



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

Weekly Water and Climate Update

October 9, 2014

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Agricultural Weather Highlights – Thursday, October 9, 2014

- “In the **West**, remnant moisture from former Hurricane Simon continues to produce locally heavy showers in the Four Corners States. Elsewhere, dry weather and near-record to record-high temperatures are promoting fieldwork, including harvest activities and Northwestern winter wheat planting.
- On the **Plains**, a few showers are developing across central portions of the region. Meanwhile, late-season heat prevails on the southern Plains, where some fields of emerging winter wheat are in need of rain.
- In the **Corn Belt**, heavy showers are developing in southern production areas, particularly in northern Missouri and southern Illinois. In contrast, cool, dry weather covers the northern Corn Belt. On October 5, the Midwestern corn harvest ranged from 1% complete in North Dakota to 44% complete in Missouri—at least 10 percentage points behind the respective 5-year averages in all states except Ohio.
- In the **South**, very warm, mostly dry weather favors summer crop maturation and harvesting, as well as early season winter wheat planting efforts. However, some thunderstorms are moving into western Kentucky.

Outlook: A significant rainfall event is underway across the nation’s mid-section due to the interaction between remnant tropical moisture and a cold front. From Arizona to Colorado, additional rainfall could reach 1 to 2 inches. However, the focus for heavy, late-week rainfall will continue to shift to parts of the Plains and Mid-South. A second cold front will swing through the South, East, and lower Midwest early next week, producing additional rainfall in some of the same areas. As a result, 5-day rainfall totals could reach 2 to 6 inches or more from the southeastern Plains into the Tennessee and lower Ohio Valleys. In contrast, little or no rain—accompanied by late season warmth—will occur from California to the Northern Plains. The NWS 6- to 10-day outlook for October 14-18 calls for warmer-than-normal weather nationwide, except for near-normal temperatures in the Pacific Northwest. Meanwhile, wetter-than-normal conditions in the Northwest and east of the Mississippi River will contrast with below-normal precipitation from the Four Corners States to the central and southern Plains.”

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

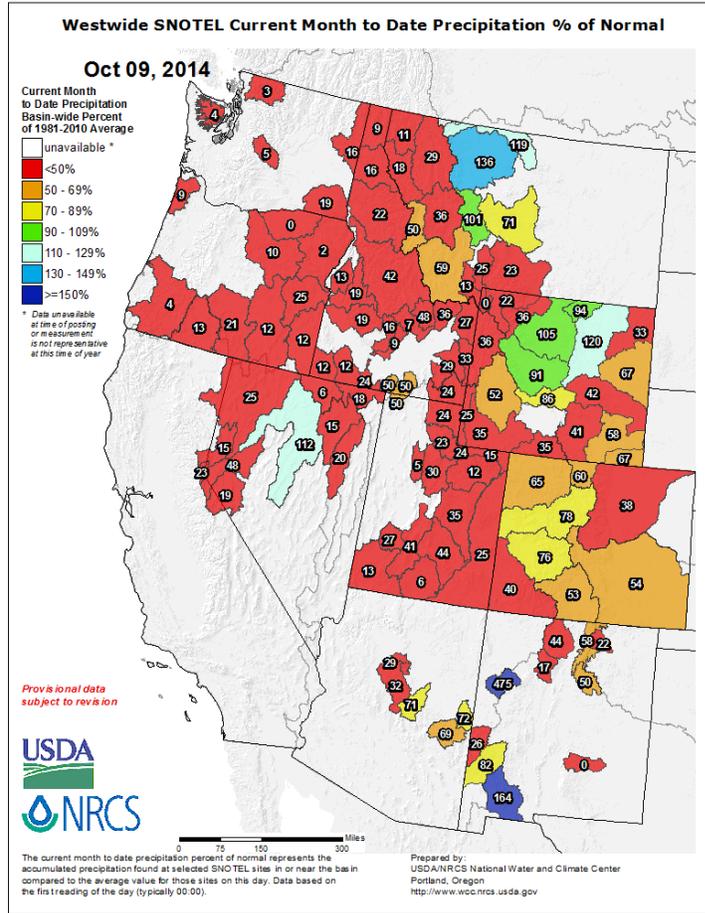
The Natural Resources Conservation Service provides leadership in a partnership effort to help people conserve, maintain, and improve our natural resources and environment

Weekly Water and Climate Update

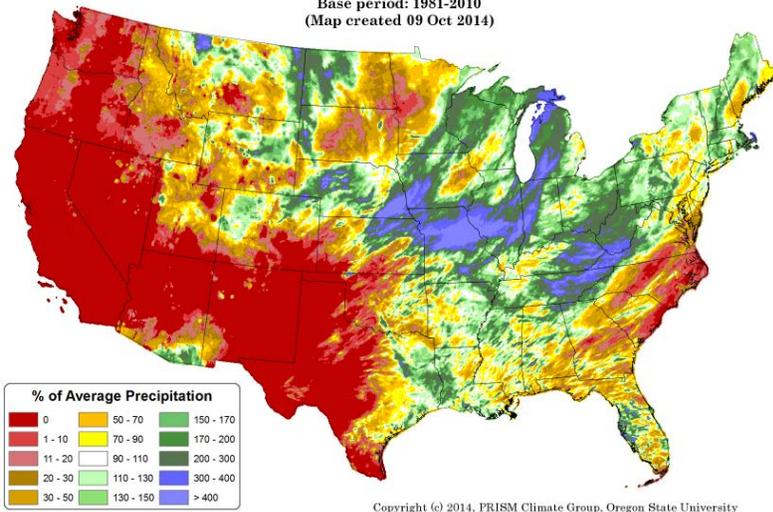
Precipitation

In the West, the [SNOTEL](#) precipitation percent of normal map for the first part of October shows mainly dry conditions. Near or slightly above normal precipitation occurred in select basins, primarily east of the Rockies. A few basins in Montana, Wyoming, New Mexico, and Nevada received 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 October 2014 - 08 October 2014
 Period ending 7 AM EST 08 Oct 2014
 Base period: 1981-2010
 (Map created 09 Oct 2014)

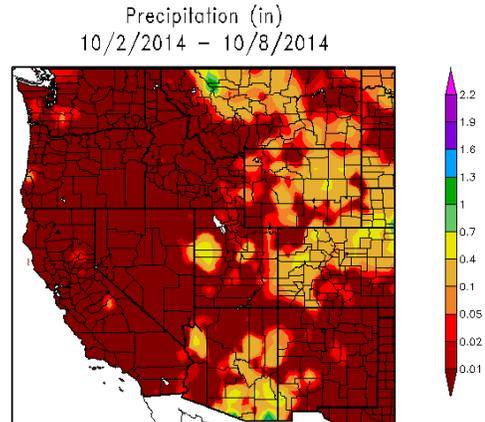


In the first part of October 2014, the national [precipitation anomaly](#) pattern reveals some higher than normal precipitation across the central Great Plains, central Appalachian Mountains, northern Rockies, west edge of the Dakotas, and Michigan. A large area of the country has seen little or no 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 the northern Rockies, Wyoming, Colorado, Arizona, and Utah. Areas in northern Montana and southern Arizona reported the largest amounts of precipitation.

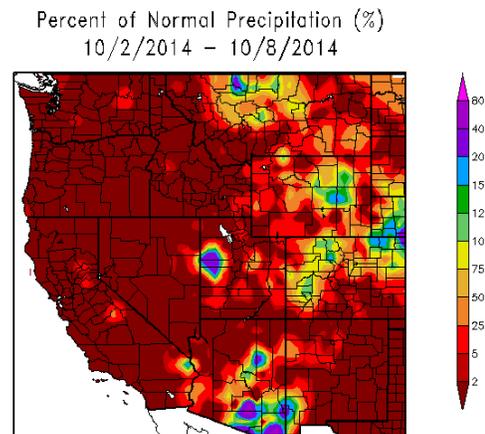


Generated 10/9/2014 at HPRCC using provisional data.

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 Rockies in Montana, Wyoming, and Colorado. Some scattered precipitation also occurred in southern California and scattered areas of Arizona, New Mexico, and Utah.

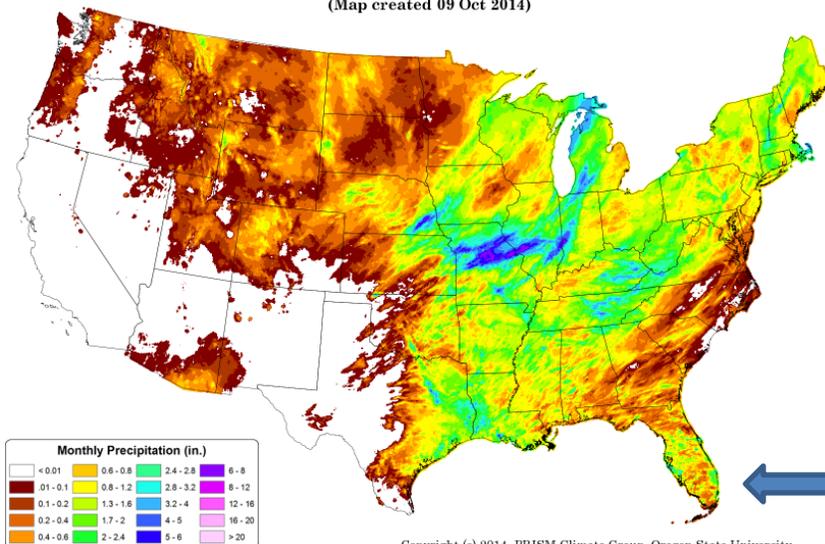
Percent of normal precipitation may be exaggerated in areas where the average for this period is at or near zero.



Generated 10/9/2014 at HPRCC using provisional data.

Regional Climate Centers

Total Precipitation: 01 October 2014 - 08 October 2014
Period ending 7 AM EST 08 Oct 2014
(Map created 09 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 eastern part of the country. The heaviest precipitation occurred over most of the Midwest in Missouri, Illinois, and Michigan. In contrast, the far West, including most of California, northern Nevada, eastern Oregon, eastern Washington, the Southwest, and western Texas, was mainly dry.

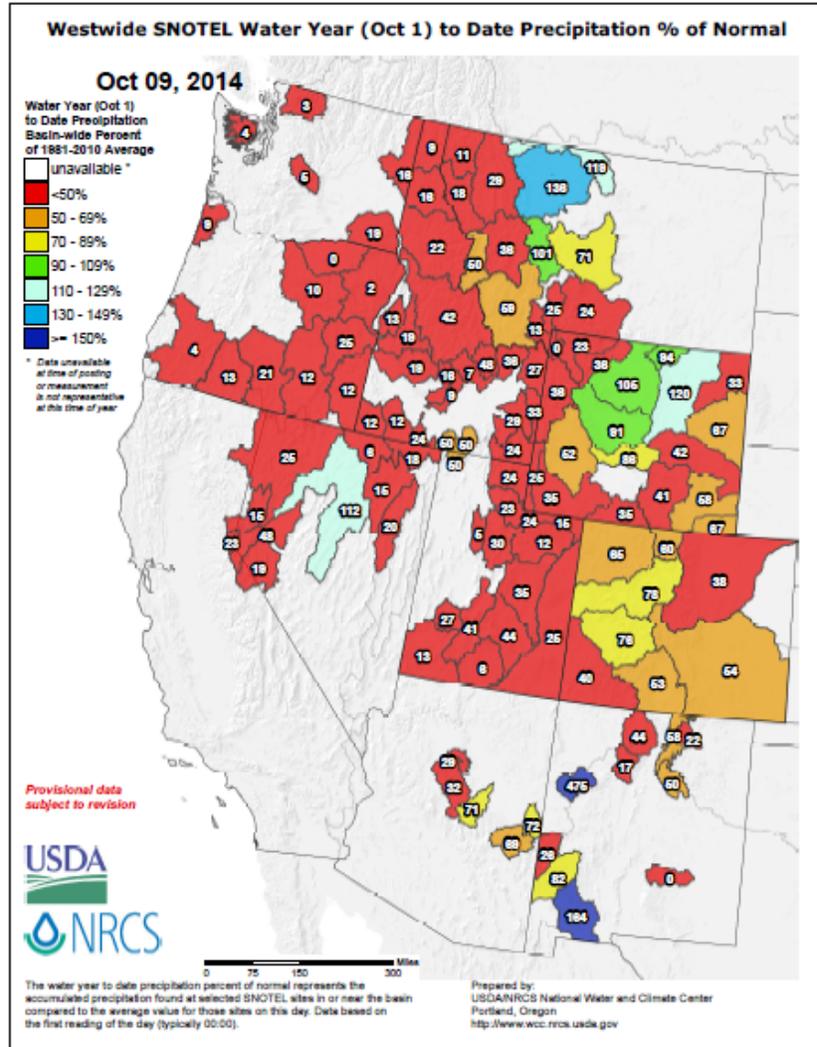
See [Go Hydrology](#) for current and forecast conditions over southern Florida.

Weekly Water and Climate Update

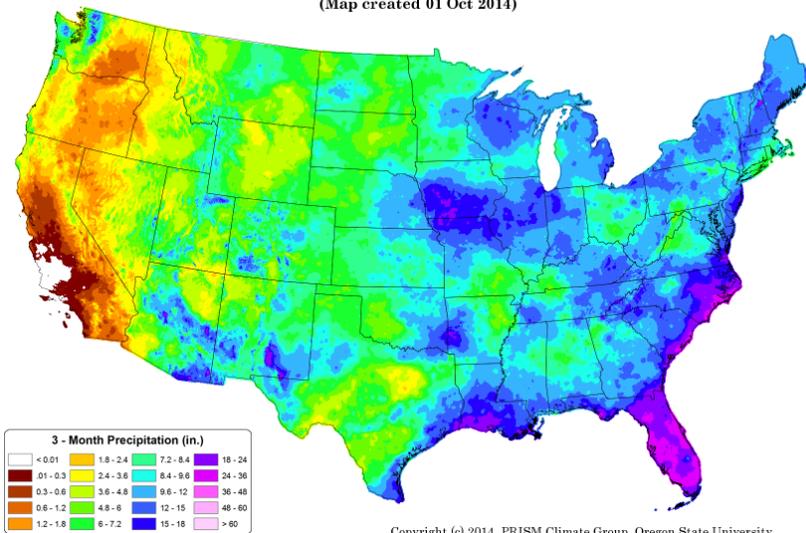
For the [2015 Water Year](#) that began on October 1, 2014, surpluses have occurred in a few basins in the West. Some basins in Nevada, Montana, Wyoming, and New Mexico have received above normal precipitation.

Many basins across the West had very little precipitation in comparison to normal for the first nine days 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)



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

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.

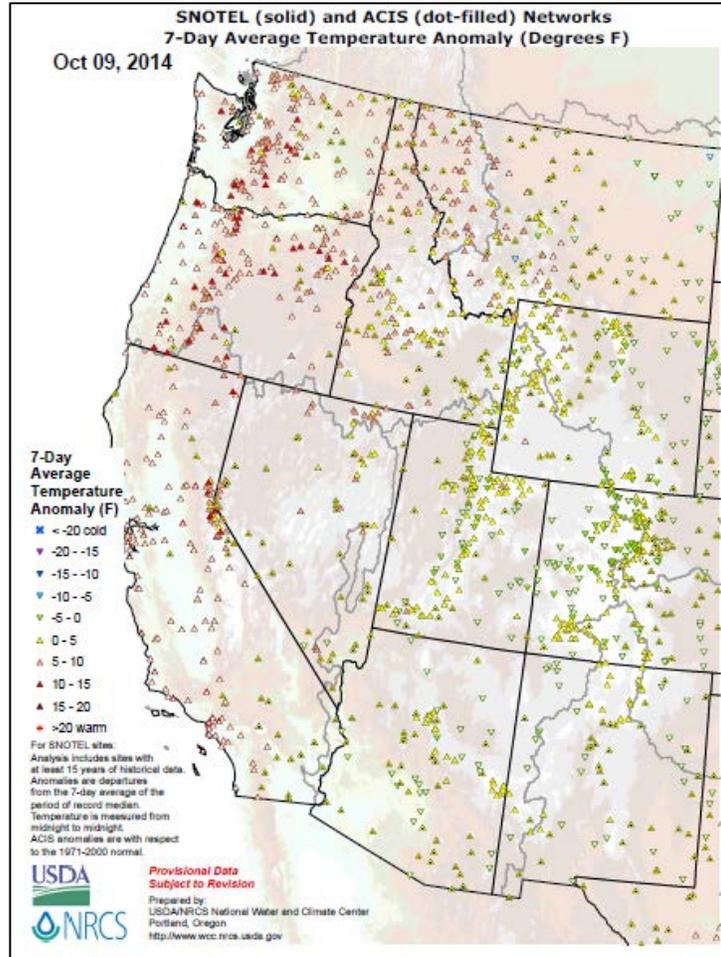
Weekly Water and Climate Update

Temperature

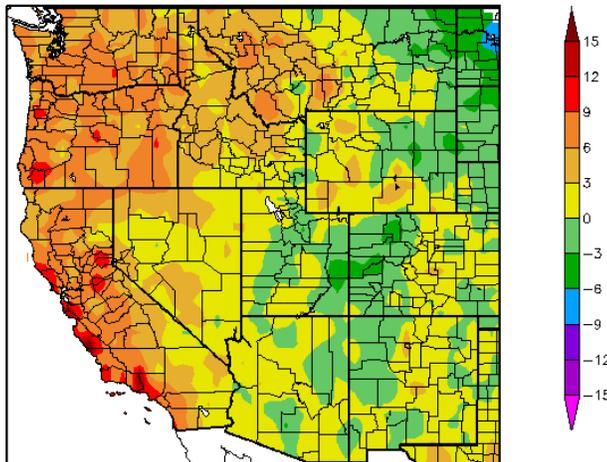
The [SNOTEL](#) and ACIS [7-day temperature anomaly](#) map for the western U.S. shows temperatures above normal for most of the Pacific coast states, as well as Idaho, Nevada, and western Montana.

Below normal temperatures occurred in eastern Montana.

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



Departure from Normal Temperature (F)
10/2/2014 – 10/8/2014



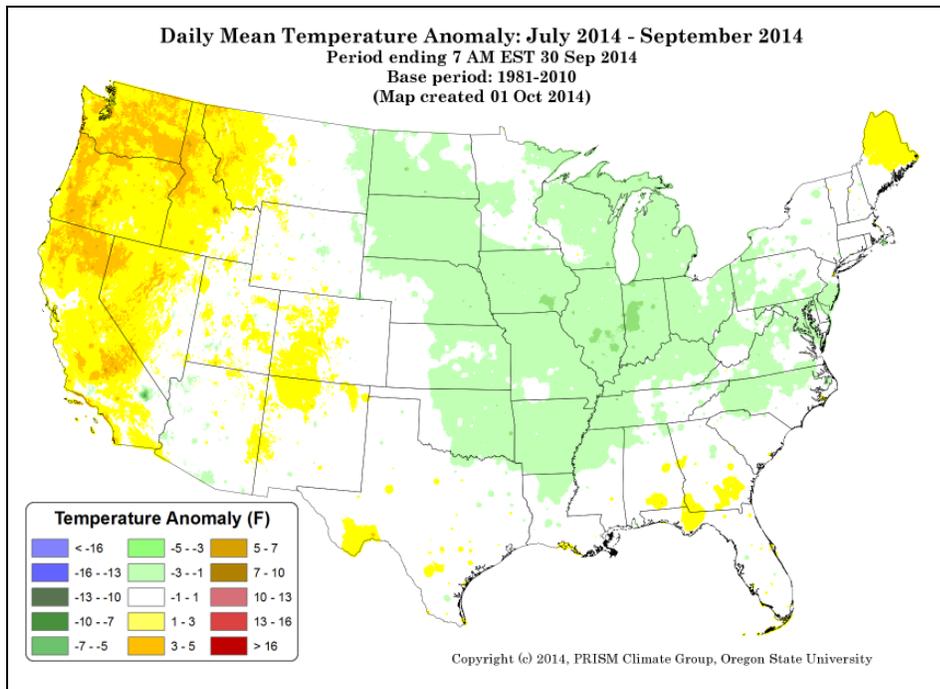
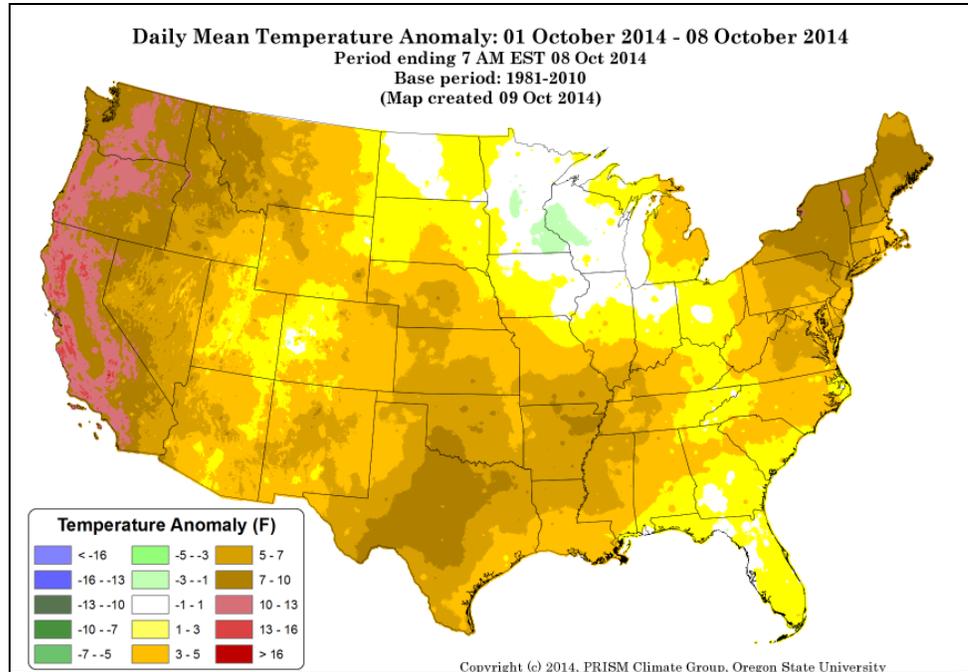
The [ACIS](#) map of the 7-day average temperature anomalies in the West ending October 8, shows the greatest negative temperature departures in eastern Montana (<-6°F). The greatest positive temperature departures occurred in southern California (>+15°F). Much of the west coast was much above normal.

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.

As of October 8, 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, but California and Oregon had the highest warm anomalies ($>+16^{\circ}\text{F}$).



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

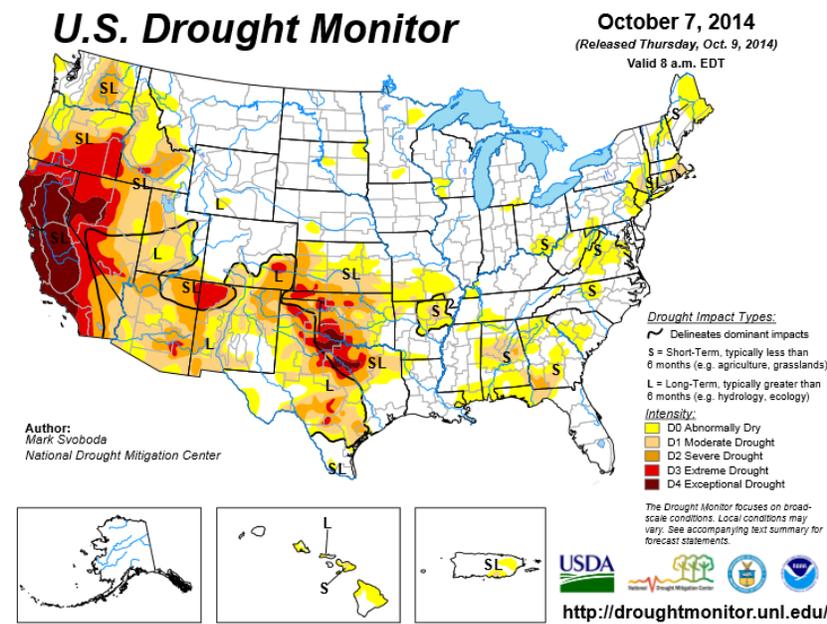
National Drought Summary – October 7, 2014

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 30.51 percent of the area in moderate drought or worse, compared with 30.57 percent a week earlier. Drought now affects 76,401,980 people, compared with 76,404,294 a week earlier.

For all 50 U.S. states and Puerto Rico, the U.S. Drought Monitor showed 25.50 percent of the area in moderate drought or worse, compared with 25.54 percent a week earlier. Drought now affects 76,472,533 people, compared with 76,474,847 a week earlier.”



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

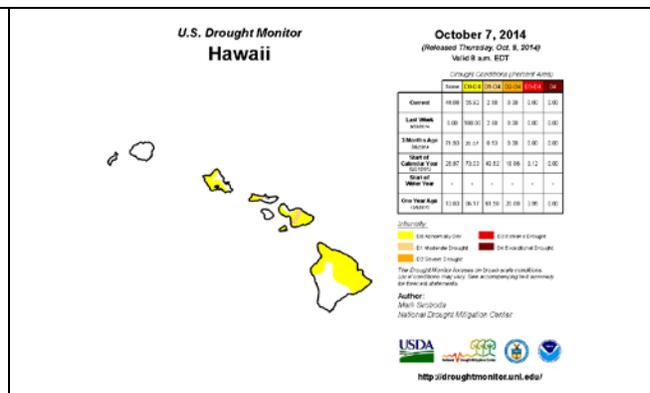
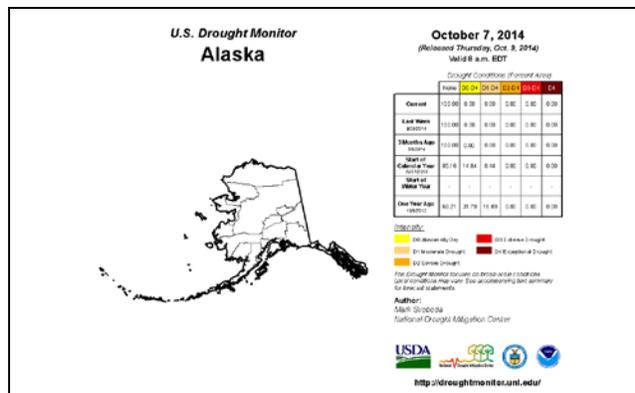
[Current Drought Monitor](#) weekly summary. The exceptional D4 levels of drought are scattered across CA, NV, TX, and OK.

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 moderate drought conditions. No changes noted for Alaska this week. There was a large drought reduction in D0 (44.08 %) to 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

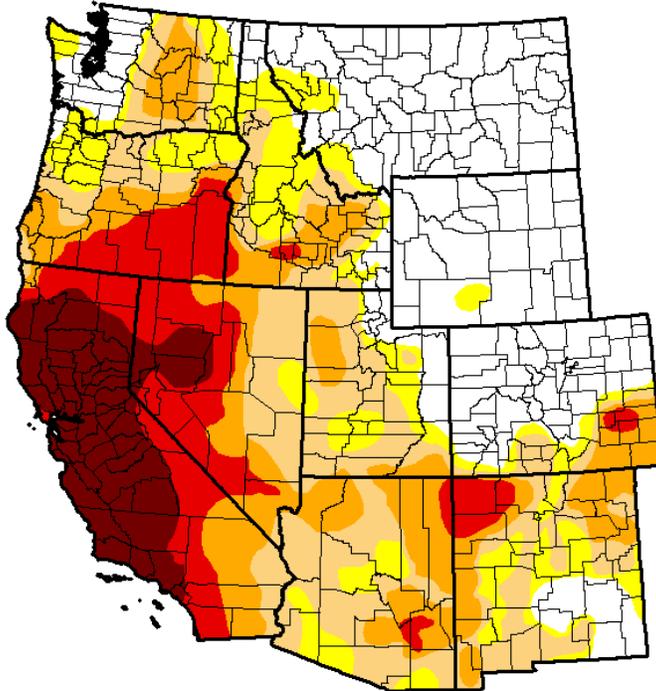
October 7, 2014

(Released Thursday, Oct. 9, 2014)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	31.51	68.49	55.52	35.65	19.95	8.90
Last Week <i>9/30/2014</i>	31.48	68.52	55.57	35.65	19.95	8.90
3 Months Ago <i>7/8/2014</i>	31.10	68.90	60.50	47.95	23.73	6.04
Start of Calendar Year <i>12/1/2013</i>	22.20	77.80	51.44	31.11	7.75	0.63
Start of Water Year	-	-	-	-	-	-
One Year Ago <i>10/8/2013</i>	27.44	72.56	56.86	32.69	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 very slight decrease in D0-D1 categories occurred in the West during this past week. The drought-free area increased very slightly this past week. D2 – D4 remained unchanged.

Click to enlarge maps

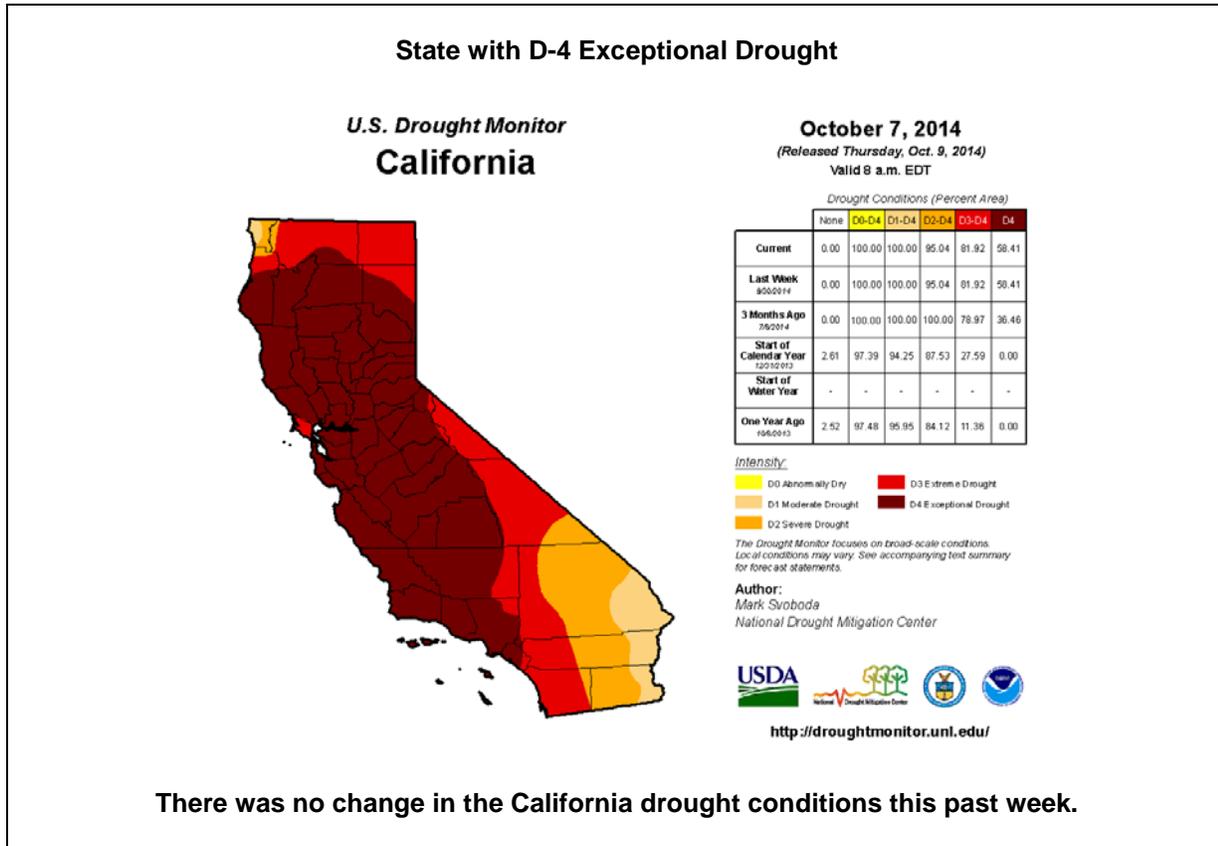
Risk Management Web Resources

- 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:

- HI - [Big Isle ranchers struggle to keep cattle in the isles](#) – Sept 28
- KS - [Decreased wheat production due to drought](#) – Oct 3
- MA - [Boston Drought Leads to Dusty September, Portends Cold](#) – Oct 1
- NJ - [September one of driest on record in North Jersey](#) – Oct 1
- RI - [September Was 2nd Driest on Record in RI](#) – Oct 1

Weekly Water and Climate Update



[CA Drought Information Resources](#)

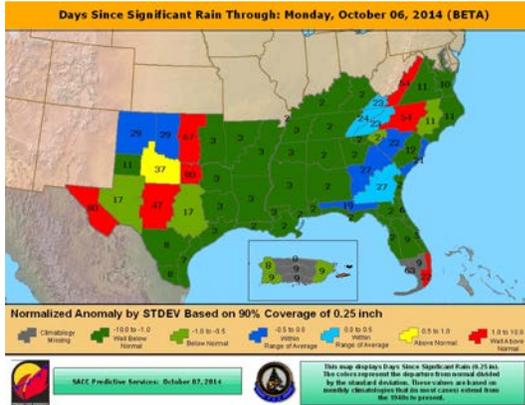
Drought News from California:

- [California dairy farmers struggling to survive prolonged drought – Oct 3](#)
- [California harvest much smaller than normal across crops – Sep 28](#)
- [Drought Impacts Fall Apple-Picking in Julian – Sep 26](#)
- [Drought means smaller pumpkins for Calif. this Halloween – Oct 3](#)
- [Drying Up? Six Industries at Big Risk in California's Drought – Sep 29](#)
- [Wildfires prove costly for California budget – Sep 29](#)
- [California ends one of driest-ever water years – Sep 30](#)
- [The large algae blooms in Vasona Lake are making it a tough year for wildlife – Oct 1](#)
- [Daily water allocation could be the next California drought strategy – Sep 27](#)
- [EPA sends California \\$183 million for more water fixes – Oct 2](#)
- [IRS extends deadline for farmers forced to sell livestock due to drought – Sep 30](#)
- [Judge upholds water for Klamath fish – Oct 2](#)
- [Another drought casualty: No chance to make key air standard – Sep 27](#)
- [Drought-conscious residents turn the water tables on public agencies – Sep 29](#)
- [Fresno Fair changes livestock rules for drought – Sep 27](#)
- [With Dry Taps and Toilets, California Drought Turns Desperate – Oct 2](#)
- [Search for more water continues in American Canyon – Oct 1](#)
- [Tri-Valley hits high water marks: Cities top drought conservation lists – Sep 24](#)

Weekly Water and Climate Update

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

Texas Drought News:
[The trouble with y'all moving to Texas – Oct 2](#)



State with D-4 Exceptional Drought

U.S. Drought Monitor Texas

October 7, 2014
(Released Thursday, Oct. 9, 2014)
Valid 8 a.m. EDT

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	29.64	70.36	49.29	20.49	11.78	2.89
Last Week 9/29/2014	29.92	71.08	48.95	20.54	11.26	2.69
3 Months Ago 7/9/2014	12.46	87.54	60.99	36.48	18.36	4.51
Start of Calendar Year 1/1/2014	28.48	71.52	43.84	21.15	5.92	0.79
Start of Water Year	-	-	-	-	-	-
One Year Ago 10/6/2013	6.60	93.40	70.47	25.41	4.41	0.12

Intensity:
■ D0 Abnormally Dry ■ D3 Extreme Drought
■ D1 Moderate Drought ■ D4 Exceptional Drought
■ D2 Severe 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 and D2 categories in Texas occurred this past week. D1, D3, D4, and the drought-free areas increased slightly.

State with D-4 Exceptional Drought

U.S. Drought Monitor Nevada

October 7, 2014
(Released Thursday, Oct. 9, 2014)
Valid 8 a.m. EDT

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	97.07	69.89	48.38	11.89
Last Week 9/29/2014	0.00	100.00	97.04	69.89	48.38	11.89
3 Months Ago 7/9/2014	0.00	100.00	100.00	86.92	54.99	11.08
Start of Calendar Year 1/1/2014	0.39	99.61	96.81	77.66	28.55	5.37
Start of Water Year	-	-	-	-	-	-
One Year Ago 10/6/2013	0.43	99.57	96.79	79.11	28.55	5.37

Intensity:
■ D0 Abnormally Dry ■ D3 Extreme Drought
■ D1 Moderate Drought ■ D4 Exceptional Drought
■ D2 Severe 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 a very slight increase in D1 in Nevada this past week.

Nevada Drought News:

[Surge in Sierra bears reported; 9 caught in 2 days – Oct 2](#)

Weekly Water and Climate Update

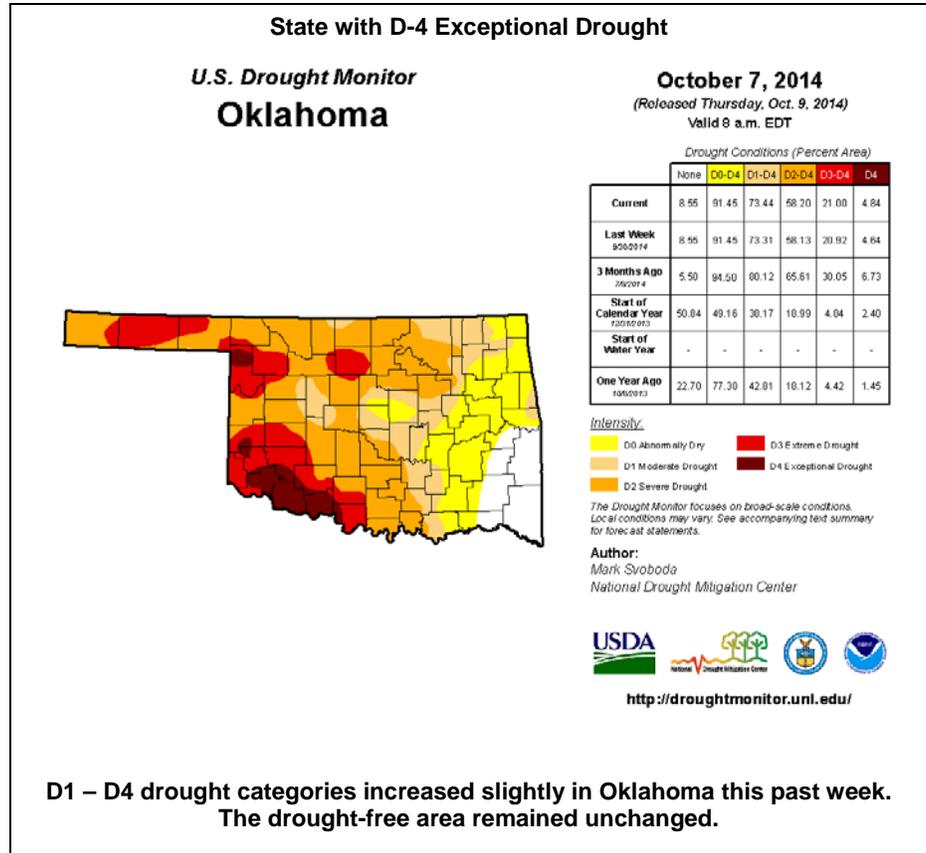
Related Area News:

[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:

[Record low water levels at Lake of the Arbuckles – Sep 29](#)



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

Number of people in each drought category in the U.S. for the week ending October 7, 2014

Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
2014-10-07	167,490,648	137,906,807	76,401,981	52,151,149	40,693,738	29,619,173
2014-09-30	165,955,734	139,441,720	76,404,294	52,238,968	40,636,869	29,518,276

New population figures added to the U.S. Drought Monitor website show that for this week, more than 76.4 million people in the United States are in a drought-affected area, very slightly down from last week by more than 2 thousand people.

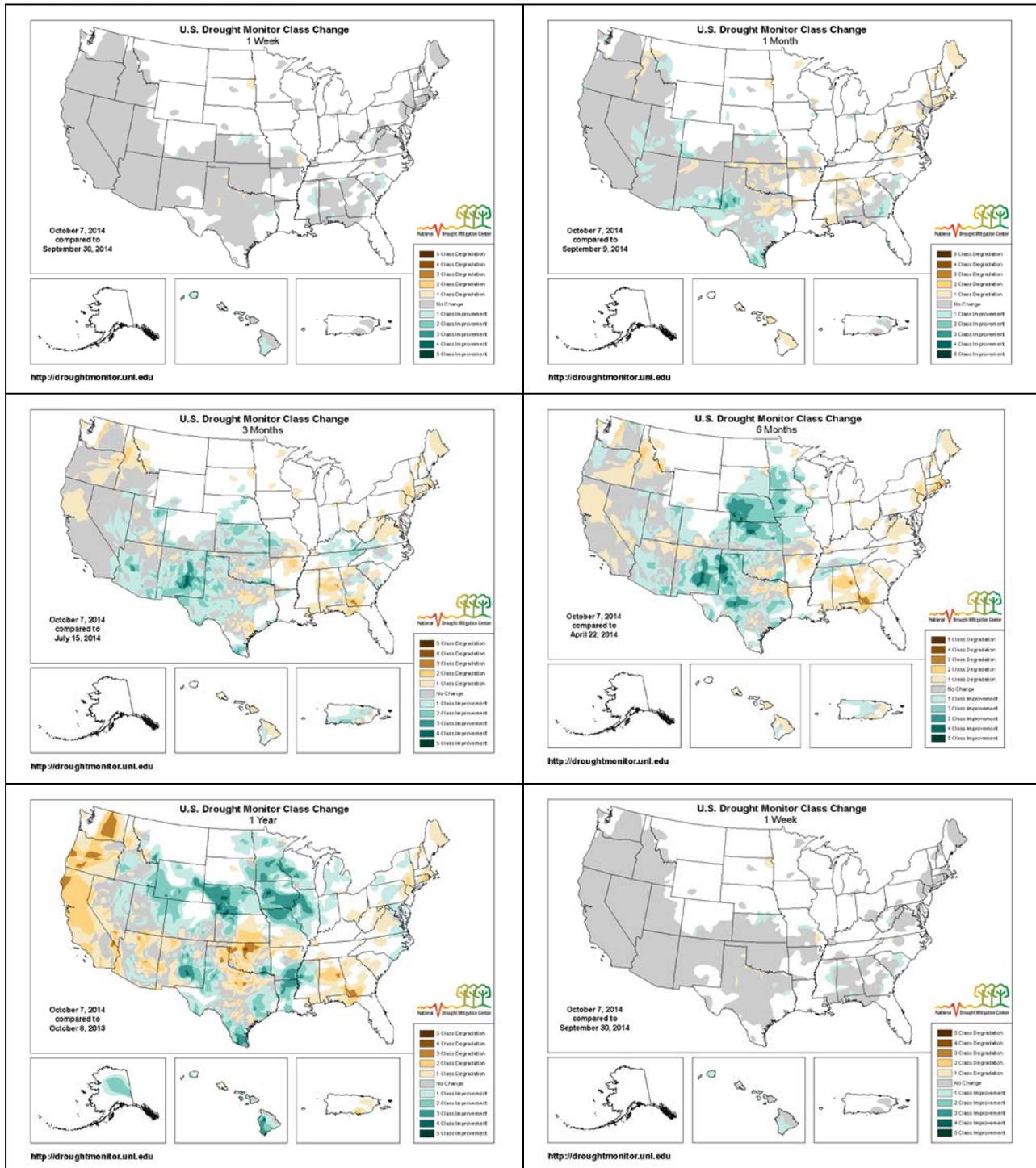
Population Statistics Methodology:

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

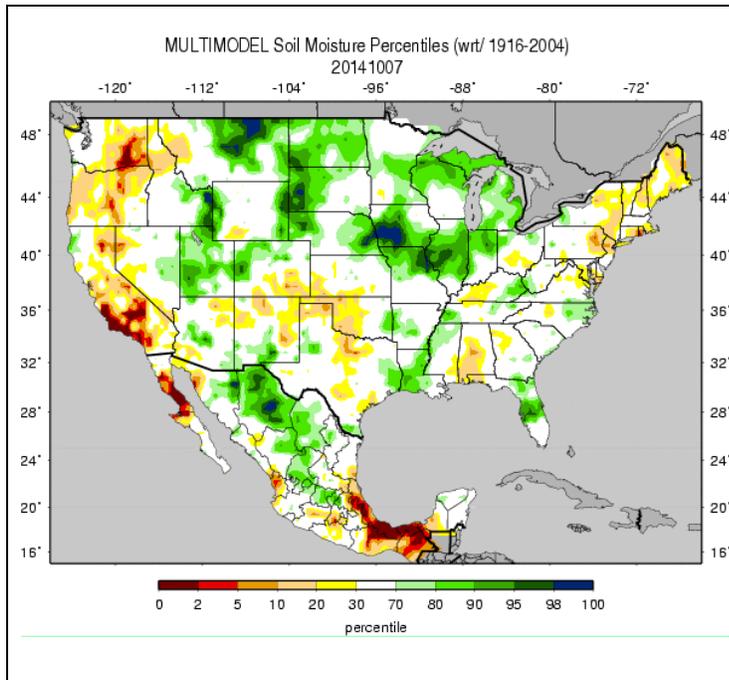
Over Various Time Periods



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

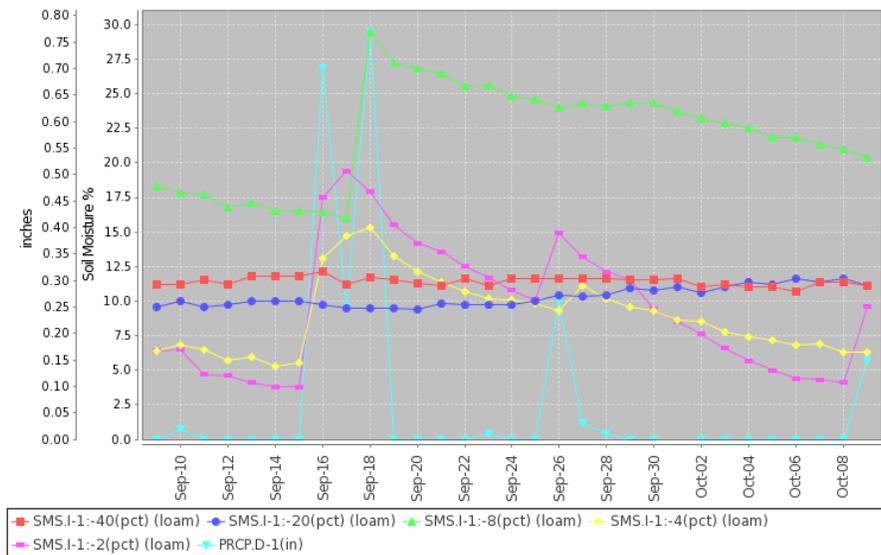


The national soil moisture model ranking in [percentile](#) as of October 7, 2014, shows dryness over California, Washington, Oregon, western Idaho, southwest Wyoming, and parts of New England. Scattered dryness was also reported in other areas of the West, the southern Plains, the Northeast and the South. Moist soils dominated central Montana, the upper Snake River, upper 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)

Station (2171) MONTH=2014-09-09 (Daily) NRCS National Water and Climate Center - Provisional Data - subject to revision Thu Oct 09 09:33:15 PDT 2014

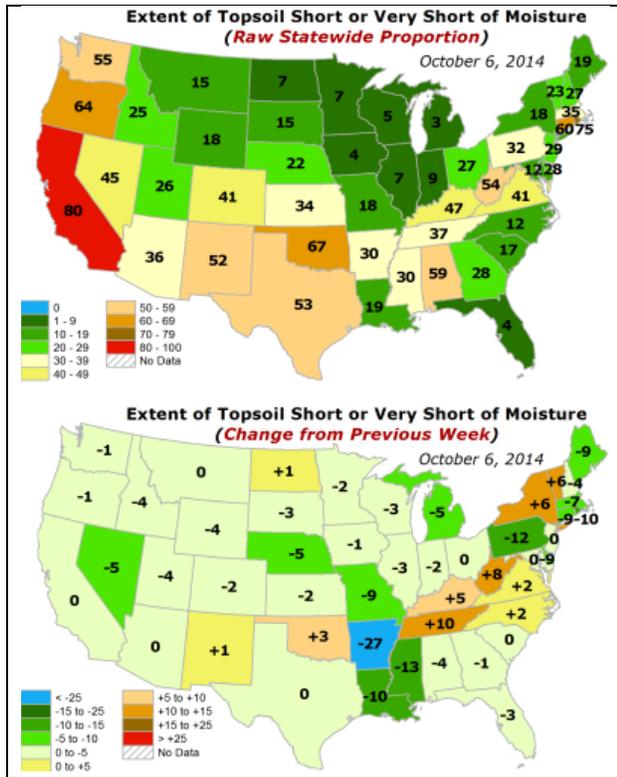


This NRCS resource shows soil moisture data at the [Sevilleta \(2171\) SCAN site](#), located in New Mexico. The precipitation in the area is graphed in light blue. This month, the precipitation on September 16 and 18 increased the 2-, 4-, and 8-inch depth sensor. Precipitation on October 9 has increased soil moisture at the 2-inch depth only and has not affected the deeper soil 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](#).

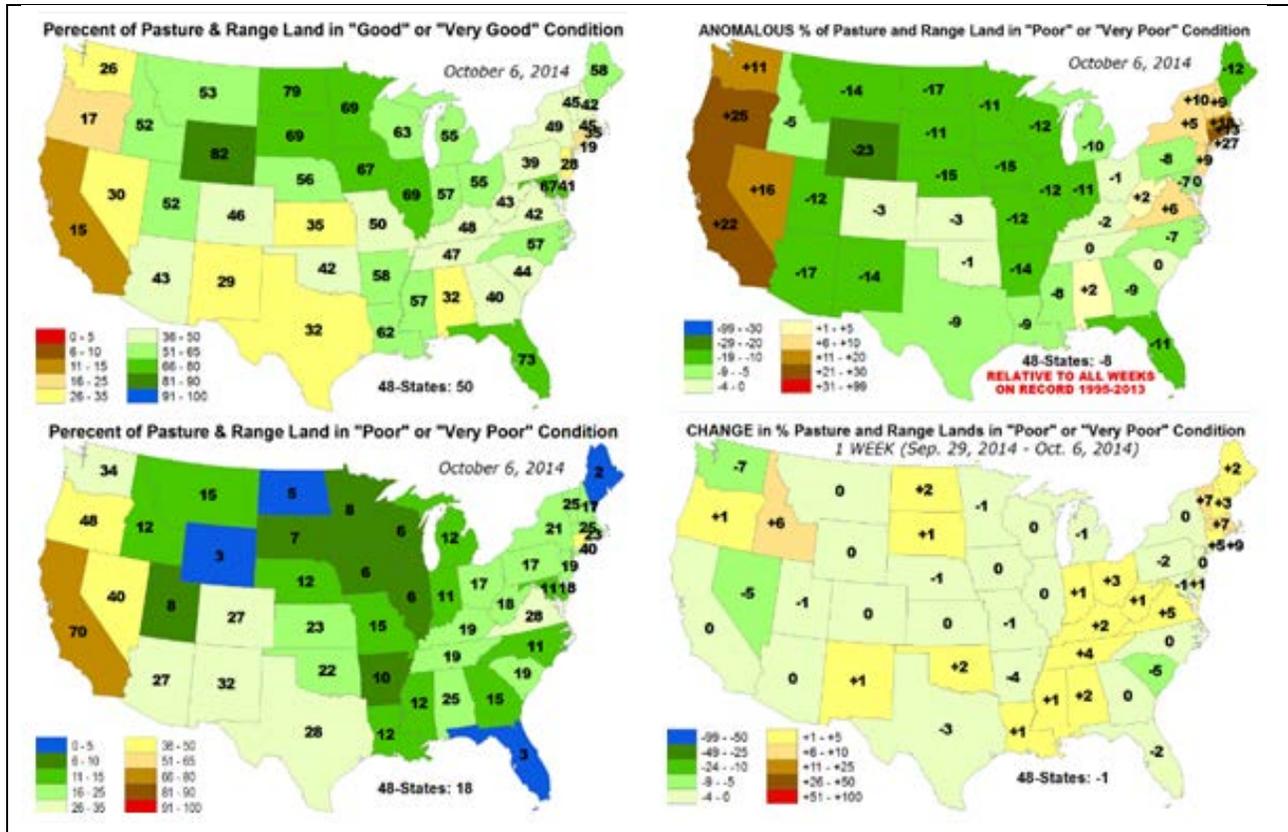
Weekly Water and Climate Update

Topsoil and Pasture & Rangeland National Conditions



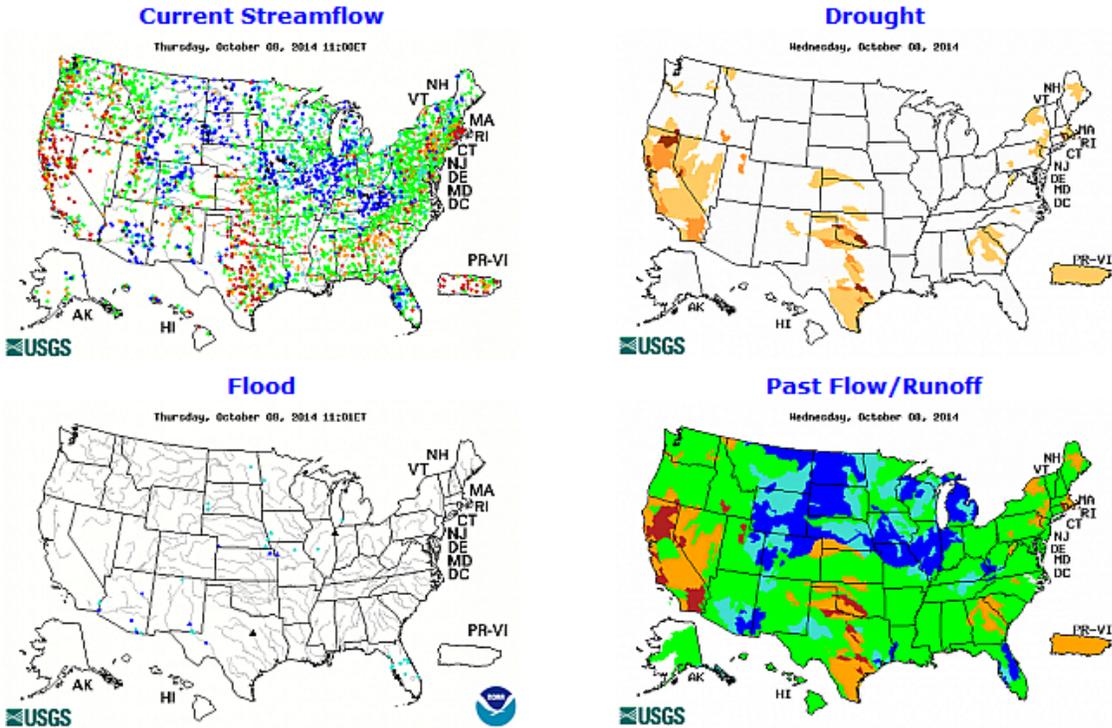
↪ Topsoils are exceptionally poor (top) over Rhode Island, Connecticut, Oklahoma, California, and Oregon with values representing 60 percent or more poorer conditions than the median for this time of year (bottom panel). West Virginia, Alabama, Texas, New Mexico, and Washington are 50 – 60 percent short of soil moisture. Locations in the upper Midwest, east to New York and many of the southeast states 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 the most of the central portion of the country. Pasture and rangelands are in poor to very poor condition in California, Oregon, Nevada, New Mexico, Texas, New Jersey, Connecticut and Rhode Island. Conditions have worsened over the dry states, and improved in the central portion of the country over this past week.



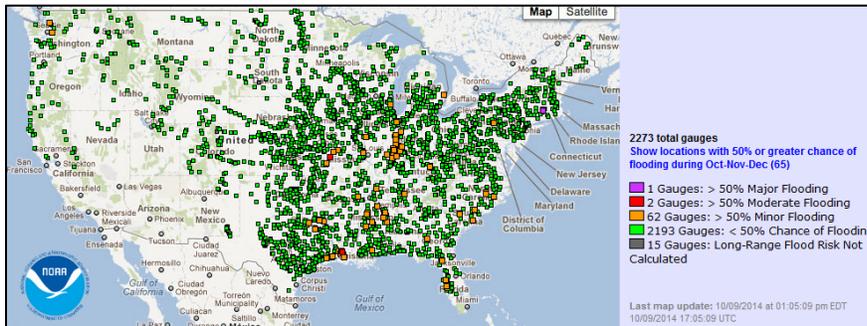
Weekly Water and Climate Update

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 parts of the mid-Atlantic states all have high flows reported due to recent precipitation (left maps). Alaska, and Oahu and Kauai, Hawaii, are also reporting some high streamflow. Rivers above flood stage in the U.S. include the Nolan River at Blum, Texas, and the Kankakee River at Shelby, Indiana.

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).

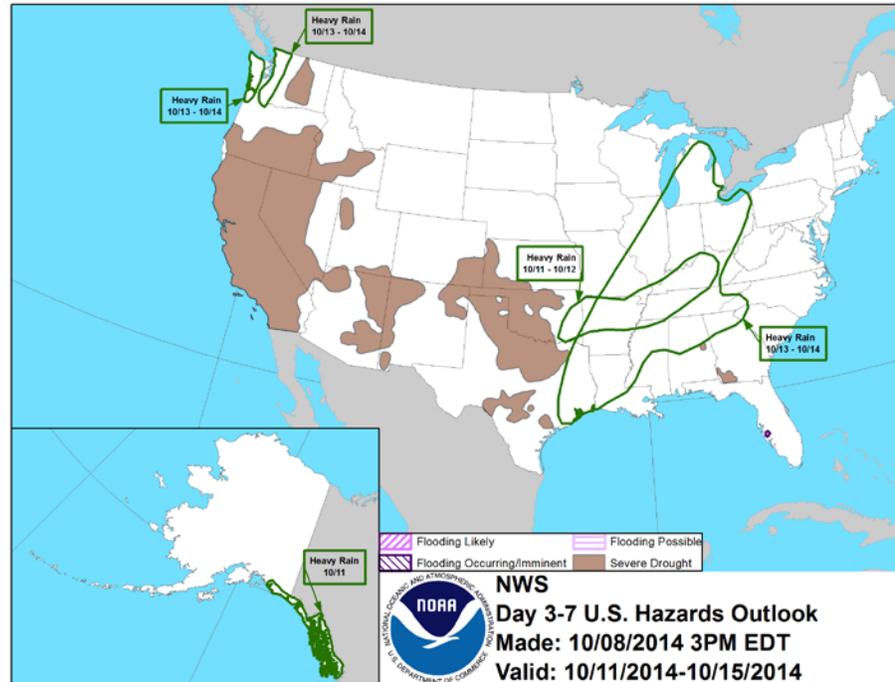
During the next three months, there is a risk of flooding in some areas of the Mississippi and lower Missouri Rivers, west-central Florida, the Gulf Coast, the Connecticut River, and western Washington. Currently, **1** gage has a greater than 50% chance to experience major flooding; **2** gages for moderate flooding, and **62** gages for minor flooding.

These numbers represent a 10-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 the central part of the U.S. (10/11-14), the Pacific Northwest (10/13-14), and in southeast Alaska (10/11). Flooding is occurring in west-central Florida (dark purple outline). Severe drought remains a large issue in much of the south-central and western U.S.



[National Drought Summary for October 7, 2014](#)

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

Summary

“Another large weather system moved across the country’s midsection last week, bringing the heaviest rains to those areas outside of dryness/drought. The system brought anywhere from 3 to 5 inches of rain across eastern Nebraska and Kansas and then through Missouri, Iowa and into the Midwest and Great Lakes region, with cooler temperatures following in its wake. The rest of the country saw a much drier week and California, Oregon and Washington recorded well above normal temperatures.

Hawaii, Alaska, and Puerto Rico

Across Hawaii, good rains across the windward locales brought widespread improvement across many of the islands on this week, with a removal of D0 for all of Kauai, Niihau and Lanai. In addition, D0 was reduced along the windward side of Oahu, eastern Molokai, windward West Maui and the southwestern half of the Big Island. The D1 areas remain in place.

The Northeast and Mid-Atlantic

Last week brought a mixed bag of weather, with much of New England experiencing warmer and drier conditions, while the Mid-Atlantic saw a little more in the way of precipitation in parts of the western Carolinas and West Virginia, although most changes to this week’s map were minor. The recent rains have brought some improvement to central West Virginia with the trimming of D0 there. Persistent short-term dryness over the past 30-60 days has brought some slight expansion of D0 in north-central North Carolina this week as soils continue to dry out and the risk of fire is heightened. The worst of the low streamflow readings are contained mostly across New England at this time. Recent rains in eastern South Carolina over the past month or more means a cutback on the D0 there this week, although D0 remains intact across the central and east-central counties over into Georgia.

The Plains and Midwest

A large, slow-moving storm system brought heavy rains (3 to 6 inches) and flooding to eastern Nebraska, eastern Kansas, southwestern Iowa, northern Missouri, central Illinois and extreme western Indiana. One-category improvements are noted in these areas, leaving behind small pockets of D0-D1 as the dryness/drought has been pushed farther south. Streamflow values across much of the Missouri and upper

Weekly Water and Climate Update

Mississippi basins are running very high for this time of year, emptying swollen streams and rivers into reservoirs along the way as recovery from the 2012-2013 drought continues.

One area that has missed out on the wetness of late is the tri-point region between extreme northeast South Dakota, southeast North Dakota and extreme west-central Minnesota, which sees the introduction of D0 this week. Although the past month was particularly dry, some locales in this region have been experiencing this pattern back to 60 and even 90 days. This isn't necessarily a bad thing as the harvest season is underway for many.

The South

All but eastern Oklahoma and eastern Texas missed out on any substantial precipitation last week while above-normal temperatures returned for most locales across the region, including most of Arkansas. Rains in eastern Texas led to some slight trimming of the southern D0 flank, but all other changes in Texas and Oklahoma were for the worse across south-central Oklahoma along the Red River and in north-central Texas along with the Panhandle, where the past 60 days have brought less than 50% of normal rains coupled with temperatures running 2-4 degrees above normal.

The Southeast

Another round of rains brought improvement to northern and western Mississippi, northern and western Alabama, and along the Alabama-Florida border in the extreme western Panhandle region where rainfall deficits are running on the order of 2 to 4 inches (~50% of normal or less in places) over the past 90 days. The core of D1-D2 (S) in central Alabama remains undisturbed as the rains missed to the north and these deficits can be traced as far back as 6 months. Although conditions are normally dry this time of year, holdover deficits from late summer have put late-season stress on soils and pastures, which are in need of some good moisture recharge heading into the off-season given yet another relatively quiet tropical storm season (although that could change for some parts of this region in the coming days). This dryness has also been lingering in parts of central Tennessee as well although no changes were made to this week's map. In Georgia, some reduction of D0 took place in the extreme northwest corner of the state.

The West

Hot temperatures (6-10 degrees above normal) and dry conditions were widespread across coastal California all the way up to Washington. Conditions remain unchanged this week on the map, however, as a critical new Water Year begins to spin up. With the 2014 Water Year in the books now, the National Weather Service in Sacramento issued some preliminary numbers that help put this drought into perspective. The Sacramento Water Supply Index (WSI) came in as the 4th driest water year in terms of runoff in the 109-year period dating back to 1906. In case you're interested, 1977 was the worst year, followed by 1924 and 1931, respectively. Several of California's largest reservoirs are running at their second-lowest levels, only running behind 1977. This is of particular importance given that the population has roughly doubled since the drought of 1977. No doubt about it, though, an above-normal Water Year is sorely needed to stave off even further depletion of surface and ground water supplies.

Elsewhere across the region, good rains came to the San Juan Mountains of Colorado, resulting in some minor trimming of the western notch of D0-D1 found there. Good rains over the past 90 days (or more) has also led to some trimming of the D3 in extreme southeast Colorado, northeast New Mexico, southwest Kansas and the extreme western Panhandle of Oklahoma. Conditions are still dire, though, as the region has weathered four years of intense, persistent drought. This is another region that could use a good beneficial winter.

Looking Ahead

For the period October 9-14, temperatures are expected to remain well above normal (3-6 degrees) across most of the West. Temperatures could prove to be even hotter across the Gulf Coast region and the Mid-Atlantic, with temperatures as high as 9 degrees above the norm. The Central Plains, Midwest and the Great Lakes regions are expecting to see much cooler than normal weather, with readings 3-6 degrees below normal. As for precipitation, one place expecting to see good precipitation is the coastal ranges of Washington. The major rainmaker, however, is expected to come from the remnants of Tropical Storm Simon trekking across the Desert Southwest (southern Arizona and New Mexico), central and southern Plains, Mississippi Valley, the Tennessee and Ohio Valleys and the Northeast. Totals are expected to range anywhere from 2 to 5 inches over widespread areas that are currently under the grip of drought. Looking out a bit further at the 6-10-day time frame (October 14-18), the models are showing a greater likelihood of above-normal temperatures for virtually all of the contiguous United States, with the exception being the Pacific Northwest. The prospects for this unseasonable warmth are quite strong in the West,

Weekly Water and Climate Update

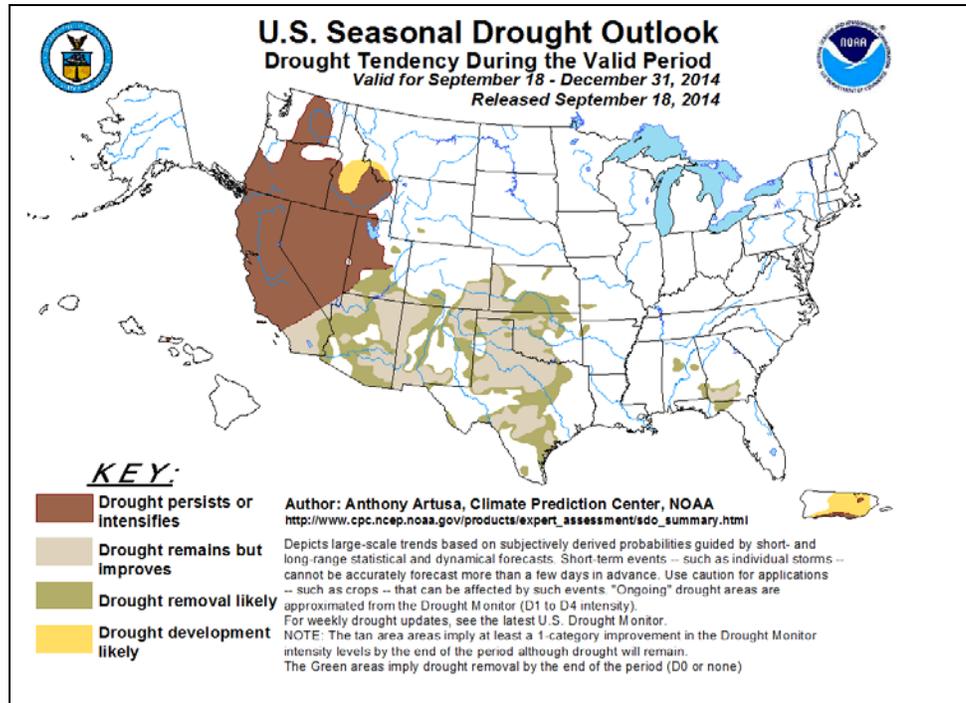
western Plains and Atlantic Coast. Southern Alaska is the only place that is expecting below-normal temperatures during this period. All areas except northern Alaska are also expected to be below normal on the precipitation side of things. For the Lower 48, the Pacific Northwest and eastern third of the country are showing better odds of above-normal precipitation. The Four Corners region and the central and southern Plains show a stronger tendency of being below normal with regard to the wet stuff.”

Supplemental Drought Information

National Seasonal Drought Outlook

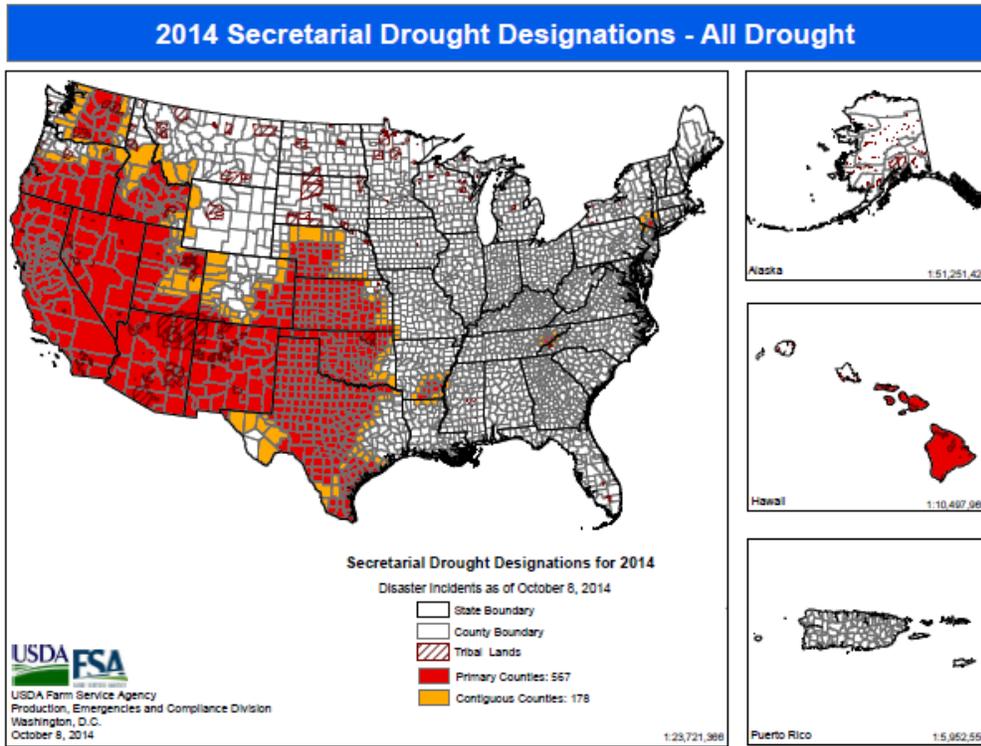
Nationally, [drought](#) is expected to persist or intensify over Puerto Rico and much of the West, including California, Oregon, Washington, Idaho, and Utah. Improvements are expected from the Southwest to Oklahoma and Texas, and in a few areas of the Southeast.

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.



Weekly Water and Climate Update

2014 USDA Secretarial Drought Designations

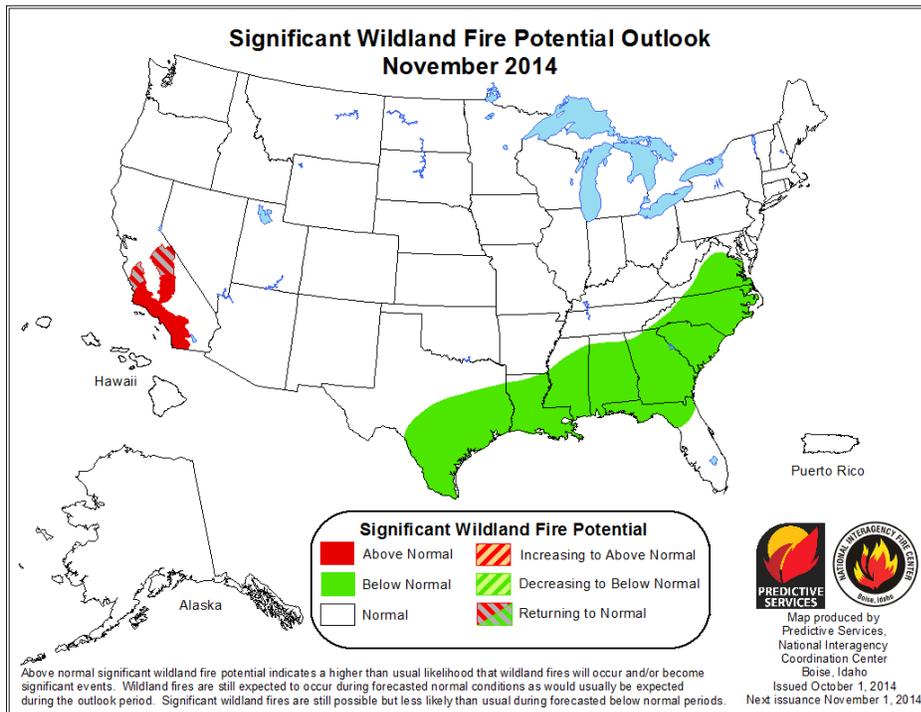


Refer to the USDA Drought Assistance [website](#) and [National Sustainable Agriculture Information Service](#).

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

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

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.

Weekly Water and Climate Update

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.

"Extension on deadline to replace livestock, defer tax on gains from sales

The Internal Revenue Service has extended the deadline for farmers and ranchers who had to sell livestock during drought. They now have an additional year to replace livestock and defer tax on any gains from the sales.

California crop production down

Drought has curbed agricultural production in California during the state's third year of drought because there was less water for irrigation. Production was down for rice, grapes, oranges, hay, corn, pistachios and almonds. The economists at UC Davis found in a study earlier this year that agriculture would likely suffer a \$2.2 billion loss and higher water costs as an estimated 420,000 acres of farmland were left unplanted.

Allocation-based structures could determine water use in California

California state and local agencies are considering the use of "allocation-based rate structures" to determine how much water households are allowed to use daily. Factors such as number of residents, amount of landscaping and medical needs may be taken into consideration in deciding one's daily allotment of water.

End of California 2014 water year

The 2014 water year (Oct. 1 – Sept. 30) was one of the driest on record, with California receiving less than 60 percent of average precipitation. Collectively, major reservoirs in the state held only 57 percent of average storage, as of Sept. 1.

EPA gives California \$183 million to improve water supplies

The Environmental Protection Agency promised \$183 million to improve water supplies in California. Cities must compete for the funds to build water-quality projects with the goal of reducing pollution and improving municipal drinking water and wastewater facilities.

California governor established program to fund water-efficiency projects

Gov. Brown signed Assembly Bill 2636 to establish CalConserve, a revolving-loan program to finance water-efficiency projects for homes and businesses. The program can also help cities and counties achieve their water conservation goals.

Drought exacerbated air quality issues in the San Joaquin Valley in California

The San Joaquin Valley Air Pollution Control District cannot achieve a key federal air standard after the unusually dry 2013-14 winter brought a lengthy episode of stagnant air and high levels of soot and other microscopic debris. The district's governing board has requested that the U.S. Environmental Protection Agency postpone the deadline until 2019.

Weekly Water and Climate Update

Years of drought threaten California dairy farmers

Years of drought have driven California hay prices to record heights, threatening the viability of dairy farms. Organic farms are even more hard pressed to continue because organic feed is pricier than regular feed. Premium alfalfa sells for up to \$350 per ton, up from \$200 to \$250 per ton in 2013. The cost of water on average in the Central Valley was 10 times higher than last year. Milk prices have risen as farmers pass along their increased costs, but during drought, farmers can only hang on so long. One to two percent of the dairy farmers in California went out of business in the past three years.

Hungry bears causing problems in Lake Tahoe and Reno, Nevada

Nine hungry bears were captured in the Lake Tahoe/Reno area during the first two days of October and another bear was struck and killed by a vehicle in Reno. The bruins are ravenous as they go through hyperphagia when they eat excessively to fatten up for winter hibernation. The problem is that drought has dried up streams and cut down on berry production and insect populations, leaving the hungry bears looking elsewhere for food.

Drought, high beef prices on the mainland make it difficult for Hawaiian beef producers to keep cattle

Drought and high beef prices on the mainland make it difficult for Hawaiian beef producers to keep cattle in the islands. Ranchers can sell beef on the mainland for \$2.25 per pound. The same beef brings only \$1.50 to \$1.65 per pound in Hawaii. Sixty to 70 percent of beef ends up being shipped out of state, although lower-priced, grass-fed beef is imported from New Zealand and Australia. Conventional feed-lot beef is also imported from the mainland. Two other challenges Hawaiian ranchers face are high water costs and development pressures.

Record low water level in Chickasaw National Recreation Area in southern Oklahoma

Lake of the Arbuckles in Chickasaw National Recreation Area dipped to a record low of 864.51 feet above sea level, or 7.49 below normal pool on Sept. 25. Boaters were encouraged to slow down and be on the lookout for objects as submerged objects were closer to the water's surface. Buffalo and Antelope springs have gone dry, reducing the flow of water in Travertine Creek. Many popular swimming areas in the park, consequently, have low water, and Little Niagara, Bear Falls and Panther Falls do not have enough water for swimming.

U.S. Bureau of Reclamation okay to release water for salmon

The Westlands Water District and the San Luis & Delta-Mendota Water Authority in the San Joaquin Valley sued the U.S. Bureau of Reclamation for reservoir releases made to benefit salmon in Northern California's Klamath River during drought in 2013. U.S. District Judge Lawrence O'Neill in Fresno gave his ruling on Oct. 1, 2014, saying that Reclamation did not violate the law by making the special reservoir release. The Westlands Water District and the San Luis & Delta-Mendota Water Authority wanted the water to go to farmers in the San Joaquin Valley rather than to fish."

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

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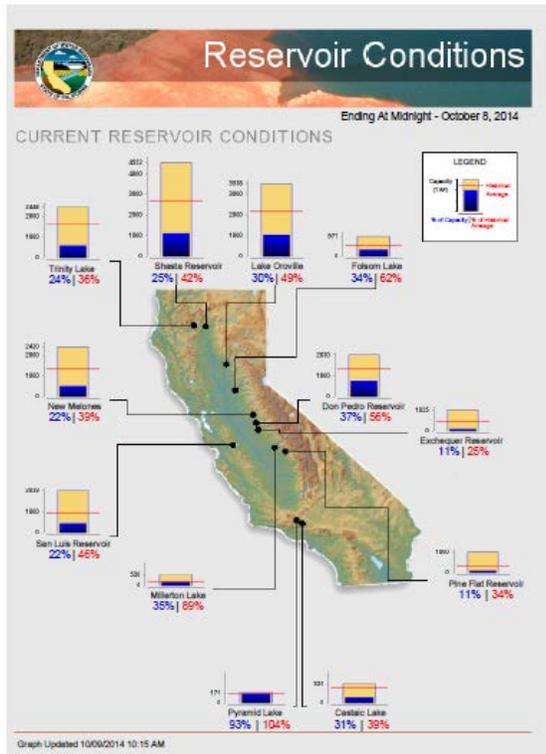


Tea Cup Reservoir Depictions

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

Weekly Water and Climate Update

California Reservoir Conditions



[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