



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

---

## Weekly Report - Snowpack / Drought Monitor Update Date: 15 September 2011

### SNOTEL SNOWPACK AND PRECIPITATION SUMMARY

**Temperature:** [SNOTEL](#) and ACIS 7-day temperature anomaly shows above normal departures over the Pacific Northwest and Northern Rockies and below normal departures over the 4-Corner States (Fig. 1). [ACIS](#) 7-day average temperature anomalies show the greatest positive temperature departures over portion of the Pacific Northwest ( $>+12^{\circ}\text{F}$ ) (warmest week this summer) and the greatest negative departures scattered across the 4-Corner region ( $<-3^{\circ}\text{F}$ ) (Fig. 1a).

**Precipitation:** [ACIS](#) 7-day average precipitation amounts for the period ending yesterday shows scattered thunderstorms due to the Southwest Monsoon (Fig. 2). In terms of percent of normal, this is also reflected over this same general region although unusual occurring precipitation fell over the Western Great Basin and southern California as an upper level low moved through the area (Fig 2a). As we wind down 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 (Fig. 2b).



Photo taken by J. Curtis on Tuesday night 10 miles south of Santa Fe, New Mexico shows a passing thunderstorm about 5 miles away. Note lightning in rain shaft.

**Overview:** With Tropical Storm Nate missing the mark in the Gulf Coast region, a much quieter weather pattern prevailed over the majority of the Lower 48 states last week. This gave some areas a chance to dry out while some others could still use a lot of help.

**Four Corners Region:** A bit of respite for some and nothing for others leads to a mixed bag of changes this week. Slow improvement after some good September precipitation means D4 is

## Weekly Snowpack and Drought Monitor Update Report

gone from southern Colorado's San Luis Valley. Arizona saw some better monsoonal activity across the central parts of the state, but it wasn't enough to improve the picture there this week. In fact, those areas that didn't see the rains are marked by degradation this week as D1 and D2 spread north and west into Maricopa, eastern La Paz, and southern Yavapai as well as a slight push to the north in Gila county, which falls just south of the better rains of last week. Author: Mark Svoboda, National Drought Mitigation 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 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>.

## Weekly Snowpack and Drought Monitor Update Report

### 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

## SNOTEL (solid) 7-Day Average Temperature Anomaly (Degrees F) Sep 14, 2011

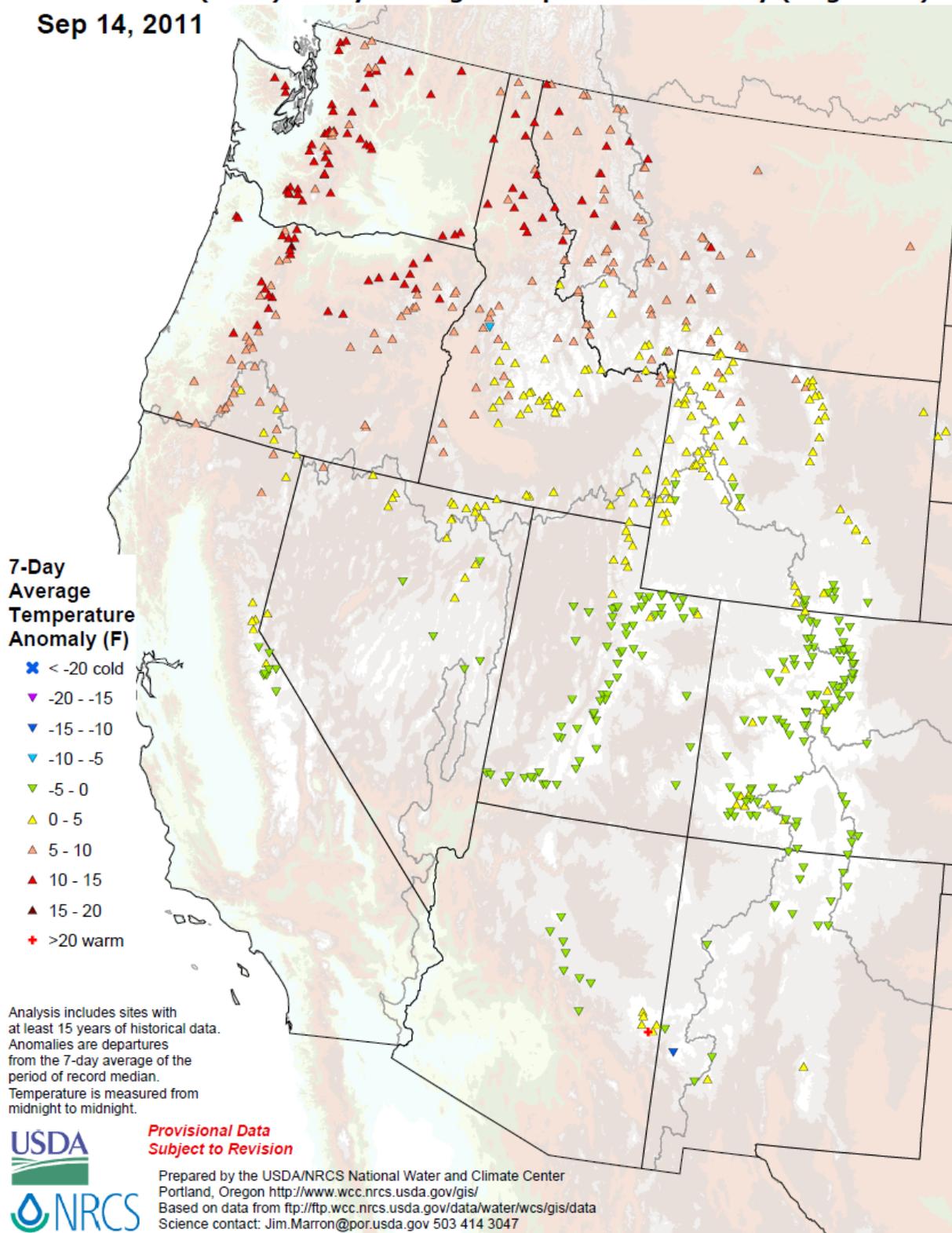
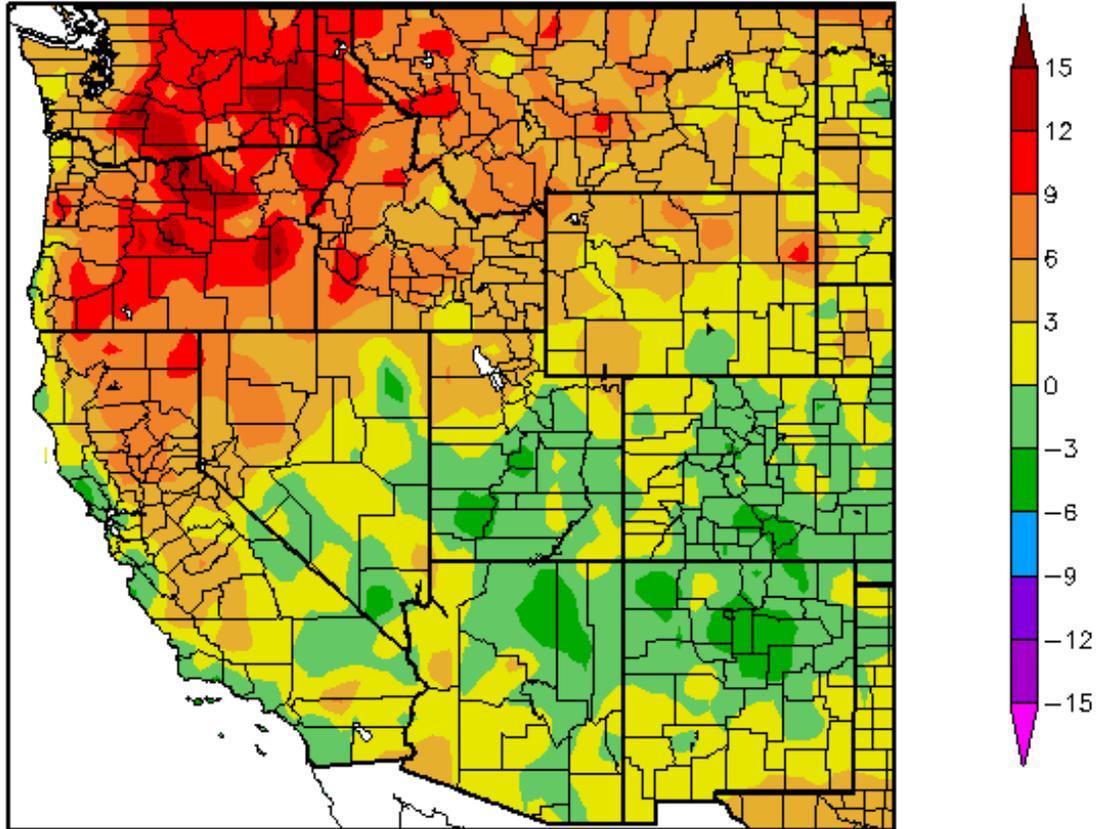


Fig. 1: **SNOTEL** and ACIS 7-day temperature anomaly shows above normal departures over the Pacific Northwest and Northern Rockies and below normal departures over the 4-Corner States.

Departure from Normal Temperature (F)  
9/8/2011 – 9/14/2011



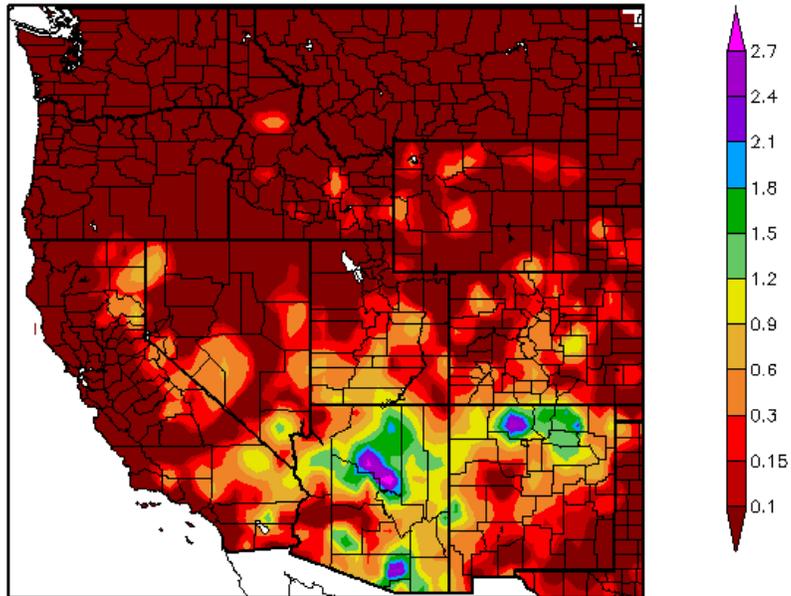
Generated 9/15/2011 at HPRCC using provisional data.

Regional Climate Centers

**Fig. 1a:** [ACIS](#) 7-day average temperature anomalies show the greatest positive temperature departures over portion of the Pacific Northwest ( $>+12^{\circ}\text{F}$ ) and the greatest negative departures over a scattered area across the 4-Corner region ( $<-3^{\circ}\text{F}$ ).

# Weekly Snowpack and Drought Monitor Update Report

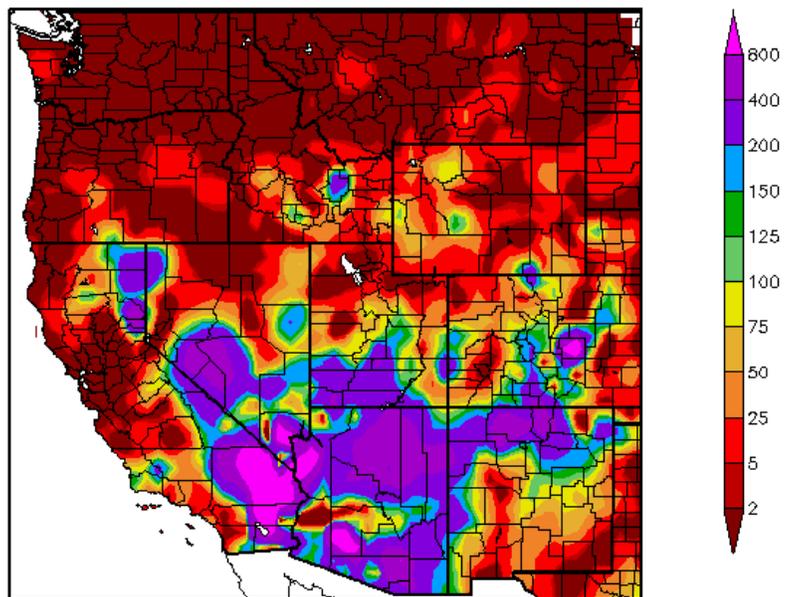
Precipitation (in)  
9/8/2011 - 9/14/2011



Generated 9/15/2011 at HPRCC using provisional data.

Regional Climate Centers

Percent of Normal Precipitation (%)  
9/8/2011 - 9/14/2011

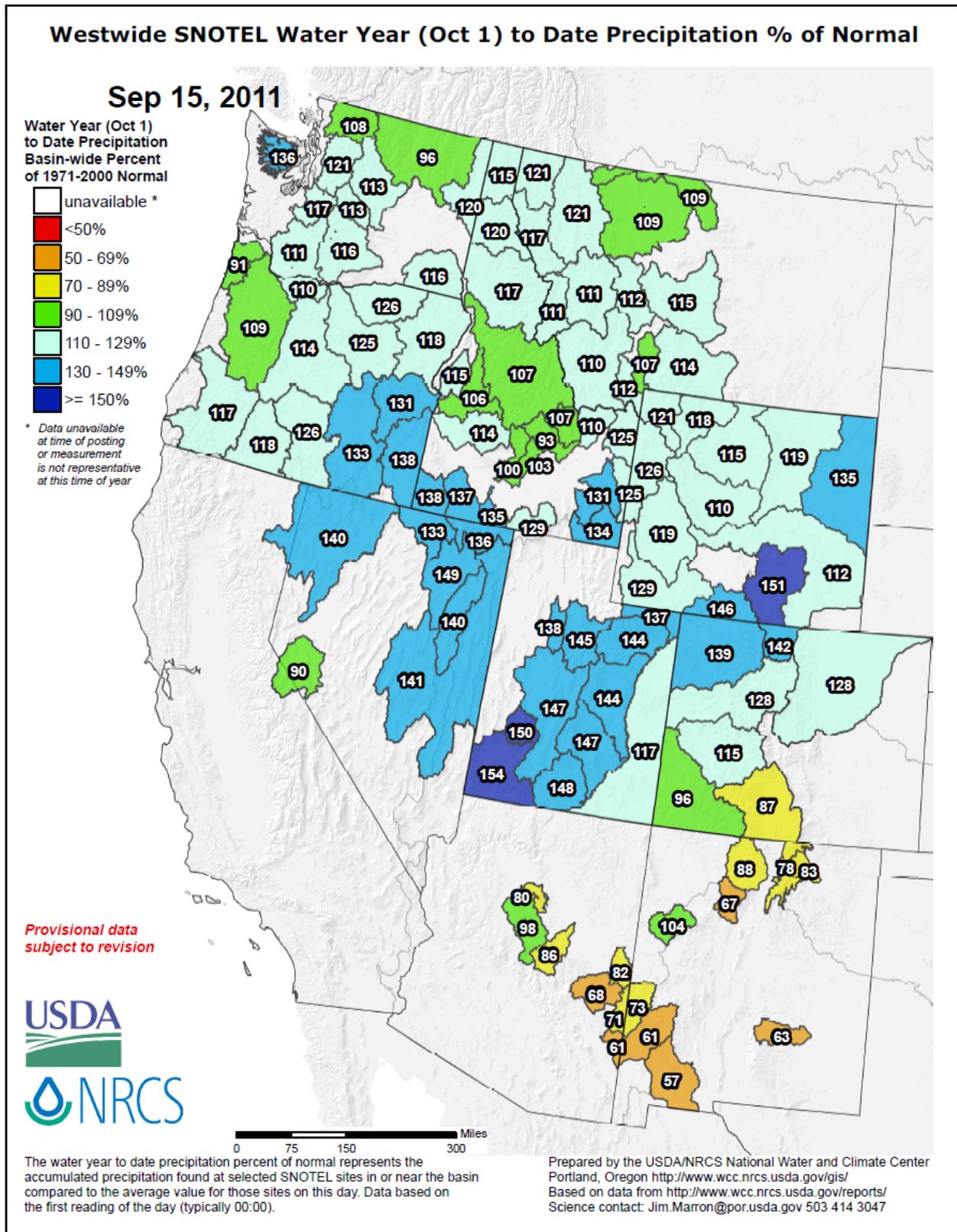


Generated 9/15/2011 at HPRCC using provisional data.

Regional Climate Centers

**Fig. 2 and 2a:** [ACIS](#) 7-day average precipitation amounts for the period ending yesterday shows scattered thunderstorms due to the Southwest Monsoon (Fig. 2). In terms of percent of normal, this is also reflected over this same general region although unusual occurring precipitation fell over the Western Great Basin and southern California as an upper level low moved through the area (Fig 2a).

# Weekly Snowpack and Drought Monitor Update Report



**Fig 2b:** As we wind down to the end of 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.

# U.S. Drought Monitor

September 13, 2011

Valid 8 a.m. EDT

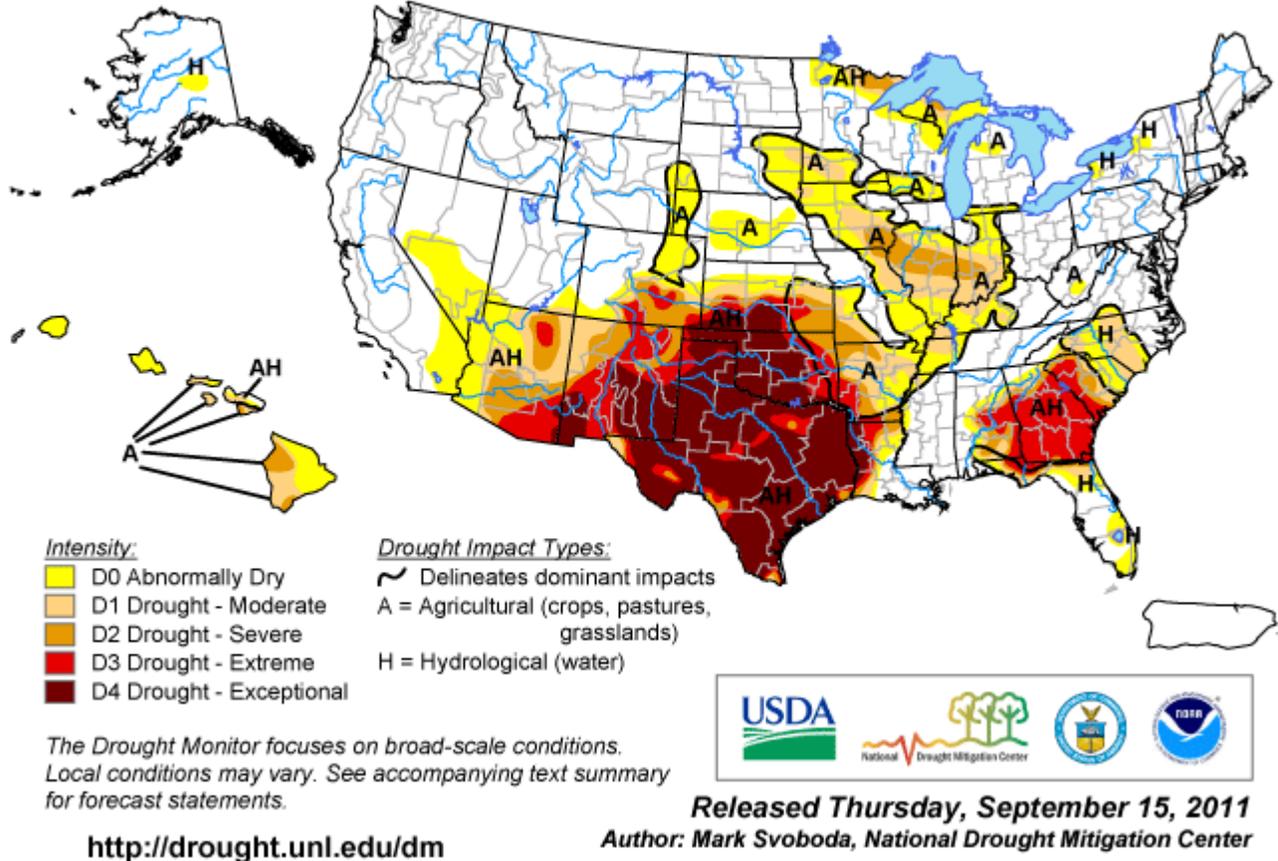


Fig. 3: Current **Drought Monitor** weekly summary. The exceptional D4 levels of drought are found over extreme southeast Arizona, New Mexico, Texas, Oklahoma, and western Louisiana.

## Headline Agriculture News

Sept 9. [Analysts: Southwestern US Drought Might Raise Global Food Prices](#)

Sept 7, Indiana. [Drought Dragging on Indiana Soybeans](#)

Sept 9, US. [Drought, heat, high demand send corn prices soaring](#)

Sept 8, Southern Minnesota. [Dry Spell Affects Area Crops](#)

Sept 5, Mississippi. [Mississippi farmers shipping hay to drought-stricken Texas](#)

Sept 6, Northwestern Arkansas. [Ranchers in western Ark. face hay shortage](#)

## General Awareness

[Heat and fires scorch South as drought toll rises](#)

Sept 8, Southern US. Drought severity worsened slightly in Texas, Oklahoma and New Mexico. Quoting our own Mark S.

[La Nina gets reborn, will strengthen during winter: CPC](#)

Sept 8. In other articles, some authorities have stated that this winter's La Niña was not likely to be as strong as last winter's La Niña.

[Scorching Texas summer heat trumps Dust Bowl record](#)

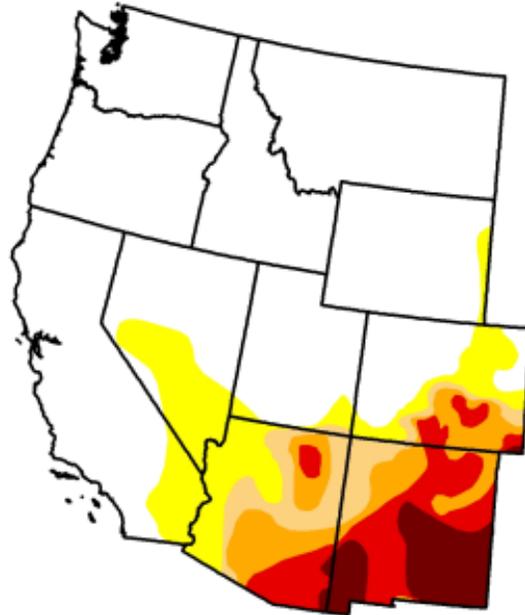
# U.S. Drought Monitor

## West

September 13, 2011  
Valid 7 a.m. EST

*Drought Conditions (Percent Area)*

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	69.61	30.39	19.84	15.58	10.00	4.13
Last Week (09/06/2011 map)	70.06	29.94	19.69	14.94	10.00	4.23
3 Months Ago (06/14/2011 map)	78.53	21.47	17.94	14.04	9.85	5.22
Start of Calendar Year (12/28/2010 map)	73.26	26.74	11.98	0.89	0.00	0.00
Start of Water Year (09/28/2010 map)	62.50	37.50	8.14	0.56	0.00	0.00
One Year Ago (09/07/2010 map)	73.53	26.47	6.34	0.56	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, September 15, 2011  
Mark Svoboda, NDMC

Fig. 3a: Drought Monitor for the [Western States](#) with statistics over various time periods. Regionally there were no significant drought condition changes this week.

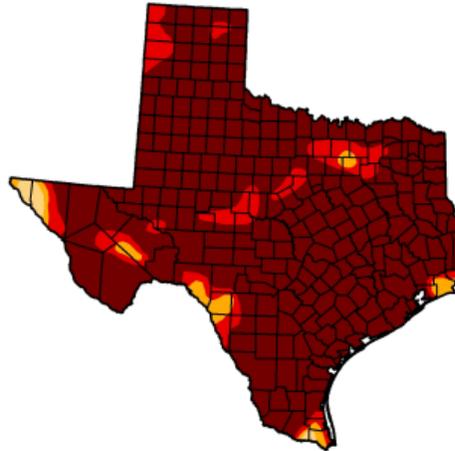
Weekly Snowpack and Drought Monitor Update Report

**U.S. Drought Monitor**  
Texas

September 13, 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	99.17	96.75	87.83
Last Week (09/06/2011 map)	0.00	100.00	99.93	99.01	95.68	81.06
3 Months Ago (06/14/2011 map)	1.97	98.03	96.53	94.77	88.57	64.78
Start of Calendar Year (12/28/2010 map)	7.89	92.11	69.43	37.46	9.59	0.00
Start of Water Year (09/28/2010 map)	75.57	24.43	2.43	0.99	0.00	0.00
One Year Ago (09/07/2010 map)	69.60	30.40	5.25	1.51	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, September 15, 2011  
Mark Svoboda, NDMC

Fig. 3b(1): Currently, ~89% of [Texas](#) is experiencing “Exceptional” D4 drought. Over 96% of the state is in D3 and D4 drought!

**U.S. Drought Monitor**  
Oklahoma

September 13, 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	100.00	92.59	68.93
Last Week (09/06/2011 map)	0.00	100.00	100.00	100.00	85.44	69.15
3 Months Ago (06/14/2011 map)	22.11	77.89	57.87	41.76	33.53	10.32
Start of Calendar Year (12/28/2010 map)	13.82	86.18	47.90	1.50	0.00	0.00
Start of Water Year (09/28/2010 map)	66.28	33.72	4.21	0.00	0.00	0.00
One Year Ago (09/07/2010 map)	42.33	57.67	35.75	0.00	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, September 15, 2011  
Mark Svoboda, NDMC

Fig. 3b(2) Currently, 92% of [Oklahoma](#) is experiencing “Exceptional” D4 drought. Over ~69% of the state is in D3 and D4 drought! Noticeable deterioration occurred this week.

Weekly Snowpack and Drought Monitor Update Report

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

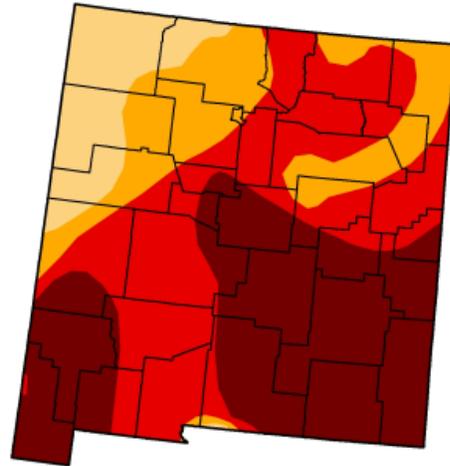
September 13, 2011  
Valid 7 a.m. EST

*Drought Conditions (Percent Area)*

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	100.00	89.33	72.20	38.22
Last Week (09/06/2011 map)	0.00	100.00	100.00	89.27	72.19	38.37
3 Months Ago (06/14/2011 map)	0.75	99.25	93.98	87.35	67.86	44.90
Start of Calendar Year (12/28/2010 map)	6.16	93.84	40.40	0.00	0.00	0.00
Start of Water Year (09/28/2010 map)	76.66	23.34	0.00	0.00	0.00	0.00
One Year Ago (09/07/2010 map)	79.95	20.05	0.00	0.00	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, September 15, 2011  
Mark Svoboda, NDMC

Fig. 3b(3): Currently, 38% of **New Mexico** is experiencing “Exceptional” D4 drought. Over 72% of the state is in D3 and D4 drought.

**U.S. Drought Monitor**  
Kansas

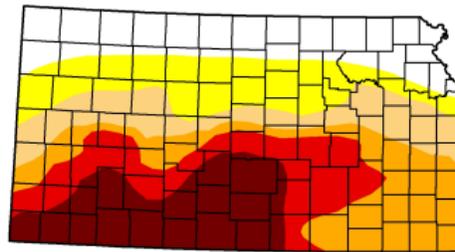
September 13, 2011  
Valid 7 a.m. EST

*Drought Conditions (Percent Area)*

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	19.89	80.11	63.29	49.90	32.26	17.63
Last Week (09/06/2011 map)	28.64	71.36	62.33	49.90	31.86	17.46
3 Months Ago (06/14/2011 map)	23.44	76.56	57.35	35.82	12.71	1.05
Start of Calendar Year (12/28/2010 map)	17.82	82.18	43.85	3.48	0.00	0.00
Start of Water Year (09/28/2010 map)	83.23	16.77	0.00	0.00	0.00	0.00
One Year Ago (09/07/2010 map)	97.58	2.42	0.00	0.00	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.

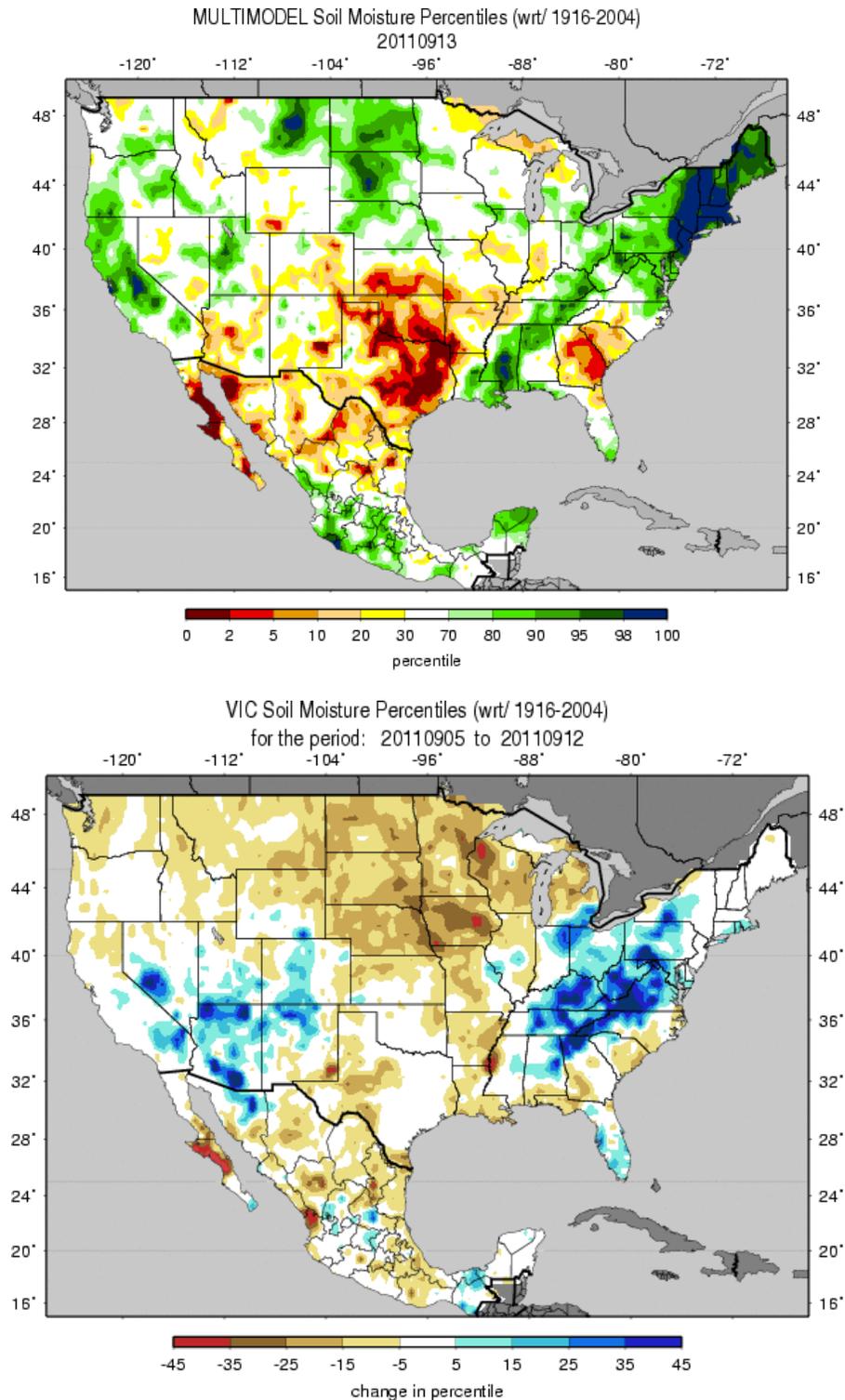
<http://drought.unl.edu/dm>



Released Thursday, September 15, 2011  
Mark Svoboda, NDMC

Fig. 3b(4): Currently, 17% of **Kansas** is experiencing “Exceptional” D4 drought. 32% of the state is in D3 and D4 drought. No significant changes are noted this week.

## Weekly Snowpack and Drought Monitor Update Report

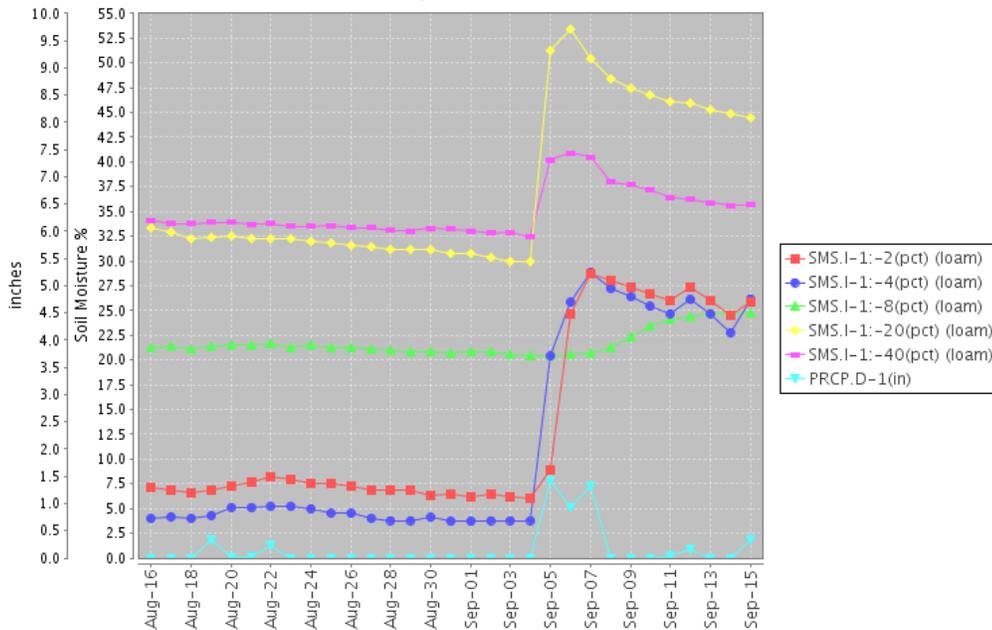


**Figs. 4a and 4b: Soil Moisture ranking in percentile as of 13 September (top) shows accumulated moist conditions over of New England due to Tropical Storm Irene and Tropical Depression Lee. During the week, the impacts from Tropical Depression Lee are obvious over the Appalachians. A significant drying trend is noted over the Northern Plains, while moisture from the Southwest Monsoon and upper level low over the Great Basin occurred.**

# Weekly Snowpack and Drought Monitor Update Report

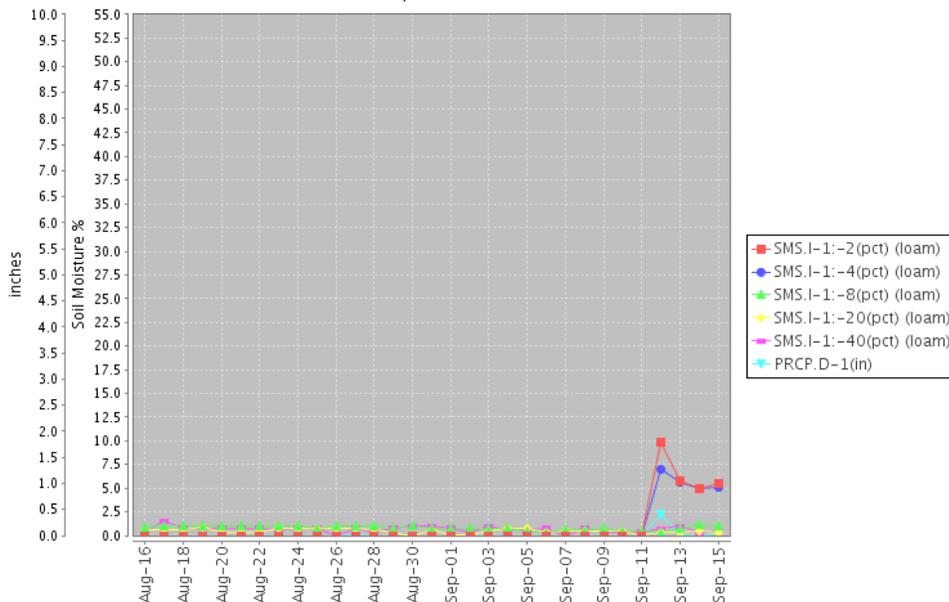
## Soil Climate Analysis Network (SCAN)

Station (2079) MONTH=2011-08-16 (Daily) NRCS National Water and Climate Center - Provisional Data - subject to revision  
Thu Sep 15 07:03:13 PDT 2011



**Fig. 5a:** This NRCS resource shows a site in [central Kentucky](#) with saturated soil through all depth as a result of Tropical Depression Lee rains in early September.

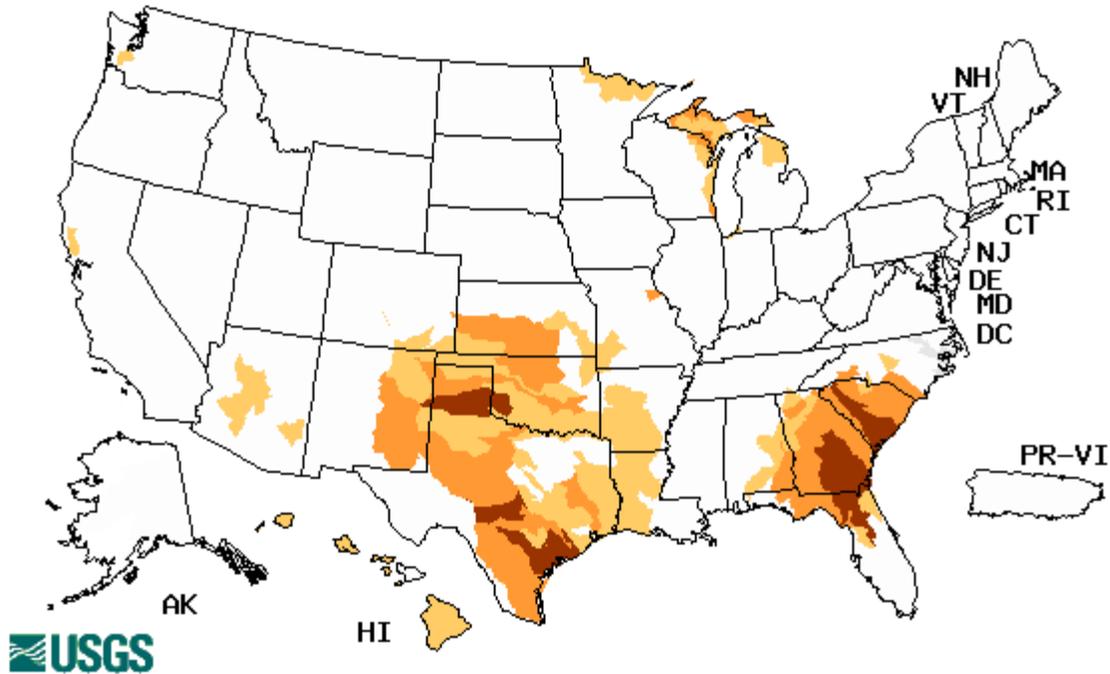
Station (2159) MONTH=2011-08-16 (Daily) NRCS National Water and Climate Center - Provisional Data - subject to revision  
Thu Sep 15 06:58:24 PDT 2011



**Fig. 5b:** This SCAN station is located in [southwestern Utah](#) shows nearly bone dry soil moisture with some moistening with a half inch precipitation event of 12 September that helped bump up near surface moisture content.

# Weekly Snowpack and Drought Monitor Update Report

Wednesday, September 14, 2011

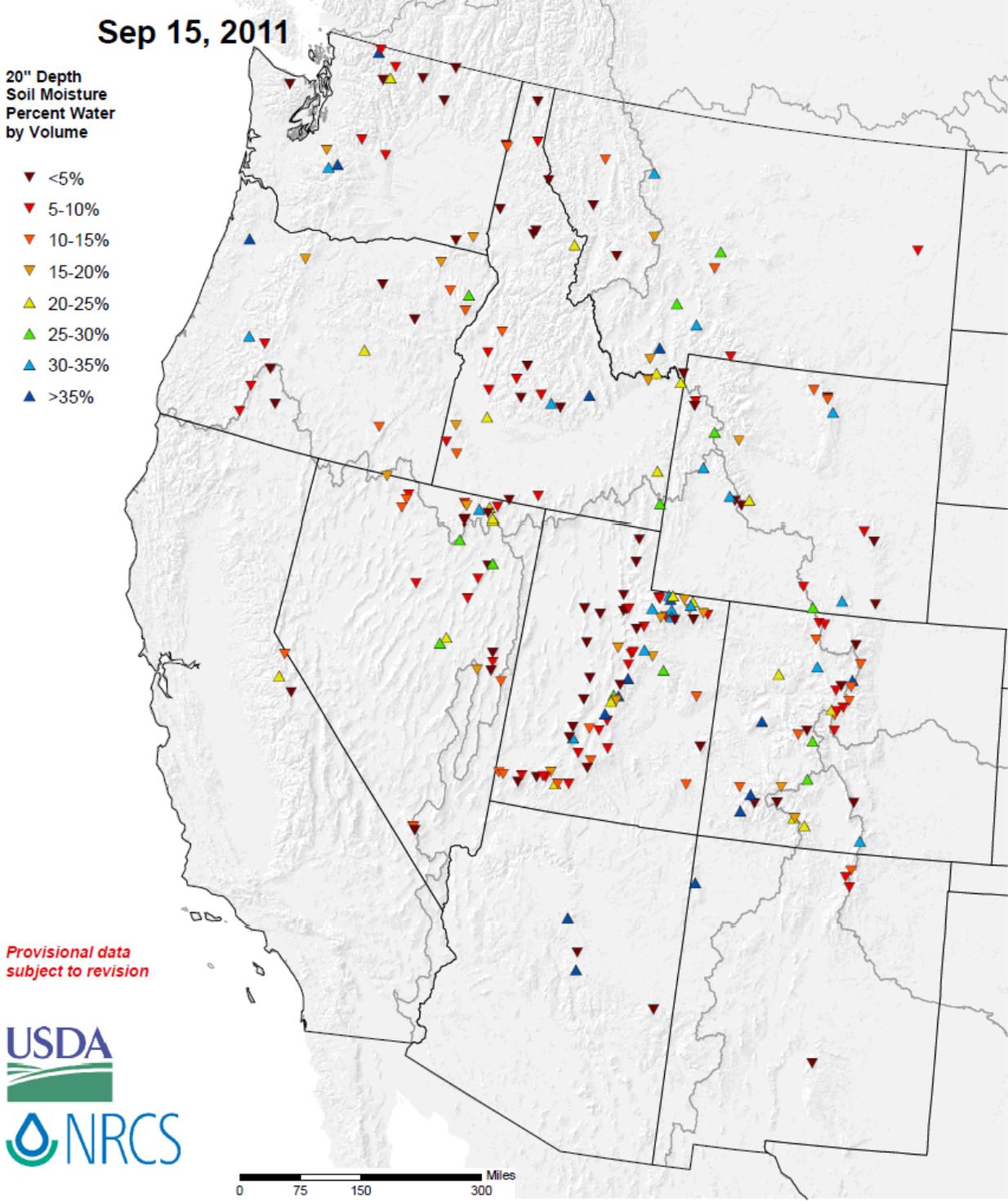


Explanation - Percentile classes				
Low	≤5	6-9	10-24	Insufficient data for a hydrologic region
Extreme hydrologic drought	Severe hydrologic drought	Moderate hydrologic drought	Below normal	

Fig. 6: Map of below normal 7-day average [streamflow](#) compared to historical streamflow for the day of year. Northern Florida, Georgia, South Carolina, Texas, and southwestern Oklahoma are experiencing extreme conditions.

# Weekly Snowpack and Drought Monitor Update Report

## Westwide SNOTEL Current 20" Depth Soil Moisture % Water by Volume

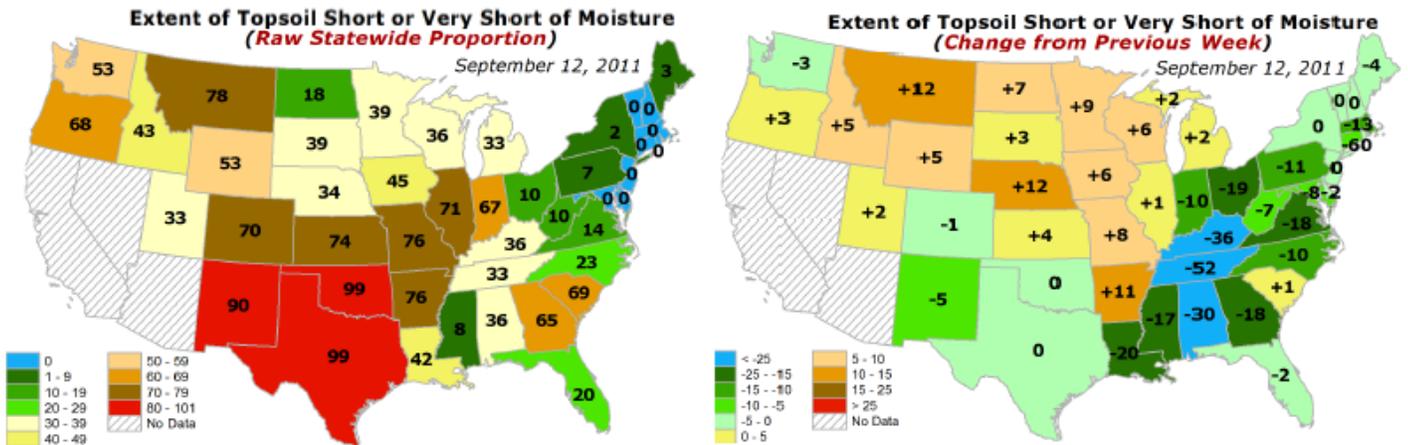


Data based on the first reading of the day (typically 00:00).

Prepared by the USDA/NRCS National Water and Climate Center  
Portland, Oregon <http://www.wcc.nrcs.usda.gov/gis/>  
Science contact: Jim.Marron@por.usda.gov 503 414 3047

Fig. 7: SNOTEL Soil Moisture at a depth of 20" reveals many sites have below average moisture.

## Weekly Snowpack and Drought Monitor Update Report

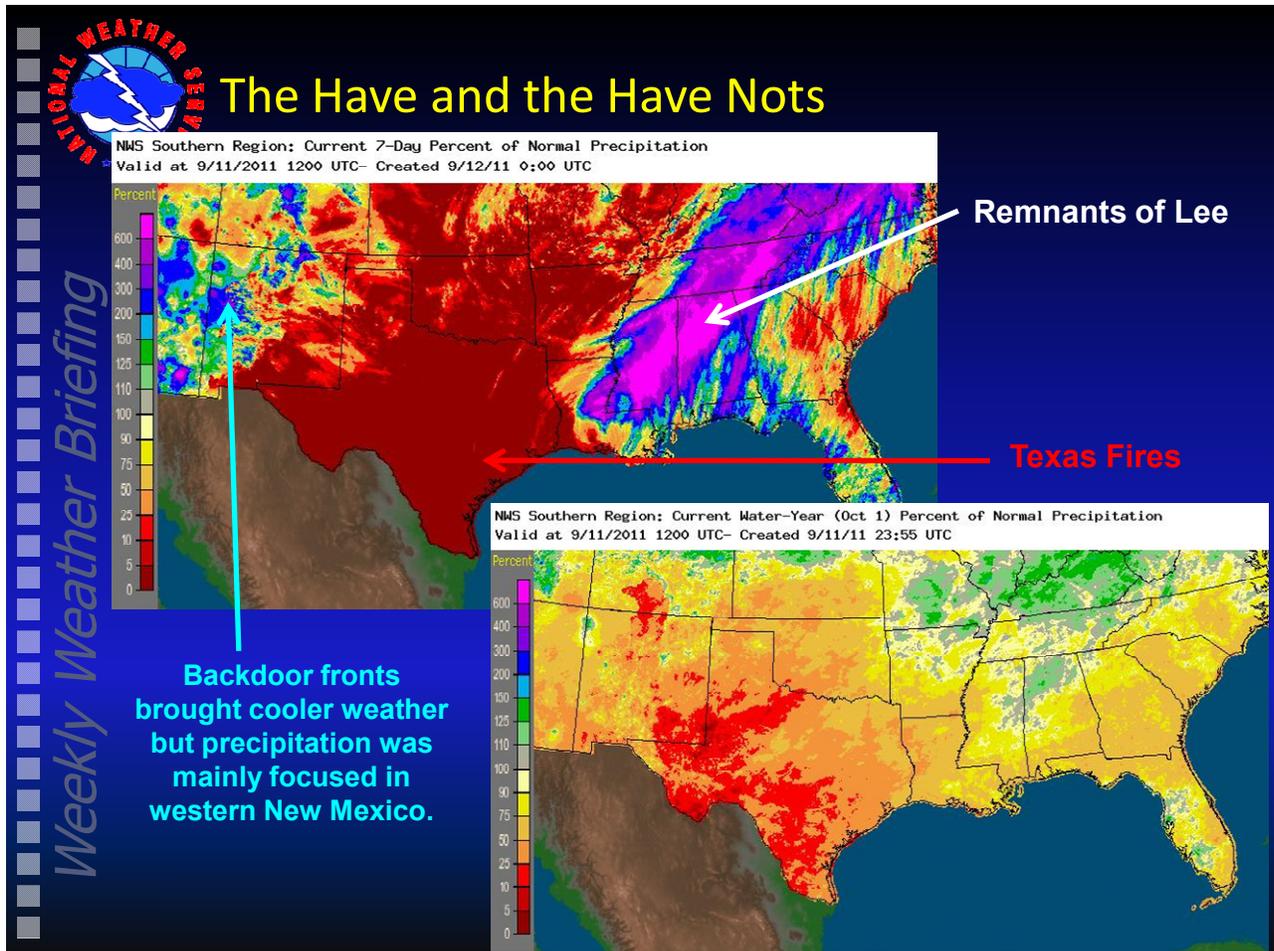


**Fig. 7a:** Current top soil condition and changes for the past week. Clearly Texas, Oklahoma, and New Mexico have extreme soil moisture deficits. However, Georgia and Tennessee have joined these ranks this week. According to USDA/NASS, 96 percent of the rangeland and pastures in Texas were rated in very poor to poor condition on September 11. Prior to 2011, the Texas record for very poor to poor rangeland and pastures had been 81 percent in August 1998 and 2006. The period of record for rangeland and pasture condition is 1995-2011.

# Weekly Snowpack and Drought Monitor Update Report

## Special Report

Record rainfall hits the Eastern States during the past few weeks.



Rainfall the past week exceeds 400 to 800 percent of normal amounts over the Central Gulf States to New England. Ref: Courtesy NWSFO Albuquerque.

## Weekly Snowpack and Drought Monitor Update Report

### National Drought Summary -- September 13, 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/>.*

**Overview:** With Tropical Storm Nate missing the mark in the Gulf Coast region, a much quieter weather pattern prevailed over the majority of the Lower 48 states last week. This gave some areas a chance to dry out while some others could still use a lot of help.

**Mid-Atlantic and Northeast:** Early period rains were heavy in places and brought flooding along with more in the way of drought relief. Locales in eastern Virginia, Maryland, the West Virginia Panhandle, southern and eastern Pennsylvania and south-central New York state saw anywhere from 3 to 8 inches of precipitation or more. This leads to the removal of all D0-D1 in the region except for a few pockets of D0 in northern New York and southeastern West Virginia.

**Southeast and Delta:** Last week was unseasonably cool (5-10 degrees below normal), and all but the central Gulf Coast region and southern Florida was dry as well. This led to some improvement in southern Florida with a reduction of D0-D1, but longer-term deficits and low lake levels (Lake Okeechobee in particular) and surrounding ecosystem stress is still of concern heading into the dry season. To the north, drought continues to expand in South Carolina with a push of D1-D3 to the east and north and into central North Carolina as well, which fell between the rains of Hurricane Irene to the east and Tropical Storm Lee to the west. This leads to expansion of D0 across south-central North Carolina, and some D1 has pushed more into southwestern and south-central North Carolina along the South Carolina border as well.

**Midwest and Great Lakes:** Continued dryness over the past 30-60-days continues to lead to some early off-season soil recharge worries, although it is very much welcomed during the harvest season. Some slight changes on the heels of Tropical Storm Lee bring some more reduction of D0 in eastern and south-central Kentucky along with some slight expansion in the northern tier counties for the Bluegrass State.

To the north, an expansion of Severe Drought (D2) leads to a band connecting Indiana with Illinois and Iowa to the west across the heart of the Corn Belt. A slight expansion of D1 is also noted in the same region. Although this won't affect this year's corn crop, it has stressed beans and pastures and will have us keeping an eye on the off-season soil moisture recharge heading into next growing season.

The Great Lakes region continues to be plagued with above-normal temperatures and lack of any significant precipitation. This brings more D0 and D1 to Michigan's Upper Peninsula along with the introduction of D2 around the Marquette region. The same pattern is responsible for the spread of D0 across northern Wisconsin and led to the expansion of D0-D2 in the Arrowhead and International Falls regions in northern Minnesota. Southern Minnesota also saw degradation in their conditions with a push of more D0 and D1 into those counties. The same

## Weekly Snowpack and Drought Monitor Update Report

holds true for northern Iowa with a slight expansion of D0 in the northeast, and some minor increase in D1 is noted in northwest Iowa as well.

**Northern and Central Plains:** Unseasonably warm temperatures and dryness over the past couple of months continue to cause issues in northeastern South Dakota, and this has brought an expansion of D0 and D1 here and across the Minnesota border to the east and south. Nebraska also sees their dry pattern continue, bringing about a larger area of D0 in the state's mid-section and also an expansion and connection of the D0 between the Nebraska Panhandle and northeastern Colorado.

**Southern Plains:** Cooler weather was welcomed across most of Kansas and down into Texas, but it failed to bring much, if anything, in the way of rainfall this past week. A slight push northward of D0-D2 is depicted this week across northern Kansas, and northeastern Oklahoma saw an increase from D2 to D3 as well. Texas conditions continue to deteriorate what little they can from abysmal, with expansion of D3-D4 noted in the southeast, central, south-central, Big Bend region, and extreme south around Brownsville. The lack of tropical activity (Nate fizzled out and drifted into Mexico well to the south this week) and better odds of a second consecutive La Niña winter only add fuel to this well-fed and entrenched drought.

**Four Corners Region:** A bit of respite for some and nothing for others leads to a mixed bag of changes this week. Slow improvement after some good September precipitation means D4 is gone from southern Colorado's San Luis Valley. Arizona saw some better monsoonal activity across the central parts of the state, but it wasn't enough to improve the picture there this week. In fact, those areas that didn't see the rains are marked by degradation this week as D1 and D2 spread north and west into Maricopa, eastern La Paz, and southern Yavapai as well as a slight push to the north in Gila county, which falls just south of the better rains of last week.

**Alaska, Hawaii, and Puerto Rico:** Conditions across Hawaii, northern Alaska and Puerto Rico remain unchanged from last week.

**Looking Ahead:** The next 5 days (through September 19) show a good chance for cooler weather across all but southern Texas, the northern Rockies and across Montana and Wyoming. Precipitation is expected to be favorable across Colorado, eastern New Mexico, the central Plains (eastern Kansas and northern Oklahoma in particular) and into Missouri and the middle Mississippi Valley. Some of the coastal regions in the mid-Atlantic could also see some more in the way of the wet stuff.

The CPC 6-10 day forecast (September 20-24) is calling for a change in the short-term pattern with above-normal temperatures likely across the majority of the country (including central interior Alaska) except for the Southeast, which looks to be below-normal during the period as does western Alaska. Precipitation is more of a mixed bag with most of the West, Great Plains, lower Mississippi Valley and western coastal Alaska more likely to see below-normal readings while the Northeast and southern Alaska are forecast to be above-normal.

**Author:** [Mark Svoboda, National Drought Mitigation Center](#)

### Dryness Categories

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

## Weekly Snowpack and Drought Monitor Update Report

### Drought Intensity Categories

D1 ... Moderate Drought

D2 ... Severe Drought

D3 ... Extreme Drought

D4 ... Exceptional Drought

### Drought or Dryness Types

A ... Agricultural

H ... Hydrological

*Updated September 14, 2011*



Photo: Taken by J. Curtis, two minutes after the cover photo.