

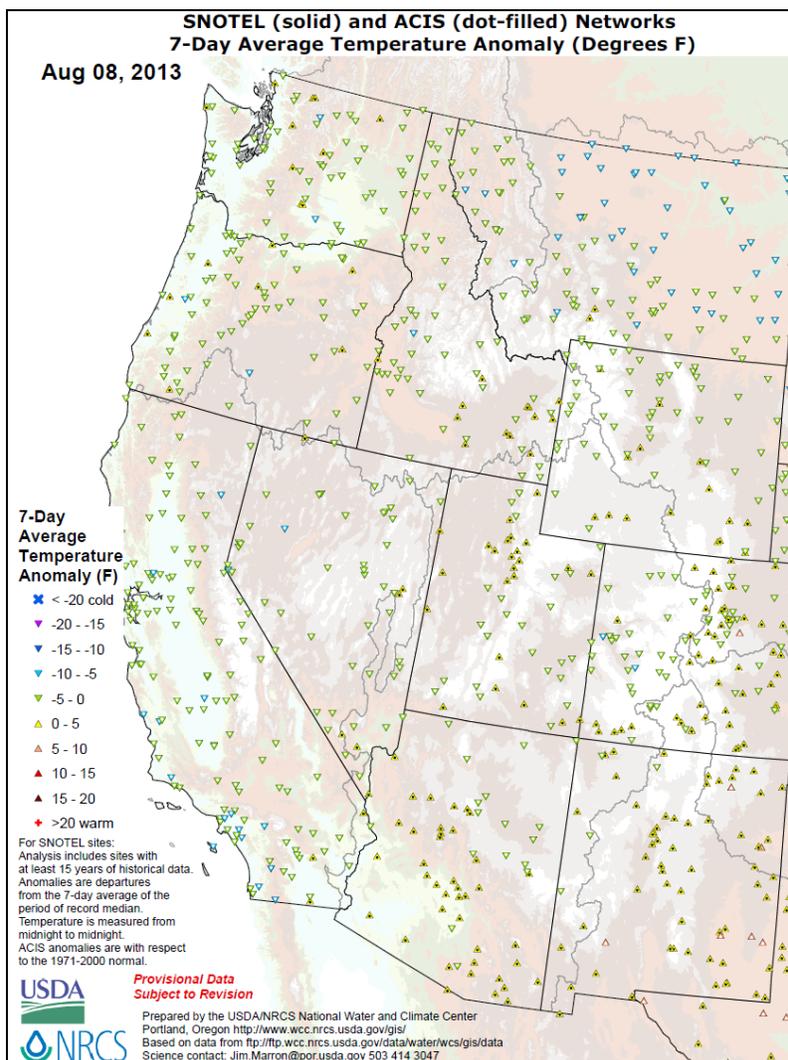


Natural Resources Conservation Service
 P.O. Box 2890
 Washington, D.C. 20013

Weekly Snowpack / Drought Monitor Update August 8, 2013

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Temperature



SNOTEL and ACIS 7-day temperature anomaly ending August 8 reveals temperatures -5°F below normal across much of the western states, with the exception of Montana which was about -10°F below the long-term average. Warmer temperature departures (up to +5°F) were confined to parts of the Southwest, where nighttime cloud cover kept temperatures from falling.

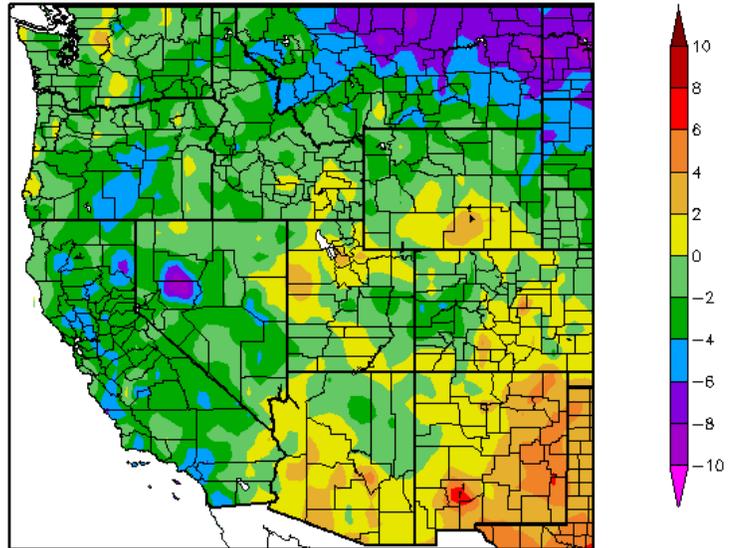
Weekly Snowpack and Drought Monitor Update Report

[ACIS 7-day](#) average temperature anomalies, ending August 7, show the greatest positive temperature departures concentrated over eastern and southern New Mexico (>+6°F). The coolest departures occurred over northern Montana and west-central Nevada (<-8°F).

This map currently does not use SNOTEL data, but is expected to later this year.

For more figures, see the latest Western Water Assessment's Intermountain West Climate [Dashboard](#). See the [Westwide Drought Tracker](#) for more maps.

Departure from Normal Temperature (F)
8/1/2013 – 8/7/2013



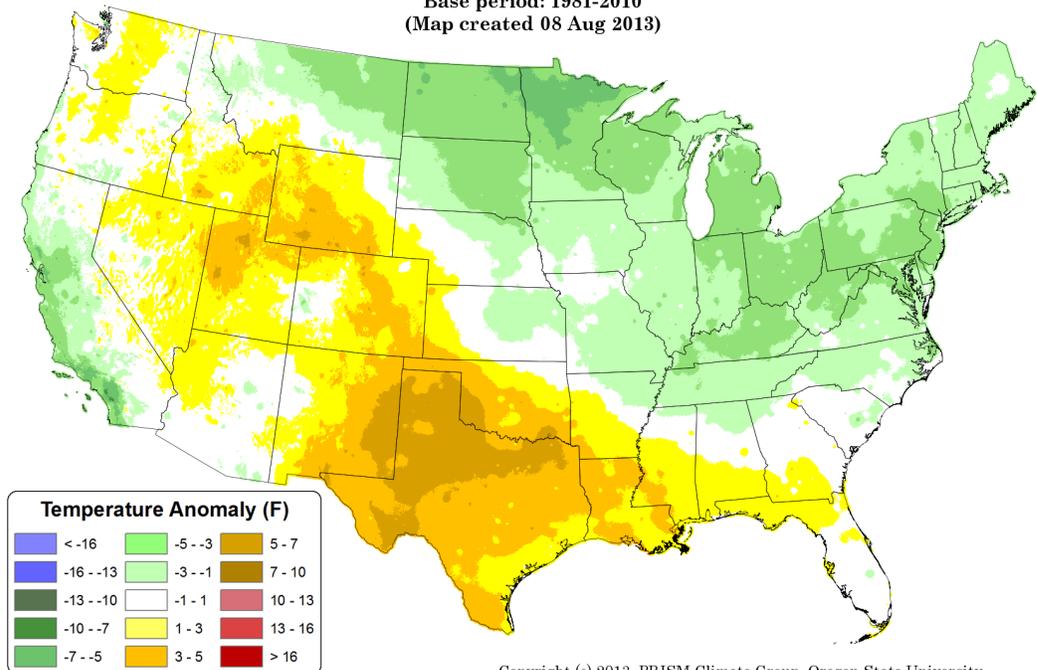
Generated 8/8/2013 at HPRCC using provisional data.

Regional Climate Centers

Daily Mean Temperature Anomaly: 01 August 2013 - 07 August 2013
Period ending 7 AM EST 07 Aug 2013
Base period: 1981-2010
(Map created 08 Aug 2013)

This preliminary [PRISM](#) temperature map, updated daily, will be available to the public by September 30.

The map contains all available network data, including SNOTEL data, and will be updated periodically as additional data become available and are quality controlled.



Copyright (c) 2013, PRISM Climate Group, Oregon State University

Accumulated average temperatures for August thus far have been considerably warmer than normal across the southern plains, lower-Mississippi River Valley, and much of the Rockies. Cooler conditions have prevailed over the northern plain, Great Lakes, Ohio Valley, and New England.

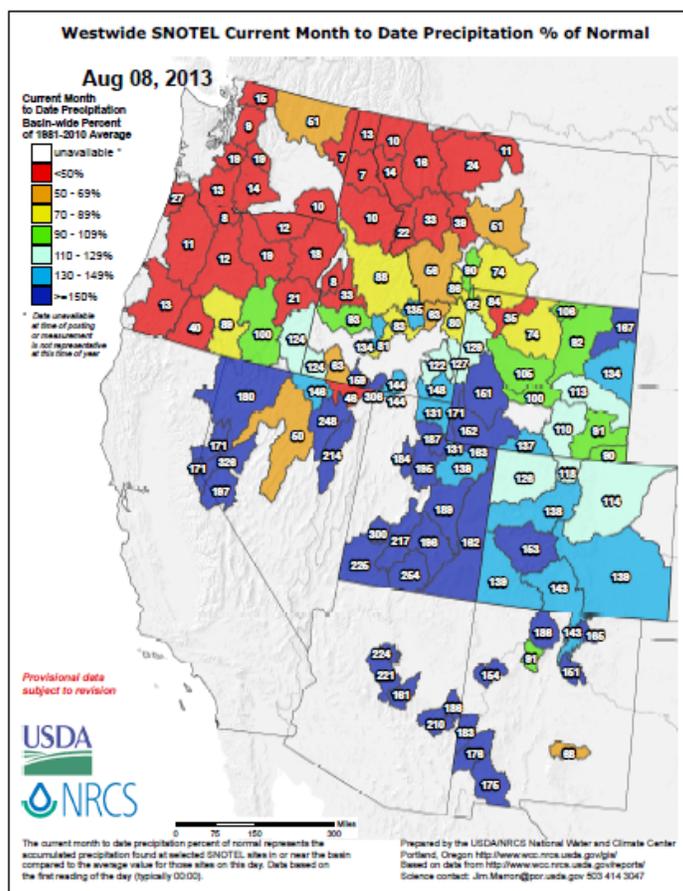
Weekly Snowpack and Drought Monitor Update Report

Precipitation

SNOTEL [month to date](#) precipitation percent of normal pattern shows that August is starting off with considerable moisture over the southern tier of the West, including much of Wyoming and southern Idaho.

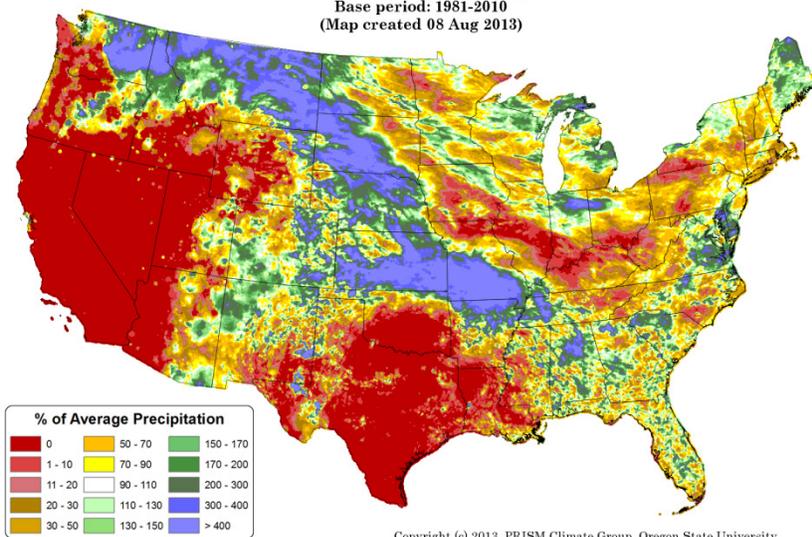
The Pacific Northwest, typically dry during the summer, continues this pattern.

Since the beginning of July, the Southwest Monsoon has provided much-needed rains over parts of the Four Corner States.



Click images for enlarged version

Total Precipitation Anomaly: 01 August 2013 - 07 August 2013
 Period ending 7 AM EST 07 Aug 2013
 Base period: 1981-2010
 (Map created 08 Aug 2013)



Accumulated total precipitation through August 7 shows a rainfall pattern that has favored parts of the Southwest (due to the seasonal monsoon) and from Washington, through Montana and southeastward to Arkansas. Drier conditions dominate from Iowa to the Ohio Valley and Texas and the southern plains.

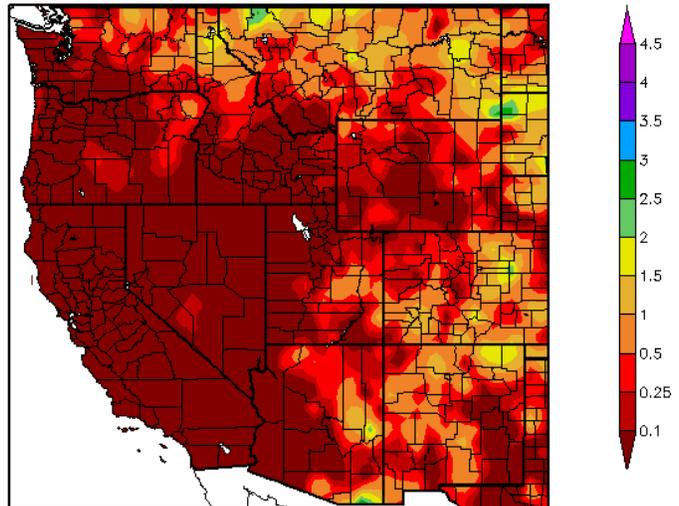
*This preliminary [PRISM](#) precipitation map will be available to the public by **September 30**. It contains all available network data, including SNOTEL data, and will be updated periodically as additional data become available and are quality controlled.*

Weekly Snowpack and Drought Monitor Update Report

[ACIS](#) 7-day average precipitation amounts for the period ending August 7 show an active monsoon over parts of eastern Arizona, New Mexico, and southern and eastern Colorado. The northernmost tier states also had considerably precipitation. The remainder of the West experienced their typically dry conditions for this time of year.

This map currently does not use SNOTEL data, but is expected to later this year.

Precipitation (in)
8/1/2013 - 8/7/2013



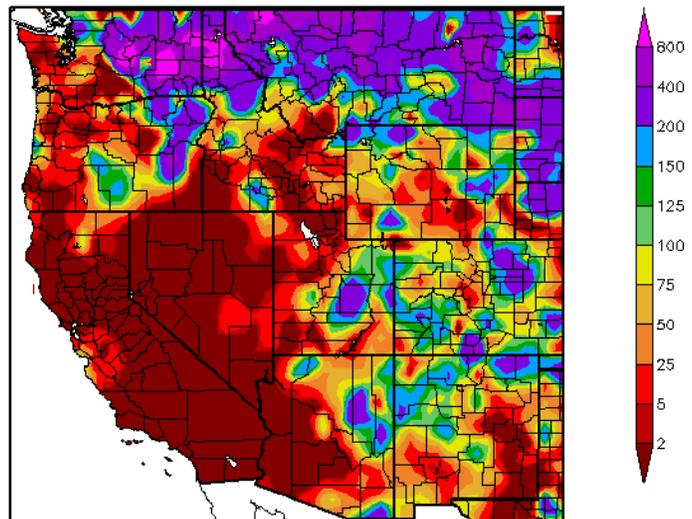
Generated 8/8/2013 at HPRCC using provisional data.

Regional Climate Centers

In this [map](#), where rain occurred, it was enough to register in amounts exceeding what would normally be expected for the week by two to four times.

This map currently does not use SNOTEL data, but is expected to later this year.

Percent of Normal Precipitation (%)
8/1/2013 - 8/7/2013



Generated 8/8/2013 at HPRCC using provisional data.

Regional Climate Centers

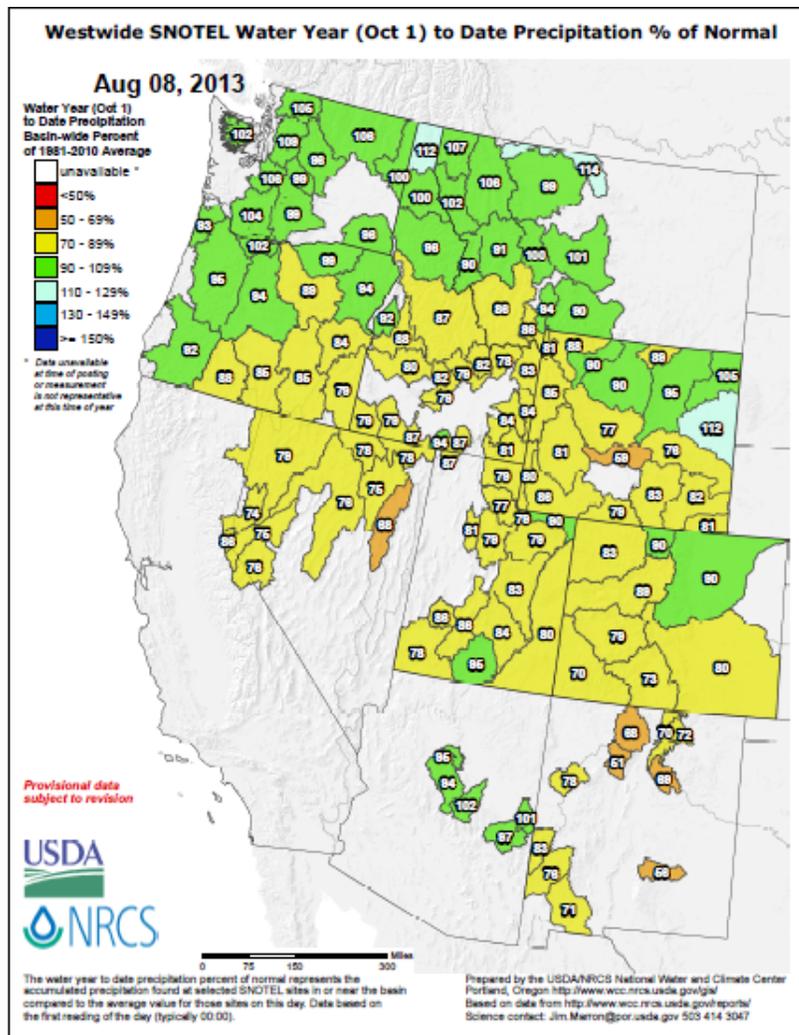
Weekly Snowpack and Drought Monitor Update Report

For the [2013 Water Year](#) that began on October 1, 2012, the pattern continues to resemble La Niña (i.e., wetter northern tier).

The impact of the Southwest Monsoon is apparent over Arizona, with near normal values. Despite recent good rains over New Mexico, the precipitation deficit from earlier this year has still not improved very much.

For the remainder of this water year, values should not change significantly from this depiction.

For additional information, daily reports by SNOTEL site are available [here](#).



Click image for larger version

Weather and Drought Summary

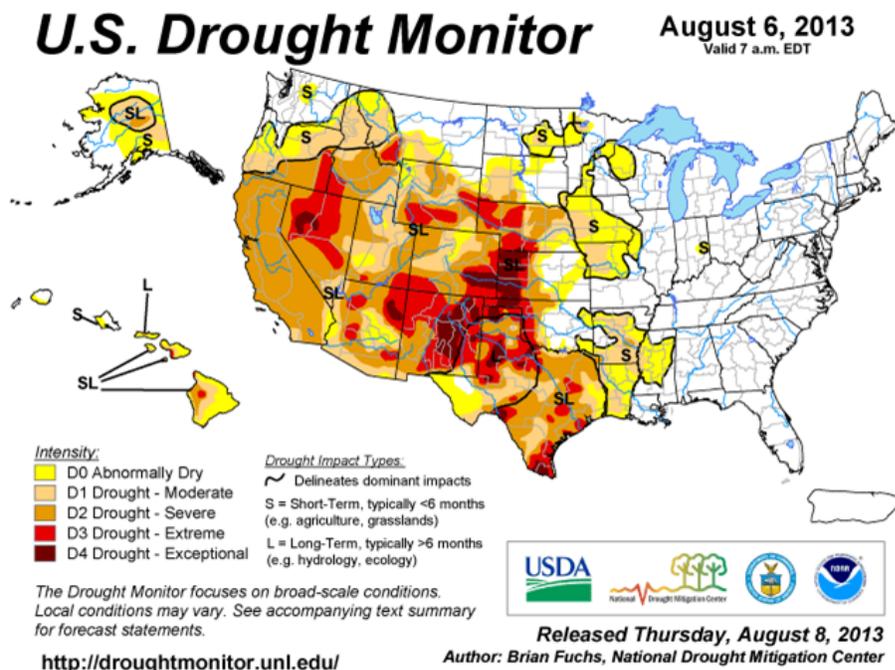
Western Drought Summary – August 6, 2013

The following **Weather and Drought Summary** is provided by this week's NDMC Author: [Brian Fuchs, National Drought Mitigation Center](#).

The West: “Several areas of improvement took place in Colorado as the consistent rain has allowed for some green up of pastures and curtailed further degradation in many portions of the state. In southeast Colorado, D4 was improved, while D3 was improved in the southwest. In the north central portions of the state, D1 and D2 conditions were improved. Wyoming has had some areas improve this week as D0 was removed from the far northeast portions of the state while D1 was improved in the southeast. New Mexico had some adjoining areas to Colorado and Texas improved this week as the area received some scattered rain events. In central New Mexico, D4 conditions were improved as the short-term conditions improved. Improvements were also made in Arizona as many locations in the northern portion of the state had record to near record wetness for the month. In the north central portion of the state, D3 was improved to D2 and in the southeast, D2 and D1 were both improved. A large expansion of D3 conditions took place this week in Nevada, southwest Idaho, and eastern Oregon. In Oregon, D1 was expanded in the central portion of the state, and in Utah, an area of D2 was expanded where hydrologic issues are continuing.”

Weekly Snowpack and Drought Monitor Update Report

A comprehensive narrative describing drought conditions for the nation can be found toward the end of this document. For drought impacts definitions for the figures below, click [here](#).



Current [Drought Monitor](#) weekly summary. The exceptional D4 levels of drought are scattered across the western Corn Belt of the Plains into southeastern Colorado, eastern New Mexico, western Nevada, and north-central Texas. For more drought news, see [Drought Impact Reporter](#).

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](#).

National Drought Related News (•):

- [Briggs & Stratton lowers earnings forecast for fiscal 2013](#) - July 26, U.S.
- [High Crop Prices and Insurance Seen Causing Catastrophe](#) - July 29, U.S.
- [Economist: Food Inflation Affected Minimally by 2012 Drought](#) - July 30, U.S.

Weekly Snowpack and Drought Monitor Update Report

- ✓ **Drought Management Resources:**
- ✓ Drought Monitor for the [Western States](#)
- ✓ Drought Impact Reporter for [New Mexico](#)
- ✓ [California Data Exchange Center](#) & [Flood Management](#)
- ✓ [NIDIS Upper Colorado River Regional Drought Earlier Warning System](#)

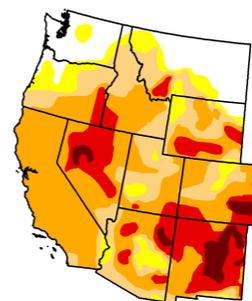
- **News Stories:**
- [Is Drought Hurting California's 2013 Outdoor Marijuana Crop?](#) - July 30, **California**
- [Burn ban in effect at state parks](#) - Aug 2, **Washington**
- [Wildfires and guns: should steel bullets be outlawed?](#) - July 25, **Utah**
- [Drought watch: over yet?](#) - July 30, **New Mexico**
- [BLM begins emergency wild horse gather](#) - July 26, **Eastern Nevada**
- [Kings high and dry with nowhere to go](#) - July 31, **Kings County, California**
- [Lower Big Hole River closes to fishing until conditions improve](#) - July 31, **Montana**

U.S. Drought Monitor

August 6, 2013
Valid 7 a.m. EST

West

| | Drought Conditions (Percent Area) | | | | | |
|--|-----------------------------------|-------|-------|-------|-------|------|
| | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
| Current | 13.20 | 86.80 | 77.41 | 57.03 | 18.96 | 3.62 |
| Last Week (07/30/2013 miss) | 12.95 | 87.05 | 77.52 | 57.26 | 17.59 | 4.68 |
| 3 Months Ago (05/07/2013 miss) | 13.46 | 86.54 | 71.04 | 47.26 | 15.25 | 5.66 |
| Start of Calendar Year (01/01/2013 miss) | 24.39 | 75.61 | 69.31 | 45.04 | 18.01 | 2.15 |
| Start of Water Year (09/25/2012 miss) | 15.12 | 84.88 | 77.15 | 43.65 | 16.85 | 1.77 |
| One Year Ago (07/31/2012 miss) | 18.40 | 81.60 | 68.22 | 49.78 | 16.74 | 0.29 |



Intensity:



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

<http://droughtmonitor.unl.edu>



Released Thursday, August 8, 2013
National Drought Mitigation Center.

Note that there was a percent improvement in D4 conditions this past week due to the SW Monsoon.

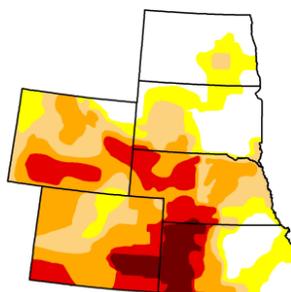
- [Bitterroot Valley irrigators quickly running out of water](#) - July 27, **Western Montana**

U.S. Drought Monitor

August 6, 2013
Valid 7 a.m. EST

High Plains

| | Drought Conditions (Percent Area) | | | | | |
|--|-----------------------------------|--------|-------|-------|-------|-------|
| | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
| Current | 23.95 | 76.05 | 60.77 | 42.60 | 19.25 | 5.74 |
| Last Week (07/30/2013 miss) | 20.53 | 79.47 | 64.24 | 46.11 | 22.01 | 7.79 |
| 3 Months Ago (05/07/2013 miss) | 7.98 | 92.02 | 82.55 | 66.30 | 30.43 | 8.48 |
| Start of Calendar Year (01/01/2013 miss) | 1.54 | 98.46 | 93.01 | 86.20 | 60.25 | 26.99 |
| Start of Water Year (09/25/2012 miss) | 0.00 | 100.00 | 98.91 | 83.80 | 61.28 | 24.35 |
| One Year Ago (07/31/2012 miss) | 2.36 | 97.64 | 87.16 | 77.25 | 48.26 | 4.01 |



Intensity:



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

<http://droughtmonitor.unl.edu>



Released Thursday, August 8, 2013
National Drought Mitigation Center.

Significant improvement in all categories this past week.

Region with D-4 Exceptional Drought

- ✓ [Kansas Drought Update.](#)
- [Kansas feedlot placements drop to lowest level since 1994](#) - July 29, **Kansas**
- [Lake McConaughy shows depth of drought in Nebraska](#) - July 30, **Nebraska**

Heavy rains in Kansas this week was perhaps the biggest news story.

Region with D-4 Exceptional Drought

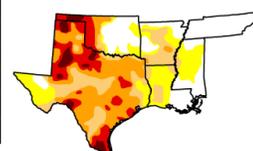
- ✓ [Texas Drought Website.](#)
- ✓ [Texas Reservoirs.](#)
- [Drought limits 2013 hay supplies](#) - July 29, **Oklahoma**
- [Drought continues](#) - July 28, **West Texas**
- [Texas' ongoing drought keeping lake levels down](#) - July 24, **Texas**

U.S. Drought Monitor

August 6, 2013
Valid 7 a.m. EST

South

| | Drought Conditions (Percent Area) | | | | | |
|--|-----------------------------------|-------|-------|-------|-------|-------|
| | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
| Current | 25.96 | 74.44 | 66.46 | 38.82 | 15.95 | 3.75 |
| Last Week (07/30/2013 miss) | 26.19 | 73.81 | 66.40 | 37.58 | 16.20 | 3.04 |
| 3 Months Ago (05/07/2013 miss) | 36.77 | 63.23 | 56.17 | 43.82 | 24.07 | 7.66 |
| Start of Calendar Year (01/01/2013 miss) | 21.18 | 78.82 | 63.69 | 50.50 | 32.80 | 10.98 |
| Start of Water Year (09/25/2012 miss) | 24.13 | 75.87 | 66.61 | 51.50 | 29.86 | 9.11 |
| One Year Ago (07/31/2012 miss) | 20.27 | 79.73 | 66.42 | 43.64 | 24.13 | 5.72 |



Intensity:



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

<http://droughtmonitor.unl.edu>

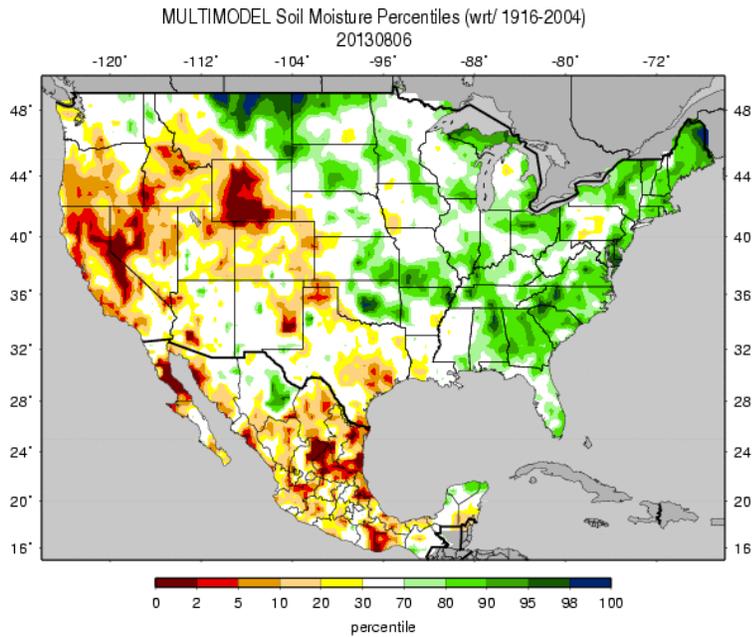


Released Thursday, August 8, 2013
National Drought Mitigation Center.

Slight worsening in all D-categories during this past week.

Weekly Snowpack and Drought Monitor Update Report

Soil Moisture

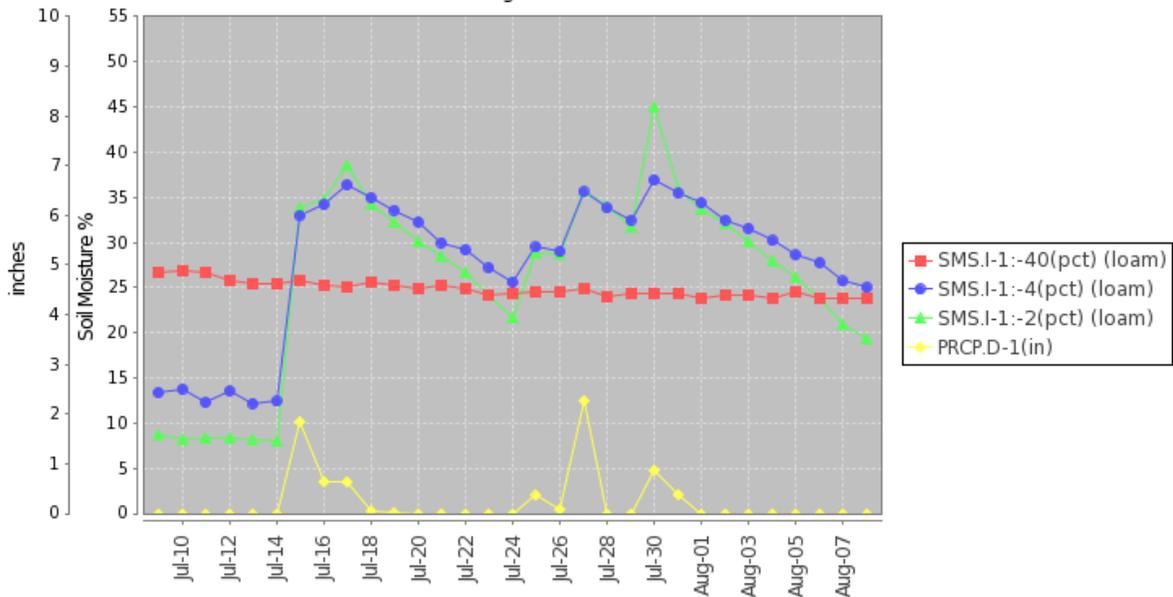


Soil moisture ranking in [percentile](#) as of August 6 shows considerable dryness over the western Great Basin, northeastern California, and Wyoming Rockies. Excess moisture is noted over northern Montana, the upper peninsula of Michigan, and over much of the eastern seaboard. Improvement continues over Arizona and New Mexico due to the SW Monsoon. Also note moisture over eastern Kansas, Oklahoma, and Arkansas due to recent heavy rains.

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 (2022) MONTH=2013-07-09 (Daily) NRCS National Water and Climate Center - Provisional Data - subject to revision as of Thu Aug 08 08:21:23 PDT 2013



This NRCS resource shows a site over central Oklahoma. Recent heavy rain saturated topsoils, while soils at depth remain near saturation but unchanged.

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

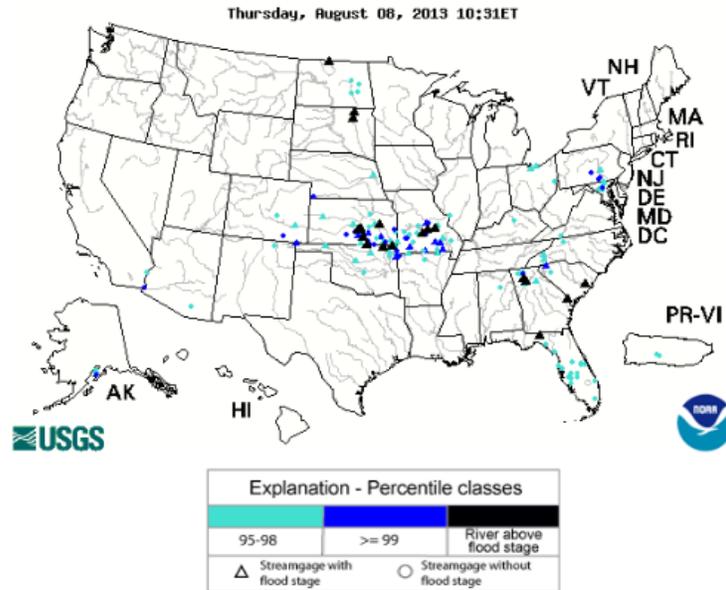
U.S. Historical Streamflow

Recent heavy rains over eastern Kansas and Arkansas caused substantial increases in river flows and some flooding.

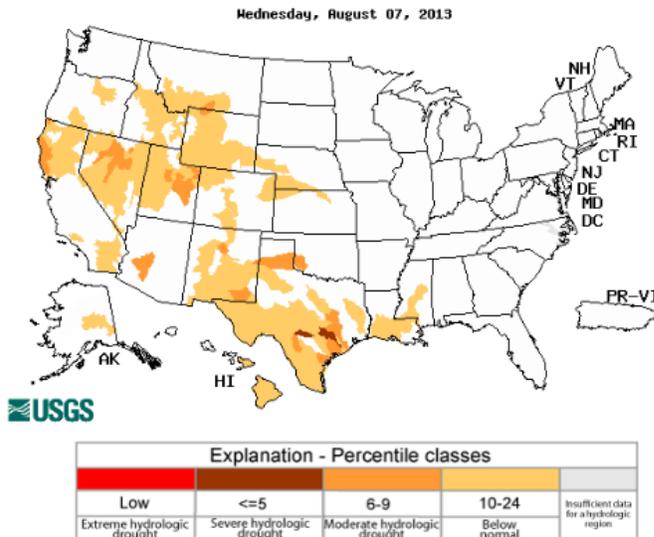
Just a year ago, severe drought dominated this region.

See the [USGS National Water Information System Mapper](#).

Map of flood and high flow condition (United States)

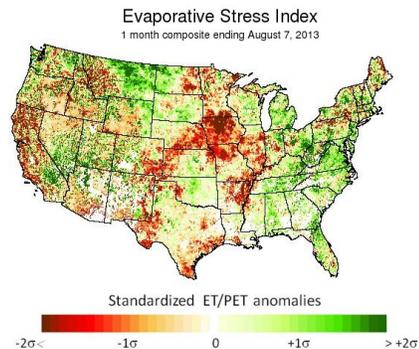


Map of below normal 7-day average streamflow compared to historical streamflow for the day of year (United States)



Severe conditions exist only over a small area in southeastern and south-central Texas.

Slow improvement over the Southwest due to the monsoon is starting to be reflected in this one-month composite map. Conditions over Iowa and surrounding areas are quiet severe. Eastern Montana is looking better, but the western half of the state isn't faring as well.



Weekly Snowpack and Drought Monitor Update Report

Complete National Drought Summary

The following complete **Weather and Drought Summary** is provided by this week's NDMC Author: [Brian Fuchs, National Drought Mitigation Center](#)

National Drought Summary -- August 6, 2013

The discussion in the Looking Ahead section is simply a description of what the official national guidance from the National Weather Service (NWS) National Centers for Environmental Prediction is depicting for current areas of dryness and drought. The NWS forecast products utilized include the HPC 5-day QPF and 5-day Mean Temperature progs, the 6-10 Day Outlooks of Temperature and Precipitation Probability, and the 8-14 Day Outlooks of Temperature and Precipitation Probability, valid as of late Wednesday afternoon of the USDM release week. The NWS forecast web page used for this section is: <http://www.cpc.ncep.noaa.gov/products/forecasts/>.

The Northeast: Although the region was generally dry, cooler than normal conditions alleviated concerns about dryness or drought. The greatest rains over the last week were recorded in Maine and portions of New Jersey. No changes to the regional depiction this week.

Mid-Atlantic: Scattered precipitation and cooler than normal temperatures kept drought concerns from developing in the region. The coastal regions received the most precipitation this week while portions of the West Virginia panhandle and southern North Carolina were the driest.

Southeast: A mostly wet week over most of the region with the greatest rains falling in northeastern Alabama and portions of west Georgia. No drought concerns for this region at this time.

South: Dryness and warm temperatures in the area brought some expansion of the drought intensities. D2 was increased in southeast Arkansas while the D0 and D1 conditions in the northwest improved. For south Texas, D3 and D4 expanded, while in east Texas D0 was introduced into several counties. Improvements were made in portions of the Texas panhandle and west Texas where the recent rains along with a generally wet pattern helped to improve the drought-related impacts. In the Oklahoma panhandle, D4 was increased to the east as several counties have missed out on many of the recent rain events in the region and have season low precipitation totals.

Midwest: Wet conditions over portions of Illinois and Indiana were in contrast to the dryness over most of Iowa, Minnesota, and Wisconsin. In Minnesota, D0 conditions were expanded while in Wisconsin, a new area of D0 was introduced. Western Iowa had D1 conditions introduced, while D0 was pushed farther to the east. Portions of southern Missouri recorded very heavy rain during the current week, allowing for some trimming of the southern edge of D0 in the state. The D1 region in Missouri was also trimmed along the west edge, but pushed farther to the south as well.

The Plains: Another week of very heavy rain amounts over much of Kansas allowed for a full category improvement of much of the drought status in the state, especially in the central and east. Some counties reported several stations with 5+ inches of rain for the week. Not all areas of Kansas received the beneficial rains as most of western Kansas missed out again this week. Farther to the north, D0 was removed from portions of southeast Nebraska and D2 was improved to D1 in southern Nebraska. In northern portions of Nebraska, a full category improvement was made along the border with South Dakota, and in western Nebraska, D3 was improved and D4 removed. South Dakota also had several areas improve, including a full category improvement in southern portions of the state as well as into western counties. In northeast South Dakota, D0 was expanded because of short-term dryness. North Dakota had D1 introduced and D0 expand as short-term dryness has started to impact the region.

The West: Several areas of improvement took place in Colorado as the consistent rain has allowed for some green up of pastures and curtailed further degradation in many portions of the state. In southeast Colorado, D4 was improved, while D3 was improved in the southwest. In the north central portions of the state, D1 and D2 conditions were improved. Wyoming has had some areas improve this week as D0 was removed from the far northeast portions of the state while D1 was improved in the southeast. New Mexico had some adjoining areas to Colorado and Texas improved this week as the area received some scattered rain events. In central New Mexico, D4 conditions were improved as the short-term conditions improved. Improvements were also made in Arizona as many locations in the northern portion of the state had record to near record wetness for the month. In the north central portion of the state, D3 was improved to D2 and in the southeast, D2 and D1 were both improved. A large expansion of D3 conditions took place this week in Nevada, southwest Idaho, and

Weekly Snowpack and Drought Monitor Update Report

eastern Oregon. In Oregon, D1 was expanded in the central portion of the state, and in Utah, an area of D2 was expanded where hydrologic issues are continuing.

Hawaii, Alaska and Puerto Rico: In Hawaii, the recent rains were helpful but not enough to make any improvements, so status quo continued this week. There were no changes in Alaska or Puerto Rico this week.

Looking Ahead: Over the next five days (August 8-11) Temperatures will continue to remain below normal over most of the country, with departures of 6-9 degrees Fahrenheit anticipated over the Plains and West Coast. Above-normal temperatures are expected in the southern United States and the northern Rocky Mountains. A wet pattern is likely to continue over much of Colorado, Kansas, and Missouri and into Kentucky and Tennessee. The forecast is anticipating amounts of 3 inches over most of Kansas and western Kentucky. Dry conditions are projected over most of the western United States and into Texas.

The CPC 6-10 day forecast (August 11-15) anticipates the best chances for below-normal temperatures will be over the Plains, Midwest, and Northeast, with the best chances for below-normal temperatures in the Great Lakes region. The best chances for above-normal temperatures will be in the southern United States, Pacific Northwest and Alaska. Most of the country has above-normal chances of recording above-normal precipitation during this time frame. The greatest chances of above-normal precipitation will be over the Southeast. The Great Basin, Southwest, and most of Texas have the best chances of recording below-normal precipitation for the period.

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](#).

For 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 Report. Reports from 2007 are available online. Reports from 2001-2006 are available on request.

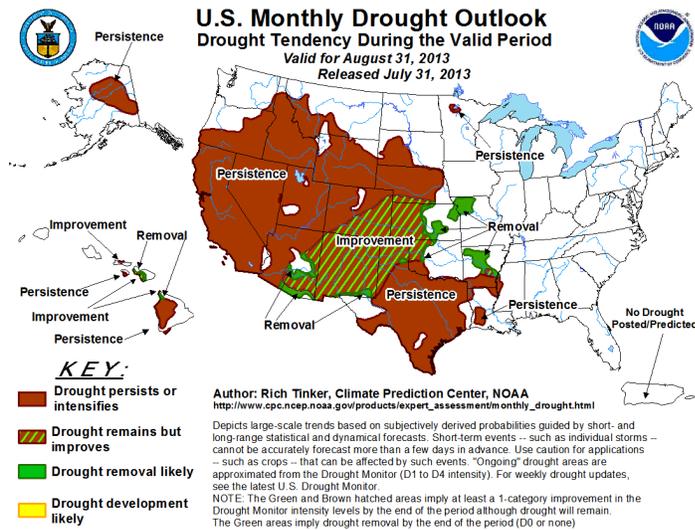
This report uses data and products provided by the Interagency Drought Monitor Consortium members and the National Interagency Fire Center.

/s/

Micheal L. Golden
Deputy Chief, Soil Science and Resource Assessment

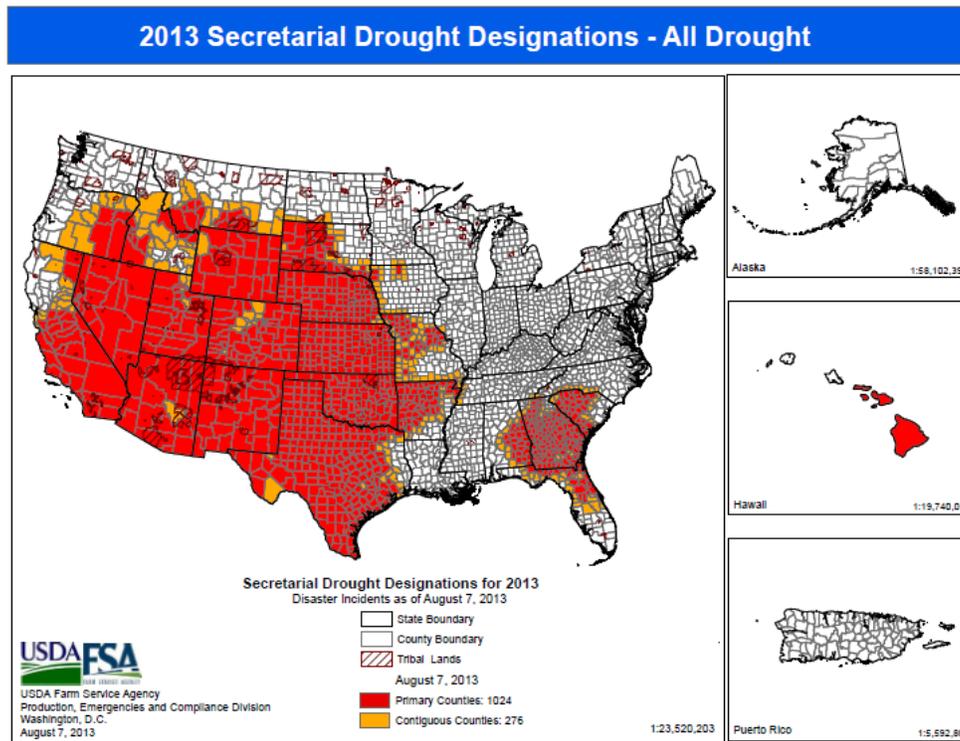
Weekly Snowpack and Drought Monitor Update Report

Drought Outlook (Forecast through August)



U.S. [Monthly](#) Drought Outlook released July 31.

Note: Expect improvements over parts of the Four Corner States and the Big Bend region of Texas by the end of October.



Refer to USDA Drought Assistance [website](#) and [National Sustainable Agriculture Information Service](#). Read about the new [USDA Regional Climate Hubs](#).

Supplemental Drought Information (provided by Brad Rippey, USDA Meteorologist, Office of the Chief Economist, World Agricultural Outlook Board). Also see: <ftp://snr-0563.unl.edu/Outgoing/US-Maps.ppt>

Highlights for the drought-monitoring period ending 7 am EDT on August 6 include:

- Recent heavy rain has taken a bite out of exceptional drought (D4) across the central Plains and the Southwest, reducing the nation's D4 coverage to 2.77%. That is down nearly one-half percentage point (0.40%) from a week ago, and represents the nation's smallest D4 area since April 23. In the last

Weekly Snowpack and Drought Monitor Update Report

week, D4 coverage fell from 25 to 21% in New Mexico; from 15 to 8% in Colorado; and from 4 to 1% in Nebraska.

- Overall U.S. drought coverage decreased slightly in the last week from 45.64 to 45.49%. Drought coverage is nearly twenty percentage points (19.96 points) below the peak coverage of 65.45% in late-September 2012.

- Drought returned to western Iowa, with 16.51% of the state covered by moderate drought (D1) on August 6. Similarly, D1 has recently returned to northern Missouri, with drought currently covering 15.42% of the state.

- The portion of the U.S. corn production area in drought has been edging upward in recent weeks, from 17 to 22% between July 9 and August 6. The increase has been largely due to resurgent drought in the western Corn Belt, including northern Missouri, eastern Nebraska, and western Iowa. Soybeans in drought have also increased in the last four weeks, from 8 to 14%. Hay (34%) and cattle in drought (47%) were both unchanged from last week.

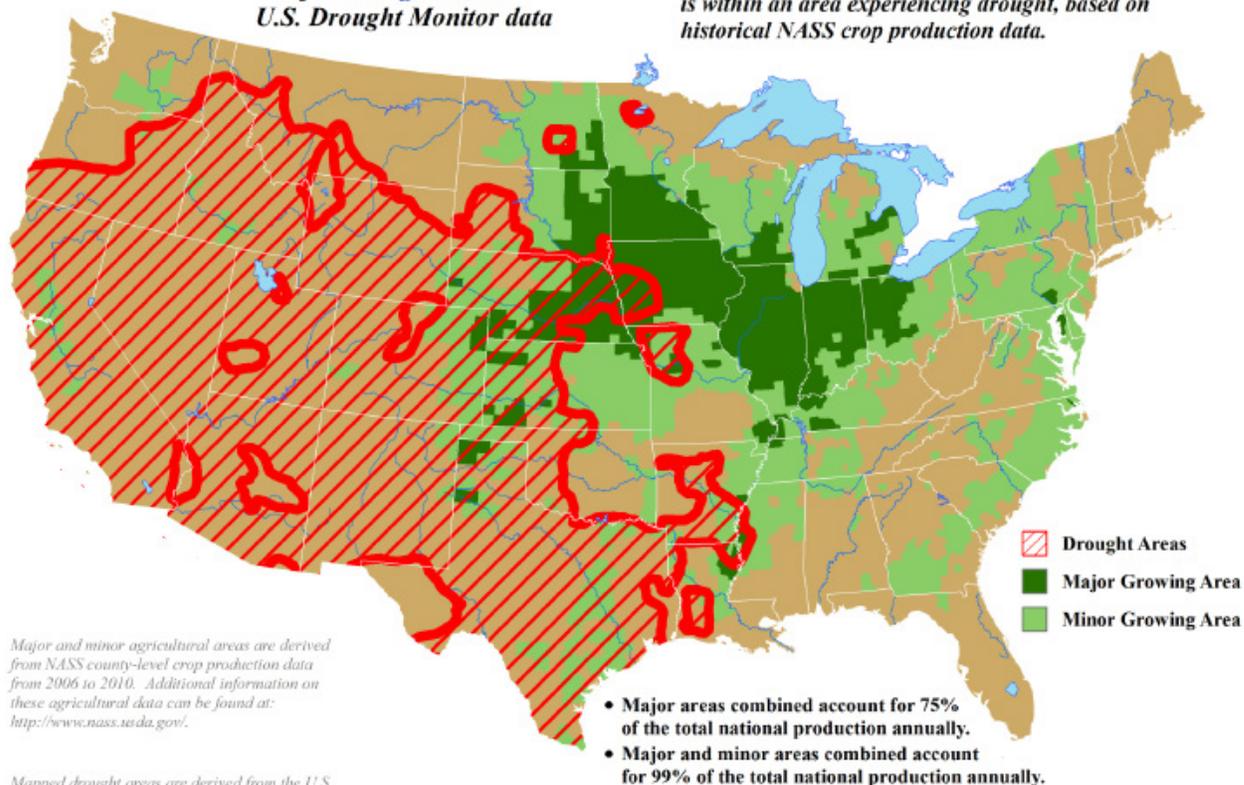
- Weather outlook: Areas from the central Plains to the northern Mid-Atlantic region will remain the focus of heavy showers through Friday, with an additional 2 to 4 inches of rain possible. Drier weather will arrive across the central Plains and the Northeast on Saturday, although showers will linger in the Southeast. By early next week, heavy showers may return to the central Plains. Occasional showers will affect most other parts of the U.S., although 5-day rainfall totals will be mostly an inch or less. Elsewhere, pleasantly cool weather across the northern and central Plains and the Midwest will contrast with persistently hot conditions across the interior Northwest and the Deep South.

Note: The following maps do not have direct links.

U.S. Corn Areas Experiencing Drought

*Reflects August 6, 2013
U.S. Drought Monitor data*

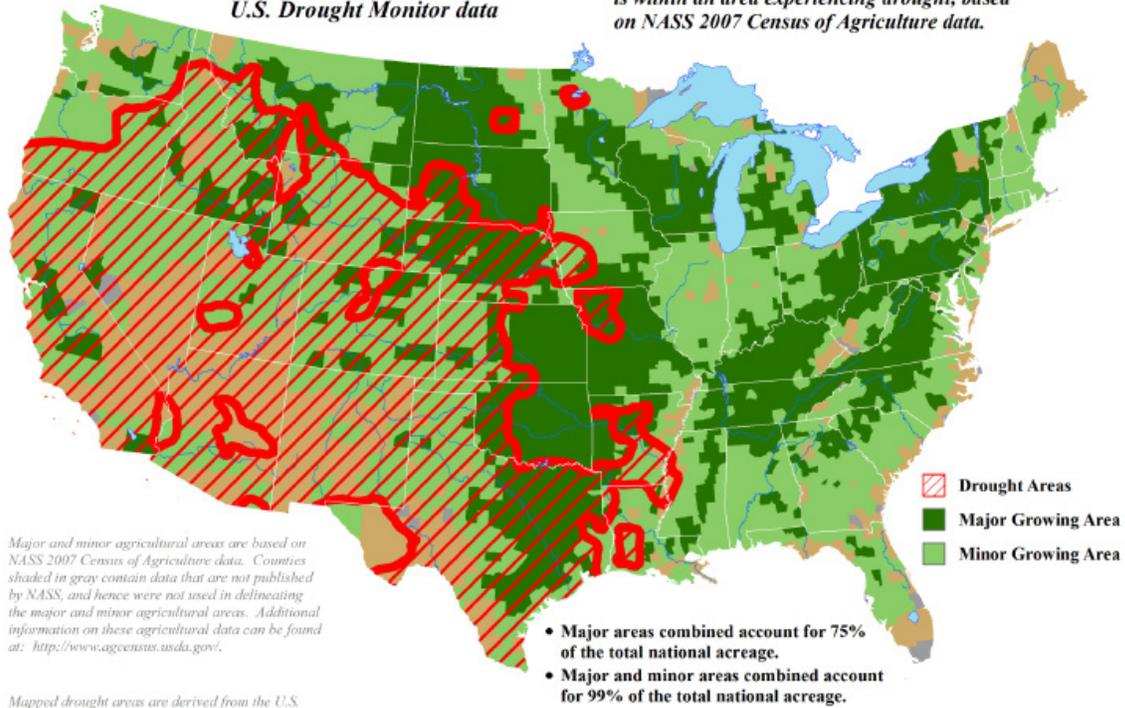
*Approximately 22% of the corn grown in the U.S.
is within an area experiencing drought, based on
historical NASS crop production data.*



U.S. Hay Areas Experiencing Drought

Reflects August 6, 2013
U.S. Drought Monitor data

Approximately 34% of the domestic hay acreage is within an area experiencing drought, based on NASS 2007 Census of Agriculture data.

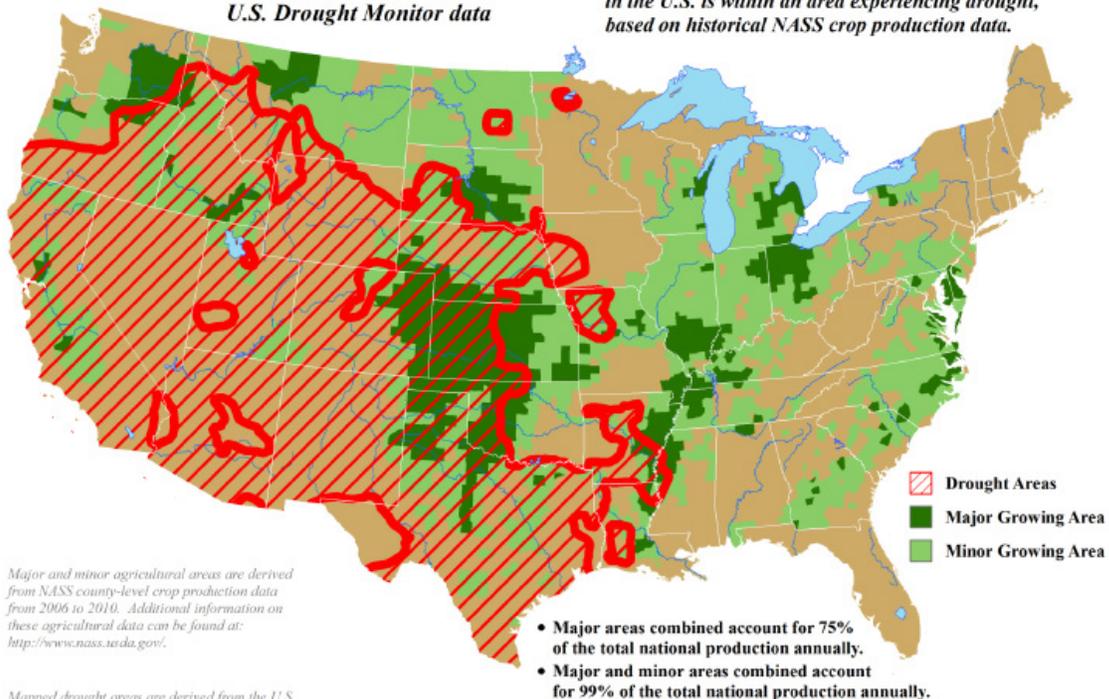


USDA Agricultural Weather Assessments
World Agricultural Outlook Board

U.S. Winter Wheat Areas Experiencing Drought

Reflects August 6, 2013
U.S. Drought Monitor data

Approximately 44% of the winter wheat grown in the U.S. is within an area experiencing drought, based on historical NASS crop production data.



USDA Agricultural Weather Assessments
World Agricultural Outlook Board

Weekly Snowpack and Drought Monitor Update Report

Drought News

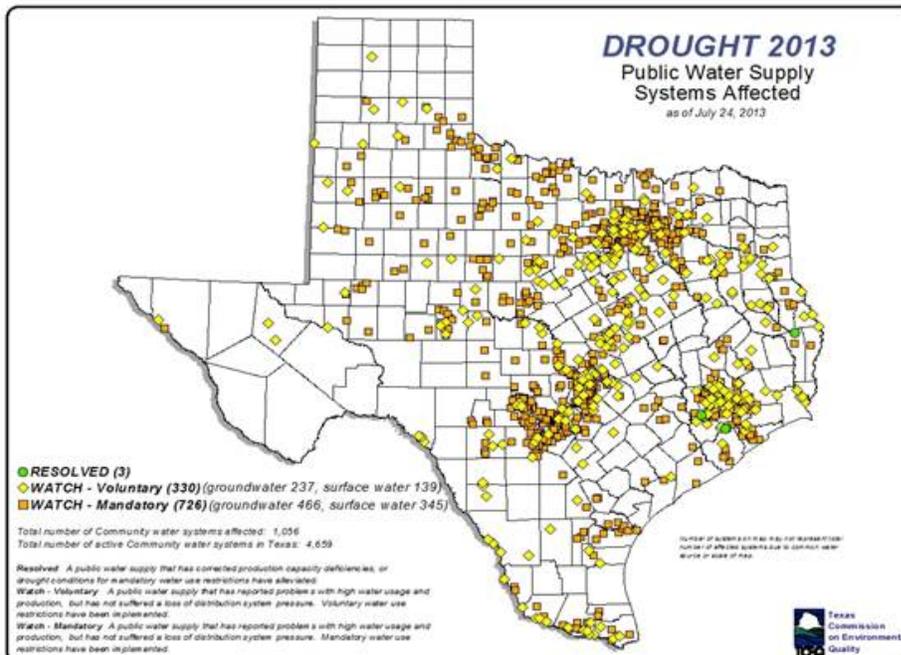
This is a collection of drought-related news stories from the past seven days or so. Impact information from these articles is entered into the [Drought Impact Reporter](#). A number of these articles will also be posted on the [Drought Headlines](#) page at the NDMC website. Noteworthy topics in the news this week:

Agriculture

- U.S. feedlot placements in June dropped 5 percent as drought forced producers to keep culling livestock. June feedlot placements in Iowa were down 23 percent, compared to June 2012, and were 9 percent lower in Kansas.
- High crop prices, stemming from drought in 2012, and historic crop insurance payouts led farmers to farm on fragile lands, such as animal habitats and erodible lands. The largest conversion from fragile land to cropland occurred in northern Plains counties, according to Environmental Working Group, an environmental advocacy group, which opposes the changes. Thirty-nine percent of the wetland conversion happened in North Dakota, South Dakota and Minnesota, while more than 50 percent of the plowing of fragile lands occurred in ten states in the Great Plains and the western Corn Belt.
- Dry conditions have hindered crop growth and production in Utah, leading the executive director of Utah's Farm Service Agency to estimate that the tart cherry crop yield will be 20 to 30 percent less than usual, along with the peach and apple crops. He also noted that water supplies were everyone's worry, with drought affecting so much of the state.

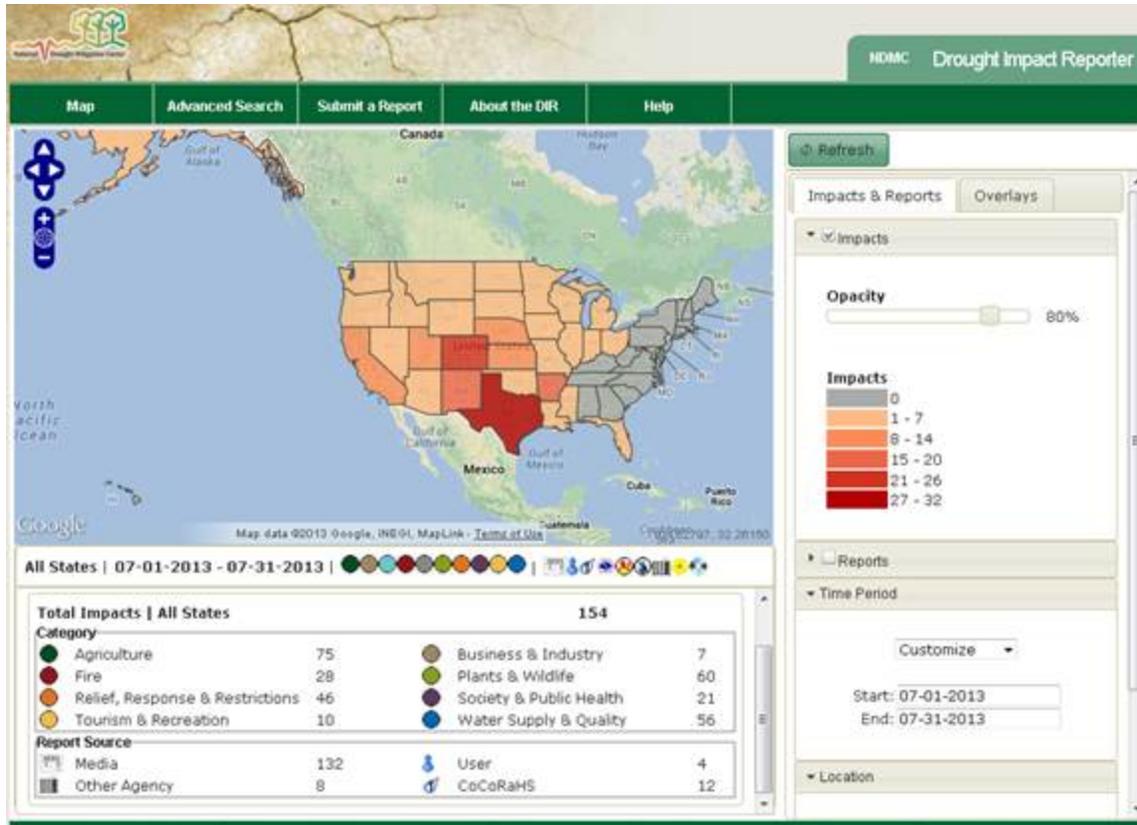
Water Supply & Quality

- The 2013 dead zone in the Gulf of Mexico is larger than usual and twice as big as last year. The dead zone is caused primarily by nitrogen-based fertilizers from the Midwest flowing into the Gulf and creating algal blooms. Drought in 2012 meant that plants weren't able to take up the fertilizer, which was flushed down river with spring 2013 rains, leading to a larger than expected dead zone. Dead fish, stingrays, crabs and shrimp by the thousands have washed ashore in Mississippi.
- At least a dozen water districts in Texas are within 45 days of running out of water, while another dozen have about 90 days' worth of water left. The graphic below shows the locations of water districts requesting water conservation.



From the Texas Commission on Environmental Quality [website](#).

Weekly Snowpack and Drought Monitor Update Report

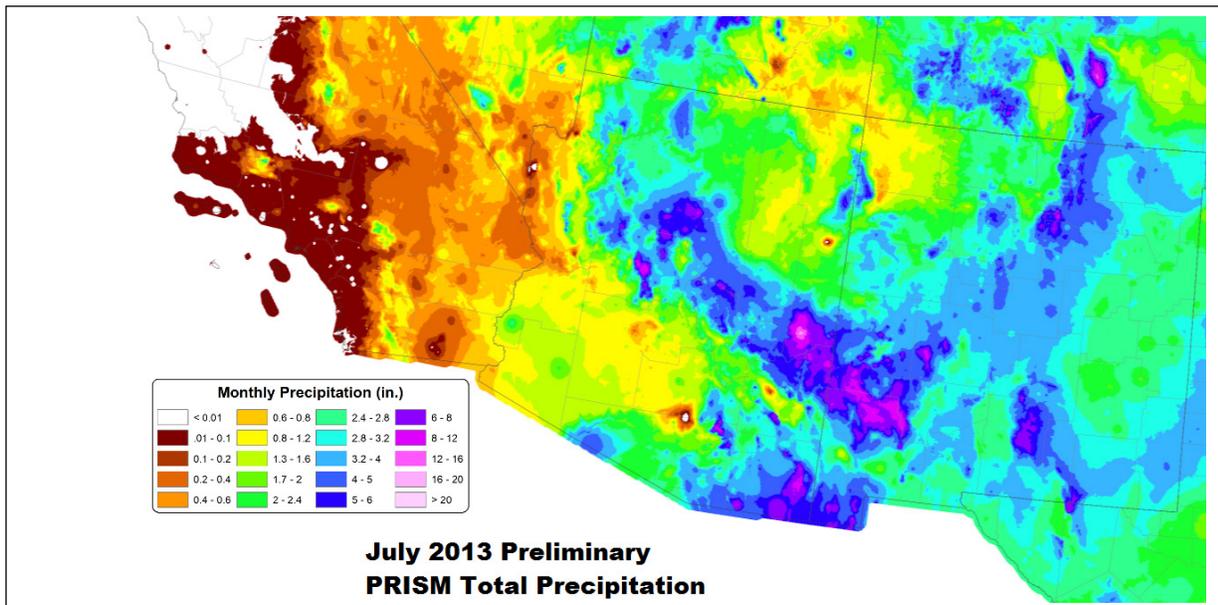


Here's a snapshot of the Drought Impact Reporter for the full month of July, with Texas and Colorado showing the most impacts. Crops, pastures, and water supplies were still feeling the effects of prolonged drought in both states.

The ([Information Incident System](#)) shows the most recent fires and their status across the U.S.

Southwest Monsoon Update (latest time lapse)

[Statistics](#) on the Southwest Monsoon thus far for Albuquerque, Tucson, Phoenix, Yuma, and El Paso..



Weekly Snowpack and Drought Monitor Update Report

| Monthly Data for July 2013 for Flagstaff, AZ CWA | | | | Monthly Data for July 2013 for Phoenix AZ CWA | | | | Monthly Data for July 2013 for Tucson AZ CWA | | | |
|--|----------------------|--------------|---------------------|---|----------------------------|--------------|---------------------|--|-----------------------|--------------|---------------------|
| State | Name | Station Type | Total Precipitation | State | Name | Station Type | Total Precipitation | State | Name | Station Type | Total Precipitation |
| AZ | ALPINE | COOP | 7.74 | AZ | APACHE JUNCTION 5 NE | COOP | 4.1 | AZ | DOUGLAS BISBEE INL AP | WBAN | 10.12 |
| AZ | FLAGSTAFF PULLIAM AP | WBAN | 7.58 | AZ | CAVE CREEK 2.9 SSW | CoCoRaHS | 3.37 | AZ | HANNAGAN MEADOWS | Snotel | 9.1 |
| AZ | MC NARY | COOP | 7.33 | AZ | CAVE CREEK 1.0 WSW | CoCoRaHS | 3.28 | AZ | CORONADO NM HQ | COOP | 8.66 |
| AZ | WILLIAMS 3.3 SSE | CoCoRaHS | 7.24 | AZ | COOLIDGE 5 W | WBAN | 3.13 | AZ | HEREFORD 8.4 W | CoCoRaHS | 8.49 |
| AZ | PINETOP | COOP | 7.22 | AZ | SCOTTSDALE 17.7 N | CoCoRaHS | 3.05 | AZ | SIERRA VISTA 9.2 SSE | CoCoRaHS | 8.34 |
| AZ | PINE 0.9 SW | CoCoRaHS | 7.22 | AZ | ROBSON RCH | COOP | 2.9 | AZ | Y LIGHTNING RCH | COOP | 8.09 |
| AZ | WORKMAN CREEK | Snotel | 7 | AZ | QUEEN CREEK 8.2 ESE | CoCoRaHS | 2.79 | AZ | BEAVER HEAD | Snotel | 7.7 |
| AZ | FLAGSTAFF 3.4 NE | CoCoRaHS | 6.87 | AZ | CASA GRANDE NM | COOP | 2.62 | AZ | DOUGLAS | COOP | 7.67 |
| AZ | NATURAL BRG | COOP | 6.79 | AZ | PARADISE VALLEY 1.9 NW | CoCoRaHS | 2.6 | AZ | CHIRICAHUA NM | COOP | 7.48 |
| AZ | HEBER 3 SE | WBAN | 6.76 | AZ | MIAMI | COOP | 2.4 | AZ | DOUGLAS 7.3 WNW | CoCoRaHS | 7.33 |
| AZ | FLAGSTAFF 6.8 NW | CoCoRaHS | 6.73 | AZ | SCOTTSDALE MUNI AP | WBAN | 2.35 | AZ | PORTAL 4 SW | COOP | 7.1 |
| AZ | WILDCAT | Snotel | 6.69 | AZ | FLORENCE 5.5 WNW | CoCoRaHS | 2.34 | AZ | HEREFORD 4.0 W | CoCoRaHS | 6.98 |
| AZ | BELMONT NWFO | COOP | 6.61 | AZ | EHRENBERG 2 E | COOP | 2.14 | AZ | MC NEAL | COOP | 6.95 |
| AZ | PRESCOTT 4.8 E | CoCoRaHS | 6.56 | AZ | SCOTTSDALE 0.9 SW | CoCoRaHS | 2.06 | AZ | SIERRA VISTA 7.2 SE | CoCoRaHS | 6.7 |
| AZ | FLAGSTAFF 3.2 NNW | CoCoRaHS | 6.53 | AZ | SCOTTSDALE 4.0 NW | CoCoRaHS | 2.05 | AZ | HEREFORD 2.8 NW | CoCoRaHS | 6.17 |
| AZ | HEBER BLACK MESA RS | COOP | 6.48 | AZ | QUEEN CREEK 4.3 E | CoCoRaHS | 2.03 | AZ | PEARCE SUNSITES | COOP | 5.93 |
| AZ | FLAGSTAFF 3.1 NNW | CoCoRaHS | 6.4 | AZ | GILBERT 3.6 ENE | CoCoRaHS | 2.02 | AZ | BISBEE | COOP | 5.89 |
| AZ | PAYSON | WBAN | 6.25 | AZ | PHOENIX 7.4 NE | CoCoRaHS | 1.97 | AZ | WHETSTONE 2.6 SW | CoCoRaHS | 5.81 |
| AZ | FLAGSTAFF 3.1 NE | CoCoRaHS | 6.17 | AZ | NEW RIVER 3.1 ENE | CoCoRaHS | 1.85 | AZ | SIERRA VISTA 0.4 ESE | CoCoRaHS | 5.76 |
| AZ | FRY | Snotel | 6 | AZ | CASA GRANDE 5.7 SE | CoCoRaHS | 1.85 | AZ | GREEN VALLEY 3.2 SW | CoCoRaHS | 5.64 |
| AZ | PRESCOTT 3.1 NW | CoCoRaHS | 5.82 | AZ | CHANDLER 2.0 N | CoCoRaHS | 1.78 | AZ | SIERRA VISTA 1.3 E | CoCoRaHS | 5.61 |
| AZ | SUNRISE MTN | COOP | 5.67 | AZ | PHOENIX SKY HARBOR INTL AP | WBAN | 1.77 | AZ | SIERRA VISTA 4.9 SE | CoCoRaHS | 5.55 |
| AZ | PAYSON 1.0 WSW | CoCoRaHS | 5.66 | AZ | CAREFREE | COOP | 1.74 | AZ | ORACLE 1.1 WSW | CoCoRaHS | 5.19 |
| AZ | ASH FORK 4.9 SW | CoCoRaHS | 5.35 | AZ | SCOTTSDALE 5.5 NNW | CoCoRaHS | 1.73 | AZ | AJO 29 S | WBAN | 5.13 |
| AZ | PRESCOTT 2.9 WNW | CoCoRaHS | 5.33 | AZ | MESA 13.6 ESE | CoCoRaHS | 1.68 | AZ | ORGAN PIPE CACTUS NM | COOP | 5.06 |
| AZ | BRIGHT ANGEL RS | COOP | 5.29 | AZ | CAVE CREEK 2.4 N | CoCoRaHS | 1.66 | AZ | KITT PEAK | COOP | 5.02 |
| AZ | FLAGSTAFF 1.3 NNE | CoCoRaHS | 5.19 | AZ | GLOBE #3 | COOP | 1.63 | AZ | GREEN VALLEY | COOP | 4.94 |
| AZ | JEROME | COOP | 5.17 | AZ | MESA 13.4 E | CoCoRaHS | 1.62 | AZ | GREEN VALLEY 2.7 SW | CoCoRaHS | 4.93 |
| AZ | WILLIAMS | COOP | 5.11 | AZ | SCOTTSDALE 5.3 NNW | CoCoRaHS | 1.59 | AZ | SIERRA VISTA 4.8 SE | CoCoRaHS | 4.92 |
| AZ | PROMONTORY | Snotel | 5.1 | AZ | YUMA 13.8 ESE | CoCoRaHS | 1.56 | AZ | ELGIN 5 S | WBAN | 4.73 |
| AZ | WHITERIVER A 1 SW | WBAN | 4.99 | AZ | PUNKIN CTR | COOP | 1.56 | AZ | PARADISE | COOP | 4.52 |
| AZ | FLAGSTAFF 3.5 E | CoCoRaHS | 4.96 | AZ | MESA 8.4 ESE | CoCoRaHS | 1.53 | AZ | HUACHUCA CITY 3.4 N | CoCoRaHS | 4.49 |
| AZ | MORMON MOUNTAIN | Snotel | 4.8 | AZ | APACHE JUNCTION 2.5 WSW | CoCoRaHS | 1.49 | AZ | NOGALES INTL AP | WBAN | 4.45 |
| AZ | PRESCOTT 3.9 NW | CoCoRaHS | 4.77 | AZ | FLORENCE 9.1 NW | CoCoRaHS | 1.47 | AZ | TUMACACORI NM | COOP | 4.43 |
| AZ | SUNSET CRATER NM | COOP | 4.62 | AZ | NEW RIVER 3.2 ENE | CoCoRaHS | 1.46 | AZ | TUBAC 2.9 SW | CoCoRaHS | 4.43 |
| AZ | PAYSON 6.3 NNE | CoCoRaHS | 4.62 | AZ | PHOENIX 6.3 ENE | CoCoRaHS | 1.46 | AZ | BOWIE 23 SSE | WBAN | 4.4 |
| AZ | MAYER 8.5 SSE | CoCoRaHS | 4.59 | AZ | ROOSEVELT 1 WNW | COOP | 1.41 | AZ | TUCSON 11.8 SE | CoCoRaHS | 4.22 |
| AZ | SPRINGERVILLE | WBAN | 4.59 | AZ | PHOENIX 9.5 SE | CoCoRaHS | 1.39 | AZ | BENSON 6 SE | COOP | 4.03 |

Top July precipitation across Arizona.

| Monthly Data for July 2013 for Albuquerque, NM CWA | | | | Monthly Data for July 2013 for El Paso, TX CWA | | | | Monthly Data for July 2013 for Midland, TX CWA | | | |
|--|---------------------|--------------|---------------------|--|----------------------|--------------|---------------------|--|--------------------------|--------------|---------------------|
| State | Name | Station Type | Total Precipitation | State | Name | Station Type | Total Precipitation | State | Name | Station Type | Total Precipitation |
| NM | SILVER CREEK DIVIDE | Snotel | 7.8 | NM | SILVER CITY 4.4 N | CoCoRaHS | 9.77 | NM | CARLSBAD 33.3 WSW | CoCoRaHS | 8.95 |
| NM | WESNER SPRINGS | Snotel | 7.7 | NM | SILVER CITY 3.4 N | CoCoRaHS | 8.47 | NM | HOPE | COOP | 6.53 |
| NM | SANTA FE | Snotel | 7.4 | NM | SILVER CITY 2.6 NNW | CoCoRaHS | 8.43 | NM | DARK CANYON ROAD | COOP | 6.36 |
| NM | LAS VEGAS 8.4 NW | CoCoRaHS | 7.01 | NM | SILVER CITY 2.7 NNW | CoCoRaHS | 8.06 | NM | CARLSBAD 2.6 NNW | CoCoRaHS | 5.5 |
| NM | SOCORRO 17 WSW | WBAN | 7 | NM | SILVER CITY 6.1 N | CoCoRaHS | 7.84 | NM | CARLSBAD 2.9 N | CoCoRaHS | 5.29 |
| NM | CONCHAS DAM | COOP | 5.66 | NM | SUNSPOT 0.07N | CoCoRaHS | 7.66 | NM | CARLSBAD CAVERNS | COOP | 5.26 |
| NM | BELÉN 5.1 SSE | CoCoRaHS | 5.62 | NM | SILVER CITY 3.9 NW | CoCoRaHS | 7.43 | NM | CARLSBAD 2.1 NNW | CoCoRaHS | 5.26 |
| NM | RED RIVER | COOP | 5.58 | NM | SIGNAL PEAK | Snotel | 7.2 | NM | CARLSBAD 2.0 N | CoCoRaHS | 5.09 |
| NM | LUNA RS | COOP | 5.55 | NM | VIRDEN 30.1 N | CoCoRaHS | 6.73 | NM | CARLSBAD | COOP | 4.72 |
| NM | HOPEWELL | Snotel | 5.4 | NM | CLOUDCROFT | COOP | 6.5 | NM | CARLSBAD CAVERN CITY AP | WBAN | 4.61 |
| NM | TOLBY | Snotel | 5.4 | NM | LOOKOUT MOUNTAIN | Snotel | 6.4 | TX | BIG LAKE 2 | COOP | 4.46 |
| NM | GLENWOOD | COOP | 5.28 | NM | CLOUDCROFT 0.4 ESE | CoCoRaHS | 6.37 | TX | ANDREWS 2 | COOP | 4.45 |
| NM | TUCUMCARI 5.6 E | CoCoRaHS | 5.21 | NM | SILVER CITY 0.5 NNW | CoCoRaHS | 5.98 | NM | CARLSBAD 3.4 N | CoCoRaHS | 4.35 |
| NM | SIERRA BLANCA | Snotel | 5.2 | NM | SILVER CITY 2.1 NNW | CoCoRaHS | 5.93 | NM | CARLSBAD NORTH 15.5 NW | CoCoRaHS | 4.35 |
| NM | LAS VEGAS 12.1 W | CoCoRaHS | 5.1 | NM | SILVER CITY 13.4 WSW | CoCoRaHS | 5.87 | NM | ARTESIA 15.5 S (LEWIS) | CoCoRaHS | 4.32 |
| NM | DATIL 2.0 W | CoCoRaHS | 5.07 | NM | BAYARD 8.9 ENE | CoCoRaHS | 5.83 | TX | MT LOCKE | COOP | 4.24 |
| NM | TIJERAS 3.7 N | CoCoRaHS | 5.03 | NM | BAYARD 17.1 E | CoCoRaHS | 5.7 | NM | CARLSBAD 17.1 NW (PRICE) | CoCoRaHS | 4.04 |
| NM | CAPITAN | COOP | 4.87 | NM | CLIFF 5.7 NE | CoCoRaHS | 5.57 | TX | LAKE AMENT | COOP | 3.87 |
| NM | MOUNTAINAIR 8NW | COOP | 4.85 | NM | CLOUDCROFT 4.9 NE | CoCoRaHS | 5.35 | NM | ARTESIA 2 WNW | WBAN | 3.84 |
| NM | CORRALES 0.8 ESE | CoCoRaHS | 4.68 | NM | CLOUDCROFT 4.0 E | CoCoRaHS | 5.3 | NM | HOBBS 8.0 SSE | CoCoRaHS | 3.78 |
| NM | ALBUQUERQUE 4.6 E | CoCoRaHS | 4.65 | NM | DEMING 8.6 SE | CoCoRaHS | 5.12 | TX | FT DAVIS | COOP | 3.78 |
| NM | LOS LUNAS 3 SSW | COOP | 4.59 | NM | HIGH ROLLS 0.8 SE | CoCoRaHS | 5.1 | TX | BIG SPRING FLD STN | COOP | 3.63 |
| NM | TUCUMCARI 4.7 NNW | CoCoRaHS | 4.56 | NM | SILVER CITY 4.6 W | CoCoRaHS | 5.05 | TX | VAN HORN | WBAN | 3.5 |
| NM | CORRALES 1.1 SSE | CoCoRaHS | 4.56 | NM | SILVER CITY 3.4 SW | CoCoRaHS | 4.97 | TX | IMPERIAL | COOP | 3.49 |
| NM | PEDERNAL 9 E | COOP | 4.51 | NM | DEMING 15.5 ESE | CoCoRaHS | 4.97 | NM | LOVINGTON 0.9 NNW | CoCoRaHS | 3.43 |
| NM | CIMARRON 4 SW | COOP | 4.45 | NM | CLOUDCROFT 2.3 S | CoCoRaHS | 4.72 | NM | HOBBS 0.4 NNE | CoCoRaHS | 3.34 |
| NM | ALBUQUERQUE 8.1 ESE | CoCoRaHS | 4.41 | NM | LAS CRUCES 0.8 WNW | CoCoRaHS | 4.58 | TX | PRESIDIO 2 | COOP | 3.22 |
| NM | LAS VEGAS MUNI AP | WBAN | 4.39 | NM | CLOUDCROFT 16 ESE | CoCoRaHS | 4.55 | NM | ARTESIA 6S | COOP | 3.2 |
| NM | ANGEL FIRE | COOP | 4.34 | NM | DEMING 16 ESE | CoCoRaHS | 4.53 | NM | TATUM | COOP | 3.17 |
| NM | EAGLE NEST | COOP | 4.32 | NM | BAYARD 0.1 SW | CoCoRaHS | 4.5 | TX | FT STOCKTON | COOP | 3.05 |
| NM | EL RITO 2.3 NW | CoCoRaHS | 4.31 | NM | MTN PARK | COOP | 4.46 | TX | LAMESA 1 SSE | COOP | 3 |
| NM | PLACITAS 2.1 SE | CoCoRaHS | 4.29 | NM | SILVER CITY 3.5 S | CoCoRaHS | 4.32 | TX | COPE RCH | COOP | 2.99 |
| NM | LOS ALAMOS 13 W | WBAN | 4.28 | NM | DEMING 19 NNE | CoCoRaHS | 4.21 | TX | ANDREWS 26.7 SW | CoCoRaHS | 2.95 |
| NM | BELÉN 1.0 NNE | CoCoRaHS | 4.27 | NM | WINSTON | COOP | 4.09 | TX | KENT 8 SE | COOP | 2.95 |
| NM | CLAYTON 14.6 SSW | CoCoRaHS | 4.25 | NM | HACHITA | COOP | 4.01 | TX | VALENTINE 20 WNW | COOP | 2.88 |
| NM | ELK | COOP | 4.25 | NM | COLUMBUS 20.1 W | CoCoRaHS | 3.98 | TX | SEMINOLE | COOP | 2.83 |
| NM | ALBUQUERQUE 6.4 ENE | CoCoRaHS | 4.24 | NM | REDROCK 1 NNE | COOP | 3.92 | NM | NADINE 2E | COOP | 2.79 |
| NM | LOS ALAMOS 0.9 SW | CoCoRaHS | 4.24 | NM | PINON 8 SSE | WBAN | 3.91 | NM | OCHOA | COOP | 2.76 |

Top July precipitation across New Mexico and Texas.

Weekly Snowpack and Drought Monitor Update Report

| Monthly Data for July 2013 for Reno, NV CWA | | | | Monthly Data for July 2013 for Elko, NV CWA | | | | Monthly Data for July 2013 for Las Vegas, NV CWA | | | |
|---|----------------------|--------------|---------------------|---|------------------|--------------|---------------------|--|------------------------|--------------|---------------------|
| State | Name | Station Type | Total Precipitation | State | Name | Station Type | Total Precipitation | State | Name | Station Type | Total Precipitation |
| CA | SONORA PASS | Snotel | 3.8 | NV | DIAMOND PEAK | Snotel | 3.2 | AZ | DIAMOND M RCH | COOP | 3.2 |
| CA | SPRATT CREEK | Snotel | 2.7 | NV | DISASTER PEAK | Snotel | 2.1 | NV | RACHEL | COOP | 2.76 |
| CA | LEAVITT LAKE | Snotel | 2.6 | NV | LAMOILLE #3 | Snotel | 2 | AZ | PIPE SPRINGS NM | COOP | 2.35 |
| CA | SUSANVILLE 3.2 SSW | CoCoRaHS | 2.25 | NV | RUTH | COOP | 1.99 | NV | SILVERPEAK | COOP | 2.25 |
| CA | VIRGINIA LAKES RIDGE | Snotel | 1.93 | NV | CORRAL CANYON | Snotel | 1.9 | NV | HENDERSON 5.9 W | CoCoRaHS | 1.95 |
| NV | BIG MEADOW | Snotel | 1.9 | NV | GREEN MOUNTAIN | Snotel | 1.8 | NV | CAJIENTE | COOP | 1.9 |
| NV | WABUSKA 6 SE | COOP | 1.74 | NV | EUREKA AIRPORT | WBAN | 1.68 | NV | MT. CHARLESTON F.S. | COOP | 1.56 |
| CA | EBBETTS PASS | Snotel | 1.7 | NV | TONOPAH | WBAN | 1.52 | AZ | KINGMAN MOHAVE CO AP | WBAN | 1.48 |
| CA | HAGAN'S MEADOW | Snotel | 1.5 | NV | DORSEY BASIN | Snotel | 1.4 | NV | EAST LAS VEGAS 1.3 NNV | CoCoRaHS | 1.42 |
| CA | FARAD | COOP | 1.49 | NV | HOLE-IN-MOUNTAIN | Snotel | 1.4 | NV | CATHEDRAL GORGE SP | COOP | 1.36 |
| CA | BRIDGEPORT | COOP | 1.23 | NV | JACKS PEAK | Snotel | 1.4 | AZ | KINGMAN 8 NE | WBAN | 1.31 |
| NV | SUN VALLEY 0.9 N | CoCoRaHS | 1.19 | NV | POLE CREEK R.S. | Snotel | 1.2 | AZ | WIKIEUP | COOP | 1.16 |
| CA | POISON FLAT | Snotel | 1.1 | NV | LAUREL DRAW | Snotel | 1.2 | NV | DESERT NATL WL RANGE | COOP | 1.16 |
| CA | RUBICON #2 | Snotel | 1.1 | NV | WARD MOUNTAIN | Snotel | 1.2 | NV | SPRING VALLEY SP | COOP | 1.15 |
| CA | VERDI 2W | COOP | 1.02 | NV | BIG BEND | Snotel | 1.1 | CA | TWENTYNINE PALMS 12E | COOP | 1.13 |
| CA | INDEPENDENCE LAKE | Snotel | 1 | NV | TONOPAH | WBAN | 0.91 | NV | HENDERSON 2.5 SE | CoCoRaHS | 1.04 |

Top July precipitation across Nevada and California.

Data provided by: Western Region Climate Center, Desert Research Institute