



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

Weekly Water and Climate Update Thursday, April 30, 2015

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[2014 Photo Contest: Transportation](#)

**Hozatka Lake
SCAN installation, Alaska**

Daniel Fisher, Photographer

National Outlook: “Generally tranquil weather will prevail for the remainder of the week, except for some locally heavy rain through Friday in the Mid-Atlantic region. An eastward expansion of warmth will accompany the quiet pattern. Late in the weekend and early next week, widespread precipitation will develop across the Intermountain West and from the central and southern Rockies northeastward into the Great Lakes region. As a result, 5-day rainfall totals could reach 1 to 2 inches from the central Plains to Michigan. Elsewhere, mostly dry weather will prevail into next week across the Far West and the Southeast, except in

southern Florida. Across Florida’s peninsula, heavy showers could return early next week. The NWS 6- to 10-day outlook for May 5 – 9 calls for near- to above-normal temperatures nationwide, except for cooler-than-normal conditions in parts of the Southwest. Meanwhile, near- to above-normal precipitation across most of the U.S. will contrast with drier-than-normal weather in the Pacific Northwest and parts of the lower Southeast.

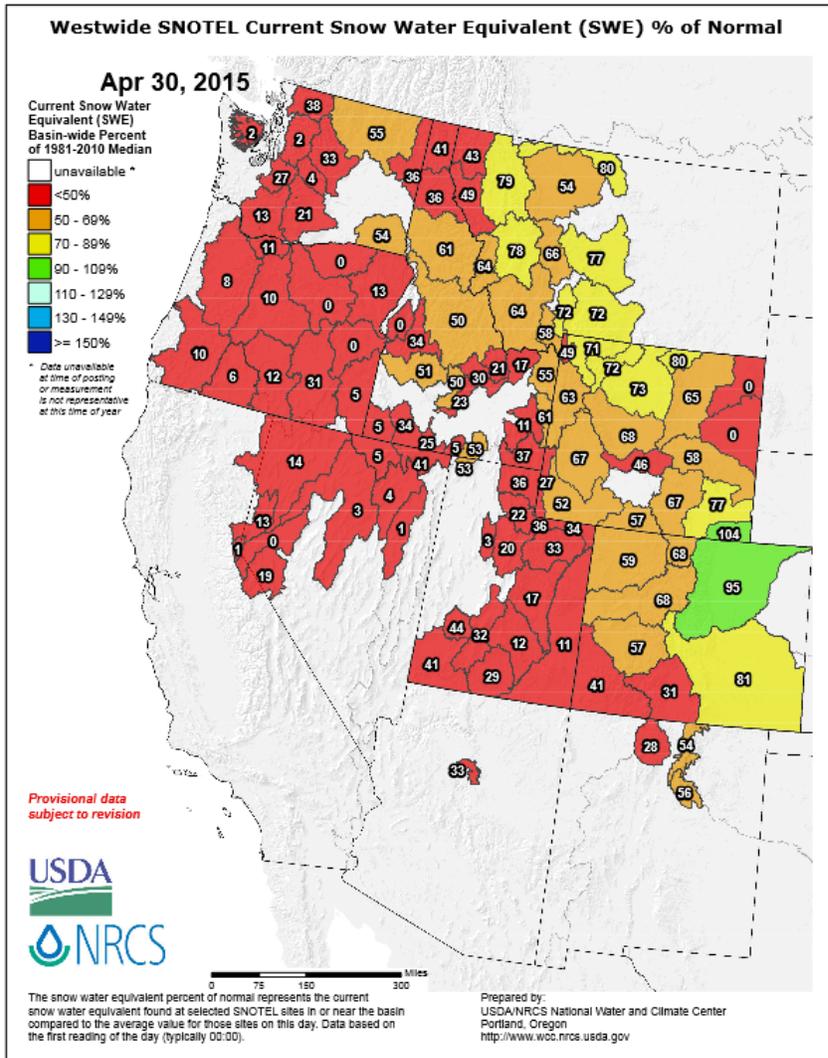
Contact: Brad Rippey, Agricultural Meteorologist, USDA/OCE/WAOB, Washington, D.C. (202-720-2397)

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 in many basins (red areas) where the snowpack, if it still exists, is in full melt. The lowest snowpack compared to normal is reported in most of Washington, all of Oregon, Nevada, California, Arizona, most of Utah, much of Idaho, and scattered in basins in other states. Some basins have zero SWE at this time. Below normal snowpacks (orange and yellow areas) are located in eastern Washington, Idaho, Colorado, Wyoming, Montana, northern New Mexico, and northwest Utah

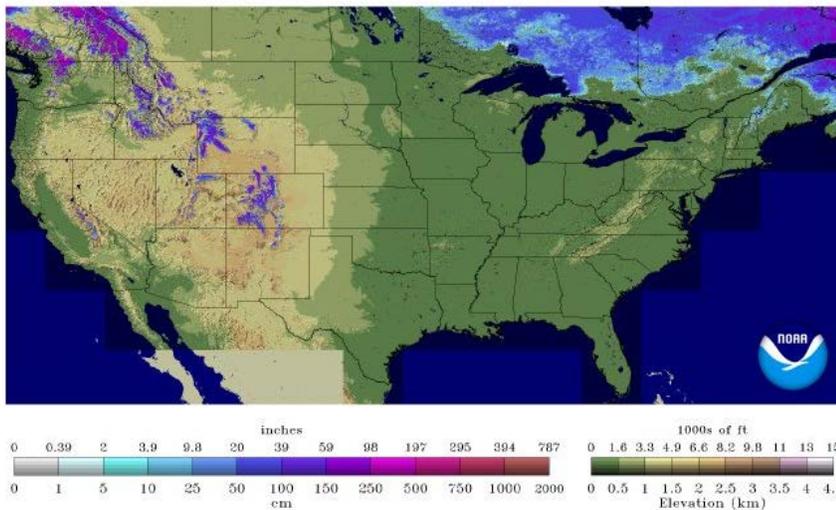
The snowpack conditions in one basin in southeast Wyoming and one basin in northeast Colorado are near normal.

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



Snow Depth

2015-04-30 06 UTC



The snow depth map as reported from the [NWS NOHRSC](#) for April 30, 2015, shows a decrease in snow cover from last week. Snow now covers 2.5% of the continental U.S. This includes snow that is primarily in the highest mountains in the West.

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. 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 low 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.

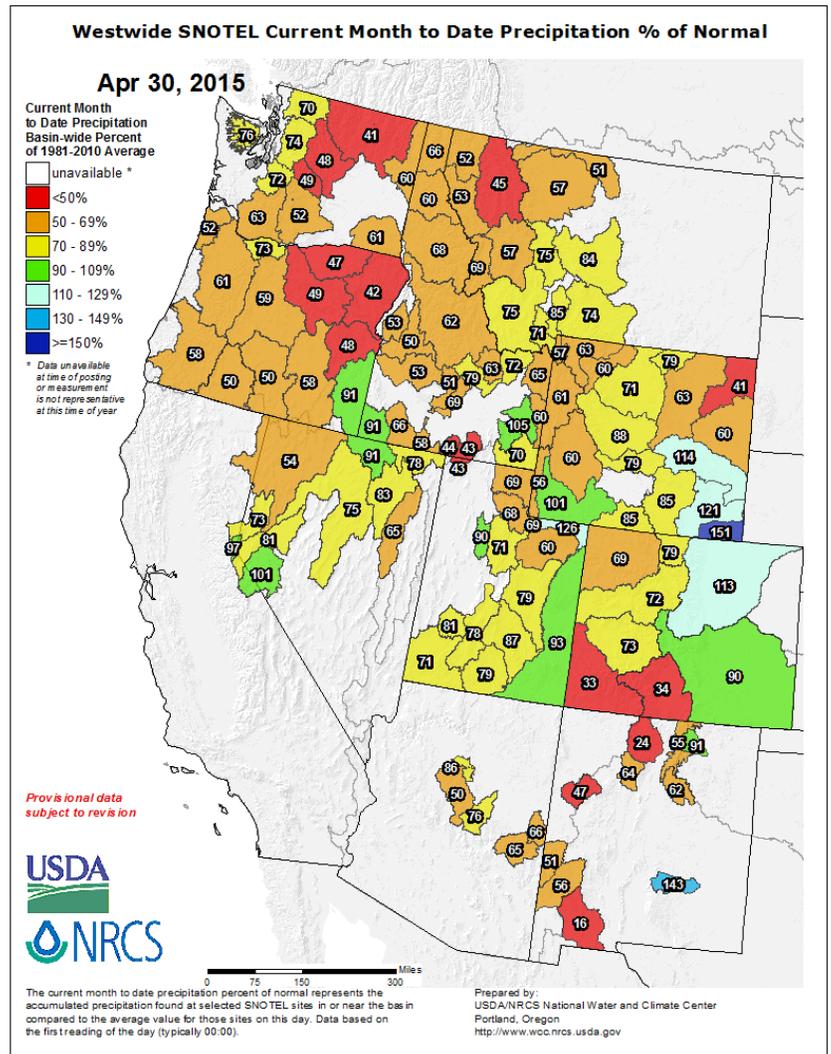
In the West, the [SNOTEL](#) precipitation percent of normal map for April shows a variety of conditions. There have been scattered wet conditions in southeast Wyoming, northeast Colorado, and southeast New Mexico (blue areas).

Near normal conditions were reported in parts of southeast Oregon, southern Idaho, southwest Wyoming, southeast Colorado, parts of Utah, northern Nevada, and along the California/ Nevada border (green areas).

Less than normal precipitation in April was reported in many basins in all western states (orange and yellow areas).

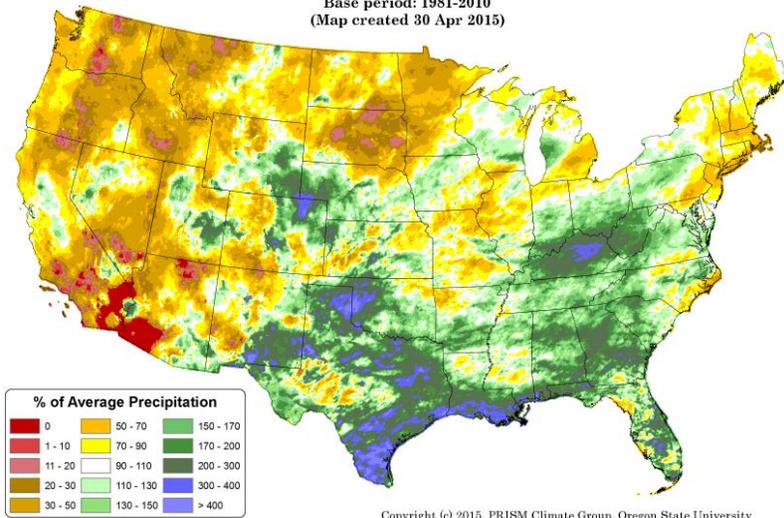
Very low precipitation was reported in parts of northern Washington, northeast Oregon, northwest Montana, northeast Wyoming, southern Idaho, northwest Utah, southwest Colorado, and several basins in western New Mexico (red area).

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 - 29 April 2015
 Period ending 7 AM EST 29 Apr 2015
 Base period: 1981-2010
 (Map created 30 Apr 2015)



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

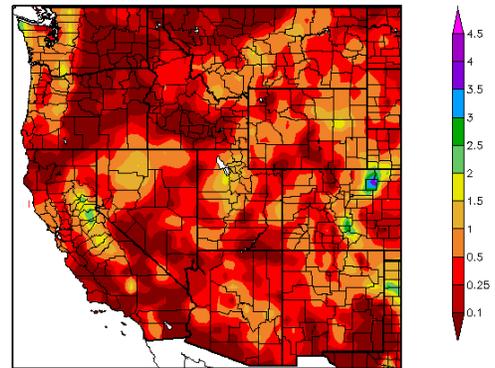
In April, the national total [precipitation anomaly](#) pattern reveals some higher than normal precipitation, primarily across the southern U.S. Areas that saw abundant precipitation include southeast New Mexico, throughout Texas to southern Louisiana, western Oklahoma, Kentucky, northeast Wyoming, and a few small areas in the Southeast. There was little or no precipitation in parts of the Southwest, Pacific Northwest, and the northern Great Plains (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 the highest precipitation in the Cascades, the Washington Olympic Peninsula, the central Sierra Nevada, and in central Colorado. The highest precipitation was reported in northeast Colorado. Light and widely scattered precipitation was also reported in all the western states.

Little to no precipitation fell in many areas of the West this week (dark red). The largest contiguous dry area covered an area in northwest California, eastern Oregon, eastern Washington, central and northern Idaho, and northwest Montana.

Precipitation (in)
 4/23/2015 - 4/29/2015



Generated 4/30/2015 at HPRCC using provisional data.

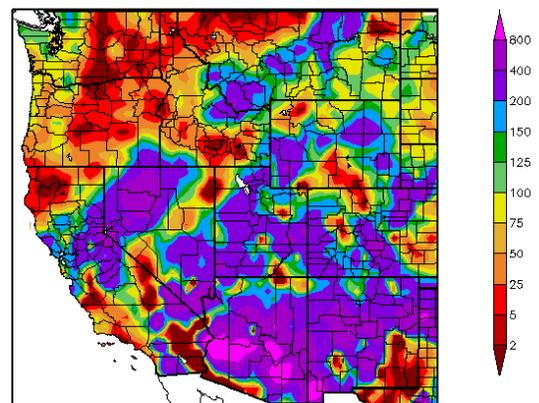
Regional Climate Centers

This ACIS percent of normal [map](#) of the West for the last seven days reflects scattered precipitation above normal across much of the West. The heaviest percent of normal precipitation fell in southern Arizona (magenta areas).

Very dry conditions for the week were reported in widely scattered areas of California, Utah, Oregon, Washington, Idaho, Montana 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.

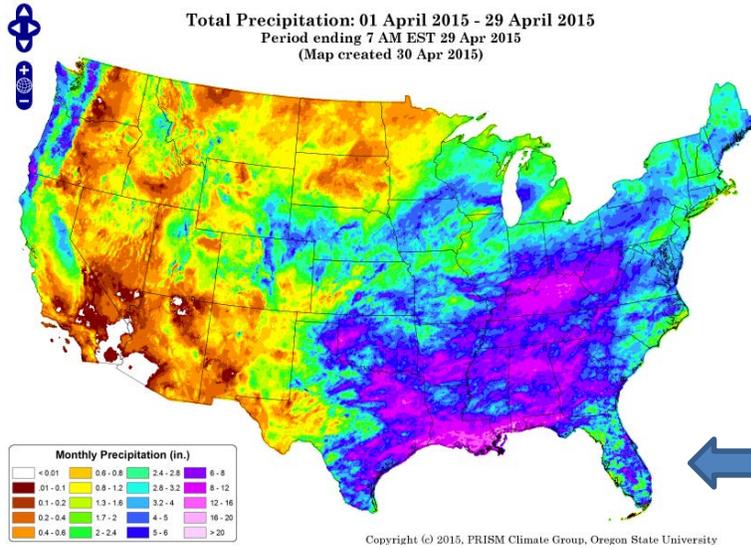
Percent of Normal Precipitation (%)
 4/23/2015 - 4/29/2015



Generated 4/30/2015 at HPRCC using provisional data.

Regional Climate Centers

Weekly Water and Climate Update



For April 2015, the [total precipitation](#) across the continental U.S. was heaviest in the eastern U.S. from Texas to Florida and north to West Virginia. Additionally, there was heavy precipitation reported in the Pacific Northwest. Scattered precipitation also fell elsewhere. In contrast, much of the Southwest, eastern Cascades, and northern Great Plains were mainly dry. The largest area of no precipitation covered parts of southern California and southern Arizona.



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

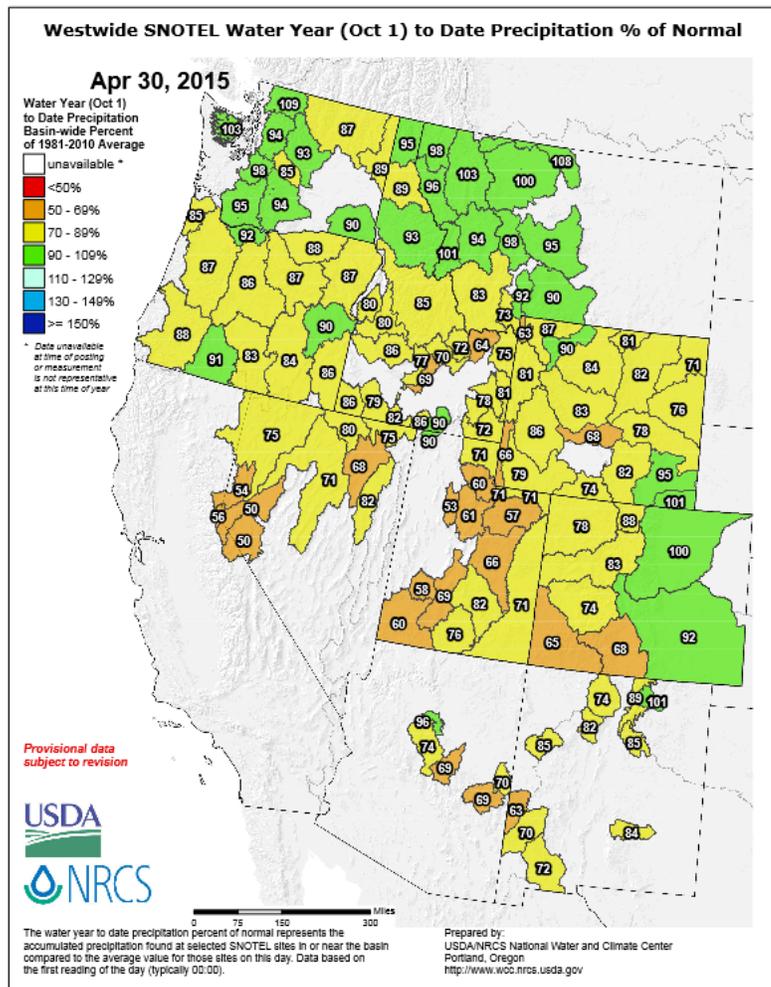
For the [2015 Water Year](#) that began on October 1, 2014, there are no basins in the West that are reporting much above normal precipitation.

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

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

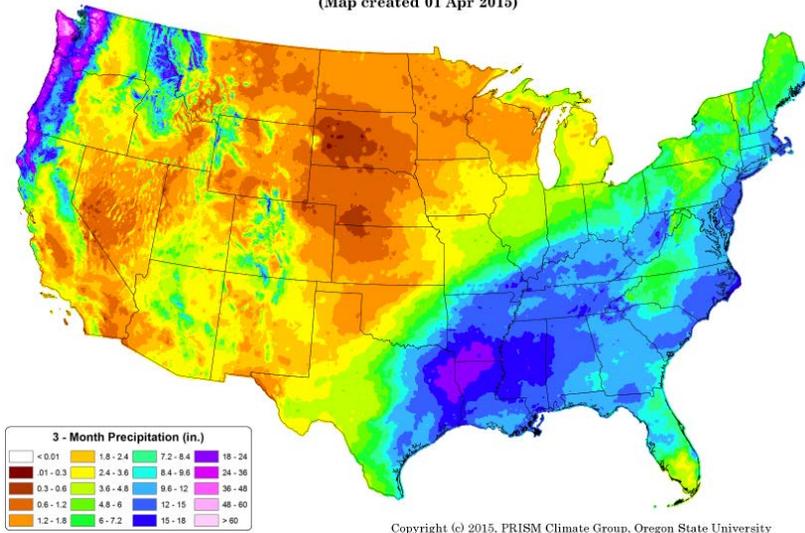
No basins are reporting less than 50% of normal at this time for the Water Year (red area).

As the Water Year advances, it becomes more difficult for river basins to change bin categories.



Weekly Water and Climate Update

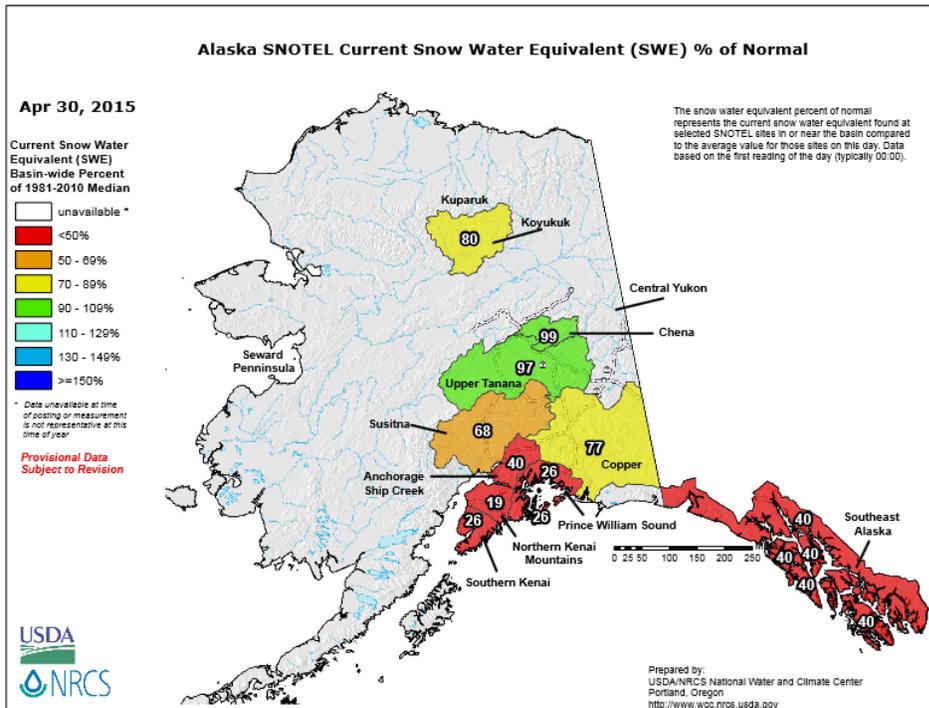
Total Precipitation: January 2015 - March 2015
 Period ending 7 AM EST 31 Mar 2015
 (Map created 01 Apr 2015)



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 Great Plains, and much of the Midwest received totals of less than 2.4 inches.

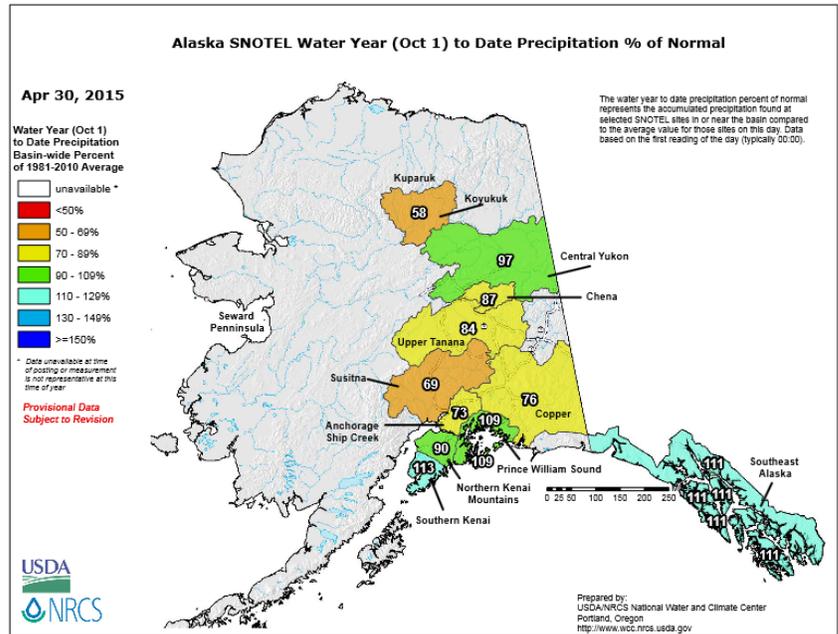
Alaska Snow Water Equivalent & Precipitation Conditions



The [Alaska SNOTEL current SWE percent of normal map](#) shows conditions across most of the state, with the exception of the Chena and Upper Tanana Basins, which are 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 to above normal conditions for the southern and southeast parts of the state, and for the central Yukon 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.

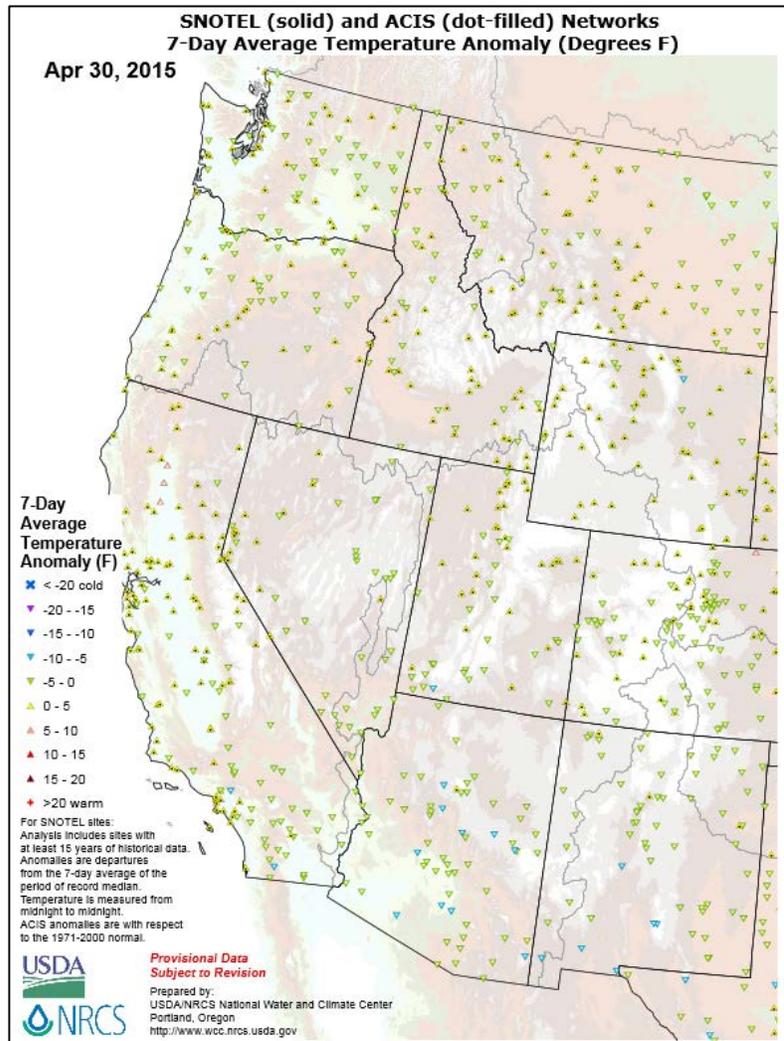


Temperature

The SNOTEL and ACIS [7-day temperature anomaly](#) map for the western U.S. shows much of the West was near normal. There was one station with high temperature anomalies in northeast Colorado at **+5-10** degrees F.

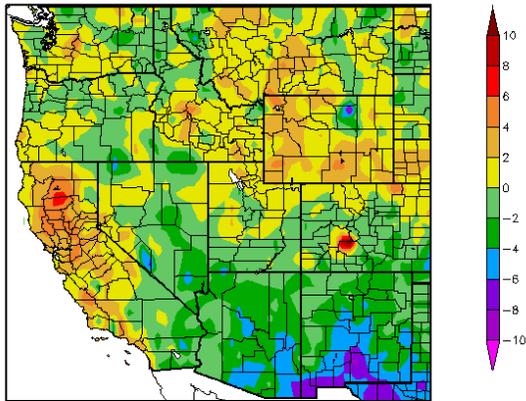
Most of the West reported near normal temperatures for the week.

There were a few stations reporting cool anomalies in southern California, Arizona, southern Utah, southern New Mexico, and one station in northern Wyoming. The anomalies reported in these states were in the **-5-10** degree F range.



Weekly Water and Climate Update

Departure from Normal Temperature (F)
4/23/2015 - 4/29/2015



The [ACIS](#) map of the 7-day average temperature anomalies in the West ending April 29 shows that the region had a near normal week. The greatest positive temperature departures occurred in California and a few other areas, with a station in central Colorado having the highest anomaly (>+10°F). The largest negative temperature departures were reported in southern Arizona and southern New Mexico (<- 8°F).

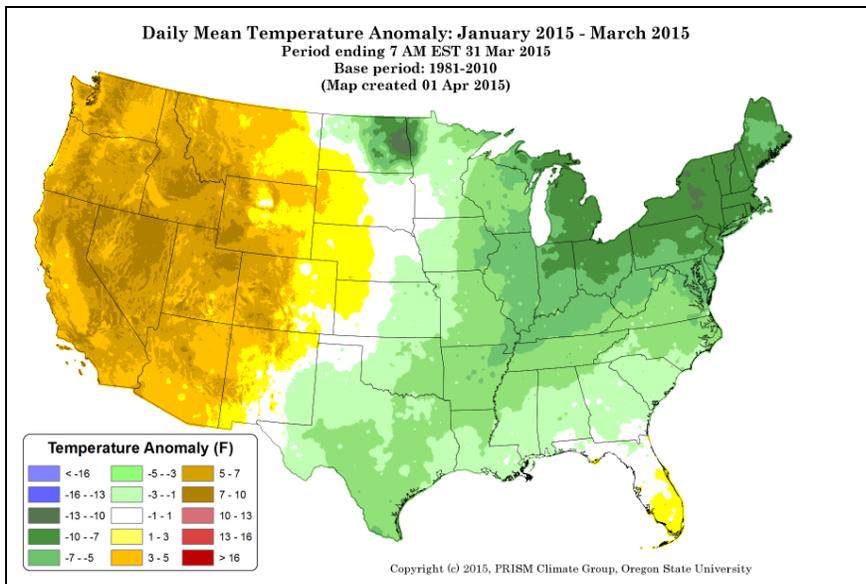
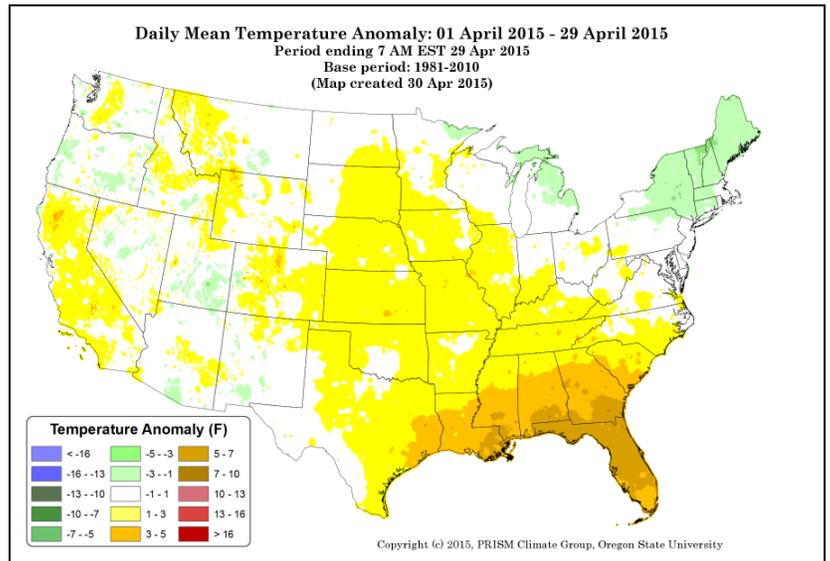
Also, see [Dashboard](#) and the [Westwide Drought Tracker](#)

Generated 4/30/2015 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 April 2015, the national daily mean temperature anomaly [map](#) shows a cool region over much of the Northeast, with the largest cool anomaly from northern Vermont to northwest Maine (<- 3°F). In contrast, above normal temperatures were recorded primarily in a large region of the Southeast, with the highest warm anomalies in Alabama, 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

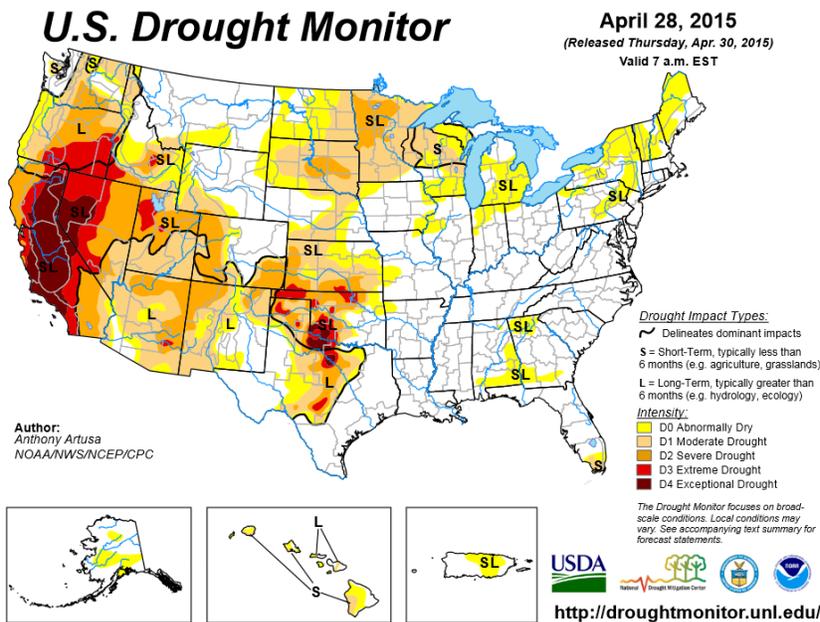
[National Drought Summary](#) – April 28, 2015

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

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

“For the contiguous 48 states, the U.S. Drought Monitor showed 37.41 percent of the area in moderate drought or worse, compared with 37.13 percent a week earlier. Drought now affects 73,703,377 people, compared with 76,589,537 a week earlier.

For all 50 U.S. states and Puerto Rico, the U.S. Drought Monitor showed 31.30 percent of the area in moderate drought or worse, compared with 31.06 percent a week earlier. Drought now affects 74,051,306 people, compared with 76,937,466 a week earlier.”



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

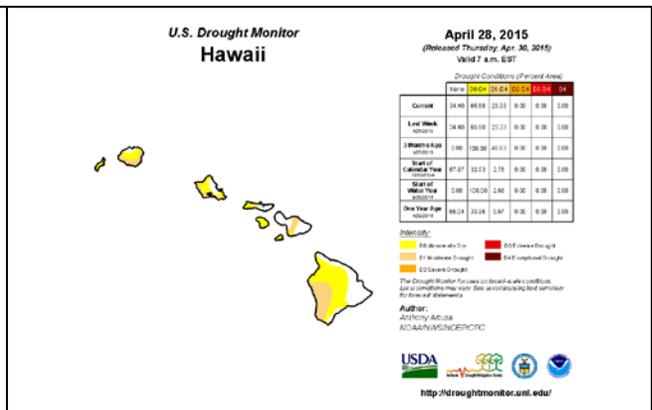
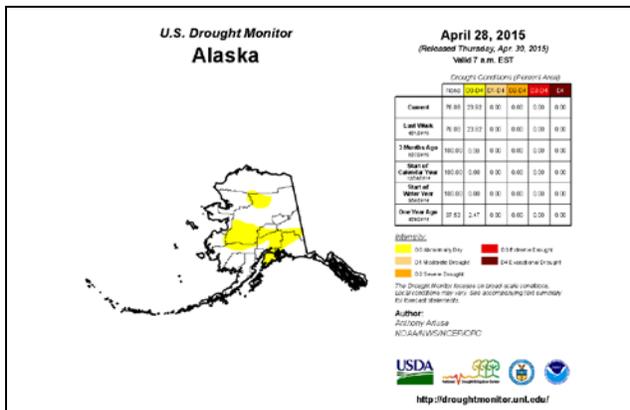
[Current Drought Monitor](#) weekly summary. The exceptional D4 levels of drought are scattered across CA, NV, TX, and OK.

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 was no change in Alaska and 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](#).”

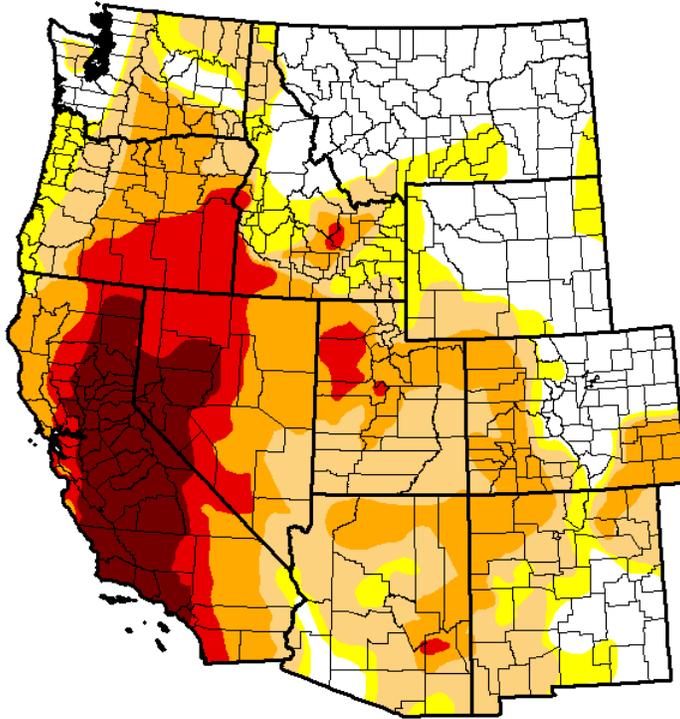
Weekly Water and Climate Update

U.S. Drought Monitor West

April 28, 2015

(Released Thursday, Apr. 30, 2015)

Valid 7 a.m. EST



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	26.14	73.86	62.12	39.33	17.64	7.95
Last Week <i>4/21/2015</i>	28.21	71.79	61.51	37.95	17.19	7.95
3 Months Ago <i>1/27/2015</i>	31.10	68.90	53.77	33.36	18.72	6.96
Start of Calendar Year <i>12/30/2014</i>	34.76	65.24	54.48	33.50	18.68	5.40
Start of Water Year <i>9/30/2014</i>	31.48	68.52	55.57	35.65	19.95	8.90
One Year Ago <i>4/29/2014</i>	30.05	69.95	61.43	45.66	19.60	4.66

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:

*Anthony Artusa
NOAA/NWS/NCEP/CPC*



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

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

Click to enlarge maps

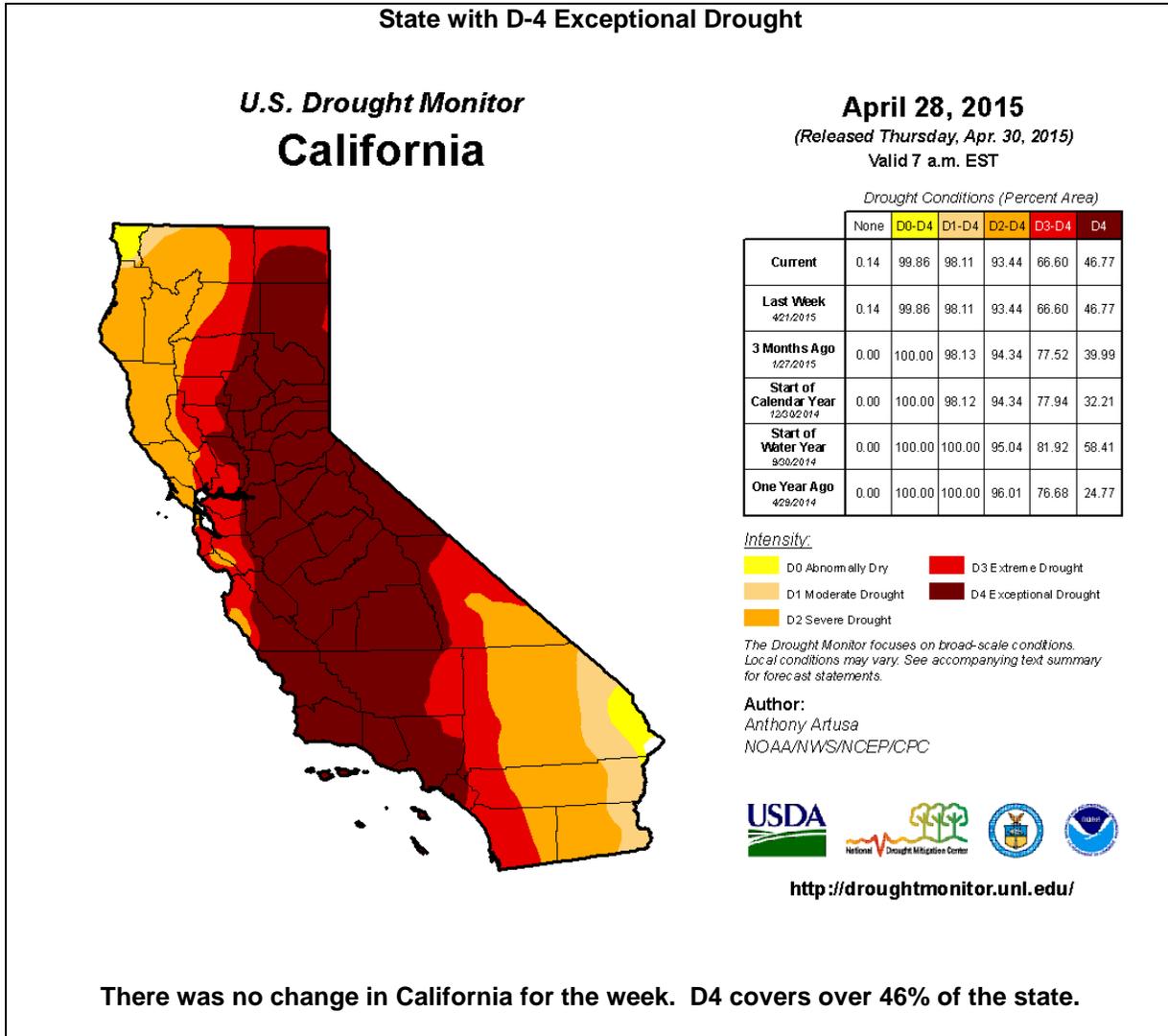
Risk Management Web Resources

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:

- U.S. - [Drought is not just a California problem](#) – Apr 18
- SD - [Dry spell reaching historic levels in South Dakota](#) – Apr 23
- WA - [No, Mr. Shatner, California can't have our water](#) – Apr 23
- OR - [Ore. governor: Drought emergencies in 2 more counties](#) – Apr 21
- WA - [Stored water used early in Yakima Basin drought](#) – Apr 22
- NM - [Dry summer would drain reservoirs, officials say](#) – Apr 23

Weekly Water and Climate Update



[CA Drought Information Resources](#)

[Drought News from California:](#)

[Farm water use comes under scrutiny](#) – Apr 20

[Wildfire threatens 300 homes in drought-stricken Southern California](#) – Apr 19

[A century of California droughts told through cartoons](#) – Apr 22

[California delta smelt survey turns up only 1 fish](#) – Apr 19

[Bill to ban fining Californians who let lawns go brown in drought](#) – Apr 23

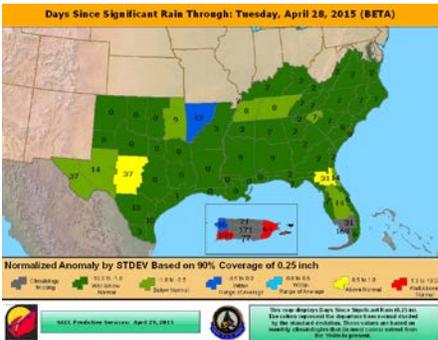
[Court: San Juan Capistrano's tiered water rates are illegal, may hinder conservation](#) – Apr 20

[State water board issues revised drought regulations for Californians](#) – Apr 19

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:
[Drought persisting in part of Central Texas](#) – Apr 24
[Rio Grande Crippled by Drought](#) – Apr 21

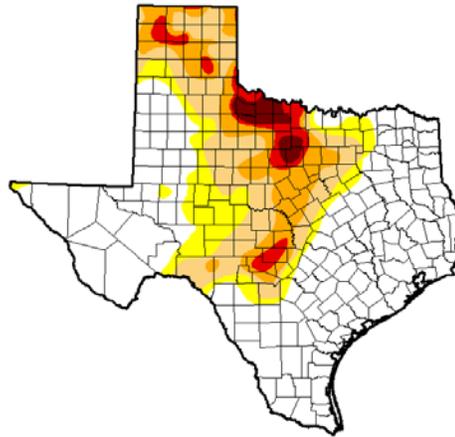


[Days since Significant Rain Summary](#)

State with D-4 Exceptional Drought

U.S. Drought Monitor Texas

April 28, 2015
 (Released Thursday, Apr. 30, 2015)
 Valid 7 a.m. EST



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	58.89	41.11	30.71	15.83	5.57	2.02
Last Week 4/21/2015	55.48	44.52	34.56	21.93	9.35	2.55
3 Months Ago 1/27/2015	41.42	58.58	39.22	23.93	11.24	3.05
Start of Calendar Year 1/1/2015	34.37	65.63	44.68	25.73	11.70	3.17
Start of Water Year 9/30/2014	28.92	71.08	48.95	29.54	11.26	2.69
One Year Ago 4/29/2014	9.88	90.12	74.47	52.91	37.88	17.75

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:
 Anthony Artusa
 NOAA/NWS/NCEP/PCP



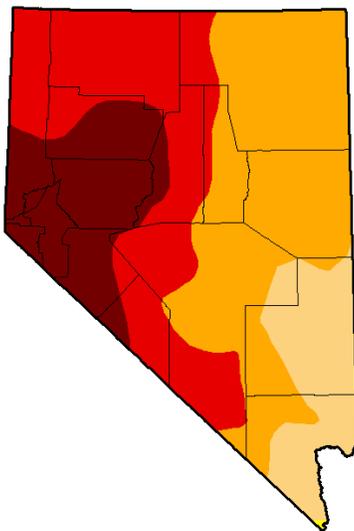
<http://droughtmonitor.unl.edu/>

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

State with D-4 Exceptional Drought

U.S. Drought Monitor Nevada

April 28, 2015
 (Released Thursday, Apr. 30, 2015)
 Valid 7 a.m. EST



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	99.93	87.00	49.21	18.38
Last Week 4/21/2015	0.00	100.00	99.93	86.67	49.12	18.38
3 Months Ago 1/27/2015	0.00	100.00	99.93	68.25	50.06	17.43
Start of Calendar Year 1/1/2015	0.00	100.00	96.98	68.25	48.38	11.89
Start of Water Year 9/30/2014	0.00	100.00	97.04	69.89	48.38	11.89
One Year Ago 4/29/2014	0.00	100.00	100.00	84.46	38.73	8.24

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:
 Anthony Artusa
 NOAA/NWS/NCEP/PCP



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

There was no change in Nevada for the week.

Nevada Drought News:

[Savage drought will drive Lake Mead to record low on Sunday](#) – Apr 23

[Seeding snow from the sky](#) – Apr 24

[Drought Forcing Some Nevada Ranchers To Ship Their Cattle East](#) – Apr 28

[Drought Is "Brutal" Says Fallon Farmer](#) - Apr 28

Weekly Water and Climate Update

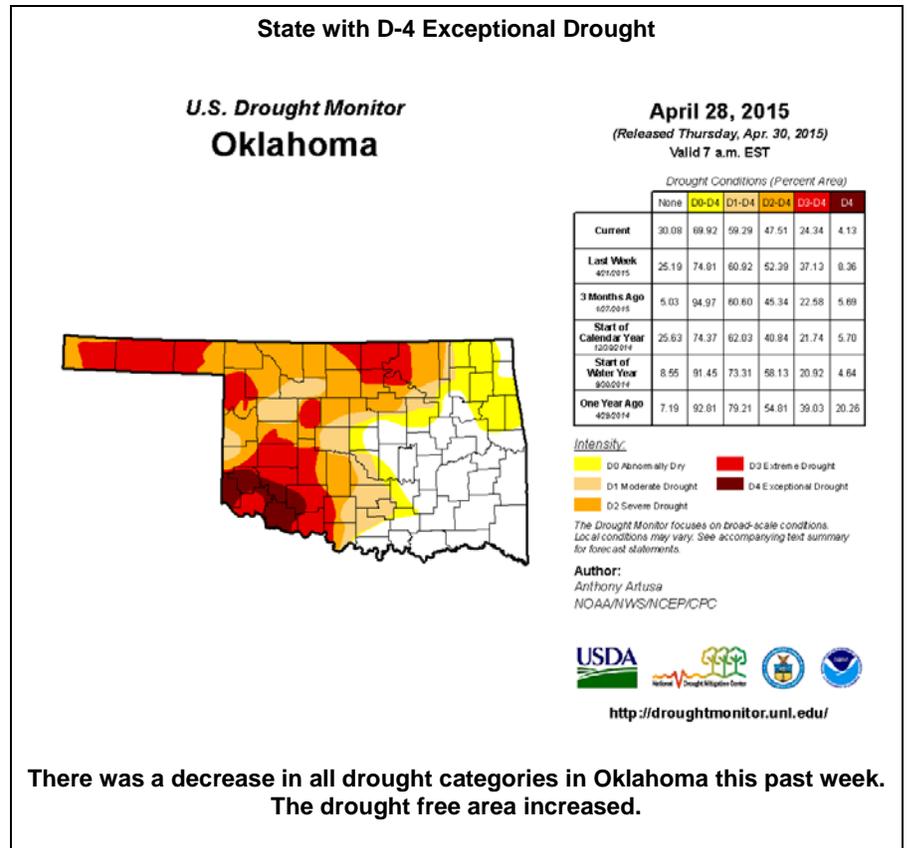
Related Area News:

[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:

[After five years of drought, Lawton turns to cloud seeding in hopes of increasing rainfall](#) – Apr 22



U.S. Population in Drought

Number of people in each drought category in the U.S. for the week ending April 28, 2015

Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
2015-04-28	189,226,124	116,171,331	73,703,378	46,240,047	32,006,639	20,770,733
2015-04-21	187,828,067	117,569,387	76,589,537	50,323,097	33,662,255	20,846,670

Population figures affected by drought in the U.S. Drought Monitor website show that, for this week, more than 73,000,000 people in the United States were in a drought-affected area, which is a decrease by over 2.8 million people from last week.

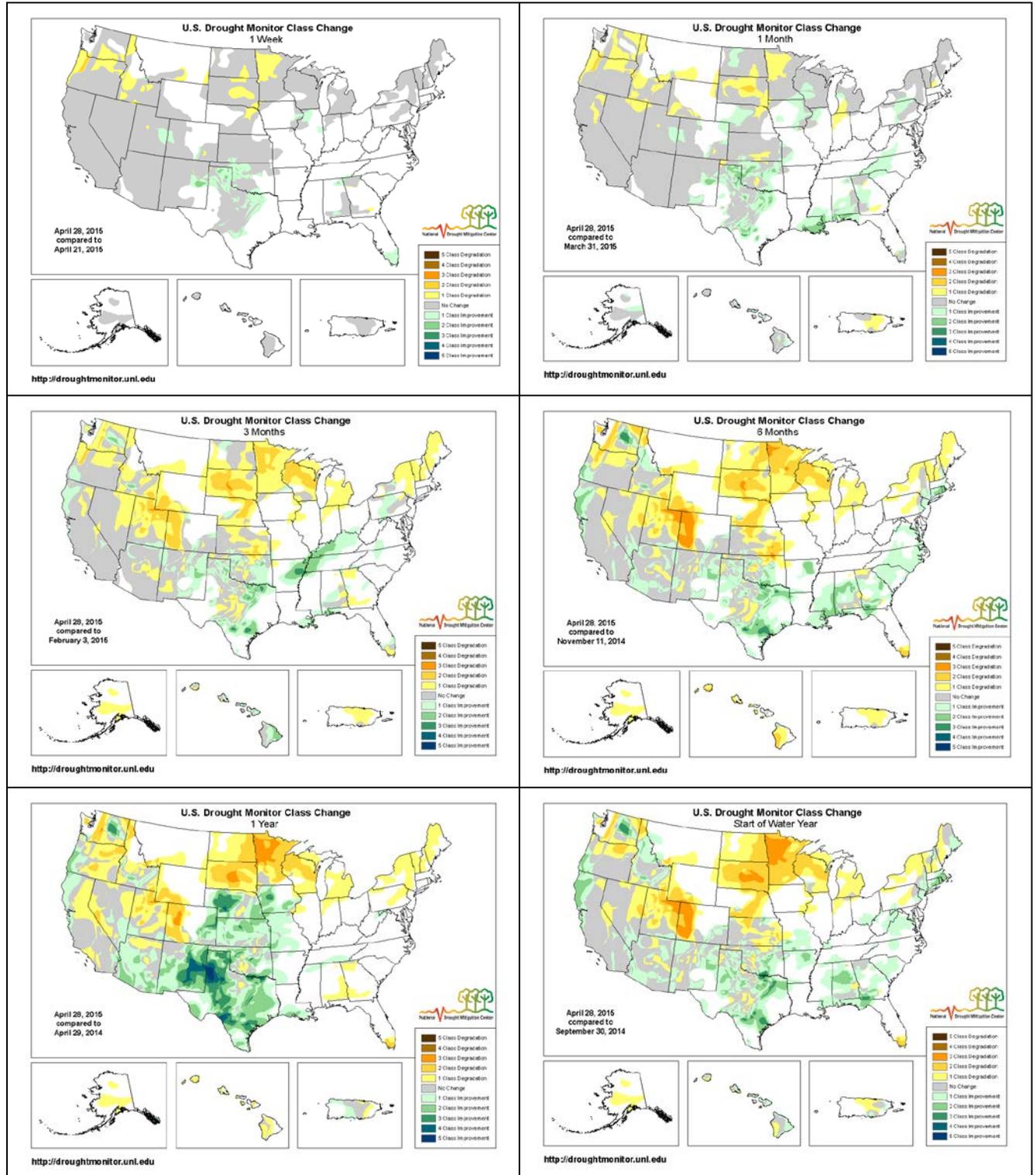
Population Statistics Methodology:

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

Weekly Water and Climate Update

Changes in Drought Monitor Categories

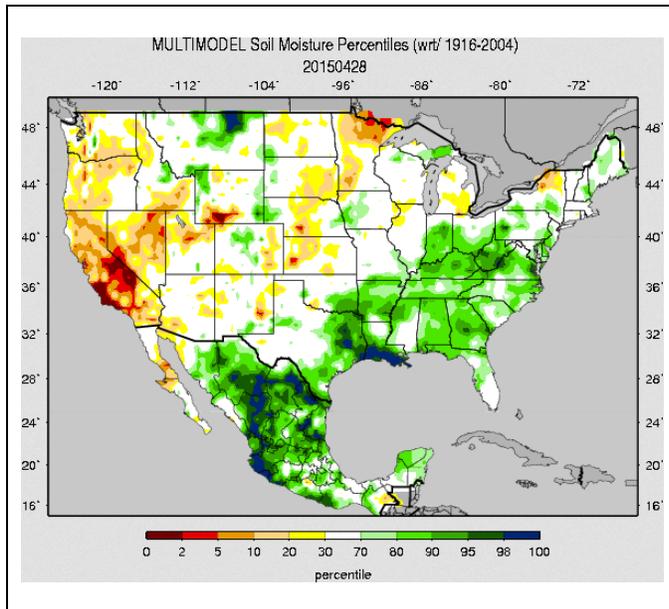
Over Various Time Periods



Click on any of these maps to enlarge. Note how the conditions over the upper Great Plains, and the central Rockies 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 Great Plains, Southwest, and the Pacific coast states have improved (lower left map).

Weekly Water and Climate Update

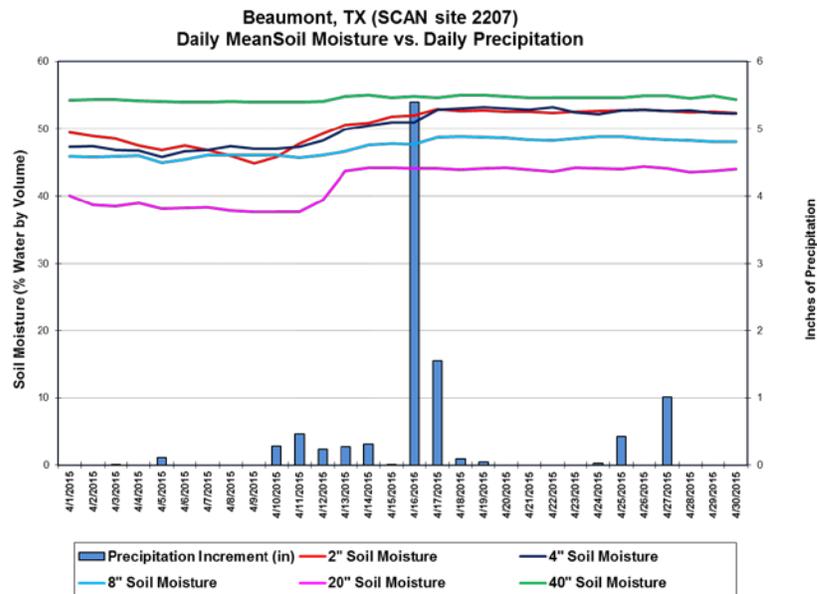
Soil Moisture



The national soil moisture model ranking in [percentile](#) as of April 28, 2015, shows dryness over most of the West, Southwest, and Great Plains. The driest areas were in California, Nevada, northern Utah, Oregon, Washington, Idaho, southern Wyoming, Nebraska, Kansas, Minnesota, and northern New York. Moist soils dominated areas of Montana, northwest Wyoming, east Texas, Louisiana, Mississippi, Alabama, Georgia, northern Florida, southeast Oklahoma, Arkansas, southern Indiana, southern Ohio, West Virginia, Tennessee, Virginia, and Kentucky. Slightly moist soils were also scattered elsewhere in the U.S.

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)

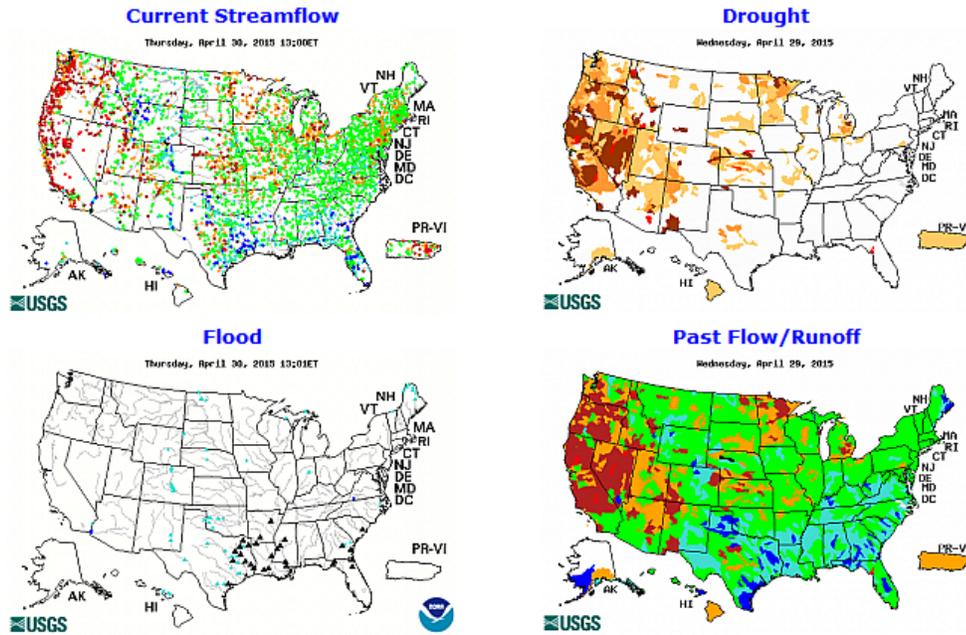


This NRCS resource shows soil moisture data for the last month at the [Beaumont Texas SCAN station 2207](#) in southern Texas. The area had a large precipitation event a week ago and several smaller events recently during the past 30 days (blue bars). This rainfall resulted in an increase in soil moisture from the large event at all sensors, with a noticeable maintenance of high soil moisture during the last week.

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. There are many gages at flood stage centered in the lower Mississippi tributaries and southern U.S. this week. These include ten gages in Texas, five gages in Louisiana, two gages in Arkansas, four in Mississippi, two in Georgia, one in South Carolina, and five 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; **20** gages for moderate flooding; and **66** gages for minor flooding.

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

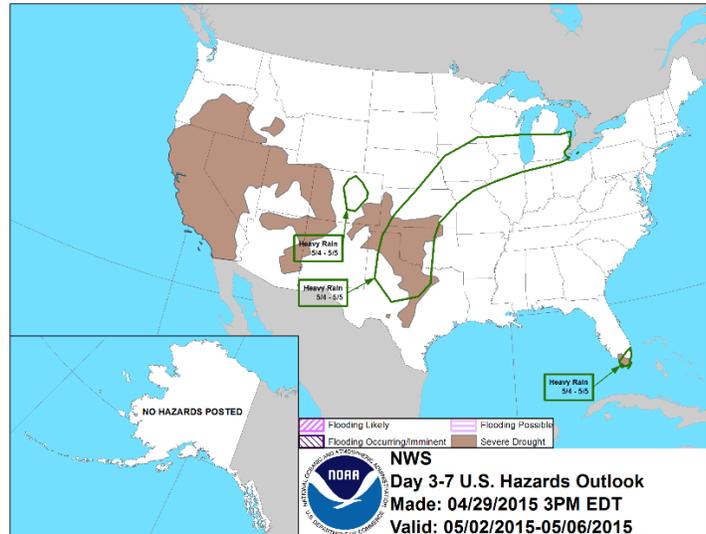
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National [Weather Hazards](#)

The National Weather Service map of national weather hazards for the next 3 – 7 days forecasts heavy rain in three areas of the country: central Colorado, from Texas to the Great Lakes, and in southern Florida (5/4-5).

In Alaska, no hazards are posted.

Severe drought remains a large issue in much of the southcentral and western U.S.



[National Drought Summary for April 28, 2015](#)

Prepared by the Drought Monitor Author: Anthony Artusa, NOAA/NWS/NCEP/CPC.

Summary

“During the past 7-days, heavy rain (2 inches or greater) fell across portions of the southern Plains, the lower Mississippi Valley, and the Southeast. The heavy rain was associated with the approach and passage of several upper-air troughs and frontal systems. Light precipitation (up to 0.5-inch) was reported across many areas west of the Continental Divide. Daytime high temperatures early in the week only reached the 30s and 40s in the eastern Dakotas/western Great Lakes region. By the weekend, high temperatures in the 40s were common across the Great Lakes region and Northeast, as winter-like conditions were slow to give way to lasting spring warmth.

Hawaii, Alaska and Puerto Rico

No changes were made to the Alaska, Hawaii, or Puerto Rico depictions this week. The San Juan International Airport has received only about 30-percent of its normal April rainfall so far. This past week, hot and dry conditions prevailed, though vegetation along the north coast was reported to be doing okay, with not too much stress.

The Midwest

An east-west oriented band of moderate rain (1.0-1.5 inches) fell this past week across eastern Iowa. With the precipitation falling at a reasonable rate, much of the water was absorbed into the ground, with little runoff. This prompted the removal of abnormal dryness (D0) from the Counties of Clinton and Cedar. A slight trimming of the nearby D0 area in northern Washington County was also rendered to the depiction. In northwestern Illinois, little if any precipitation deficits were noted out to 90-days. In response, abnormal dryness (D0) was removed from the counties of Winnebago, Carroll, Ogle, Whiteside, Lee, Henry, Bureau and Marshall. In east-central Illinois, the lingering area of D0 did not have much support, so it was also removed from the depiction. In Minnesota, a prolonged period of dry conditions warranted a 1-category degradation from moderate to severe drought (D1 to D2) over northwestern portions of the state. This D2 area roughly corresponds to the area of Water Year precipitation totals that rank below the 5th percentile. Other factors, such as a 6-month SPI value less than -1.5 across much of northern Minnesota, and water levels on the huge Lake of the Woods ranging between the 10th and 25th percentiles, were also considered.

The Northeast and Mid-Atlantic

Light precipitation (up to 0.5-inch) and chilly temperatures characterized much of the region this past week. As moisture conditions are good, and stream flows range from normal to above-normal, most of the regional depiction remained unchanged. One minor exception was to trim the abnormal dryness (D0) out of northern Massachusetts due to adequate to excessive soil moisture.

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The Plains

In North Dakota, rains this past week were very spotty. Conditions were variable, with some reports of wet soil and machinery stuck in the mud, and other reports of inadequate vegetation for livestock. For this week, the only modification made to the drought depiction was to slightly expand moderate drought (D1) westward in south-central North Dakota to include eastern Stutsman, eastern Logan, and eastern McIntosh Counties. One area that bears monitoring in the next few weeks for possible deterioration to severe drought (D2) is Cass and Richland Counties, in the extreme southeast part of the state.

In eastern and central South Dakota, field work and corn planting is ramping up quickly this week, especially in the eastern part of the state, and field reports indicate dry topsoil conditions. A fairly large area of severe drought (D2) was introduced in central and eastern South Dakota. One agricultural impact is winter wheat winterkill (due in part to dry overall conditions, lack of protective snow cover, and a lack of moisture so far this spring). Other small grains that were planted this spring have been slow to emerge, or uneven in emergence, due to dry conditions. Alfalfa fields also experienced winterkill and/or frost damage. Moderate drought (D1) was expanded across north-central and extreme southeastern portions of South Dakota, where recent rains missed. The National Agricultural Statistics Service (part of USDA) soil moisture reports indicate South Dakota is 69 percent Short or Very Short, which is the third worst in the Nation.

In northeastern Nebraska, longer-term precipitation deficits extend back to (at least) the start of the current Water Year (October 1, 2014). Recent rainfall has also missed this region. Therefore, a 1-category deterioration was made to the depiction, from abnormal dryness to moderate drought (D0 to D1), for the Counties of Antelope, Pierce, Knox, and Cedar. In southwestern Kansas, there were welcome rains and cooler conditions, but the only 1-category upgrade was made to the counties of Meade and Clark. Other areas received enough precipitation to at least offset further degradation.

In western and central Oklahoma, heavy rain (widespread 2-4 inches, locally in excess of 10 inches) fell during the past week prompting 1-category improvements in some areas. In Texas, rain fell mostly where it was needed this week, resulting in lots of 1-category improvements across the state. Improvements in the Dallas-Fort Worth area are based on reservoir recovery, while in the San Antonio area, they are based on aquifer recovery and various objective indicators. Reservoirs are lagging behind in central Texas. Short-term improvements were also rendered to the drought depiction in the Panhandle region.

The Southeast and lower Mississippi Valley

In southeastern Tennessee, rainfall amounts of 3-6 inches within the past two weeks supported the removal of lingering abnormal dryness. In southern Alabama, the area of moderate drought (D1) was deleted from the drought depiction due to sufficient rainfall and stream flow values ranging within the highest quartile of the historical distribution. In northeastern Alabama, a large portion of the D0 area was trimmed away, due to factors such as near to above-normal soil moisture values (both total column and root-zone), and stream flows ranging between the 65th and 90th percentiles. Moderate rain (0.5-2.0 inches) fell across much of the state of Georgia, but not enough for widespread improvements, and just enough to offset further degradation. In northern Georgia, abnormal dryness (D0) was trimmed away from southern Gwinnett, and all of Banks and Stephens Counties. In southern Georgia, abnormal dryness (D0) was expanded eastward to include southern Coffee, southern Bacon, northern Ware, and northern Pierce Counties. In North Carolina, below-normal rainfall was reported in most areas during the past 7-days. Normal precipitation at this time of year is approximately one inch per week. Moisture conditions and stream flows remain in good shape. One to two inch rains across southern Florida prompted a 1-category improvement across the board.

The West

In eastern New Mexico during the past several days, widespread 1-2 inch rain amounts (locally greater) fell in the area from Clayton to Tucumcari, Santa Rosa, and Clovis. There were reports of excellent soaking rains, with little runoff into arroyos and small streams. A rancher from San Miguel County reported soil moisture down to 3 feet, with significant green-up compared to the past several years. Factors such as these prompted the removal of severe drought (D2) from Quay County, and moderate drought (D1) from southern Quay County and portions of adjacent counties. Following are USGS stream flow reports for New Mexico (expressed as percent of historical average for the current Water Year, October 1, 2014 to present). Stream flows in the Gila basin range between 98-104 percent; for the headwater tributaries of the Pecos River basin 106-138 percent, and for the lower Pecos River basin 84-166 percent. Stream flows in the Animas River of the San Juan River basin are about 123 percent of average; for the headwater tributaries of the Canadian River basin 78-126 percent, for the mid- to lower- part of the Canadian River basin 19-41 percent, and for the Canadian River mainstem near 21

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percent. In the Rio Grande basin above Albuquerque, stream flows range between 88-129 percent of average; the Rio Grande below Taos Junction Bridge 116 percent, and the Jemez River near Jemez 92 percent of average.

Relatively small-scale revisions were made to the depiction in both Colorado and Utah. The largest change was a 1-category improvement (from D2 to D1) across eastern sections of Utah, and adjacent western sections of Colorado.

In southwestern Idaho over the past few weeks, there has been a robust green-up in the Owyhee River basin. However, it appears to be short-lived, as the snow-dominated streamflow peak has, or is now, passing through the region. In addition, prospects for ample precipitation within the next two weeks are low. As a result, widespread 1-category deterioration was rendered to the drought depiction across much of Idaho. In Washington, it's been much drier than usual during the last month, especially in the lower Columbia Basin. As a result, the Yakima Bureau of Reclamation announced their mid-month forecast is expecting pro-ratable water users to receive only 54 percent of their water allocation. Reservoirs are being tapped earlier than normal (normal is late June), since snow melt is not adequate for regional needs, in addition to stretches of warm, dry weather. Accordingly, severe drought (D2) was expanded from north-central Oregon into south-central Washington, and moderate drought (D1) was expanded across the Blue Mountains (Garfield and Asotin Counties) in the extreme southeast part of the state, where the few Snotel stations that are there, are snow-free. In northeastern Oregon, severe drought (D2) was expanded across Umatilla and northern Baker Counties. Abnormal dryness (D0) was expanded to include the Oregon Coast, due to significant short-term precipitation deficits. Moderate drought (D1) was expanded westward across the western slopes of the Oregon Cascades, and much of the Willamette Valley. In south-central and southeastern Montana, abnormal dryness (D0) was modestly expanded to reflect the increasingly dry conditions.

Little if any precipitation fell across the state of California during the past 7-days, with the exception of moderate to locally heavy precipitation (0.5-3.0 inches) over north-central portions of the state, including the Sierras. The heavy precipitation will aid in green-up, but is expected to have very little impact on the long-term drought. No alterations were made this week to the California drought depiction.

Looking Ahead

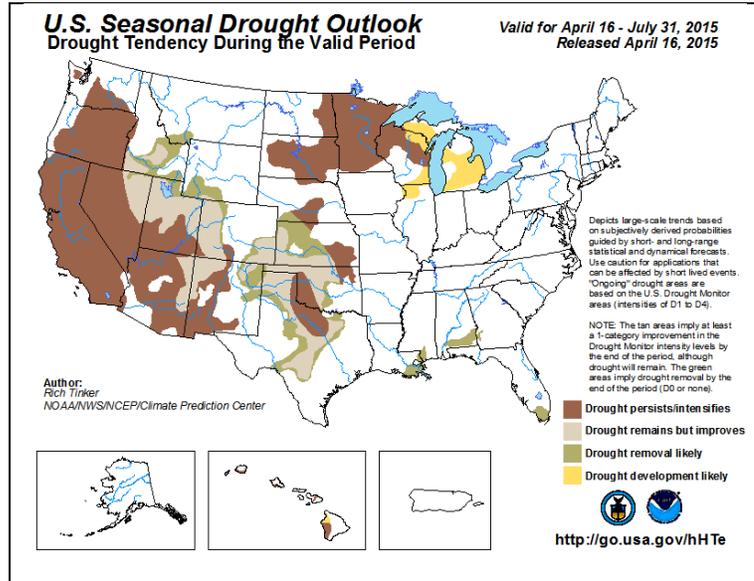
For the upcoming 5-day period, April 30-May 4, much of the contiguous United States is expected to receive little if any precipitation. Fairly localized exceptions may include the Virginias and parts of the Corn Belt, where 0.5-2.0 inches is predicted.

For the 6-10 day period, May 5-9, there are elevated odds of above-median precipitation across most areas between the Rockies and Appalachians, as well as for southern Florida. There are elevated odds of below-median precipitation for much of the Pacific Northwest and part of the Southeast.”

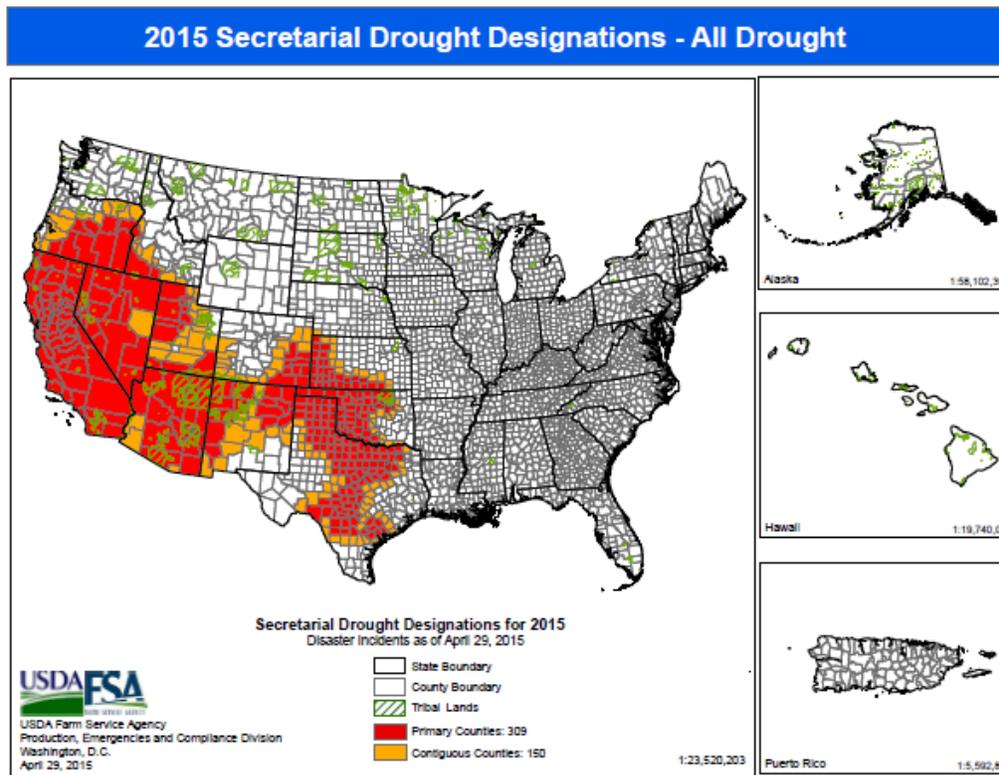
Supplemental Drought Information

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



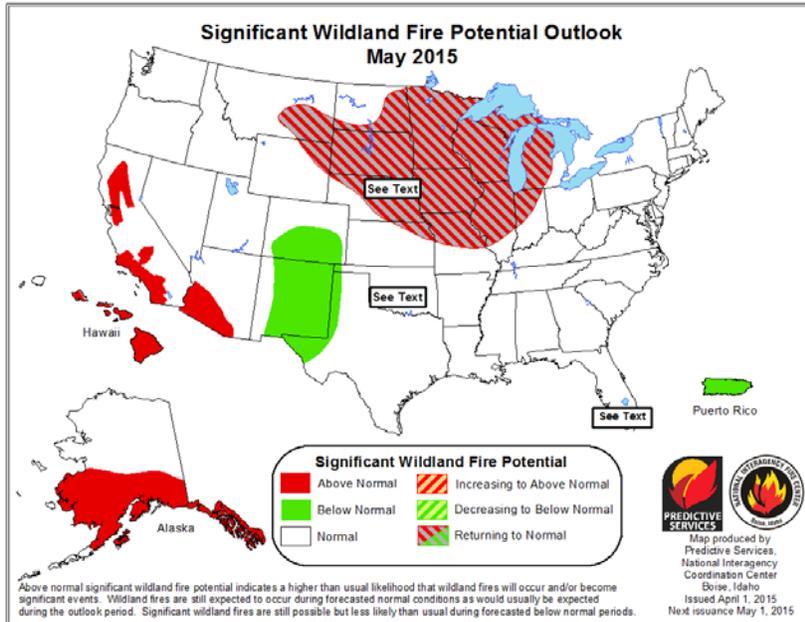
Refer to the USDA Drought Assistance [website](#) and [National Sustainable Agriculture Information Service](#).

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

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

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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.

Additional Maps

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

Regional zooms of ACIS station data percent-of-normal precipitation: <http://dmcommunity.unl.edu/maps/All-CONUS-ACIS-PNP.pptx>. National Water and Climate Center (NWCC) Surface Water Supply Index (SWSI) maps: <http://www.wcc.nrcs.usda.gov/wsf/swsi.html>

Supplemental Drought-Agriculture News

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

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

“California’s mandatory water targets updated

The California State Water Resources Control Board revised its mandatory water conservation goals for some cities as water agencies protested that the original water use goals were unreasonable. The updated mandatory conservation goals ranged from 8 to 36 percent, in comparison with 2013 water use.

Tiered water pricing ruled illegal in California

The 4th District Court of Appeals ruled that San Juan Capistrano’s tiered water rate system was illegal, sounding a warning for other water districts that use tiered pricing to promote water conservation. A key component of the conservation orders put forth by Gov. Brown on April was for local agencies to implement conservation pricing to discourage water waste.

Water diversions at an end for post-1914 water rights holders in the San Joaquin River watershed

On April 23, 2015, the State Water Resources Control Board (State Water Board) issued curtailment notices to all post-1914 water right holders within the San Joaquin River watershed and those with junior priority class right

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holders in the Scott River watershed until further notice. The State Water Board has been monitoring the flow conditions in the San Joaquin and Scott River watersheds and due to limited precipitation and snowpack, the current flows are insufficient to satisfy diversion demands under more senior rights.

Bill to permit brown lawns during drought emergency passed Assembly, headed to Senate

The California Assembly unanimously passed a bill preventing residents from being fined for allowing their lawns to turn brown during a drought emergency. The legislation will move to the Senate.

Delta smelt scarce in a trawl survey of the Sacramento-San Joaquin Delta

The March trawl survey for adult smelt conducted by the California Department of Fish and Wildlife found only four females and two males in the Sacramento-San Joaquin Delta. The April survey turned up just one fish. Counts of longfin smelt have also fallen to record lows.

Lake Mead to fall to record low

The level of Lake Mead is expected to dip below 1,080.19 feet above sea level on April 26, falling to a level not seen since May 1937. The March forecast for the Colorado River predicted roughly 71 percent of average flow this summer for the 40 million people who rely on the river for water and electricity. The April forecast estimated the flow to be just 52 percent of average, and one expert warned that the flow could be even less.

Drought emergencies in two additional Oregon counties

Gov. Kate Brown of Oregon announced drought emergencies for Baker and Wheeler counties, due to drought, thin snowpack and low water supplies. The governor previously recognized Crook, Harney, Klamath, Lake and Malheur counties as being in drought emergencies. Jackson and Josephine county and areas in the Umatilla Basin may also be candidates for drought emergency declarations.

River flows insufficient in Washington's Yakima Basin

The U.S. Bureau of Reclamation began using stored reservoir water to compensate for low natural flows amid intensifying drought and abysmally low snowfall in the Yakima Basin. Normally the stored water is not used until June, but unusual weather conditions forced them to dip into the stored water on April 15. "

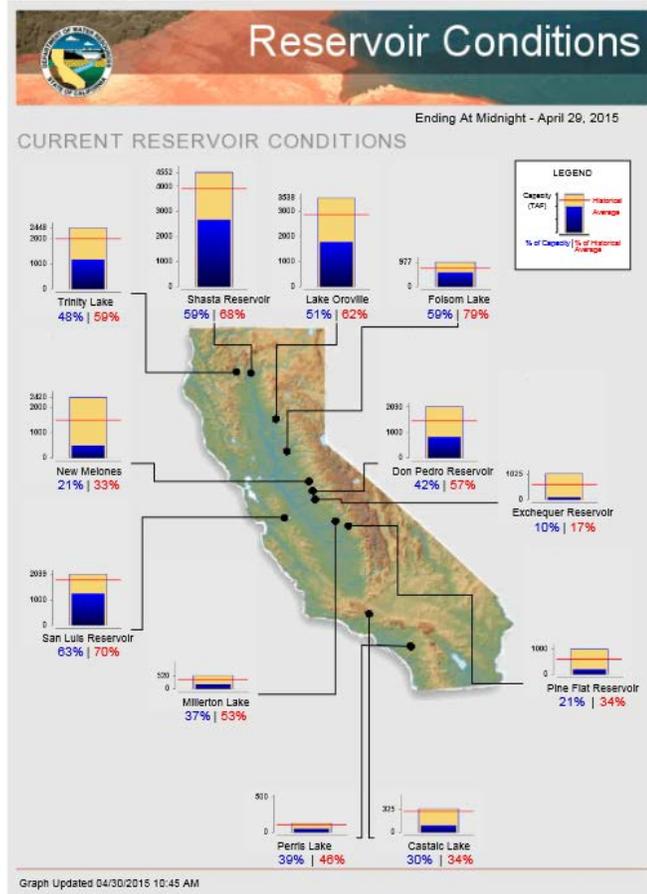
Tea Cup Reservoir Depictions

- <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)

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California Reservoir Conditions

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



[California delta smelt survey turns up only 1 fish](#) San Jose Mercury News

April 19, Sacramento-San Joaquin Delta. The March trawl survey for adult smelt conducted by the California Department of Fish and Wildlife found only four females and two males in the Sacramento-San Joaquin Delta. The April survey turned up just one fish. Counts of longfin smelt have also fallen to record lows. Early in April, the State Water Resources Board chose to limit Sierra runoff to the estuary, due to drought, and depriving fish of the cold, fresh water that enhances survival.



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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](#).

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