



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

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**Weekly Report - Snowpack / Drought Monitor Update      Date:    13 August 2009**

## **SNOTEL SNOWPACK AND PRECIPITATION SUMMARY**

**Temperature:** SNOTEL and ACIS-day station average weekly temperature anomalies reveal that after a week of record heat, colder than average temperatures returned to the West (Fig.1). ACIS 7-day average temperature anomalies show that the greatest positive temperature departures occurred over southeast Arizona (>+6F) and the greatest negative departures occurred over Northern Nevada (<-8F) (Fig. 1a).

**Precipitation:** ACIS 7-day average precipitation amounts for the period ending 12 August shows a mostly dry West with the exception of scattered thunderstorms across northeast Oregon to northeast Wyoming. In terms of percent of normal, the northern half of the West was quite wet for this time of year (Fig 2 and 2a). Seasonal precipitation (rain & snow water equivalent) as a percent of normal for the 2009 Water Year that began on October 1, 2008 shows surplus values over southern Idaho into Wyoming and eastern Nevada with deficits over the northernmost Tier States, southwest New Mexico, and northwest Oregon. No appreciable change occurred since last week except for an 11% increase over northeast Wyoming (Fig. 2b).

## **WESTERN DROUGHT STATUS**

**The West:** Eastern Montana is beginning to show signs of early drought, similar to that of western North Dakota and this is reflected in an expansion of D0 over Sheridan County. Precipitation this summer has been lacking in this area. In western Montana, drought conditions are improving and moderate drought is no longer depicted in Sanders and Lincoln counties, in the Kootenai National Forest area.

South central Colorado is beginning to exhibit signs of early drought, including lack of precipitation the last month due to a weak to moderate monsoon season, and wildfire risk and activity has increased. D0, abnormally dry, designation was introduced.

An evaluation of the summer season so far led to a reduction of the area of severe drought in northeastern California and parts of northwestern Nevada this week. D2 is now limited to a portion of eastern Lassen county in California, central Washoe and western Pershing county in Nevada. This reassessment is a culmination of several factors, including: a much above normal and near-record month of precipitation in June; streamflow in the region is near normal in many areas; reservoirs in the area are near 80 percent of normal levels; beneficial thunderstorms have brought modest precipitation in July; and cooler than normal temperatures in early August have reduced water demand. Wild land fire risk continues to be an issue in this region, as well as the long-term three-year drought, so no change in the area of moderate drought was made. 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.***

## Weekly Snowpack and Drought Monitor Update Report

### **DROUGHT IMPACTS DEFINITIONS** (<http://drought.unl.edu/dm/classify.htm>)

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, 3a, and 3b).

### **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/>.

### **OBSERVED FIRE DANGER CLASS**

The [adjective class rating](#) is a method of normalizing rating classes across different fuel models, indexes, and station locations. It is based on the primary fuel model cataloged for the station, the fire danger index selected to reflect staffing levels, and climatological class breakpoints. This information is provided by local station managers. About 90% use the Burning Index (BI); others use Energy Release Component (ERC). Staffing class breakpoints are set by local managers from historical fire weather climatology (Figs. 5).

Only reporting station locations are indicated with a marker on the maps. Values between stations are estimated with an inverse distance-squared technique on a 10-km grid. This works pretty well in areas of relatively high station density, but has obvious shortcomings in other areas.

### **VEGETATION STRESS (Figure 6)**

([http://www.star.nesdis.noaa.gov/smcd/emb/vci/VH/vh\\_currentImage.php](http://www.star.nesdis.noaa.gov/smcd/emb/vci/VH/vh_currentImage.php))

#### **Image Interpretation**

The images are color-coded maps of vegetation condition (health) estimated by the Vegetation and Temperature Condition Index (VT). The VT is a numerical index, which changes from 0 to 100 characterizing change in vegetation conditions from extremely poor (0) to excellent (100). Fair conditions are coded by green color (50), which changes to brown and red when conditions deteriorate and to blue when they improve. The VT reflects indirectly a combination of chlorophyll and moisture content in the vegetation and also changes in thermal conditions at the surface. This new approach combines the visible, near infrared and thermal radiances in a numerical index characterizing vegetation health. This approach is extremely useful in detecting and monitoring such complex and difficult-to-identify phenomenon as drought. The VT values below 35 are used for identifying vegetation stress which is an indirect drought indicator. The VT is very useful for early drought detection, assessing drought area coverage, duration, and intensity, and for monitoring drought impacts on vegetation and agricultural crops.

## Weekly Snowpack and Drought Monitor Update Report

### Background of the Tool

Monitoring vegetation health (condition), including drought detection and watch, is based on radiance measurements in the visible (VIS), near infrared (NIR), and 10.3-11.3 micrometers thermal (T) bands (channels) of the Advanced Very High Resolution Radiometer (AVHRR). These measurements are processed to reduce long-term noise. The VIS and NIR values were converted to the Normalized Difference Vegetation Index [NDVI I= (NIR-VIS)/(NIR+VIS)] and the T to brightness temperature (BT) using a look-up table. The NDVI and BT were filtered in order to eliminate high frequency noise. They were also adjusted for a non-uniformity of the land surface due to climate and ecosystem differences using multi-year NDVI and BT data. The NDVI and BT were converted to the Vegetation Condition Index (VCI), Temperature Condition Index (TCI), and their combination (VT).

### U.S. HISTORICAL STREAMFLOW

This map, (Fig. 7) 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.

[http://water.usgs.gov/cgi-bin/waterwatch?state=us&map\\_type=dryw&web\\_type=map](http://water.usgs.gov/cgi-bin/waterwatch?state=us&map_type=dryw&web_type=map).

### PASTURE AND RANGELAND CONDITIONS (Figure 8)

This product is produced and compiled by the NOAA's Climate Prediction Center:

<http://www.cpc.ncep.noaa.gov/products/predictions/experimental/edb/pasture-range-statewide-conditions.pdf>.

### 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/cqibin/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://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

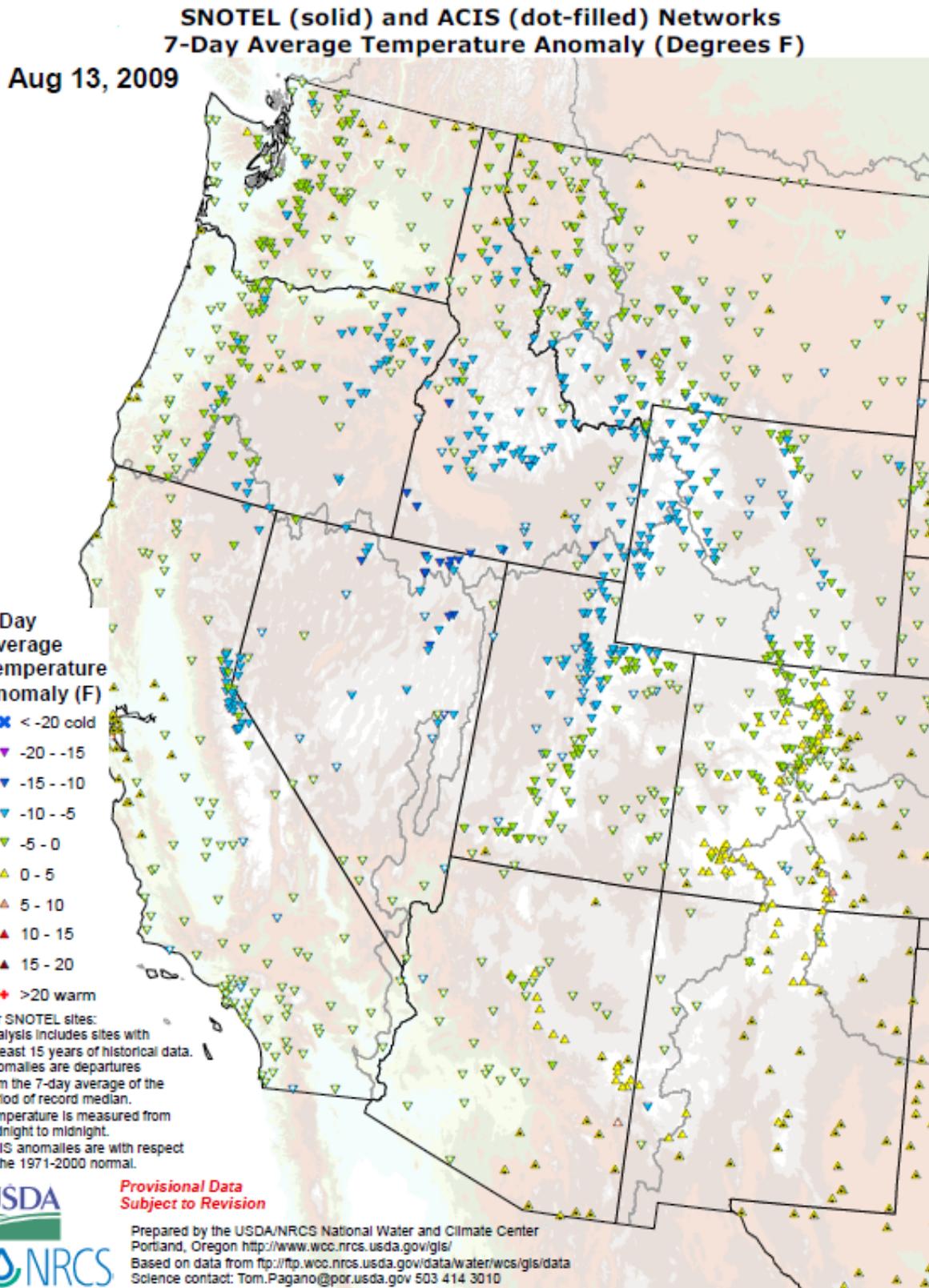
<http://www.wcc.nrcs.usda.gov>. This document is available from the following location on the NWCC homepage - <http://www.wcc.nrcs.usda.gov/water/drought/wdr.pl>

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

/s/ NOLLER HERBERT

Director, Conservation Engineering Division

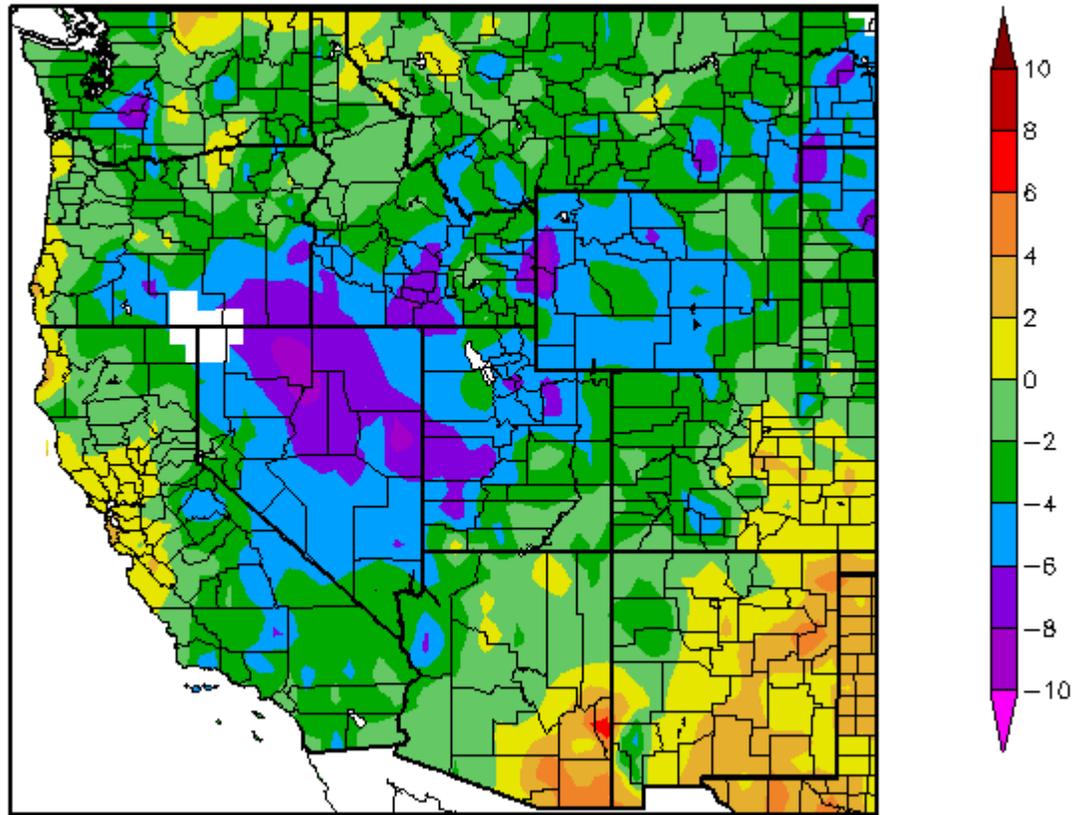
# Weekly Snowpack and Drought Monitor Update Report



**Fig. 1. SNOTEL and ACIS-day station average weekly temperature anomalies reveal that after a week of record heat, colder than average temperatures returned to the West.**

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

Departure from Normal Temperature (F)  
8/6/2009 – 8/12/2009



Generated 8/13/2009 at HPRCC using provisional data.

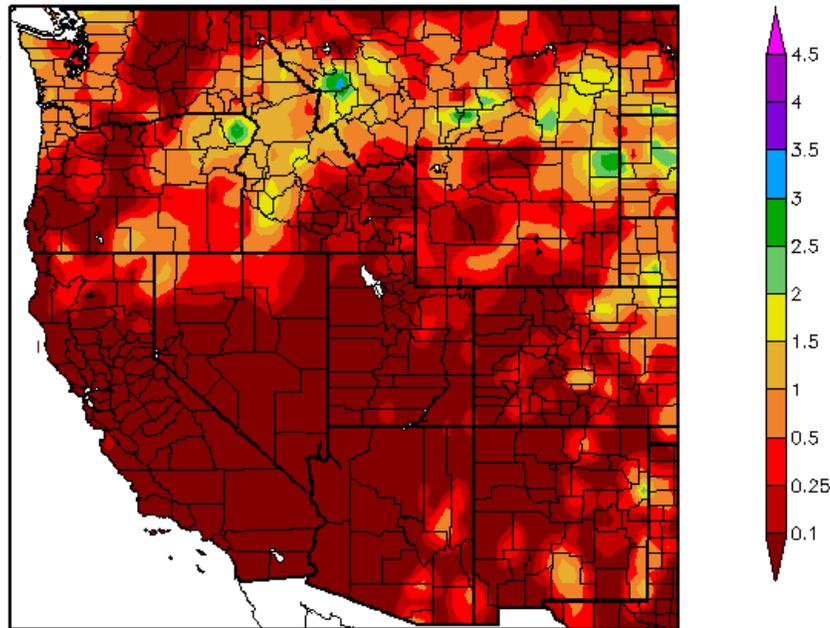
NOAA Regional Climate Centers

**Fig. 1a. ACIS 7-day average temperature anomalies show that the greatest positive temperature departures occurred over southeast Arizona (>+6F) and the greatest negative departures occurred over Northern Nevada (<-8F).**

Ref: [http://www.hprcc.unl.edu/maps/current/index.php?action=update\\_product&product=TDept](http://www.hprcc.unl.edu/maps/current/index.php?action=update_product&product=TDept)

## Weekly Snowpack and Drought Monitor Update Report

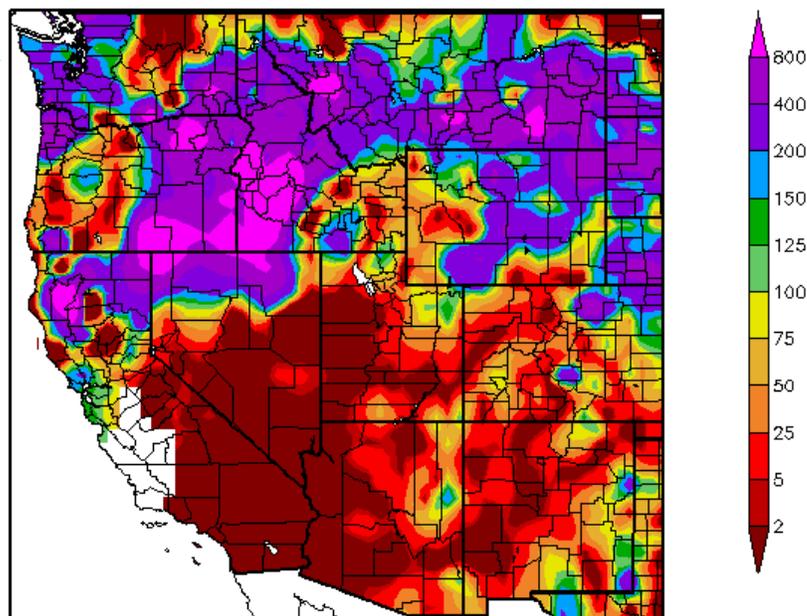
Precipitation (in)  
8/6/2009 – 8/12/2009



Generated 8/13/2009 at HPRCC using provisional data.

NOAA Regional Climate Centers

Percent of Normal Precipitation (%)  
8/6/2009 – 8/12/2009



Generated 8/13/2009 at HPRCC using provisional data.

NOAA Regional Climate Centers

**Fig. 2. and 2a. ACIS 7-day average precipitation amounts for the period ending 12 August shows a mostly dry West with the exception of scattered thunderstorms across northeast Oregon to northeast Wyoming. In terms of percent of normal, the northern half of the West was quite wet for this time of year. Ref: [http://www.hprcc.unl.edu/maps/index.php?action=update\\_product&product=PNorm](http://www.hprcc.unl.edu/maps/index.php?action=update_product&product=PNorm)**

Weekly Snowpack and Drought Monitor Update Report

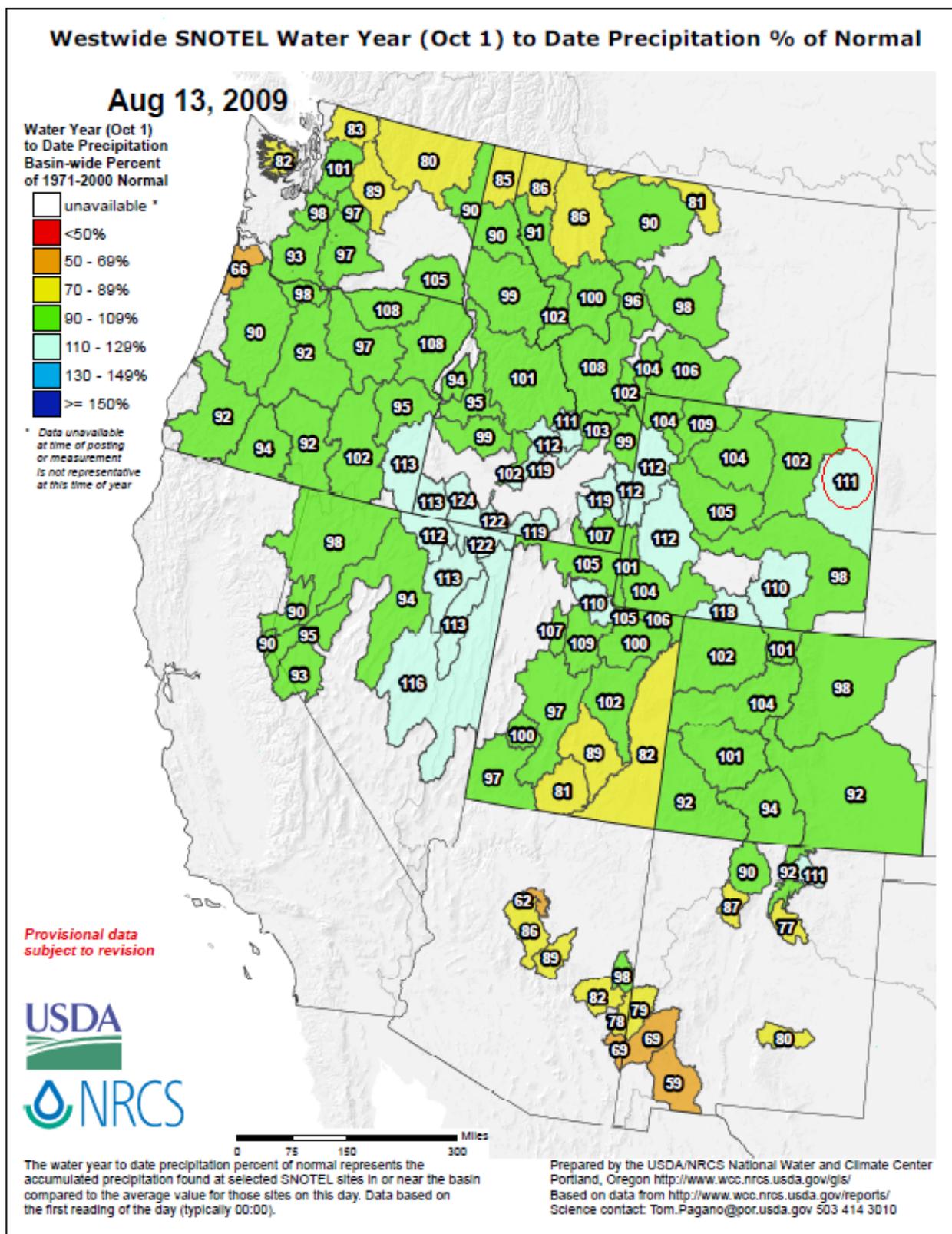
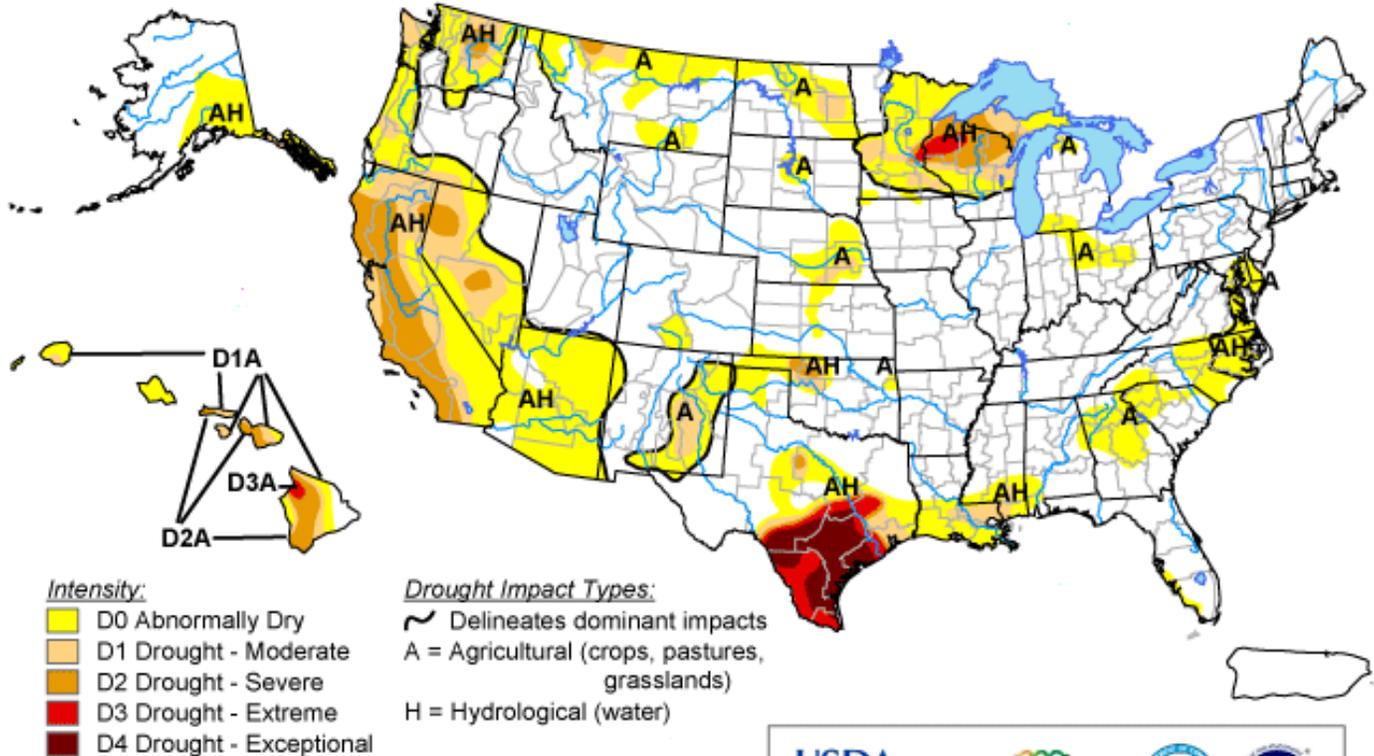


Fig 2b. Seasonal precipitation (rain & snow water equivalent) as a percent of normal for the 2009 Water Year that began on October 1, 2008 shows surplus values over southern Idaho into Wyoming and eastern Nevada with deficits over the northernmost Tier States, southwest New Mexico, and northwest Oregon. No appreciable change since last week except for an 11% increase over northeast Wyoming.

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

# U.S. Drought Monitor

August 11, 2009  
Valid 8 a.m. EDT



Intensity:

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

Drought Impact Types:

- Delineates dominant impacts
- A = Agricultural (crops, pastures, grasslands)
- H = Hydrological (water)

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



Released Thursday, August 13, 2009

Author: Laura Edwards, Western Regional Climate Center

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

Fig. 3. Current Drought Monitor weekly summary.

Ref: National Drought Mitigation Center (NDMC) - <http://www.drought.unl.edu/dm/monitor.html>

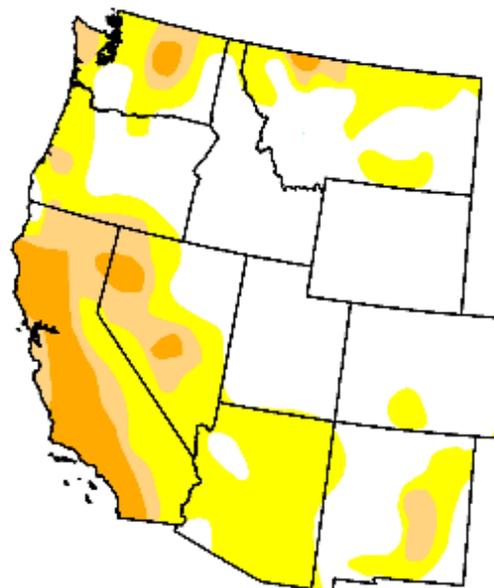
# U.S. Drought Monitor

## West

August 11, 2009  
Valid 7 a.m. EST

*Drought Conditions (Percent Area)*

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	53.6	46.4	16.8	7.1	0.0	0.0
Last Week (08/04/2009 map)	54.4	45.6	17.1	7.5	0.0	0.0
3 Months Ago (05/19/2009 map)	42.8	57.2	27.2	8.2	0.0	0.0
Start of Calendar Year (01/06/2009 map)	37.4	62.6	28.9	8.8	0.4	0.0
Start of Water Year (10/07/2008 map)	41.3	58.7	28.6	10.4	0.1	0.0
One Year Ago (08/12/2008 map)	32.7	67.3	31.2	10.0	0.7	0.0



**Intensity:**

- D0 Abnormally Dry
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<http://drought.unl.edu/dm>



Released Thursday, August 13, 2009

Author: Laura Edwards, Western Regional Climate Center

**Fig. 3a. Drought Monitor for the Western States with statistics over various time periods. Regionally, conditions have improved slightly during the past week.**

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

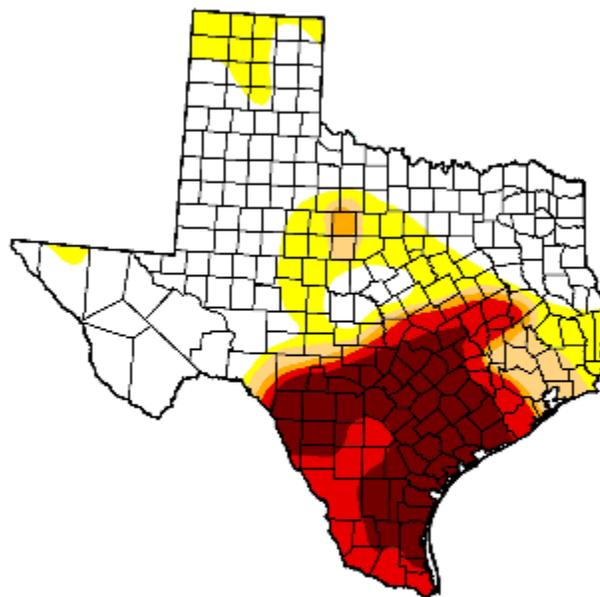
# U.S. Drought Monitor

## Texas

August 11, 2009  
Valid 7 a.m. EST

*Drought Conditions (Percent Area)*

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	50.0	50.0	34.1	28.9	26.6	16.8
Last Week (08/04/2009 map)	50.0	50.0	34.1	28.9	26.6	16.8
3 Months Ago (05/19/2009 map)	31.9	68.1	51.9	36.3	20.5	8.5
Start of Calendar Year (01/06/2009 map)	41.7	58.3	24.5	15.0	9.1	4.2
Start of Water Year (10/07/2008 map)	67.2	32.8	20.5	11.0	3.6	0.0
One Year Ago (08/12/2008 map)	17.0	83.0	57.3	33.6	20.3	4.0



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>



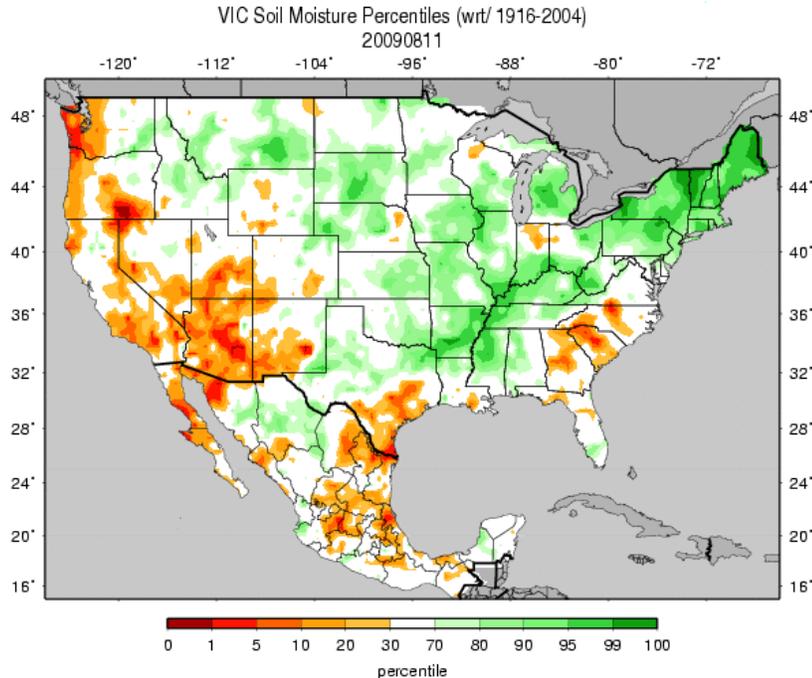
Released Thursday, August 13, 2009

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Fig. 3b: Texas is the only state with D4 drought condition in the US. Note that there was no change since last week. See paper: *An Assessment of the Meteorological Severity of the 2008-09 Texas Drought through July 2009*: <http://www.met.tamu.edu/osc/Aug09Drought.pdf>

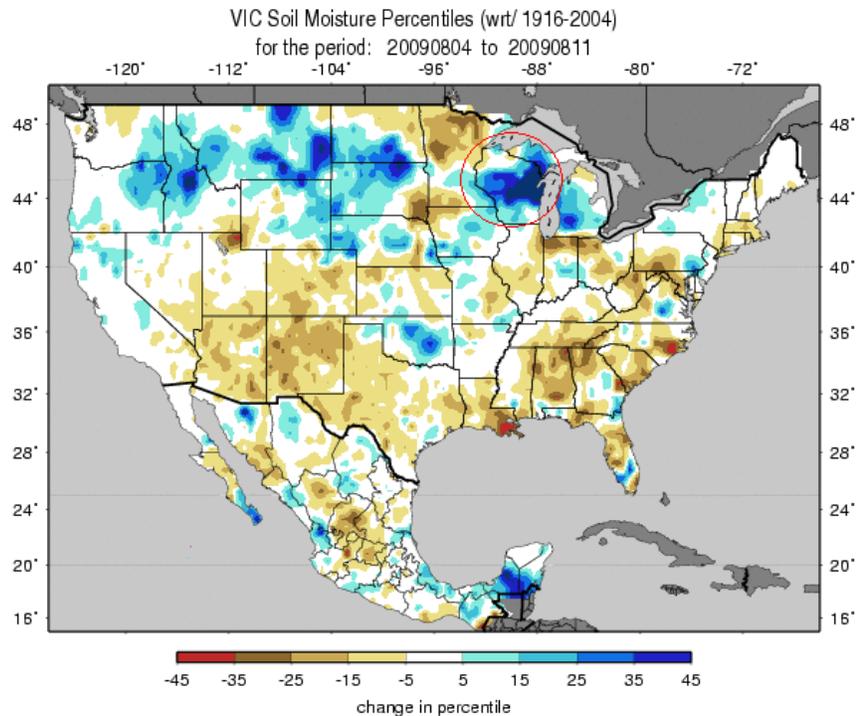
Ref: [http://www.drought.unl.edu/dm/DM\\_state.htm?TX,S](http://www.drought.unl.edu/dm/DM_state.htm?TX,S)

## Weekly Snowpack and Drought Monitor Update Report



**Figs. 4a: Soil Moisture ranking in percentile based on 1916-2004 climatology as of 11 August. Near saturation exists over the northeastern to the Lower Mississippi River Valley, while excessive dryness is scattered across the Gulf Coast State parts of the Southwest and Northwest.**

Ref: [http://www.hydro.washington.edu/forecast/monitor/curr/conus.mexico/CONUS.MEXICO.vic.sm\\_gnt.gif](http://www.hydro.washington.edu/forecast/monitor/curr/conus.mexico/CONUS.MEXICO.vic.sm_gnt.gif)



**Figs. 4b: Soil Moisture change in percentile based on 1916-2004 climatology for this past week. Excessive drying is found over much of the Southeast, Southwest and northern Minnesota. Excessive moistening is found over the Wisconsin, much of the Northern Plains, and Idaho to eastern Oregon.**

Ref:

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

## Weekly Snowpack and Drought Monitor Update Report

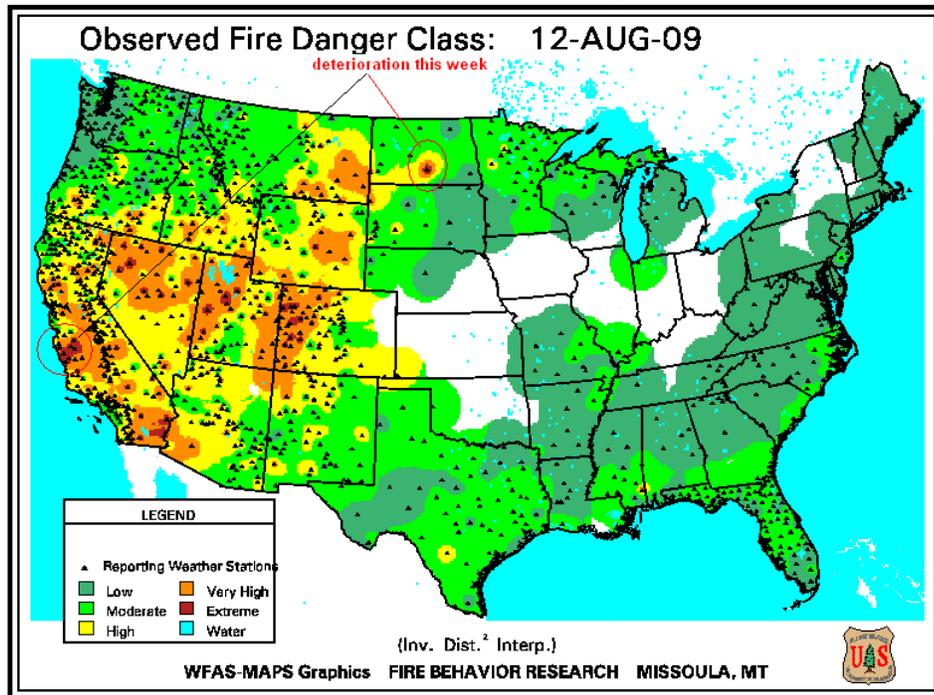


Fig. 5a. Observed Fire Danger Class. Conditions over the West have deteriorated significantly over the central North Dakota and central coastal California, but have improved generally over the remainder of the West due to cooler weather this week. Ref: [http://www.wfas.net/images/firedanger/fd\\_class.gif](http://www.wfas.net/images/firedanger/fd_class.gif)

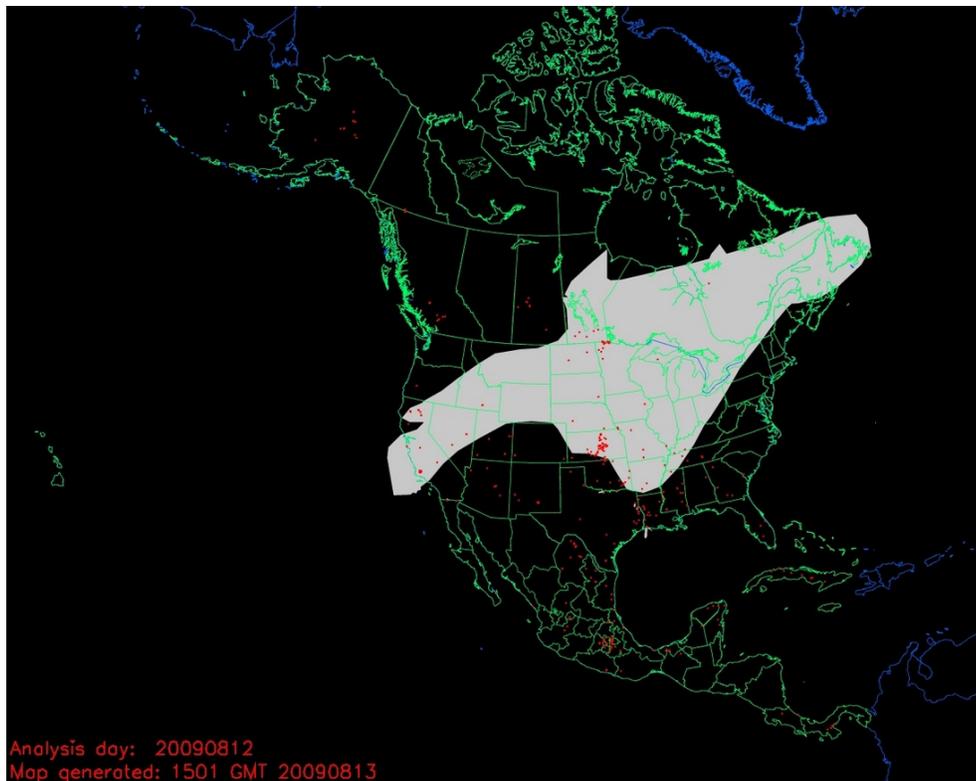


Fig. 5b. Hazard Mapping System Fire and Smoke. Analysis is for 8/12/2009 with fires shown as red dots. Fire size has been increased so fires are visible in this large view. Smoke, when detected by the analyst, is in gray. Ref: <http://www.osdpd.noaa.gov/ml/land/hms.html>.

Weekly Snowpack and Drought Monitor Update Report

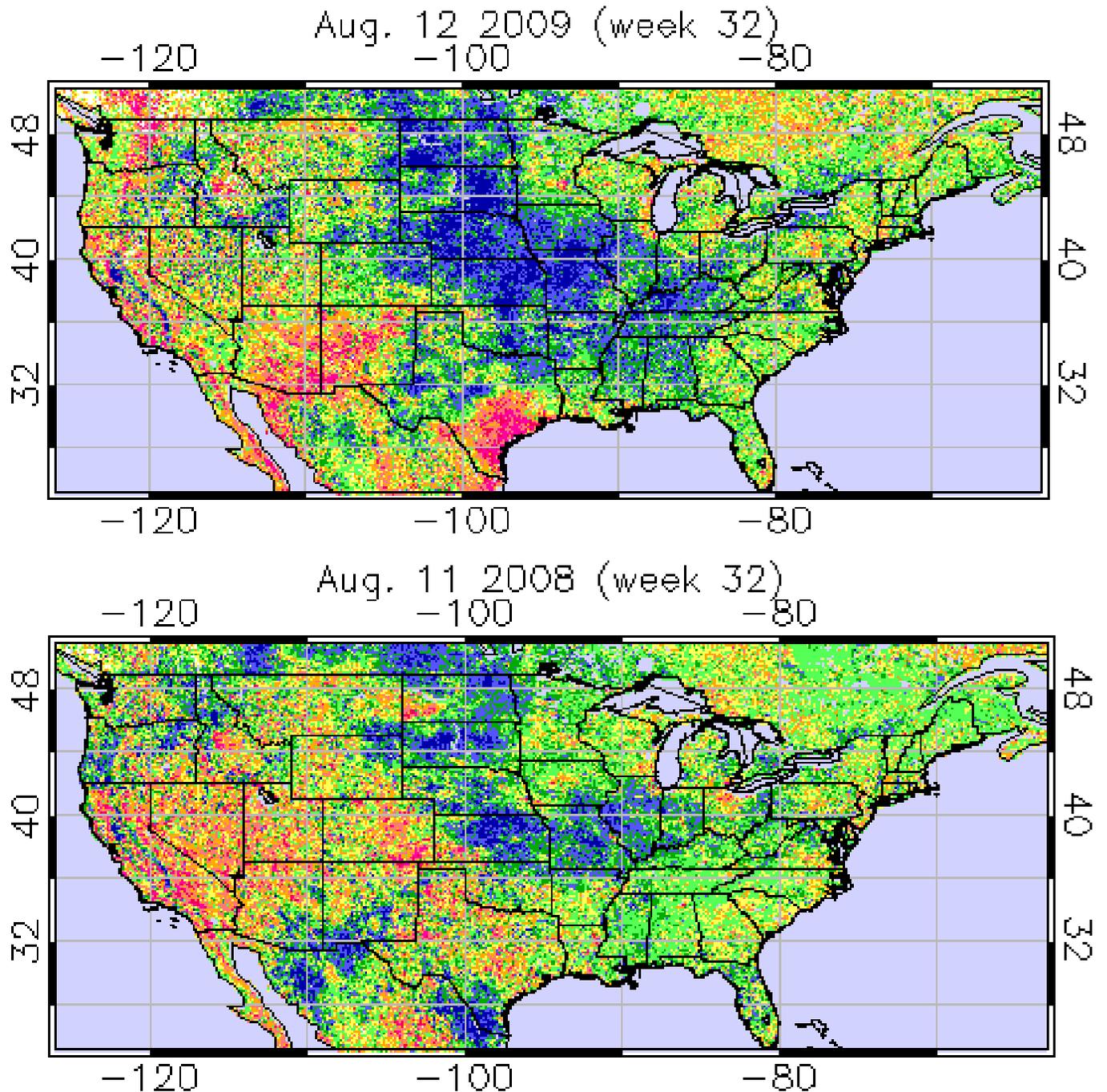
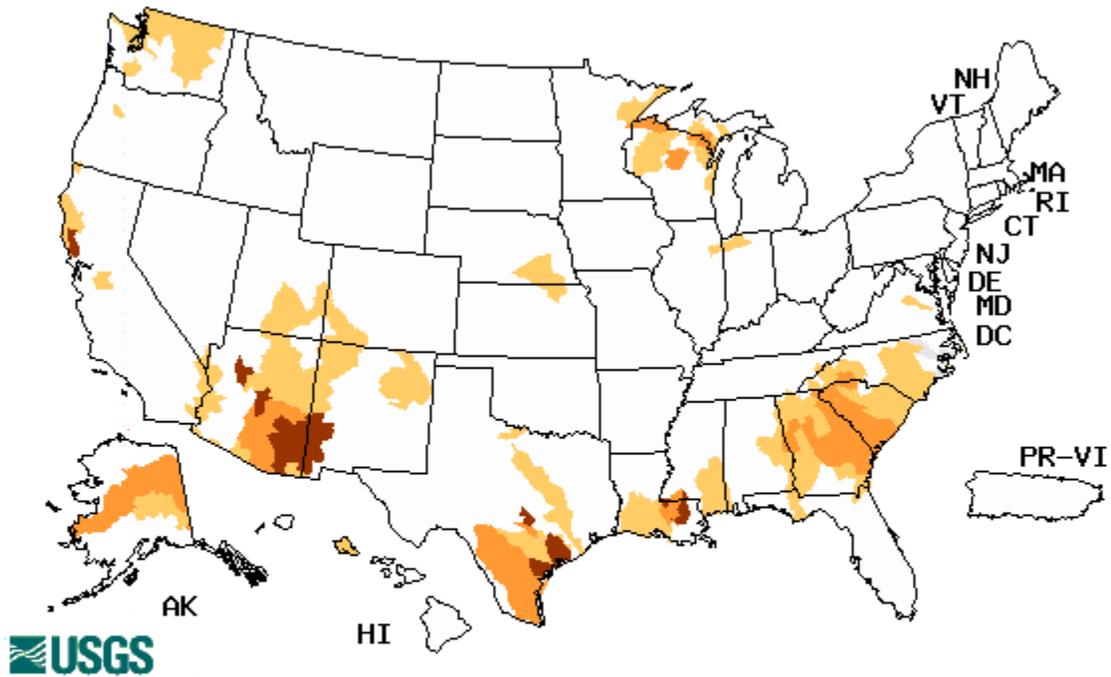


Fig. 6. Vegetation Drought Response Index: Note the comparison to last year. The Central and the Northern Great Plains show very favorable conditions while southern Texas, New Mexico, Arizona, and north-central Washington shows very stressed conditions past this week. Last year, California, Colorado, and southwest North Dakota were the most stressed areas.

Ref: [http://www.star.nesdis.noaa.gov/smcd/emb/vci/VH/vh\\_currentImage.php](http://www.star.nesdis.noaa.gov/smcd/emb/vci/VH/vh_currentImage.php)

# Weekly Snowpack and Drought Monitor Update Report

Wednesday, August 12, 2009



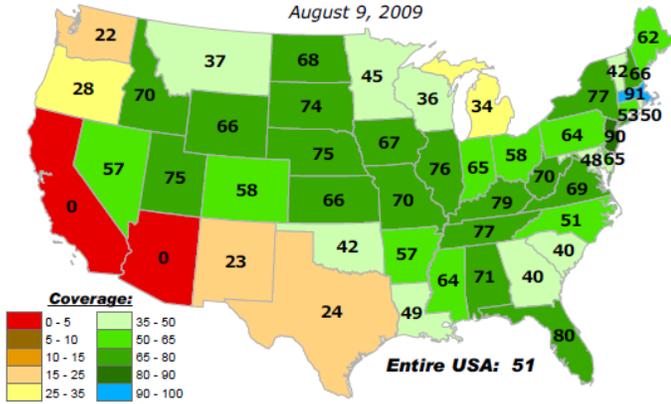
Explanation - Percentile classes				
Low	<=5	6-9	10-24	Insufficient data for a hydrologic region
Extreme hydrologic drought	Severe hydrologic drought	Moderate hydrologic drought	Below normal	

Fig. 7. Map of below normal 7-day average streamflow compared to historical streamflow for the day of year. Severe flows over parts of Texas, Louisiana, and over southeastern Arizona into southwest New Mexico exist.

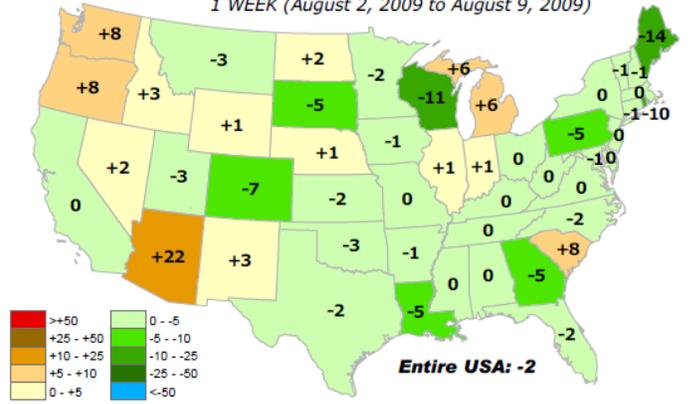
Ref: <http://water.usgs.gov/waterwatch/?m=dryw&w=map&r=us>.

# Weekly Snowpack and Drought Monitor Update Report

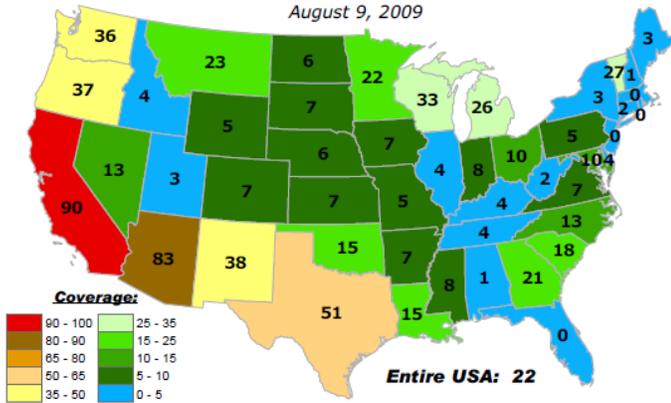
Percent of Pasture & Range Land in "Good" or "Excellent" Condition  
August 9, 2009



CHANGE in % of Pasture and Range Lands in "Poor" or "Very Poor" Condition  
1 WEEK (August 2, 2009 to August 9, 2009)



Percent of Pasture & Range Land in "Poor" or "Very Poor" Condition  
August 9, 2009



CHANGE in % of Pasture and Range Lands in "Poor" or "Very Poor" Condition  
4 WEEKS (July 12, 2009 to August 9, 2009)

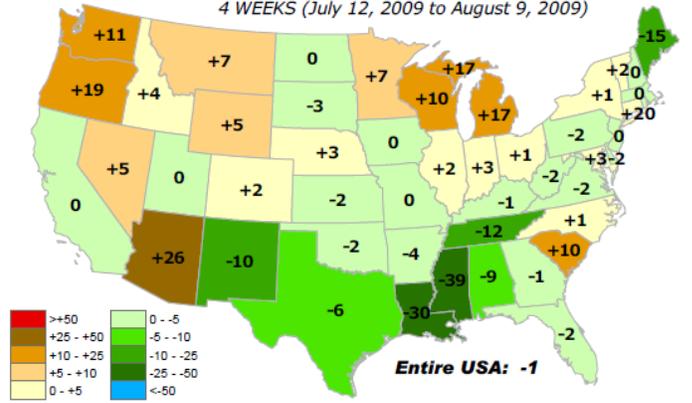


Fig. 8. Current Pasture and Range Land conditions and changes over the last week and last month.

Ref: <http://www.cpc.ncep.noaa.gov/products/predictions/experimental/edb/pasture-range-statewide-conditions.pdf>

## Weekly Snowpack and Drought Monitor Update Report

### National Drought Summary –August 11, 2009

*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 and Mid-Atlantic:** Storms produced some areas of significant rainfall, particularly over upstate New York and southeastern Pennsylvania into New Jersey. Weekly totals were around one to four inches. In Virginia, localized storm activity was not enough to remedy the abnormally dry conditions in the eastern part of the state. This week, no changes were made in the Northeast or Mid-Atlantic.

**Southeast:** Near-normal precipitation across North Carolina, Georgia and Alabama led to no change of drought extent or severity in these states. In Florida, a mixed bag of wet and dry weather this week also led to no change of drought conditions. Small areas of heavy rainfall occurred along the southwest coast, but long-term drought prevails and the abnormally dry designation remains.

**Ohio River and southern Mississippi River Valleys:** It was another week of wet weather in this region. Southeastern Indiana recorded as much as three to four inches of rain. Along the Mississippi River from southern Illinois to Louisiana has been drought-free as well and continued to receive rain this week. No change in drought extent or severity was made throughout these regions.

**Southern Plains:** Continued hot and dry weather in southern Texas maintained the extreme and exceptional drought. For nine counties in Texas, the current drought is the worst on record for intensity, since 1895. Agricultural and ranching impacts from many counties continue to be reported, with little surface water and grass growth to support cattle.

In Oklahoma, recent rains of more than two inches in some eastern counties led to a one-category improvement in Adair and Cherokee counties. Other improvements in severity were gained in some western counties as well, also in response to recent rainfall and improvements in soil moisture.

Precipitation deficits in central Kansas are beginning to show early signs of dry conditions. The area of abnormally dry (D0) was expanded south and north to the Nebraska border. For the last 30 days, deficits in this area are running around two inches, or 50-75% of normal.

Visual crop surveys in Nebraska provided evidence of water stress in some corn and soybean regions. The area of moderate drought in south central Nebraska was expanded to include areas north and east of there, over Lincoln and portions of Saunders, Lancaster and Fillmore counties.

**Northern Plains:** Significant precipitation across central Minnesota and Wisconsin this week led to improvements in the previous D0-D1 region. Local totals of over six inches fell in parts of this area. Outside of this narrow band, drought conditions worsened to include a growing area of moderate drought in southeastern Minnesota, and an extension of abnormally dry conditions into northern Iowa. Elsewhere, an area of abnormally dry (D0) was introduced in southwestern Minnesota and northwestern Iowa in Rock, Nobles and

## Weekly Snowpack and Drought Monitor Update Report

Lyon counties to reflect precipitation deficits of greater than 50 percent for the last 30 days, and 30 percent below normal for the last three months.

In eastern South Dakota, a one-category improvement was made to reflect no drought in an area including Roberts and Grant counties. Further north, pre-drought conditions are being reported by agricultural sectors in northwestern North Dakota. This week's map now shows D0 across these counties north of the Missouri River. Fortunately, temperatures have remained cool this season to dampen the impact of dry conditions and reduce water demand.

**The West:** Eastern Montana is beginning to show signs of early drought, similar to that of western North Dakota and this is reflected in an expansion of D0 over Sheridan County. Precipitation this summer has been lacking in this area. In western Montana, drought conditions are improving and moderate drought is no longer depicted in Sanders and Lincoln counties, in the Kootenai National Forest area.

South central Colorado is beginning to exhibit signs of early drought, including lack of precipitation the last month due to a weak to moderate monsoon season, and wildfire risk and activity has increased. D0, abnormally dry, designation was introduced.

An evaluation of the summer season so far led to a reduction of the area of severe drought in northeastern California and parts of northwestern Nevada this week. D2 is now limited to a portion of eastern Lassen county in California, central Washoe and western Pershing county in Nevada. This reassessment is a culmination of several factors, including: a much above normal and near-record month of precipitation in June; streamflow in the region is near normal in many areas; reservoirs in the area are near 80 percent of normal levels; beneficial thunderstorms have brought modest precipitation in July; and cooler than normal temperatures in early August have reduced water demand. Wild land fire risk continues to be an issue in this region, as well as the long-term three-year drought, so no change in the area of moderate drought was made.

**Hawaii, Alaska and Puerto Rico:** Central Alaska streamflow data show below normal levels for this time of year. In addition, precipitation deficits have been accumulating since the water year began last fall, despite above normal snowpack in and around Fairbanks. As a result, abnormally dry (D0) was expanded northward to indicate drying conditions in this region.

As Tropical Storm Felicia made its way towards Hawaii, no significant improvements were made in the precipitation deficit or drought impacts as of Tuesday morning. As a result, no change in drought extent or severity was made.

Puerto Rico remains unchanged and drought free this week.

**Looking Ahead:** For the first few days of the next US Drought Monitor period, monsoonal moisture will continue in the Southwest. A slow moving front appears to be making its way across the northern states, and another front is stretching along the eastern seaboard. Some existing drought areas in Montana and North Dakota may benefit from some precipitation as the northern front stalls over that region. If the forecast verifies, eastern parts of North Carolina and Virginia may also see dry conditions improving. Over the next two days, a low pressure system off the west coast of Alaska will become more developed, bringing some rain to the western part of the state. Another small area of precipitation is forecast along the Canadian border to the east as well.

The six to ten day forecast (August 18-22) calls for a ridge to settle in the western continental US, with a trough to the east. This would bring above normal temperatures to

## Weekly Snowpack and Drought Monitor Update Report

the west and below normal temperatures over the Great Lakes and central Plains states. Southern Texas and Florida are projected to continue the hot and dry trend from last week. Below normal precipitation across the northern tier states is also reflected in the six to ten day forecast. An area of above normal precipitation for this period extends from Oklahoma to the Northeast.

**Author:** Laura Edwards, Western Regional Climate Center.

### **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 13, 2009