



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

Weekly Water and Climate Update Thursday, May 21, 2015

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2014 Photo Contest: Scenery

Neacola River
Valley, AK

Photo by: Daniel Fisher

National Outlook: “An extremely active weather pattern will persist through the holiday weekend, with multiple rounds of showers and thunderstorms expected—starting later today—across portions of the central and southern Plains. Five-day rainfall totals could reach 4 to

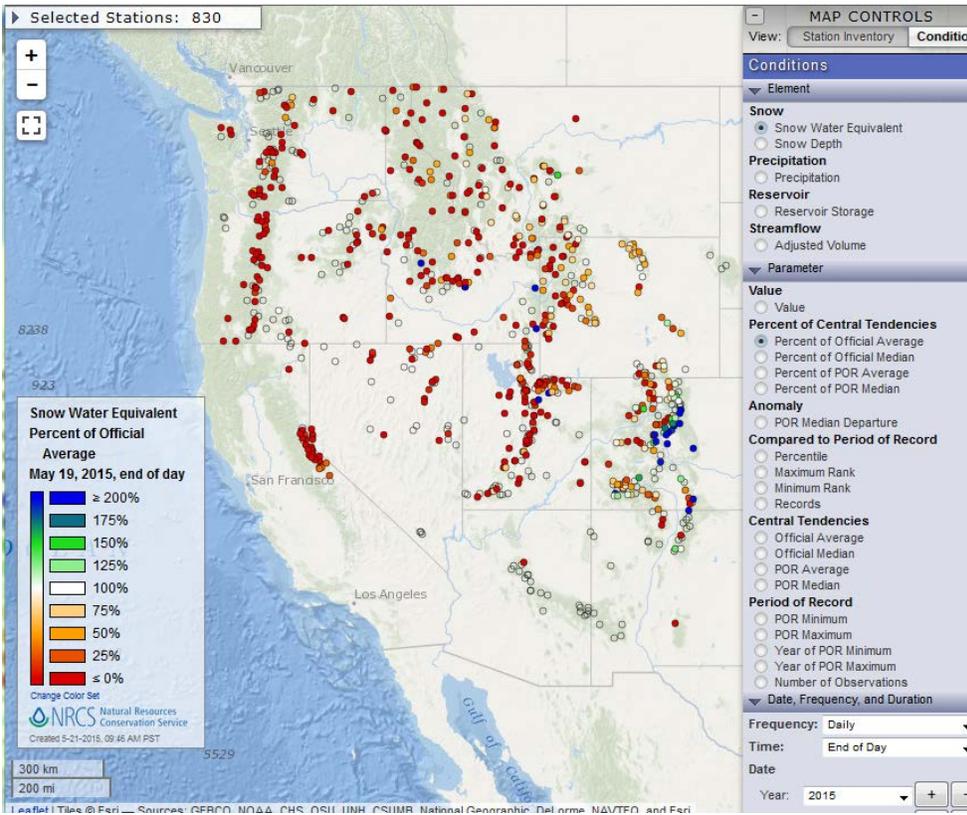
8 inches in parts of Oklahoma and Texas, likely leading to widespread flooding. A much broader area of the Plains, southwestern Corn Belt, and middle and lower Mississippi Valley can expect 1- to 3-inch totals. Mostly dry weather will be limited to the Desert Southwest, the Southeast, and the nation’s northern tier. Cool weather will persist in many areas of the U.S. into the weekend, except in the Pacific Northwest. The NWS 6- to 10-day outlook for May 26 – 30 calls for the likelihood of above-normal temperatures along the Pacific Coast, in the Northwest, and east of the Mississippi River. Meanwhile, cooler-than-normal conditions will cover the central and southern High Plains and parts of the Southwest. A wet pattern will persist nearly nationwide, with drier-than-normal weather likely limited to the northern Pacific Coast, southern Florida, and a small area near the Canadian border centered on northern North Dakota.”

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



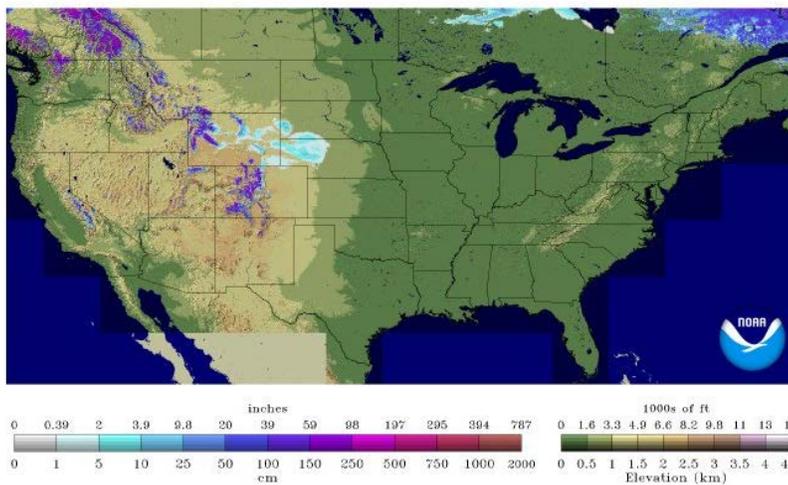
The [Westwide SNOTEL Current Snow Water Equivalent \(SWE\) % of Normal](#) map shows that the snowpack has primarily melted out with the exception of late season snow this past week. Many stations have zero SWE at this time.

Note that some sites are normally melted out at this time.

A few stations in Colorado, Utah, and Wyoming are reporting above normal conditions (green and blue dots).

National Snow 2014-2015 Analysis 2015

Snow Depth
2015-05-21 06 UTC



The snow depth map as reported from the [NWS NOHRSC](#) for May 21, 2015, shows an increase in snow cover from last week. Snow fell over the Rockies, eastern Colorado, western South Dakota, and Nebraska. Snow now covers 3.5% of the continental U.S. This includes snow that is primarily in the highest mountains in the West.

Weekly Water and Climate Update

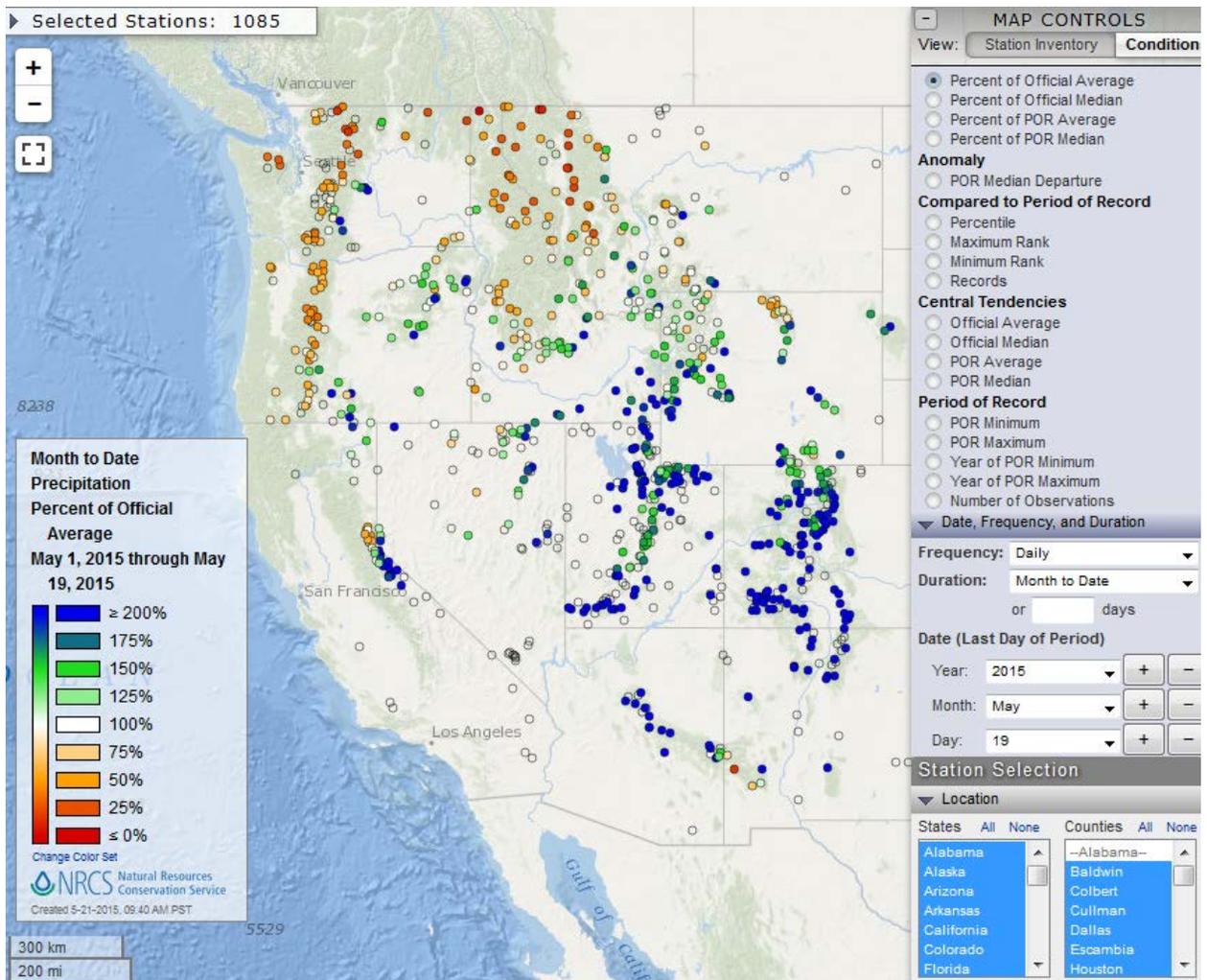
Precipitation

In the West, the SNOTEL [precipitation percent of normal map](#) for May shows a pattern of generally dry conditions in the northwestern states and wet conditions in the southwestern states. The wet conditions are reported at stations that cover much of southern Wyoming, southern Idaho, most of Utah, Colorado, Arizona, most of New Mexico, and along the border of Nevada/California and in eastern Nevada (blue dots).

Near normal conditions were reported in a few scattered stations in Oregon, Idaho, Montana, and Wyoming (white dots).

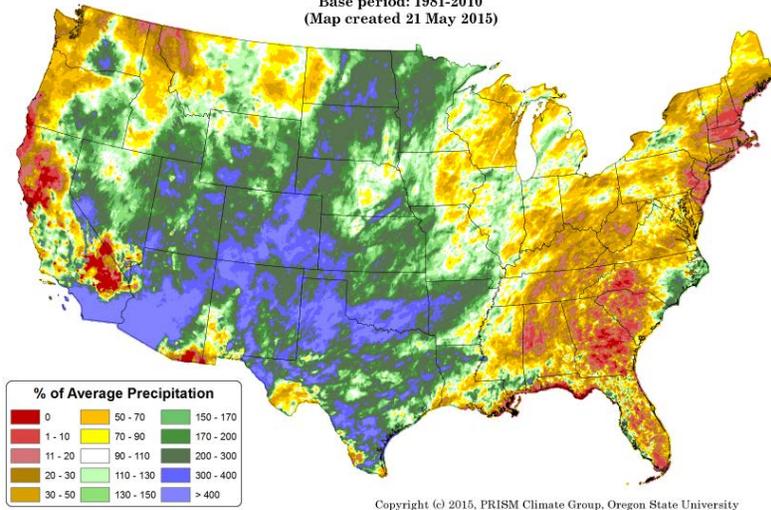
Less than normal precipitation in May was reported in northern Wyoming, western Oregon, Washington, western Montana, and northern Idaho (orange and yellow dots). Very low precipitation was reported in Washington, Oregon, Montana, northern California, and northwest Nevada, much of Idaho, northwest Utah, and southwest New Mexico (red dots).

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



Weekly Water and Climate Update

Total Precipitation Anomaly: 01 May 2015 - 20 May 2015
 Period ending 7 AM EST 20 May 2015
 Base period: 1981-2010
 (Map created 21 May 2015)



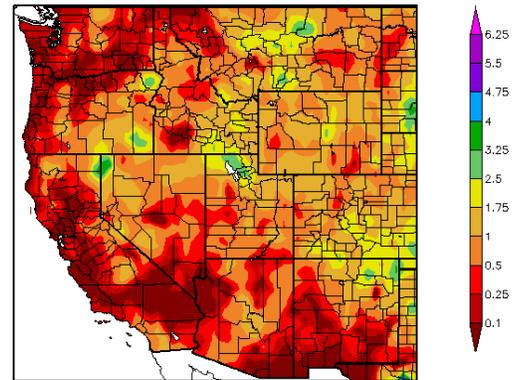
So far in May, the national total [precipitation anomaly](#) pattern reveals higher than normal precipitation across the Southwest, central Rockies, and into the Great Plains. Areas that saw higher precipitation include southern California, southern Nevada, Utah, Colorado, Arizona, New Mexico, Texas, Oklahoma, and scattered across the Plains states. There was little or no precipitation in a few areas of the West, the South, and the Northeast (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 widely scattered precipitation across the area. The highest precipitation total was reported in northeast California. Light and widely scattered precipitation also was reported in all western states.

Little to no precipitation was reported in scattered areas of the West this week (dark red). The largest contiguous dry area was along the Pacific coast from Canada to southern California, and continuing along the southern border of Arizona and New Mexico.

Precipitation (in)
 5/14/2015 - 5/20/2015

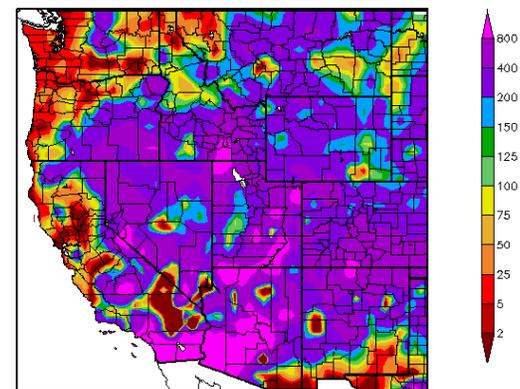


This ACIS percent of normal [map](#) of the West for the last seven days shows that precipitation was above normal across much of the area. The highest percent of normal precipitation fell in several areas of southern California, parts of Arizona, several areas in Utah, southern Idaho, Colorado, New Mexico, and western Nevada (magenta areas).

Very dry conditions for the week were reported in widely scattered areas of California, southern Nevada, Arizona, southern New Mexico, Washington, Oregon, northern Idaho, and northern Montana (dark red areas).

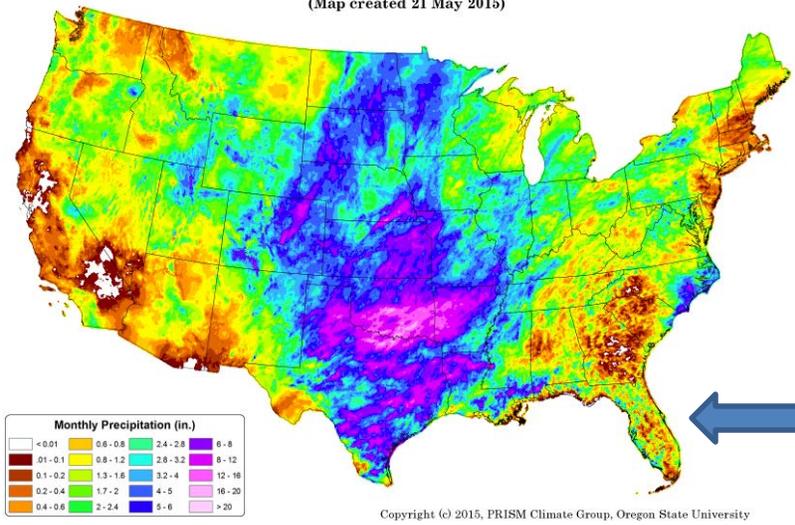
Percent of normal precipitation may be exaggerated in areas where the average for this seven-day period is at or near zero.

Percent of Normal Precipitation (%)
 5/14/2015 - 5/20/2015



Weekly Water and Climate Update

Total Precipitation: 01 May 2015 - 20 May 2015
 Period ending 7 AM EST 20 May 2015
 (Map created 21 May 2015)



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

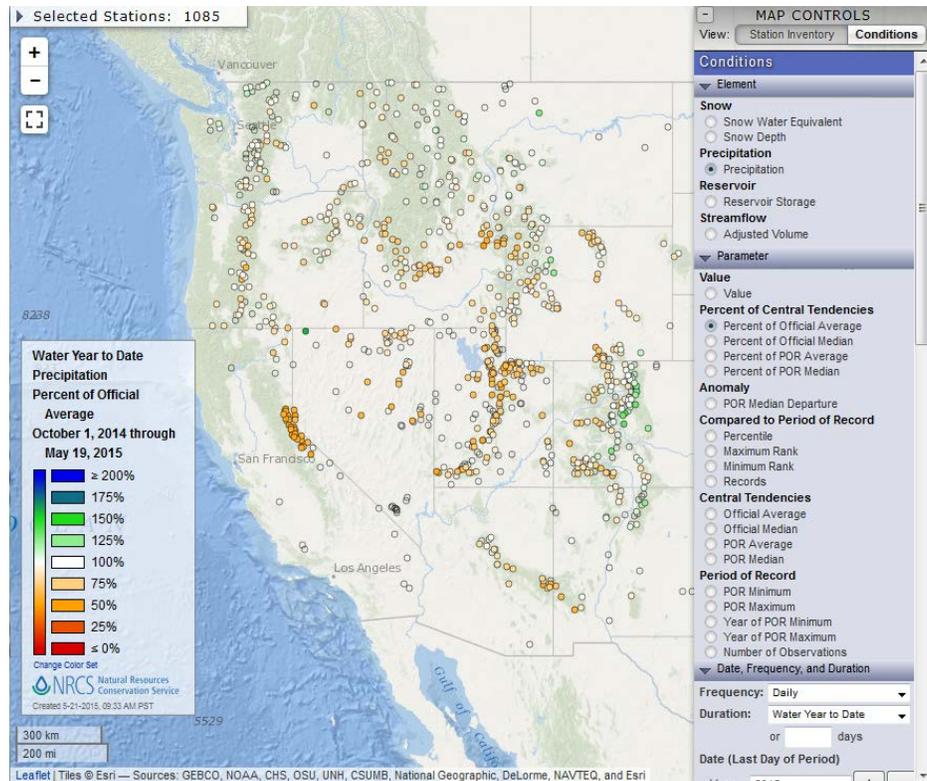
For May 2015, the [total precipitation](#) across the continental U.S. was heaviest in the southern Great Plains. Precipitation continued to inundate much of the worst D4 drought areas in Texas and Oklahoma. Precipitation also fell elsewhere in the Great Plains, southern and eastern Texas, and southeast North Carolina. In contrast, much of the West, the South, and the Northeast were mainly dry.

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

For the [2015 Water Year](#) that began on October 1, 2014, there are a few stations along the eastern front of the Rockies that are reporting above normal precipitation.

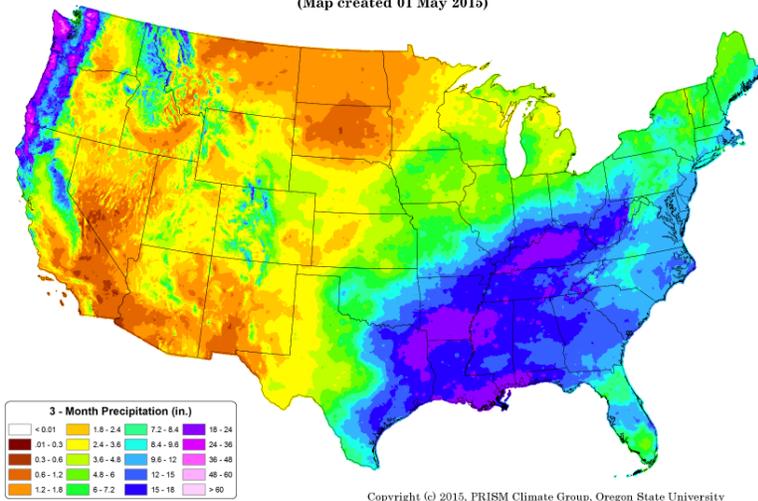
Many scattered stations across the West have near normal conditions for this part of the Water Year (mapped in white).

Several areas in the West have less than normal precipitation for the Water Year. These include stations in all western states, with the lowest percent of normal in California (mapped in yellow and orange).



Weekly Water and Climate Update

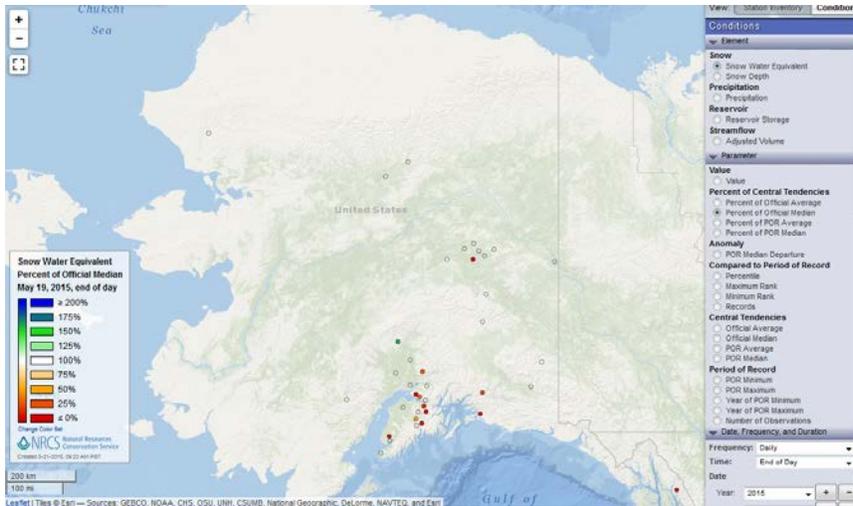
Total Precipitation: February 2015 - April 2015
 Period ending 7 AM EST 30 Apr 2015
 (Map created 01 May 2015)



The national map of the [three-month period](#) (February - April) shows that the southcentral region of the nation received precipitation from 2.4 inches to greater than 18 inches. Parts of the West, especially along the Pacific coast and in the mountains, also received significant precipitation. The highest amounts over 48 inches were recorded in Washington.

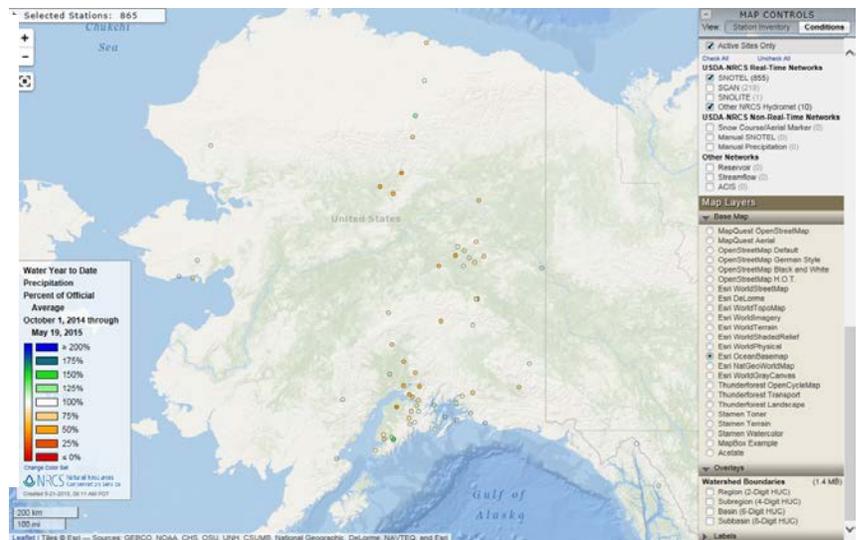
In contrast to the eastern U.S. and Pacific coast, parts of the West, the northern Great Plains, and much of the Midwest received totals of less than 2.4 inches.

Alaska Snow Water Equivalent & Precipitation Conditions



The [Alaska SNOTEL current SWE percent of normal map](#) shows below to near normal conditions across most of the state. Tokositna Valley is the only site now reporting above median snowpack. See the [Alaska update report](#) for individual station data.

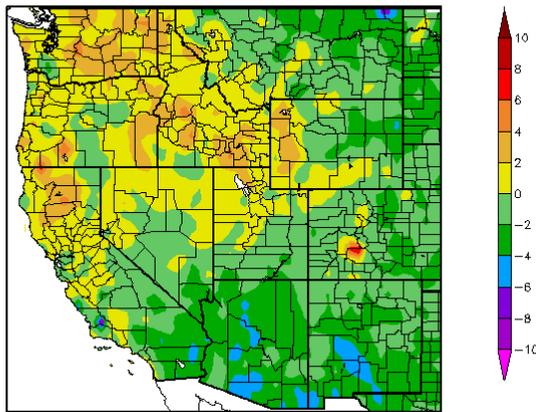
The [Alaska SNOTEL Water Year to Date Precipitation Percent of Normal](#) map shows near to above normal conditions for a few stations in the Prince William Sound and southern Kenai basins. Near normal conditions are reported for southeast Alaska. Interior Alaska is reporting drier than normal conditions. See the [Alaska update report](#) for individual station data.



Weekly Water and Climate Update

Temperature

Departure from Normal Temperature (F)
4/21/2015 - 5/20/2015



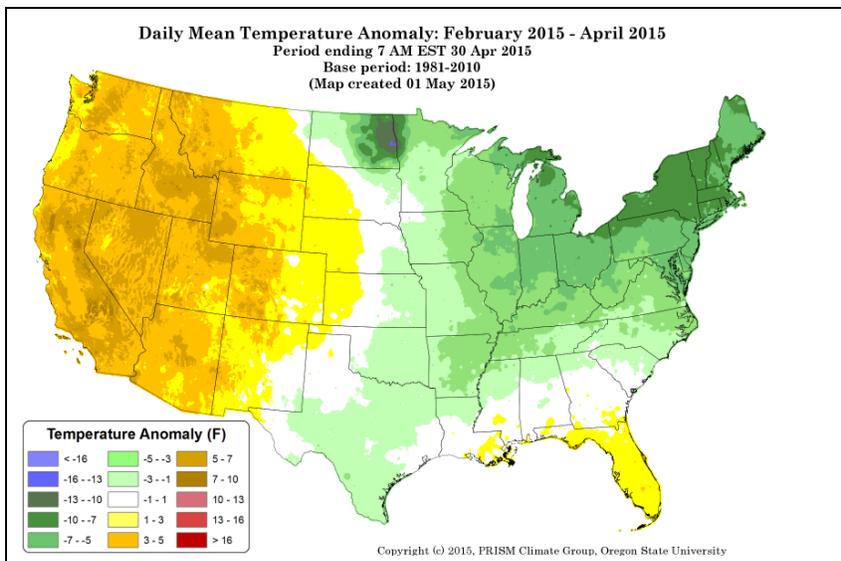
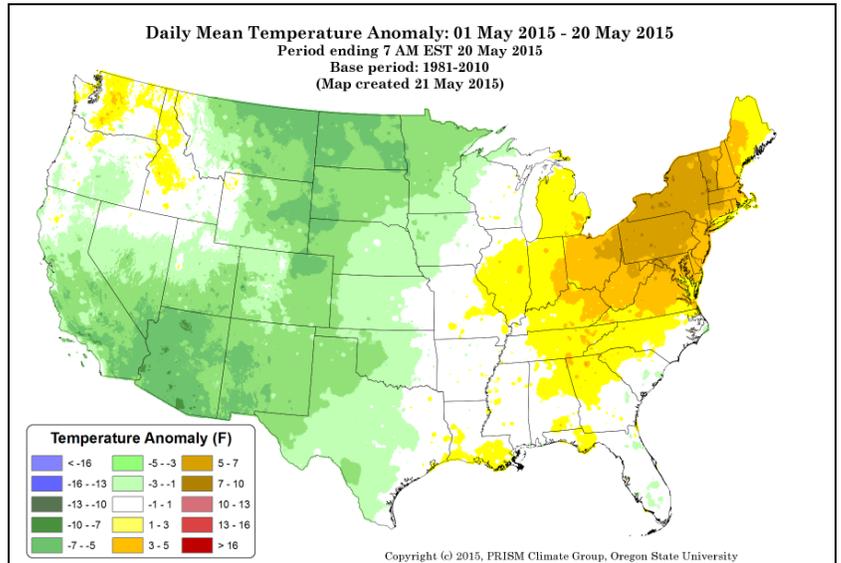
The [ACIS](#) map of the 7-day average temperature anomalies in the West ending May 20 shows that the region had a near normal week. The greatest positive temperature departures occurred in Colorado with the highest anomaly (>+4°F). The areas with negative temperature departures were in southern New Mexico, southern Arizona, southern California, with the largest departure in northern Montana (<- 6°F).

Generated 5/21/2015 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 May 2015, the national daily mean temperature anomaly [map](#) shows a cool region over much of the West, with Arizona reporting the largest cool anomaly (< -7°F). In contrast, above normal temperatures were recorded primarily in much of the Northeast, with the largest departures in Pennsylvania, New York, western Vermont, and western Massachusetts (>+7°F).



The February - April national daily mean temperature anomalies for the U.S. in this [climate map](#) shows the West and Southeast had above normal temperatures (>+7°F). The northern Great Plains and the Northeast 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 the Northeast. The coolest anomalies were in the Red River of the North basin in North Dakota and Minnesota (<-13°F).

Weekly Water and Climate Update

Weather and Drought Summary

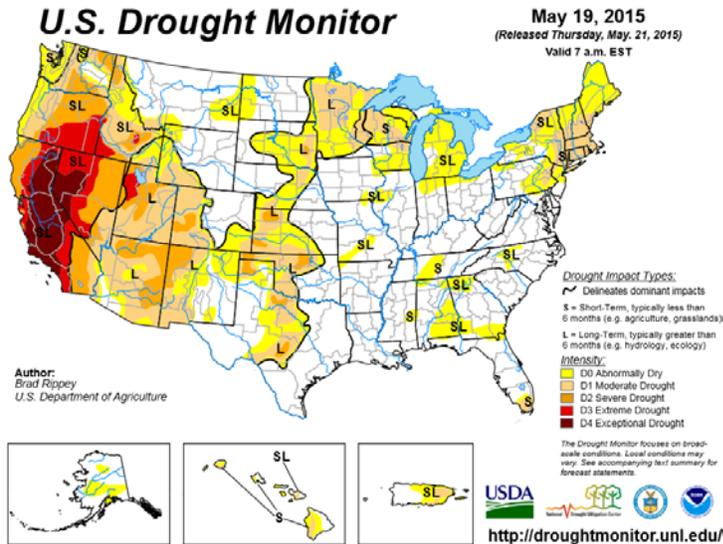
National Drought Summary – May 19, 2015

The following **Weather and Drought Summary** is provided by this week's NDMC Drought Author, Brad Rippey, U.S. Department of Agriculture.

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

“For the contiguous 48 states, the U.S. Drought Monitor showed 31.54 percent of the area in moderate drought or worse, compared with 34.61 percent a week earlier. Drought now affects 88,035,732 people, compared with 67,727,982 a week earlier.

For all 50 U.S. states and Puerto Rico, the U.S. Drought Monitor showed 26.40 percent of the area in moderate drought or worse, compared with 28.96 percent a week earlier. Drought now affects 89,132,987 people, compared with 68,822,176 a week earlier.”



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

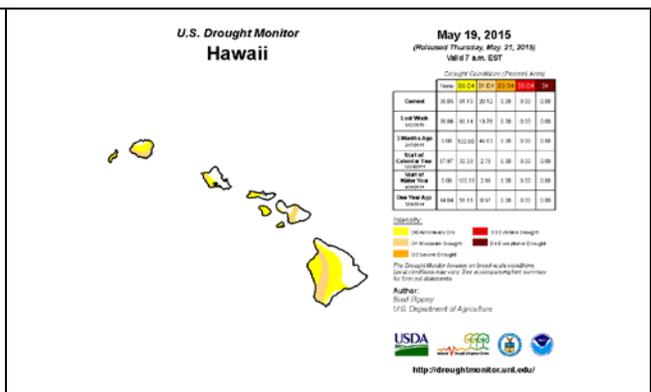
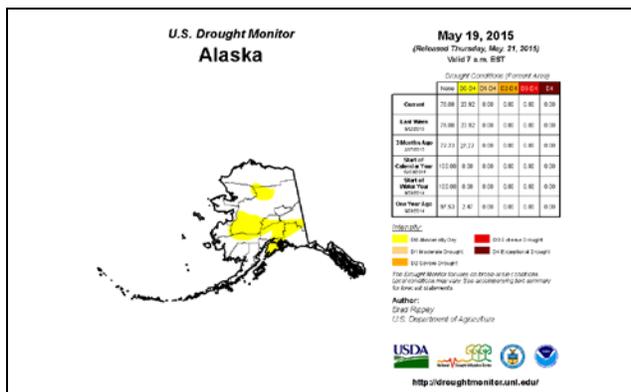
[Current Drought Monitor](#) weekly summary. The exceptional D4 levels of drought are across CA, and NV.

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](#).

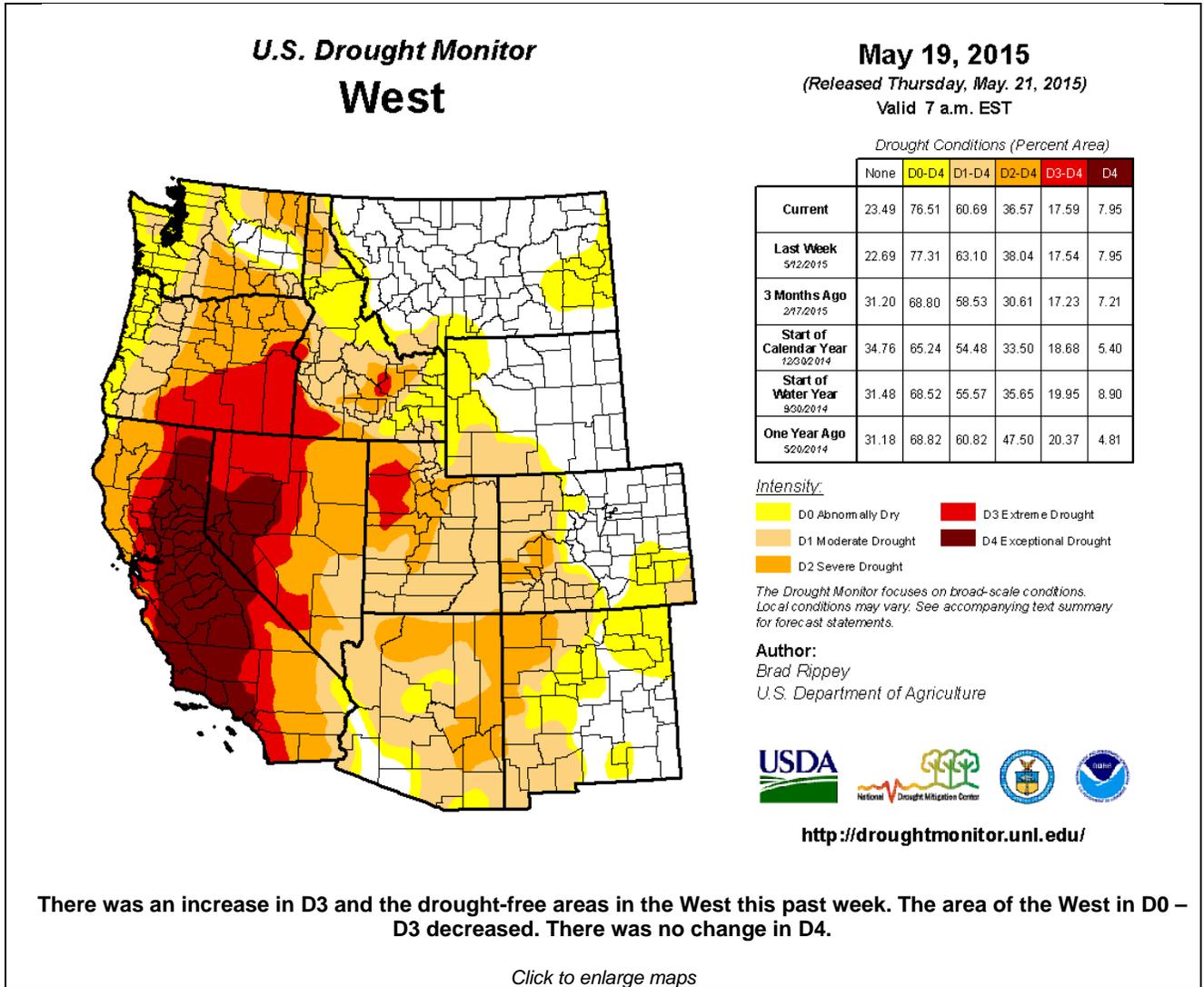
Drought Management Resources:

- ✓ <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](#)



“The [49th](#) and [50th](#) States show normal to moderate drought conditions. There was no change in Alaska or 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



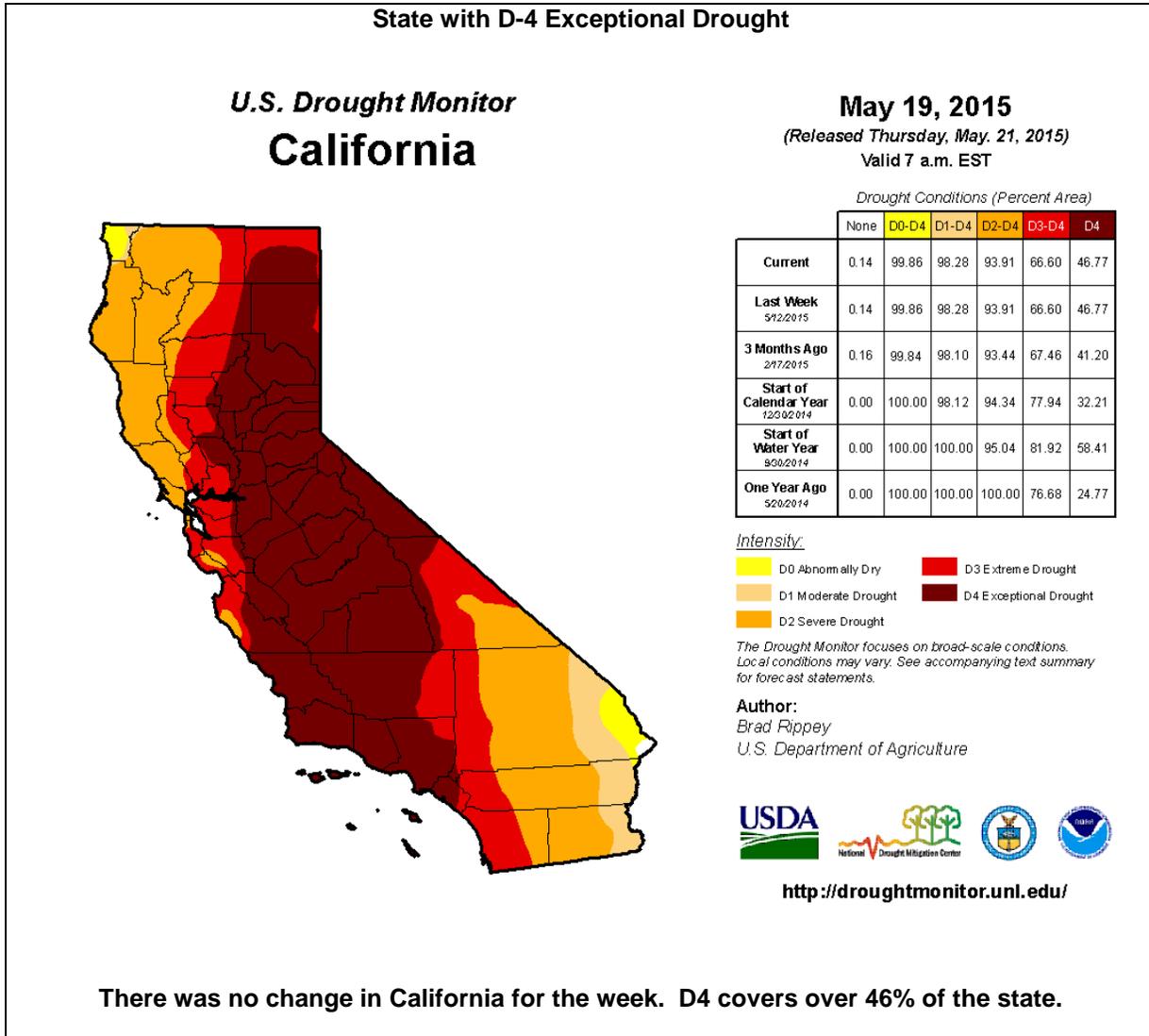
Risk Management Web Resources

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:

- AZ - [Could drought slow America's most vibrant economy?](#) – May 8
- U.S. - [El Nino Returns as Australia Declares First Event Since '10](#) – May 12
- TX - [Report: Statewide drought ends](#) – May 11
- MA - [This machine can make salty water drinkable — using only the sun's rays](#) – May 10
- OR - [Drought Declarations for Umatilla and Morrow County Sent to Governor](#) – May 15
- WA - [Inslee declares statewide drought emergency](#) – May 15
- WA - [Eager for white water? Don't wait](#) – May 12
- UT - [Don't water outside for a week, Salt Lake County conservationists plead](#) – May 11
- TX - [With lakes nearly full, water district will lift drought restrictions](#) – May 12
- PR - [Puerto Rico to begin rationing water amid drought](#) – May 12

Weekly Water and Climate Update

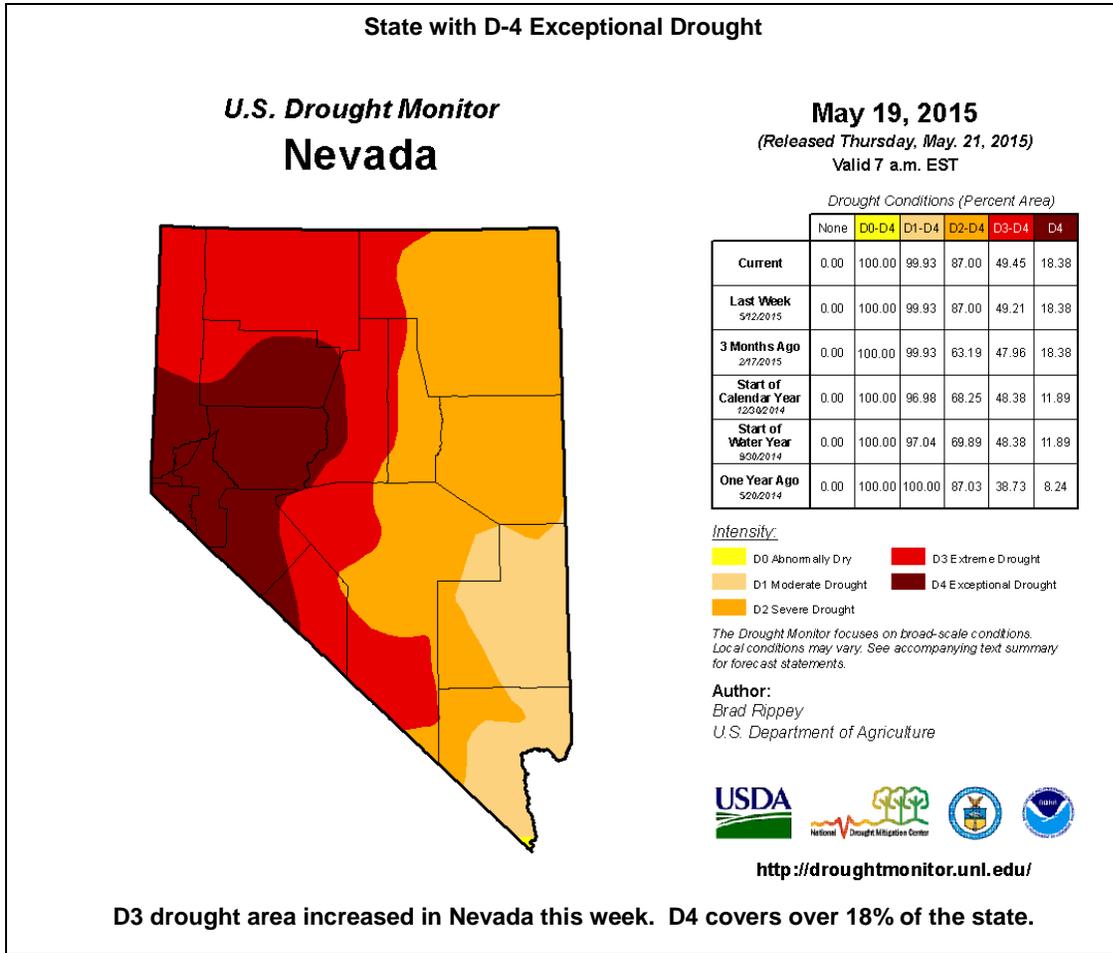


[CA Drought Information Resources](#)

[Drought News from California:](#)

- [California pool, hot tub filling bans have industries steaming](#) – May 10
- [California Golf Courses Tee Up Water-Saving Measures](#) – May 13
- [Nestle Turns Milk Into Water as California Drought Rages](#) – May 13
- [California farmers in line for more drought cutbacks](#) – May 11
- [California water cuts ignore past changes by some cities](#) – May 9
- [You know it's bad when officials suggest watering yards with washing machine water](#) – May 12
- [Bottled-water business grows during drought](#) – May 10
- [Building boom and drought collide on Catalina Island](#) – May 8
- [California Drought Changes How Car Dealerships Serve Customers, Wash Cars](#) – May 11
- [DROUGHT: Customers thirst for turf-removal rebates](#) – May 7
- [Regional tensions linger in California's drought](#) – May 11
- [HEMET: \\$500,000 project will extend boat ramp at Diamond Valley Lake](#) – May 12
- [Livingston declares drought emergency, limits outdoor watering](#) – May 11
- [San Jose to face mandatory water rationing with monthly allotments](#) – May 11

Weekly Water and Climate Update



Nevada Drought News:

[Nevada drought claims Washoe Lake](#)
– May 14

U.S. Population in Drought

Number of people in each drought category in the U.S. for the week ending May 5, 2015

Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
2015-05-19	152,415,585	152,981,870	88,035,733	42,034,072	31,217,712	20,564,132
2015-05-12	153,879,440	151,518,014	67,727,982	43,010,635	31,379,746	20,564,132

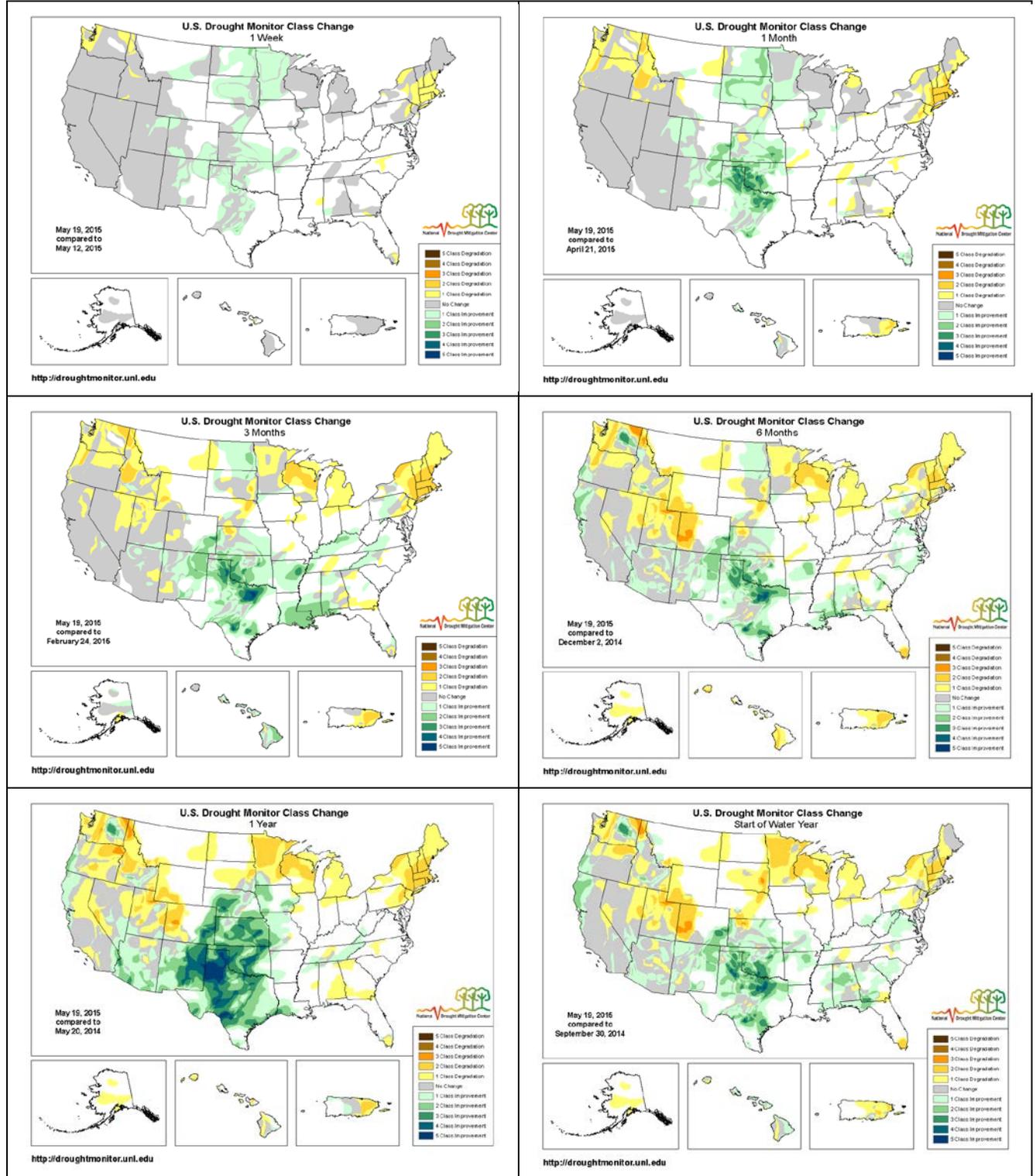
Population figures affected by drought in the U.S. Drought Monitor website show that, for this week, more than 88,000,000 people in the United States were in a drought-affected area, which is a large increase by over 20.3 million people from last week.

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

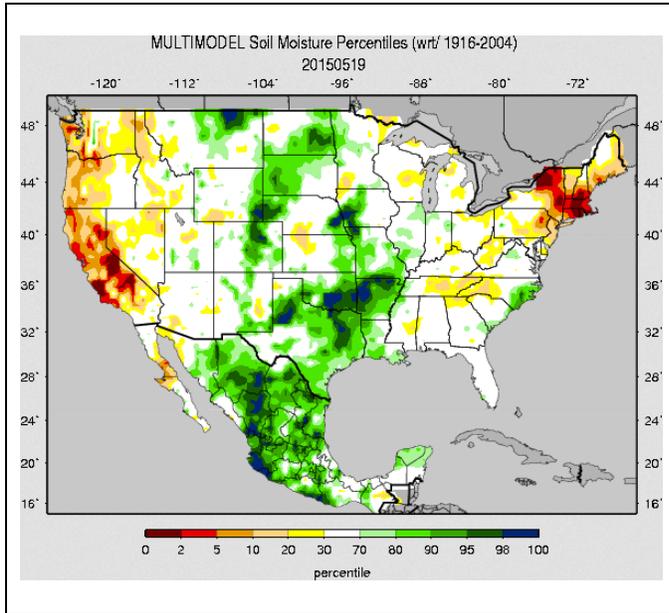
Over Various Time Periods



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 central and southern Great Plains, and the Southwest, have improved (lower left map).

Weekly Water and Climate Update

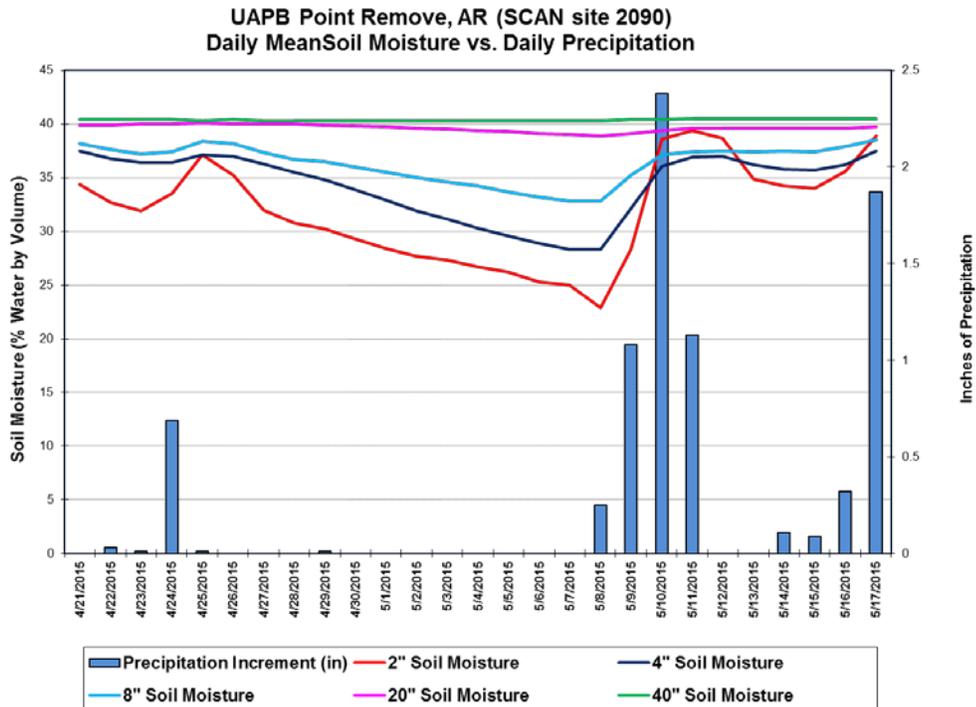
Soil Moisture



The national soil moisture model ranking in [percentile](#) as of May 19, 2015, shows dryness over most of the West and the Northeast. The driest areas were in California, Nevada, western Oregon, western Washington, eastern New York, Vermont, New Hampshire, Maine, Massachusetts, Rhode Island, Connecticut, and northeast Pennsylvania. Additional drier than normal conditions are scattered across areas in many states. Moist soils dominated the central region of the country, including much of northeastern Montana, eastern Wyoming, eastern Colorado, parts of Nebraska, Texas, Oklahoma, western Louisiana, Arkansas, Missouri, western Iowa, and eastern North Carolina. 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)

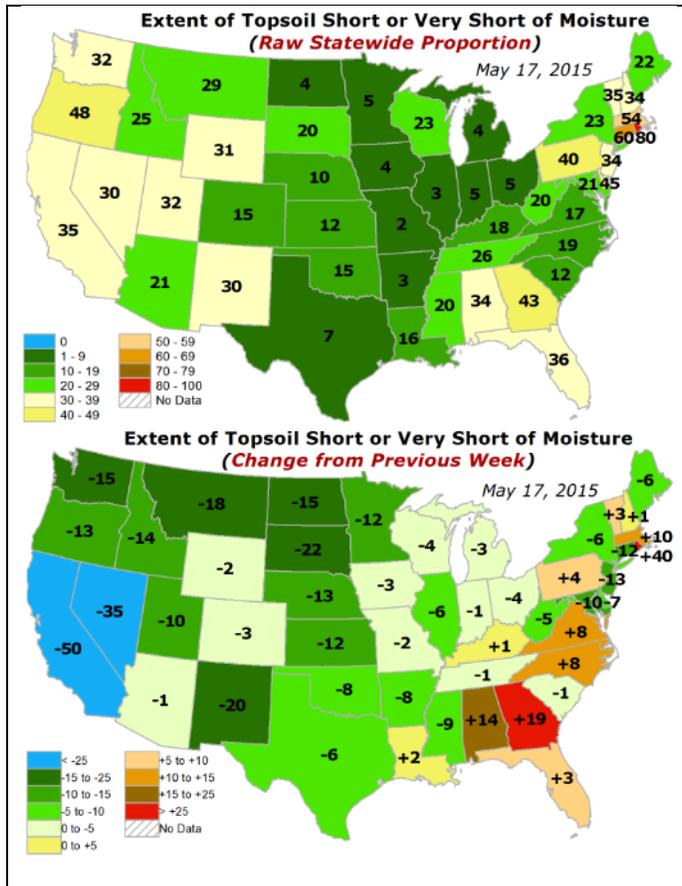


This NRCS resource shows soil moisture data for the last month at the [UAPB Point Remove \(SCAN site 2090\)](#) in Arkansas. The area had several, large precipitation events in the last 30 days, with the largest one in the last 10 days (blue bars). This rainfall resulted in an increase in soil moisture at the 2-, 4-, and 8-inch depth sensors, with the 2-inch sensor reporting the most change with precipitation. The soil moisture at the 20- and 40-inch depth remained unchanged.

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

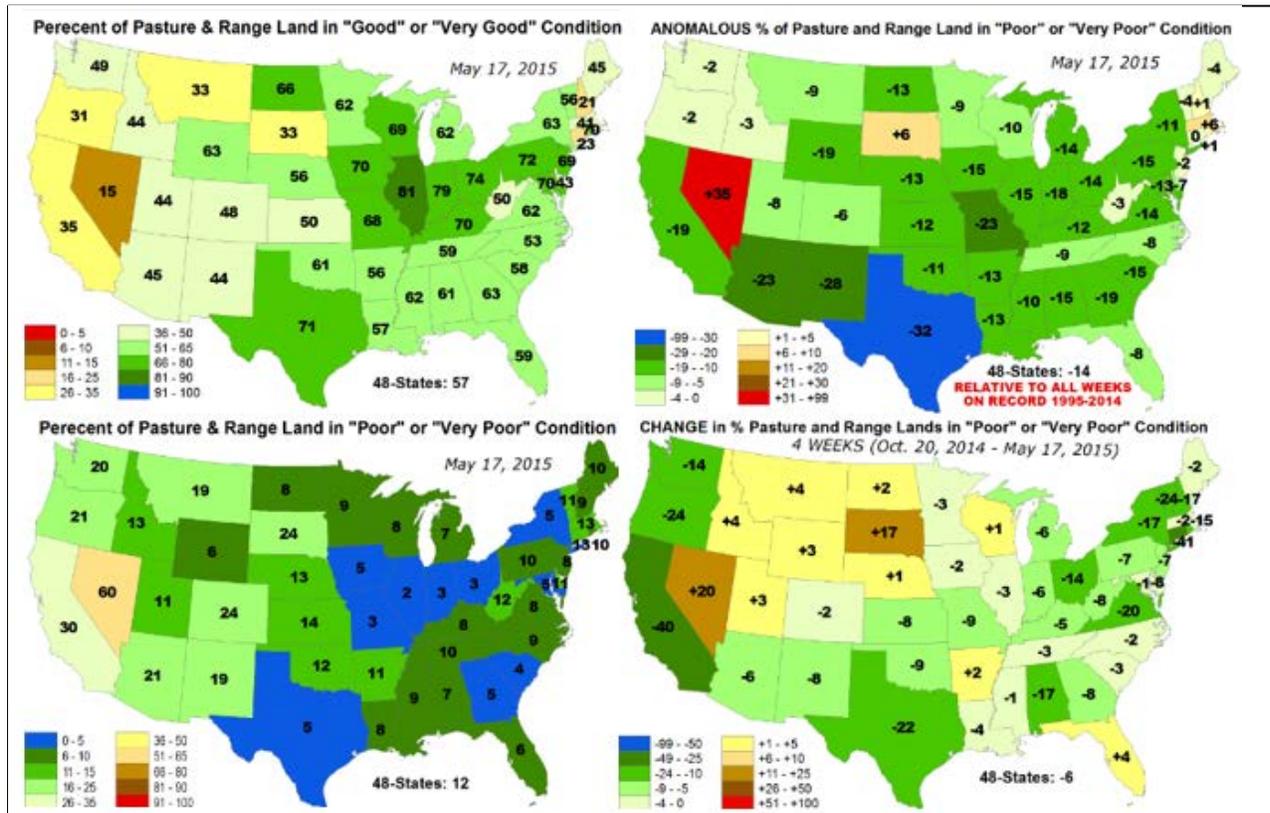
Topsoil and Pasture & Rangeland National Conditions



↩ **Topsoil Moisture** is exceptionally poor (top) over Rhode Island and Connecticut with values representing more than 60% poorer conditions than the median for this time of year. Locations in the Great Plains to the Southeast have good soil moisture conditions.

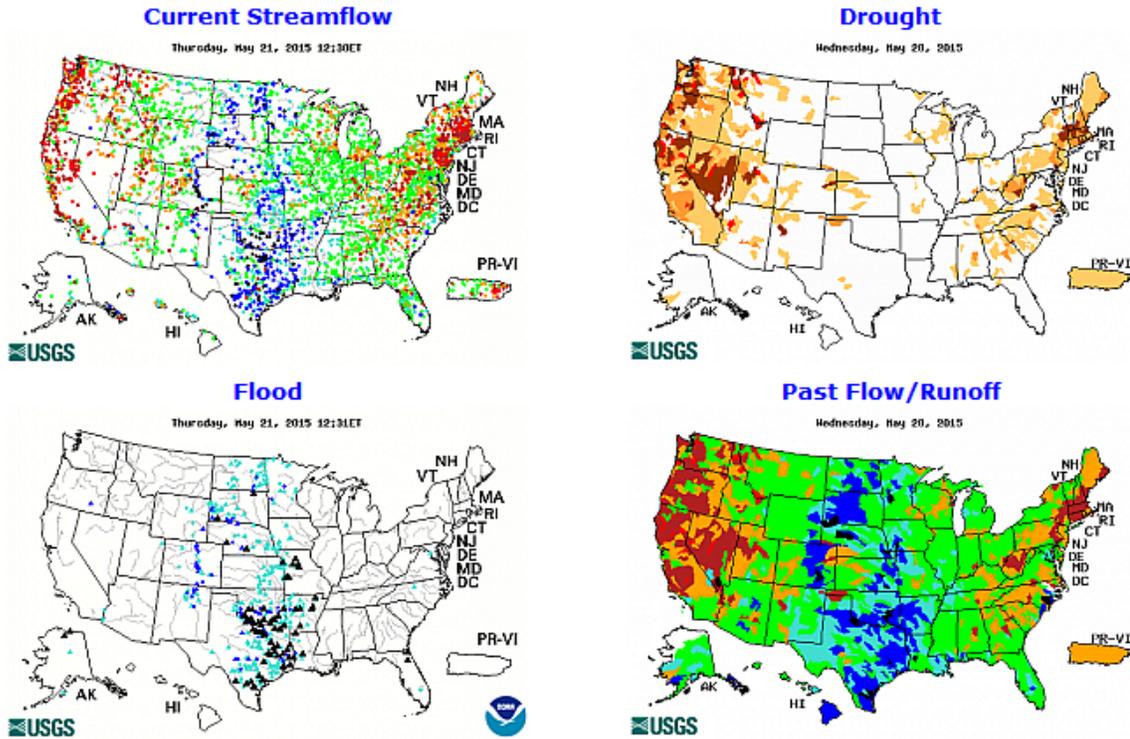
Over the past week, good topsoil moisture dominated the central and western U.S. (bottom panel). California and Nevada show the largest topsoil moisture increase for the week, whereas the East was drying out.

↩ **Pasture and Rangeland across the U.S.** Many of the states east of the Mississippi River are doing well, as noted below. These conditions also extend across the northern Great Plains and northern Rockies. Pasture and rangelands are stressed over California, Nevada, and the Northeast. Condition changes have varied widely over this past week.



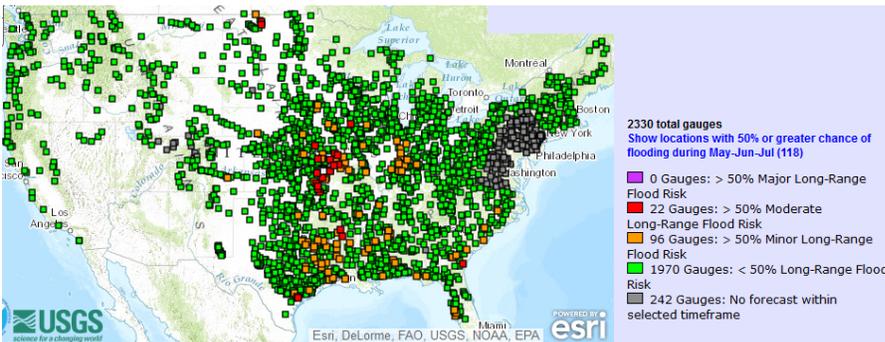
Weekly Water and Climate Update

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 tributaries and southern U.S. this week. These include thirty-nine gages in Texas, fifteen in Oklahoma, two in South Dakota, two in Nebraska, eight in Missouri, five in Oklahoma, six in Arkansas, three in Louisiana, four in Florida and two in northern Alaska.

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 the Midwest and the Southeast. Currently, **0** gages have a greater than 50% chance to experience major flooding; **22** gages for moderate flooding; and **96** gages for minor flooding.

These numbers represent a 19 gage increase with a greater than 50 percent chance of minor flooding category since last week.

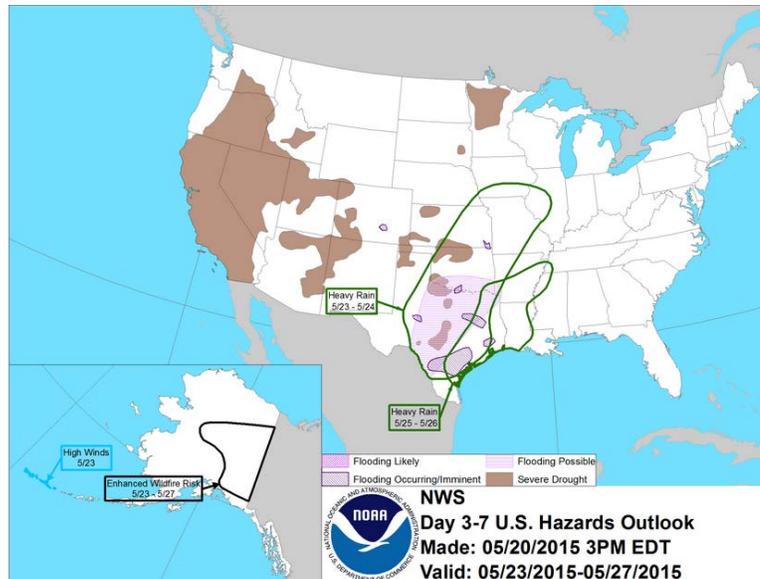
Weekly Water and Climate Update

National [Weather Hazards](#)

The National Weather Service map of national weather hazards for the next 3 – 7 days forecasts heavy rain in the central and southern U.S. (5/23-26). Flooding is occurring or possible in Texas, Oklahoma, Colorado, and Kansas.

In Alaska, high winds are expected in the western Aleutians (5/23) with an enhanced risk of wildfire for much of the interior (5/23-27).

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



[National Drought Summary for May 19, 2015](#)

Prepared by the Drought Monitor Author: Brad Rippey, U.S. Department of Agriculture.

Summary

"Nearly coast-to-coast storminess reduced drought's footprint across the nation's mid-section but triggered lowland flooding from the southeastern Plains and the western Gulf Coast region into the mid-South. Farther east, however, only light showers, if any, dampened the eastern U.S., except for some briefly heavy rain in the northern Mid-Atlantic region. In the Northeast, where little precipitation has fallen during the spring, another mostly dry week raised concerns about a lack of soil moisture and declining streamflows. Meanwhile, cool, wet weather in the upper Midwest provided much-needed moisture, following a period of rapid planting progress. In fact, below-normal temperatures dominated much of the country, with widespread freezes noted across the north-central U.S. from May 18-20. Elsewhere, broadly unsettled weather prevailed in the West, with the heaviest precipitation falling across the northern Intermountain region and the central and southern Rockies. The Western precipitation boosted topsoil moisture, aided winter grains, and reduced irrigation requirements. Beneficial showers dampened parts of California and Nevada, but failed to dent the Far West's serious hydrological drought.

Great Plains

Frenetic weather led to further reductions in drought coverage. Late-season snow briefly blanketed several areas, including parts of North Dakota on May 17-18 and western Nebraska on May 19-20. Farther south, multiple rounds of heavy showers and locally severe thunderstorms led to flooding, particularly across the southeastern Plains. Several gauging points, including the Red River near DeKalb, Texas, and the Poteau River near Panama, Oklahoma, climbed to their highest levels since May 1990. The Red River near DeKalb rose 4.51 feet above flood stage on May 13, while the Poteau River near Panama surged 14.54 feet above flood stage on May 12. By May 20, cumulative storage in Texas' reservoirs climbed to 24.78 million acre-feet (78.5% of capacity)—the highest in more than 4 years. Only a month ago, Texas' storage was 22.53 million acre-feet, or 71.4% of capacity. Six months ago, on November 20, 2014, storage stood at just 19.43 million acre-feet, 62.0% of capacity.

On the southern Plains, month-to-date rainfall has already exceeded a foot in many locations, including Oklahoma City, Oklahoma (13.88 inches, or 508% of normal), and Wichita Falls, Texas (12.43 inches, or 570%). Record-high May totals in those two locations are 14.52 inches (in 2013) in Oklahoma City and 13.22 inches (in 1982) in Wichita Falls. In the Plains' cotton belt, incessant rains have hampered fieldwork. For example, only 19% of Texas' intended cotton acreage had been planted by May 17, compared to the 5-year average of 36%. Farther north, spring precipitation arrived mostly too late to revive winter wheat but has aided rangeland, pastures, and summer crops. By May 17, roughly one-third of the winter wheat was rated in very poor to poor condition in South Dakota (36%), Nebraska (31%), and Kansas (30%). The damage to wheat was caused much

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earlier due to a combination of drought and winter weather extremes. Meanwhile, South Dakota's rangeland and pastures—which were rated 33% very poor to poor on May 3, improved to 24% very poor to poor by May 17. Spring wheat, grown primarily in six Northern States from Washington to Minnesota, was off to a good start, with 65% of the crop rated good to excellent (and only 4% very poor to poor) on May 17.

Hawaii, Alaska and Puerto Rico

No changes were made in Alaska and Puerto Rico. It is worth noting, however, locally heavy showers in parts of western and northeastern Puerto Rico staved off drought expansion. Areas that missed most of the mid-May rainfall remain dry. In San Juan, for example, rainfall from March 1 – May 19 totaled just 3.15 inches (31% of normal). Meanwhile in Hawaii, water restrictions were eased (from 10% mandatory to 10% voluntary) on Molokai, contributing to the removal of D1. On Maui, however, short-term dryness (D0) and moderate drought (D1) expanded, mainly due to worsening pasture conditions.

Midwestern and Great Lakes States

Significant rainfall pushed as far east as the upper Mississippi Valley but tapered to light showers east of the Mississippi River. As a result, substantial improvements in areas affected by dryness and drought were limited to the upper Midwest. St. Cloud, Minnesota, received 5.19 inches of rain during the first 18 days of May, followed by consecutive freezes (30 and 31°F, respectively) on May 19-20.

Southeast

Pockets of abnormal dryness (D0) dotted the Southeast, with moderate drought (D1) confined to southern Florida. Southern Florida continues to await the arrival of its summer wet season, with drought-related impacts expected to diminish once rains arrive. Elsewhere, patchy Southeastern dryness was promoting spring fieldwork but reducing streamflows and increasing stress on pastures and summer crops. In Tennessee, 59% of the pastures were rated good to excellent on May 17, down from 70% a week earlier. Similarly, Georgia's pastures rated good to excellent declined from 70 to 63% during the week ending May 17.

The Northeast

Aside from a couple bursts of thundershowers in the Mid-Atlantic States, mostly dry weather again prevailed. Stream data from USGS indicated extremely low flows for this time of year from the northern Mid-Atlantic region into southern New England. Moderate drought (D1) was introduced in two areas—one stretching from parts of eastern Pennsylvania into New England, and the other covering much of northern New York. In many of the driest areas, spring precipitation has been scarce. From March 1 – May 19, precipitation totaled less than two-third of normal in locations such as Boston (5.64 inches, or 56% of normal), New York's Central Park (7.12 inches, or 63%), and Providence (7.39 inches, or 65%).

West

Cool, occasionally showery weather across much of the western U.S. reduced irrigation demands, boosted topsoil moisture, and benefited rangeland, pastures, winter grains, and spring-sown crops. However, the late-season moisture failed to significantly alter the bleak hydrological situation in drought-affected areas, including California. By April 30, reservoir storage as a percent of average for the date was significantly below normal in Arizona, California, Nevada, New Mexico, and Oregon. Storage in California's 154 reservoirs stood at 18.0 million acre-feet (64 percent of average) on May 1, about 1.6 million acre-feet lower than a year ago. With little snow in the mountains above California's lakes, further inflow will be negligible, meaning that the reservoir recharge season has ended early.

An exception to the West's cool, damp pattern was the Pacific Northwest, where abnormal dryness (D0) expanded to cover western Washington. During the first 19 days of May, rainfall totaled just 0.65 inch (20% of normal) in Quillayute, Washington. Farther inland, USDA on May 17 rated only a little more than one-third of the winter wheat crop in good to excellent in Washington (39%) and Oregon (34%). In addition to less-than-ideal crop conditions, snowpack and streamflows remain at extremely low levels in most of the Northwest. As a result, severe drought (D2) was introduced across portions of northeastern Washington and northern Idaho, while moderate drought (D1) was expanded. Farther south, recent precipitation has been heavy enough in southern Idaho to prevent significant drought expansion, although hydrological concerns persist.

Despite atypically heavy showers for May in California, Nevada, and Arizona, the drought depiction remained effectively unchanged. Simply stated, the late-season rain and snow showers have improved the appearance of the landscape but have left the underlying, long-term drought virtually untouched. Even with the showers, California's topsoil moisture was rated 85% very short to short on May 17, while subsoil moisture was 90% very

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short to short. Similarly, Nevada's topsoil moisture was 65% very short to short, while subsoil moisture was 85% very short to short. Nevertheless, locations reporting their wettest May day on record included San Diego, California (1.63 inches on May 14; previously, 1.49 inches on May 8, 1977), and Phoenix, Arizona (0.93 inch on May 15; previously, 0.91 inch on May 4, 1976).

More widespread precipitation has fallen in recent weeks across the central and southern Rockies and environs. In fact, the water content of the high-elevation snowpack climbed above the mid-May average in several river basins in the Rockies of Colorado and New Mexico. Due to the extensive precipitation, improved water-supply prospects, and boost in soil moisture, another round of sweeping improvements in the drought depiction were introduced in Colorado and New Mexico, extending northward into southern Wyoming and westward into eastern Utah. Through May 19, month-to-date precipitation has totaled 200 to 300% of normal in locations such as Grand Junction, Colorado; Salt Lake City, Utah; Denver, Colorado; and Evanston, Wyoming. Parts of New Mexico have been even wetter in recent weeks, relative to normal, with May 1-19 totals reaching 5.45 inches (524% of normal) in Clayton and 1.50 inches (484%) in Albuquerque.

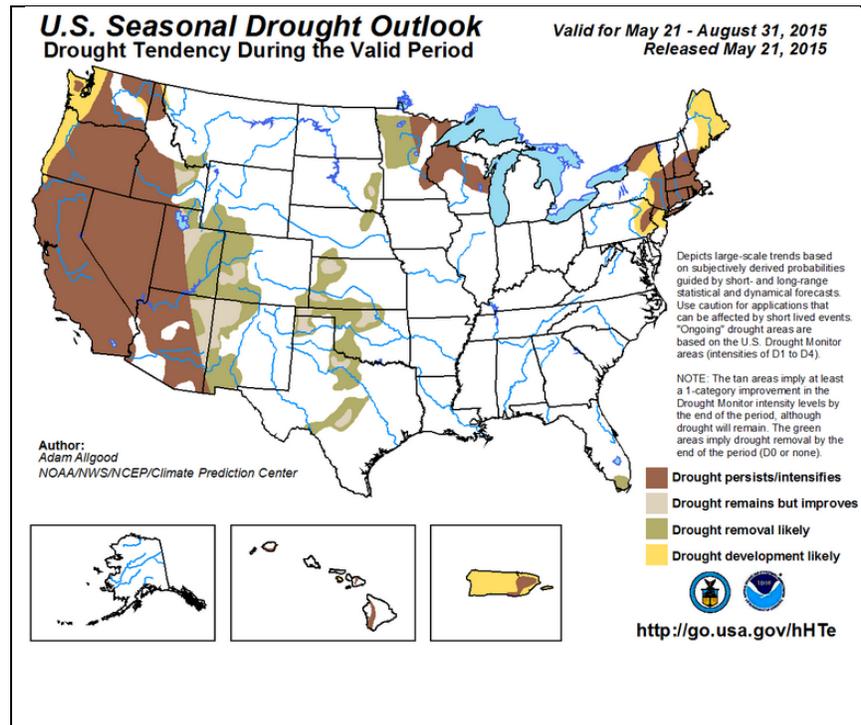
Looking Ahead

During the next several days, a parade of storms will continue to emerge from the western U.S. As a result, 5-day precipitation totals could reach 1 to 2 inches from Oregon and northern California to the Intermountain West. Meanwhile, totals of 2 to 5 inches or more can be expected across the central and southern Plains and parts of the mid-South. In contrast, little or no rain will fall in the eastern U.S. and across the nation's northern tier. Most of the country, excluding the Southeast and Northwest, will continue to experience cool weather. The NWS 6- to 10-day outlook for May 26 – 30 calls for likelihood of above-normal temperatures along the Pacific Coast, in the Northwest, and east of the Mississippi River. Meanwhile, cooler-than-normal conditions will cover the central and southern High Plains and parts of the Southwest. A wet pattern will persist nearly nationwide, with drier-than-normal weather likely limited to the northern Pacific Coast, southern Florida, and a small area near the Canadian border centered on northern North Dakota."

Supplemental Drought Information

National Seasonal Drought Outlook

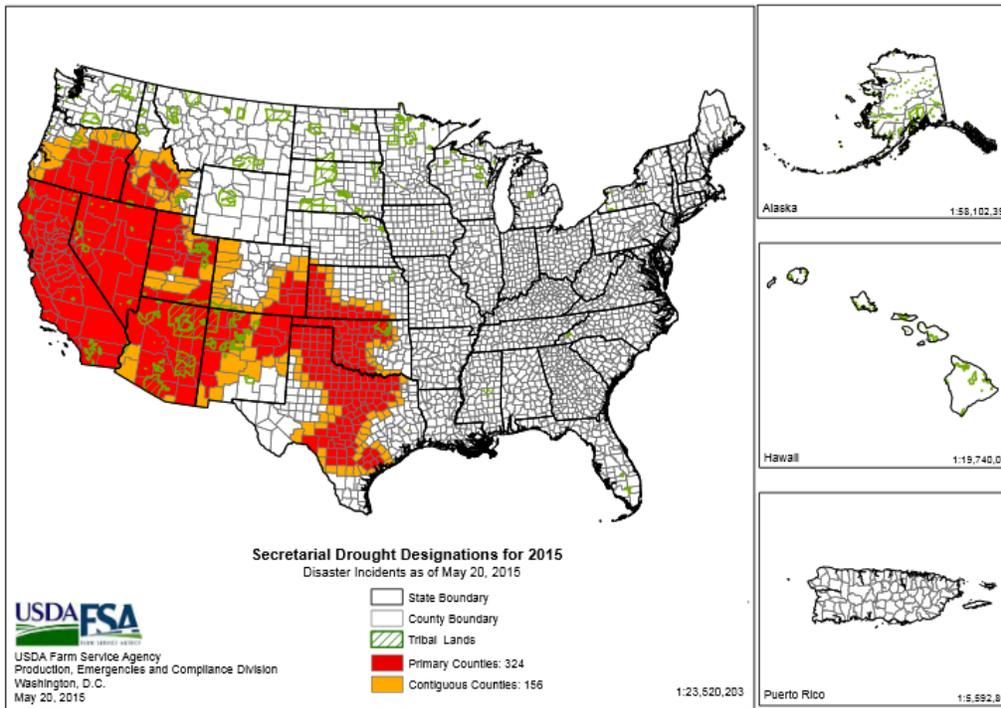
Nationally, [drought](#) is expected to persist or intensify over much of the west, central, and northeast U.S., including California, Nevada, Oregon, Washington, Utah, Arizona, Minnesota, Wisconsin, New York, Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire, Hawaii, and Puerto Rico.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



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2015 USDA Secretarial Drought Designations

2015 Secretarial Drought Designations - All Drought

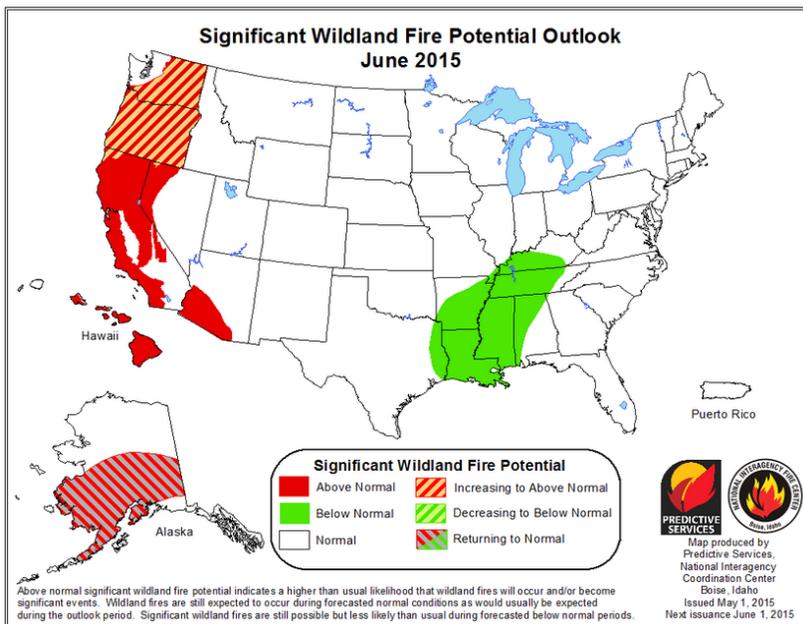


Refer to the USDA Drought Assistance [website](#) and [National Sustainable Agriculture Information Service](#).

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

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

National Fire Potential Outlook



June Fire Forecast

In June, 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 southern U.S.

California, western Nevada, southwest Arizona, and Hawaii have above normal fire potential.

Oregon and western Washington have increasing to above normal fire potential for June.

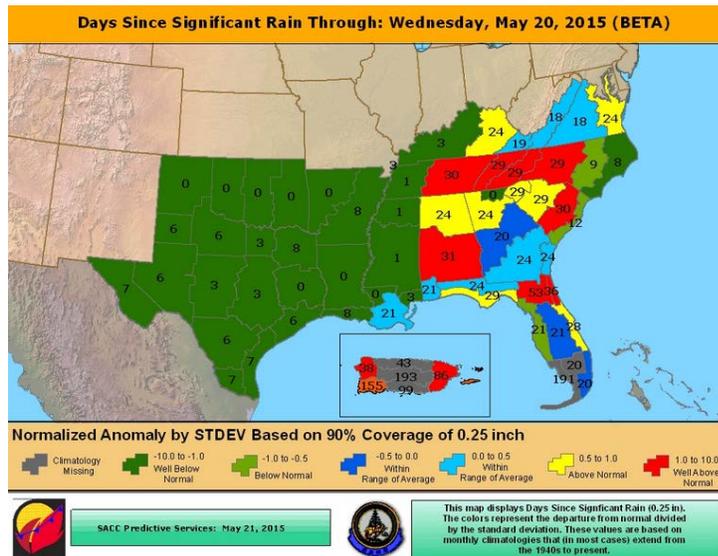
The southern half of Alaska is returning to normal fire potential.

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Additional Maps

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

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



[Days since Significant Rain Summary](#)

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 quest for greater water conservation

With the State Water Resources Control Board moving ahead with water targets for water agencies and cities, nearly all California water districts are focused on ramping up water restrictions, with some communities facing water budgets and rationing to meet the demand for water conservation. However San Diego and Orange County water authorities were frustrated that the new water reduction targets imposed by the SWRCB do not consider how and where cities get their water or give credit for mitigation efforts.

California's State Resources Water Control Board preparing to curtail senior water rights

The State Resources Water Control Board was taking aim at agricultural water use and announced impending curtailment orders for senior water rights holders, comprised mainly of agricultural districts. According to the water board chairwoman, the curtailment orders may be handed down within a matter of weeks. Junior water rights holders were notified on May 1 that they must end water diversions.

Animosity over water restrictions, perceived water use by others

Tighter water restrictions were forcing Californians to take a look at their own water use and cut back wherever possible, but the demand for conservation also reawakened regional tensions throughout the state. While competition between urban, agricultural and environmental interests has been an issue, the disparity in water use between richer and poorer communities has also drawn recent attention.

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Anger at exploitation of state's valuable resource

Californians were becoming increasingly outraged at companies bottling and selling the state's water amid a four year drought. There are 108 bottling operations in the state.

California golf courses making water-saving landscaping choices

California's golf courses were tearing out turf and replacing it with drought-tolerant landscaping to cut down drastically on water use and the cost of irrigation and maintain an attractive appearance. The landscaping change is being carried out in areas where play will not be affected.

California's Bay Area pool, hot tub construction not thriving amid new water restrictions

Bay Area pool builders and hot tub retailers were struggling to keep customers from cancelling construction contracts. Contractors have also had to find new sources of water to fill the pools, given that water restrictions prohibit the use of potable water for pool and hot tub filling.

Lawn mostly brown at Westwood, California's Church of Jesus Christ of Latter-day Saints temple

The Church of Jesus Christ of Latter-day Saints' temple in Westwood was surrounded by mostly dormant grass rather than the lush green lawn normally associated with the edifice. Lawn watering ceased about one month ago to conserve water, stated a security guard at the temple.

"You know it's bad when officials suggest watering yards with washing machine water"

Kern County supervisors ordered staff to push the idea of the public using water from their washing machines to irrigate yards. The county has no plans to limit residential watering, but always encourages the wise use of resources.

Drought emergency for all of Washington State

Washington's Gov. Inslee declared a drought emergency for the entire state, smoothing the way for aid to those coping with water shortages. Record low snowpack and subsequent water shortfalls led agriculture officials to estimate a crop loss of \$1.2 billion this year.

Seven more county drought declarations in Oregon

The Oregon Drought Council sent seven additional county drought declarations to the governor. The counties in crisis include Deschutes, Grant, Jackson, Josephine, Lane, Morrow and Umatilla. Fourteen of the 36 counties in the state have received drought declarations.

Drought abatement in Texas

The Texas Water Development Board announced that the state was no longer in drought as gauged by the Palmer Drought Severity Index. Texas has endured drought since 2011.

The number of impacts for California in the [Drought Impact Reporter](#) continues to rise with the advent of new water conservation targets."



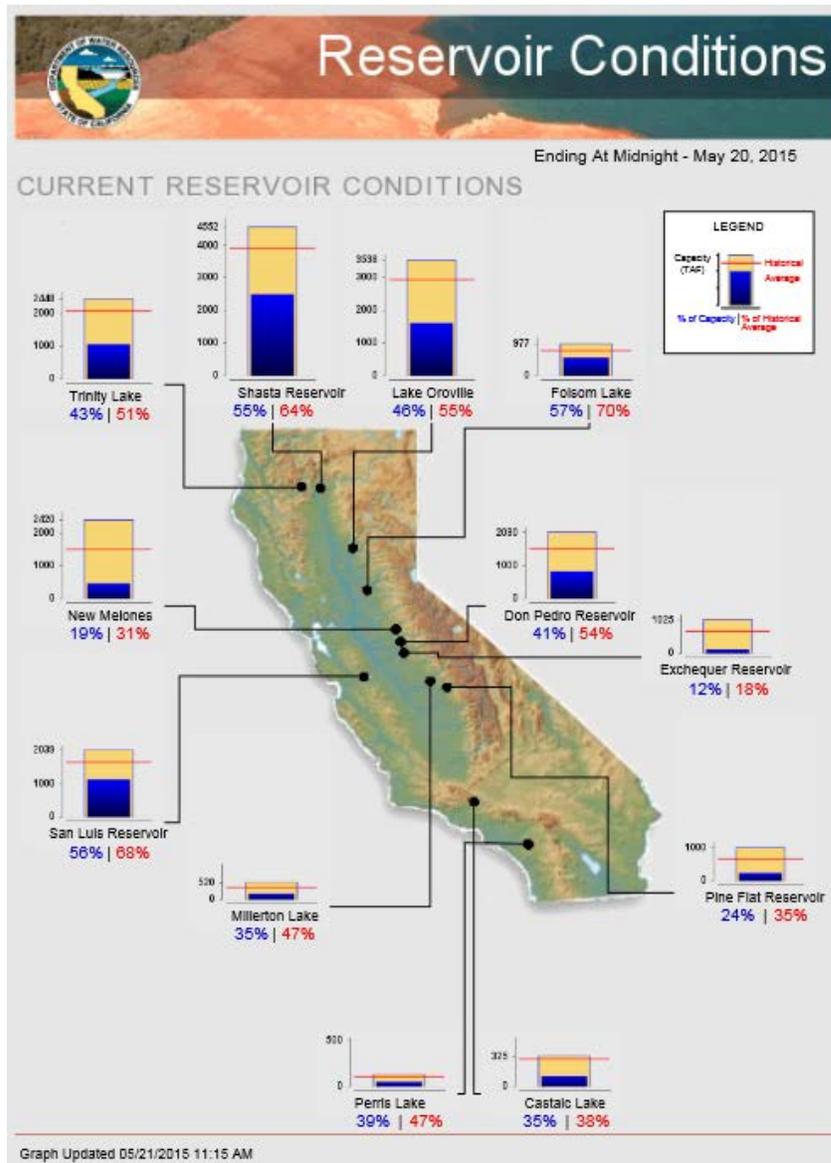
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Tea Cup Reservoir Depictions

- <http://www.usbr.gov/uc/water/basin/> ← Upper Colorado
- http://www.usbr.gov/uc/wcao/water/basin/tc_gr.html; ← Upper Snake
- <http://www.usbr.gov/pn/hydromet/burtea.html> ← Upper Colorado
- http://www.usbr.gov/uc/water/basin/tc_cr.html ← Upper Colorado
- <http://www.usbr.gov/pn/hydromet/select.html> ← Pacific Northwest
- <http://www.sevierriver.org/reservoirs/teacup-diagram-of-reservoirs/> ← Sevier River Water (UT)

California Reservoir Conditions

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



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State Activities

[State government drought activities](#) can be tracked through their drought plans. NRCS Snow Survey and Water Supply Forecasting (SSWSF) Program State Office personnel are participating in state drought committee meetings and providing the committees and media with appropriate SSWSF information. Additional information describing the [tools](#) available from the Drought Monitor can also be found at the [U.S. Drought Portal](#).

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