



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

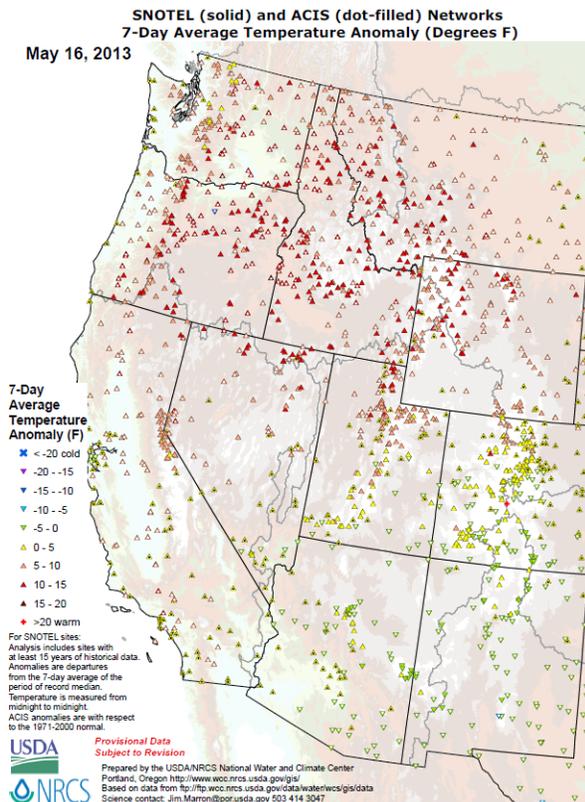
Weekly Snowpack / Drought Monitor Update, 16 May 2013

SNOTEL SNOWPACK AND PRECIPITATION SUMMARY (Most figures are clickable to enlarge and update)

Temperature

[SNOTEL](#) and ACIS 7-day temperature anomaly ending today reveals the temperature gradient shifted from west-to-east last week to north-to-south this week.

Well above normal temperatures dominated the Pacific Northwest and northern Rockies, whereas cooler than typical temperatures prevailed over the Southwest.

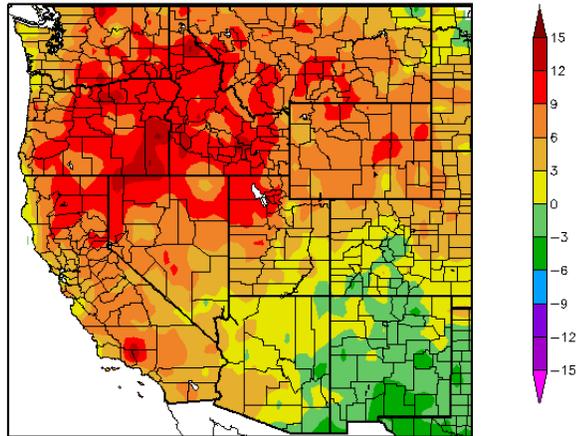


Weekly Snowpack and Drought Monitor Update Report

[ACIS 7-day](#) average temperature anomalies show the greatest positive temperature departures over eastern Oregon and northern Idaho (>+15°F). The greatest negative departures occur across portions of southern New Mexico (<-3°F). This map currently does not use SNOTEL data, but is expected to later this summer.

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

Departure from Normal Temperature (F)
5/9/2013 – 5/15/2013



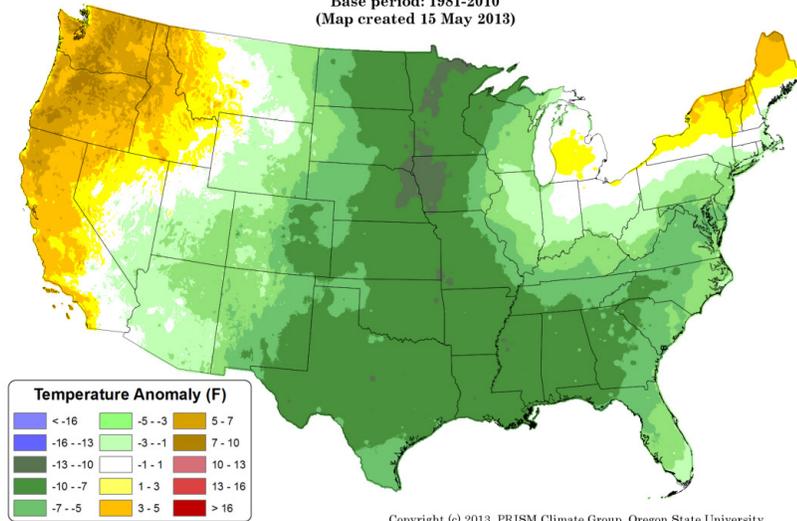
Generated 5/16/2013 at HPRCC using provisional data.

Regional Climate Centers

This new, preliminary [PRISM](#) temperature map, updated daily, will be available to the public at no cost by early fall. It contains all available network data, including SNOTEL data, and will be updated periodically as additional data become available and are quality controlled.

In this current map, the Pacific Northwest is experiencing a very warm May, whereas the eastern Rockies and Great Plains are seeing more April-like temperatures.

Daily Mean Temperature Anomaly: 01 May 2013 - 14 May 2013
Period ending 7 AM EST 14 May 2013
Base period: 1981-2010
(Map created 15 May 2013)



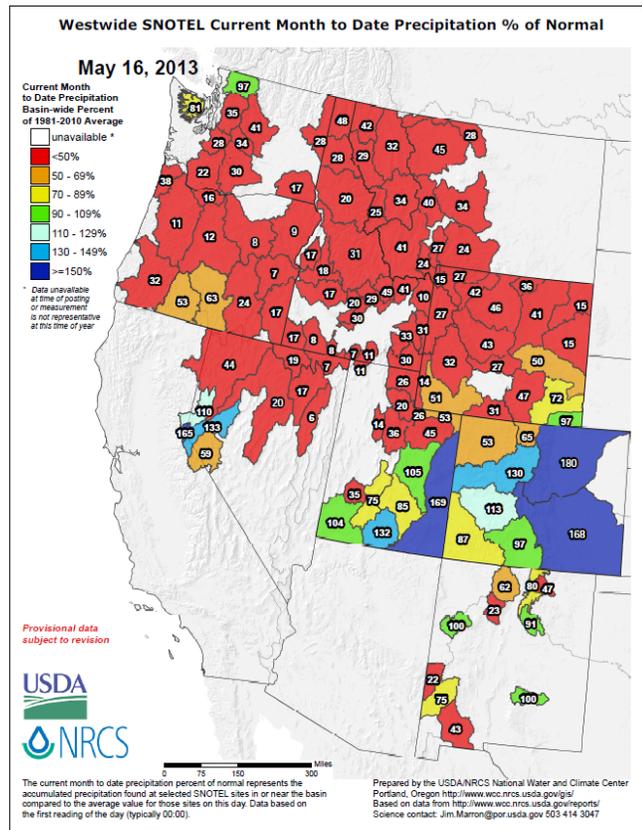
Copyright (c) 2013, PRISM Climate Group, Oregon State University

Weekly Snowpack and Drought Monitor Update Report

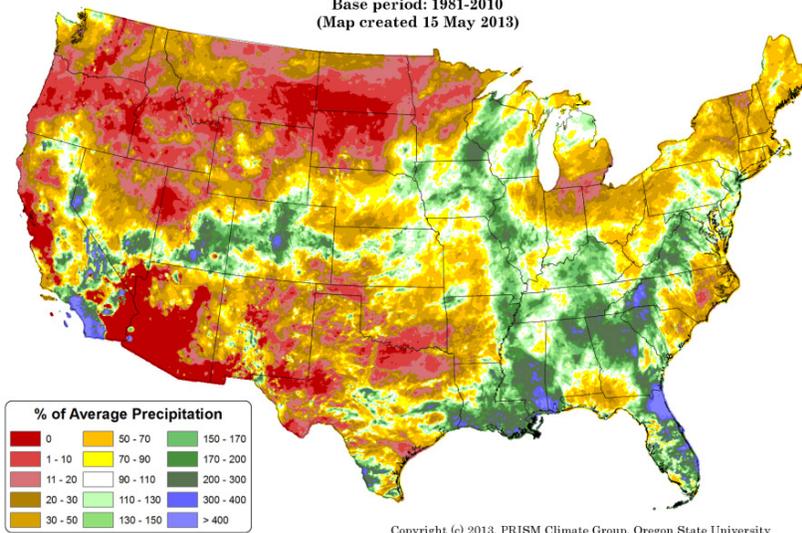
Precipitation

SNOTEL month to date precipitation percent of normal pattern shows significant precipitation across the northern Sierra Nevada, the southeastern half of Utah, and much of central and eastern Colorado.

The remainder of the West is experiencing a dry month with deficits mounting.



Total Precipitation Anomaly: 01 May 2013 - 14 May 2013
 Period ending 7 AM EST 14 May 2013
 Base period: 1981-2010
 (Map created 15 May 2013)



In this current map, heavier than normal precipitation has occurred from the Sierra Nevada eastward through Utah and Colorado. Thus far for May, the lack of moisture is apparent over the Pacific Northwest through Montana and Arizona and much of New Mexico. The unusual occurrence of light precipitation over southern California reflects the statistical anomaly shown (blue).

This new, preliminary [PRISM](#) precipitation map, updated daily, will be available to the public at no cost by early fall.

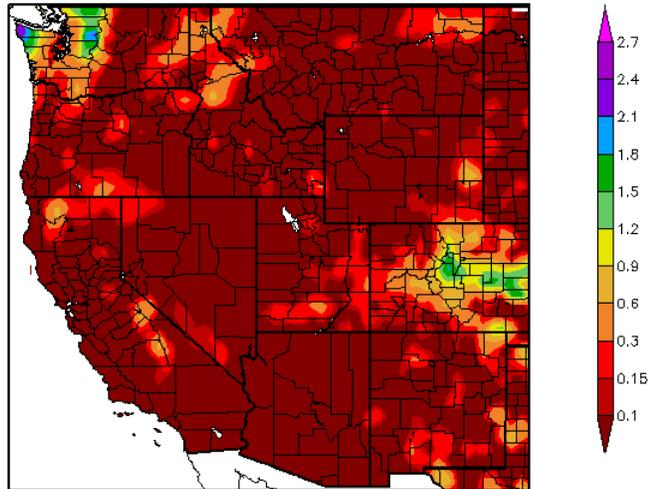
It contains all available network data, including SNOTEL data, and will be updated periodically as additional data become available and are quality controlled.

Weekly Snowpack and Drought Monitor Update Report

[ACIS](#) 7-day average precipitation amounts for the period ending May 15 show the heaviest precipitation across northern Washington and east-central Colorado.

This map currently does not use SNOTEL data, but is expected to later this summer.

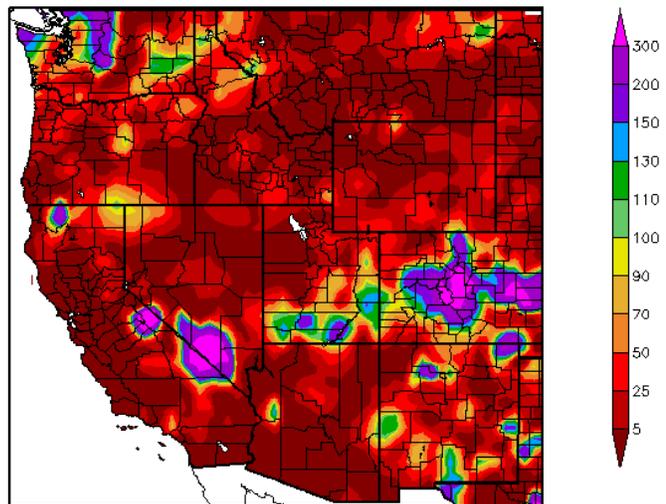
Precipitation (in)
5/9/2013 - 5/15/2013



In this map, moisture is reflected in terms of very high percent of normal values over Washington and Colorado. The other regions (e.g., Nevada, California, and Utah) reflect some moisture in locations that do not ordinarily receive much or any precipitation this time of year.

This map currently does not use SNOTEL data, but is expected to later this summer.

Percent of Normal Precipitation (%)
5/9/2013 - 5/15/2013

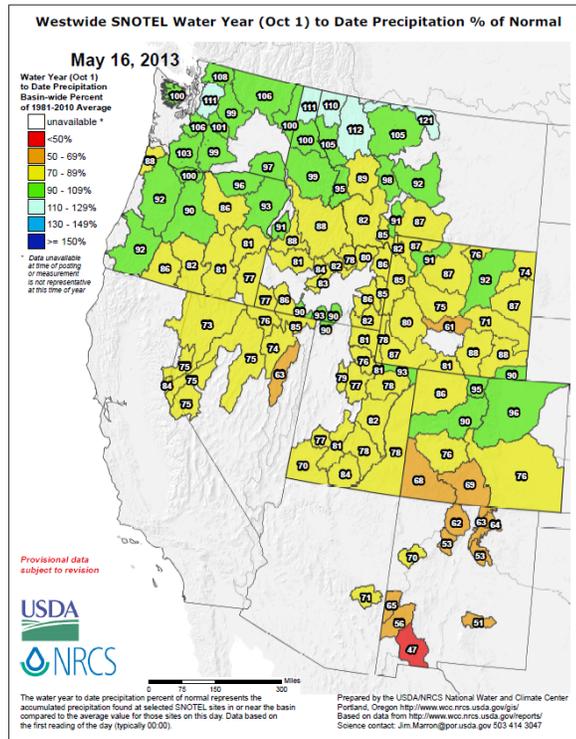


Weekly Snowpack and Drought Monitor Update Report

For the [2013 Water Year](#) that began on 1 October 2012, the pattern continues to resemble La Niña (e.g., wetter northern tier).

Parts of Arizona are still the exception for the southern tier with near normal amounts. Southeastern Oregon and northeastern Nevada have bucked this tendency over the northern tier states with lesser precipitation.

For additional information, daily reports by SNOTEL sites are available [here](#).



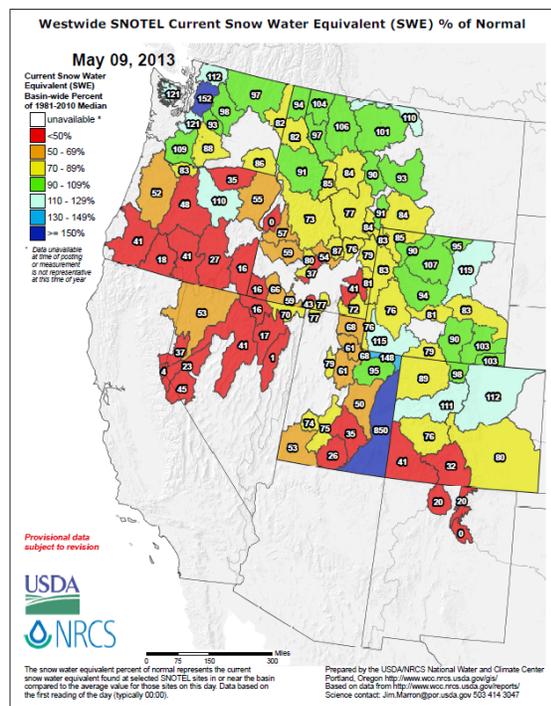
"More dry times news from CA. Friant water users lose another 5% of allocation. We are on pace for continuing our driest calendar year on record. For the 8 station index in the northern Sierra, our calendar year total is 8.7 inches which is over 2 inches below 1924 (driest year on record). Nov and Dec account for 73% of the water year total of 41.8 inches which is 84% of the long term average of 50 inches. The daily reservoir report (33 reservoirs) shows reservoir storage at 90% of average for the State. The end-of-April 154 reservoir tally shows storage at 96% of average. Last year storage was at 113% of average at the end-of-April. Inflows have peaked and summer drawdown has started." – Mike Anderson, CA State Climatologist

Snow

[Snow-Water Equivalent \(SWE\)](#): Today's map shows high values holding in Washington and over parts of Wyoming and Colorado.

The extremely high value over eastern Utah reflects low snowpack where there is usually none measured by this late in the season.

A useful basin-by-basin assessment of SWE to date can be viewed by state [here](#) and [here](#).



Weekly Snowpack and Drought Monitor Update Report

WEATHER AND DROUGHT SUMMARY

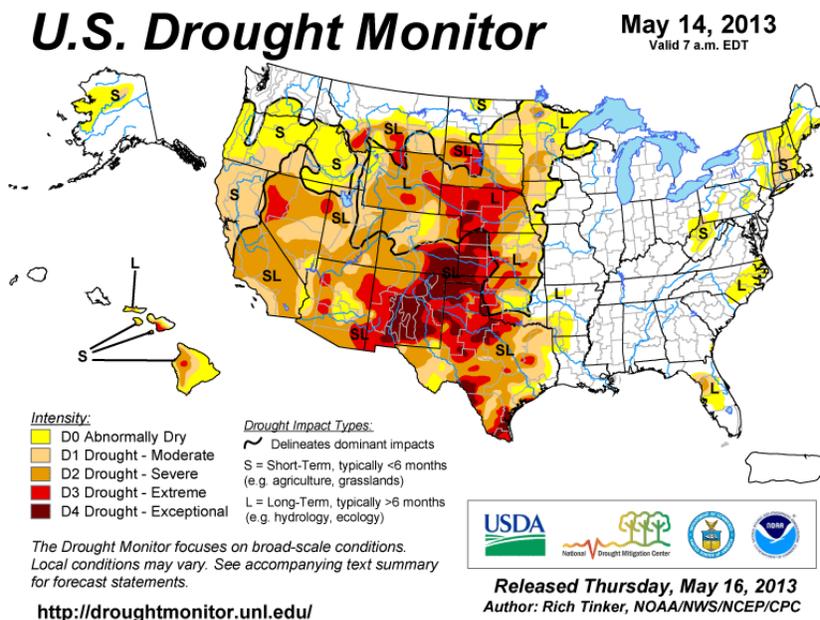
The following **Weather and Drought Summary** is provided by this week's NDMC Author: **Author [Rich Tinker, NOAA/NWS/NCEP/Climate Prediction Center](#)**:

“The Rockies Westward to the Pacific Coast: Moderate to heavy precipitation fell on central, east-central, and north-central sections of Colorado, with 2 to 4 inches reported near the middle of the state. As a result, the D2 to D4 areas in eastern Colorado retreated southward somewhat, and improvements to D0 and D1 were made in central and north-central parts of the state.

Light precipitation – at least a few tenths of an inch – was reported across much of southeastern Wyoming, western Colorado, eastern Utah, southeastern Idaho, the Sierra Nevada, and the southern Cascades while the rest of the region experienced a dry week.

The declining snowpack and substantially below-normal precipitation for the past 2 to 6 months led to some significant deterioration across the southwestern quarter of Montana and adjacent sections of Idaho. Most notably, a broad area of D3 was introduced in southwestern Montana where 20 to 50 percent of normal precipitation has been measured over the past 3 months. Some areas in this region have received only 40 to 65 percent of normal amounts since the start of the water year in October 2012. Meanwhile, D2 conditions in part of northeastern Utah were improved to D1 where deficits have declined during the past couple of months. Other areas were unchanged.”

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



Current [Drought Monitor](#) weekly summary. The exceptional D4 levels of drought are scattered across the western Corn Belt of the Plains into southeastern Colorado and much of New Mexico. For more drought news, see [Drought Impact Reporter](#).

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).

Weekly Snowpack and Drought Monitor Update Report

See interesting report on [Lake Powell](#).

[New Mexico, El Paso farmers cut crops, use wells in drought](#)

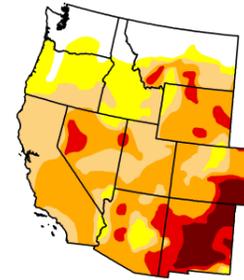
May 7, **Southern New Mexico, El Paso, Texas.** Officials for the Elephant Butte Irrigation District still have not determined water allotments for the 2013 irrigation season, which has been delayed for lack of water—the worst water shortage for irrigation on the Rio Grande River in almost a century. But they caution growers that allocations may be as little as 3.2 to 3.6 inches during a brief irrigation season in June. More farmers are resorting to pumping groundwater, expensive as it is, drilling new wells or refurbishing old wells to be able to continue farming and also leaving land fallow when there is no other option.

See: Drought Monitor for the [Western States](#)
Drought Impact Reporter for [New Mexico](#)

U.S. Drought Monitor West

May 14, 2013
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	13.09	86.91	71.39	46.93	15.33	5.91
Last Week (05/07/2013 msa)	13.46	86.54	71.04	47.26	15.25	5.66
3 Months Ago (02/12/2013 msa)	26.33	73.67	64.77	41.81	13.38	3.15
Start of Calendar Year (01/01/2013 msa)	24.39	75.61	69.31	45.04	18.01	2.15
Start of Water Year (09/25/2012 msa)	15.12	84.88	77.15	43.65	16.85	1.77
One Year Ago (05/06/2012 msa)	31.85	68.15	49.83	26.45	4.36	0.36



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

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

<http://droughtmonitor.unl.edu>



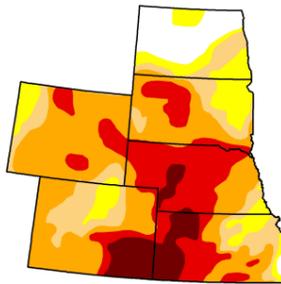
Released Thursday, May 16, 2013
Rich Tinker, Climate Prediction Center/NCEP/NWS/NOAA

Conditions remain essentially unchanged from last week.

U.S. Drought Monitor High Plains

May 14, 2013
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	7.52	92.48	80.56	65.20	29.25	7.88
Last Week (05/07/2013 msa)	7.98	92.02	82.55	66.30	30.43	8.48
3 Months Ago (02/12/2013 msa)	5.01	94.99	91.35	82.51	57.64	29.19
Start of Calendar Year (01/01/2013 msa)	1.54	98.46	93.01	86.20	60.25	26.99
Start of Water Year (09/25/2012 msa)	0.00	100.00	98.91	83.80	61.28	24.35
One Year Ago (05/08/2012 msa)	51.34	48.66	18.04	6.41	0.00	0.00



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

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

<http://droughtmonitor.unl.edu>



Released Thursday, May 16, 2013
Rich Tinker, Climate Prediction Center/NCEP/NWS/NOAA

Conditions improved slightly from last week.

Drought Monitor for the [High Plains](#) with statistics over various time periods. Note improvement in all categories but D4 this week. See [Kansas Drought Update](#).

[Drought's grip on state's cattle holds](#)

May 9, **Kansas.** The livestock auction in Salina continues to move cattle from Colorado, western Kansas and Nebraska as drought conditions persist. Sales on May 7 were 15 percent higher than the same time last year when drought was also a big driver in cattle sales. Two years of drought in Kansas caused crop losses of \$1.8 billion in 2011 and more than \$3 billion in 2012.

The owner of auctions in Kansas, Oklahoma and Colorado stated that sales numbers are not high presently as producers try to hold onto their cattle, but he expects to see more cattle coming to auction at the end of May if rain does not fall to green up pastures.

Drought Monitor for the [South-Central Region](#) with statistics over various time periods. Note some deterioration in the higher categories this week.

Check out the Texas Drought [Website](#). See [Texas Reservoirs](#).

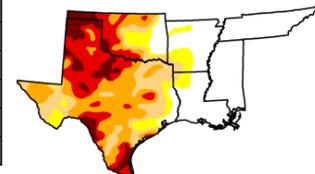
[Oklahoma wheat output seen falling 45 percent after drought, freeze](#)

May 2, **Oklahoma.** Oklahoma wheat production could fall to 85.5 million bushels, down from 154.8 million bushels in 2012 since drought and late freezes have damaged the crop.

U.S. Drought Monitor South

May 14, 2013
Valid 7 a.m. EST

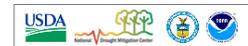
	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	36.15	63.85	55.58	41.73	22.57	7.35
Last Week (05/07/2013 msa)	36.77	63.23	56.17	43.82	24.87	7.66
3 Months Ago (02/12/2013 msa)	35.59	64.41	54.92	40.36	24.12	9.20
Start of Calendar Year (01/01/2013 msa)	21.18	78.82	63.69	50.50	32.80	10.98
Start of Water Year (09/25/2012 msa)	24.13	75.87	66.61	51.50	29.86	9.11
One Year Ago (05/08/2012 msa)	45.48	54.52	36.34	25.63	12.34	3.73



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

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<http://droughtmonitor.unl.edu>

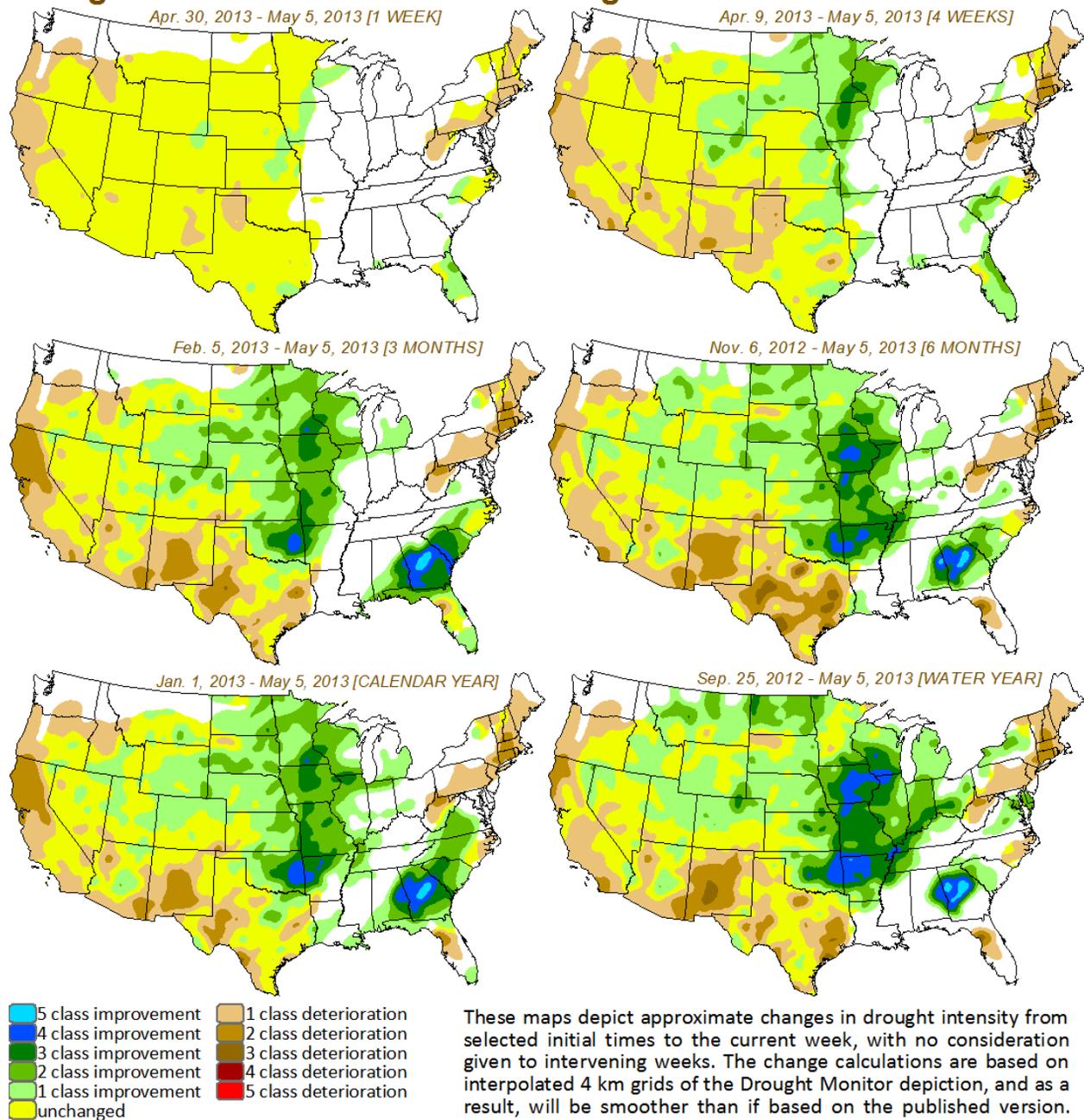


Released Thursday, May 16, 2013
Rich Tinker, Climate Prediction Center/NCEP/NWS/NOAA

Conditions improved slightly from last week.

Weekly Snowpack and Drought Monitor Update Report

Drought Monitor Classification Changes for Selected Time Periods

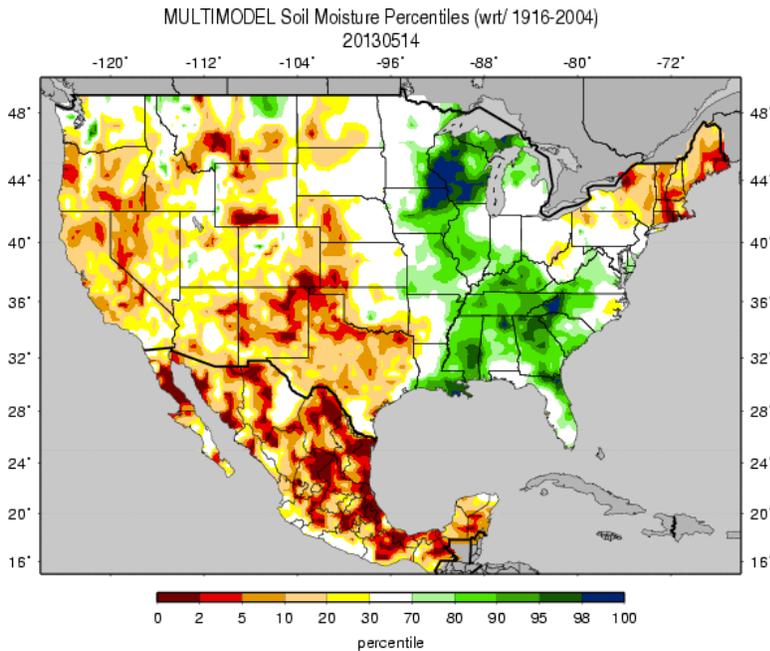


Drought Monitor [category changes](#) over several time periods. This figure is based on data through 5 May 2013.

Note recent deterioration over parts of the Southwest (upper-most panels) and longer term deterioration (lower-most panels). The Mississippi River Valley has seen significant improvements for the 2013 Water Year.

Weekly Snowpack and Drought Monitor Update Report

Soil Moisture



Soil moisture ranking in [percentile](#) as of 14 May shows dryness over the western High Plains, scattered across the Rockies, western Great Basin, Southwest, and California. New England dryness is expanding.

Note abundant moisture over the western Great Lakes and less moisture over the Tennessee and lower Mississippi River Valleys.

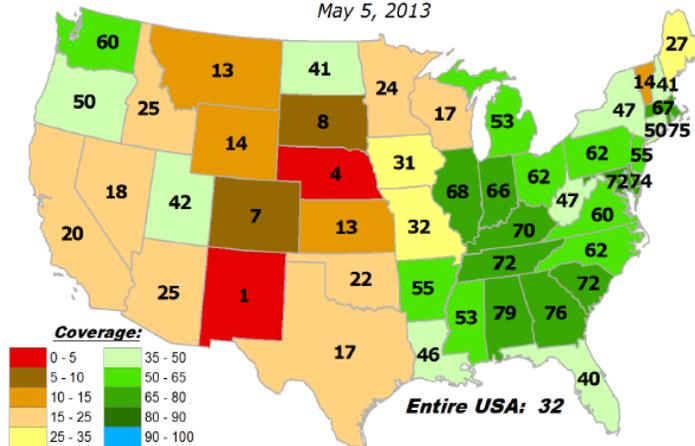
Useful Hydrological Links: [Crop Moisture Index](#); [Palmer Drought Severity Index](#); [Standardized Precipitation Index](#); [Surface Water Supply Index](#); [Weekly supplemental maps](#), [Minnesota Climate Working Group](#).

The first Pasture & Range Land Conditions [map](#) for the season shows that New Mexico has the worst conditions by far in the U.S (lower panel).

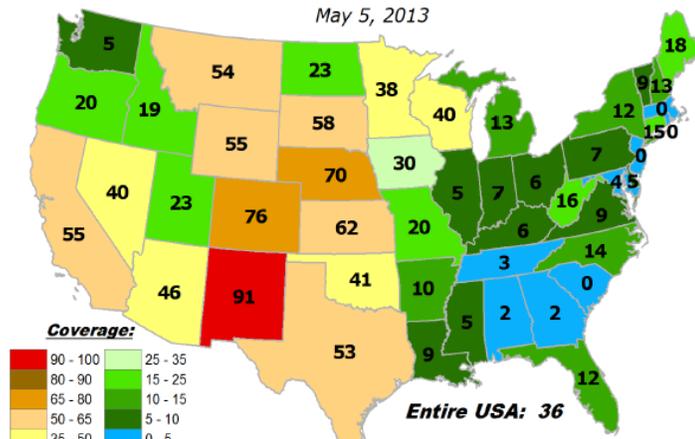
While Nebraska has the 2nd worst levels of good or excellent conditions (top panel), its poor or very poor levels are not as severe as Colorado's.

Generally, much of the Western States (with the exception of Washington) has 50% of its lands with less than ideal conditions. However, the Pacific Northwest and Utah have minimal severe conditions.

Percent of Pasture & Range Land in "Good" or "Excellent" Condition
May 5, 2013



Percent of Pasture & Range Land in "Poor" or "Very Poor" Condition
May 5, 2013



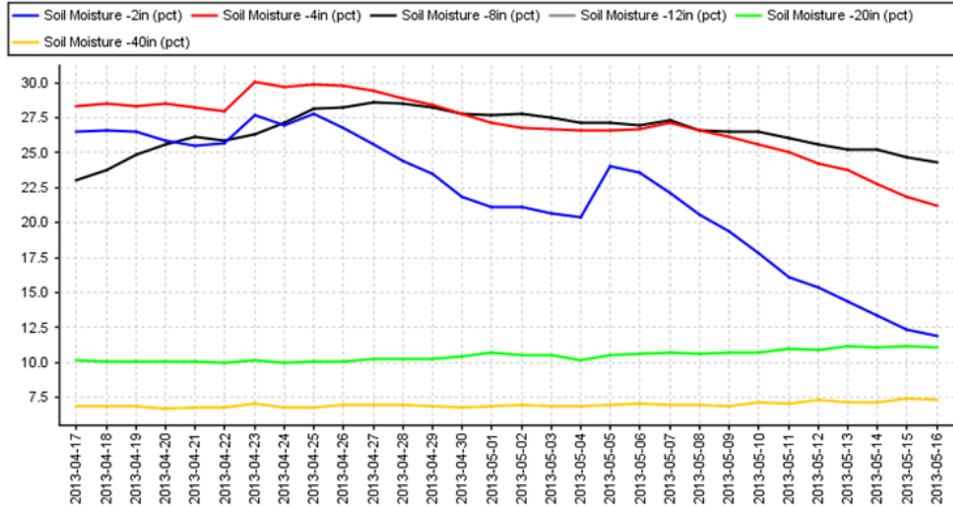
Weekly Snowpack and Drought Monitor Update Report

Soil Climate Analysis Network (SCAN)

Montana Site - Moccasin (2119)

(As of: Thu May 16 11:57:22 CDT 2013)

Provisional data, subject to revision



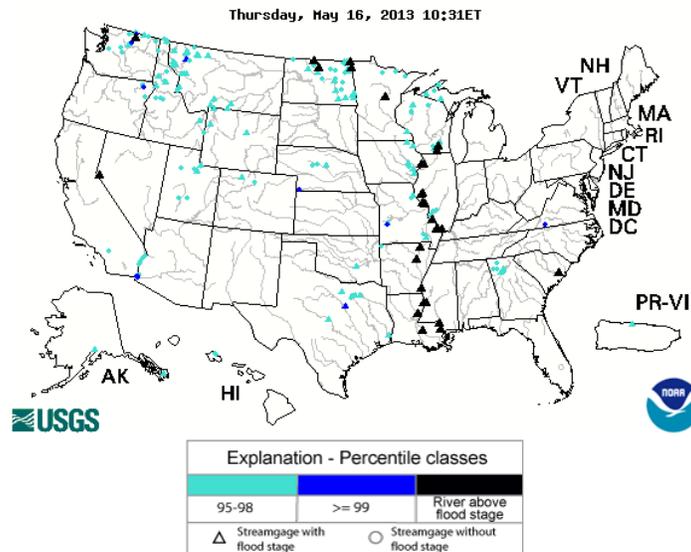
This NRCS resource shows a site over [central Montana](#) with drying soil moisture in the upper levels whereas drier soils exist and persist at depth.

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](#).

U.S. Historical Streamflow

Map of current flood and high flow conditions shows much of the Mississippi River and Red River (North Dakota) at flood stage.

See the USGS [National Water Information System Mapper](#).



Weekly Snowpack and Drought Monitor Update Report

State Activities

State government drought activities can be tracked at the following URL: <http://drought.unl.edu/mitigate/mitigate.htm>. NRCS Snow Survey and Water Supply Forecasting (SSWSF) Program State Office personnel are participating in state drought committee meetings and providing the committees and media with appropriate SSWSF information - <http://www.wcc.nrcs.usda.gov/cgibin/bor.pl>. Additional information describing the products available from the Drought Monitor can be found at the following URLs: <http://drought.unl.edu/dm/> and <http://www.drought.gov>.

For More Information

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

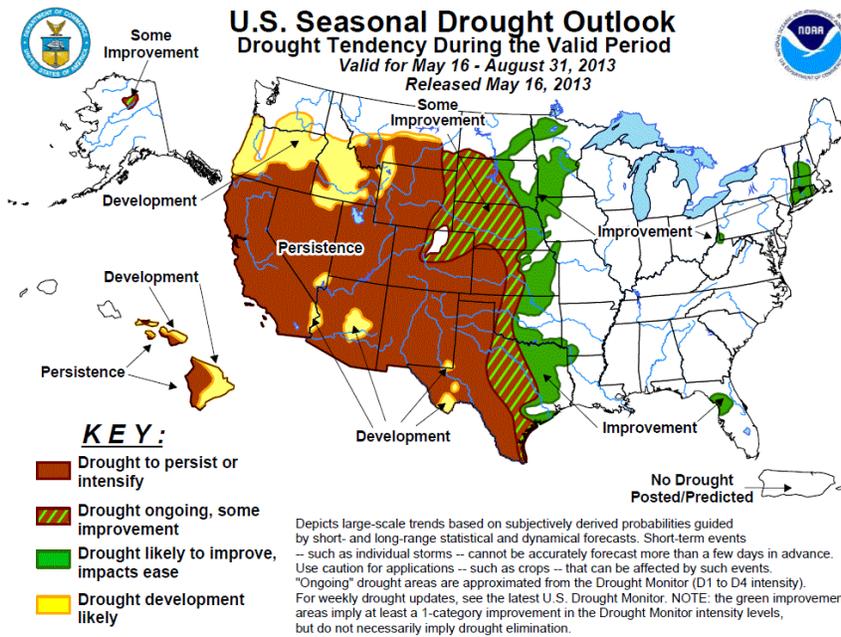
This report uses data and products provided by the Interagency Drought Monitor Consortium members and the National Interagency Fire Center.

/s/

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

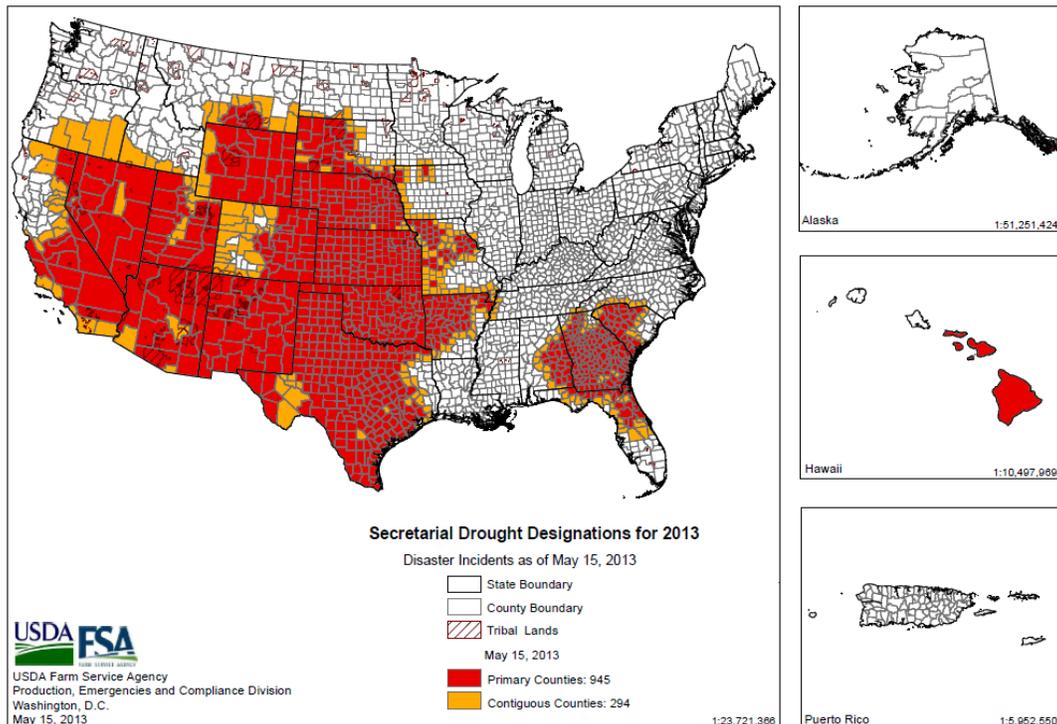
Weekly Snowpack and Drought Monitor Update Report

Drought Outlook (Forecast)



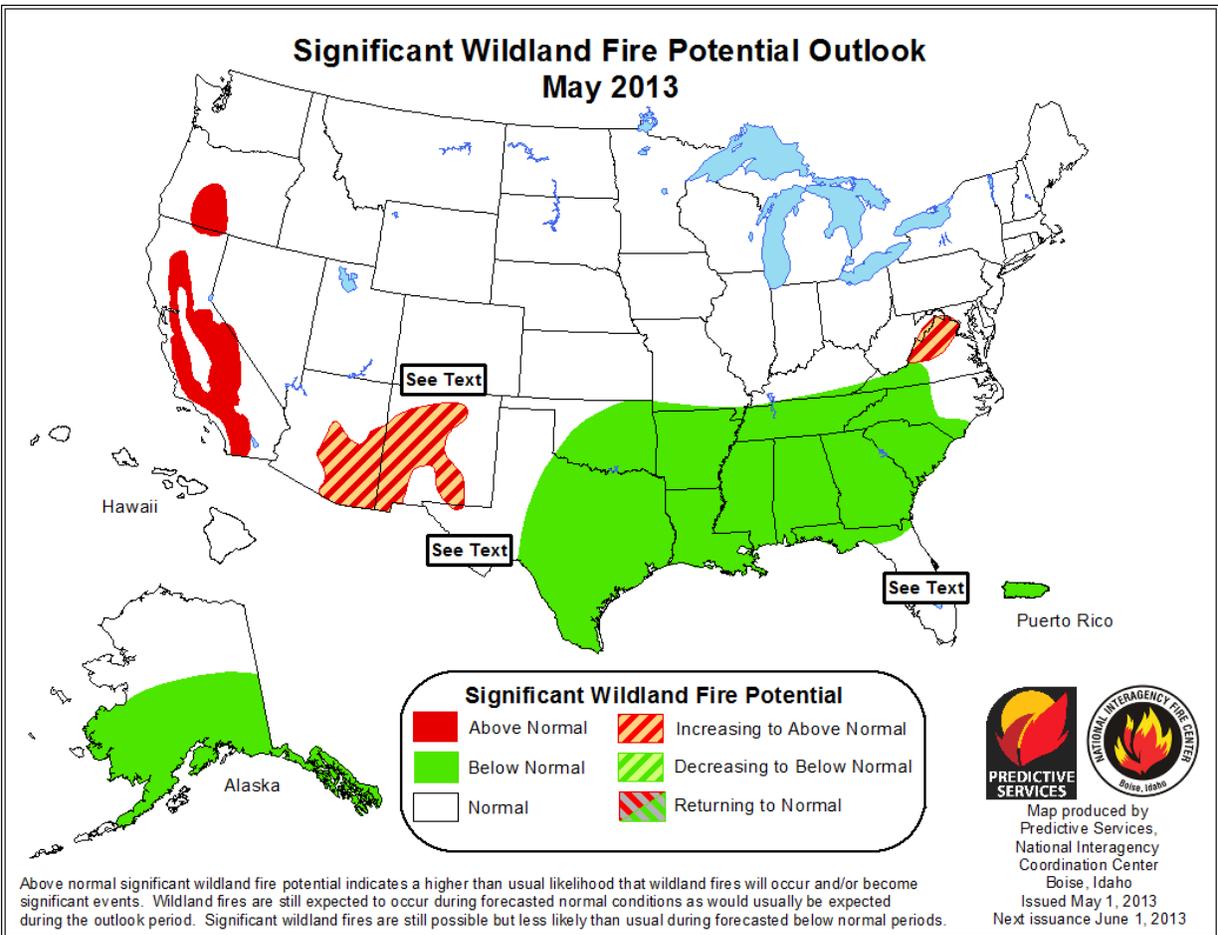
U.S. Seasonal [Drought Outlook](#) as of 16 May. Note that there are no significant changes since the last update two weeks ago. See the latest NOAA CPC [seasonal forecast](#) released today. It depicts a warmer than average West with drier conditions over the Pacific NW and eastern New Mexico.

2013 Secretarial Drought Designations - All Drought



Refer to USDA Drought Assistance [website](#) and [National Sustainable Agriculture Information Service](#).

Weekly Snowpack and Drought Monitor Update Report



Secretary Vilsack of the USDA and Secretary Jewell of DOI jointly released the Significant [Wildland Fire Potential Outlook](#). See [June](#) and [July-August](#) forecasts.

[This year](#), significant fire potential is predicted to be above normal in much of the West, including almost all of Arizona, New Mexico, California, Oregon and Idaho; and portions of Montana, Colorado, Utah, and Washington. In 2012, 9.3 million acres of private, state, and federal land, and more than 4,400 structures burned in wildfires. That was the third highest number of acres burned since at least 1960, the earliest date with reliable records.

On average, Forest Service and Interior agencies respond to tens of thousands of wildfires per year, suppressing all but a small percentage during the first burning period. However, the few fires that cannot be suppressed during the initial stages run the risk of becoming much larger.

Federal assets include more than 13,000 firefighters, including permanent and seasonal federal employees; more than 1,600 engines; up to 26 multiengine air tankers and two water scooper aircrafts; approximately 27 single engine air tankers; and hundreds of helicopters. At the National Interagency Fire Center, firefighting experts from multiple government agencies continuously monitor fire activity, weather and fuel conditions while strategically positioning Federal firefighters, ground equipment and aircraft to support wildfires across the country as the season shifts.