

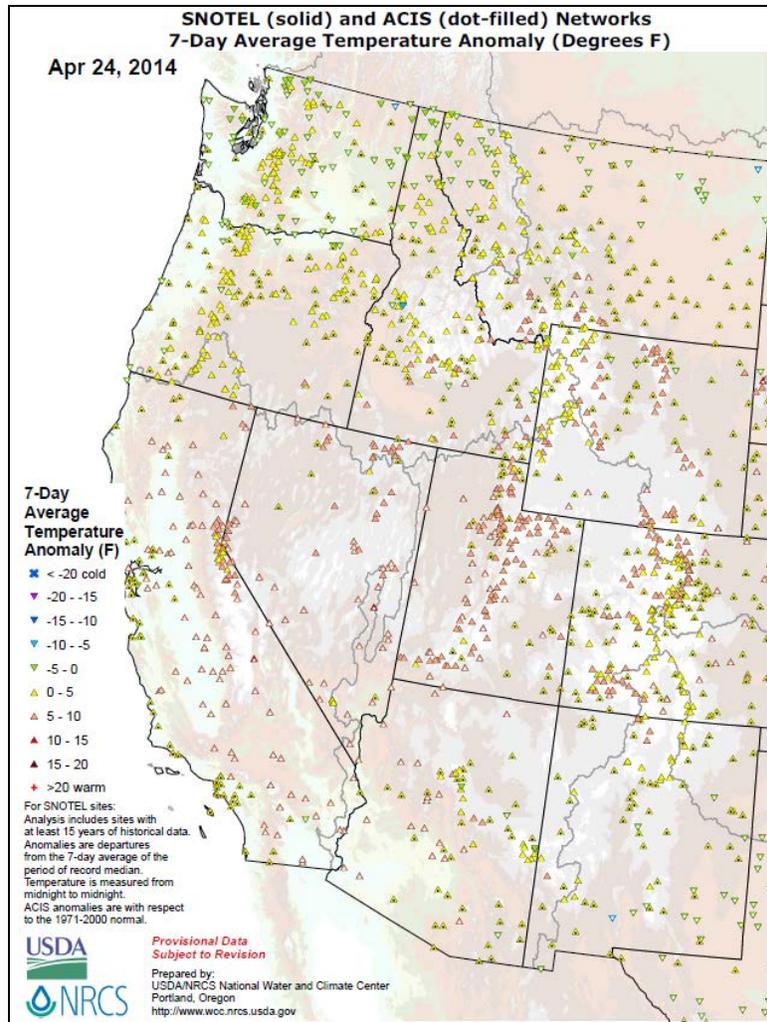


Natural Resources Conservation Service  
 P.O. Box 2890  
 Washington, D.C. 20013

## Weekly Snowpack / Drought Monitor Update April 24, 2014

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### Temperature



[SNOTEL](#) and [ACIS 7-day temperature anomaly](#) shows temperatures well above normal over California and the interior portions of the West. Lower departures are noted over the Northern Tier states.

*Click on most maps in this report to enlarge and 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

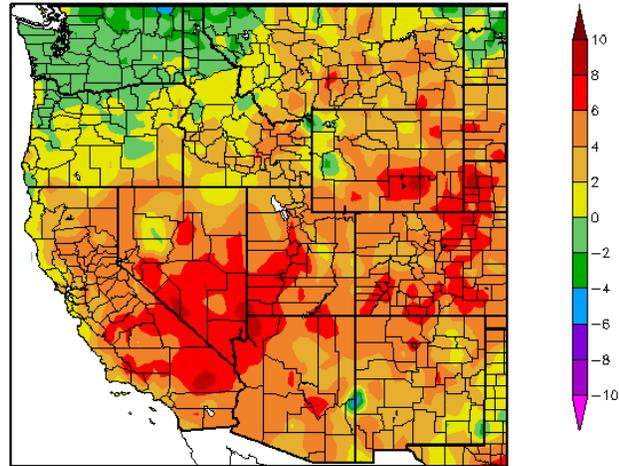
An Equal Opportunity Employer

# Weekly Snowpack and Drought Monitor Update Report

ACIS 7-day average temperature anomalies, ending April 23, show the greatest negative temperature departures from northern Washington through northern Montana ( $<-2^{\circ}\text{F}$ ). The greatest positive temperature departures occurred in southern Nevada and southern California ( $>+8^{\circ}\text{F}$ ).

- ✓ Also, see [Dashboard](#) and the [Westwide Drought Tracker](#).

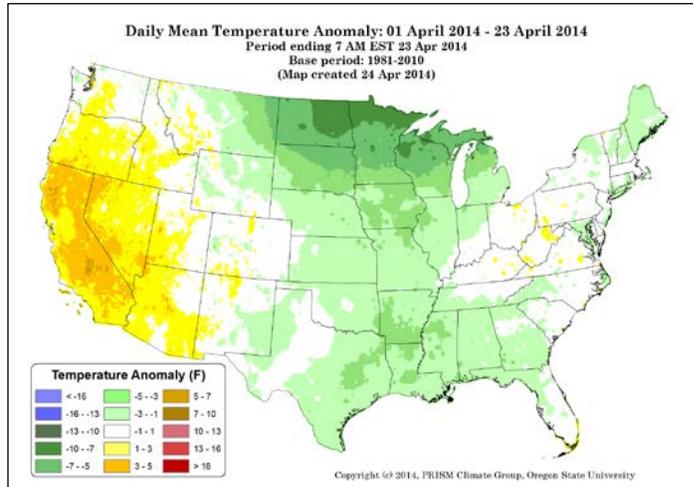
Departure from Normal Temperature (F)  
4/17/2014 - 4/23/2014



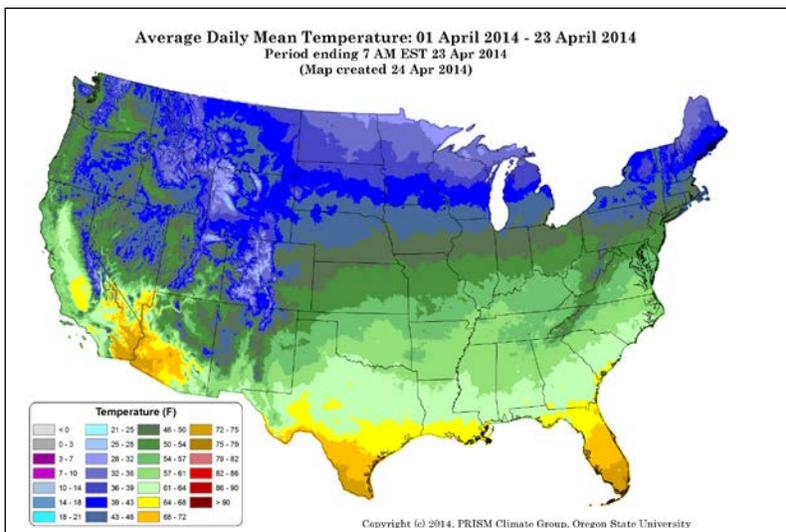
Generated 4/24/2014 at HPRCC using provisional data.

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.



← The April 1 to April 23, 2014 temperature departures map shows a cold pattern over the central region of the country; especially over the northern Great Plains. Above normal temperatures dominate the Pacific Coast states. Elsewhere near normal conditions prevail.

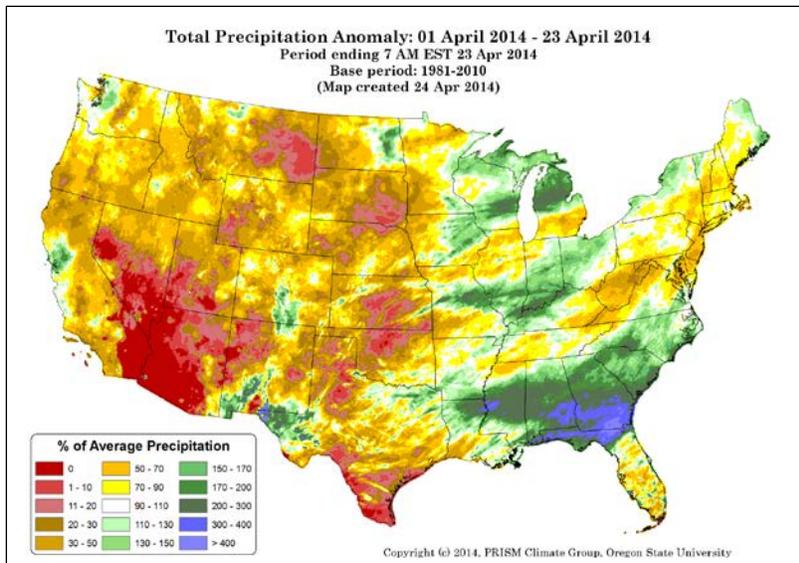
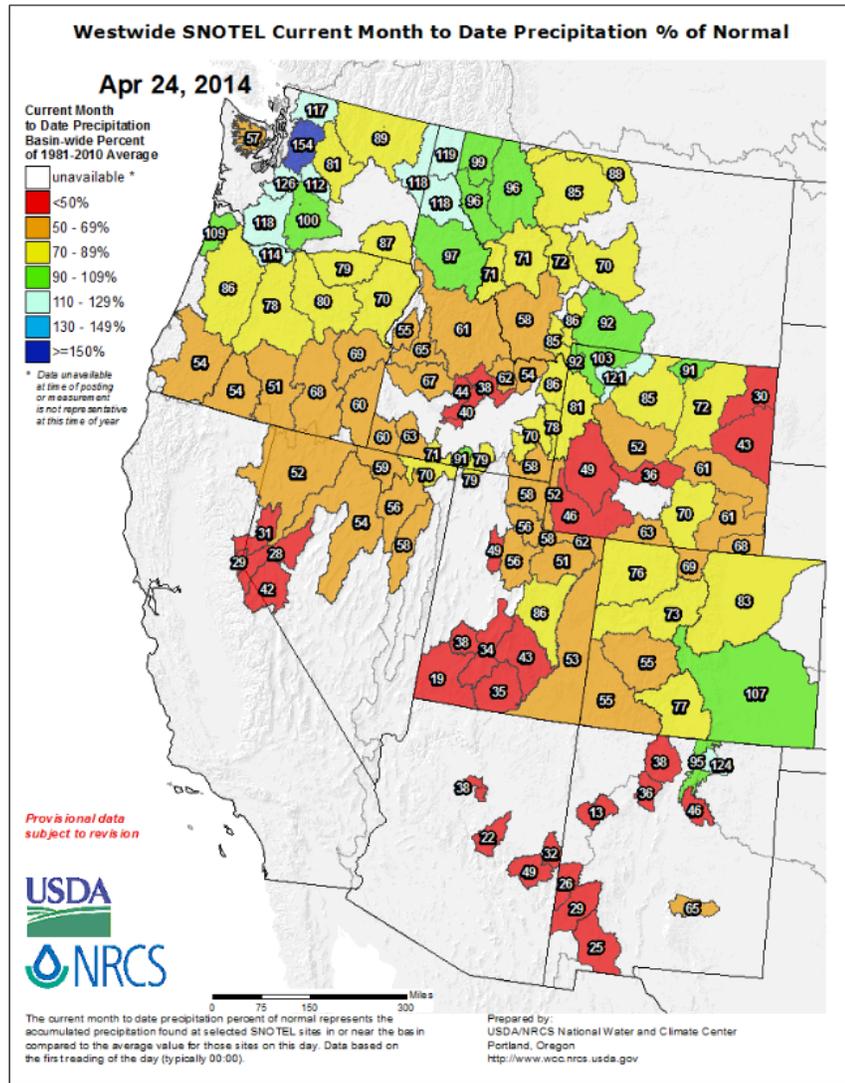


Forecasting the start of the spring snowmelt and subsequent runoff depends, in part, on when average temperatures warm to above freezing. Monitoring this type of [climate map](#) is a useful way to gauge when this onset is likely to occur.

# Weekly Snowpack and Drought Monitor Update Report

## Precipitation

The April [SNOTEL](#) precipitation percent of normal map shows predominately deficit conditions over much of the West. Surpluses are noted over the Washington Cascades and northern Idaho Panhandle. Another basin east of Yellowstone National Park also has surplus conditions.



← The [April](#) precipitation anomaly pattern reveals surplus moisture over parts of the Great Lakes, mid-Mississippi River Valley, Gulf Coast states, the central California coast, and southcentral Colorado. The Southwest (excluding southern New Mexico), Northwest (excluding the Washington Cascades), Northern Rockies, and much of the Great Plains are falling behind in moisture.

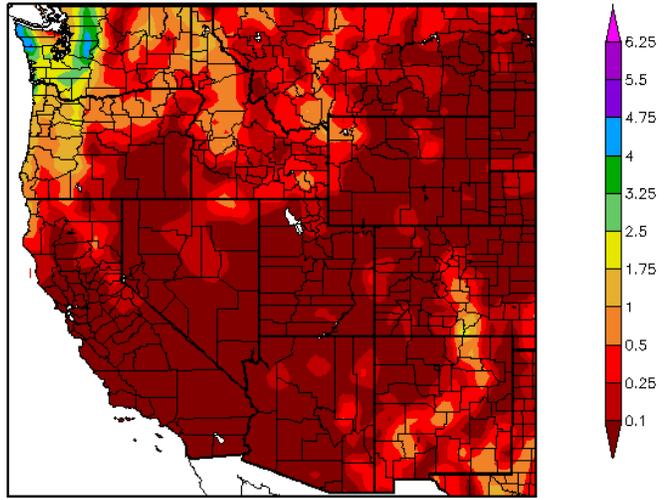
*This preliminary daily PRISM precipitation map contains all available network data, including SNOTEL data, and is updated periodically as additional data become available and are quality controlled.*

# Weekly Snowpack and Drought Monitor Update Report

The [ACIS 7-day](#) total precipitation map shows continued abundant moisture falling over western Washington, with lesser amounts over the Oregon Cascades, northern Rockies, and southern Rockies.

Elsewhere, little if any precipitation occurred.

Precipitation (in)  
4/17/2014 - 4/23/2014

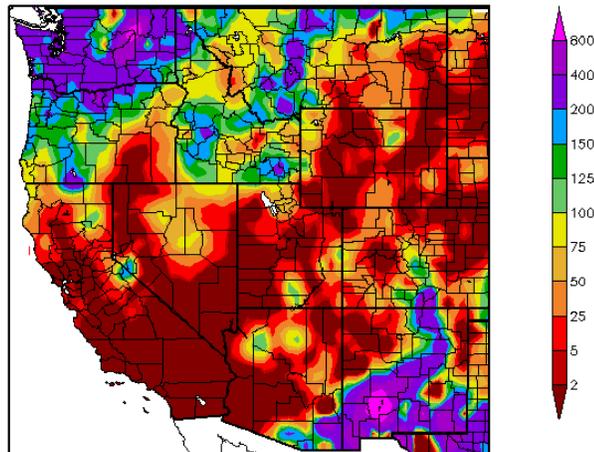


Generated 4/24/2014 at HPRCC using provisional data.

Regional Climate Centers

As would be expected based on the map above, this map reflects a similar pattern of precipitation that fell across the West during the week. →

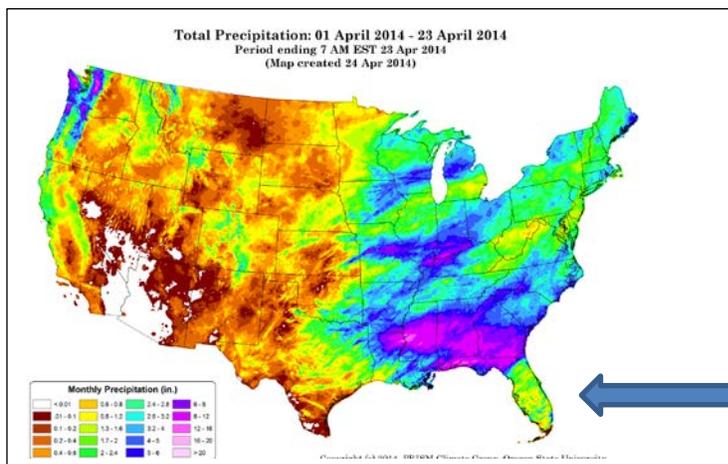
Percent of Normal Precipitation (%)  
4/17/2014 - 4/23/2014



Note that the precipitation over Washington is more than four times the amount that fell over southern New Mexico yet both areas experienced over 400% of their typical precipitation during the past week.

Generated 4/24/2014 at HPRCC using provisional data.

Regional Climate Centers



← The April 2014 [total precipitation](#) indicates large regions across the country with significant moisture (three bands across the Central Time Zone) as well as western Washington) and dryness from the Great Plains to the California border). Areas that have been in drought for some time are not being helped if this persistent pattern.

See [Go Hydrology](#) for current and forecast conditions over southern Florida.

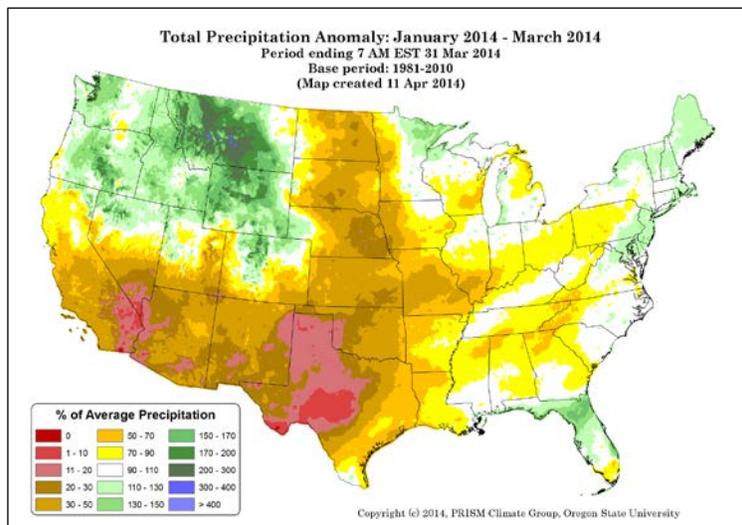
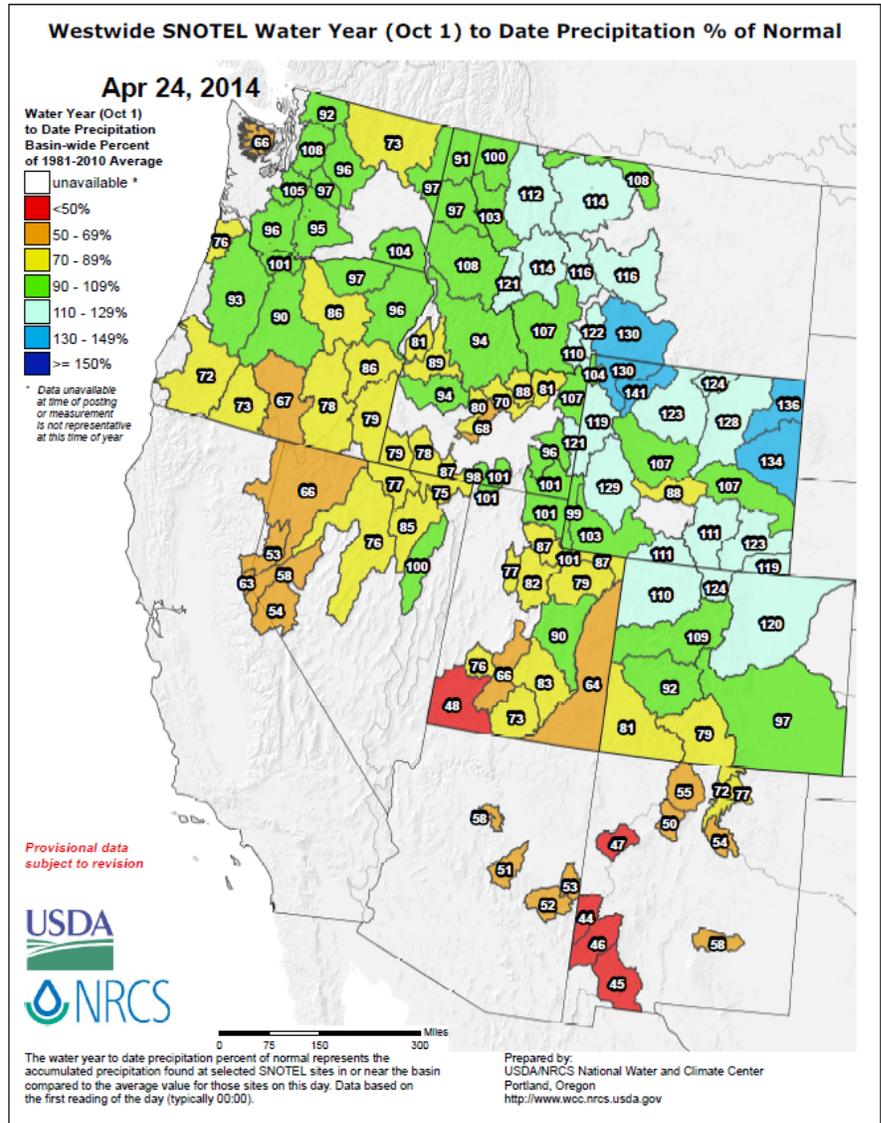
## Weekly Snowpack and Drought Monitor Update Report

For the [2014 Water Year](#) that began on October 1, 2013, only central Montana, most of Wyoming, and northern Colorado are experiencing surpluses.

Near average conditions dominate the northern half of the Cascades, the northern half of Idaho, westernmost Montana, the Lower Bear River in eastern Utah and southeast Idaho, and parts of the southern half of Colorado.

The largest deficits are centered over southern Oregon, western Nevada, southern and eastern Utah, Arizona, and New Mexico.

As the Water Year advances, it becomes more difficult for river basins to change bin categories.

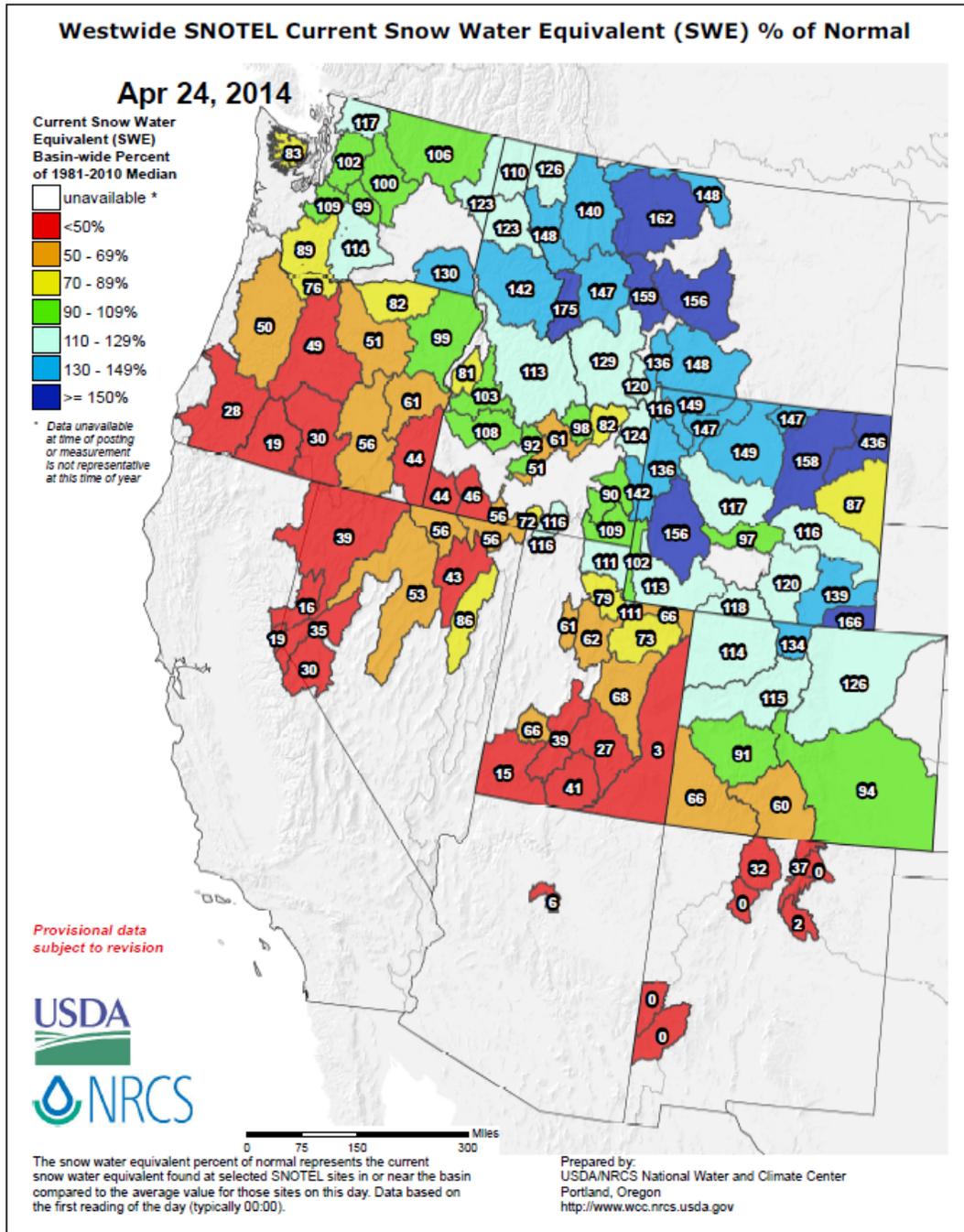


← The January through March 2014 [total precipitation anomaly](#) map shows extensive dryness across the Great Plains and Southwest.

Extensive moisture is noted over the northern half of the Rockies and parts of the Pacific Northwest. Northern Florida and parts of New England were also slightly ahead of normal for this three-month period.

# Weekly Snowpack and Drought Monitor Update Report

## Snow



[Snow Water Equivalent](#) (SWE) values are generally higher east of the Continental Divide, with the exception of New Mexico. During this time of year, the percent of normal can increase without additional moisture if the melt of the snowpack is delayed by colder than normal conditions. Values over the Southwest can also ramp up quickly with any precipitation event, because this is usually a dry time of year. However, most of the Southwest Snow Telemetry (SNOTEL) stations have melted out.

See Monday's Wyoming weekly snow report at the end of this week's report.

The water supply forecasts issued by the [National Water and Climate Center](#) for the spring and summer months are [now available](#).

See the latest:

- [National Snow Analysis](#)
- [West-Wide Water Supply Forecast Tables](#)

# Weekly Snowpack and Drought Monitor Update Report

## Weather and Drought Summary

### National Drought Summary – April 22, 2014

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

USDM Map Services: (contains [archived maps](#))

"For the contiguous 48 states, the U.S. Drought Monitor showed 39.43 percent of the area in moderate drought or worse, compared with 37.88 percent a week earlier. D4 increased to 3.28% this past week.

For all 50 U.S. states and Puerto Rico, the U.S. Drought Monitor showed 32.11 percent of the area in moderate drought or worse, compared with 31.65 percent a week earlier.

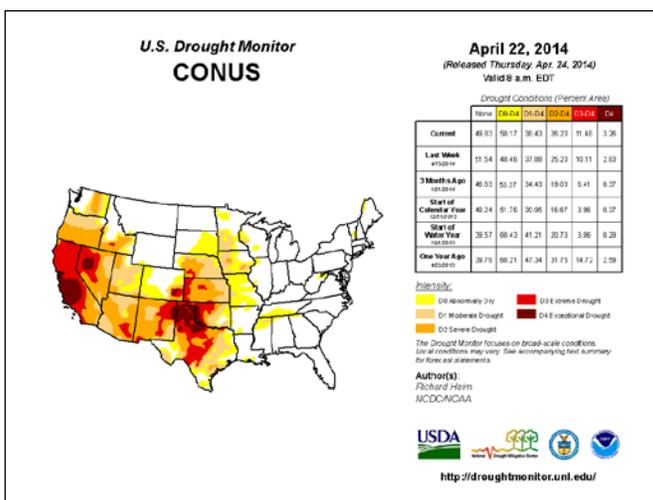
[Current Drought Monitor](#) weekly summary. The exceptional D4 levels of drought are scattered across CA, NV, CO, TX, OK, and now NM.

The latest [drought indicator blend and component percentiles](#) spreadsheet is a great resource for climate division drought statistics. This link is for the latest [Drought Outlook](#) (forecast). See [climatological rankings](#).

For more drought news, see [Drought Impact Reporter](#).

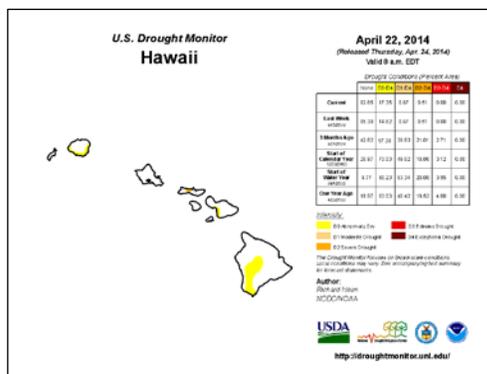
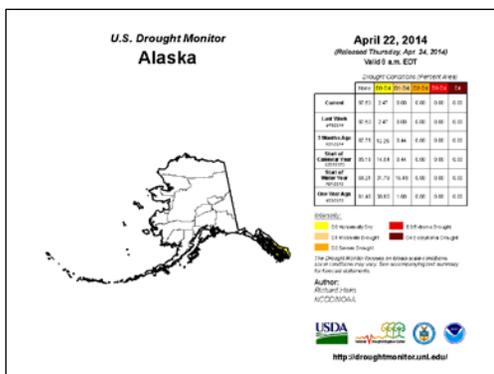
### Drought Management Resources (v):

- ✓ [Watch AgDay TV](#)
- ✓ [Drought Impacts Webinar Series](#)
- ✓ [Quarterly Climate Summary and Outlooks for the Great Lakes, Midwest and Missouri Basin States](#)
- ✓ [The Spring 2014 edition of DroughtScope](#)



See: Latest Drought [Impacts](#) during the past week.

- [Study shows lasting effects of drought in rainy eastern US](#) - April 17
- [Organic milk shortage felt locally](#) - April 14
- [Orange Juice Prices Are Squinting Higher](#) - April 17, **Florida**



The 49<sup>th</sup> and 50<sup>th</sup> States show relatively benign drought conditions. No changes noted for Alaska and Hawaii has experienced significant improvements.

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 that follow, click [here](#)."

# Weekly Snowpack and Drought Monitor Update Report

## Risk Management Web Resources

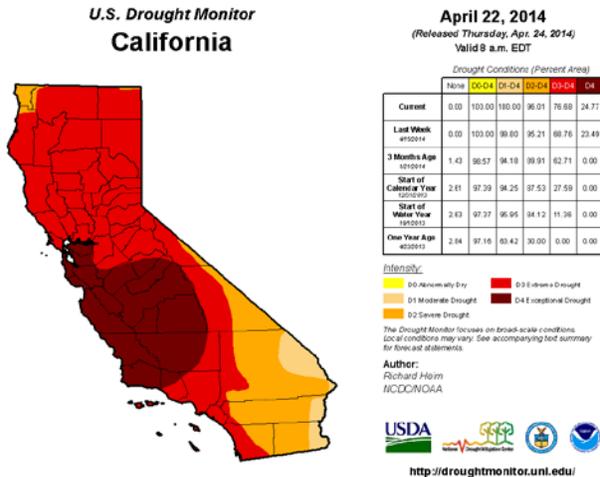
- ✓ Drought Monitor for the [Western States](#)
- ✓ Drought Impact Reporter for [New Mexico](#)
- ✓ [California Data Exchange Center & Flood Management](#)
- ✓ [Intermountain West Climate Dashboard](#)
- ✓ [Great Basin Dashboard](#)
- ✓ [CLIMAS January 2014 Climate Summary](#)
- ✓ [California Sierra Nevada-related snow pack](#)

## U.S. Impacts during the past week

- [Wildfires really are on the rise in West, Utah researchers say](#) - April 17

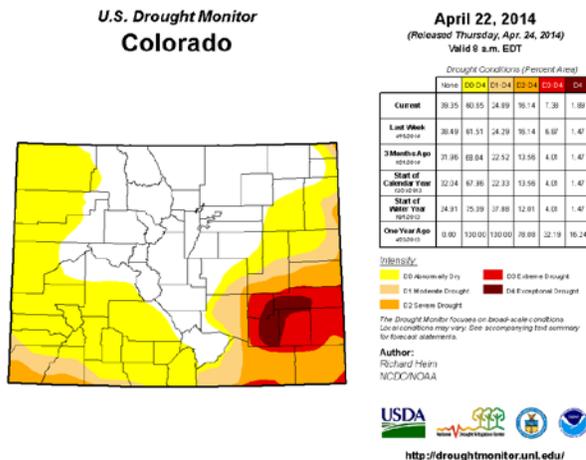
[Click to enlarge maps](#)

## State with D-4 Exceptional Drought

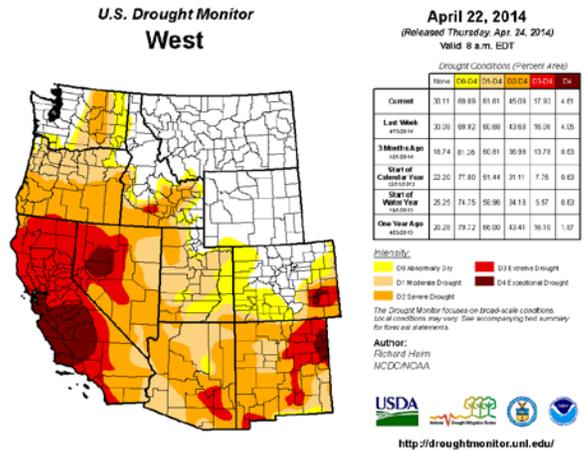


**Significant deterioration in D3-D4 occurred this week.**

## State with D-4 Exceptional Drought



**Some deterioration in D3-D4 occurred this week.**

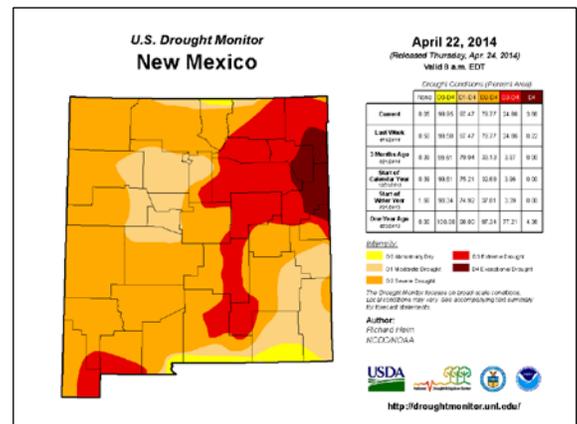


**Slight deterioration in D1-D4 occurred this week.**

## CA Drought Information Resources

### Drought News from California

- [Drought intensifying pest problems on farms](#) - April 17
- [Northern California bat population declining amid drought conditions](#) - April 17
- [California residents divided on drought solution](#) - April 16
- [Drought Squeezing Local Foodbanks](#) - April 16
- [Drought will cause avocado, lettuce prices to spike up to 34%, study says \(CHART\)](#) - April 17
- [Sneeze, wheeze, allergies: Valley's drought making it worse](#) - April 17
- [California Farmers to Get More Water](#) - April 18
- [California looking to recycled water to ease drought concerns](#) - April 14
- [California Suffers Astonishingly Fast Snowpack Melt as Drought Intensifies](#) - April 17
- [Well boom saving crops, but at risk of water table?](#) - April 13



**Introduction of D4 in eastern NM this week.**

# Weekly Snowpack and Drought Monitor Update Report

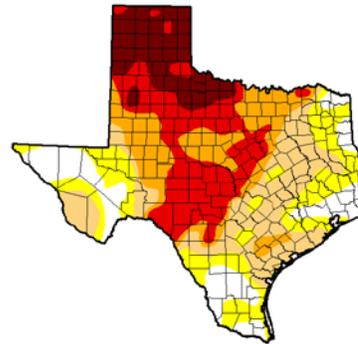
## State with D-4 Exceptional Drought

- ✓ Texas Drought [Website](#).
- ✓ [Texas Reservoirs](#).
- ✓ [Texas Drought Monitor Coordination Conference](#)  
**Call:** on Monday's 2:00 PM - 3:00 PM CST
- [Farmers fighting wind erosion and continued drought](#) - April 13
- [Major West Texas lake could become multi-million-dollar mud hole](#) - My San Antonio.com - April 15
- [North Texas city awaits word on wastewater re-use](#) - April 13



[Days Since Rain Summary](#)

## U.S. Drought Monitor Texas



April 22, 2014  
(Released Thursday, Apr. 24, 2014)  
Valid 8 a.m. EDT

	Drought Conditions (Percent Area)					
	None	D0-D1	D2-D3	D3-D4	D4	D4+
Current	13.52	86.38	68.68	48.56	32.67	12.54
Last Week	17.54	82.38	65.67	44.74	28.98	10.31
3 Months Ago	23.26	78.74	45.74	21.59	6.68	0.79
Start of Calendar Year	28.48	71.52	43.84	21.15	5.82	0.79
Start of Water Year	6.82	93.38	70.95	25.88	4.01	0.12
One Year Ago	1.40	98.59	92.21	70.83	38.00	11.93

**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.

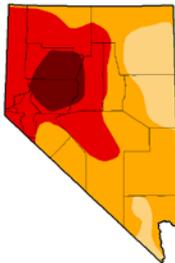
Author:  
Richard Heim  
NCCD/NOAA

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

Notable deterioration in D1-D4 occurred during the past week.

## State with D-4 Exceptional Drought

### U.S. Drought Monitor Nevada



April 22, 2014  
(Released Thursday, Apr. 24, 2014)  
Valid 8 a.m. EDT

	Drought Conditions (Percent Area)					
	None	D0-D1	D2-D3	D3-D4	D4	D4+
Current	0.00	100.00	100.00	100.00	100.00	100.00
Last Week	0.00	100.00	100.00	100.00	100.00	100.00
3 Months Ago	0.00	100.00	100.00	100.00	100.00	100.00
Start of Calendar Year	0.00	100.00	100.00	100.00	100.00	100.00
Start of Water Year	0.00	100.00	100.00	100.00	100.00	100.00
One Year Ago	0.00	100.00	100.00	100.00	100.00	100.00

**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  
NCCD/NOAA

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

Significant deterioration in D3 occurred this week.

- [Fire officials preparing for a potentially dangerous wildfire season](#) - April 17

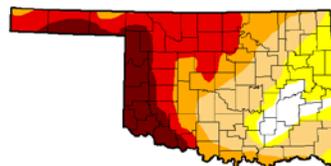
## State with D-4 Exceptional Drought

Related news:

- ✓ [2014 Kansas Drought Report and Summary](#)
- [Past 30 days precipitation totals](#)
- [Past 30 days precipitation percent of normal](#)
- [Calendar Year precipitation totals](#)
- [Calendar Year precip percent of normal](#)
- ✓ [Cold could damage wheat](#) - April 14

Significant deterioration in D3 occurred this week.

## U.S. Drought Monitor Oklahoma



April 22, 2014  
(Released Thursday, Apr. 24, 2014)  
Valid 8 a.m. EDT

	Drought Conditions (Percent Area)					
	None	D0-D1	D2-D3	D3-D4	D4	D4+
Current	6.73	93.27	79.85	54.81	27.88	14.34
Last Week	6.73	93.27	79.85	54.81	26.51	13.71
3 Months Ago	25.17	64.83	38.04	11.99	4.34	2.40
Start of Calendar Year	52.04	49.18	28.17	10.09	4.34	2.40
Start of Water Year	21.74	78.26	43.00	17.82	4.82	1.45
One Year Ago	10.80	89.20	72.00	52.78	30.50	5.40

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

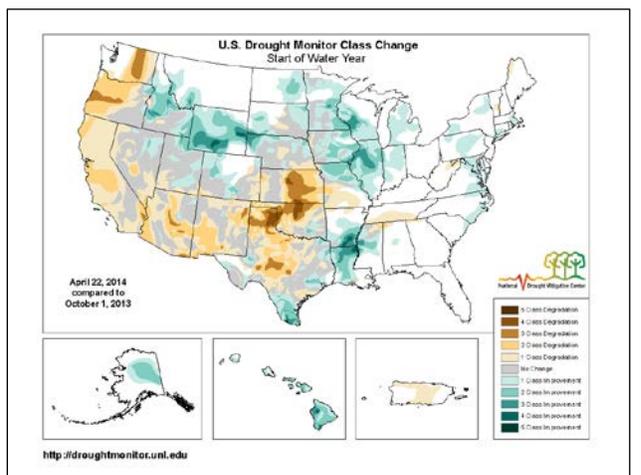
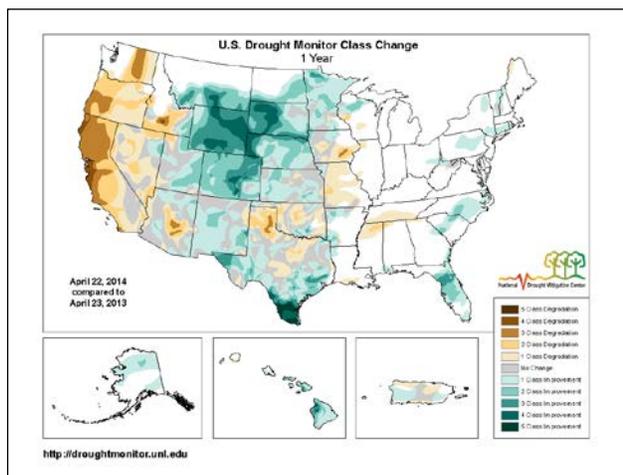
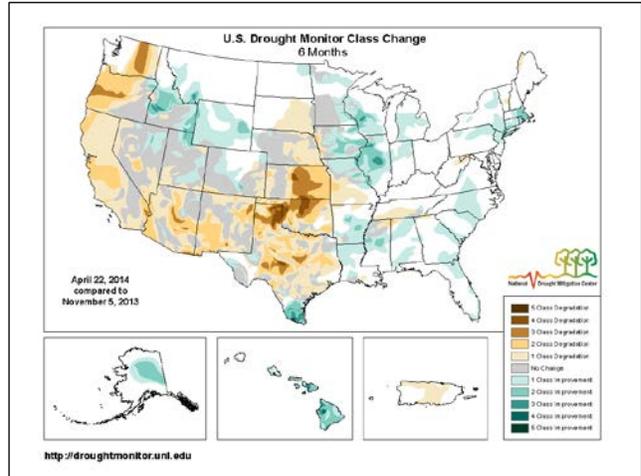
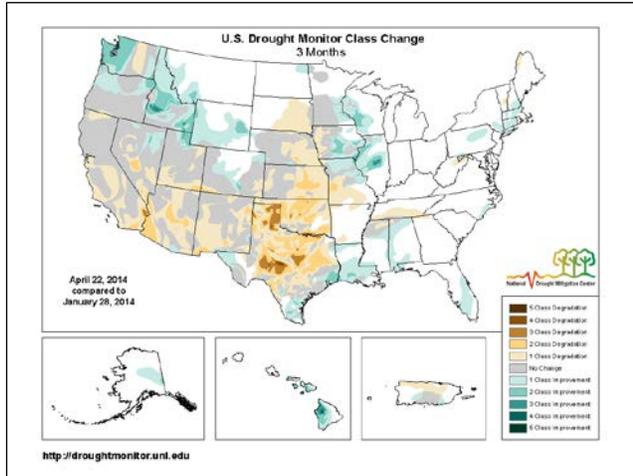
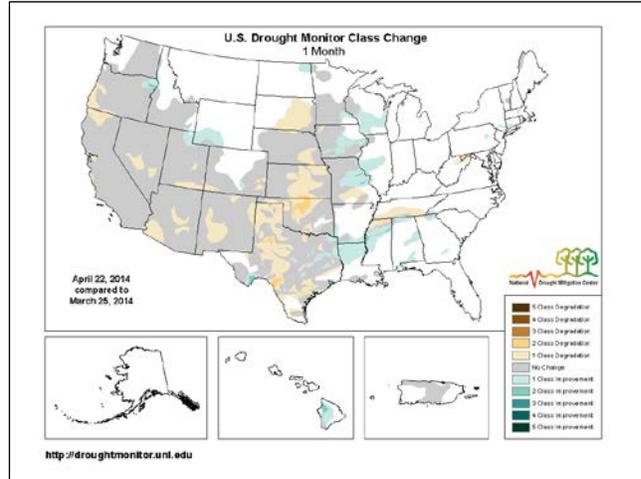
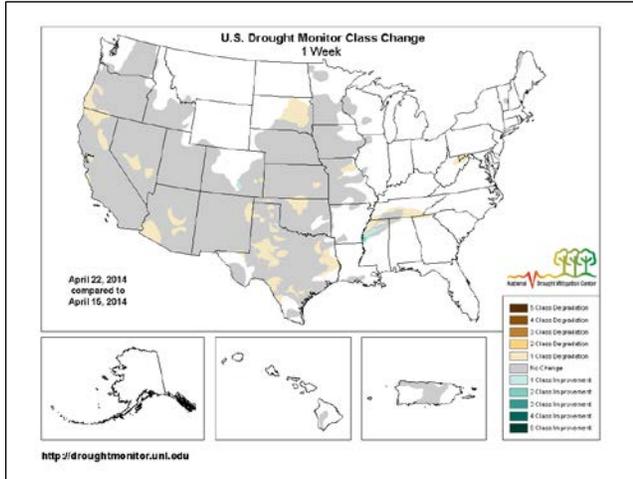
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:  
Richard Heim  
NCCD/NOAA

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

# Weekly Snowpack and Drought Monitor Update Report

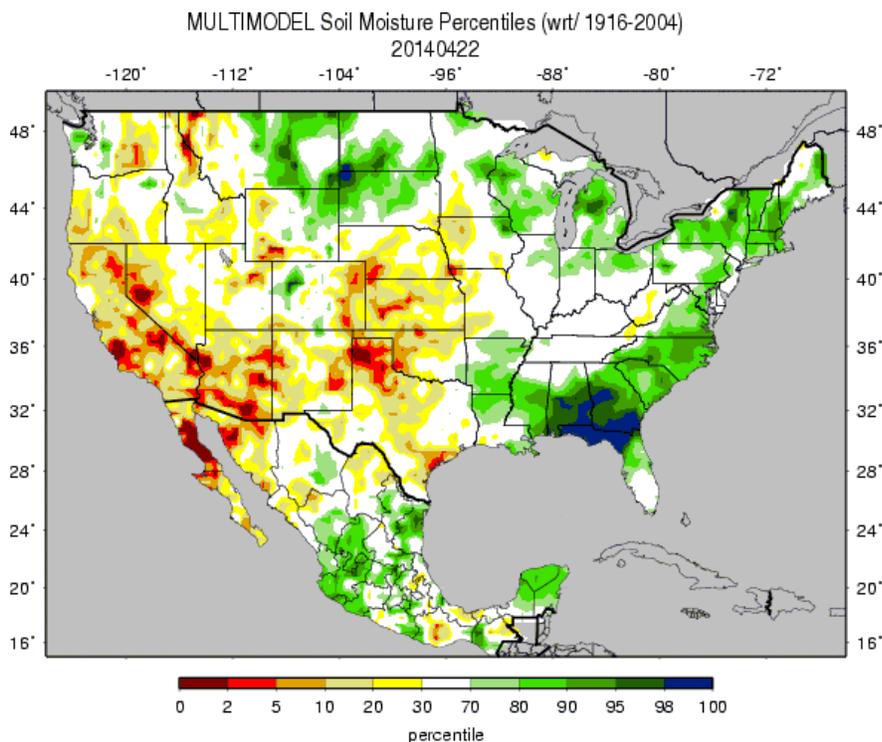
## Changes in Drought Monitor Categories (over various time periods)



Changes to the drought monitor usually start to accelerate in the spring. Since the start of the 2014 Water Year (lower right map), the western drought conditions have worsened over the Pacific Northwest and improved over Wyoming and Idaho. Conditions have also improved over the Mississippi River Valley, but have worsened from Kansas to northern Texas.

# Weekly Snowpack and Drought Monitor Update Report

## Soil Moisture



**Note:** Northernmost states with continued frozen ground will not have the most accurate and reliable soil moisture measurements until late April.

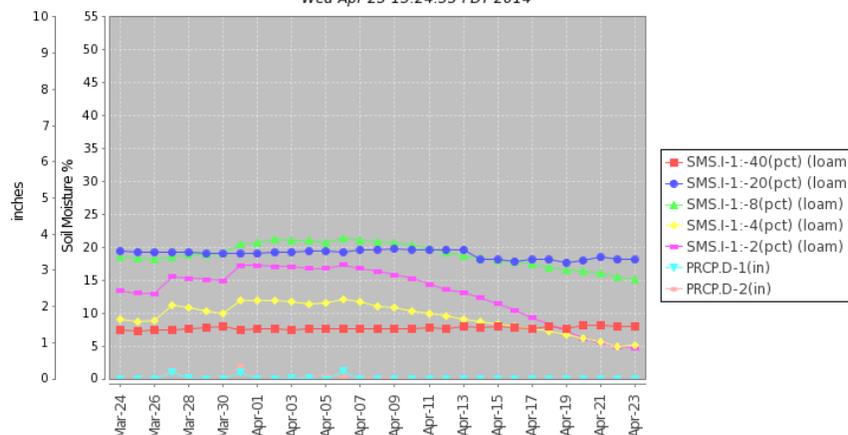
Soil moisture ranking in [percentile](#) as of April 22 shows dryness over central California, western Nevada, southern Arizona, eastern New Mexico, and the southcentral Great Plains (i.e., northern Texas to southern Nebraska). Moist soils dominate the Gulf Coast states, eastern seaboard, and north of the Black Hills. With abundant snowpack in Montana, concern exists about potential Missouri River flooding in the coming weeks (see the next page for more data).

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 (2170) MONTH=2014-03-24 (Daily) NRCS National Water and Climate Center - Provisional Data - subject to revision  
Wed Apr 23 13:24:33 PDT 2014

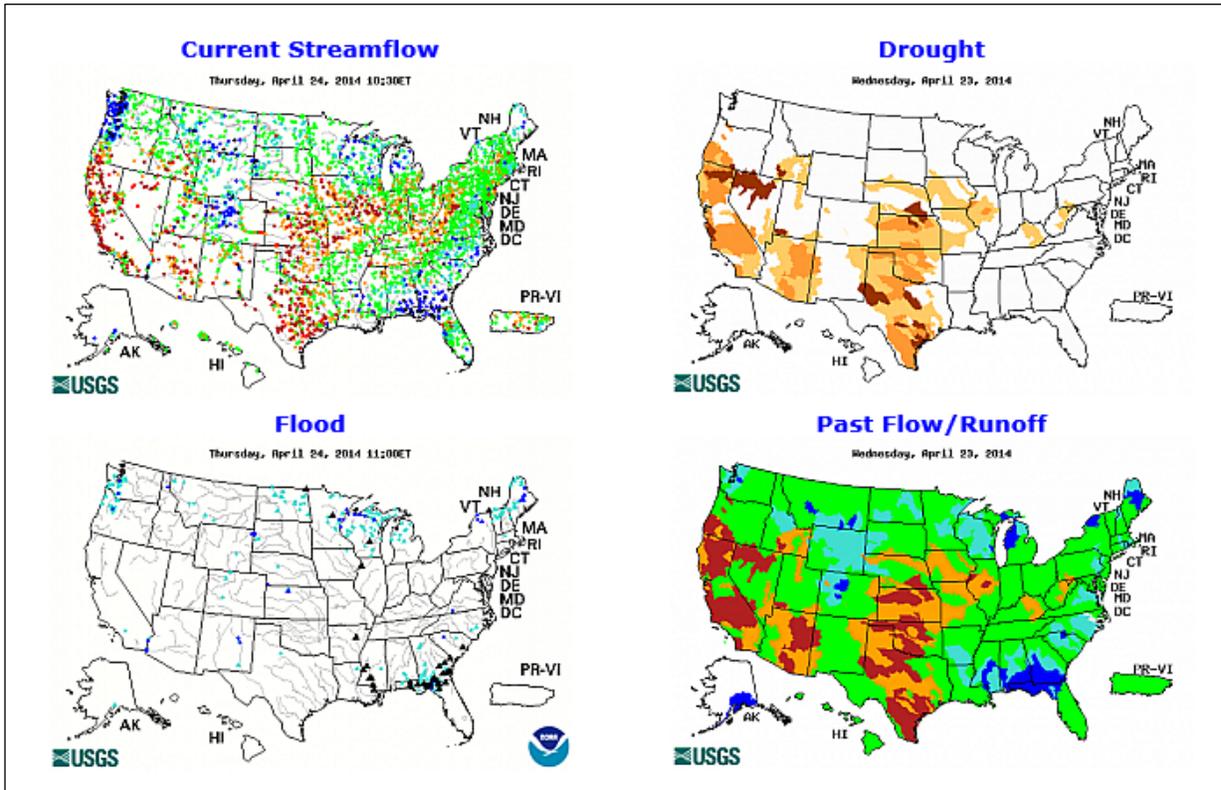


This NRCS resource shows soil moisture data at a SCAN site located in [central Nevada](#). Note the upper layers are drying out due to lack of precipitation as the deeper layers are maintaining their moisture (for now).

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](#).

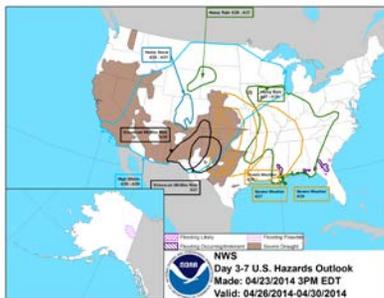
# Weekly Snowpack and Drought Monitor Update Report

## Streamflow



Click maps to enlarge and update

### Weather hazards



High winds and enhanced chances for wildfires are possible by the weekend for the interior West and southern High Plains. Heavy snows are also possible over the high country in Colorado and heavy rains for the Black Hills, South Dakota.

## National Long Range Outlook



During the next three months, flooding is possible over the Red River Valley in North Dakota, the upper Midwest, and the middle Mississippi River Valley. Currently, 3 gauges have a greater than 50% chance to experience major flooding; 49 gauges for moderate flooding; 227 gauges for minor flooding.

## Weekly Snowpack and Drought Monitor Update Report

### [National Drought Summary for April 22, 2014](#)

Prepared by: Drought Monitor Author: Richard Heim, NCDC.

#### Summary

"Weather systems moving in the upper-level westerly flow generated low pressure systems and surface fronts which moved across the contiguous United States (CONUS) this U.S. Drought Monitor (USDM) week. Two storm tracks resulted, with one moving across the northern tier states and the other from southern New Mexico, across the Gulf of Mexico coast, and up the East Coast. Above-normal rainfall was widespread across southern New Mexico, the Texas Trans Pecos, and the coastal Southeast. Below-normal precipitation dominated the rest of the country, with much of the Southwest again receiving virtually no precipitation. Weekly temperatures averaged above normal in the West and below normal in the East.

#### Hawaii, Alaska, and Puerto Rico

Rainfall totals have been below average over the past month along the lower elevations of Kauai's eastern through southern through western slopes, and a USDA/FSA report indicated some dryness settling into the area. D0 was introduced over southern Kauai, but no change was made to the rest of the Hawaiian Islands. A mixed pattern of rainfall occurred over Puerto Rico, with the D0 area generally below normal. Many streams continued to have below-normal flow, so no change was made to the D0 area. Alaska was mostly drier than normal this week, but streams were running above average (except in the panhandle D0 area), so no change was made to the depiction.

#### Midwest

East-central Missouri benefited from heavy precipitation earlier in the month, while the rest of the state has been below normal. But longer-term (90 days and longer) dryness is evident. Streamflow conditions varied across the state. D0 in east-central Missouri was pulled back to reflect recovered farm ponds and creeks. But April 20 reports from the U.S. Department of Agriculture (USDA) rated 21% of the topsoil and 72% of the subsoil moisture short to very short (dry to very dry) in the northeast district, which prompted expansion of D0.

#### The Mid-Atlantic

The heavier storms seem to miss an area of the central Appalachians continues. Precipitation deficits exceed 4 inches over the last 90 days in some locations, and are more than 6 inches over the last 6 months. An area of D0 was added to northeastern West Virginia and western Maryland to reflect deepening precipitation and soil moisture deficits and low streamflows. It was given an SL indicator to reflect the dryness at both the short and long time scales.

#### The Northeast

Precipitation ranged from a few tenths of an inch in the western portions to 1 to 2 inches, and locally over 2 inches, in the eastern portions. Recent snowmelt has contributed moisture to the soils and helped keep streamflow high, but precipitation deficits remain at the 60-day to 6-month time frame, so no change was made to the depiction.

## Weekly Snowpack and Drought Monitor Update Report

### The Plains

Drier-than-normal weather dominated the Plains this week and much of the last 6 months. A colder-than-normal winter and early spring have delayed agricultural activities; April 21 USDA reports indicated that the condition of winter wheat has declined in Kansas, with winter wheat condition rated poor to very poor for 32% of the crop in Kansas, 12% in Nebraska, and 4% in South Dakota. The USDA rated topsoil moisture conditions short or very short (dry or very dry) for 72% of Kansas, 54% of Nebraska, 50% of Colorado, and 23% of South Dakota. D0 expanded across eastern South Dakota to reflect dryness at the 30-day to 6-month time scales. Most of Kansas and Nebraska were already in moderate to extreme (D1-D3) drought, but an oval of D3 was added in central Kansas and D2 expanded eastward from there to reflect extreme low precipitation values at 30-90 days, as well as poor USDA soil moisture and crop condition reports. In southeast Colorado, D3-D4 expanded while the western edge of D0-D1 contracted. The D3 expansion in southeast Colorado bled into western Kansas.

### The South

Weather systems moving in the southern storm track dropped 1+-inch rains over parts of Texas and Oklahoma, but the storms affected a relatively small area. Most of the South was drier than normal this week, continuing a pattern which has dominated the last 6 months and longer. The High Plains region of the Texas panhandle has had the driest October-March 42-month period in the 1895-2014 record during October 2010-March 2014, with range, pastures, and wheat struggling, and even irrigation was not helping much. D0-D4 expanded in many parts of Texas, D4 expanded in the Oklahoma panhandle, and D3 pushed into north central Oklahoma and bled into adjoining parts of Kansas.

### The Southeast

Widespread 2-4-inch rains, with locally over 5 inches, fell from the Florida panhandle to coastal North Carolina. 1+-inch rains were common from central Georgia to parts of western North Carolina. Rainfall amounts were significantly less to the north and west, further away from the coastal storm track. Below-normal year-to-date precipitation and low streamflows prompted the expansion of D0 across northern Mississippi, southern to central Tennessee, northern Alabama, northern Georgia, and a tiny portion of extreme southwestern North Carolina. Rainfall from the previous week, and earlier, prompted the pullback of D0-D1 in west central Mississippi, but D1 expanded slightly into the drier parts of northern Mississippi. The impacts indicator was split between S to the north and SL to the south to differentiate between the shorter-term and longer-term dryness.

### The West

Parts of the coast and Cascades of Washington were wetter than normal this week, with stations receiving 3 inches or more of precipitation, and some locations reporting over 5 inches. An inch or two of precipitation was widespread over western Oregon, yet the week ended up drier than normal. Parts of the northern and central Rockies received an inch or more of precipitation, which was above normal in places. An upper-level system dropped a third of an inch to an inch of rain over southern New Mexico, which was above normal for the week. Otherwise, precipitation amounts were half an inch or less, with the southwestern third to half of the West receiving no precipitation. Mountain snowpack was below normal, except for the Washington ranges and northern and central Rockies, with continued warmer-than-normal temperatures accelerating the melting of the meager snowpack in the California Sierras.

In Arizona, livestock water tanks were dry so water hauling was an issue on ranges that don't have water improvements with pumps, tanks, and pipes. D2-D3 expanded in southeast Arizona where

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stream levels continued to fall and evaporation was high. A very high fire danger and low precipitation at long (multi-year) time scales prompted the expansion of D1 in southwest Arizona and adjoining California and conversion of the S impact indicator to SL. In New Mexico, wetness in July and September 2013 masked longer-term dryness. October 2010-March 2014 was the third driest such 42-month period in the 1895-2014 record; it would be the driest if not for the July/September rains. Another dry week combined with this long-term dryness to expand D4 in northeast New Mexico. In Nevada, D3 expanded in Nye and adjacent Mineral counties, and the D1 donut hole was eliminated in southeast Nevada. The L impacts boundary along the Colorado-Utah-Wyoming boundary was pulled back where soil moisture deficits and short-term precipitation deficits indicated the SL timescale squeezing the L impacts region.

D2 and D3 expanded in northern California and parts of southern Oregon, with D2 spreading along coastal Oregon up to Lake County where precipitation deficits and low streamflows were most significant. D4 expanded further in the San Francisco Bay area and across all of Monterey County. In California, the city of San Diego was proposing a water supply "level 1" status, and a small reservoir/water district in Riverside County was on the 30-90 day "watch" list for depleted supplies. The San Antonio Reservoir has been essentially dry through the entire winter and Nacimiento Reservoir was at 22% capacity. The City of Montague risks running out of drinking water by the end of summer and has requested that all outside watering be curtailed until further notice; this is the first time in over 80 years of water deliveries from the Montague Water Conservation District (MWCD) that this situation has occurred. Growers in Shasta Valley with the primary irrigation district (MWCD) were expected to have only enough irrigation water to irrigate what would equate to a single irrigation on about half of their acreage. Many growers in the Big Springs area have already started pumping water to irrigate field. Within 24 hours of when one grower started irrigating, two nearby domestic wells went dry. The frustration caused by the drought can be seen in a report by an observer in Siskiyou County: "Our snow pack is pathetic, rainfall is way below normal, (low) stream flows are running at 2-3 months ahead of normal depending on the area, well levels have dropped severely and many wells are dry in spring or have levels typical of late fall, surface water irrigation supplies are non-existent to extremely limited in many areas, and the situation is only getting worse daily (especially after 3 consecutive years of drought)." With the expansion of D1 across southeast California and southwest Arizona, this week marks the first time in the 15-year history of the USDM that 100% of California was in moderate to exceptional drought.

### ***Looking Ahead***

The NWS HPC 7-Day Quantitative Precipitation Forecast (QPF) calls for frontal-low pressure systems to bring an inch or more of precipitation across a large part of the country, stretching from the eastern and northern Great Plains to the Appalachians, with 3 inches or more across parts of the Midwest to Deep South. Another area of 2+-inch precipitation is projected for coastal Washington and Oregon, and parts of the northern Rockies, while the Southwest is expected to remain mostly dry. Temperatures for the April 24-30 period are predicted to be warmer than normal in the southern states ahead of the front, with colder-than-normal air from the north moving across the country behind the frontal systems.

The 6-10 day and 8-14 day outlooks indicate that an upper-level circulation pattern, consisting of a ridge over western North America and a trough over the east, is predicted to become entrenched during May 1-7, bringing colder-than-normal temperatures to the country east of the Rockies and warmer-than-normal temperatures to the West and Alaska. This period should be drier than normal for the Southwest and Great Plains into the Midwest, and wetter than normal across the Southeast, Ohio Valley, Northeast, and part of the Pacific Northwest. Southern Alaska is expected to be wetter than normal with northwest Alaska drier than normal."

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## 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.

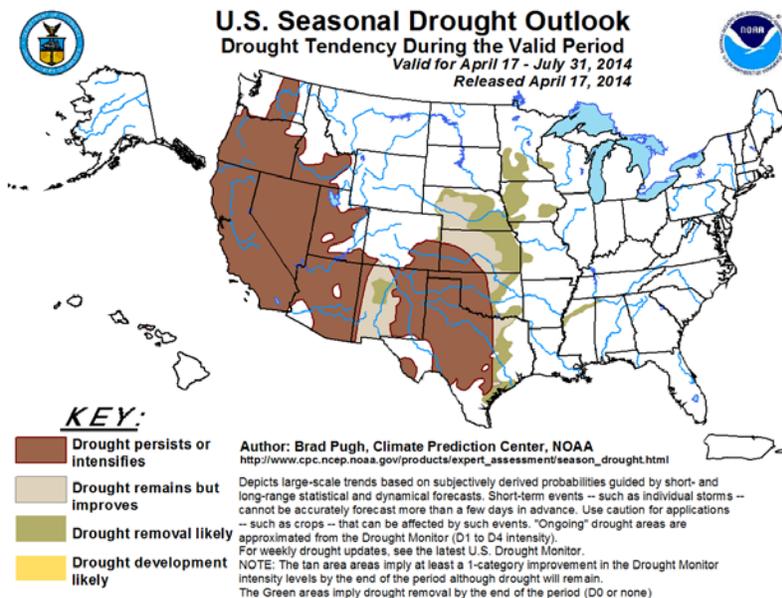
This report uses data and products provided by the Interagency Drought Monitor Consortium members and the National Interagency Fire Center.

/s/

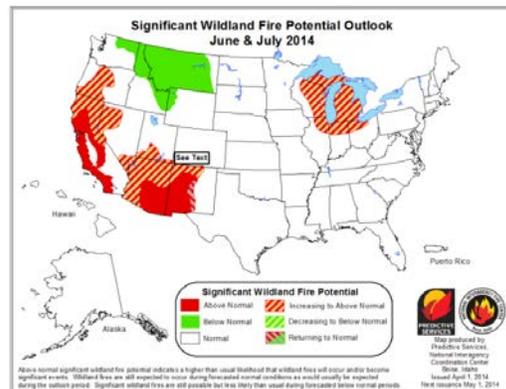
David W. Smith  
Acting Deputy Chief, Soil Science and Resource Assessment

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## [Drought Outlook](#) For April 17 to July 31, 2014

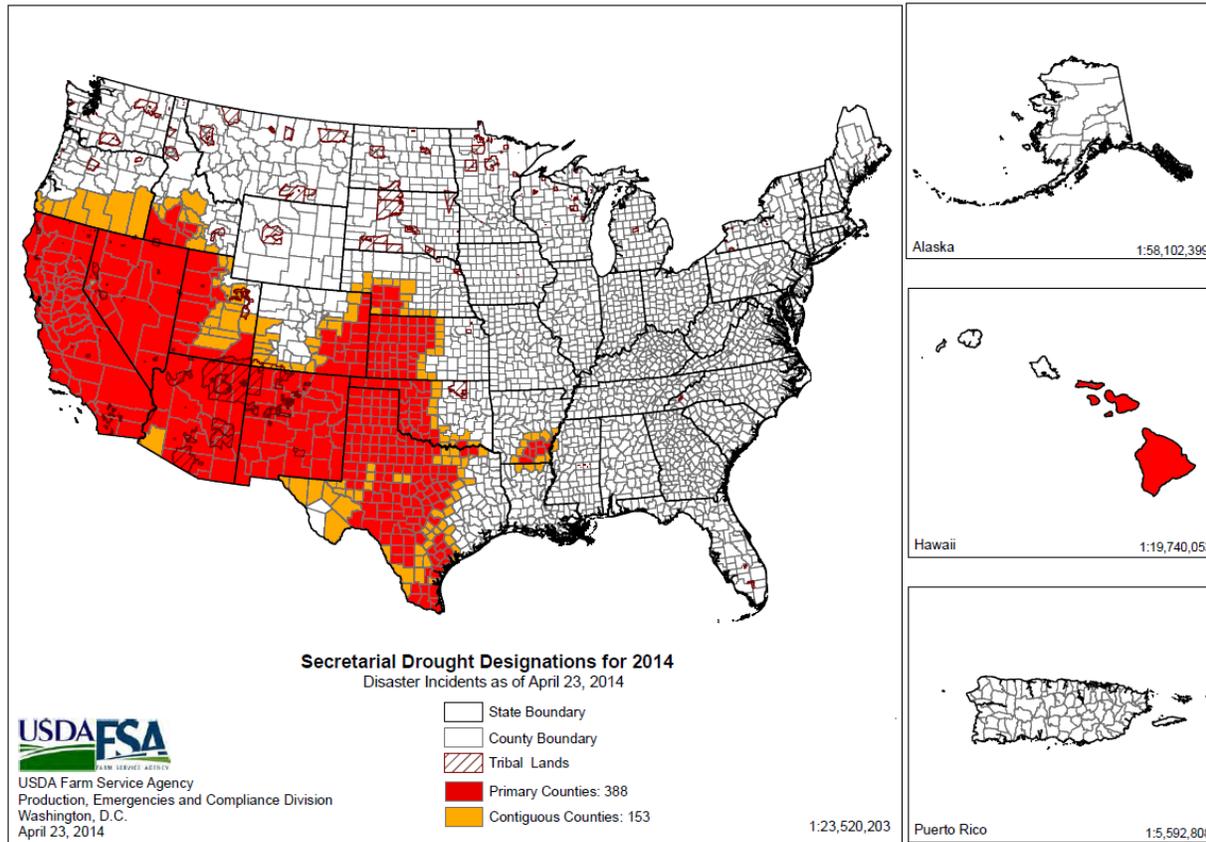


- Drought is expected to persist over much of the West. However, western New Mexico is expected to benefit from the summer monsoon. The area from the central Great Plains to the northern Midwest is also expected to improve.
- ✓ Also see: [National Significant Wildland Fire Potential Outlook](#) (updated on the first of each month) contains a content summary of the previous month's conditions.



## June & July Outlook

## 2014 Secretarial Drought Designations - All Drought



Refer to the USDA Drought Assistance [website](#) and [National Sustainable Agriculture Information Service](#). Read about the new [USDA Regional Climate Hubs](#).

### Supplemental Drought-Agriculture [News](#)

Download [archived](#) "U.S. Crops in Drought" files

This following a collection of drought-related news stories from the past seven days or so. Impact information from these articles is entered into the [Drought Impact Reporter](#). A number of these articles will also be posted on the [Drought Headlines](#) page at the NDMC website. The list is compiled by Denise D. Gutzmer, Drought Impact Specialist, and National Drought Mitigation Center.

### California

#### State and federal water allocation increase

Water districts and farmers in California will get up to 5 percent of requested amounts of water from the State Water Project. The U.S. Bureau of Reclamation bumped up allocations for water agencies in the Sacramento Valley from 40 percent to 75 percent.

#### More wells being drilled in the Central Valley

Well drillers in the Central Valley are very busy as farmers eagerly request new wells to provide water for their crops. Some well drillers are booked out to one year, so high is the demand for water. Fresno County officials issued 256 new well permits for agricultural and domestic use in the first three months of 2014, which is more than double the number of permits issued by this time last year. The number of permits to dig agricultural wells in Tulare County tripled to 245. Similarly in Kern County, the number of wells for agricultural use more than quadrupled to 63.

#### Organic milk supplies

Some grocery stores in the Washington D.C. area have posted signs on the doors of their dairy cases, alerting customers to supply issues for organic milk. For livestock to produce organic milk, they need plenty of water, organic hay and grass, but the drought in California has made it difficult and more expensive to meet those criteria. As a result, prices of organic dairy products are likely to rise.

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### Food banks not receiving as many produce donations

Foodbanks in California were feeling the pinch of drought, due to less produce being grown in the state and fewer produce donations coming their way. Foodbanks must vie against others in the food industry for basic items like onions, potatoes, carrots and corn. The Foodbank of Santa Barbara said they were getting more requests for produce from local groups serving children and needed cash donations to be able to help those in need.

### Allergy season lengthened

Central Valley pollen counts typical of April were already present in February as drought drove up pollen levels. The allergy season may also last longer than usual as drought causes grasses and trees to pollinate longer.

### Bat population reduced by drought

More dead and dying bats than usual are being found in Northern California. Bats feed on aquatic insects and insects that spend a portion of their lives in water, stated the founder of Northern California Bats. Drought may have reduced the insect population to the extent that bats cannot find enough insects to eat because fewer agricultural fields were irrigated or flooded, providing a water source for the insects.

## Texas

### Water supplies

In Texas, 1,143 of the state's 4,642 water suppliers had imposed voluntary or mandatory water restrictions as of April 10 to extend water supplies amid persistent drought. An estimated 31 public water systems have fewer than 90 days' worth of water left, while seven systems may have less than 45 days' worth of water remaining.

### Farmers challenged by drought, winds

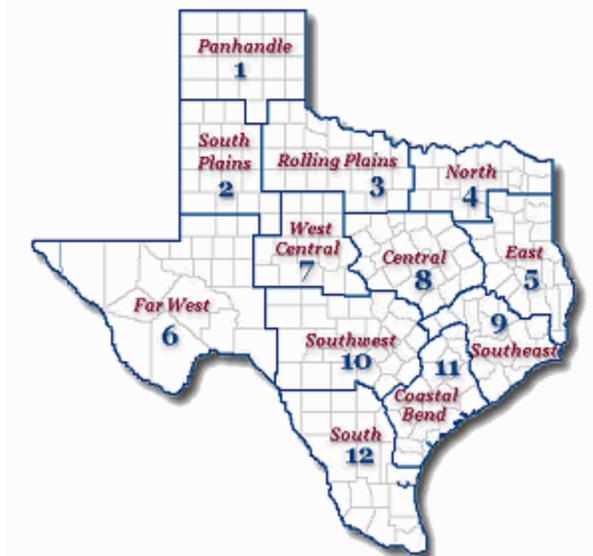
Windblown soil erosion was a problem throughout the **Texas Panhandle** where drought conditions were worse than in other parts of the state. Dryland wheat growers in Wheeler County have brought in crop insurance adjusters to witness the devastation caused by drought, said the AgriLife Extension agent for the county. Even irrigated wheat manifested signs of drought damage.

The growth and development of all small grains in **West Central Texas** was limited by warm, dry and windy conditions, and some fields were already a total loss. Other wheat fields were very short with spotty stands and were in poor to fair condition. Stock tank levels continued to decline and were presently a problem for some farmers. Heavy supplemental feeding continued for all livestock.

Ranchers in the **Rolling Plains of Texas** tried to protect pastures by rotating cattle to avoid overgrazing, but it did not help much. While farmers had prepared fields for spring planting, high winds led to blowouts and the need to go over the plowed ground again. Several counties had burn bans.

Winter wheat in the **South Plains of Texas** was stifled by drought. Livestock needed to be fed weekly because pastures did not provide enough.

Texas AgriLife Extension Service county offices by district



### Oklahoma crops

Wheat and canola, compromised by the drought in Oklahoma, were further damaged by a spring freeze. The wheat crop in and around Major County had lost a "considerable amount of yield potential" due to the drought, said the

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Oklahoma Cooperative Extension Service ag educator for the county, who noted that the wheat was thin and in even worse shape to the west.

Drought hindered growth of the canola and reduced the number of blooms on the plants, which will reduce yield. Sixty-nine percent of the canola was in poor or very poor condition.

### 38 million gallon flush in Portland, Oregon

A teenager in Portland...um... tainted a 38 million gallon reservoir with his own "water." Portland water authorities have chosen to drain and refill the reservoir to provide its water customers with the highest quality water. Those voicing an opinion favor keeping the water in the reservoir as the water quality tests show no threat to human health. Note: *That's 116.61 Acre-feet or enough water to support 116 average families of 4 for a year.*

In 2011, some other genius pulled a similar stunt, prompting officials to drain a smaller reservoir of 8 million gallons.

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### Tea Cup reservoir depictions:

- <http://www.usbr.gov/uc/water/basin/> ← Upper Colorado
- [http://www.usbr.gov/uc/wcao/water/basin/tc\\_gr.html](http://www.usbr.gov/uc/wcao/water/basin/tc_gr.html); ← Upper Snake
- <http://www.usbr.gov/pn/hydromet/burtea.html> ← Upper Colorado
- [http://www.usbr.gov/uc/water/basin/tc\\_cr.html](http://www.usbr.gov/uc/water/basin/tc_cr.html) ← Upper Colorado
- <http://www.usbr.gov/pn/hydromet/select.html> ← Pacific Northwest
- <http://www.sevierriver.org/reservoirs/teacup-diagram-of-reservoirs/> ← Sevier River Water (UT)

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NWCC's Surface Water Supply Index (SWSI) maps are located [here](#).

