



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

Weekly Water and Climate Update Thursday, June 18, 2015

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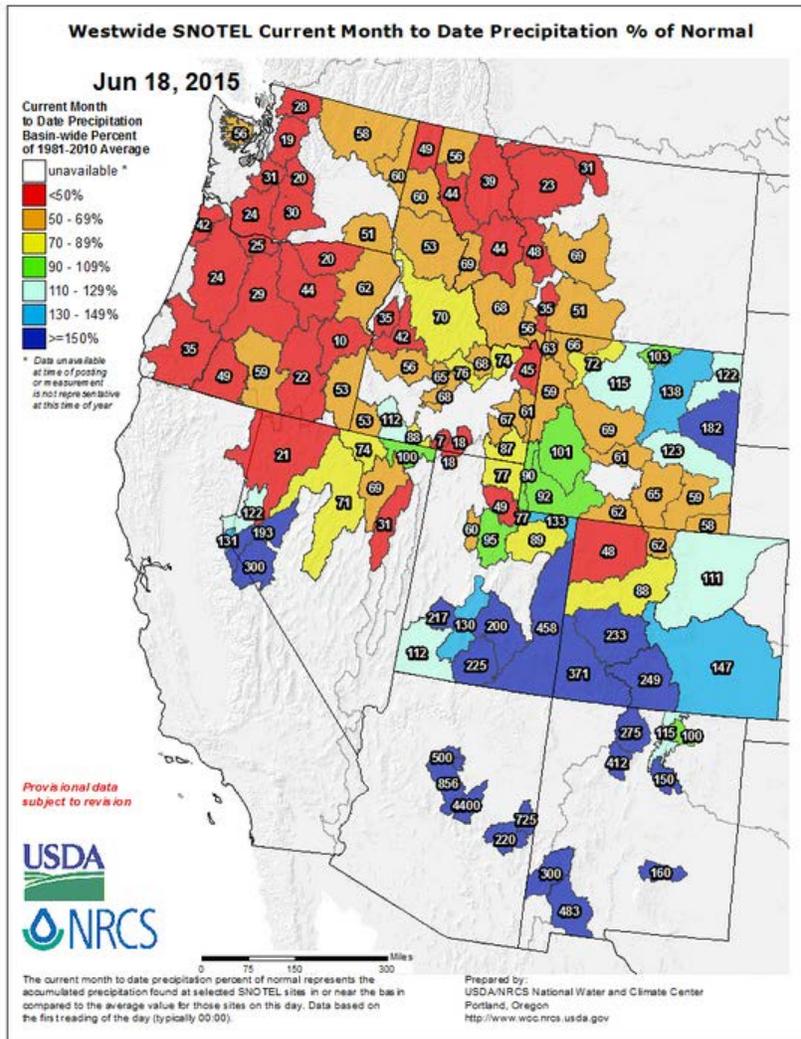
Photo from the [Colorado June 1 Basin Outlook Report](#). View of Mount Princeton over the Arkansas River from Salida on May 29, 2015. Snowpack in the Upper Arkansas River basin was above median for June 1st and the Arkansas River at Salida is projected to have near normal streamflow volumes this summer.

Photograph by Lexi Landers, NRCS

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

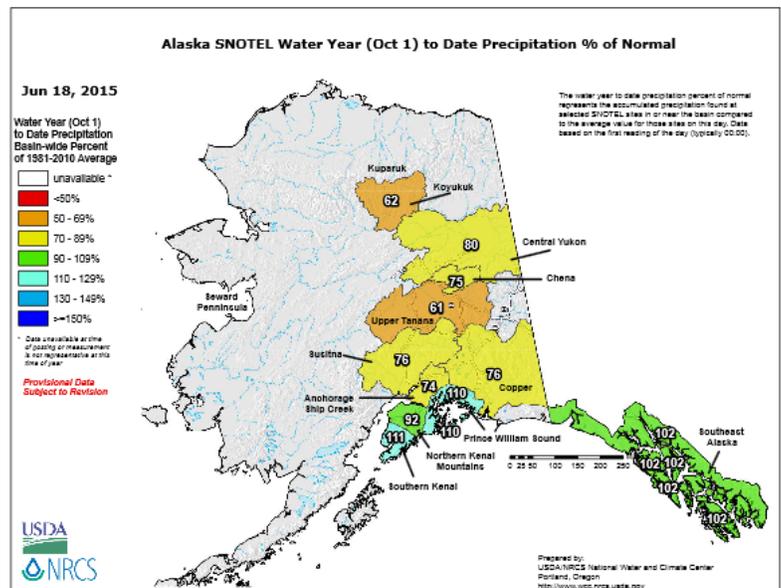
Precipitation



In the West, the SNOTEL [current month to date precipitation % of normal](#) map for June shows a pattern of generally wet conditions in the southern region and northeast Wyoming. Dry to near normal conditions were reported in the central to the northern regions of the West.

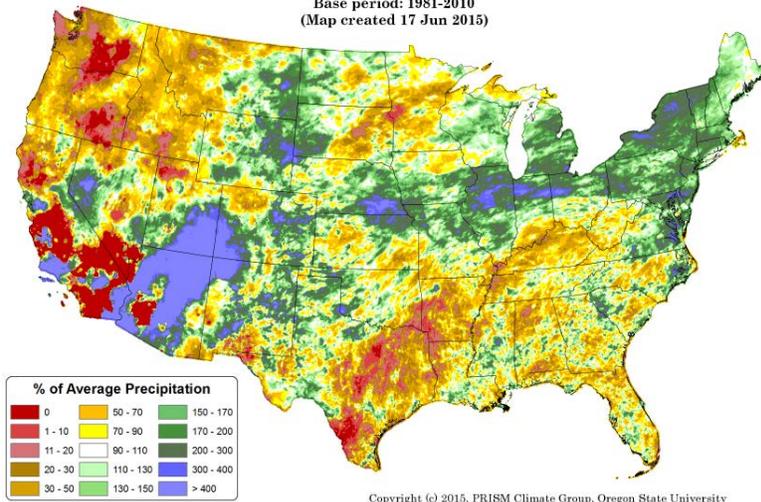
At this time of year, percent of normal may be exaggerated in normally low precipitation areas.

The Alaska SNOTEL [water year to date precipitation percent of normal](#) map shows near to above normal conditions for the Kenai and southeast Alaska. The remainder of Alaska reported drier than normal conditions.



Weekly Water and Climate Update

Total Precipitation Anomaly: 01 June 2015 - 16 June 2015
 Period ending 7 AM EST 16 Jun 2015
 Base period: 1981-2010
 (Map created 17 Jun 2015)



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

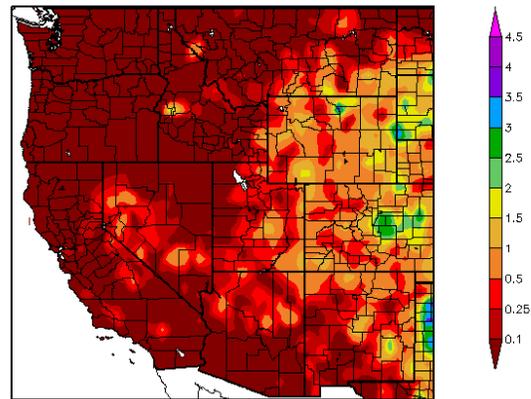
So far in June, the PRISM national [total precipitation anomaly](#) pattern reveals higher than normal precipitation in the Southwest, central Plains, and much of the Northeast. There was little or no precipitation in parts of the West, the northern Great Plains, and the southcentral U.S.

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 total in eastern Wyoming. Widely scattered precipitation was reported in many western states.

Little to no precipitation was reported in the Pacific Northwest and other areas this week (dark red).

Precipitation (in)
 6/11/2015 - 6/17/2015



Generated 6/18/2015 at HPRCC using provisional data.

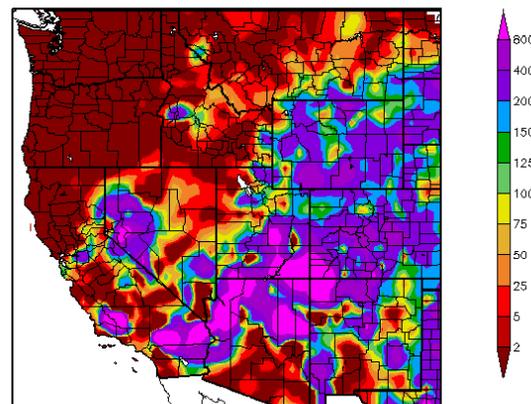
Regional Climate Centers

This ACIS [percent of normal precipitation](#) map for the last seven days shows that precipitation was above normal across much of the West. The highest percent of normal precipitation fell in several states (magenta area).

Very dry conditions for the week were reported primarily in the Pacific Northwest (dark 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 (%)
 6/11/2015 - 6/17/2015

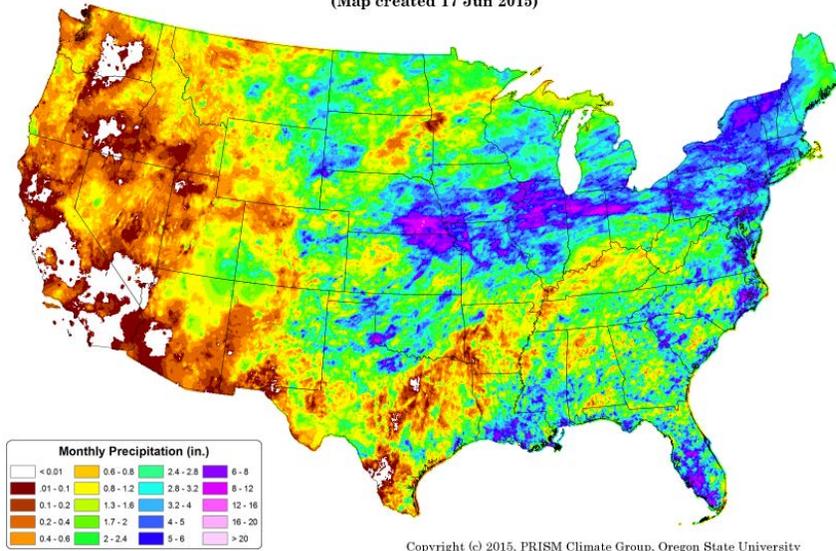


Generated 6/18/2015 at HPRCC using provisional data.

Regional Climate Centers

Weekly Water and Climate Update

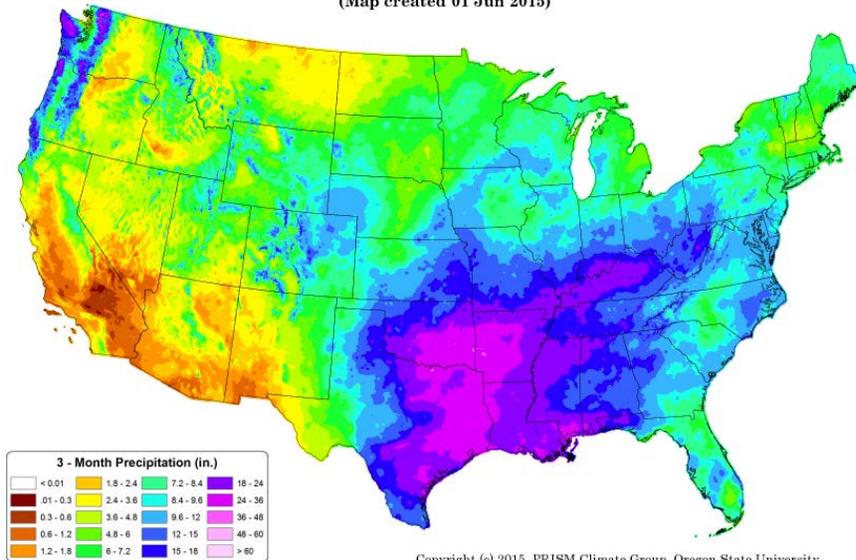
Total Precipitation: 01 June 2015 - 16 June 2015
 Period ending 7 AM EST 16 Jun 2015
 (Map created 17 Jun 2015)



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For June 2015, the [total precipitation](#) across the continental U.S. was heaviest in the East, the South, and the central Great Plains. In contrast, parts of the southern Plains and the West were mainly dry.

Total Precipitation: March 2015 - May 2015
 Period ending 7 AM EST 31 May 2015
 (Map created 01 Jun 2015)



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The national map of the [three-month period](#) (March – May) shows that the southcentral region of the nation received precipitation from 6 inches to greater than 36 inches. Parts of the West, especially along the north Pacific coast and in the mountains, also received significant precipitation.

In contrast to the eastern U.S. and north Pacific coast, parts of the Southwest and the northern Great Plains received totals of less than 2.4 inches.

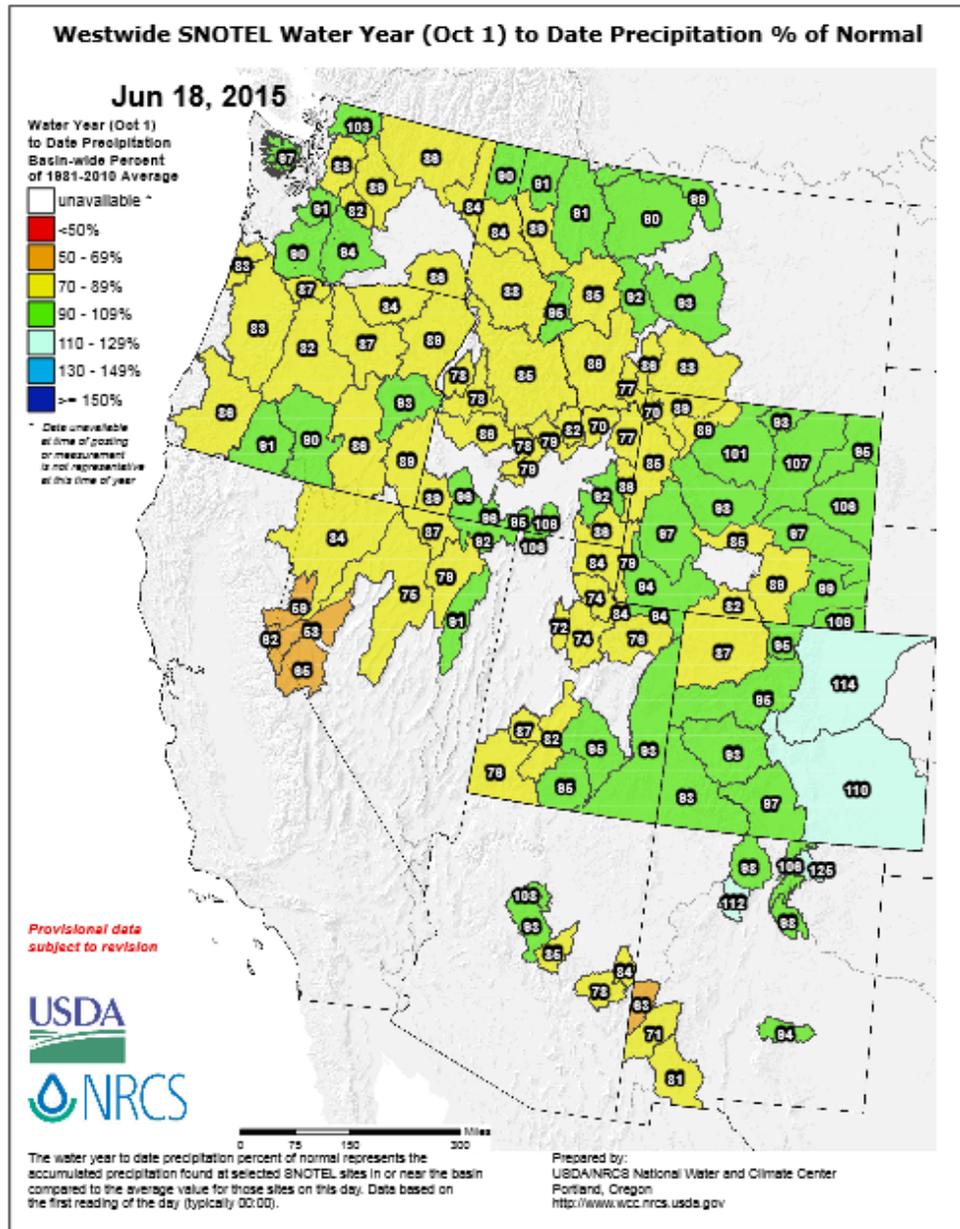
Weekly Water and Climate Update

For the [2015 Water Year](#) that began on October 1, 2014, there are two basins in northeastern Colorado and two in northern New Mexico reporting above normal precipitation.

Many scattered basins across the West have near normal conditions for this part of the Water Year (mapped in green).

Other basins in the western states have less than normal precipitation (mapped in yellow and orange).

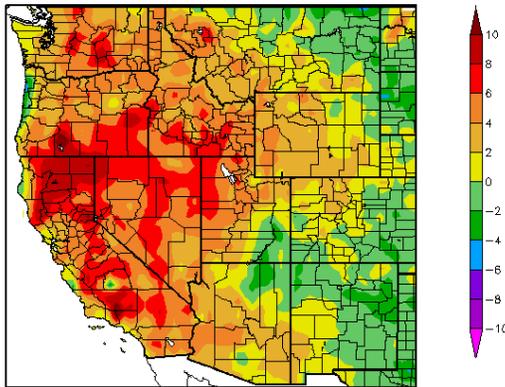
As the Water Year advances, it becomes more difficult for river basins to change categories.



Weekly Water and Climate Update

Temperature

Departure from Normal Temperature (F)
6/11/2015 – 6/17/2015



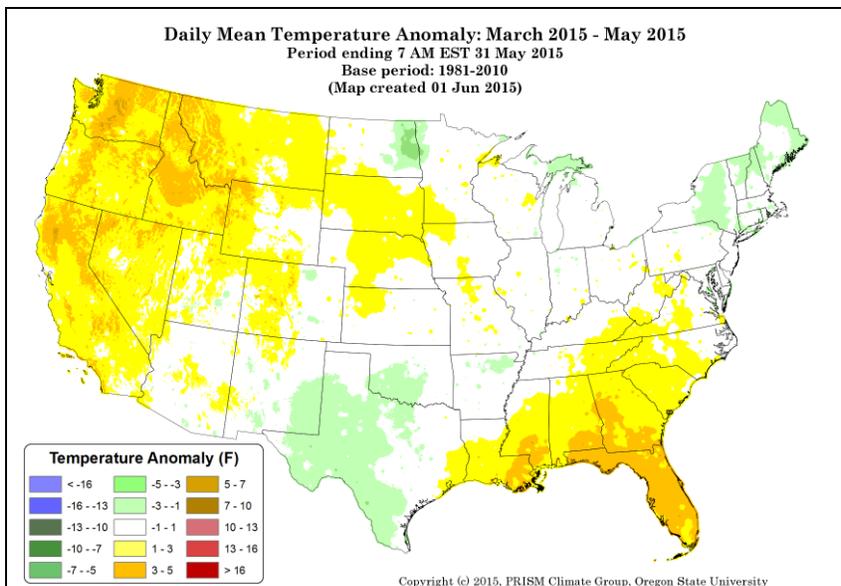
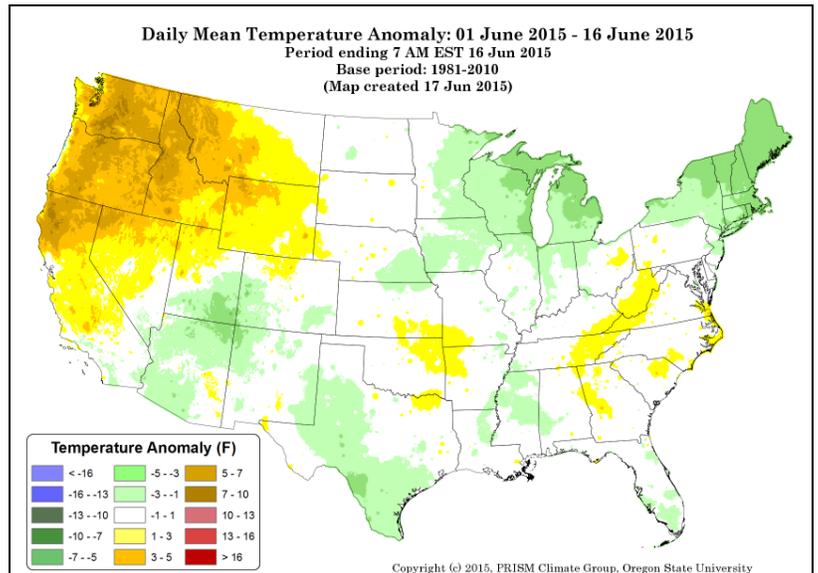
The ACIS map of the [7-day average temperature anomalies](#) in the West ending June 17 shows that the region had primarily warm to very warm conditions, with some cool areas primarily in the eastern region. The greatest positive temperature departures occurred in California and southern Oregon with the highest anomaly ($>+10^{\circ}\text{F}$). The areas with the largest negative temperature departures were in coastal Oregon and northern Montana ($<-4^{\circ}\text{F}$).

Generated 6/18/2015 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 June 2015, the national [daily mean temperature anomaly](#) map shows a slightly cool area over much of the Northeast, the southern Plains, the Great Lakes and the Four Corners area ($<-3^{\circ}\text{F}$). Above normal temperatures were recorded in much of the Pacific Northwest ($>+7^{\circ}\text{F}$).



The March - May national [daily mean temperature anomalies](#) for the U.S. in this climate map shows the West had the largest temperature departures above normal ($>+7^{\circ}\text{F}$). The northern Great Plains had the coolest temperature anomalies in North Dakota and Minnesota ($<-3^{\circ}\text{F}$).

Weekly Water and Climate Update

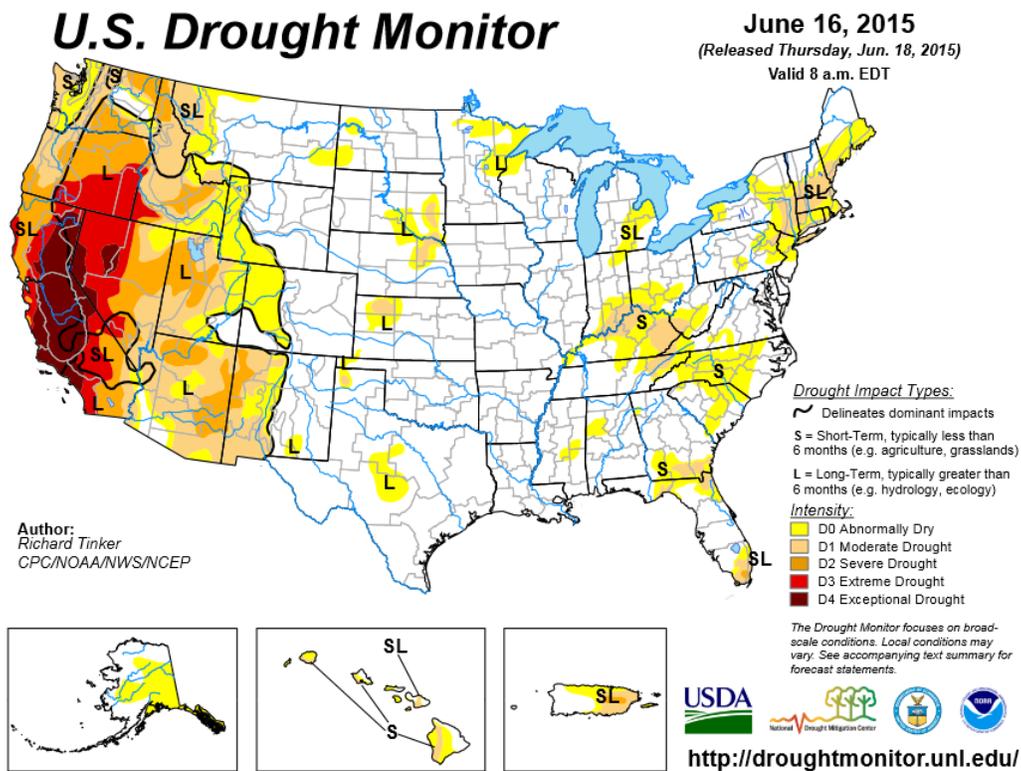
Weather and Drought Summary

[National Drought Summary](#) – June 16, 2015

The following **Weather and Drought Summary** is provided by this week's NDMC Drought Author, Richard Tinker, NOAA/NWS/NCEP/CPC. USDM Map Services: contains [archived maps](#)

“For the contiguous 48 states, the U.S. Drought Monitor showed 24.66 percent of the area in moderate drought or worse, compared with 23.29 percent a week earlier. Drought now affects 76,469,731 people, compared with 70,783,903 a week earlier.

For all 50 U.S. states and Puerto Rico, the U.S. Drought Monitor showed 20.67 percent of the area in moderate drought or worse, compared with 19.52 percent a week earlier. Drought now affects 78,323,542 people, compared with 72,399,806 a week earlier.”



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

[Current Drought Monitor](#) weekly summary. Exceptional D4 levels of drought are in CA, and NV. 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](#). Climate Outlook: [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](#)

[Spring 2014 edition of DroughtScope](#)

[U.S. Crops in Drought](#)

Weekly Water and Climate Update

National Drought Summary for June 16, 2015

Prepared by the Drought Monitor Author: Richard Tinker, NOAA/NWS/NCEP/CPC.

Regional Summaries

“East-Central States

A swath of dryness has developed during the last couple of months from the interior eastern Carolinas northwestward through the lower Ohio Valley, including most of Kentucky, northeastern Tennessee, and southwestern West Virginia. Last week continued the pattern, with most of the region measuring 0.5 inch rain or less.

Great Plains

Only a few areas of dryness and drought remain in the Great Plains following the deluges of the last 1 to 2 months. It was wet again this past week, with most sites from the western Dakotas and northern Nebraska southward through central and southeast Texas recording at least an inch of rain. The heaviest amounts (2 to over 6 inches) fell on portions of upper southeast Texas, and in a broad swath from northwestern Texas and most of Oklahoma northeastward through southern and east-central Kansas and eastern Nebraska.

Midwest and Great Lakes Region

Beneficial rains fell on the D0 area in the eastern Great Lakes, but in deference to longer-term deficits and low groundwater estimates, no changes were made this week. Generally 3 to 5 inches soaked south-central Michigan, and only part of east-central Michigan and northeast Indiana reported less than 2 inches. Precipitation totals are now near to above normal for the last 6 months, but parts of the region still reports somewhat below normal precipitation for the past 9 to 24 months, with northeast Indiana having subnormal totals for the longest period. This, in addition to satellite estimates of groundwater levels are in the driest 5 to 20 percent of historic occurrences.

The Northeast

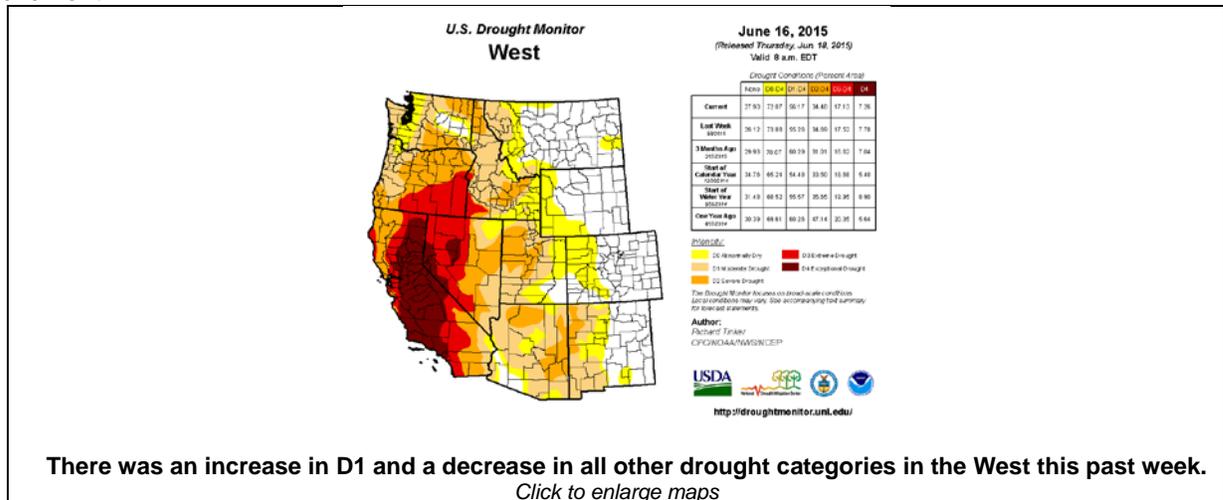
A variable precipitation pattern was observed across the Northeast. Most of central and north New York and western New England received 2 to 4 inches of rain over the course of the week. In contrast, many locations in southern and eastern Pennsylvania, lower New York and Long Island, and east New England reported 0.5 to 1.0 inch.

The Rockies to the West Coast

Unseasonably heavy rains fell again this week across a swath from west-central Nevada through portions of Utah, southernmost Idaho, western Wyoming, southwestern Colorado, and adjacent Arizona and New Mexico, partially from tropical cyclone remnants.

The Southeast

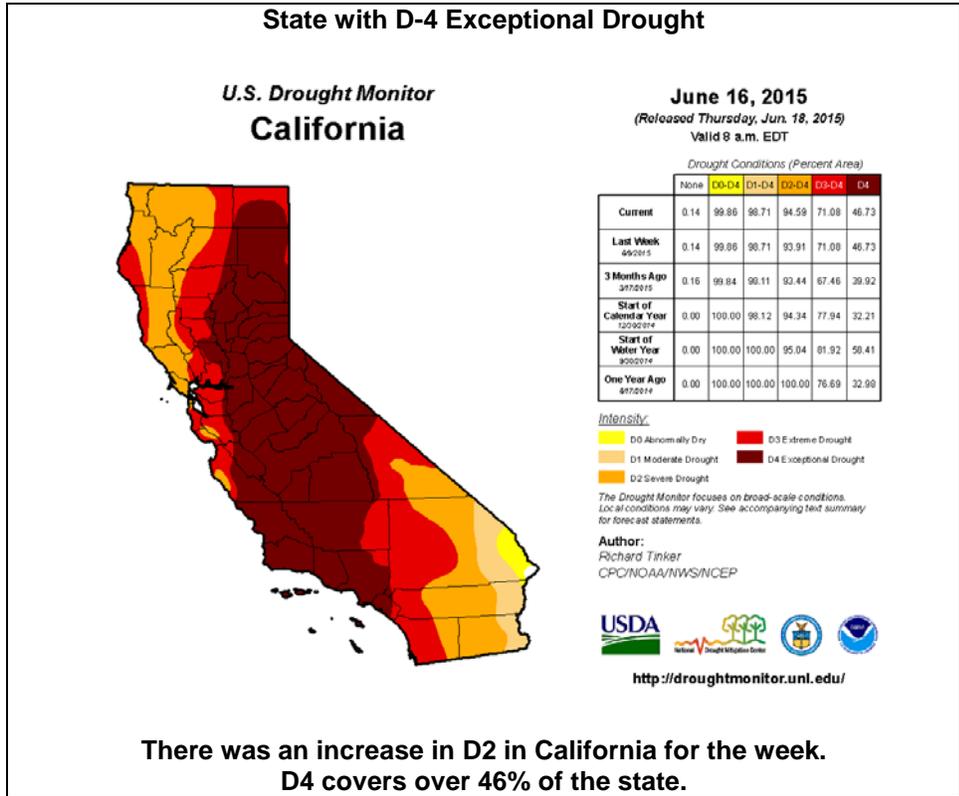
Rainfall totals were somewhat higher in this region than in the areas to the north, but above-normal amounts were patchy, and this in combination with abnormally high temperatures resulted in more areas of deterioration than improvement.



Weekly Water and Climate Update

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](#)
- [NRCS Surface Water Supply Index \(SWSI\)](#)



[CA Drought Information Resources](#)

[Drought News from California:](#)

[California drought: State orders large water cuts- June 12](#)

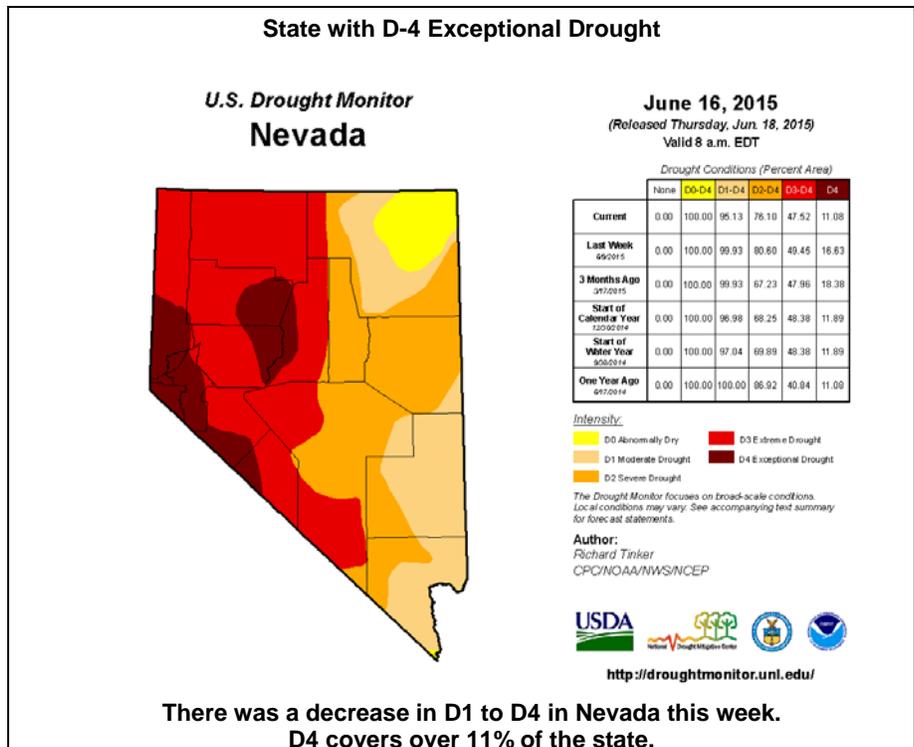
[\\$110 million in drought aid going to California, other Western States – June 12](#)

[California Drought Changes What Farmers Grow – June 11](#)

[Drought News from Nevada:](#)

[Long-term extreme drought still problem for Nevada – June 11](#)

[Are Drought-Ravaged Trees the New Wildfire Fuel? – June 11](#)



Weekly Water and Climate Update

U.S. Population in Drought

Number of people in each drought category in the U.S. for the week ending June 16, 2015

Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
2015-06-16	167,506,665	137,890,789	76,469,732	41,625,015	31,691,772	20,528,640
2015-06-09	169,565,889	135,831,566	70,783,904	42,337,212	31,700,501	20,559,973

Population figures affected by drought in the U.S. Drought Monitor website show that, for this week, more than 76,000,000 people in the United States were in a drought-affected area, which is an increase by over 5.6 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.

Supplemental Drought-Agriculture News

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

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

U.S. Drought Impacts during the past week

Visit the [Drought Impact Reporter](#) for more information.

The screenshot shows the Drought Impact Reporter interface. At the top, there are navigation tabs: Map, Advanced Search, Submit a Report, About the DIR, and Help. Below the navigation is a map of the United States with a color-coded legend for drought impacts. The legend shows five categories: 0 (white), 3-13 (light orange), 14-23 (orange), 24-33 (dark orange), and 44-53 (red). The map shows California and parts of the Southwest in the red category. To the right of the map is a control panel with a Refresh button, tabs for Impacts & Reports and Overlays, an Opacity slider set to 80%, and a list of filters including Reports, Time Period, Location, Categories, and Report Types. Below the map is a summary table for 'All States | 05-18-2015 - 06-18-2015' showing a total of 96 impacts. The table lists categories and their counts: Agriculture (30), Fire (7), Relief, Response & Restrictions (53), Tourism & Recreation (9), Business & Industry (10), Plants & Wildlife (24), Society & Public Health (25), and Water Supply & Quality (61). Below the table is a 'Report Source' section showing 88 Media reports and 2 User reports.

Total Impacts All States		96	
Category			
Agriculture	30	Business & Industry	10
Fire	7	Plants & Wildlife	24
Relief, Response & Restrictions	53	Society & Public Health	25
Tourism & Recreation	9	Water Supply & Quality	61
Report Source			
Media	88	User	2

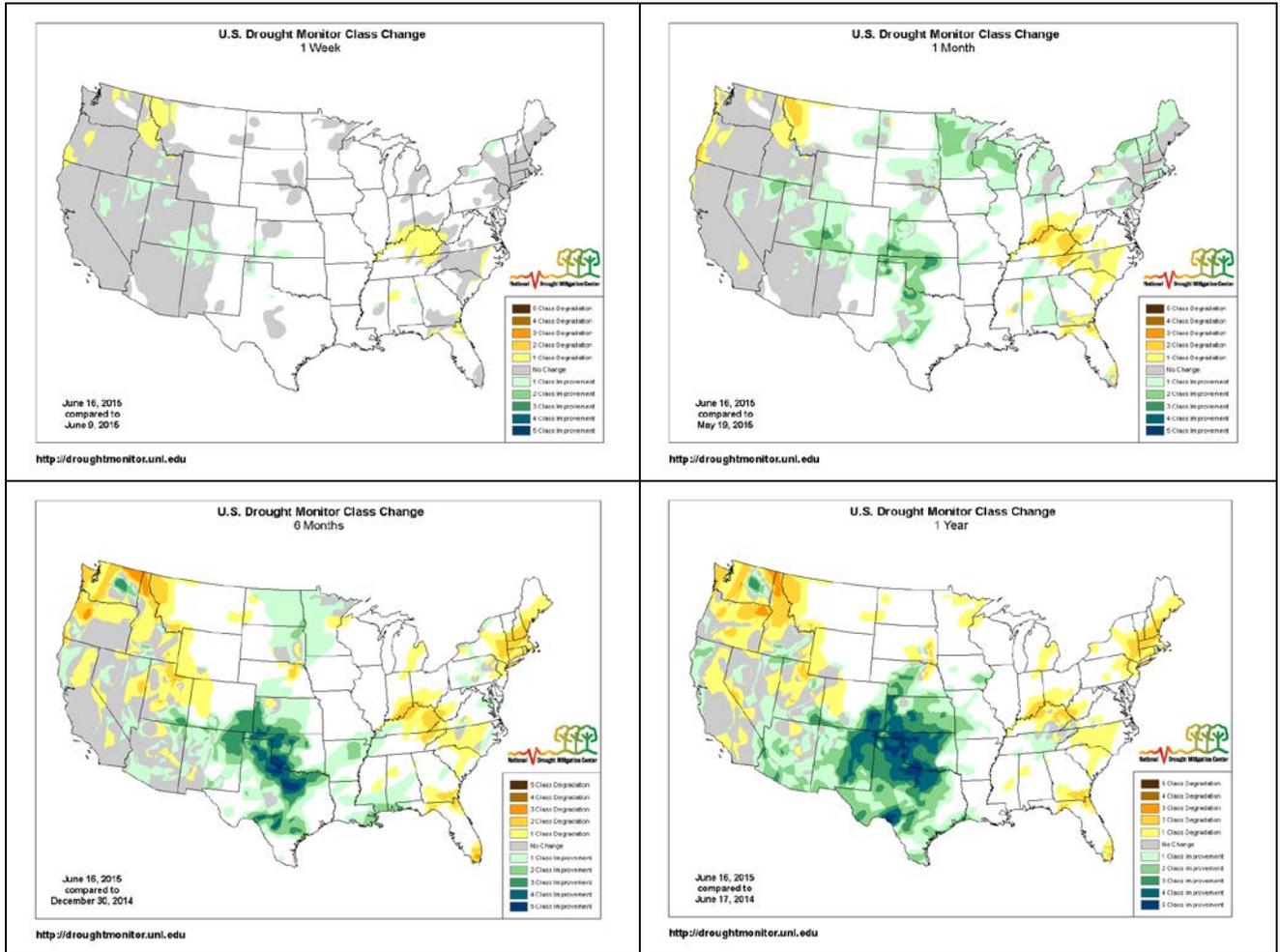
©2015 The National Drought Mitigation Center | 3310 Holdrege Street | P.O. Box 830988 | Lincoln, NE 68583-0988
 phone: (402) 472-6707 | fax: (402) 472-2946 | [Contact Us](#)

Nebraska
Lincoln

Weekly Water and Climate Update

Changes in Drought Monitor Categories

Over Various Time Periods



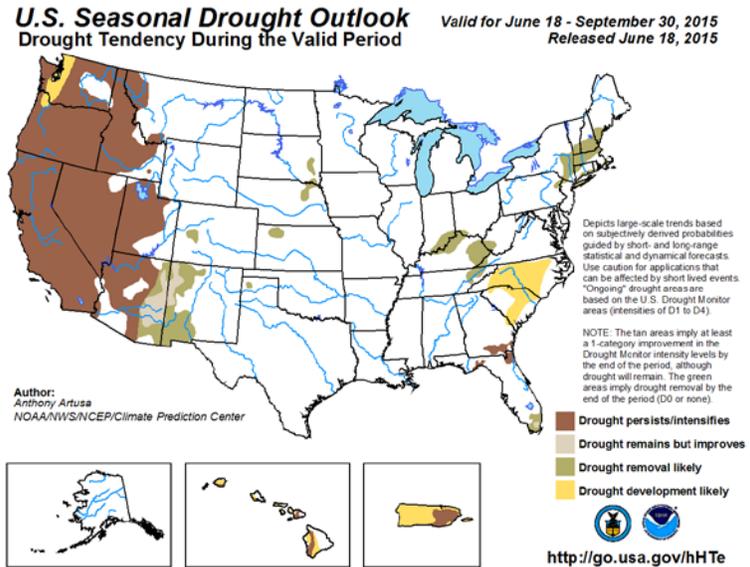
Click on any of these maps to enlarge. Note how the conditions over the Northwest, the Northeast, and the central Rockies have degraded between 6 to 12 months (lower maps). During this same time period, conditions over parts of the central and southern Great Plains and the Southwest have improved.

Weekly Water and Climate Update

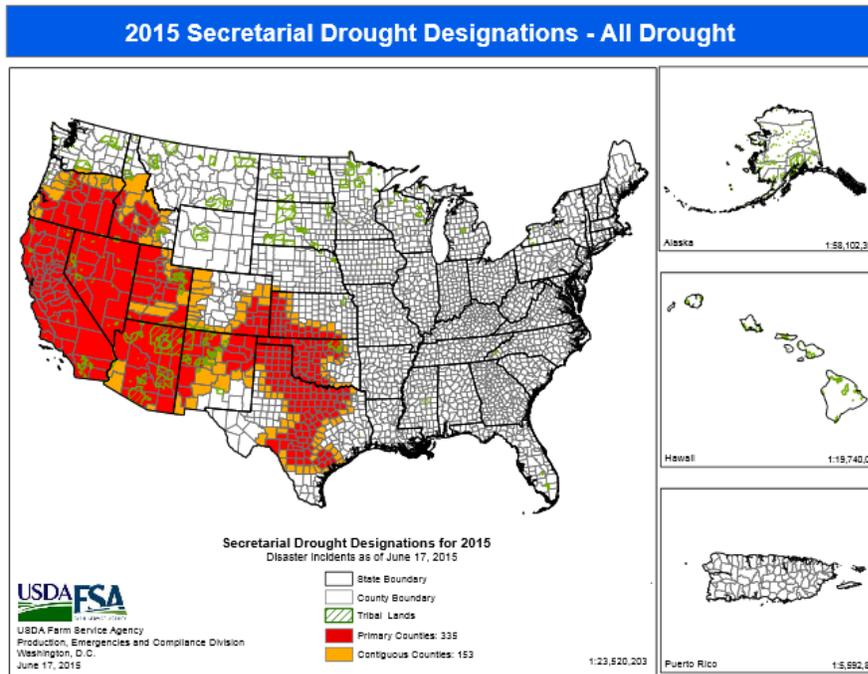
National Seasonal Drought Outlook

Nationally, [drought](#) is expected to persist or intensify over much of the West, a small area of the Southeast, and parts of Hawaii and Puerto Rico.

Improvements and removal of drought status are expected in the Southwest, Northeast, Ohio Valley, southern Florida, and the central Great Plains. The areas of drought that are likely to develop further are in the Pacific Northwest, the Carolinas, Hawaii, and Puerto Rico.



2015 USDA Secretarial Drought Designations



[USDA Drought Assistance website](#)

[National Sustainable Agriculture Information Service.](#)

[USDA Regional Climate Hubs.](#)

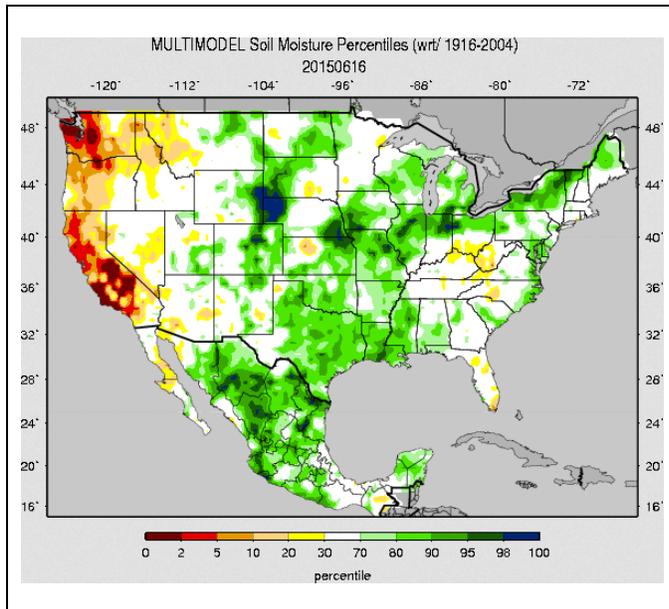
[NASS Quick Stats](#)

State Drought 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](#).

Weekly Water and Climate Update

Soil Moisture



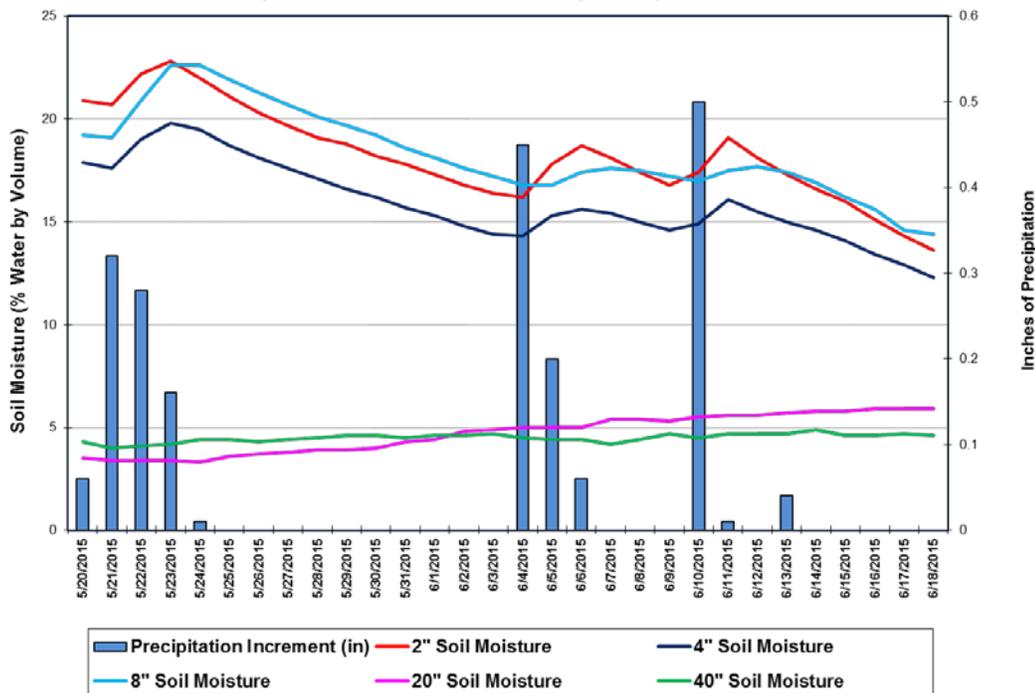
The national [soil moisture model ranking](#) in percentile as of June 16, 2015, shows dryness over most of the West. Moist soils dominated the central and northeast regions of the country. Moist soils were also scattered elsewhere in the U.S.

Hydrological Links:

- [CRN Soil Moisture](#)
- [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 \(SCAN\)](#)

Bodie Hills, California (SCAN site 2215)
Daily Mean Soil Moisture vs. Daily Precipitation

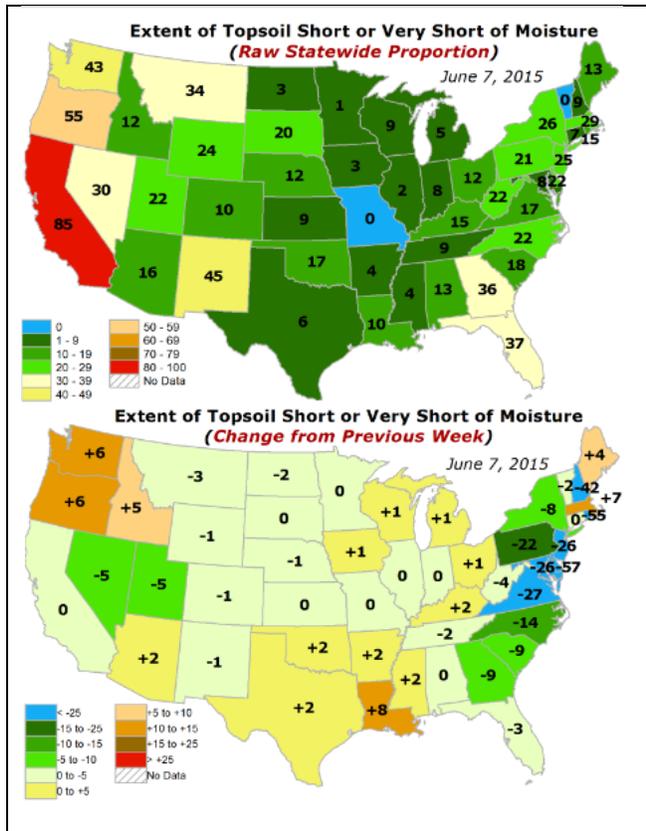


This NRCS resource shows soil moisture data for the last month at the [Bodie Hills SCAN site 2215](#) in California. The area had several precipitation events in the last 30 days (blue bars). This rainfall resulted in temporarily improved soil moisture in the shallow soil moisture sensors (2-, 4-, and 8-inch depths). The deepest (20- and 40-inch) soil moisture sensors have reported some slight long-term improvement from recent rainfall.

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

Topsoil and Pasture & Rangeland National Conditions



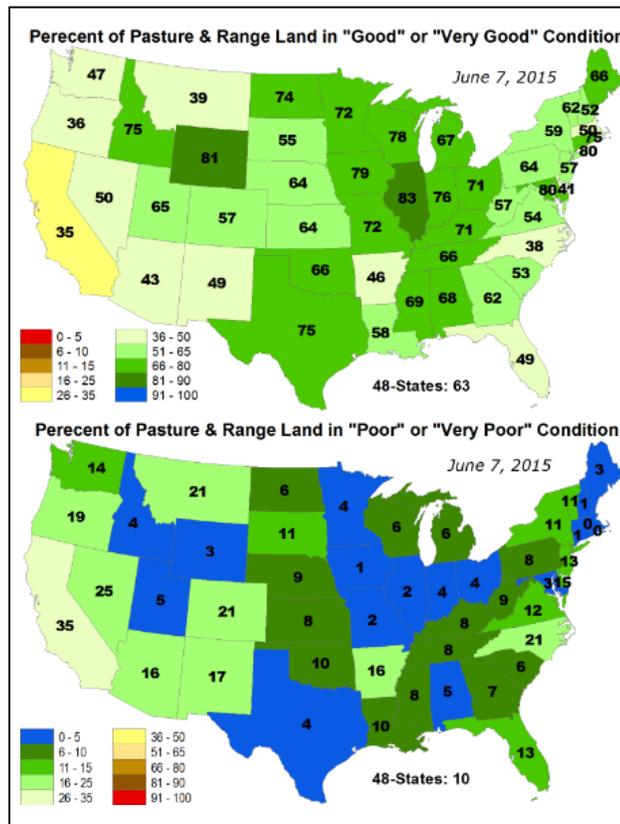
Topsoil Moisture is exceptionally poor over California, with values representing more than 60% poorer conditions than the median for this time of year. Locations in the central and eastern U.S. have good soil moisture conditions (top map)

Over the past week, good topsoil moisture dominated the central and western U.S.. Much of the eastern U.S. showed the largest topsoil moisture increase for the week, whereas the Pacific Northwest and parts of the west region were drying out (bottom map).

Pasture and Rangeland conditions across the U.S: Many states are currently reporting good conditions.

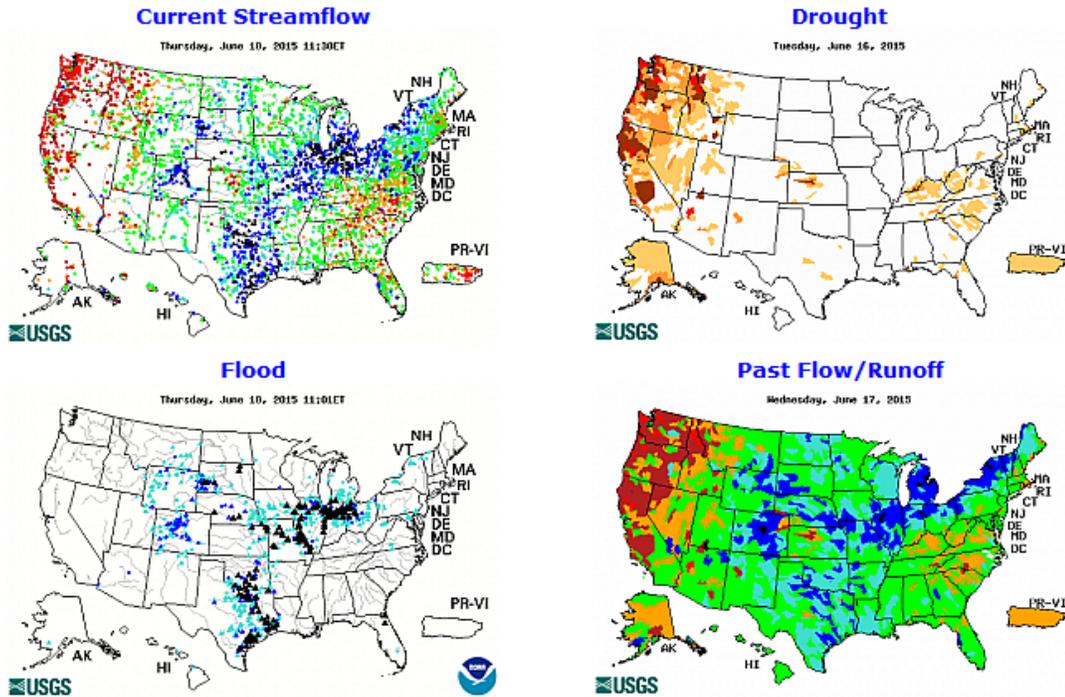
However, pasture and rangelands are stressed over California.

Conditions have generally shown improvement over this past week.



Weekly Water and Climate Update

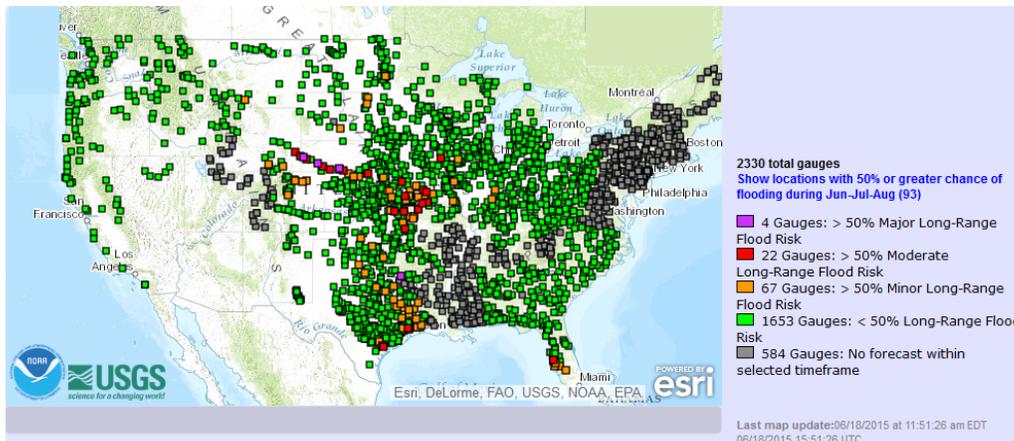
Streamflow



Nationally, stream gages across the Great Plains into the Great Lakes are reporting much above normal streamflow. There are many gages at or above flood stage centered in the Mississippi River tributaries this week.

National Long-Range Outlook

According to the National Weather Service, during the next three months there is a risk of flooding in the Midwest and the Southeast. Currently, **4** gages have a greater than 50% chance to experience major flooding; **22** gages for moderate flooding; and **67** gages for minor flooding. These numbers represent no change in the number of gages with a greater than 50 percent chance of minor flooding category since last week.



Click map to enlarge and update

Weekly Water and Climate Update

Weather Outlook

June 18, 2015 National Outlook: “Tropical Depression Bill will gradually turn to the northeast and further weaken, but will remain the focus for flooding rains. Storm-total precipitation, in addition to what has already fallen, could reach 3 to 6 inches from the mid-South into the Ohio Valle, impacting many areas still reeling from the May deluge. Meanwhile, organized showers will develop late in the week across the upper Midwest, where at least an inch of rain will fall in many locations. In contrast, little or no rain will fall across the West and lower Southeast, accompanied by above-normal temperatures. Hot weather will also expand over the central and southern Plains, where daytime highs will approach or top 100°F. The NWS 6- to 10-day outlook for June 16–20 calls for the likelihood of hot weather in the West and Southeast, while cooler-than-normal conditions can be expected across the southern High Plains and from eastern North Dakota to New England. Meanwhile, mostly dry weather in the South and Northwest will contrast with wetter-than-normal weather in parts of the Southwest and from the Midwest into the Northeast.”

Contact: Eric Luebehusen, Agricultural Meteorologist, USDA/OCE/WAOB, Washington, D.C. (202-720-3361)

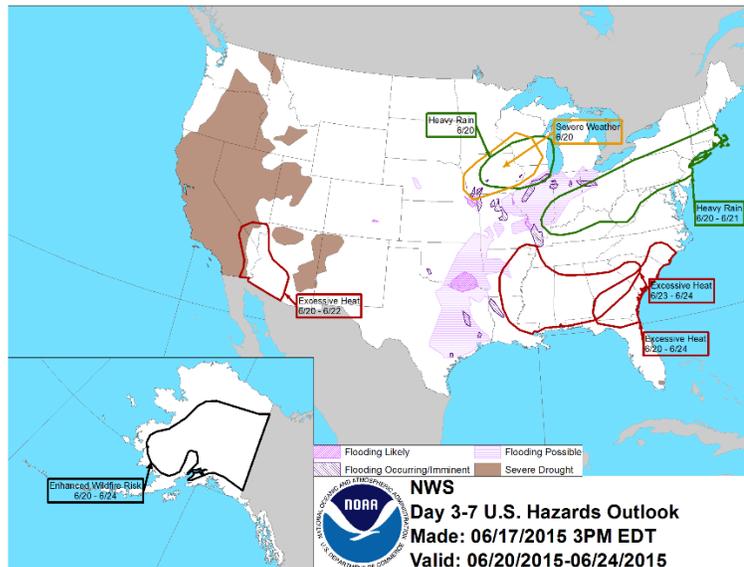
Website: <http://www.usda.gov/oce/weather/pubs/Daily/TODAYSWX.pdf>

National Weather Hazards

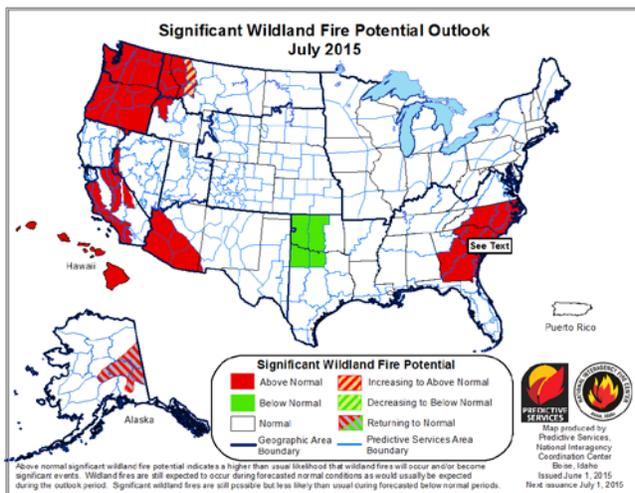
The National Weather Service map of [national weather hazards](#) for the next 3 – 7 days forecasts heavy rain in the upper Midwest and Northeast (6/20-21). Severe weather is expected in the Upper Midwest (6/20). Excessive heat is expected in the Southwest (6/20-22) and the Southeast (6/20 – 24)

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

In Alaska, enhanced wildfire risk is expected (6/20 – 24).



National Fire Potential Outlook



July Fire Forecast

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

Below normal fire potential for July 2015 (in green on the map) is forecast for the southcentral U.S.

The West, Southeast, and Hawaii have above normal fire potential.

Eastern Alaska is returning to normal fire potential.

Weekly Water and Climate Update

Current Reservoir Storage

Reservoir Data and State combined [Reservoir Storage](#).

USBR Hydromet Tea Cup Reservoir Depictions

<http://www.usbr.gov/uc/water/basin/> ← Upper Colorado

<http://www.usbr.gov/pn/hydromet/select.html> ← Pacific Northwest/Snake/Columbia

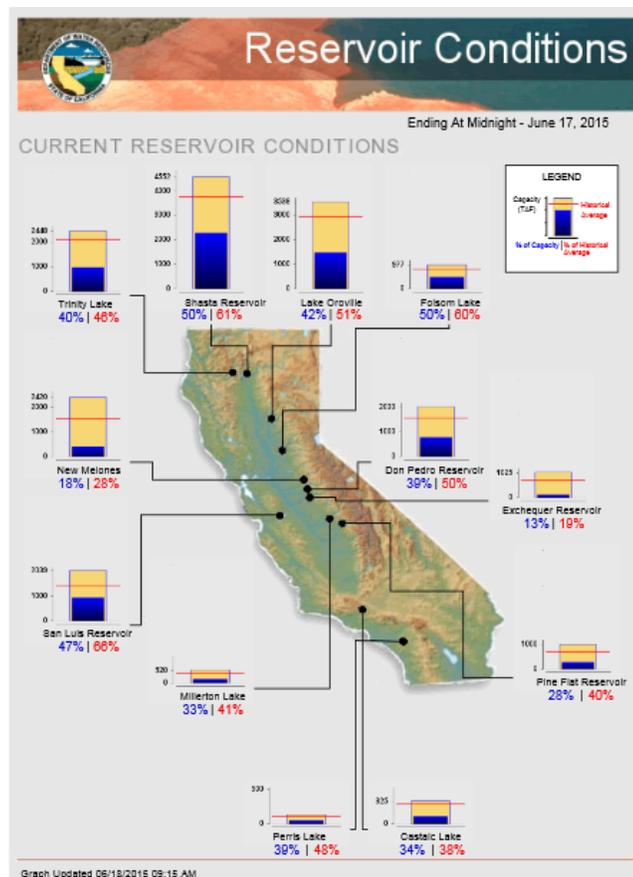
<http://www.sevierriver.org/reservoirs/teacup-diagram-of-reservoirs/> ← Sevier River Water (UT)

http://www.usbr.gov/gp/hydromet/teacup_form1.html ← Upper Missouri (also links for KS, OK, TX)

California Department of Water Resources: Reservoir Conditions

[California Major Reservoir conditions](#)

California Department of Water Resources



More Information

The National Water and Climate Center (NWCC) [website](#) 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

6/18/2015