



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

Weekly Snowpack / Drought Monitor Update September 25, 2014

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Agricultural Weather Highlights – Thursday, September 25, 2014

- “In the **West**, showers associated with a Pacific storm are pushing farther inland across Washington, Oregon, and northern California. Cooler weather accompanies the rain. Elsewhere, very warm dry weather is promoting summer crop maturation and harvesting. In California, rice was 7% harvested on September 21.
- On the **Plains**, isolated showers are limited to parts of western Texas. Elsewhere, dry weather and near-record to record-high temperatures favor winter wheat planting and emergence, as well as summer crop maturation and harvesting. On September 21, winter wheat planting was ahead of the respective, 5-year averages in all of the Plains States except South Dakota and Texas. Nebraska (56% planted) led the region in planting progress.
- In the **Corn Belt**, widely scattered showers stretch from Wisconsin to Missouri. Elsewhere in the Midwest, warm, dry weather is ideal for late-developing corn and soybeans. On September 21, corn maturity lagged the average pace by more than 20 percentage points in Iowa, Minnesota, and the Dakotas.
- In the **South**, showers linger along and near the Gulf and Atlantic Coasts. Elsewhere, warm, dry weather is highly favorable for fieldwork, including corn, soybean, cotton, peanut, and rice harvesting.

Outlook: Late-season warmth will gradually shift eastward, migrating from the northern Plains into the Midwest and Northeast during the weekend. Meanwhile, cooler air will infiltrate the West. On Friday and during the weekend, precipitation will become heavier and more widespread across much of the West, except in southern California and the southern Rockies. Five-day precipitation totals could locally reach 2 to 4 inches in the northern Rockies and northern Intermountain West. By early next week, heavy precipitation will overspread the northern High Plains. Elsewhere, heavy showers (1 to 3 inches) can be expected during the next couple of days in southern Texas, while rain (1 to 3 inches) will return to parts of the Southeast during the weekend. The NWS 6- to 10-day outlook for September 30 – October 4 calls for above-normal temperatures in coastal California and across the eastern half of the U.S., while cooler-than-normal conditions will cover much of the West. Meanwhile, near- to above-normal precipitation across the majority of the country will contrast with drier-than-normal weather in New England, northern California, and portions of Nevada and Oregon.”

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>

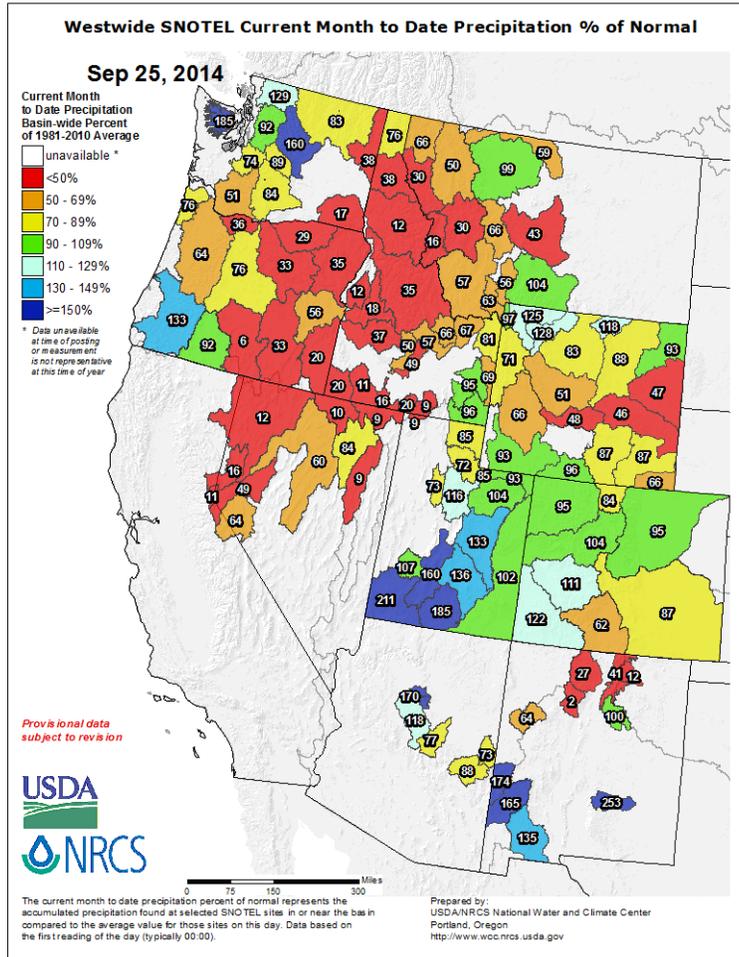
The Natural Resources Conservation Service provides leadership in a partnership effort to help people conserve, maintain, and improve our natural resources and environment

Weekly Snowpack and Drought Monitor Update Report

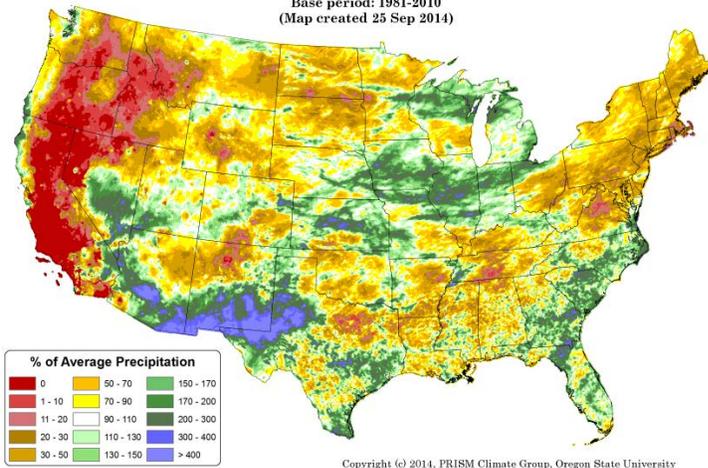
Precipitation

In the West, the September [SNOTEL](#) precipitation percent of normal map shows a wide variety of conditions where precipitation occurred only in some basins in each of the states. Most of Utah, northwest Wyoming, northwest Washington, southwest Oregon, central Arizona, and southern New Mexico received near to above normal precipitation for the period. The percent of normal values (especially in the dark blue areas) may be amplified where normally very little precipitation falls during this time of year.

Click on most maps in this report to enlarge and see latest available update.



Total Precipitation Anomaly: 01 September 2014 - 24 September 2014
 Period ending 7 AM EST 24 Sep 2014
 Base period: 1981-2010
 (Map created 25 Sep 2014)



In September 2014, the national [precipitation anomaly](#) pattern reveals some higher than normal precipitation across the Southwest. Monsoon and hurricane-remnant moisture dominated Arizona and parts of southeastern California, southern Nevada, southwest Utah, and southern New Mexico into western Texas. Above average moisture was also recorded in parts of the Southeast to the mid-Atlantic states, and a swath of moisture from Kansas to the upper Midwest. A large area of the West, especially much of California, Oregon, Nevada, Idaho, and southern Washington, has seen little or no precipitation.

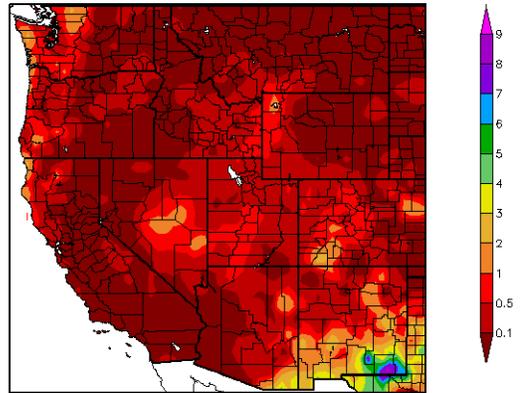
This preliminary daily PRISM precipitation anomaly map contains all available network data, including SNOTEL data, and is updated periodically as additional data become available

Weekly Snowpack and Drought Monitor Update Report

and are quality controlled.

The [ACIS 7-day](#) total precipitation map for the western U.S. shows mainly dry conditions. Precipitation has fallen primarily across the southwest states. Heavy precipitation fell in southeast Arizona, as well as in southern New Mexico and into Texas. Scattered precipitation also occurred in the central Rocky Mountains, central Nevada, and along the Pacific coast from northern California through Washington.

Precipitation (in)
9/18/2014 - 9/24/2014



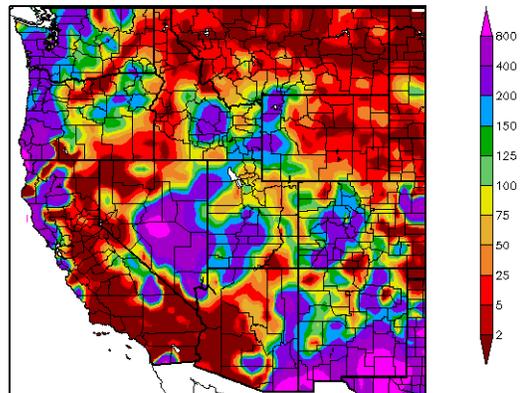
Generated 9/25/2014 at HPRCC using provisional data.

Regional Climate Centers

This percent of normal [map](#) of the West for the last seven days reflects widely scattered precipitation. The heaviest precipitation fell across the southern tier states of Arizona, southern New Mexico, central Nevada and the western edge of the California-Oregon border. Some scattered heavy precipitation also occurred in Washington, Utah, Colorado, Idaho and western Wyoming. Other areas of the West saw some limited scattered precipitation.

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

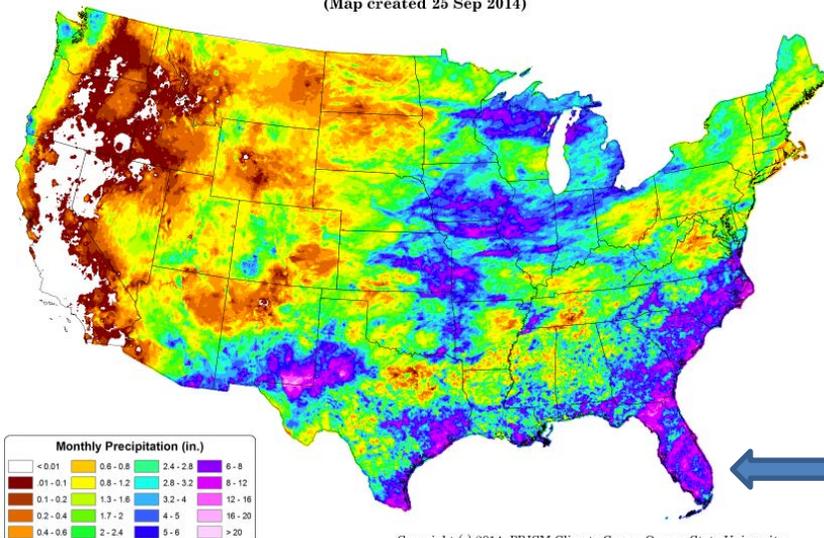
Percent of Normal Precipitation (%)
9/18/2014 - 9/24/2014



Generated 9/25/2014 at HPRCC using provisional data.

Regional Climate Centers

Total Precipitation: 01 September 2014 - 24 September 2014
Period ending 7 AM EST 24 Sep 2014
(Map created 25 Sep 2014)



Copyright (c) 2014, PRISM Climate Group, Oregon State University

So far in September 2014, the [total precipitation](#) across the continental U.S. was heaviest from the central to the eastern part of the country. Scattered heavy precipitation occurred over much of the southeastern U.S. Heavy precipitation was also recorded in Arizona, southern New Mexico, western Texas, and in the Midwest. In contrast, the far West, including most of California, northern Nevada, eastern Oregon, eastern Washington, and Idaho, were mainly dry.

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

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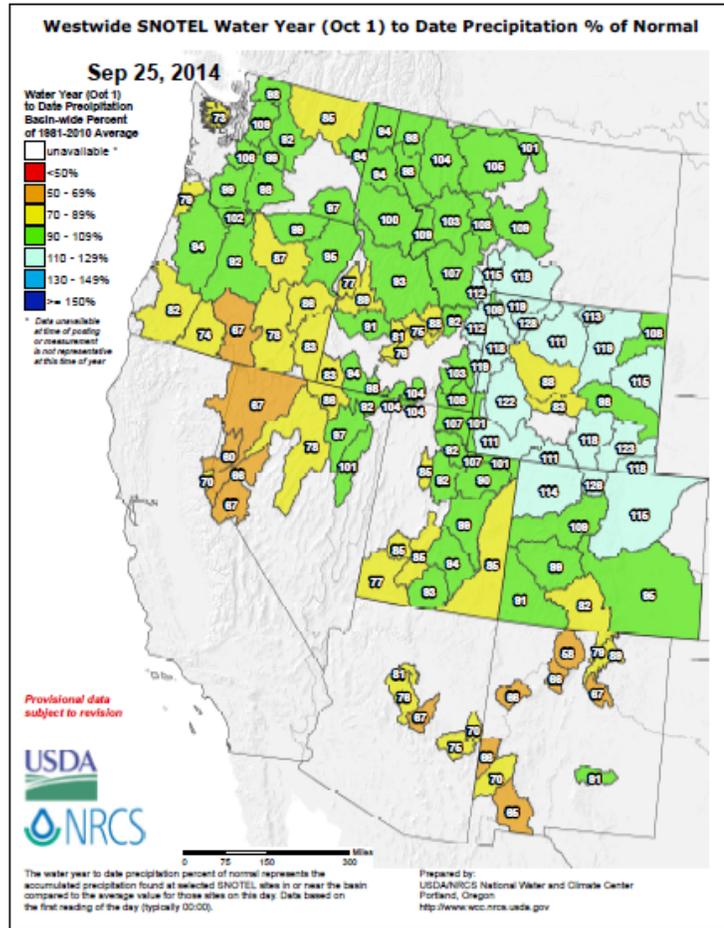
For the [2014 Water Year](#) that began on October 1, 2013, surpluses in the western U.S. occurred in south-central Montana, most of Wyoming, and northern Colorado.

Some basins in Montana, Wyoming, and northern Colorado have received above normal precipitation.

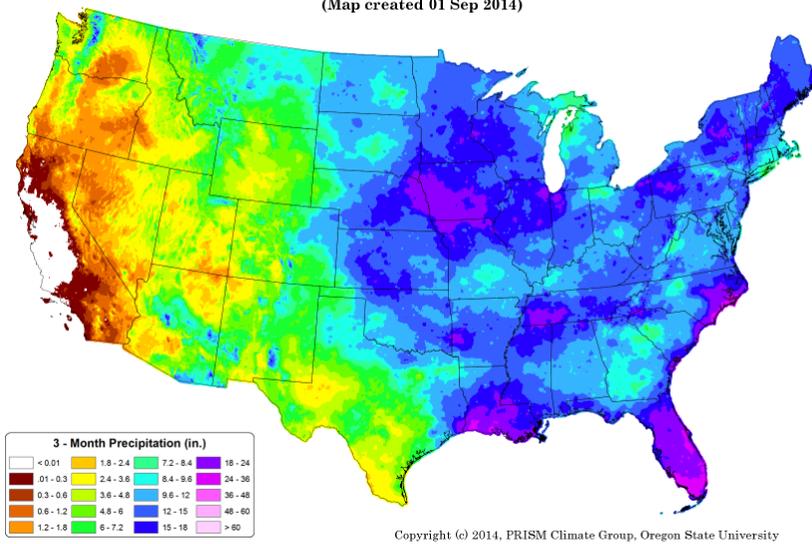
Near average conditions dominated the northern half of the Cascades, the northern half of Idaho, northwestern-most Montana, much of Utah and southeast Idaho, and parts of the southern half of Colorado.

The largest deficits were centered over southern Oregon, the Sierra Nevada in Nevada and California, Arizona, and New Mexico.

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



Total Precipitation: June 2014 - August 2014
 Period ending 7 AM EST 31 Aug 2014
 (Map created 01 Sep 2014)



The national map of the [three-month period](#) (June - August) shows that the eastern half of the nation received precipitation in the range from 8.4 inches to greater than 24 inches in Iowa, eastern Nebraska, northern Missouri, western Tennessee, Louisiana, Florida, North Carolina, and scattered areas of the Northeast.

On the other hand, much of the West received totals of less than 4.8 inches. Central California had little to no precipitation for the period. The exceptions in the West were over the northern Rockies and Cascades, where totals exceeded 12 inches.

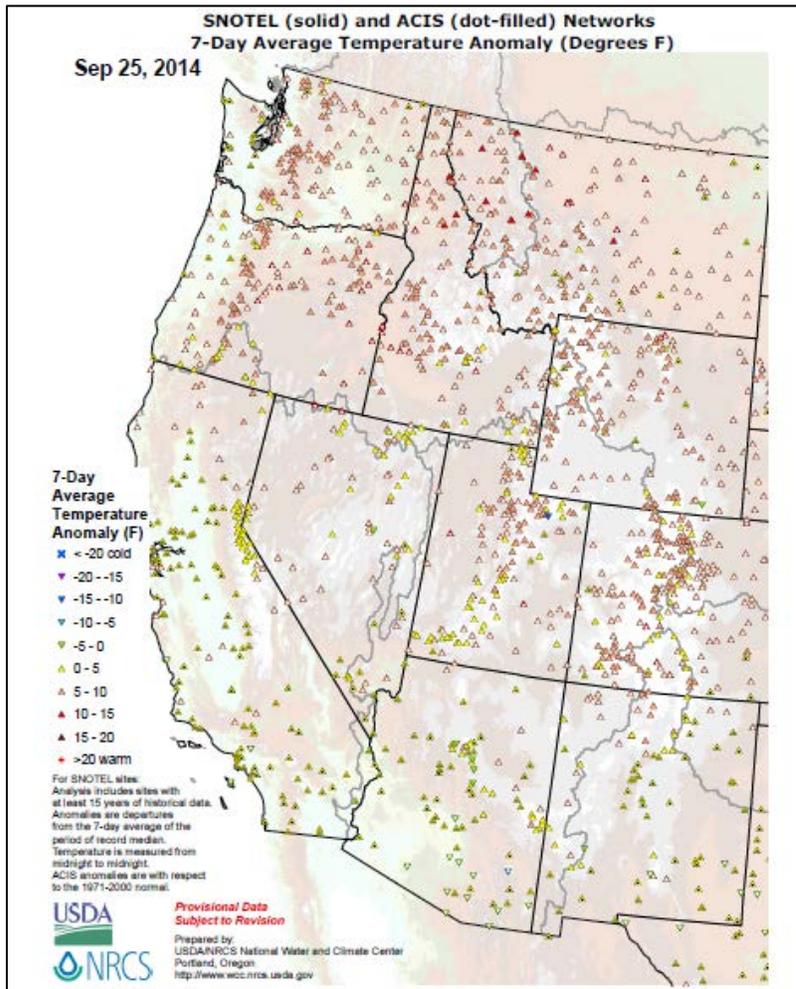
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Temperature

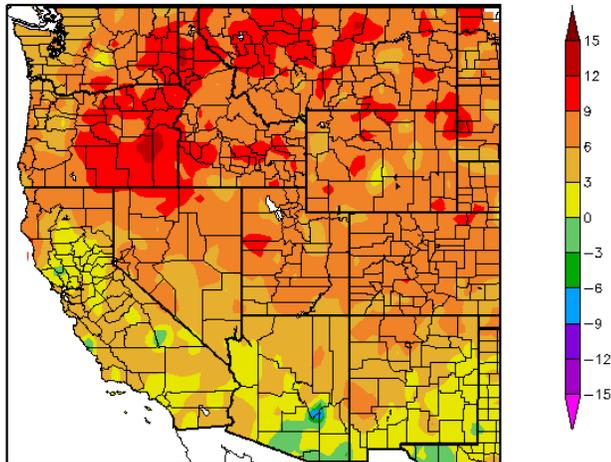
The [SNOTEL](#) and ACIS [7-day temperature anomaly](#) map for the western U.S. shows temperatures above normal for most of the northern states in the West, where Oregon, Washington, Idaho, Montana, Wyoming, Colorado, northern Utah, northern New Mexico, northern Nevada, and northern California all reported more than 5 degrees F warmer than normal.

Below normal temperatures occurred in a very few places in southern Arizona.

The remainder of the West was near normal for the week.



Departure from Normal Temperature (F)
9/18/2014 – 9/24/2014



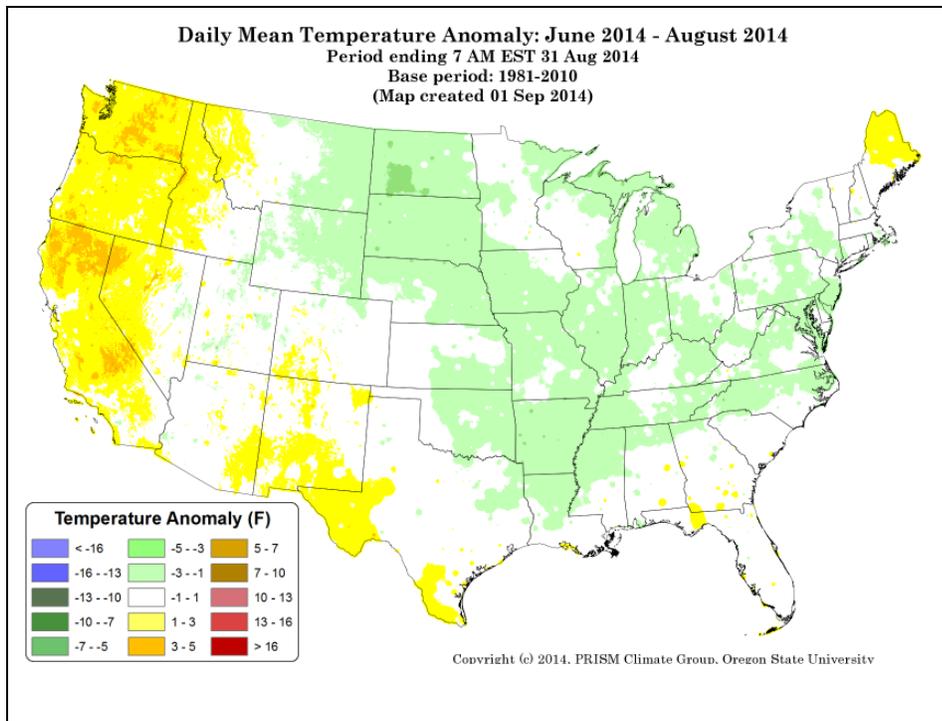
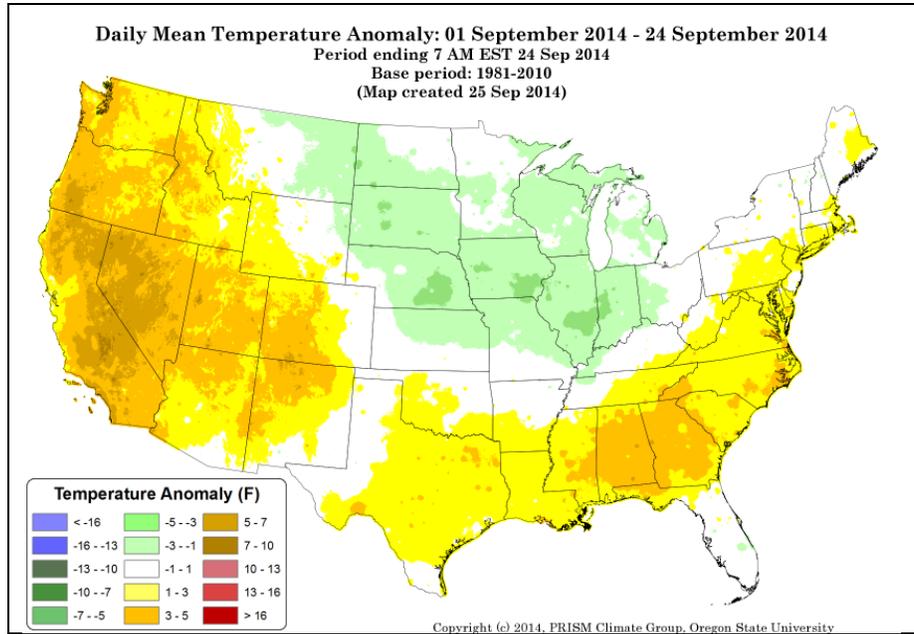
The [ACIS](#) map of the 7-day average temperature anomalies in the West ending September 24, shows the greatest negative temperature departures in southern Arizona (<math>< -6^{\circ}\text{F}</math>). The greatest positive temperature departures occurred in eastern Oregon, northern Idaho, and southern Wyoming (>+12°F).

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

Weekly Snowpack and Drought Monitor Update Report

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.

During September 2014, the national daily mean temperature anomaly [map](#) shows a cool pattern centered over the central Midwest (<-5°F). Above normal temperatures were recorded in the West and the Southeast. California had the largest area of warm anomalies (>+7°F).



June - August national daily mean temperature anomalies for the U.S. in this [climate map](#) show the west coast had slightly to above normal temperatures, mainly in California, western Nevada, and eastern Washington (>+3°F). Most of the remainder of the country reported normal to slightly cooler than normal temperatures this summer, with the coolest temperatures in western North Dakota (<-5°F).

Weekly Snowpack and Drought Monitor Update Report

Weather and Drought Summary

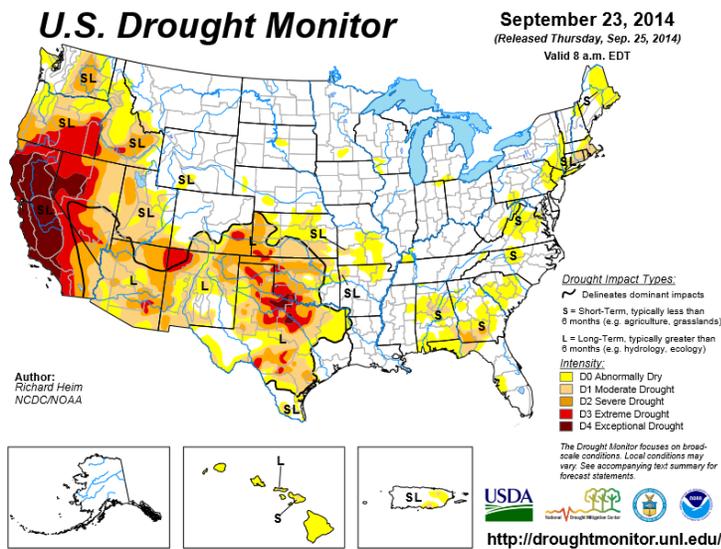
National Drought Summary – September 23, 2014

The following **Weather and Drought Summary** is provided by this week's NDMC Drought Author, Richard Heim, NOAA/NCDC.

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

“For the contiguous 48 states, the U.S. Drought Monitor showed 30.62 percent of the area in moderate drought or worse, compared with 31.11 percent a week earlier. Drought now affects 74,817,650 people, compared with 70,810,751 a week earlier.

For all 50 U.S. states and Puerto Rico, the U.S. Drought Monitor showed 25.59 percent of the area in moderate drought or worse, compared with 26.00 percent a week earlier. Drought now affects 75,030,440 people, compared with 71,005,132 a week earlier.”



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

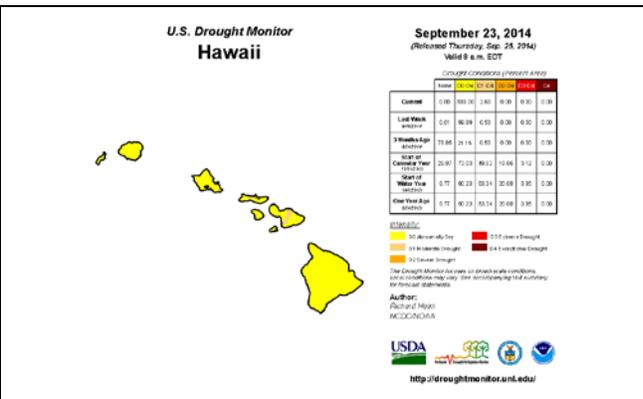
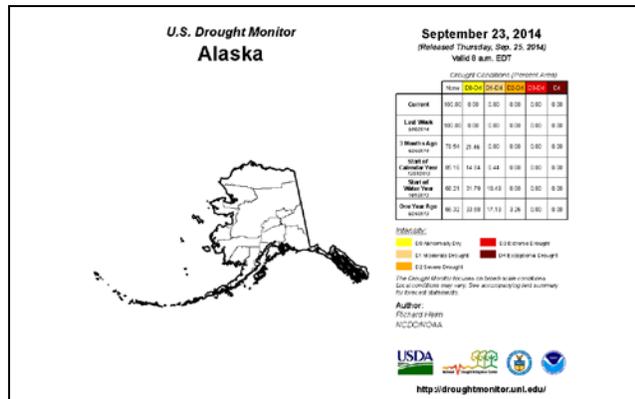
[Current Drought Monitor](#) weekly summary. The exceptional D4 levels of drought are scattered across CA, NV, TX, and OK.

The latest [drought indicator blend and component percentiles](#) spreadsheet is a great resource for climate division drought statistics. This link is for the latest [Drought Outlook](#) (forecast). See [climatological rankings](#).

For more drought news, see [Drought Impact Reporter](#).
New: [ENSO Blog](#).

Drought Management Resources:

- ✓ <http://www.usda.gov/oce/weath er/Drought/AgInDrought.pdf>
- ✓ [Watch AgDay TV](#)
- ✓ [Drought Impacts Webinar Series](#)
- ✓ [NIDIS Quarterly Climate Impacts and Outlook](#)
- ✓ [The Spring 2014 edition of DroughtScope](#)



“The [49th](#) and [50th](#) States show normal to abnormally dry conditions. No changes noted for Alaska. D0 increased from 99.9 to 100 percent, and D1 increased to 2.68 percent in Hawaii this week. The whole state of Hawaii is now designated as abnormally dry. 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](#).”

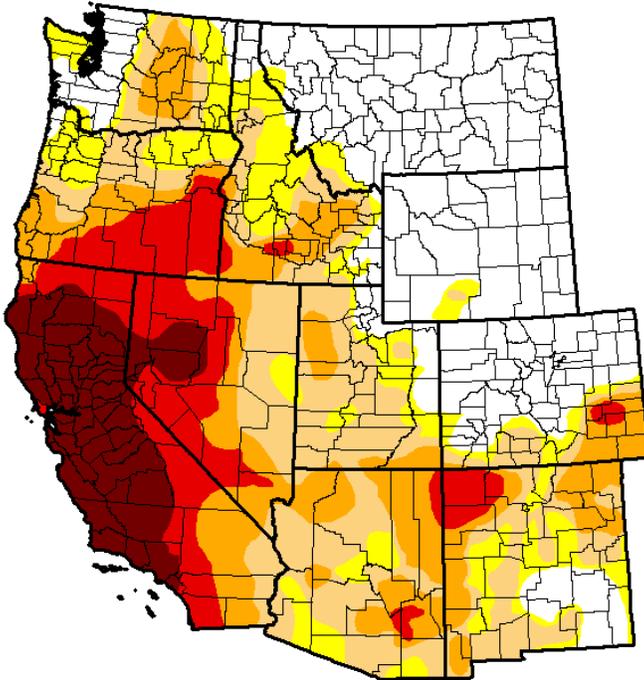
Weekly Snowpack and Drought Monitor Update Report

U.S. Drought Monitor West

September 23, 2014

(Released Thursday, Sep. 25, 2014)

Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	31.18	68.82	56.42	35.96	20.00	8.90
Last Week 9/16/2014	29.74	70.26	57.24	38.69	19.88	8.90
3 Months Ago 6/24/2014	30.81	69.19	60.20	47.31	20.35	5.64
Start of Calendar Year 12/1/2013	22.20	77.80	51.44	31.11	7.75	0.63
Start of Water Year 10/1/2013	25.25	74.75	58.96	34.18	5.57	0.63
One Year Ago 9/24/2013	18.70	81.30	65.30	38.58	7.47	0.63

Intensity:

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

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

Author:

Richard Heim
NCDC/NOAA



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

A slight decrease in D0-D2 categories occurred in the West during this past week. D3 and the drought-free area increased slightly this past week. D4 remained unchanged.

Click to enlarge maps

Risk Management Web Resources

- Drought Monitor for the [Western States](#)
- Drought Impact Reporter for [New Mexico](#)
- [California Data Exchange Center & Flood Management](#)
- [Intermountain West Climate Dashboard](#)
- [California Sierra Nevada-related snow pack](#)

U.S. [Impacts](#) during the past week:

U.S. - [US Consumer Prices Fall 0.2 Percent in August](#) – Sep 17

SC - [Drought Declared in Parts of S.C.](#) – Sep 16

MA - [Dry weather draining Easton wells](#) – Sep 19

CT - [Residents asked to conserve water use](#) – Sep 18

Weekly Snowpack and Drought Monitor Update Report

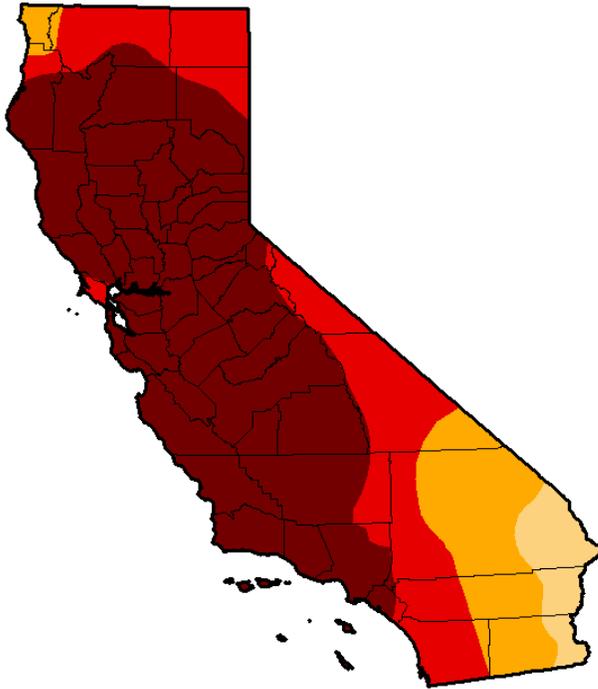
State with D-4 Exceptional Drought

U.S. Drought Monitor California

September 23, 2014

(Released Thursday, Sep. 25, 2014)

Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	100.00	95.34	81.92	58.41
Last Week 9/16/2014	0.00	100.00	100.00	95.42	81.92	58.41
3 Months Ago 6/24/2014	0.00	100.00	100.00	100.00	76.69	32.98
Start of Calendar Year 12/1/2013	2.61	97.39	94.25	87.53	27.59	0.00
Start of Water Year 10/1/2013	2.63	97.37	95.95	84.12	11.36	0.00
One Year Ago 9/24/2013	2.63	97.37	96.04	89.84	11.36	0.00

Intensity:



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

Author:

Richard Heim
NCDC/NOAA



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

There was a slight decrease in D2 in the California drought conditions this past week.

[CA Drought Information Resources](#)

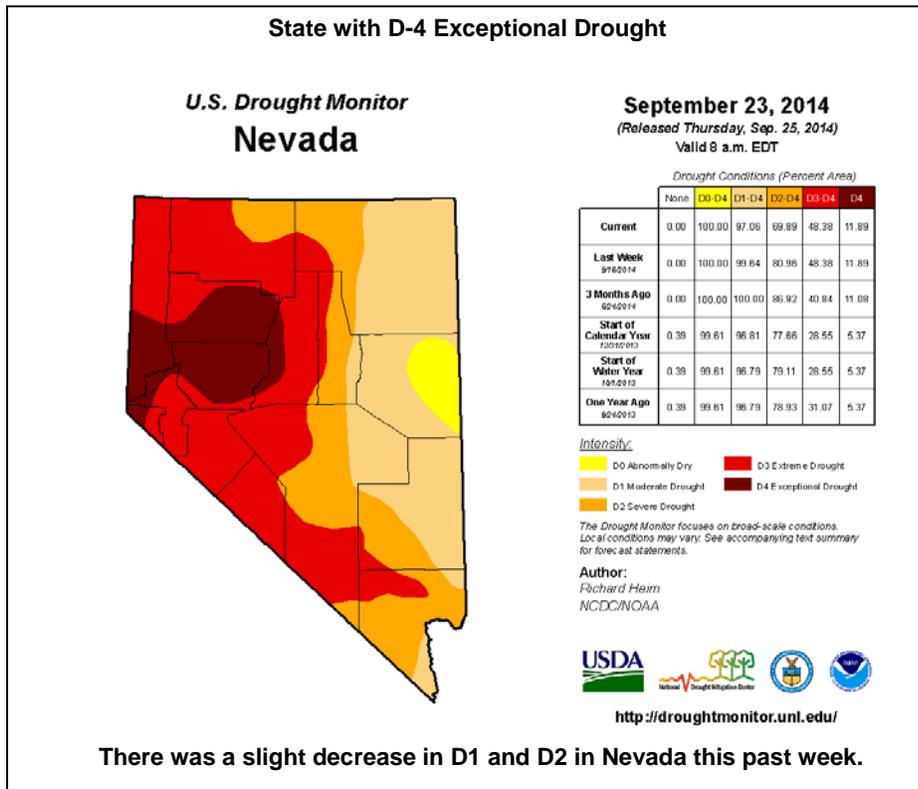
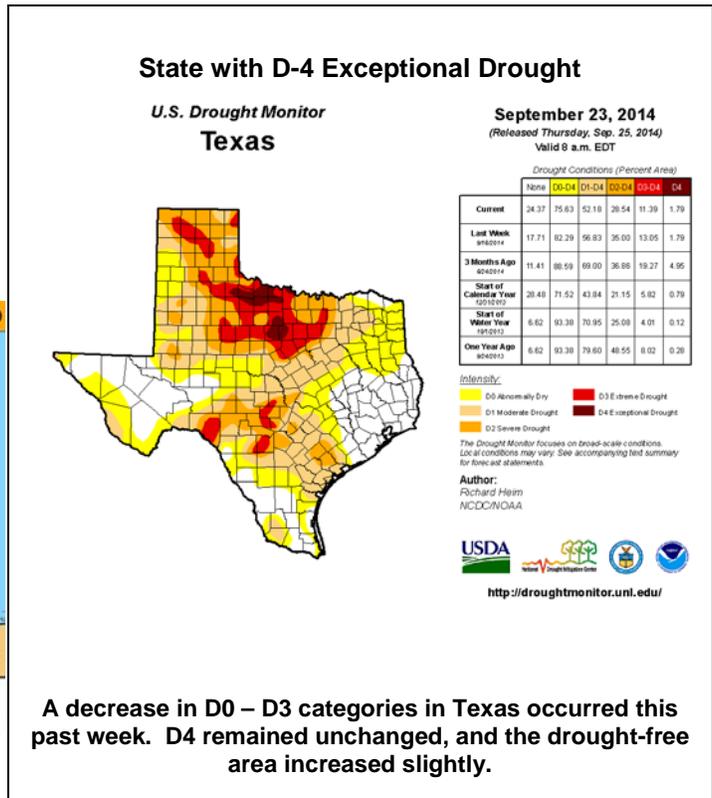
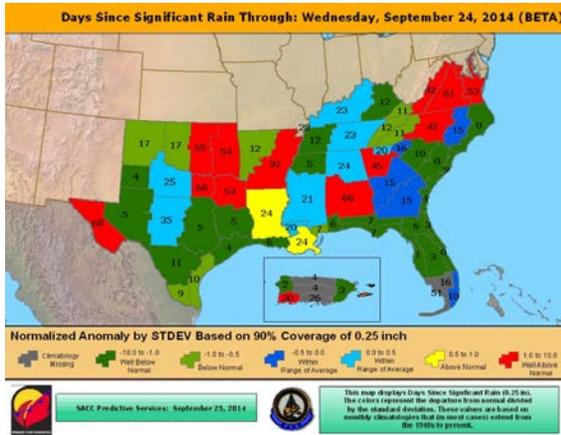
[Drought News from California:](#)

- [California Drought: Is Forcing Farmers to Seek Land in Oregon](#) – Sep 19
- [Brown signs bill to regulate pumping of underground water](#) – Sep 19
- [Survey finds almond growers deeply impacted by drought](#) – Sep 12
- [Boles Fire roars through Weed, burning homes, forcing evacuations](#) – Sep 16
- [Firefighters dig in for the long haul against El Dorado's King fire](#) – Sep 18
- [Northern California wildfire's rapid growth is slowed overnight](#) – Sep 19
- [Does tarantula boom signal end of California drought?](#) – Sep 18
- [HOAs barred from requiring luscious landscaping](#) – Sep 18
- ['Hi, do you have water?' In a central Calif. town, answer is often no.](#) – Sep 18
- [More emergency water releases for Klamath salmon](#) Sep 17
- [Water agencies are learning pools aren't a big factor during drought](#) – Sep 12

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

Texas Drought News:
[Putting a cap on water loss](#) – Sep 16



Weekly Snowpack and Drought Monitor Update Report

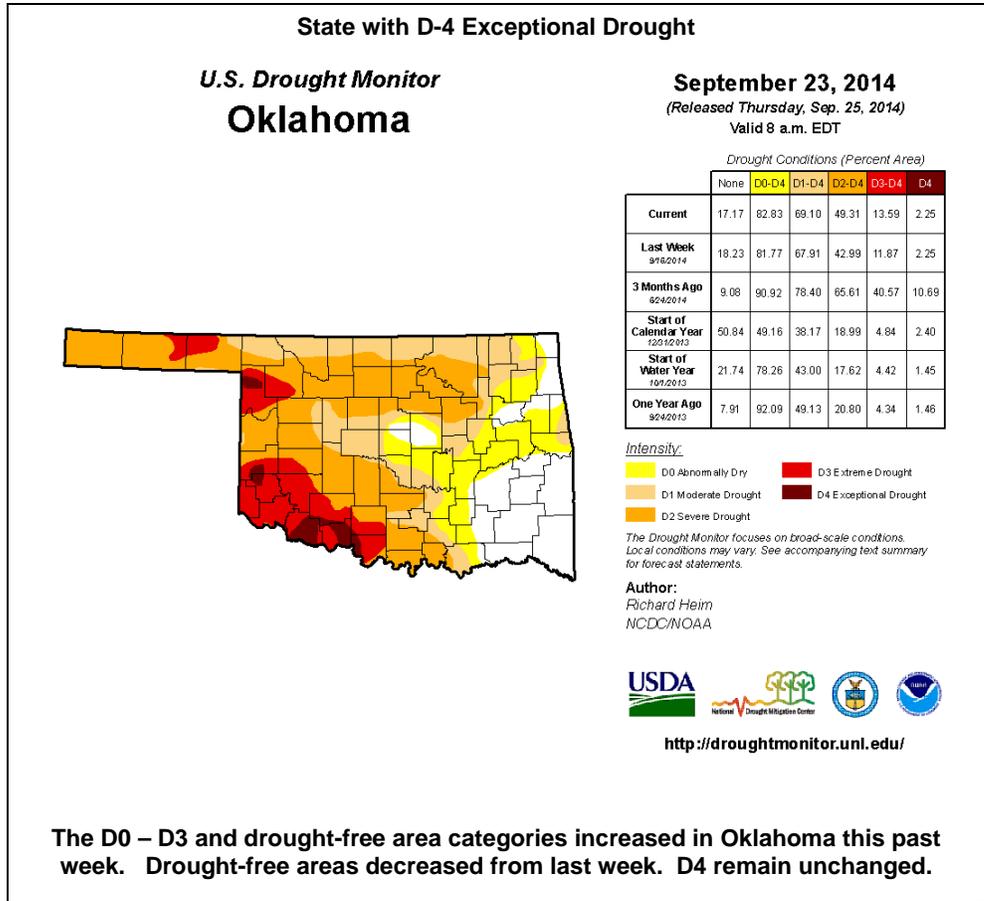
Related Area News:

[2014 Kansas Drought Report and Summary](#)

- [Past 30 days precipitation totals](#)
- [Past 30 days precipitation percent of normal](#)
- [Calendar Year precipitation totals](#)
- [Calendar Year Precip percent of normal](#)
- [Short Crop ET](#)

Oklahoma News:

[Construction delayed on canola processing plant, but project still is going forward](#) – Sep 17



U.S. Population in Drought Information

Number of people in each drought category in the U.S. for the week ending September 9, 2014

Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
2014-09-23	173,342,123	132,055,332	74,817,650	50,584,754	38,809,909	27,626,366
2014-09-16	180,538,825	124,858,630	70,810,751	52,950,046	38,934,796	27,626,366

New population figures added to the U.S. Drought Monitor website show that for this week, more than 74.8 million people in the United States are in a drought-affected area, up by more than 4 million people from a week ago.

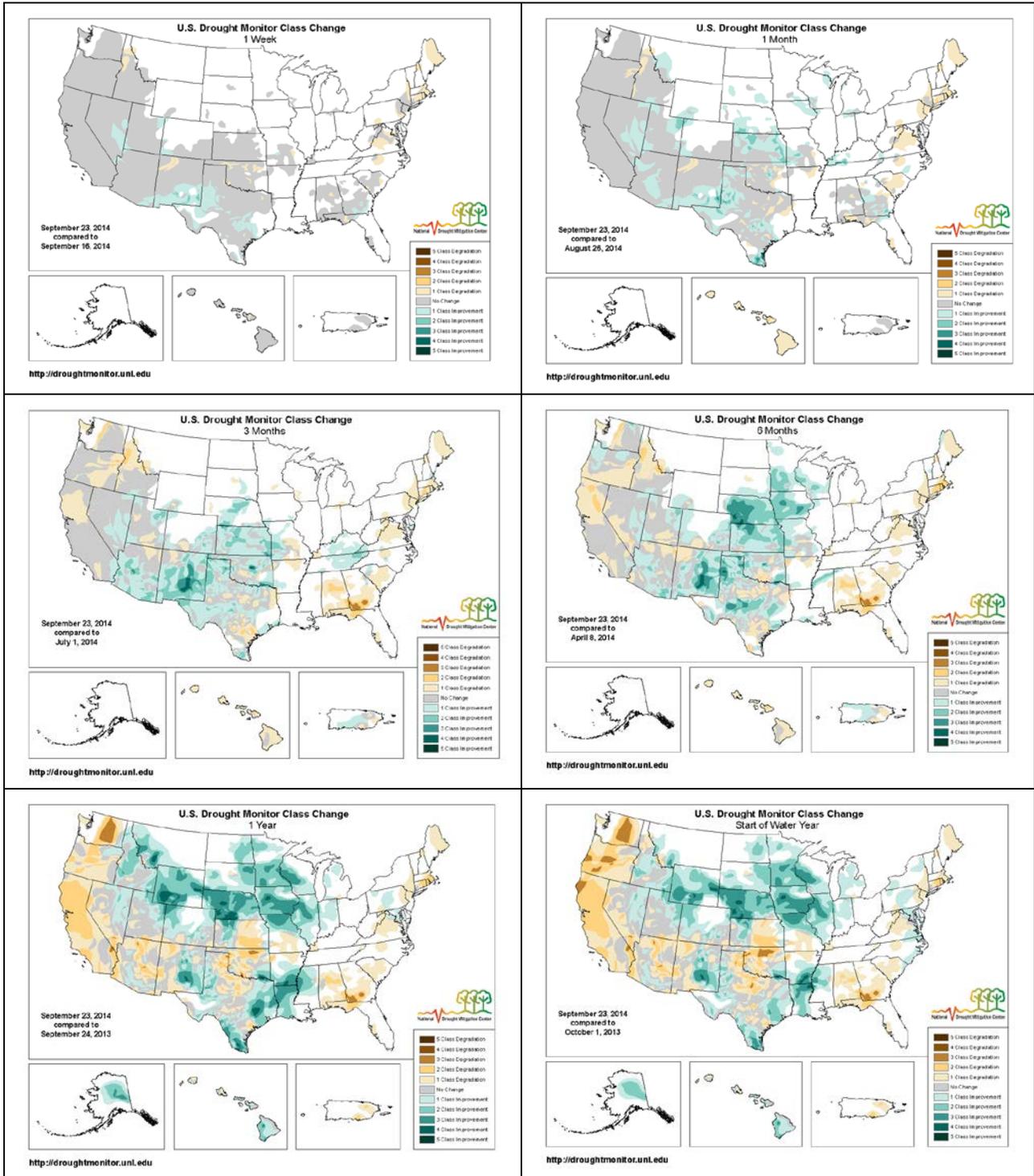
Population Statistics Methodology:

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 Snowpack and Drought Monitor Update Report

Changes in Drought Monitor Categories

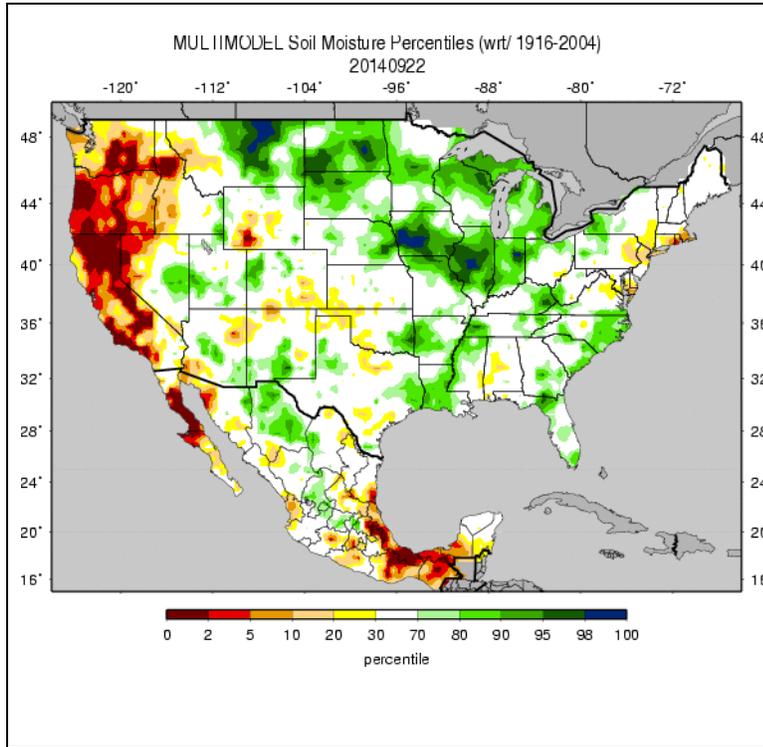
Over Various Time Periods



Click on any of these maps to enlarge. Note how the conditions over the Rockies and northern Great Plains have improved between 6 to 12 months (middle right to lower left maps). However, also note that since the start of the 2014 Water Year last October, conditions over the Southeast, parts of the southern Great Plains and the Pacific coast states have deteriorated significantly (lower right map).

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Soil Moisture

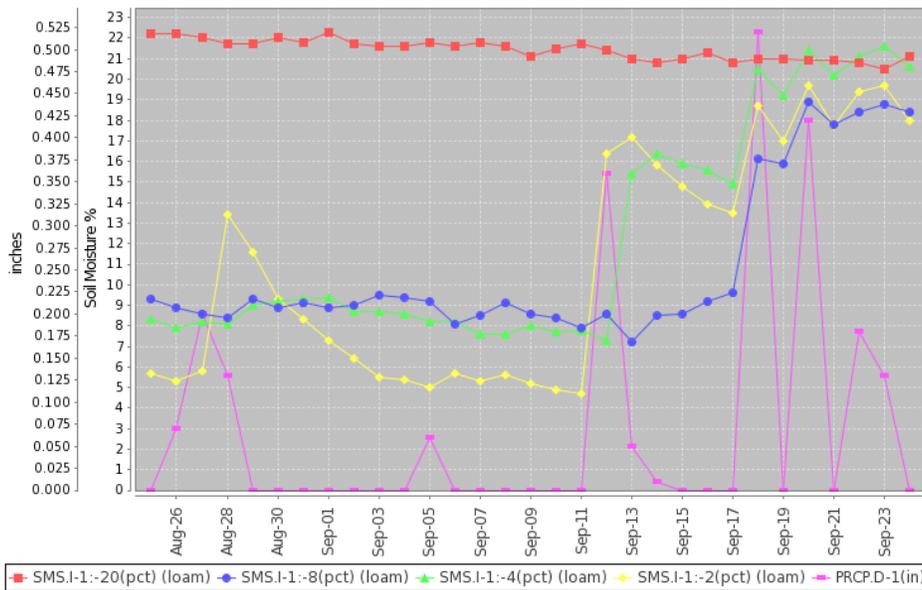


The national soil moisture model ranking in [percentile](#) as of September 22, 2014, shows dryness over California, Washington, Oregon, western Idaho, southwest Wyoming, and southern New England. Scattered dryness was also reported in other areas of the West, Oklahoma, Texas, New York, and parts of the mid-Atlantic coast. Moist soils dominated from Montana, the upper Midwest and great Lakes states to the southern Atlantic coast. The wettest locations were centered in the Dakotas and eastern Montana. Soils in Iowa, Illinois, northern Wisconsin and Michigan, Louisiana, eastern Kentucky, and northern Florida also had scattered high moisture content.

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)

Station (2015) MONTH=2014-08-25 (Daily) NRCS National Water and Climate Center - Provisional Data - subject to revision
Wed Sep 24 12:07:03 PDT 2014

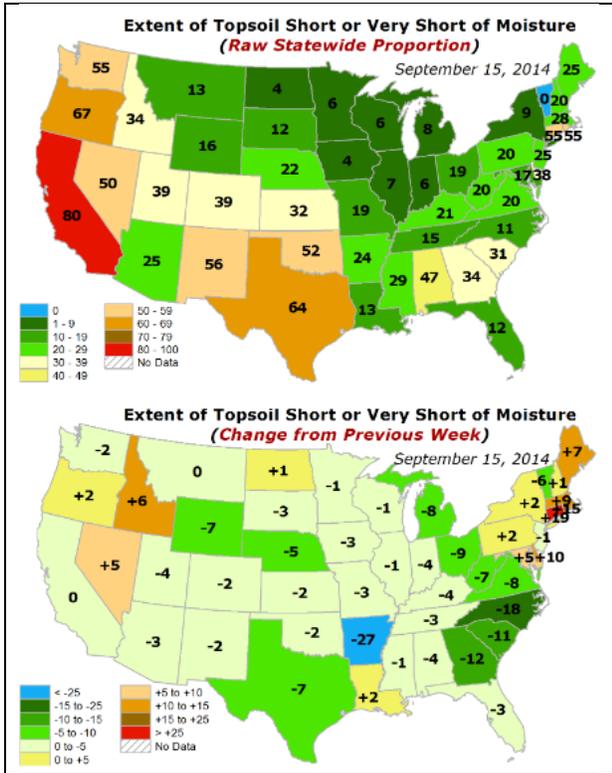


This NRCS resource shows soil moisture data at the [Adams Ranch #1 \(2015\)](#) SCAN site, located in New Mexico. The precipitation in the area is graphed in light pink. The recent precipitation has increased the 2-, 4- and 8- inch depth soil moisture, whereas the deeper soil sensors at 20 inches have shown only slight fluctuations in soil moisture during the month.

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](#).

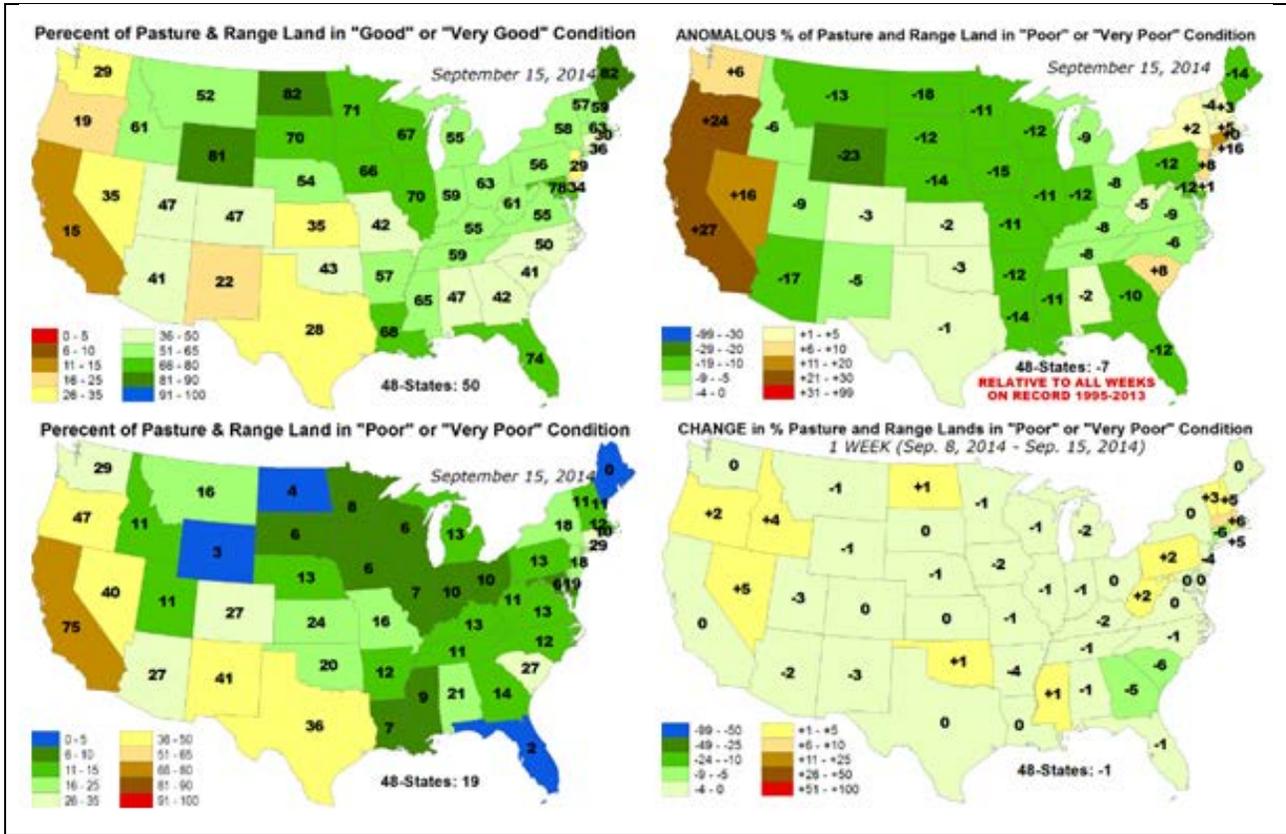
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Topsoil and Pasture & Rangeland National Conditions



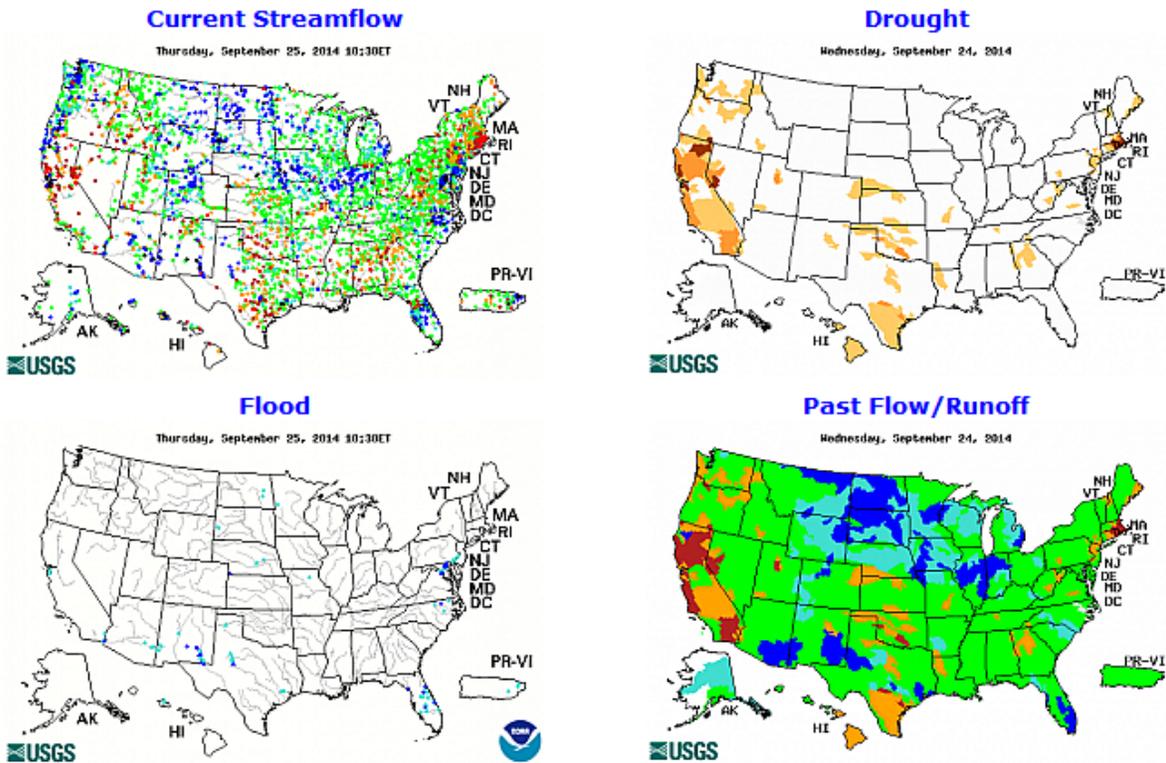
↪ Topsoils are exceptionally poor (top) over Texas, California, and Oregon with values representing 60 percent or more poorer conditions than the median for this time of year (bottom panel). Locations in the upper Midwest, east to New England and the mid-Atlantic states, as well as Louisiana and Florida, have good soil moisture conditions.

↪ 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 in poor to very poor condition in California, Oregon, Nevada, New Mexico, and Texas.



Weekly Snowpack and Drought Monitor Update Report

Streamflow



The rivers are high over most of the central U.S., including the Mississippi River Basin, the central Rockies, the Southwest, Florida, Kentucky, Tennessee, and parts of the mid-Atlantic States, due to recent precipitation (left maps). Alaska, and Oahu and Kauai, Hawaii are also reporting some high streamflow. There are currently no rivers above flood stage in the U.S.

National Long-Range Outlook



Click maps 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).

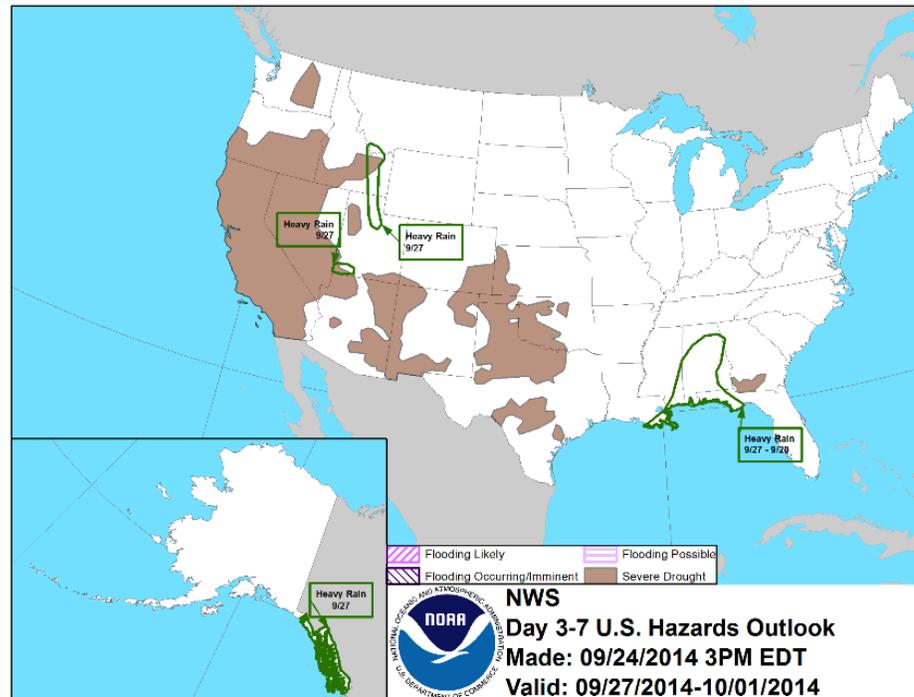
During the next three months, there is a risk of flooding in some areas of the Mississippi and lower Missouri Rivers, west-central Florida, and the Connecticut River. Currently, **1** gage has a greater than 50% chance to experience major flooding; **3** gages for moderate flooding; and **26** gages for minor flooding.

These numbers represent a 6-gage decrease in the greater than 50 percent chance of minor flooding category in the last week.

Weekly Snowpack and Drought Monitor Update Report

National [Weather Hazards](#)

Heavy rain is expected during the next week in the southeast U.S. (9/27–28), eastern Idaho and Utah (9/27), and in southeast Alaska (9/27) outlined in green. Severe drought remains a large issue in much of the south-central and western U.S.



[National Drought Summary for September 23, 2014](#)

Prepared by the Drought Monitor Author: Richard Heim, NOAA/NCDC.

Summary

“The long-wave circulation pattern, during this U.S. Drought Monitor (USDM) week, consisted of an upper-level ridge over the western United States and trough over the east. This continued the trend of well-above-normal temperatures in the West and below-normal temperatures in the Midwest to Northeast. Low pressure systems, moving in the jet stream flow, dragged cold fronts across the contiguous United States (CONUS), bringing areas of precipitation to the northern Rockies, Plains, Great Lakes, and Southeast. Moisture from the remnants of Hurricane Odile deluged parts of the Southwest and western Texas with flooding rains, while a cold front spread moisture across portions of central and eastern Texas. Some of Odile’s tropical moisture fed monsoon showers over the Intermountain Basin. However, large parts of the Far West, Great Plains, and CONUS east of the Mississippi River had a drier-than-normal week.

Hawaii, Alaska, and Puerto Rico

Rainfall was above normal at southern stations on the Big Island, but below normal at most other locations across Hawaii. D1(S) was added to the Upcountry Maui area due to lowering reservoir and inflow levels. These hydrological conditions prompted the Maui County Dept. of Water Supply to call for a voluntary 10 percent cutback in water use. No change was made to the depiction in Alaska or Puerto Rico.

The Northeast and Mid-Atlantic

It was another drier-than-normal week across the Northeast and Mid-Atlantic. Cooler-than-normal temperatures helped keep evapotranspiration down, but hydrological impacts were mounting in southern New England from the lack of rain. Streams were low from Connecticut to eastern Massachusetts, with soils drying and pastures and rangeland suffering. In Manchester, Connecticut, the Water and Sewer Department has issued a water conservation alert because its reservoir was below 80 percent of capacity; a ban on outdoor watering and other outdoor water uses took effect in Ipswich, Massachusetts as the rainfall deficit continued to build; and level 5 drought conditions were declared in Danvers, Massachusetts, due to low flow in the Ipswich River and the rapid depletion of the city’s reservoir. September 22 reports from the U.S. Department of Agriculture (USDA) indicated that 26% of the topsoil and 20% of the subsoil in New England was short to very short of moisture (dry to very dry), and 12% of the pastures were rated in poor to very poor condition. D1 (moderate drought) was added to the southern New England states and D0 (abnormally dry conditions) expanded northward (into parts of Maine) and westward (further into New

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York and Pennsylvania). Mounting precipitation deficits over the last 90 days prompted expansion of D0 in Virginia, southwest Pennsylvania, and southern Maryland.

The Plains and Midwest

With cooler-than-normal temperatures and areas of precipitation, no change was made to the USDM depiction in the Midwest, although mounting precipitation deficits were becoming a concern in northeast Minnesota. A weather system, that dropped 2-4 inches of rain over southwest Missouri, resulted in contraction of D0 there. But 30- to 90-day precipitation deficits continued to mount further east, with low streams becoming evident, so D0 expanded in east central Missouri. No change was made to the USDM depiction over the central and northern Plains, even though the week was mostly drier than normal. Areas of above-normal rain fell across Kansas, but they had little impact on agricultural conditions, so no improvement was made to the USDM depiction. The extreme dryness of the 2012-2013 drought severely depleted soil moisture in the state. As noted by the Kansas State Climatologist's office, surface water supplies have not recovered materially, with ponds having a quarter to a third of normal capacity, even in areas receiving above-normal precipitation. The USDA reported up to 55% of the topsoil and 64% of the subsoil short to very short of moisture in some western crop districts, with 23% of pasture and range conditions poor to very poor statewide. Even in the northeast district, where soil moisture conditions were "wettest", 15% of topsoil and 32% of subsoil were still rated short to very short of moisture.

The South

There were several reports of 5 inches or more of rain in parts of southeast, central, and west Texas for the week, resulting in contraction of D0-D3. Rainfall from the remnants of Hurricane Odile significantly improved reservoirs in west Texas, with Guadalupe Mountains National Park reporting a total of 13.58 inches of rain and Gail (in Borden County) reporting 18.24 inches. On the other hand, continued dryness in northeast Texas and central to western Oklahoma resulted in expansion of D0-D3 in those areas. While subsoil moisture improved, the USDA reported that topsoils in Oklahoma continued to dry out, with 55% of topsoil and 61% of subsoil statewide short to very short of moisture, and 20% of pastures and rangeland in poor to very poor condition. Conditions in Texas improved over last week, with 52% of topsoil and 63% of subsoil rated short to very short of moisture, and 34% of pastures and rangeland in poor to very poor condition.

The Southeast

Frontal rains dropped 1-3 inches of moisture in portions of southeast Georgia and adjoining northern Florida, prompting contraction of D0-D2, and 4+ inches of rain erased D0 in Pinellas County in western Florida. But continued dryness, especially over the last 60 to 90 days, caused the expansion of D0-D1 in other parts of the Southeast. D1 expanded in central Alabama and D0 expanded in North and South Carolina. Low streamflows and drying soils were causing vegetative stress in the northern Piedmont of North Carolina. The USDA reported that 55% of the topsoil and 54% of the subsoil in Alabama was short or very short of moisture, and 21% of the state's pastures and rangeland were rated poor to very poor. In Georgia, the statistics were 31% of topsoil, 35% of subsoil, and 13% of pastures and rangeland. In southern Georgia, the dry land peanut crop in Irwin County was severely affected by drought and Lesser Corn Stalk Borer damage, and development of the dry land cotton crop was hindered by the drought. Irwin County is under D1-D2 conditions.

The West

The remnants of Hurricane Odile dropped 2 inches or more of rain along a path from southeast Arizona, across southern New Mexico, into western Texas this week, with locally 5 inches or more reported in many areas along with widespread flooding. A CoCoRaHS weather station near Carlsbad, New Mexico, reported 10.48 inches of rain during the week. Reservoirs along the Pecos River in southeast New Mexico were replenished by the Odile rainfall, including Brantley and Red Bluff. Significant improvement in the USDM depiction was made, with D1-D2 pulled back in southeast Arizona, D0-D3 pulled back in southern New Mexico, and much of southeast New Mexico now drought-free. However, the Odile rainfall, while beneficial, was not enough to eliminate 3+ years of drought in other parts of the state. A band of moderate drought (D1) remained from southwest to south central New Mexico, with an oval of severe drought (D2) in the southwest corner of the state. Areas to the north received very little to no rain from Odile. Another dry week added short-term dryness on top of long-term dryness, so D2-D3 was expanded in northwest New Mexico. USDA reports indicated that, on a statewide basis, soil moisture and pastures and rangeland improved in New Mexico, with the values decreasing to 52% of topsoil and 56% of subsoil short or very short of moisture and 32% of pasture and rangeland rated in poor to very poor condition.

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Further to the north, beneficial rains improved D0-D3 in southwest Colorado and D0-D1 at the junction of Colorado, Wyoming, and Utah. But D0 expanded into northwest Montana and D1 expanded into the north central prairies and canyons of Idaho to reflect dryness which appeared as notable departures on the 30-day to 6-month Standardized Precipitation Index. Firefighting crews were fighting large wildfires in the northern Idaho D1 area. Monsoon showers dropped an additional inch or more of rain over parts of the intermountain basin, adding to the above-normal rainfall this area has received during the summer. D1-D2 were pulled back in southeast to east central Nevada to reflect the short-term gains made due to the monsoon/tropical moisture. Showers in parts of California dropped a few tenths of an inch of rain, but had little effect on drought conditions. Reservoir levels in the state continued to decline and groundwater wells continued to go dry. Record warm January-August temperatures across the West have intensified evapotranspiration and exacerbated drought conditions. With continued much-above-normal temperatures, the drought depiction across the rest of the West remained unchanged.

Looking Ahead

During the September 25-30 period, a large upper-level trough of low pressure will begin moving over the western CONUS from the Pacific. Temperatures will be warmer than normal for much of the country at the beginning of this period, but become cooler than normal in the West near the end of the period. The trough should bring precipitation to much of the West, with an inch or more expected from northern California to the Cascades of the Pacific Northwest, and an inch or more over much of the Northern Rockies. The precipitation is expected to miss southern California. Bands of frontal precipitation are likely in parts of the Plains and Midwest, in the Southeast, and along the Gulf of Mexico and Atlantic coasts, although the precipitation is forecast to miss large parts of the Plains to Midwest.

The upper-level pattern will slowly migrate to the east during October 1-8. The 6-10 day and 8-14 day outlooks indicate that the temperature pattern will be below normal in the West and above normal in the East, with above-normal temperatures eventually returning to the West Coast. The precipitation pattern should transition to drier than normal in the West and wetter than normal from the Rockies to the Great Lakes and Southeast as the weather-producing systems migrate eastward. An upper-level ridge over the eastern Pacific is expected to bring above-normal temperatures to Alaska, with wetter-than-normal conditions to the southern coastal locations and drier-than-normal conditions to the interior Alaskan locations.”

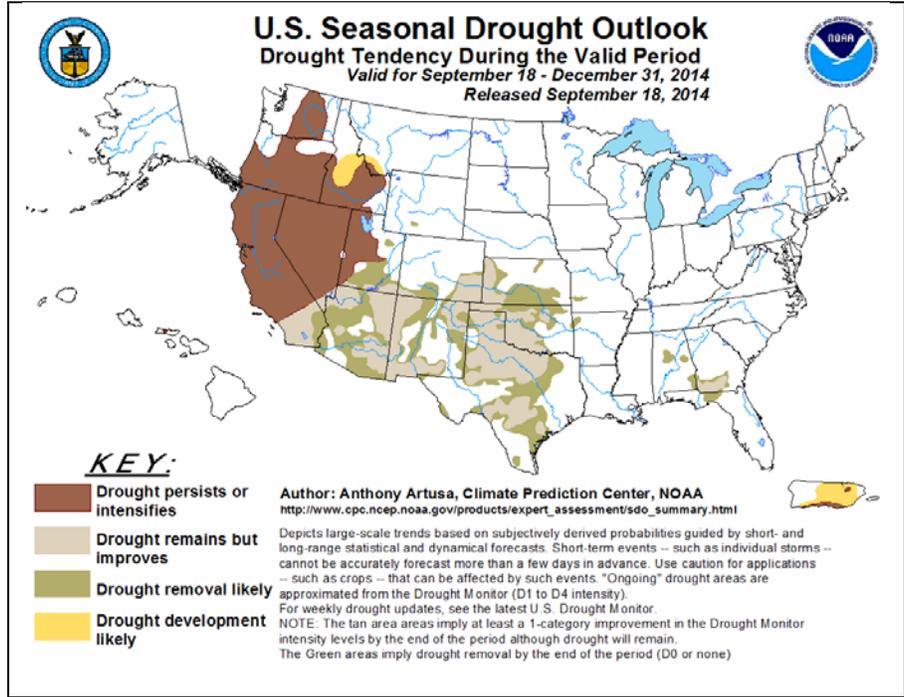
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Supplemental Drought Information

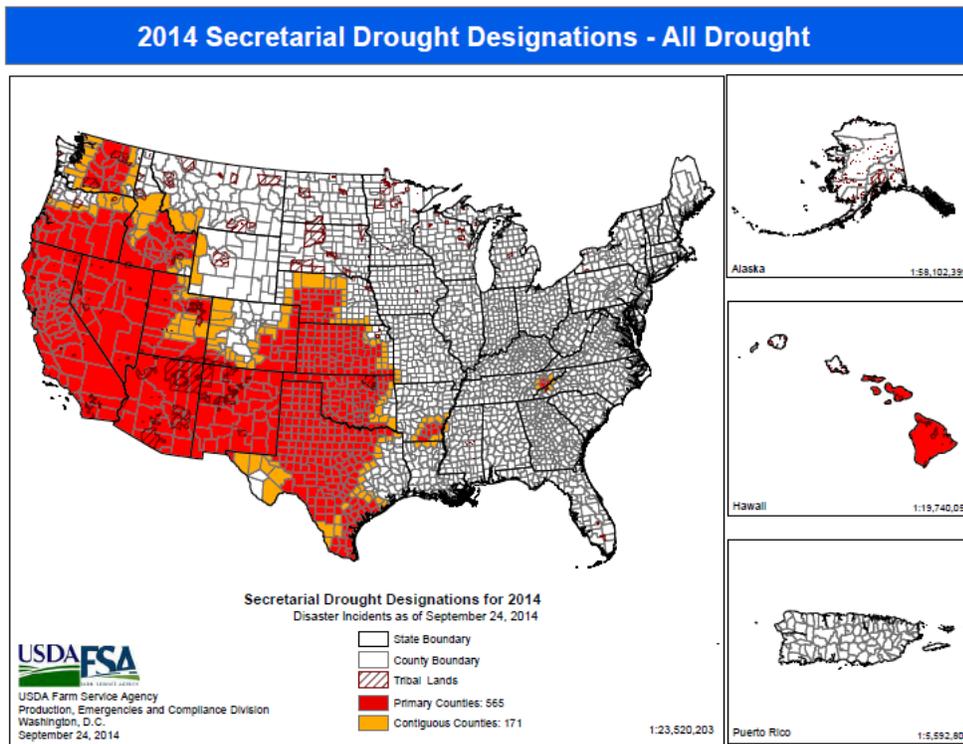
National Seasonal Drought Outlook

Nationally, [drought](#) is expected to persist or intensify over Puerto Rico and much of the West, including California, Oregon, Washington, Idaho, and Utah. Improvements are expected from the Southwest to Oklahoma and Texas, and in a few areas of the Southeast.

Also see: [National Significant Wildland Fire Potential Outlook](#) (updated on the first of each month) contains a content summary of the previous month's conditions.



2014 USDA Secretarial Drought Designations



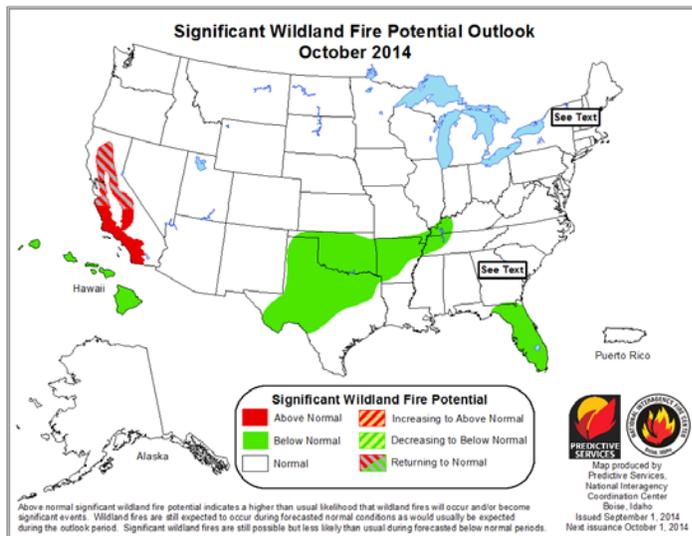
Refer to the USDA Drought Assistance [website](#) and [National Sustainable Agriculture Information Service](#).

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

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

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National Fire Potential Outlook



October Forecast

Above normal [fire potential](#) will persist in parts of California.

The below normal fire potential area in green on the map is forecast for Florida, Texas, Oklahoma, Arkansas, western Tennessee and Kentucky, and Hawaii.

Additional Maps

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

Regional zooms of ACIS station data percent-of-normal precipitation: <http://dmcommunity.unl.edu/maps/All-CONUS-ACIS-PNP.pptx>.

National Water and Climate Center (NWCC) Surface Water Supply Index (SWSI) maps: <http://www.wcc.nrcs.usda.gov/wsf/swsi.html>

Supplemental Drought-Agriculture News

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

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

"California drought and food costs

Food costs in the U.S. rose 2.7 percent over the last 12 months as the California drought cut into crop yields. In August, food costs inched up 0.2 percent after a 0.4 percent increase in July.

King Fire in El Dorado County, California

The King Fire had charred 76,376 acres or 119 square miles as of early Sept. 19. The fire grew only 5,000 acres overnight, thanks to cooler, cloudier conditions. The previous night, the fire exploded to twice its size, from 44 sq. miles to 111 square miles as winds and dense, dry vegetation fed the fire. The daily cost of battling the King Fire amounts to \$5 million.

States of emergency in El Dorado, Siskiyou counties in California

California Gov. Brown declared states of emergency in El Dorado and Siskiyou counties, due to the raging King and Boles fires. The King Fire in El Dorado County scorched nearly 28,000 acres, was just 5 percent contained and continued to grow. More than 2,400 firefighters were battling the conflagration. The Boles Fire near Weed in Siskiyou County burned 375 acres and destroyed 150 structures.

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California wildfire stats

- California firefighters have fought nearly 6,100 wildfires, or roughly 630 more fires than during the 2013 season, since the start of 2014
- Wildfires have charred about 400,000 acres, compared to the 471,000 acres burned in 2013
- The largest wildfire in California this year is the Happy Camp Complex, which has charred 125,788 acres since it began on Aug. 11.

California groundwater withdrawals to be regulated

Gov. Jerry Brown of California signed a package of regulations instituting the management of groundwater pumping, which has been regulated in most western states. The three bills that he signed included SB 1168, which instructs local agencies to create management plans. AB 1739 establishes when the state can intervene if the local groups don't manage groundwater adequately. A third measure, SB 1319, is meant to dispel some farmers' concerns by postponing state action in places where surface water has been depleted by groundwater pumping.

The ongoing drought helped build the political will to develop and pass such legislation.

Help for California families with dry wells

The governor issued an executive order allowing families with dry wells to get funding through the California Disaster Assistance Act to get water for drinking and sanitation.

California homeowners associations can no longer prohibit drought-tolerant landscaping

California homeowners associations can no longer prohibit drought-tolerant landscaping since Gov. Jerry Brown signed AB2104 into law on Sept. 18. Some homeowners associations took advantage of legal loopholes to make members maintain their lawns and landscaping, and even fine members if they failed to do so, despite the worst drought in many years.

Drought hurting California almond growers

The drought has presented serious challenges to California almond farmers who must find water for their trees and have resorted to drilling new wells, depending on salty groundwater or bulldozing trees. The U.S. Department of Agriculture's National Agricultural Statistics Service and California agriculture officials sent surveys to 688 almond growers, 458 of whom filled out and returned the surveys.

Survey results showed that almost 70 percent of almond growers have only groundwater to use for irrigation this year—no surface water or canal water. Roughly 23 percent drilled new wells, an expensive option, while 32 percent improved existing wells.

Nearly 75 percent of almond growers are using groundwater with a higher salt content than is recommended for almond trees. Almond trees suffering from salt build-up often see smaller nut size, reduced growth and the potential for smaller than usual crops in future years.

More water releases to protect salmon in Northern California

The U.S. Bureau of Reclamation increased water releases from the Lewiston Dam into the Trinity River on Sept. 16 as evidence of a parasite harmful to salmon resurfaced. Ichthyophthirius multifiliis, or Ich, can be problematic in stagnant water and harms fishes' gills, leading them to suffocate. Nine of 20 fish tested for the parasite this week were found to be infected with Ich. This is the same parasite responsible for the deaths of tens of thousands of salmon in 2002.

Reclamation upped flows into the river in late August, to the consternation of water districts in Southern California that receive water from Lewiston Dam. When the water districts sought a temporary injunction on the water releases, a U.S. district judge denied the request. Reclamation also took into consideration that more water leaving Lewiston Dam meant less water for the Sacramento River for salmon and agriculture. The bigger water release will continue for seven days.

Drought-related water quality issues in Duncan, Oklahoma

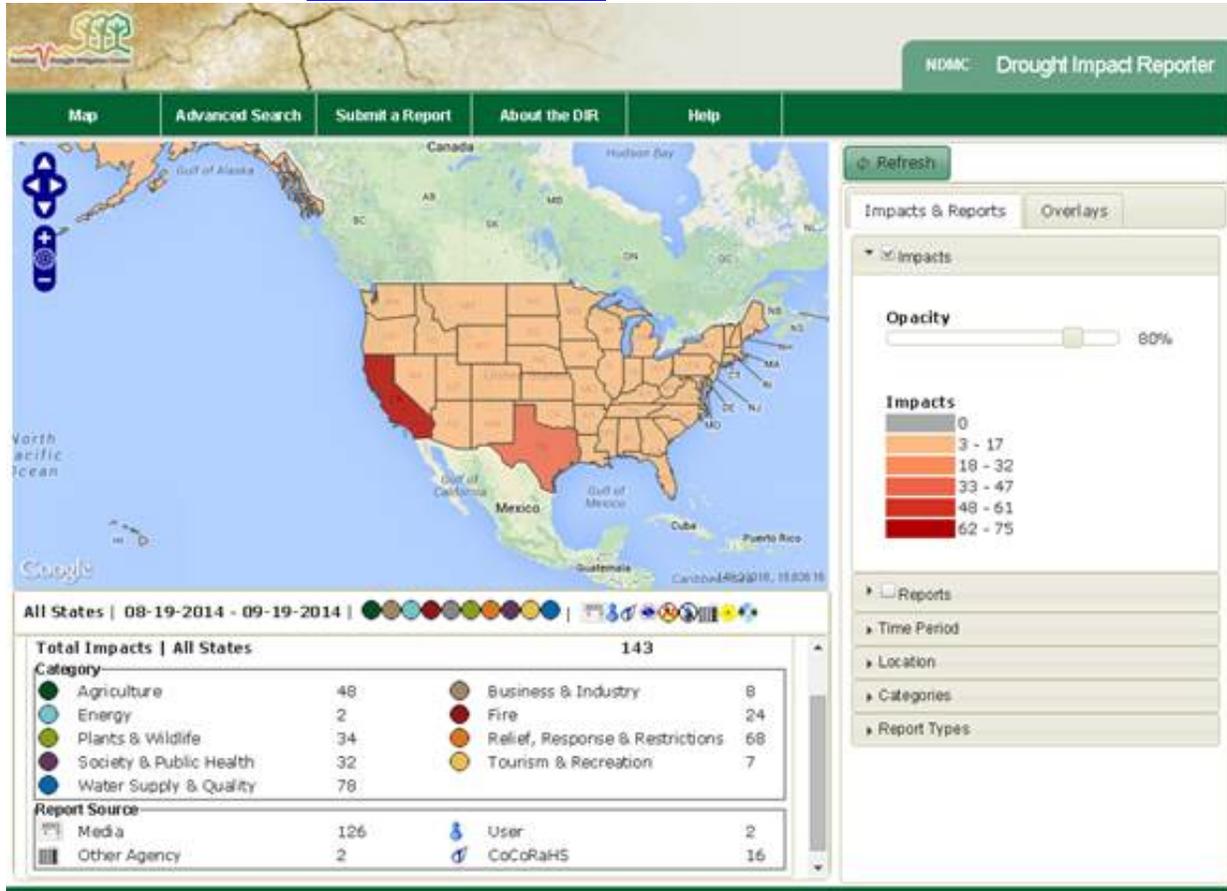
The City of Duncan was experiencing drought-related water quality issues and urged residents with severely compromised immune systems, the elderly and those with infant children to check with their doctor before drinking municipal water. The issue stems from the water in Waurika Lake having a higher than normal organic content, prompting the treatment plant to use more chlorine and leaving higher concentrations of a byproduct known as trihalomethanes (THM).

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Construction of \$250 million canola processing plant on hold in Enid, Oklahoma

Construction of a canola processing plant in Enid has been delayed, in part, to the poor canola crop in the region. The past few years have been dry, which has hurt the canola and wheat crops. Work on the \$250 million Northstar Agri Industries canola processing plant will continue at a later date. “

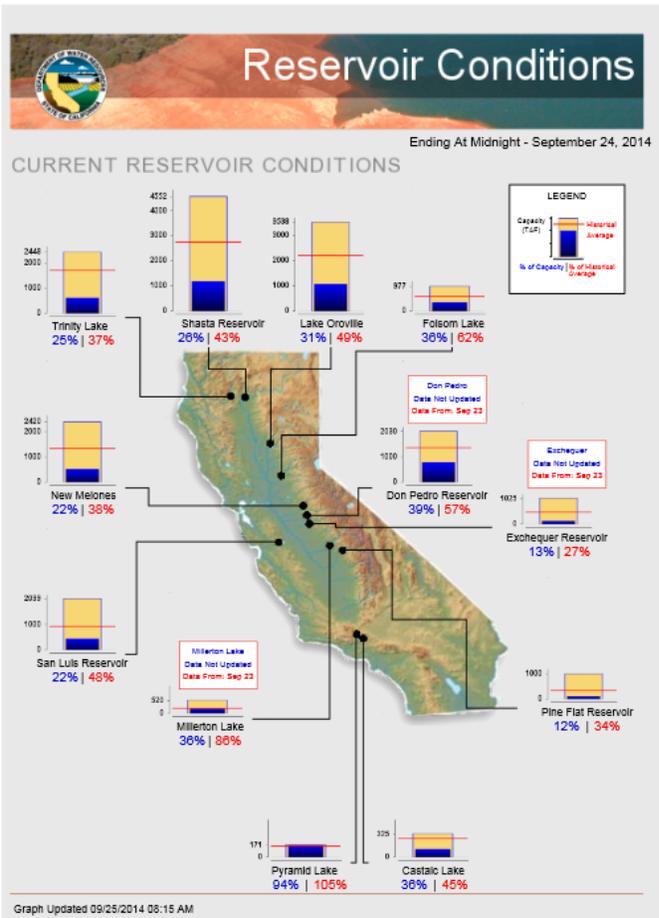
For more details, see the [Drought Impact Reporter](#)



Tea Cup Reservoir Depictions

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

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

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 Snowpack and Drought Reports 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