



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

## Weekly Snowpack / Drought Monitor Update

### August 7, 2014

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### Highlights: Agricultural Weather Highlights – Thursday - August 7, 2014

- “In the **West**, isolated showers dot the southern Rockies and the Intermountain region. Where rain is falling, or has recently fallen, short-term benefits include reduced irrigation demands and a decrease in stress on rangeland and pastures. Temperatures are rebounding to above-normal levels in northern California, following the recent spell of unusually cool, showery weather.
- On the **Plains**, mostly dry weather prevails, except for a few showers and thunderstorms in Kansas and Oklahoma. Hot weather in Montana is hastening winter wheat harvesting and spring wheat maturation. Meanwhile in Texas, hot, dry weather is gradually increasing stress on rangeland, pastures, and rain-fed summer crops.
- In the **Corn Belt**, widespread showers are providing beneficial moisture to corn and soybeans. Early today, some of the heaviest rain is falling in Missouri, where topsoil moisture was rated 52% very short to short on August 3. Elsewhere in the Midwest, dry weather accompanies near- to below-normal temperatures.
- In the **South**, showers and thunderstorms are edging across the northwestern fringe of the region, including parts of Arkansas. Elsewhere, hot, dry weather favors fieldwork and rapid crop development. The corn harvest is just getting underway across the Deep South—and was 1% complete in Louisiana on August 3.

**Outlook:** During the next few days, showers will be focused in the vicinity of a frontal zone stretching from the central Plains into the Southeast. The front will separate hot air across the South from cool conditions in the Midwest. Five-day rainfall totals, in addition to what has already fallen, could reach 2 to 4 inches from the central Plains into the southern Mid-Atlantic States. In contrast, mostly dry weather will prevail in the Great Lakes region and the south-central U.S. Farther west, showers will continue in the Great Basin, Southwest, and Intermountain West, with 5-day totals exceeding an inch in some areas. Elsewhere, heat will persist in the Northwest. The NWS 6-to 10-day outlook for August 12-16 calls for below-normal temperatures from the central Plains into the Midwest and Northeast, while hotter-than-normal conditions can be expected across the northern High Plains, Deep South, and much of the West. Meanwhile, near- to above-normal rainfall across the majority of the U.S. will contrast with drier-than-normal weather in southern Texas and from the Pacific Northwest to the northern High Plains.”

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

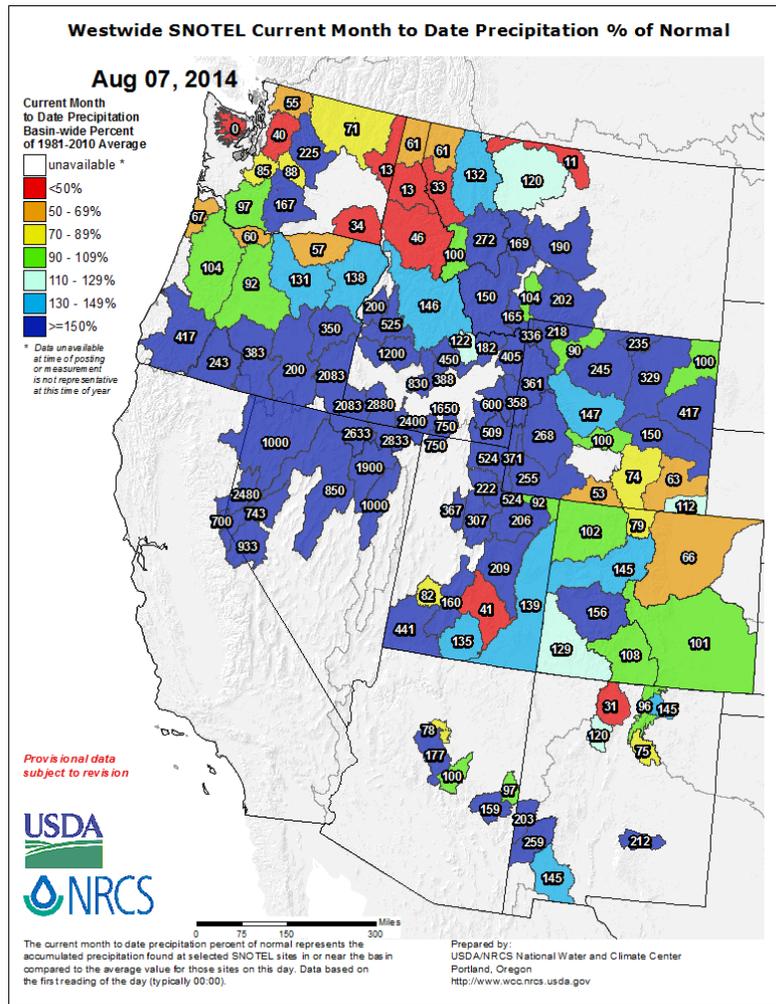
The Natural Resources Conservation Service provides leadership in a partnership effort to help people conserve, maintain, and improve our natural resources and environment

# Weekly Snowpack and Drought Monitor Update Report

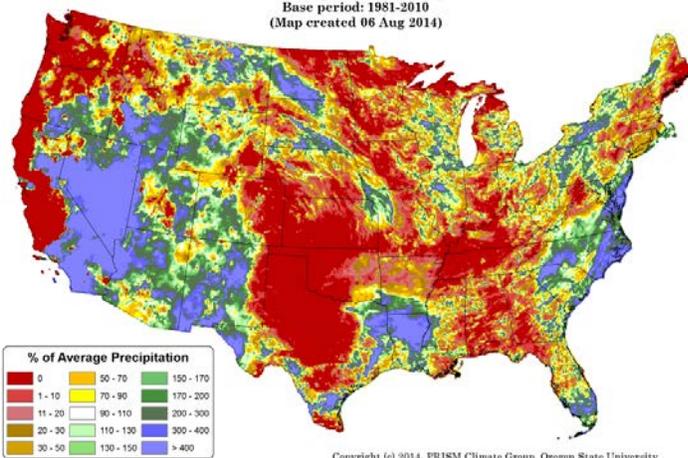
## Precipitation

The August 1 - 7 [SNOTEL](#) precipitation percent of normal map shows large percent of average precipitation in the central areas of the West, and a wide variety of conditions elsewhere. 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 - 05 August 2014**  
 Period ending 7 AM EST 05 Aug 2014  
 Base period: 1981-2010  
 (Map created 06 Aug 2014)



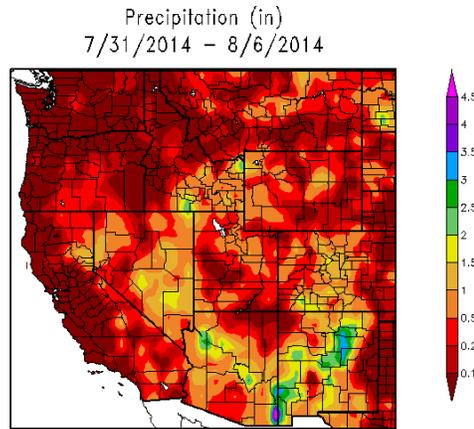
During the first few days of August 2014, the national [precipitation anomaly](#) pattern reveals some higher than normal precipitation across Nevada, southern California, the Southwest, Louisiana, Southern Florida and the mid-Atlantic. Much of the West, especially coastal and northern California, the Pacific Northwest, northern Texas, Oklahoma, and Kansas 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 the Southwest, California, Nevada through southern Idaho, and into Wyoming. Scattered thunderstorms and precipitation also occurred in the northern Rockies, the Southwest, the central and southern Rocky Mountains, and into the Great Plains.

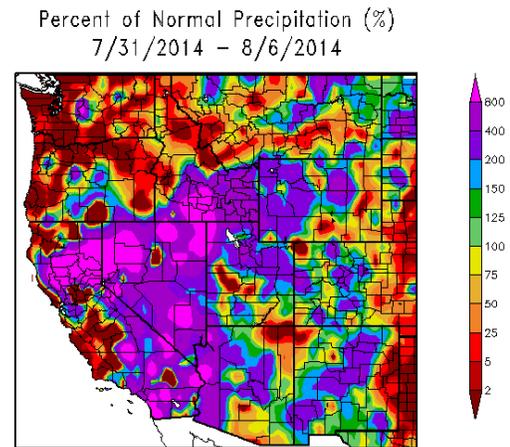
Little, if any, precipitation occurred over parts of the Northwest.



Generated 8/7/2014 at HPRCC using provisional data. Regional Climate Centers

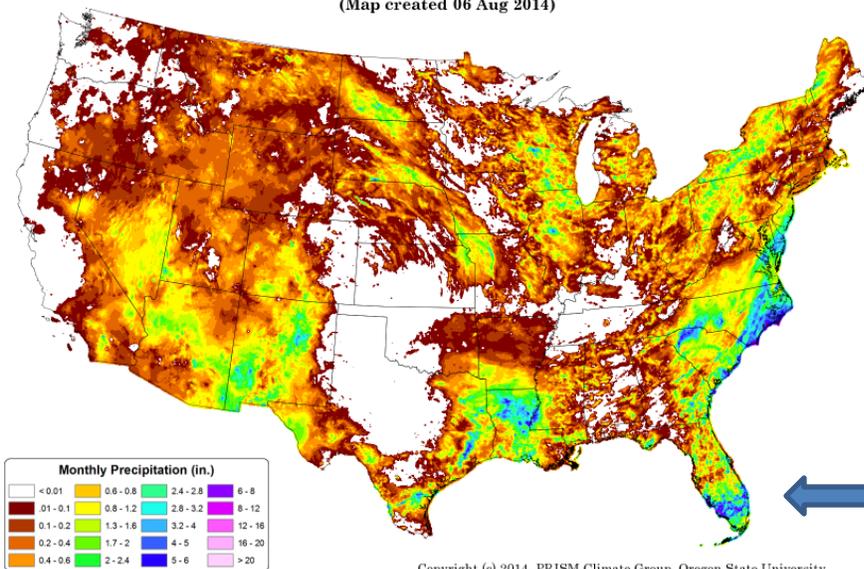
This percent of normal [map](#) of the West reflects the heaviest scattered precipitation falling across central and southern California, Nevada, southern Idaho, the central and southern Rocky Mountains, and the Southwest, with some scattered precipitation elsewhere in the West.

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



Generated 8/7/2014 at HPRCC using provisional data. Regional Climate Centers

**Total Precipitation: 01 August 2014 - 05 August 2014**  
 Period ending 7 AM EST 05 Aug 2014  
 (Map created 06 Aug 2014)



Monthly Precipitation (in.)			
<0.01	0.6-0.8	2.4-2.8	6-8
0.1-0.1	0.8-1.2	2.8-3.2	8-12
0.1-0.2	1.3-1.6	3.2-4	12-16
0.2-0.4	1.7-2	4-5	16-20
0.4-0.6	2-2.4	5-6	>20

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

In early August 2014, the total precipitation across the continental U.S. was heaviest in the Southwest, the mid-Atlantic, southern Florida, and central Louisiana. In contrast, the Pacific coast, and much of the central U.S. was mainly dry.

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

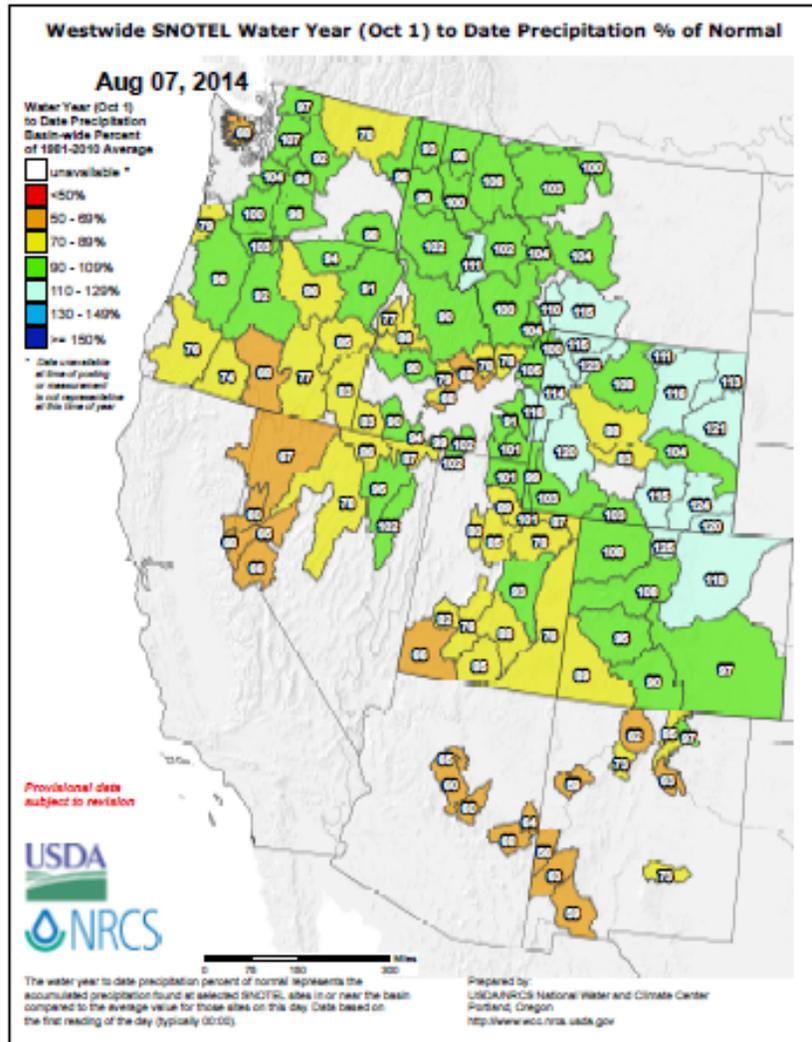
## Weekly Snowpack and Drought Monitor Update Report

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

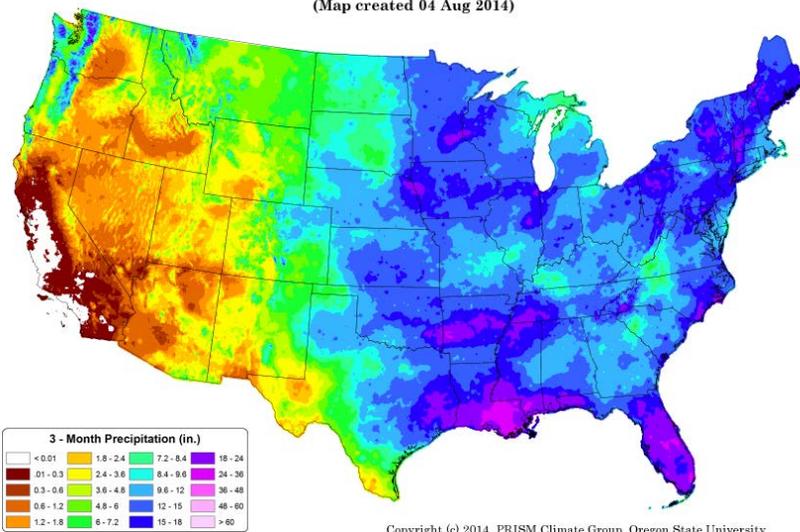
Near average conditions dominated the northern half of the Cascades, the northern half of Idaho, northwestern-most Montana, the lower Bear River in eastern Utah and southeast Idaho, and parts of the southern half of Colorado.

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 04 Aug 2014)



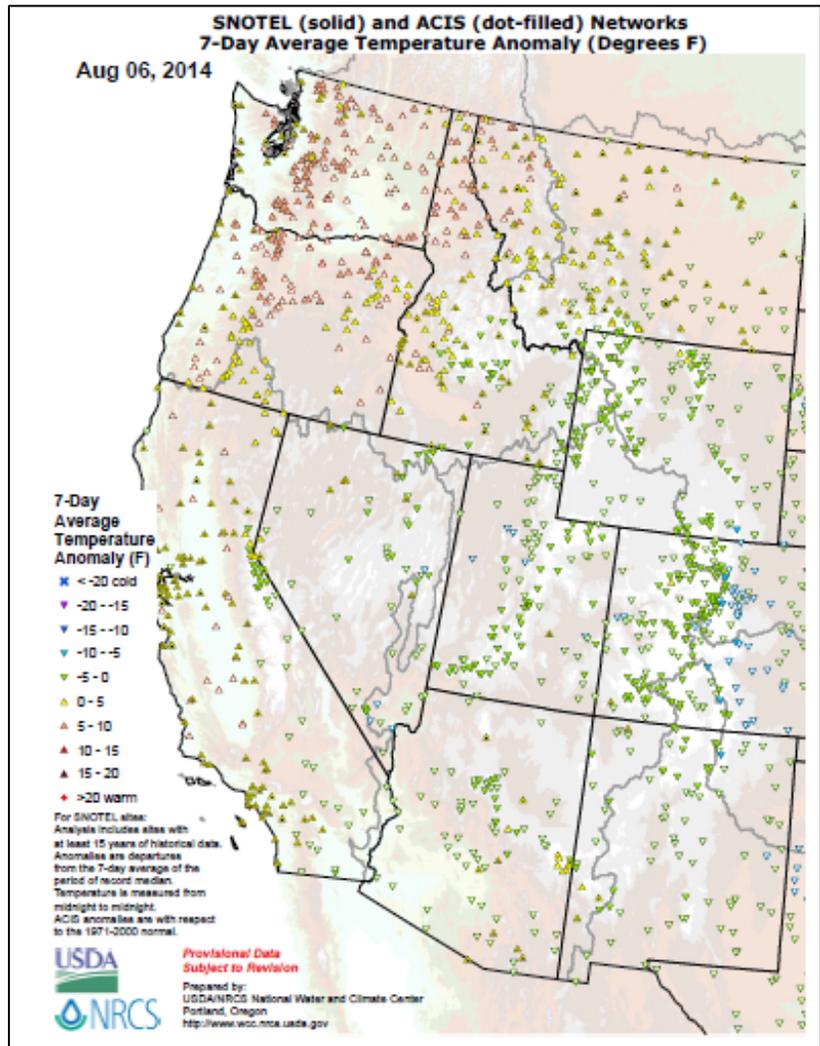
The national map of the [three-month period](#) (May - July) shows that the eastern half of the nation received precipitation in the range from 5 to greater than 36 inches along the Gulf Coast and Florida.

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.

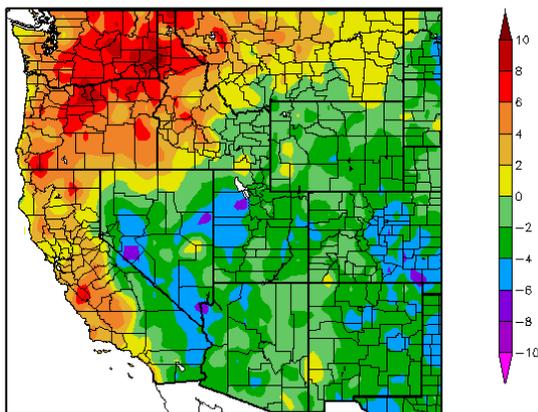
# Weekly Snowpack and Drought Monitor Update Report

## Temperature

The [SNOTEL](#) and ACIS [7-day temperature anomaly](#) map for the western U.S. shows temperatures above normal in the Pacific Northwest, northern Idaho, and Montana. Below normal temperatures occurred in Colorado, the Southwest, and a few locations in central Utah and eastern Nevada.



Departure from Normal Temperature (F)  
7/31/2014 – 8/6/2014



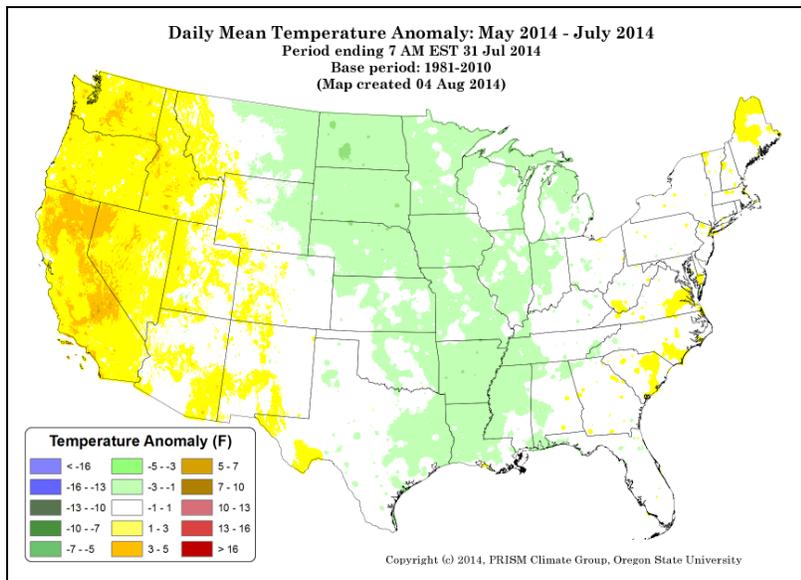
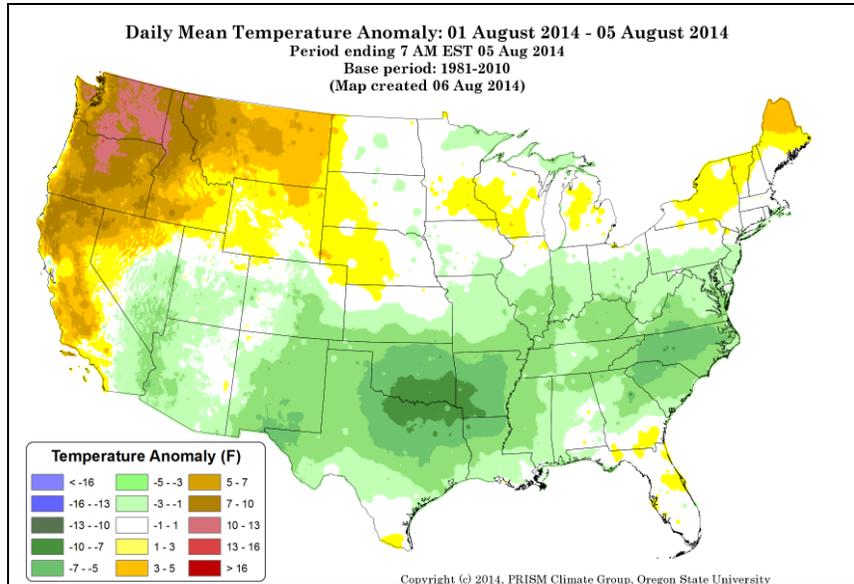
[ACIS](#) map of the 7-day average temperature anomalies in the West ending August 6, shows the greatest negative temperature departures scattered over the Southwest and Nevada ( $<-6^{\circ}\text{F}$ ). The greatest positive temperature departures occurred in eastern Washington ( $>+8^{\circ}\text{F}$ ).

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 the first few days of August, the national temperature anomaly [map](#) shows a cold pattern over the southern Great Plains ( $< -7^{\circ}\text{F}$ ). Above normal temperatures dominated the West, centered in eastern Washington and the Columbia River Basin ( $> +10^{\circ}\text{F}$ ). Northern New England also experienced warm temperatures ( $> +3^{\circ}\text{F}$ ).



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

# Weekly Snowpack and Drought Monitor Update Report

## Weather and Drought Summary

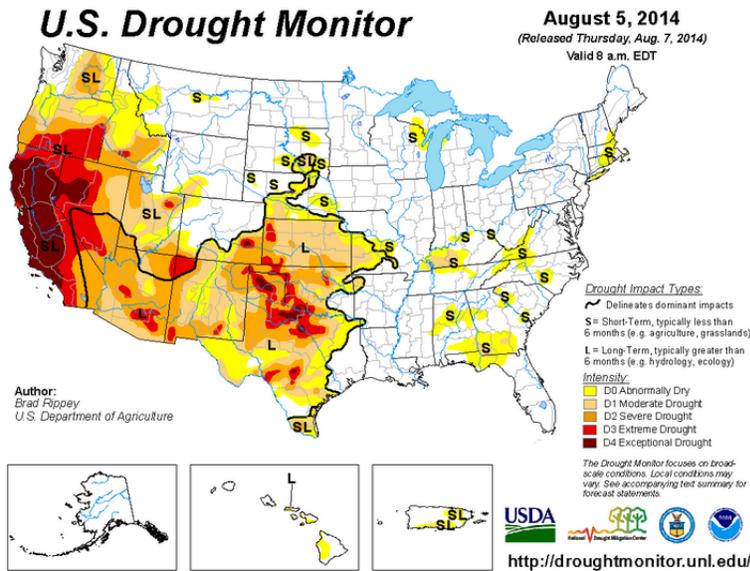
### National Drought Summary – August 5, 2014

The following **Weather and Drought Summary** is provided by this week's NDMC Drought Author, Brad Rippey, USDA.

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

“For the contiguous 48 states, the U.S. Drought Monitor showed 33.94 percent of the area in moderate drought or worse, compared with 34.06 percent a week earlier.

For all 50 U.S. states and Puerto Rico, the U.S. Drought Monitor showed 28.36 percent of the area in moderate drought or worse, compared with 28.47 percent a week earlier.”



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

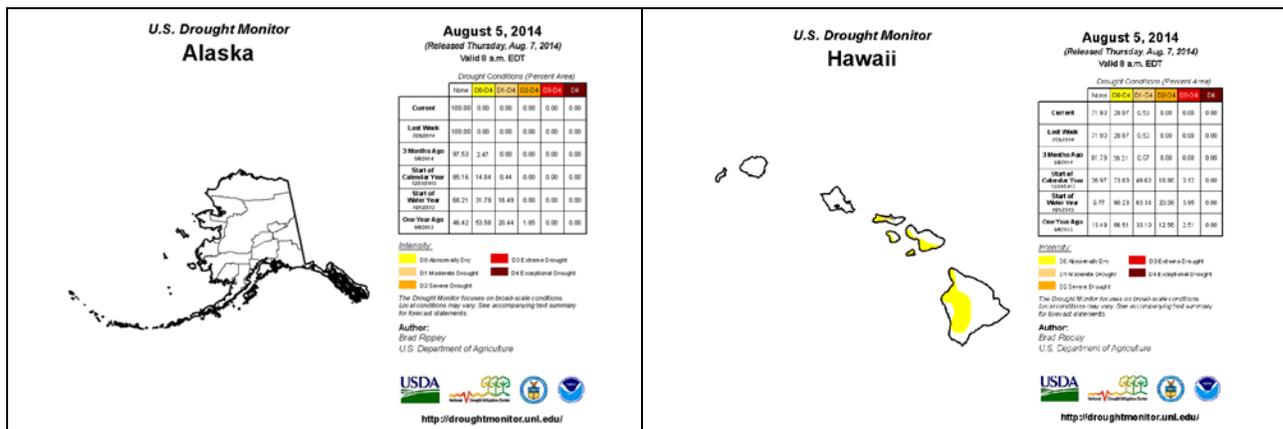
[Current Drought Monitor](#) weekly summary. The exceptional D4 levels of drought are scattered across CA, NV, CO, TX, OK, and NM.

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

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:

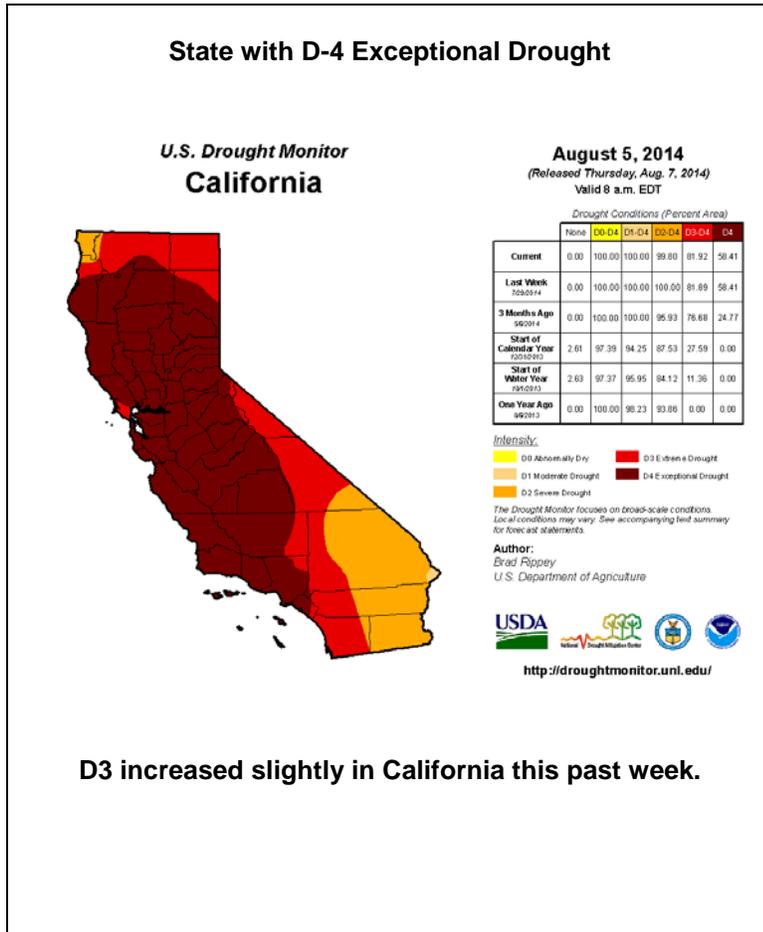
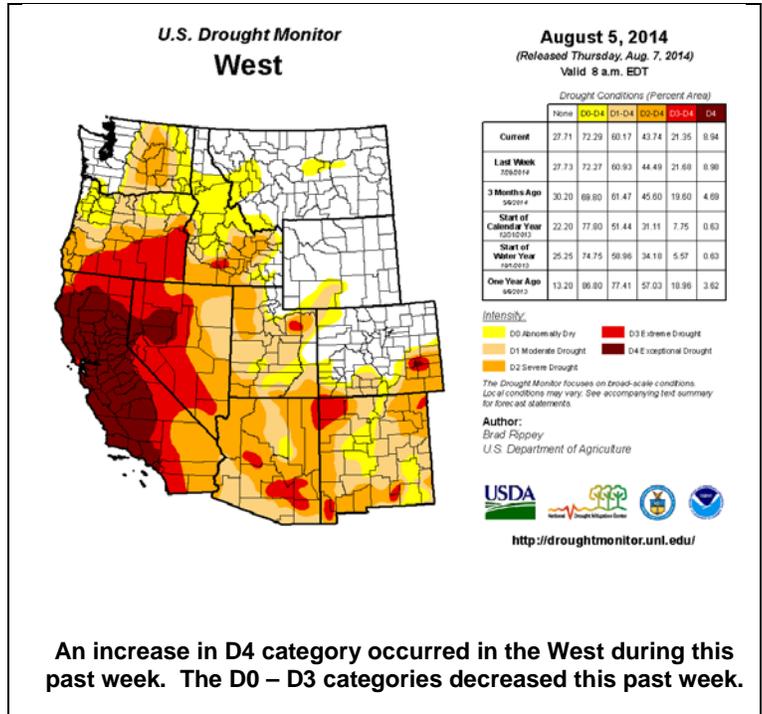
WI - [Cargill to close Milwaukee beef plant](#) – July 30

KY - [Dry weather hurts potential yield for some farmers](#) – Aug 1

WA - [Heat toughens wildfire battle](#) – July 29

[Deal struck to conserve Colorado River basin](#) - Aug 1

[Click to enlarge maps](#)



## CA Drought Information Resources

### Drought News from California:

[California drought: As land sinks, farmers' brainstorm on water](#) – July 26

[California Farms Rush to Sink Wells as Record Drought Escalates](#) – Aug 1

[Drought Devastating California's Cattle Herd](#) – Aug 1

[Crews make slow progress on Yosemite fire as chance of rain increases](#) – July 28

[Weather aids firefighters battling large Sierra blazes](#) – July 31

[North American waterfowl are newest casualty of California's drought](#) – July 30

[California can't say if it's meeting drought goal](#) – July 26

[Drought making this worst year for West Nile virus](#) – July 25

[Drought cancels Sacramento's Gold Rush Days](#) – July 28

# Weekly Snowpack and Drought Monitor Update Report

## State with D-4 Exceptional Drought

**U.S. Drought Monitor  
Colorado**

**August 5, 2014**  
(Released Thursday, Aug. 7, 2014)  
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	59.92	40.08	26.96	15.52	2.67	0.52
<b>Last Week (2014)</b>	59.92	40.08	27.03	15.55	3.18	0.92
<b>3 Months Ago (2014)</b>	36.40	63.60	31.93	18.85	8.30	1.89
<b>Start of Calendar Year (2014)</b>	32.04	67.96	22.33	13.56	4.01	1.47
<b>Start of Water Year (2013)</b>	24.91	75.09	37.88	12.01	4.01	1.47
<b>One Year Ago (2013)</b>	0.00	100.00	93.43	71.62	27.18	8.18

**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:**  
Brad Rippey  
U.S. Department of Agriculture

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

## News From Colorado:

[Heavy rain and flooding in drought-stricken SE Colorado](#) – Aug 6

[Farmers On Colorado's Plains Work Through Modern Day Dust Bowl](#) – Aug 1

**Reductions in the D1 – D4 category occurred this past week.**

- Texas Drought [Website](#).
- [Texas Reservoirs](#).
- [Texas Drought Monitor Coordination Conference Call](#): on Monday's 2:00 PM - 3:00 PM CST
- [Corpus Christi enforces stricter drought rules](#) – July 28
- [LCRA cracking down on water use violators](#) – July 28
- [July '14 Results in 348% of Normal Rainfall in Wichita Falls](#) – Aug 1

## State with D-4 Exceptional Drought

**U.S. Drought Monitor  
Texas**

**August 5, 2014**  
(Released Thursday, Aug. 7, 2014)  
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	17.20	82.80	50.88	35.52	13.67	2.85
<b>Last Week (2014)</b>	15.95	84.05	68.16	32.98	14.29	2.94
<b>3 Months Ago (2014)</b>	5.11	94.89	83.25	65.13	46.17	21.26
<b>Start of Calendar Year (2014)</b>	28.48	71.52	43.84	21.15	5.02	0.79
<b>Start of Water Year (2013)</b>	6.62	93.38	70.95	25.68	4.01	0.13
<b>One Year Ago (2013)</b>	1.72	98.28	89.38	67.69	25.63	5.24

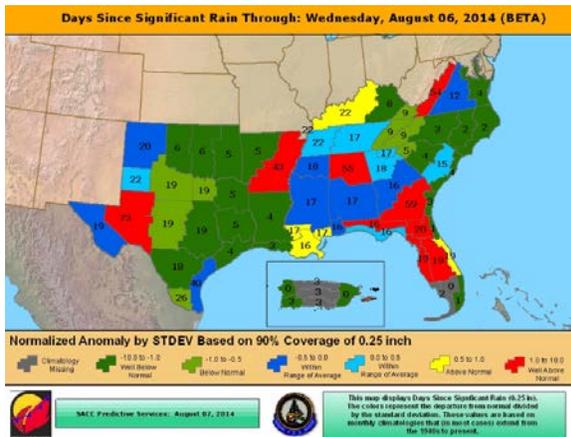
**Intensity:**  
■ D0 Abnormally Dry     ■ D3 Extreme Drought  
■ D1 Moderate Drought     ■ D4 Exceptional Drought  
■ D2 Severe Drought

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

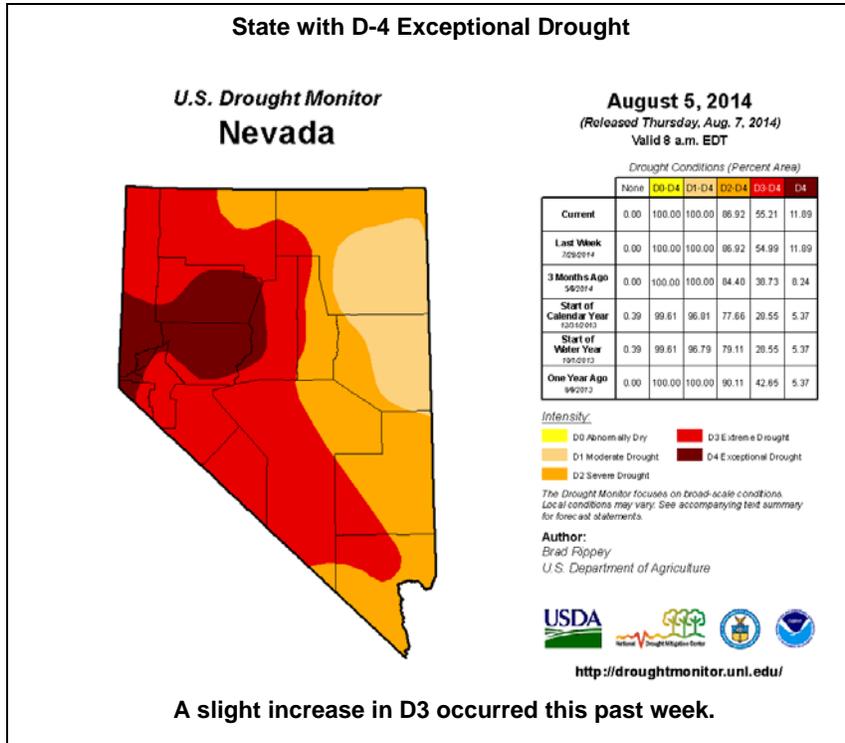
**Author:**  
Brad Rippey  
U.S. Department of Agriculture

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

**Decrease in D3 – D4 drought categories occurred this past week. An increase in D1 – D2 occurred this past week. D1 decreased this past week.**



# Weekly Snowpack and Drought Monitor Update Report



## Nevada Drought News:

[Low water levels taking toll on Lake Tahoe rec businesses](#) – July 22

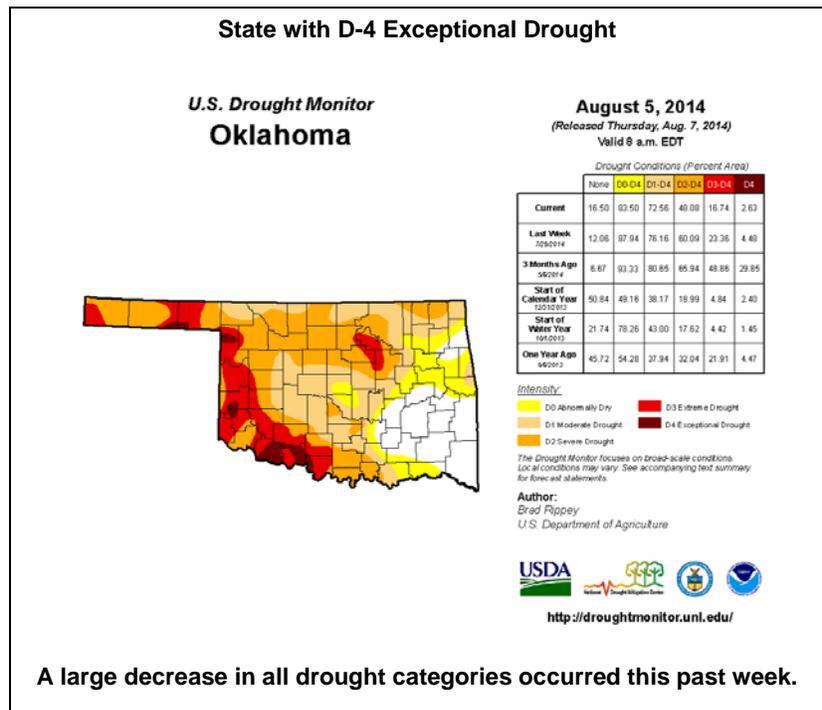
[Drought Shuts Hydro Power Generation](#) – July 30

## 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](#)

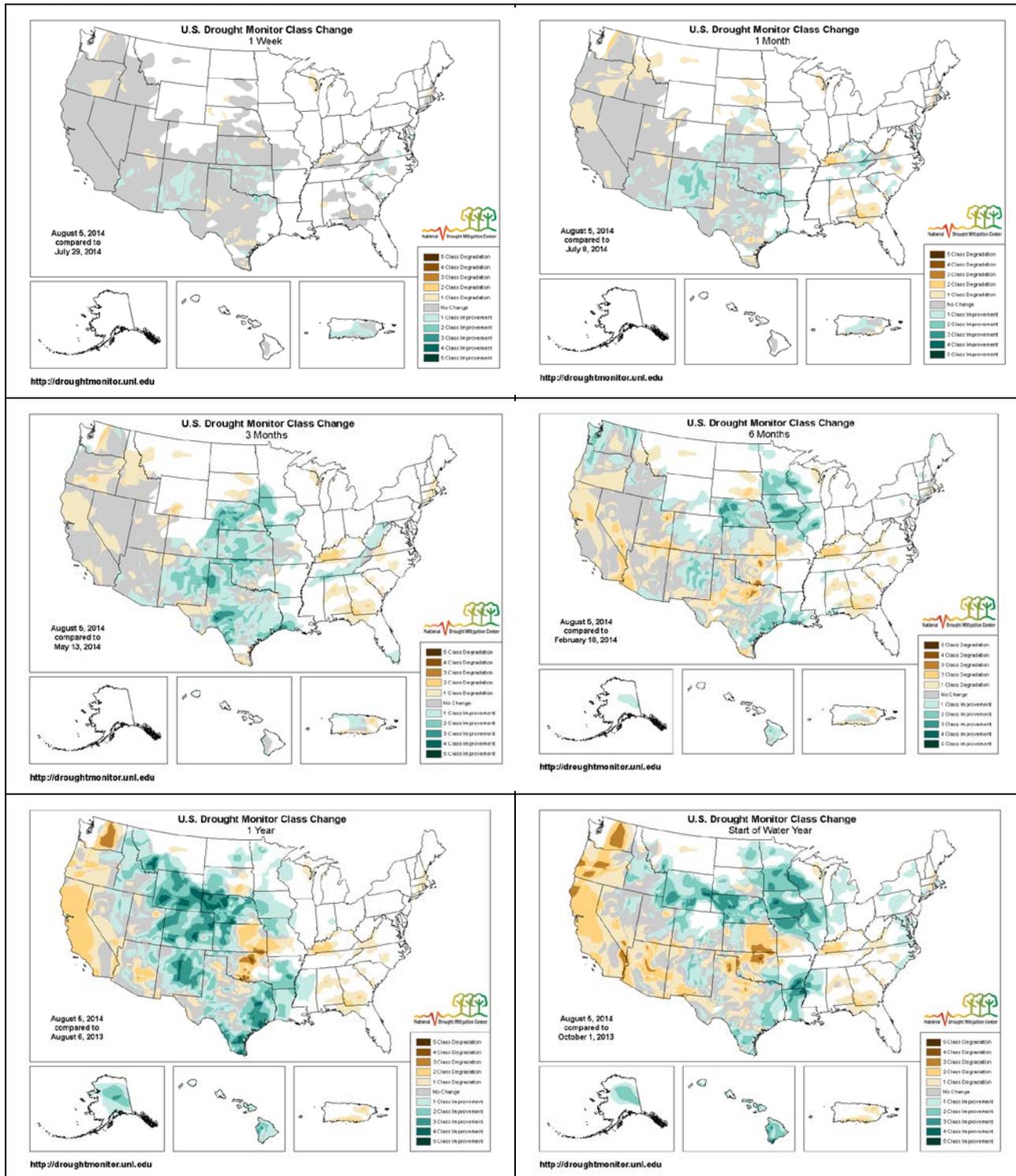
[Chipping away at the drought](#) – July 22



# Weekly Snowpack and Drought Monitor Update Report

## Changes in Drought Monitor Categories

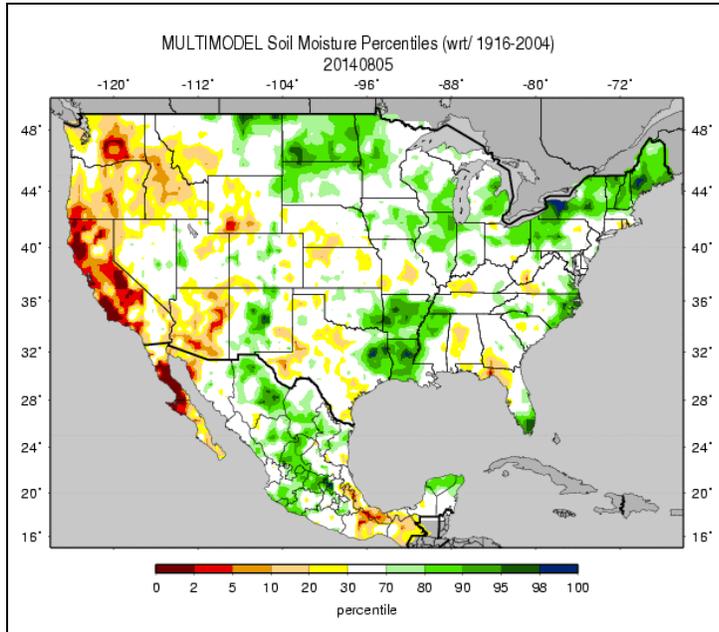
### Over Various Time Periods



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

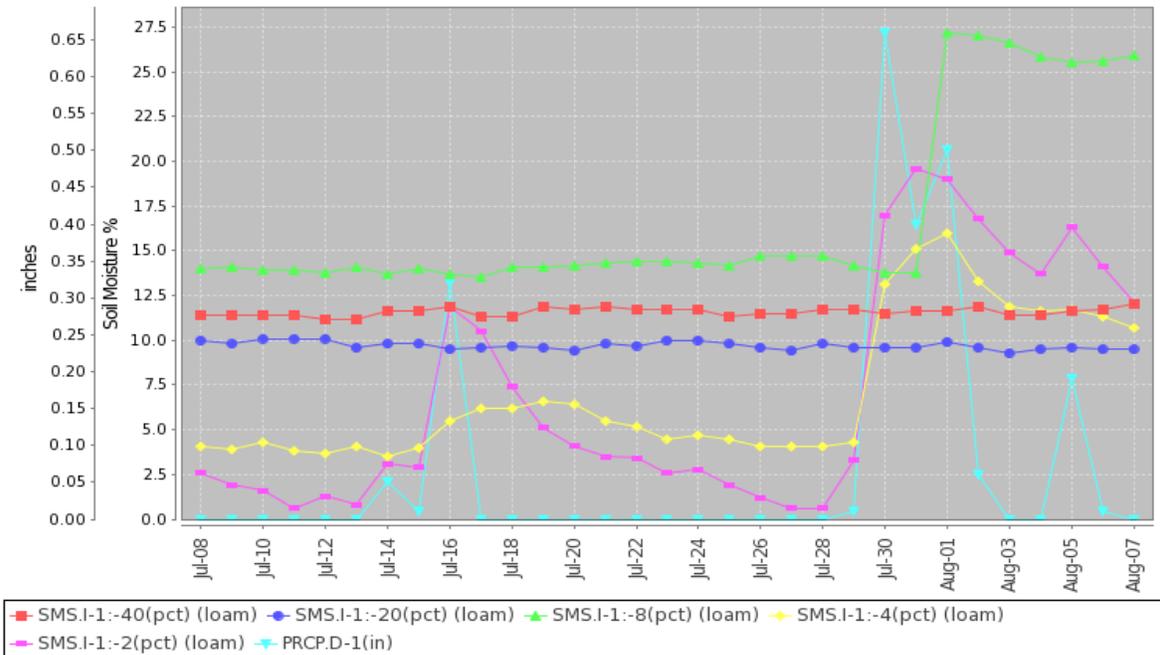


The national soil moisture model ranking in [percentile](#) as of August 5 shows dryness over California, Arizona, Washington, Oregon, Idaho, and southwest Wyoming. Scattered dryness was also reported in other areas west of the Rockies. Very moist soils dominated eastern Montana to the Great Lakes, where the wettest locations were centered in western Minnesota, and parts of the Dakotas, Wisconsin, Illinois, and Iowa. The soils in the lower Mississippi River Basin and parts of the New England 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 (2171) MONTH=2014-07-08 (Daily) NRCS National Water and Climate Center - Provisional Data - subject to revision Thu Aug 07 05:15:52 PDT 2014

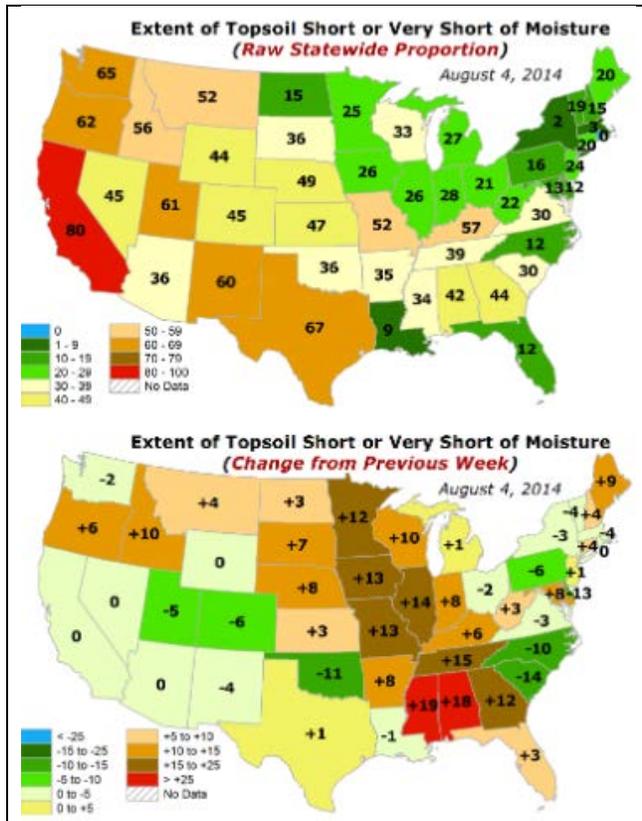


This NRCS resource shows soil moisture data at the [Sevilleta SCAN station](#) (2171) located in central New Mexico. Note the rapid increase in soil moisture in the 2-inch and 4-inch upper soil layers because of the recent monsoon precipitation in the area (precipitation trace in light blue). Recently, the August 1 precipitation has also increased the 8-inch depth soil moisture, while the deeper soil sensors at 20 and 40 inches depth (blue and red traces) don't show an increase 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](#).

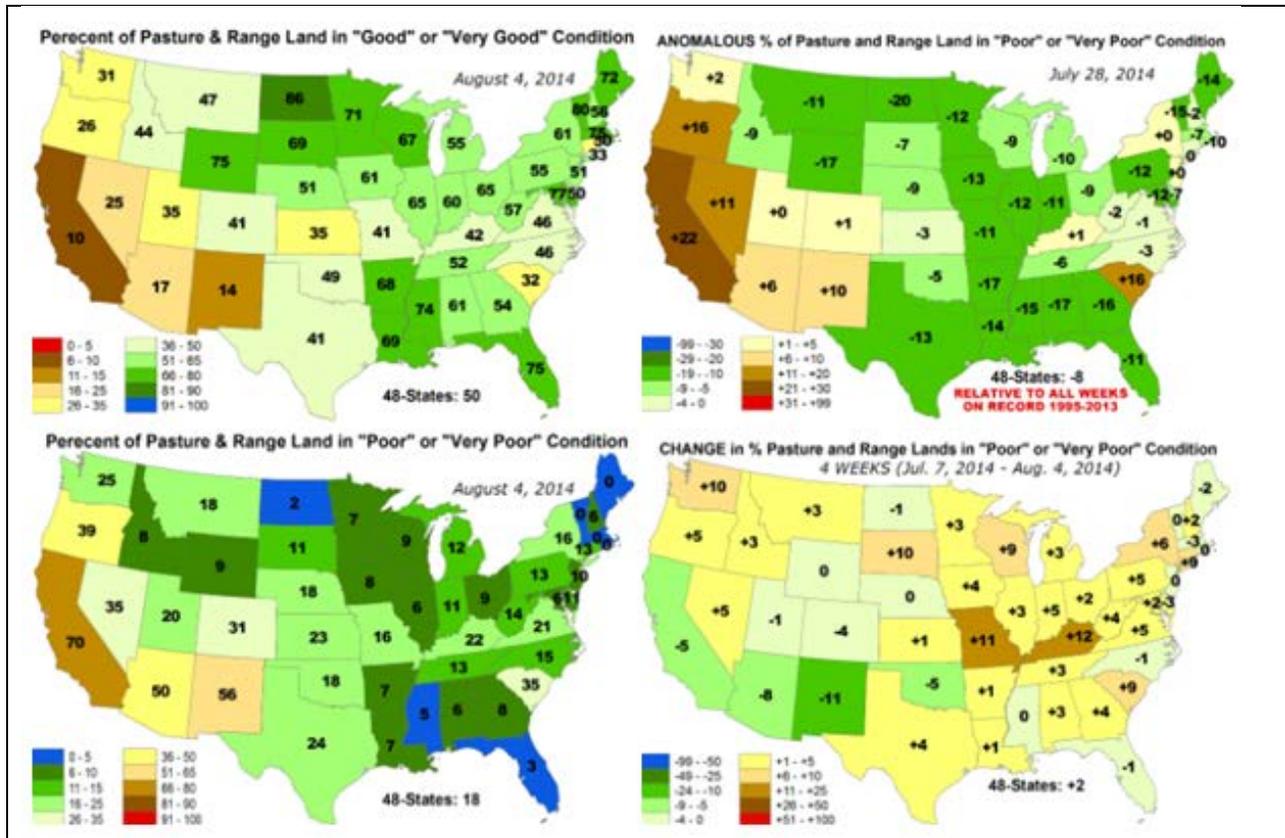
# Weekly Snowpack and Drought Monitor Update Report

## Topsoil and Pasture & Rangeland National Conditions



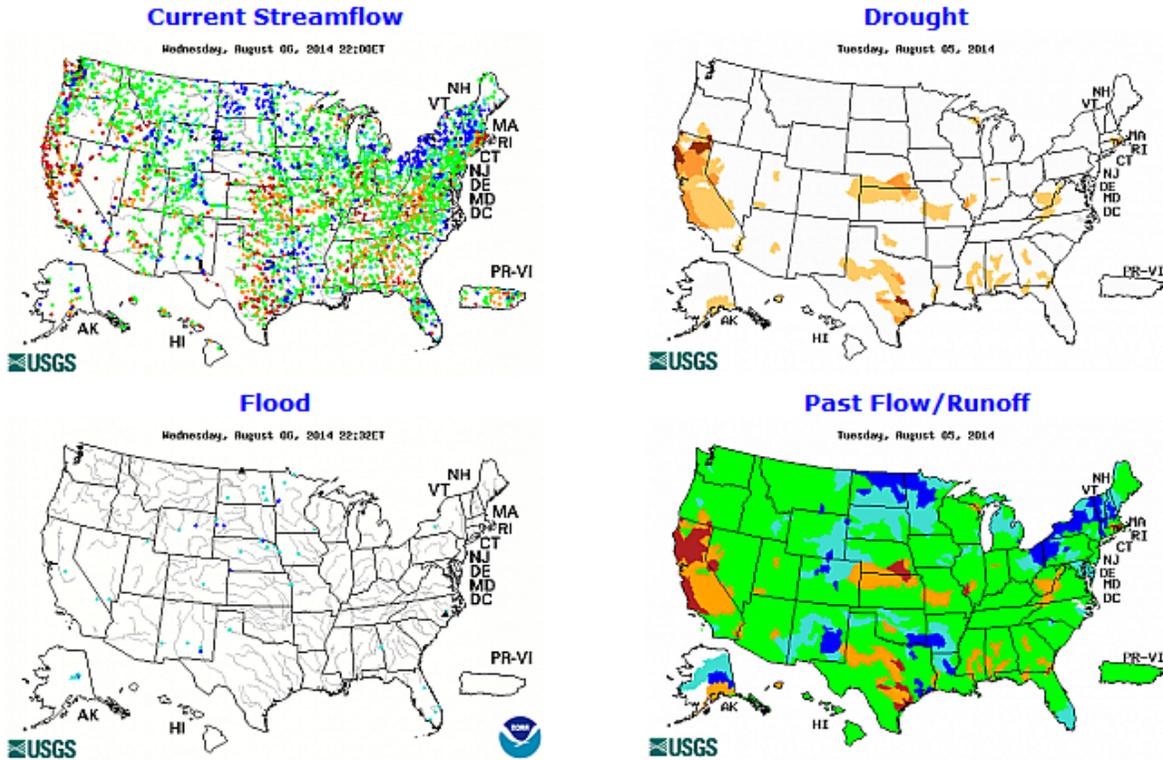
☞ Topsoils are exceptionally poor (top) over Texas, New Mexico, California, Utah, Oregon, and Washington with values representing more than 60 percent poorer conditions than the median for this time of year (bottom panel). Locations in the northern Great Plains across to New England, Louisiana, and Florida 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 stressed over California, the Great Basin, and the Southwest. Conditions have improved in the Southwest over this past week.



# Weekly Snowpack and Drought Monitor Update Report

## Streamflow



The streams are high over much of the Mississippi River Basin, the central Rockies, southern New Mexico, Florida, and the Northeast due to recent precipitation (left maps). Central Alaska is also reporting some high streamflow. Flooding is occurring along the Souris River in North Dakota, and the Northeast Cape Fear River in North Carolina where the rivers are above flood stage (lower left map).

## National Long-Range Outlook



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; **1** gage for moderate flooding; and **14** gages for minor flooding.

These numbers represent no change in the number of gages since last week.

Click maps to enlarge and update

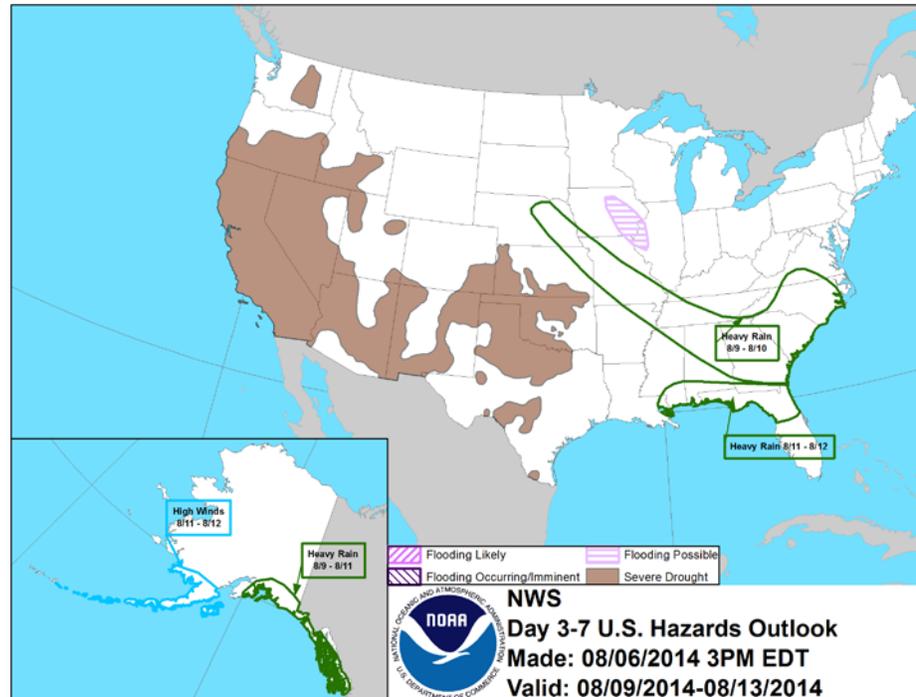
Currently the Upper Midwest part of the map has not been calculated for the long range flood outlook (dark gray dots).

## Weekly Snowpack and Drought Monitor Update Report

### National [Weather hazards](#)

Heavy rain is expected in the coming week from Nebraska to Florida and in southern and Southeast Alaska. High winds are expected in western Alaska and over the Aleutian Islands.

Flooding is also likely over Iowa and Illinois in the upper Mississippi River.



### [National Drought Summary for July 29, 2014](#)

Prepared by the Drought Monitor Author: Brad Rippey, USDA

#### Summary

“A vigorous monsoon circulation led to heavy rain (locally 2 inches or more) in parts of Arizona and the central and southern Rockies. The rain provided some drought relief, benefited rangeland and pastures, and eased irrigation demands. At times, showers spread as far west as California, resulting in some rare, locally heavy summer rainfall but having little overall impact on the state’s 3-year drought. Moisture also spilled across portions of the central and southern Plains, where interaction with a cold front led to copious rainfall (2 to 6 inches) in Oklahoma and environs. Rainfall totals were much lighter, however, across the majority of Texas. Farther north, however, only isolated showers interrupted an otherwise dry pattern from the Pacific Coast to the northern Plains and western Corn Belt. Despite a July drying trend, many Midwestern crops continued to thrive due to moderate temperatures and adequate subsoil moisture reserves. On August 3, USDA rated nearly three-quarters of the U.S. corn (73%) and soybeans (71%) in good to excellent condition—the highest such ratings this late in the season since 2004. In stark contrast, the return of extremely hot weather to the interior Northwest maintained stress on rangeland, pastures, and rain-fed crops. Elsewhere, locally heavy showers peppered the East, although amounts were highly variable. Some of the heaviest rain fell in the southern Mid-Atlantic States, helping to ease the effects of short-term dryness.

#### California

A strange thing happened on the path to California’s historic drought: it rained. Although the rain’s overall effect on the drought were inconsequential, there were some short-term benefits such as reduced irrigation demands and evaporation rates; lower temperatures in the wake of record-setting heat; and temporary relief for drought-stressed rangeland and pastures. Reasons that California’s rain did not provide substantial drought relief included: 1) a lack of widespread coverage of the heaviest showers, 2) the fact that heavy showers mostly fell outside California’s key watershed areas in the Colorado River basin and the Sierra Nevada, and 3) the fact that the high runoff rate of the heaviest rain did not allow for significant percolation into drought-parched soils. Nevertheless, intense rainfall on August 3 led to memorable

## Weekly Snowpack and Drought Monitor Update Report

flooding on the slopes of Mt. Baldy in southern California. Selected daily-record rainfall totals in California on August 3 included 0.49 inch in Needles and 0.07 inch in Long Beach. Scattered showers were reported in other parts of California on various days. Despite the cooler weather and showers, California's rangeland condition remained steady (70% very poor to poor on August 3). Similarly, topsoil moisture (80% very short to short) and subsoil moisture (85% very short to short) were unchanged from the previous week. Across the northern tier of California, several wildfires—including the 30,000- to 40,000-acre Eiler and Bald fires—remained active in early August.

### Hawaii and Puerto Rico

There were no changes in Hawaii's coverage of dryness (D0), which persisted in some leeward locations from Molokai to the Big Island. In addition, a small patch of moderate drought (D1) remained on Molokai. Meanwhile in the Atlantic Basin, Tropical Storm Bertha—later a hurricane—passed near the southwestern tip of Puerto Rico on August 2. Bertha produced heavy rain, locally 6 to 10 inches or more, across the southern slopes of central Puerto Rico, with lighter amounts noted elsewhere on the island. As a result, there was a reduction in Puerto Rico's coverage of abnormal dryness (D0) and moderate drought (D1). Despite Bertha's rain, precipitation deficits still existed across parts of Puerto Rico at various time scales. In San Juan, rainfall from June 1 – August 5 totaled 6.01 inches (59 percent of normal), despite 1.67 inches of rain during the first 5 days of August.

### Northeast

Another week of sub-par rainfall along much of the northern Atlantic Coast led to a slight expansion of abnormal dryness (D0), mainly in central Massachusetts. On Long Island, rainfall in Islip, New York, from June 1 – August 5 totaled just 5.21 inches (63% of normal).

### Northern Plains and Midwest

Spotty showers accompanied below-normal temperatures across the northern Plains and Midwest. Due to persistently cool weather and a lack of heat stress, impacts from short-term dryness have been slow to emerge. Nevertheless, there was some minor expansion of abnormal dryness (D0) and moderate drought (D1) in the southwestern Corn Belt, while a new region of D0 was introduced in northeastern Wisconsin and northwestern Michigan. From June 1 – August 5, rainfall in Traverse City, Michigan, totaled 4.77 inches (71% of normal). Similarly, Green Bay, Wisconsin, netted a June 1 – August 5 total of just 5.29 inches (67% of normal). In Wisconsin, USDA reports indicated that “dry soil conditions and a lack of heat units were keeping corn development behind normal, especially for late-planted fields.” Reports from Michigan echoed those comments: “cool, dry weather in most regions has been a challenge [with respect] to crop development.” In Nebraska, “another week of only scattered rainfall stressed dryland crops and pastures, [while] irrigation continued non-stop in many areas.” North Platte, Nebraska, completed its driest July on record, with rainfall totaling just 0.14 inch (5% of normal). Previously, North Platte's driest July had occurred in 1901, when 0.34 inch fell. By August 3, topsoil moisture was rated at least one-third very short to short in Missouri (52%), Montana (52%), Nebraska (49%), South Dakota (36%), and Wisconsin (33%). On the same date, nearly one-fifth of the rangeland and pastures were rated very poor to poor in Montana and Nebraska—both at 18%.

### Northwest

Record-setting heat returned to the interior Northwest, leading to some further increases in drought coverage—mainly in Washington and Oregon. In Washington, Omak posted consecutive daily-record highs (105 and 104°F, respectively) on July 29-30, followed by another record setting high of 100°F on August 2. Wenatchee, WA, also notched a pair of daily-record highs (105 and 103°F, respectively) on July 29-30. Other triple-digit, daily-record highs on July 29 included 105°F in Yakima, WA, and 104°F in Pendleton, OR. Effects of heat and drought were apparent on rangeland, pastures, and rain-fed summer crops. For example, 35% of Washington's spring wheat crop was rated in very poor to poor condition on August 3, according to USDA. On the same date, 39% of Oregon's rangeland and pastures were rated very poor to poor. And, topsoil moisture was rated more than half very short to short in Washington (65%), Oregon (62%), and Idaho (56%).

### Southeast

Very heavy rain in portions of the southern Mid-Atlantic States contrasted with mostly dry conditions farther west. Several spots of abnormal dryness (D0) were eliminated, and others were reduced in size. On July 31 – August 1, rainfall totaled 4.90 inches in Greenville-Spartanburg (GSP), South Carolina. During the

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preceding 30 days, from July 1-30, GSP's rainfall had totaled 3.79 inches (82% of normal). Meanwhile in eastern North Carolina, August 1-5 rainfall topped 5 inches in locations such as Beaufort (6.62 inches) and Cape Hatteras (5.08 inches). As a result, topsoil moisture improved significantly in rain-soaked areas. For example, North Carolina's topsoil moisture rated very short to short, which had been 22% on July 27, improved to 12% by August 3.

However, dryness (D0) and drought (D1) expanded in several areas, particularly in parts of Kentucky, Alabama, Georgia, and northern Florida. A new region of moderate drought (D1) was introduced in an area centered on southwestern Georgia. With a monthly rainfall of 2.33 inches (32 percent of normal), Tallahassee, Florida, experienced its driest July since 1918, when a record-low total of 1.28 inches occurred. Alma, Georgia, received a monthly sum of 0.41 inch (8% of normal), breaking its July 2006 record of 0.77 inch. By August 3, topsoil moisture was rated 57% very short to short in Kentucky, along with 44% in Georgia and 42% in Alabama. South Carolina topped the Southeast with 35% of its pastures rated in very poor to poor condition on August 3—although that represented a 10 percentage point improvement from the previous week.

### Southern Plains

Heavy rain swept across Oklahoma and environs on July 30-31, resulting in modest reductions in drought intensity and coverage. A stripe of 2- to 6-inch rainfall totals stretched across southeastern Colorado, southwestern Kansas, central and eastern Oklahoma, and northeastern Texas, with official, 2-day totals reaching 5.18 inches in McAlester, Oklahoma; 4.02 inches in Paris, Texas; and 2.18 inches in Medicine Lodge, Kansas. Oklahoma's topsoil moisture was rated 36% very short to short on August 3, an improvement from 47% the previous week. However, the effects of a multi-year drought were still apparent in the fact that, on August 3, subsoil moisture was rated 59% very short to short in Oklahoma, along with 52% in both Colorado and Kansas.

Aside from some heavy showers in northern and eastern Texas, significant rainfall largely bypassed the Lone Star State in late July and early August. As a result, both topsoil and subsoil moisture was rated 67% very short to short on August 3, according to USDA. Several degradations in the drought depiction were introduced in Texas, while USDA reported that rangeland and pasture "conditions began to deteriorate in areas of Edwards Plateau due to dry weather." In addition, some producers in southern Texas "began to provide supplemental feed."

### Southwest

Locally heavy showers associated with the monsoon circulation continued to pepper the Great Basin, Intermountain West, and Southwest, resulting in further improvements to the drought depiction where significant rain fell. Many of the improvements were concentrated across New Mexico, as well as portions of west-central and southeastern Arizona. On August 3, rangeland and pastures were rated 56% very poor to poor in New Mexico and 50% very poor to poor in Arizona. However, those numbers represented improvements from 65 and 56%, respectively, from the previous week. Shower activity continued to bypass many areas in Utah, which topped the Southwestern States on August 3 with 61% of its topsoil moisture rated very short to short. In northeastern Arizona, rain also continued to skirt much of the Navajo Nation and the Hopi Indian Reservation, leading to an increase in the coverage of severe drought (D2).

### Looking Ahead

From August 7 – 11, showery weather will gradually shift from the north-central U.S. into the Southeast. Five-day rainfall totals could reach 2 to 4 inches from the southwestern Corn Belt to the Carolinas. Meanwhile, mostly dry weather will prevail across the Great Lakes region and the southern Plains, although generally cool weather in the Midwest will contrast with hot conditions in the south-central U.S. Farther west, monsoon showers will be mostly confined to the northern Intermountain region, although a new surge of moisture may reach the Southwest during the next few days. In Hawaii, the remnants of Hurricane Iselle will pass over or very close to the Big Island during the night of August 7-8. Iselle, expected to be a tropical storm upon reaching the Big Island, could result in torrential rainfall and gusty winds. Effects from Iselle may also reach some of the other Hawaiian Islands, mainly on August 8.

The NWS 6- to 10-day outlook for August 12 – 16 calls for the likelihood of below-normal temperatures from the central Plains into the Midwest and Northeast, while hotter-than-normal conditions can be expected across the northern High Plains, Deep South, and much of the West. Meanwhile, near- to above-normal rainfall across the majority of the U.S. will contrast with the likelihood of drier-than-normal weather in southern Texas and from the Pacific Northwest to the northern High Plains."

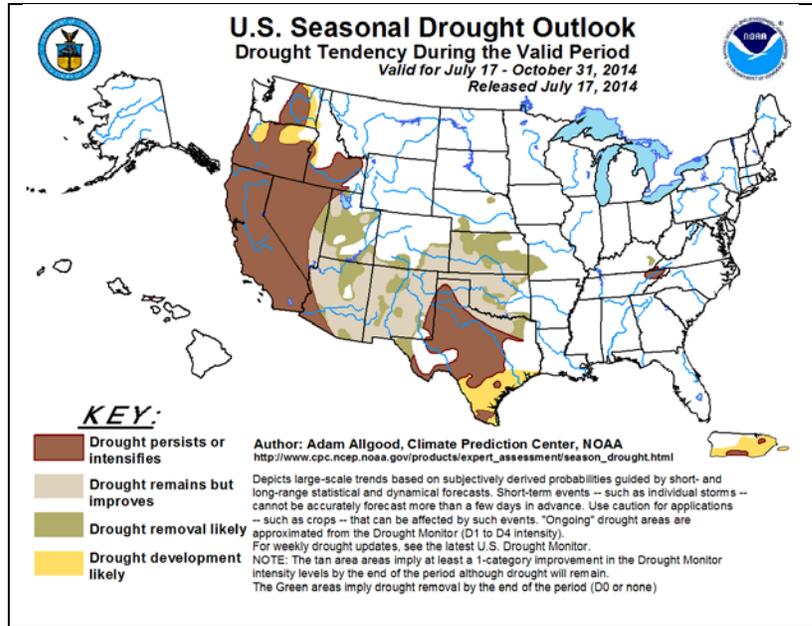
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## Supplemental Drought Information

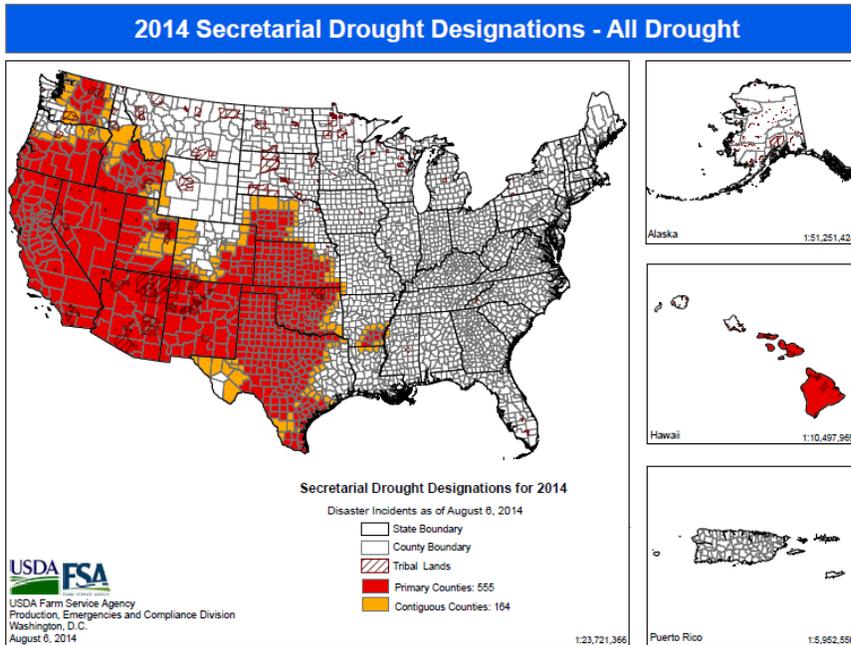
### National Seasonal Drought Outlook

[Drought](#) is expected to persist over much of the West and the southern Great Plains. Improvements are expected from the Southwest to the central Great Plains.

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



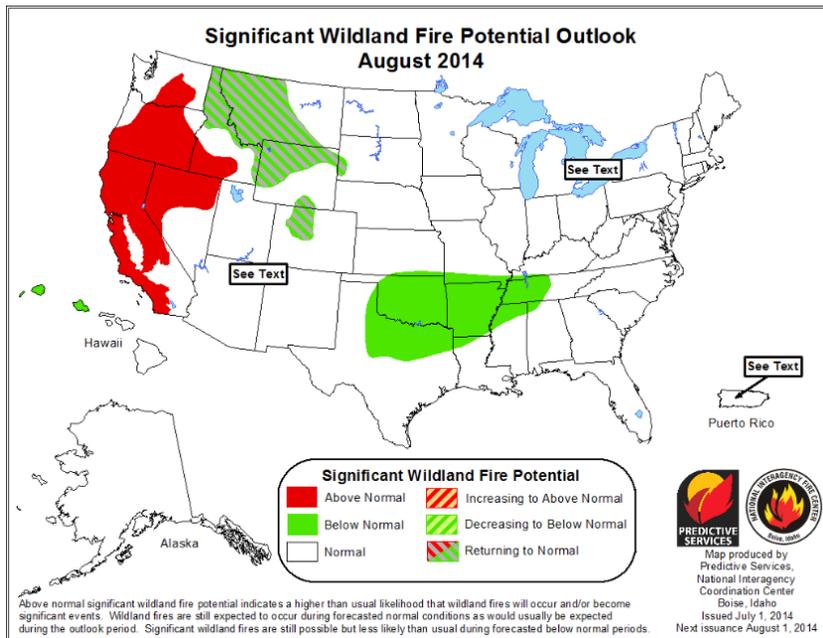
Refer to the USDA Drought Assistance [website](#) and [National Sustainable Agriculture Information Service](#).

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 Idaho. 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.

Florida and the Southeast have returned to normal fire potential.

### 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.

#### “Records of water use in California

Few California state agencies could produce records of water use when the Associated Press requested them recently, leaving the rate of actual water conservation unknown for state agencies. The AP asked the 11 agencies and departments that use the most water to compare water use for the first half of 2014 with last year's, but only four were able to locate the data for buildings they manage, and in some cases, took weeks to round up the data. This unfulfilled data request highlights one of the state's challenges in managing its water supply.

#### Additional assistance for Californians with dry wells

The U.S. Department of Agriculture announced \$9.7 million in additional drought relief for rural Californians in 11 counties to help with dry wells and other water sources. The Obama administration has given more than \$50 million in drought assistance.

#### Cooperation to prevent more subsidence in Merced County, California

Excessive groundwater pumping and resulting land subsidence has two Merced County men, a farmer and the general manager of San Luis Canal Co., working together and recruiting area farmers to create

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solutions that prevent additional subsidence and still meet water needs. Some mitigative efforts could include absorbing more rainwater in fallow fields for storage underground, storing floodwater, using highly efficient irrigation methods, lobbying for new reservoirs and possibly pushing for regulating California groundwater.

### **Level of Lake Tahoe causing propeller damage, restricting movement of sailboats into marina**

The dropping level of Lake Tahoe has exposed obstacles that are nearer to the water's surface and are damaging boat propellers. Some sailboats cannot go into the marina. Sand Harbor's boat ramp on Tahoe's East Shore closed for the rest of the season on July 28. The parking lot will stay open for boats that can be carried to the water, but all other watercraft must go to the Cave Rock boat ramp.

Water flowing out of Lake Tahoe was insufficient to permit continued rafting on the Truckee River, forcing outfitters to end their season early at a sizeable financial loss.

### **Waterfowl on Pacific Flyway threatened by drought, less habitat**

This year is expected to be a very difficult one for North American waterfowl that travel along the Pacific Flyway. With the drought, there are fewer remaining water sources in the Central Valley, meaning birds will be crowded into smaller areas, making it easier to transmit diseases and more challenging to find enough food. In a typical year, about 5 million waterfowl winter on state and federal wildlife refuges and flooded rice fields in the Central Valley.

Birds have already died from disease in several areas. Officials suspect avian botulism, but the cause has not yet been confirmed.

### **Water conservation in the Colorado River Basin**

The Interior Department and four municipal water providers in Arizona, California, Nevada and Colorado were contributing \$11 million to promote water conservation in the Colorado River basin and will take part in a pilot program to reduce water demand by cities, farmers and industry.

### **Beef plant closing in Milwaukee, Wisconsin**

The small cattle herd from years of drought led Cargill to announce the closure of the Milwaukee beef plant.

### **Hydropower production ended in Nevada**

Three hydropower plants belonging to the Truckee Meadows Power Authority were shutting down because there was not enough water to keep the plants operating. The plants will probably be able to generate hydropower again in January or February.

### **Crop damage in western Kentucky**

Corn in Caldwell and Lyon counties has not seen rainfall in about two months, likely dropping yields to just over half of last year's 185 to 190 bushels per acre. Soybean yield may fall to one-third of normal.

### **Lower Colorado River Authority near Austin, Texas guarding water supply**

People drawing water from the Highland Lakes must have a valid contract or the Lower Colorado River Authority will report violators to the Texas Commission on Environmental Quality. The LCRA simply wants those who draw water to apply for a domestic contract if they do not have one and pay for the water they use.

### **Wildfires**

California has about a dozen large fires burning in the state, according to the Active Fire Mapping Program. The Sand fire and the El Portal fire made the news earlier this week as they charred 3,800 acres in Amador and El Dorado counties and at least 4,198 acres near Yosemite National Park, respectively. The French fire in Sierra National Forest in Madera County had consumed more than 8,200 acres.

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The [Active Fire Mapping Program](#) from the USDA Forest Service Remote Sensing Applications Center:



### Tea Cup Reservoir Depictions

- <http://www.usbr.gov/uc/water/basin/> ← Upper Colorado
- [http://www.usbr.gov/uc/wcao/water/basin/tc\\_gr.html](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](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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8/7/2014