



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

Weekly Snowpack / Drought Monitor Update August 28, 2014

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Highlights: Agricultural Weather Highlights – Thursday - August 28, 2014

- “In the **West**, monsoon showers have diminished in the Four Corners States, where some improvement from drought has been noted due to recent rain. In contrast, hot, dry weather in the Northwest and northern California is promoting fieldwork but heightening irrigation demands and exacerbating drought.
- On the **Plains**, warm, dry weather in northern portions of the region is allowing spring wheat harvesting to resume following recent rain-induced delays. Showers across the central and southern Plains are easing drought and providing soil moisture for upcoming winter wheat planting.
- In the **Corn Belt**, locally heavy showers are benefiting filling corn and soybeans in western portions of the region. In contrast, dry, hot weather across the southern tier of the Corn Belt is hastening summer crop maturation, while dry — albeit cool — weather is favoring crop development in northern growing areas.
- In the **South**, showers remain confined to southern Florida and the western Gulf Coast. Elsewhere, hot, dry weather favors crop maturation and fieldwork, including sorghum, rice, and corn harvesting.

Outlook: An upper-air disturbance will drift along a stationary front in the nation’s mid-section, producing locally heavy rain in the western and central Corn Belt, while showers develop along a trailing cold front from the central and southern Plains into the Delta. In contrast, high pressure will maintain mostly dry weather east of the Mississippi, though showers will gradually spread east over the weekend as the high shifts offshore. Farther south, an area of disturbed weather in the western Gulf will trigger showers in southern Texas, but tropical storm development is not expected. Out west, dry, hot weather will replace recent rainfall in the Great Basin and Rockies, while heat and dryness will prevail in drought-afflicted California, Oregon, and central Washington. The NWS 6- to 10-day outlook for September 2–6 calls for near- to above-normal temperatures across much of the contiguous U.S., except for cooler-than-normal conditions over the northwestern quarter of the nation. Meanwhile, above-normal rainfall over the eastern half of the U.S. and along the Canadian border will contrast with drier-than-normal weather from the Pacific Northwest and Great Basin southeastward into the Four Corners and western Texas.”

Contact: Eric Luebehusen, Agricultural Meteorologist, USDA/OCE/WAOB, Washington, D.C. (202-720-3361) Website: <http://www.usda.gov/oce/weather/pubs/Daily/TODAYSWX.pdf>

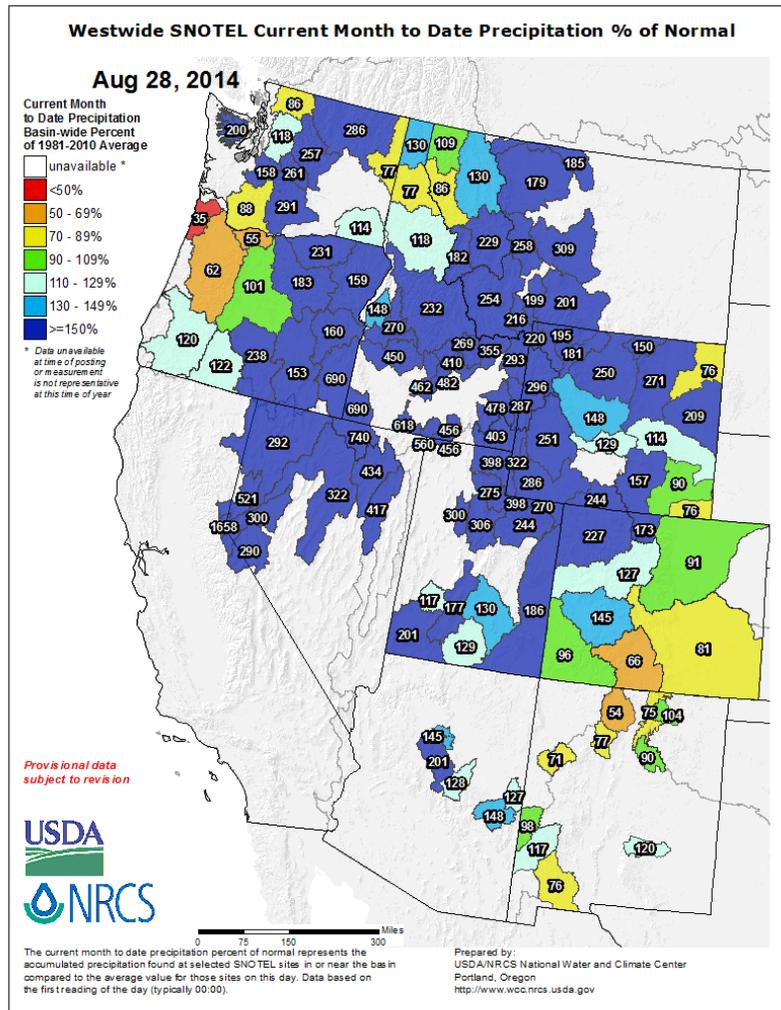
The Natural Resources Conservation Service provides leadership in a partnership effort to help people conserve, maintain, and improve our natural resources and environment

Weekly Snowpack and Drought Monitor Update Report

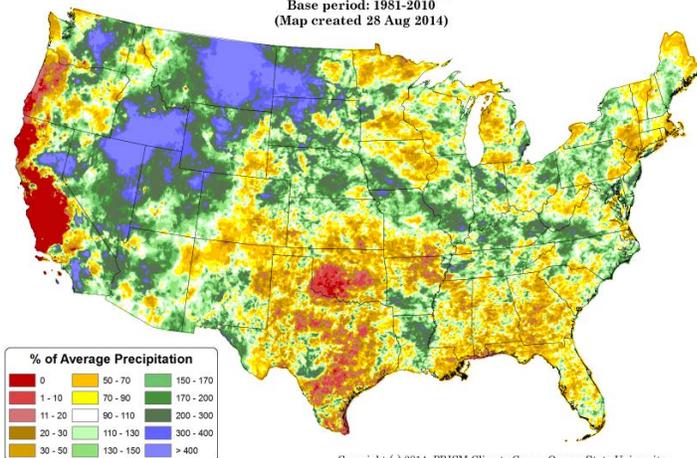
Precipitation

In the West, the August 1 - 28 SNOTEL precipitation percent of normal map shows much of the West has received greater than 150% of normal for the period. There are a wide variety of conditions in Idaho, Oregon, New Mexico, and Colorado where precipitation occurred only in select basins in each of the states. The percent of normal values (especially in the dark blue areas) may be amplified where normally very little precipitation falls at this time of year.

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



Total Precipitation Anomaly: 01 August 2014 - 27 August 2014
 Period ending 7 AM EST 27 Aug 2014
 Base period: 1981-2010
 (Map created 28 Aug 2014)



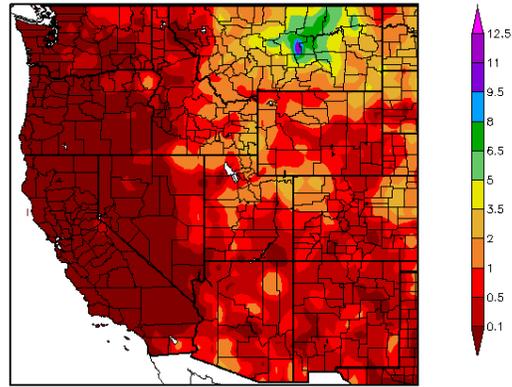
During August 2014, the national precipitation anomaly pattern reveals some higher than normal precipitation across central Washington, Montana, southern Idaho, Nevada, the Sierra Nevada, and parts of the Dakotas. Much of the West, especially coastal California, Oregon, Washington, and most of Texas and Oklahoma, have seen little or no precipitation.

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

Weekly Snowpack and Drought Monitor Update Report

The [ACIS 7-day](#) total precipitation map for the western U.S. shows mainly dry conditions. Precipitation has fallen primarily in central Montana. Scattered thunderstorms and monsoon precipitation also occurred from eastern Washington and Oregon to the Southwest, the Rocky Mountains, and into the southern Great Plains.

Precipitation (in)
8/21/2014 - 8/27/2014



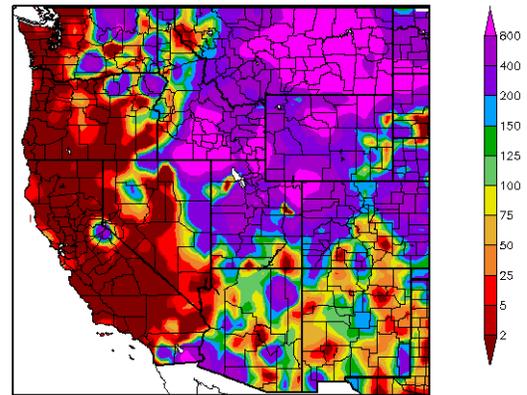
Generated 8/28/2014 at HPRCC using provisional data.

Regional Climate Centers

This percent of normal [map](#) of the West reflects the heaviest scattered precipitation falling across eastern Idaho, Montana, Utah, and Wyoming, Oregon, Washington, and the Rocky Mountains also received notable precipitation. Some scattered precipitation also occurred elsewhere in the West.

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

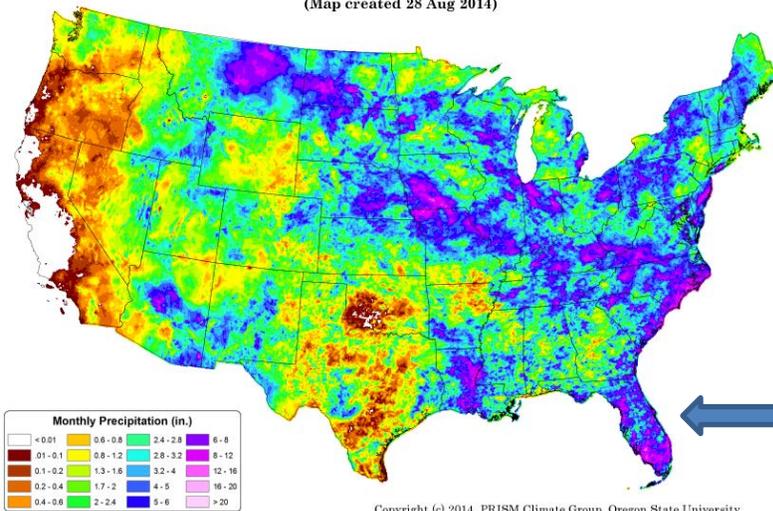
Percent of Normal Precipitation (%)
8/21/2014 - 8/27/2014



Generated 8/28/2014 at HPRCC using provisional data.

Regional Climate Centers

Total Precipitation: 01 August 2014 - 27 August 2014
Period ending 7 AM EST 27 Aug 2014
(Map created 28 Aug 2014)



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

So far in August 2014, the total precipitation across the continental U.S. was heaviest on the Atlantic coast, Florida, central Louisiana, northern Great Plains, and parts of the central U.S. In contrast, Texas, Oklahoma, and the Pacific coast were mainly dry.

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

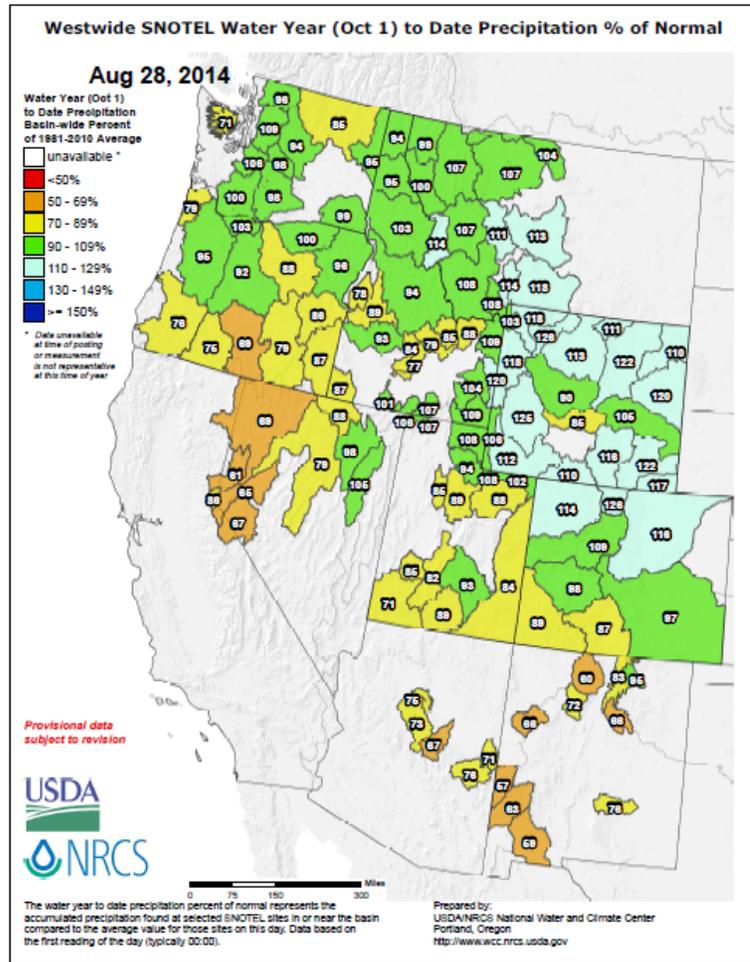
Weekly Snowpack and Drought Monitor Update Report

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

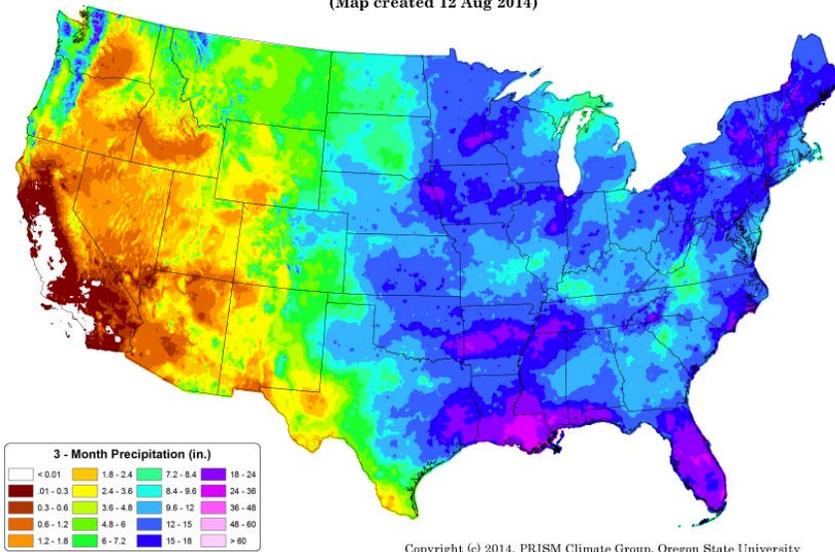
Near average conditions dominated the northern half of the Cascades, the northern half of Idaho, northwestern-most Montana, the Bear River in northern Utah and southeast Idaho, and parts of the southern half of Colorado.

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

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



Total Precipitation: May 2014 - July 2014
 Period ending 7 AM EST 31 Jul 2014
 (Map created 12 Aug 2014)



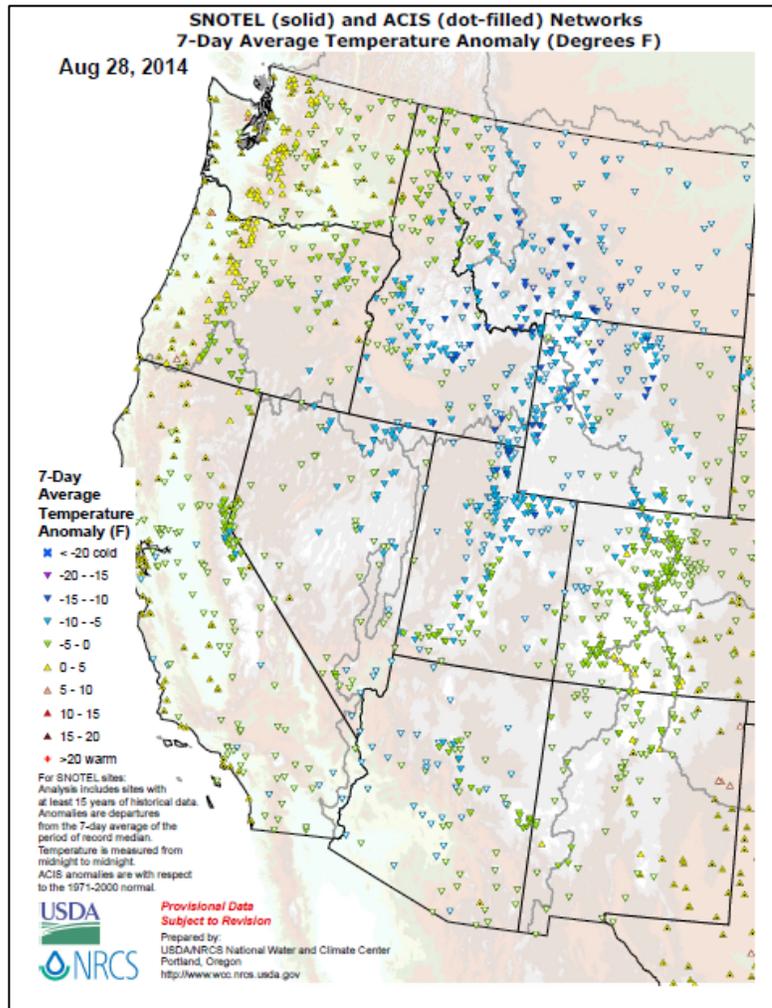
The national map of the [three-month period](#) (May - July) shows that the eastern half of the nation received precipitation in the range from 5 to greater than 36 inches along the Gulf Coast and Florida.

On the other hand, parts of the West received totals of less than 3 inches. The exceptions in the West were over the northern Rockies and Cascades, where totals exceeded 15 inches.

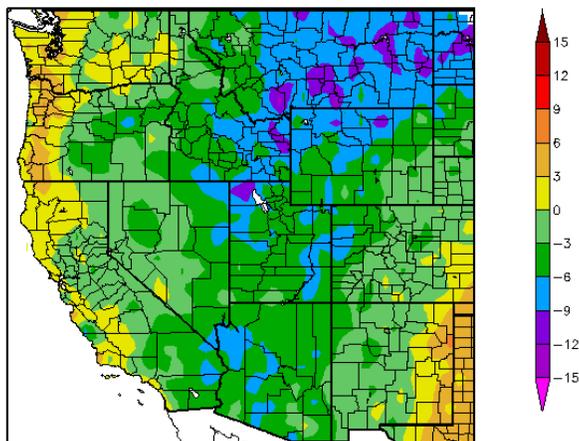
Weekly Snowpack and Drought Monitor Update Report

Temperature

The [SNOTEL](#) and [ACIS 7-day temperature anomaly](#) map for the western U.S. shows temperatures above normal along the Pacific coast and in northeast New Mexico. Below normal temperatures occurred in a large area of the West, including Montana, Idaho, Wyoming, Utah, Nevada, and Arizona. The remainder of the West was near normal for the week.



Departure from Normal Temperature (F)
8/21/2014 – 8/27/2014



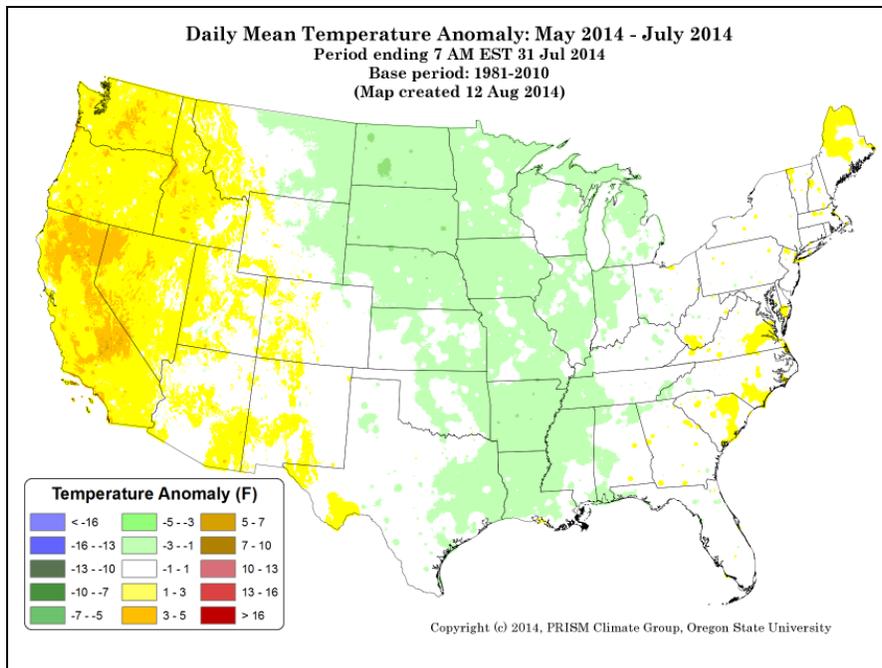
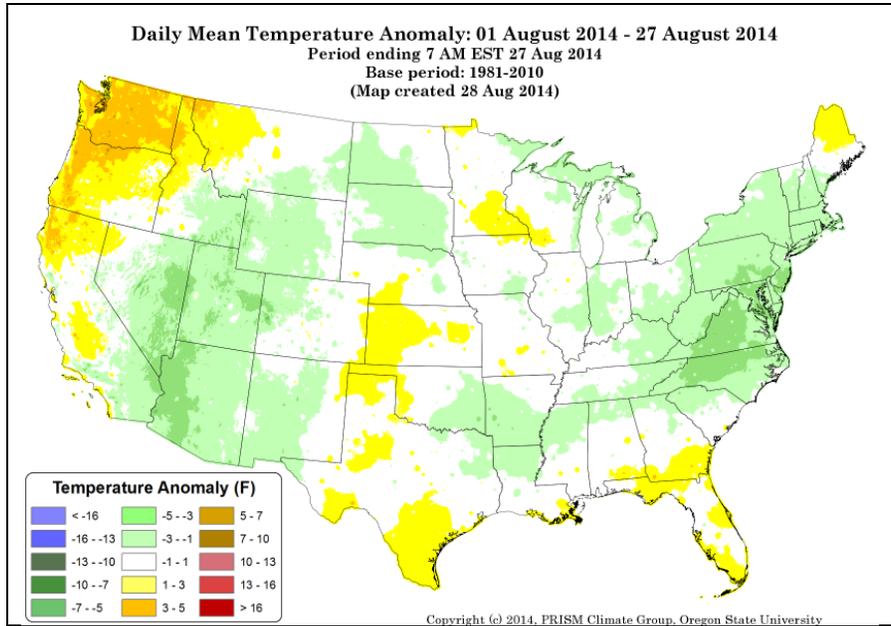
The [ACIS](#) map of the 7-day average temperature anomalies in the West ending August 27, shows the greatest negative temperature departures scattered over Utah, Idaho, Montana, and Wyoming ($<-9^{\circ}\text{F}$). The greatest positive temperature departures occurred in northeast New Mexico ($>+9^{\circ}\text{F}$).

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

Weekly Snowpack and Drought Monitor Update Report

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

During August 2014, the national daily mean temperature anomaly [map](#) shows a cold pattern over the Great Basin, western Arizona, and the central Atlantic coast ($<-5^{\circ}\text{F}$). Above normal temperatures were recorded in the Pacific Northwest and northern California ($>+3^{\circ}\text{F}$).



May - July national daily mean temperature anomalies for the U.S. in this [climate map](#) shows the West had near normal to slightly to above normal temperatures, mainly in California, western Nevada, and eastern Washington ($>+3^{\circ}\text{F}$). Most of the remainder of the country reported normal to cool temperatures this summer, with the coolest temperatures in North Dakota ($<-5^{\circ}\text{F}$).

Weekly Snowpack and Drought Monitor Update Report

Weather and Drought Summary

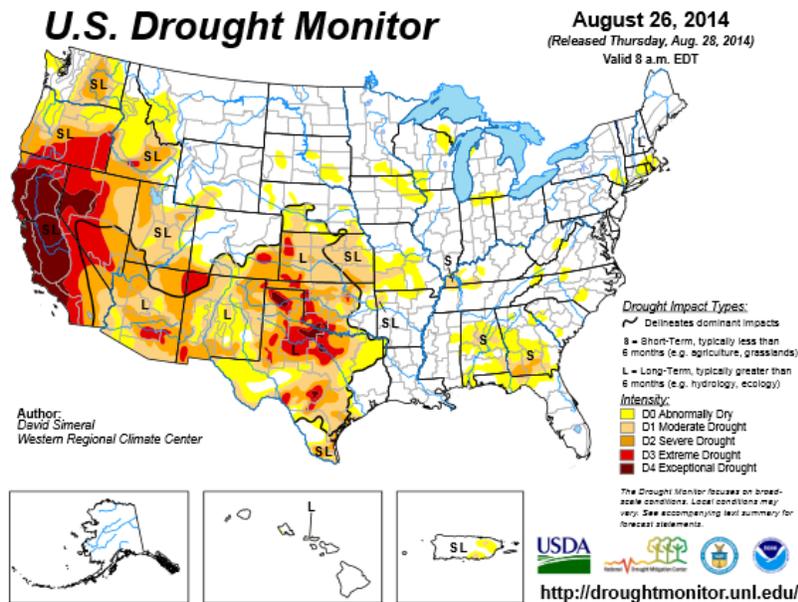
National Drought Summary – August 26 2014

The following **Weather and Drought Summary** is provided by this week's NDMC Drought Author, David Simeral, Western Regional Climate Center.

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

“For the contiguous 48 states, the U.S. Drought Monitor showed 33.86 percent of the area in moderate drought or worse, compared with 33.56 percent a week earlier.

For all 50 U.S. states and Puerto Rico, the U.S. Drought Monitor showed 28.29 percent of the area in moderate drought or worse, compared with 28.04 percent a week earlier.”



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

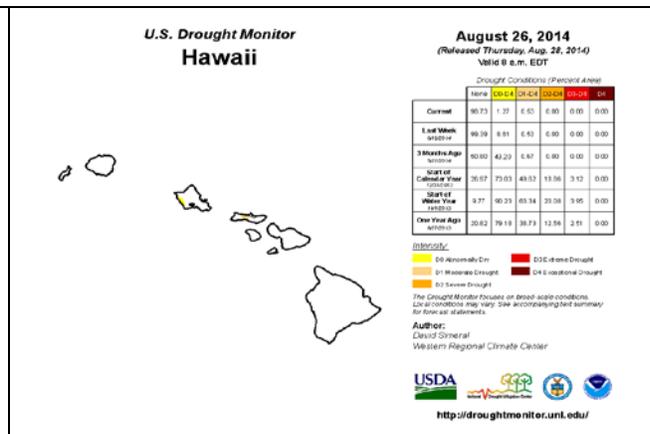
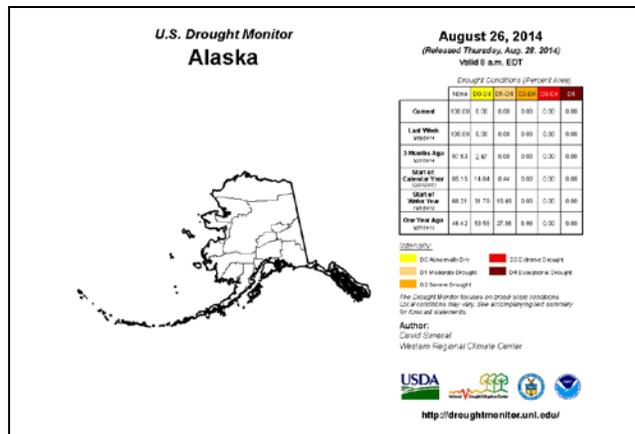
[Current Drought Monitor](#) weekly summary. The exceptional D4 levels of drought are scattered across CA, NV, TX, and OK.

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:

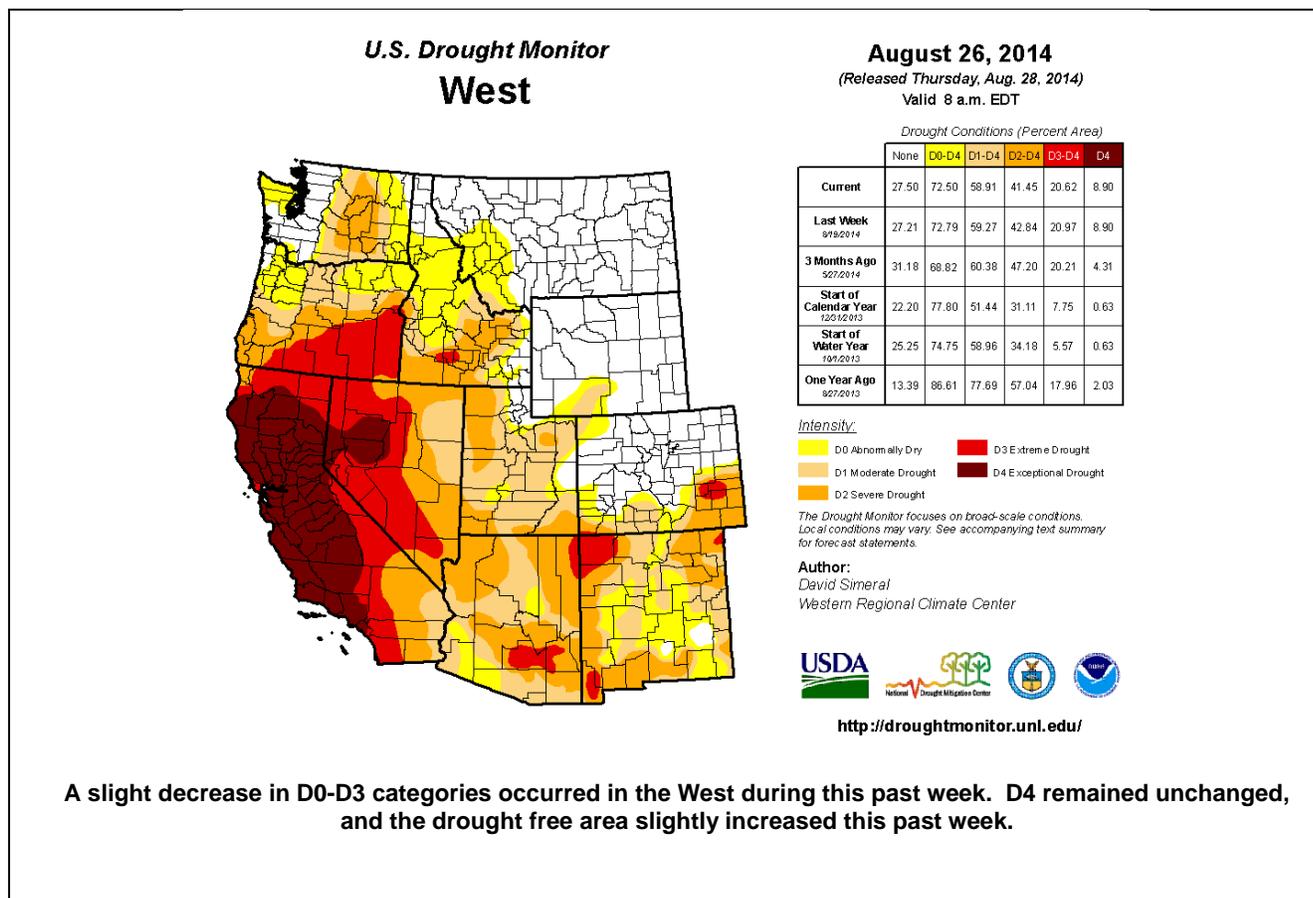
- ✓ <http://www.usda.gov/oce/weath er/Drought/AgInDrought.pdf>
- ✓ [Watch AgDay TV](#)
- ✓ [Drought Impacts Webinar Series](#)
- ✓ [NIDIS Quarterly Climate Impacts and Outlook](#)
- ✓ [The Spring 2014 edition of DroughtScope](#)



“The [49th](#) and [50th](#) States show relatively benign drought conditions. No changes noted for Alaska and Hawaii this week. A comprehensive narrative describing drought conditions across other parts of the nation can be found toward the end of this document. For drought impacts definitions for the figures that follow, click [here](#).”

Weekly Snowpack and Drought Monitor Update Report

Risk Management Web Resources



Click to enlarge maps

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:

- [Consumer Prices Edge up 0.1 Percent in July](#) – Aug 19
- [Beef Production Down 9 Percent from Last July](#) – Aug 22
- [Greener Pastures Signaling U.S. Beef Supply Rebound: Commodities](#) – Aug 19
- [Montana wheat harvest late but high in protein](#) – Aug 18
- WA - [Dry, warm weather taking toll on wheat crops](#) – Aug 19
- GA - [Farmers battle drought conditions](#) – Aug 18
- WEST - [63 trillion gallons of groundwater lost in drought, study finds](#) – Aug 21

Weekly Snowpack and Drought Monitor Update Report

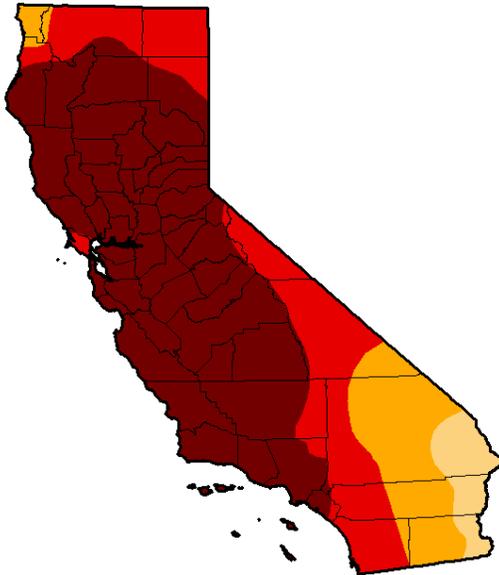
State with D-4 Exceptional Drought

U.S. Drought Monitor California

August 26, 2014

(Released Thursday, Aug. 28, 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	95.42	81.92	58.41
Last Week 8/19/2014	0.00	100.00	100.00	97.59	81.92	58.41
3 Months Ago 5/27/2014	0.00	100.00	100.00	100.00	76.68	24.77
Start of Calendar Year 12/01/2013	2.61	97.39	94.25	87.53	27.59	0.00
Start of Water Year 10/01/2013	2.63	97.37	95.95	84.12	11.36	0.00
One Year Ago 8/27/2013	0.00	100.00	98.23	93.86	11.36	0.00

Intensity:



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

Author:
David Simeral
Western Regional Climate Center



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

The D2 drought category decreased slightly in California this past week.

[CA Drought Information Resources](#)

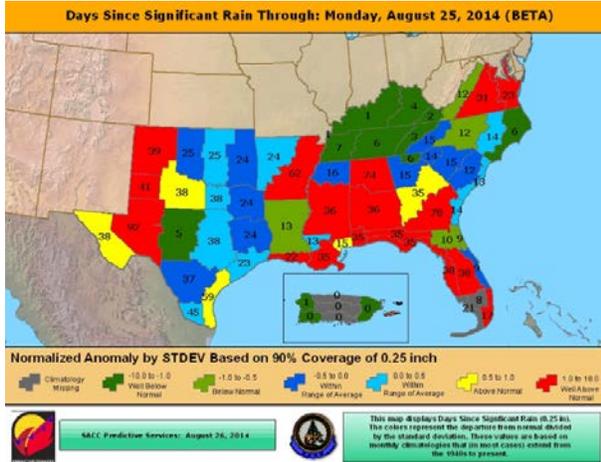
[Drought News from California:](#)

- [Grape crush kicks off early at UC Davis – Aug 21](#)
- [Record drought saps California honey production – Aug 21](#)
- [Water agencies: Delta farmers may be taking water meant for other regions – Aug 18](#)
- [Drought has state debating its unregulated pumping – Aug 20](#)
- [California Business, Farm and Community Groups Join Forces for Drought Relief in Statewide Food Giveaway – Aug 19](#)
- [Drought debate: Homeowner fined for replacing grass with drought-tolerant plants – Aug 20](#)
- [Los Angeles waterslide plan draws protests during drought – Aug 20](#)
- [Only in California? The #DirtBucketChallenge – Aug 21](#)
- [Worsening California drought starting to limit outdoor recreation – Aug 17](#)
- [DROUGHT: Water regulations tightened further – Aug 21](#)
- [L.A. takes gentle approach to conserving water during drought – Aug 18](#)
- [UC Davis study: California gives away more water than it has – Aug 19](#)
- [Water agencies: Delta farmers may be taking water meant for other regions – Aug 18](#)
- [West's historic drought stokes fears of water crisis – Aug 17](#)

Weekly Snowpack and Drought Monitor Update Report

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

NM - [Ditches and preparation help many San Juan County farmers cope with drought](#) – Aug 17

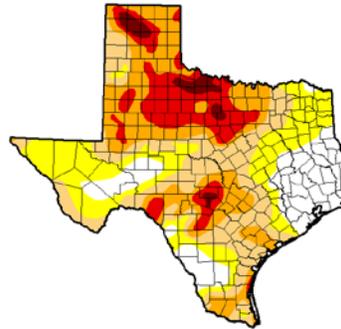


[Days since Significant Rain Summary](#)

State with D-4 Exceptional Drought

U.S. Drought Monitor
Texas

August 26, 2014
 (Released Thursday, Aug. 28, 2014)
 Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	18.83	83.17	81.25	38.21	16.23	2.76
Last Week 8/20/14	19.17	80.83	59.29	34.23	15.16	2.76
3 Months Ago 6/26/14	19.72	80.28	71.15	49.16	22.81	10.76
Start of Calendar Year 1/1/14	28.48	71.52	43.84	21.15	5.82	0.79
Start of Water Year 1/15/13	6.82	93.18	73.95	25.08	4.01	0.12
One Year Ago 8/27/13	2.82	97.18	97.88	66.12	19.34	2.14

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:
 David Simeral
 Western Regional Climate Center

USDA, NRCS, NIDM, NWS, NCEP, NCEP/Climate Prediction Center

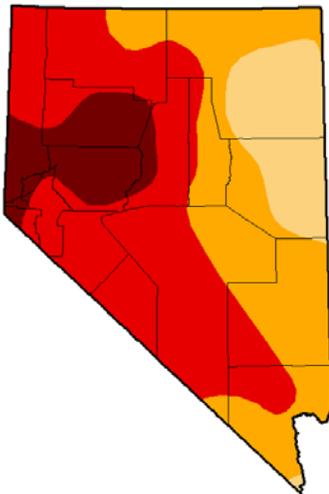
<http://droughtmonitor.unl.edu/>

A slight decrease in drought free areas occurred this past week. An increase in D0 – D3 occurred this past week. D4 remained unchanged.

State with D-4 Exceptional Drought

U.S. Drought Monitor
Nevada

August 26, 2014
 (Released Thursday, Aug. 28, 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	86.77	55.21	11.89
Last Week 8/16/14	0.00	100.00	100.00	86.92	55.21	11.89
3 Months Ago 6/26/14	0.00	100.00	100.00	87.03	38.73	8.24
Start of Calendar Year 1/1/14	0.39	99.61	96.01	77.66	28.55	5.37
Start of Water Year 1/15/13	0.39	99.61	96.79	79.11	28.55	5.37
One Year Ago 8/27/13	0.00	100.00	100.00	90.11	42.57	5.37

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:
 David Simeral
 Western Regional Climate Center

USDA, NRCS, NIDM, NWS, NCEP, NCEP/Climate Prediction Center

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

The D2 drought category decreased slightly in Nevada this past week.

Nevada Drought News:

[UNR Gets \\$3.8 million federal grant to study drought](#) – Aug 18

[AZ - Monsoon dropping lots of water, but drought remains unchanged](#) – Aug 21

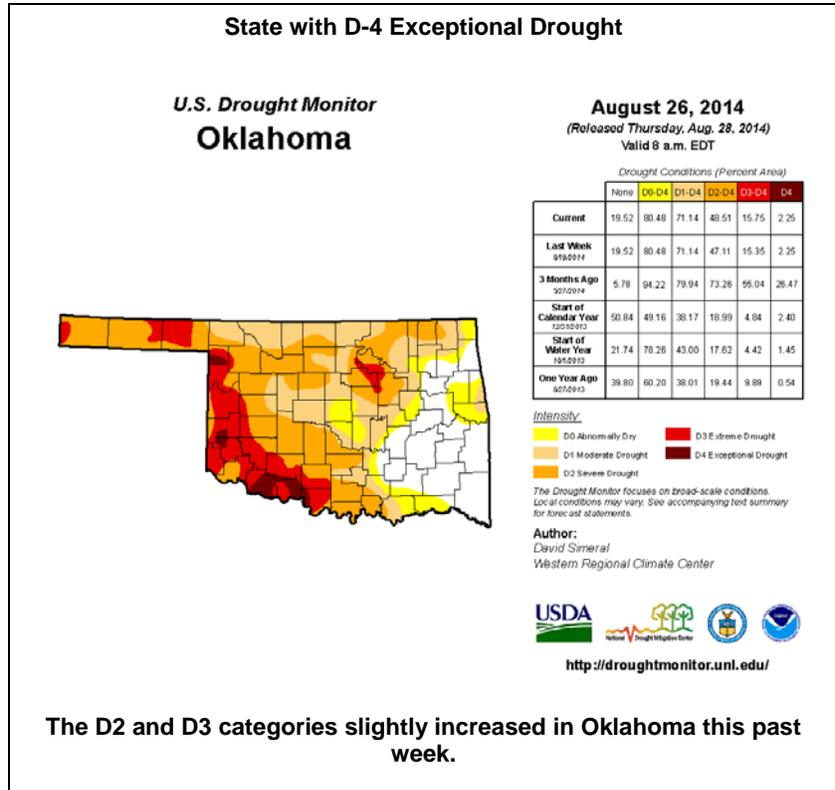
Weekly Snowpack and Drought Monitor Update Report

Related Area News:

[2014 Kansas Drought Report and Summary](#)

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

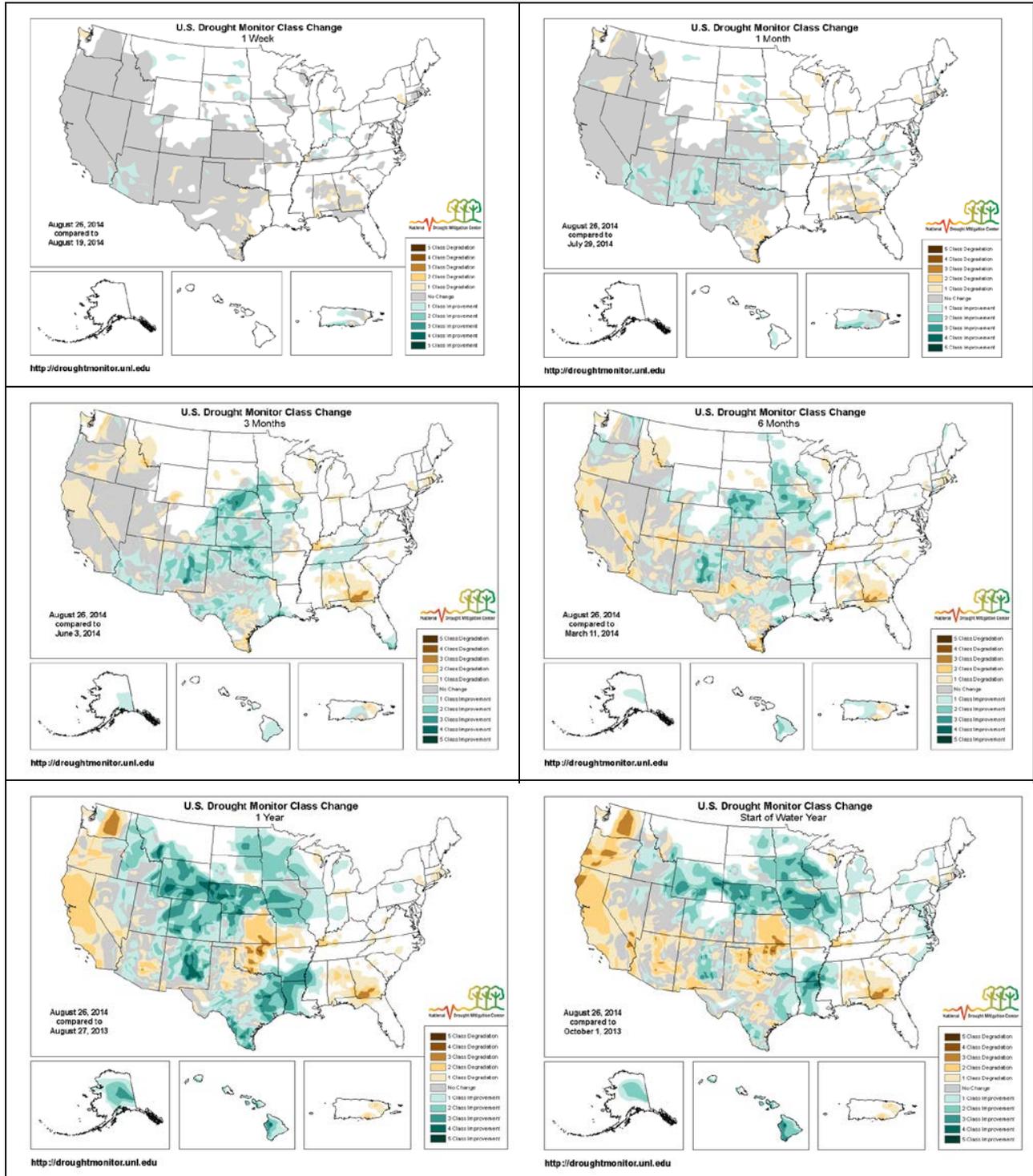
[Fall forecast shows limited relief from drought – Aug 24](#)



Weekly Snowpack and Drought Monitor Update Report

Changes in Drought Monitor Categories

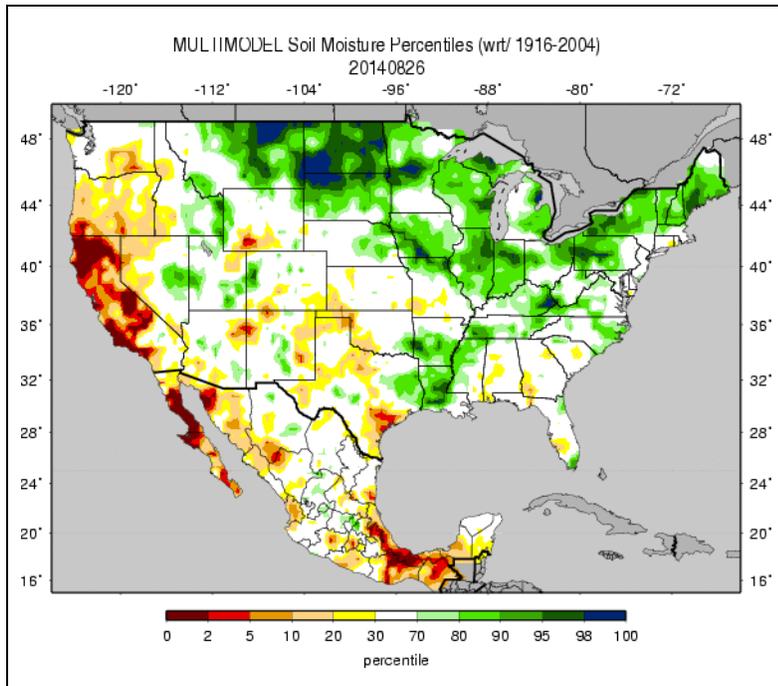
Over Various Time Periods



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

Weekly Snowpack and Drought Monitor Update Report

Soil Moisture

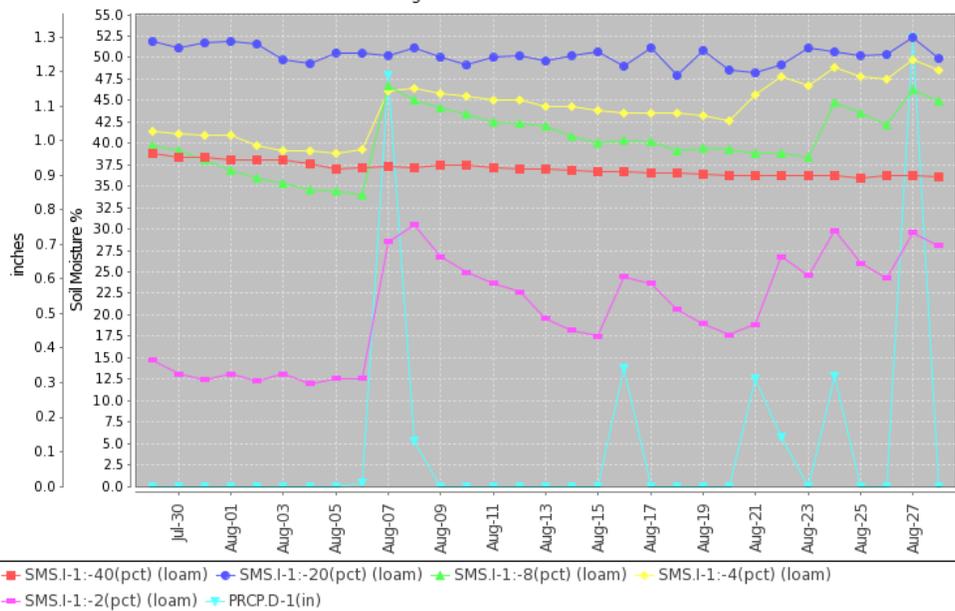


The national soil moisture model ranking in [percentile](#) as of August 26 shows dryness over California, Washington, Oregon, western Idaho, southern Texas, and southwest Wyoming. Scattered dryness was also reported in other areas of the West, Kansas, Oklahoma, Missouri, Texas, Florida, Alabama, Georgia, and South Carolina. Moist soils dominated from Montana to the Atlantic coast, where the wettest locations were centered in the Dakotas and eastern Montana. Most of the soils in the Mississippi River Basin, the mid Atlantic and Northeast states also had 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 (2031) MONTH=2014-07-29 (Daily) NRCS National Water and Climate Center - Provisional Data - subject to revision
Thu Aug 28 08:21:36 PDT 2014

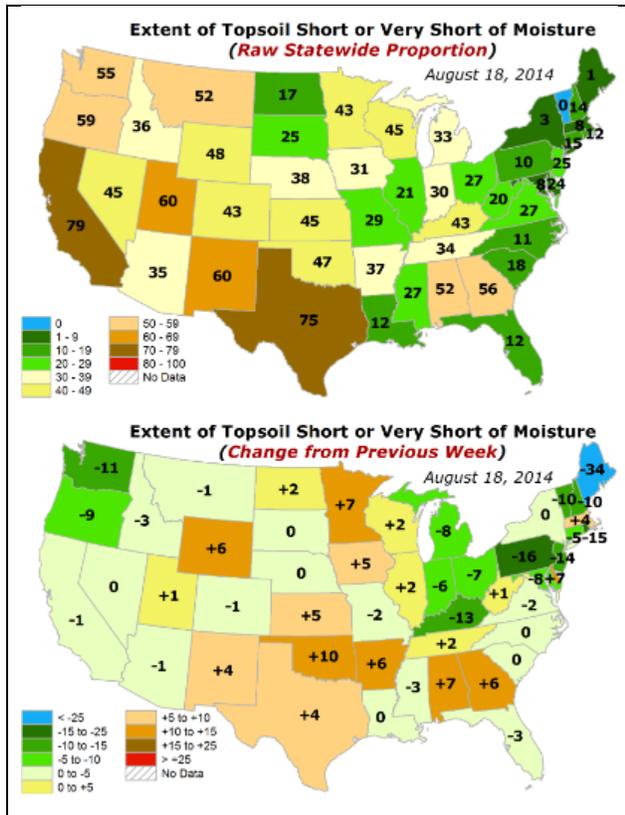


This NRCS resource shows soil moisture data at the [Ames SCAN site number 2031](#), located in Iowa. The recent precipitation in the area is graphed in light blue. The August precipitation has increased the 2-, 4-, and 8-inch depth soil moisture, whereas the deeper soil sensors at 20- and 40-inches depth (red traces) show little to no change from the recent precipitation.

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](#).

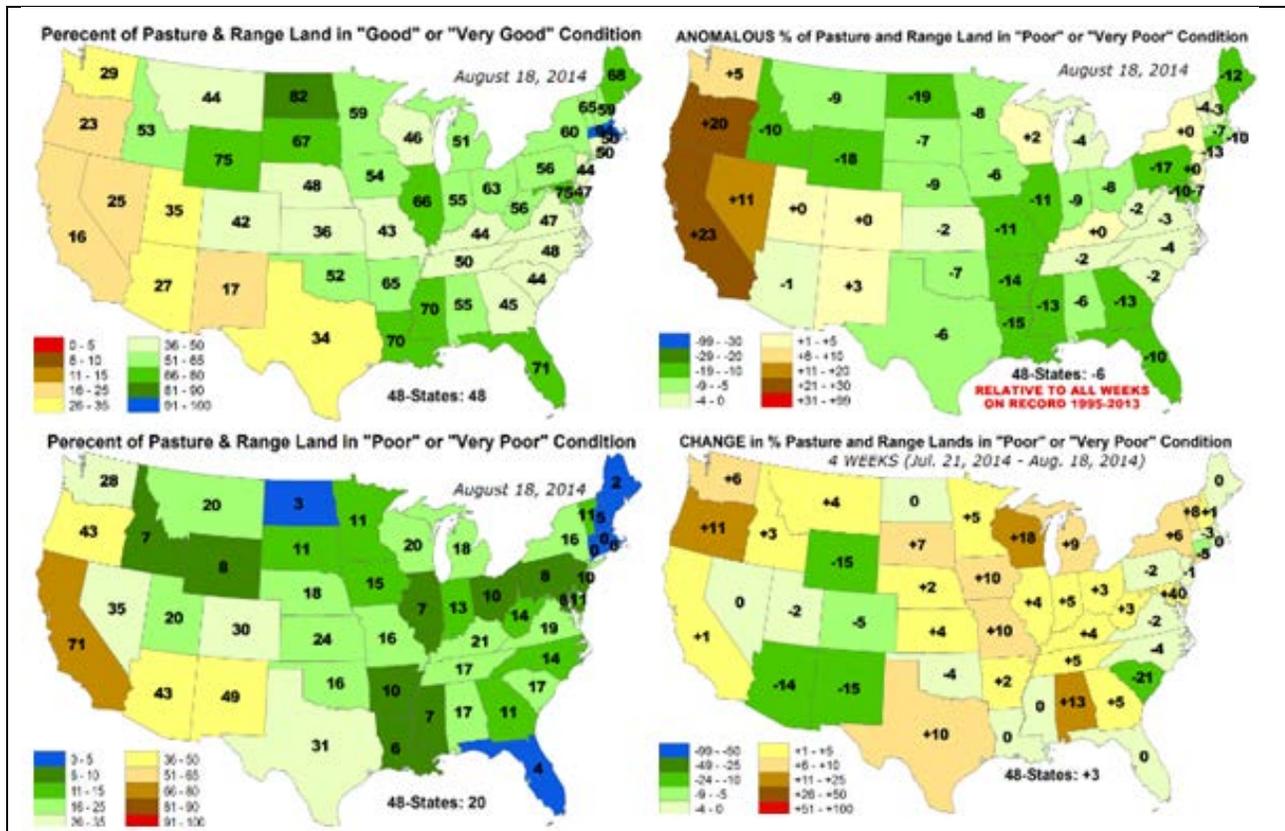
Weekly Snowpack and Drought Monitor Update Report

Topsoil and Pasture & Rangeland National Conditions



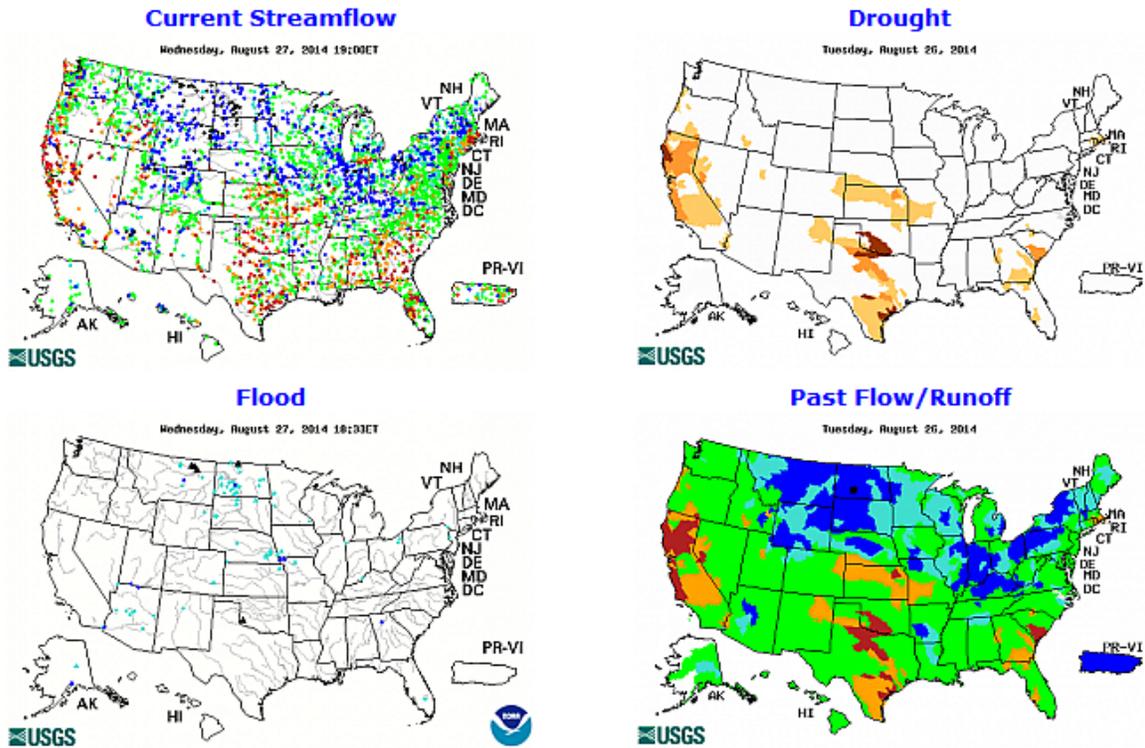
↪ Topsoils are exceptionally poor (top) over Texas, New Mexico, California, and Utah with values representing more than 60 percent poorer conditions than the median for this time of year (bottom panel). Locations in the Dakotas, east to much of the Atlantic coast, as well as Louisiana and Florida have good soil moisture conditions.

↪ Many of the states east of the Mississippi River are doing well, as noted below. These conditions also extend across the northern Great Plains and northern Rockies. Pasture and rangelands are in poor and very poor condition in California, the Great Basin, and the Southwest. Conditions have improved in the Southwest and Rockies over this past week.



Weekly Snowpack and Drought Monitor Update Report

Streamflow



The streams are high over much of the central U.S, including the Mississippi River Basin, the central Rockies, the Southwest, Florida, and the Northeast, due to recent precipitation (left maps). Central Alaska, Oahu, Hawaii, and central Puerto Rico are also reporting some high streamflow. Rivers are above flood stage along the Souris River in North Dakota, the Milk River in Montana, the Salt Fork Red River in Oklahoma, and Heeia Stream on Oahu, Hawaii, (lower left map).

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 many areas of the upper Mississippi and Missouri Rivers, west-central Florida, and the Connecticut River. Currently, **1** gage has a greater than 50% chance to experience major flooding; **5** gages for moderate flooding; and **22** gages for minor flooding.

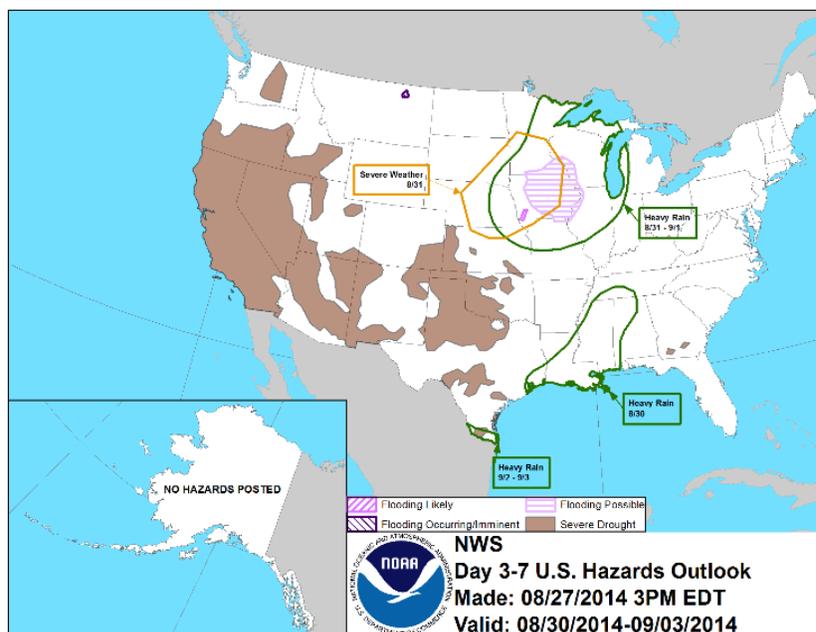
These numbers represent an 11-gage increase in minor flooding in the last 2 weeks.

Weekly Snowpack and Drought Monitor Update Report

National [Weather hazards](#)

Severe weather is expected in the north central part of the country on August 31, as outlined in orange on the map hazard map at the right. A small area of current flooding is noted in north central Montana. Flooding is likely or possible in the area of the upper Midwest shown in lavender. Several areas of expected heavy rain are outlined in green, covering much of the upper Midwest, the lower Mississippi River, and in a small area in southern Texas. Severe drought remains a large issue in much of the western U.S.

No hazards are expected in Alaska.



[National Drought Summary for August 26, 2014](#)

Prepared by the Drought Monitor Author: David Simeral, Western Regional Climate Center

Summary

This U.S. Drought Monitor week saw an active pattern across the Northern Rockies, Northern Plains, and parts of the Midwest. In Montana, a slow-moving, low-pressure system delivered widespread heavy rainfall and flash flooding during the weekend. Across parts of the Southwest, eastern Great Basin, and Intermountain West, locally heavy monsoon rains continued to provide short-term relief to the region. In contrast, the Far West remained in a dry pattern except for some isolated thunderstorm activity in parts of the Mojave Desert in southeastern California. Overall, the seven-day average temperatures in the western U.S. were generally below normal. East of the Rockies, temperatures for the week were above normal – especially across the Southern Plains, Texas, and portions of the Midwest while New England and the Mid-Atlantic states experienced slightly cooler than normal temperatures. In the Midwest, locally heavy rains fell across portions of Iowa, Illinois, Indiana, Kentucky, and Ohio bringing relief to scattered dry pockets in the region. In the Southeast, hot and dry conditions led to further deterioration of conditions across parts of Alabama and Georgia.

Mid-Atlantic

The Mid-Atlantic remained drought-free on this week's map. The only change on the map this week was in the Piedmont of North Carolina where recent rains improved conditions leading to removal of an area of Abnormally Dry (D0) in the north-central part of the state. Overall, temperatures were below-normal in Delaware, Maryland, and the eastern half of Virginia while North Carolina was near-normal. Rainfall was mainly concentrated in the western part of the region where rainfall accumulations were in the one-to-three inch range.

Midwest

During the past week, significant rainfall accumulations (three-to-eight inches) were observed across much of the region with the highest accumulations reported in northern Indiana. Heavy rains helped to improved soil moisture and pasture conditions as well as area streamflows leading to removal of scattered pockets of Abnormally Dry (D0) in Indiana, Iowa, Kentucky, Minnesota, and Ohio. In southwestern Missouri, short-term precipitation deficits, below-normal streamflows, and reduced soil moisture led to the expansion of

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Abnormally Dry (D0) and Moderate Drought (D1) areas. Temperatures across the region were above-normal during the past week.

Puerto Rico, Hawaii, and Alaska

The weather system that would become Hurricane Cristobal, delivered five-to-ten inches of rain to Puerto Rico helping to alleviate some areas of Abnormally Dry (D0) and Moderate Drought (D1) along the southern coast. Despite the torrential rains, short-term precipitation deficits remained in eastern portions of the island. In the Hawaiian Islands, the only change to the map was the introduction of an area of Abnormally Dry (D0) in west Oahu. In Alaska, temperatures were well above normal across most of the state with the exception of Prince William Sound and the adjacent coastal mountains where above-average rainfall was observed while the rest of the state was generally near-normal in terms of precipitation for the week. Notable were record-breaking high temperatures reported in the Aleutians and southeast Alaska.

The Northeast

In New York, short-term precipitation deficits led to the introduction of an area of Abnormally Dry (D0) in the Catskills and Hudson Valley region. Otherwise, New England remained drought-free on the map this week. Temperatures across the region were slightly below normal except in Upstate New York and Maine where temperatures were four-to-five degrees above normal. Overall, the region was dry with the exception of some locally heavy rainfall (three-to-four inches) in the Adirondacks of New York.

The Plains

Heavy rains fell across parts of the Northern Plains during the past week with two-to-six-inch accumulations in portions of North and South Dakota. Below-normal temperatures and rains led to the removal of Moderate Drought (D1) from South Dakota as well as areas of Abnormally Dry (D0) in the Dakotas and Nebraska. In southeastern Nebraska, short-term precipitation deficits and localized agricultural impacts on corn and soybean crops led to a minor expansion of an area of Moderate Drought (D1). In the Southern Plains, hot and dry conditions dominated the region with high temperatures exceeding 100° F in both Oklahoma and Kansas. Temperature departures from average were four-to-ten degrees above normal. In Oklahoma, drying ponds and low reservoir storage levels led to minor expansion of areas of Severe Drought (D2) in northeastern Oklahoma and Extreme Drought (D3) in southwestern Oklahoma.

The South

During the past week, the South was hot and dry with temperatures reaching the high 90s to more than 100° F across most of the region. Some moderate to locally heavy precipitation (one-to-three inches) fell across isolated areas in the southern half of Louisiana, southeastern Texas, western Texas, and the Texas Panhandle. On the map, conditions across parts of Texas continued to deteriorate as below-normal precipitation, high maximum temperatures, reduced soil moisture, and low reservoirs led to expansion of areas of Moderate Drought (D1), Severe Drought (D2), and Extreme Drought (D3) in the North Central and Gulf Coast Plains regions. According to Water Data for Texas, Coastal Bend Area reservoirs are currently 35.3% full while the Rio Grande Region Planning Region reservoirs are currently 22.1% full. In contrast, the East Texas reservoirs are currently 96.4% full. In the Panhandle, isolated showers and thunderstorm activity led to a slight reduction in the spatial extent of Severe Drought (D2) and Extreme Drought (D3).

The Southeast

The Southeast was hot and generally dry during the past week with the exception of some isolated shower activity in southern Alabama, southeast Georgia, and Florida. According to the National Weather Service, a number of all-time daily high temperature records were broken across the region including: Montgomery, Alabama (100° F); Sarasota, Florida (100° F); Savannah, Georgia (100° F); Tallahassee, Florida (101° F); and Tampa, Florida (99° F). Some locally heavy rainfall accumulations (two-to-four inches) were observed in parts of southwestern and north-central Florida. Continued short-term precipitation deficits (30/60-day) and below-normal streamflows led to expansion of areas of Abnormally Dry (D0), Moderate Drought (D1), and Severe Drought (D2) in Alabama and Georgia. In southwestern Georgia, hot and dry conditions continued to deplete soil moisture and some minor agricultural impacts have been reported.

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The West

During the past week, significant rains fell across the eastern two-thirds of Montana. In central Montana, rainfall accumulations ranged from four-to-ten inches leading to flash flooding of local streams. According to the U.S. Geological Survey (USGS), the Missouri River at Landusky swelled to 35,000 cubic feet per second (cfs); well above mean flows at ~ 6000 cfs. In the Southwest, torrential monsoonal rains in the Phoenix Metro area and central Arizona led to flash flooding of dry washes and streams. In the Bradshaw Mountains north of Phoenix, four-to-eight inches of rain last week caused the Agua Fria River (above Lake Pleasant Reservoir) to swell to approximately 40,000 cfs (normal daily median discharge – 2 cfs), according to the USGS. The cumulative effect of the summer monsoon precipitation in Arizona led to one-category improvements in areas of Extreme Drought (D3), Severe Drought (D2), and Moderate Drought (D1) in central, southern, and western portions of the state. In these areas, beneficial rains improved the health of the vegetation, soil moisture, and surface water flows. Despite short-term gains in both Arizona and New Mexico, longer-term hydrological impacts (below-normal reservoir levels) remained after multiple years of below-normal snowpacks in the region's mountain ranges. In New Mexico, the Middle Rio Grande Conservancy District recently curtailed water bank deliveries for irrigation in response to low flows along the Rio Grande. The combination of short- and long-term hydrological impacts (below-normal reservoir storage levels, below-normal mountain snowpack conditions in the headwater regions) led to the re-introduction of an area of Moderate Drought (D1) in the Middle Rio Grande corridor from Socorro County northward to Sante Fe County. In the Upper Colorado River Basin, recent monsoonal shower and thunderstorm activity has improved streamflows and reduced precipitation deficits leading to one-category improvements in areas of Extreme Drought (D3) Severe Drought (D2), and Moderate Drought (D1) in northeastern Utah and extreme northwestern Colorado. In California, recent showers and thunderstorms in the Mojave Desert (southeastern California) led to a one-category improvement in an area of Severe Drought (D2). Otherwise, conditions in California remained unchanged on the map. Elsewhere around the West, reservoir storage levels remained well below normal in Arizona, Nevada, New Mexico, and Oregon.

Looking Ahead

The NWS WPC 7-Day Quantitative Precipitation Forecast (QPF) calls for moderate-to-heavy precipitation accumulations (two-to-six inches) in an area stretching from the High Plains eastward to the Upper Midwest with lesser accumulations across the Lower Midwest, New England, Mid-Atlantic, and the Southeast. One-to-three inches are forecasted across the Gulf Coast region while the western U.S. will remain largely dry. The 6–10 day outlooks call for a high probability of above-normal temperatures across California, the Southwest, and the eastern half of the U.S. while below normal temperatures are forecasted across the Pacific Northwest, northern Rockies, and Intermountain West. A high probability of above-normal precipitation is forecasted for the Eastern tier while the West will be below-normal.

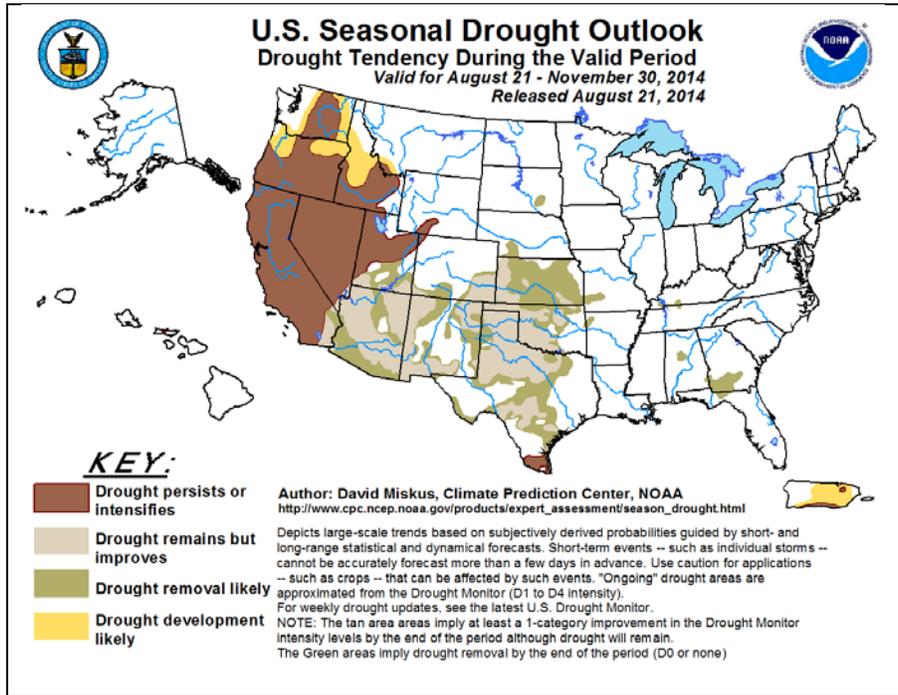
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Supplemental Drought Information

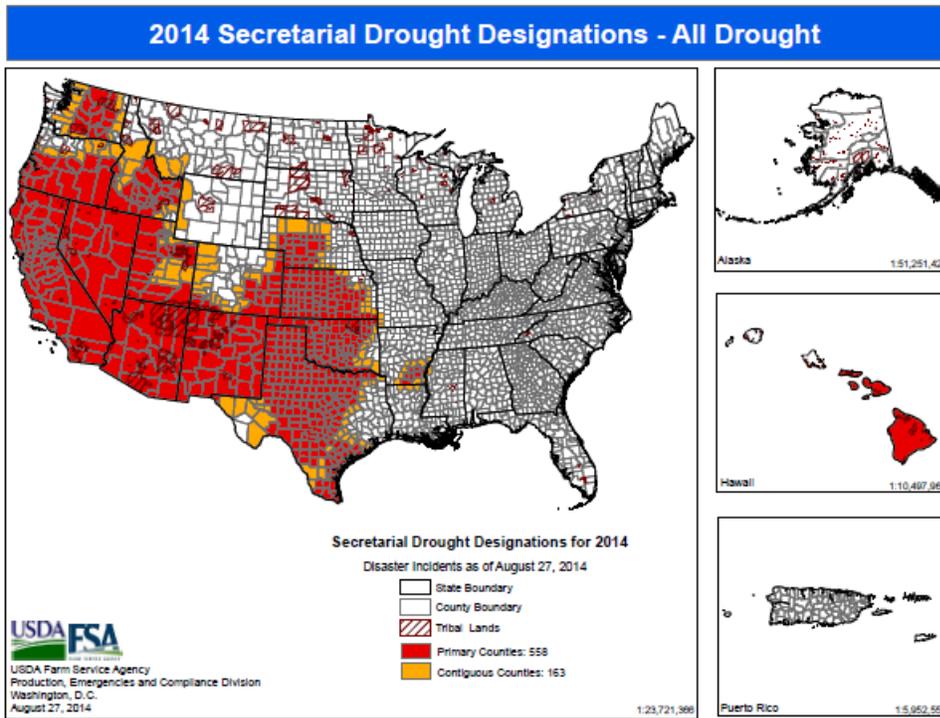
National Seasonal Drought Outlook

Nationally, [drought](#) is expected to persist or intensify over much of the West, the southern tip of Texas, and Puerto Rico. Improvements are expected from the Southwest to the central Great Plains, 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



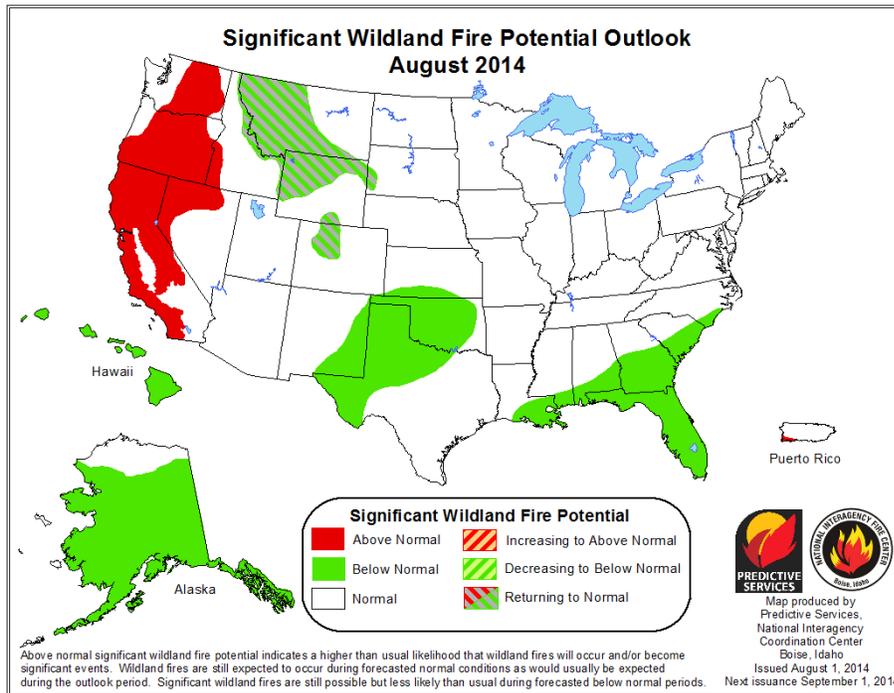
Refer to the USDA Drought Assistance [website](#) and [National Sustainable Agriculture Information Service](#).

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

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

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National Fire Potential Outlook



August Forecast

Above normal [fire potential](#) continues in California, Nevada, Oregon, Washington, and western Idaho. The southwest tip of Puerto Rico also has above normal fire potential.

Fire potential is returning to normal in the northern Rockies of Idaho, Montana, Wyoming, and Colorado.

The below normal fire potential area is forecast in the lower Mississippi River Basin east to Florida, eastern New Mexico through northern Texas, and most of Oklahoma. Below normal conditions are also reported in all of Hawaii and all but northern Alaska.

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, and National Drought Mitigation Center.

"Earth's surface rising in Western U.S.

Drought cost the Western U.S. about 63 trillion gallons of water over the past year and a half, say researchers from UC San Diego's Scripps Institution of Oceanography and the U.S. Geological Survey. The Earth's surface rose about 0.16 inches during that time. In the Sierra Nevada and the Coast Ranges in California, the water loss was even greater as the surface rose as much as 0.6 inches. The uplift was detected across the Western U.S. using GPS data normally used to detect minor changes caused by earthquakes.

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U.S. beef production, consumer prices

Beef production was 2.09 billion pounds in July, which was 9 percent lower than July 2013. Slaughter numbers were also down 10 percent at 2.6 million head, but live weights were up slightly, compensating for fewer animals.

Consumer ground beef prices rose 12 percent to a new high of \$3.884 per pound in July. The cost of boneless sirloin steak also rose 16 percent to a record high of \$7.87 per pound. Drought and the smallest cattle herd in 63 years contributed to lower production and the high price of beef.

U.S. consumer prices up slightly in July

U.S. consumer prices rose a seasonally adjusted 0.1 percent in July as falling gasoline prices offset a 0.4 percent increase in food costs, due to drought and other adverse weather. Consumer prices climbed 0.3 percent in June and 0.4 percent in May. The July uptick of 0.4 percent in food prices was the fifth increase of that size or larger in the past six months.

California water rights exceed existing water supply

California water rights holders have been promised five times more water than flows through the state, researchers from UC Davis uncovered in a recent study. The State Water Resources Control Board has a backlog in water allocation data and does not know exactly how much water was being used. As drought continues, the state is striving to straighten out the outdated and inaccurate water records.

The most over-allocated rivers run through central and Northern California, flowing from the Sierra Nevada to the Central Valley and toward the Sacramento-San Joaquin Delta. In Southern California, water users have rights to 183 percent of the Santa Ana River's annual runoff. Water users on the San Joaquin River have rights to 673 percent of the river's natural flow.

Statewide, 370 million acre-feet of water have been allocated by the state to various users, but only 70 million acre-feet of water are available in a decent year of precipitation. That leaves the state about 300 million acre-feet short of water, or the equivalent of about 2.5 Lake Tahoes.

California's groundwater pumping rate unsustainable

Groundwater pumping in California far exceeds a sustainable rate as growers struggle to produce crops in the state's third year of drought. Near Sacramento, the level of a state-owned well plummeted 100 feet during a three month period. Other wells have gone dry amid a well-drilling frenzy. Irrigation represents 41 percent of California's water use, while urban water systems use just 9 percent.

Request for analysis of farmers' diversions in the Sacramento-San Joaquin Delta

The California Department of Water Resources and U.S. Bureau of Reclamation requested that the State Water Resources Control Board analyze water diversions by farmers in the Sacramento-San Joaquin Delta. The agencies release water from their dams on the Sacramento, Feather and American rivers, send it through the Delta, and pump it out to send elsewhere, but are suffering water losses somewhere along the line. They suspect that Delta farmers on the 70 Delta islands are taking water that does not belong to them. The farmers have water rights that allow them to take as much of the "natural" flow as they need to grow crops, and those water rights predate the DWR's and Reclamation's water rights.

In response, the California Sportfishing Protection Alliance, a group that sympathizes with Delta landowners, has filed a formal complaint against DWR and Reclamation, charging that the agencies illegally divert water from the San Joaquin, Mokelumne, Cosumnes and Calaveras rivers, taking water to which they hold no rights.

California bees and honey production

The California drought has dried up native plants and wildflowers, whose nectar honeybees use to make honey. Beekeepers must supplement the bees' diets with sugar syrup until plants resume making flowers and nectar.

Drought has cut California's honey production by more than half, compared to annual averages before the drought. In 2010, 27.5 million pounds of honey were produced in the state, and in 2013, the honey crop was 10.9 million pounds. The 2014 honey crop is expected to be even lower than last year.

Greater need for food assistance at California food banks

California's business, agriculture, and civic organizations have joined forces with the California Community Food Bank to form the "California Water Feeds our Communities" food drive to collect and distribute food to food banks across the state. The historic drought has increased demand at food banks and limited donations. Food deliveries will begin on Sept. 3 when 17 trucks transporting 374 pallets of produce travel

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from Fresno to food banks in Merced, Bakersfield, Los Angeles, Watsonville, Salinas, Santa Maria, Oxnard, Riverside and San Diego.

Some of the organizations involved in the effort include Fresno Downtown Business Hub, El Agua Es Asunto De Todos, and California Water Alliance.

Woman in San Ramon, California threatened with fine by HOA

A San Ramon woman replaced her lawn with drought-tolerant landscaping and earned a rebate from her public water supplier, but her homeowner association does not like the change. The Twin Creeks South Estate Homes Association says it will fine her \$50 per month until she returns her yard to at least 25 percent turf.

Drought increased protein content of Southern Great Plains wheat

Drought stress in 2013 and 2014 increased the protein content of wheat in the southern Great Plains, producing more high protein wheat than usual in the U.S. In Texas, about 85 percent of the wheat has protein levels exceeding 12.5 percent.

Of the 15 percent of the high protein wheat that has been harvested in Montana, samples had protein levels in excess of 13 percent and test weights of more than 63 pounds per bushel, according to the Montana Wheat and Barley Committee marketing director. Foreign buyers seek Montana's premium high protein wheat to blend it with regular flour to make flour that is good for making pasta.

With plenty of wheat on the global market, wheat prices are falling. The additional high protein wheat on the market means Montana farmers may not receive the usual protein premiums this year.

Washington, Idaho wheat crop

The wheat crop in the Inland Northwest was about 30 percent lower than last year's yield and a little below the 10-year average. Wheat was planted deeper in dry areas in the fall of 2013, and significant rainfall caused the soil to form a crust that the wheat plants could not break through. Some farmers replanted two or three times. The dry spring and summer and one hundred degree temperatures sealed the crop's fate. The winter wheat in Lincoln County, Washington was shorter than usual, ripe early and yielded 30 to 50 percent less than last year. The smaller crop hurts grain storage companies that will take in less revenue as farmers bring in less grain.

Georgia peanuts, cotton

Dryland peanuts were stressed by the lack of rain in Colquitt County. A lot of the dryland cotton was beginning to open, limiting cotton production.

Conservation program aims to reduce groundwater pumping in Clovis, New Mexico

The city of Clovis applied for a federal grant which would be used to fund a conservation program in which farmers are paid to not irrigate their crops. If the grant comes through, farmers could receive about \$400 per acre. The Ogallala Aquifer in the vicinity of Clovis is nearly depleted, say local officials. Wells in the area could produce about 1,200 gallons per minute a decade ago, but these days, a good well may only produce 200 gallons per minute. The program is intended to slow pumping from the aquifer and conserve water.

More water for endangered fish in the San Juan River in northwestern Arizona, southeastern Utah

The U.S. Bureau of Reclamation has begun releasing more water from the Navajo Lake Dam to provide more water for endangered fish, such as the razorback sucker and the roundtail chub, in the San Juan River. The flow was increased from 650 cubic feet per second to 750 cubic feet per second on Aug. 18 and was intended to maintain the target base flow of 500 to 1,000 cubic feet per second through the endangered fish habitat from Farmington to Lake Powell."

For more details, visit 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)

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/

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8/28/2014