



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

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**Weekly Report - Snowpack / Drought Monitor Update**

**Date: 16 December 2010**

## **SNOTEL SNOWPACK AND PRECIPITATION SUMMARY**

**Snow:** Snow-Water Equivalent percent of normal values for 16 December 2010 shows conditions improved significantly from the Northern Cascades to the Northern Rockies this week (Fig 1). SNOTEL 7-day snow depth changes show considerably gains in accumulation across much of the West excluding the Southern Cascades in Oregon and southwest mountains of Utah (Fig. 1a).

**Temperature:** SNOTEL 7-day average temperature departure from normal map shows temperatures were much above normal over the southern half of the West and closer to Normal over the Cascades (Fig 2). ACIS 7-day average temperature anomalies show that the greatest positive temperature departures was over central Idaho, southeast Oregon, and western Utah ( $>+15^{\circ}\text{F}$ ) and the greatest negative departures occurred over northeast Montana ( $<-6^{\circ}\text{F}$ ) (Fig. 2a).

**Precipitation:** ACIS 7-day average precipitation amounts for the period ending 15 December shows the bulk of the heaviest precipitation confined to Pacific Northwest (western Washington and northwest Oregon) (Fig. 3). In terms of percent of normal, the precipitation pattern was extremely wet over the Northern Tier States and extremely dry over the Southern Tier States (typical during La Niña) (Fig. 3a). For the 2011 Water-Year that began on 1 October 2010, precipitation has increased significantly over the Pacific Northwest to the Northern Rockies. The highest percentages are still found over the Great Basin and the lowest over eastern Arizona and all of New Mexico (Fig. 3b).

**Southwest:** Another week of little or no precipitation and above-normal temperatures (4 to 8 deg F, as expected during a strong La Nina) continued to accumulate precipitation deficits and delay the start to the 2010-11 Water-Year. Except for some unseasonably heavy rainfall back in early and mid-October, most of southeastern California, Arizona, New Mexico, southwest Texas, and southern sections of Utah and Colorado have seen little precipitation. Fortunately, temperatures have generally been at or below normal since late October, however, this week's warmth exacerbated the lack of rain. Accordingly, D0 was expanded across nearly all of New Mexico, into southeastern Utah and southwestern Colorado, and D1 was introduced into southeastern Arizona and southwestern New Mexico and southern Colorado. In the latter area, precipitation deficits have accumulated over the past few months, SNOTEL precipitation percentiles are fairly low, and STD basin precipitation and SWC on December 13 ranged between 50 to 75 percent. In contrast, after a reassessment of several indices, D0 was removed from northwestern Arizona where the heavy rains (2 to 6 inches) in early and mid-October still affected the short-term blends and indices (no drought), and nearby southwestern Utah SNOTEL Basin Water Year to Date (WYTD) precipitation was at 199 percent.

**Intermountain West and north-central Rockies:** The wettest storm in the past two years hit western Washington Saturday, with weekly totals of 6 to 12 inches common, with locally up to 18 inches in western Washington. The moisture fetch also generated ample precipitation to much of the Northwest, in line with expected La Nina conditions. Accordingly, the continued wet

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winter and this week's precipitation (0.5 to 2 inches) was enough to remove lingering D0 in southwest and southeast Idaho, northwestern Utah, and the western edges in southwestern Oregon and northwestern Wyoming. SNOTEL basin averaged WYTD precipitation and Snow Water Content (SWC) on Dec. 13 was 125 to 150 percent of normal, an excellent start to this year's water year. In western Wyoming, higher-elevation sites are doing well, but lower-elevation stations are much drier, especially in Sublette and Sweetwater counties. As a result, the D1 remained there. Additional precipitation (1 to 1.5 inches) fell on the remainder of southern Oregon and northern California, requiring further trimming of D0 and D1 where the largest totals occurred. Farther south, even though no precipitation fell and temperatures were well above-normal, no degradation was made (D0 and D1H remained) in central California and southern Nevada thanks to a wet November. Author: David Miskus, CPC/NCEP/NWS/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 and 4a).

### **SOIL MOISTURE**

Soil moisture (Figs. 5a and 5b), 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/>.

### **U.S. HISTORICAL STREAMFLOW**

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

This map, (Fig. 6) 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/cgibin/bor.pl>.

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Additional information describing the products available from the Drought Monitor can be found at the following URL: <http://drought.unl.edu/dm/> and <http://drought.gov>.

### **FOR MORE INFORMATION**

The National Water and Climate Center Homepage provide the latest available snowpack and water supply information. Please visit us at <http://www.wcc.nrcs.usda.gov>. This document is available from the following location on the NWCC homepage - <http://www.wcc.nrcs.usda.gov/water/drought/wdr.pl>

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

/s/ JEFF GOEBEL  
Acting Director, Resource Inventory Division

# Weekly Snowpack and Drought Monitor Update Report

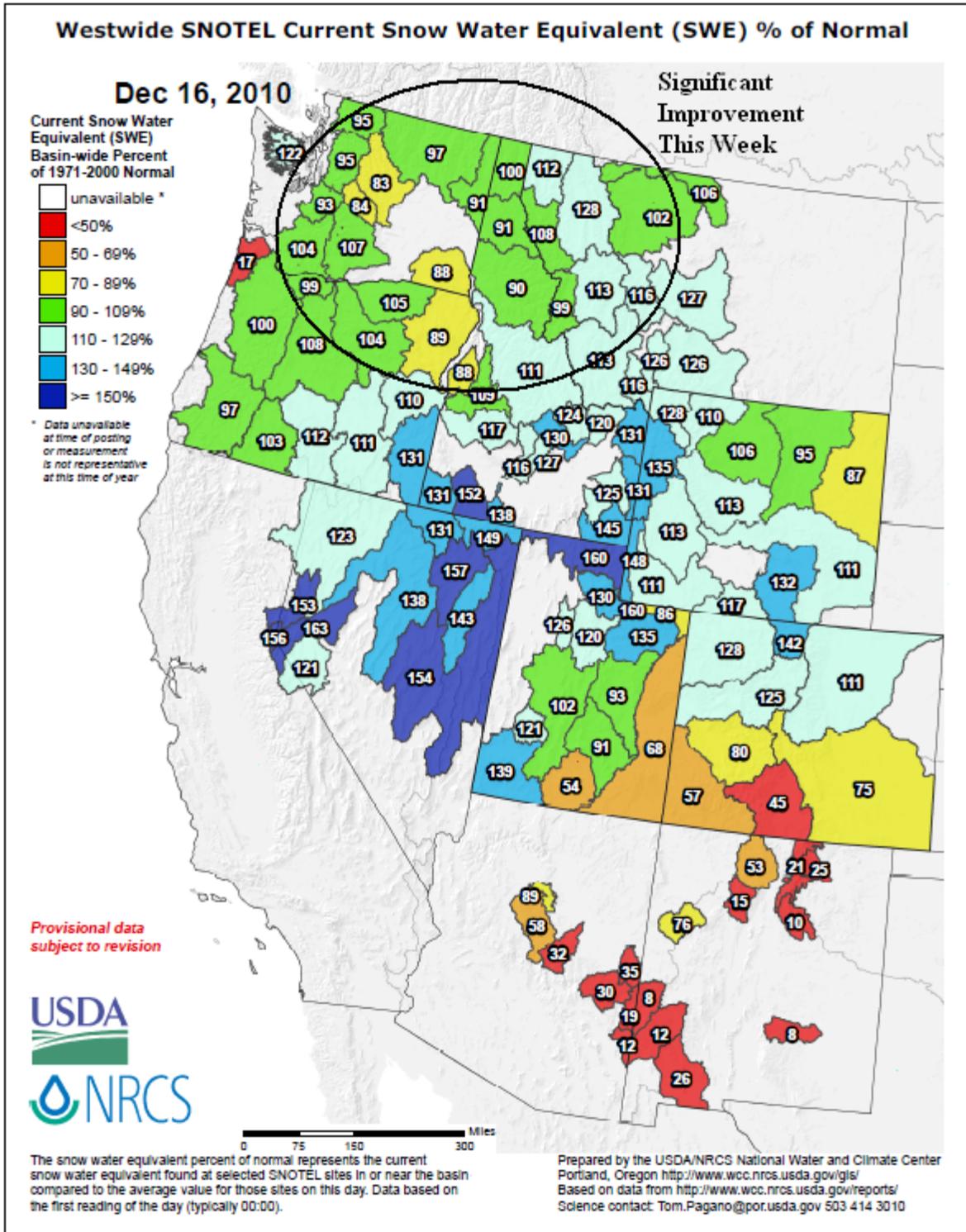


Fig 1. SNOTEL Snow-Water Equivalent percent of normal values for 16 December 2010 shows conditions improved significantly from the Northern Cascades to the Northern Rockies this week.

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

# Weekly Snowpack and Drought Monitor Update Report

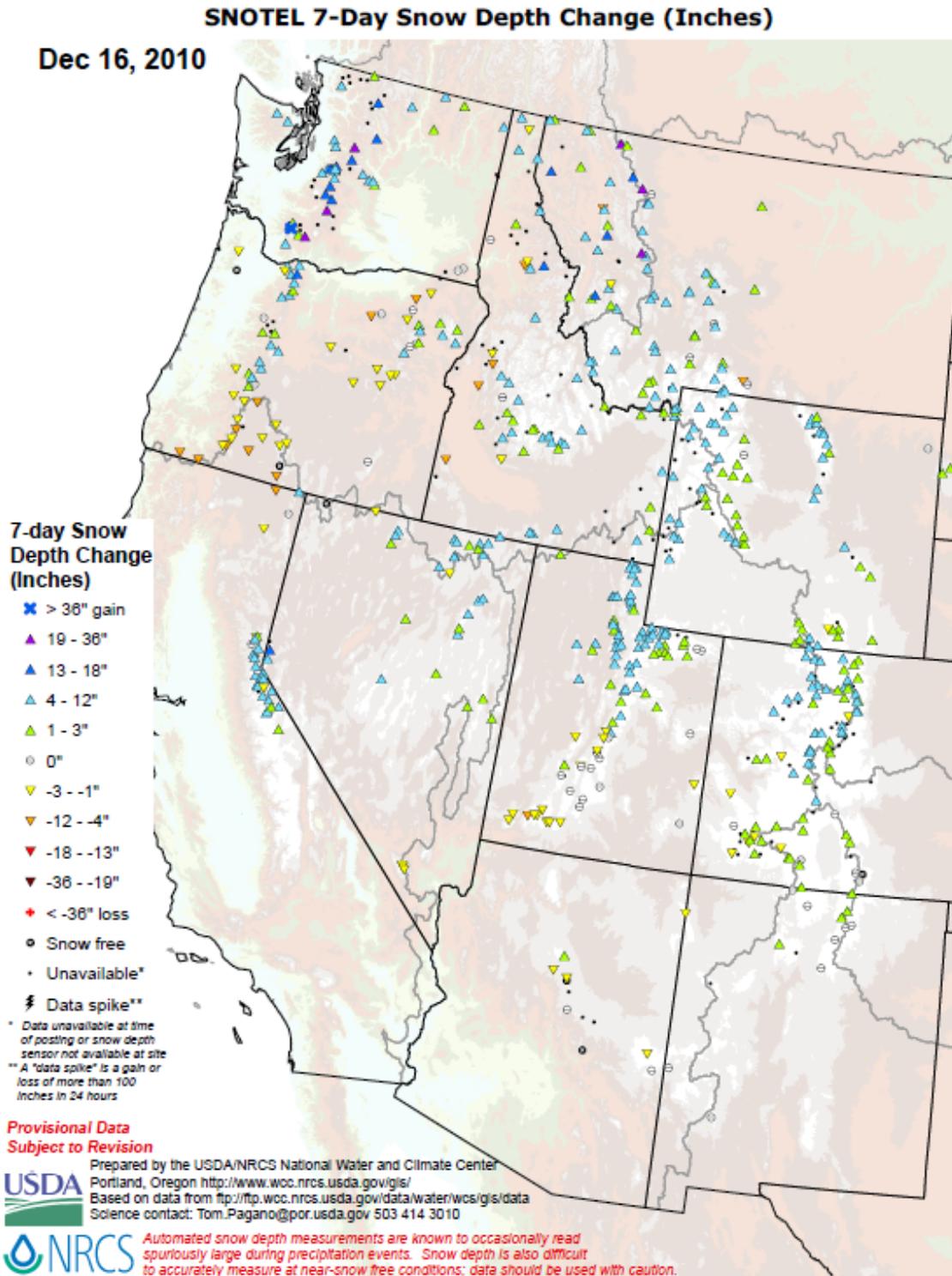


Fig 1a. SNOTEL 7-day snow depth changes show considerably gains in accumulation across much of the West excluding the Southern Cascades in Oregon and southwest mountains of Utah.

Ref: [http://www.wcc.nrcs.usda.gov/ftpref/data/water/wcs/gis/maps/west\\_snowdepth\\_7ddelta.pdf](http://www.wcc.nrcs.usda.gov/ftpref/data/water/wcs/gis/maps/west_snowdepth_7ddelta.pdf)

# Weekly Snowpack and Drought Monitor Update Report

## SNOTEL (solid) 7-Day Average Temperature Anomaly (Degrees F) Dec 16, 2010

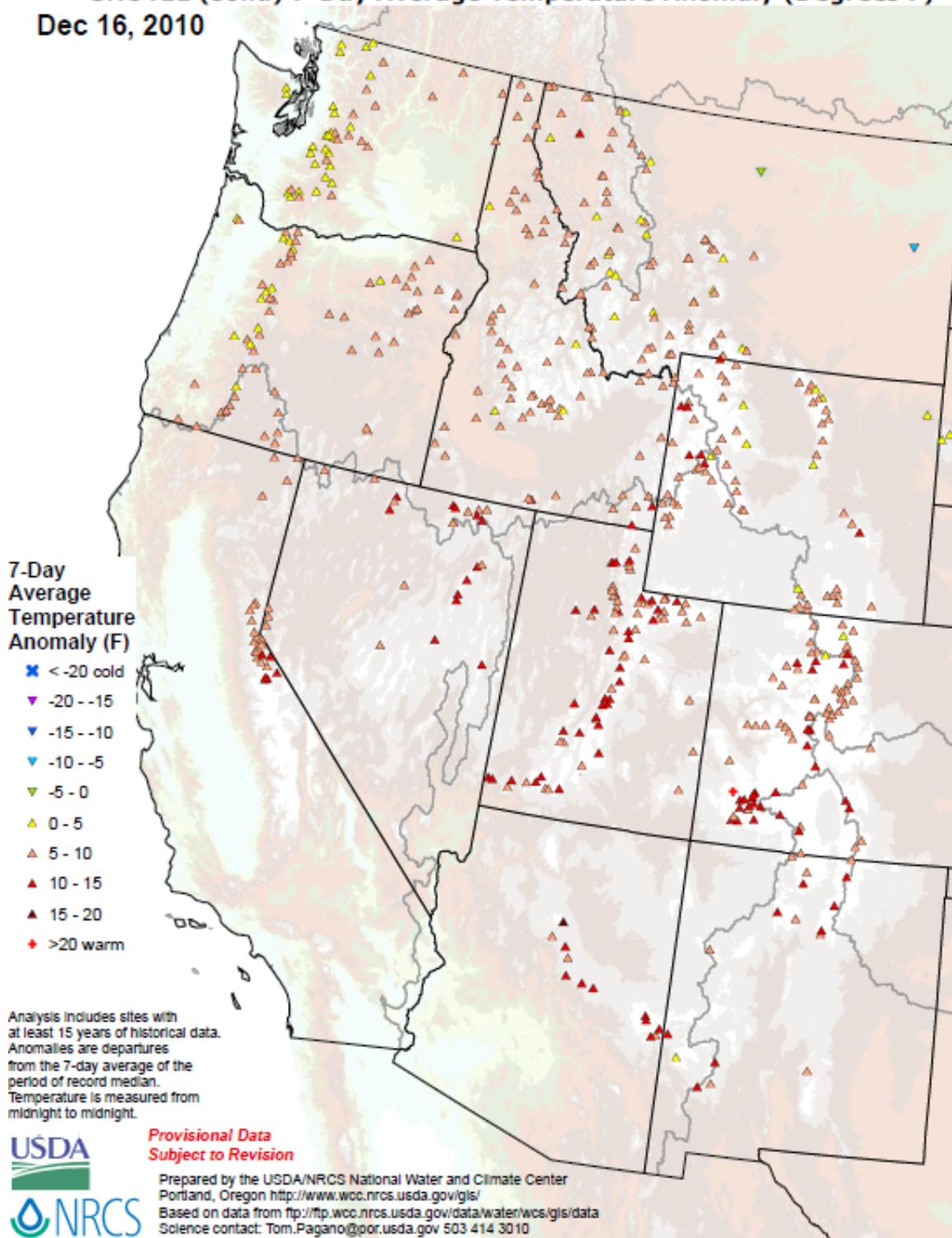
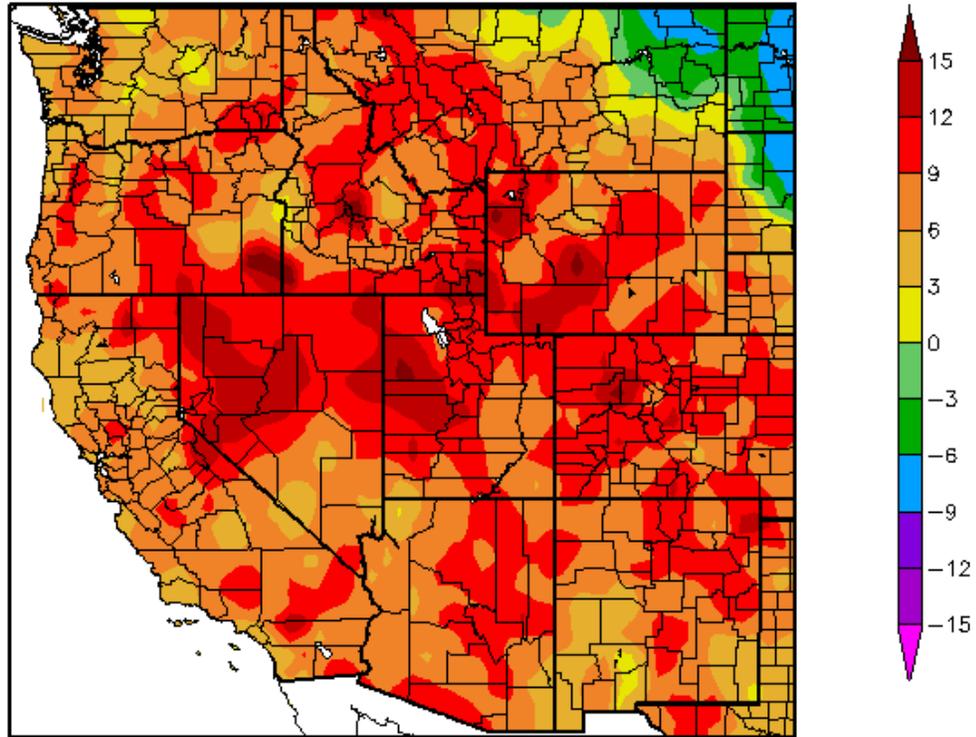


Fig. 2: SNOTEL 7-day average temperature departure from normal map shows temperatures were much above normal over the southern half of the West and closer to Normal over the Cascades.

Ref: <http://www.wcc.nrcs.usda.gov/ftpref/data/water/wcs/gis/maps/WestwideTavg7dAnomaly.pdf>

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Departure from Normal Temperature (F)  
12/9/2010 – 12/15/2010



Generated 12/16/2010 at HPRCC using provisional data.

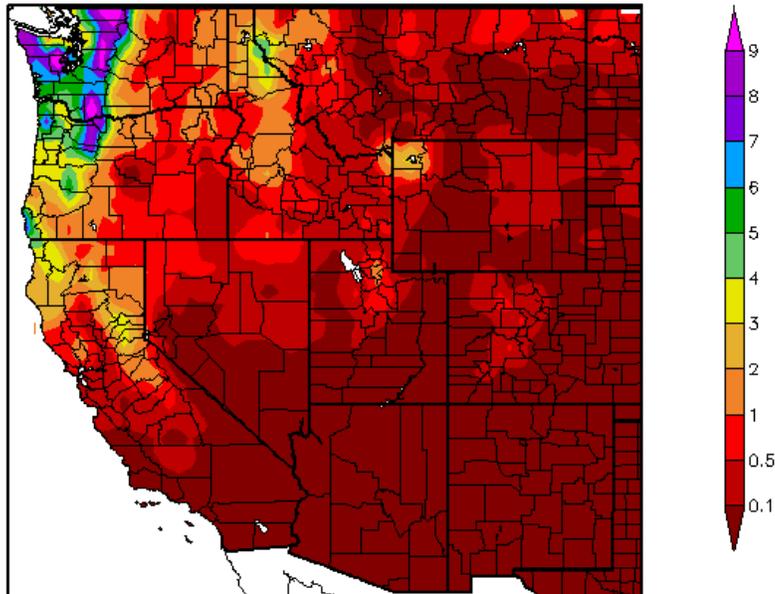
Regional Climate Centers

**Fig. 2a: ACIS 7-day average temperature anomalies show that the greatest positive temperature departures was over central Idaho, southeast Oregon, and western Utah (>+15°F) and the greatest negative departures occurred over northeast Montana (<-6°F).**

Ref: [http://www.hprcc.unl.edu/maps/current/index.php?action=update\\_daterange&daterange=7d](http://www.hprcc.unl.edu/maps/current/index.php?action=update_daterange&daterange=7d)

## Weekly Snowpack and Drought Monitor Update Report

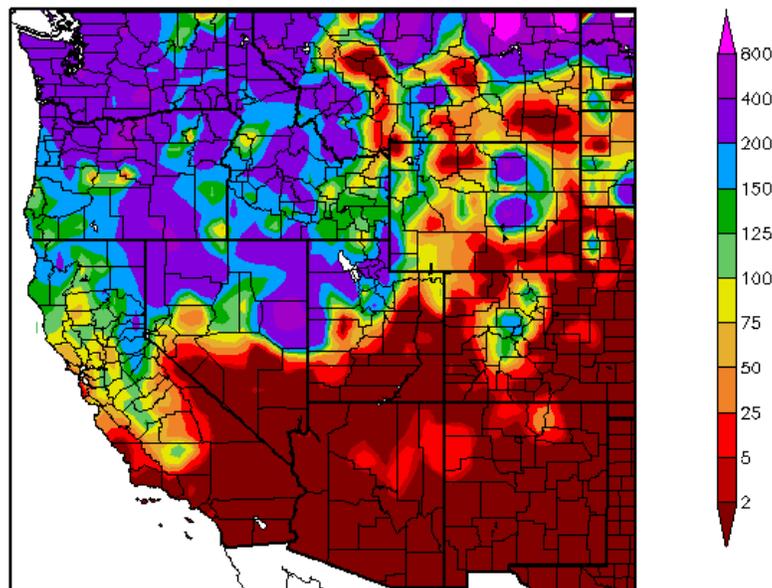
Precipitation (in)  
12/9/2010 - 12/15/2010



Generated 12/16/2010 at HPRCC using provisional data.

Regional Climate Centers

Percent of Normal Precipitation (%)  
12/9/2010 - 12/15/2010



Generated 12/16/2010 at HPRCC using provisional data.

Regional Climate Centers

**Fig. 3 and 3a:** ACIS 7-day average precipitation amounts for the period ending 15 December shows the bulk of the heaviest precipitation confined to Pacific Northwest (western Washington and northwest Oregon) (Fig. 3). In terms of percent of normal, the precipitation pattern was extremely wet over the Northern Tier States and extremely dry over the Southern Tier States (typical La Niña signature) (Fig. 3a). Ref: <http://www.hprcc.unl.edu/maps/current/>

Weekly Snowpack and Drought Monitor Update Report

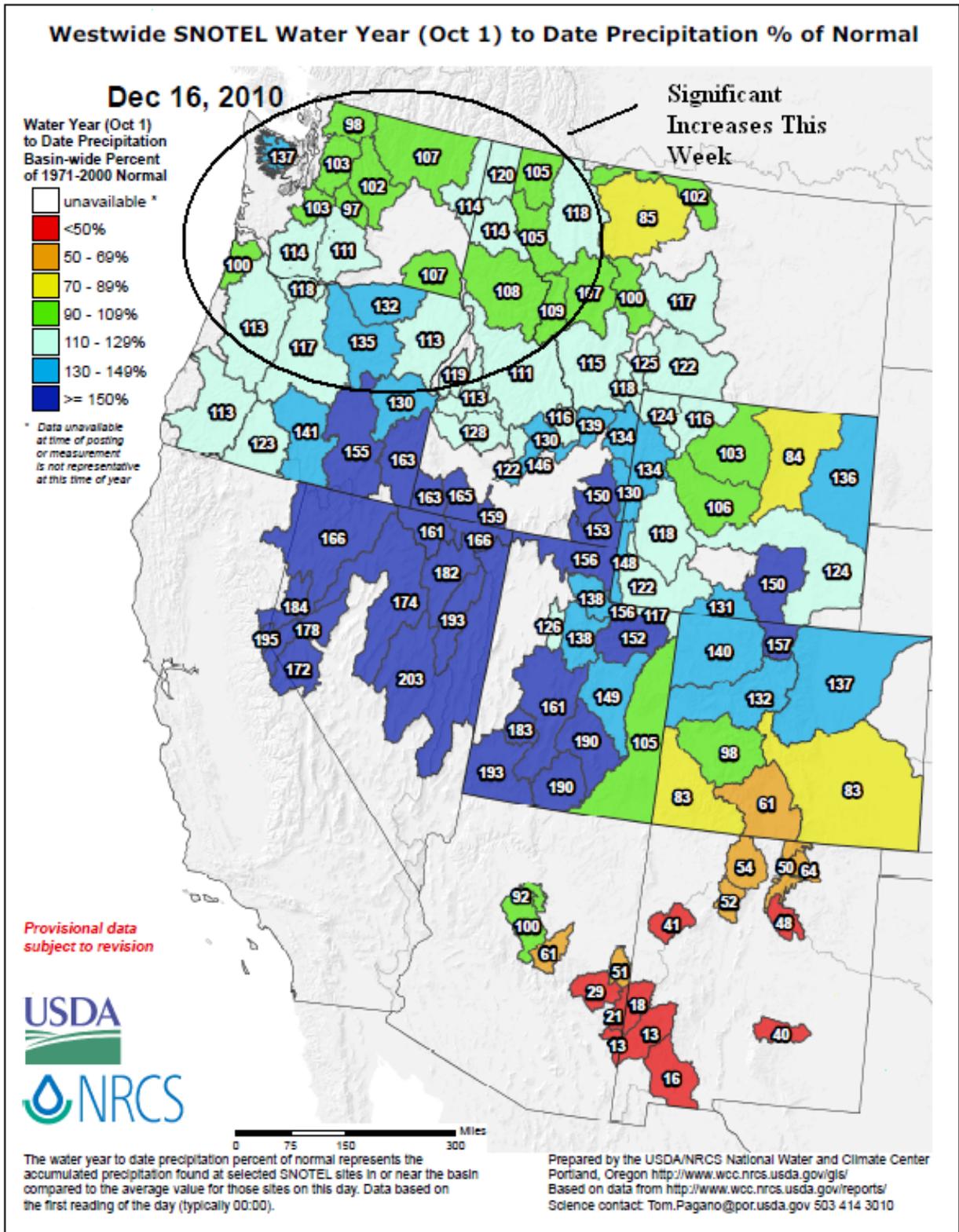


Fig 3b: For the 2011 Water-Year that began on 1 October 2010, precipitation has increased significantly over the Pacific Northwest to the Northern Rockies. The highest percentages are still found over the Great Basin and the lowest over eastern Arizona and all of New Mexico.

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

# U.S. Drought Monitor

December 14, 2010

Valid 7 a.m. EST

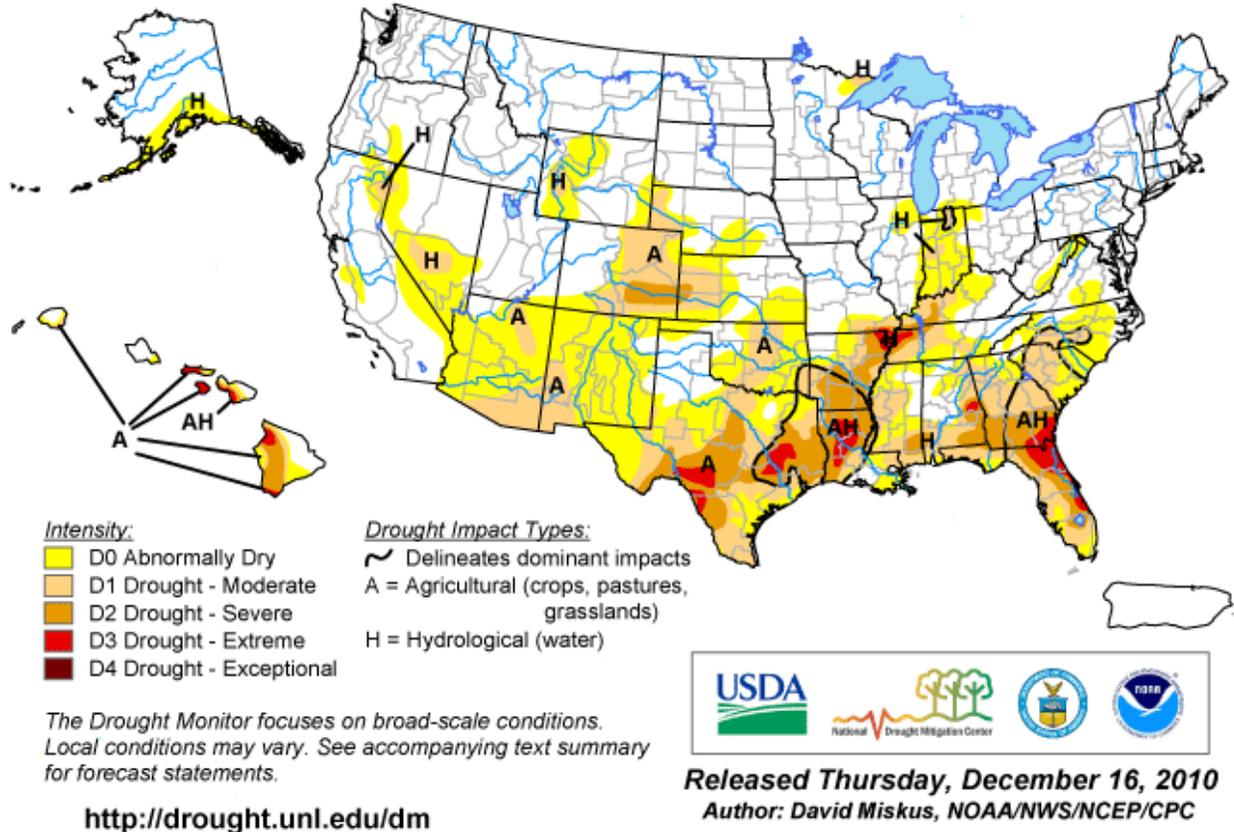


Fig. 4: Current Drought Monitor weekly summary. The severest D3 levels of drought dominate Hawaii, and is scattered across Texas to Florida.  
Ref: <http://www.drought.unl.edu/dm/monitor.html>

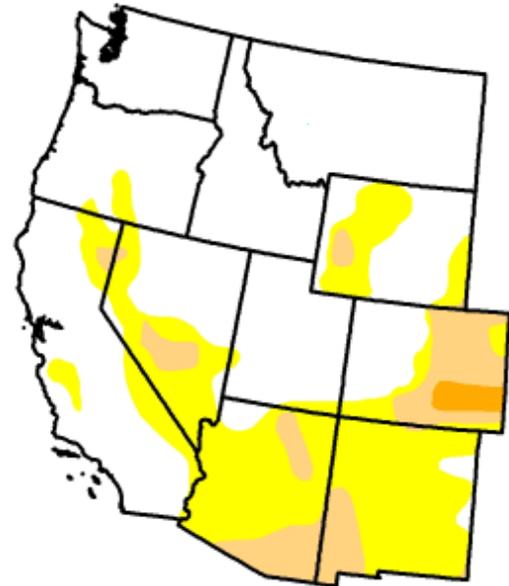
# U.S. Drought Monitor

## West

December 14, 2010  
Valid 7 a.m. EST

*Drought Conditions (Percent Area)*

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	64.0	36.0	9.8	0.9	0.0	0.0
Last Week (12/07/2010 map)	64.9	35.1	6.4	0.9	0.0	0.0
3 Months Ago (09/21/2010 map)	69.9	30.1	6.9	0.6	0.0	0.0
Start of Calendar Year (01/05/2010 map)	40.1	59.9	30.6	9.9	0.5	0.0
Start of Water Year (10/05/2010 map)	62.5	37.5	8.4	0.6	0.0	0.0
One Year Ago (12/15/2009 map)	43.0	57.0	28.4	9.9	0.5	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>

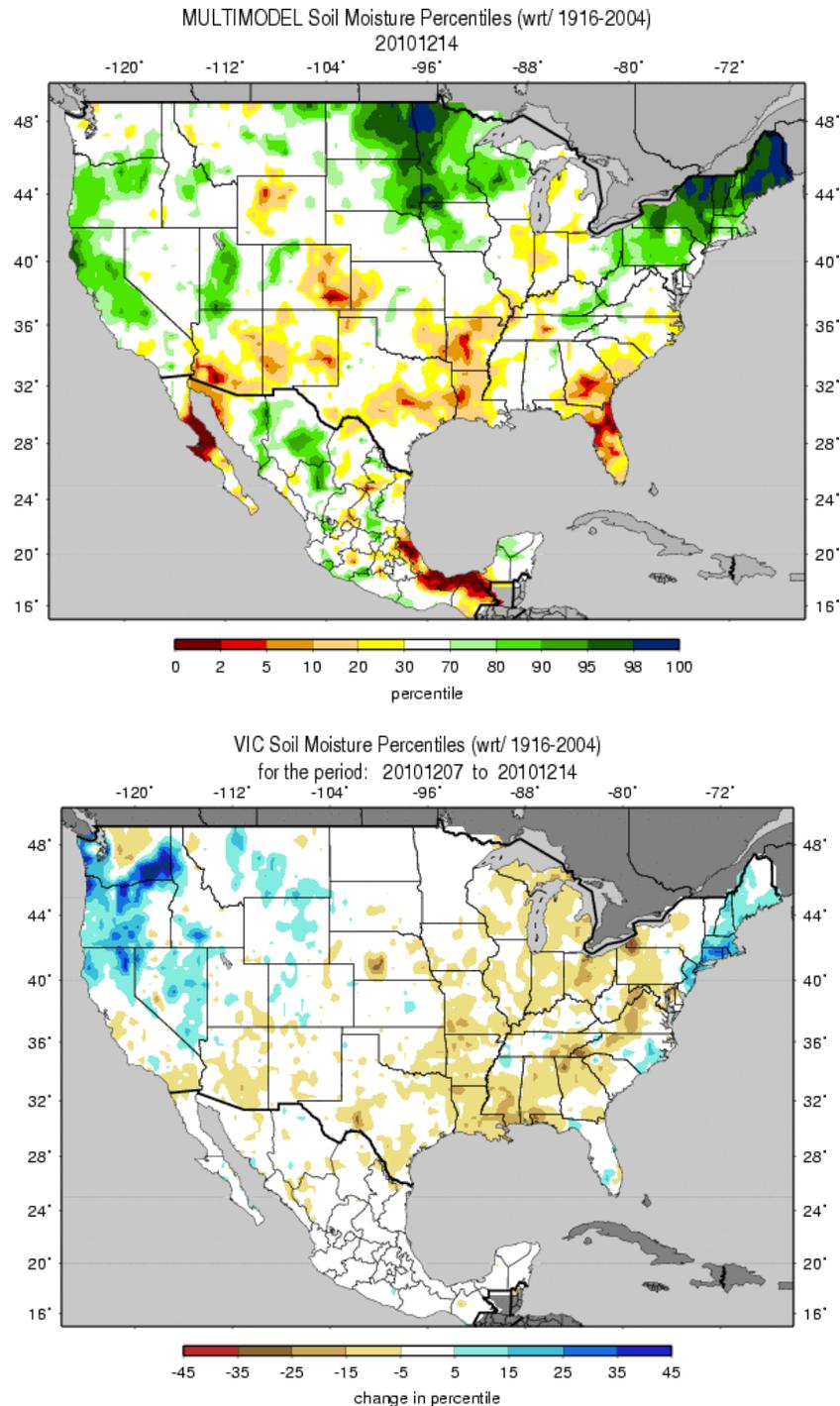


Released Thursday, December 16, 2010  
Author: D. Miskus, CPC/NOAA

**Fig. 4a: Drought Monitor for the Western States with statistics over various time periods. Regionally there was some deterioration in D1 intensity over southern Arizona and New Mexico during the past week.**

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

## Weekly Snowpack and Drought Monitor Update Report



**Figs. 5a and 5b: Soil Moisture ranking in percentile based on 1916-2004 climatology as of 14 December (Fig. 5a). Wetter conditions dominate New England and the Northeast Plains and drier conditions dominate much of the Southern Tier States. During the past week, much wetter conditions developed over parts of the Pacific Northwest and Coastal New England with dryness developing over the eastern third of the country (Fig. 5b).**

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

# Weekly Snowpack and Drought Monitor Update Report

Wednesday, December 15, 2010

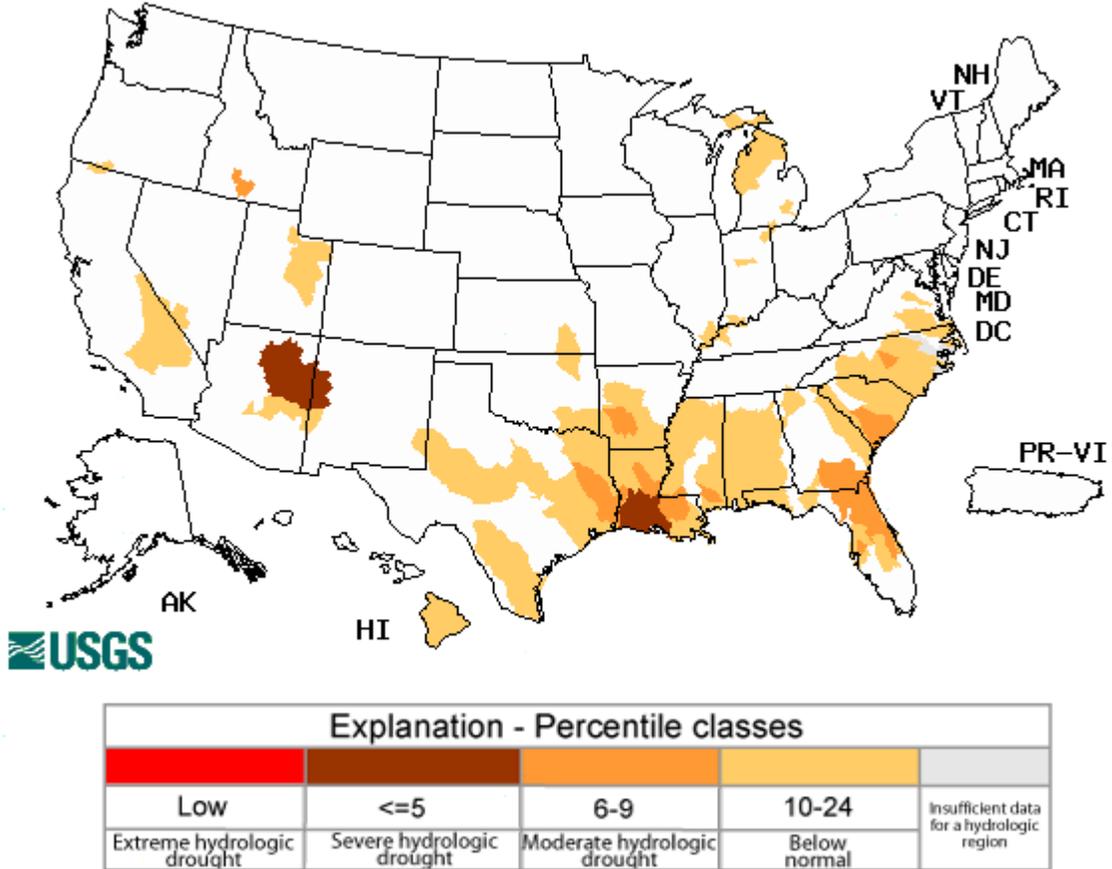


Fig. 6: Map of below normal 7-day average streamflow compared to historical streamflow for the day of year. Clearly, the Southern Tier States are starting to reflect La Niña conditions of dryness. Note: northern site gauges will become less accurate as rivers and streams freeze. Ref: <http://waterwatch.usgs.gov/?m=dryw&r>

## Weekly Snowpack and Drought Monitor Update Report

### National Drought Summary -- December 14, 2010

*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/>.*

**Weekly Summary:** A fairly typical La Niña weather pattern occurred this week, with heavy precipitation in the Northwest, very dry conditions across most of the southern tier of States (from southern California to Florida), and above-normal precipitation in the Tennessee and Ohio Valleys into the Northeast. An intensifying storm dumped heavy snows on parts of the upper Midwest (southern Minnesota and Wisconsin) and brought rain to the East, but after the storm left, strong gusty winds and frigid air produced heavy lake-effect snows in the Great Lakes snow belt regions. Well above-normal temperatures enveloped the Rockies westward, while subnormal temperatures chilled the eastern half of the U.S., including sub-freezing readings deep into southern Florida. Heavy rains also soaked Hawaii, especially the eastern-most islands (Kauai and Oahu), although all islands (leeward and windward sides) received beneficial and surplus rains. Alaska was fairly tranquil, with light precipitation limited to the southeastern Panhandle.

**Southeast and mid-Atlantic:** Weekly precipitation totals generally increased from south to north along the East Coast, with light rainfall (0.1 to 0.3 inches) in much of Florida and eastern Georgia and heavy precipitation (2 to 4 inches) in eastern New England. In-between, 1 to 1.5 inches of rain in eastern New Jersey was enough to alleviate the D0, while the 1 to 1.5 inches of precipitation in southeastern Virginia (west of Norfolk) and eastern North Carolina (north of Wilmington) allowed for trimming of the D0 edge. Similar to the Ohio and Tennessee Valleys, the Northeast has also seen increased precipitation since October which has led to drought improvement or removal, as has parts of the Southeast, namely northern sections of Mississippi, Alabama, and Georgia. The trend continued this week in the northern parts of the Southeast as another 1 to 1.5 inches of rain maintained surpluses out to 90-days, resulting in additional trimming of D0-D1 in northern Mississippi, central and northern Alabama, and northern Georgia. In contrast, subnormal precipitation (weekly totals less than 0.5 inches) in the eastern Gulf and southern Atlantic Coasts further degraded conditions. Less than 25 percent of normal precipitation has fallen in portions of eastern Georgia and northern Florida the past 60-days, and since mid-September (90-days), under half of normal rainfall was observed in eastern Georgia and most of north-central Florida. Most USGS average stream flow sites at all time periods (1-, 7-, 14-, and 28-days) were at near or record lows in northern and central Florida, eastern Georgia, and the central Carolinas, while soil moisture indices, blends, and models were depicting percentiles in the lower 5th percentile in eastern Georgia and north-central Florida. Accordingly, D1-D3 crept northward into eastern Georgia and southeastern South Carolina; the two separate D3 areas in eastern Florida were joined, encompassing the Florida Space Coast; D1 and D2 expanded westward in north-central Florida; D1 extended into Collier County and surrounding areas in southern Florida; D1 slightly expanded eastward in central South Carolina; and the last remaining no drought area was removed in extreme southern Florida.

**Ohio, Tennessee, and lower Mississippi Valleys:** Light to moderate precipitation (0.5 to 1.5 inches), including snow, fell on the Ohio and Tennessee Valleys, continuing a pattern of wet weather that started about 2-3 months ago that is consistent with expected La Nina precipitation signals (surplus precipitation during the winter months). In the lower Mississippi Valley, however, precipitation has been more scattered and generally lighter (this week, less than 0.5 inches). Accordingly, short-term

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conditions (60-days and less) in the Ohio and Tennessee Valleys had above-normal precipitation and accumulated surpluses, especially in the eastern sections, resulting in some improvements along the D0-D3 edges where an inch or more fell this week. Elsewhere, near- to slightly subnormal precipitation in the western Ohio and Tennessee Valleys and lower Mississippi Valley in the short-term (less than 60-days) mandated little or no improvement. From 60- to 90-days, under half of normal precipitation has fallen on southern Missouri, western Arkansas, and western Louisiana, and conditions remained status-quo or slightly degraded. USGS average stream flows at 14- and 28-days depicted the short-term improvement or lack of it, with most sites in the normal percentiles (25th to 75th) in the Ohio and Tennessee Valleys into northern Mississippi and northern Alabama, but less than 25th percentile in lower Mississippi Valley. The Impact designator was also changed to H only (from AH) as most short-term impacts (e.g. agriculture) do not exist during the winter, especially in the north, but was kept AH in the lower Mississippi Valley as short-term impacts can still occur.

**Central and Southern Plains:** Similar to the Southwest, little or no precipitation fell on the southern half of the Plains, although temperatures were close to normal for the week. Since receiving moderate to heavy precipitation back in early November (mainly Texas Panhandle, northwest Oklahoma, and central Kansas), much of Oklahoma, Kansas, and Texas have recorded little or no precipitation, and moisture conditions have deteriorated. More rain had fallen to the east (Arkansas and Louisiana) during November, but precipitation also decreased during December here. As a result, based upon the greatest deficits at 90-days and less, the Texas SPI blends, USGS stream flows below the 10th percentiles, and local input, D3 increased in east-central Texas (90-day percent of normal precipitation [PNP] less than 25 percent and deficits between 7 and 10 inches) and in south-central Texas; D2 expanded in north-central and eastern Texas (90-day PNPs less than 50 percent and deficits between 4 and 7 inches); D1 spread into west-central Texas near Midland, and into north and northeast Texas (30-day PNPs less than 25 percent and deficits between 2 and 4 inches), and northward into central Oklahoma (30- and 90-day PNPs are less than 25 and 50 percent, and deficits between 2 to 4 and 4 to 7 inches, respectively). In Oklahoma's Osage and Creek counties, farm ponds are quite low, even lower than the drought of 2005 and 2006, and Skiatook Lake (Osage County) is 4 feet below normal, significant for this small lake. D2 stretched eastward into western Kansas from eastern Colorado as conditions have been as dry or even drier at 90-days and longer, while dry conditions in southeastern Kansas warranted D0. D1 was also extended into southeastern Oklahoma from western Arkansas where they have also missed out on decent rains the past 3 months. The D0 hole in northeastern Texas also shrank with another dry week, although the Texas Panhandle (from Lubbock to Amarillo), northwest Oklahoma, and south-central Kansas continued to benefit from heavy rains in mid-October and early November.

**Southwest:** Another week of little or no precipitation and above-normal temperatures (4 to 8 deg F, as expected during a strong La Nina) continued to accumulate precipitation deficits and delay the start to the 2010-11 water year. Except for some unseasonably heavy rainfall back in early and mid-October, most of southeastern California, Arizona, New Mexico, southwest Texas, and southern sections of Utah and Colorado have seen little precipitation. Fortunately, temperatures have generally been at or below normal since late October, however, this week's warmth exacerbated the lack of rain. Accordingly, D0 was expanded across nearly all of New Mexico, into southeastern Utah and southwestern Colorado, and D1 was introduced into southeastern Arizona and southwestern New Mexico and southern Colorado. In the latter area, precipitation deficits have accumulated over the past few months, SNOTEL precipitation percentiles are fairly low, and STD basin precipitation and SWC on December 13 ranged between 50 to 75 percent. In contrast, after a reassessment of several indices, D0 was removed from northwestern Arizona where the heavy rains (2 to 6 inches) in early and mid-October still affected the short-term blends and indices (no drought), and nearby southwestern Utah SNOTEL Basin Water Year to Date (WYTD) precipitation was at 199 percent.

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**Intermountain West and north-central Rockies:** The wettest storm in the past two years hit western Washington Saturday, with weekly totals of 6 to 12 inches common, with locally up to 18 inches in western Washington. The moisture fetch also generated ample precipitation to much of the Northwest, in line with expected La Nina conditions. Accordingly, the continued wet winter and this week's precipitation (0.5 to 2 inches) was enough to remove lingering D0 in southwest and southeast Idaho, northwestern Utah, and the western edges in southwestern Oregon and northwestern Wyoming. SNOTEL basin averaged WYTD precipitation and Snow Water Content (SWC) on Dec. 13 was 125 to 150 percent of normal, an excellent start to this year's water year. In western Wyoming, higher-elevation sites are doing well, but lower-elevation stations are much drier, especially in Sublette and Sweetwater counties. As a result, the D1 remained there. Additional precipitation (1 to 1.5 inches) fell on the remainder of southern Oregon and northern California, requiring further trimming of D0 and D1 where the largest totals occurred. Farther south, even though no precipitation fell and temperatures were well above-normal, no degradation was made (D0 and D1H remained) in central California and southern Nevada thanks to a wet November.

**Hawaii and Alaska:** Widespread, moderate to heavy rains fell across the entire state including both windward and leeward sides, although Kauai and Oahu received the bulk of the rainfall. The rains started late Wednesday and tapered off by early Saturday. Totals of 4 to 10 inches were common on Kauai, 3 to 6 inches on Oahu, 2 to 4 inches on Molokai and Lanai, 2 to 5 inches on Maui, and 1 to 3 inches on Big Island. The two western most islands (Kauai and Oahu) have been in recovery mode for the past month, so a 1-category improvement was made there. The D4 in southwestern Maui was removed after Kula Branch, Ulupalakua, and Kihei measured 2.35, 1.84, and 2.04 inches, respectively. The rest of the state, however, was just recently introduced to heavy rainfall, so conditions were left status quo pending additional assessments next week. But as an example, the Kualapuu Reservoir in western Molokai did not rise at all after last week's rains. And on the Big Island, 1 to 2 inches of rain did little to ease brush fire threats (high to extreme), and ranchers in the south are still hauling water.

In Alaska, mostly cold and tranquil conditions covered the state, with little or no precipitation and subnormal temperatures common. Fort Yukon plunged to -53 deg F on Dec. 12, with Bettles not far behind at -47 deg F. Significant precipitation was limited to extreme southeastern Panhandle where Ketchikan and Annette Island measured a weekly total of 4.93 and 2.13 inches. With most of the state in deep freeze, no changes were made in Alaska.

**Looking Ahead:** December 16-20, 2010 weather should be somewhat similar to this week's weather with the exception of a storm developing in the eastern Gulf and tracking northeastward. This should provide beneficial precipitation to the eastern Gulf and southern Atlantic Coast States. The West should see a continuation of stormy weather later in the week, even extending south into southern California. A weak system currently in the Southwest may bring light precipitation to parts of the Four Corners region, but dry conditions should prevail in the Nation's mid-section (Plains). Readings will remain chilly in the northern Plains, upper Midwest, and across the eastern third of the U.S. while the Southwest and southern Plains observe above-normal temperatures. The Northwest and New England should be close to normal.

For the ensuing 5 days (December 21-25), above-normal precipitation is expected to continue in the West, particularly in California and the Great Basin, while subnormal precipitation is forecast across the southern tier of States and along the East Coast, especially in the Southwest, southern Plains, and lower Mississippi Valley. Alaska should see subnormal precipitation across the south and east, and surplus precipitation in the southwest. Readings are predicted to be unseasonably mild in the western half of the Nation, while subnormal temperatures persist in the Southeast and mid-Atlantic. The

## Weekly Snowpack and Drought Monitor Update Report

southern half of Alaska should experience below normal readings.

**Author:** [David Miskus, CPC/NCEP/NWS/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**

A ... Agricultural

H ... Hydrological

Updated December 15, 2010

**The latest release of the NOAA Climate Prediction Center's seasonal forecast is now available at: <http://www.cpc.noaa.gov/products/predictions/30day>.**