



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

Weekly Report - Snowpack / Drought Monitor Update **Date: February 14, 2008**

SNOTEL SNOWPACK AND PRECIPITATION SUMMARY

Snow: During the past week, snowfall accumulations were up across the Northern and Central Rockies and Northern Cascades but down sharply elsewhere. A preliminary forecast increase in excess of 10% in April-July runoff occurred this week over portions of Colorado but down by greater percentages over northern New Mexico. Snow-water equivalent percent to date shows well above normal values over portions of the Cascades (WA & OR), Southern Rockies (CO & NM), Utah and the mountains of Arizona. Below normal values dominate in southern New Mexico (Fig. 1a).

Temperature: For the past seven days, average temperature anomaly for most stations in the West were within 5F of normal with coldest departures (-10F) over the Central Rockies (Fig. 2). The greatest negative temperature departures occurred over eastern Montana and south central Colorado (~-12F) and the greatest positive departures occurred over western Montana (>+9F) (Fig. 2a).

Precipitation: Preliminary precipitation totals for the 7-day period ending 13 February shows significant increase in precipitation across Montana, northern Idaho, and eastern Washington. Hardly any precipitation fell south of a line from northern California to southern Colorado (a typical La Nina pattern) (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 well above normal totals over much of the West. Only two river basins (one in Arizona and the other in Oregon) are lower than 90% of normal (Fig. 3a).

WESTERN DROUGHT STATUS

The Rockies, Intermountain West, and Far West: The heaviest precipitation during the past week fell in drought-free areas from the coast to the Cascades of Washington and Oregon. Precipitation also fell across the northern and central Rockies, but outside of the Pacific Northwest and parts of Montana, conditions in the West were generally drier than average. Nevertheless, reductions in drought severity were made in several parts of the West based on new information from the NRCS report on February 1 western snowpack conditions and release of an update to the Western Water Supply Outlook that took into account the generally abundant January snowfall.

Significant surpluses in snowpack exist over all of the Pacific Northwest (Washington, Oregon, and Idaho) and most of the Central and Southern Rockies of Colorado and New Mexico, as well as Arizona and Utah. Deficits dominate in some basins in the Northern Rockies (Wyoming and Montana), southern New Mexico, and eastern Alaska. Spring and summer streamflow forecasts increased significantly across the West during January, and at the start of February, forecasts call for well above normal values over Arizona and most of New Mexico, Utah, and Colorado. Near normal conditions (+/- 30% the long-term average) are forecasted in other areas, with the exception of southern Idaho, much of western Wyoming, and small parts of central and western Montana.

Weekly Snowpack and Drought Monitor Update Report

Mountain snowpack at the beginning of February was above average across most of Oregon with amounts exceeding 150% of average over much of the Oregon Cascades. Reflecting these snowpack conditions, above normal spring and summer streamflows, >110% to 130% of average, are predicted for most of Oregon. These conditions supported 1-category reductions in D0 to D2H drought severity in central parts of the state.

One-category reductions were also made across large parts of Utah where above average snowpack predominates. Moderate drought (D1H) was upgraded to D0 from southwestern to northeastern Utah and the severe drought (D2H)/moderate drought (D1H) boundary was pushed northwestward to the southern edge of the Great Salt Lake. Mountain snowpack exceeded 130% of average in southwestern Utah with generally above average amounts (>110%) from central to northeastern areas of the state. Snowpack in the mountains near Salt Lake City was helped by record January snowfall. A total of 170 inches of snow fell in the month of January at the Alta ski area southeast of the city. This was more than half of the average snowfall for the month and eclipsed the previous record of 168 inches that fell in 1967. Snow water content was near to above average in every river basin in Utah. By the end of the first week of February, the average seasonal peak had already been eclipsed in the Virgin Basin of southwest Utah, more than one month prior to the normal peak in late March. Reservoir levels for the state of Utah as a whole remained below average, but several reservoirs in Utah were at levels near to above average for the second week of February. While inflow from melting snowpack is still to be realized, NRCS forecasts of spring and summer streamflow are above to well above average in most of Utah. A large area of D2H drought persists in northwestern Utah and stretches into southwest Wyoming and southern Idaho where seasonal precipitation amounts have been generally average to below average and large long-term precipitation deficits remain. Moderate drought (D1H) also remains in southeastern Utah and along the Arizona border where Lake Powell storage is less than 70% of average.

One-category improvements were made across much of the western half of Montana. Although February 1 mountain snowpack was below average in some parts of the northern Rockies, average to above average mountain snowpack predominated. NRCS Snotel snow water content as of February 12 was above average along the Bitterroot Range of far western Montana (110-125% of average), and conditions were average to above average conditions elsewhere. With the 1-category reductions, severe drought (D2H) remains in only a small area centered on Chouteau County of north-central Montana as well as areas of eastern Montana stretching into North and South Dakota, where 3-month precipitation has totaled less than half of average. Moderate drought (D1H) and abnormally dry conditions persist over much of the remainder of Montana. However drought and abnormally dry conditions are now absent from parts of western Montana and northern Idaho.

Conditions deteriorated in only two areas of the West. Moderate drought (D1H) expanded westward across Kings and southwestern Fresno counties in the southern end of the San Joaquin Valley where drier than average conditions have prevailed over the past three to six months. An extension of abnormally dry conditions (D0A) from eastern New Mexico to southwestern New Mexico and southeastern Arizona reflected season-to-date precipitation less than 70% of average with totals less than 50% in parts of the region. Author: Jay Lawrimore, NOAA's National Climatic Data 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. 4, 4a, 4b, 4c, and 4d).

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.

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/>

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

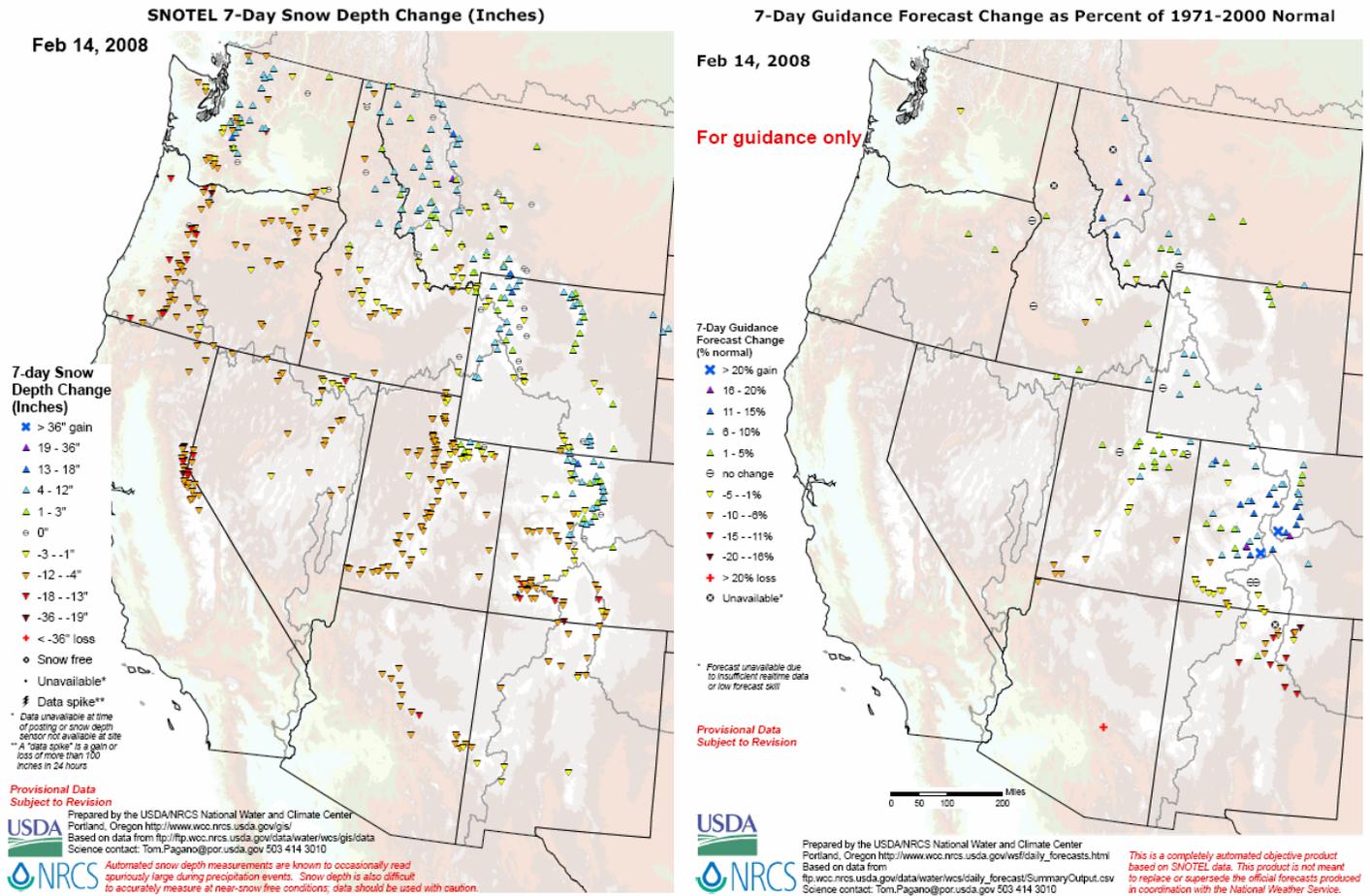


Fig. 1. During the past week, snowfall accumulations were up across the Northern and Central Rockies and Northern Cascades but down sharply elsewhere (left figure). A preliminary forecast increase in excess of 10% in spring-summer runoff occurred this week over portions of Colorado but down by greater percentages over northern New Mexico (right figure). Note: Forecast values for the Sierra and Cascades but are not shown.

Refs: ftp://ftp.wcc.nrcs.usda.gov/data/water/wcs/gis/maps/west_snowdepth_7ddelta.pdf
ftp://ftp.wcc.nrcs.usda.gov/data/water/wcs/daily_forecast/maps/west_dailyfcst_7daych.pdf

Weekly Snowpack and Drought Monitor Update Report

Westwide SNOTEL Current Snow Water Equivalent (SWE) % of Normal

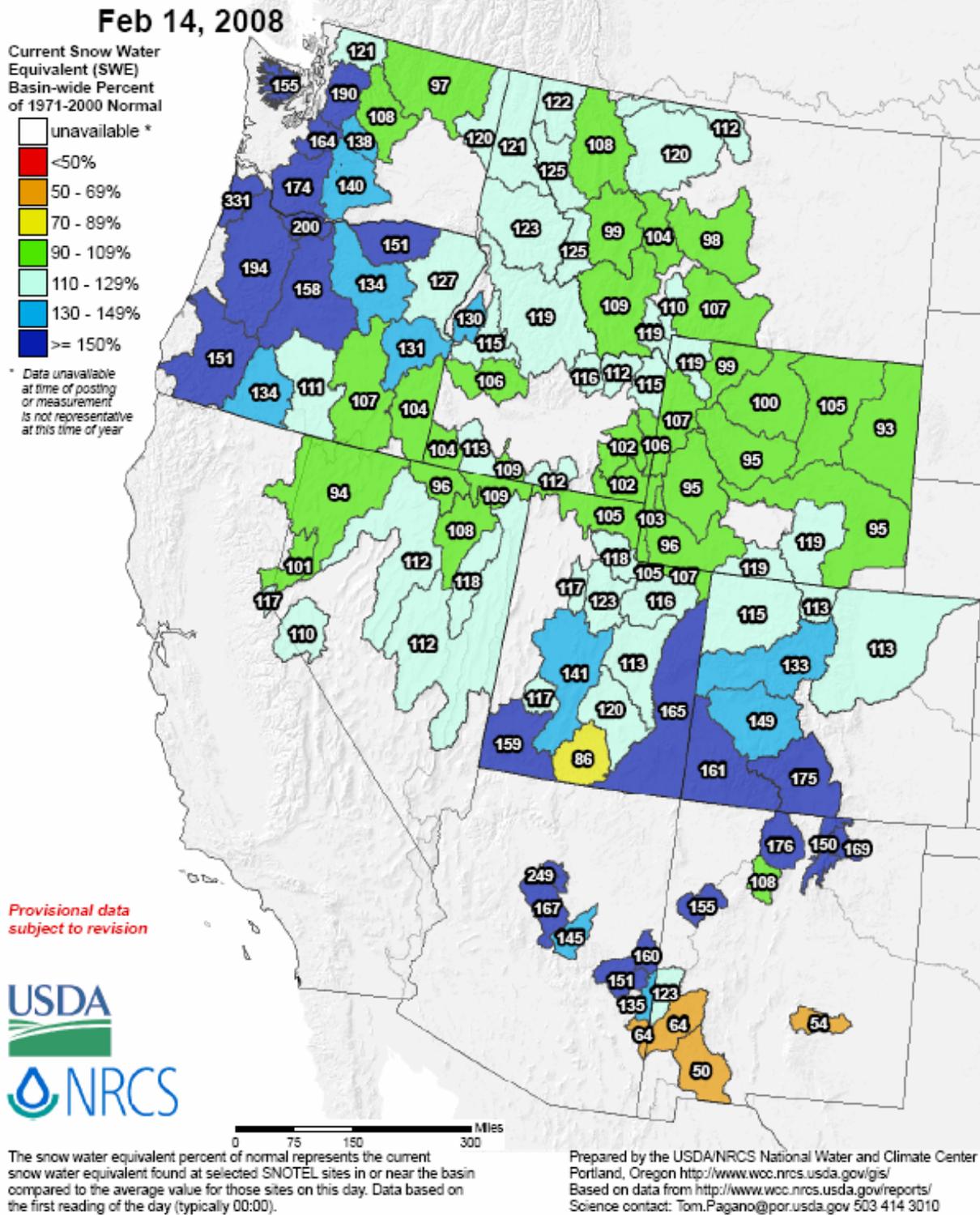


Fig. 1a. Snow-water equivalent percent to date shows well above normal values over portions of the Cascades (WA & OR), Southern Rockies (CO & NM), Utah and the mountains of Arizona. Below normal values dominate in southern New Mexico.

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

**SNOTEL (solid) and ACIS (dot-filled) Networks
7-Day Average Temperature Anomaly (Degrees F)**

Feb 14, 2008

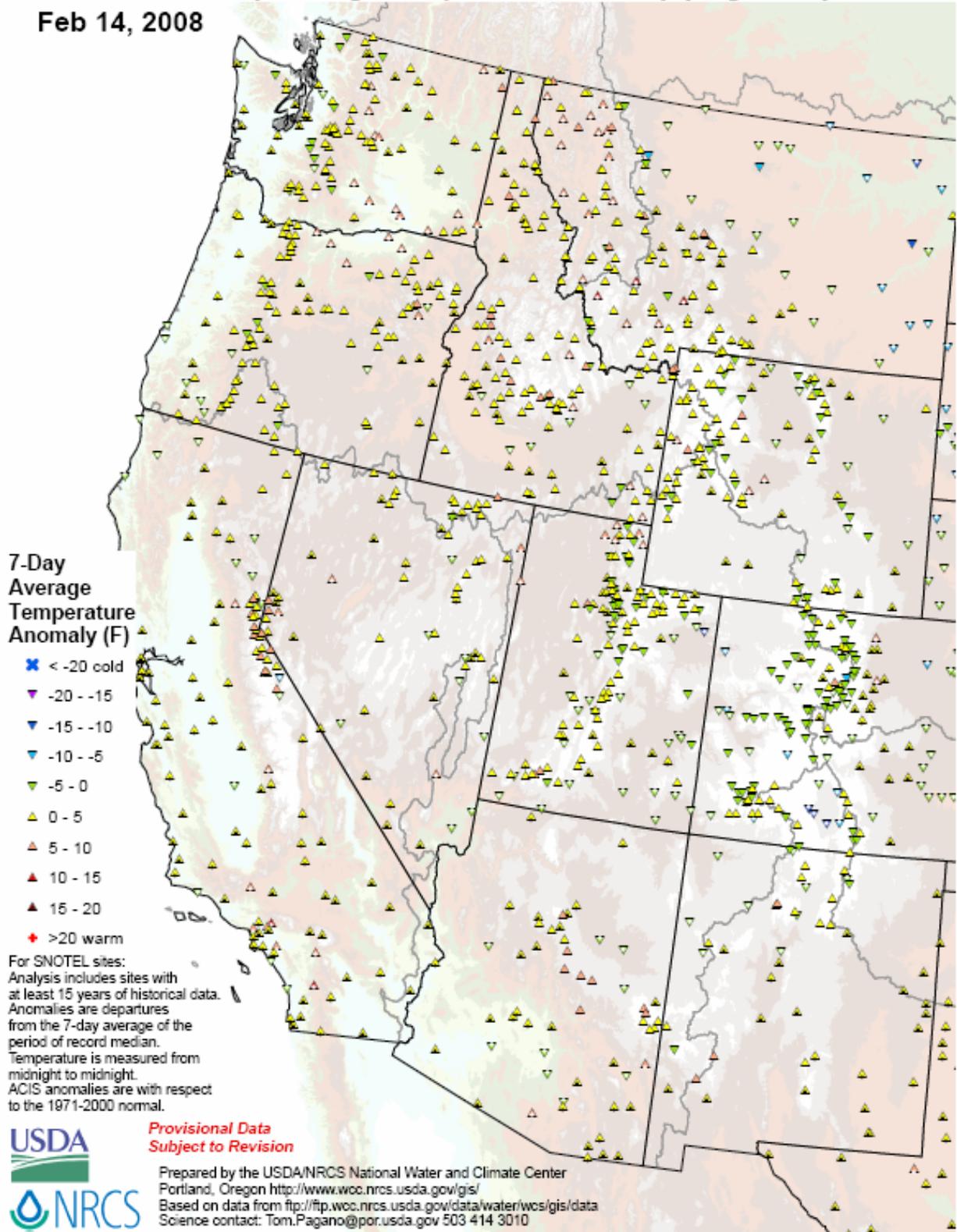
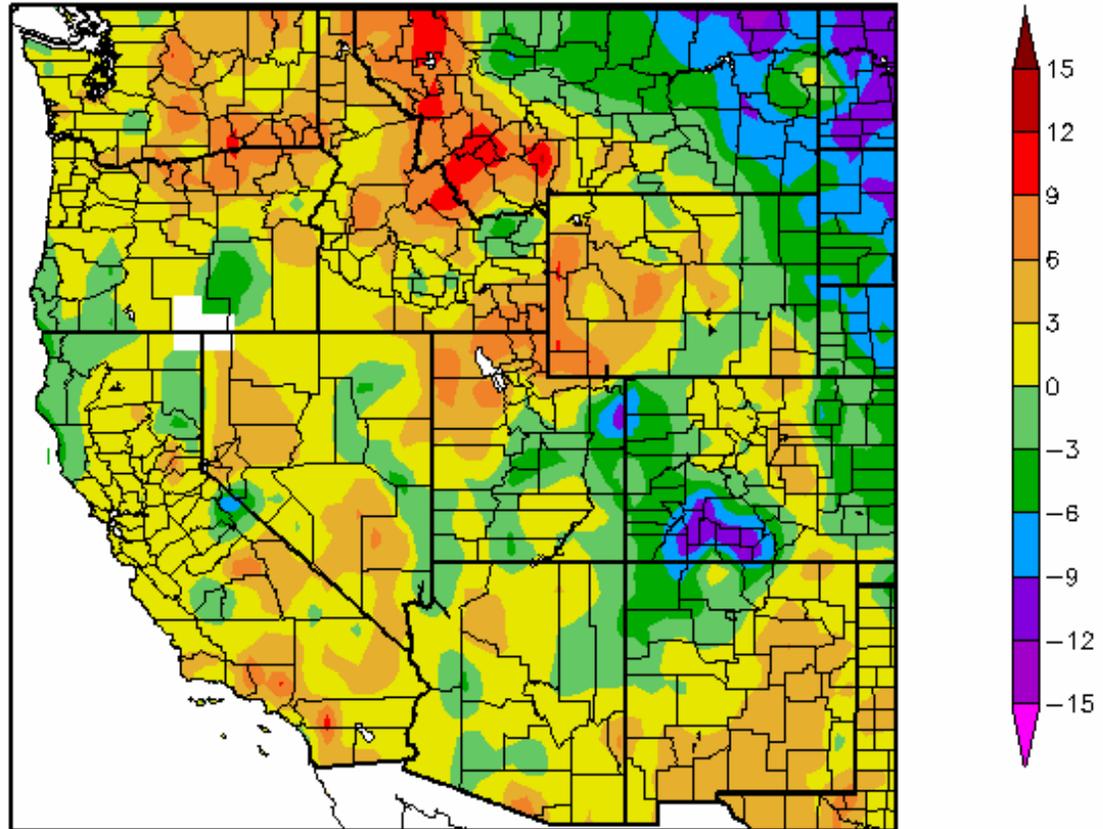


Fig. 2. SNOTEL & ACIS 7-day station average temperature anomaly for most stations in the West were within 5F of normal with coldest departures (-10F) over the Central Rockies.

Ref: <ftp://ftp.wcc.nrcs.usda.gov/data/water/wcs/gis/maps/WestwideTavq7dAnomalyAcis.pdf>

Departure from Normal Temperature (F)
2/7/2008 – 2/13/2008



Generated 2/14/2008 at HPRCC using provisional data.

NOAA Regional Climate Centers

The Current Climate Summary Maps are produced daily using data from the Applied Climate Information System (ACIS). Stations used are from the National Weather Service Cooperative Observer Network (COOP), and the Automated Weather Data Network (AWDN). All near-real-time data are considered preliminary and should be used responsibly.

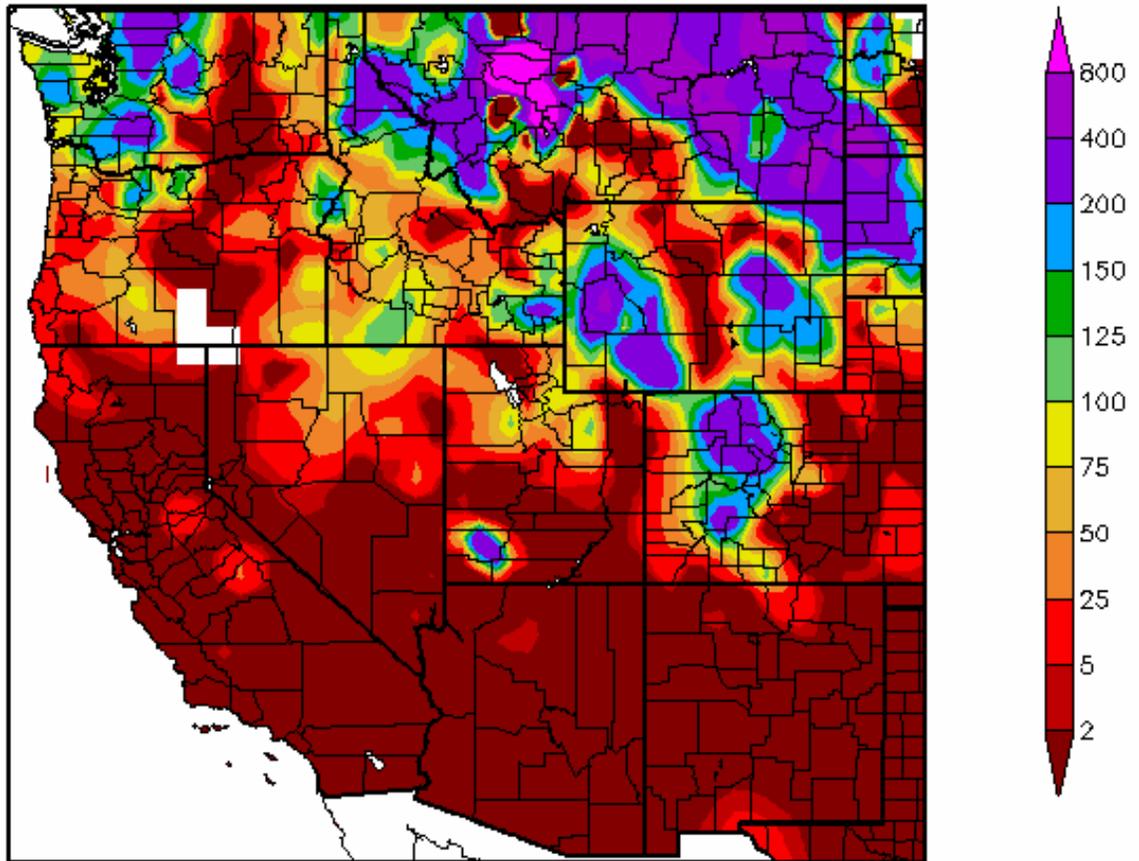


Normal refers to the 1971-2000 Climate Normal for the selected product.

Fig. 2a. ACIS 7-day average temperature anomaly: Greatest negative temperature departures over eastern Montana and south central Colorado (~-12F) and greatest positive departures over western Montana (>+9F). Ref:

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

Percent of Normal Precipitation (%)
2/7/2008 – 2/13/2008



Generated 2/14/2008 at HPRCC using provisional data.

NOAA Regional Climate Centers

The Current Climate Summary Maps are produced daily using data from the Applied Climate Information System (ACIS). Stations used are from the National Weather Service Cooperative Observer Network (COOP), and the Automated Weather Data Network (AWDN). All near-real-time data are considered preliminary and should be used responsibly.



Normal refers to the 1971-2000 Climate Normal for the selected product.

Fig. 3. ACIS 7-day average precipitation anomaly: Preliminary precipitation totals for the 7-day period ending 13 February shows significant increase in precipitation across Montana, northern Idaho, and eastern Washington. Hardly any precipitation fell south of a line from northern California to southern Colorado (a typical La Nina pattern).

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

Weekly Snowpack and Drought Monitor Update Report

Westwide SNOTEL Water Year (Oct 1) to Date Precipitation % of Normal

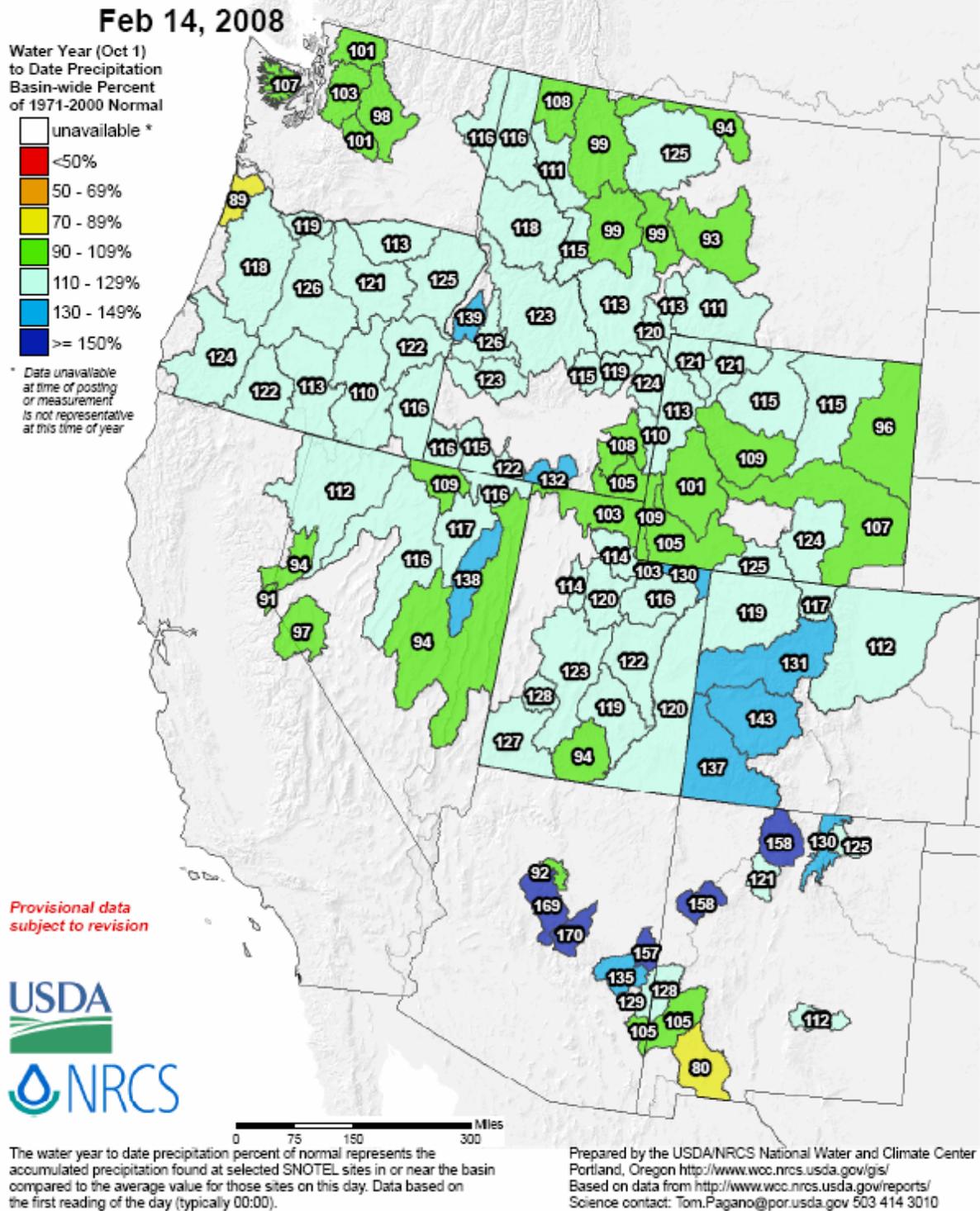
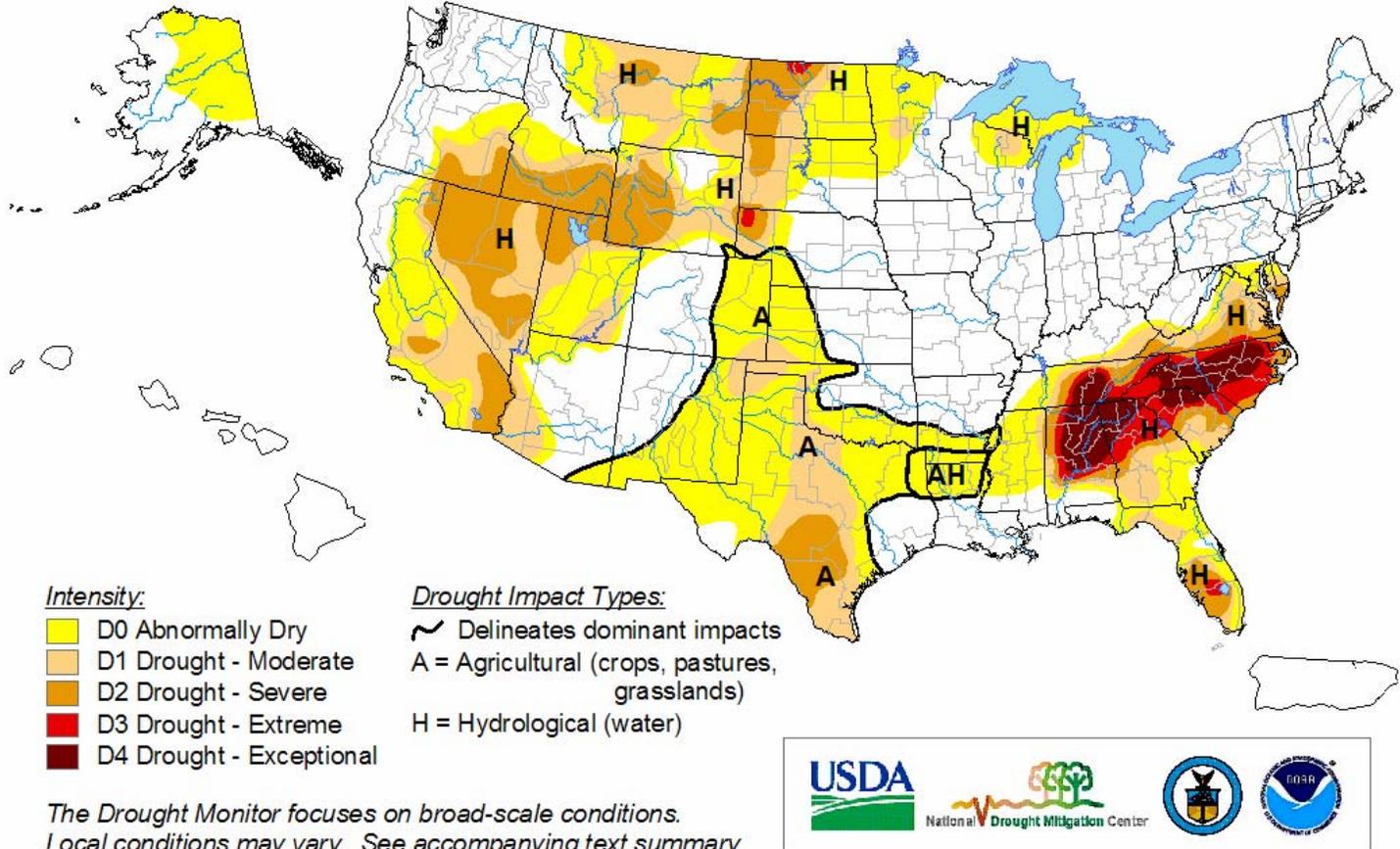


Fig 3a. Seasonal precipitation (rain & snow water equivalent) as a percent of normal for the 2008 Water Year that began on October 1, 2007 shows well above normal totals over much of the West. Only two river basins (one in Arizona and the other in Oregon) are lower than 90% of normal.

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

U.S. Drought Monitor

February 12, 2008
Valid 7 a.m. EST



Released Thursday, February 14, 2008

<http://drought.unl.edu/dm> Authors: Jay Lawrimore/Liz Love-Brotak, NOAA/NESDIS/NCDC

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

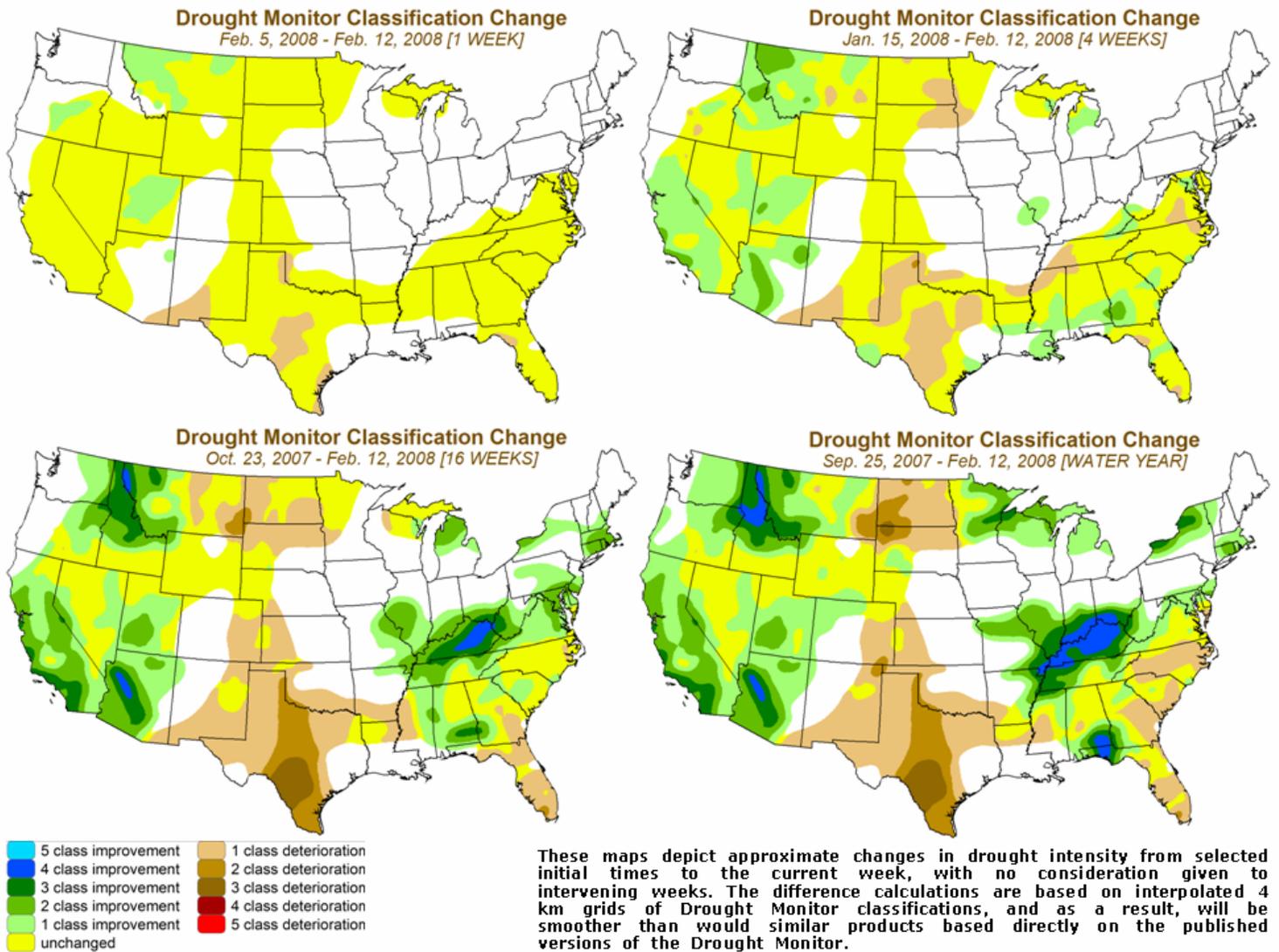


Fig. 4a. Drought Monitor classification changes during several time periods. Scattered improvement and worsening occurred across the US during the past week with longer term improvement over Kentucky, northwest Florida, central Idaho, and southern Arizona.

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

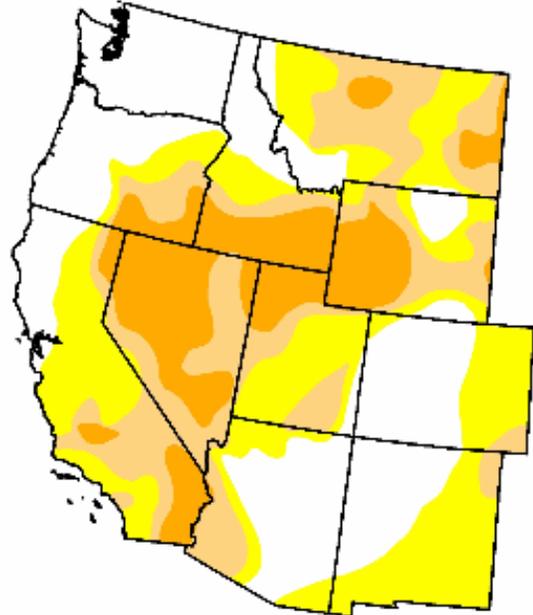
U.S. Drought Monitor

West

February 12, 2008
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	33.2	66.8	37.7	16.9	0.0	0.0
Last Week (02/05/2008 map)	34.1	65.9	43.6	18.9	0.0	0.0
3 Months Ago (11/20/2007 map)	25.4	74.6	56.6	38.1	7.9	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 (02/13/2007 map)	41.7	58.3	33.2	18.9	5.0	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, February 14, 2008

Author: J. Lawrimore/L. Love-Brotak, NOAA/NESDIS/NCDC

Fig. 4b. Drought Monitor for the Western States with statistics over various time periods. Note slight improvement since last week.

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

U.S. Drought Monitor

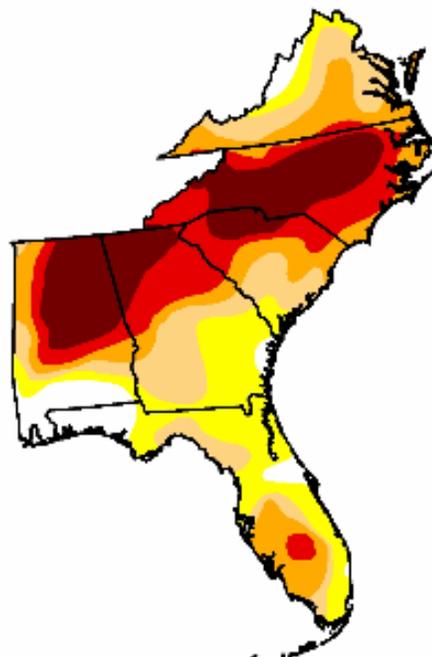
Southeast

February 12, 2008

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	8.0	92.0	73.2	54.8	36.3	19.8
Last Week (02/05/2008 map)	8.0	92.0	71.8	54.8	36.3	19.8
3 Months Ago (11/20/2007 map)	11.3	88.7	75.6	55.4	41.7	27.2
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 (02/13/2007 map)	62.6	37.4	8.7	0.0	0.0	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



Released Thursday, February 14, 2008

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

Fig. 4c: Drought Monitor for the Southeastern States with statistics over various time periods. Note no significant change since last week.

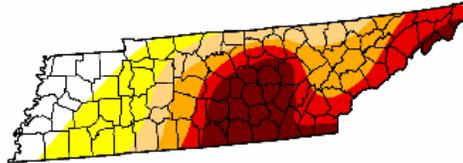
Ref: http://www.drought.unl.edu/dm/DM_southeast.htm

U.S. Drought Monitor

Tennessee

February 12, 2008
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	14.3	85.7	67.1	54.1	36.3	18.7
Last Week (02/05/2008 map)	14.3	85.7	67.1	54.1	36.3	18.7
3 Months Ago (11/20/2007 map)	17.7	82.3	66.3	61.2	50.3	23.9
Start of Calendar Year (01/01/2008 map)	27.4	72.6	60.8	53.8	46.8	19.9
Start of Water Year (10/02/2007 map)	0.0	100.0	100.0	100.0	85.7	61.3
One Year Ago (02/13/2007 map)	34.2	65.8	47.9	0.0	0.0	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>



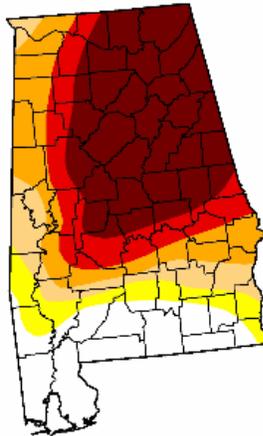
Released Thursday, February 14, 2008
Author: J. Lawrimore/L. Love-Brotak, NOAA/NESDIS/NCDC

U.S. Drought Monitor

Alabama

February 12, 2008
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	18.3	81.7	74.2	65.0	49.8	36.7
Last Week (02/05/2008 map)	18.3	81.7	74.2	65.0	49.8	36.7
3 Months Ago (11/20/2007 map)	1.3	98.7	88.2	76.2	63.6	49.8
Start of Calendar Year (01/01/2008 map)	9.5	90.5	80.8	66.9	56.5	38.9
Start of Water Year (10/02/2007 map)	0.0	100.0	95.4	83.7	76.1	52.0
One Year Ago (02/13/2007 map)	46.7	53.3	2.7	0.0	0.0	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>

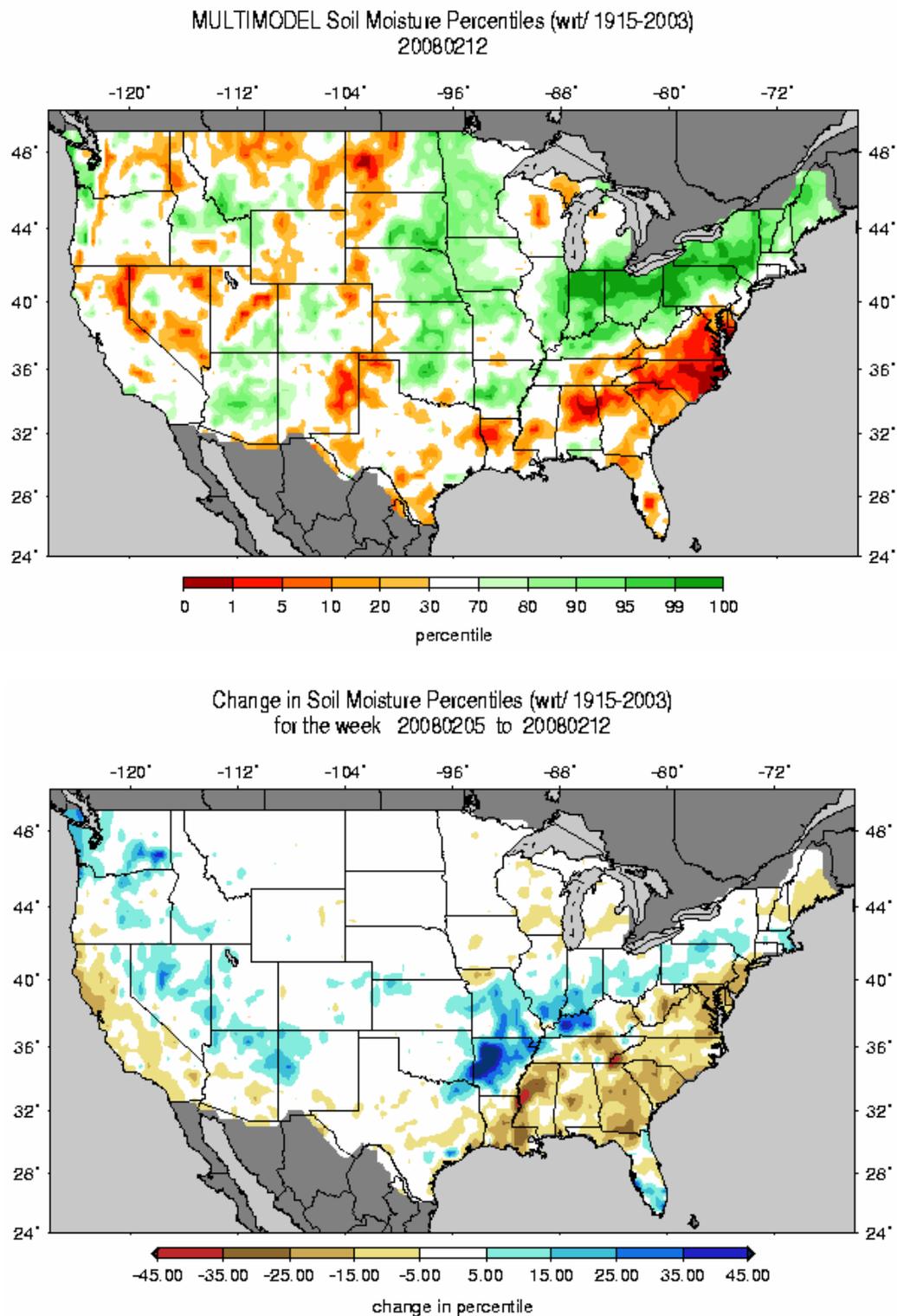


Released Thursday, February 14, 2008
Author: J. Lawrimore/L. Love-Brotak, NOAA/NESDIS/NCDC

Fig. 4d. Drought Monitor for Tennessee and Alabama with statistics over various time periods shows some of the severest drought conditions in the US. Note no change since last week for Tennessee and Alabama.

Ref: http://www.drought.unl.edu/dm/DM_state.htm?TN,S
http://www.drought.unl.edu/dm/DM_state.htm?AL,SE

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. Note significant moistening over the Arkansas and western Kentucky. Remark: In colder regions of the West, frozen ground suggests incorrect values or missing data.

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

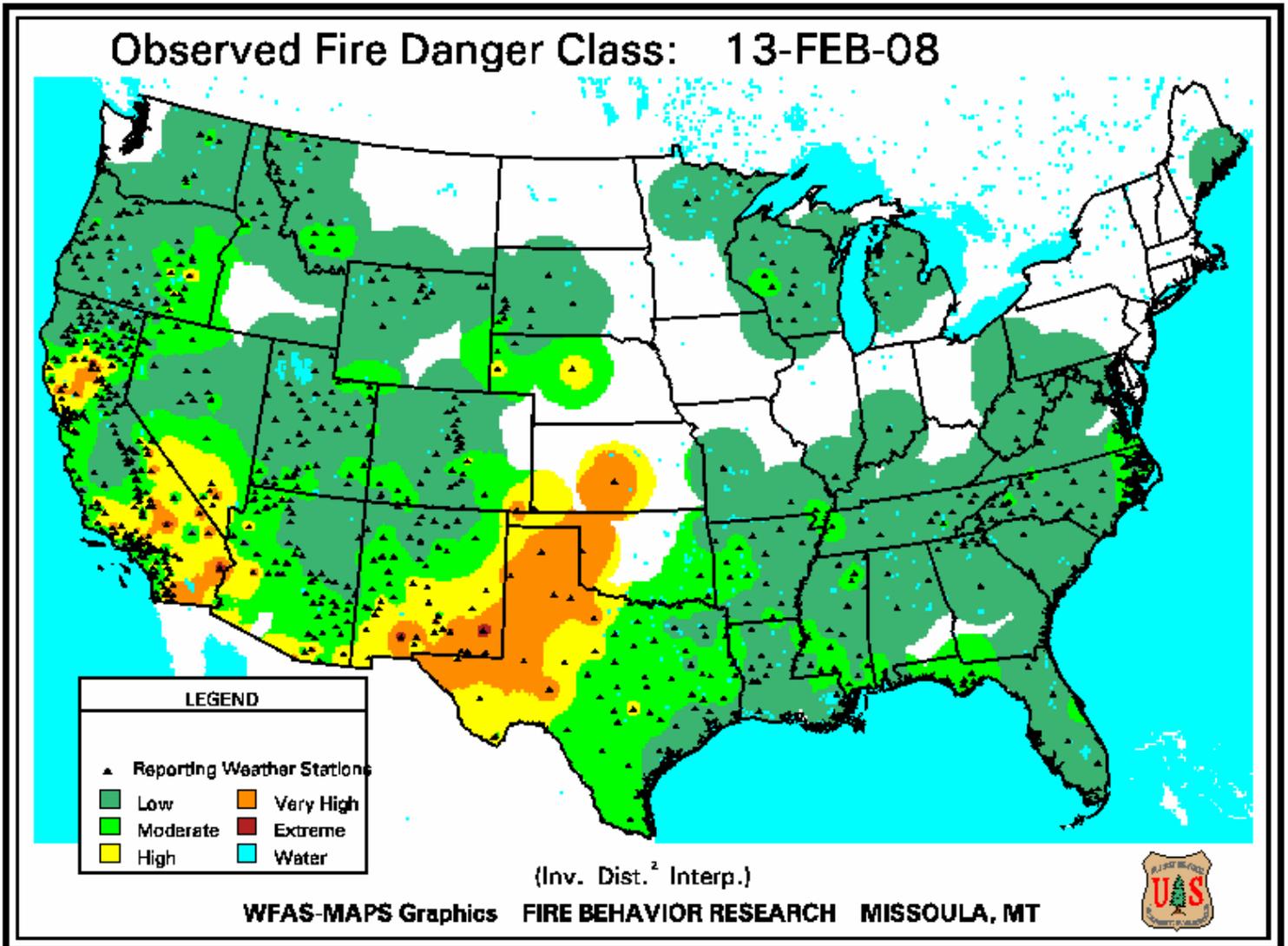


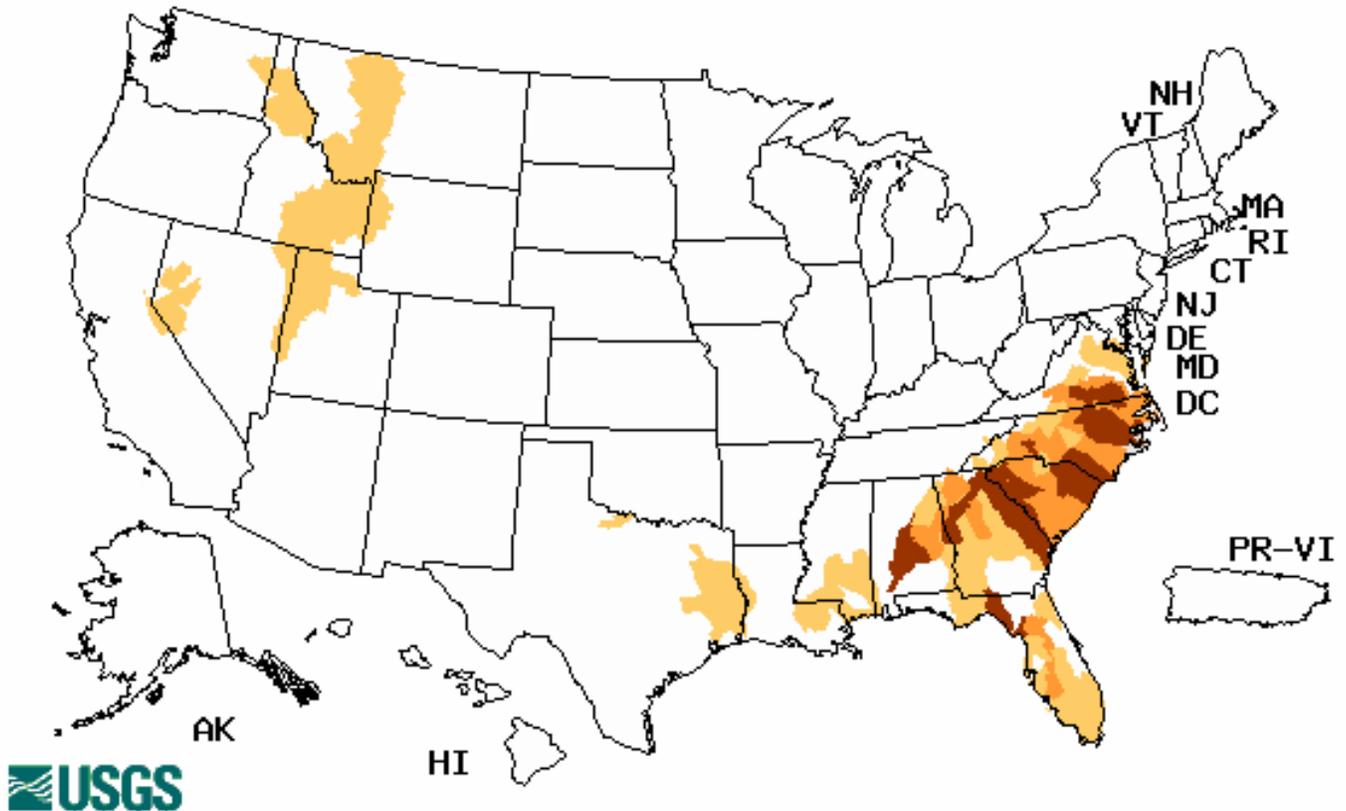
Fig. 6. Observed Fire Danger Class as of 13 February. Note increase risk of fire over southern California and from southeast New Mexico to central Kansas.

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, February 13, 2008



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. This week's map shows marked worsening over the Southeast and Mid-Atlantic States since last week. Values over the colder regions of the West and northern states are probably missing or in error due to river icing and freeze-up.

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

Weekly Snowpack and Drought Monitor Update Report

National Drought Summary – February 12, 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 Southeast and Mid-Atlantic: In contrast to the previous week when much needed precipitation fell in many drought-affected areas, little precipitation fell in the Southeast as a whole during the past seven days. Conditions remained unchanged in most of the region, but the continued lack of rain in Florida led to further deterioration in northern areas of the state. An extension of moderate drought (D1H) to the east and southward along the northeastern Gulf coast reflected increasing deficits that have left 3-month precipitation totals at less than 50% of average. In southern Florida severe (D2H) to extreme (D3H) drought remained across a broad area from Polk to southern Collier counties and east to Lake Okeechobee, which dropped to 9.99 feet. There are reports that some canals in western and northern areas of Collier County are going dry, and that Lake Tafford, the primary water supply for the town of Immokollee is completely dry.

Although changes in drought severity were not made in other parts of the Southeast, the persistence of severe to exceptional drought contributed to numerous wildfires. In North Carolina downed power lines sparked fires that burned more than 10,000 acres during the past weekend, according to North Carolina's State Climatologist. This was approximately half the total acreage normally consumed by wildfire during an average year in the state. Wildfire activity has also been unusually high in Virginia, where more than 9,000 acres have burned since the beginning of the year, according to the National Interagency Fire Center.

The Great Lakes Region and Midwest: More than two to three inches of precipitation fell in the drought-free area stretching from south-central Illinois to southeastern Michigan and northern Ohio during the past week. Amounts generally decreased with distance north and south of this line. Light amounts in areas along the Kentucky/West Virginia border that have been wetter than average in recent weeks led to a small southward shift of abnormally dry and moderate drought (D1H) boundaries. Areas in D0 and D1H in Michigan, northeast Wisconsin, and Minnesota generally received up to 0.5 inches of precipitation, and no change in drought status occurred.

The Plains: Conditions continued to deteriorate in large parts of the southern Plains. In Texas, severe drought (D2A) was extended northward along the Rio Grande to the Del Rio area and as far north as Mason and Llano counties. Abnormally dry (D0) conditions were downgraded to moderate drought (D1A) in central Texas, while D1A and D0 boundaries were pushed eastward in southern Texas. Corpus Christi experienced its driest October 1 thru February 10 since 1962. Only 2.88 inches of rain fell during the period, approximately 30% of average. Wildfires continued to threaten large parts of central and western Texas. According to an AgriLife Extension agent in Callahan County of north-central Texas, high winds and lack of rainfall led to extremely hazardous conditions with numerous fires burning in the county. For the state as a whole, approximately 17,000 acres burned due to wildfires during a 3-day period. For the year, acreage lost to wildfires already exceeded 150,000 acres, approximately 25% more than burned in all of 2007. Agricultural reports in west-central Texas indicate good cotton yields while wheat is in very poor condition due to the drier than normal conditions. An extension agent in Somervell County southwest of Fort

Weekly Snowpack and Drought Monitor Update Report

Worth noted that high winds continued to deplete topsoil moisture and as a result there is very little green vegetation in pastures and winter food for livestock has shown little growth. Conditions also deteriorated along the western Oklahoma/Texas Panhandle border, where D0 was downgraded to moderate drought (D1A). Precipitation has been below average for much of the past six months, and 60-day precipitation totals less than 25% of average are widespread.

The Rockies, Intermountain West, and Far West: The heaviest precipitation during the past week fell in drought-free areas from the coast to the Cascades of Washington and Oregon. Precipitation also fell across the northern and central Rockies, but outside of the Pacific Northwest and parts of Montana, conditions in the West were generally drier than average. Nevertheless, reductions in drought severity were made in several parts of the West based on new information from the NRCS report on February 1 western snowpack conditions and release of an update to the Western Water Supply Outlook that took into account the generally abundant January snowfall.

Significant surpluses in snowpack exist over all of the Pacific Northwest (Washington, Oregon, and Idaho) and most of the Central and Southern Rockies of Colorado and New Mexico, as well as Arizona and Utah. Deficits dominate in some basins in the Northern Rockies (Wyoming and Montana), southern New Mexico, and eastern Alaska. Spring and summer streamflow forecasts increased significantly across the West during January, and at the start of February, forecasts call for well above normal values over Arizona and most of New Mexico, Utah, and Colorado. Near normal conditions (+/- 30% the long-term average) are forecasted in other areas, with the exception of southern Idaho, much of western Wyoming, and small parts of central and western Montana.

Mountain snowpack at the beginning of February was above average across most of Oregon with amounts exceeding 150% of average over much of the Oregon Cascades. Reflecting these snowpack conditions, above normal spring and summer streamflows, >110% to 130% of average, are predicted for most of Oregon. These conditions supported 1-category reductions in D0 to D2H drought severity in central parts of the state.

One-category reductions were also made across large parts of Utah where above average snowpack predominates. Moderate drought (D1H) was upgraded to D0 from southwestern to northeastern Utah and the severe drought (D2H)/moderate drought (D1H) boundary was pushed northwestward to the southern edge of the Great Salt Lake. Mountain snowpack exceeded 130% of average in southwestern Utah with generally above average amounts (>110%) from central to northeastern areas of the state. Snowpack in the mountains near Salt Lake City was helped by record January snowfall. A total of 170 inches of snow fell in the month of January at the Alta ski area southeast of the city. This was more than half of the average snowfall for the month and eclipsed the previous record of 168 inches that fell in 1967. Snow water content was near to above average in every river basin in Utah. By the end of the first week of February, the average seasonal peak had already been eclipsed in the Virgin Basin of southwest Utah, more than one month prior to the normal peak in late March. Reservoir levels for the state of Utah as a whole remained below average, but several reservoirs in Utah were at levels near to above average for the second week of February. While inflow from melting snowpack is still to be realized, NRCS forecasts of spring and summer streamflow are above to well above average in most of Utah. A large area of D2H drought persists in northwestern Utah and stretches into southwest Wyoming and southern Idaho where seasonal precipitation amounts have been generally average to below average and large long-term precipitation deficits remain. Moderate drought (D1H) also remains in southeastern Utah and along the Arizona border where Lake Powell storage is less than 70% of average.

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One-category improvements were made across much of the western half of Montana. Although February 1 mountain snowpack was below average in some parts of the northern Rockies, average to above average mountain snowpack predominated. NRCS Snotel snow water content as of February 12 was above average along the Bitterroot Range of far western Montana (110-125% of average), and conditions were average to above average conditions elsewhere. With the 1-category reductions, severe drought (D2H) remains in only a small area centered on Chouteau County of north-central Montana as well as areas of eastern Montana stretching into North and South Dakota, where 3-month precipitation has totaled less than half of average. Moderate drought (D1H) and abnormally dry conditions persist over much of the remainder of Montana. However drought and abnormally dry conditions are now absent from parts of western Montana and northern Idaho.

Conditions deteriorated in only two areas of the West. Moderate drought (D1H) expanded westward across Kings and southwestern Fresno counties in the southern end of the San Joaquin Valley where drier than average conditions have prevailed over the past three to six months. An extension of abnormally dry conditions (DOA) from eastern New Mexico to southwestern New Mexico and southeastern Arizona reflected season-to-date precipitation less than 70% of average with totals less than 50% in parts of the region.

Alaska: In a pattern similar to the preceding week, little or no precipitation fell across drought-affected areas of Alaska as well as much of the rest of state outside of the Panhandle, where liquid equivalent precipitation totals exceeding 1 to 2 inches were widespread. February 1 snowpack less than 70% of average supported an extension of abnormally dry (D0) conditions in the Arctic Plains of northern Alaska and southward in the Alaska Range and Talkeetna Mountains of southern Alaska.

Looking Ahead: For February 14-February 18, an active pattern across the southern tier of the nation is expected to bring much needed precipitation to some drought-affected areas. Early in the period a deep trough over the western U.S. and a developing storm system over the Southwest are projected to produce rain and snow in New Mexico and Texas. Slow movement is expected as the storm system becomes separated from the main upper level flow. The potential also exists for central Gulf coast storm development as the upper level trough moves eastward in the middle of the period with parts of the Deep South and Ohio River Basin benefiting from additional precipitation. While eastward movement of the upper level pattern brings cooler than average temperatures to much of the East, warmer and drier conditions will return to the Southwest and southern Plains during the latter half of the period.

For the ensuing 5 days (February 19-23), projections favor a ridge over the West and a trough over the eastern U.S. This pattern is expected to bring warmer than average temperatures to western areas of the nation while the central and eastern U.S. are projected to be generally cooler than average. Drier than average conditions are expected to stretch from the West coast to the southern Plains and Midwest, while wetter than average conditions are more likely in the Southeast and along the eastern seaboard. Southern Alaska and the Panhandle are also projected to be wetter than average, while a pattern of drier than average conditions is more likely to influence central and northern areas of the state.

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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

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