



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

Weekly Report - Snowpack / Drought Monitor Update

Date: 8 March 2012

SNOTEL SNOWPACK AND PRECIPITATION SUMMARY

Snow: [Snow Water-Equivalent](#): No changes since last week. The Northern Tier States including the Wyoming Mountains are near normal while the Southern Tier States including the Oregon River Basins are significantly below normal. However, some river basins in New Mexico are still faring well (Fig. 1). [7-Day Snow Depth Change](#) ending this morning shows increases the Sierra and Cascades. Scattered increases also are noted over the Northern Tier States. Decreases dominated the Southwest and Colorado Rockies (Fig. 1a).

Temperature: [SNOTEL](#) and ACIS 7-day temperature anomaly showed values generally within $\pm 5^{\circ}\text{F}$ (Fig. 2). ACIS [7-day average temperature anomalies](#) show the greatest positive temperature departures over southern Montana and scattered across the Western High Plains ($>+6^{\circ}\text{F}$) and the greatest negative departures over the Central Great Basin (Nevada) ($<-8^{\circ}\text{F}$) (Fig. 2a).

Precipitation: [ACIS](#) 7-day average precipitation amounts for the period ending yesterday shows wet condition over the Northern Cascades and lesser amounts over the Sierra (Fig. 3). However, in terms of percent of normal, besides the Northern Cascades, pockets of above normal amounts were observed across parts of the Great Basin, western Wyoming, and eastern Montana (Fig. 3a). Since the start of the [2012 Water-Year](#) that began on 1 October 2011, the seasonal moisture has favored northern Wyoming, south-central Idaho, and parts of northern New Mexico. No notable changes to report this week (Fig. 3b).

The West: The West was generally dry this week with the exception of the extreme Northwest. Drought conditions remain unchanged in most areas but intensified in northern Utah, in southern Oregon and near the Nevada – California border where long-term deficits are mounting. 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 common and water restrictions imposed and crop or pasture losses likely. 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 4c).

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

Weekly Snowpack and Drought Monitor Update Report

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 to 80 inches. 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 SS/WSF State Office personnel are participating in state drought committee meetings and providing the committees and media with appropriate SS/WSF information - <http://www.wcc.nrcs.usda.gov/cqibin/bor.pl>. Additional information describing the products available from the Drought Monitor can be found at the following URL: <http://drought.unl.edu/dm/> and <http://www.drought.gov>.

For More Information

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

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

/s/

Micheal L. Golden

Acting Deputy Chief, Soil Survey and Resource Assessment

Weekly Snowpack and Drought Monitor Update Report

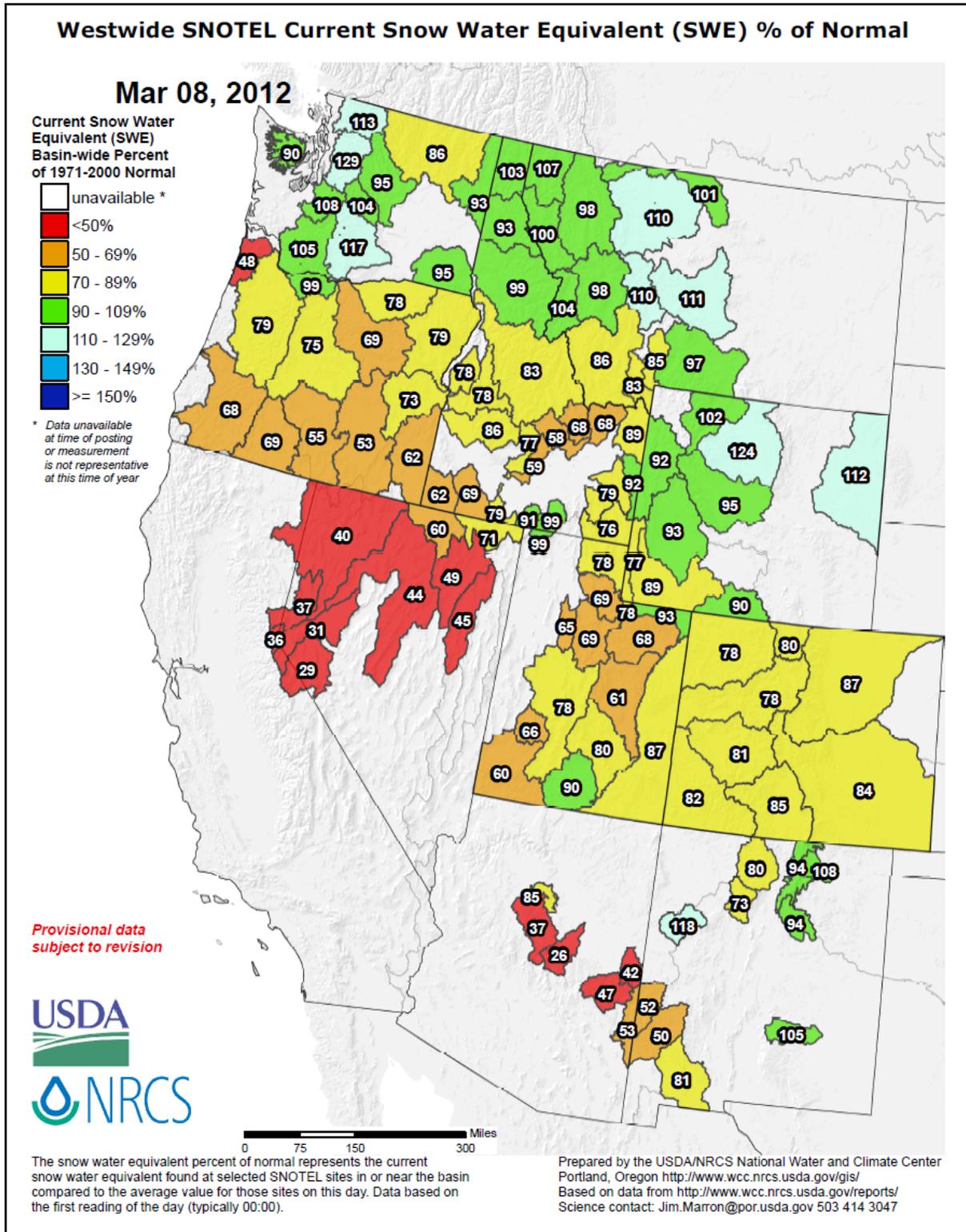


Fig. 1: Snow Water-Equivalent: No changes since last week. The Northern Tier States including the Wyoming Mountains are near normal while the Southern Tier States including the Oregon River Basins are significantly below normal. However, some river basins in New Mexico are still faring well.

SNOTEL 7-Day Snow Depth Change (Inches)

Mar 07, 2012

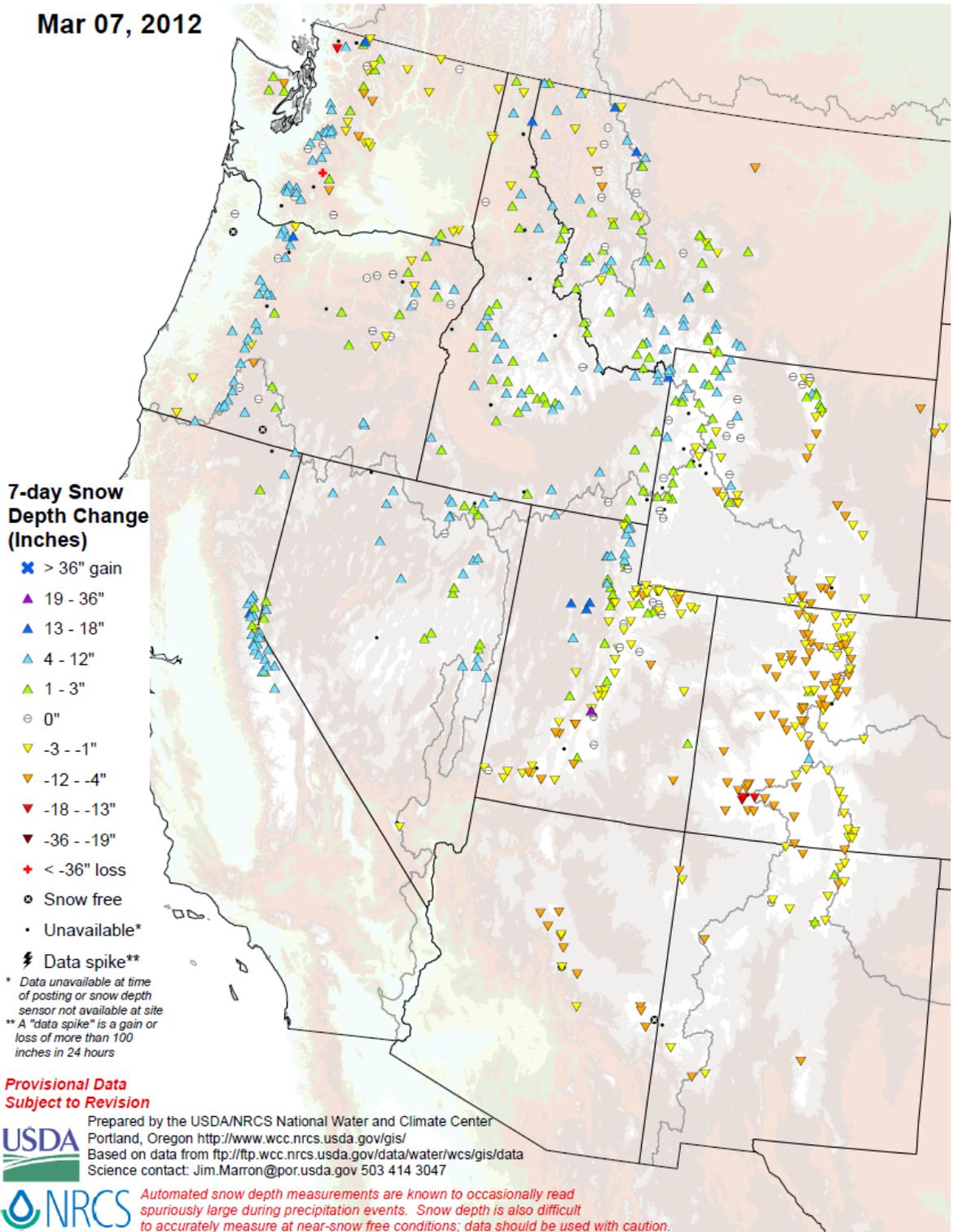


Fig. 1a: 7-Day Snow Depth Change ending this morning shows increases the Sierra and Cascades. Scattered increases also are noted over the Northern Tier States. Decreases dominated the Southwest and Colorado Rockies.

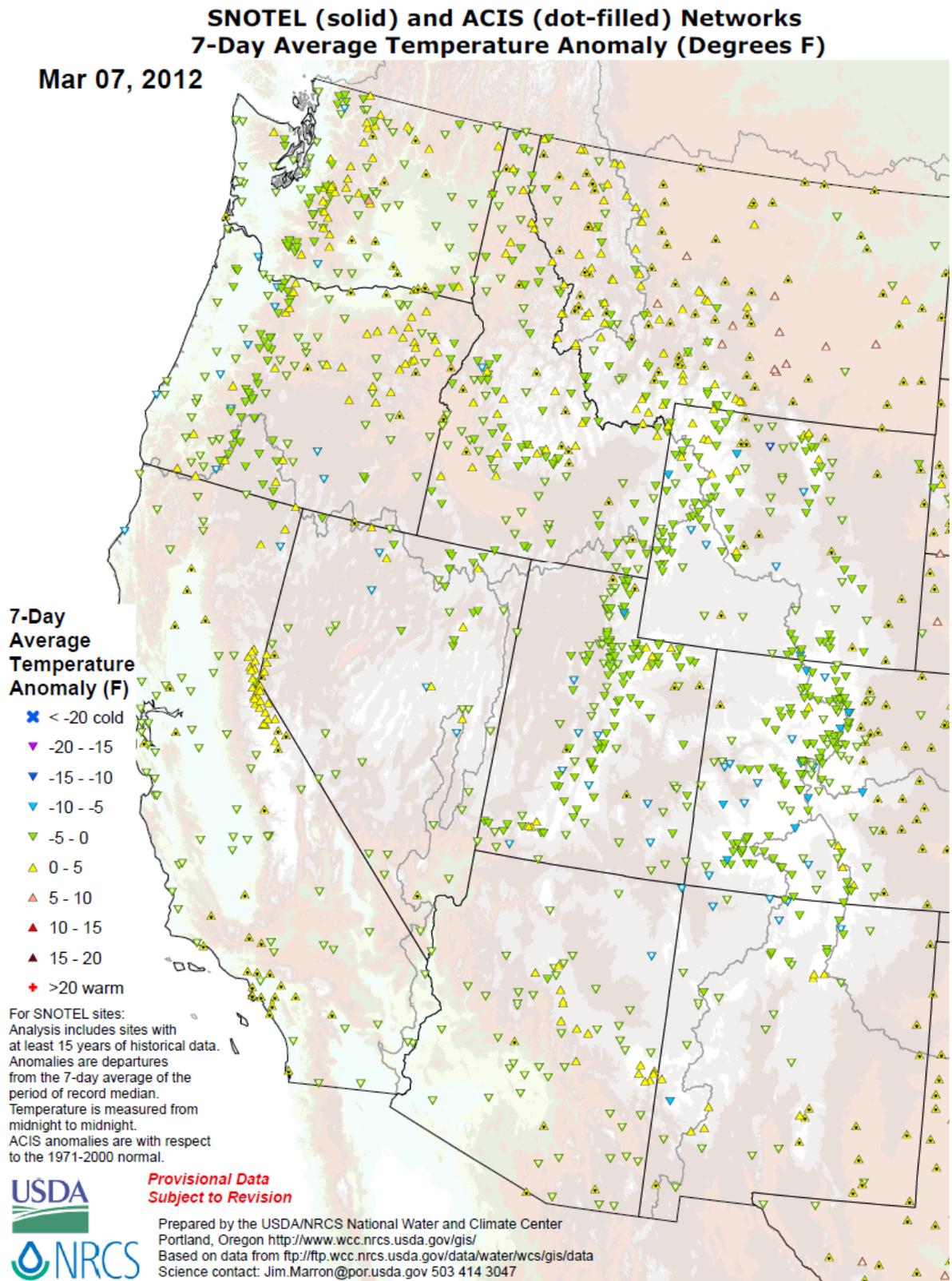
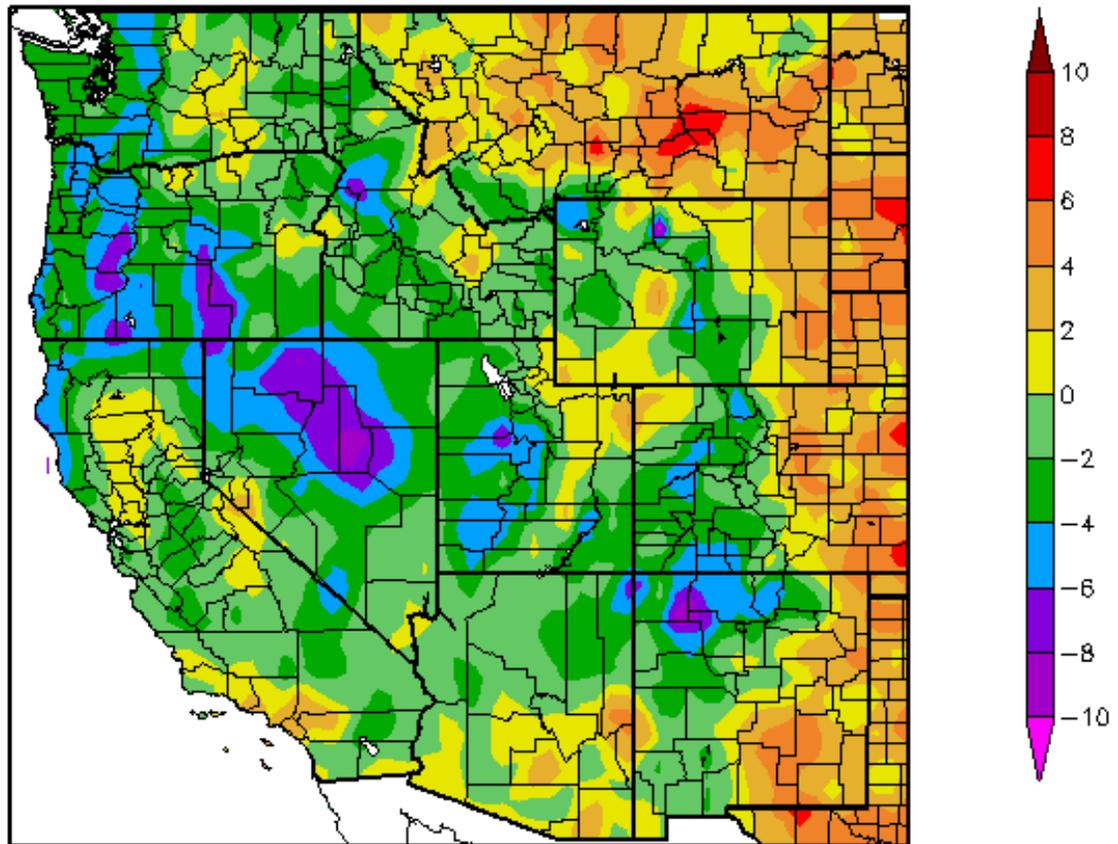


Fig. 2: **SNOTEL** and ACIS 7-day temperature anomaly showed values generally within $\pm 5^{\circ}\text{F}$.

Departure from Normal Temperature (F)
3/1/2012 – 3/7/2012



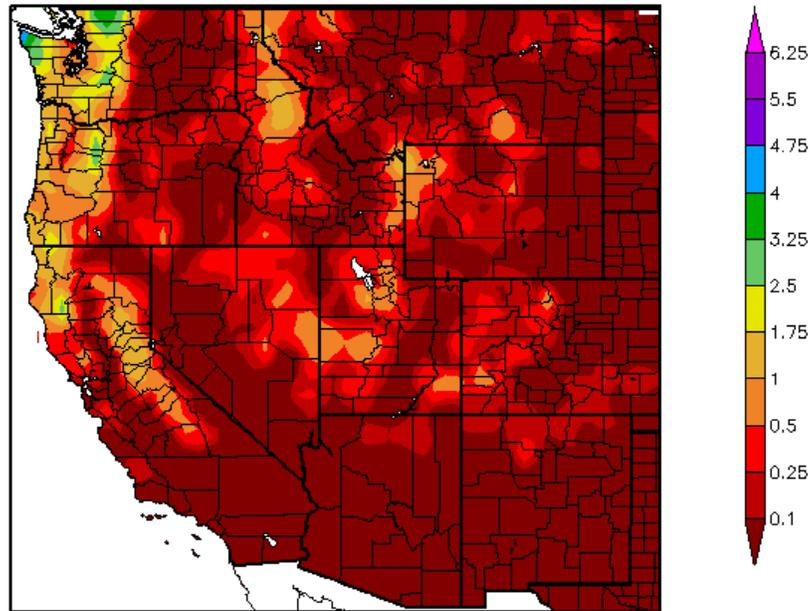
Generated 3/8/2012 at HPRCC using provisional data.

Regional Climate Centers

Fig. 2a: ACIS 7-day average temperature anomalies show the greatest positive temperature departures over southern Montana and scattered across the Western High Plains (>+6°F) and the greatest negative departures over the Central Great Basin (Nevada) (<-8°F).

Weekly Snowpack and Drought Monitor Update Report

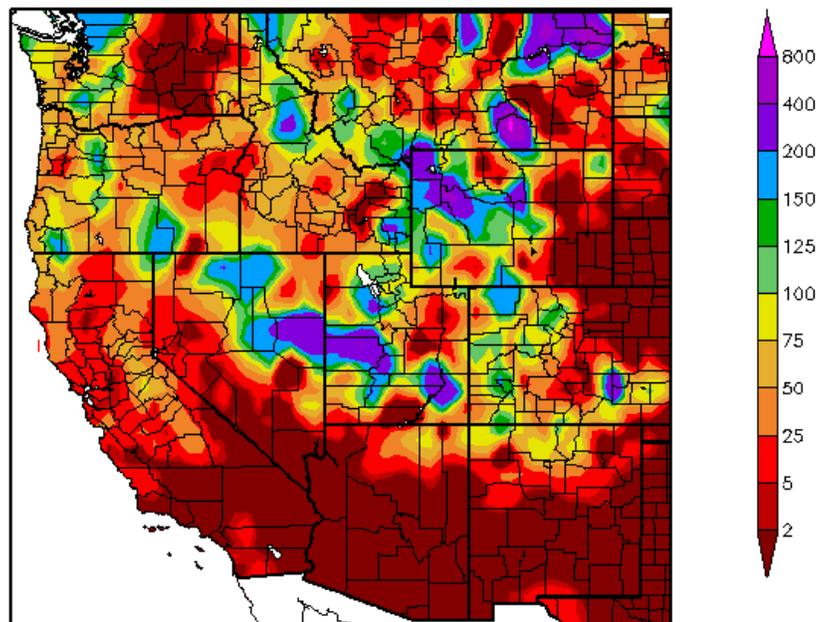
Precipitation (in)
3/1/2012 - 3/7/2012



Generated 3/8/2012 at HPRCC using provisional data.

Regional Climate Centers

Percent of Normal Precipitation (%)
3/1/2012 - 3/7/2012



Generated 3/8/2012 at HPRCC using provisional data.

Regional Climate Centers

Fig. 3 and 3a: [ACIS](#) 7-day average precipitation amounts for the period ending yesterday shows wet condition over the Northern Cascades and lesser amounts over the Sierra (top). However, in terms of percent of normal, besides the Northern Cascades, pockets of above normal amounts were observed across parts of the Great Basin, western Wyoming, and eastern Montana (bottom).

U.S. Drought Monitor

March 6, 2012
Valid 7 a.m. EST

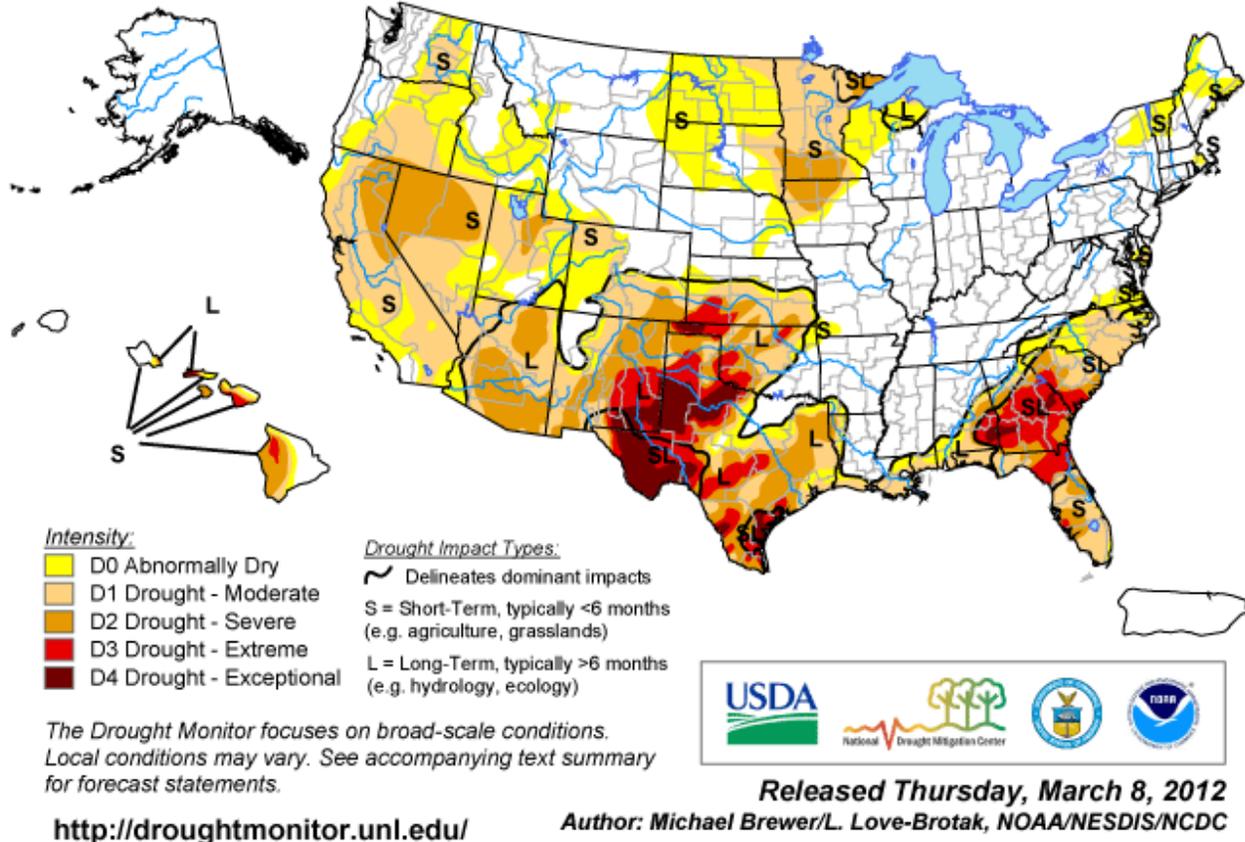


Fig. 4: Current [Drought Monitor](#) weekly summary. The exceptional D4 levels of drought are found over southeastern New Mexico, much of western Texas, the Panhandle of Oklahoma, and to a lesser extent over south Georgia and southeast Alabama. For more drought news, see [Drought Impact Reporter](#).

Agriculture

[Despite positive signals, cowherd rebuilding will take time](#)

Feb 29, **Oklahoma**. Careful pasture management is essential at this stage of recovery to prevent weeds from taking over and to allow pasture grasses to reestablish themselves.

[Expert: Texas cattle producers should remain de-stocked despite recent rainfall](#)

Feb 27, **Texas**. An AgriLife Extension state forage specialist in College Station stated that pasture recovery can take up to a year for some grass species, making restocking premature despite the appearance of green grass.

[High prices force tough bird feeder choices](#)

Feb 27, **Kansas**. Drought reduced sunflower production in Kansas by 20 percent in 2011, according to the executive director of the National Sunflower Association in North Dakota.

Water Supply & Quality

[City adjusts water use for new restrictions](#)

[Irrigator group making plans for drought declaration](#)

[Russian River water conditions now declared 'critical'](#)

[Texas rice farmers won't get water for irrigation](#)

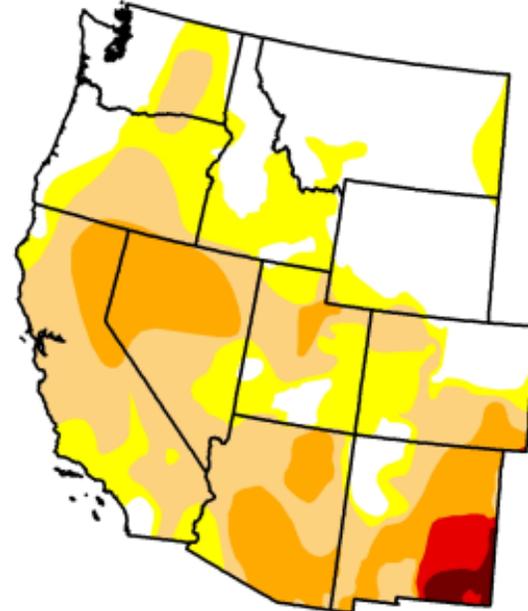
U.S. Drought Monitor

West

March 6, 2012
Valid 7 a.m. EST

Drought Conditions (Percent Area)

| | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
|---|-------|-------|-------|-------|-------|------|
| Current | 31.74 | 68.26 | 46.48 | 18.37 | 2.57 | 0.94 |
| Last Week (02/28/2012 map) | 31.91 | 68.09 | 45.30 | 17.63 | 2.56 | 0.83 |
| 3 Months Ago (12/06/2011 map) | 70.25 | 29.75 | 18.13 | 14.57 | 9.02 | 1.94 |
| Start of Calendar Year (12/27/2011 map) | 48.49 | 51.51 | 20.05 | 12.22 | 2.67 | 0.78 |
| Start of Water Year (09/27/2011 map) | 66.72 | 33.28 | 19.04 | 14.99 | 9.30 | 3.81 |
| One Year Ago (03/01/2011 map) | 76.15 | 23.85 | 15.15 | 7.72 | 0.00 | 0.00 |



Intensity:

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

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

<http://droughtmonitor.unl.edu>



Released Thursday, March 8, 2012
Michael Brewer, National Climatic Data Center, NOAA

Fig. 4a: Drought Monitor for the [Western States](#) with statistics over various time periods. Note a slight deterioration in all D-categories this week. For more info about conditions over Arizona and New Mexico, see [La Nina Tracker](#).

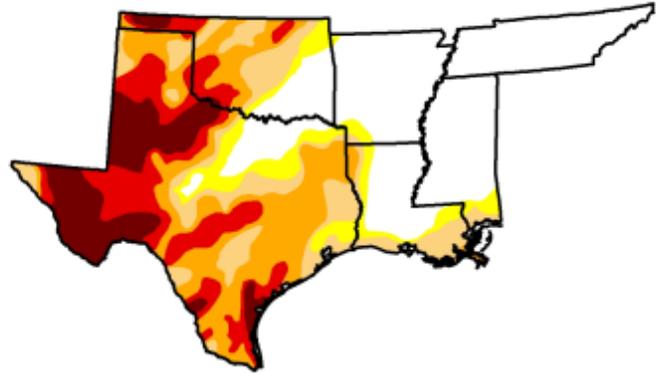
U.S. Drought Monitor

South

March 6, 2012
Valid 7 a.m. EST

Drought Conditions (Percent Area)

| | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
|---|-------|-------|-------|-------|-------|-------|
| Current | 36.89 | 63.11 | 55.89 | 41.95 | 23.80 | 10.93 |
| Last Week (02/28/2012 map) | 36.89 | 63.11 | 55.02 | 41.39 | 23.22 | 7.96 |
| 3 Months Ago (12/06/2011 map) | 24.24 | 75.76 | 71.33 | 58.44 | 45.92 | 22.87 |
| Start of Calendar Year (12/27/2011 map) | 26.47 | 73.53 | 69.01 | 54.81 | 39.11 | 17.15 |
| Start of Water Year (09/27/2011 map) | 18.34 | 81.66 | 76.26 | 70.61 | 63.67 | 53.77 |
| One Year Ago (03/01/2011 map) | 4.74 | 95.26 | 74.28 | 38.60 | 10.76 | 0.00 |



Intensity:

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

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

<http://droughtmonitor.unl.edu>



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Michael Brewer, National Climatic Data Center, NOAA

Fig. 4b: Drought Monitor for the [South-Central States](#) with statistics over various time periods. No significant change noted this week.

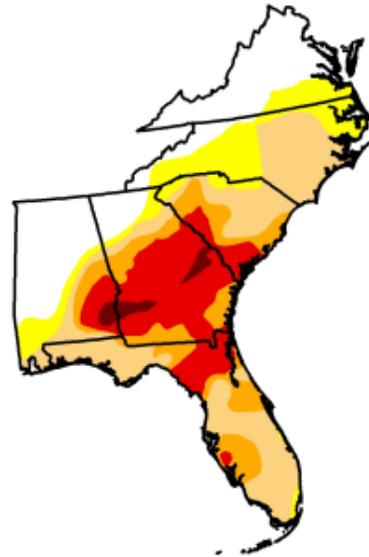
U.S. Drought Monitor

Southeast

March 6, 2012
Valid 7 a.m. EST

Drought Conditions (Percent Area)

| | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
|---|-------|-------|-------|-------|-------|------|
| Current | 26.24 | 73.76 | 59.02 | 32.47 | 19.04 | 1.62 |
| Last Week (02/28/2012 map) | 24.97 | 75.03 | 58.78 | 36.93 | 24.26 | 8.11 |
| 3 Months Ago (12/06/2011 map) | 43.19 | 56.81 | 43.30 | 31.28 | 19.41 | 0.00 |
| Start of Calendar Year (12/27/2011 map) | 40.38 | 59.62 | 43.05 | 28.62 | 18.71 | 0.00 |
| Start of Water Year (09/27/2011 map) | 42.24 | 57.76 | 41.82 | 31.77 | 23.48 | 0.00 |
| One Year Ago (03/01/2011 map) | 5.82 | 94.18 | 75.79 | 27.10 | 4.43 | 0.00 |



Intensity:

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

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

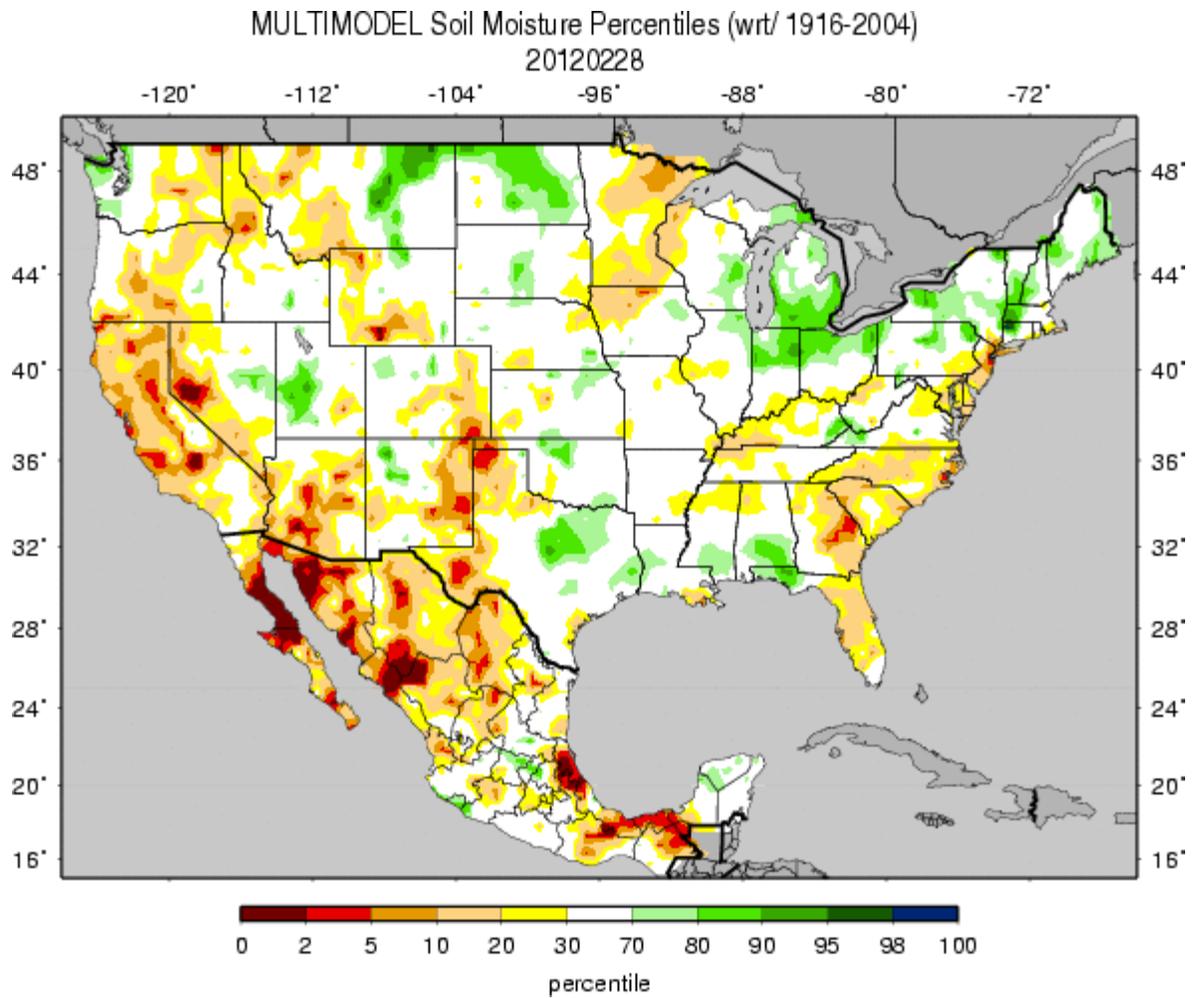
<http://droughtmonitor.unl.edu>



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Fig. 4c: Drought Monitor for the [Southeastern States](#) with statistics over various time periods. Note a nice improvement in D3 and D4 this week.

Weekly Snowpack and Drought Monitor Update Report



Figs. 5: Soil Moisture ranking in [percentile](#) as of 28 February shows conditions about the same as last week. Note: Soil moisture this time of year is often unreliable due to frozen ground.

Weekly Snowpack and Drought Monitor Update Report

Soil Climate Analysis Network (SCAN)

Station (2038) MONTH=2012-02-07 (Daily) NRCS National Water and Climate Center - Provisional Data - subject to revision
Thu Mar 08 07:18:56 PST 2012

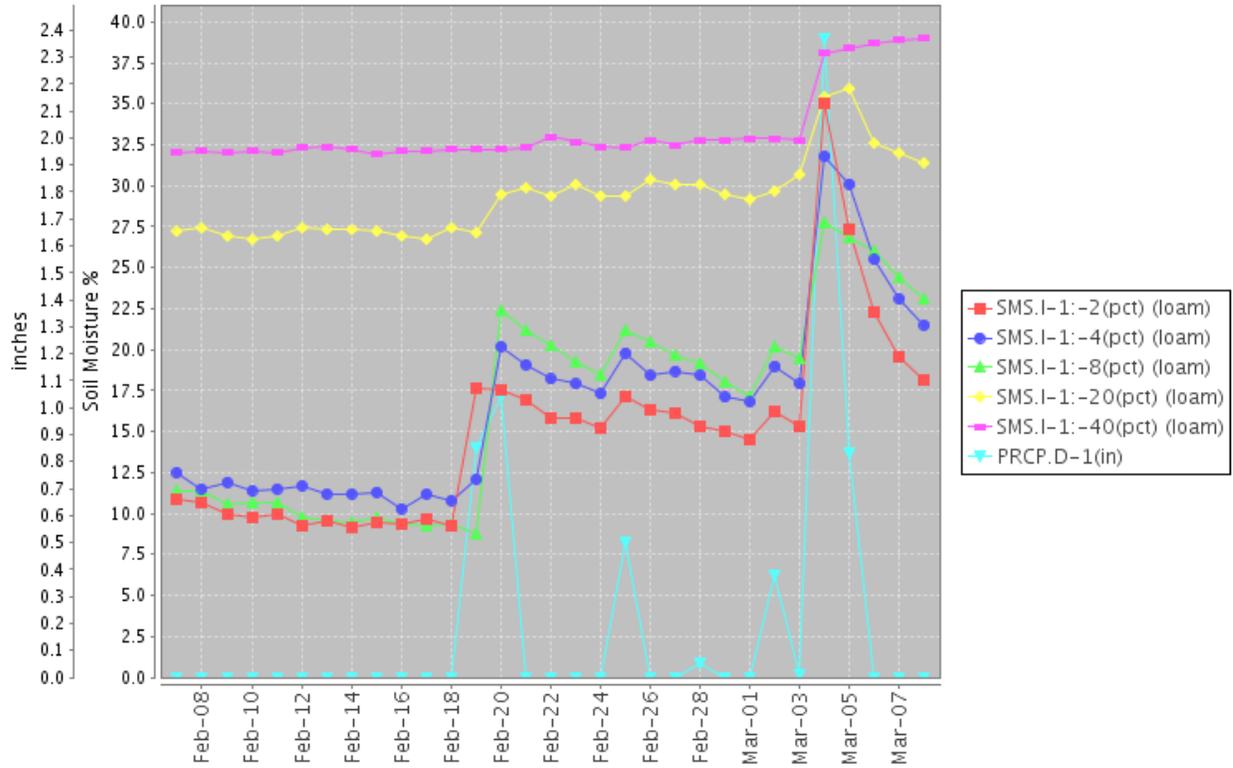
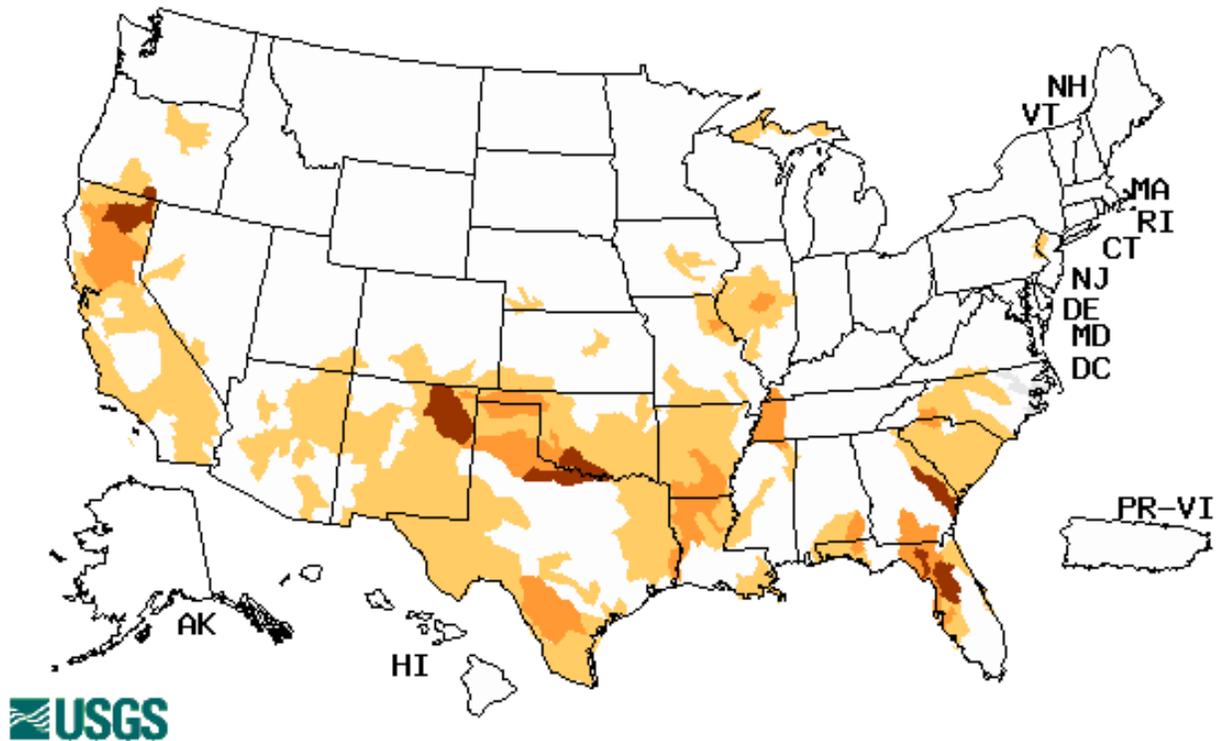


Fig. 6: This NRCS resource shows a site over [southern South Carolina](#) with soil moisture continuing to respond to some recent rains.

Weekly Snowpack and Drought Monitor Update Report

Wednesday, March 07, 2012



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

Fig. 7: Map of below normal 7-day average [streamflow](#) compared to historical streamflow for the day of year. Clearly, the Southeast States showed significant improvement this week as severe flows have abated. A new area of severe flows has developed over northern Texas and northern California.

Weekly Snowpack and Drought Monitor Update Report

National Drought Summary -- March 6, 2012

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/>.

This U.S. Drought Monitor week was dominated by a series of storm that moved across the country primarily from February 28 – March 2. These storms dropped well over 100 tornadoes, based upon preliminary reports. According to NOAA's Storm Prediction Center, as of March 6, there were 47 confirmed deaths in Alabama, Illinois, Indiana, Kansas, Kentucky, Missouri, Ohio, and Tennessee.

The Southeast: Beneficial precipitation moved through some of the most intense drought areas of the Southeast this week. Storms which brought tornadoes from Ohio and Illinois down through Alabama also brought multiple inches of rain from the panhandle of Florida up into the Delmarva Peninsula. Areas of Exceptional Drought (D4) were alleviated in south Georgia. Extreme Drought (D3) improved in northern Florida, Georgia, and South Carolina. Severe Drought (D2) improved in Florida and the Carolinas. Moderate Drought (D1) improved in southern Alabama and northern Florida.

The Northeast and Mid-Atlantic: Adequate rains fell this week the Mid-Atlantic and Northeast. Areas of Abnormal Dryness (D0) improved in the southern Delmarva Peninsula and in southeastern Maine.

The South and Southern Plains: With the exception of the extreme south of Texas and near New Orleans, LA, little precipitation fell in the South this week. Minor improvements in Exceptional Drought (D3) were made around southeastern Louisiana and in south-central Texas. The mounting lack of precipitation in western Texas and the Texas Panhandle led to expansion in all drought classes in those areas including expansion of Exceptional Drought (D4). In Kansas, Moderate Drought (D1) and Abnormal Dryness (D0) expanded in the north-central and western part of the State.

The Northern Plains and Midwest: Conditions in the Northern Plains improved some this week with the passing of a front that dumped rain and snow across much of the region. Moderate Drought (D1) improved in North and South Dakota and in northeast Nebraska. Abnormal Dryness (D0) improved in South Dakota. In the Midwest, conditions improved slightly in northwest Iowa with contraction of Severe Drought (D2).

The West: The West was generally dry this week with the exception of the extreme Northwest. Drought conditions remain unchanged in most areas but intensified in northern Utah, in southern Oregon and near the Nevada – California border where long-term deficits are mounting.

Weekly Snowpack and Drought Monitor Update Report

Hawaii, Alaska and Puerto Rico: Drought conditions remained unchanged in Alaska and Puerto Rico this week. In Hawaii, precipitation on the south end of the Big Island led to improvement in Severe (D2) and Moderate Drought (D1). Oahu saw a contraction of the Abnormal Dryness (D0) there.

Looking Ahead: During the March 8-12, 2012 time period, there is an enhanced probability of precipitation in the Pacific Northwest and ranging from the Southern Plains into the Southeast. Below normal precipitation is expected through much of the West and throughout the Great Lakes and New England.

For the ensuing 5 days (March 13-17, 2012), the odds favor normal to warmer than normal conditions over the entire US with the exception of the Pacific Coast and Alaska, where odds favor below normal conditions. In New England, the extreme Southwest, and Alaska the odds favor below normal precipitation while the northern Pacific Coast and a large area from the South, through the Southeast and into the Ohio Valley and Midwest are expected to see above normal precipitation.

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 March 7, 2012