



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

Weekly Water and Climate Update

Thursday, April 9, 2015

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**April 1 snow survey at
Bryce Canyon Snow
Course, UT**

March 27, 2015

**Photo by Lynn Kitchen,
NRCS**

Outlook: “A storm system centered over the Intermountain West will drift eastward across the central Plains before turning northeastward and reaching the Great Lakes region by Friday. Strong to locally severe thunderstorms will remain a threat during the next 3 days, initially across parts of the mid-South and Midwest but later in

the southern and eastern U.S. Additional rainfall could reach 1 to 3 inches or more from the lower and middle Mississippi Valley into the East. In contrast, dry weather will prevail in California and the Southwest. During the weekend, warm weather will return to areas of the northern and western U.S. that have been experiencing very cool conditions. By early next week, a new round of heavy rain will develop across the south-central U.S., including parts of Texas. The NWS 6- to 10-day outlook for April 13 – 17 calls for near- to above-normal temperatures nationwide, except for cooler-than-normal conditions across northern sections of the Rockies, High Plains, and Intermountain West. Meanwhile, above-normal precipitation across most of the eastern half of the U.S. will contrast with drier-than-normal weather in the Far West, including the Pacific Coast States and the Great Basin.”

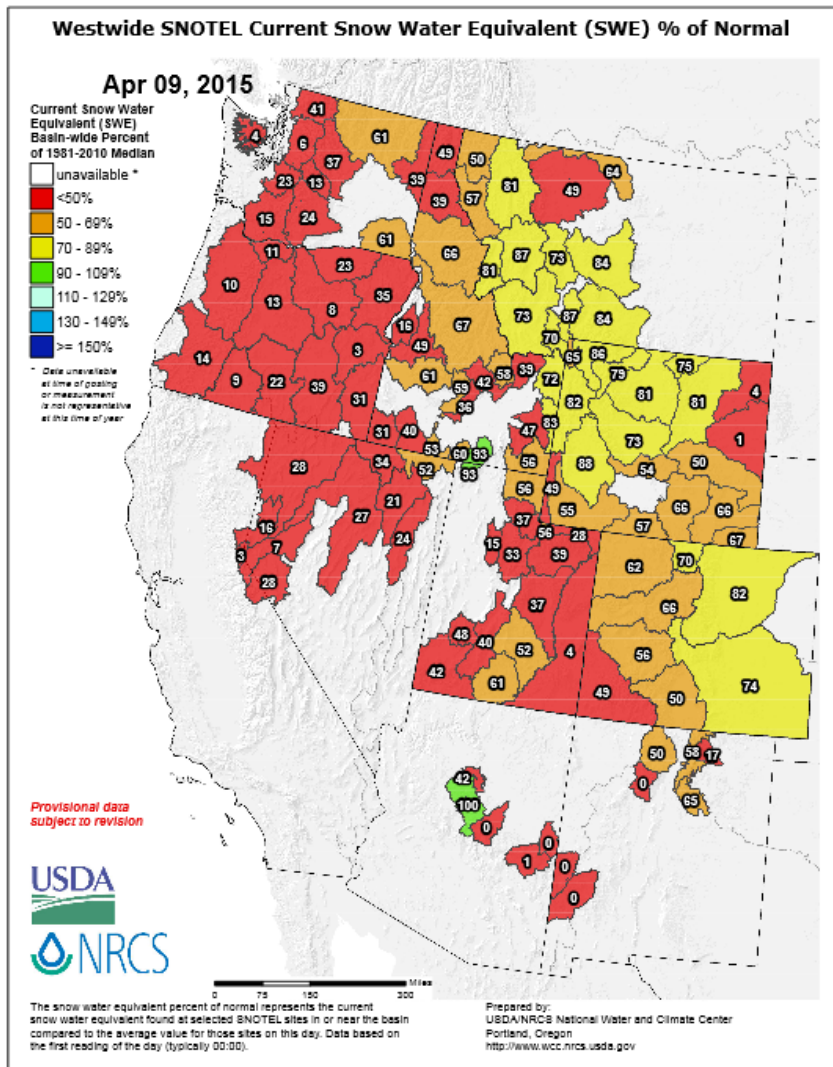
Contact: Brad Rippey, Agricultural Meteorologist, USDA/OCE/WAOB, Washington, D.C. (202-720-2397)

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 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, parts of Arizona, much of Idaho, parts of New Mexico, three basins in Wyoming, one basin in Montana, and most of Utah. Below normal snowpacks (orange and yellow areas) are also located in eastern Washington, Idaho, Utah, Colorado, most of Wyoming, Montana, one basin in central Arizona, and northern New Mexico.

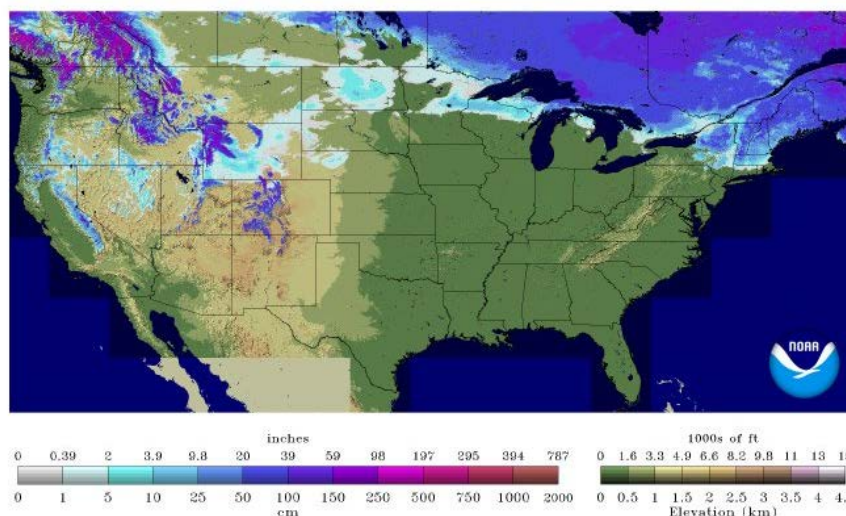
The snowpack in one basin in Arizona, one in northwest Utah, and one in southeast Idaho are near normal.

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

National Snow 2014-Analysis 2015

Snow Depth

2015-04-09 06 UTC



The snow depth map as reported from the [NWS NOHRSC](#) for April 9, 2015, shows an increase in snow cover from last week. Snow now covers 15.6% of the continental U.S. This includes snow across many of the mountains in the West, northern Great Plains, upper Midwest, and 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 below normal for most of the winter. The Sierra Nevada precipitation for the water year (Oct. 1 – today) is also well below normal, and a few cool storms have raised the Cascade Mountain precipitation (see map on page 5) to near normal and improved the snowpack conditions. The overriding influence in these unusual circumstances of having a low snowpack but with near normal precipitation is the persistent warm temperatures that have dominated the snowpack processes.

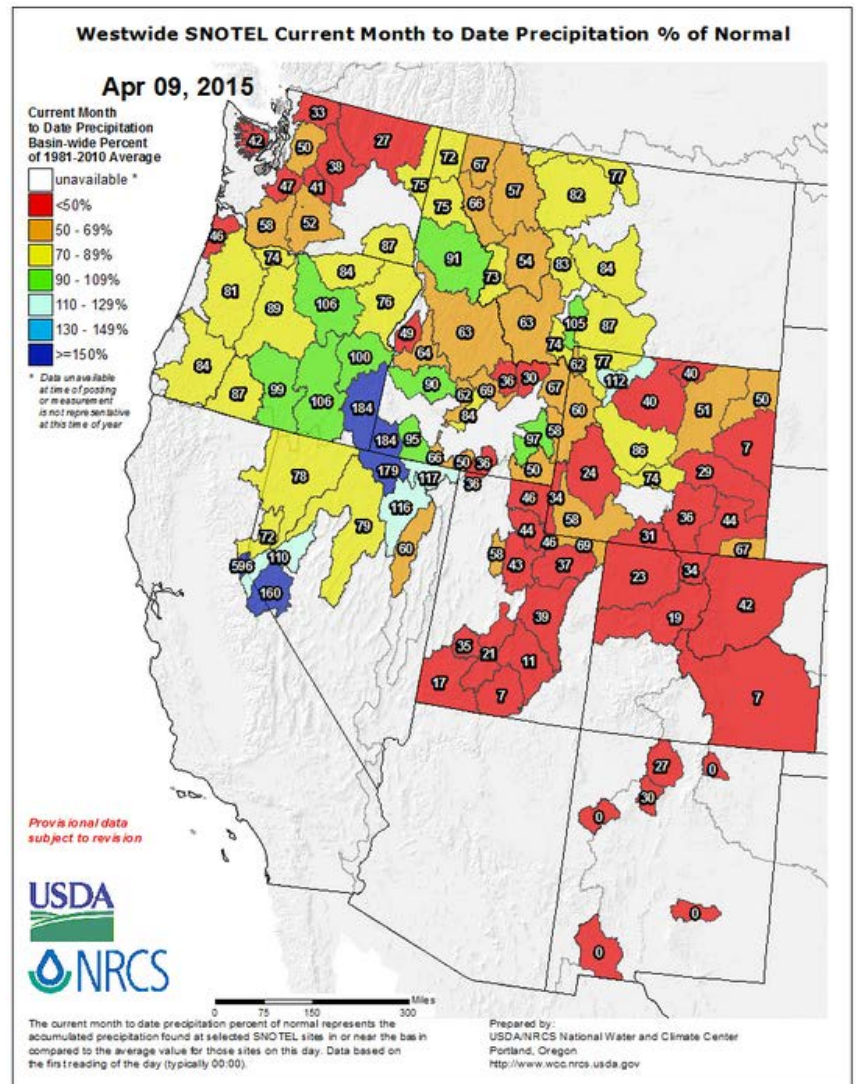
Freezing levels for most storm events have remained well above the elevation of many SNOTEL sites. The near average precipitation (see map on page 5), especially in the Cascades of Oregon and Washington, has helped to improve any soil moisture, groundwater, and reservoir deficits. Warm temperatures and 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 early April shows a variety of conditions. There have been scattered wet conditions in eastern Oregon, northeastern Nevada, southwest Idaho, and in some basins in eastern California and western Nevada (blue areas).

Near normal conditions were reported in several basins in eastern Oregon, scattered basins in Idaho, and one basin in Montana (green areas).

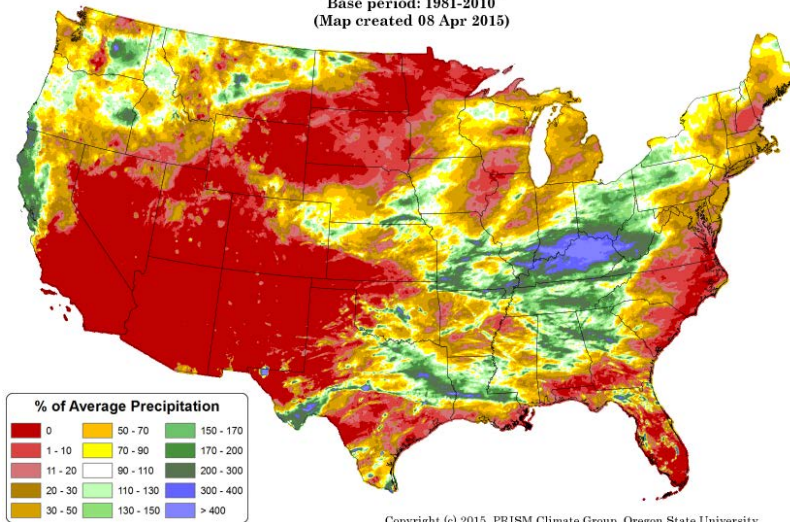
Low to no precipitation for early April was reported in some basins in Washington, Idaho, Montana, Wyoming, Utah, Colorado, New Mexico, one basin in eastern Nevada, and one basin in western Oregon (red and orange areas).

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 - 07 April 2015
 Period ending 7 AM EST 07 Apr 2015
 Base period: 1981-2010
 (Map created 08 Apr 2015)



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

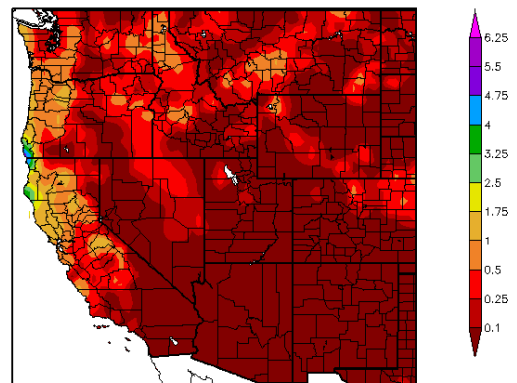
So far in April, the national total [precipitation anomaly](#) pattern reveals some higher than normal precipitation, primarily in southern Illinois, Kentucky, and West Virginia. A few other areas receiving high anomalies include northwest California, central Washington and areas scattered across central Texas. There was little or no precipitation in many parts of the West, the northern Great Plains, and the Southeast (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 along the Pacific coast from northern California to northern Washington, and in the northern Rockies of Idaho and Montana. The highest area of significant precipitation was along the coastal Oregon-California border. Light and widely scattered precipitation was also reported in Oregon, Washington, Idaho, Montana, northern California, northern Nevada, Montana, northern Utah, a few areas of Wyoming, and northeast 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, New Mexico, and most of Colorado.

Precipitation (in)
 4/2/2015 - 4/8/2015



Generated 4/9/2015 at HPRCC using provisional data.

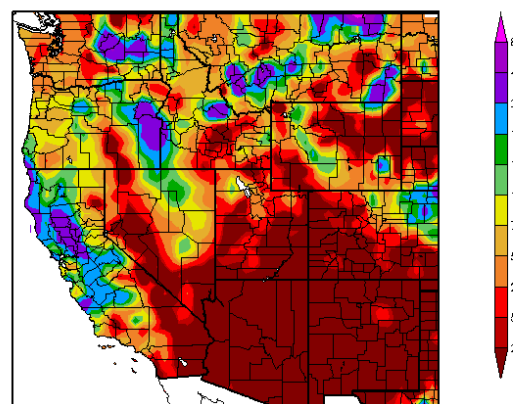
Regional Climate Centers

This ACIS percent of normal [map](#) of the West for the last seven days reflects precipitation in California and along the northern tier states. The heaviest percent of normal precipitation fell in northeast Montana (magenta areas).

Very dry conditions for the week were reported in southeast California, southern Nevada, southern Utah, Arizona, New Mexico, and western and southern Colorado (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 (%)
 4/2/2015 - 4/8/2015

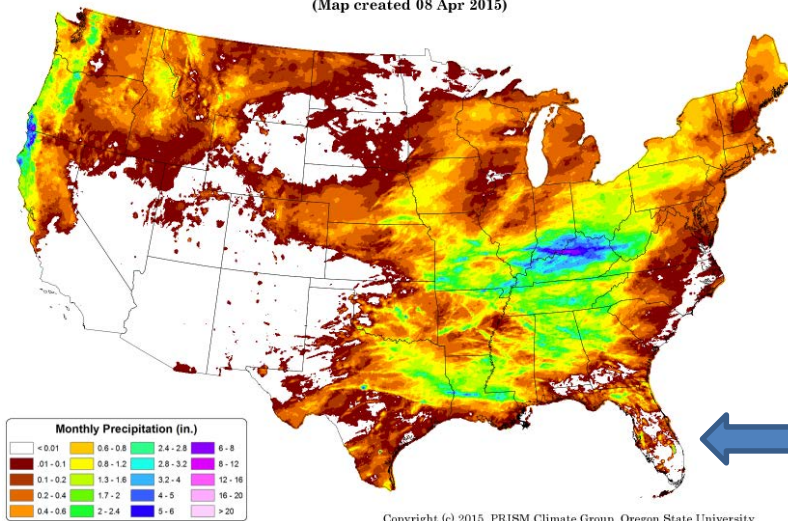


Generated 4/9/2015 at HPRCC using provisional data.

Regional Climate Centers

Weekly Water and Climate Update

Total Precipitation: 01 April 2015 - 07 April 2015
Period ending 7 AM EST 07 Apr 2015
(Map created 08 Apr 2015)



For early April 2015, the [total precipitation](#) across the continental U.S. was heaviest in northwest California and Kentucky, and also significant in western Oregon, eastern Texas, central Louisiana, southern Illinois, southern Indiana, southern Ohio, and West Virginia. Precipitation also fell over the central Midwest states with scattered light precipitation in the Northwest. In contrast, much of the Southwest and northern Great Plains were mainly dry.

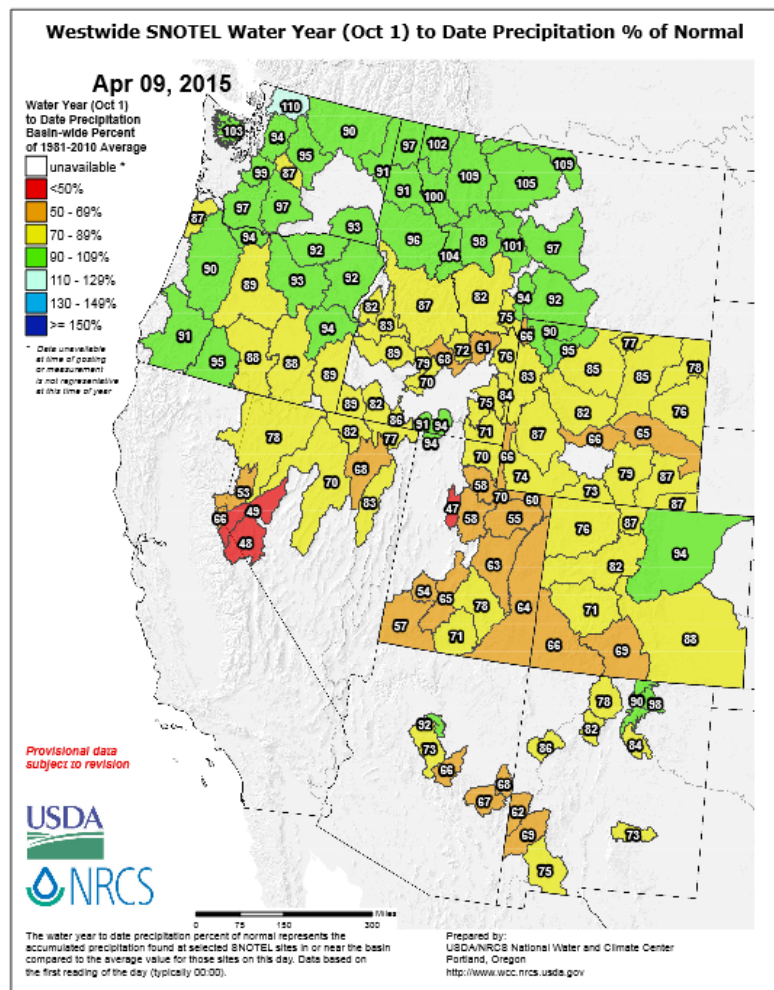
See [Go Hydrology](#) for current and forecast conditions over southern Florida.

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 Arizona, one basin in Utah, and two basins in northern New Mexico.

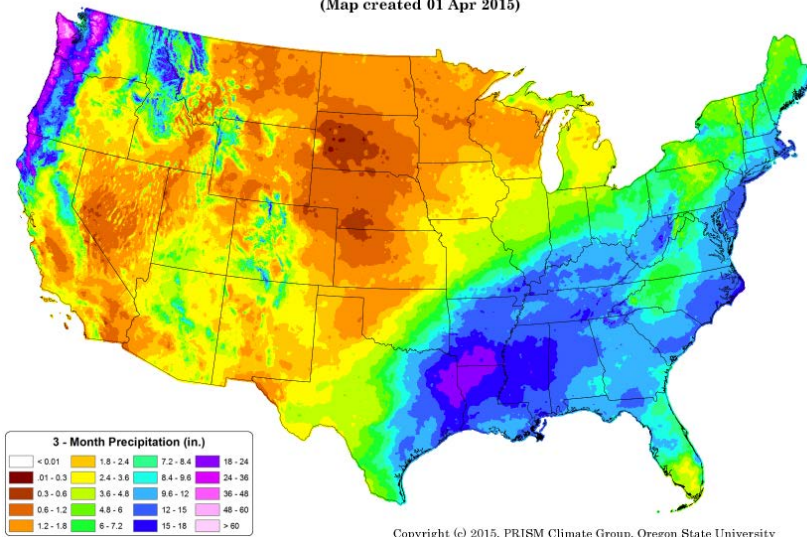
Several areas have less than normal precipitation for the Water Year. These include basins in southern Idaho, most of Wyoming, most of Colorado, most of Utah, California, Nevada, most of Arizona, most of New Mexico, southeast Oregon, one basin in Washington, and two basins in Montana (mapped in yellow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

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



Weekly Water and Climate Update

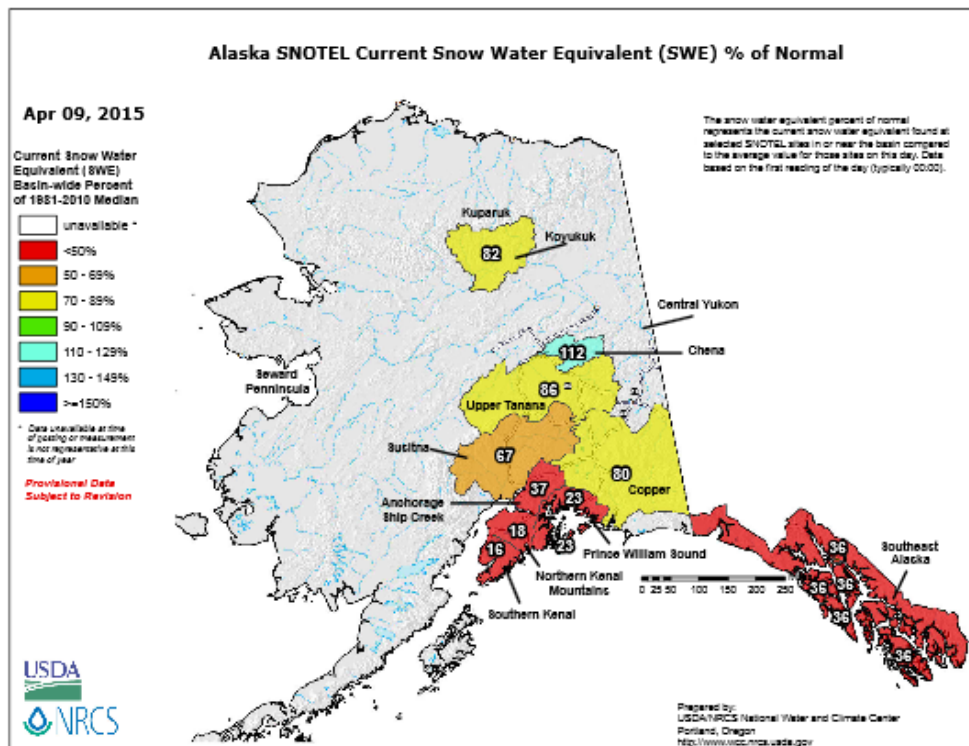
Total Precipitation: January 2015 - March 2015
Period ending 7 AM EST 31 Mar 2015
(Map created 01 Apr 2015)



The national map of the [three-month period](#) (January - March) shows that the south central 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 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.

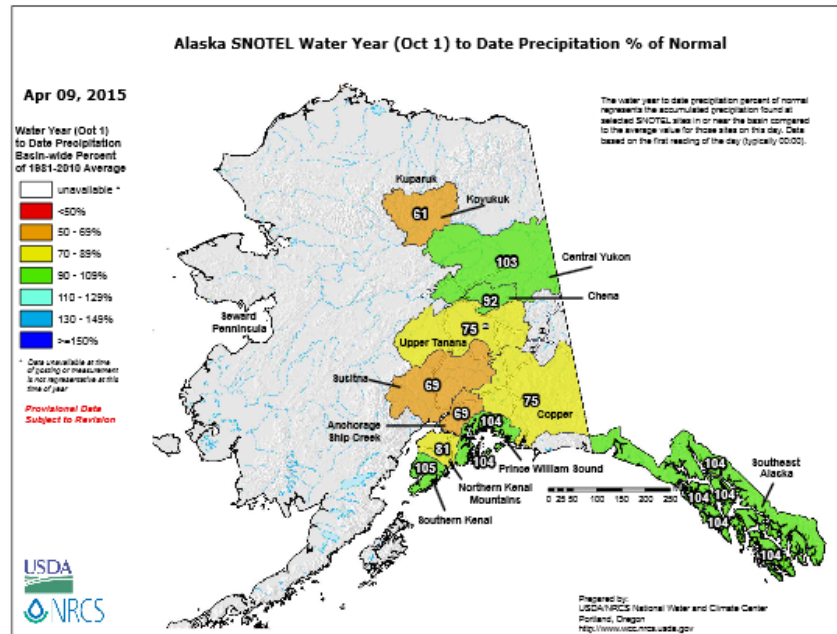
Alaska Snow Water Equivalent & Precipitation Conditions



The [Alaska SNOTEL current SWE map](#) shows less than normal 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, 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 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. See the [Alaska update report](#) for individual station data.

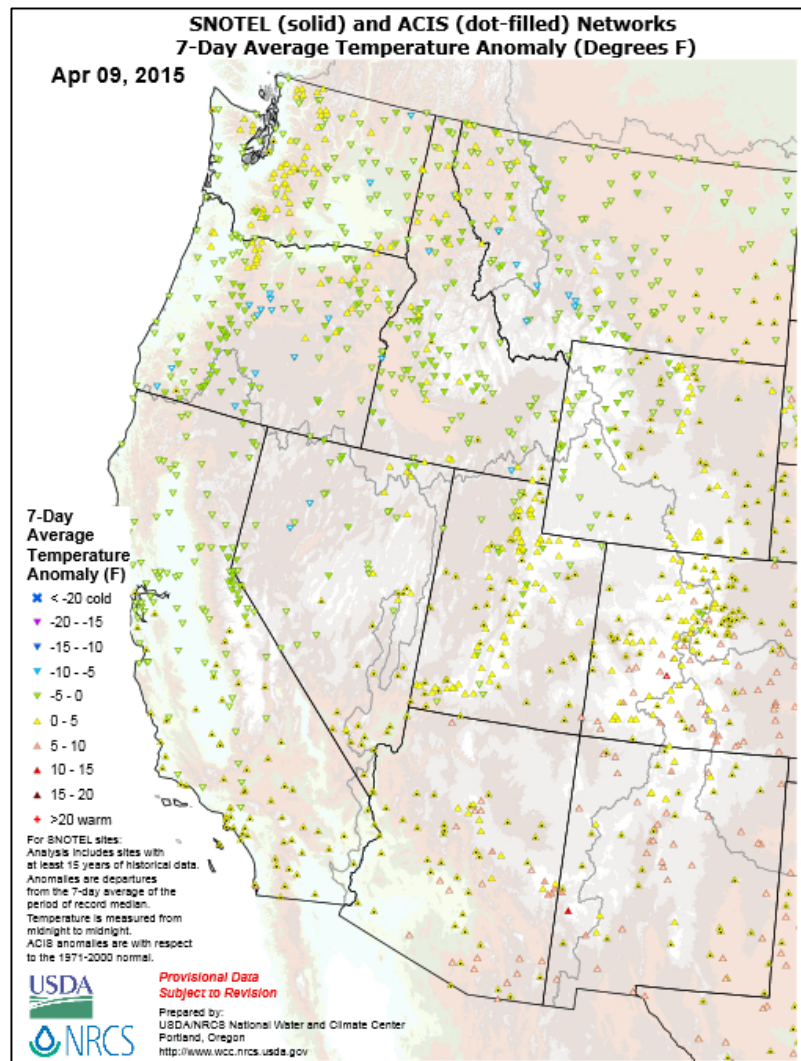


Temperature

The SNOTEL and ACIS [7-day temperature anomaly](#) map for the western U.S. shows for the first time in many weeks, much of the West was near or below normal. The highest anomalies were in Colorado, New Mexico, and Arizona. The two highest anomalies were in central Colorado and southwest New Mexico at **+10-15** degrees F.

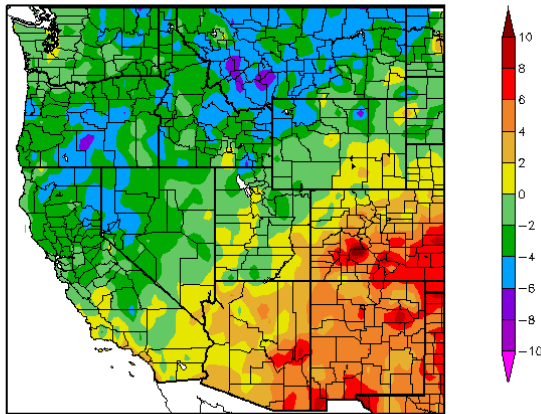
There were many areas that had several stations with near normal temperatures across the West.

The cool anomalies were located in Oregon, Idaho, Montana, and northern Nevada. The anomalies reported in these states were all in the **-5-10** degree F range.



Weekly Water and Climate Update

Departure from Normal Temperature (F)
4/2/2015 – 4/8/2015



The [ACIS](#) map of the 7-day average temperature anomalies in the West ending April 8 shows that the region had a cooler week in contrast to much of the winter. The greatest positive temperature departures occurred in the Southwest, with central Colorado having the highest anomaly ($>+10^{\circ}\text{F}$). Much of the West was near normal, with the largest negative temperature departures reported in Oregon and Montana ($<-6^{\circ}\text{F}$).

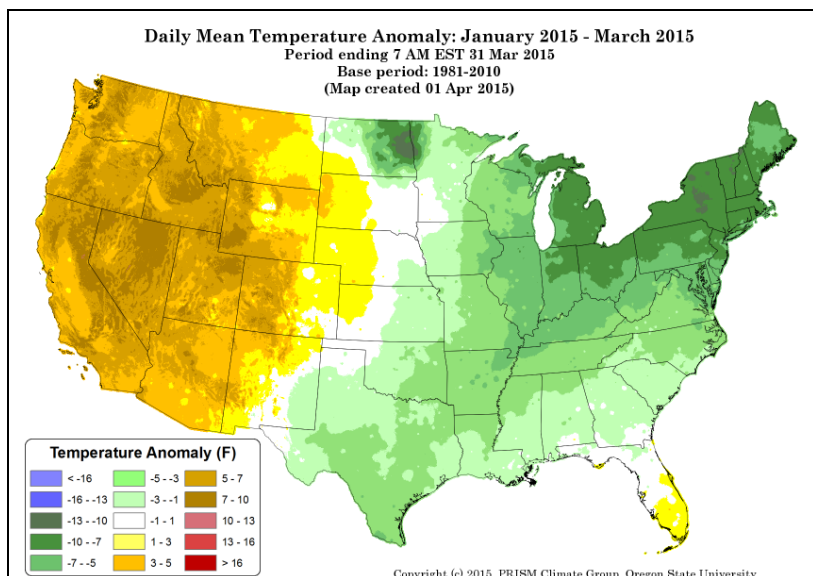
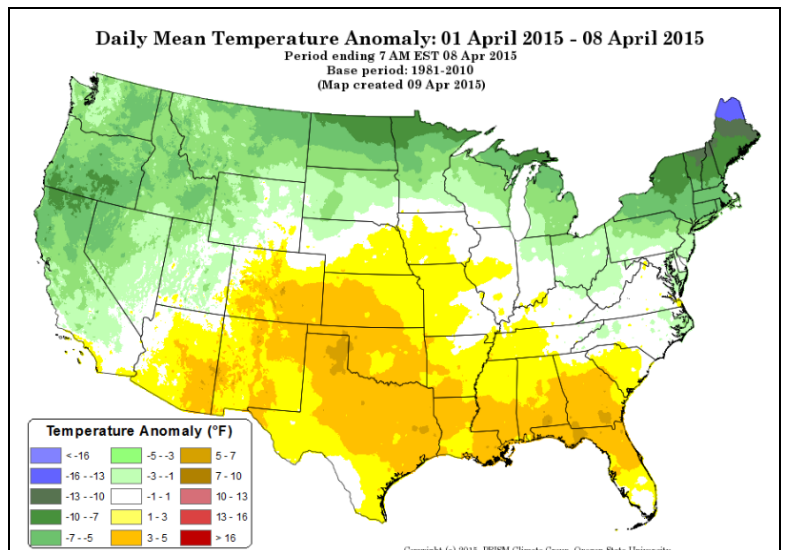
Also, see [Dashboard](#) and the [Westwide Drought Tracker](#)

Generated 4/9/2015 at HPRDC 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.

In early 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 ($<-13^{\circ}\text{F}$). In contrast, above normal temperatures were recorded from the Southwest to the Southeast, with several areas in Arizona, Colorado, New Mexico, Texas, Alabama, Georgia, and Florida having the highest warm anomalies ($>+5^{\circ}\text{F}$).



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 ($>+7^{\circ}\text{F}$). 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 New York, Vermont, and North Dakota ($<-10^{\circ}\text{F}$).

Weather and Drought Summary

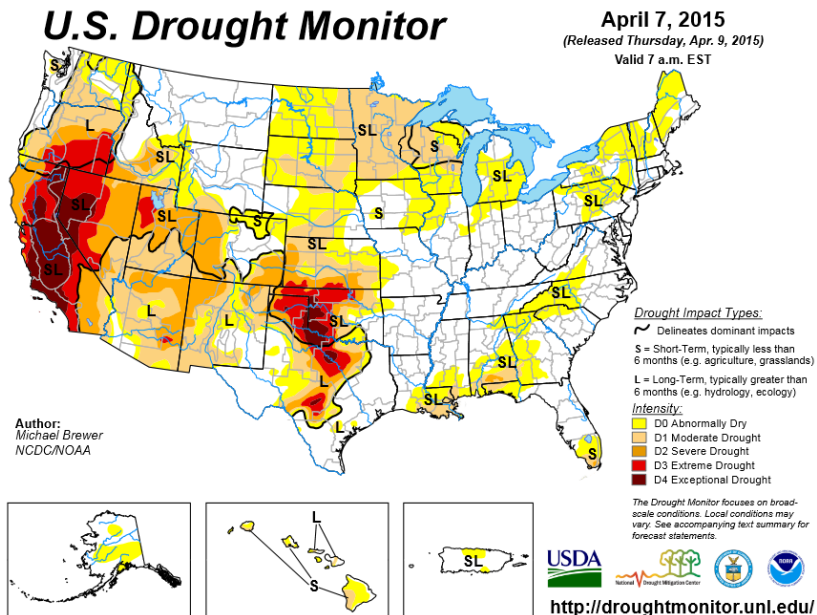
National Drought Summary – April 7, 2015

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 36.92 percent of the area in moderate drought or worse, compared with 36.84 percent a week earlier. Drought now affects 78,114,050 people, compared with 77,956,706 a week earlier.

For all 50 U.S. states and Puerto Rico, the U.S. Drought Monitor showed 30.89 percent of the area in moderate drought or worse, compared with 30.82 percent a week earlier. Drought now affects 78,461,979 people, compared with 78,313,606 a week earlier."



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

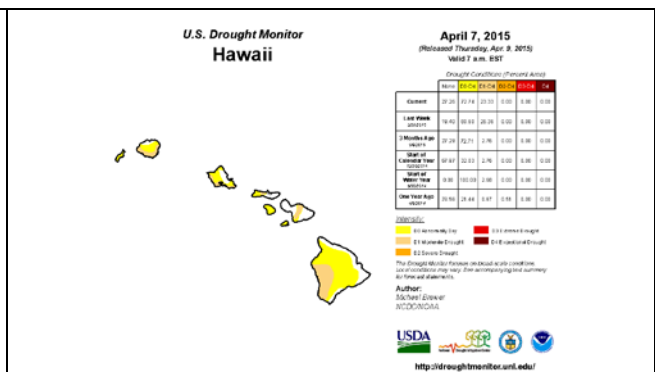
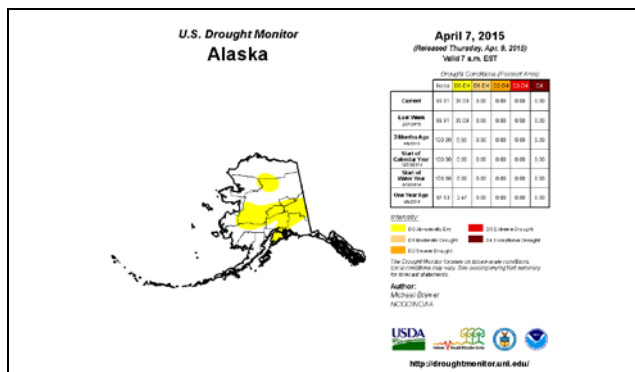
[Current Drought Monitor](#) weekly summary. The exceptional D4 levels of drought are scattered across CA, NV, TX, and OK.

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/weath er/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 was no change in Alaska this week. D0 and D1 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 7, 2015

(Released Thursday, Apr. 9, 2015)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	27.70	72.30	59.80	37.72	17.04	7.63
Last Week 3/31/2015	28.49	71.51	59.80	36.89	17.04	7.23
3 Months Ago 1/6/2015	34.82	65.18	54.24	33.31	18.57	5.40
Start of Calendar Year 12/31/2014	34.76	65.24	54.48	33.50	18.68	5.40
Start of Water Year 9/30/2014	31.48	68.52	55.57	35.65	19.95	8.90
One Year Ago 4/9/2014	28.62	71.38	60.61	42.40	16.03	4.03

Intensity:

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

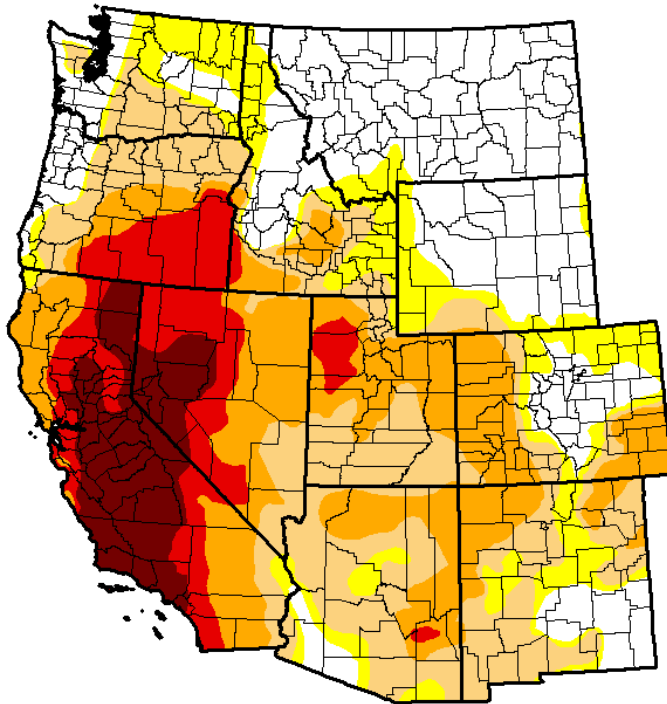
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:

Michael Brewer
NCDC/NOAA



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



There was an increase in D0, D2 and D4 areas in the West this past week. The drought-free area slightly decreased and there was no change in D1 and D3.

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:

U.S. - [Federal Funding in Short Supply for Rural Water Projects](#) – Mar 30

OR - [Snowpack remains slight](#) – Apr 1

WA - [State to lease water to bolster summer stream flow](#) – Apr 2

UT - [Water is coming, but please conserve, experts urge](#) – Apr 2

Weekly Water and Climate Update

State with D-4 Exceptional Drought

U.S. Drought Monitor California

April 7, 2015

(Released Thursday, Apr. 9, 2015)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.15	99.85	98.11	93.44	66.60	44.32
Last Week 3/31/2015	0.15	99.85	98.11	93.44	66.60	41.41
3 Months Ago 1/6/2015	0.00	100.00	98.12	94.34	77.94	32.21
Start of Calendar Year 12/30/2014	0.00	100.00	98.12	94.34	77.94	32.21
Start of Water Year 9/30/2014	0.00	100.00	100.00	95.04	81.92	58.41
One Year Ago 4/8/2014	0.00	100.00	99.81	95.21	68.76	23.49

Intensity:

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

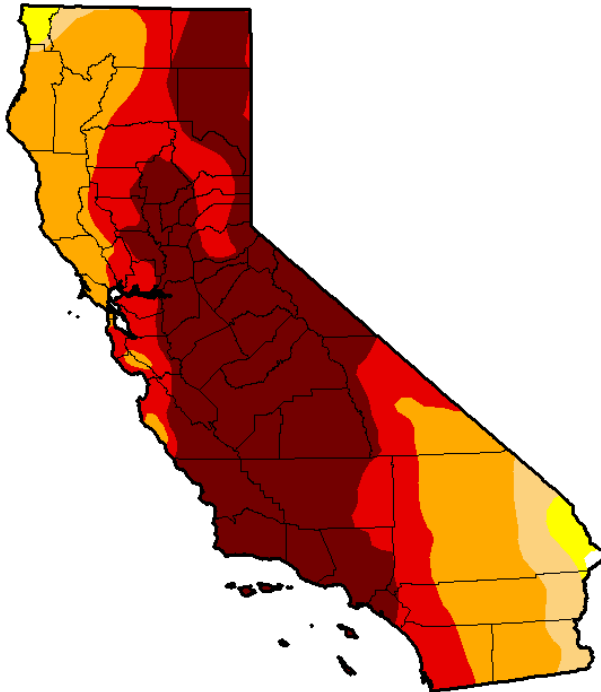
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:

Michael Brewer
NCDC/NOAA



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



There was an increase in D4 in California for the week. D4 now covers over 44% of the state.

[CA Drought Information Resources](#)

[Drought News from California:](#)

[As California Loses Hydro Resources to Drought, Large-Scale Solar Fills in the Gap](#) – Mar 31

[Drought prompts truck and release of salmon smolts in Rio Vista](#) – Mar 26

[Drought threatens American River fish](#) – Mar 28

[California governor orders mandatory water restrictions](#) – Apr 1

[Governor Brown Directs First Ever Statewide Mandatory Water Reductions](#), April 1, 2015

[California agriculture, largely spared in new water restrictions, wields huge clout](#) – Apr 2

[American Canyon planners recommend no front lawns on new homes](#) – Mar 31

[Earliest opening in 20 years for Yosemite's Glacier Point Road](#) – Mar 28

[In store for visitors to Yosemite: a drier, browner park](#) – Mar 29

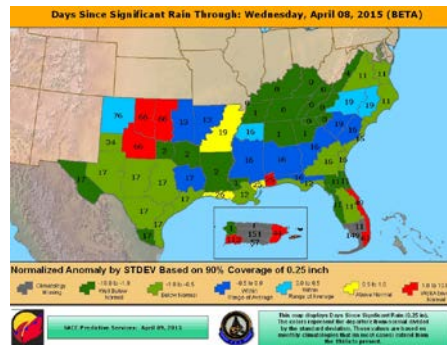
[Paltry snowpack forces skiers to higher ground amid drought](#) – Apr 3

[Blame the drought for poor taste in EBMUD water](#) – Mar 30

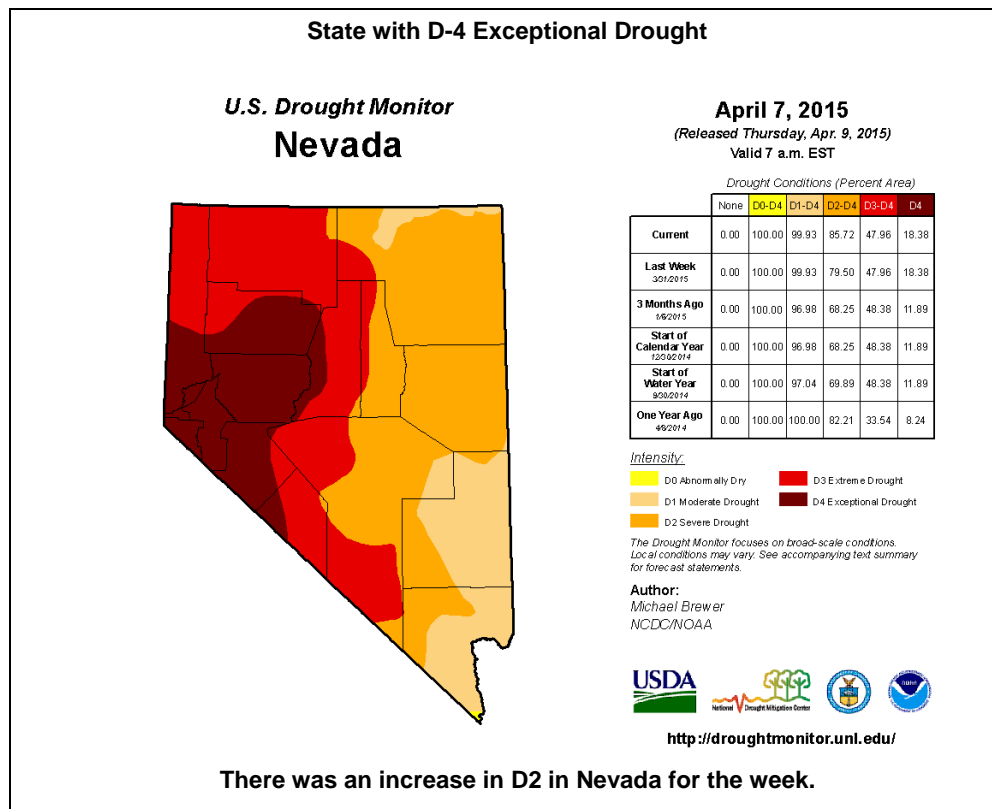
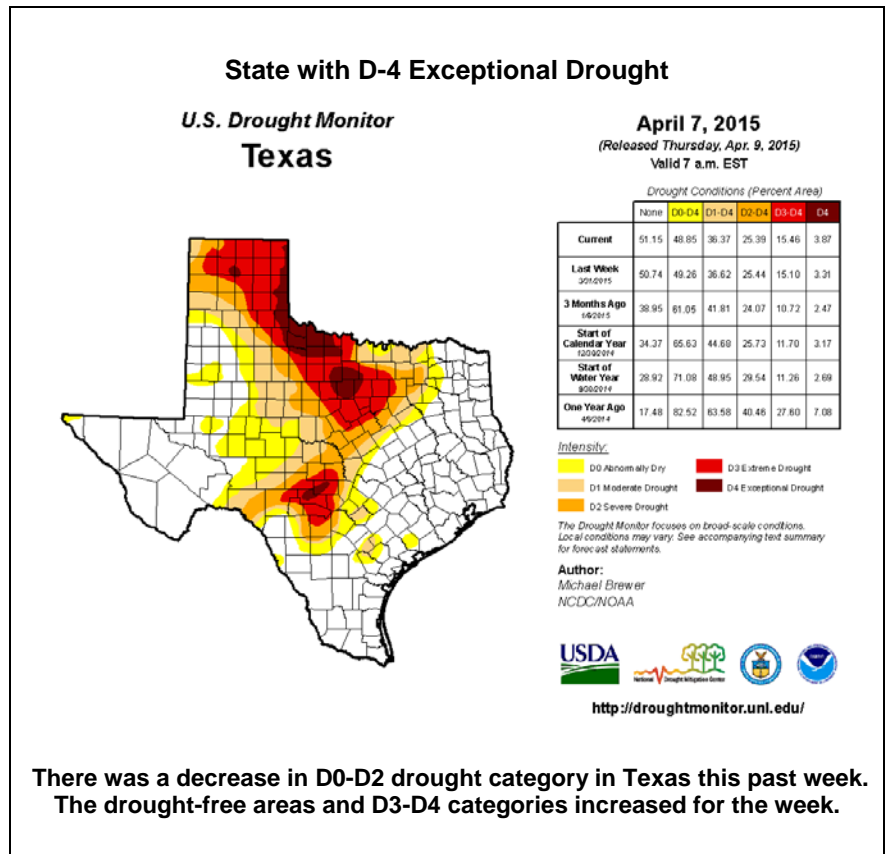
Weekly Water and Climate Update

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

Texas Drought News:
[Fish dying at Lake Stamford, drought blamed](#) – Mar 31
[Water Ruling Cuts State's Power in Droughts](#) – Apr 2



[Days since Significant Rain Summary](#)



Nevada Drought News:

[Parched Nevada Sees Opportunities in Cloud Seeding](#) – Apr 6

[Reno must start 10% water cut now, TMWA says](#) – Mar 31

[Snow survey to show severity of drought](#) - Mar 31

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:

[Drought persists throughout area](#) – Mar 29
[Economic decline definitely felt](#) – Mar 28

State with D-4 Exceptional Drought

U.S. Drought Monitor Oklahoma

April 7, 2015

(Released Thursday, Apr. 9, 2015)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	16.76	83.24	68.27	52.74	39.72	11.60
Last Week 3/31/2015	14.36	85.64	68.62	50.68	37.38	8.41
3 Months Ago 1/6/2015	29.59	70.41	59.21	42.59	22.35	5.54
Start of Calendar Year 12/31/2014	25.63	74.37	62.03	40.84	21.74	5.70
Start of Water Year 9/30/2014	8.55	91.45	73.31	58.13	20.92	4.64
One Year Ago 4/9/2014	6.34	93.66	76.48	52.63	26.39	13.54

Intensity:

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

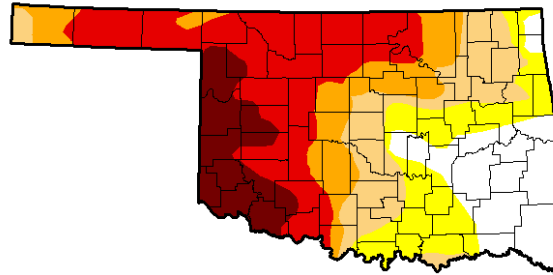
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:

Michael Brewer
NCDC/NOAA



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



There was an increase in D2 - D4 and the drought-free areas in Oklahoma this past week. The D0 – D1 drought category areas decreased for the week.

U.S. Population in Drought

Number of people in each drought category in the U.S. for the week ending April 7, 2015

Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
2015-04-07	164,941,612	140,455,843	78,114,051	50,658,806	35,715,115	20,620,654
2015-03-31	171,628,060	133,769,394	77,956,706	50,027,446	35,620,981	20,578,448

Population figures affected by drought in the U.S. Drought Monitor website show that, for this week, more than 78,000,000 people in the United States were in a drought-affected area, which is an increase by over 150,000 people from last week.

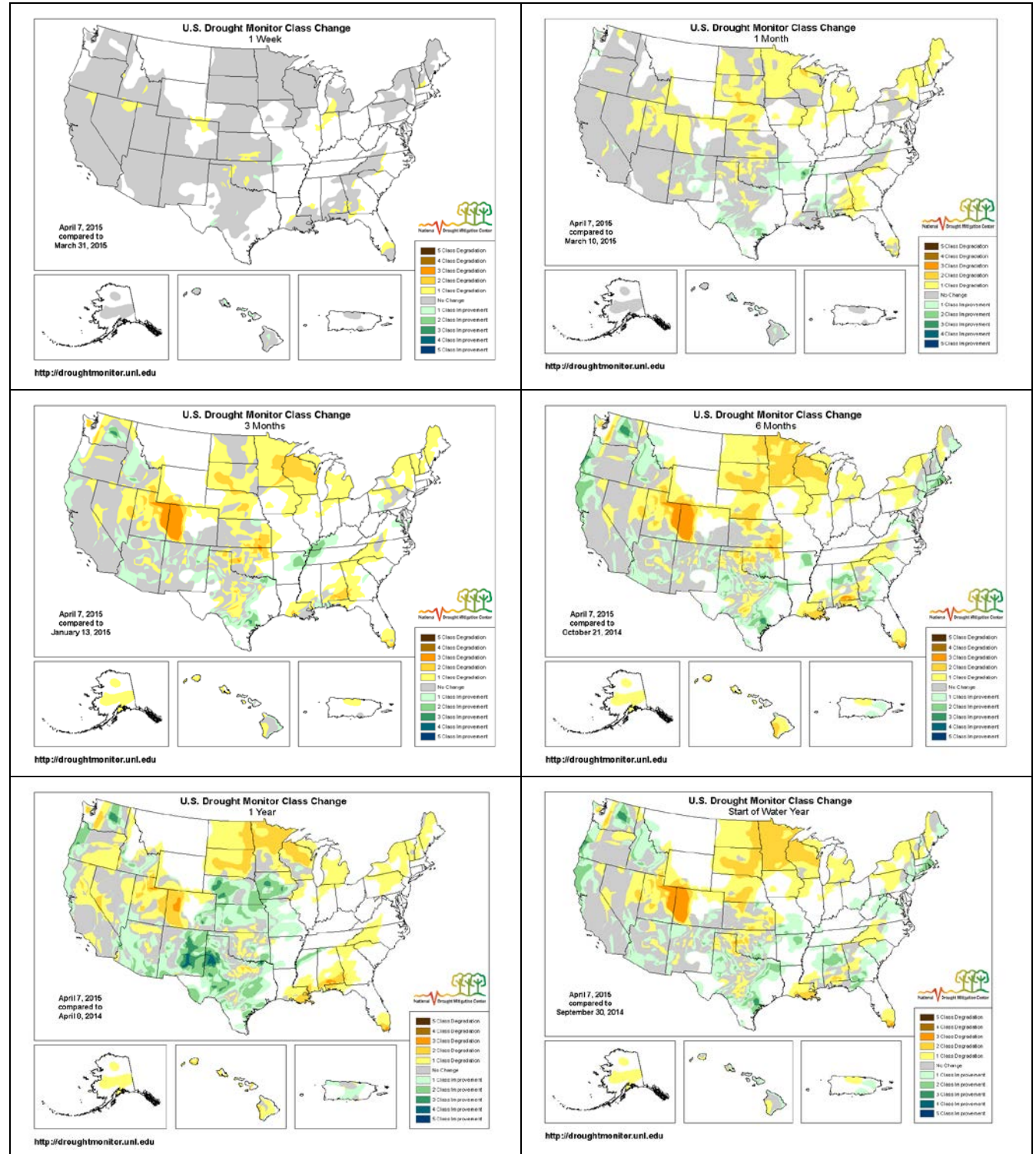
Population Statistics Methodology:

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

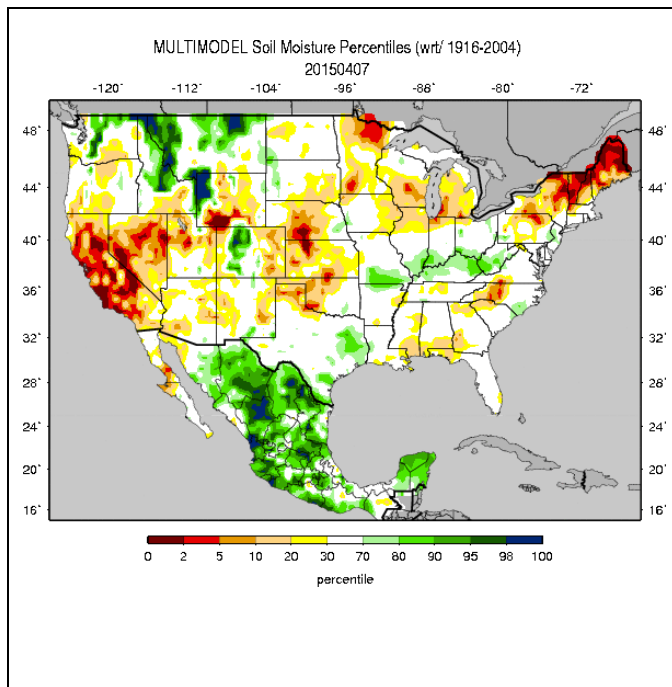
Over Various Time Periods



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

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Soil Moisture

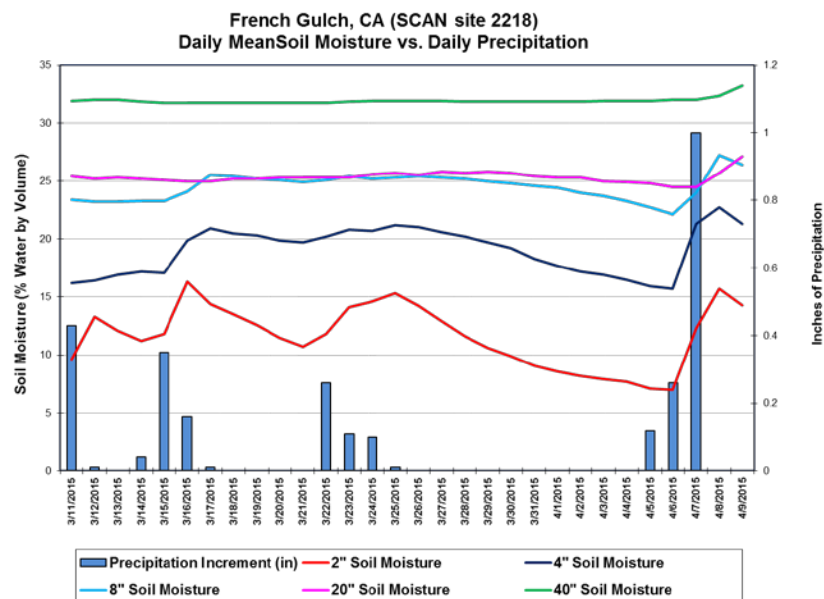


The national soil moisture model ranking in [percentile](#) as of April 7, 2015, shows dryness over most of the Northeast, Southwest, and Great Plains. The driest areas were in Nevada, California, northern Utah, southern Wyoming, Nebraska, Kansas, Oklahoma, Minnesota, Pennsylvania, New York, Vermont, Maine, and New Hampshire. Moist soils dominated parts of Washington, Montana, northern Idaho, east Texas, Arkansas, Missouri, and Kentucky. Slightly moist soils were also scattered elsewhere throughout the South, Southeast, Mid-Atlantic and Great Plains regions.

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)

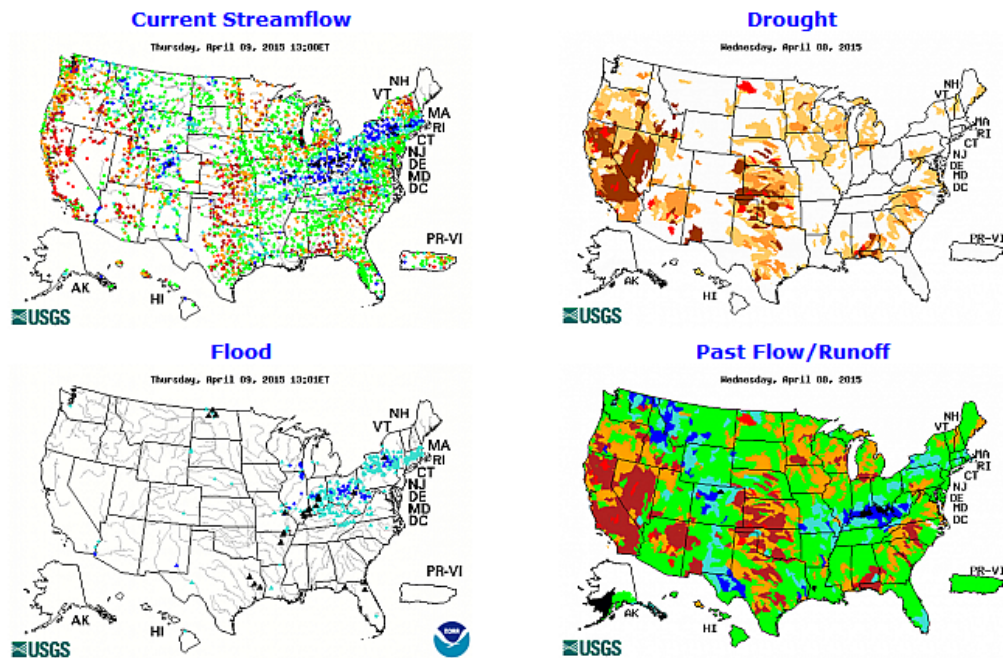


This NRCS resource shows soil moisture data for the last month at the [French Gulch SCAN site 2218](#) in northern California. The area had several small precipitation events and a large recent event in the past 30 days (blue bars). This rainfall resulted in an increase in soil moisture at the 2-, 4-, and 8-inch depths, and the recent storm 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](#).

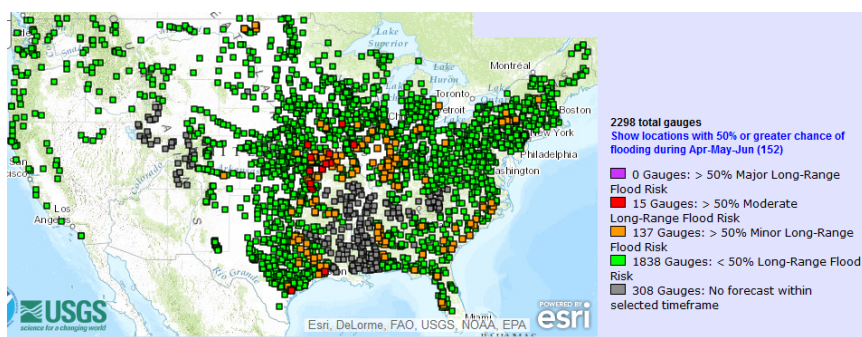
Weekly Water and Climate Update

Streamflow



Gages in several regions of the U.S. are reporting much above normal streamflow. Some gages in the northern states are 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 this week. These include three rivers in North Dakota, three in eastern Texas, two in Arkansas, one in Missouri, two in Illinois, nine in Indiana, one in Ohio, one in New York, and four 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 gauges with a slight to higher risk of flooding. Currently, **0** gauges have a greater than 50% chance to experience major flooding; **15** gauges for moderate flooding; and **137** gauges for minor flooding.

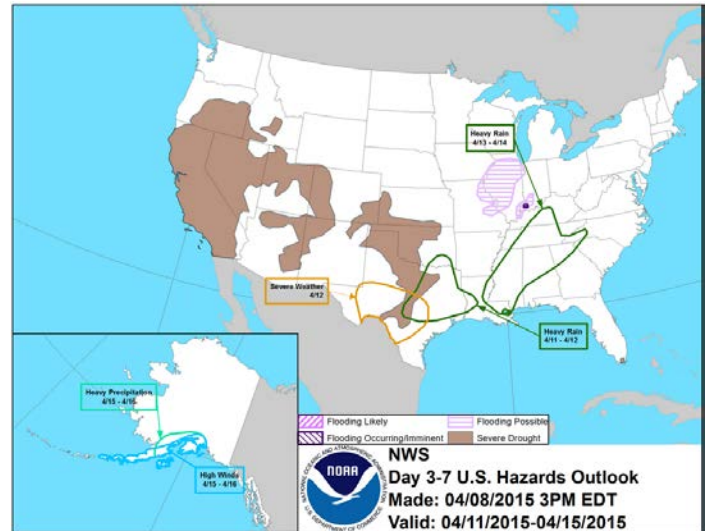
These numbers represent a **1** gage increase in the greater than 50 percent chance of minor flooding category since last week.

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 precipitation in the Southeast (4/13-14) and in eastern Texas (4/11-12). Severe weather is expected in south central Texas (4/12). Flooding is likely across most of Illinois, southern Indiana, and eastern Missouri. There is also a small area of flooding imminent/occurring in southwest Indiana.

In Alaska, high winds are expected along the southwest coast (4/15-16). Heavy precipitation is also expected within the same area (4/15-16). Severe drought remains a large issue in much of the southcentral and western U.S.



[National Drought Summary for April 7, 2015](#)

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

Summary

"This week saw warmer than normal temperatures impacting roughly two-thirds of the nation. A significant storm brought abundant rain to the Ohio Valley and severe weather through that region and the Central Plains. The storm brought tornados, hail, and strong winds to over 15 states. Most of the rest of the country experienced continued dryness. Strong winds and warmer than average temperatures added short-term insult to the long-term drought impacting the Southern Plains.

Hawaii, Alaska and Puerto Rico

Some much needed moisture came to the Hawaiian Islands this week promoting improvement in Moderate Drought (D1) and Abnormal Dryness (D0) across many of the islands. Puerto Rico and Alaska remain unchanged this week.

The Midwest

From southern Missouri into West Virginia abundant rain fell. This prompted removing some areas of Abnormal Dryness (D0) in Missouri. The northern part of the Midwest remained dry and Abnormal Dryness (D0) expanded in southern Michigan, through northern Indiana and into west-central Illinois.

The Northeast and Mid-Atlantic

Another dry week in New England led to a slight expansion of Abnormal Dryness (D0) in New Hampshire and into northern Massachusetts. Some of this area is still recovering from a long, cold, snowy winter with some areas still maintaining snow cover at the end of this week.

The Plains

Rain came to the Plains associated with severe weather this Drought Monitor week. The rain was mostly limited to areas of eastern Oklahoma and Kansas and extended into the southern Midwest. Other parts of the Southern Plains experienced degradation in the drought conditions largely associated with the warm temperatures and very strong winds. Severe (D2), Extreme (D3), and Exceptional Drought (D4) expanded around the Texas panhandle and adjacent areas, extending into central Oklahoma. Severe (D2) and Extreme Drought (D3) expanded in southern Kansas as the state saw dust clouds roll through at least one western county on April 2.

The Southeast

While the area around northern Alabama and Tennessee received precipitation, most of the rest of the Southeast remained dry again this week. In Georgia and southern Alabama, this lingering dryness led to the expansion of Abnormal Dryness (D0) and Moderate Drought (D1) and the introduction of Severe Drought (D2) in

Weekly Water and Climate Update

south-central Alabama. Likewise, areas of Mississippi that missed the beneficial rains that fell to their north experienced an expansion of Abnormal Dryness (D0) in the southern part of the state.

The West

Some much needed precipitation fell in northwestern California this week. The rain did not penetrate very far from the coast. Continued dryness resulted in an expansion of Exceptional Drought (D4) in northwest California. Statewide snowpack remains at 5% as of April 6, 2015. Northern Nevada and Utah saw an expansion of Severe Drought (D2) in the north as did southern Idaho. In northern Colorado and southern Wyoming, Abnormal Dryness (D0) expanded.

Looking Ahead

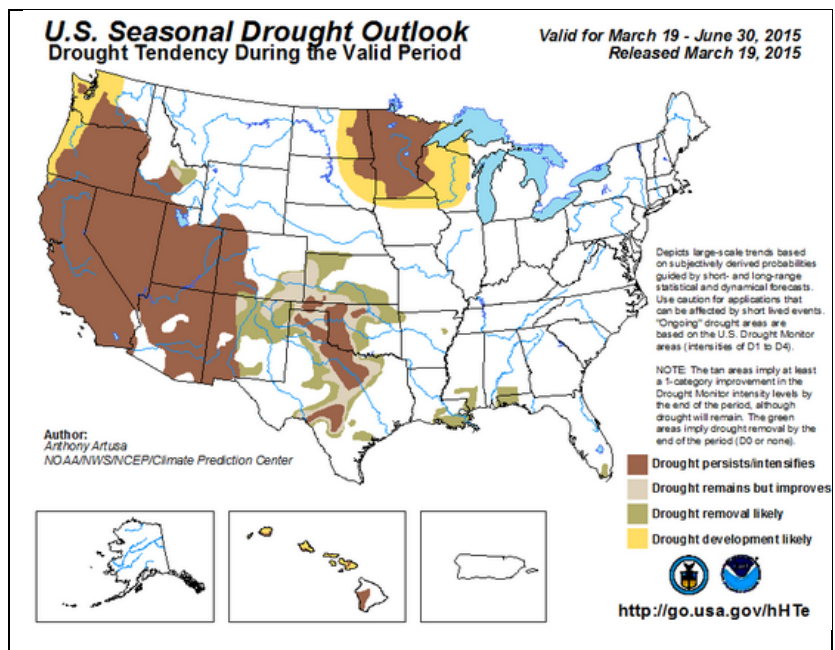
Precipitation is expected to migrate from the Gulf Coast into the Midwest in the coming days. The Pacific Northwest is likely to see precipitation each day. The rest of the country is expected to remain dry. Warmer than normal temperatures are expected over most of the contiguous U.S. during the same time. The Pacific Northwest is the only exception to this with below-normal temperatures expected throughout the period.

The NWS 6-10 day outlooks call for normal to warm conditions over the U.S. with the exception of the northern West and western Alaska which should experience below-normal temperatures. Precipitation during that timeframe is expected to be normal to above-normal across the country with the exception of the far West and extreme northern Alaska which are expected to be below-normal."

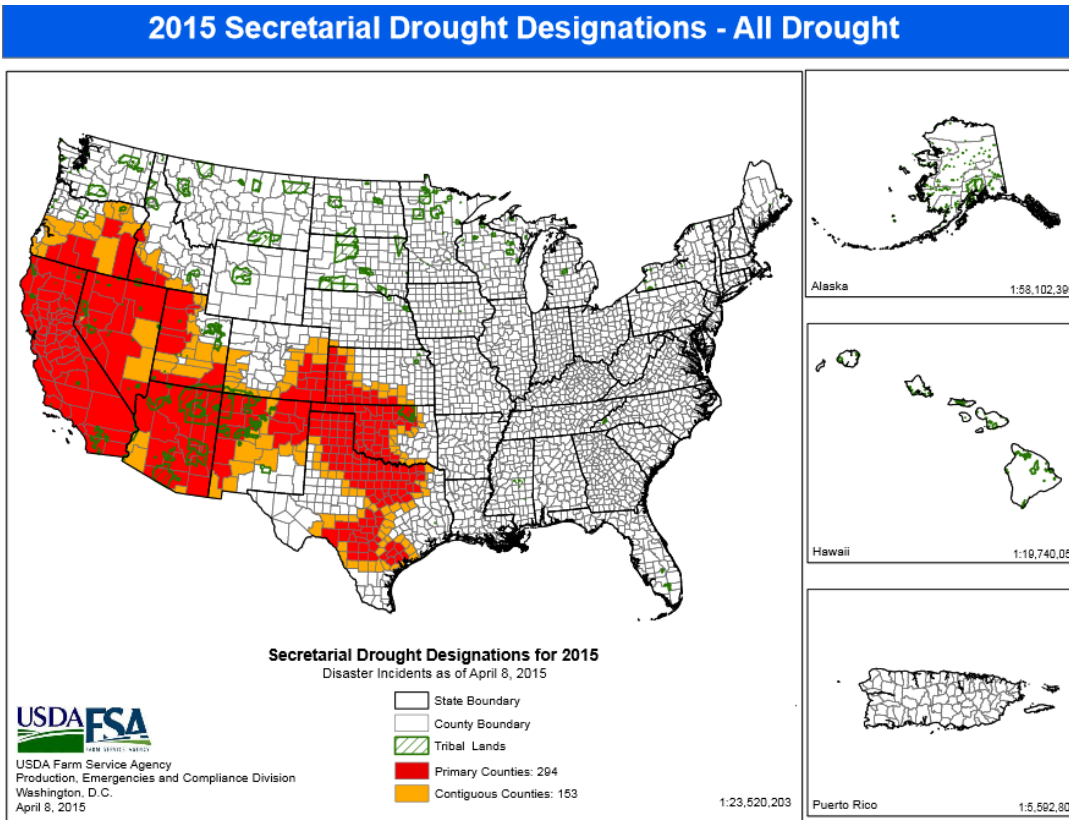
Supplemental Drought Information

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, Minnesota, North Dakota, South Dakota, Colorado, and Hawaii. Improvements are expected in parts of Colorado, New Mexico, Texas, Oklahoma, Nebraska, Louisiana, Mississippi, and Florida. 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

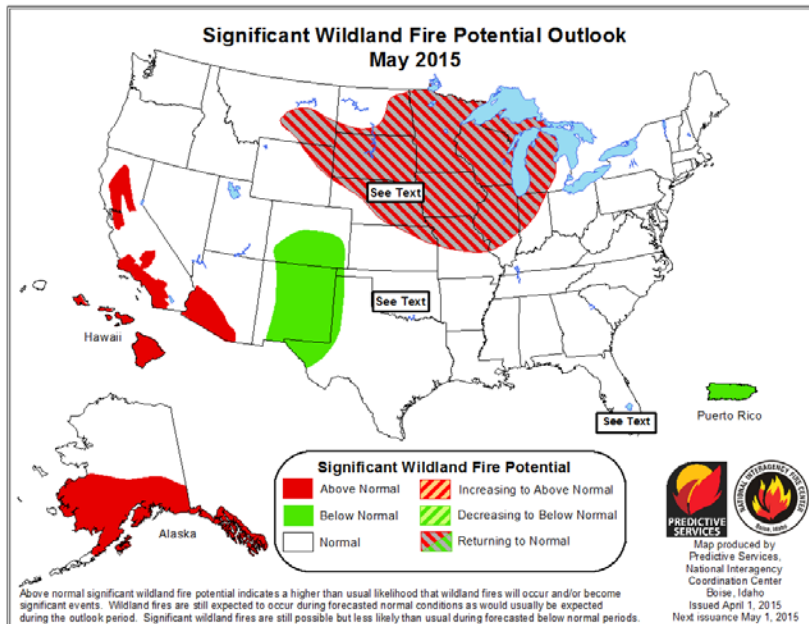


Refer to the USDA Drought Assistance [website](#) and [National Sustainable Agriculture Information Service](#).

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

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

National Fire Potential Outlook



May Fire Forecast

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

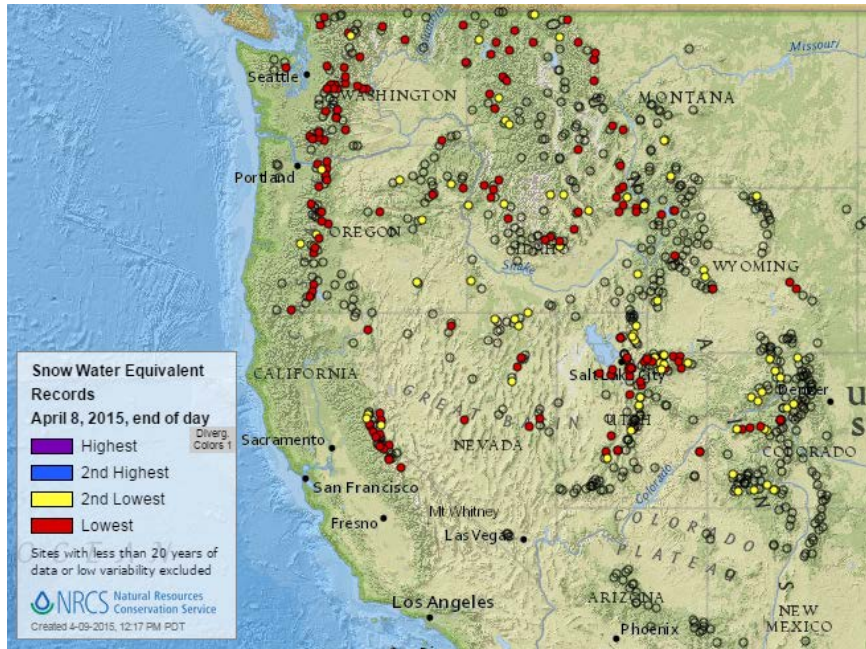
A large area of the central U.S. will return to normal fire potential for May. Below normal fire potential for May 2015 (in green on the map) is forecast for New Mexico, southern Colorado, western Texas, and in Puerto Rico. Parts of Arizona, California, the southern half of Alaska, and most of the Hawaiian 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/sws.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 8. 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 restrictions in California

Gov. Jerry Brown ordered new water restrictions requiring Californians to curtail water use by 25 percent, compared to 2013 levels. The announcement came as the state's April 1 snow measurement revealed 5 percent of average, the smallest amount of snow for that date since record-keeping began 65 years ago.

From Gov. Jerry Brown's website, some of the actions in the executive order include:

- Replacement of 50 million square feet of lawns throughout the state with drought tolerant landscaping in partnership with local governments
- Creation of a temporary, statewide consumer rebate program to replace old appliances with more water and energy efficient models
- Campuses, golf courses, cemeteries and other large landscapes must make significant cuts in water use
- New homes and developments were prohibited from irrigating with potable water unless water-efficient drip irrigation systems were used. Watering of ornamental grass on public street medians was banned.
- Water rate structures must be adjusted to implement conservation pricing at local level
- Agricultural water users must report more water use information to state regulators
- Water agencies in depleted groundwater basins will face consequences if they have not shared data on their groundwater supplies with the state
- Standards for toilets and faucets and outdoor landscaping in residential communities will be updated. Communities that ignore these standards will face consequences.

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- Monthly reporting of water usage, conservation and enforcement actions by local water suppliers will be made permanent

Snow pack figures in California, Oregon, Nevada

California: Sierra Nevada basin wide average was 5 percent of normal

Oregon: The snowpack in Central Oregon was roughly 25 percent of normal. The snowpack in the Deschutes/Crooked River Basin was 8 percent of average.

Nevada: Lake Tahoe Basin snowpack was 3 percent of normal. Snow has melted at nearly all measuring sites. In the Truckee River Basin, snowpack was 14 percent of normal.

Unsavory taste, smell to East Bay water

Some East Bay residents noticed the water has a different taste and odor recently, and complained to the East Bay Municipal Utility District. The problem began when EBMUD started drawing water from the upper levels of Pardee Reservoir to leave the cooler water near the bottom for use in the fall when salmon spawn in the Mokelumne River. EBMUD will resume pulling water from the deeper parts of the reservoir, so the problem should be resolved in a matter of days.

California fish need help to survive another drought year

Twelve million juvenile Chinook salmon were being trucked from the Coleman National Fish Hatchery in Anderson to Rio Vista in the Sacramento-San Joaquin Delta because the warm flow of Battle Creek, a tributary of the Sacramento River, is very low. The 3-inch long smolts would likely perish before they reached the delta, leaving very few to return as adults to reproduce in three years. Salmon were also transported to the delta in the spring of 2014.

As endangered steelhead trout in the American River prepare to hatch, the U.S. Bureau of Reclamation temporarily increased outflow through gates in the dam's face to draw out cold water from deeper parts of the reservoir to cool water in the American River for the fish. The brevity of the water release illustrates the concern about conserving the state's precious water.

Yosemite National Park: road opening early, visitors urged to try different activities

Glacier Point Road in Yosemite National Park opened March 28, the earliest date in the park's history as drought and warm temperatures chased away what little snow fell in the park during the winter.

Due to the lack of snow, visitor bureaus were emphasizing different activities in the park. Majestic Yosemite Falls was not highlighted so much, and instead, activities like hiking, biking and photography were recommended to prospective visitors. Yosemite Falls is expected to run dry in June, two months earlier than usual. The Merced River, which supplies water to Nevada and Vernal falls, is also anticipated to slow to a trickle in June.

Washington Department of Ecology seeking senior water rights in the Upper Yakima River Basin

The Washington Department of Ecology was seeking irrigators willing to lease water to supplement stream flow in the Upper Yakima Basin. With the warm winter and extremely low snowpack, streams in the upper watershed, which normally benefit from snowmelt, could run dry this summer. Ecology is interested in senior water rights for tributaries north of Yakima and will pay the water rights holders to not divert water this summer. By keeping water in the tributaries, fisheries and river flows benefit.

Low snowpack, water stress in Northern Utah

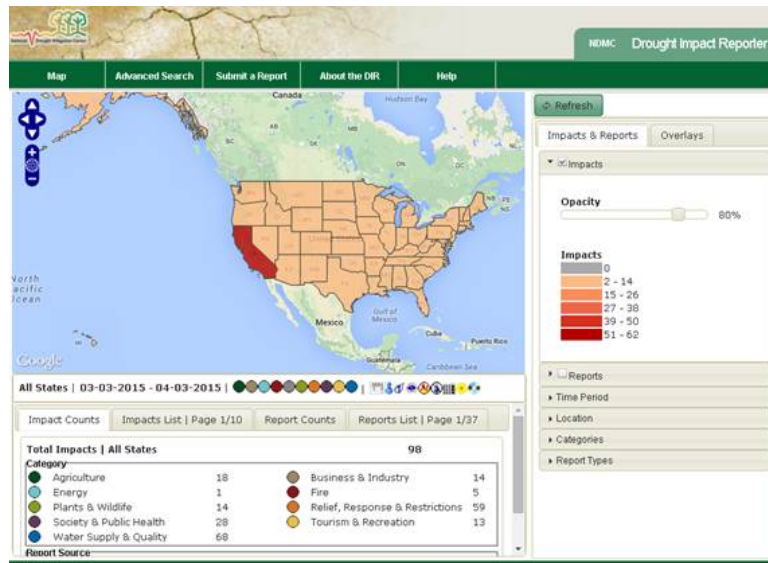
Water customers in Weber and Davis counties were urged to curb their lawn watering by 30 percent. Water availability could be limited by Oct. 1 or sooner.

Texas water rights ruling

In a monumental victory for senior water rights holders in Texas, the state cannot take water from senior water rights holders and give it to cities or power generators, even if the water is needed for public health, safety and welfare. Junior water rights holders, however, are not protected from such curtailments. The 13th Court of Appeals upheld a lower court's ruling on the matter.

The number of impacts for California in the [Drought Impact Reporter](#) far exceed the count for all other states, hence the unchanging map, week after week."

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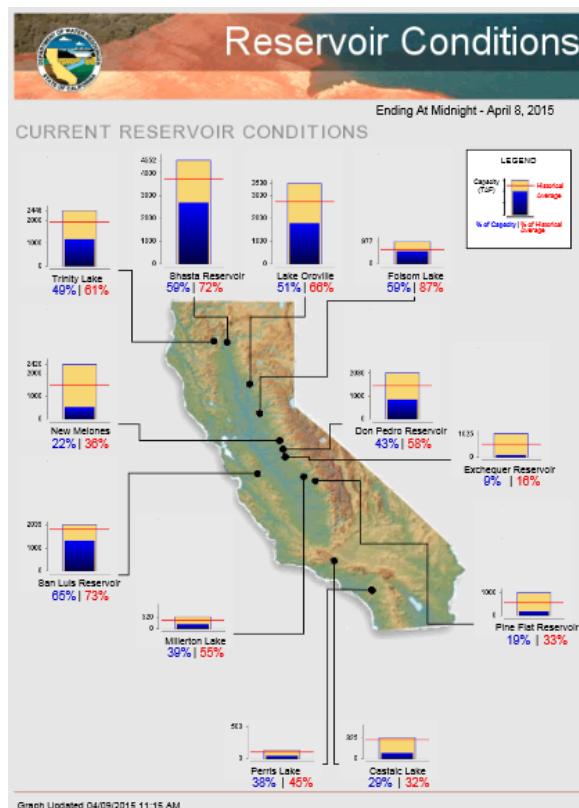


Tea Cup Reservoir Depictions

- <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)

California Reservoir Conditions

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



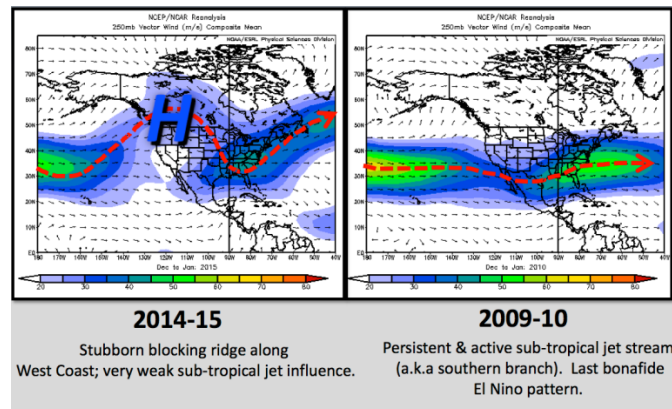
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State Activities

[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.



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