

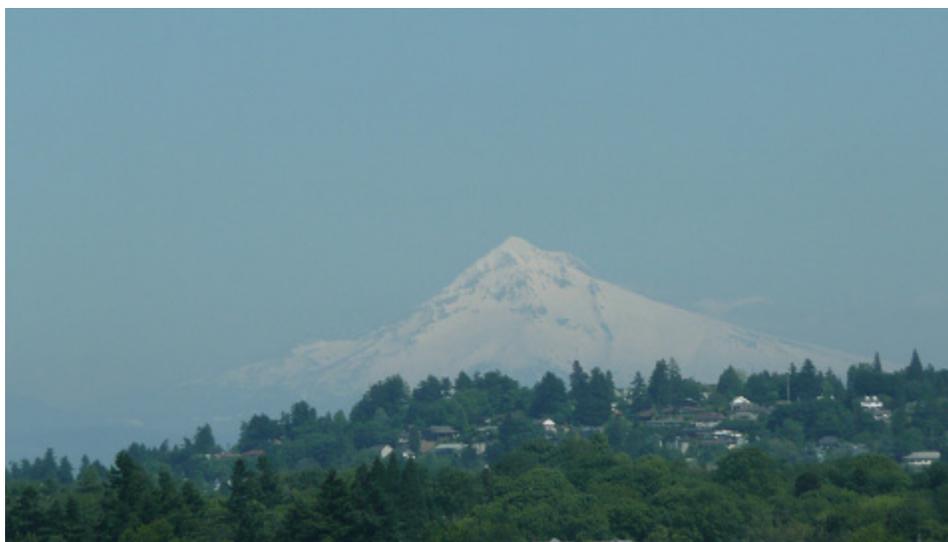


Natural Resources Conservation Service
P.O. Box 2890
Washington, D.C. 20013

Weekly Report - Snowpack / Drought Monitor Update **Date: 19 June, 2008**

SNOTEL SNOWPACK AND PRECIPITATION SUMMARY

Snow: With the exception of some of the highest peaks in the Cascades and Northern Rockies, the snowpack has essentially melted out for the season (Fig. 1). Mt. Hood still stands with SWE greater than 150% for this time of year (photo below). Snow-water equivalent percent for this Water Year as of 19 June shows exceptionally late snow melt over the northern states in the West. It should be remembered that any snow cover existing this late into the season is rare and thus the reason for the high percentages. (Fig. 1a).



Mt. Hood viewed from Portland, 48 miles away on 12 June 2008.

Temperature: For the past seven days, average temperature anomalies were generally within 5 degrees F of normal (Fig. 2). Specifically, the greatest negative temperature departures occurred over eastern Montana (<-8F) and greatest positive departures occurred over the extreme Southwestern States (>+8F) (Fig. 2a).

Precipitation: Preliminary precipitation totals for the 7-day period ending 19 June shows areas of heavy precipitation due to scattered thunderstorms over Idaho and Montana. Otherwise, typical dry conditions prevail over the West for this time of year (Fig. 3). Seasonal precipitation (rain & snow water equivalent) as a percent of normal for the 2008 Water Year that began on October 1, 2007 shows above normal totals over Colorado, central Arizona, parts of Oregon, and northern Wyoming. Parts of Nevada and southern New Mexico are experiencing significant shortfalls. No significant change since last week (Fig. 3a).

Weekly Snowpack and Drought Monitor Update Report

WESTERN DROUGHT STATUS

The West: In the dry areas across the West, weekly precipitation totals in excess of 0.5 inch were restricted to western Wyoming and isolated sites in southern Idaho. Most locations received no measurable rainfall, which is not particularly unusual for these areas during summer. However, some areas of deterioration were noted, primarily across California, where all but the northwestern and southwestern extremities of the state are now experiencing at least moderate drought. Severe drought (D2) expanded northward slightly in the San Joaquin Basin. Author: [Rich Tinker, Climate Prediction Center, NOAA](#)

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

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. 4, 4a, 4b, and 4c).

SOIL MOISTURE

Soil moisture (Figs. 5 and 5a), 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).

OBSERVED FIRE DANGER CLASS

The National Interagency Coordination Center provides a variety of products that describe the current wildfire status for the U.S. - <http://www.nifc.gov/information.html>. The latest Observed Fire Danger Class is shown in Figs. 6 shows the current active wildfires across the West - <http://geomac.usgs.gov/>.

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.

VEGETATION HEALTH

Associated with vegetation health are pasture and rangeland conditions (Fig. 8), as noted at: <http://www.cpc.ncep.noaa.gov/products/predictions/experimental/edb/pasture-range-statewide-conditions.pdf>. **Remarks:** *Difference exists in 'condition' categories used by NASS, NOAA, etc., compared to NRCS definitions. The condition in this report only considers present grass growth. NRCS often considers 10 - 17 indicators as appropriate for vegetation health.*

Weekly Snowpack and Drought Monitor Update Report

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/>

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

SNOTEL Current Snow Water Equivalent (SWE) Percent of Normal Peak Jun 19, 2008

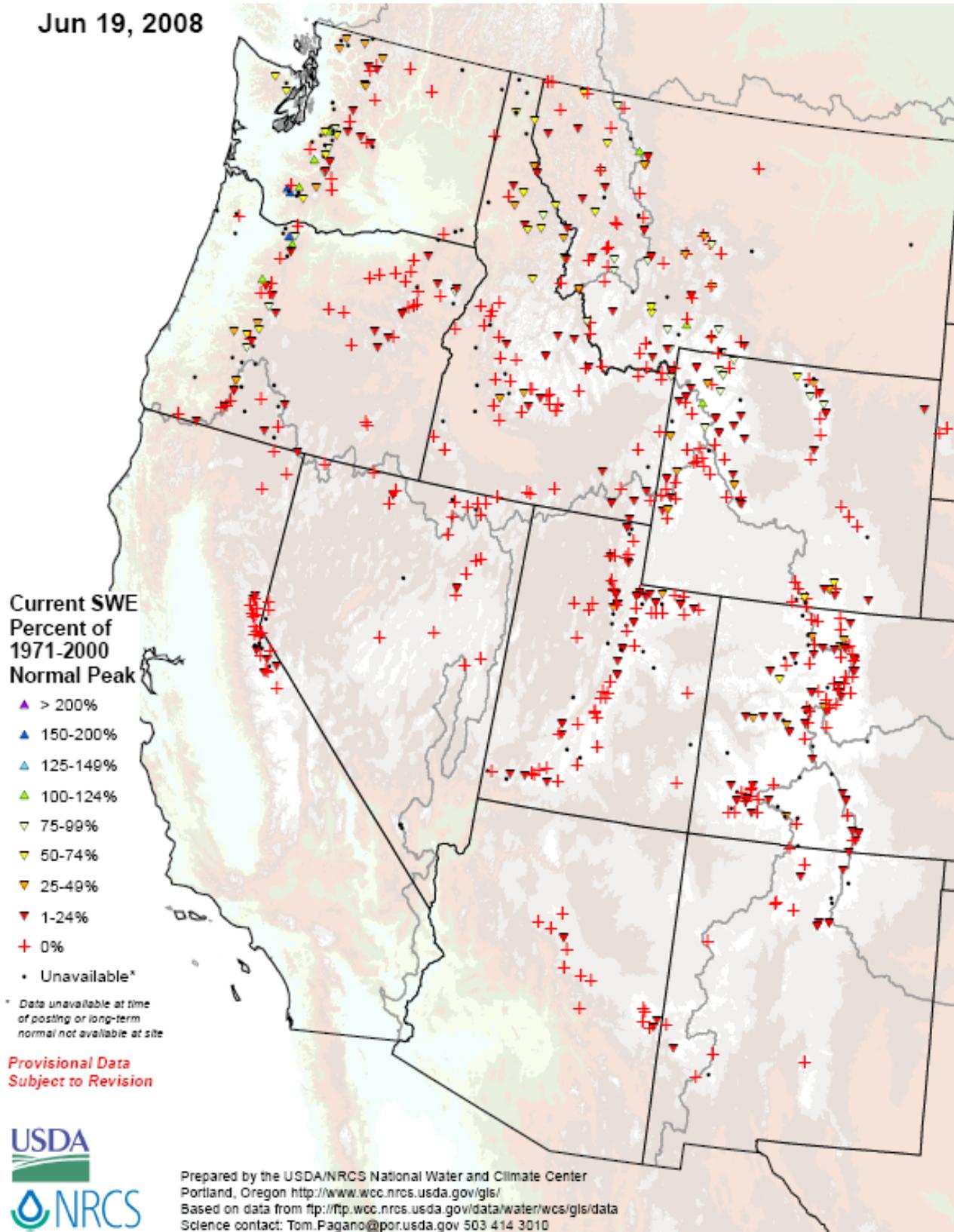


Fig. 1. With the exception of some of the highest peaks in the Cascades and Northern Rockies, the snowpack has essentially melted out for the season. Mt. Hood still stands with SWE greater than 150% for this time of year.

Weekly Snowpack and Drought Monitor Update Report

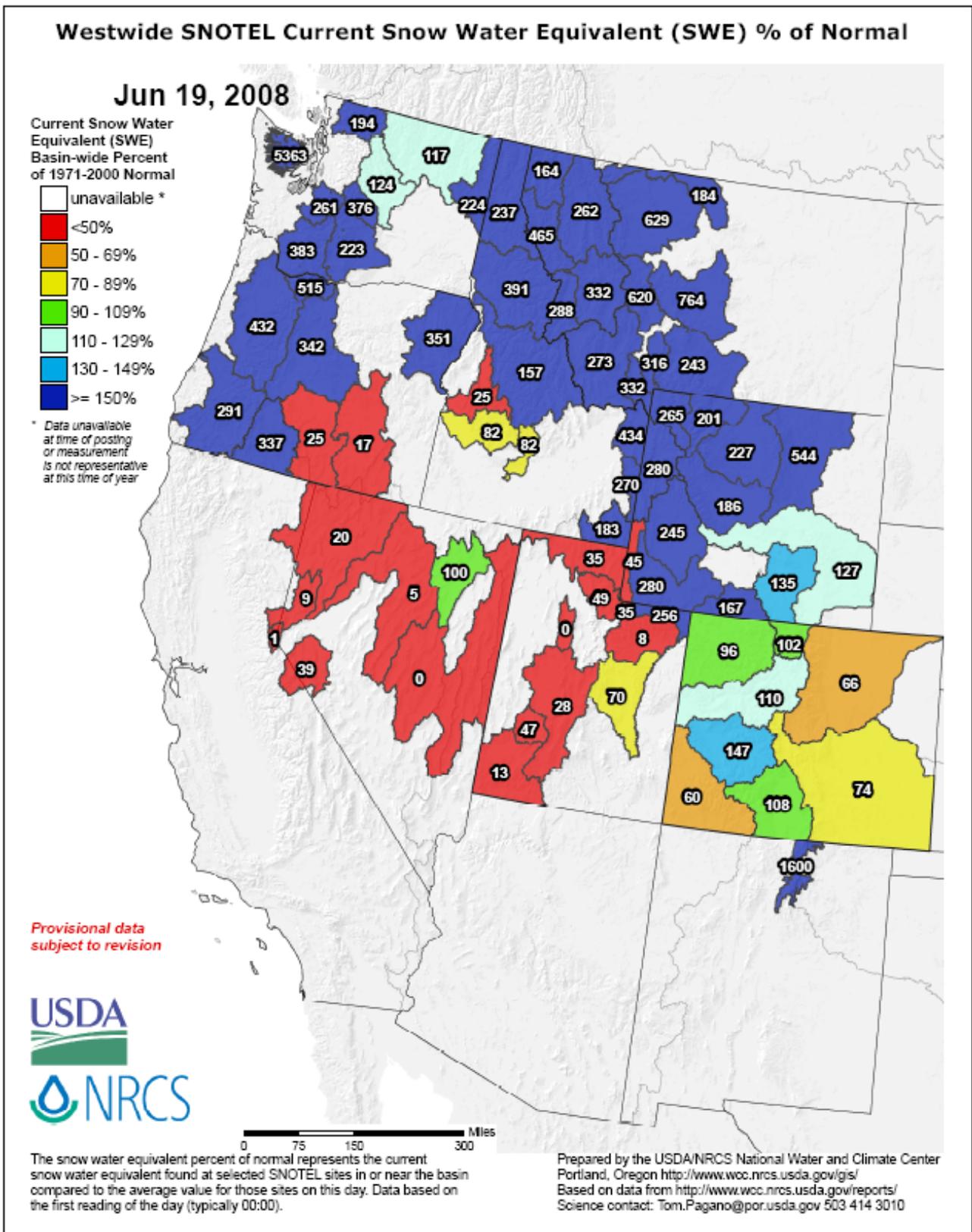


Fig. 1a. Snow-water equivalent percent for this Water Year as of 19 June shows exceptionally late snow melt over the northern states in the West. Remember that any snow cover that exists this late into the season is rare and thus the reason for the high percentages.

Ref: ftp://ftp.wcc.nrcs.usda.gov/data/water/wcs/gis/maps/west_swepctnormal_update.pdf

Weekly Snowpack and Drought Monitor Update Report
SNOTEL (solid) and ACIS (dot-filled) Networks
7-Day Average Temperature Anomaly (Degrees F)

Jun 19, 2008

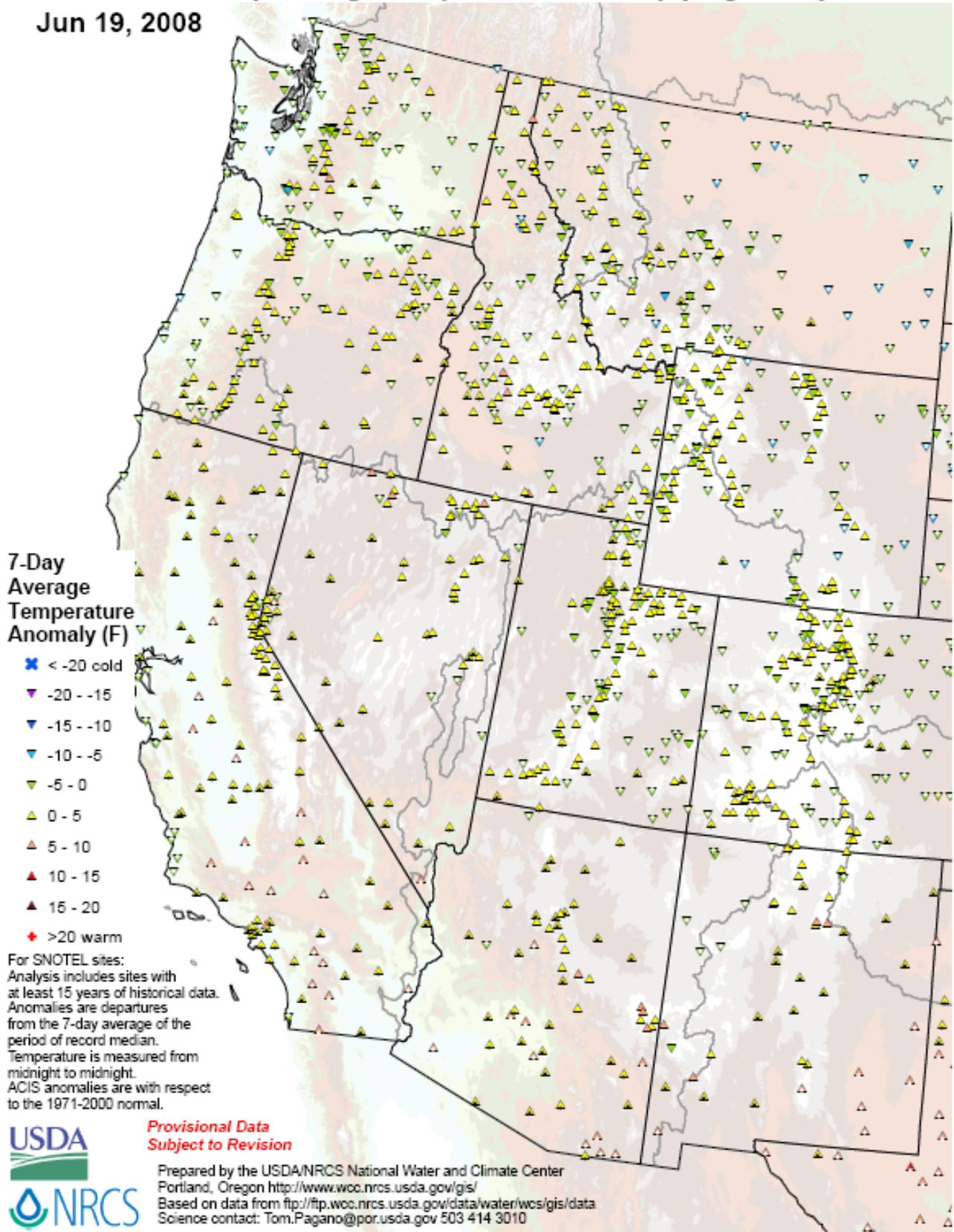
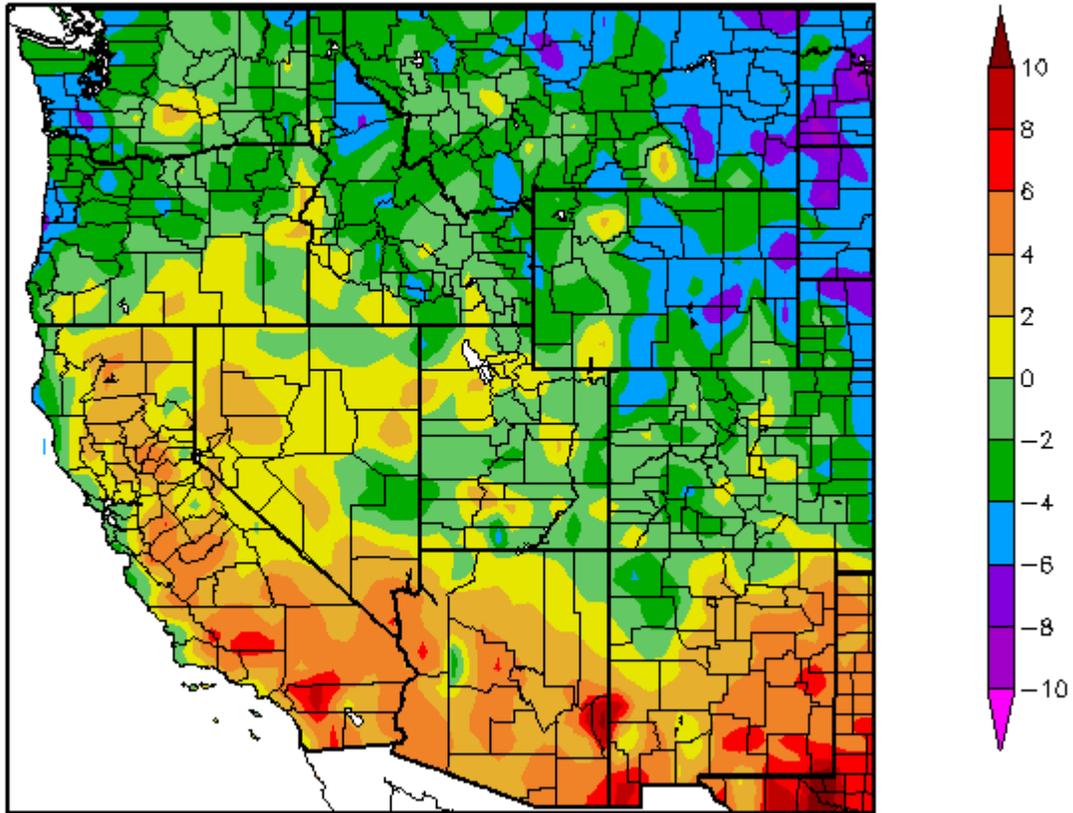


Fig. 2. SNOTEL & ACIS 7-day station average temperature anomalies were generally within 5 degrees F of normal. Ref: [ftp://ftp.wcc.nrcs.usda.gov/data/water/wcs/gis/maps/WestwideTavg7dAnomalyAcis.pdf](http://ftp.wcc.nrcs.usda.gov/data/water/wcs/gis/maps/WestwideTavg7dAnomalyAcis.pdf)

Departure from Normal Temperature (F)
6/12/2008 – 6/18/2008



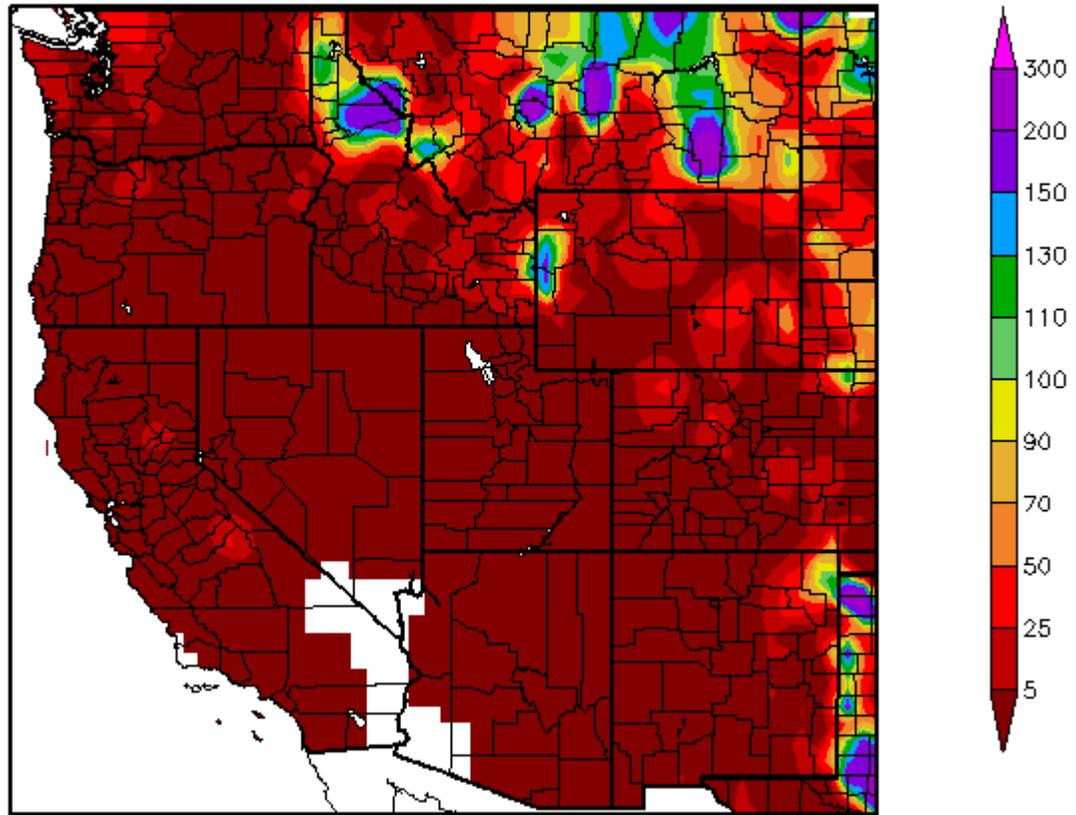
Generated 6/19/2008 at HPRCC using provisional data.

NOAA Regional Climate Centers

Fig. 2a. ACIS 7-day average temperature anomalies: Greatest negative temperature departures occurred over eastern Montana (<-8F) and greatest positive departures occurred over the extreme Southwestern States (>+8F).

Ref: http://www.hprcc.unl.edu/maps/current/index.php?action=update_product&product=TDdept

Percent of Normal Precipitation (%)
6/12/2008 – 6/18/2008



Generated 6/19/2008 at HPRCC using provisional data.

NOAA Regional Climate Centers

Fig. 3. ACIS 7-day average precipitation anomaly: Preliminary precipitation totals for the 7-day period ending 19 June shows areas of heavy precipitation due to scattered thunderstorms over Idaho and Montana. Otherwise, typical dry conditions prevail over the West for this time of year.

Ref: http://www.hprcc.unl.edu/maps/index.php?action=update_product&product=PNorm

Weekly Snowpack and Drought Monitor Update Report

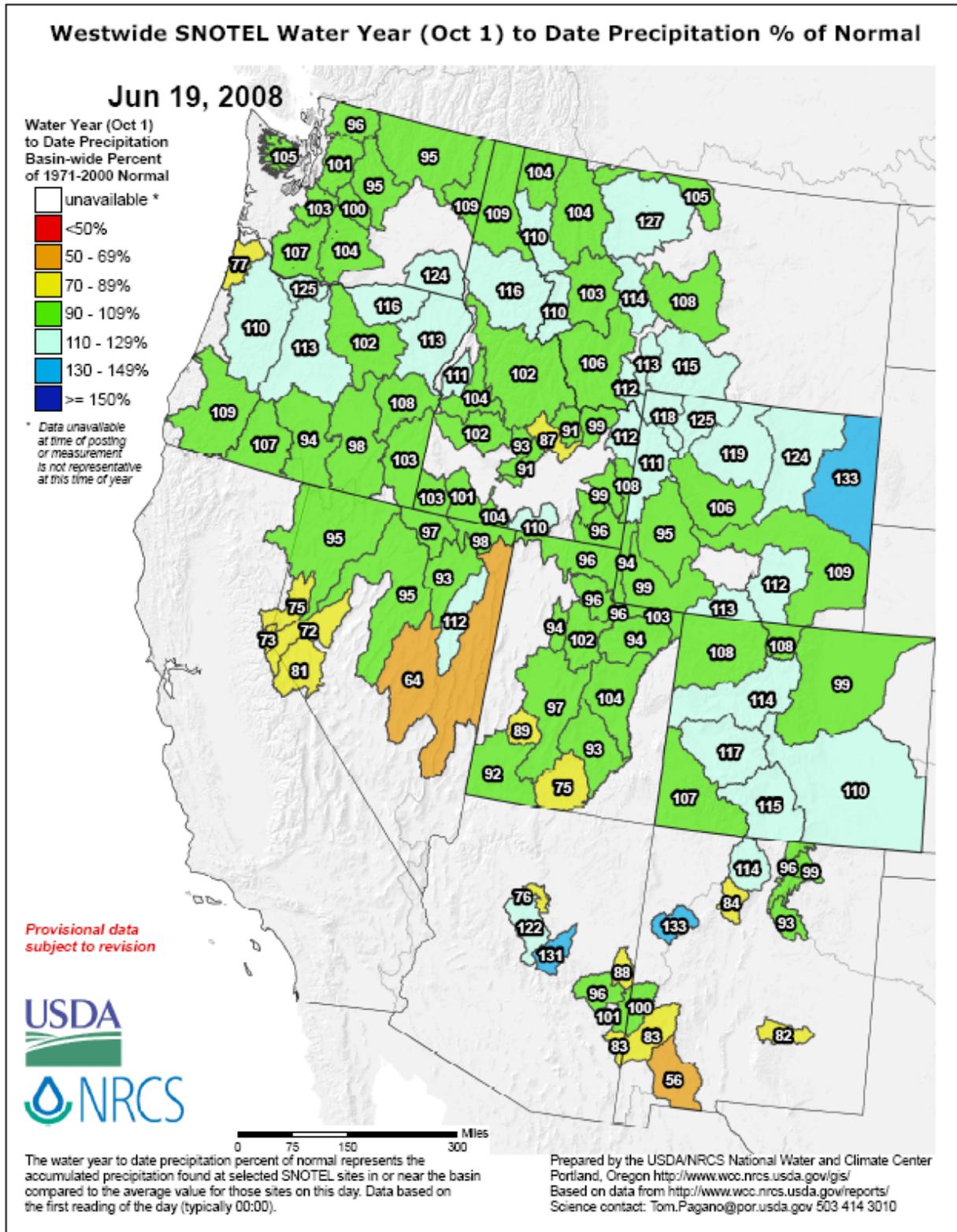
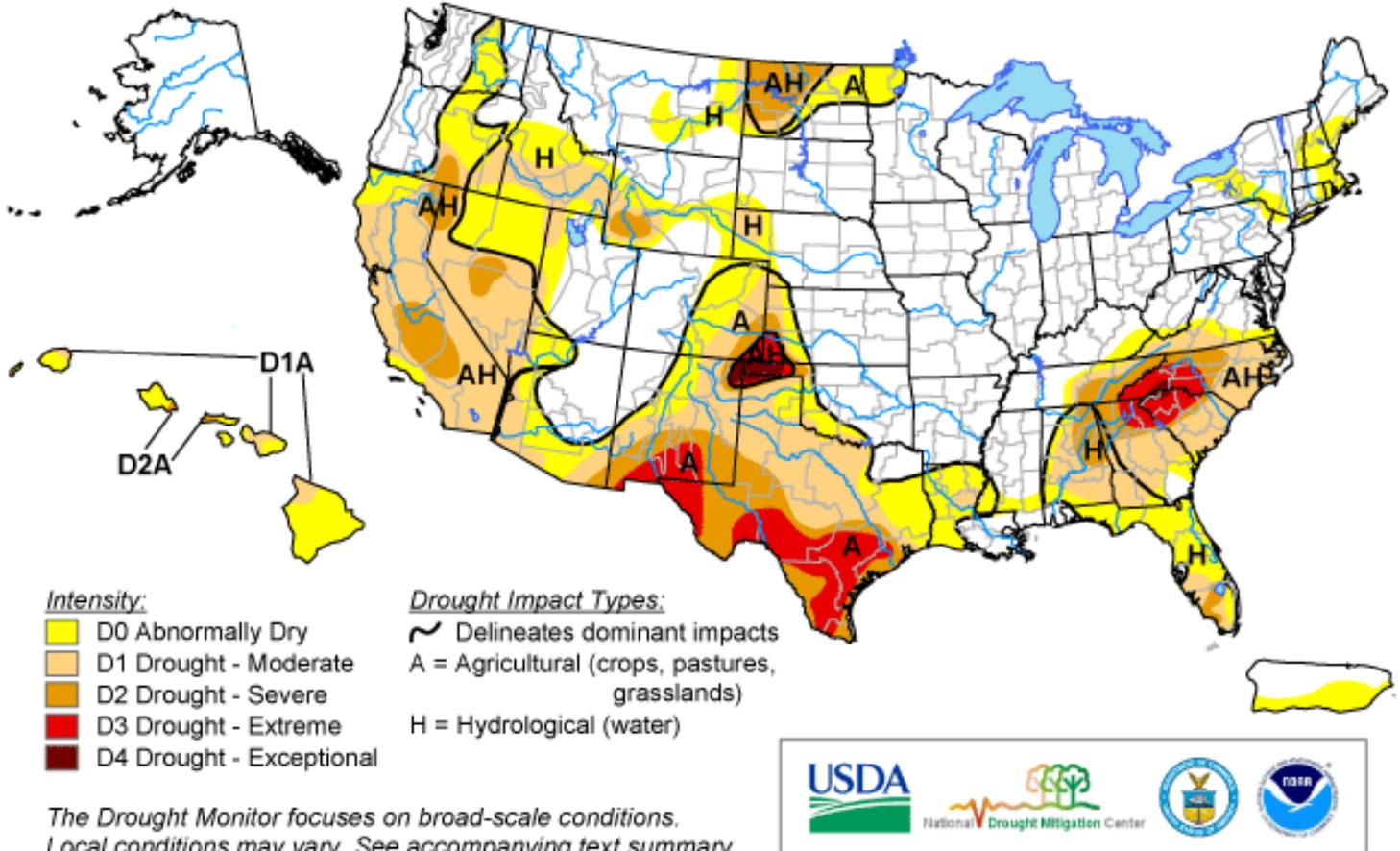


Fig 3a. Seasonal precipitation (rain & snow water equivalent) as a percent of normal for the 2008 Water Year that began on October 1, 2007 shows above normal totals over Colorado, central Arizona, parts of Oregon, and northern Wyoming. Parts of Nevada and southern New Mexico are experiencing significant shortfalls. No significant change since last week.
Ref: ftp://ftp.wcc.nrcs.usda.gov/data/water/wcs/gis/maps/west_wytdprecpcnormal_update.pdf

U.S. Drought Monitor

June 17, 2008
Valid 8 a.m. EDT



Released Thursday, June 19, 2008
Author: Rich Tinker, CPC/NOAA

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

Fig. 4. Current Drought Monitor weekly summary.
Ref: National Drought Mitigation Center (NDMC) - <http://www.drought.unl.edu/dm/monitor.html>

Weekly Snowpack and Drought Monitor Update Report

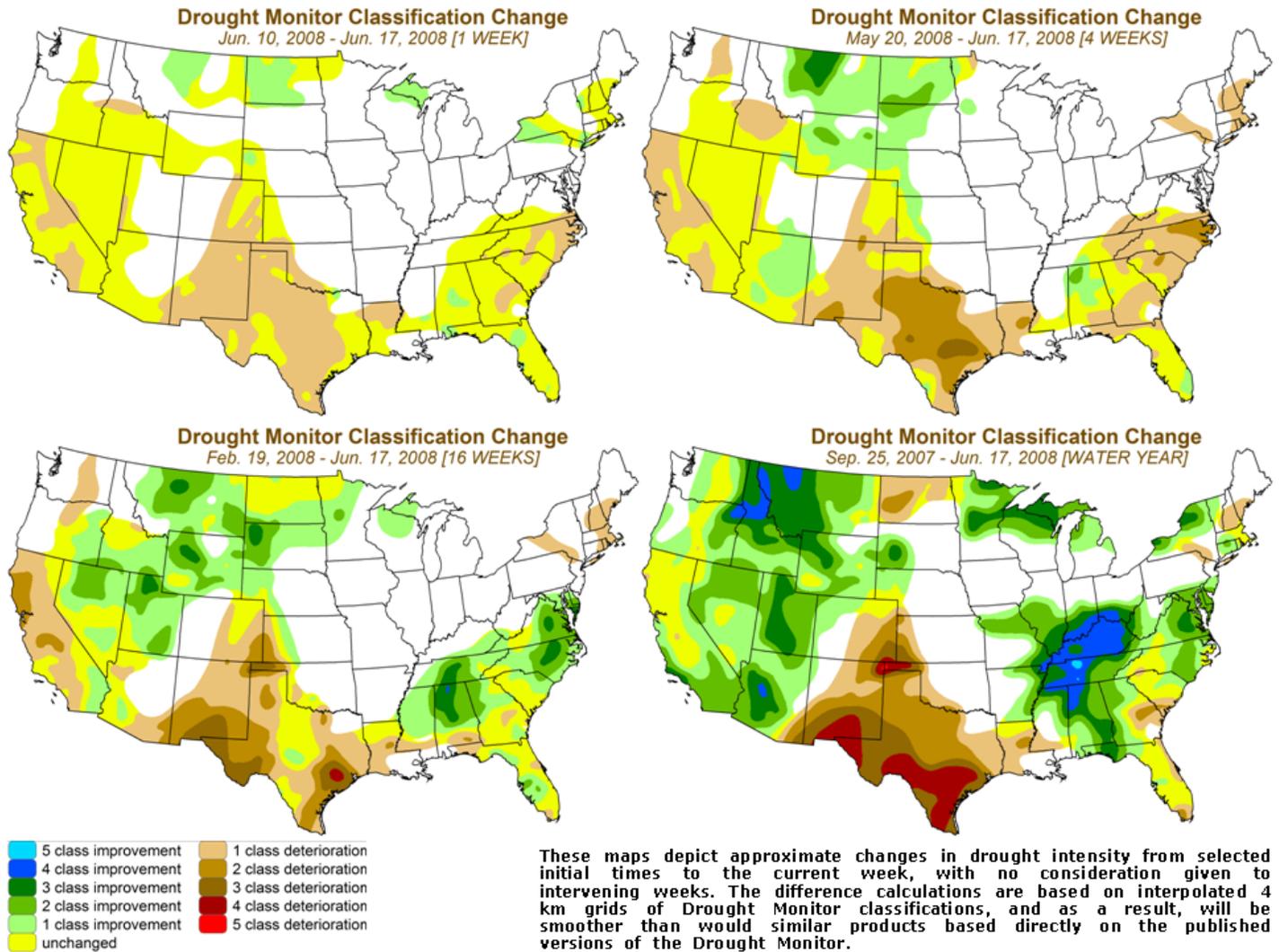


Fig. 4a. Drought Monitor classification changes over various time periods shows some worsening drought conditions over Texas and the Southern Rockies (upper left) this week. Much of these areas have also seen worsening conditions during the past four week (upper right). Improvement is noted over Montana and the Northern Plains (lower left) and over the Ohio and Tennessee River Valleys (lower right) since the start of the Water Year.

Ref: <http://www.cpc.ncep.noaa.gov/products/predictions/experimental/edb/dm-change-4maps.png>

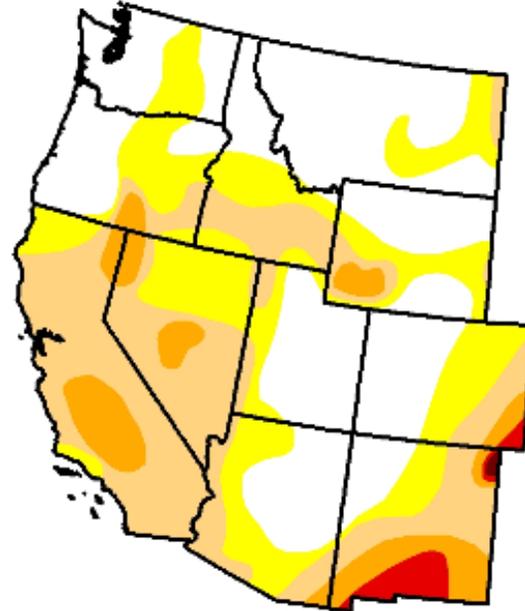
U.S. Drought Monitor

West

June 17, 2008
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	40.1	59.9	35.9	9.4	1.8	0.1
Last Week (06/10/2008 map)	42.2	57.8	28.2	5.5	0.2	0.0
3 Months Ago (03/25/2008 map)	41.4	58.6	36.4	15.4	0.0	0.0
Start of Calendar Year (01/01/2008 map)	26.3	73.7	54.7	33.1	2.7	0.0
Start of Water Year (10/02/2007 map)	22.0	78.0	62.3	44.7	12.4	0.0
One Year Ago (06/19/2007 map)	33.5	66.5	48.7	28.3	7.5	0.0



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, June 19, 2008
Author: Rich Tinker, CPC/NOAA

Fig. 4b. Drought Monitor for the Western States with statistics over various time periods. Note continued deterioration in drought conditions since last week.

Ref: http://www.drought.unl.edu/dm/DM_west.htm

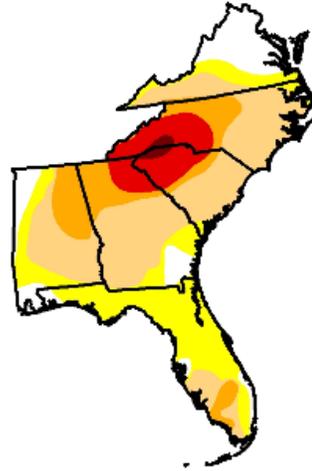
U.S. Drought Monitor

Southeast

June 17, 2008
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	13.5	86.5	61.8	24.1	10.5	0.9
Last Week (06/10/2008 map)	12.6	87.4	54.6	24.6	8.2	0.0
3 Months Ago (03/25/2008 map)	24.8	75.2	57.5	38.1	18.0	0.0
Start of Calendar Year (01/01/2008 map)	9.6	90.4	74.3	58.5	41.0	22.0
Start of Water Year (10/02/2007 map)	10.1	89.9	77.9	63.8	45.2	24.0
One Year Ago (06/19/2007 map)	8.3	91.7	66.8	45.0	29.5	8.0



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



Released Thursday, June 19, 2008
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<http://drought.unl.edu/dm>

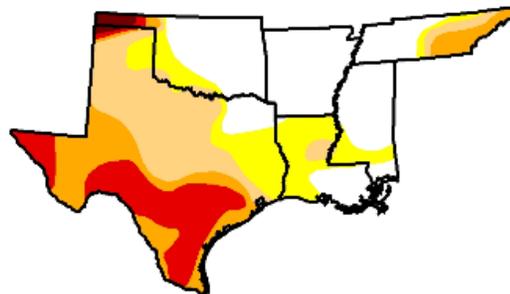
U.S. Drought Monitor

South

June 17, 2008
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	36.2	63.8	48.0	28.5	14.0	1.0
Last Week (06/10/2008 map)	41.4	58.6	30.7	20.2	4.0	0.0
3 Months Ago (03/25/2008 map)	58.1	41.9	28.7	8.1	3.5	0.0
Start of Calendar Year (01/01/2008 map)	57.5	42.5	12.9	4.3	3.8	1.6
Start of Water Year (10/02/2007 map)	77.6	22.4	12.6	10.2	7.5	4.9
One Year Ago (06/19/2007 map)	70.5	29.5	18.6	13.5	9.7	2.5



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

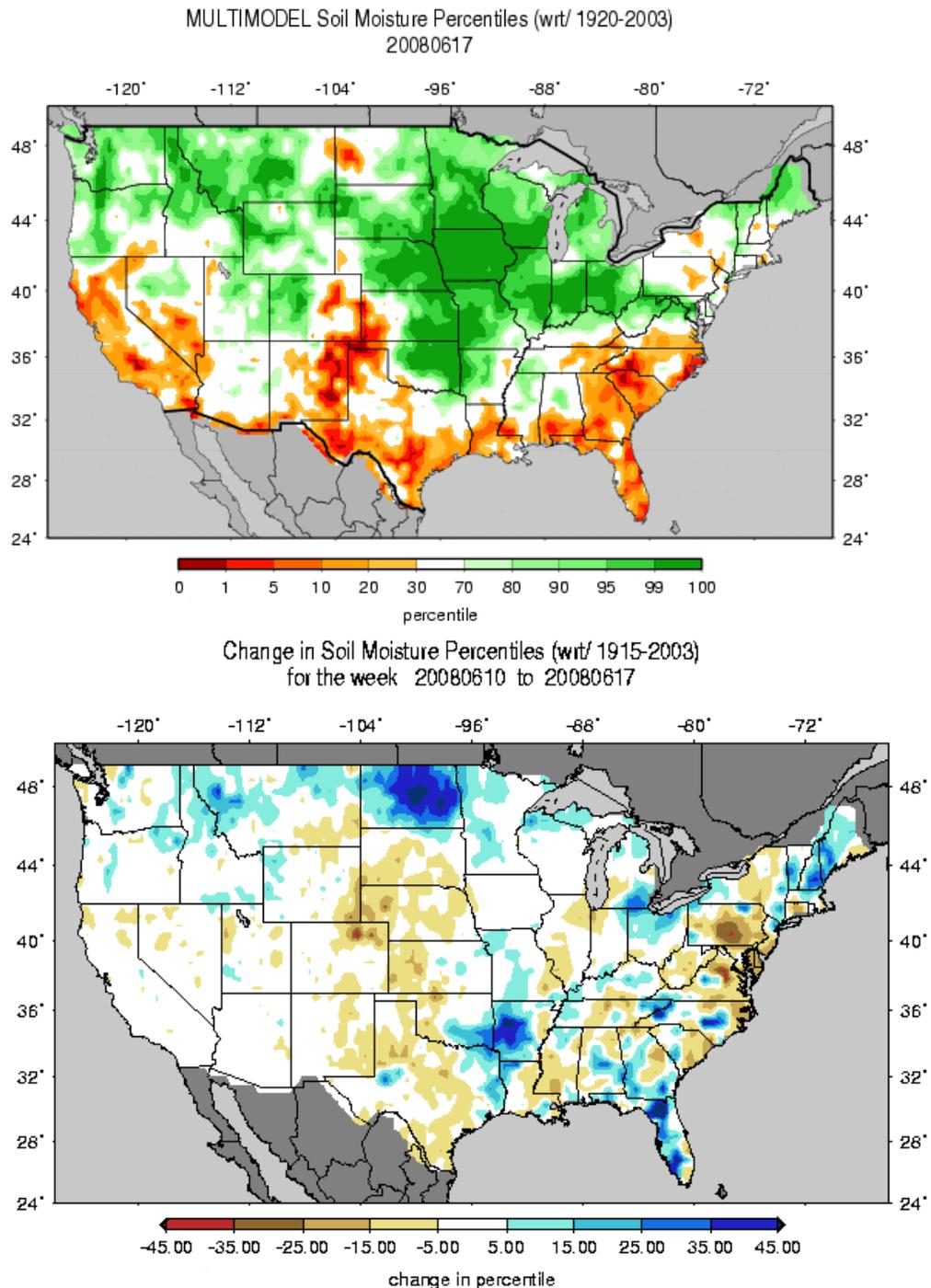


Released Thursday, June 19, 2008
Author: Rich Tinker, CPC/NOAA

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

Fig. 4c: Drought Monitor for the Southeastern and South-Central States shows significant worsening drought conditions since last week. Ref: http://www.drought.unl.edu/dm/DM_southeast.htm

Weekly Snowpack and Drought Monitor Update Report



Figs. 5 & 5a: Soil Moisture Ranking and change in percentile based on 1915-2003 climatology for this past week. Excessive moisture dominates the mid section of the nation (see special report after Figure 8 on the major flooding) while dryness dominates and is expanding across the middle High Plain (Fig. 5). Last week saw a significant increase in soil moisture over North Dakota, Upper Mississippi River Valley, Florida, and New England while much of the Pennsylvania was drying out (Fig. 5a).

Ref: http://www.hydro.washington.edu/forecast/monitor/curr/CONUS.multimodel.sm_gnt.gif
http://www.hydro.washington.edu/forecast/monitor/curr/CONUS.vic.sm_gnt.1wk.gif

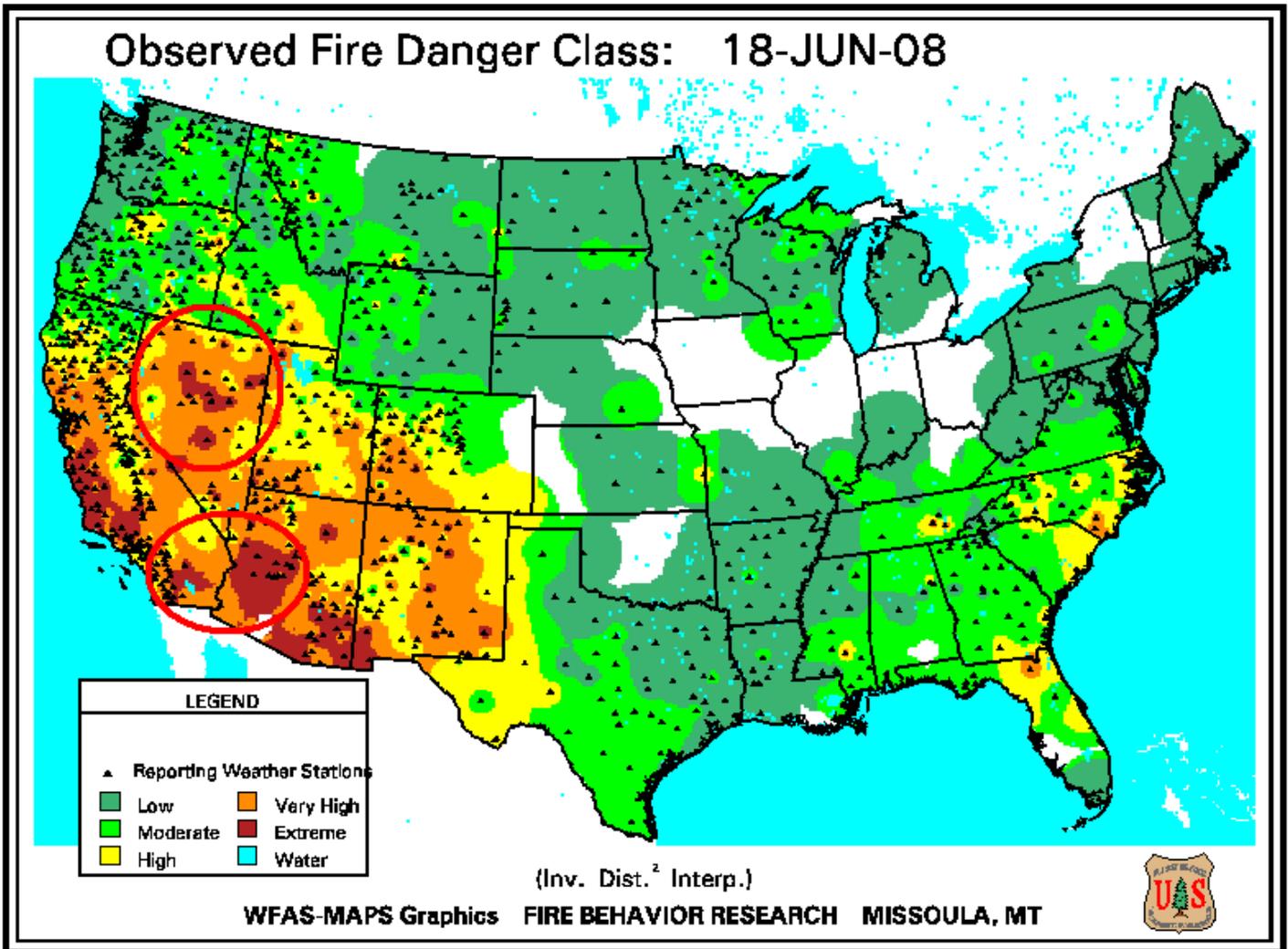


Fig. 6. Observed Fire Danger Class. Note extreme fire danger over the Southwest (especially New Mexico). Conditions have rapidly worsened over southern California, northern Nevada and southwest Arizona (red circle) since last week. Source: Forest Service Fire Behavior Research – Missoula, MT. Ref: http://www.fs.fed.us/land/wfas/fd_class.gif

Weekly Snowpack and Drought Monitor Update Report

Wednesday, June 18, 2008

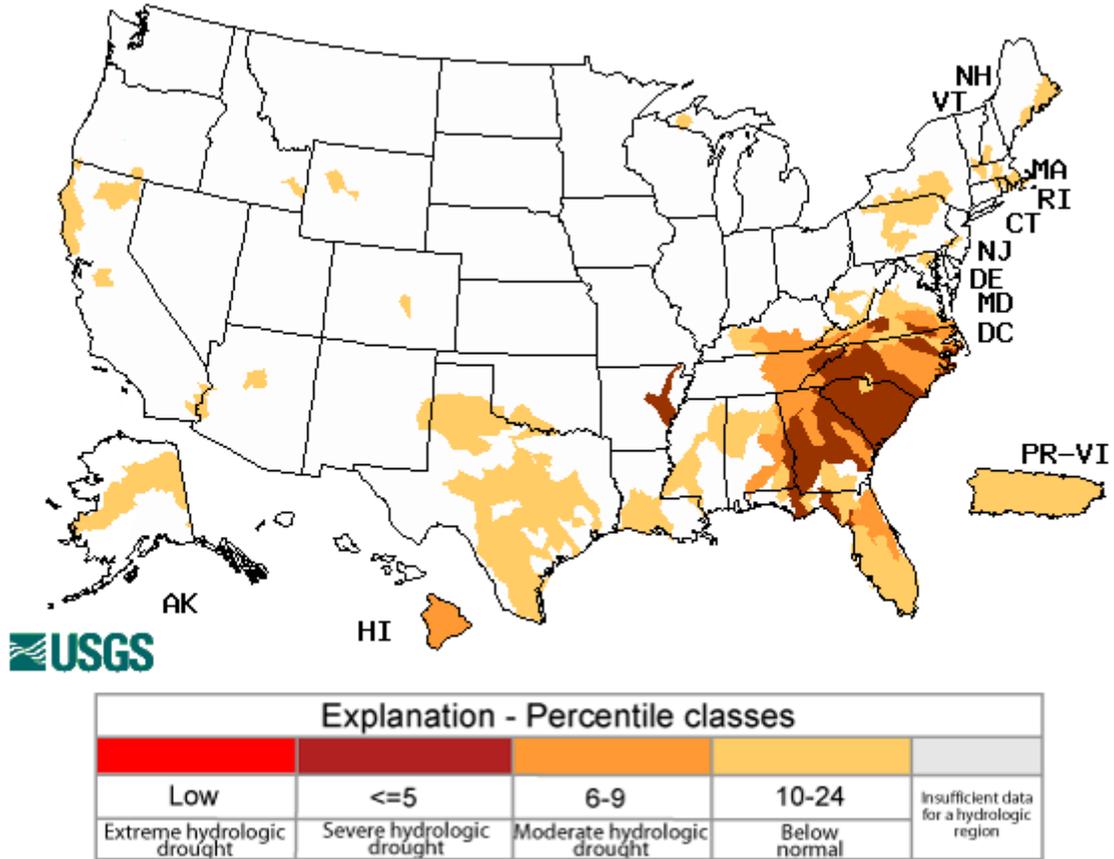
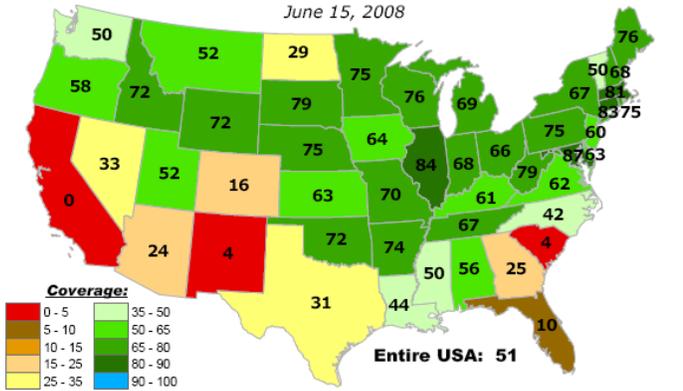


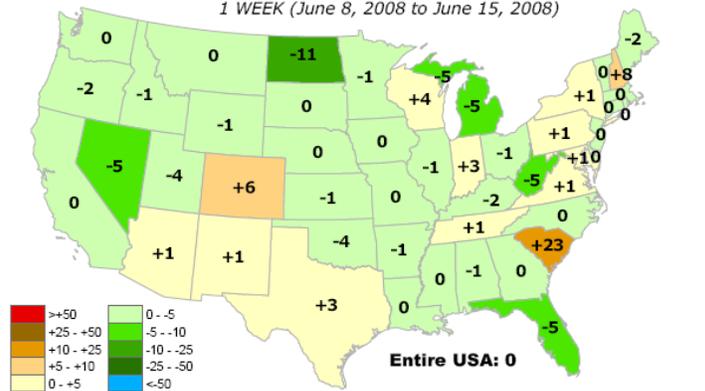
Fig. 7. This week's map shows continued low stream flow over parts of the Southeast. No significant change since last week. Ref: USGS
<http://water.usgs.gov/waterwatch/?m=dryw&w=map&r=us>

Weekly Snowpack and Drought Monitor Update Report

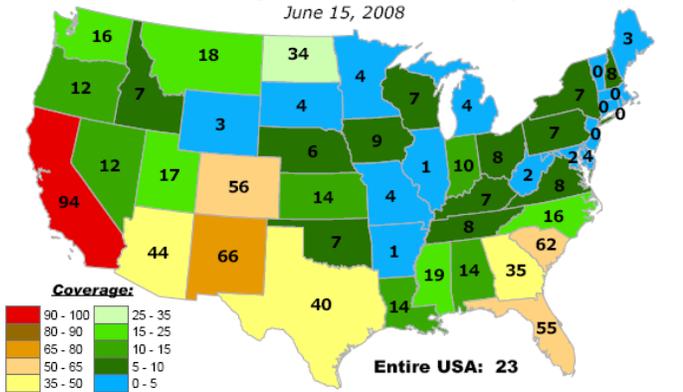
Percent of Pasture & Range Land in "Good" or "Excellent" Condition
June 15, 2008



CHANGE in % of Pasture and Range Lands in "Poor" or "Very Poor" Condition
1 WEEK (June 8, 2008 to June 15, 2008)



Percent of Pasture & Range Land in "Poor" or "Very Poor" Condition
June 15, 2008



CHANGE in % of Pasture and Range Lands in "Poor" or "Very Poor" Condition
4 WEEKS (May 18, 2008 to June 15, 2008)

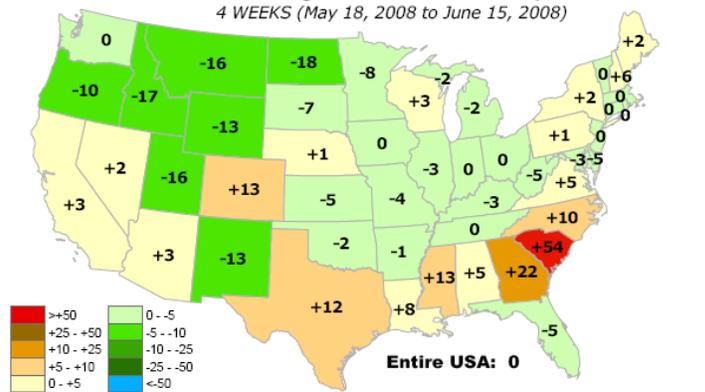


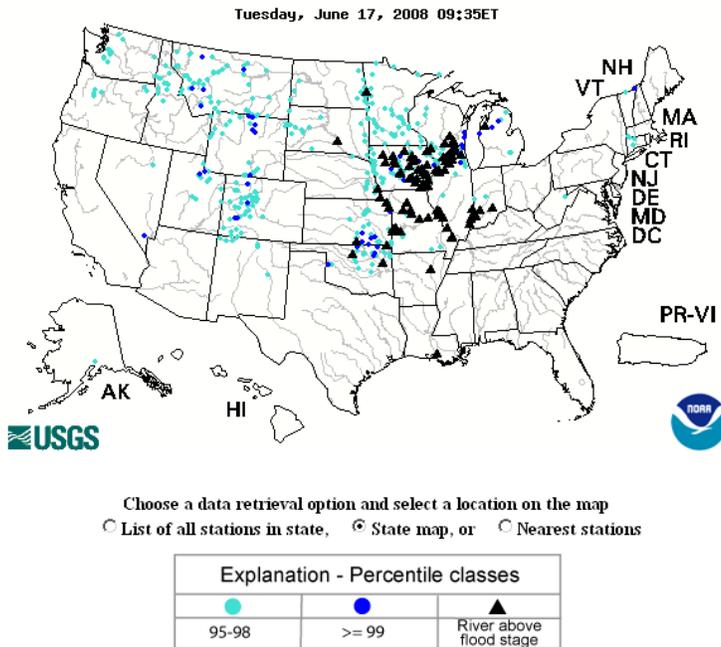
Fig. 8: Pasture and rangeland conditions and changes for various periods. Note poor conditions over California, New Mexico, Colorado, South Carolina, and Florida (lower left) and worsening conditions over the South Carolina since last week (upper right). During the past four weeks, conditions have worsened significantly over South Carolina, and Georgia, and to a lesser extent over Colorado, Texas, Mississippi, and North Carolina (lower right).

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

Special Flood Report

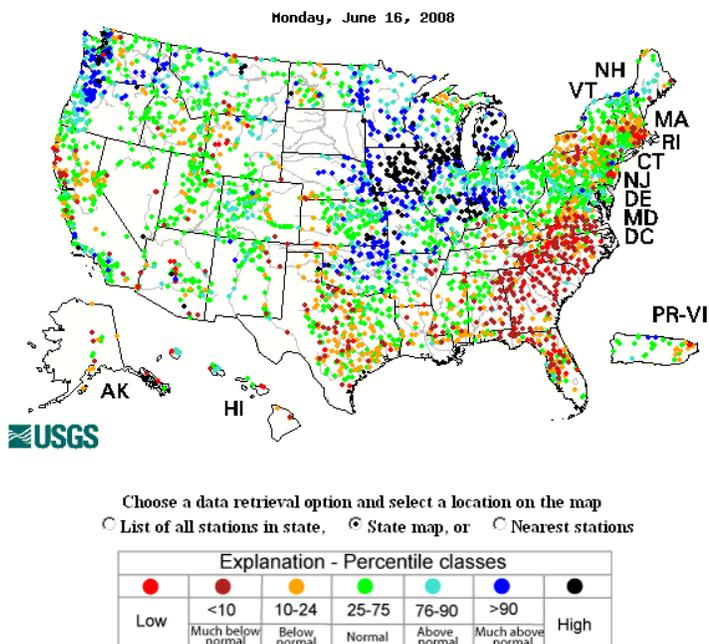
National Water and Climate Center – 17 June 2008

Map of flood and high flow condition (United States)



<http://water.usgs.gov/cgi-bin/wwdp>

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



Top figure reveals location of flooding (black triangles) and the lower figure shows stream flows from a historical perspective

Croplands Vegetation Drought Response Index

Vegetation Condition

- Extreme Drought
- Severe Drought
- Moderate Drought
- Pre-Drought
- Near Normal
- Unusually Moist
- Very Moist
- Extremely Moist
- Other landcover
- Out of Season
- Water

June 2, 2008

Even two weeks ago, soil moisture levels were high over Iowa.
http://www.drought.unl.edu/vegdiri/VegDRI_Main.htm

Percent of Normal Precipitation (%) 6/3/2008 – 6/16/2008

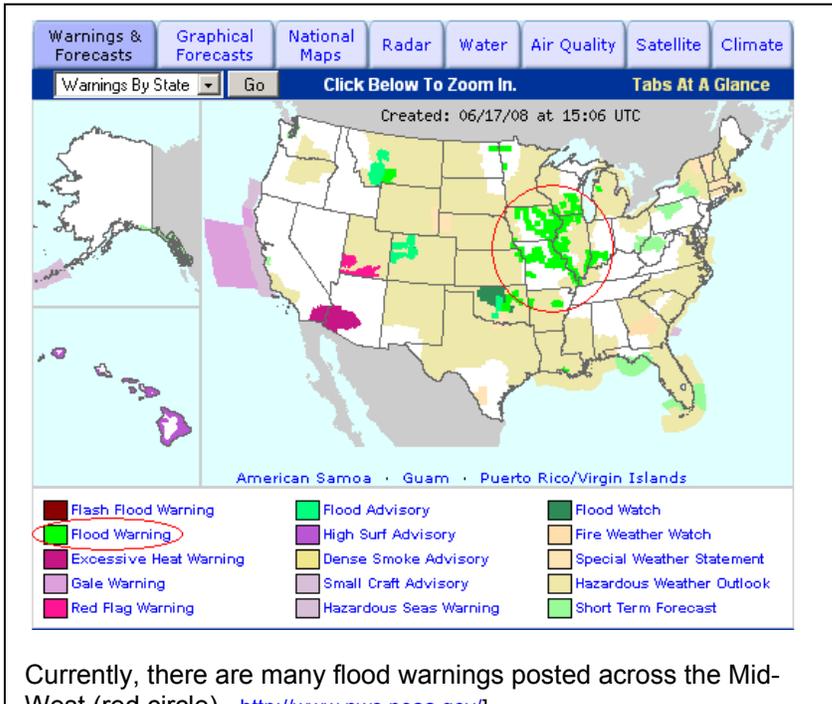
Generated 6/17/2008 at HPRCC using provisional data.
NOAA Regional Climate Centers

Since June 2nd, extensive areas of rainfall exceeding 400% of normal have occurred across the Mid-West.
http://www.hprcc.unl.edu/maps/current/index.php?action=update_daterange&daterange=14d

Weekly Snowpack and Drought Monitor Update Report

on 16 June (percentile). Black dots are at or near record high levels.
<http://water.usgs.gov/waterwatch/?m=pa07d&w=map&r=us>

Flood Impact Summary



Currently, there are many flood warnings posted across the Mid-West (red circle). <http://www.nws.noaa.gov/>

The NWS has provided the following public service notice:

U.S. Department of Agriculture offers tips to keep food safe during a weather emergency...

Did you know that a flood, fire, national disaster, or the loss of power from severe weather could jeopardize the safety of your food? Knowing how to determine if food is safe and how to keep food safe will help minimize the potential loss of food and reduce the risk of food borne illness. This USDA Consumer's Guide will help you make the right decisions for keeping your family safe during an emergency:
http://www.fsis.usda.gov/Fact_Sheets/Emergency_Preparedness_Fact_Sheets/index.asp

Historical perspective

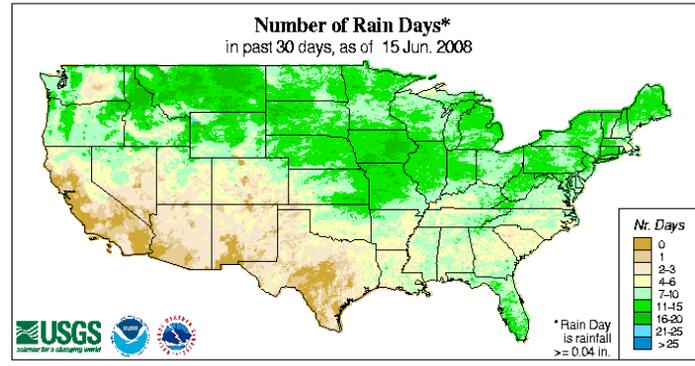
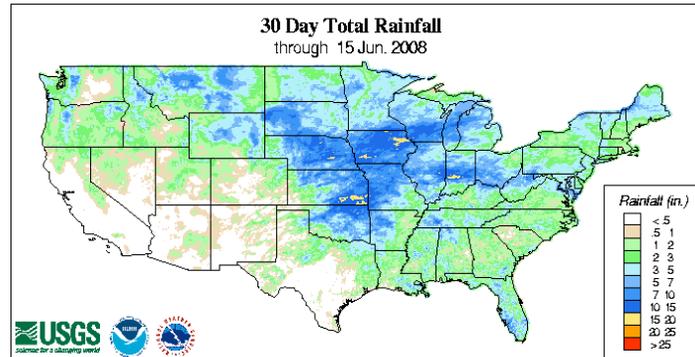
The Great Midwest Flood of 1993 was the "most devastating flood in modern United States history" with economic damages near \$20 billion. More than 50,000 homes were damaged or destroyed. The areal extent, intensity, and long duration of the flooding makes this event unique in the 20th century (National Oceanic and Atmospheric Administration, 1994). At least 38 people lost their lives as a result of this extreme flood (Interagency Floodplain Management Task Force, 1994).

<http://water.usgs.gov/nwsun/WSP2425/flood.html>

The June 2008 Midwest floods are nicely summarized by state in Wikipedia: http://en.wikipedia.org/wiki/June_2008_Midwest_floods.

Other recent news stories:
http://news.yahoo.com/s/ap/20080613/ap_on_re_us/severe_weather Cedar Rapids

http://www.chicagotribune.com/news/nationworld/chi-flood-econ_bdjun15.0.194715.story Spike in food costs expected



Nearly 20 days of rain has occurred in the past 30 days with totals exceeding 15 inches in some locations across the Midwest
<http://igskmncnwb015.cr.usgs.gov/usraindry/>

Additional Climate Data

<http://climate.sdstate.edu/ClimateDivisions/Seasonal.cfm>
 Climate Division and year-wise variation in seasons rainfall & temperature – menu driven inputs

<http://cig.mesonet.org/~derek/public/droughtmonitoring/>
 By state & Climate Divisions: 30, 60, 90, 180, and 365-day periods showing historical ranking of wettest and driest periods: For Iowa:

30-Day Precip for Iowa May 17, 2008 through Jun 15, 2008						
Climate Division	Total Rainfall	Departure from Normal	Pct of Normal	Driest since	Wettest since	
Iowa Statewide	10.18"	+5.82"	234 %	2006 (2.20")	1993 (6.51")	--
IA-CD1 (Northwest)	6.40"	+2.40"	160 %	2006 (1.28")	1993 (6.51")	--
IA-CD2 (N. Central)	12.04"	+7.62"	272 %	2006 (2.34")	--	--
IA-CD3 (Northeast)	12.55"	+8.28"	294 %	2006 (3.59")	--	--
IA-CD4 (W. Central)	9.50"	+3.26"	224 %	2006 (1.33")	1967 (11.19")	--
IA-CD5 (Central)	11.49"	+6.88"	249 %	2006 (1.77")	1947 (11.93")	--
IA-CD6 (E. Central)	9.91"	+5.59"	230 %	2006 (2.63")	--	--
IA-CD7 (Southwest)	12.81"	+8.27"	282 %	2006 (3.74")	--	--
IA-CD8 (S. Central)	10.21"	+5.70"	226 %	2006 (2.19")	1947 (11.57")	--
IA-CD9 (Southeast)	6.94"	+2.55"	158 %	2006 (1.35")	2004 (6.97")	--
Climate Division	Rank of 87 such periods	Driest on Record	Wettest on Record	30-day SPI (Anndt Score)	Most Like	
Iowa Statewide	1st wettest	1.52" (1948)	9.06" (1947)	+2.61	1947 (8.29)	--
IA-CD1 (Northwest)	9th wettest	1.28" (2006)	7.65" (1944)	+1.36	1991 (8.70)	--
IA-CD2 (N. Central)	1st wettest	1.00" (1988)	9.44" (2004)	+2.84	1967 (7.30)	--
IA-CD3 (Northeast)	1st wettest	0.09" (1988)	11.17" (2004)	+2.66	1947 (8.20)	--
IA-CD4 (W. Central)	3rd wettest	1.22" (1933)	11.19" (1967)	+2.08	1991 (8.07)	--
IA-CD5 (Central)	2nd wettest	1.15" (1948)	11.95" (1947)	+2.32	1947 (8.97)	--
IA-CD6 (E. Central)	1st wettest	0.58" (1992)	9.13" (1947)	+2.17	1947 (7.82)	--
IA-CD7 (Southwest)	1st wettest	0.82" (1948)	12.38" (1947)	+2.37	1967 (8.79)	--
IA-CD8 (S. Central)	2nd wettest	0.48" (1948)	11.57" (1947)	+1.97	1947 (8.24)	--
IA-CD9 (Southeast)	9th wettest	0.70" (1948)	8.66" (1947)	+1.19	2001 (9.08)	--

<http://cig.mesonet.org/~derek/public/droughtmonitoring/IA-30day.html>

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National Drought Summary -- June 17, 2008

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: The heat relented and rainfall increased as the week progressed, with most locations recording 0.5 to locally 3.0 inches of rain. As a result, abnormal dryness decreased in coverage, but was not eliminated.

Mid-Atlantic and Southeast: The searing heat eased up during the period, particularly in the northern reaches of the region. Rainfall also increased, but was primarily associated with scattered to isolated showers and thundershowers. Thus, there was a wide range of precipitation totals observed for the 7-day period. Many locations picked up 0.5 to 3.0 inches of precipitation, but a fair number of sites received less while isolated locations across southern Georgia and southern Florida reported as much as 6 inches of rain. The scattered nature of the precipitation means that there will be some variability in dry conditions on a scale too small to depict on our national map. However, significant rainfall was widespread enough to erase D1 conditions in northern Florida and drop D2 conditions to D1 across central Alabama. Furthermore, surface moisture increases were noted across Florida and near the central Gulf Coast, but hydrologic conditions, which respond to precipitation on longer time scales, remained essentially unchanged. As a result, the D0AH to D2AH conditions in these areas were reclassified as D0H to D2H, and some limited improvements were introduced. In contrast, rainfall totals were relatively low across western South Carolina and much of interior North Carolina, resulting in the introduction of exceptional drought (D4) near the Carolinas' border, and the eastward expansion of D1 to D3 conditions farther east in the Carolinas. Similarly, generally light precipitation led to the expansion of D1 across central and eastern Georgia, the introduction of D1 in east-central Louisiana, and the expansion of abnormal dryness across northern Louisiana.

The Plains and Upper Midwest: Heavy rains, with some flooding and/or severe weather, again pounded areas from central Oklahoma and Kansas northeastward through southern Wisconsin. More beneficially, moderate to heavy precipitation fell on most areas from central Montana eastward across the Upper Peninsula of Michigan, eliminating the D3 conditions in western North Dakota and reducing the extent of D0 to D2 elsewhere.

Unfortunately, precipitation essentially evaded the dry areas in the rest of the High Plains and Texas last week, with much hotter than normal weather accompanying the dryness from the Oklahoma Panhandle southward through New Mexico and central Texas. As a result, dry conditions persisted or worsened in the past week. Conditions were particularly severe across the Oklahoma Panhandle and adjacent areas, where significant dryness dates back at least 18 months with precipitation totals since October 2007 ranging from 10 to 25 percent of normal. This prompted the introduction of exceptional drought (D4) conditions in this region, with some spread of D1 to D3 conditions in nearby areas, especially in the eastern Oklahoma Panhandle and adjacent areas. Farther south, D1 to D3 conditions expanded broadly across New Mexico and Texas, with much of the southern half of Texas, far western Texas, and south-central New

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Mexico dropping to D3. According to the National Agricultural Statistics Service, the dryness was seriously affecting crops in the southern Plains. In Texas, 18 percent of peanuts, 20 percent of corn, 23 percent of sorghum, 25 percent of oats, 35 percent of cotton, 40 percent of rangelands, and 47 percent of winter wheat were in poor or very poor condition, as were 24 percent of sorghum and 66 percent of rangeland in New Mexico. In Colorado, 47 percent of winter wheat, 51 percent of sorghum, and 56 percent of rangelands were in poor or very poor condition.

The West: In the dry areas across the West, weekly precipitation totals in excess of 0.5 inch were restricted to western Wyoming and isolated sites in southern Idaho. Most locations received no measurable rainfall, which is not particularly unusual for these areas during summer. However, some areas of deterioration were noted, primarily across California, where all but the northwestern and southwestern extremities of the state are now experiencing at least moderate drought. Severe drought (D2) expanded northward slightly in the San Joaquin Basin.

Hawaii, Alaska and Puerto Rico: Scattered showers, some moderate to heavy, were observed across Hawaii, but most of the rainfall missed the existing drought areas and was not sufficient to alleviate abnormal dryness anywhere in the island chain. In fact, conditions deteriorated to D2 in eastern Oahu and the western half of Molokai.

Across eastern Alaska, light but persistent precipitation has been observed for the past several weeks, resulting in the elimination of abnormally dry conditions from the state.

Spotty moderate to heavy rainfall again hit Puerto Rico, but evaded all but the northernmost fringes of the abnormally dry area, keeping conditions unchanged from last week.

Looking Ahead: June 19–23, 2008, looks to be near or slightly cooler than normal from the Mississippi River eastward while heat builds through the interior West. Moderate to heavy rainfall (0.5 to 2.5 inches) could affect parts of the dry areas in New England, eastern North Carolina, southern Florida, the lower Mississippi Valley, the Red River Valley of the South, and perhaps most beneficially, much of the Oklahoma Panhandle and adjacent areas. Elsewhere, light precipitation is forecast for areas east of the Rockies, with little or none falling farther west, except perhaps on northwestern most Washington.

For the ensuing 5 days (June 24–28, 2008), the odds favor continued above-normal temperatures across most of the West, with the heat expanding toward the upper and middle Mississippi Valley. Higher than normal temperatures are also expected to begin building in the south Atlantic region, from central Florida northward into lower North Carolina. Meanwhile, cooler than normal conditions are favored in New England, the southeastern half of Texas, and the lower Mississippi Valley. Unfortunately for the areas experiencing dryness and drought across the contiguous 48 states, the only area where the odds favor wetter than normal weather are in the central High Plains and eastern Wyoming. Drier than normal conditions seem more likely across New England, and in a broad swath from the central and southern sections of the Pacific Coast eastward through the central and southern Rockies, the southern Plains, and the Gulf Coast States.

Author: [Rich Tinker, Climate Prediction Center, NOAA](#)

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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 June 18, 2008