



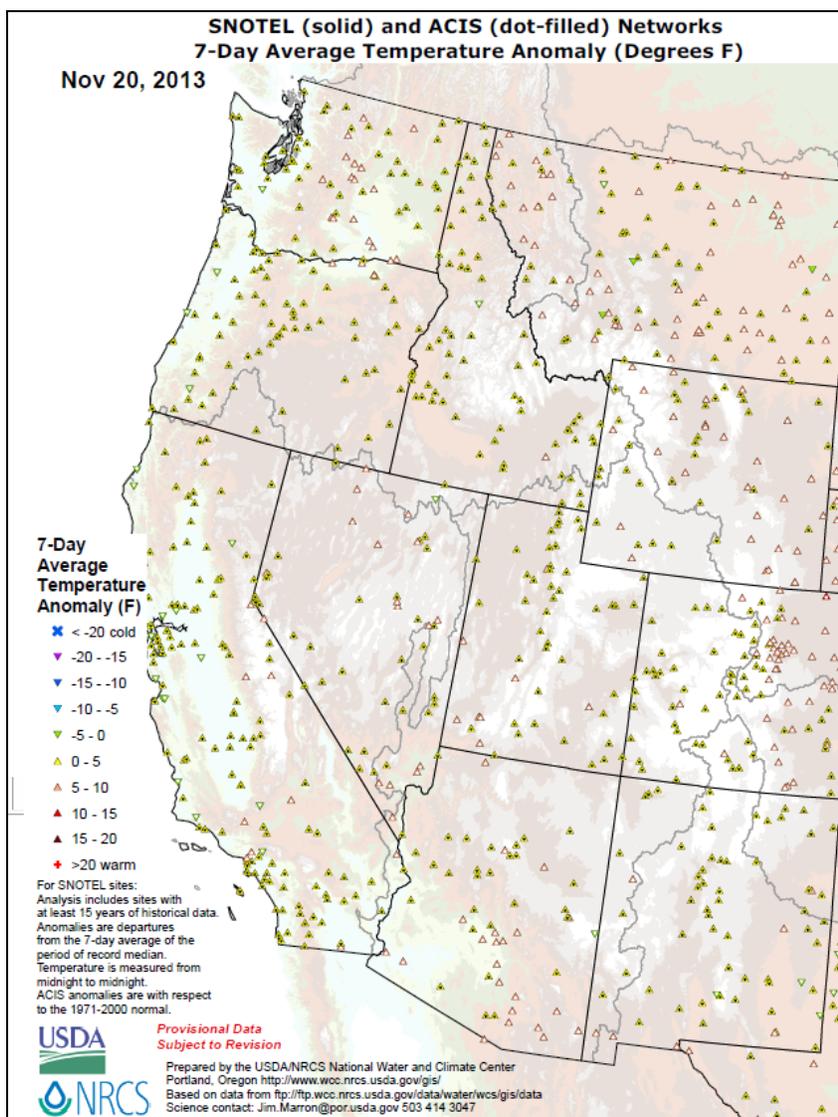
Natural Resources Conservation Service  
 P.O. Box 2890  
 Washington, D.C. 20013

## Weekly Snowpack / Drought Monitor Update

November 21, 2013

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### Temperature



SNOTEL and ACIS [7-day temperature anomaly](#) map shows temperatures above normal across the West through November 20.

*Click map to see latest available update.*

The Natural Resources Conservation Service provides leadership in a partnership effort to help people conserve maintain and improve our natural resources and environment

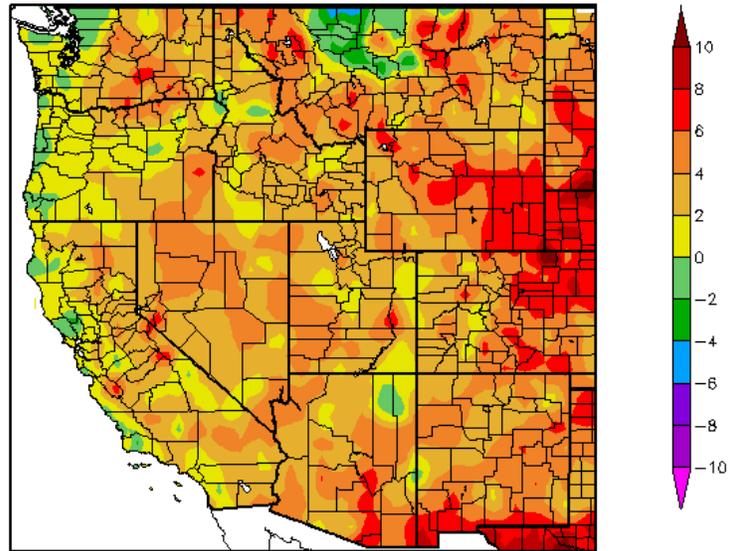
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## Weekly Snowpack and Drought Monitor Update Report

[ACIS](#) 7-day average temperature anomalies, ending November 20, show the greatest positive temperature departures scattered across the western Great Plains ( $>10^{\circ}\text{F}$ ). The greatest negative departures occurred over parts of northern Montana ( $>-4^{\circ}\text{F}$ ).

For more figures, see the latest Western Water Assessment's Intermountain West Climate [Dashboard](#). See the [Westwide Drought Tracker](#).

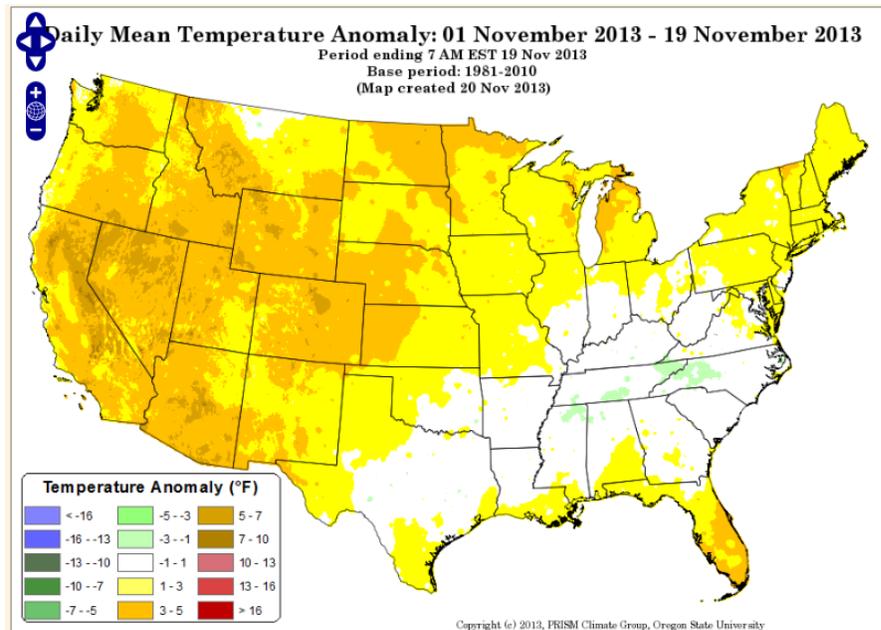
Departure from Normal Temperature (F)  
11/14/2013 – 11/20/2013



Generated 11/21/2013 at HPRCC using provisional data.

Regional Climate Centers

This preliminary PRISM temperature map contains all available network data, including SNOTEL data, and will be updated periodically as additional data become available and are quality controlled. See remarks in **red** below for more details.



Thus far, November has been a very warm month across much of the nation with departures from the long-term average exceeding  $5^{\circ}\text{F}$  over parts of the West. The southern Plains, Mid-Atlantic, and Southeastern states have had temperatures closer to normal.

***The PRISM anomaly map above is calculated from the entire monthly average. For example, an autumn month would have more positive anomalies in the early part of the month and more negative anomalies in the latter part of the month (as temperatures cool). This may explain differences with ACIS data which use actual daily climatology whereas PRISM uses the monthly climatology divided by the number of days in the month. This bias reverses in the spring months with warming occurring during the latter part of month. These differences become less noticeable toward the end of these months.***

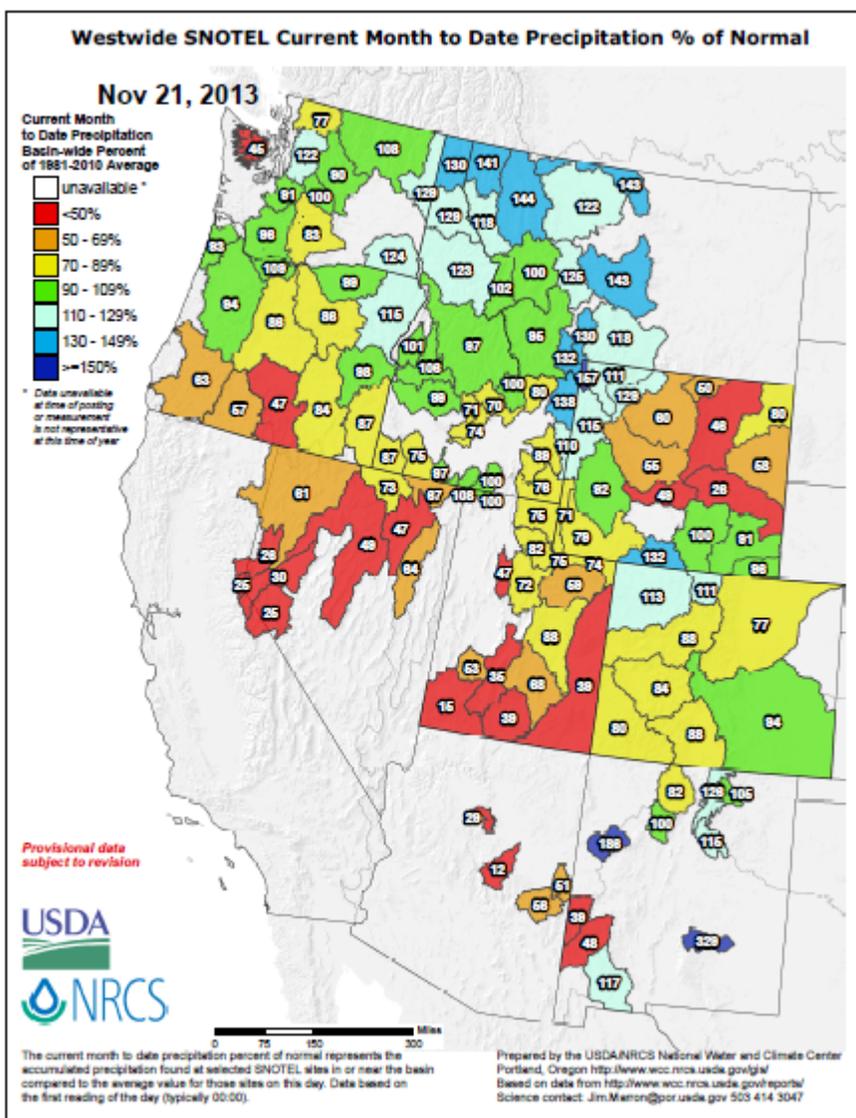
# Weekly Snowpack and Drought Monitor Update Report

## Precipitation

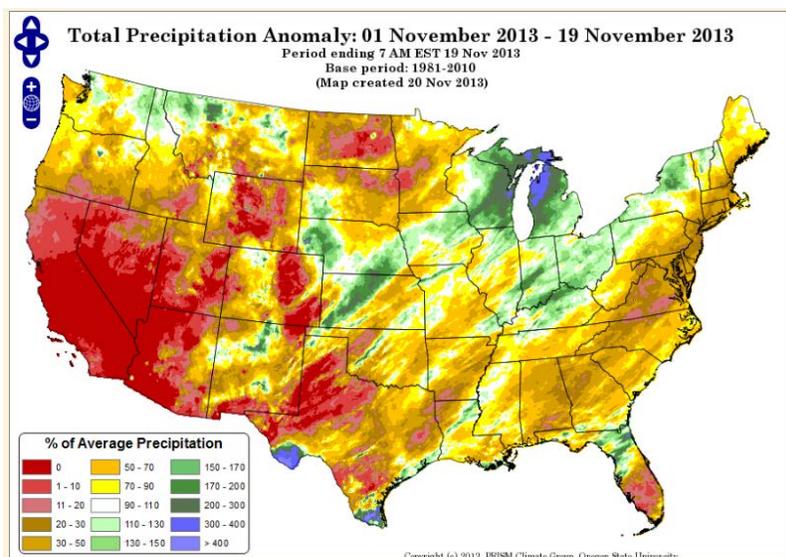
SNOTEL [month to date](#) precipitation percent of normal (through November 21), shows scattered abundant moisture across the northern tier states of the West, but many basins in the interior states have not received much in the way of precipitation.

An expected upper level low will be moving slowly across the Southwest during the next five days and should help improve monthly totals over this region.

High pressure is expected to influence conditions over the northern tier states of the West during the next 10 to 14 days, with little, if any, precipitation.



Click image to enlarge and get latest available update



Thus far, November [precipitation](#) has been largely absent over California, the Great Basin, the northern High Plains, Virginia, and Florida. Moisture has occurred in abundance over parts of western Nebraska, central Kansas, northern Florida, the northern Great Lakes region, and parts of the southern and Big Horn regions of Texas.

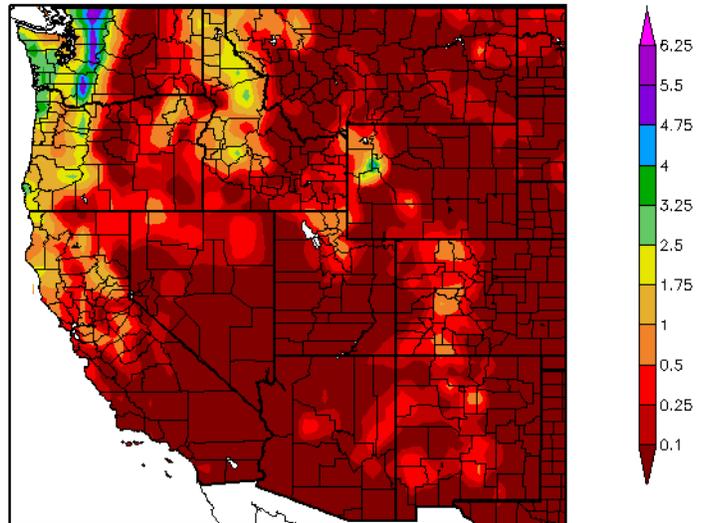
*This preliminary daily PRISM precipitation contains all available network data, including SNOTEL data, and is updated periodically as additional data become available and are quality controlled.*

## Weekly Snowpack and Drought Monitor Update Report

Precipitation (in)  
11/14/2013 - 11/20/2013

[ACIS 7-day](#) average precipitation amounts for the period ending November 20 show heavier precipitation over the northern Cascades. Elsewhere, scattered precipitation totaling up to 2.5 inches fell across parts of the northern Rockies. Little, if any, precipitation fell over the remainder of the West. →

**Note:** SNOTEL reports will be incorporated in ACIS precipitation totals maps very soon.

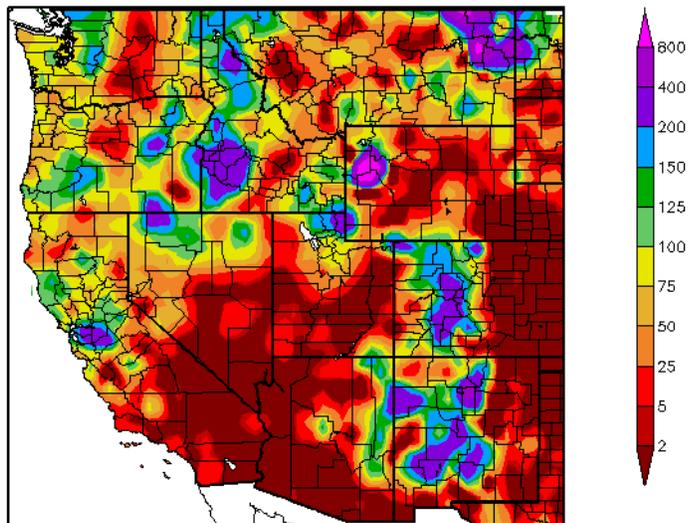


Generated 11/21/2013 at HPRCC using provisional data.

Regional Climate Center

Percent of Normal Precipitation (%)  
11/14/2013 - 11/20/2013

This [map](#) shows that the bulk of precipitation by percent of normal fell over Idaho, northeast Montana, the Wyoming Range (south of Yellowstone National Park), Uinta Mountains (in northeast Utah), and much of the Colorado and New Mexico Rockies. Lesser amounts occurred over southern California, southern Nevada, western Arizona, central Wyoming, and the eastern Plains of Colorado and New Mexico. →



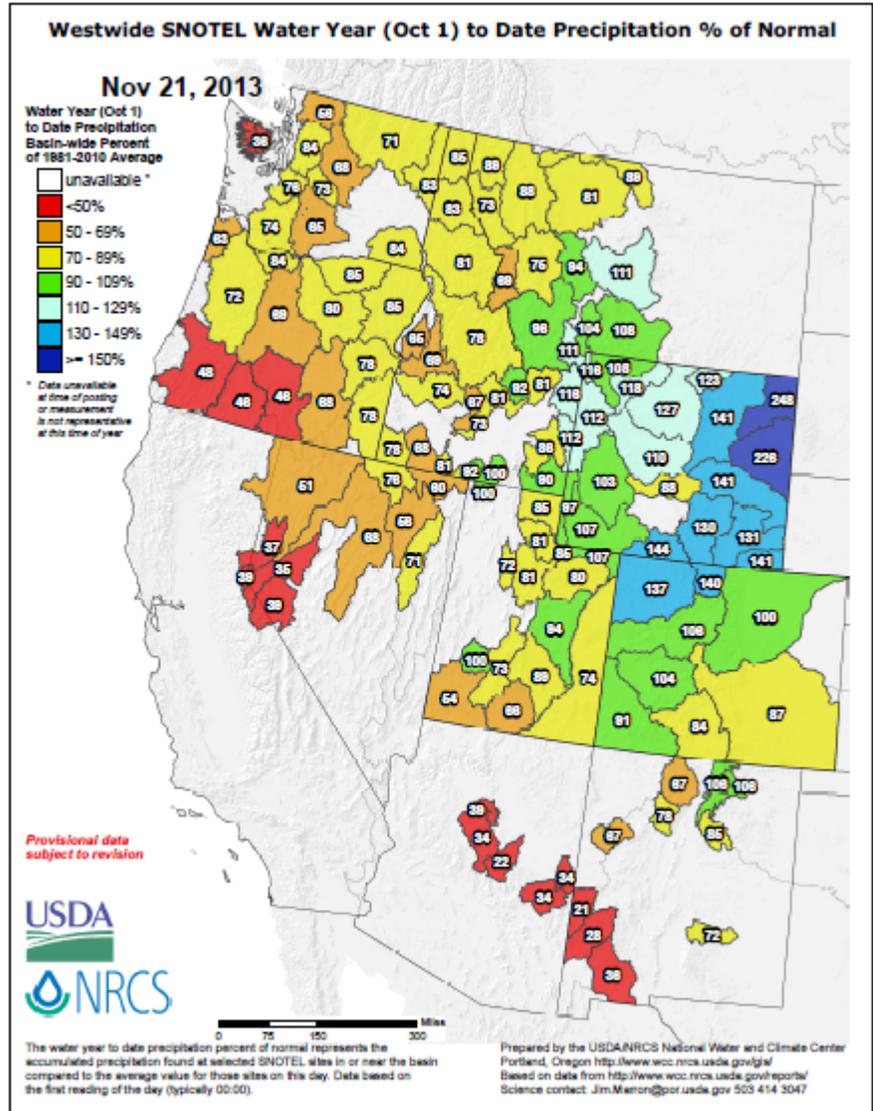
Generated 11/21/2013 at HPRCC using provisional data.

Regional Climate Center

## Weekly Snowpack and Drought Monitor Update Report

For the [2014 Water Year](#) that began on October 1, 2013, the ENSO pattern thus far looks neutral (i.e., north and south regions of the West are dry, whereas the eastern slope of the Rockies is somewhat wetter).

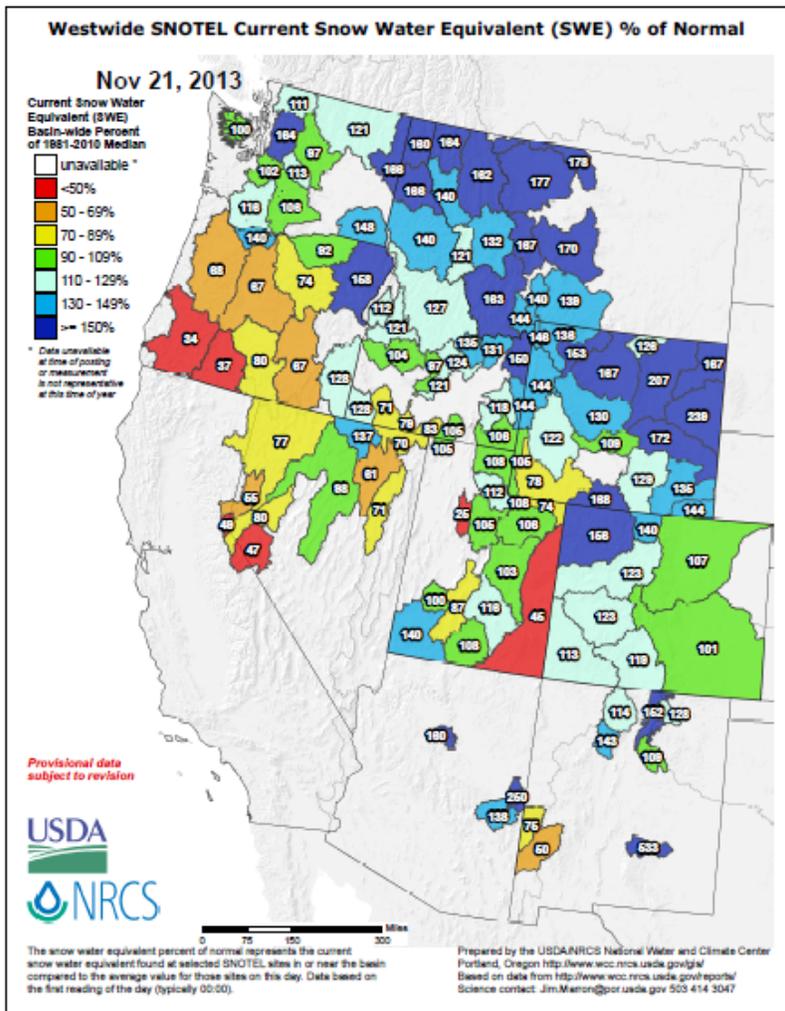
[Long range weather forecasts](#) are suggesting somewhat drier conditions over the southern tier states of the West and wetter conditions over the northern tier states.



*Click image for latest available update*

# Weekly Snowpack and Drought Monitor Update Report

## Snow



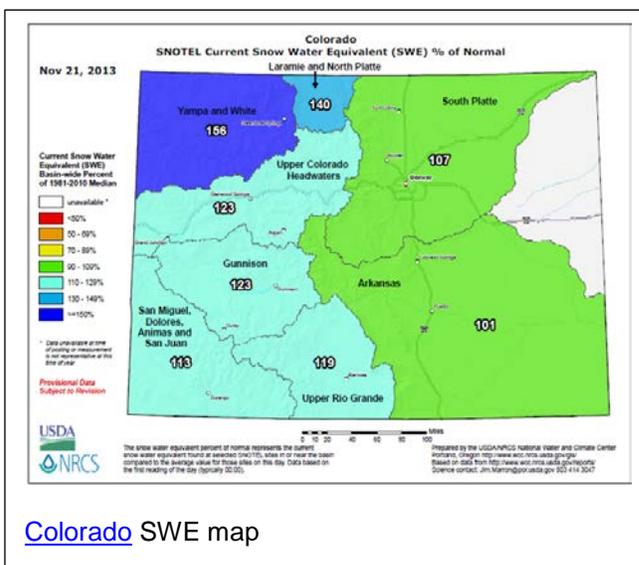
**Snow Water Equivalent (SWE)** values are off to a good start over much of the western states; especially over the Washington Cascades, Montana, much of Wyoming, southern Utah, northern Idaho, Arizona, and western Colorado-northern New Mexico. The only notable exceptions include much of Oregon, western and eastern Nevada, and from southwestern Wyoming to eastern Utah. However, early season snows are highly variable in the timing of their appearance across the West.

Persistent periods of dry weather can result in SWE percent of normal values dropping by more than three percent each day during this time of year.

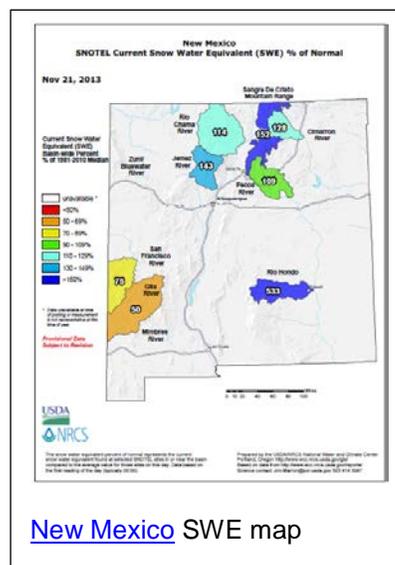
By the beginning of December, a better indication of how the snow accumulation season will materialize.

The all-important April 1 SWE date will best determine the water supply forecasts issued by the [National Water and Climate Center](#).

See latest [National Snow Analysis](#).



[Colorado SWE map](#)



[New Mexico SWE map](#)

Colorado and New Mexico are sharing in some early season snowfall. More is expected through the remainder of this week and into early next week as a slow moving winter storm hits these states.

# Weekly Snowpack and Drought Monitor Update Report

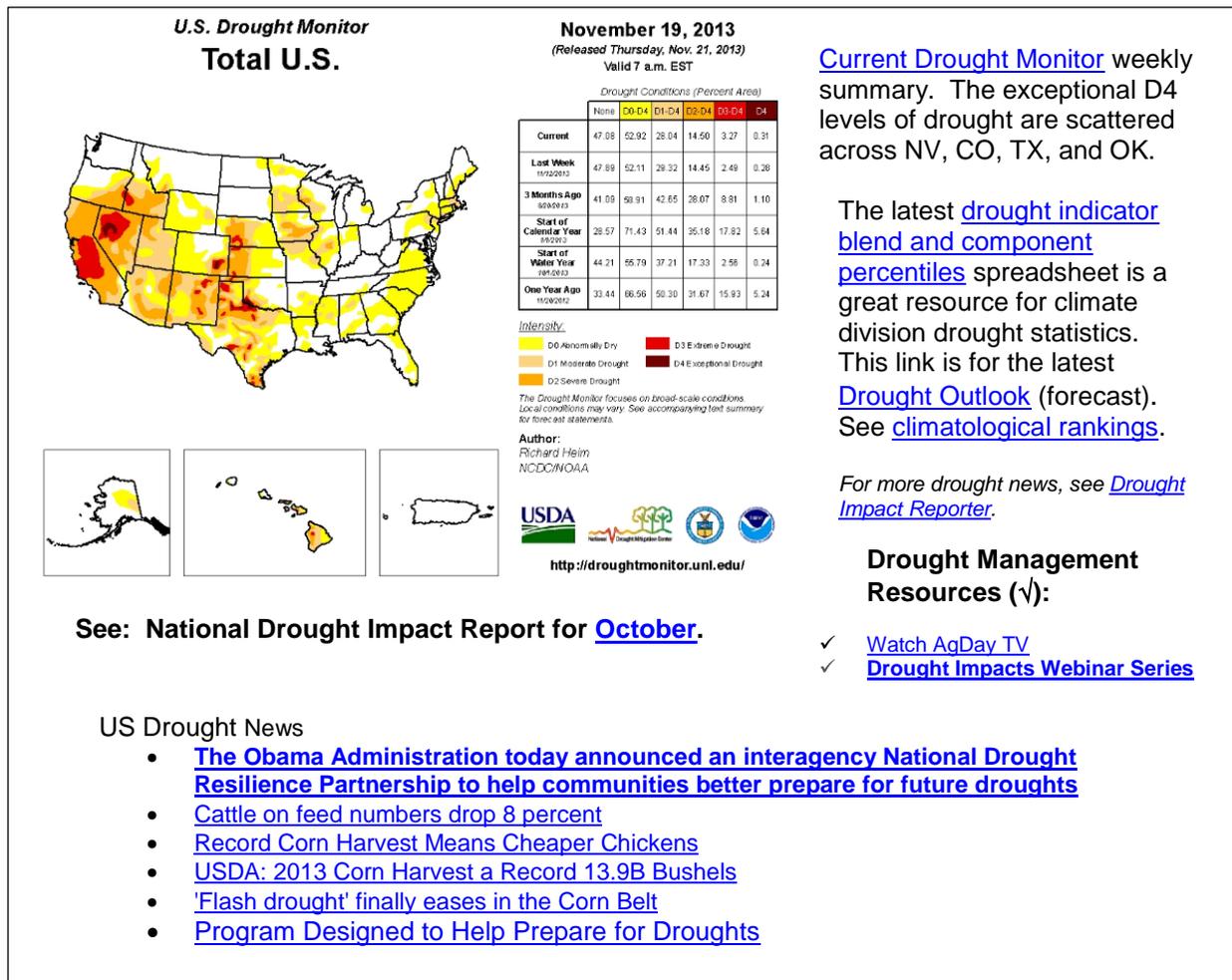
## Weather and Drought Summary

National Drought Summary – November 21, 2013

The following **Weather and Drought Summary** is provided by this week's NDMC Drought Author, Richard Heims, from the NDMC.

**Important update: If you are currently displaying any of the U.S. Drought Monitor maps on your website, there is a new way of doing so. Visit the Map Service page for more information and also to obtain the appropriate HTML code. The old method will continue to work until Monday, December 2nd but will be discontinued beyond that point.**

USDM Map Services: <http://droughtmonitor.unl.edu/MapsandDataServices/MapService.aspx>



A comprehensive narrative describing drought conditions across other parts of the nation can be found toward the end of this document. For drought impacts definitions for the figures below, click [here](#).

**"The West:** According to November 19 SNOTEL station observations, snow water content in the Washington Cascades to northern and central Rockies was above normal, but this is the start of the wet season when normals are low. In spite of this week's precipitation in the Pacific Northwest and northern Rockies, water year-to-date (October 1 to present) precipitation remained below normal for much of the West, except for parts of northwestern Montana to Colorado where it was near to above normal. The Southwest (and California) has been especially dry since the summer monsoon ended. In California's San Joaquin Valley, the city of Bakersfield has moved completely to ground water supplies due to the dry conditions and lack of surface water. Reservoirs are approaching 70% of average capacity.

# Weekly Snowpack and Drought Monitor Update Report

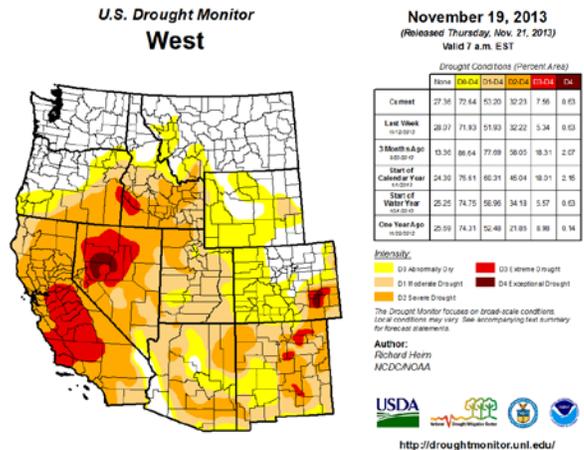
According to local National Weather Service experts, this level has historically been one of the measures of statewide drought, especially with precipitation being historically low for the calendar year. Some of those reservoirs should be near operational thresholds for low water. Consequently, D3 expanded into the San Joaquin Valley to reflect these impacts. In New Mexico, D0-D1 expanded in the south to reflect recent dryness, and D3 expanded in the northeast to reflect persistent dryness from the year to date. In Arizona, D0 and D1 expanded to reflect recent dryness, and the SL impacts boundary was shifted east to cover much of California and Arizona.

During the past week, SNOTEL [temperatures](#) were generally +5°F of normal except cooler over Montana and along the immediate West Coast. SNOTEL [snow](#) depths increased by over 2 feet in northern Idaho. Elsewhere, much of the northern half of the West experience gain of about a foot of snow while the southern half gained a few inches. For the 2014 Water Year SNOTEL [precipitation](#) surpluses extend from south Montana to northern Colorado. Deficits exist generally elsewhere; especially over the southern Cascades, Sierra, and Southwest mountains.”

- ✓ Drought Monitor for the [Western States](#)
- ✓ Drought Impact Reporter for [New Mexico](#)
- ✓ [California Data Exchange Center & Flood Management](#)
- ✓ NIDIS [Upper Colorado River Regional Drought Earlier Warning System](#)
- ✓ [Intermountain West Climate Dashboard](#)
- ✓ [Great Basin Dashboard](#)

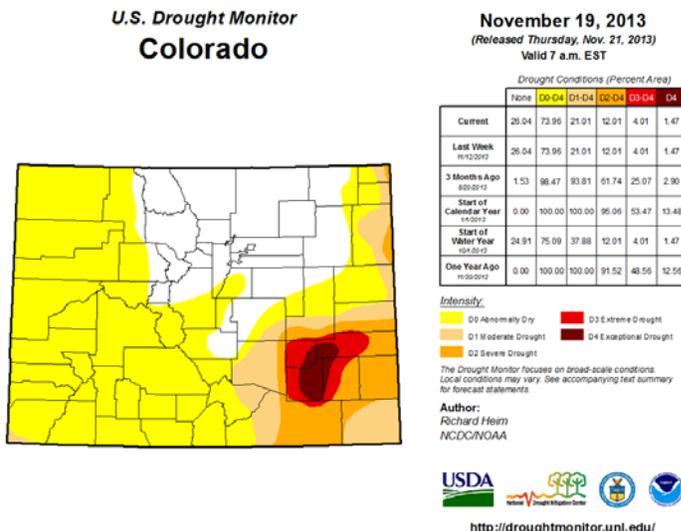
## Western Drought News:

- [Dry and windy conditions make for high fire concern, according to SLO Co. Cal Fire](#) - Nov 14, **San Luis Obispo County, California**
- [Dry October and November: Is it a drought?](#) - Nov 12, **Sacramento, California**
- [New study: Dust, warming portend dry future for the Colorado River](#) – Nov 14, **Colorado**
- [Cloud seeding, no longer magical thinking, is poised for use this winter](#) - Nov 11, **California**



Note that there some deterioration in D3 this week.

- [Insurer expects record crop losses](#) - Nov 13, **Northern Colorado**
- [Colorado leaders press USDA to maintain snow data, water supply monitoring program funding](#)



## State with D-4 Exceptional Drought

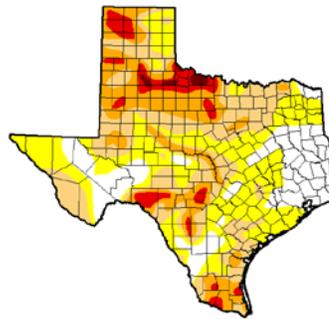
No changes have occurred during the past week.

# Weekly Snowpack and Drought Monitor Update Report

## State with D-4 Exceptional Drought

- ✓ Texas Drought [Website](#).
- ✓ [Texas Reservoirs](#).
- [Correction: Fracking-Water Recycling story](#) - Nov 11
- [Only 1/5 of monarchs moving through Texas](#) - Nov 11
- [San Marcos to Return to Stage 2 Drought Restrictions](#) - Nov 11
- [Underwater ghost town: Old Bluffton](#) - Nov 14
- [Concerns as Austin Residents Drill New Wells](#) - Nov 9
- [Facing Drought, Wichita Falls Bans Outdoor Watering](#) - Nov 12

### U.S. Drought Monitor Texas



November 19, 2013  
(Released Thursday, Nov. 21, 2013)  
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D1	D1-D2	D2-D3	D3-D4	D4
Current	10.91	81.09	50.09	24.45	6.09	0.75
Last Week (11/12/13)	20.35	79.65	50.05	23.56	6.25	0.43
3 Month Ago (8/20/13)	2.82	87.18	88.93	65.88	17.80	2.28
Start of Calendar Year (1/1/13)	3.04	96.96	87.00	65.38	20.03	11.95
Start of Water Year (10/1/12)	6.02	83.38	70.95	25.28	4.01	6.12
One Year Ago (11/19/12)	8.05	91.25	75.84	49.08	23.95	7.05

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

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

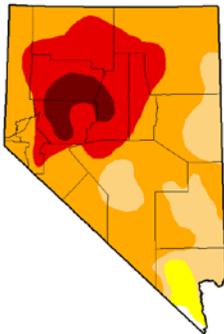
Author:  
Richard Heim  
NCEM/NOAA

USDA  
<http://droughtmonitor.unl.edu/>

Note slight deterioration in D2 to D4 categories during the past week.

## State with D-4 Exceptional Drought

### U.S. Drought Monitor Nevada



November 19, 2013  
(Released Thursday, Nov. 21, 2013)  
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D1	D1-D2	D2-D3	D3-D4	D4
Current	6.38	90.51	90.01	76.16	28.55	5.37
Last Week (11/12/13)	6.38	90.51	90.01	76.16	28.55	5.37
3 Month Ago (8/20/13)	6.38	100.00	100.00	90.16	42.05	5.37
Start of Calendar Year (1/1/13)	6.38	100.00	98.13	82.22	16.48	0.00
Start of Water Year (10/1/12)	6.38	95.51	90.76	76.16	28.55	5.37
One Year Ago (11/19/12)	6.38	100.00	94.28	84.28	37.37	0.00

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

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

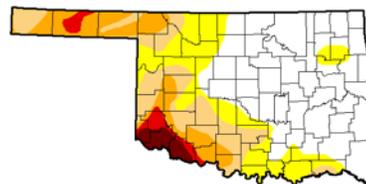
Author:  
Richard Heim  
NCEM/NOAA

USDA  
<http://droughtmonitor.unl.edu/>

No changes have occurred during the past week.

## State with D-4 Exceptional Drought

### U.S. Drought Monitor Oklahoma



November 19, 2013  
(Released Thursday, Nov. 21, 2013)  
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D1	D1-D2	D2-D3	D3-D4	D4
Current	50.19	49.81	30.97	15.93	4.92	2.40
Last Week (11/12/13)	50.24	49.76	29.88	15.43	4.48	2.08
3 Month Ago (8/20/13)	53.91	46.09	32.82	22.26	9.89	0.54
Start of Calendar Year (1/1/13)	0.00	100.00	100.00	100.00	94.89	37.06
Start of Water Year (10/1/12)	21.74	78.26	43.00	17.62	4.42	1.45
One Year Ago (11/19/12)	0.00	100.00	100.00	99.56	71.86	32.28

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

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

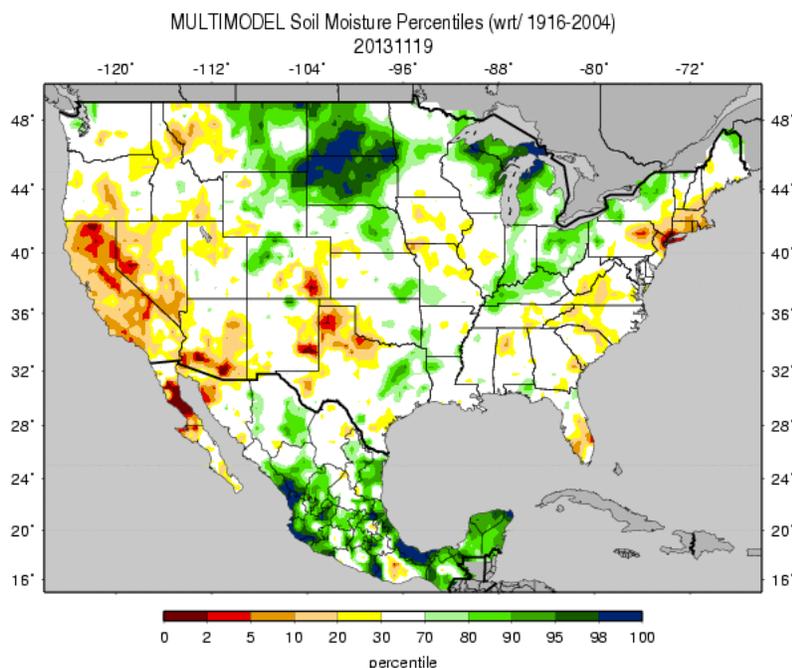
Author:  
Richard Heim  
NCEM/NOAA

USDA  
<http://droughtmonitor.unl.edu/>

Note no changes occurred this past week.

# Weekly Snowpack and Drought Monitor Update Report

## Soil Moisture



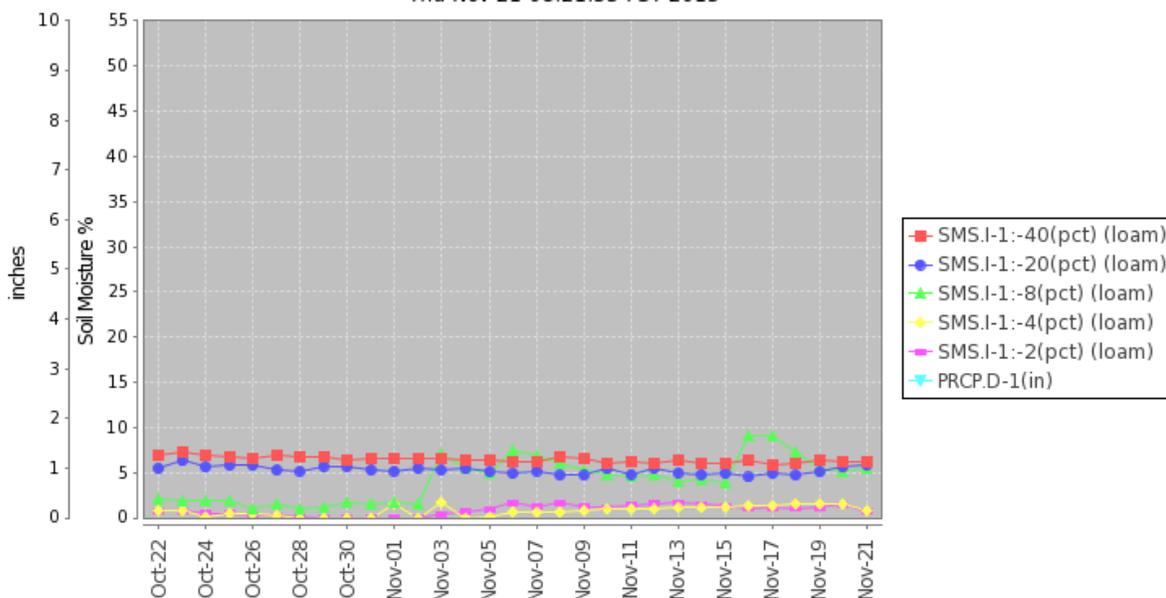
Soil moisture ranking in [percentile](#) as of November 19 shows considerable moisture over the northern Great Plains and northern Great Lakes. Excessive dryness is noted over the panhandle of Texas, northern California, southeast Colorado, and the New York City area.

Useful Hydrological Links: [Crop Moisture Index](#); [Palmer Drought Severity Index](#); [Standardized Precipitation Index](#); [Surface Water Supply Index](#); [Weekly supplemental maps](#); [Minnesota Climate Working Group](#); [Experimental High Resolution Drought Trigger Tool](#); [NLDAS Drought Monitor](#); [Soil Moisture](#).

[Soil Health-unlock your farm's potential](#)

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

Station (2012) MONTH=2013-10-22 (Daily) NRCS National Water and Climate Center - Provisional Data - subject to revision  
Thu Nov 21 08:21:33 PST 2013



This NRCS resource shows a site over central Florida. Soil conditions are very dry from 2 to 40 inch depths.

Useful Agriculture Links: [Vegetation Drought Response Index](#); [Evaporative Stress Index](#); [Vegetation Health Index](#); [NDVI Greenness Map](#); [GRACE-Based Surface Soil Moisture](#); [North American Soil Moisture Network](#); [Monthly Wild Fire Forecast Report](#).

## Weekly Snowpack and Drought Monitor Update Report

### Complete National Drought Summary

The following complete **Weather and Drought Summary** is provided by this week's NDMC Author: Richard Heim, NCDC

#### [Summary](#)

"A strong cold front barreled across the central and eastern United States this U.S. Drought Monitor (USDM) week, sparking deadly severe weather and locally heavy rain in the Midwest. Two inches or more of rain fell across parts of northeast Illinois, southern Wisconsin, and Lower Michigan, causing contraction of some drought areas, with heavy rain also in the Ohio Valley. Rainfall amounts dropped off significantly once the front crossed the Appalachians, with only a few tenths of an inch common from the central to coastal parts of Georgia through the New England states. This continued a dry trend for much of the Deep South and East Coast which started 3 to 4 months ago and prompted expansion of D0. Several inches of precipitation fell from Pacific fronts in the coastal mountains of the Pacific Northwest and Rockies of northern Idaho, while other parts of the Rockies saw an inch or less; otherwise, the rest of the West and Great Plains were mostly drier than normal. Temperatures were generally above normal across the West and Northern Plains and below normal from the Ohio Valley to Southeast.

#### [Hawaii, Alaska, and Puerto Rico](#)

Recent rainfall has elevated reservoir supplies on Maui to adequate levels and has been sufficient to improve drought conditions on several of the Hawaiian Islands this week. D0 was contracted and D1 eliminated on Oahu, D0-D2 pulled back on Maui, and D1 contracted on the Big Island. Above-normal precipitation fell over the northern half of Alaska this week while the southern half was drier than normal. Water year to date precipitation was 150-200% of normal, or higher, at some western and northern interior stations, and seasonal snow water content was 125% of normal or higher in the Susitna, Chena, and Koyukuk basins, prompting contraction of the D0-D1 area. The remaining D1 reflected low snow water content in the Upper Tanana and Copper basins and long-term (4-12 month) precipitation deficits. D0 was added to Alaska's southern panhandle to reflect below-normal precipitation (at the 1-6-month time scales) and low reservoir levels (Black Bear Lake dam is about 2 feet below normal, Tyee reservoir 10 feet below normal, and Swan Lake reservoir 15 feet below normal). Rainfall this week across Puerto Rico was generally below normal, but no change was made to the depiction.

#### [Midwest](#)

Tornadoes, produced by a cold front from southern Illinois and western Kentucky to northern Ohio, killed six people. But the front brought welcomed rains, although the heavier rains generally occurred in streaks. As a result, D0 -D1-D2 were pulled back in east central to northeast Iowa, D0 was pulled back in central Illinois and trimmed in southeast Illinois, and D1 was trimmed in northwest Illinois. D0 was cut in southeast Wisconsin and a little over the border into northern Illinois where 1-2-inch rains eliminated deficits. Widespread 1+ inch rains (with locally heavier amounts) eliminated deficits in the northern portions of Lower Michigan, resulting in the severing of the D0 which left a D0 island in the east and a D0 thumb in the south.

## Weekly Snowpack and Drought Monitor Update Report

### [The Northeast](#)

Another week of below-normal precipitation across most of the Northeast further worsened precipitation deficits. In northern New Jersey and along the New England coast, 60-day precipitation deficits exceeded 6 inches. Newark, NJ has had only 2.51 inches of precipitation since September 1, which is a departure of -7.15 inches or 26% of normal. Streamflow was well below normal (tenth percentile or below) from New Jersey to Massachusetts and soil moisture was short to very short of moisture (dry to very dry) for more than half of Connecticut and Rhode Island, according to November 17 U.S. Department of Agriculture (USDA) reports. D0 expanded from New York to New England; D0 also expanded from central Pennsylvania south, bridged to the D0 in the Virginias; and D1 expanded in Pennsylvania and up the coast from Massachusetts into Maine. Improvement occurred in the Adirondacks where above-normal precipitation trimmed the western edge of D0.

### [The Plains](#)

The frontal system dropped half an inch of moisture across parts of the northern Plains this week, but the southern parts were dry. D0 expanded across central to eastern Kansas to reflect the meteorological dryness of the last 3 weeks (low humidity, high winds and limited precipitation) to 90 days (below-normal precipitation) and developing hydrological/agricultural impacts (stock ponds are losing ground and winter wheat is beginning to be negatively affected). In Oklahoma, D1 expanded in the northwest and D2-D4 in the southwest to reflect continued dryness and low soil moisture.

### [The South](#)

Another dry week in the South led to expansion of drought in Texas and Oklahoma. D0 expanded over southwest Texas to reflect 60-day dryness and local burn bans and D2-D3 also expanded there, while D1-D4 expanded in northwest and north central Texas. Improvement was made in the panhandle where D2-D3 were trimmed and in central to east Texas where D0 was pulled back.

### [The Southeast](#)

Half an inch or more of rain fell in the Southern Appalachians and Tennessee Valley, and along the Gulf Coast from the Florida Panhandle to Mississippi Delta. Otherwise, the piedmont and coastal plains of the southern states were very dry this week, compounding dryness that has been the norm since September. Precipitation deficits for the last 90 days were 6 inches or more from southern Alabama to southern Virginia, with deficits exceeding 9 inches along the coast of the Carolinas. Wilmington, NC, has received only 4.29 inches of precipitation since September 1, which is a departure of -8.90 inches or 35% of normal, while the departure for North Myrtle Beach, SC for since August 1 is -11.00 inches. Streamflow was below normal (10th to 24th percentile) across large parts of the piedmont areas of the Southeast and in eastern Florida, and much below normal (tenth percentile) in south central Virginia and adjacent North Carolina. The separate sections of D0 that existed in the Southeast were expanded and joined, so that D0 now stretches unbroken from Florida and southern Alabama to Maine. D0 was kept out of Florida's Everglades and Water Conservation Areas as the water levels were still good there from the abundant summer rain."

# Weekly Snowpack and Drought Monitor Update Report

## State Activities

[State government drought activities](#) can be tracked through their drought plans. NRCS Snow Survey and Water Supply Forecasting (SSWSF) Program State Office personnel are participating in state drought committee meetings and providing the committees and media with appropriate [SSWSF information](#). Additional information describing the [tools](#) available from the Drought Monitor can also be found at the [U.S. Drought Portal](#).

## More Information

The National Water and Climate Center (NWCC) [Homepage](#) provides the latest available snowpack and water supply information. This document is available [weekly](#). CONUS Snowpack and Drought Reports from 2007 are available online. Reports from 2001-2006 are available on request.

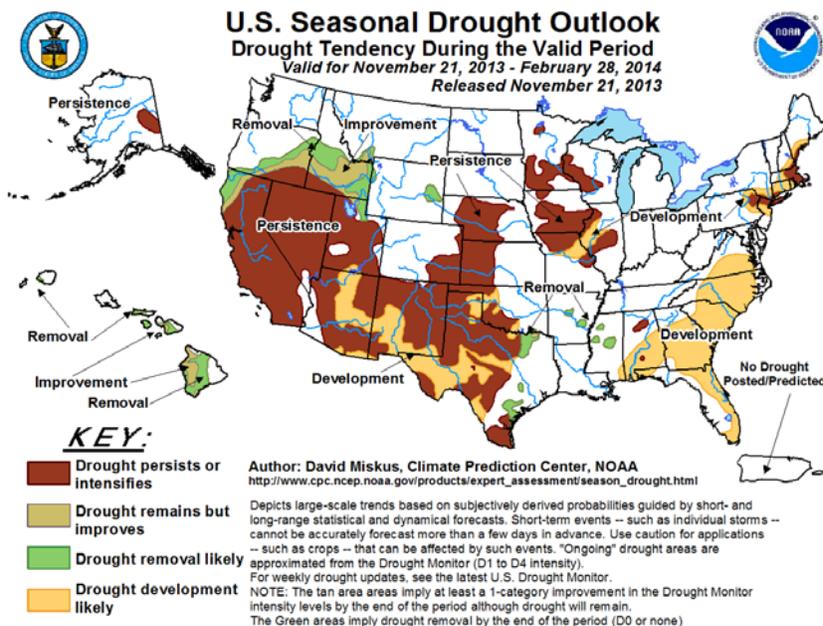
This report uses data and products provided by the Interagency Drought Monitor Consortium members and the National Interagency Fire Center.

/s/

Micheal L. Golden  
Deputy Chief, Soil Science and Resource Assessment

\*\*\*\*\*

## Drought Outlook



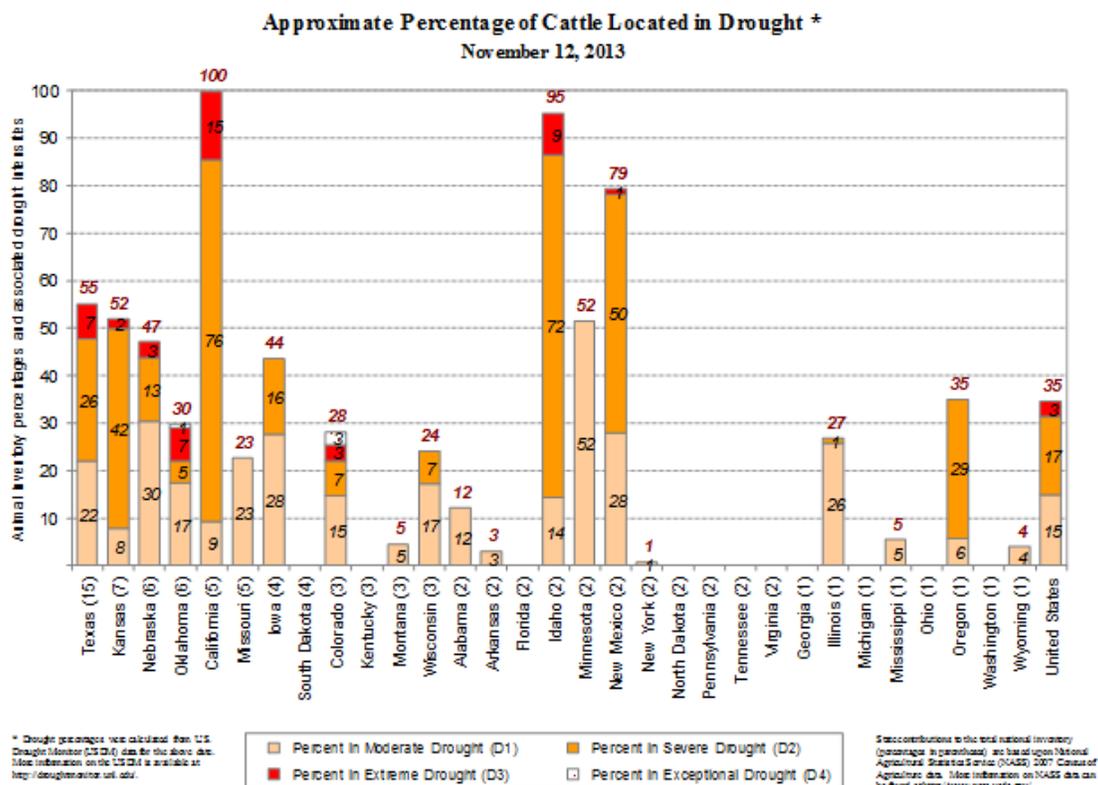
U.S. Seasonal Drought Outlook for December through February shows:

- Drought is expected to improve over parts of northern California to southern Idaho. Elsewhere, drought is expected to persist over much of the Great Basin, Southwest, southern Rockies, the Upper Mississippi River Valley, and south-central Plains. Drought is expected to develop over much of the East Coast States including Alabama.
- ✓ Also see: [National Significant Wildland Fire Potential Outlook](#) (updated on the 1<sup>st</sup> of each month) and contains a nice content summary of the previous month's conditions.



## Weekly Snowpack and Drought Monitor Update Report

- Cattle in drought (36%), winter wheat in drought (31%), and hay in drought (22%) were down two to three percentage points from a week ago. USDA/NASS reported that 91% of the winter wheat had been planted by November 3, with 78% of the crop emerged. Although most of the wheat crop is growing well – rated 63% good to excellent on November 3 – dryness remains a concern on the southern High Plains. For example, 20% of the winter wheat in Texas was rated very poor to poor on November 3, up from 5% two weeks ago.



- Weather outlook: For the remainder of today, a weakening cold front will generate scattered showers across the eastern U.S. Meanwhile, a Pacific storm will arrive in the Northwest. During the next several days, the storm will traverse the nation's northern tier, resulting in generally light rain and snow. However, storm totals could reach two to four inches from the Pacific Northwest to the northern Rockies. In contrast, mostly dry weather will prevail across the southern two-thirds of the U.S., except in southern sections of Florida and Texas. Early next week, a surge of cold air will arrive across the Midwest and Northeast.- Provide by Brad Rippey, USDA

\*\*\*\*\*

Noteworthy topics in the news this week:

### The new National Drought Resilience Partnership

A drought preparedness program was announced by Obama administration officials to help communities get ready for impending drought and to know how best to respond when droughts do occur. The U.S. Department of Agriculture and the National Oceanic and Atmospheric Administration will head up the project.

### Another painful crop insurance payout for Ault, Colorado business

A crop insurer in Ault, Colorado anticipates up to \$9 million in claims from northern Colorado farmers in 2013, due to early drought, hailstorms and late-summer flooding. The insurer paid out nearly \$6 million in indemnity payments in 2012, which was about three times as much as the insurer had ever paid previously.

## Weekly Snowpack and Drought Monitor Update Report

### **Wichita Falls, Texas in stage 4 water restrictions; water quality declining**

Stage 4 water restrictions begin on Nov. 16 because the combined storage of lakes Kickapoo and Arrowhead fell below 30 percent of capacity. Under stage 4 restrictions, all outdoor watering is prohibited, and local businesses will face an internal audit of water use.

The quality of Wichita Falls' drinking water has deteriorated because drought has depleted Lakes Arrowhead and Kickapoo. The amount of total dissolved solids has increased from 250 parts per million (ppm) to 1,000 ppm.

### **Water customers on Big Island of Hawaii ordered to curb water use by 25 percent**

Water customers in Waimea were ordered to curb their water use by 25 percent as the Hawaii County Department of Water Supply declared the area to be under water restriction on the evening of Nov. 8. Conversely, on Maui, water restrictions were lifted after plentiful rainfall filled reservoirs.

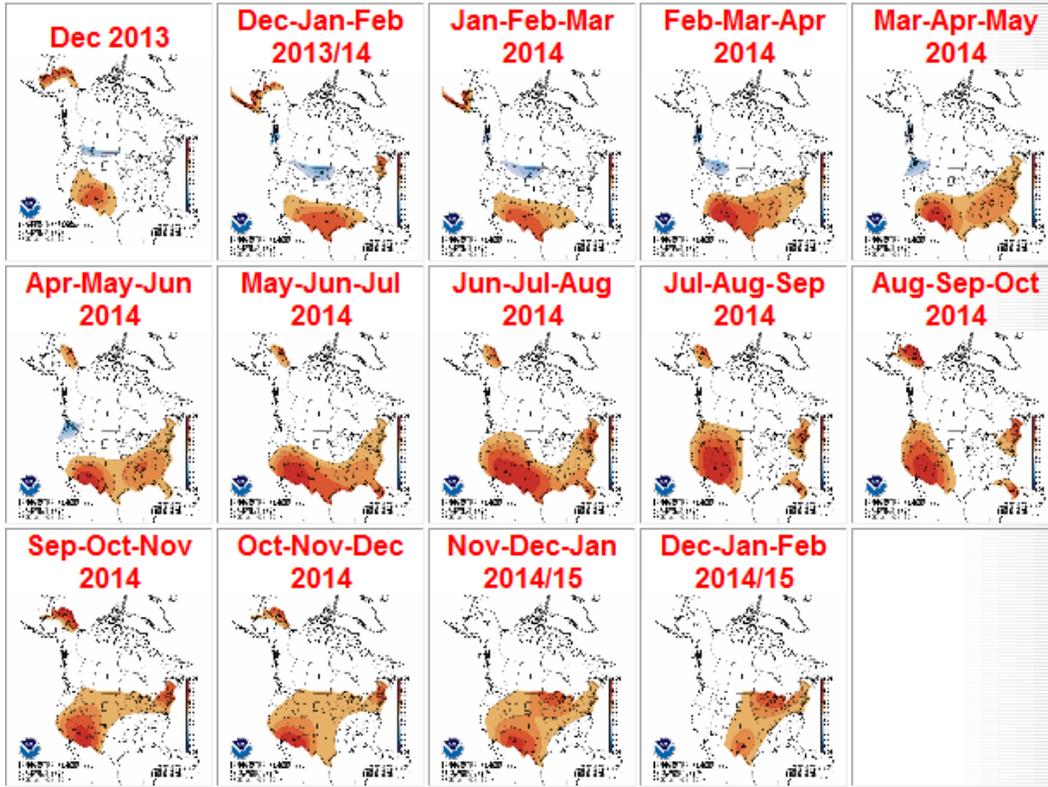
### **Fewer monarch butterflies passing through Texas this fall**

Two years of drought and habitat destruction in the Midwest have drastically limited the number of butterflies returning to Mexico to overwinter this year. A master naturalist and entomology specialist in Victoria, Texas said that of the 300 million monarch butterflies that left Mexico this spring, just 60 million of the butterflies' progeny, or 20 percent of the original number of monarchs, will return to Mexico in the fall.

**Other Headlines:** [Drought playing havoc with city's trees](#) - Nov 9, **Springfield, Illinois**; [Drought forces Waimea water restriction](#) - Nov 9, **Big Island, Hawaii**; [Drought-Related Water Restrictions Lifted in Upcountry, Maui](#) - Nov 13, **Maui**; [Low water levels lead to Douglas County drought warning](#) - Nov 14, **Douglas County in northeastern Kansas.**

# Weekly Snowpack and Drought Monitor Update Report

## Temperature



[Latest NOAA CPC Seasonal Outlook:](#)

A modified La Niña pattern is expected with below normal precipitation and above normal temperatures across the southern tier of the U.S. For the northern tier, a somewhat cooler and wetter Pacific Northwest and northernmost Rockies is expected, whereas the remainder the country should see near normal temperature and precipitation.

## Precipitation

