



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

Weekly Water and Climate Update

October 16, 2014

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Agricultural Weather Highlights – Thursday, October 16, 2014

- “In the **West**, showers are limited to western Washington, despite widespread cloudiness. On October 12 in California, winter wheat was 10% planted, while harvest was 59% complete for rice and 30% complete for cotton.
- On the **Plains**, mild, breezy weather prevails. Showers are confined to northeastern Montana and western North Dakota. Soil moisture shortages persist across portions of the southern Plains, despite recent rainfall, maintaining concerns about winter wheat establishment.
- In the **Corn Belt**, clouds and a few showers linger from the Ohio Valley into the lower Great Lakes region. Elsewhere, mild, dry weather favors a limited return to summer crop harvesting and winter wheat planting, as fields dry out and crops dry down.
- In the **South**, mostly dry weather prevails in the wake of the recent rainfall event. Clouds and a few showers linger, however, across the interior Southeast. Fieldwork includes winter wheat planting and harvesting of a variety of summer crops, including corn, soybeans, cotton, peanuts, and rice.

Outlook: Gonzalo, the first Category 4 hurricane in the Atlantic Basin since Ophelia in October 2011, will not threaten the U.S. but will pass near Bermuda on Friday. Meanwhile, a tropical storm watch has been issued for the Big Island of Hawaii. Tropical Storm Ana may become a hurricane before passing near, or just south, of the Hawaiian Islands from Friday night through the weekend. Meanwhile across the U.S. mainland, a period of generally mild, dry weather will promote a variety of fieldwork activities. Exceptions to the tranquil weather pattern will include cool conditions and lingering showers in the Great Lakes and Northeastern States. For the remainder of today, rainfall totals of 1 to 3 inches can be expected in New England. Elsewhere, periods of rain will affect the Pacific Northwest, while late-week showers will develop in the Rio Grande Valley. The NWS 6- to 10-day outlook for October 21-25 calls for below-normal temperatures in much of the eastern U.S., while warmer-than-normal weather will stretch from the Pacific Coast to the Plains and upper Midwest. Meanwhile, near- to below-normal precipitation across the majority of the nation will contrast with wetter-than-normal conditions across southern Florida, along the northern Atlantic Coast, and in the Southwest and Pacific Northwest.”

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>

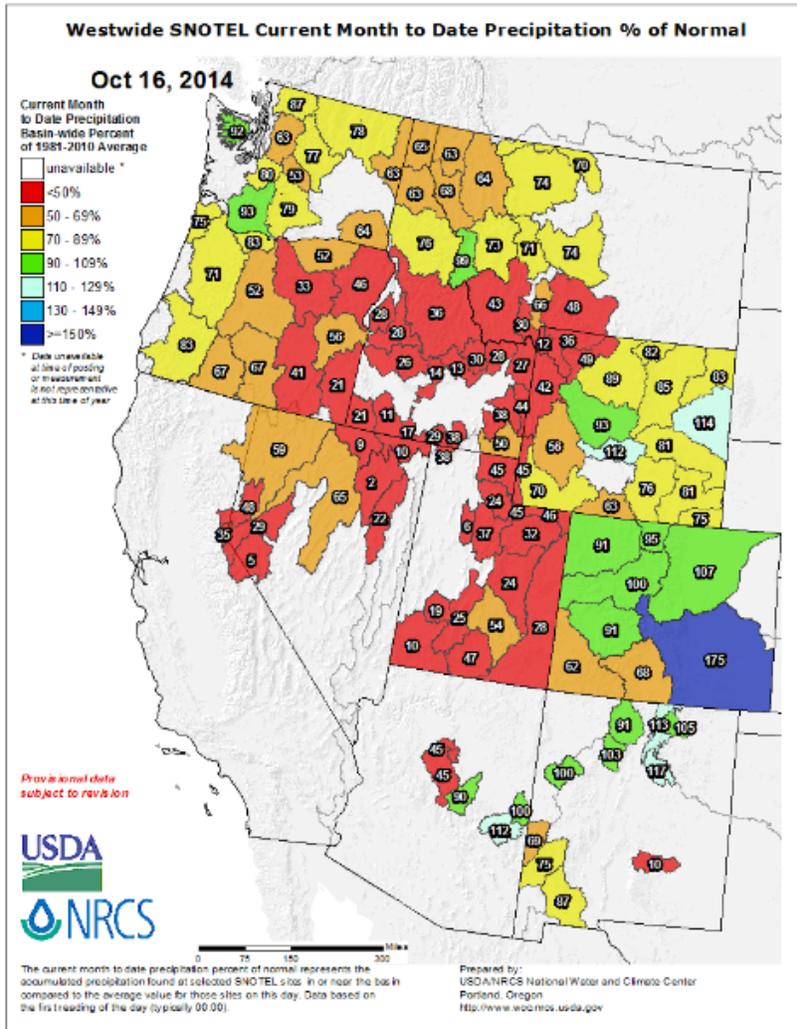
The Natural Resources Conservation Service provides leadership in a partnership effort to help people conserve, maintain, and improve our natural resources and environment

Weekly Water and Climate Update

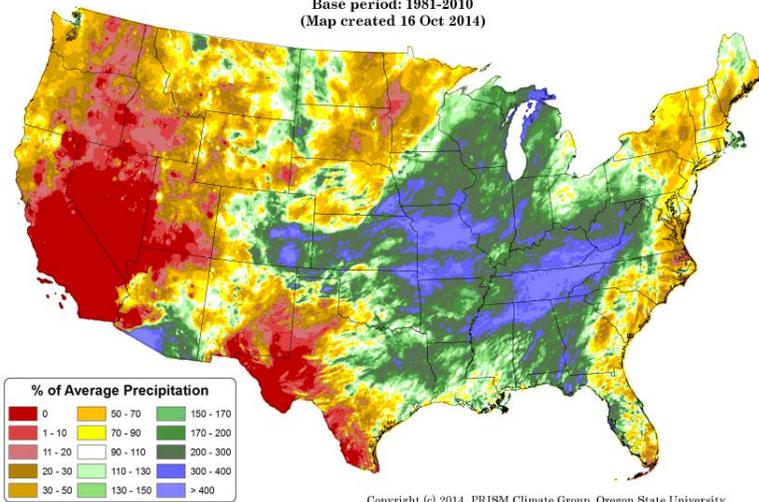
Precipitation

In the West, the [SNOTEL](#) precipitation percent of normal map for the first half of October shows mainly dry conditions. The Columbia River, Great Basin, and eastern Utah were much below average for the period. Near or slightly above normal precipitation occurred in select basins in Wyoming, Colorado, and the Southwest. 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 October 2014 - 15 October 2014
 Period ending 7 AM EST 15 Oct 2014
 Base period: 1981-2010
 (Map created 16 Oct 2014)

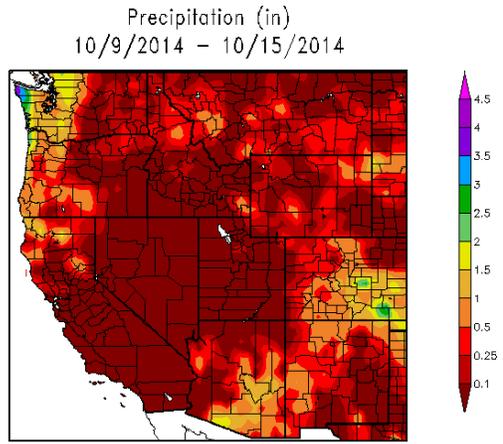


In the first part of October 2014 the national [precipitation anomaly](#) pattern reveals some higher than normal precipitation across the central U.S. The Great Plains from western Colorado to the central and southern Appalachian Mountains, received the most moisture so far this month. Parts of the West and southern New Mexico and Texas have seen little or no precipitation (red area).

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.

Weekly Water and Climate Update

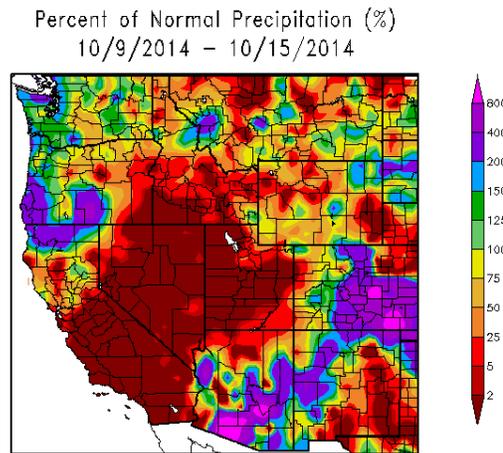
The [ACIS 7-day](#) total precipitation map for the western U.S. shows mainly dry conditions. Precipitation has fallen in a few scattered areas in Washington, Oregon, northern California, Wyoming, Colorado, Arizona, and New Mexico. The northwest tip of the Olympic Peninsula reported the largest amounts of precipitation.



Generated 10/16/2014 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 percent of normal precipitation fell across Arizona, New Mexico, and Colorado. Some scattered precipitation also occurred in northern California, Oregon, Washington, northern Idaho, Wyoming, and Montana.

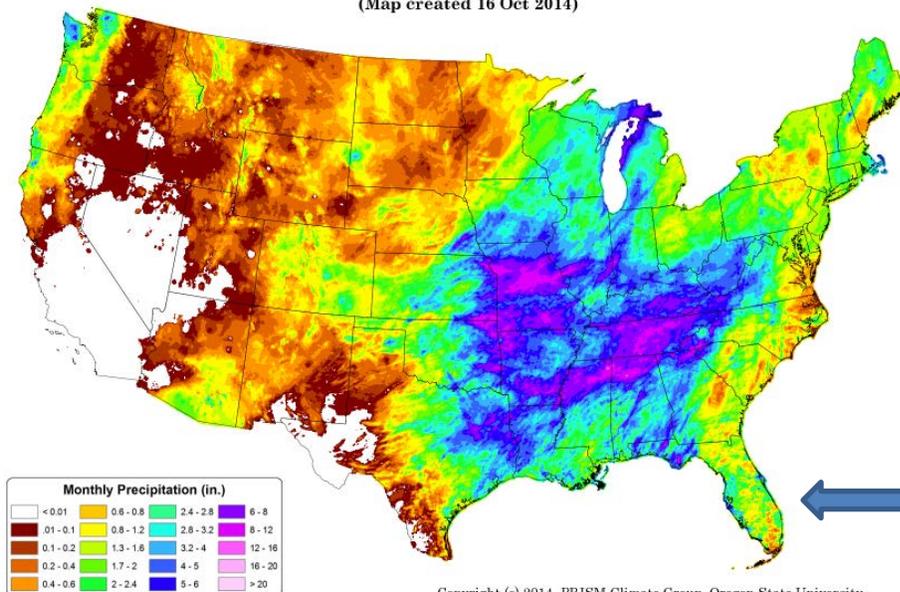


Generated 10/16/2014 at HPRCC using provisional data.

Regional Climate Centers

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

Total Precipitation: 01 October 2014 - 15 October 2014
Period ending 7 AM EST 15 Oct 2014
(Map created 16 Oct 2014)



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

So far in October 2014, the [total precipitation](#) across the continental U.S. was heaviest from the central to the southeastern part of the country. In contrast, the far West, including most of California, Nevada, eastern Oregon, eastern Washington, southern Idaho, southern New Mexico, and western Texas, was mainly dry.

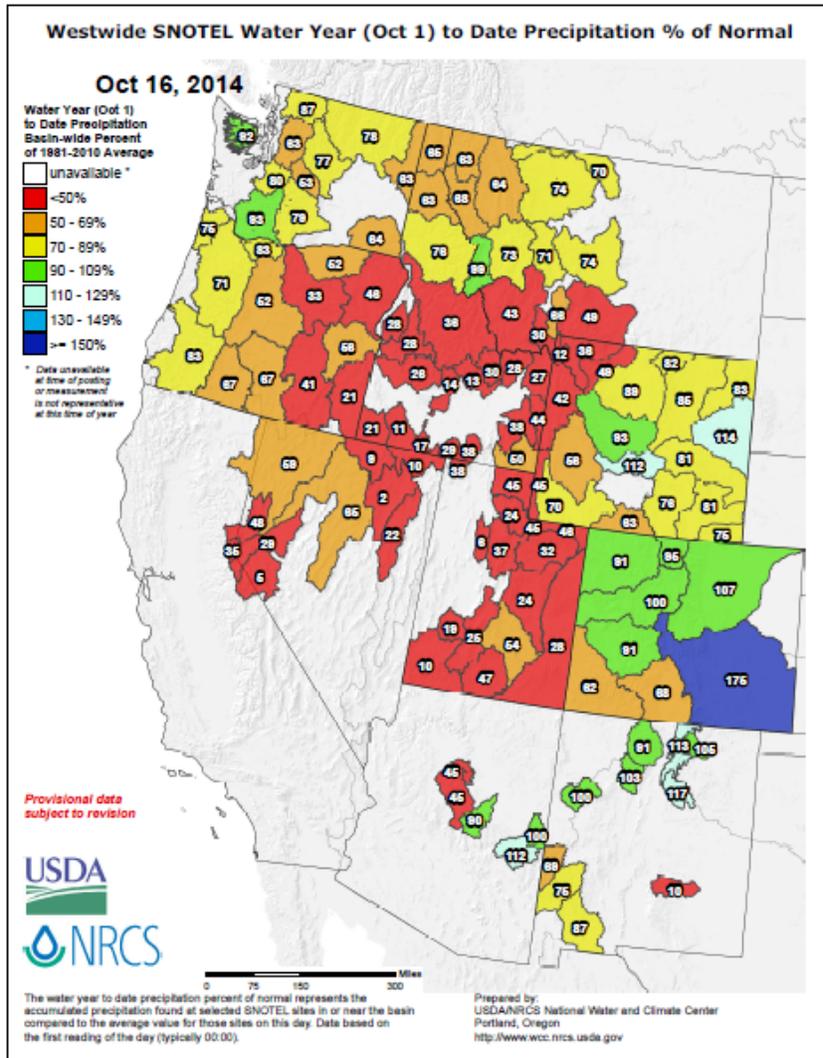
See [Go Hydrology](#) for current and forecast conditions over southern Florida.

Weekly Water and Climate Update

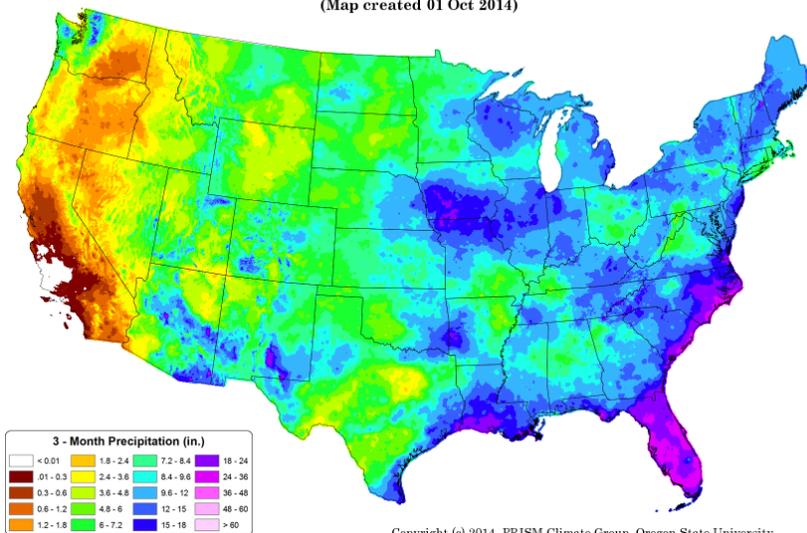
For the [2015 Water Year](#) that began on October 1, 2014, surpluses have occurred in very few basins in the West. Some basins in Wyoming, Colorado, Arizona, and New Mexico have received above normal precipitation.

Many basins across the West had very little precipitation in comparison to normal for the first two weeks of the new Water Year.

At the beginning of the Water Year, basin conditions can change rapidly with small amounts of precipitation. As the Water Year advances, it becomes more difficult for river basins to change bin categories.



Total Precipitation: July 2014 - September 2014
Period ending 7 AM EST 30 Sep 2014
(Map created 01 Oct 2014)



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The national map of the [three-month period](#) (July - September) shows that the eastern half of the nation received precipitation in the range from 6 inches to greater than 24 inches in Iowa, northern Missouri, Louisiana, Florida, and along the coast from Georgia to Virginia.

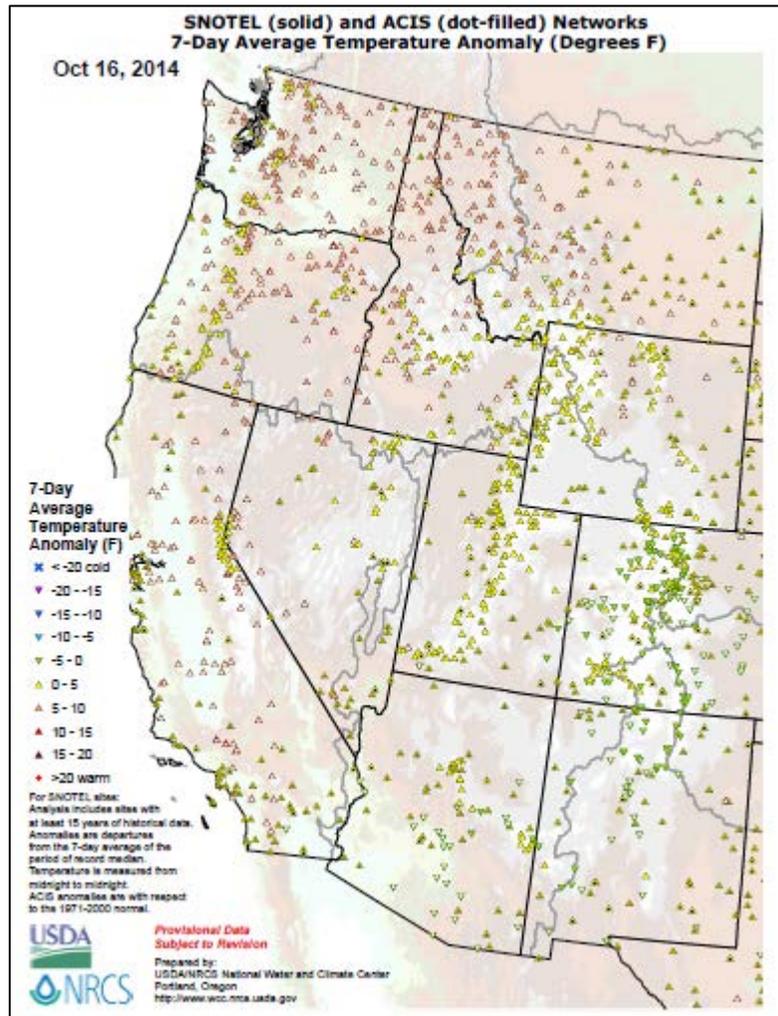
On the other hand, much of the West received totals of less than 4.8 inches. Central and southern California had little to no precipitation for the period. The exceptions in the West were over the northern Rockies, the Cascades, and the Southwest, where totals exceeded 12 inches.

Weekly Water and Climate Update

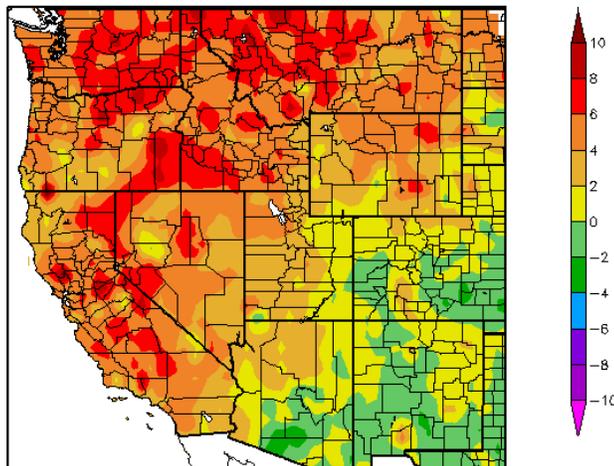
Temperature

The [SNOTEL](#) and ACIS [7-day temperature anomaly](#) map for the western U.S. shows temperatures above normal for most of the Pacific coast states, as well as Idaho, Nevada, and western Montana. Two stations in southern California reported greater than 10 degrees above normal for the week.

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



Departure from Normal Temperature (F)
10/9/2014 – 10/15/2014



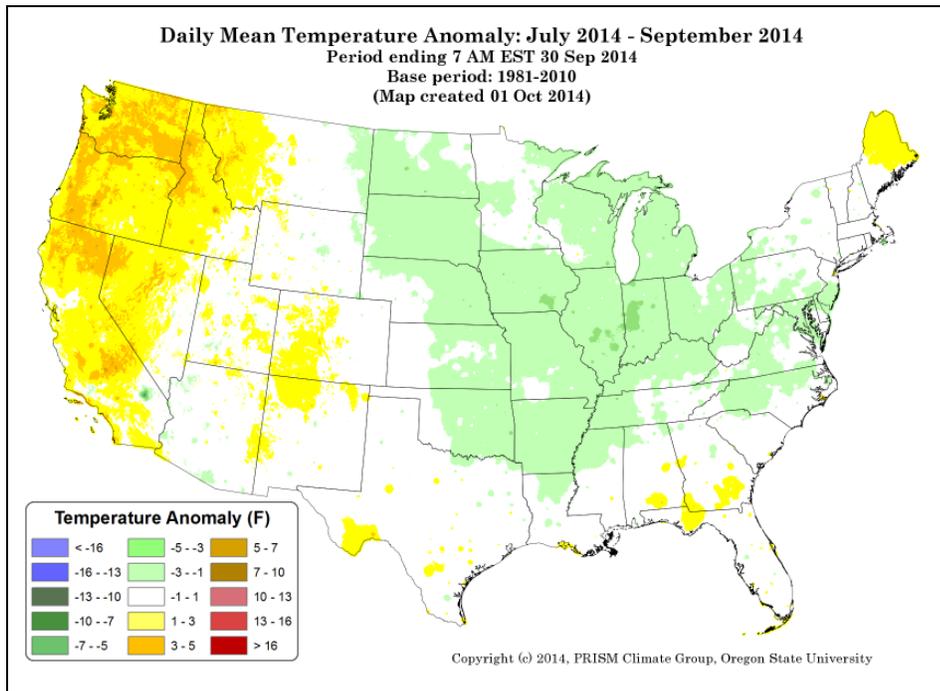
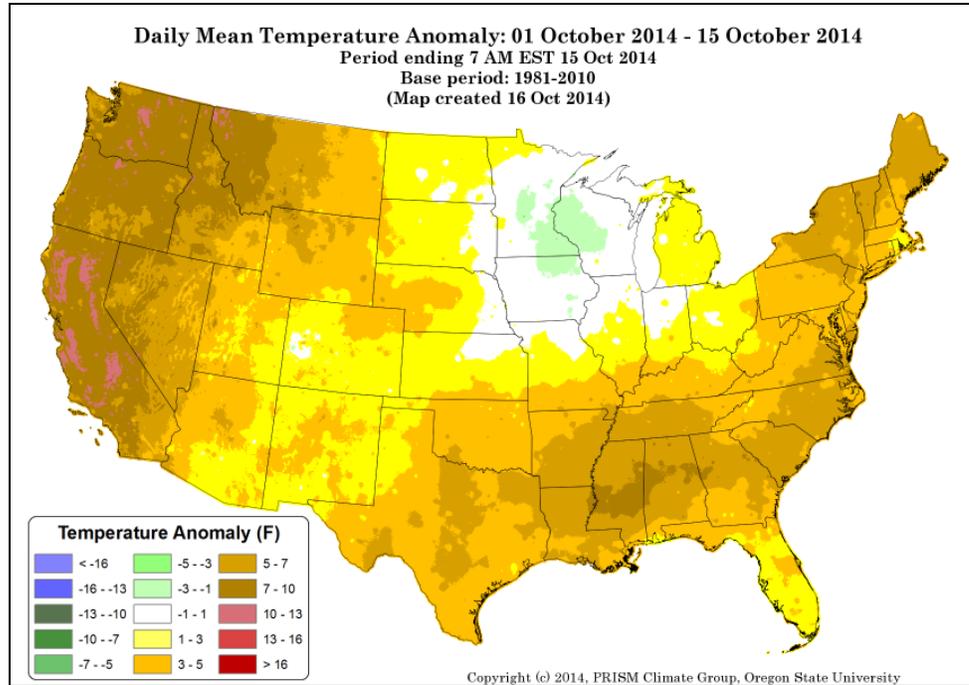
The [ACIS](#) map of the 7-day average temperature anomalies in the West ending October 15, shows the greatest negative temperature departures in southern New Mexico and Arizona ($<-2^{\circ}\text{F}$). The greatest positive temperature departures occurred in many areas of the West, including California, Oregon, Washington, and Montana ($>+8^{\circ}\text{F}$). Much of the West experienced above normal temperatures.

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

Weekly Water and Climate Update

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.

So far in October 2014, the national daily mean temperature anomaly [map](#) shows a cool pattern in the northern Midwest ($<-3^{\circ}\text{F}$). Above normal temperatures were recorded in most areas of the country. Southern California had the highest warm anomalies ($>+13^{\circ}\text{F}$).



July - September 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, Oregon, and Washington ($>+5^{\circ}\text{F}$). Most of the remainder of the country reported normal to slightly cooler than normal temperatures this summer, with the coolest temperatures in Iowa, Illinois, and Indiana ($<-3^{\circ}\text{F}$).

Weekly Water and Climate Update

Weather and Drought Summary

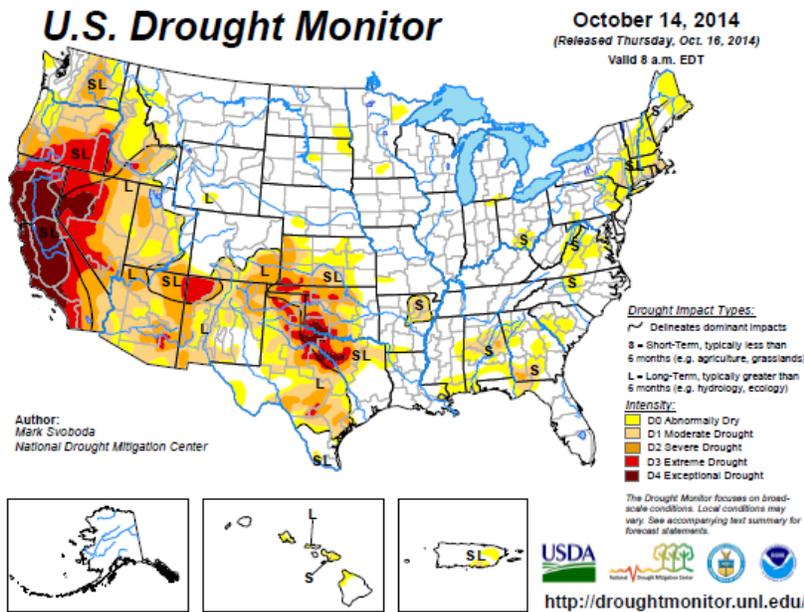
National Drought Summary – October 14, 2014

The following **Weather and Drought Summary** is provided by this week's NDMC Drought Author, Mark Svoboda, National Drought Mitigation Center.

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

“For the contiguous 48 states, the U.S. Drought Monitor showed 29.78 percent of the area in moderate drought or worse, compared with 30.51 percent a week earlier. Drought now affects 74,025,952 people, compared with 76,401,980 a week earlier.

For all 50 U.S. states and Puerto Rico, the U.S. Drought Monitor showed 24.89 percent of the area in moderate drought or worse, compared with 25.50 percent a week earlier. Drought now affects 74,096,505 people, compared with 76,472,533 a week earlier.”



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

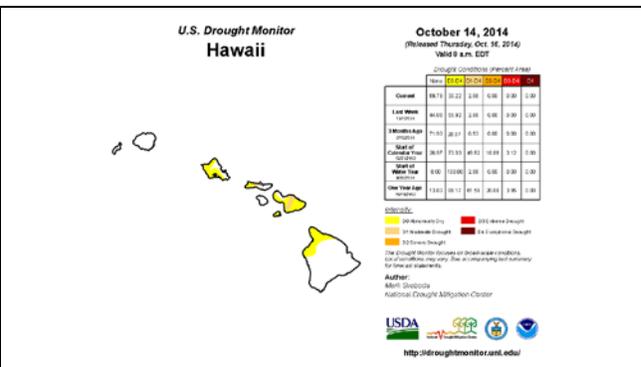
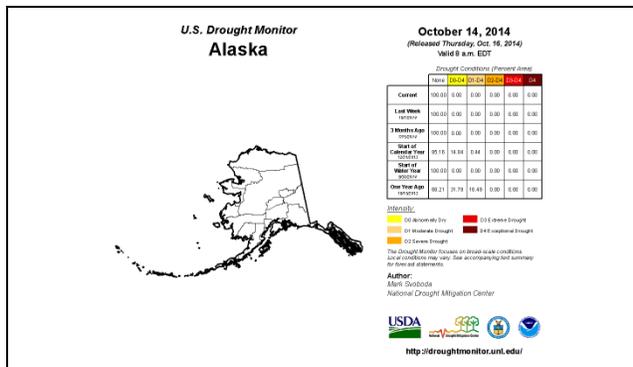
[Current Drought Monitor](#) weekly summary. The exceptional D4 levels of drought are scattered across CA, NV, TX, and OK.

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/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 moderate drought conditions. No changes were noted for Alaska this week. While D1 remained the same, there was a large reduction in D0 (25.70 %) and an increase in no drought in Hawaii. A comprehensive narrative describing drought conditions across other parts of the nation can be found toward the end of this document. For drought impacts definitions for the figures that follow, click [here](#).”

Weekly Water and Climate Update

U.S. Drought Monitor West

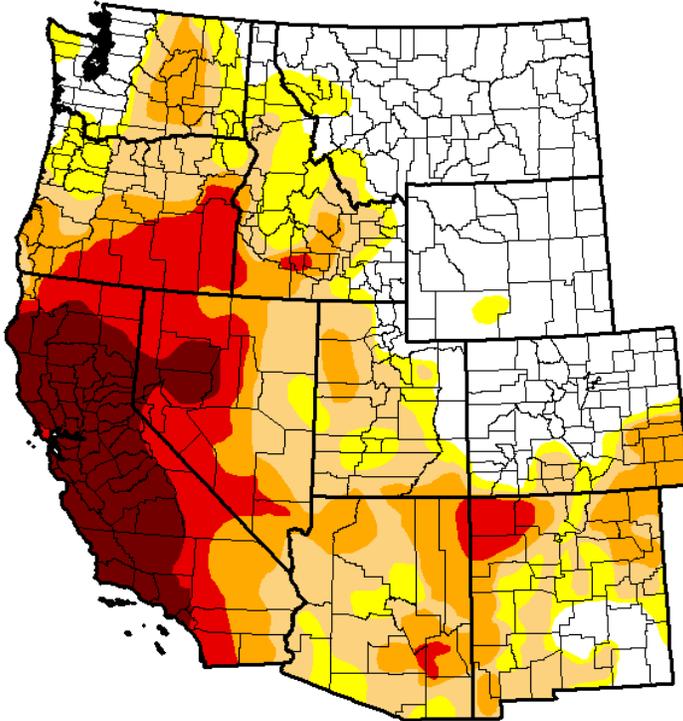
October 14, 2014

(Released Thursday, Oct. 16, 2014)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	31.95	68.05	55.56	35.07	19.75	8.90
Last Week <i>10/7/2014</i>	31.51	68.49	55.52	35.65	19.95	8.90
3 Months Ago <i>7/15/2014</i>	31.51	68.49	60.35	46.65	23.56	6.02
Start of Calendar Year <i>12/31/2013</i>	22.20	77.80	51.44	31.11	7.75	0.63
Start of Water Year <i>9/30/2014</i>	31.48	68.52	55.57	35.65	19.95	8.90
One Year Ago <i>10/15/2013</i>	27.53	72.47	56.15	32.44	5.34	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:

Mark Svoboda
National Drought Mitigation Center



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

A slight decrease in D0, D2, and D3 categories occurred in the West during this past week. The D1 and drought-free area increased very 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:

- KY - [Ky. corn farmers says yields down due to less rain](#) – Oct 4
- OR - [Drought drains lake, reveals history](#) – Oct 7

Weekly Water and Climate Update

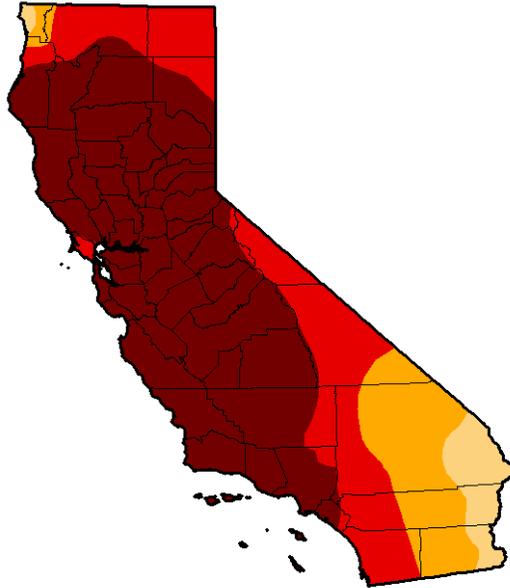
State with D-4 Exceptional Drought

U.S. Drought Monitor California

October 14, 2014

(Released Thursday, Oct. 16, 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	95.04	81.92	58.41
Last Week 10/7/2014	0.00	100.00	100.00	95.04	81.92	58.41
3 Months Ago 7/15/2014	0.00	100.00	100.00	100.00	81.85	36.49
Start of Calendar Year 12/31/2013	2.61	97.39	94.25	87.53	27.59	0.00
Start of Water Year 9/30/2014	0.00	100.00	100.00	95.04	81.92	58.41
One Year Ago 10/15/2013	2.65	97.35	95.95	84.12	11.36	0.00

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:

Mark Svoboda
National Drought Mitigation Center



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

There was no change in the California drought conditions this past week.

[CA Drought Information Resources](#)

[Drought News from California:](#)

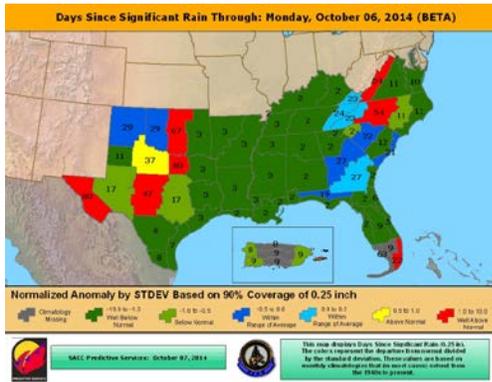
- [California Drought Produces Tastier Wine Grapes](#) – Oct 7
- [California Drought Worries Pool Industry](#) – Oct 5
- [California drought prompts increase in natural gas](#) – Oct 6
- [In virtual mega-drought, California avoids defeat](#) – Oct 6
- [California drought: Team climbs high to assess redwoods threat](#) – Oct 7
- [California Tries Giant Water Coolers to Save Fish](#) – Oct 3
- [In wake of drought and fires, turtle habitat becomes death trap](#) – Oct 5
- [Region's ninth bear is tranquilized, removed](#) – Oct 9
- [Bank's regional donation drive includes Sacramento food bank](#) – Oct 9
- [Castaic Lake so low that fisherman finds agent's gun lost 22 years ago](#) – Oct 9
- [Californians make big cuts in water usage, report says](#) – Oct 7
- [Could those empty Valley reservoirs fill up in one winter?](#) – Oct 4

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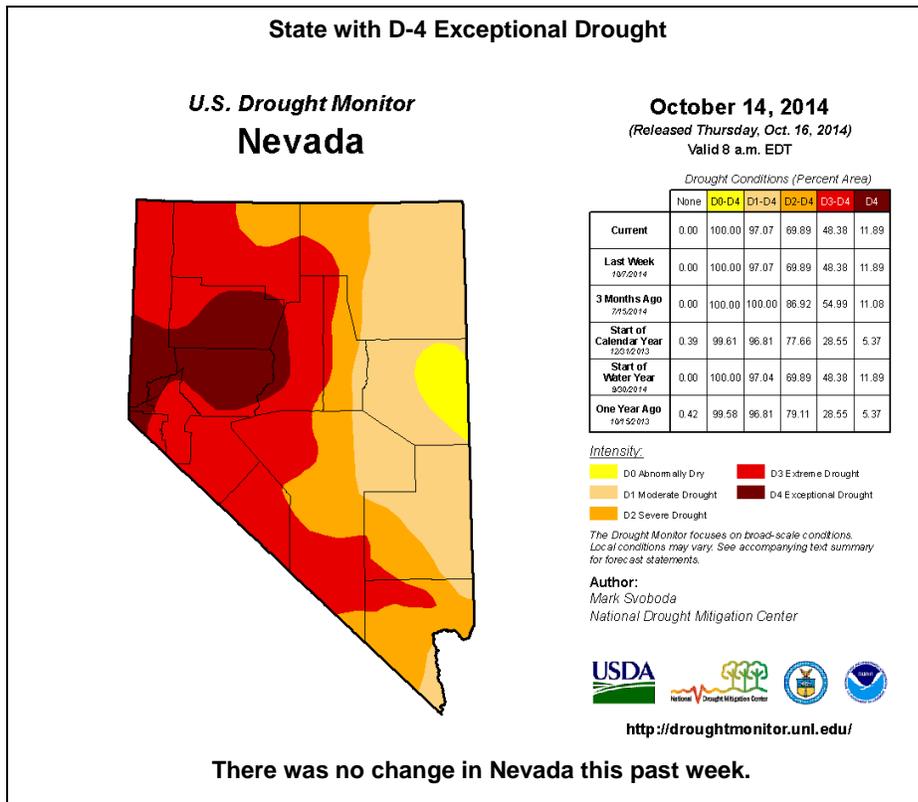
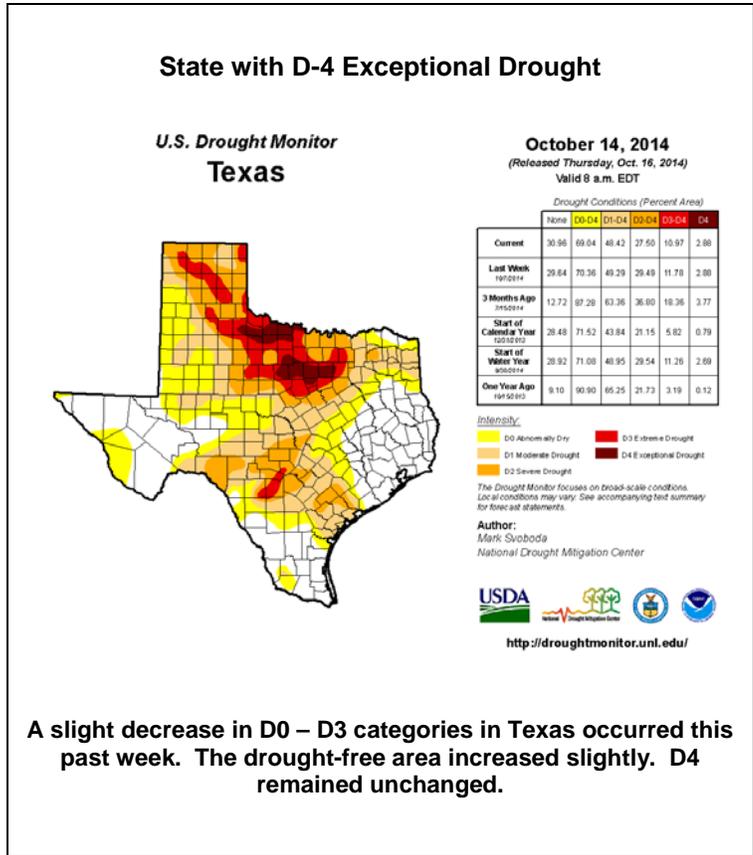
Texas Drought [Website](#).
 Texas [Reservoirs](#).
 Texas [Drought Monitor Coordination Conference Call](#): on Monday's 2:00 PM - 3:00 PM CST

Texas Drought News:

[Texas Crop Report – Sep 30](#)
[Scientists dive into work to protect salamanders – Oct 8](#)
[LCRA approves new reservoir – Oct 8](#)
[New drought tool: pay farmers not to irrigate – Oct 1](#)



[Days since Significant Rain Summary](#)



Nevada Drought News:

[Sierra Nevada forest health in rapid decline, drought adds fuel to the ... – Oct 6](#)
[Drought hits Lake Tahoe, drying up Truckee River – Sep 29](#)

Weekly Water and Climate Update

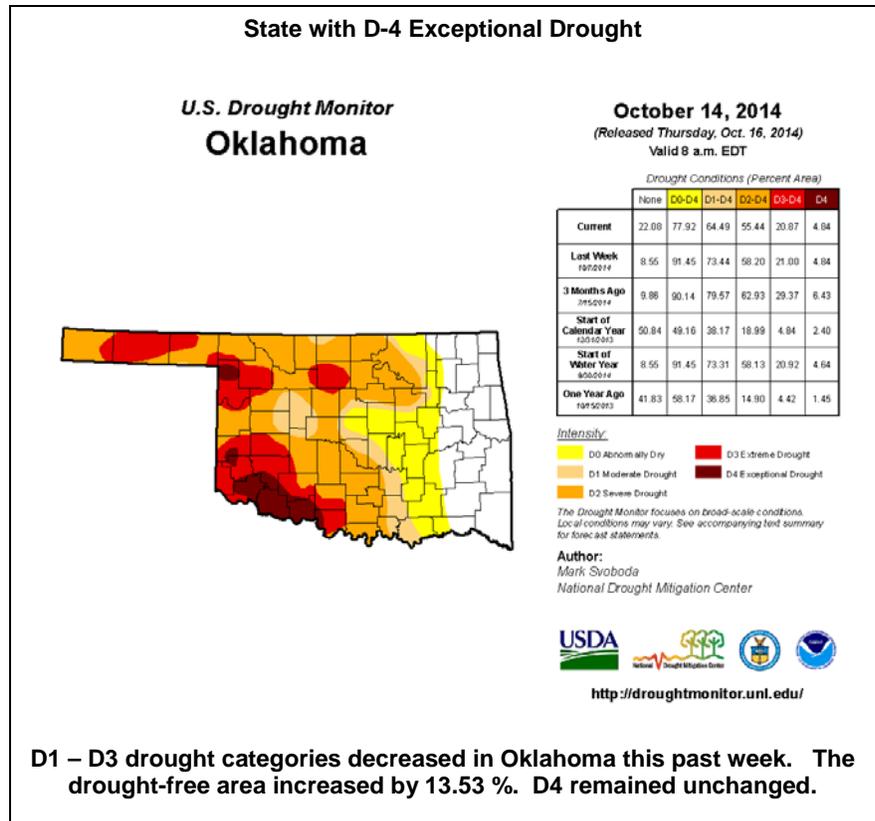
Related Area News:

[2014 Kansas Drought Report and Summary](#)

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

Oklahoma News:

[Drought hangs tough in Oklahoma, but rain is in the forecast – Oct 9](#)



U.S. Population in Drought Information

Number of people in each drought category in the U.S. for the week ending October 14, 2014

Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
2014-10-14	170,562,023	134,835,432	74,025,952	51,759,447	40,611,998	29,619,173
2014-10-07	167,490,648	137,906,807	76,401,981	52,151,149	40,693,738	29,619,173

New population figures added to the U.S. Drought Monitor website show that for this week, more than 74 million people in the United States are in a drought-affected area, down from last week by more than 2.3 million people.

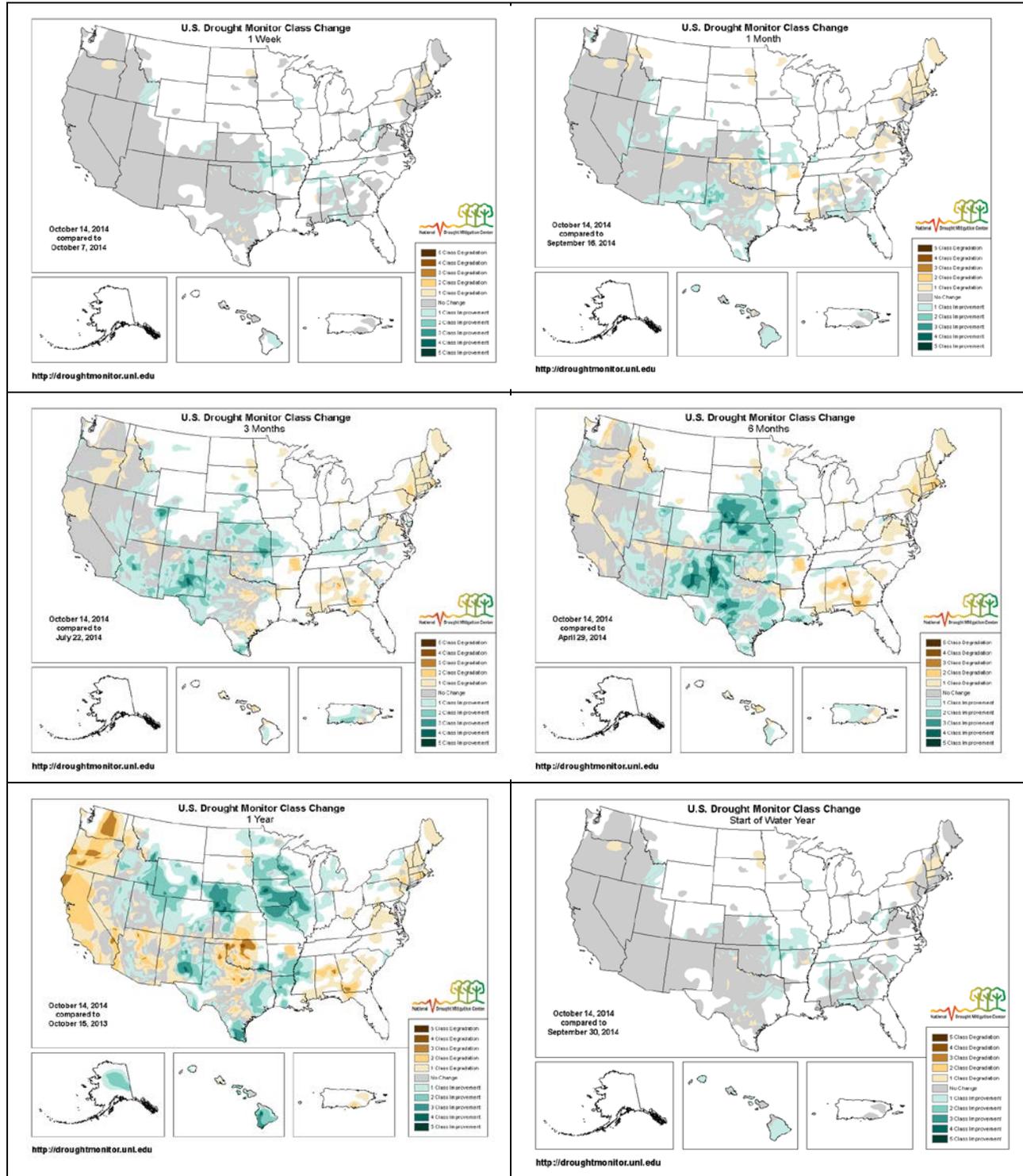
Population Statistics Methodology:

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

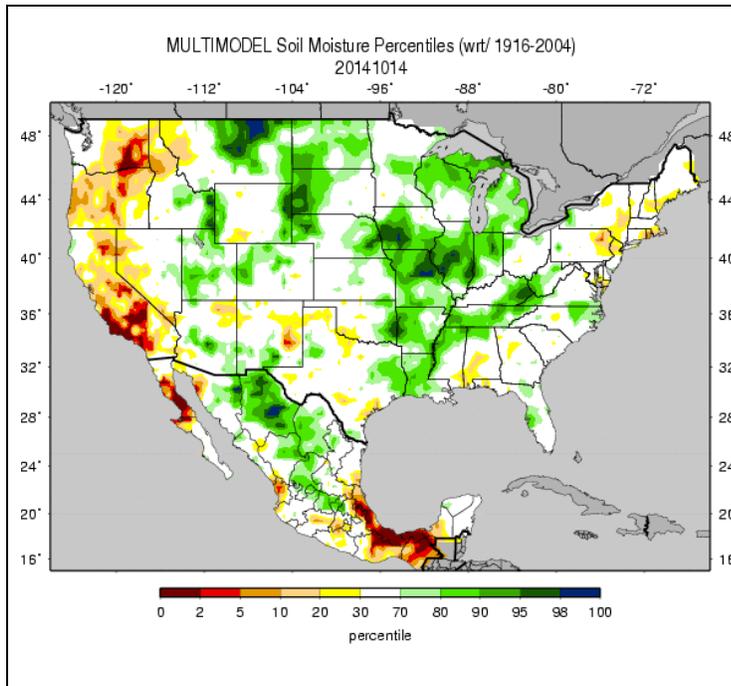
Over Various Time Periods



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

Weekly Water and Climate Update

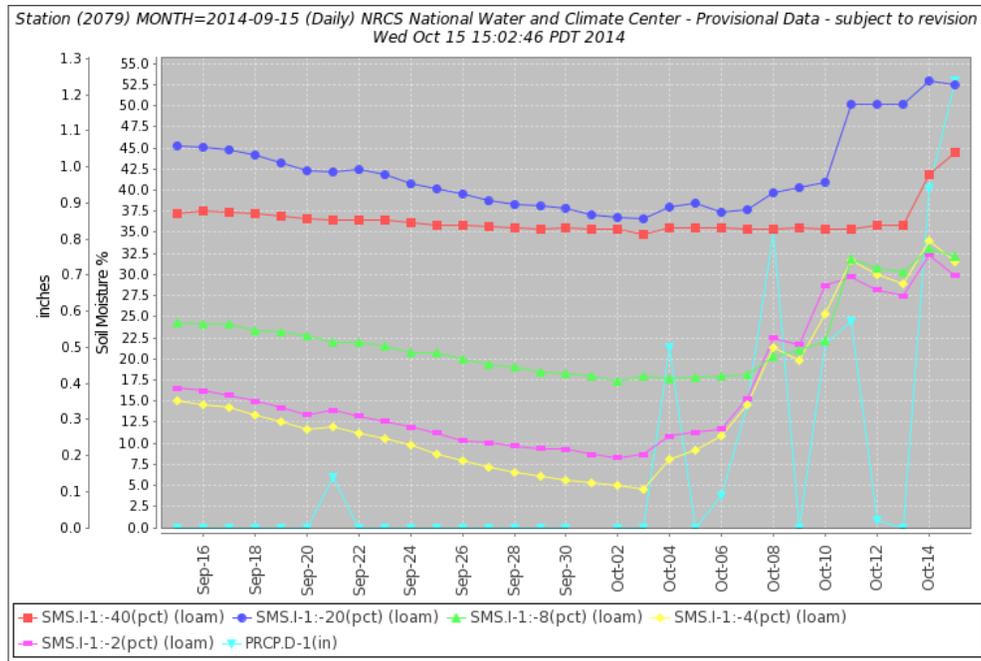
Soil Moisture



The national soil moisture model ranking in [percentile](#) as of October 14, 2014, shows dryness over California, Washington, Oregon, northern Idaho, and western Nevada. There are also scattered dry areas in the Southwest and Texas, the Southeast, parts of the Northeast, and New England. Moist soils dominated central Montana, the upper Snake River, the Midwest, and Great Lakes states. The wettest locations were scattered in the western Dakotas, north central Montana, and Iowa. Soils in the upper Mississippi, Louisiana, Florida, Utah, western Colorado, and the Southwest 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)

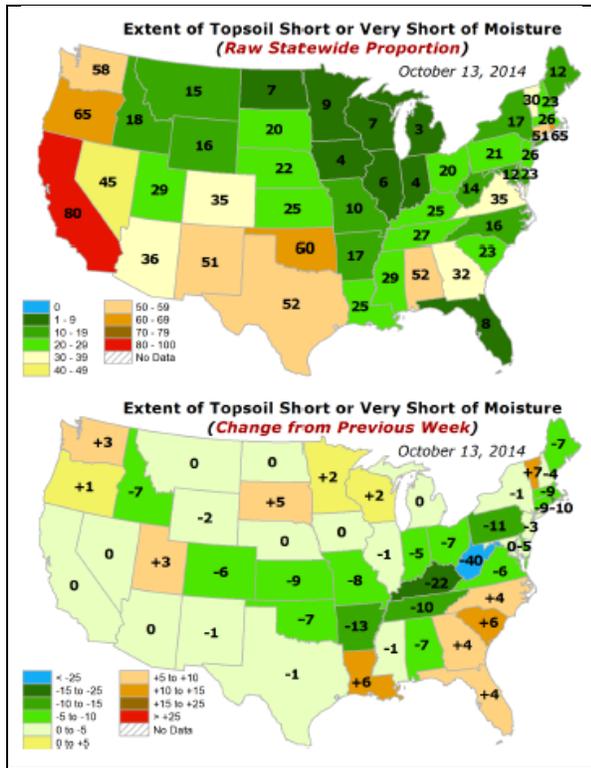


This NRCS resource shows soil moisture data at the [Mammoth Cave \(2079\) SCAN site](#), located in Kentucky. The precipitation in the area was fairly heavy since the start of October (graphed in light blue). This resulted in increased soil moisture at all the depth sensors.

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](#).

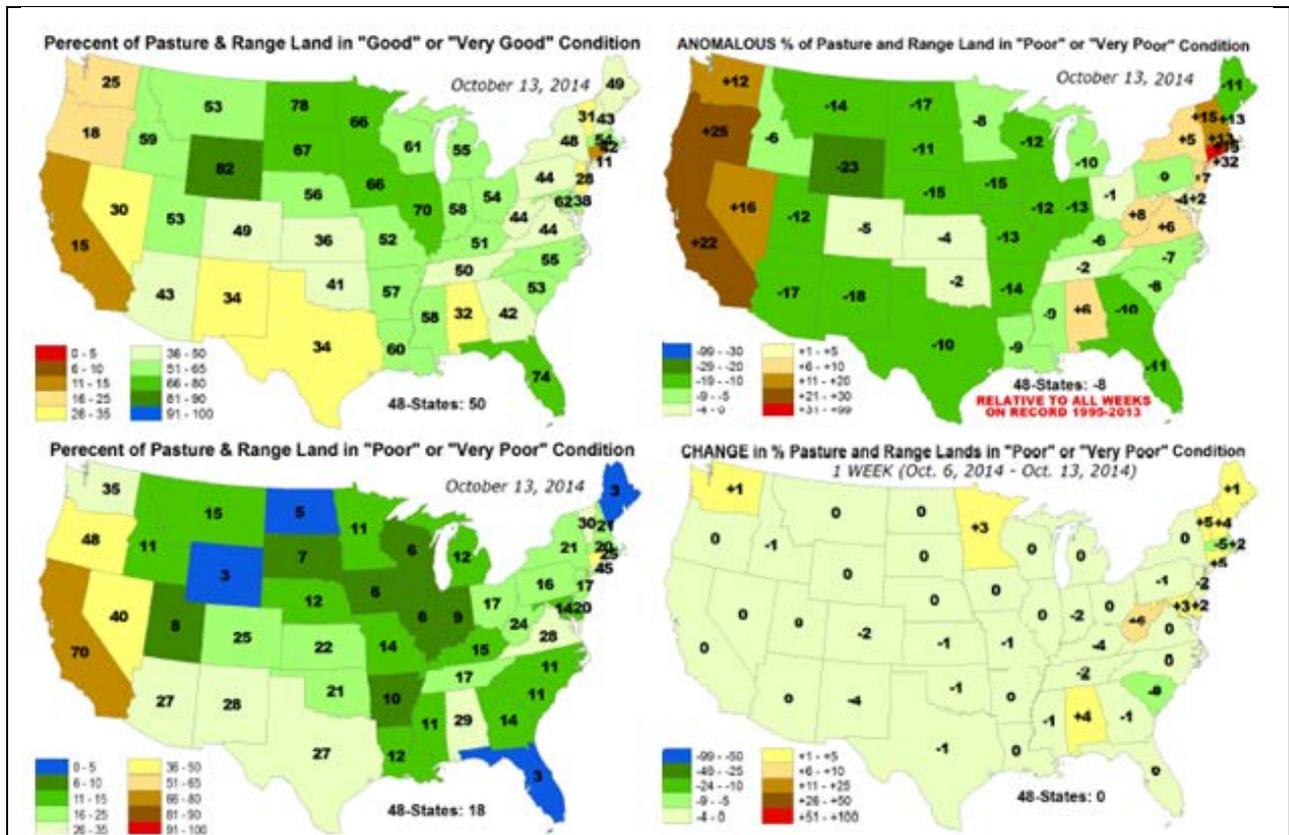
Weekly Water and Climate Update

Topsoil and Pasture & Rangeland National Conditions



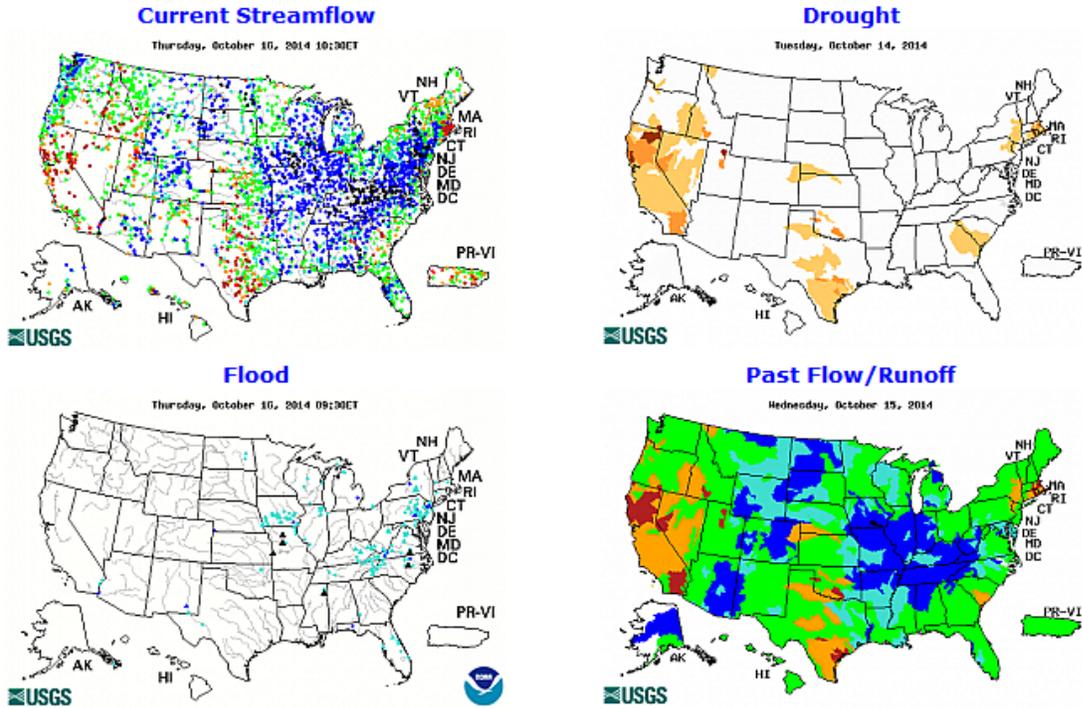
↩ Topsoils are exceptionally poor (top) over Rhode Island, Connecticut, Oklahoma, California, and Oregon with values representing 60 percent or more poorer conditions than the median for this time of year (bottom panel). Alabama, Texas, New Mexico, and Washington are 50 – 60 percent short of soil moisture. Locations in the upper Midwest, east to New York, and Florida have good soil moisture conditions.

↩ Many of the states have near or greater than 50% good pasture and range conditions, as noted below. These conditions also extend across most of the central portion of the country. Pasture and rangelands are in poor to very poor condition in California, Oregon, Nevada, and Connecticut. Conditions have changed very little over this past week.



Weekly Water and Climate Update

Streamflow



The rivers are high over most of the central U.S. The Mississippi River Basin, the central Rockies, the upper Ohio River, the Southwest, Florida, and much of the Mid-Atlantic States, due to recent precipitation (left maps). Alaska, and Oahu and Kauai, Hawaii, are also reporting a few rivers with high streamflow. Rivers above flood stage in the U.S. include the Lower Osage River near Horton, MO, Blackwater River at Blue Lick, MO, Grand River near Sumner, MO, Tombigbee River near Bigbee, MS, Coosa River near Childersburg, AL, Neuse River at Smithfield, NC, and the Meherrin River near Lawrenceville, VA.

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).

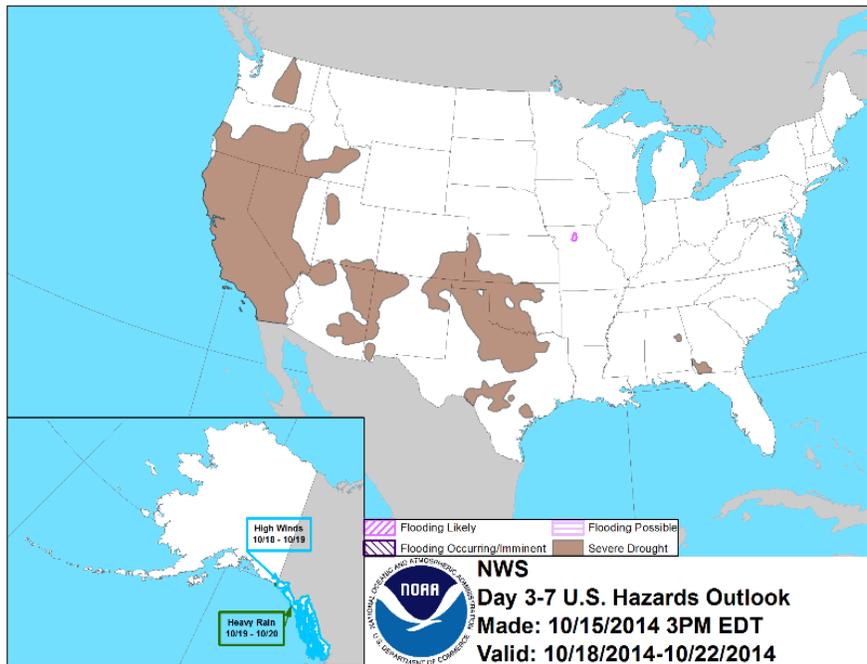
During the next three months, there is a risk of flooding in some areas of the Mississippi and lower Missouri Rivers, west-central Florida, the Gulf Coast, the Southeast, the Connecticut River, and western Washington. Currently, **1** gage has a greater than 50% chance to experience major flooding; **3** gages for moderate flooding, and **68** gages for minor flooding.

These numbers represent a 7-gage increase in the greater than 50 percent chance of minor flooding category in the last week.

Weekly Water and Climate Update

National [Weather Hazards](#)

Heavy rain (outlined in green) is expected during the next week in Alaska (10/19-20), and high winds are expected (10/18-19). Severe drought remains a large issue in much of the south-central and western U.S.



[National Drought Summary for October 14, 2014](#)

Prepared by the Drought Monitor Author: Mark Svoboda, National Drought Mitigation Center.

Summary

"In a repeat of last week, yet another large weather system moved across the country's midsection, bringing copious rains to the central Plains, middle Mississippi Valley and the Tennessee Valley, with 3-6 inches being a regular occurrence. Parts of the Pacific Northwest also enjoyed some nice moisture during the week. As for temperatures, most of the West and South saw well above normal temperatures, with readings 6 to 12 degrees above the norm. Unseasonably cooler weather was confined mostly to the northern and central Plains along with the Upper Midwest and Great Lakes regions.

Hawaii, Alaska, and Puerto Rico

Alaska and Puerto Rico remain unchanged this week.

Across Hawaii, a much quieter week means there aren't too many changes. The only change does cover a good chunk of the Big Island as D0 continues to shrink on the southwestern reaches.

The Northeast and Mid-Atlantic

Another dry week in New England results in a large expansion of D0 in northeastern Pennsylvania, eastern New York, Vermont, New Hampshire, western Maine and western Massachusetts. The region also saw some slight expansion of the D1 in southern New York along the border with New Jersey. Rainfall is running anywhere from 50 to 75% of normal (or worse) in this area dating back to mid-July, and soil moisture and streamflow levels have fallen, given the dryness of late. Conditions have been more favorable to the south across the Mid-Atlantic, with recent wetness leading to a reduction of D0 across West Virginia, the extreme western Maryland Panhandle and into Pennsylvania. Streamflow values here are exactly the opposite of those in New England, with flows running well above normal region wide in the Mid-Atlantic. Some relief may be on the way given widespread rains that are expected across both regions as of this writing.

The Plains and Midwest

On the heels of large areas of heavy rains last week across the region, another storm dumped another round of heavy rains (2 to 6 inches) across the state of Missouri, eastern and southern Kansas, western and southern Arkansas, eastern Oklahoma and northeastern Texas. Large 1- to 2-category improvements are noted in the D0-D2 areas on this week's map for those areas seeing the heaviest rains and deficits being erased back to six months or more in those areas listed above. Soil moisture and streamflows are in

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great shape heading into winter in these areas as well. Missouri saw large improvements, with all but a small remnant of D0 being all that remains in the southwest part of the state where D1 was last week. Drought has been removed in northwest Arkansas, but the dryness persists and has expanded ever so slightly in the northeast corner of the state. Texas was more of a mixed bag, with rains improving things by 1 category in the eastern portion of the state (in general), but warm and dry conditions leading to degradation, with expansion of D1-D3 sneaking back in across south Texas. North-central Texas has also fared a bit better of late, and this is reflected in a slight trimming of D2-D4 in this part of the state and along the Red River border with Oklahoma.

Farther north, the rains missed the northern Plains (with no complaints or major impacts being reported as harvesting efforts are well underway now and behind schedule), with just a slight expansion of D0 showing up in southeastern North Dakota. To the east in Wisconsin, a good late period soaking led to the removal of the D0 across the southwestern quadrant of the state.

The Southeast

This week's map depicts major, widespread changes to the drought landscape after heavy rains fell across northern Mississippi, Tennessee, most of Kentucky, most of Alabama and northern Georgia. Large areas of D0-D2 have been reduced or erased, leaving both Kentucky and Tennessee drought/dryness free this week. Large areas of one-category improvement are noted in all parts of Alabama, the Florida Panhandle and southwestern and northern Georgia.

The West

High temps and dryness continue to plague much of the West during the early weeks of the new Water Year, with the exceptions being southern Colorado, southeast Arizona and the eastern third of Washington in the Cascade Range and along the coastal ranges. This trend has led to an expansion of D1 across more of northeastern Oregon.

One area that has done really well the past 6 months, and even tracking back to the beginning of the calendar year, has been in eastern Idaho, parts of northern Utah and northern Nevada. This has led to some early Water Year reassessment, noted by the trimming and shifting of D0-D2 westward in eastern Idaho and through a change of the impact line from "S/L" to "L". As we enter the new Water Year, there are still some long-term lingering water supply issues across this region and into southwestern Montana, which bears watching to see if this wet pattern carries on during the winter.

The recent run of wetness this fall has led to some favorable soil moisture recharge and improving conditions in southern Colorado, with the removal of D3 and some reduction of D0-D2 noted there on this week's map.

Looking Ahead

For the period October 15-20, after seeing a very wet pattern the past few weeks across the country's mid-section, there should finally be some time to dry out and let the harvesting resume. The only areas showing good chances for heavier precipitation are in the coastal ranges and mountains in the Pacific Northwest, primarily from northern Oregon up into Canada. The other area expecting good rains is from the Mid-Atlantic up into New England, where 1-3 inches should bring some relief to the region. As for temperatures, most of the West, Pacific Northwest and the Great Plains states are expecting to see unseasonably warm temperatures, with readings likely running 3-6 degrees above-normal.

Looking at the 6- to 10-day time frame (October 21-25), the warm temperature trend continues into this period, and the entire western two-thirds of the country and most of Alaska are expected to see above-normal temperatures, with the strongest likelihood falling in the High Plains and along the Rocky Front Range from Colorado and Wyoming up into Montana. The bulls-eye for cooler than normal weather is found in the Tennessee and Ohio Valleys and within the Mid-Atlantic from Georgia northward into New Jersey. A greater likelihood of above-normal precipitation over this period is confined to the Pacific Northwest, Four Corners, southern Florida and the New England coastline. However, a large area of the country from the Great Plains eastward into the Mississippi Valley, the Midwest, Ohio Valley, Tennessee Valley and the western fringes of the Mid-Atlantic can expect it to be dry, with the highest probability falling from the Great Lakes down to the Gulf Coast along the Mississippi Valley."

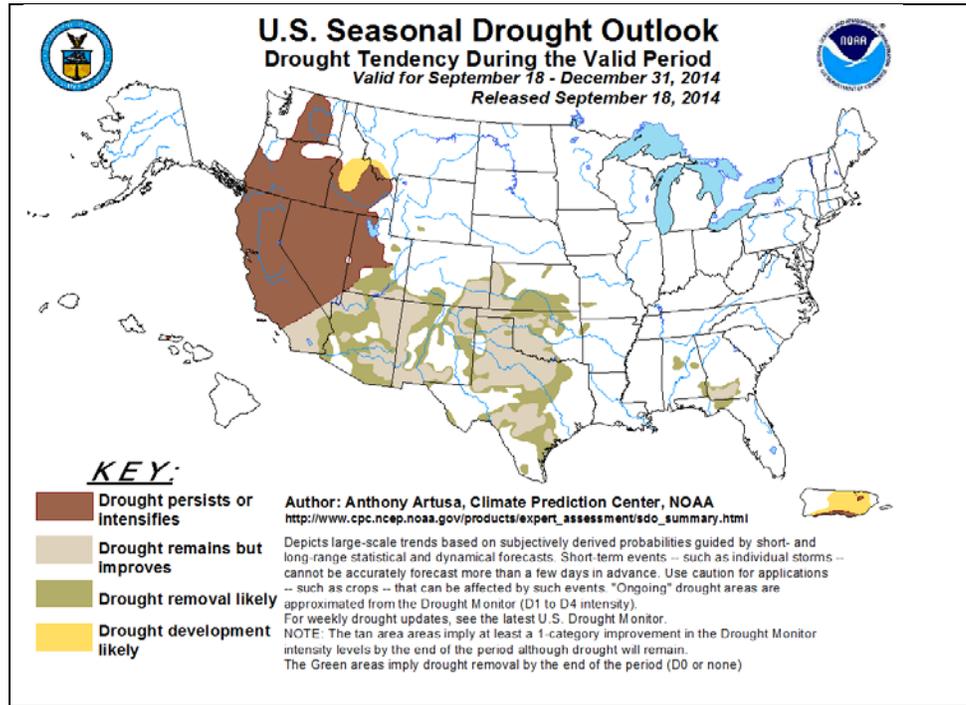
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Supplemental Drought Information

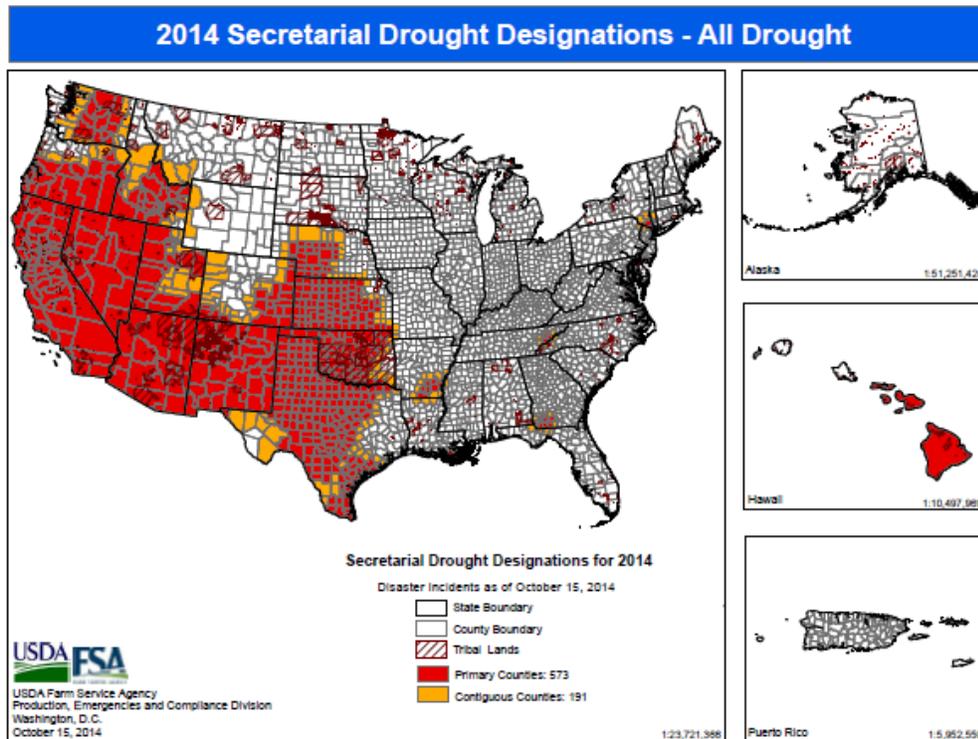
National Seasonal Drought Outlook

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



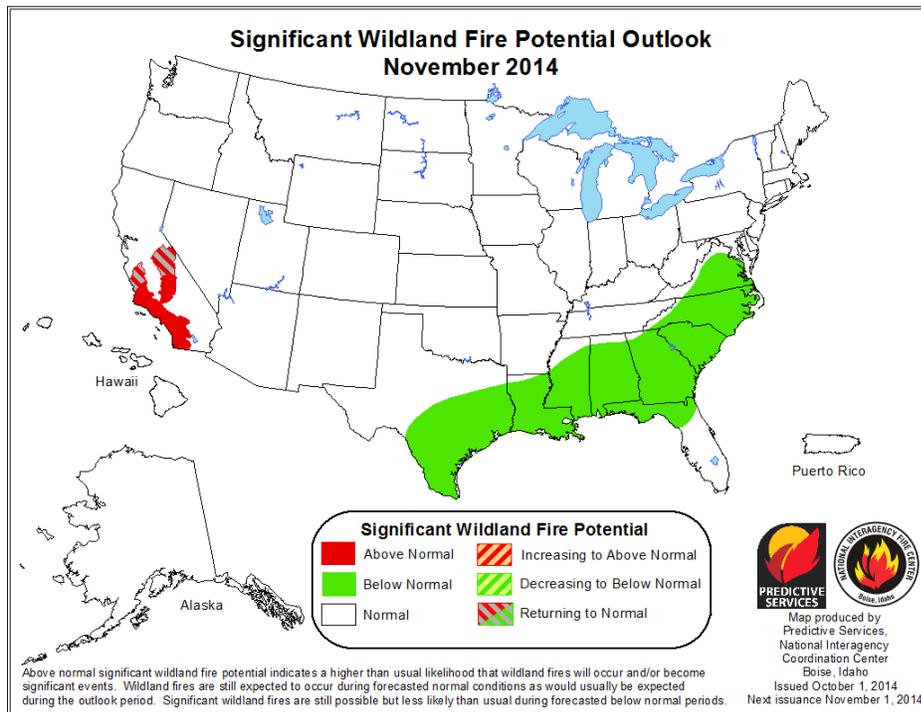
Refer to the USDA Drought Assistance [website](#) and [National Sustainable Agriculture Information Service](#).

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

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

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National Fire Potential Outlook



November Forecast

In November, above normal [fire potential](#) will persist in parts of California.

The below normal fire potential area in green on the map is forecast for Texas, through the Southeast, to the mid-Atlantic States.

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 Statewide water conservation

Californians curbed water use by 11.5 percent in August, compared with the previous year, for more water savings than in previous months. Parts of Southern California made substantial progress in water conservation, from using 8 percent *more* water in May to using 7.8 percent less in August. Five months ago, Gov. Brown urged residents to cut their water use by 20 percent, putting Californians a little more than halfway to the goal.

The California pool industry concerned about water restrictions

The California pool industry is concerned that more than three dozen water agencies and cities have set rules on pool maintenance. In some cities, residents may not drain or refill pools or must cover pools with

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covers to reduce evaporation. While business is fine at present, people in the pool industry worry that ongoing drought will eventually hurt pool-related businesses.

Ninth bear in residential area in Kern County, California

A small black bear in a tree led a Bakersfield resident to call the California Department of Fish and Wildlife, who darted the bear and relocated the 75-pound juvenile female bear 20 miles from the city. This was the ninth bear found in an inhabited area of Kern County in the past month.

Western pond turtles succumbing to starvation, illness at pond in northern Los Angeles County

A drying lake in northern Los Angeles County has led to the deaths of many state-protected Western pond turtles, which were dying of starvation and conditions related to starvation. The lake is home to about 300 turtles, some of which have been rescued and kept at the Turtle Conservancy's Behler Chelonian Center in Ventura County.

Giant coolers to protect fish at California hatcheries

Giant water chillers were installed at the Livingston Stone National Fish Hatchery below Shasta Dam in northern California and at the American River hatchery near Sacramento to lower the water temperature to a tolerable level for baby salmon and other fish.

Redwood trees, other vegetation drought-stressed in Santa Cruz County

Vegetation in the Henry Cowell Redwoods State Park was showing obvious signs of drought stress. Oxalis on the forest floor was shriveled up, ferns were turning a rusty-brown, conifers were shedding leaves more heavily than usual and redwood trees were dropping their cones prematurely before the cones were open and spreading seeds.

Central Valley Community Bank helping to ease hunger in the Central Valley

The CEO of the Central Valley Community Bank, based in Fresno, launched a program called "Food Fund Challenge" allowing people to donate to regional food banks through the CVCB's 21 regional branches. The CVCB gave \$5,000 to seven food banks, including California Emergency Foodlink in Sacramento and food banks in San Joaquin, Tulare, Fresno, Madera, Merced and Stanislaus counties.

Items lost in Castaic Lake nearly 22 years ago recovered in Los Angeles County

A fisherman on Castaic Lake found a badge and handgun belonging to a federal agent who lost the items almost 22 years ago. The level of Castaic Lake was down about 151 feet due to the ongoing drought.

Texas

New reservoir in the works for Wharton County, Texas

The Lower Colorado River Authority approved plans on Sept. 17 to construct a new reservoir near Lane City in Wharton County. Their aim is to bolster the water supply for the basin by locating the \$214.9 million reservoir in an area that receives about twice as much rainfall as the Highland Lakes.

Voluntary Irrigation Suspension Program for the Edwards Aquifer Authority in south Texas

The Edwards Aquifer Authority will offer the Voluntary Irrigation Suspension Program Option in 2015. The program conserves water in the aquifer by paying farmers and other heavy water users in exchange for them not irrigating. The VISPO became an option for irrigators because the J-17 index well in Bexar County fell below the historic average of 630.6 feet above sea level, triggering the use of the no-irrigation program.

Salamanders collected from wild to protect endangered species near San Marcos, Texas

San Marcos salamanders were collected from Spring Lake and were being housed in the San Marcos Aquatic Resources Center's refuge facilities to have some creatures in reserve in the event that a dramatic change would take place in their habitat, devastating the population.

Corn yields in south central Kentucky better than expected

Corn yields in south central Kentucky were not hurt as much by the dry summer as farmers feared they would be. One farmer near Rich Pond said his yield was 125 acres per bushel, compared to 200 bushels per acre in 2013.

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Artifacts appearing at Emigrant Lake near Ashland, Oregon

Drought lowered the level of Emigrant Lake, exposing remnants of a service station in what used to be Klamath Junction before the area was inundated with the construction of the reservoir. Old spark plugs, brakes and other similar items are nestled with stones Native Americans used for chipping arrowheads.

Interesting historical drought impacts:

Low river levels stopped Western Massachusetts factory operation, July 1864

Hot, dry weather depleted rivers in Western Massachusetts, forcing some factories to close, due to the low water levels. Low water at the Watershops at the Springfield Armory slowed war production.

[Civil War October 1864: Presidential election a nasty contest pitting Lincoln against McClellan](#)

General Grant and his troops were held up by drought near Petersburg, Virginia, Aug. 1864

General Grant and his troops were held up near Petersburg, “due solely to the extreme drought, which rendered it impossible for him to move his men and animals away from where fresh water could be procured.”

Grant told Ohio Sen. Benjamin Wade that he and his army would move along as soon as adequate rain fell. Drought was plaguing the region, drying up wells, devastating crops and stopping production at water-power driven mills. “

[Civil War, August 1864: Democrats seek peace, drought hampers war and local commerce, men of means buy way out of service](#)

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



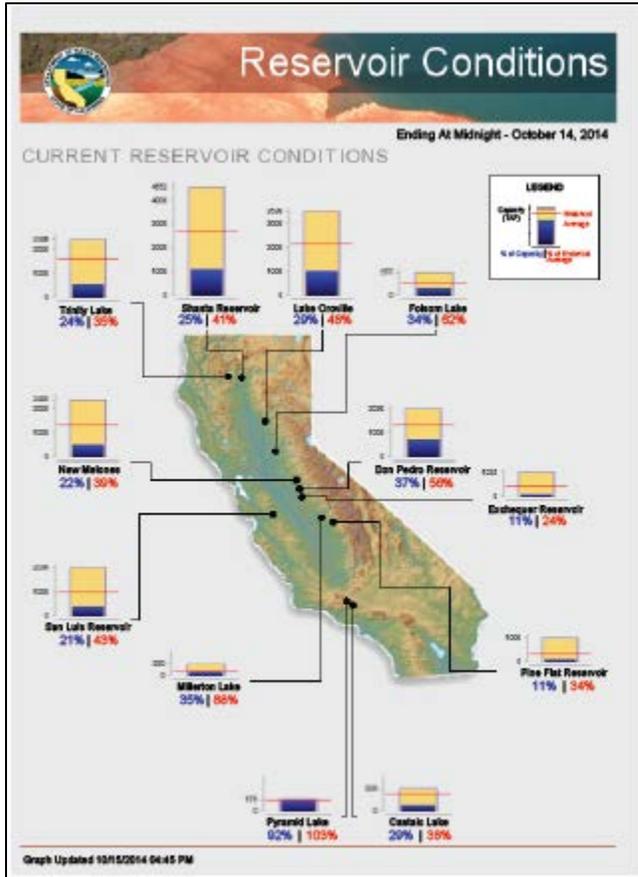
Tea Cup Reservoir Depictions

- <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 Reservoir Conditions

From the California Department of Water Resources



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

California crop losses from the latest [U.S. Crop Production Report](#) (USDA released Oct. 10) From- Brad Rippey, USDA (BRippey@oce.usda.gov)

Crop	Acres Harvested 2013	Acres Harvested 2014	Production 2013	Production 2014	Yield Change %
Corn (1)	180,000	110,000	35.1	17.6	- 50%
Cotton (2)	92,000	59,000	333,000	220,000	- 34%
Rice (3)	561,000	428,000	47.6	36.4	- 24%
Hay (4)	540,000	440,000	1.836	1.496	- 16%

(1) Production in millions of bushels

(2) Production in 480 lb bales

(3) Production in million cwt

(4) Production in millions of tons (Not including alfalfa).

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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