



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

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**Weekly Report - Snowpack / Drought (& Flood) Monitor Update**    **Date: 11 August 2011**

## **SNOTEL SNOWPACK AND PRECIPITATION SUMMARY**

**Temperature** SNOTEL and ACIS 7-day temperature anomaly shows +5°F departures over the Central Rockies and Southwest and -5°F departures elsewhere (Fig. 1). ACIS 7-day average temperature anomalies show the greatest positive temperature departures across southeastern New Mexico (>+8°F) and the greatest negative departures over portions of the eastern Great Basin and Coastal Southern California (<-4°F) (Fig. 1a).

**Precipitation:** ACIS 7-day average precipitation amounts for the period ending yesterday shows the bulk of the heaviest precipitation scattered east of the Continental Divide and especially over the High Plains (Fig. 2). In terms of percent of normal, the precipitation in the form of widely scattered thunderstorms is noted over Idaho, Wyoming and the Dakota (Fig 2a). The Summer Southwest Monsoon has weakened considerably. For the 2011 Water-Year that began on 1 October 2010, the greatest deficits are found over the extreme southern reaches of the Southwest. Areas with the highest values are found over the Great Basin, Cascades, Sierra, and parts of Northern and Central Rockies. The Southwest Monsoon in New Mexico is not contributing much to water deficits thus far this season.

[Flooding persists](#) along the flood plain of much of the [Missouri River](#).

**Weekly Weather Summary:** Exceptional drought continues its hold on the southern states of Texas, Oklahoma, New Mexico and neighboring states. Recent extreme high temperatures have combined with below average precipitation over the last few weeks to create drought impacts in the Corn Belt states of Iowa, Illinois and Indiana.

**West:** Very few changes were made in the western region of the United States. Widespread rainfall south and southeast of Denver, CO have improved the drought conditions and a one-category improvement is made in Jefferson, Park, El Paso, and Lincoln counties and the surrounding area. Drought impacts to producers in this area are not as severe as were reported in July. In the San Luis Valley in south central Colorado, exceptional drought impacts continue despite recent precipitation over the last few weeks, and this area remains in D4 status.

**Author:** [Laura Edwards, Western Regional Climate Center](#)

***A comprehensive narrative describing drought conditions for the nation can be found at the end of this document.***

### [Drought Impacts Definitions](#)

The possible impacts associated with **D4 (H, A)** drought include widespread crop/pasture losses and shortages of water in reservoirs, streams, and wells creating water emergencies. The possible impacts associated with **D3 (H, A)** drought include major crop/pasture losses and widespread water shortages or restrictions. Possible impacts from **D2 (H, A)** drought are focused on water shortages common and water restrictions imposed and crop or pasture losses likely. The possible impacts associated with **D1 (H, A)** drought are focused on water shortages

## Weekly Snowpack and Drought Monitor Update Report

developing in streams, reservoirs, or wells, and some damage to crops and pastures (Figs. 3 through 3d).

### Soil Moisture

Soil moisture (Figs. 4a and 4b), is simulated by the [VIC macroscale hydrologic model](#). The detailed, physically-based VIC model is driven by observed daily precipitation and temperature maxima and minima from approximately 2130 stations, selected for reporting reliably in real-time and for having records of longer than 45 years (and various other criteria). Another good resource can be found at: <http://www.emc.ncep.noaa.gov/mmb/nldas/drought/>.

### [Soil Climate Analysis Network \(SCAN\)](#)

Figure 5 provides supplemental data on soil conditions (moisture and temperatures at various depths from 2 inches to 80 inches). For more information about SCAN see ([brochure](#)).

### [U.S. Historical Streamflow](#)

This map, (Fig. 6) shows the 7-day average streamflow conditions in hydrologic units of the United States and Puerto Rico for the day of year. The colors represent 7-day average streamflow percentiles based on historical streamflow for the day of the year. Thus, the map shows conditions adjusted for this time of the year. Only stations having at least 30 years of record are used. Sub-regions shaded gray indicate that insufficient data were available to compute a reliable 7-day average streamflow value. During winter months, this situation frequently arises due to ice effects. The data used to produce this map are provisional and have not been reviewed or edited. They may be subject to significant change.

### State Activities

State government drought activities can be tracked at the following URL: <http://drought.unl.edu/mitigate/mitigate.htm>. NRCS SS/WSF State Office personnel are participating in state drought committee meetings and providing the committees and media with appropriate SS/WSF information - <http://www.wcc.nrcs.usda.gov/cgibin/bor.pl>. Additional information describing the products available from the Drought Monitor can be found at the following URL: <http://drought.unl.edu/dm/> and <http://www.drought.gov>.

### For More Information

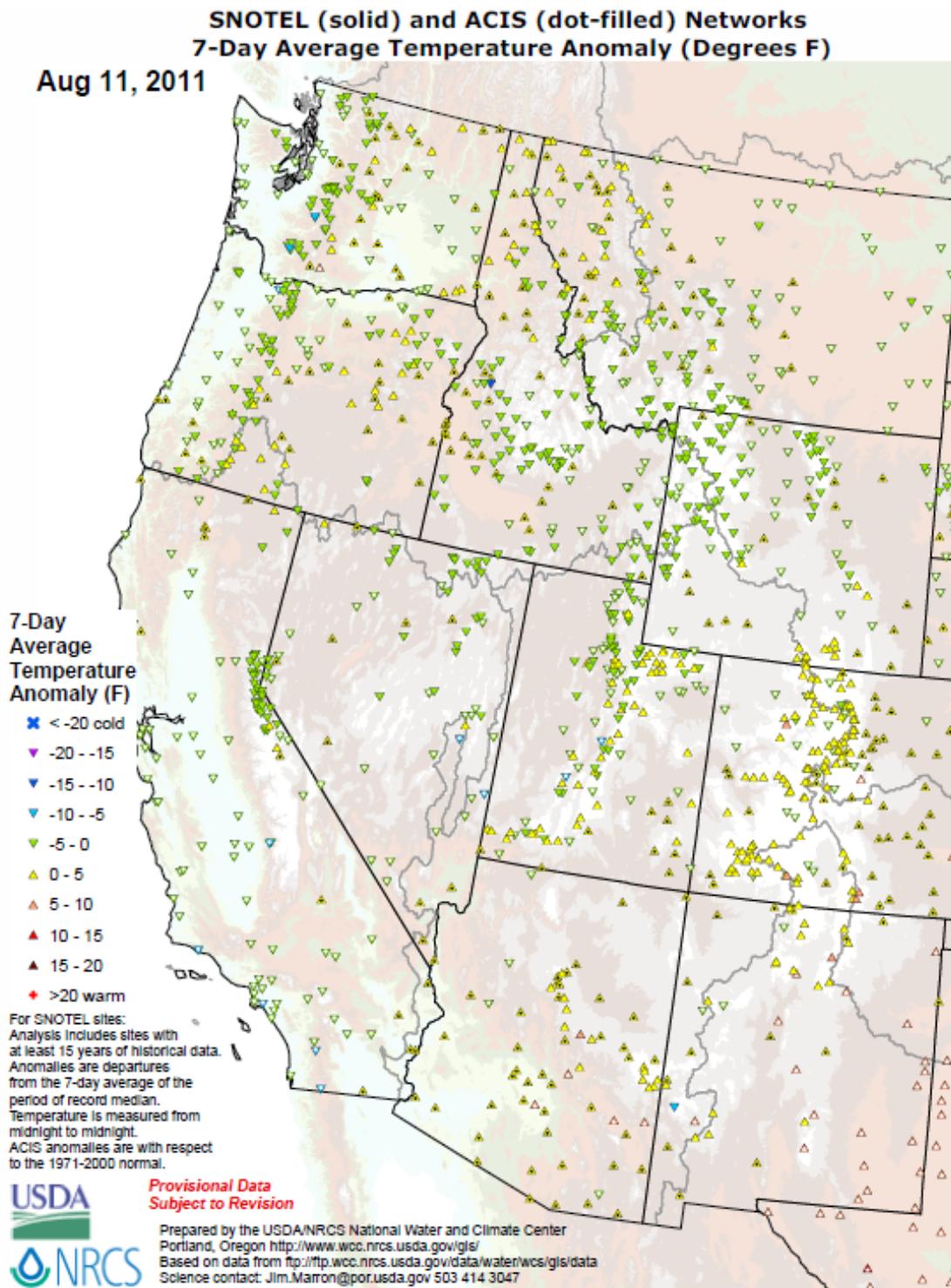
The National Water and Climate Center Homepage provide the latest available snowpack and water supply information. Please visit us at <http://www.wcc.nrcs.usda.gov>. This document is available from the following location on the NWCC homepage - <http://www.wcc.nrcs.usda.gov/water/drought/wdr.pl>. Reports from 2007 are available on-line while ones from 2001-2006 can be acquired upon request.

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

/s/

Douglas Lawrence  
Deputy Chief, Soil Survey and Resource Assessment

# Weekly Snowpack and Drought Monitor Update Report

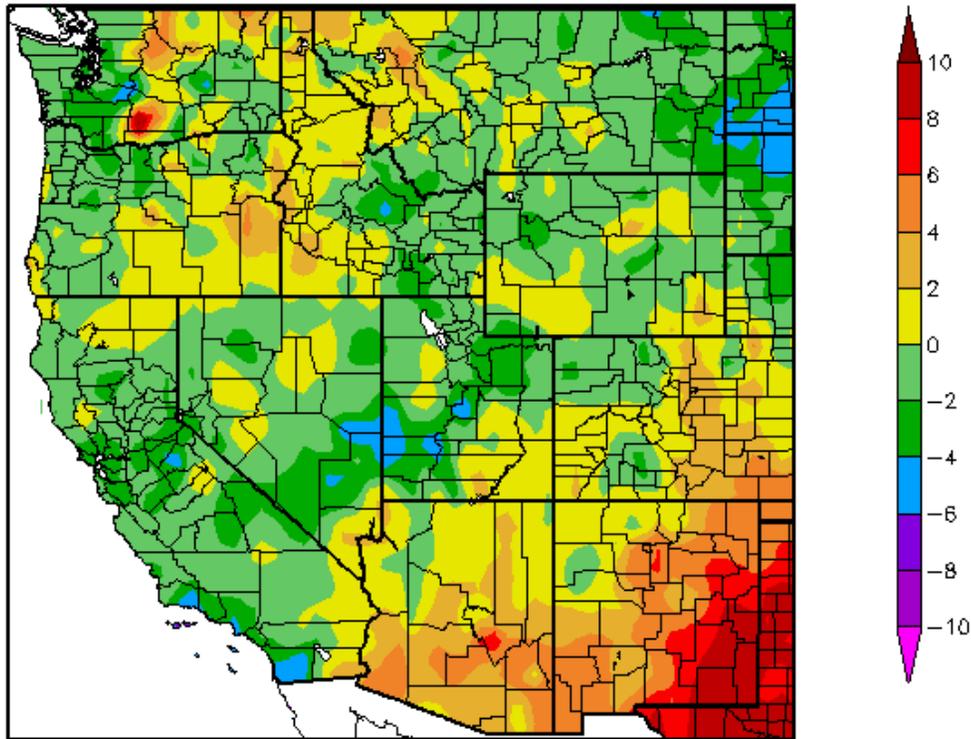


**Fig. 1: SNOTEL and ACIS 7-day temperature anomaly shows +5°F departures over the Central Rockies and Southwest and -5°F departures elsewhere.**

Ref: <http://www.wcc.nrcs.usda.gov/ftpref/data/water/wcs/gis/maps/WestwideTavg7dAnomalyAcis.pdf>

## Weekly Snowpack and Drought Monitor Update Report

Departure from Normal Temperature (F)  
8/4/2011 – 8/10/2011



Generated 8/11/2011 at HPRCC using provisional data.

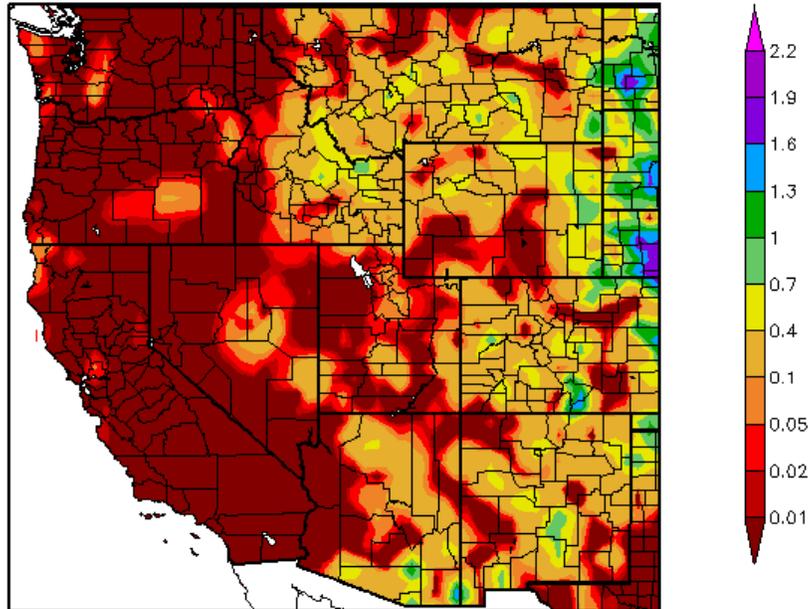
Regional Climate Centers

**Fig. 1a: ACIS 7-day average temperature anomalies show the greatest positive temperature departures across southeastern New Mexico (>+8°F) and the greatest negative departures over portions of the eastern Great Basin and Coastal Southern California (<-4°F).**

Ref: [http://www.hprcc.unl.edu/maps/current/index.php?action=update\\_daterange&daterange=14d](http://www.hprcc.unl.edu/maps/current/index.php?action=update_daterange&daterange=14d)

## Weekly Snowpack and Drought Monitor Update Report

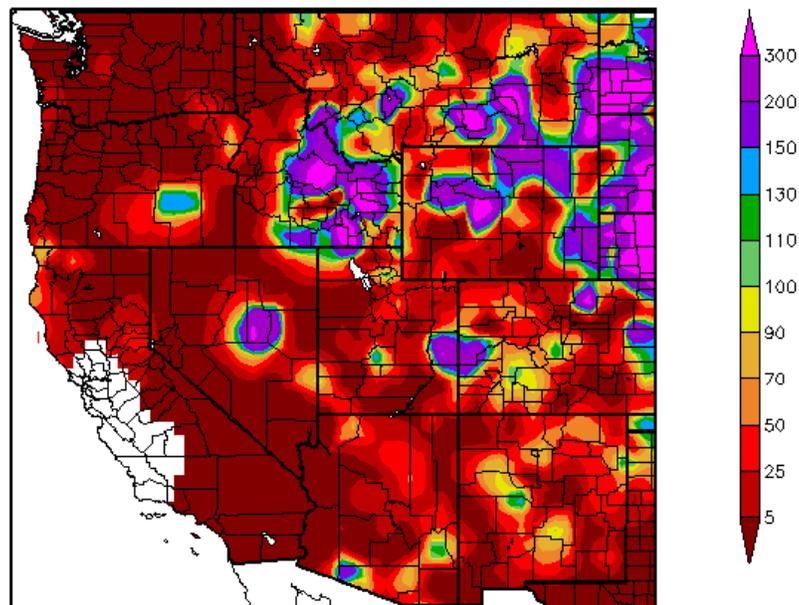
Precipitation (in)  
8/4/2011 - 8/10/2011



Generated 8/11/2011 at HPRCC using provisional data.

Regional Climate Centers

Percent of Normal Precipitation (%)  
8/4/2011 - 8/10/2011



Generated 8/11/2011 at HPRCC using provisional data.

Regional Climate Centers

**Fig. 2 and 2a: ACIS 7-day average precipitation amounts for the period ending yesterday shows the bulk of the heaviest precipitation scattered east of the Continental Divide and especially over the High Plains (Fig. 2). In terms of percent of normal, the precipitation in the form of widely scattered thunderstorms is noted over Idaho, Wyoming and the Dakota (Fig 2a). The Summer Southwest Monsoon has weakened considerably.**

Ref: <http://www.hprcc.unl.edu/maps/current/>

Weekly Snowpack and Drought Monitor Update Report

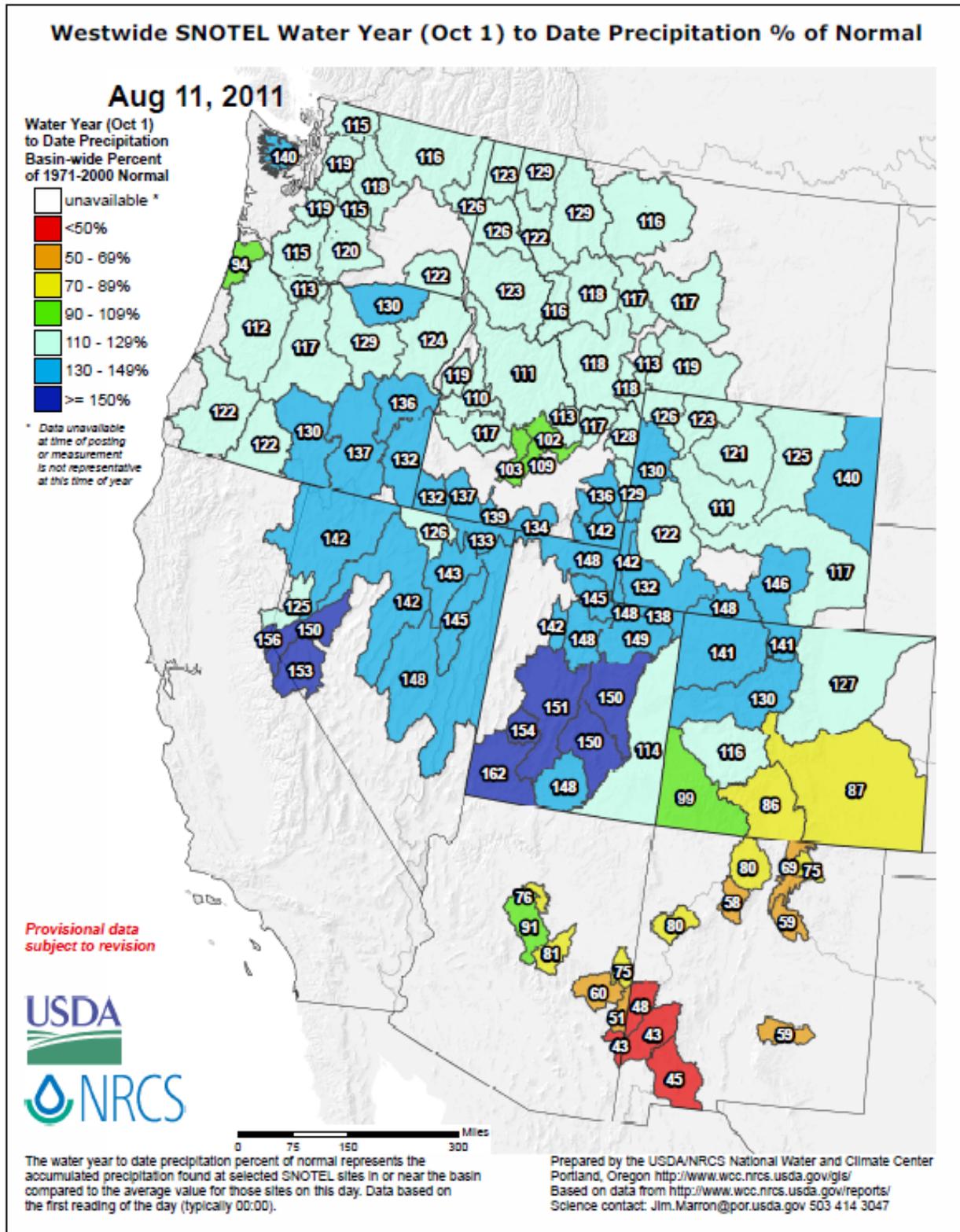


Fig 2b: For the 2011 Water-Year that began on 1 October 2010, the greatest deficits are found over the extreme southern reaches of the Southwest. Areas with the highest values are found over the Great Basin, Cascades, Sierra, and parts of Northern and Central Rockies. The Southwest Monsoon in New Mexico is not contributing much to water deficits thus far this season.

Ref: [http://www.wcc.nrcs.usda.gov/ftpref/data/water/wcs/gjs/maps/west\\_wytdprecpcnormal\\_update.pdf](http://www.wcc.nrcs.usda.gov/ftpref/data/water/wcs/gjs/maps/west_wytdprecpcnormal_update.pdf)

# U.S. Drought Monitor

August 9, 2011  
Valid 8 a.m. EDT

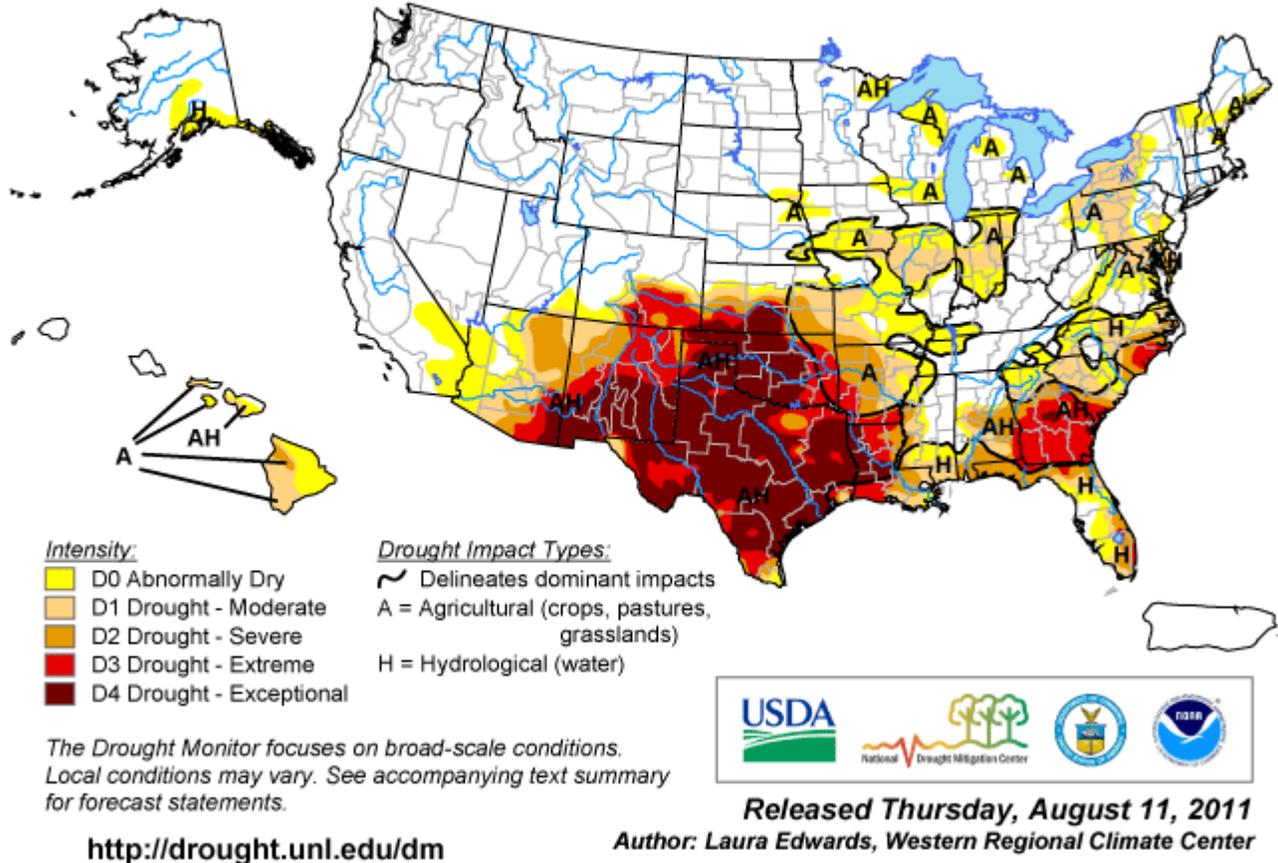


Fig. 3: Current Drought Monitor weekly summary. The exceptional D4 levels of drought are found over southeast Arizona, New Mexico, extreme southeast Colorado, Texas, Oklahoma, Louisiana, and Georgia. Ref: <http://www.drought.unl.edu/dm/monitor.html>

## Agriculture Drought News

Aug 4, [Texas](#). Lack of water, water intoxication or poor water quality may be related to some cattle deaths since the dead animals were sometimes found near the water.

July 29, [Oklahoma](#). Feeder cattle sales were up 56 percent, while cow and bull sales were up 205 percent compared to last year. So many ranchers want to sell that livestock haulers are busy, forcing a delay in shipping the cattle to market.

Aug 3, [Eastern Texas](#). Area creeks and ponds were low and could not supply enough water to help the crops.

Aug 3, [Southwestern Oklahoma](#). The dry stock ponds were leading cattle producers to sell, as documented in the article about cattle liquidation in Oklahoma, [Drought Accelerates Liquidation In Southern Plains](#).

Aug 3, [Oklahoma, Texas](#). Hot, dry, no pasture, no water.

Aug 3, [Texas panhandle](#). The need for more irrigation than usual has led to some dry wells. Other farmers planted less, knowing that there wouldn't be enough water for all of the crops.

Aug 3, [Southwestern Missouri](#). Heat and drought in July hurt the crops, forcing farmers to resort to filing insurance claims.

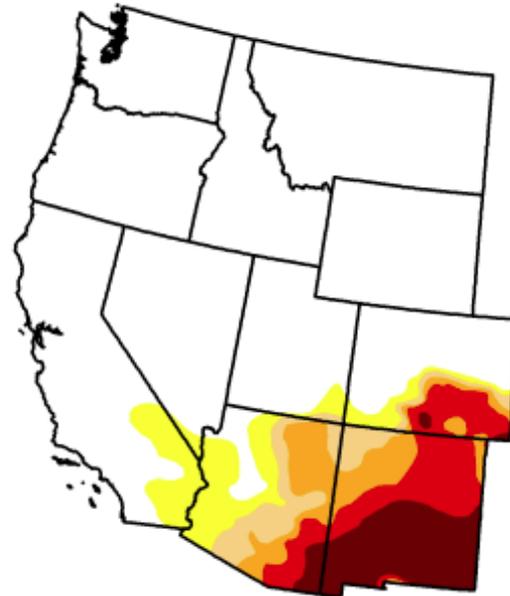
# U.S. Drought Monitor

## West

August 9, 2011  
Valid 7 a.m. EST

*Drought Conditions (Percent Area)*

|   | None  | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4   |
|---|-------|-------|-------|-------|-------|------|
| Current                                       | 75.17 | 24.83 | 18.82 | 15.30 | 10.88 | 5.44 |
| Last Week<br>(08/02/2011 map)                 | 74.90 | 25.10 | 18.98 | 15.44 | 11.10 | 5.52 |
| 3 Months Ago<br>(05/10/2011 map)              | 75.89 | 24.11 | 20.08 | 15.56 | 8.04  | 3.09 |
| Start of<br>Calendar Year<br>(12/28/2010 map) | 73.26 | 26.74 | 11.98 | 0.89  | 0.00  | 0.00 |
| Start of<br>Water Year<br>(09/28/2010 map)    | 62.50 | 37.50 | 8.14  | 0.56  | 0.00  | 0.00 |
| One Year Ago<br>(08/03/2010 map)              | 73.79 | 26.21 | 7.30  | 0.59  | 0.00  | 0.00 |



Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

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

<http://drought.unl.edu/dm>



Released Thursday, August 11, 2011  
Laura Edwards, Western Regional Climate Center

**Fig. 3a: Drought Monitor for the Western States with statistics over various time periods. Regionally there were no significant changes this week.**

Ref: [http://www.drought.unl.edu/dm/DM\\_west.htm](http://www.drought.unl.edu/dm/DM_west.htm)

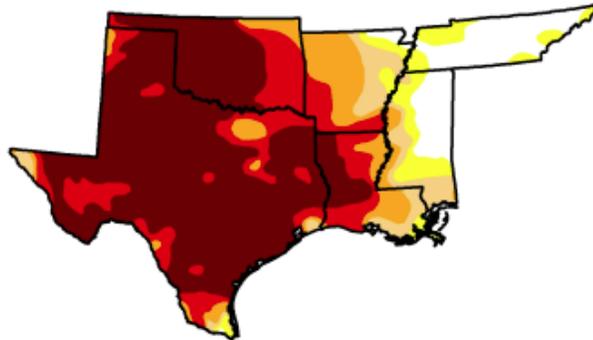
# U.S. Drought Monitor

## South

August 9, 2011  
Valid 7 a.m. EST

*Drought Conditions (Percent Area)*

|   | None  | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4    |
|---|-------|-------|-------|-------|-------|-------|
| Current                                       | 9.69  | 90.31 | 83.96 | 77.45 | 67.21 | 50.63 |
| Last Week<br>(08/02/2011 map)                 | 8.30  | 91.70 | 84.47 | 79.33 | 64.10 | 47.32 |
| 3 Months Ago<br>(05/10/2011 map)              | 24.26 | 75.74 | 68.94 | 62.96 | 50.20 | 27.03 |
| Start of<br>Calendar Year<br>(12/28/2010 map) | 8.86  | 91.14 | 67.65 | 35.21 | 10.17 | 0.00  |
| Start of<br>Water Year<br>(09/28/2010 map)    | 54.23 | 45.77 | 20.04 | 6.79  | 0.83  | 0.00  |
| One Year Ago<br>(08/03/2010 map)              | 74.02 | 25.98 | 11.51 | 5.03  | 1.69  | 0.00  |



**Intensity:**

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

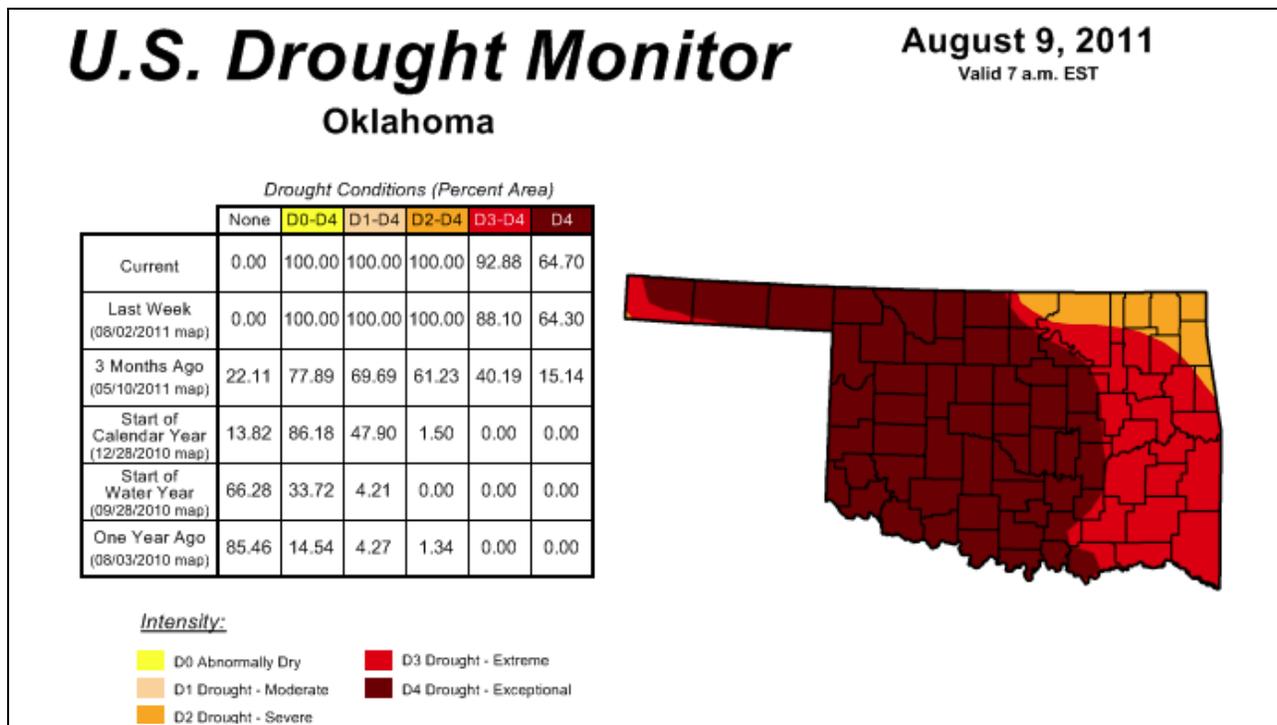
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.



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Laura Edwards, Western Regional Climate Center

<http://drought.unl.edu/dm>

Fig. 3b: Drought Monitor for the South-Central States with statistics over various time periods. This region has shown some deterioration in D3-D4 over the past week. Ref: [http://www.drought.unl.edu/dm/DM\\_south.htm](http://www.drought.unl.edu/dm/DM_south.htm). Fig. 3b(1) shows stats for Oklahoma below.

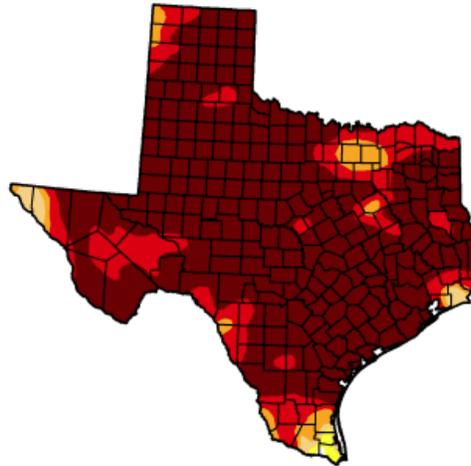


Weekly Snowpack and Drought Monitor Update Report

**U.S. Drought Monitor**  
Texas

August 9, 2011  
Valid 7 a.m. EST

|   | Drought Conditions (Percent Area) |        |       |       |       |       |
|---|-----------------------------------|--------|-------|-------|-------|-------|
|   | None                              | D0-D4  | D1-D4 | D2-D4 | D3-D4 | D4    |
| Current                                       | 0.07                              | 99.93  | 99.48 | 97.99 | 94.27 | 78.26 |
| Last Week<br>(08/02/2011 map)                 | 0.07                              | 99.93  | 99.48 | 98.67 | 91.73 | 73.49 |
| 3 Months Ago<br>(05/10/2011 map)              | 0.00                              | 100.00 | 97.78 | 93.89 | 82.06 | 47.55 |
| Start of<br>Calendar Year<br>(12/28/2010 map) | 7.89                              | 92.11  | 69.43 | 37.46 | 9.59  | 0.00  |
| Start of<br>Water Year<br>(09/28/2010 map)    | 75.57                             | 24.43  | 2.43  | 0.99  | 0.00  | 0.00  |
| One Year Ago<br>(08/03/2010 map)              | 89.46                             | 10.54  | 2.45  | 0.22  | 0.00  | 0.00  |



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

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

<http://drought.unl.edu/dm>



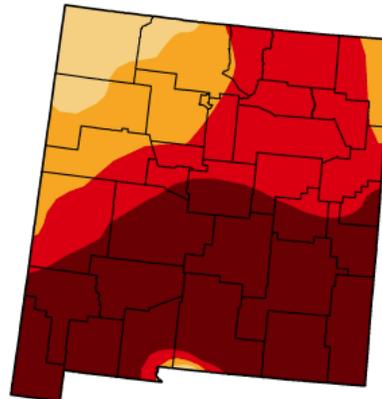
Released Thursday, August 11, 2011  
Laura Edwards, Western Regional Climate Center

Fig. 3c: Currently, 78% of Texas is experiencing “Exceptional” D4 drought. Almost 94% of the state is in D3 and D4 drought! Ref: [http://www.drought.unl.edu/dm/DM\\_state.htm?TX,S](http://www.drought.unl.edu/dm/DM_state.htm?TX,S)

**U.S. Drought Monitor**  
New Mexico

August 9, 2011  
Valid 7 a.m. EST

|   | Drought Conditions (Percent Area) |        |        |       |       |       |
|---|-----------------------------------|--------|--------|-------|-------|-------|
|   | None                              | D0-D4  | D1-D4  | D2-D4 | D3-D4 | D4    |
| Current                                       | 0.00                              | 100.00 | 100.00 | 93.16 | 77.31 | 47.30 |
| Last Week<br>(08/02/2011 map)                 | 0.00                              | 100.00 | 100.00 | 93.24 | 79.05 | 47.47 |
| 3 Months Ago<br>(05/10/2011 map)              | 0.00                              | 100.00 | 96.59  | 87.36 | 61.02 | 30.14 |
| Start of<br>Calendar Year<br>(12/28/2010 map) | 6.16                              | 93.84  | 40.40  | 0.00  | 0.00  | 0.00  |
| Start of<br>Water Year<br>(09/28/2010 map)    | 76.66                             | 23.34  | 0.00   | 0.00  | 0.00  | 0.00  |
| One Year Ago<br>(08/03/2010 map)              | 79.55                             | 20.45  | 0.00   | 0.00  | 0.00  | 0.00  |



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

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

<http://drought.unl.edu/dm>

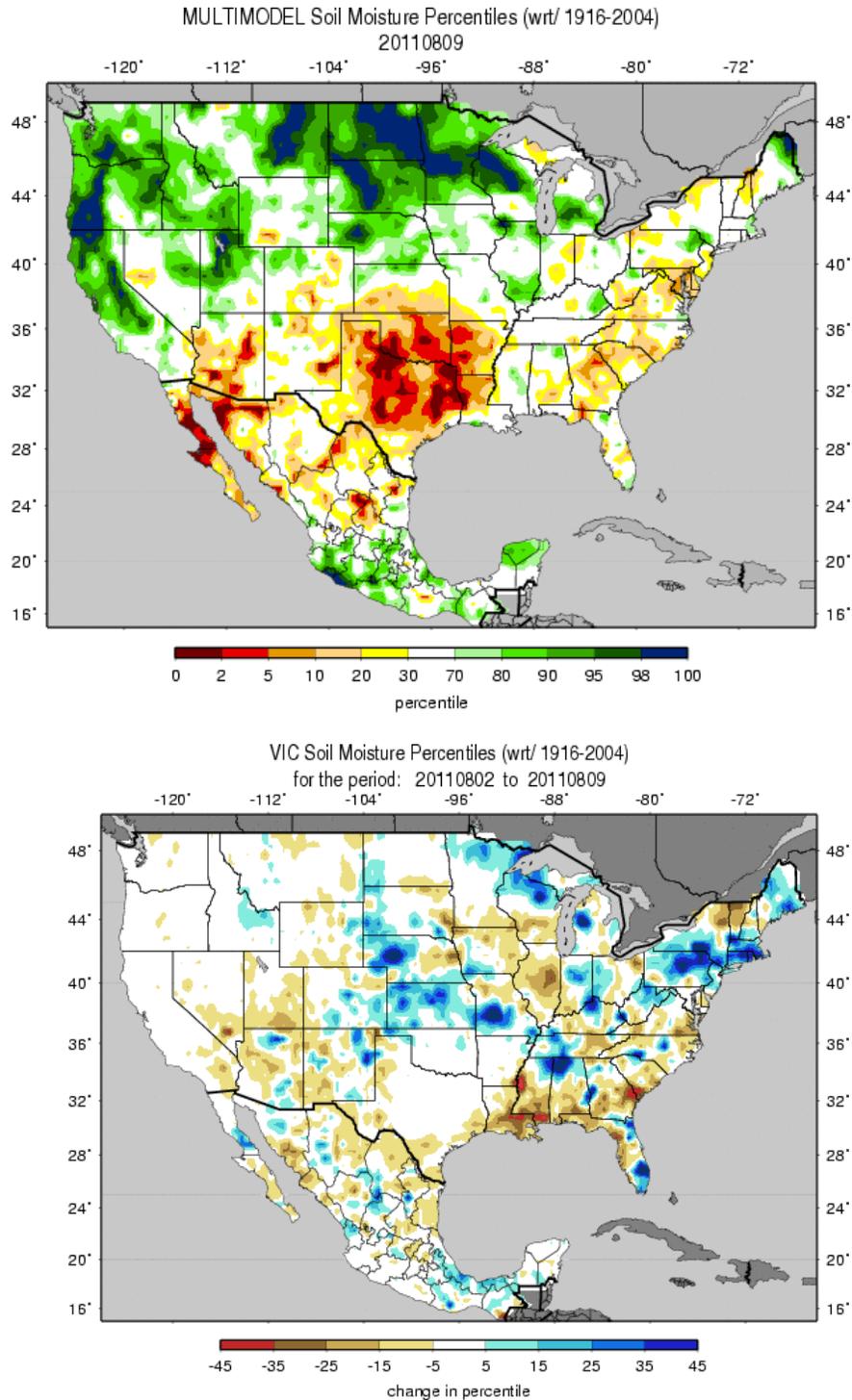


Released Thursday, August 11, 2011  
Laura Edwards, Western Regional Climate Center

Fig. 3d: Drought Monitor for New Mexico with statistics over various time periods. Thus far, the impacts of the Southwest Monsoon have been negligible.

Ref: [http://www.drought.unl.edu/dm/DM\\_state.htm?NM,W](http://www.drought.unl.edu/dm/DM_state.htm?NM,W)

## Weekly Snowpack and Drought Monitor Update Report



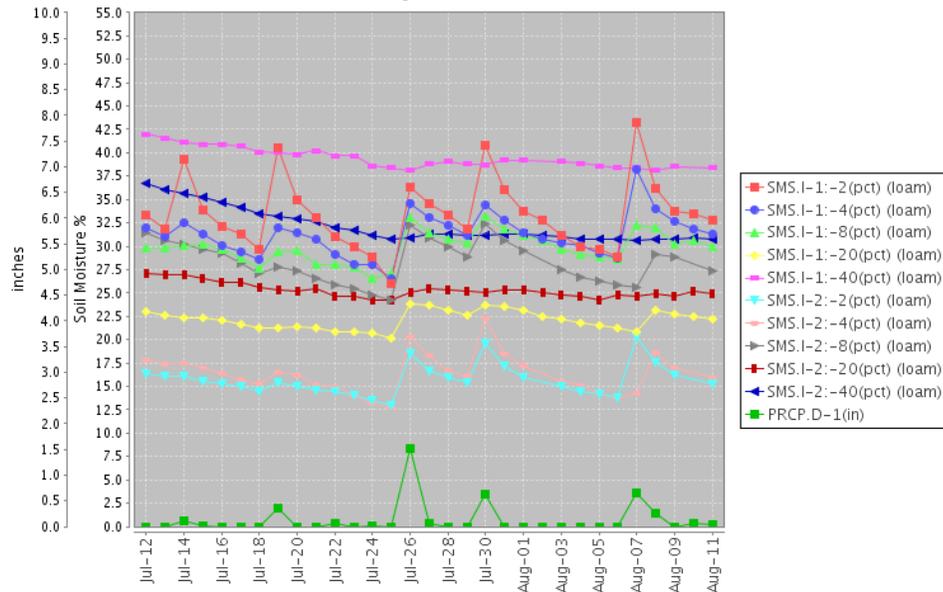
**Figs. 4a and 4b: Soil Moisture ranking in percentile as of 8 August (top) shows moist conditions over much of the Northern Tier States east of the Mississippi River with dryness over the Southern Plains. A continuation of a rather complex pattern of moistening and drying occurred again this week across the nation (bottom).**

[http://www.hydro.washington.edu/forecast/monitor/curr/conus.mexico/CONUS.MEXICO.multimodel.sm\\_qnt.gif](http://www.hydro.washington.edu/forecast/monitor/curr/conus.mexico/CONUS.MEXICO.multimodel.sm_qnt.gif)  
[http://www.hydro.washington.edu/forecast/monitor/curr/conus.mexico/CONUS.MEXICO.vic.sm\\_qnt.1wk.gif](http://www.hydro.washington.edu/forecast/monitor/curr/conus.mexico/CONUS.MEXICO.vic.sm_qnt.1wk.gif)

# Weekly Snowpack and Drought Monitor Update Report

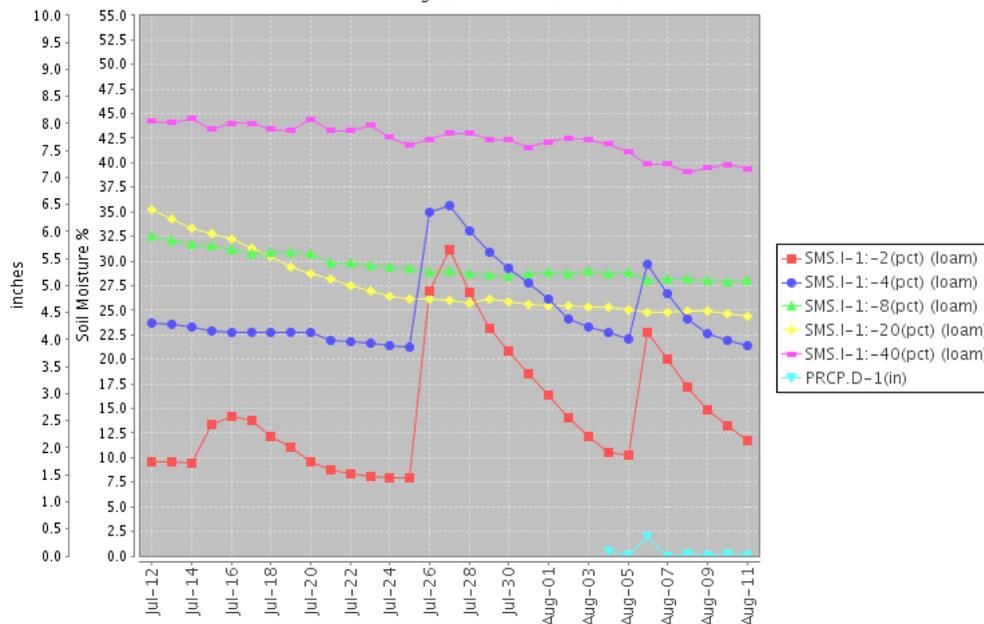
## Soil Climate Analysis Network (SCAN)

Station (2042) MONTH=2011-07-12 (Daily) NRCS National Water and Climate Center - Provisional Data - subject to revision  
Thu Aug 11 07:43:43 PDT 2011



**Fig. 5a:** This NRCS resource shows a site in southern Vermont with improving soil moisture as rains dominated on August 7. Ref: <http://www.wcc.nrcs.usda.gov/nwcc/site?sitenum=2042&state=vt>

Station (2121) MONTH=2011-07-12 (Daily) NRCS National Water and Climate Center - Provisional Data - subject to revision  
Thu Aug 11 07:46:45 PDT 2011



**Fig. 5b:** This SCAN station is located in eastern Montana shows a slow decline in soil moisture at the 40 inch depth while near surface depths respond to a small rain event on 6 August. Ref: <http://www.wcc.nrcs.usda.gov/nwcc/site?sitenum=2121&state=mt>

# Weekly Snowpack and Drought Monitor Update Report

Wednesday, August 10, 2011

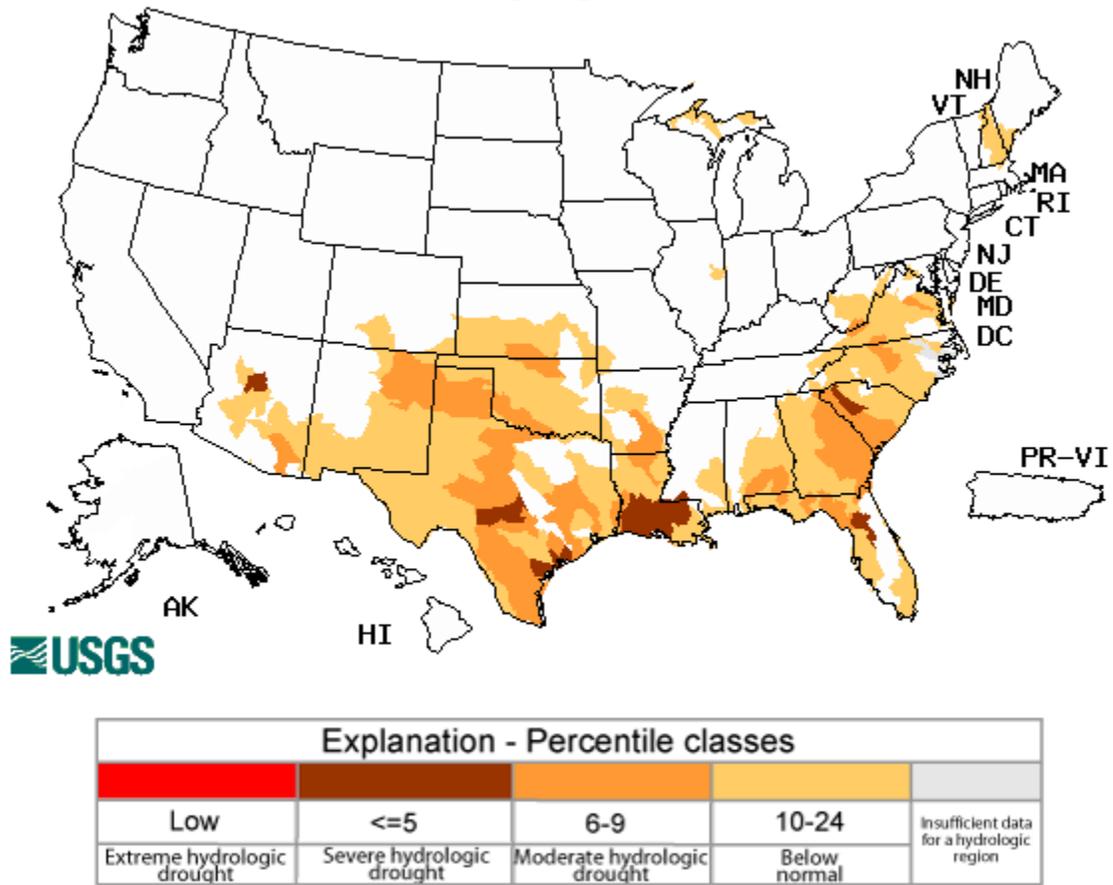


Fig. 6: Map of below normal 7-day average streamflow compared to historical streamflow for the day of year. Portions of the Arizona, Texas, Louisiana, Florida, and South Carolina are experiencing severe conditions. Ref: <http://waterwatch.usgs.gov/?m=dryw&r>.

## Weekly Snowpack and Drought Monitor Update Report

### Special Report

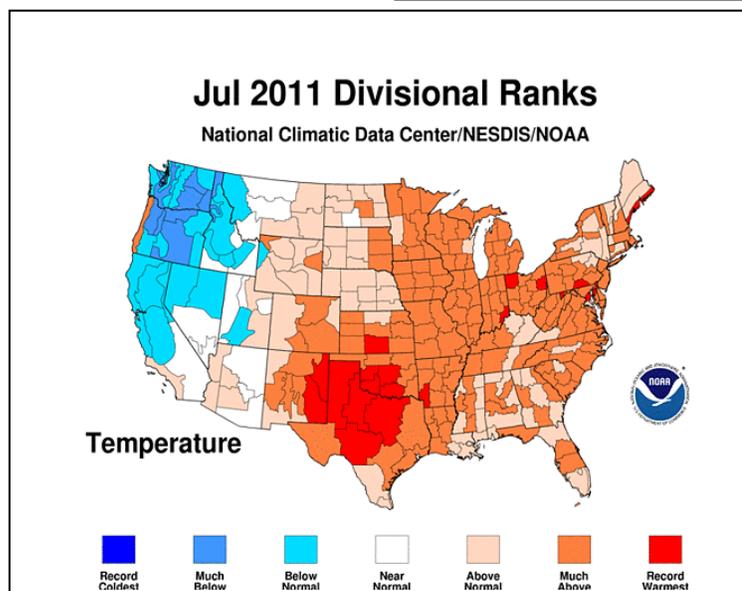
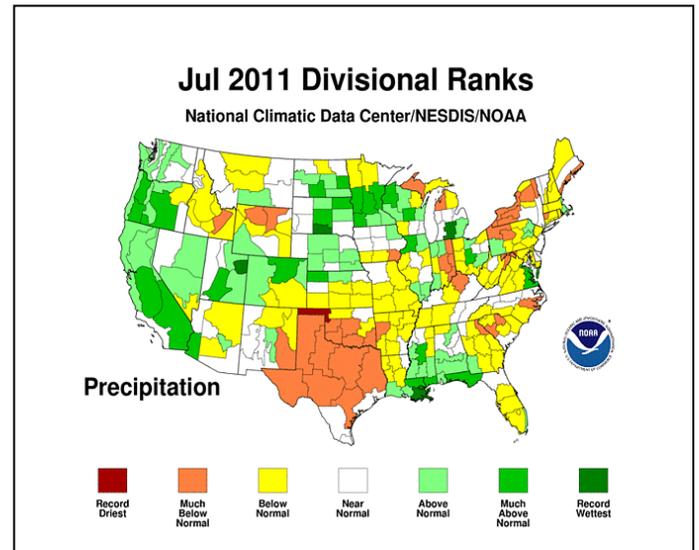
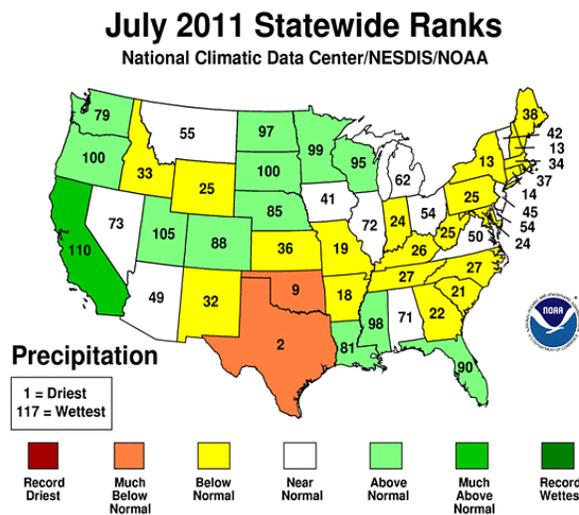
#### National Overview: Climate Highlights – July

- The average U.S. [temperature](#) in July was 77.0 degrees F (25.0 degrees C), which is 2.7 degrees F (1.5 degrees C) above the long-term (1901-2000) average, resulting the fourth warmest July and the fourth warmest month on record. [Precipitation](#), averaged across the nation, was 2.46 inches (62.5 mm). This was 0.32 inch (8.1 mm) below the long-term average, with large variability between regions.
- Both [Oklahoma](#) and [Texas](#) had their warmest months on record, with monthly statewide average temperatures of 88.9 degrees F (31.6 degrees C) and 87.1 degrees F (30.6 degrees C), respectively. Oklahoma's statewide average temperature was the warmest monthly statewide average temperature on record for any state during any month. The previous warmest monthly statewide average temperature was also in Oklahoma, during July 1954, at 88.1 degrees F (31.2 degrees C).
- Only seven of the [lower 48 states](#) — all west of the Rockies — experienced a July average temperature near or below the 20th century average. The other 41 had a above-normal, much-above-normal, or record warmest July.
- [Regionally](#), the [South climate region](#), which includes Arkansas, Kansas, Louisiana, Mississippi, Oklahoma, and Texas, had its warmest single calendar month for any climate region since records began in 1895. The average temperature of 86.1 degrees F (30.1 degrees C), bested the previous all-time record of 85.9 degrees F (29.0 degrees C) set in July 1980 in the South climate region.
- [Dallas](#) exceeded 100 degrees F (37.8 degrees C) on 30 of the 31 days during July. In [Oklahoma City](#), July was the warmest single calendar month with an average temperature of 89.2 degrees F (31.8 degrees C), besting the previous record of 88.7 degrees F (31.5 degrees C) set in August 1936. Further east, [Washington DC](#) (National AP) also had its warmest single calendar month on record. The average temperature of 84.5 degrees F (29.2 degrees C) smashed the previous record of 83.1 degrees F (28.4 degrees C) set in July 2010 and July 1993. Other selected monthly and daily records can be viewed here: [July 2011 Climate Extremes](#)
- Precipitation during July was variable across the [country](#). Wetter-than-normal conditions occurred along parts of the Gulf Coast, all of the Pacific Coast, and much of the upper Midwest. Dry anomalies prevailed in most other locations. July offered no relief to the parched soils of [Texas](#) and [Oklahoma](#) where it was the second (tied) and ninth driest July on record, respectively. Additionally, Texas has had five straight months in which average precipitation ranked in the bottom ten driest. Meanwhile, it was the eighth wettest July on record for [California](#) — this during a month which is typically quite dry for most of the state.
- Winds ahead of monsoonal thunderstorms produced an expansive [dust storm](#) which stretched for nearly 100 miles and quickly moved through a large area of Arizona on July 5. The dust storm traveled approximately 150 miles picking up dust as it traveled across the extremely dry desert lands. The infrastructure in the densely populated city of Phoenix was directly impacted, limiting the movement of automobiles and air traffic.
- The largest national footprint of D4 ("exceptional drought") in the 12-year history of the [U.S. Drought Monitor](#) occurred in July. In Texas "exceptional drought" covers more than 75 percent (201,436 sq mi) of the state. This area is larger than the entire Northeast climate region (196,224 sq mi). Drought conditions are so harsh in some locations that it

## Weekly Snowpack and Drought Monitor Update Report

would take as much as [20 inches of precipitation](#) in one month to end the drought. Conditions in Oklahoma are also dire, with 100 percent of the state suffering from D1-D4 (Moderate-Exceptional) drought. At the beginning of the water year (9/28/2010), drought conditions (D1-D4) covered only four percent of the state.

- The July Climate Extremes Index for the CONUS was [37 percent](#). This is the highest July value in the CEI record (since 1910). The culprits were, in order of impact: Extreme warm minimum temperatures ([60 percent](#) of the country, easily the largest on record), extreme wet PDSI (soaked [northern plains](#) & [western great lakes](#)), extreme [warm maximum temperatures](#), and extreme dry PDSI (south-central U.S. through [Gulf Coast](#)). According to the Regional CEI, the [South](#) and [Southeast](#) had their 1st- and 2nd-most extreme July's on record, respectively
- For all locations that report [daily temperature data](#), 1.5 percent of station reports tied or broke a daily high maximum temperature record during the month, while 3.4 percent of station reports tied or broke a daily high minimum temperature record. For July, 78 U.S. locations tied or broke daily all-time maximum high temperature records while 213 locations tied or broke an all-time daily warm low temperature record (warm nighttime temperatures).



## Weekly Snowpack and Drought Monitor Update Report

### National Drought Summary -- August 9, 2011

*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/>.

**Summary:** Exceptional drought continues its hold on the southern states of Texas, Oklahoma, New Mexico and neighboring states. Recent extreme high temperatures have combined with below average precipitation over the last few weeks to create drought impacts in the Corn Belt states of Iowa, Illinois and Indiana.

**Northeast and Mid-Atlantic:** An area of abnormally dry conditions is expanded in the states of Vermont and New Hampshire. Over the last 30 days, rainfall totals of one to five inches below average have been reported across much of the northern tier of these states. Streamflow data is averaging around 20% of normal in some area creeks and rivers for this time of year.

**Southeast:** Abnormally dry conditions now exist in the mountains of western North Carolina and eastern Tennessee, abnormally dry conditions. This area has not received as much rainfall as normal for this time of year, particularly over the last 30 days, and streamflow data in the area are also beginning to show signs of less surface water flowing through the mountain creeks and rivers. In the Charlotte area, as much as six inches of rain fell this week, but primarily on the already drought-free area. Elsewhere in North Carolina, some improvement is warranted in the north central part of the state, with a change from D1 to D0 status. Hydrological impacts persist, however, and that is indicated as the primary impact.

A swath of heavy rain through east central South Carolina is cause for a one-category improvement from Columbia to Charleston. Local totals were one to two inches or more above normal for the week. An area of extremely heavy precipitation centered in northeastern Georgia was also beneficial. Scattered thunderstorm activity in Florida was considered, but no changes were made on the peninsula. The impacts of previous extreme drought in the Florida panhandle have subsided, and D3, or Extreme Drought, conditions are removed.

**South:** Texas continues to suffer from unprecedented drought. Climate data show that the Lone Star State is in its driest ten-month period ever on record, in over a century of data. This is unprecedented territory, as the precipitation deficits mount, and triple digit temperatures continue to increase water demand. Significant, ongoing impacts related to agriculture, water supply and natural vegetation conditions have been reported. Widespread Exceptional Drought (D4) is maintained in large part across the region.

The western edge of the D4 area in the Oklahoma and Texas Panhandles continued to erode thanks to monsoon rainfall amounts of nearly an inch in some areas. Boise City, OK, received 0.95 inch in the last seven days, compared to an October 1 - July 31 total of 3.78 inches. Elsewhere, D3 was expanded eastward across the remainder of southeastern Oklahoma, over the Red River and into western Arkansas due to a combination of short-term dryness with excessive heat, residual effects of moderate drought from the preceding year, and local impact

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reports. The Oklahoma Biological Survey reported that streams in southeastern Oklahoma were going dry, threatening up to three endangered mussel species.

Elsewhere, a large area of six to eight inches of rainfall across northeastern Mississippi and northwestern Alabama removed dry conditions and no drought is depicted on this week's map. In northwestern Louisiana, drought impacts and precipitation deficits are accumulating, resulting in an increase in the D4 area. Much of the Exceptional Drought is due to shortages of two to three feet of rainfall over the last 18 months. At the opposite corner of the state, rain was a welcome sight and gave reason for one-category improvement from Baton Rouge and New Orleans, LA to Biloxi, MS.

**Central and Midwest:** Drought impacts have developed quickly in the Corn Belt states of South Dakota, Iowa, Illinois and Indiana. Multiple days of 100+ degree temperatures have combined with below average precipitation over the last few weeks to stress the corn plants, particularly in areas with sandier soils or areas with delayed planting due to a wet spring. This "flash drought" is depicted as D1, moderate drought, in southeastern South Dakota, and from southeast Iowa to central Indiana. The soybean regions have not reported similar conditions thus far.

A storm track across northeastern Kansas and into southwestern Missouri produced locally three to eight inches above average precipitation for the current Drought Monitor period. One-category improvements are made in several counties, approximately from Manhattan to Lawrence, KS, and also over part of the Ozarks between Kansas City and Springfield, MO.

**West:** Very few changes were made in the western region of the United States. Widespread rainfall south and southeast of Denver, CO have improved the drought conditions and a one-category improvement is made in Jefferson, Park, El Paso, and Lincoln counties and the surrounding area. Drought impacts to producers in this area are not as severe as were reported in July. In the San Luis Valley in south central Colorado, exceptional drought impacts continue despite recent precipitation over the last few weeks, and this area remains in D4 status.

**Hawaii, Alaska and Puerto Rico:** The Big Island is suffering from lack of rainfall in the agricultural areas of north, west and central regions. D2 was expanded to include a larger area of north central Hawaii, and moderate drought conditions now encompass most of the western half of the island.

The abnormally dry areas in Alaska held steady this week. Despite widespread reports of precipitation across the state, they did not alleviate the current D0 regions and were below normal for the period. Many stations are maintaining rainfall deficits of up to three inches below average for the last month.

In Puerto Rico, residents continue to be bombarded by above average precipitation this summer, and no drought conditions are depicted on the map. For the last 30 days, rainfall totals of more than eight inches above normal are common across the island.

**Looking Ahead:** The first few days of the next U.S. Drought Monitor period will bring scattered showers throughout the monsoon region, centered on New Mexico. A swath of this scattered convective activity may be found from north to south, just east of the Rocky Mountains, but may not alleviate the severe to exceptional drought conditions in the Great Plains states. A strong system will move the middle part of the country, centered on Arkansas. Texas will continue to be "high and dry", with little drought relief in sight over the next week.

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The extended outlook over the next six to ten days calls for continued above normal temperatures across throughout the central U.S., from Arizona to Mississippi and north to the Great Lakes. This area has already been affected by extremely high maximum temperatures, and the heat trend will continue. Cooler than normal temperatures are expected across Alaska, the Pacific coast and along the Atlantic coast from Virginia to northern Florida. Below normal precipitation pattern will persist as well throughout much of the most severe drought areas, and above normal precipitation projected over the northern High Plains states and far Pacific Northwest and Northeast.

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### **Dryness Categories**

D0 ... Abnormally Dry ... used for areas showing dryness but not yet in drought, or for areas recovering from drought.

### **Drought Intensity Categories**

D1 ... Moderate Drought

D2 ... Severe Drought

D3 ... Extreme Drought

D4 ... Exceptional Drought

### **Drought or Dryness Types**

A ... Agricultural

H ... Hydrological

*Updated August 10, 2011*