



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

Weekly Report - Snowpack / Drought Monitor Update

Date: 7 February 2013

SNOTEL SNOWPACK AND PRECIPITATION SUMMARY

Temperature: [SNOTEL](#) and ACIS 7-day temperature anomaly ending 7 February shows generally warmer than normal conditions across the West; especially over the Northern Cascades, Northern Rockies, and Northern Sierra (Fig. 1a). [ACIS](#) 7-day average temperature anomalies show the greatest positive temperature departures over northwestern Montana (>+15°F). The greatest negative departures occurred over the Uintah Mountains in northeastern Utah (<-9°F) (Fig. 1b).

Precipitation: [ACIS](#) 7-day average precipitation amounts for the period ending yesterday shows lots of red; indicating very little precipitation has fallen (Fig. 2a). However, in terms of percent of normal, even a small amount of moisture reflects a high percent of normal because this time of year is usually dry. This is clearly illustrated over Montana and northern Wyoming (Fig. 2b). SNOTEL [month to date](#) precipitation percent of normal for February shows a generally dry start to the month with some notable exceptions: the eastern slope of Montana (Missouri River drainage) and south-central Wyoming (North Platte River drainage) (Fig. 2c). For the [2013 Water-Year](#) that began on 1 October 2012, statistics continue to favor the Northern Tier States and the Northern Sierra with surpluses. Significant deficits dominate over the Sweetwater-North Platte River Basins in central-southeastern Wyoming, Colorado, and New Mexico. Arizona's near average percentages reflect close to their snow-water equivalent percentages as noted in Fig. 3b (Fig. 2d).

Snow: [Snow depths](#) changes for the week indicated that many SNOTEL sites reported gains generally east of the Continental Divide, although not by very much. The opposite situation occurred over the western half of the Western States; especially over the Cascades (Fig. 3a). As for [snow water-equivalent](#), the largest deficits continue over much of New Mexico, increasingly so over the Arizona Mountains, most of Colorado, eastern-central Wyoming, and the northeastern edge of the Great Basin. Surpluses now only exist over parts of the Cascades (Fig. 3b).

Week in Review: Precipitation in the U.S. Drought Monitor this week was dominated by a strong frontal passage that produced a tornado outbreak on January 29-30. In the two-day period, there were 78 reports of tornadoes in the NOAA Storm Prediction Center's Storm Reports, 65 on January 29th and 13 on January 30th, all of which are considered preliminary. Tornadoes were reported in Alabama, Arkansas, Georgia, Illinois, Indiana, Kentucky, Louisiana, Mississippi, Missouri, Oklahoma, and Tennessee. Tennessee appears to have the largest number of reports at 19. There was one tornado-related fatality in Georgia, outside of Atlanta. This storm dumped above normal precipitation from the Southern Plains into the Midwest and from the Deep South through upstate New York.

The West: Exceptional Drought (D4) expanded in Colorado this week while Abnormal Dryness (D0) abated in central Idaho and western Montana. Other areas of the West remained unchanged. Snowpack improved in some places this week but is still below normal across

Weekly Snowpack and Drought Monitor Update Report

much of the West. This week's Drought Monitor Author: [Michael Brewer, National Climatic Data Center, NOAA](#).

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

Drought Impacts Definitions

The possible impacts associated with **D4 (S, L)** drought include widespread crop/pasture losses and shortages of water in reservoirs, streams, and wells creating water emergencies. The possible impacts associated with **D3 (S, L)** drought include major crop/pasture losses and widespread water shortages or restrictions. Possible impacts from **D2 (S, L)** drought are focused on water shortages, water restrictions imposed, and crop or pasture losses. The possible impacts associated with **D1 (S, L)** drought are focused on water shortages developing in streams, reservoirs, or wells, and some damage to crops and pastures (Figs. 4 through 4d).

Soil Moisture

Soil moisture (Fig. 5) is simulated by the [VIC macroscale hydrologic model](#). The detailed, physically-based VIC model is driven by observed daily precipitation and temperature maxima and minima from approximately 2130 stations, selected for reporting reliably in real-time and for having records of longer than 45 years (and various other criteria). Another good resource can be found at: <http://www.emc.ncep.noaa.gov/mmb/nldas/drought/>.

Soil Climate Analysis Network (SCAN)

Figure 6 provides supplemental data on soil conditions (moisture and temperatures at various depths from 2 inches up to 80 inches at some sites. For more information about SCAN see [brochure](#).

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.

State Activities

State government drought activities can be tracked at the following URL: <http://drought.unl.edu/mitigate/mitigate.htm>. NRCS Snow Survey and Water Supply Forecasting (SSWSF) State Office personnel are participating in state drought committee meetings and providing the committees and media with appropriate SSWSF 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 URLs: <http://drought.unl.edu/dm/> and <http://www.drought.gov>.

For More Information

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

Weekly Snowpack and Drought Monitor Update Report

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

/s/

Micheal L. Golden

Deputy Chief, Soil Science and Resource Assessment

Weekly Snowpack and Drought Monitor Update Report

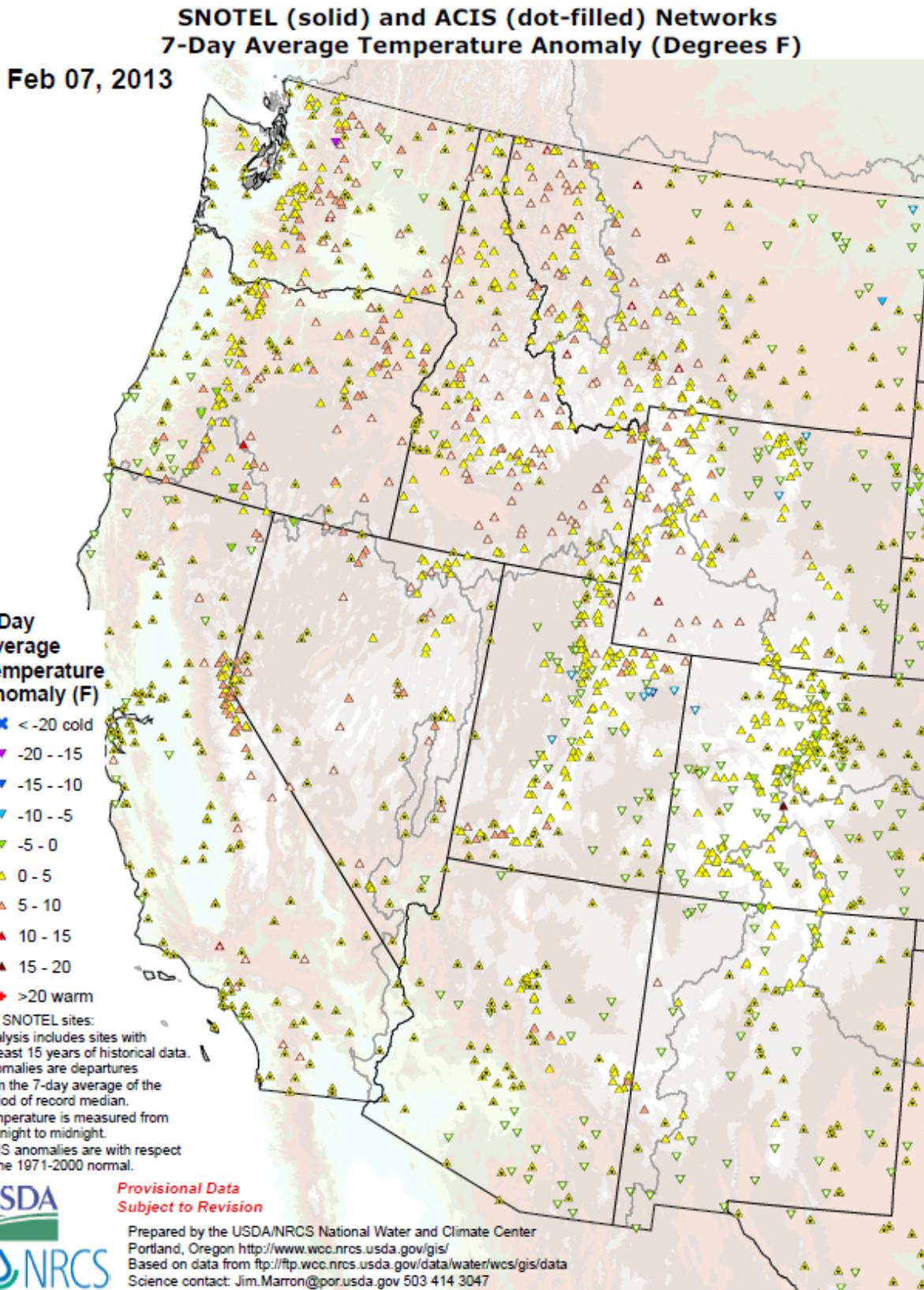
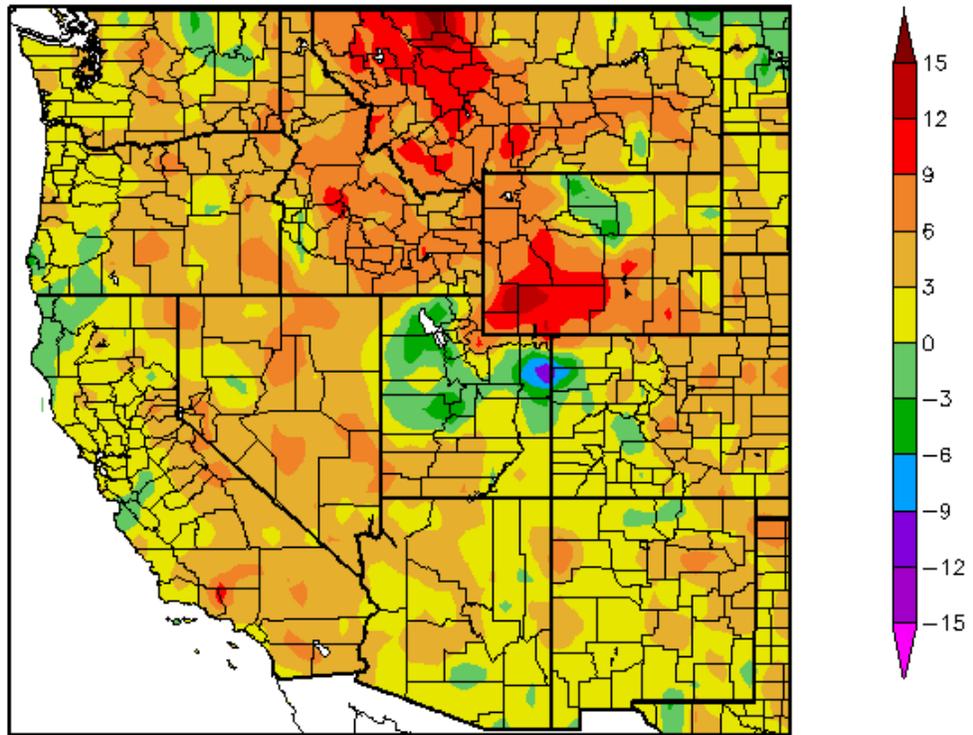


Fig. 1a: SNOTEL and ACIS 7-day temperature anomaly ending 7 February shows generally warmer than normal conditions across the West; especially over the Northern Cascades, Northern Rockies, and Northern Sierra.

Departure from Normal Temperature (F)
1/31/2013 – 2/6/2013



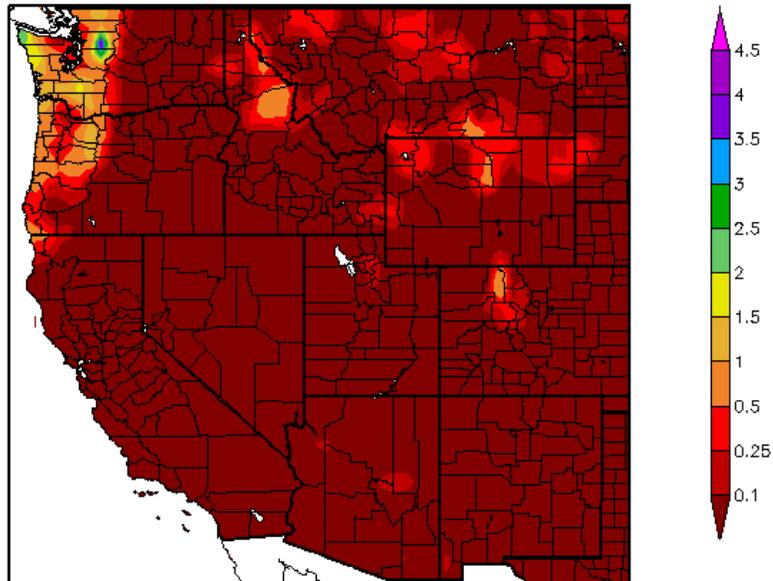
Generated 2/7/2013 at HPRCC using provisional data.

Regional Climate Centers

Fig. 1b: ACIS [7-day](#) average temperature anomalies show the greatest positive temperature departures over northwestern Montana (>+15°F). The greatest negative departures occurred over the eastern Uintah Mountains in northeastern Utah (<-9°F). For more figures, see the Western Water Assessment's Intermountain West Climate [Dashboard](#).

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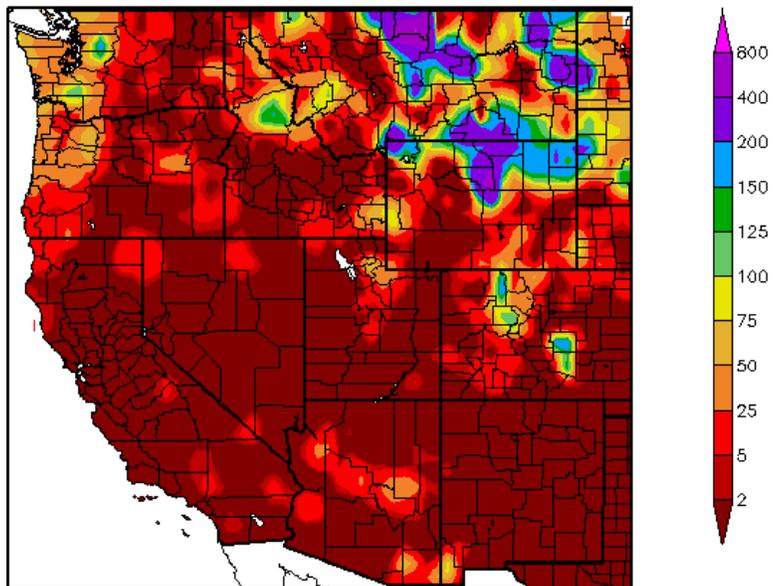
Precipitation (in)
1/31/2013 - 2/6/2013



Generated 2/7/2013 at HPRCC using provisional data.

Regional Climate Centers

Percent of Normal Precipitation (%)
1/31/2013 - 2/6/2013



Generated 2/7/2013 at HPRCC using provisional data.

Regional Climate Centers

Fig. 2a and 2b: [ACIS](#) 7-day average precipitation amounts for the period ending yesterday shows lots of red; indicating very little precipitation has fallen (Fig. 2a). However, in terms of percent of normal, even a small amount of moisture reflects a high percent of normal since this time of year is usually quite dry (Fig. 2b). This is clearly illustrated over Montana and northern Wyoming.

Weekly Snowpack and Drought Monitor Update Report

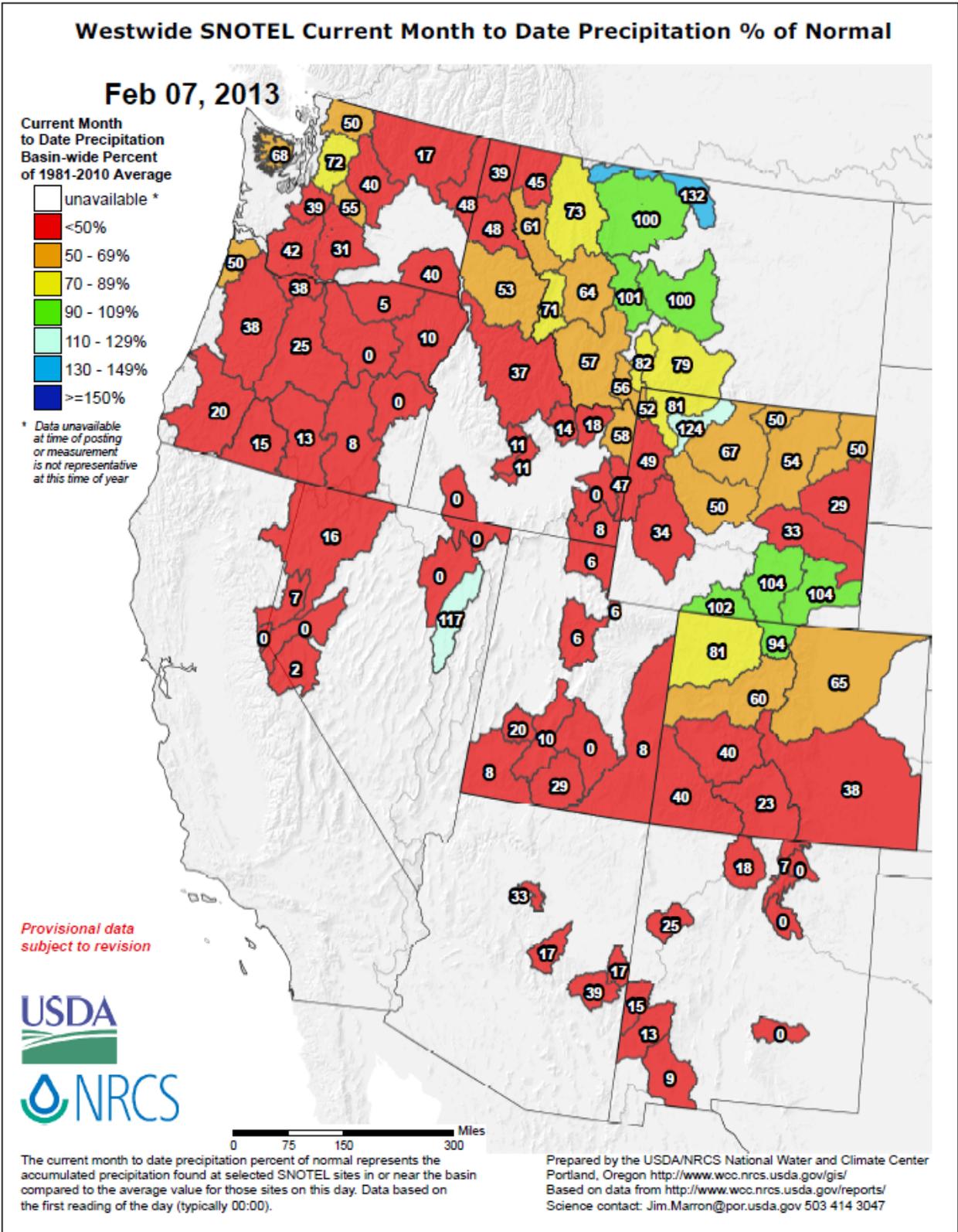


Fig. 2c: SNOTEL [month to date](#) precipitation percent of normal for February shows a generally dry start to the month with some notable exceptions: the eastern slope of Montana (Missouri River drainage) and south-central Wyoming (North Platte River drainage).

Weekly Snowpack and Drought Monitor Update Report

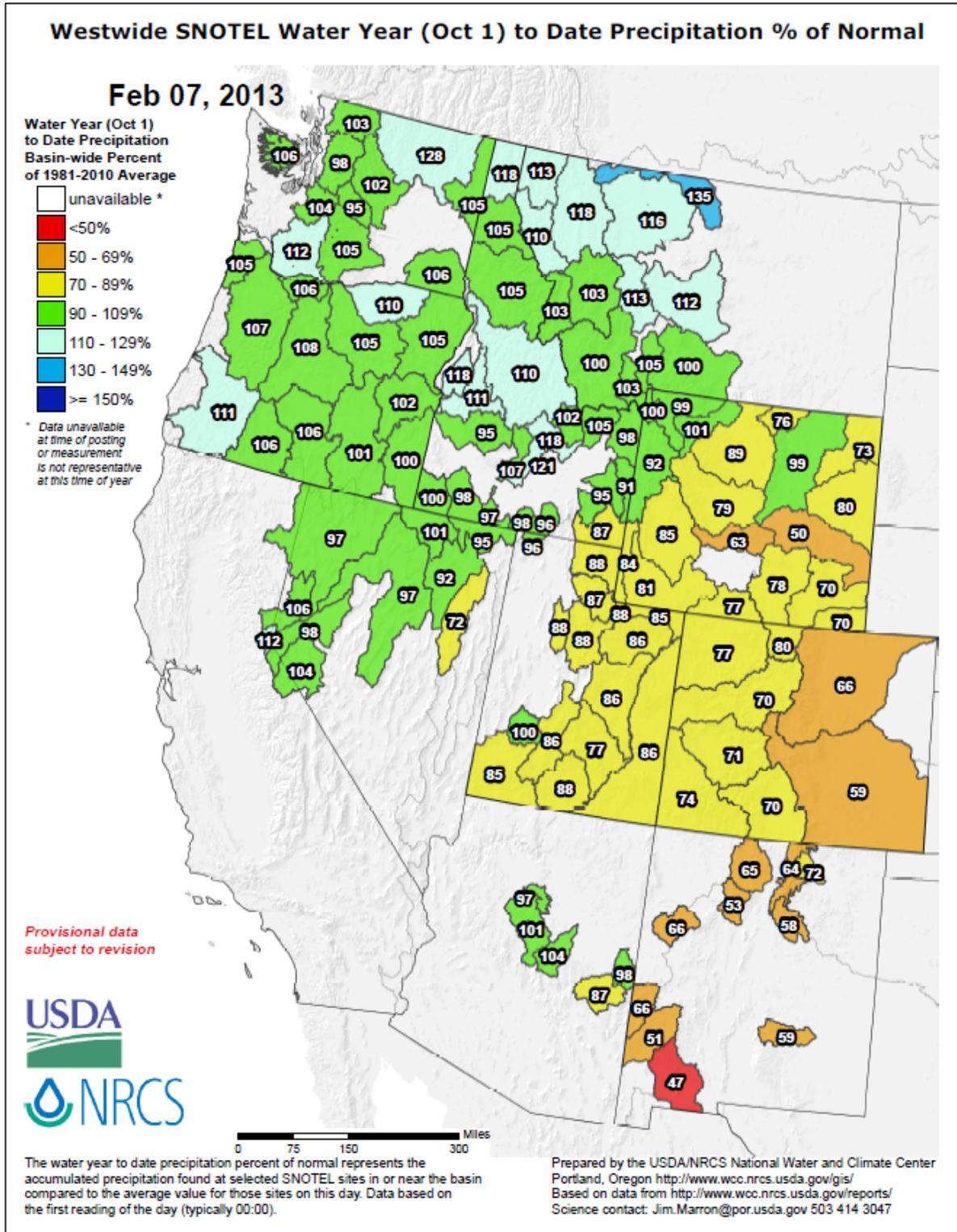


Fig. 2d: For the [2013 Water-Year](#) that began on 1 October 2012, statistics continue to favor the Northern Tier States and the Northern Sierra with surpluses. Significant deficits dominate over Sweetwater-North Platte River Basins in central-southeastern Wyoming, Colorado, and New Mexico. Arizona's near average percentages reflect close to their snow-water equivalent percentages as noted in Fig. 3b. Daily reports by SNOTEL sites can be acquired by clicking [here](#).

SNOTEL 7-Day Snow Depth Change (Inches)

Feb 07, 2013

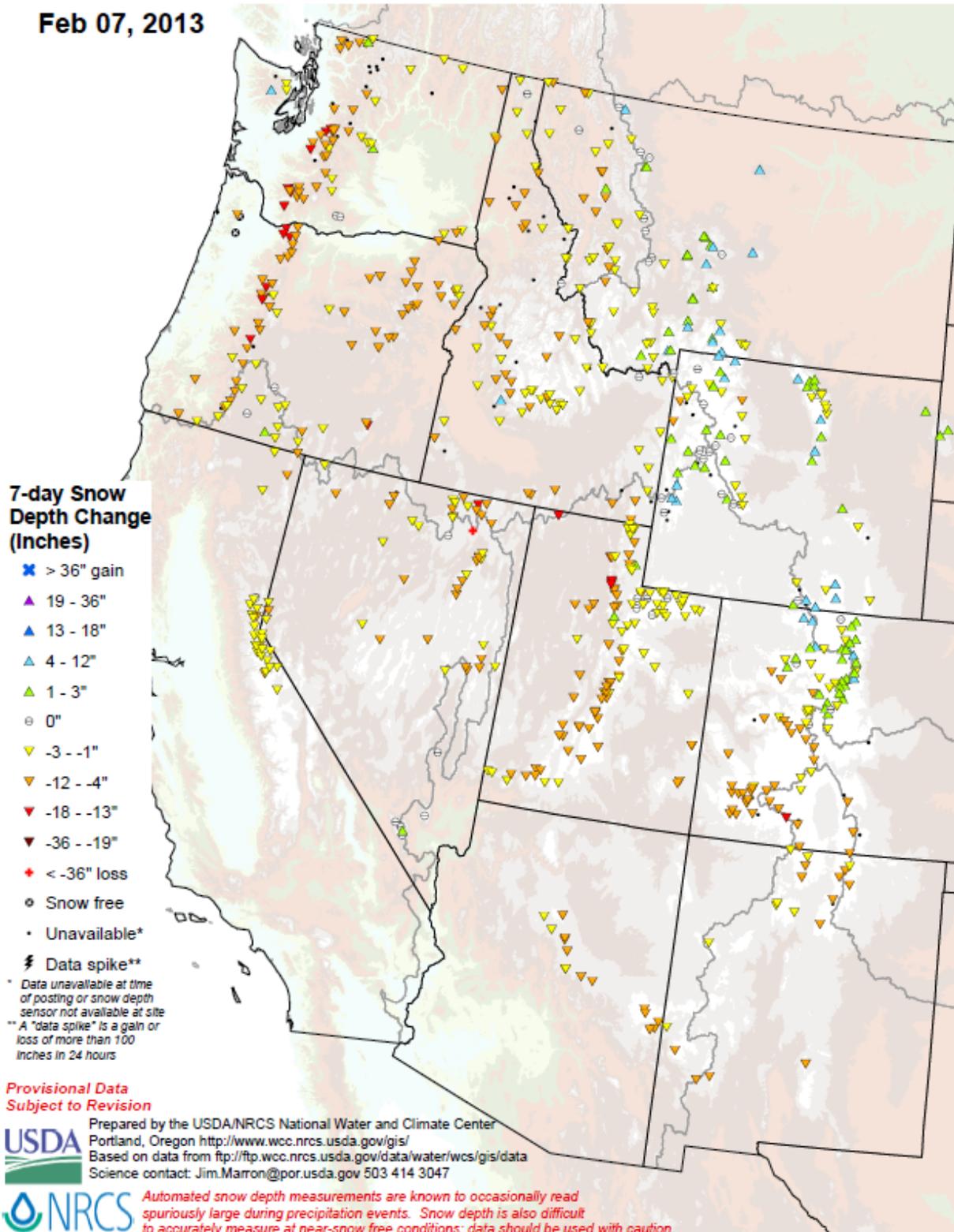


Fig. 3a: Snow depths changes for the week revealed that many stations reported gains generally east of the Continental Divide, although not by very much. The opposite situation occurred over the western half of the Western States; especially over the Cascades.

Weekly Snowpack and Drought Monitor Update Report

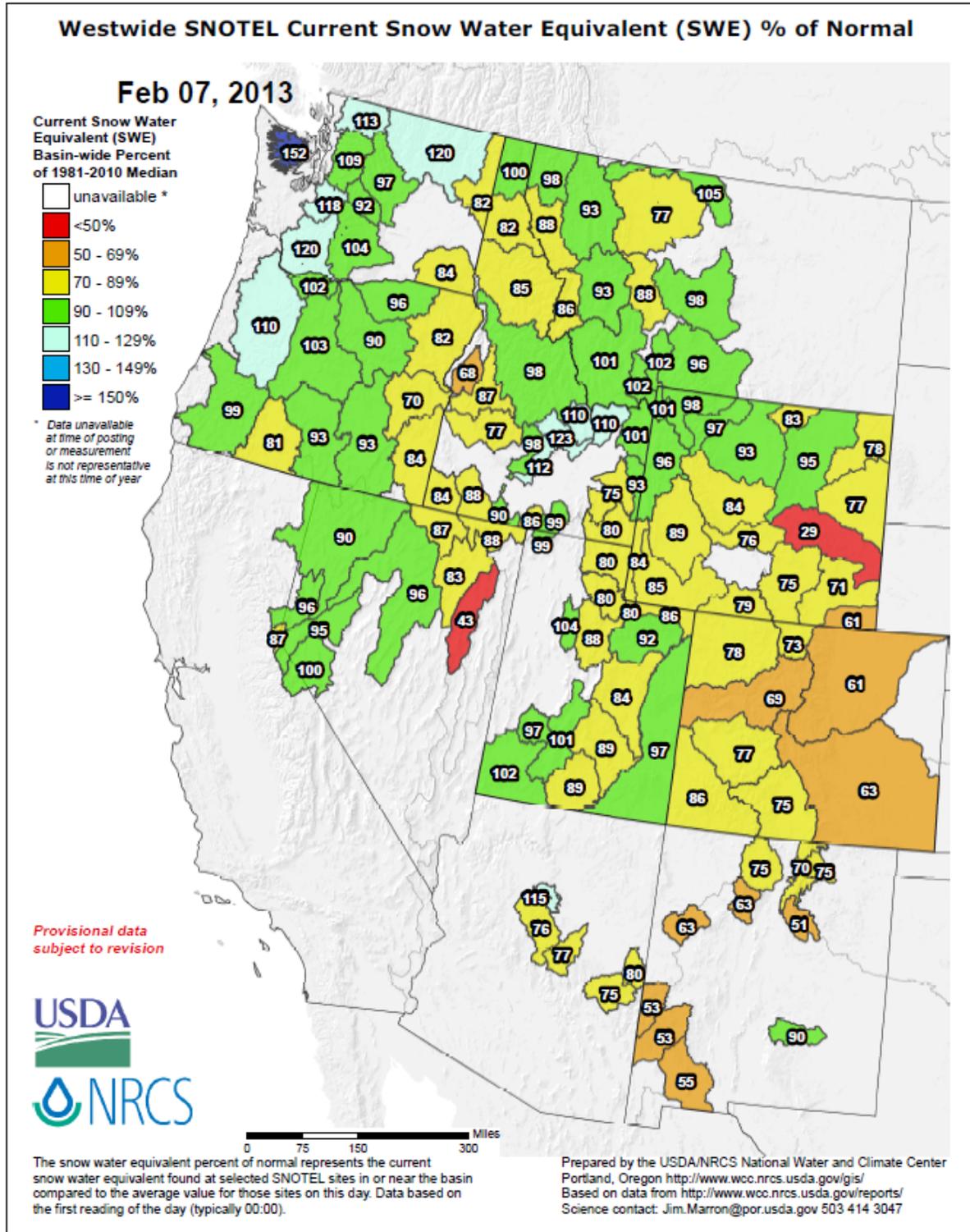


Fig. 3b: Snow-Water Equivalent (SWE): Largest deficits continue over much of New Mexico, increasingly so over the Arizona Mountains, most of Colorado, eastern-central Wyoming, and the northeastern edge of the Great Basin. Surpluses now only exist over the parts of the Cascades. For expected snowfall amounts, click [here](#). A useful basin by basin assessment of SWE to date can be viewed by state [here](#) and [here](#).

Weekly Snowpack and Drought Monitor Update Report

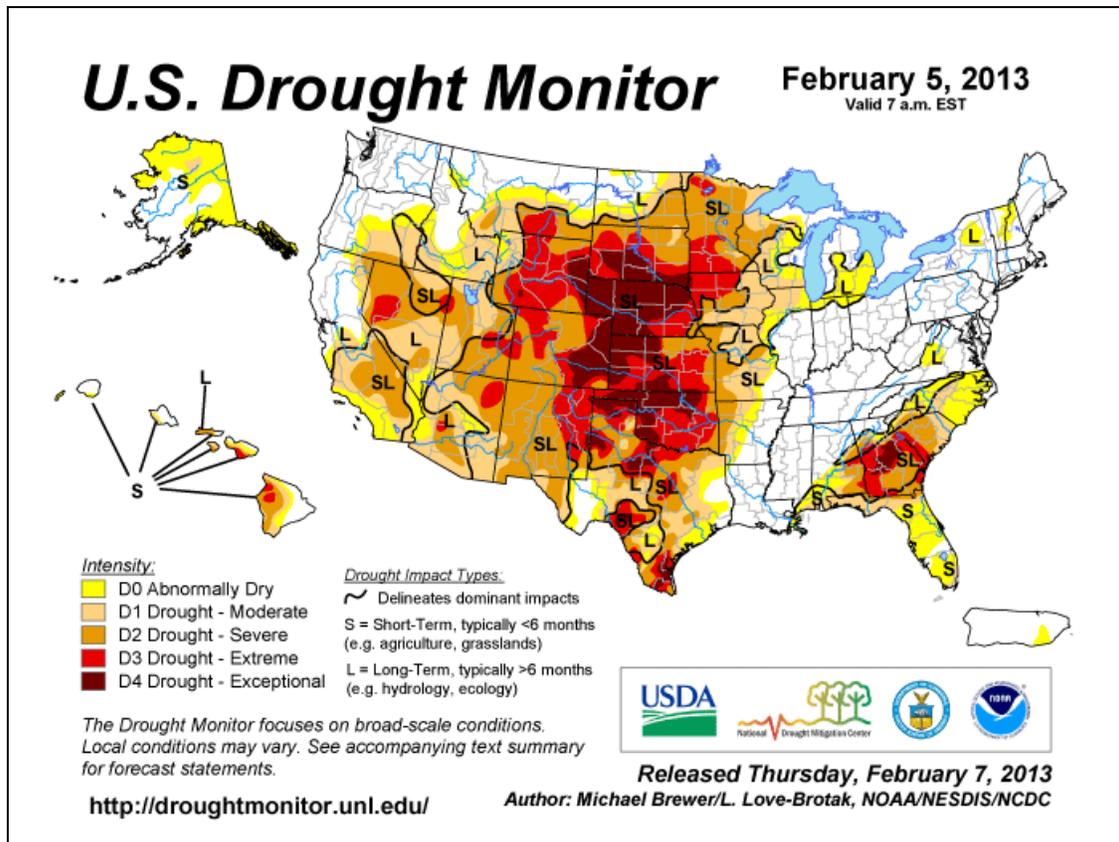


Fig. 4: Current [Drought Monitor](#) weekly summary. The exceptional D4 levels of drought are found over Georgia, and scattered across the western cornbelt of the Plains into southeastern Colorado and Wyoming, easternmost New Mexico, and southward into Texas. For more drought news, see [Drought Impact Reporter](#). Click for the latest statistics for [California Reservoirs](#). The latest [drought indicator blend and component percentiles](#) spreadsheet is a great resource for climate division drought statistics. See Fig. 8 for the latest [Drought Outlook](#) (forecast).

For an interesting website on Lake Mead drought update, click [here](#).

Agriculture and Drought in the News

[Drought causes flower prices to rise](#) - Jan 31, **U.S.**

[Feedlot numbers continue to dwindle](#) - Jan 28, **U.S.**

[The latest USDA Cattle Inventory Report shows cattle numbers down 2 percent](#) - Feb 1, **U.S.**

[U.S. spring crop season jeopardized as drought persists](#) - Jan 31, **U.S.**

[West U.S. Plains wheat stays starved for moisture](#) - Jan 31, **Western Great Plains.**

Water Supply & Quality in the News

[Water From Canton Lake Flowing Toward Oklahoma City](#)

Jan 30, **Oklahoma City, Oklahoma.** The Army Corps of Engineers released water from Canton Lake in the northwestern Oklahoma to bolster water supplies for Oklahoma City. A total of 30,000 acre-feet of water will flow into the North Canadian River downstream to Lake Hefner, where the water will be stored for municipal use. It takes about two weeks for the water to travel from Canton Lake to Oklahoma City.

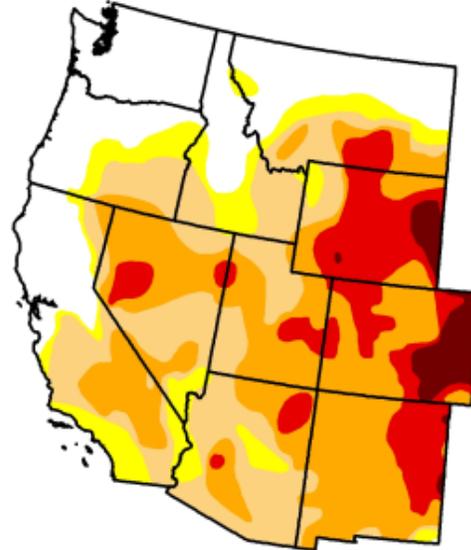
U.S. Drought Monitor

West

February 5, 2013
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	23.73	76.27	66.52	44.01	15.72	3.15
Last Week (01/29/2013 map)	23.58	76.42	66.52	44.01	16.39	2.15
3 Months Ago (11/06/2012 map)	16.89	83.11	73.49	43.52	17.38	1.90
Start of Calendar Year (01/01/2013 map)	24.39	75.61	69.31	45.04	18.01	2.15
Start of Water Year (09/25/2012 map)	15.12	84.88	77.15	43.65	16.85	1.77
One Year Ago (01/31/2012 map)	33.02	66.98	40.69	10.98	2.82	0.83



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 7, 2013
Michael Brewer, National Climatic Data Center, NOAA

<http://droughtmonitor.unl.edu>

Fig. 4a: Drought Monitor for the [Western States](#) with statistics over various time periods. Note slight uptick in D4 this past week.

In California, there are cooperative snow surveys made up of 35 or so utilities, water agencies, government agencies and the Department of Water Resources. The NRCS is one of the cooperating agencies. Through this cooperative, California has over 200 manual snow surveys and has a similar number of snow pillows. With this data they publish a Bulletin 120 every month from February through May which provides a forecast of April through July runoff. We provide daily snow reports through the California Data Exchange Center (which also posts the Bulletin 120 at <http://cdec.water.ca.gov/snow/bulletin120/index2.html>) through the following links:

Current PAGE6 report: <http://cdec.water.ca.gov/cgi-progs/snow/PAGE6>
 Current DLYSWEQ report: <http://cdec.water.ca.gov/cgi-progs/snow/DLYSWEQ>
 Current Regional Snowpack Plots: http://cdec.water.ca.gov/cgi-progs/snow/PLOT_SWC

California also hosts a statewide water conditions page at:

http://cdec.water.ca.gov/water_cond.html which has links to precipitation, reservoir storage, snowpack, runoff, and summary reports.

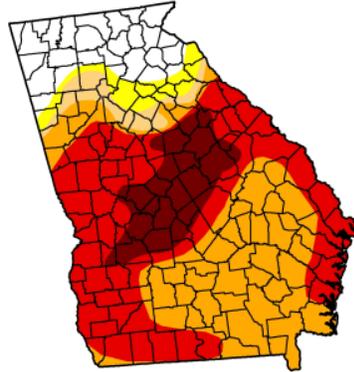
Weekly Snowpack and Drought Monitor Update Report

U.S. Drought Monitor Georgia

February 5, 2013
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	13.03	86.97	82.89	79.05	46.85	11.99
Last Week (01/29/2013 map)	8.30	91.70	86.57	82.44	43.58	11.99
3 Months Ago (11/06/2012 map)	11.09	88.91	55.17	42.56	26.70	13.98
Start of Calendar Year (01/01/2013 map)	1.63	98.37	89.49	64.87	36.96	10.25
Start of Water Year (09/25/2012 map)	37.30	62.70	52.44	42.66	34.04	17.18
One Year Ago (01/31/2012 map)	14.41	85.59	83.07	77.34	67.38	16.52

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



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

<http://droughtmonitor.unl.edu>



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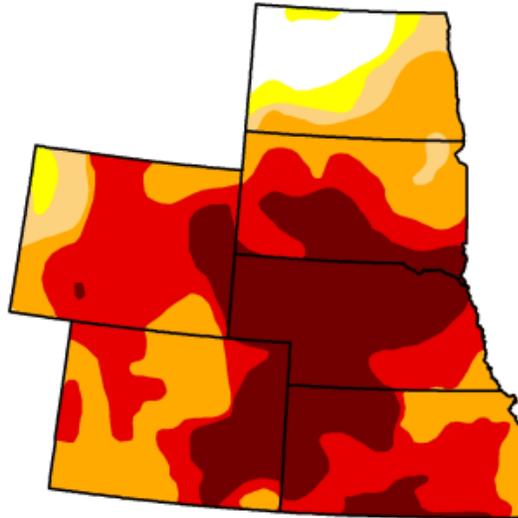
Fig. 4b: D4 conditions are over Georgia. Some additional D3 deterioration has occurred this past week.

U.S. Drought Monitor High Plains

February 5, 2013
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	4.79	95.21	92.08	87.25	60.61	29.19
Last Week (01/29/2013 map)	4.79	95.21	92.08	87.25	61.29	27.02
3 Months Ago (11/06/2012 map)	0.03	99.97	96.46	83.94	57.54	27.24
Start of Calendar Year (01/01/2013 map)	1.54	98.46	93.01	86.20	60.25	26.99
Start of Water Year (09/25/2012 map)	0.00	100.00	98.91	83.80	61.28	24.35
One Year Ago (01/31/2012 map)	40.21	59.79	23.28	6.33	2.22	0.04

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



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

<http://droughtmonitor.unl.edu>



Released Thursday, February 7, 2013
Michael Brewer, National Climatic Data Center, NOAA

Fig. 4c: Drought Monitor for the High Plains with statistics over various time periods. D4 conditions increased by 2 percent for the week.

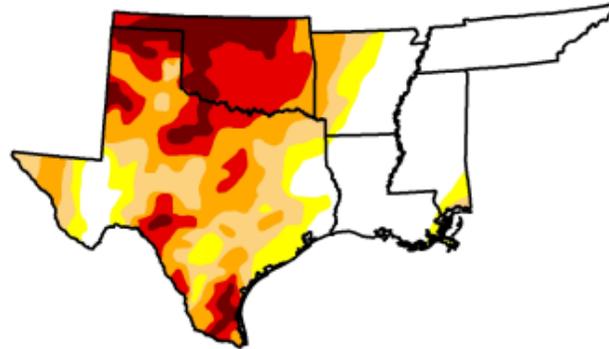
U.S. Drought Monitor

South

February 5, 2013
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	34.65	65.35	55.82	41.66	23.91	9.20
Last Week (01/29/2013 map)	31.46	68.54	56.21	41.73	24.00	8.59
3 Months Ago (11/06/2012 map)	29.13	70.87	54.00	37.59	21.68	6.61
Start of Calendar Year (01/01/2013 map)	21.18	78.82	63.69	50.50	32.80	10.98
Start of Water Year (09/25/2012 map)	24.13	75.87	66.61	51.50	29.86	9.11
One Year Ago (01/31/2012 map)	32.32	67.68	61.19	50.60	35.37	14.32



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.

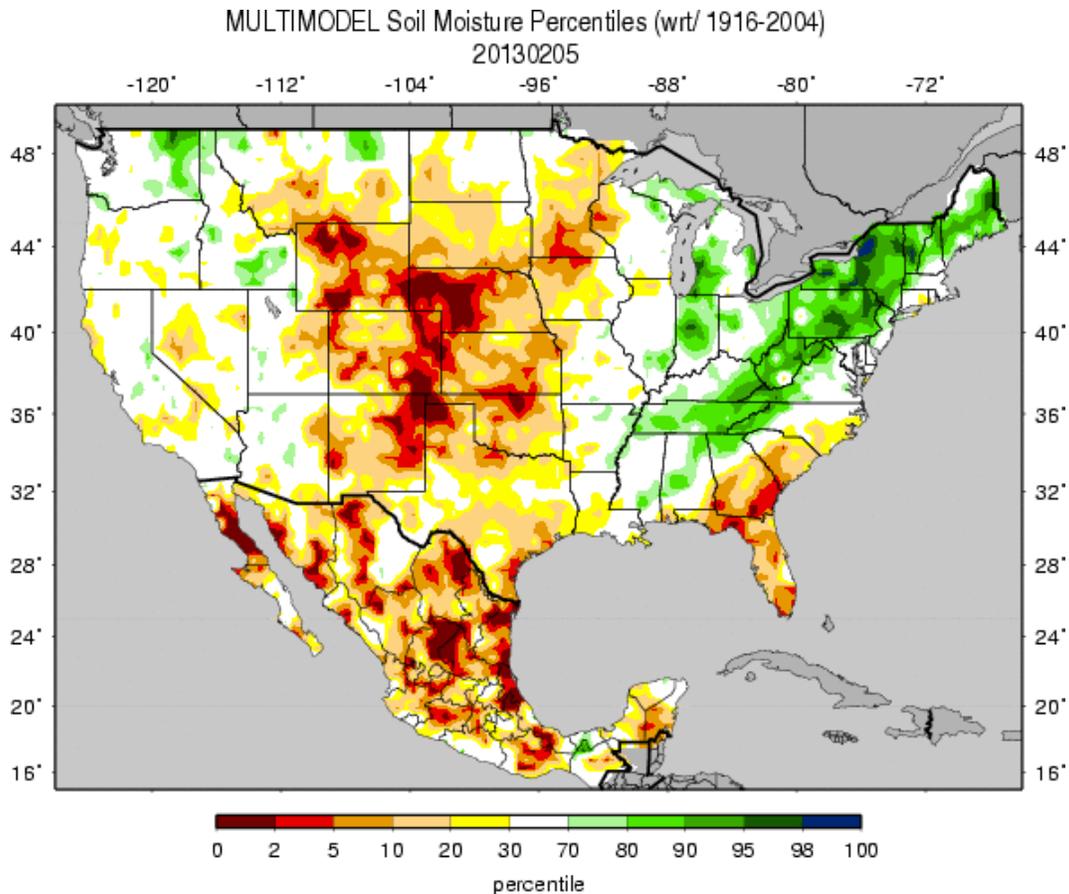


Released Thursday, February 7, 2013
Michael Brewer, National Climatic Data Center, NOAA

<http://droughtmonitor.unl.edu>

Fig. 4d: Drought Monitor for the [South-Central Region](#) with statistics over various time periods. Note some creep in D4 over the past 7 days. Check out the [Texas Drought Website](#).

Weekly Snowpack and Drought Monitor Update Report



Figs. 5: Soil Moisture ranking in [percentile](#) as of 5 February shows dryness scattered across the Central Plains, much of the Rockies, and over New Mexico. Note a resurgence of moisture over New England and the Appalachian Mountains this week. Freezing soils will distort actual moisture values, making them less than reliable over the Northern States.

Useful Hydrological Links:

USDA western U.S. mountain snow water content anomaly map.

USGS (U.S. Geological Service) [observed streamflow](#); NOAA Climate Prediction Center (CPC) modeled runoff [anomalies](#) and [percentiles](#); VIC (University of Washington Variable Infiltration Capacity macro scale hydrologic model) [1-](#), [2-](#), [3-](#), and [6-](#)month and [water year-to-date](#) runoff percentiles; NLDAS (North American Land Data Assimilation System) modeled streamflow [anomalies](#) and [percentiles](#); NLDAS model runoff [anomalies](#) and [percentiles](#); USGS groundwater observations ([real-time network](#), [climate response network](#), [total active network](#)); USDA snow water content observations for the West (SNOTEL station [percentiles](#) and [percent of normal](#), SNOTEL basin [percent of normal](#) and [percent of average](#)) and Alaska ([SNOTEL station percent of normal](#), [SNOTEL basin percent of normal](#)); USDA reservoir storage as [percent of capacity](#).

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

Station (2094) MONTH=2013-01-08 (Daily) NRCS National Water and Climate Center - Provisional Data - subject to revision
Thu Feb 07 08:31:05 PST 2013

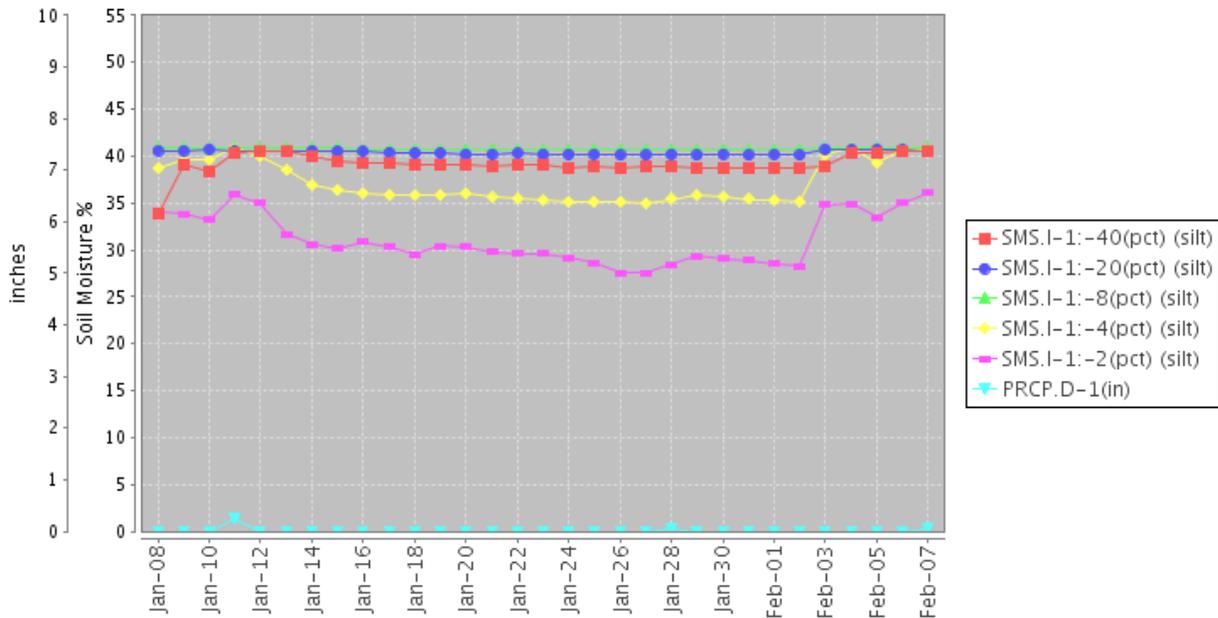


Fig. 6: This NRCS resource shows a site over [northeastern Kansas](#) with moist soil at all levels during the past month despite a lack of precipitation. Note: Whether this moisture can be easily extracted is not readily apparent in this type of chart. However, caution should be exercised if soils are frozen. Moisture sensor accuracies become unreliable when the soil temperature falls below 32°F.

Useful Agriculture Links:

USDA (U.S. Department of Agriculture) [observed soil moisture conditions](#), [departures and percentiles](#), and comparison to [5-year average](#) and [10-year average](#); the Palmer [Crop Moisture Index \(CMI\)](#), which intensified during the month in the West and Lower to Mid-Mississippi Valley (weeks [1](#), [2](#), [3](#), [4](#), [5](#)); CPC modeled soil moisture [anomalies](#) and [percentiles](#) for end of May, and [soil moisture anomaly change](#) compared to previous month; CPC's Leaky Bucket model [soil moisture percentiles](#); NLDAS modeled soil moisture percentiles for the [top soil layer](#) and [total soil layer](#); VIC modeled [soil moisture percentiles](#), and [soil moisture percentile change](#) compared to previous month; USDA observed [pasture and rangeland conditions](#); [Vegetation Drought Response Index \(VegDRI\)](#); the NOAA/NESDIS satellite-based [Vegetation Health Index \(VHI\)](#); the USGS agro-hydrologic model ([Soil Water Index](#), [Water Requirement Satisfaction Index](#)); Selected SNOTEL Sites (measured [2"](#), [4"](#), [8"](#), [20"](#), and [40"](#) soil moisture depths); Monthly [SCAN Report](#) from Utah.

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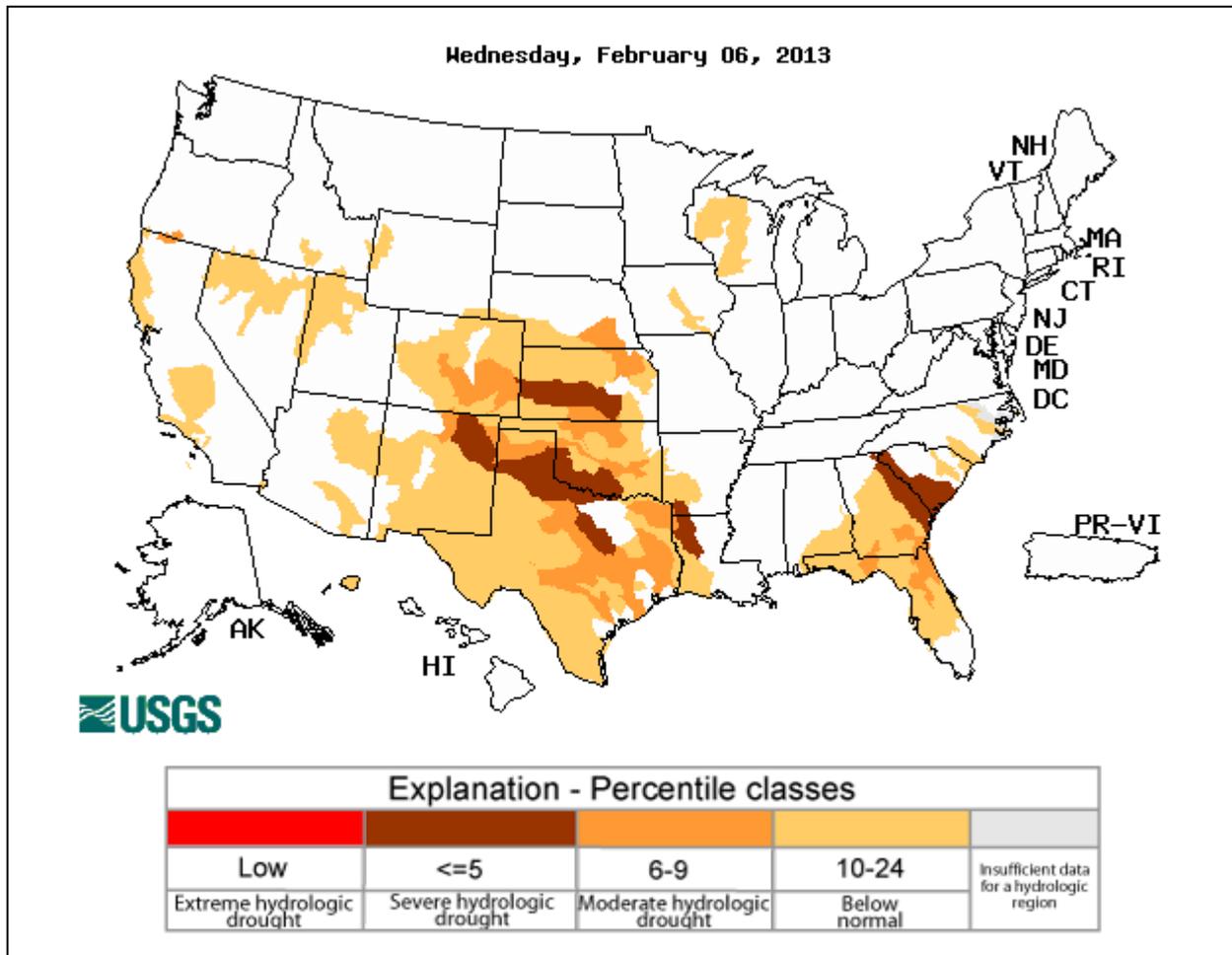


Fig. 7: Map of below normal 7-day average [streamflow](#) compared to historical streamflow for the day of year. **Severe** conditions exist over south-central Kansas, from northeastern New Mexico to northern Texas/southern Oklahoma, and parts of the Southeast States. As with soil moisture, streamflow data can be severely compromised by prolonged freezing temperatures. See the USGS [National Water Information System Mapper](#).

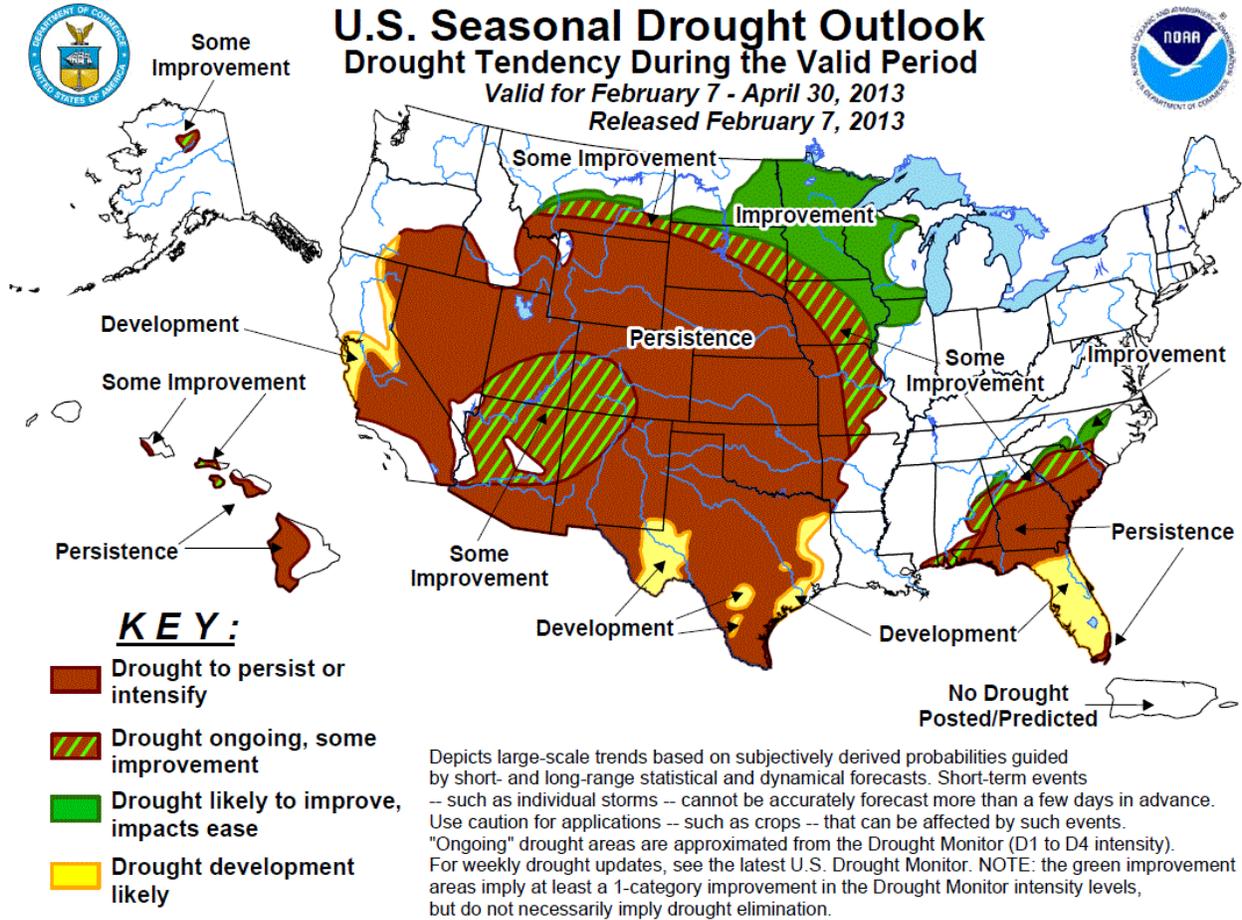


Fig. 8: U.S. seasonal [Drought Outlook](#) released today, 7 February.

See USDA Drought Assistance [website](#).

Weekly Snowpack and Drought Monitor Update Report

National Drought Summary -- February 5, 2013

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/>.

Precipitation in the U.S. Drought Monitor this week was dominated by a strong frontal passage that produced a tornado outbreak on January 29-30. In the two day period, there were 78 reports of tornadoes in the NOAA Storm Prediction Center's Storm Reports, 65 on January 29th and 13 on January 30th, all of which are considered preliminary. Tornadoes were reported in Alabama, Arkansas, Georgia, Illinois, Indiana, Kentucky, Louisiana, Mississippi, Missouri, Oklahoma, and Tennessee. Tennessee appears to have the largest number of reports at 19. There was one tornado-related fatality in Georgia, outside of Atlanta. This storm dumped above normal precipitation from the Southern Plains into the Midwest and from the Deep South through upstate New York.

The Southeast: The powerful storm on the 29th and 30th of January provided some much-needed precipitation to the region. Areas of Exceptional (D3), Severe (D2) and Moderate Drought (D1) as well as Abnormal Dryness (D0) were alleviated from northeast Alabama, through northern Georgia and up the Appalachians into Virginia. Tennessee and Kentucky also saw eradication of Abnormal Dryness (D0) in the western parts of their states. Conversely, Exceptional Drought (D3) expanded in southern Georgia and Moderate Drought (D1) expanded in southern Alabama and Mississippi. Moderate Drought (D1) was introduced in South Florida.

The Northeast and Mid-Atlantic: Areas of Moderate Drought (D1) and Abnormal Dryness (D0) improved this week in Appalachian Virginia and West Virginia. All other areas remained unchanged.

The South and Southern Plains: The areas from eastern Oklahoma through Arkansas saw significant improvements in Extreme (D3), Severe (D2), and Moderate Drought (D1) and Abnormal Dryness this week with the passing of the January 29-30 storm. In southern Texas and the Oklahoma Panhandle, areas of Exceptional (D4), Extreme (D3), Severe (D2), and Moderate Drought (D1) expanded as did Abnormal Dryness (D0). In South Texas, this was largely due to dry conditions compounded by above normal temperatures and wind.

The Central and Northern Plains and Midwest: Conditions continued to improve in the Midwest. The area from Missouri up through eastern Iowa and into Illinois, Indiana, and Ohio saw relief of Severe (D2) and Moderate Drought (D1) and Abnormal Dryness (D0). Additionally, South Dakota saw small improvement in Exceptional (D4) and Extreme Drought (D3). Precipitation fell in other areas of this region but frozen soils led to high runoff and little moisture seeping into the ground. Improvements were largely kept to areas where soil temperatures was above freezing.

The West: Exceptional Drought (D4) expanded in Colorado this week while Abnormal Dryness (D0) abated in central Idaho and western Montana. Other areas of the West remained unchanged. Snowpack improved in some places this week but is still below normal

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across much of the West.

Hawaii, Alaska and Puerto Rico: Two weeks of decent precipitation have improved D0 to D3 conditions across the Hawaiian Islands with each island seeing at least some improvement. Likewise, central Alaska also saw improvement in Abnormal Dryness (D0) due to enhanced precipitation. Drought conditions remained unchanged in Puerto Rico.

Looking Ahead: During the February 7-11, 2013 time period, there is an enhanced probability of precipitation moving from the West Coast early in the period, across the central U.S., and into the Midwest and Mid-Atlantic by the end of the period. Above normal temperatures are expected to move from the central U.S. early in the period to also cover the East and Gulf Coasts by the end of the period.

For the ensuing five days (February 12-16, 2013), the odds favor normal to above normal temperatures mostly east of the Mississippi River. Below normal temperatures are likely from the Mississippi River to the West Coast. Precipitation is likely to be normal to above normal from the Northern Rockies to the Southern Plains and all points eastward. Below normal precipitation is likely along the West Coast. The odds of above normal precipitation are greatest across the Northern Plains, into the Great Lakes, all down the East Coast, and in southern Texas. In Alaska, temperatures and precipitation are likely to be above normal across the state.

Author: [Michael Brewer, National Climatic Data Center, NOAA](#)

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

S ... Short-Term, typically <6 months (e.g. agricultural, grasslands)

L ... Long-Term, typically >6 months (e.g. hydrology, ecology)

Updated February 6, 2013

[USDA Highlights](#)

Highlights for the drought-monitoring period ending 7 am EST on January 29 include:

- Overall U.S. drought coverage remained virtually unchanged (57.68% of the contiguous U.S. is D1 or greater, versus 57.64% last week).

Weekly Snowpack and Drought Monitor Update Report

- The portion of the contiguous U.S. in the worst category – D4, or exceptional drought – was nearly steady at 6.37%. D4 coverage has ranged from 5% to 7% for 25 consecutive weeks (August 14 – January 29).

- The percent of hay in drought (59%) remained unchanged, while cattle in drought (69%) inched up a percentage point from a week ago. Winter wheat in drought (59%) was also unchanged from last week. The last time “hay in drought” was less than 60% was July 3, 2012.

- For the 30th consecutive week (July 10, 2012 – January 29, 2013), drought encompassed more than two-thirds of the domestic cattle inventory.

Eric Luebehusen, USDA Meteorologist
Office of the Chief Economist
World Agricultural Outlook Board
Washington, D.C.

Phone: 202-720-3361

Email: eluebehusen@oce.usda.gov

The latest monthly ENSO update is now available [here](#).

Synopsis: ENSO-neutral is favored through Northern Hemisphere spring 2013.

During January 2013, ENSO-neutral continued, although below average sea surface temperatures (SST) prevailed across the eastern half of the equatorial Pacific. While remaining below average, a high degree of variability in the weekly Niño 3 and 3.4 indices was apparent during the month. The oceanic heat content (average temperature in the upper 300m of the ocean) was also below average (, largely reflecting negative subsurface temperature anomalies in the eastern Pacific. At the same time, positive anomalies increased and expanded eastward to the central Pacific by late January. The variability in both the ocean and atmosphere was enhanced during January, at least partially due to a strong Madden-Julian Oscillation (MJO). Consequently, the location of the MJO was reflected in the monthly averages of wind and convection. Anomalous upper-level winds were westerly over the eastern half of the equatorial Pacific, while low-level winds were near average. Relative to December 2012, the region of enhanced convection shifted eastward and became more prominent over Indonesia and the western equatorial Pacific. Despite these transient features contributing to cool conditions, the collective atmospheric and oceanic system reflects ENSO-neutral.

The vast majority of models predict near average SST (between -0.5°C and +0.5°C) in the Niño-3.4 region through the late Northern Hemisphere summer. However, because model skill is generally low during April-June, there is less confidence in the forecast beyond the spring. Thus, ENSO-neutral is favored through Northern Hemisphere spring 2013 (see CPC/IRI consensus forecast).