interior Alaska. Much of the remainder of interior Alaska is reporting drier than normal conditions. This is in contrast to the poor snow conditions due to warm temperatures across southern Alaska. See the [Alaska update report](#) for individual station data.

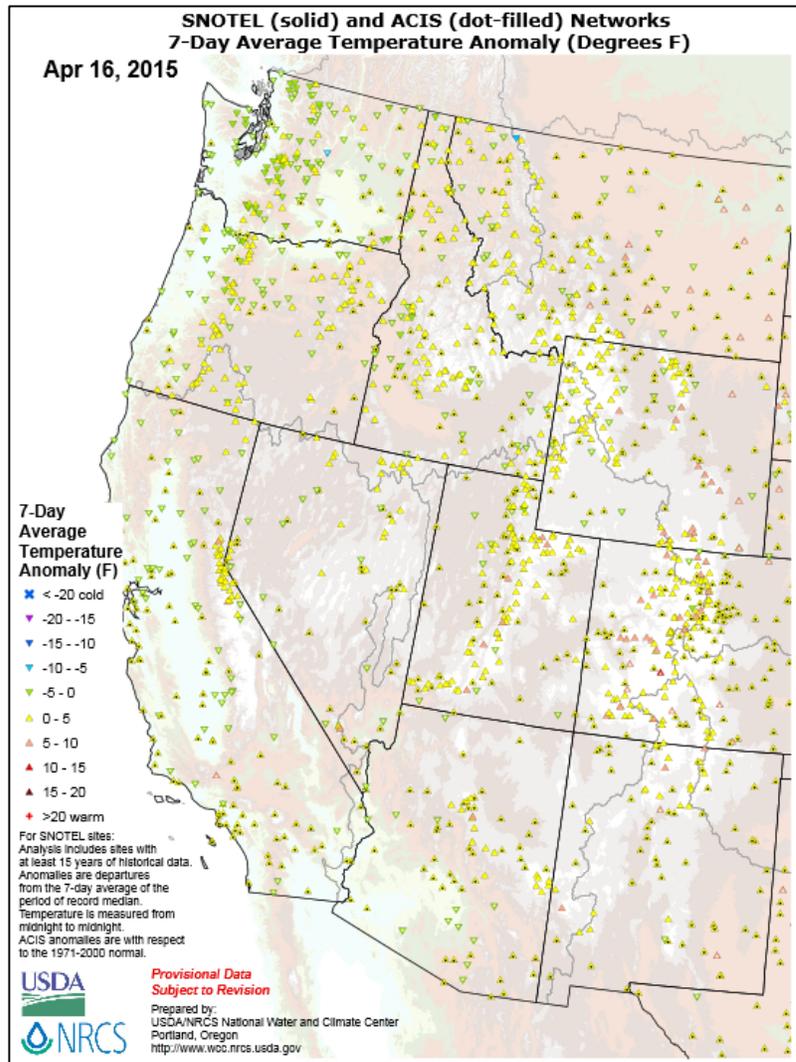


## Temperature

The SNOTEL and ACIS [7-day temperature anomaly](#) map for the western U.S. shows much of the West was near normal. The highest temperature anomalies were in Colorado, northern New Mexico, eastern Wyoming, eastern Montana, and a few scattered stations elsewhere. The highest anomaly was in central Colorado at **+10-15** degrees F.

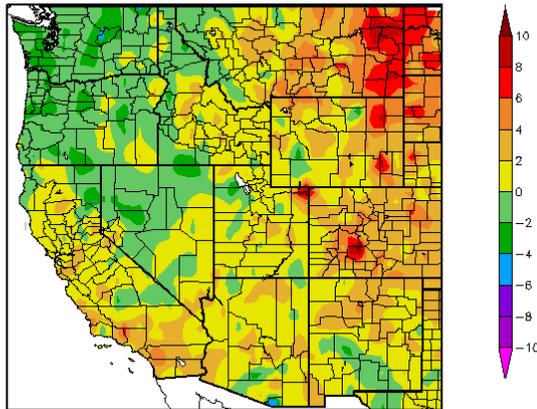
There were many areas that had several stations with near normal temperatures across the West.

There were only two stations reporting cool anomalies in central Washington and northern Montana. The anomalies reported in these states were in the **-5-10** degree F range.



## Weekly Water and Climate Update

Departure from Normal Temperature (F)  
4/9/2015 - 4/15/2015



The [ACIS](#) map of the 7-day average temperature anomalies in the West ending April 15 shows that the region had a cooler week in contrast to much of the winter. The greatest positive temperature departures occurred in the eastern part of the region, with central Colorado having the highest anomaly (>+10°F). Much of the West was near normal, with the largest negative temperature departures reported in eastern Washington and southern Arizona (<-4°F).

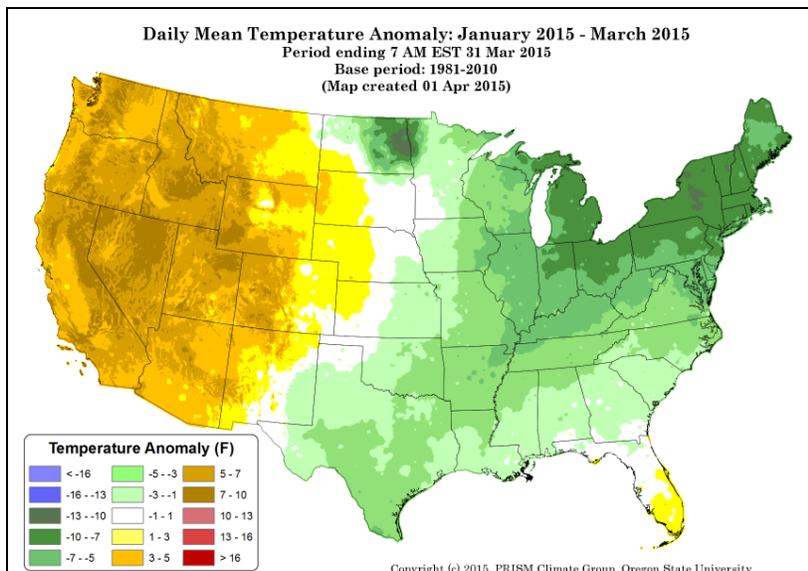
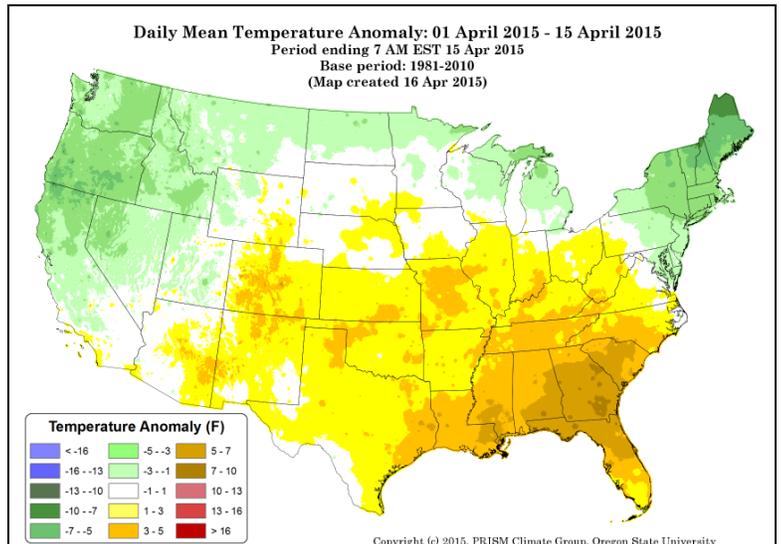
Also, see [Dashboard](#) and the [Westwide Drought Tracker](#)

Generated 4/16/2015 at HPRCC using provisional data.

Regional Climate Centers

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.

For the first half of April 2015, the national daily mean temperature anomaly [map](#) shows a persistent large, cool region over much of the West across the northern Midwest to the Northeast, with the largest cool anomaly in northern Maine (<-10°F). In contrast, above normal temperatures were recorded from the Southwest to the Southeast, with the highest warm anomalies in the Southeast in Mississippi, Georgia, and Florida (>+7°F).



The January - March national daily mean temperature anomalies for the U.S. in this [climate map](#) shows the western U.S. had above normal temperatures (>+7°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 New York, Vermont, and North Dakota (<-10°F).

# Weekly Water and Climate Update

## Weather and Drought Summary

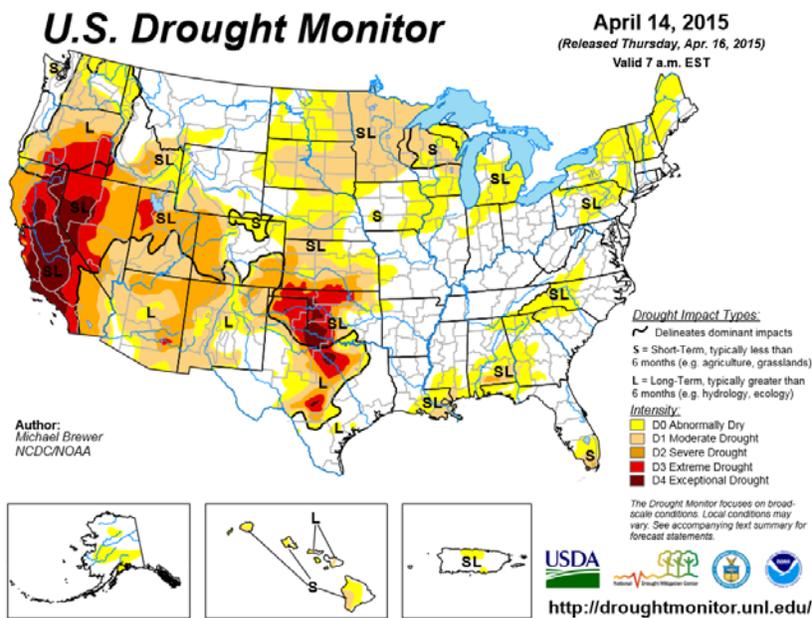
### [National Drought Summary](#) – April 14, 2015

The following **Weather and Drought Summary** is provided by this week's NDMC Drought Author, Michael Brewer, NOAA/NCDC.

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

“For the contiguous 48 states, the U.S. Drought Monitor showed 37.46 percent of the area in moderate drought or worse, compared with 36.92 percent a week earlier. Drought now affects 77,248,929 people, compared with 78,114,050 a week earlier.

For all 50 U.S. states and Puerto Rico, the U.S. Drought Monitor showed 31.34 percent of the area in moderate drought or worse, compared with 30.89 percent a week earlier. Drought now affects 77,596,858 people, compared with 78,461,979 a week earlier.”



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

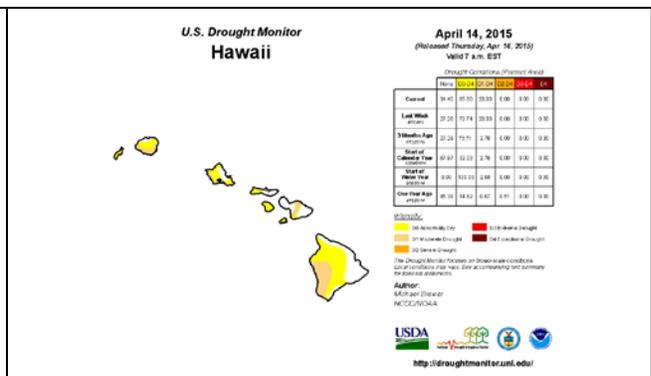
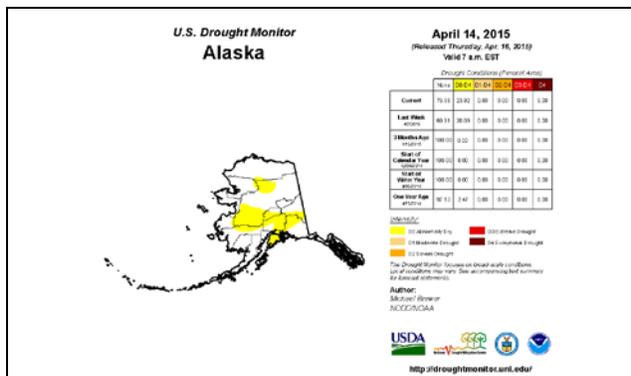
[Current Drought Monitor](#) weekly summary. The exceptional D4 levels of drought are scattered across CA, NV, TX, and OK.

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. There D0 decreased in Alaska this week. D1 remained the same, and D0 decreased and the drought free area increased 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

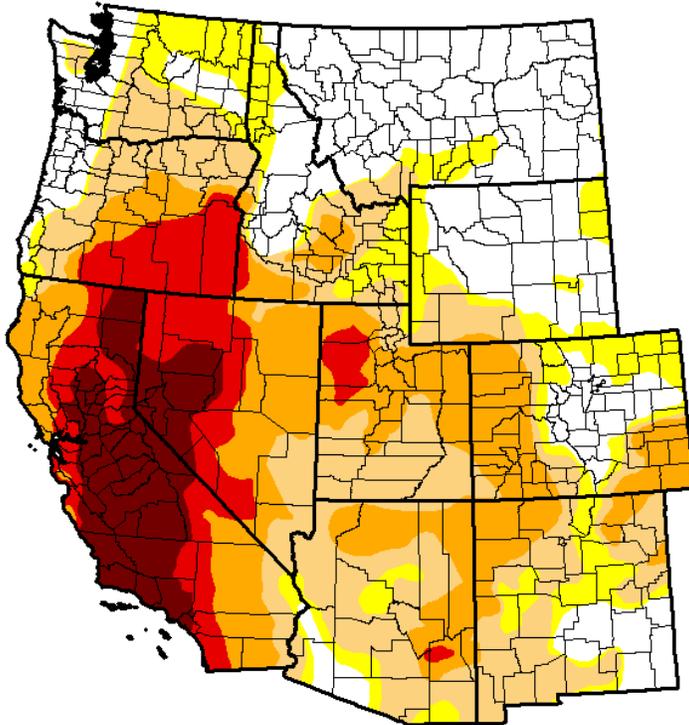
**April 14, 2015**

(Released Thursday, Apr. 16, 2015)

Valid 7 a.m. EST

*Drought Conditions (Percent Area)*

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	26.55	73.45	61.00	37.91	17.04	7.63
<b>Last Week</b> <i>4/7/2015</i>	27.70	72.30	59.80	37.72	17.04	7.63
<b>3 Months Ago</b> <i>1/13/2015</i>	34.29	65.71	53.21	33.18	18.52	6.35
<b>Start of Calendar Year</b> <i>12/31/2014</i>	34.76	65.24	54.48	33.50	18.68	5.40
<b>Start of Water Year</b> <i>9/30/2014</i>	31.48	68.52	55.57	35.65	19.95	8.90
<b>One Year Ago</b> <i>4/15/2014</i>	30.08	69.92	60.68	43.68	16.06	4.05



*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:**

Michael Brewer  
NCDC/NOAA



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

**There was an increase in D0 - D2 areas in the West this past week. The drought-free area slightly decreased and there was no change in D3 and D4.**

*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:

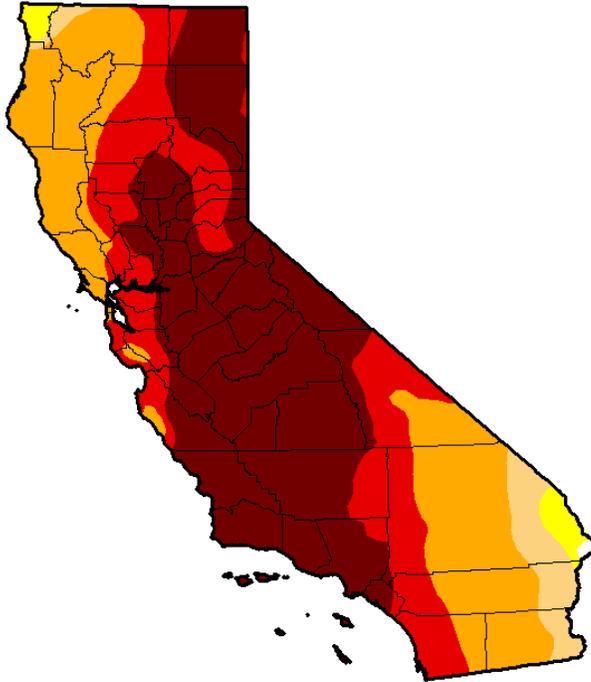
- OR - [Drought threatens to envelop Oregon as emergency requests flow in](#) – Apr 9
- ID - [Fremont declares drought emergency](#) – Apr 9
- CO - [Dry March has Colorado water watchers worried](#) – Apr 7
- CA - [Beneath California Crops, Groundwater Crisis Grows](#) – Apr 5
- CA - [Calif. drought challenges state's businesses](#) – Apr 4

## Weekly Water and Climate Update

State with D-4 Exceptional Drought

### U.S. Drought Monitor California

**April 14, 2015**  
(Released Thursday, Apr. 16, 2015)  
Valid 7 a.m. EST



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	0.14	99.86	98.11	93.44	66.60	44.32
<b>Last Week</b> 4/7/2015	0.15	99.85	98.11	93.44	66.60	44.32
<b>3 Months Ago</b> 1/13/2015	0.00	100.00	98.12	94.34	77.52	39.15
<b>Start of Calendar Year</b> 12/02/2014	0.00	100.00	98.12	94.34	77.94	32.21
<b>Start of Water Year</b> 9/30/2014	0.00	100.00	100.00	95.04	81.92	58.41
<b>One Year Ago</b> 4/13/2014	0.00	100.00	99.80	95.21	68.76	23.49

*Intensity:*



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

**Author:**  
Michael Brewer  
NCDC/NOAA



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

**There was a very slight increase in the D0 drought category in California for the week. The drought free area very slightly decreased, and the other drought categories remained unchanged. D4 covers over 44% of the state.**

#### [CA Drought Information Resources](#)

#### [Drought News from California:](#)

- [Calif. drought challenges state's businesses](#) – Apr 4
- [Rainwater Collection Sees Boom As California's Drought Worsens](#) – Apr 7
- [Drought raises electricity rates in Sacramento](#) – Apr 6
- [California speeds water-efficiency standards for faucets](#) – Apr 9
- [California drought leads to increase in West Nile virus cases](#) – Apr 8
- [SF officials search for the city's 'ugliest yard'](#) – Apr 9
- [Some Central California residents solely rely on water deliveries due to drought](#) – Apr 5
- [Valley leaders urge Brown to release more Delta water for local livelihoods](#) – Apr 2
- [Fishing Ban Proposed On Stretch Of Sacramento River](#) – Apr 6
- [Beneath California Crops, Groundwater Crisis Grows](#) – Apr 5
- [California cities pressured to step up to slash water use](#) – Apr 7
- [Californians with Century-Old Water Rights Face Restrictions](#) – Apr 3
- [Klamath snow survey comes up dry](#) – Apr 7
- [South state agency to ration water to districts](#) – Apr 7



# 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:

[Towns Near Tulsa Are Facing Drought Problems](#)  
– Apr 7

### State with D-4 Exceptional Drought

## U.S. Drought Monitor

# Oklahoma

**April 14, 2015**  
(Released Thursday, Apr. 16, 2015)  
Valid 7 a.m. EST

*Drought Conditions (Percent Area)*

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	23.52	76.48	65.21	51.65	39.72	10.73
<b>Last Week</b> 4/7/2015	16.76	83.24	68.27	52.74	39.72	11.60
<b>3 Months Ago</b> 1/13/2015	29.59	70.41	59.12	42.59	22.58	5.69
<b>Start of Calendar Year</b> 1/2/2014	25.63	74.37	62.03	40.84	21.74	5.70
<b>Start of Water Year</b> 9/30/2014	8.55	91.45	73.31	58.13	20.92	4.64
<b>One Year Ago</b> 4/15/2014	6.73	93.27	78.95	54.81	26.51	13.71

*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:**  
Michael Brewer  
NCDC/NOAA

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

**There was a decrease in D0 – D2 and D4 in Oklahoma this past week. The drought free area increased and D3 remained unchanged for the week.**

## U.S. Population in Drought

Number of people in each drought category in the U.S. for the week ending April 14, 2015						
Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
2015-04-14	168,689,975	136,707,480	77,248,929	50,398,913	35,627,328	20,604,030
2015-04-07	164,941,612	140,455,843	78,114,051	50,658,806	35,715,115	20,620,654

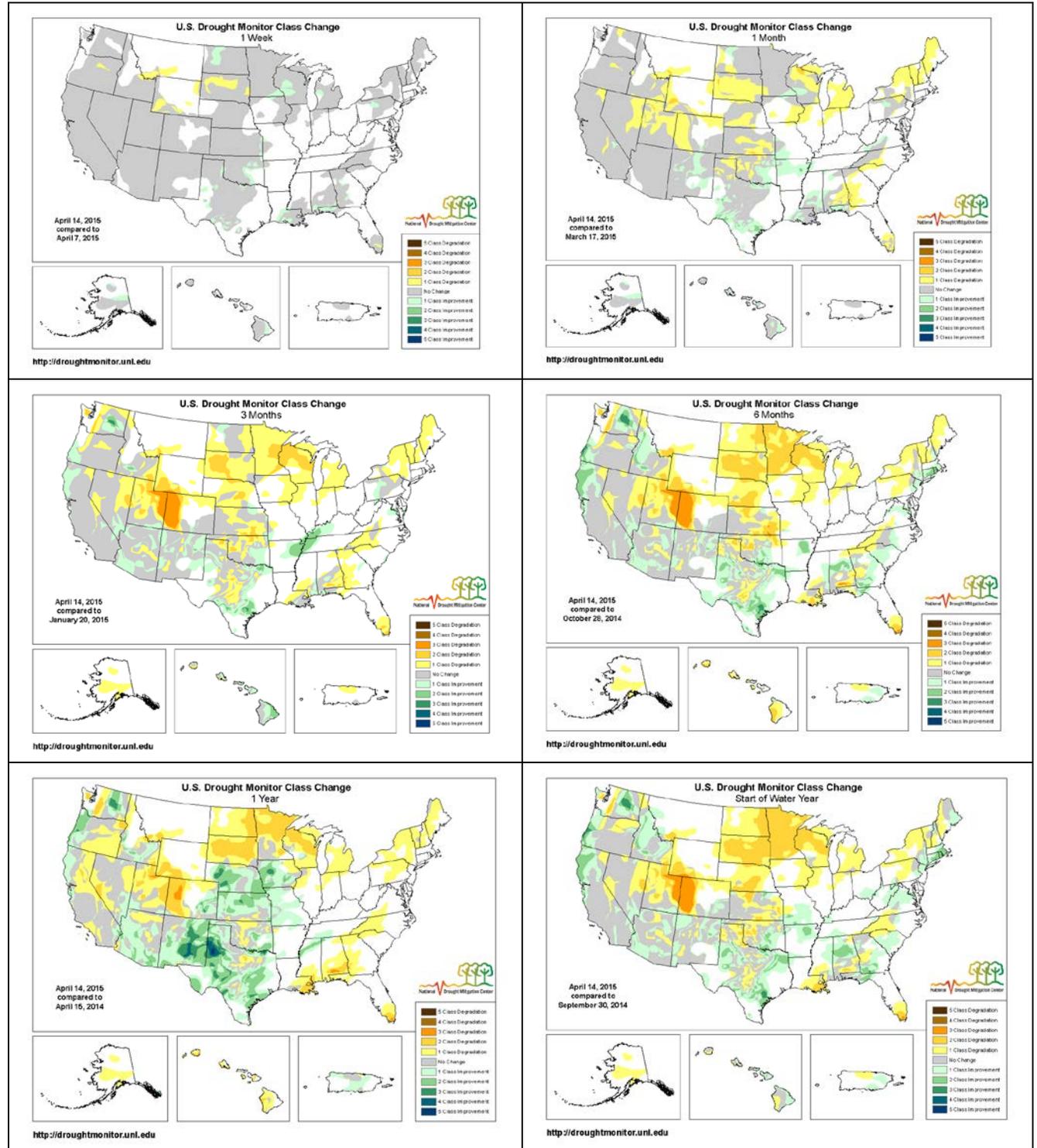
**Population figures affected by drought in the U.S. Drought Monitor website show that, for this week, more than 77,000,000 people in the United States were in a drought-affected area, which is a decrease by over 865,000 people from last week.**

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

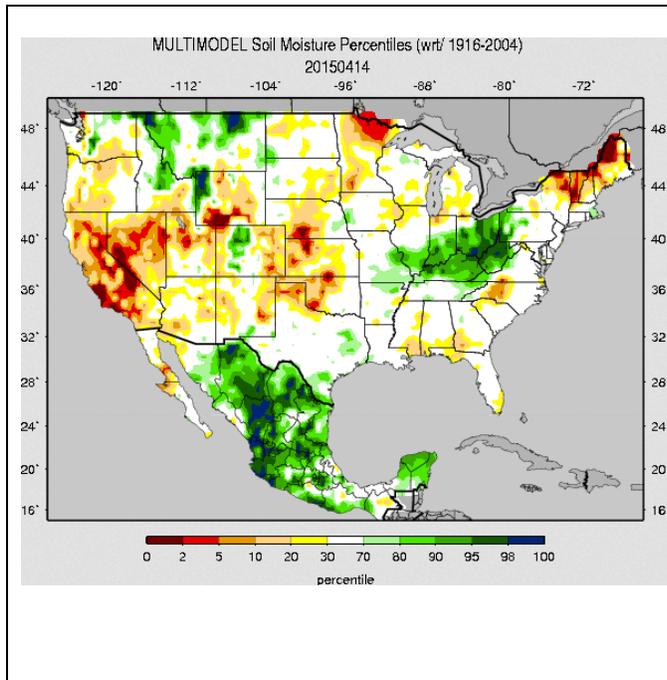
### Over Various Time Periods



Click on any of these maps to enlarge. Note how the conditions over the upper Great Plains, and central 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

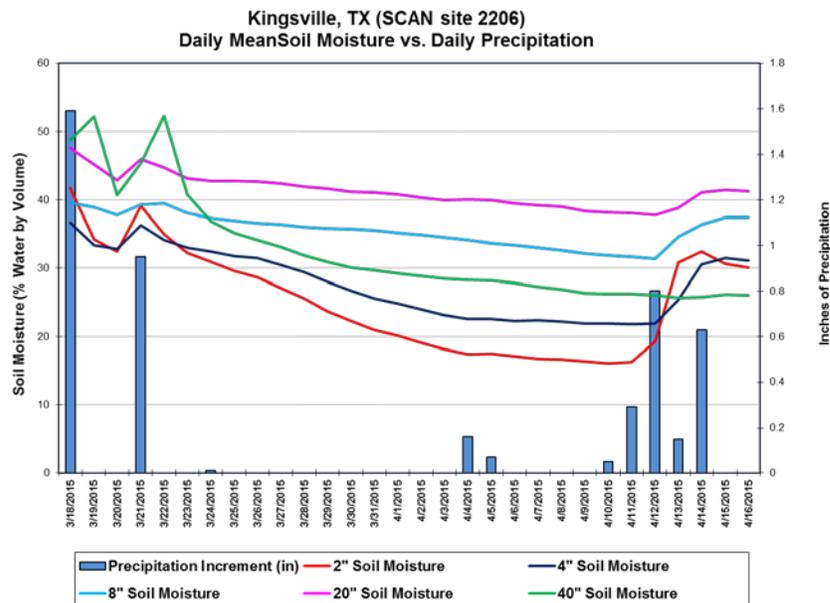


The national soil moisture model ranking in [percentile](#) as of April 14, 2015, shows dryness over most of the Northeast, West, Southwest, and Great Plains. The driest areas were in Nevada, California, northern Utah, southern Wyoming, Nebraska, Kansas, Oklahoma, Minnesota, New York, Vermont, Maine, and New Hampshire. Moist soils dominated areas of Washington, Montana, northern Idaho, western Wyoming, eastern Missouri, southern Illinois, southern Indiana, Ohio, West Virginia, and Kentucky. Slightly moist soils were also scattered elsewhere in the U.S.

Some of the country may have frozen soil 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)

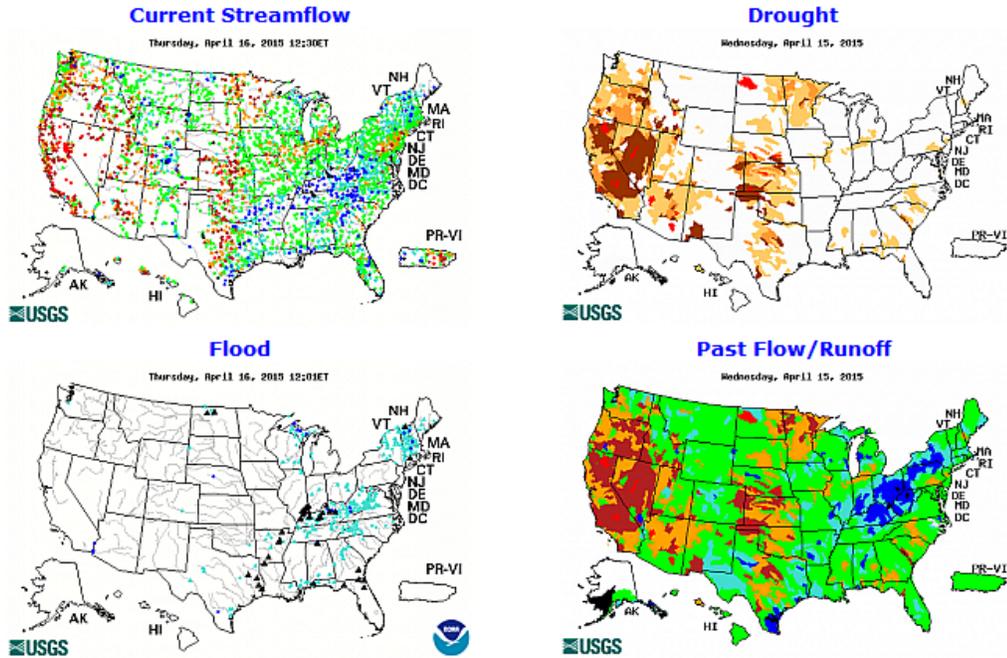


This NRCS resource shows soil moisture data for the last month at the [Kingsville, TX SCAN site 2206](#) in southern Texas. The area had several small precipitation events recently and a large recent event in the past 30 days (blue bars). This rainfall resulted in an increase in soil moisture at the beginning of the month at all sensors, with a noticeable drying during the interim. Recent rainfall has again increased the soil moisture at all depths.

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](#).

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## Streamflow



Gages in several regions of the U.S. are reporting much above normal streamflow. Some gages in the northern states are frozen, so may not relate to the precipitation and snow conditions in that area. There are many gages at flood stage centered in the Ohio Valley, but also concentrated in the Connecticut River and lower Mississippi tributaries this week. These include two rivers in North Dakota, four in eastern Texas, four in Arkansas, one in Louisiana, one in Missouri, four in Illinois, seven in Kentucky, seven in Indiana, one in Vermont, two in Connecticut, two in Alabama, two in Georgia, and three in 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, **0** gages have a greater than 50% chance to experience major flooding; **15** gages for moderate flooding; and **140** gages for minor flooding.

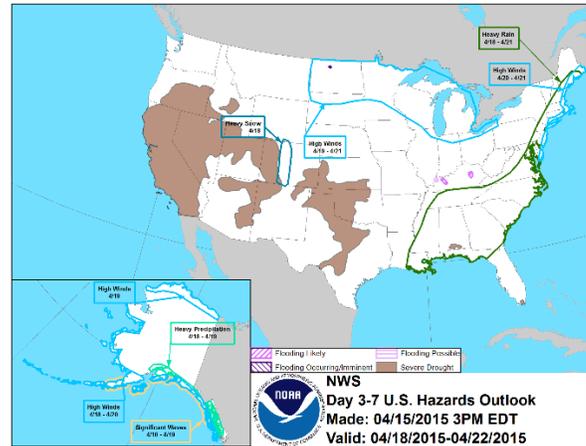
These numbers represent a **3** gage increase in the greater than 50 percent chance of minor flooding category since last week.

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### National [Weather Hazards](#)

The National Weather Service map of national weather hazards for the next 3 – 7 days forecasts heavy precipitation along much of the eastern seaboard and southeast (4/18-21). High winds are expected from the Dakotas to the Great Lakes (4/19-21) and along the Atlantic coast from Maryland to Maine (4/20-21). Heavy snow is expected along the front range of the Rockies in Colorado (4/18). Flooding is likely and possible in Kentucky. There is also a small area of flooding imminent/occurring in southwest Indiana.

In Alaska, high winds are expected along most of the coastal areas (4/18 - 20). Heavy precipitation is also expected in Southeast and southern coasts (4/18-19). Significant waves are expected along the southern part of the state (4/18-19). Severe drought remains a large issue in much of the southcentral and western U.S.



### [National Drought Summary for April 14, 2015](#)

Prepared by the Drought Monitor Author: Michael Brewer, NOAA/NCDC.

#### Summary

"Most locations east of the Mississippi River saw precipitation this week. Rain along the Gulf Coast was particularly heavy as a storm dumped copious amount of rain on southern Louisiana, Mississippi, and Alabama. The Mobile Regional Airport set a daily record for April 12 with 7.28 inches of rain. Areas of the Midwest and Southern Plains also benefited from substantial rainfall this week.

#### Hawaii, Alaska and Puerto Rico

Hawaii continues to benefit from much-needed rain. Precipitation on the Big Island led to improvements in Abnormal Dryness (D0) in the eastern part of the island. Likewise, in Alaska, improving snowpack conditions led to a decrease in Abnormal Dryness (D0) in the north and southeast part of the state. Conditions across Puerto Rico remained unchanged this week.

#### The Midwest

Significant amounts of rain fell from Iowa across Minnesota, Wisconsin, and into Michigan. The impacted areas saw improvement in Moderate Drought (D1) and Abnormal Dryness (D0) in the path of the storm. Other areas remained unchanged.

#### The Northeast and Mid-Atlantic

Receiving a break from the onslaught of cold, wet conditions that have dominated much of the winter and spring, this area of the country enjoyed near-normal temperatures and slightly drier conditions along the coast this week. Abnormal Dryness (D0) continues to impact much of the area but drought is not present and with the exception of a minor trimming of Abnormal Dryness (D0) in central Pennsylvania, no changes were made to the map depiction.

#### The Plains

The Southern Plains experienced another week with relatively wet conditions. There were minor improvements in all drought categories in Texas, Oklahoma, Arkansas, and southeast Kansas. The Northern Plains experienced a mixed bag of changes. In western North Dakota, precipitation improved Abnormal Dryness (D0) while in South Dakota Moderate Drought (D1) expanded northward.

#### The Southeast

Damp conditions across the Gulf Coast resulted in improvement in Severe (D2) and Moderate Drought (D1) and Abnormal Dryness (D0) across the Panhandle of Florida and southern Louisiana, Mississippi, Alabama, and Georgia. This same system provided rain in and around the Atlanta area alleviating some of the Abnormal

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Dryness (D0) there. Conversely, southern Florida experienced a small increase in Moderate Drought (D1) conditions with dryness in the Miami-Dade area extending back three months or more.

### The West

Most of the West saw little to no precipitation this week. Select areas of the Rockies were experiencing some snowfall as the week ended, the impacts of which will be assessed in the map next week. Likewise, the Pacific Northwest saw some coastal precipitation. However, it was largely limited to the areas that are not currently experiencing drought conditions. Little change was made to the drought depiction in the West with the exception of degradation in conditions in and around Wyoming, southern Montana, and northeast Utah. Severe (D2) and Moderate Drought (D1) and Abnormal Dryness (D0) expanded in that area. Little precipitation came to California again this week and no changes were made to the state depiction. At the end of the week, the statewide snow water equivalent stood at 5% of average and Extreme (D3) to Exceptional Drought (D4) again covered two-thirds of the state.

### Looking Ahead

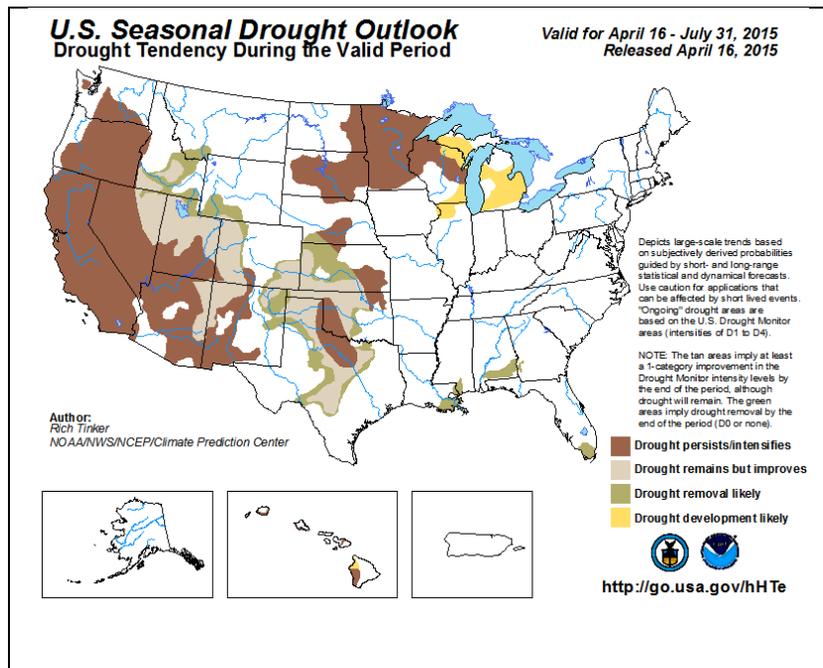
Normal to below-normal temperatures are expected in the central and eastern parts of the country in the coming days. Warmer than average temperatures should cover the West Coast. Above-normal precipitation is expected from the Southern Plains across the South and Southeast. Drier conditions are expected across much of the West.

The NWS 6-10 day outlooks call for normal to above-normal temperature over the U.S. west of the Rocky mountains and in the extreme Southeast. Precipitation is expected to be above-normal through the eastern third of the country, in the Southern Plains, and across Alaska. Below-normal precipitation can be expected from the Pacific Northwest through the Northern and Central Plains."

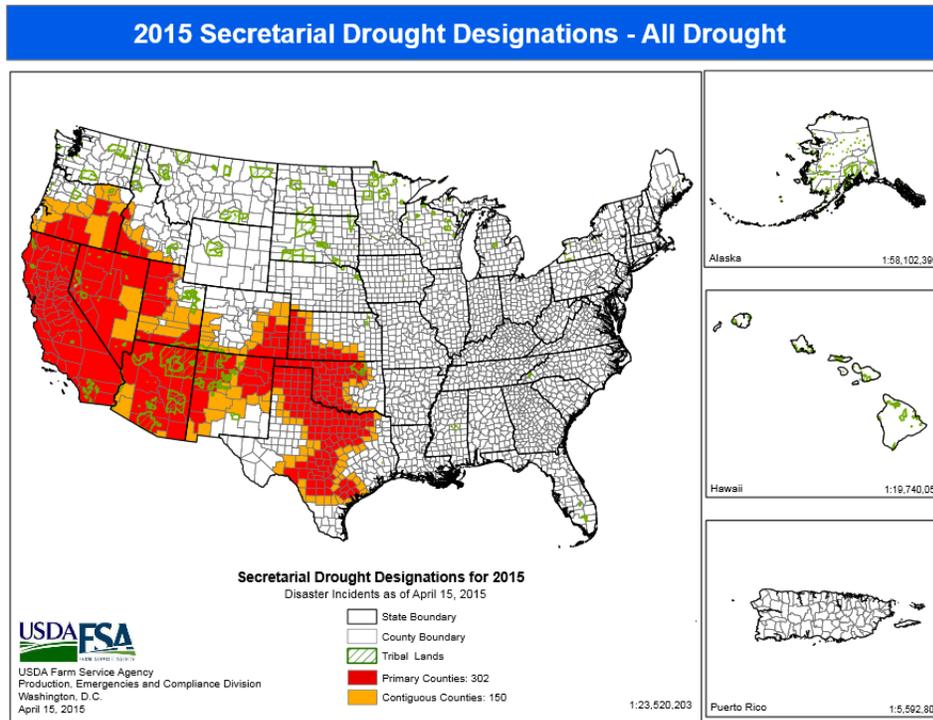
## Supplemental Drought Information

### National Seasonal Drought Outlook

Nationally, [drought](#) is expected to persist or intensify over much of the West and Central U.S., including California, Nevada, Oregon, Washington, Utah, Arizona, New Mexico, Texas, Oklahoma, Minnesota, North Dakota, South Dakota, Colorado, and Hawaii. Improvements are expected in parts of Idaho, Nevada, Utah, Colorado, Arizona, New Mexico, Texas, Oklahoma, and Nebraska. Drought removal is likely in parts of Idaho, Wyoming, Utah, Colorado, Nebraska, New Mexico, Texas, Oklahoma, Louisiana, Mississippi, Alabama, and Florida. The areas of drought that are likely to develop further are in the upper Midwest and Hawaii.



2015 USDA Secretarial Drought Designations

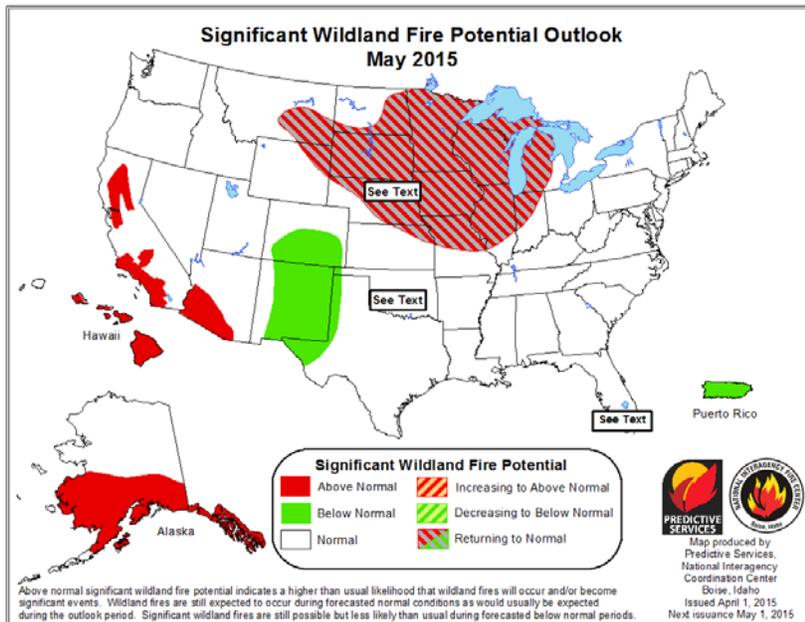


Refer to the USDA Drought Assistance [website](#) and [National Sustainable Agriculture Information Service](#).

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

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

National Fire Potential Outlook



May Fire Forecast

In May, much of the U.S. is forecast to have normal [fire potential](#).

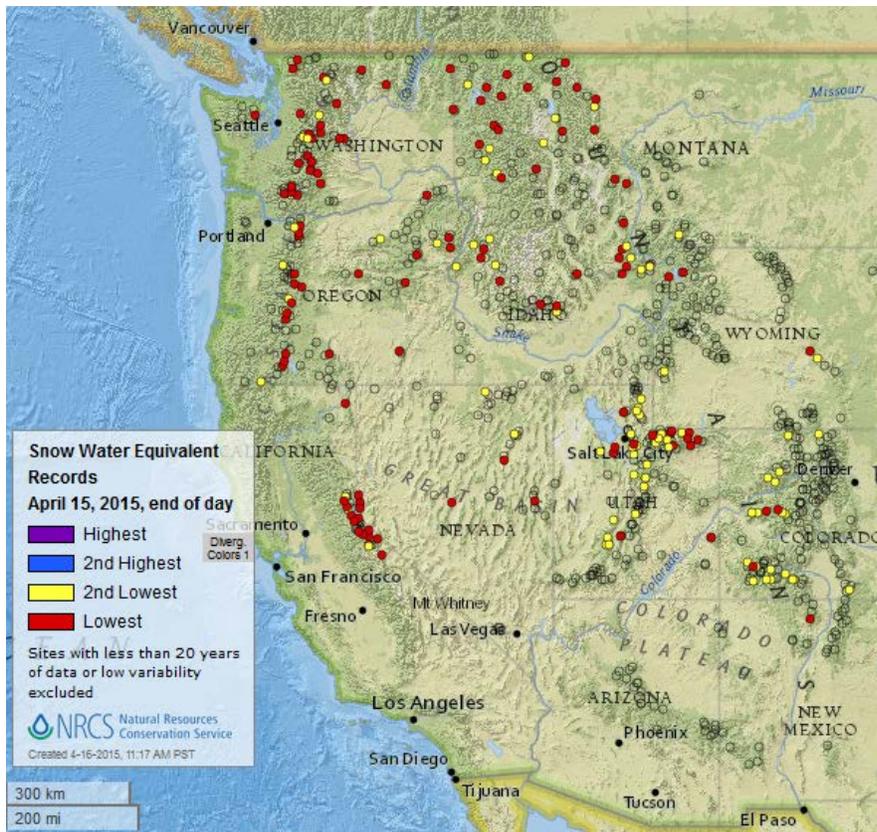
A large area of the central U.S. will return to normal fire potential for May. Below normal fire potential for May 2015 (in green on the map) is forecast for New Mexico, southern Colorado, western Texas, and in Puerto Rico. Parts of Arizona, California, the southern half of Alaska, and most of the Hawaiian Islands have above normal fire potential.

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### 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>



The National Water and Climate Center is introducing a new map product. This map depicts NRCS SNOTEL and snow course sites with new record low or near record low snow water equivalent (SWE) for April 15. Stations colored red are in record territory, while yellow shows stations at their second lowest record for the day.

### 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.

#### **Mandatory water conservation targets for California water agencies, cities**

The State Water Resources Control Board issued mandatory targets for water conservation as statewide water savings slipped to less than 3 percent in February. The draft water reduction targets, ranging from 10 to 35 percent, were based on per capita use. San Diego and Los Angeles, for example, must curb water use 20 percent after savings of just 2 and 7 percent since June 2014. Large fines await agencies that do not meet the targets.

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### **Valley farmers urgently seeking more water**

Farm community leaders from Fresno and Tulare counties met in Selma to passionately urge Gov. Brown to send more water from Northern California to the valley to keep land in production, keep farmworkers employed and prevent groundwater levels from continuing their rapid decline.

### **Holders of water rights prior to 1914 may face curtailment**

The State Water Resources Control Board sent letters warning holders of water rights prior to 1914 that they could face curtailments this summer. Water rights holders in the Sacramento and San Joaquin river watersheds would likely be affected.

### **Drought shifts cropping plans**

Farmers are shifting their cropping plans to produce less broccoli, carrots and tomatoes, and grow more fruit and nut trees, which require less water. Cotton used to cover 1.5 million acres, but now covers relatively little acreage. Roughly one million acres are presently fallowed, according to the University of California-Davis. The projected loss to the state in 2015 could be \$3 billion, up from \$2 billion in 2014, said Richard Howitt, an agriculture and resource economics expert at the University of California-Davis. He estimated that an additional 20,000 jobs in agriculture and food production could be lost.

### **Reduced hydro production led to higher electric rates**

Electric rates for Sacramento residents rose 1.3 percent in April as the lack of cheap hydropower came to be felt. SMUD anticipates receiving about 12 percent of its power from hydro in 2015, in comparison with twice that amount in a normal year.

The municipal utility in Roseville imposed a 2 percent hydro surcharge in July 2014 to pay for more expensive energy. Pacific Gas and Electric Co., serving much of California from Eureka in the north to Bakersfield in the south, upped its electric rates 1.5 percent prior to March 2014.

### **New water-efficient standards for faucets, urinals**

The California Energy Commission was stepping up the development of water-efficiency standards for faucets and urinals. The new standards will become effective in January 2016, and devices that do not meet the standards will not be sold in 2016.

### **West Nile virus could as bad, worse than 2014**

2015 is feared to bring high mosquito activity, similar to 2014 when 801 cases of West Nile virus were reported to the California Department of Public Health. Of those infected, 31 died.

### **San Francisco's ugliest yard contest**

To promote water conservation, San Francisco's department of the environment came up with a contest to find the city's ugliest yard. The winner will receive a yard makeover.

### **Additional emergency requests in Oregon**

Oregon's Gov. Kate Brown received more requests for emergency declarations, and more were in the offing as counties struggle to cope with the state's fourth year of drought.

### **Drought Task Forum in Nevada**

Gov. Sandoval announced the creation of the Nevada Drought Forum to assess the persistent drought and advise on state policies. This winter was the state's driest on record, and northern Nevada was in its fourth year of drought.

### **Drought emergency in Fremont County, Idaho**

Fremont County commissioners declared a drought emergency, based on reservoir storage, snowpack and other water data.

### **Disappointing Colorado snowpack**

Average Colorado snowpack was 67 percent of average, according to the Natural Resources Conservation Service. Runoff is expected to be disappointing in south and southwestern Colorado.

See the [Drought Impact Reporter](#) for more details.

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### Agriculture

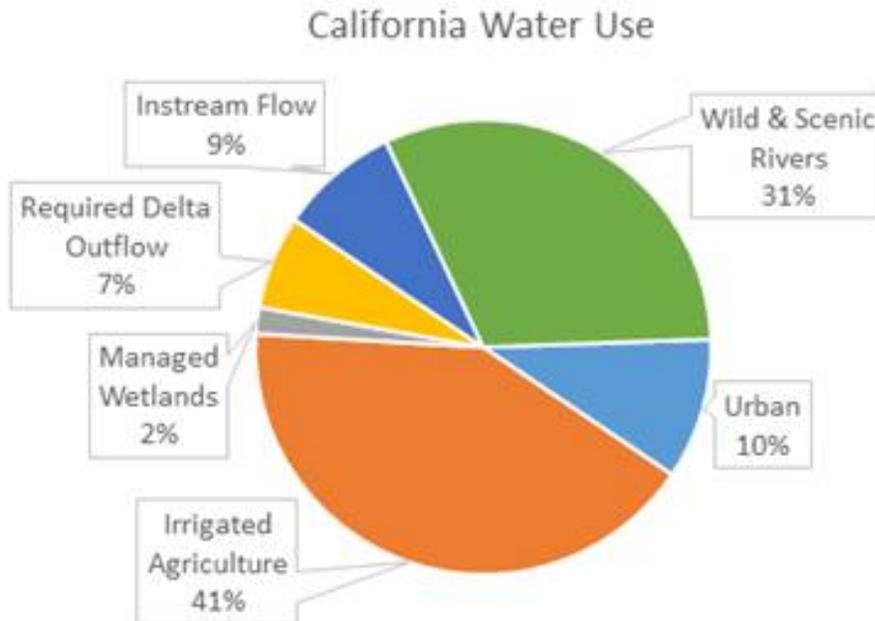
#### [8 Facts about Almonds, Agriculture, and the Drought](#)

#### Reuters

April 8, **California**. This article by the Almond Hullers and Processors Association offers their figures on agriculture and water use in California. Many interesting links in the article provide additional information.

- Almonds are often hammered as being a water-intensive crop, but only require 23 gallons per ounce or a gallon or less per kernel, including shell and hull (the kernel we eat, and cows eat the hull). This figure is comparable to that of other crops grown in the state. Other protein sources can require much more water per ounce.
- Agriculture consumes 41 percent of the state's total water supply, not the 80 percent often cited.

\*Last year, state and federal water projects provided 5 percent and 0 percent for farmers south of the delta. This year, the estimate is 20 percent from the State Water Project and 0 percent from the Central Valley Project.



From the Northern California Water Association

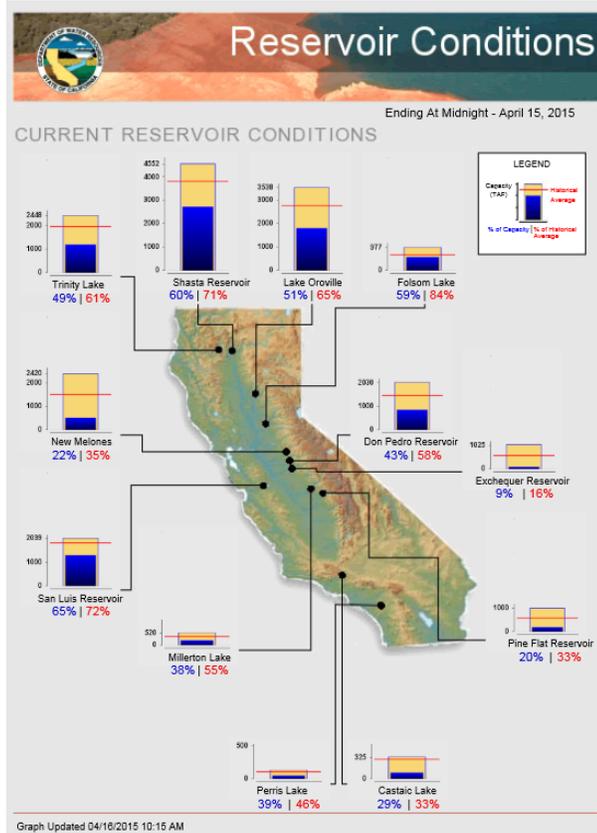
### Tea Cup Reservoir Depictions

- <http://www.usbr.gov/uc/water/basin/> ← Upper Colorado
- [http://www.usbr.gov/uc/wcao/water/basin/tc\\_gr.html](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](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)

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## California Reservoir Conditions

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

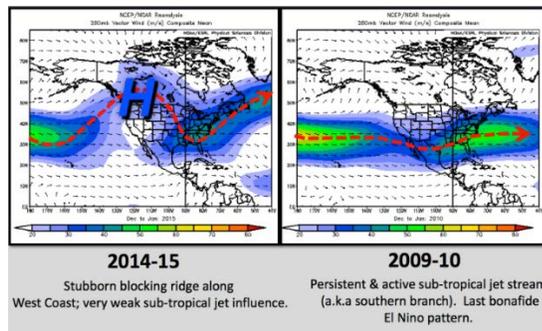


## State Activities

[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.



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### 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