



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

Weekly Water and Climate Update Thursday, June 4, 2015

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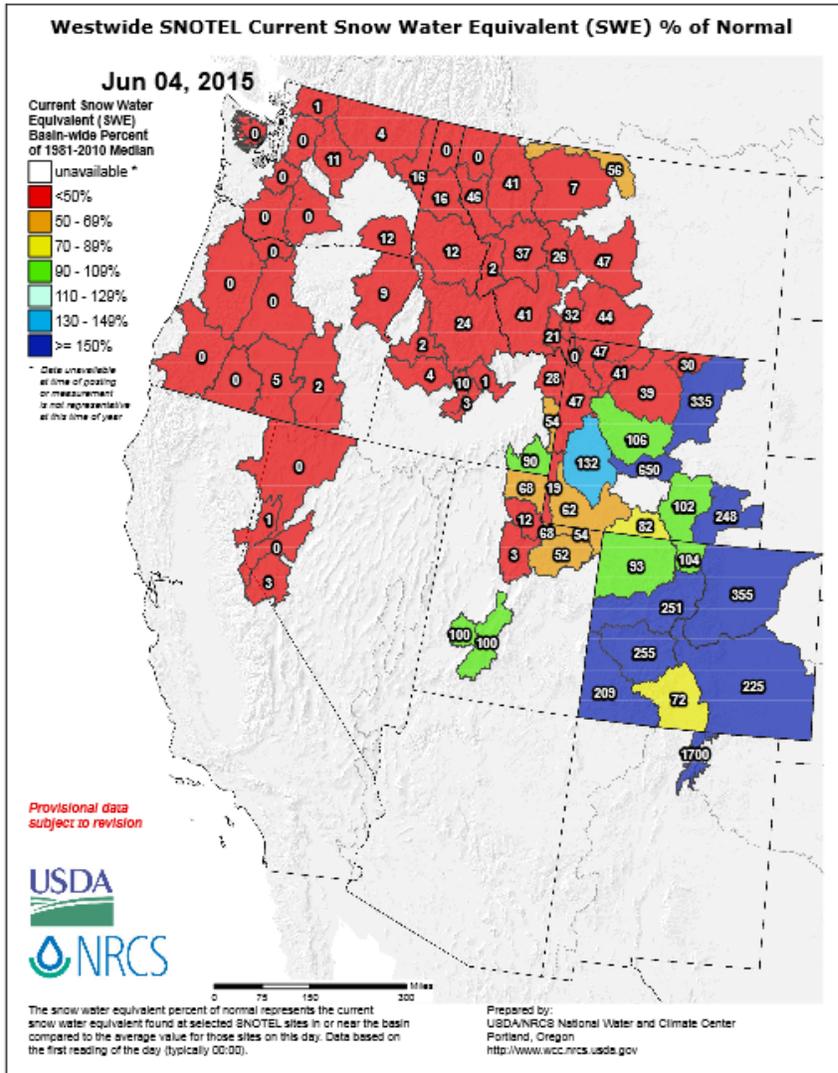


Photograph from the May 1 Basin Outlook Report for New Mexico. Aaron Miller doing the Powderhorn. Taos, New Mexico, April 27, 2015.

Photo Courtesy of Logan Peterson, 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

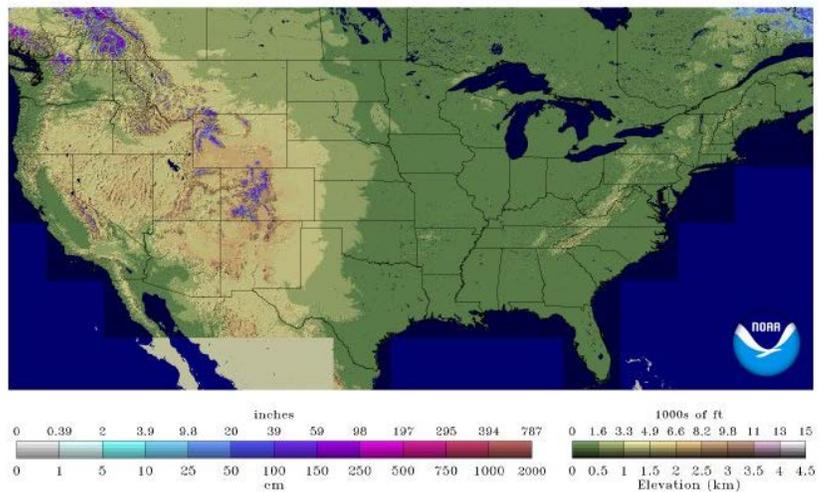


The westwide SNOTEL [current snow water equivalent \(SWE\) % of normal](#) map shows the snowpack has primarily melted out at station locations, with the exception of late-season snow in Wyoming, Colorado, northern New Mexico, and Utah. Many stations have zero SWE at this time.

Percent of average may be exaggerated if the normals are near zero.

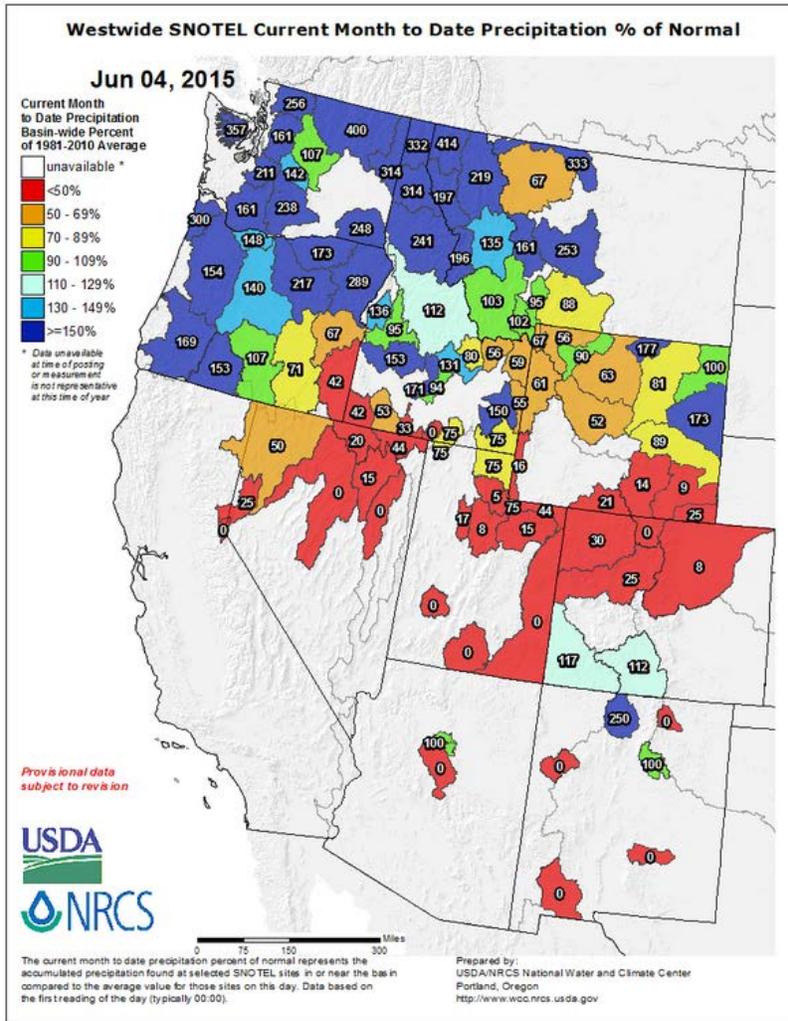
The [snow depth](#) map as reported from the National Weather Service for June 4, 2015. Snow now covers 0.7% of the continental U.S. This includes snow that is primarily in the highest mountains in the West.

Snow Depth
 2015-06-04 06 UTC



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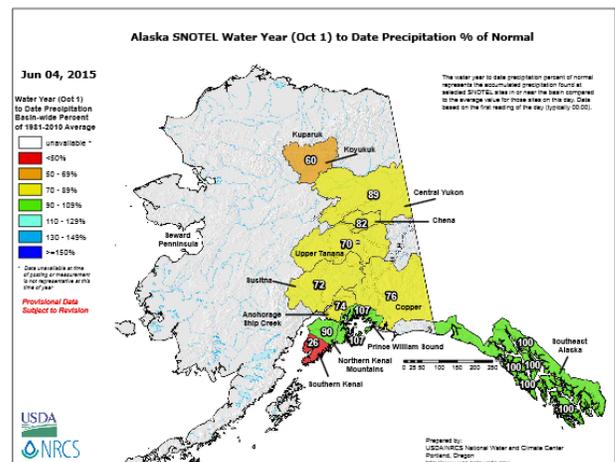
Precipitation



In the West, the SNOTEL [current month to date precipitation % of normal map](#) for early June shows a pattern of generally wet conditions in the northern regions and dry conditions from the central to the southern regions. *At this time of year, percent of normal may be exaggerated in normally low precipitation areas.*

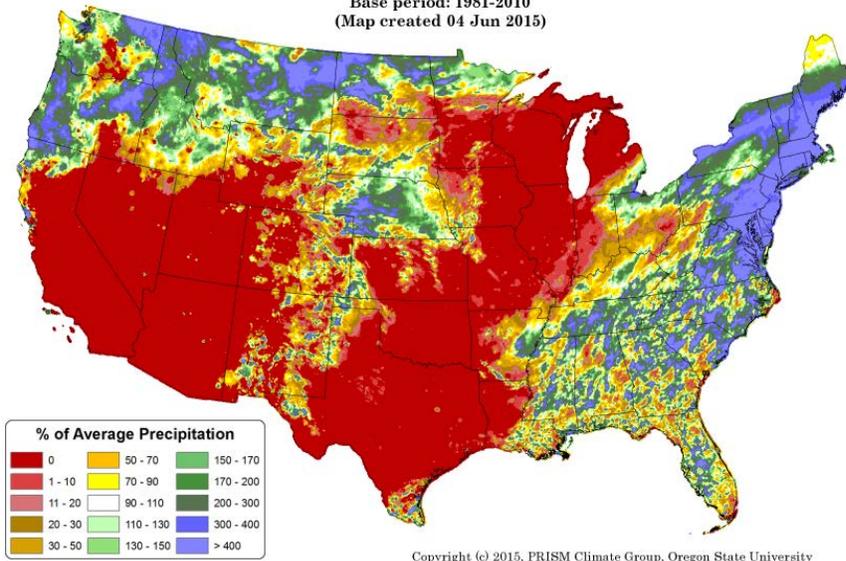
The Alaska SNOTEL [water year to date precipitation percent of normal](#) map shows near normal conditions for the northern Kenai Mountains and southeast Alaska.

The remainder of Alaska is reporting drier than normal conditions.



Weekly Water and Climate Update

Total Precipitation Anomaly: 01 June 2015 - 03 June 2015
 Period ending 7 AM EST 03 Jun 2015
 Base period: 1981-2010
 (Map created 04 Jun 2015)



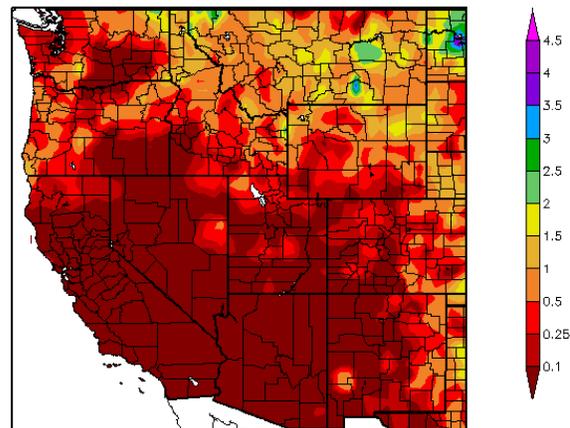
So far in very early June, the PRISM national total precipitation anomaly pattern reveals higher than normal precipitation across the northern tier states, central Midwest, and much of the East. There was little or no precipitation in much of the West and central U.S. (red and dark orange areas).

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 total was reported in Montana. Widely scattered precipitation was reported in most western states.

Little to no precipitation was reported in the Southwest region of the West this week (dark red).

Precipitation (in)
 5/28/2015 - 6/3/2015



Generated 6/4/2015 at HPRCC using provisional data.

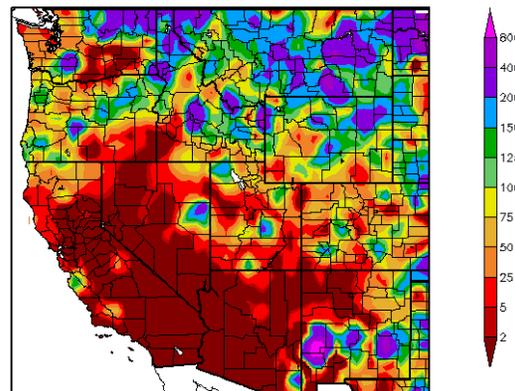
Regional Climate Centers

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

Very dry conditions for the week were reported primarily in California, Nevada, and Arizona (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 (%)
 5/28/2015 - 6/3/2015

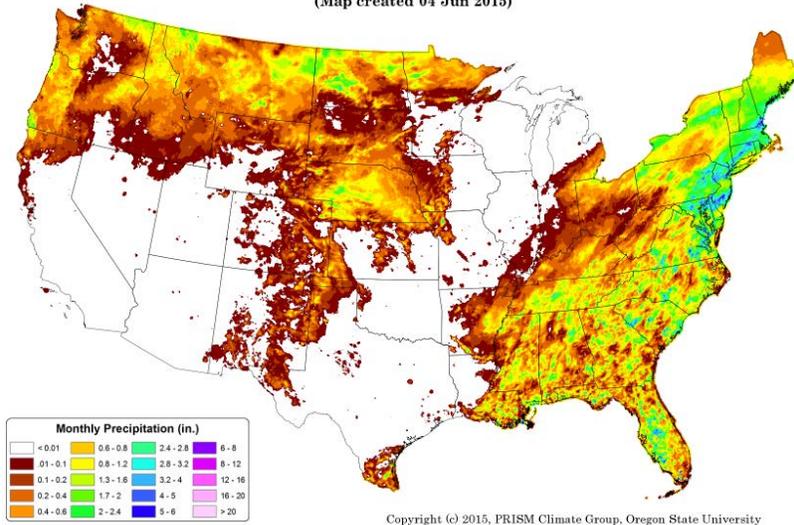


Generated 6/4/2015 at HPRCC using provisional data.

Regional Climate Centers

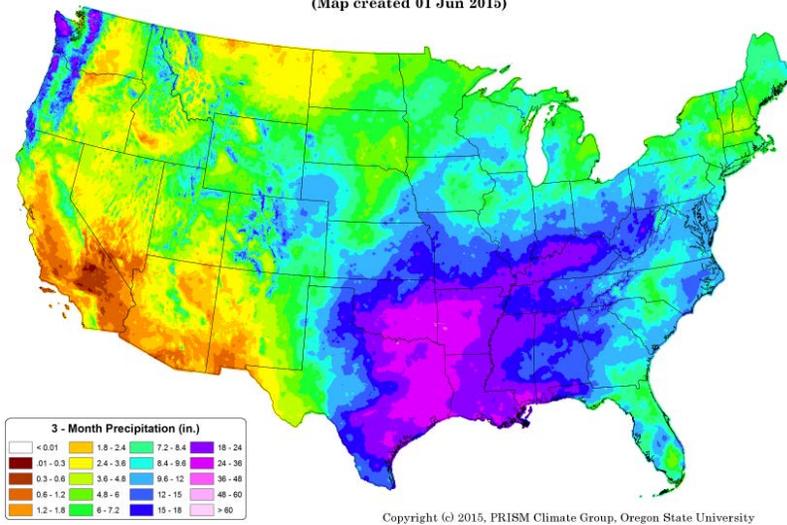
Weekly Water and Climate Update

Total Precipitation: 01 June 2015 - 03 June 2015
 Period ending 7 AM EST 03 Jun 2015
 (Map created 04 Jun 2015)



For the first few days in June 2015, the [total precipitation](#) across the continental U.S. was heaviest in the Northeast. Light precipitation also fell elsewhere in the East and across the Pacific Northwest and northern Great Plains. In contrast, much of the Southwest and the central U.S. were mainly dry.

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



The national map of the [PRISM three-month period](#) (March – May) shows that the southcentral region of the nation received precipitation from 6.0 inches to greater than 36 inches. Parts of the West, especially along the Pacific coast and in the mountains, also received significant precipitation.

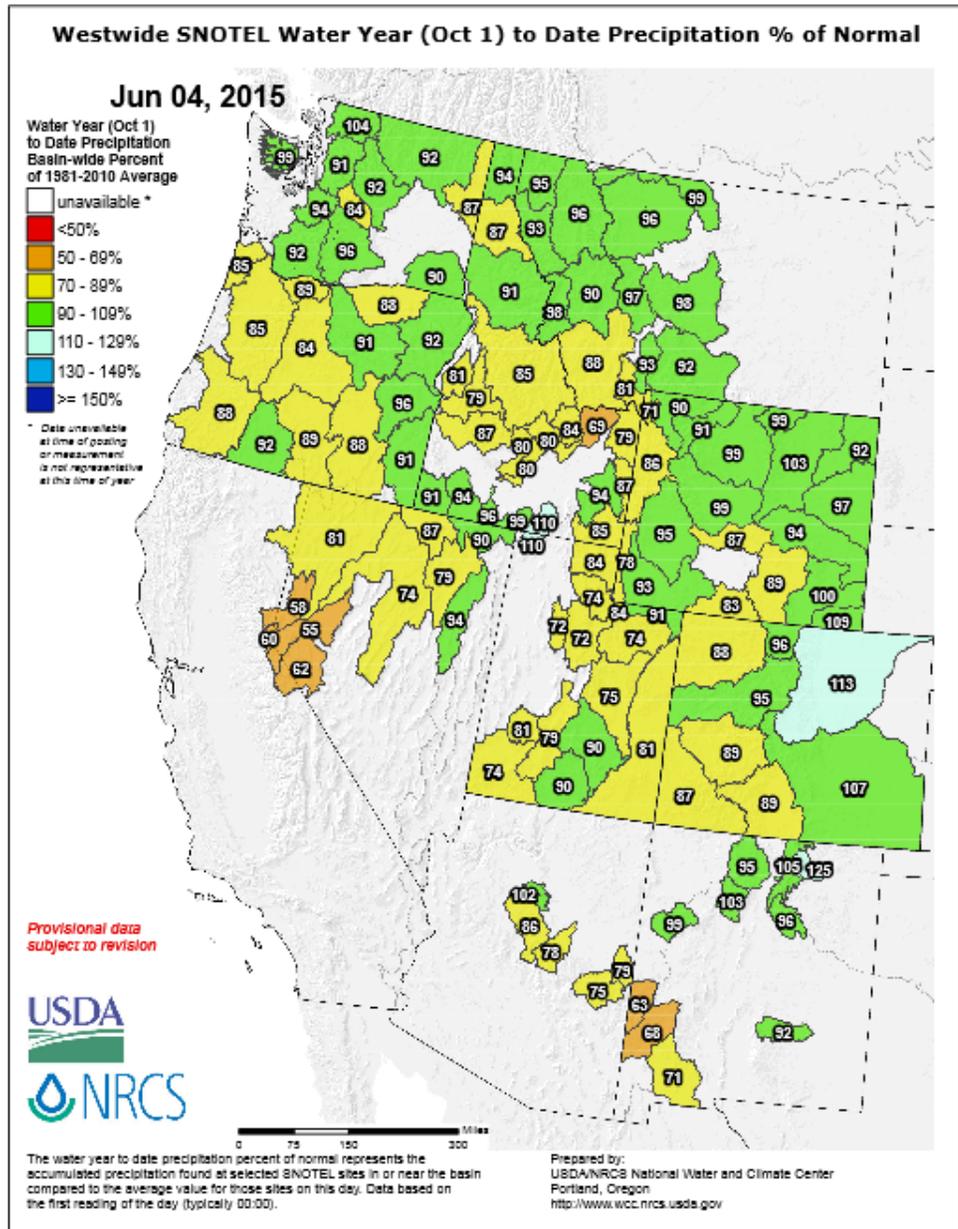
In contrast to the eastern U.S. and Pacific coast, parts of the West and the northern Great Plains, received totals of less than 2.4 inches.

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For the [2015 Water Year](#) that began on October 1, 2014, there is one basin in eastern Colorado reporting above normal precipitation.

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

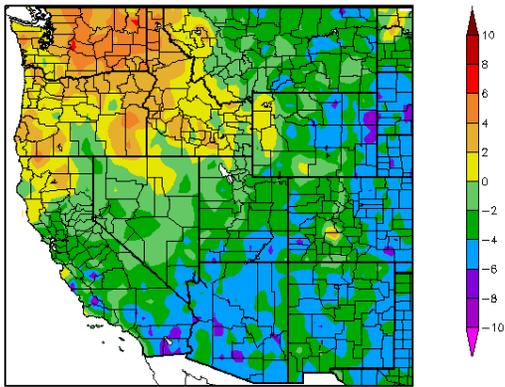
Other basins in the western states have less than normal precipitation for the Water Year (mapped in yellow and orange).



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Temperature

Departure from Normal Temperature (F)
5/5/2015 – 6/3/2015



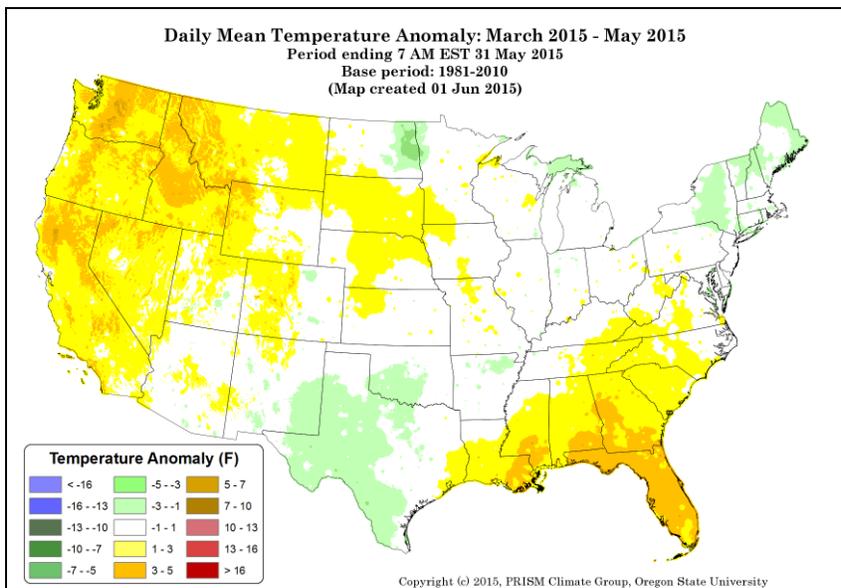
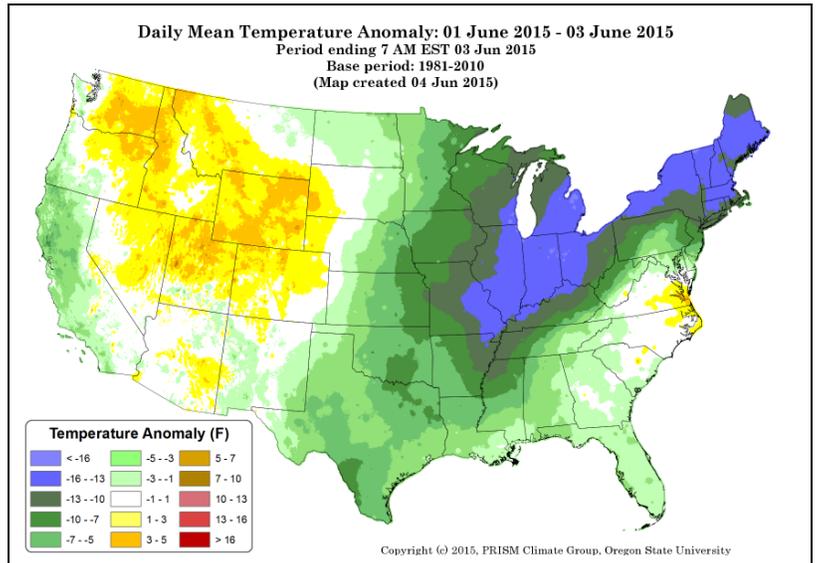
Generated 6/4/2015 at HPRCC using provisional data.

Regional Climate Centers

The ACIS map of the [7-day average temperature anomalies](#) in the West ending June 3 shows that the region had widely different conditions, with the southeastern states much cooler than normal. In contrast, the northwestern states, especially Washington, were warm. The greatest positive temperature departures occurred in Washington with the highest anomaly ($>+6^{\circ}\text{F}$). The areas with the largest negative temperature departures were in southern California, southern Utah, eastern Wyoming, and Colorado ($<-6^{\circ}\text{F}$).

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

For the first few days of June 2015, the national [daily mean temperature anomaly](#) map shows a very cool region over much of the upper Midwest and Northeast ($<-16^{\circ}\text{F}$). Above normal temperatures were recorded in much of the West and along the central Atlantic coast ($>+5^{\circ}\text{F}$).



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

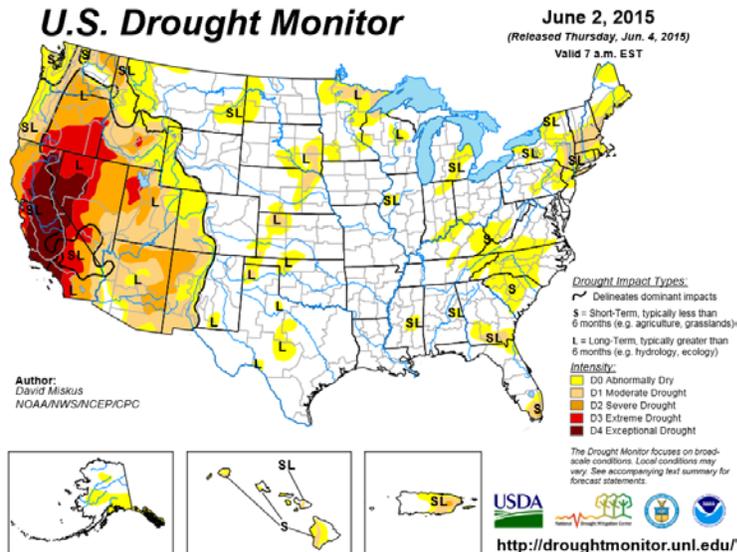
[National Drought Summary](#) – June 2, 2015

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

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

“For the contiguous 48 states, the U.S. Drought Monitor showed 24.57 percent of the area in moderate drought or worse, compared with 26.35 percent a week earlier. Drought now affects 70,721,569 people, compared with 92,891,198 a week earlier.

For all 50 U.S. states and Puerto Rico, the U.S. Drought Monitor showed 20.59 percent of the area in moderate drought or worse, compared with 22.07 percent a week earlier. Drought now affects 72,335,224 people, compared with 93,988,453 a week earlier.”



See: 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](#).
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](#)

[National Drought Summary for June 2, 2015](#)

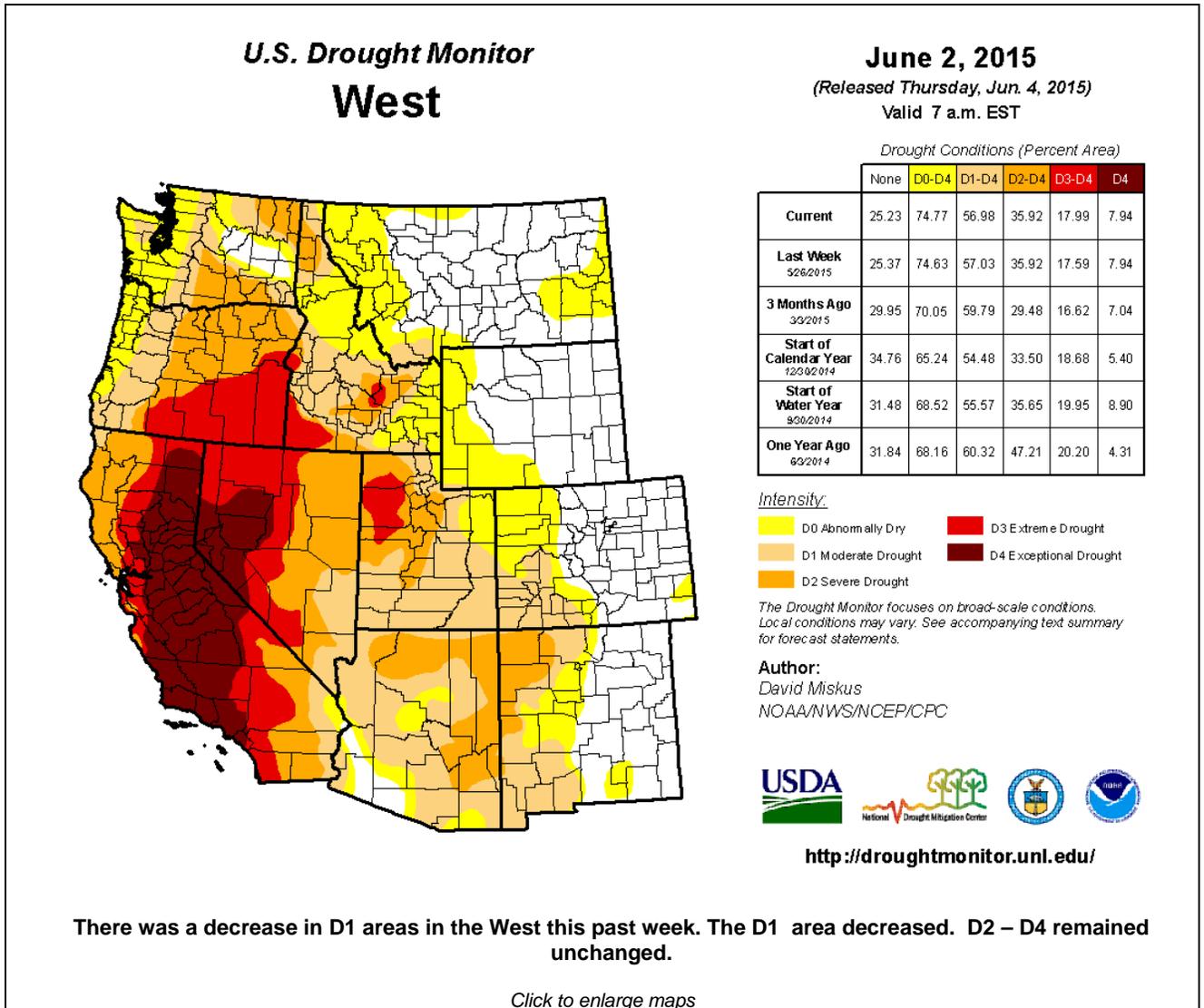
Prepared by the Drought Monitor Author: David Miskus, NOAA/NWS/NCEP/CPC.

Summary

“A series of cold fronts moving southeastward out of the Canadian Prairies brought additional moderate to heavy (more than 2 inches) rains to the water-logged southern and central Plains, including most of Kansas, Oklahoma, and Texas, along with beneficial moisture to the northern Plains and Midwest, early in the period. Based upon estimated monthly state rainfall totals, May 2015 was the wettest month ever in Texas (8.81 inches) and Oklahoma (14.27 inches), incredibly ending the region’s long-term drought within 4-6 weeks (but causing widespread flooding). Over the weekend as a strong cold front finally pushed eastward, the southern half of the Plains finally cleared out while much of the Southeast, mid-Atlantic, and New England reported welcome showers and thunderstorms which ended the unseasonable warmth and eased short-term dryness. Dry conditions and increasing temperatures returned to the Southwest after an unseasonably cool and wet May that led to unexpected green-up of ranges and pastures in parts of southern and eastern California, Nevada, and western Arizona but did nothing to ease the long-term drought, and most-likely added extra fuel for late summer and early fall wildfires once the vegetation dies off. Light showers were enough to keep the Pacific Northwest at

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status-quo, while a very warm and record dry May (after a wet April), along with little to no spring snowpack, was enough to expand D0 along the southeastern Panhandle of Alaska. Continued subnormal rains across eastern Puerto Rico and low stream flows justified expansion of D0 and D1, and the addition of D2..”



Risk Management Web Resources

[Drought Monitor](#) for the Western States

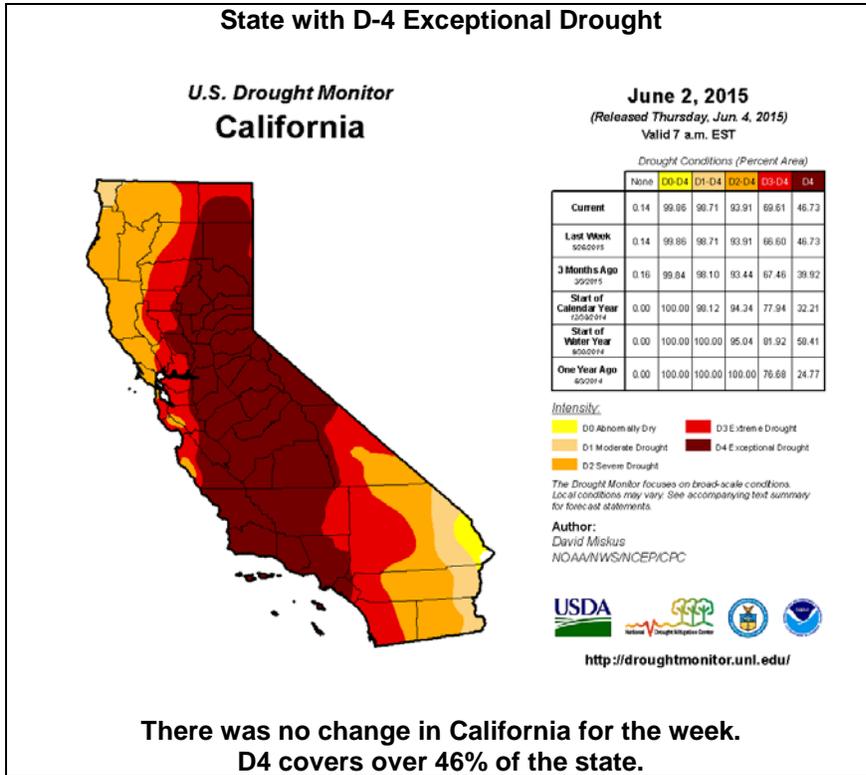
[Drought Impact Reporter](#) for New Mexico

[California Data Exchange Center](#)

[Flood Management Intermountain West Climate Dashboard](#)

[California Sierra Nevada-related snowpack](#)

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[CA Drought Information Resources](#)

[Drought News from California:](#)

[California redwood trees stressed to breaking point by drought, dying in Southern California](#) – May 25

[Drought angst shrivels Californians views of state](#) – May 26

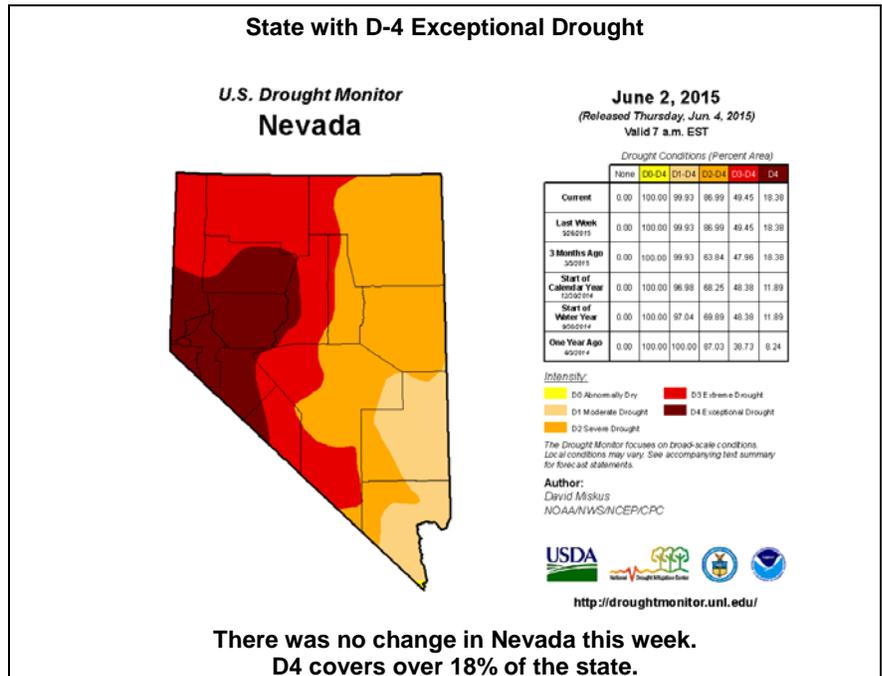
[DROUGHT: 'Cash for grass' program gets \\$350 million boost](#) – May 26

[San Jose Water Company's strict drought rules opposed by hundreds at meeting](#) – May 29

Nevada Drought News:

[Stream Fishing On The Decline In Nevada Due To Drought](#) – May 26

[Workshops to focus on drought assistance for Nevada ag producers](#) – May 26



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

Number of people in each drought category in the U.S. for the week ending June 2, 2015

Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
2015-06-02	166,747,842	138,649,613	70,721,569	42,458,923	31,704,738	20,564,003
2015-05-26	138,040,100	167,357,355	92,891,198	41,576,544	31,217,712	20,564,003

Population figures affected by drought in the U.S. Drought Monitor website show that, for this week, more than 70,000,000 people in the United States were in a drought-affected area, which is a decrease by over 22.2 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.

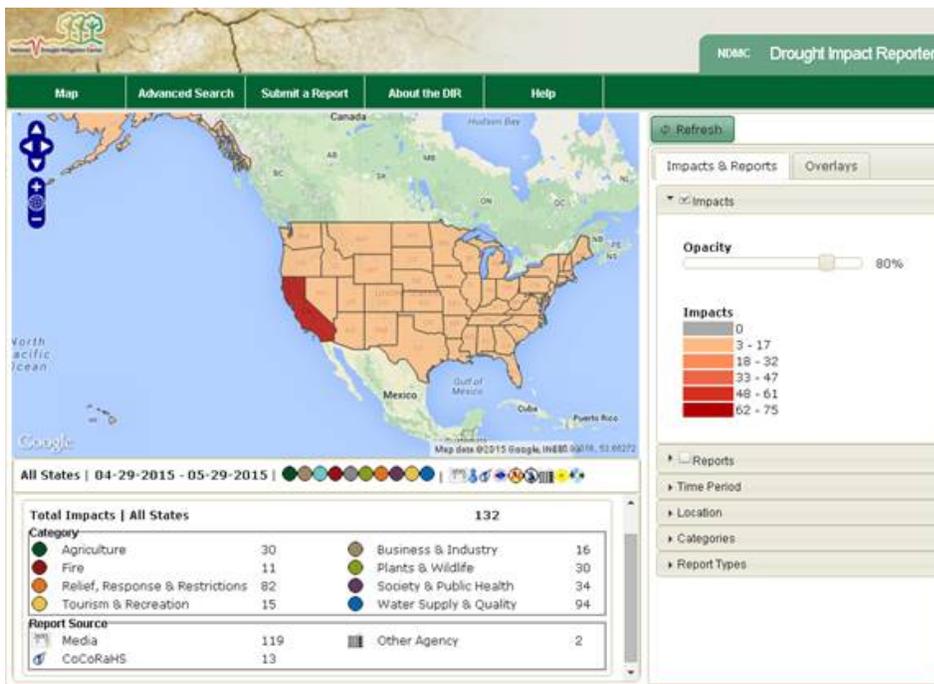
Supplemental Drought-Agriculture News

A collection of drought-related news stories from the past seven days or so 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

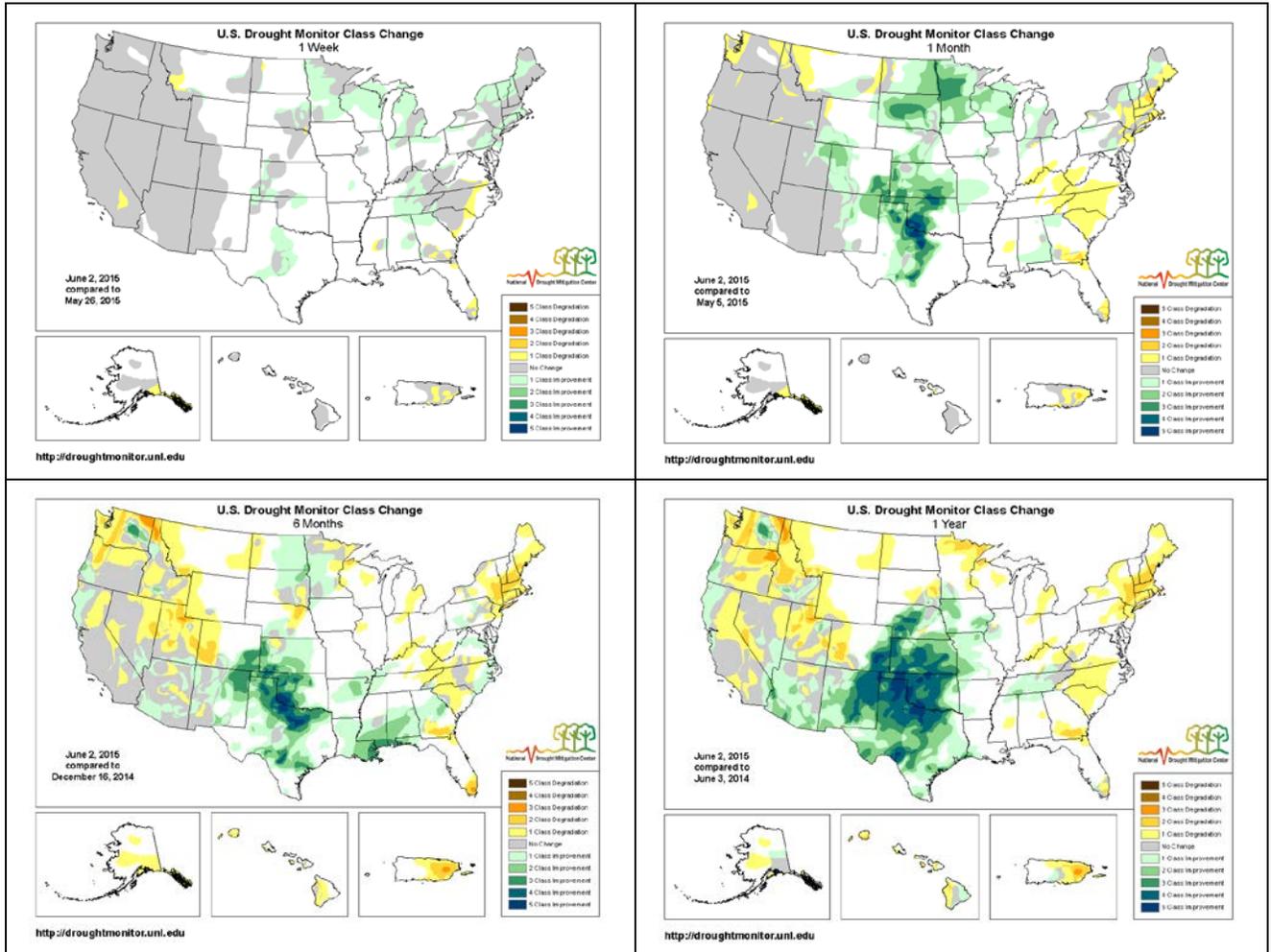
The [Drought Impact Reporter](#) shows California with the most impacts, but along the East Coast from Maine to Florida, there has been a small uptick in media and CoCoRaHS reports about browning lawns, farmers irrigating early and requests for water conservation.



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Changes in Drought Monitor Categories

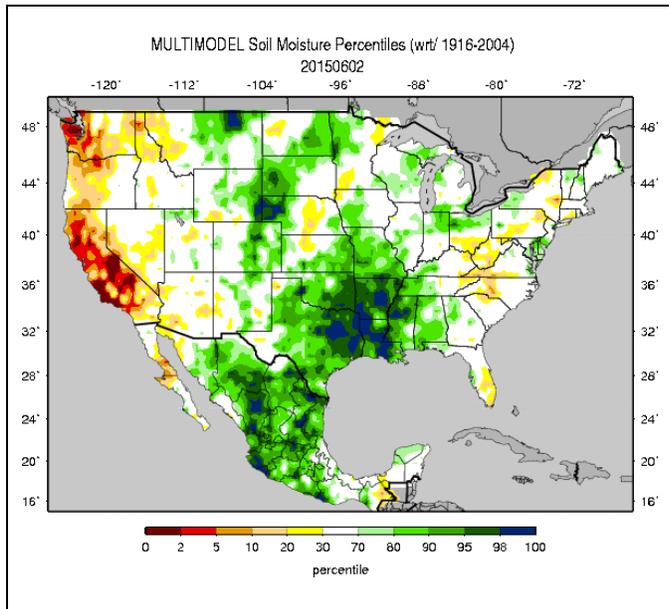
Over Various Time Periods



Click on any of these maps to enlarge. Note how the conditions over the upper Northwest 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.

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Soil Moisture



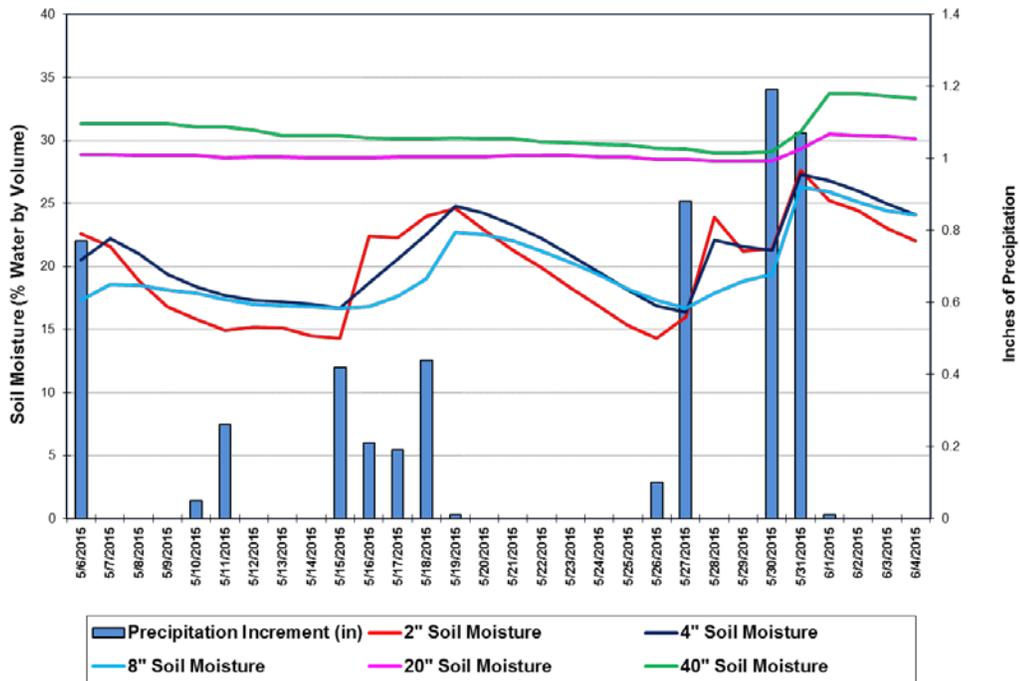
The national [soil moisture model ranking](#) in percentile as of June 2, 2015, shows dryness over most of the West. Additional drier than normal conditions are scattered across areas in many states. Moist soils dominated the southcentral region of the country. Slightly moist soils were also scattered 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 \(SCAN\)](#)

Sunleaf Nursery, Ohio (SCAN site 2073)
Daily Mean Soil Moisture vs. Daily Precipitation

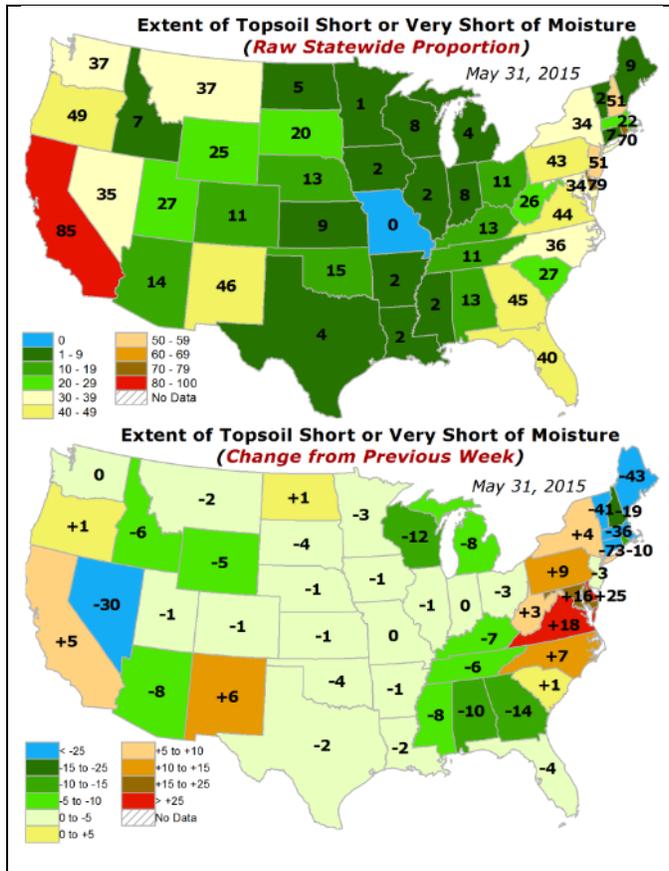


This NRCS resource shows soil moisture data for the last month at the [Sunleaf Nursery \(SCAN site 2073\) in Ohio](#). The area had several, large precipitation events in the last 30 days (blue bars). This rainfall resulted in improved soil moisture in the shallow (2-, 4-, and 8-inch depths). The more recent heavy precipitation improved soil moisture at all sensor depths.

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

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Topsoil and Pasture & Rangeland National Conditions



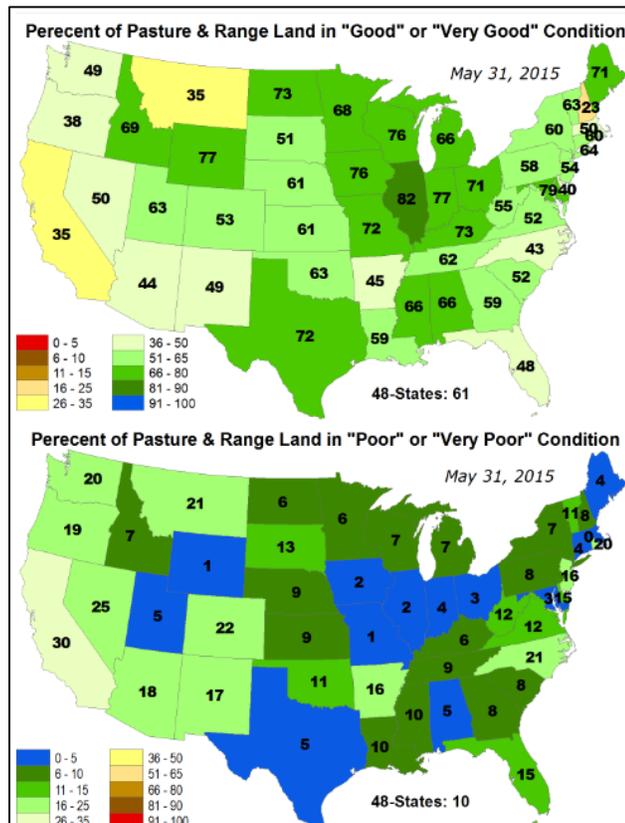
Topsoil Moisture is exceptionally poor (top) over California, Rhode Island, and Delaware with values representing more than 60% poorer conditions than the median for this time of year. Locations in the central U.S. have good soil moisture conditions.

Over the past week, good topsoil moisture dominated the central and western U.S. (bottom panel). New England showed the largest topsoil moisture increase for the week, whereas the Mid-Atlantic region was drying out.

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

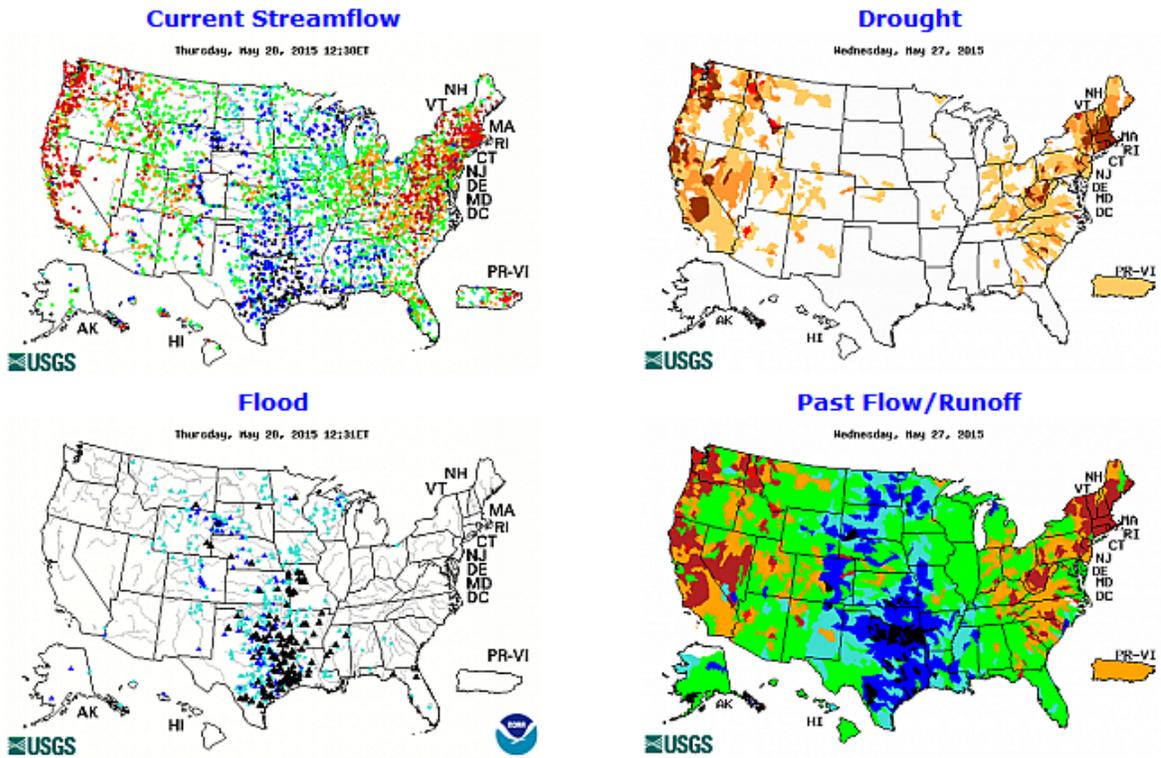
Pasture and rangelands are stressed over California, Montana, and New Hampshire.

Conditions have generally shown improvement over this past week.



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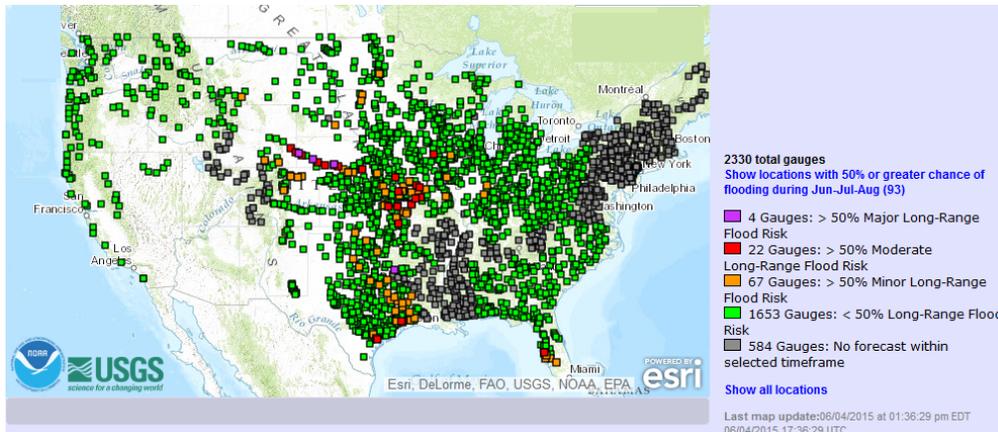
Streamflow



Nationally, stream gages primarily in the southern Great Plains are reporting much above normal streamflow. There are many gages at or above flood stage centered in the Mississippi River tributaries and southern U.S. 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 a 33 gage decrease 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

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Weather Information

National Outlook: “During the next several days, hot weather will gradually expand eastward from the south-central U.S. and develop in the Northwest. Cool weather will linger, however, in the Southwest, the Great Lakes region, and the Atlantic Coast States. Meanwhile, an active weather pattern will prevail from the Intermountain West into the Northeast. Five-day rainfall totals could reach 1 to 3 inches from central portions of the Rockies and Plains to New England. Showers will also develop in Florida, but mostly dry weather can be expected through the weekend in the south-central U.S. and the Far West. The NWS 6- to 10-day outlook for June 9 – 13 calls for near- to above-normal temperatures nationwide, with the greatest likelihood of anomalous warmth across the northern Plains and the West. Meanwhile, near- to above-normal rainfall across most of the country will contrast with drier-than-normal weather in parts of the south-central U.S. and across the nation’s northern tier from the Pacific Northwest to Lake Superior.”

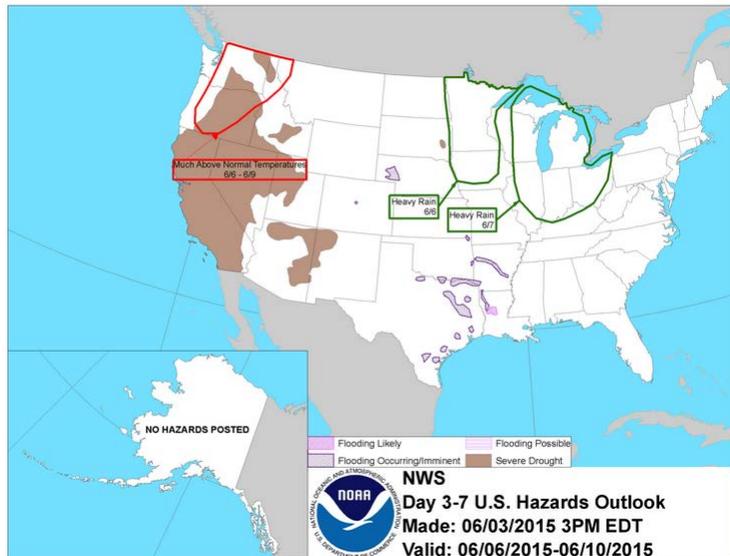
Contact: Brad Rippey, Agricultural Meteorologist, USDA/OCE/WAOB, Washington, D.C. (202-720-2397)
Website: <http://www.usda.gov/oce/weather/pubs/Daily/TODAYSWX.pdf>

National Weather Hazards

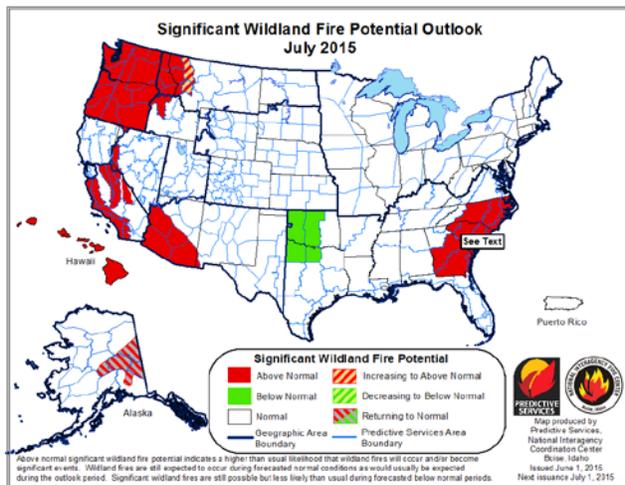
The National Weather Service map of [national weather hazards](#) for the next 3 – 7 days forecasts heavy rain in the upper Midwest (6/6-7). Flooding is occurring or possible in many portions of the Mississippi basin and the Texas coast. Flooding is also occurring in central Colorado and western Nebraska. Much above normal temperatures are forecast for the Pacific Northwest ((6/6-9).

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

In Alaska, no hazards are posted.



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 June 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.

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Supplemental Drought Information

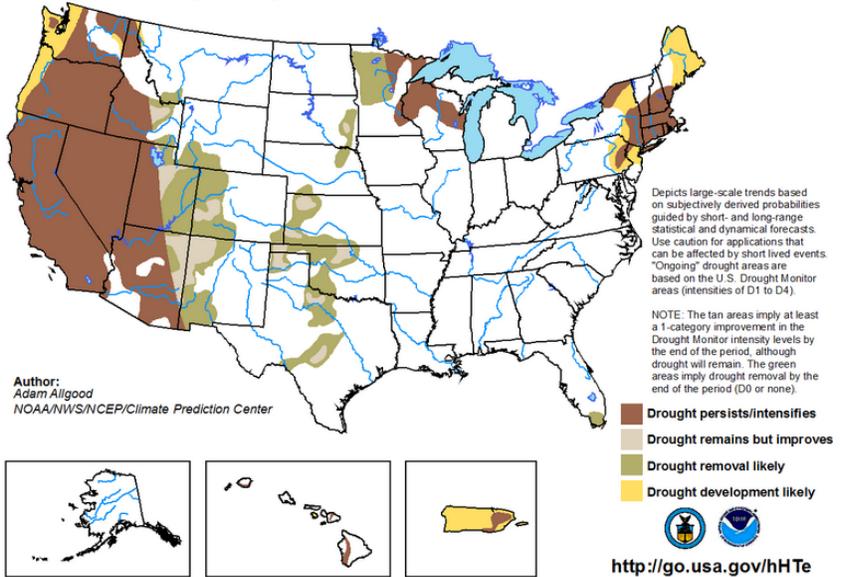
National Seasonal Drought Outlook

Nationally, [drought](#) is expected to persist or intensify over much of the west, central, and northeast U.S., including California, Nevada, Oregon, Washington, Utah, Arizona, Minnesota, Wisconsin, New York, Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire, Hawaii, and Puerto Rico.

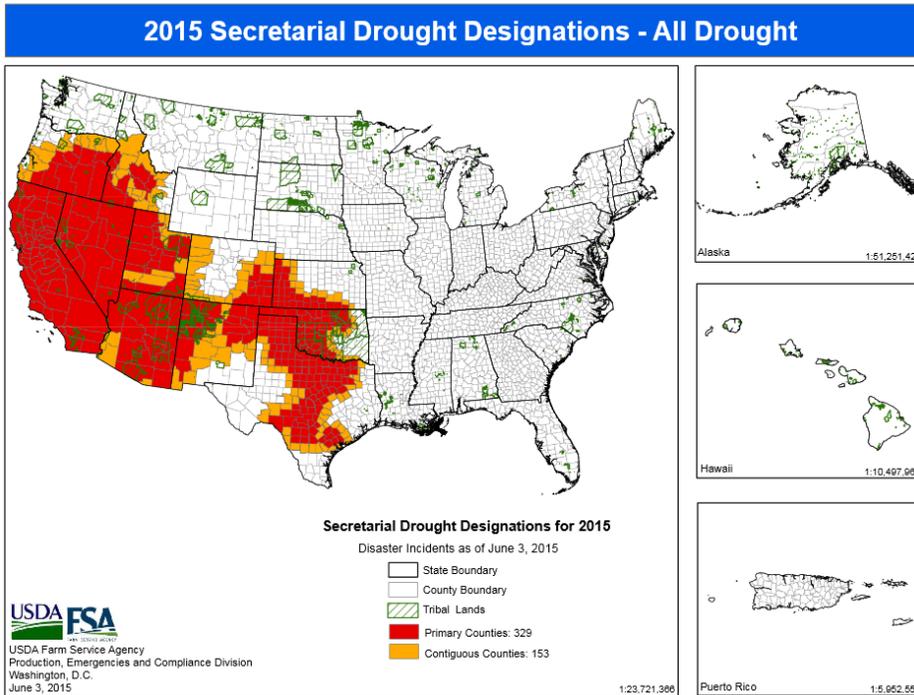
Improvements and removal of drought status are expected in parts of Idaho, Utah, Colorado, Arizona, New Mexico, Texas, Oklahoma, Nebraska, South Dakota, Kansas, Nebraska, Minnesota, and southern Florida. The areas of drought that are likely to develop further are in the Pacific Northwest, the Northeast, and Puerto Rico.

U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period

Valid for May 21 - August 31, 2015
Released May 21, 2015



2015 USDA Secretarial Drought Designations



[USDA Drought Assistance website](#)

[National Sustainable Agriculture Information Service.](#)

[USDA Regional Climate Hubs.](#)

[NASS Quick Stats](#)

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Additional Maps

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

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

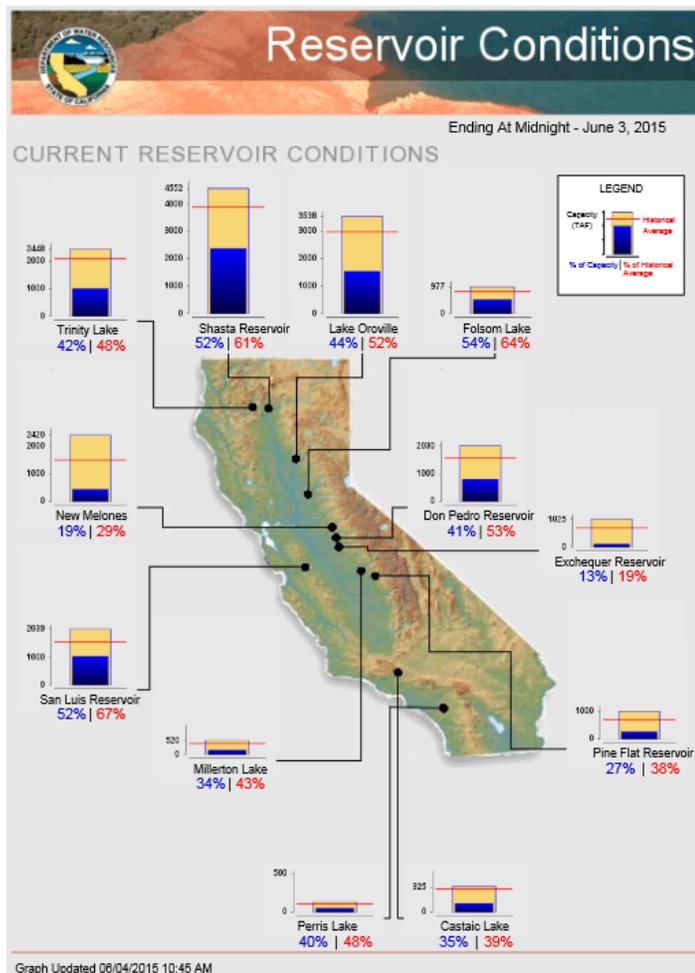
Tea Cup Reservoir Depictions

- <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](#)

California Department of Water Resources



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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](#).

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