United States Department of Agriculture

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

Weekly Water and Climate Update

December 4, 2014

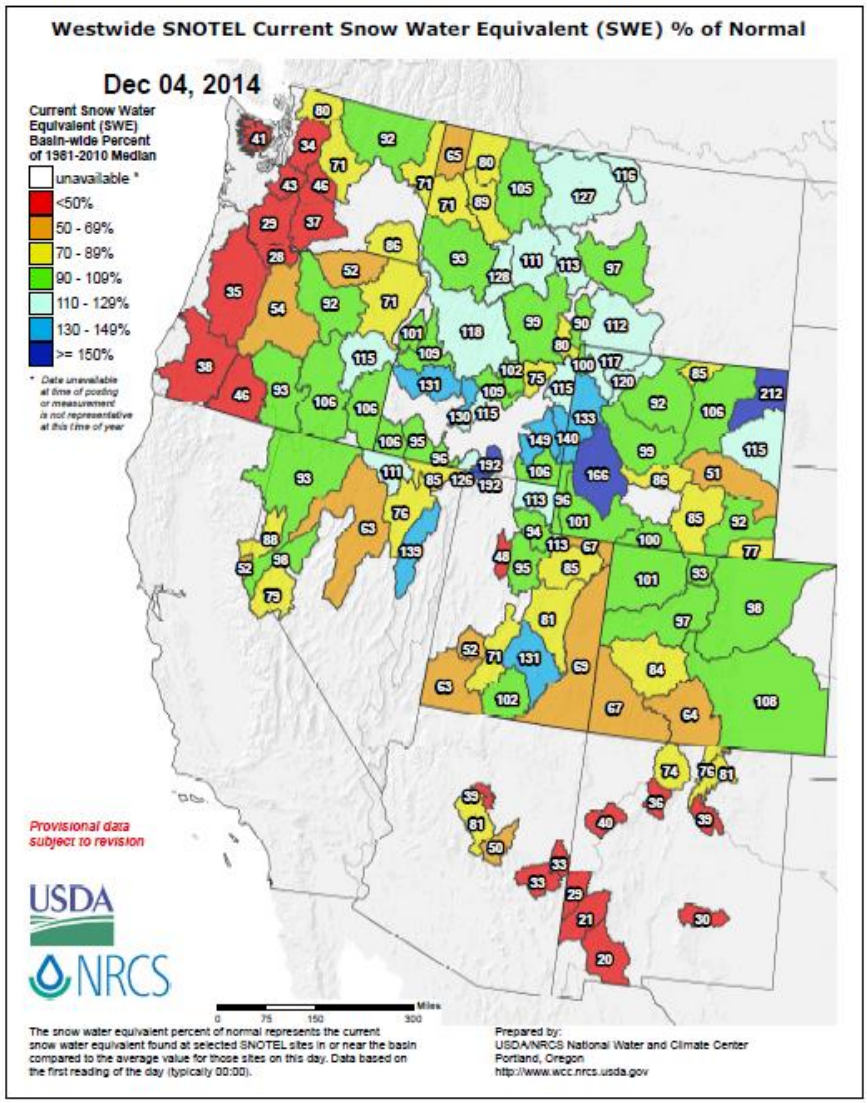
Agricultural Weather Highlights – Thursday – December 4, 2014

- "In the **West**, widespread precipitation has ended across California, although scattered showers linger. Meanwhile, heavy rain and high-elevation snow has moved into Arizona, where cotton was 75% harvested on November 30. Elsewhere, precipitation is spreading inland across the Northwest, causing some travel disruptions from the Cascades eastward due to snow and freezing rain.
- On the **Plains**, mild, dry weather prevails, except for some lingering cold conditions along the Canadian border. In advance of an approaching storm system, fieldwork—including cotton harvesting—is proceeding across the southern Plains.
- In the **Corn Belt**, rain showers are affecting portions of the middle Mississippi and lower Ohio Valleys. Elsewhere, dry weather accompanies near- to below-normal temperatures, although soggy fields are limiting late-season corn harvest efforts in the Great Lakes States.
- In the **South**, a few rain showers are developing in the Tennessee Valley. In contrast, warm, dry weather in the lower Southeast is promoting late-season fieldwork, including winter wheat planting and soybean harvesting.

Outlook: During the next several days, most of the U.S. will experience near- to above-normal temperatures. During the weekend, however, cool air will briefly cover portions of the Plains, Midwest, and East. Meanwhile, a significant rainfall event will unfold during the next 3 days across the South, East, and lower Midwest, with 1- to 2-inch totals common from the northern Mississippi Delta and the Ohio Valley to southern New England. Farther west, precipitation will end later today across the Southwest, while dry weather will prevail during the next 5 days northwest of a line from Nebraska to Michigan. Elsewhere, significant Western precipitation will shift into the northern Pacific coastal region, with 2- to 4-inch totals expected during the next 5 days from western Washington southward into northwestern California. NWS 6- to 10-day outlook for December 9-13 calls for warmer-than-normal weather nationwide, except for near- to below-normal temperatures in the Southeast. Meanwhile, near- to below-normal precipitation across the majority of the U.S. will contrast with wetter-than-normal weather in northern New England, the southern half of Texas, and much of the Far West—including northern and central California."

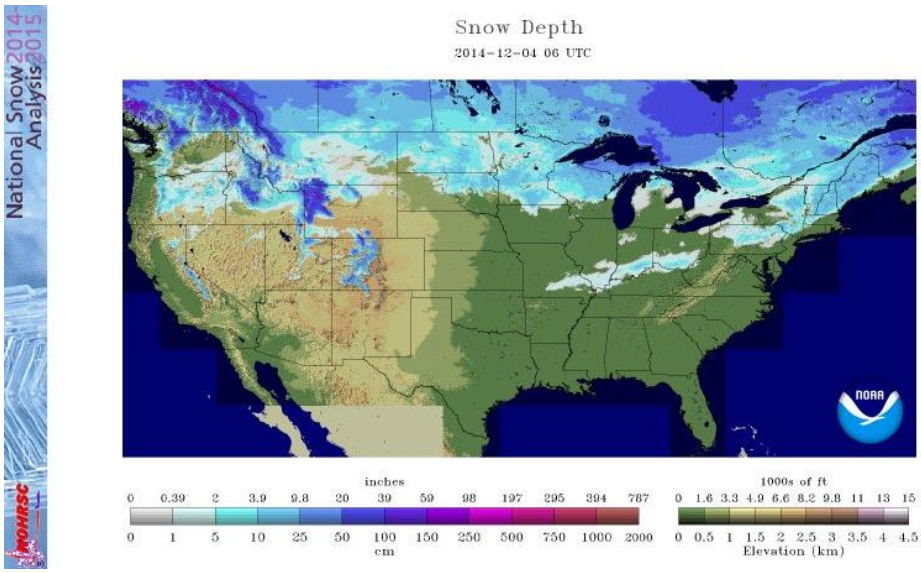
Contact: Brad Rippey, Agricultural Meteorologist, USDA/OCE/WAOB, Washington, D.C. (202-720-2397) Website: http://www.usda.gov/oce/weather/pubs/Daily/TODAYSWX.pdf

Snow



For the 2015 Water Year that began on October 1, 2014, a few areas in Idaho, eastern Nevada, northern Utah, Wyoming, and Montana have recorded much above normal Snow Water Equivalent (SWE) values (medium and dark blue areas).

The largest snowpack deficits (red areas) are in the Cascades and Olympics of Oregon and Washington, a basin in central Utah, and most basins in Arizona and New Mexico.



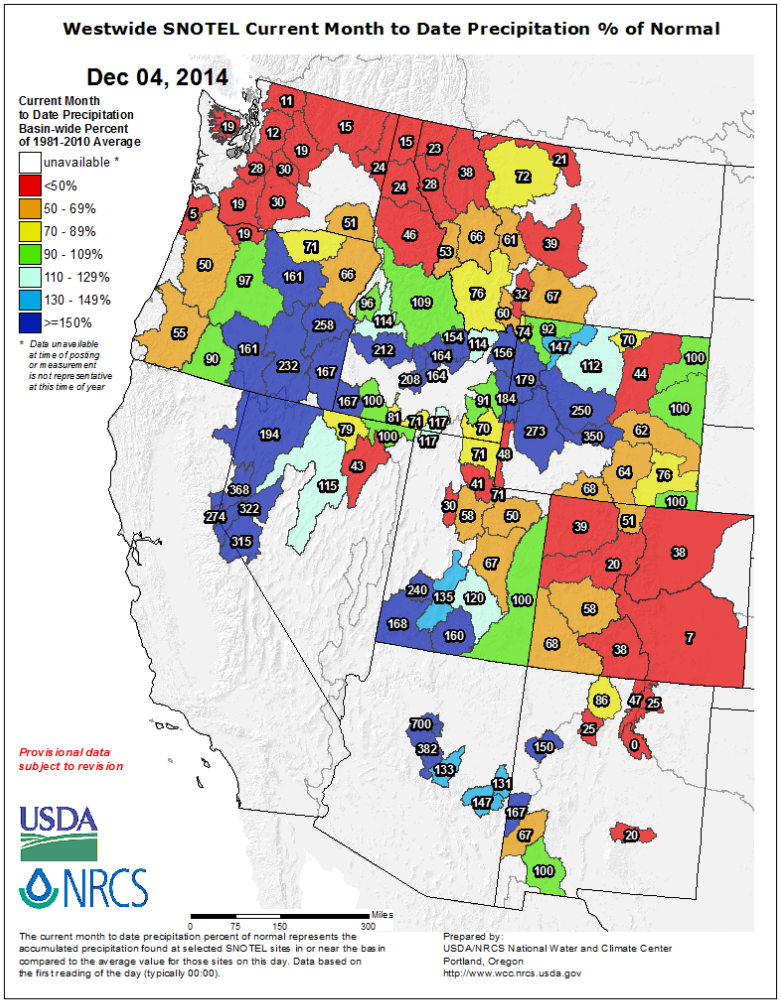
Snow depth from the NWS NOHRSC as of December 4, 2014. Cold and precipitation over most of the U.S. has resulted in snow across much of the northern tier states. Areas with a substantial snowpack include the upper peninsula of Michigan, the Rocky Mountains in Wyoming and Montana, and central Idaho.

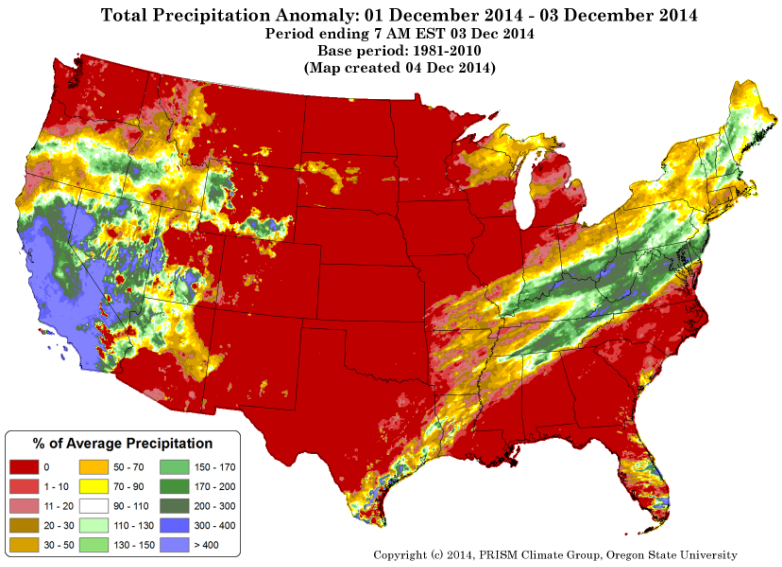
Precipitation

In the West, the SNOTEL precipitation percent of normal map for the start of December shows most of Colorado, New Mexico, Montana, northern Idaho, and Washington much below normal so far this month. Above normal precipitation occurred in basins in western Nevada, California, eastern Oregon, central Idaho, western Wyoming, southern Utah, and Arizona. A few basins in New Mexico are also above average.

The percent of normal values (especially the dark blue areas) may be amplified where normally very little precipitation falls during this time of year.

Click on most maps in this report to enlarge and see the latest available update.



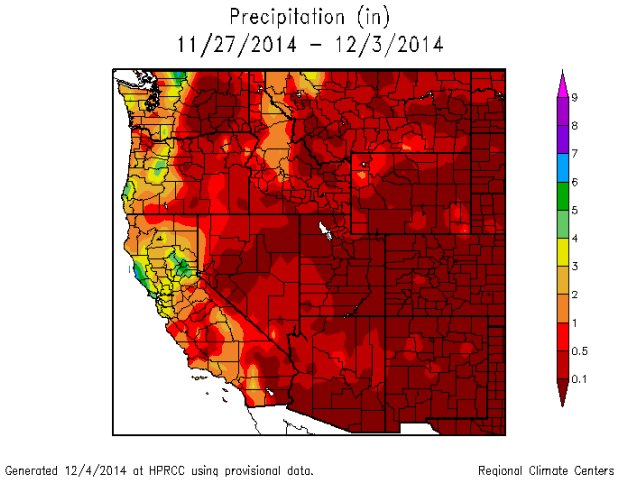


Thus far in the beginning of December 2014, the national precipitation anomaly pattern reveals some higher than normal precipitation, primarily in California and Nevada. Precipitation also fell in southern Texas, Kentucky, Tennessee, West Virginia, Virginia, and Florida. Most of the country received less than normal or no precipitation. (red areas).

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

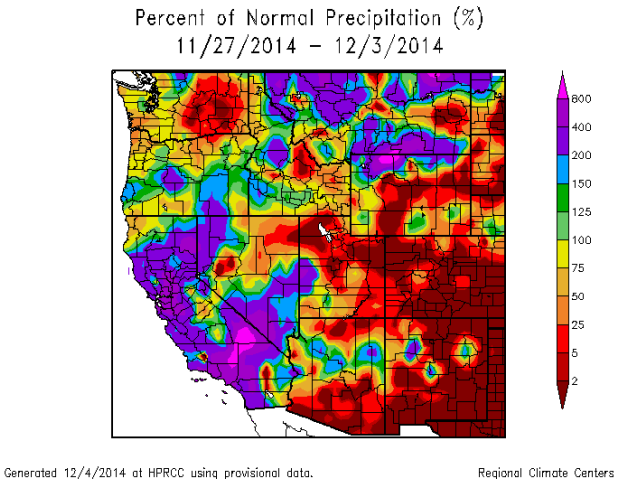
The ACIS 7-day total precipitation map for the western U.S. shows mainly dry conditions. Precipitation has fallen in California, Nevada, Oregon, and Washington. An area along the northern California coast and in the north Cascades recorded over 6 inches of rain (blue areas). Other areas of precipitation occurred in the central and southern Rocky Mountains.

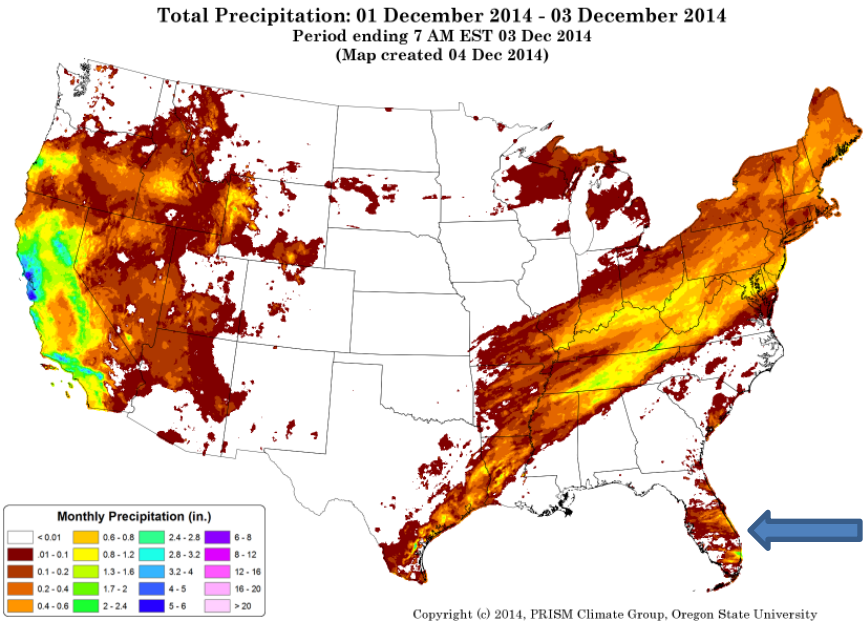
Other scattered areas that received precipitation are in northern Montana, Wyoming, and northern Idaho.



This percent of normal map of the West for the last seven days reflects heavy precipitation scattered across the region. The heaviest percent of normal precipitation fell in California, northern Wyoming, and Montana, which recorded over 800% for the period (pink areas). Parts of all the other western states also received precipitation.

Percent of normal precipitation may be exaggerated in areas where the average for this period is at or near zero.





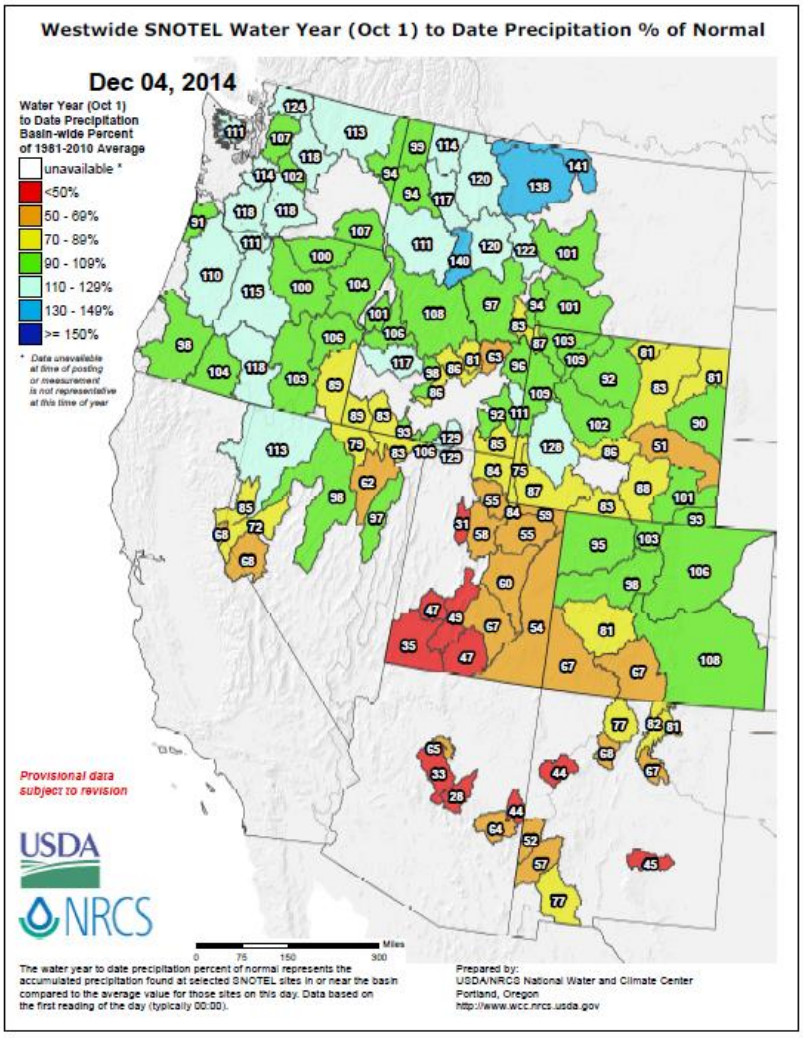
For the first few days in December 2014, the total precipitation across the continental U.S. was heaviest in California and Nevada. Isolated high precipitation was also recorded in Oregon, Texas, Tennessee, Kentucky, Virginia, west Virginia, and Florida. In contrast, much of the Central U.S., Southwest, and Southeast were mainly dry.

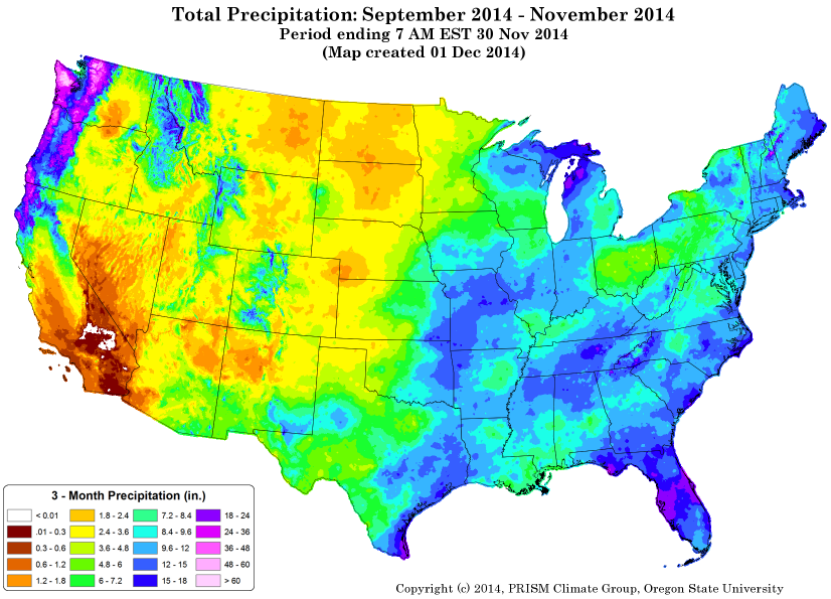
See Go Hydrology for current and forecast conditions over southern Florida.

For the 2015 Water Year that began on October 1, 2014, surpluses have occurred in a few basins in the West. Washington, Oregon, Montana, and a few basins in Idaho, Nevada, and Wyoming have received above normal precipitation.

Many basins across the West have near normal conditions for this part of the water year. A few areas have less than normal precipitation for this water year. These include basins in California, Nevada, Idaho, Wyoming, Utah, Colorado, Arizona, and New Mexico.

At the beginning of the Water Year, basin conditions can change rapidly with small amounts of precipitation. As the Water Year advances, it becomes more difficult for river basins to change bin categories.





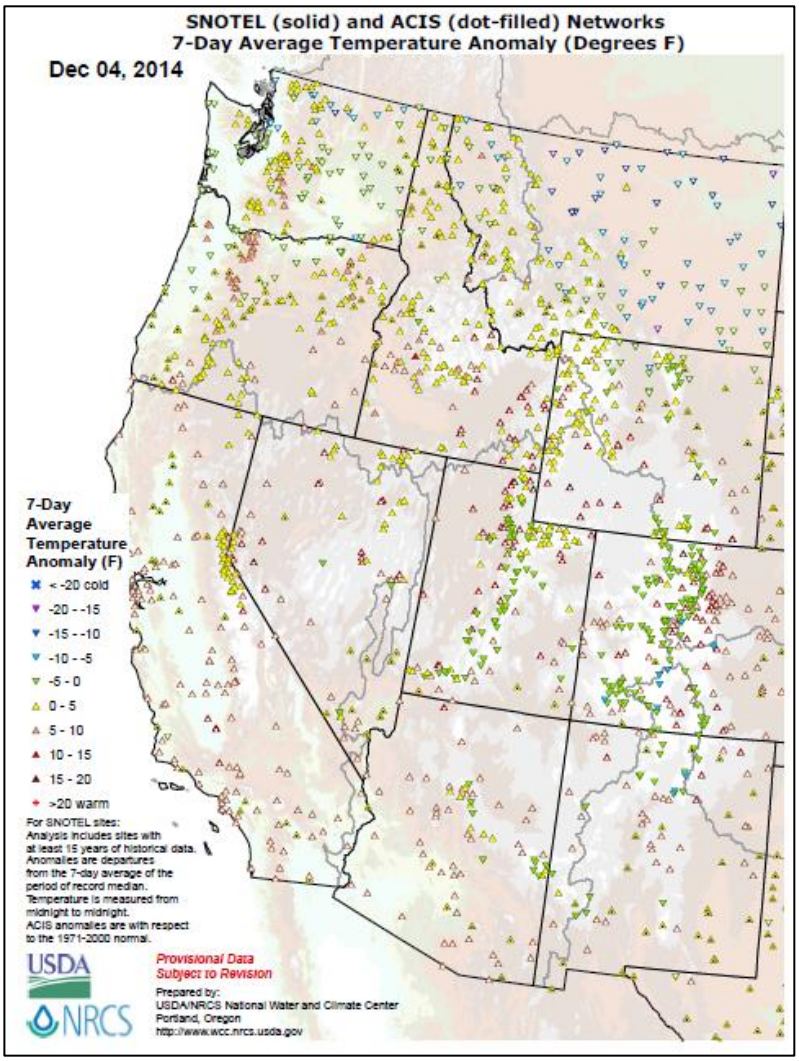
The national map of the three-month period (September - November) shows that the eastern half of the nation received precipitation in the range from 6 inches to greater than 18 inches. The highest amounts were recorded in Michigan, Florida, New Hampshire, Maine, and southern Texas. In the West, Oregon, Washington, and northern California received over 36 inches for the period.

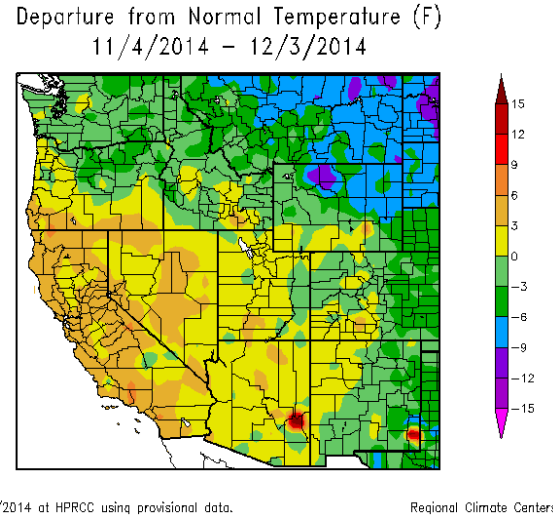
In contrast, parts of the West received totals of less than 1.8 inches. Central and southern California had little to no precipitation for the period.

Temperature

The SNOTEL and ACIS 7-day temperature anomaly map for the western U.S. shows most of the West was near average for the week. Many states had some stations recording slightly warmer than normal temperatures for the week. This includes stations in Washington, Oregon, Idaho, Wyoming, Colorado, Utah, Nevada, California, Arizona, and New Mexico. The warmest areas were concentrated in the central Rockies in Idaho, Wyoming, Colorado, northern Utah, and Nevada.

The only cool area in the region was in eastern Montana where temperatures were cooler than average for the week.



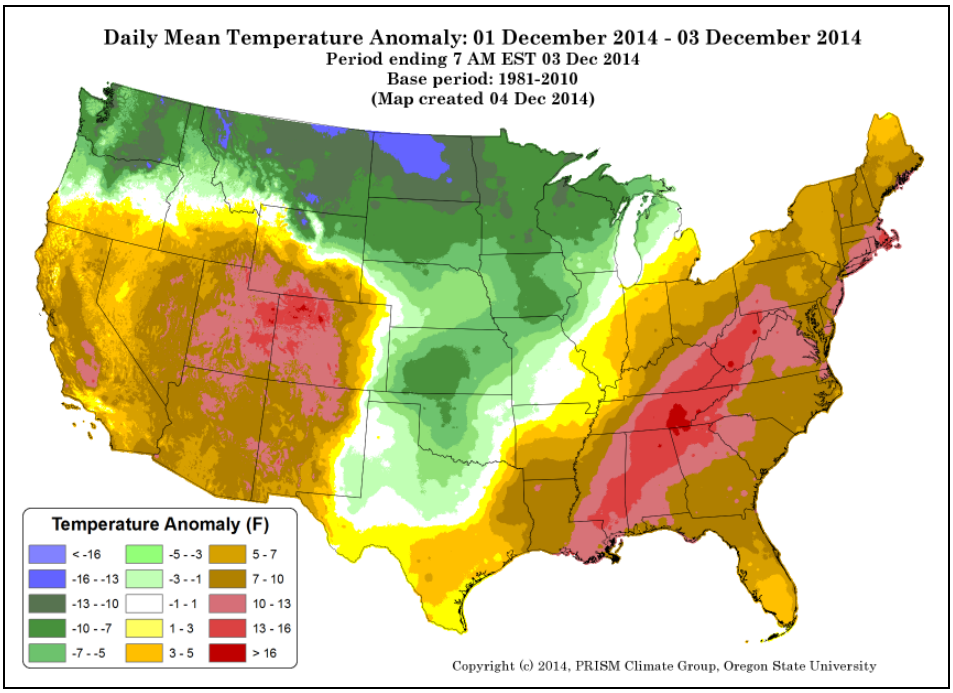


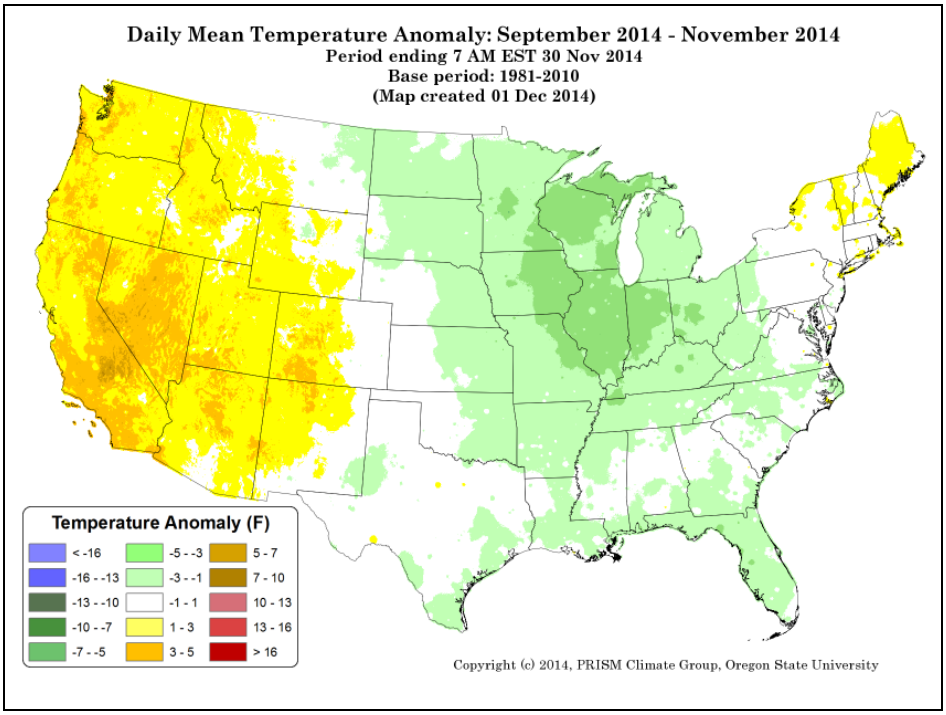
The ACIS map of the 7-day average temperature anomalies in the West ending December 3, shows the greatest negative temperature departures in Montana and Wyoming (<-9°F). The greatest positive temperature departures occurred in Arizona and New Mexico (>+12°F). California, Nevada, and southern Oregon were generally warmer than normal for the week.

Also, see Dashboard and the Westwide Drought Tracker

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.

Thus far in December 2014, the national daily mean temperature anomaly map shows a large cool pattern in the north central U.S. (<-13°F). Above normal temperatures were recorded in the West and Southeast. Areas in Utah, Colorado, Tennessee, West Virginia, and Alabama had the highest warm anomalies (>+16°F).





The September – November national daily mean temperature anomalies for the U.S. in this climate map shows the west coast had slightly to above normal temperatures in California (>+7°F). The north central portion of the country reported normal to slightly cooler than normal temperatures for this period, with the coolest temperatures in northern Michigan, Wisconsin, Minnesota, Iowa, Illinois, Indiana, and a few other scattered areas (<-3°F).

Weather and Drought Summary

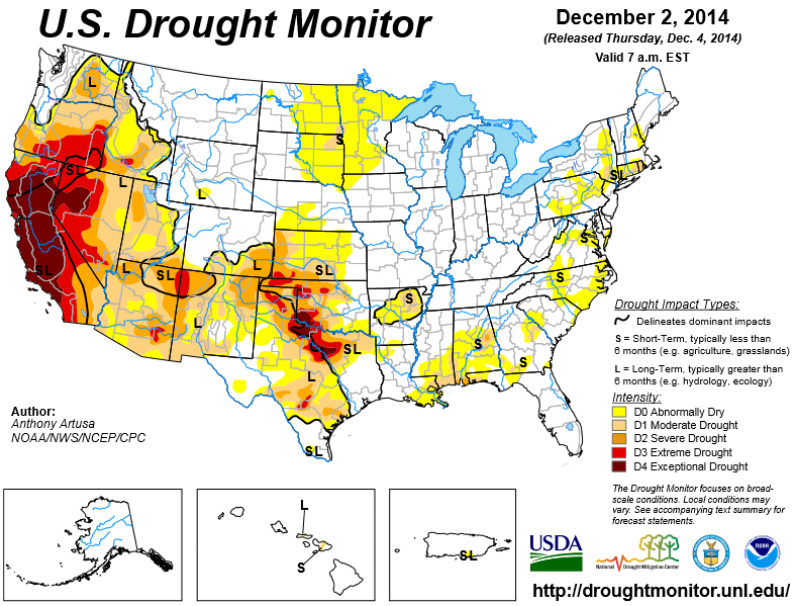
National Drought Summary – December 2, 2014

The following **Weather and Drought Summary** is provided by this week's NDMC Drought Author, Anthony Artusa, NOAA/NWS/NCEP/CPC.

USDM Map Services: contains archived maps

"For the contiguous 48 states, the U.S. Drought Monitor showed 29.13 percent of the area in moderate drought or worse, compared with 28.91 percent a week earlier. Drought now affects 67,800,982 people, compared with 67,748,696 a week earlier.

For all 50 U.S. states and Puerto Rico, the U.S. Drought Monitor showed 24.34 percent of the area in moderate drought or worse, compared with 24.15 percent a week earlier. Drought now affects 67,824,535 people, compared with 67,772,248 a week earlier."



See: Latest Drought Impacts during the past week.

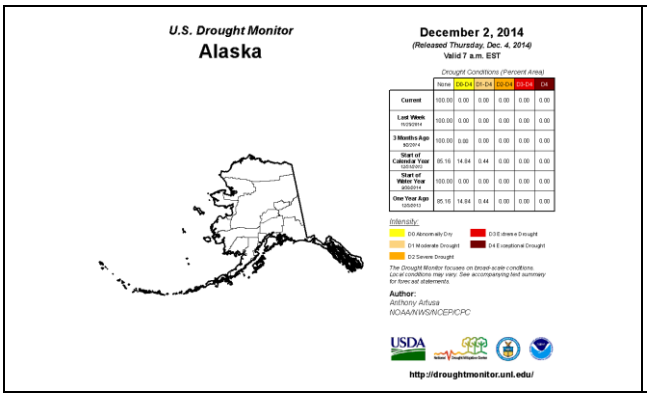
Current Drought Monitor weekly summary. The exceptional D4 levels of drought are scattered across CA, NV, TX, and OK.

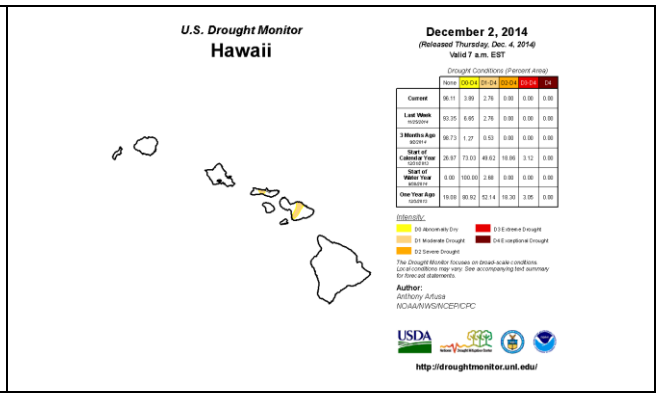
The latest drought indicator blend and component percentiles spreadsheet is a great resource for climate division drought statistics. This link is for the latest Drought Outlook (forecast). See climatological rankings.

For more drought news, see Drought Impact Reporter.
***New**: ENSO Blog.*

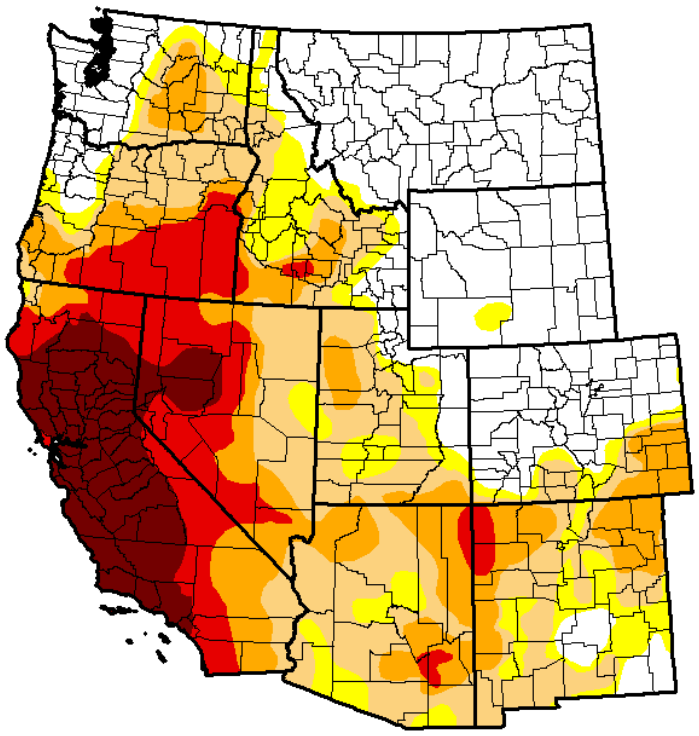
Drought Management Resources:

- ✓ http://www.usda.gov/oce/weather/Drought/AgInDrought.pdf
- ✓ Watch AgDay TV
- ✓ Drought Impacts Webinar Series
- ✓ NIDIS Quarterly Climate Impacts and Outlook
- ✓ The Spring 2014 edition of DroughtScape
- ✓ U.S.Crops in Drought





"The 49th and 50th States show normal to moderate drought conditions. No changes were noted for Alaska this week. Hawaii had a slight decrease in D0 from a week ago. 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."



U.S. Drought Monitor
West

December 2, 2014
(Released Thursday, Dec. 4, 2014)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	34.32	65.68	55.16	34.01	18.98	8.45
Last Week 11/25/2014	34.72	65.28	54.99	33.88	18.75	8.45
3 Months Ago 9/2/2014	28.38	71.62	57.74	40.04	20.16	8.90
Start of Calendar Year 12/31/2013	22.20	77.80	51.44	31.11	7.75	0.63
Start of Water Year 9/30/2014	31.48	68.52	55.57	35.65	19.95	8.90
One Year Ago 12/3/2013	26.84	73.16	49.99	30.86	7.56	0.63

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:
Anthony Artusa
NOAA/NWS/NCEP/CPC

http://droughtmonitor.unl.edu/

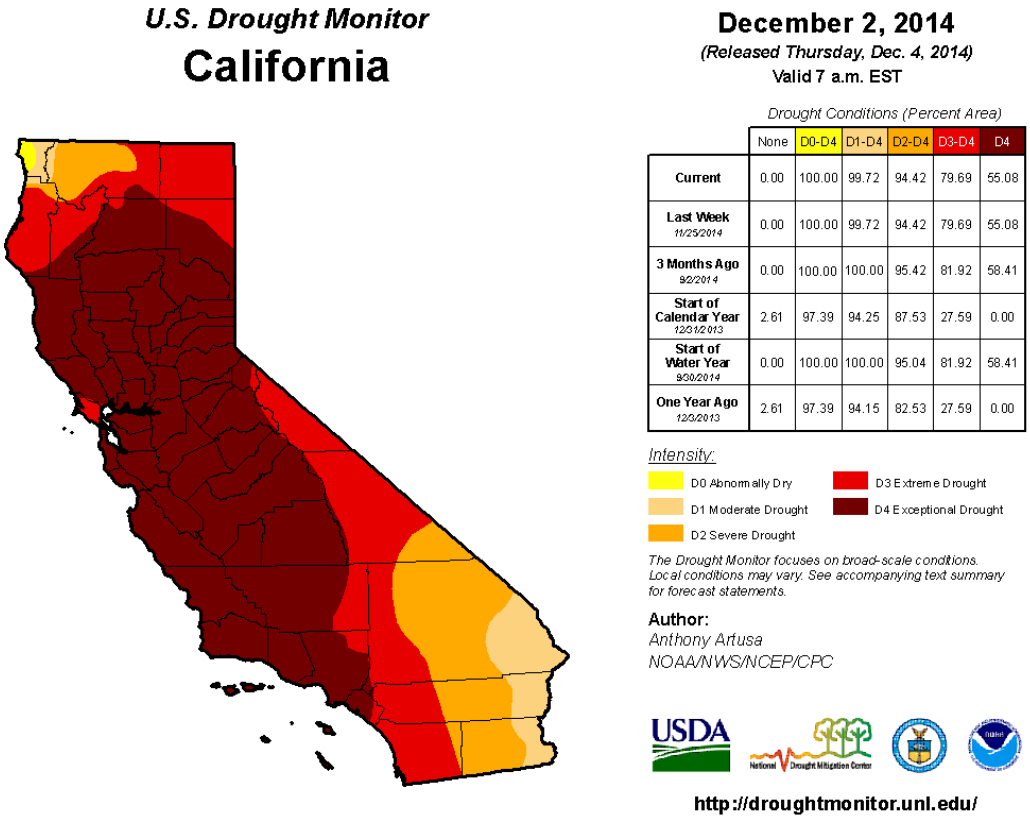
A slight increase in D0 – D3 occurred this past week. The drought-free area decreased slightly. D4 remained unchanged.

Click to enlarge maps

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
California Sierra Nevada-related snow pack

State with D-4 Exceptional Drought



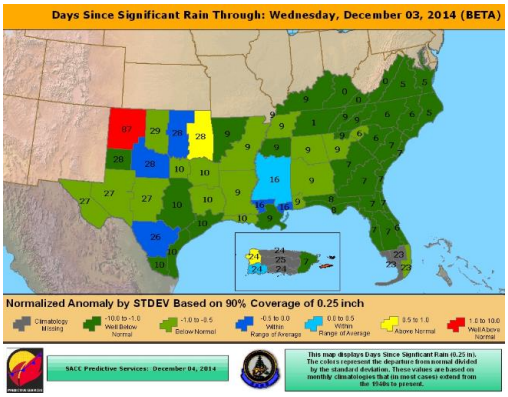
No change in California this past week.

CA Drought Information Resources

Drought News from California:

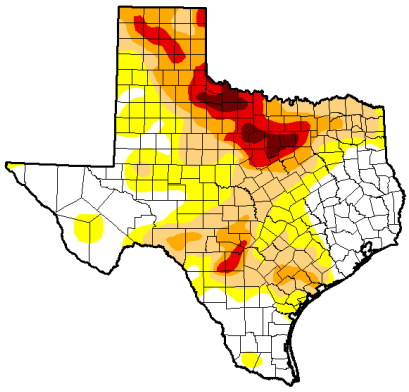
CA-DWR – News release: Updated Report: Groundwater Resources Depleted By Drought Dec 2.
CA-DWR Daily Drought Information Summary – Dec 4

Texas Drought Website.
Texas Reservoirs.
Texas Drought Monitor Coordination Conference Call: on Monday's 2:00 PM - 3:00 PM CST



Days since Significant Rain Summary

State with D-4 Exceptional Drought



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Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	34.05	65.95	43.29	22.05	9.50	2.57
Last Week 11/25/2014	34.11	65.89	42.56	22.05	9.50	2.57
3 Months Ago 9/2/2014	13.26	86.74	61.39	37.92	16.18	2.76
Start of Calendar Year 12/31/2013	28.48	71.52	43.84	21.15	5.82	0.79
Start of Water Year 9/30/2014	28.92	71.08	48.95	29.54	11.26	2.69
One Year Ago 12/3/2013	24.58	75.42	47.39	21.29	5.84	0.96

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

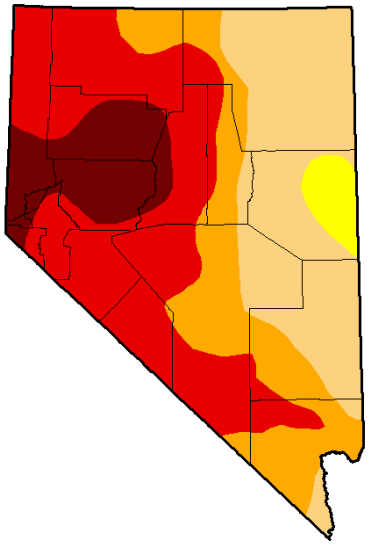
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
Anthony Artusa
NOAA/NWS/NCEP/CPC

http://droughtmonitor.unl.edu/

There was a slight increase in D0 and D1 in Texas this past week. The drought-free area decreased slightly.

State with D-4 Exceptional Drought



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Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	97.04	68.25	48.38	11.89
Last Week 11/25/2014	0.00	100.00	97.04	68.25	48.38	11.89
3 Months Ago 9/2/2014	0.00	100.00	99.64	80.96	50.30	11.89
Start of Calendar Year 12/31/2013	0.39	99.61	96.81	77.66	28.55	5.37
Start of Water Year 9/30/2014	0.00	100.00	97.04	69.89	48.38	11.89
One Year Ago 12/3/2013	0.39	99.61	96.81	77.66	28.55	5.37

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.

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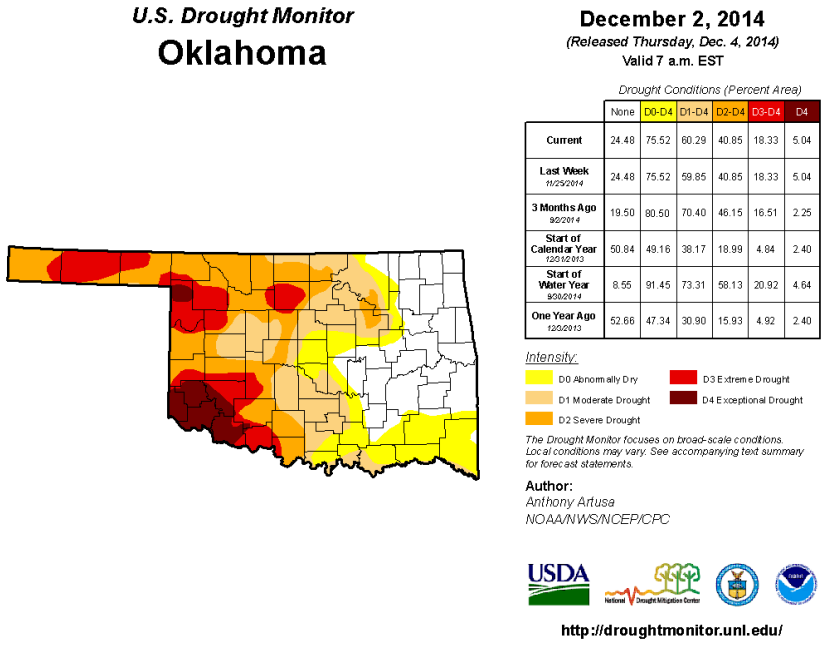
There was no change in Nevada this past week.

Related Area 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***
- ***Short Crop ET***

State with D-4 Exceptional Drought



There was an increase in D1 in Oklahoma this past week. All other categories remained unchanged.

U.S. Population in Drought

Number of people in each drought category in the U.S. for the week ending November 4, 2014

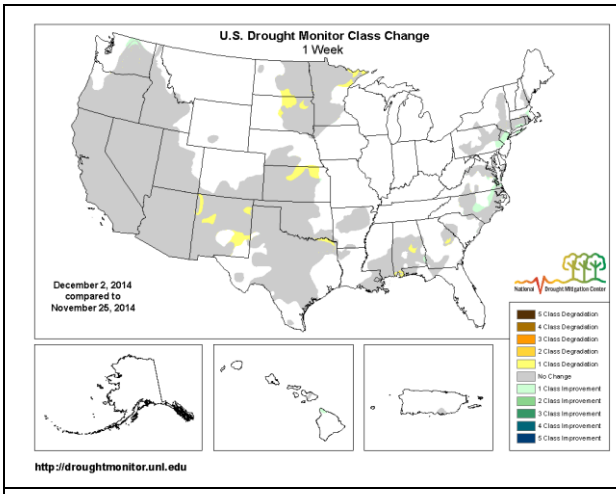
Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
2014-12-02	197,057,716	108,339,739	67,800,983	49,294,740	40,270,690	29,404,569
2014-11-25	179,180,347	126,217,108	67,748,696	49,114,886	40,220,448	29,404,569

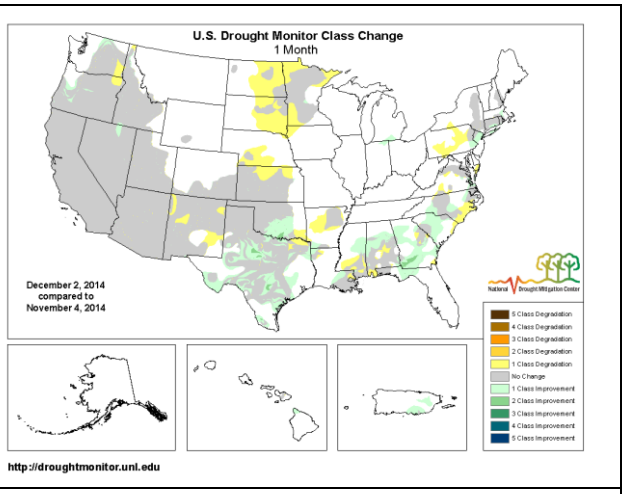
Population figures affected by drought in the U.S. Drought Monitor website show that for this week, more than 67,000,000 people in the United States were in a drought-affected area, which increased by over 52,000 people from last week.

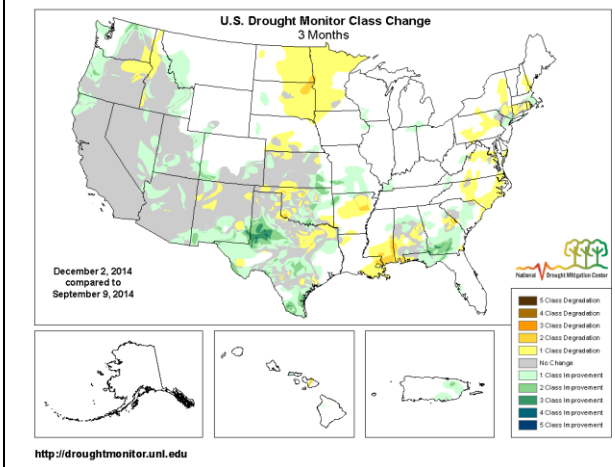
Population Statistics Methodology:
The U.S. Drought Monitor population statistics are calculated at the county level, and aggregated to the state, regional, and national levels. The population densities have been calculated for each county. The proportion of the physical area of the county that is in drought is multiplied by the uniform population density in order to obtain a number for each county. The county values are then summed at the state, regional, and national level.

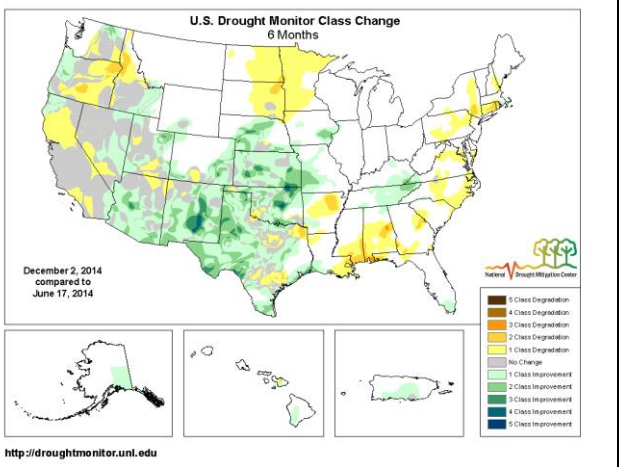
Changes in Drought Monitor Categories

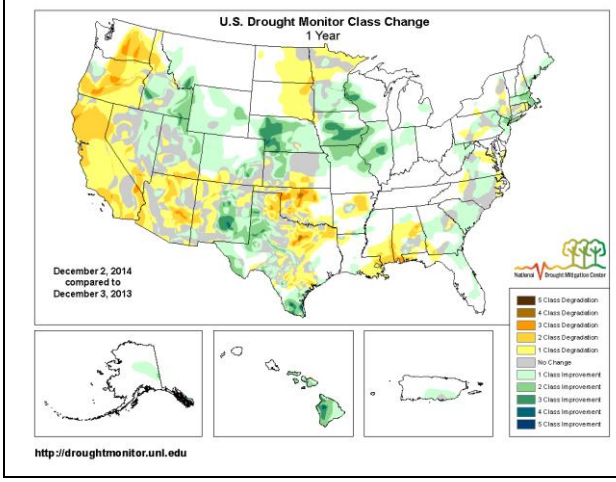
Over Various Time Periods

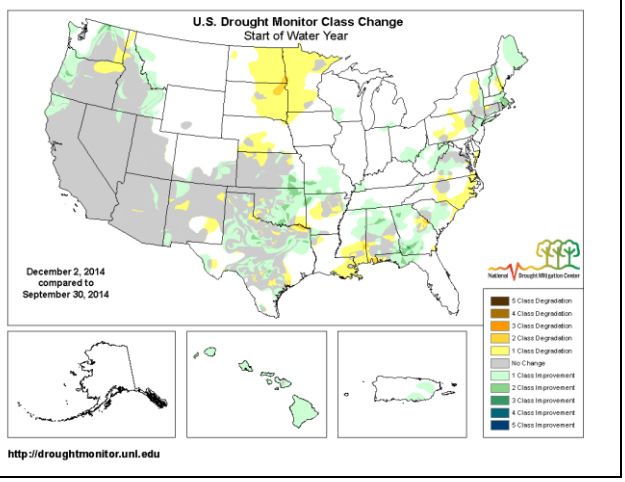






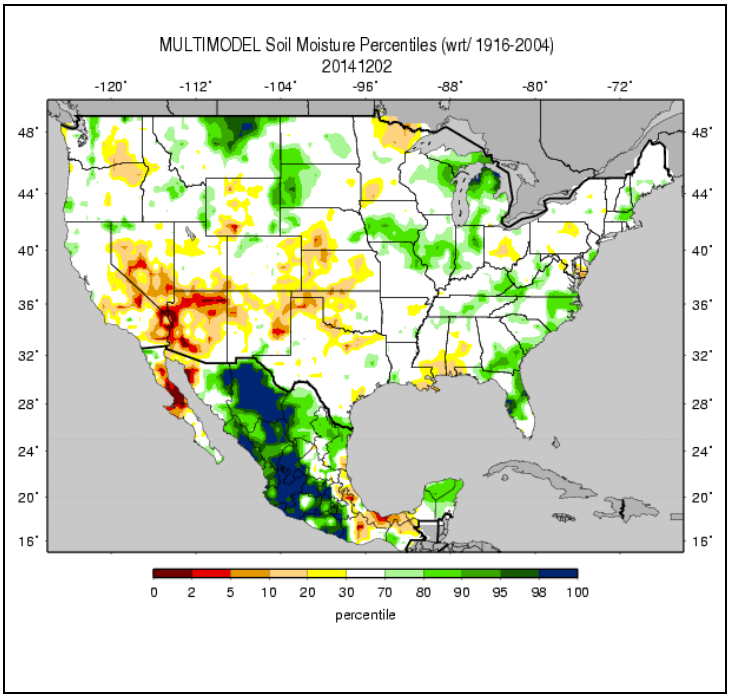






Click on any of these maps to enlarge. Note how the conditions over the Rockies and central Great Plains have improved between 6 to 12 months (middle right to lower left maps). However, also note that since a year ago, conditions over parts of the Northeast, the South, parts of the southern Great Plains, and the Pacific coast states have deteriorated significantly (lower left map).

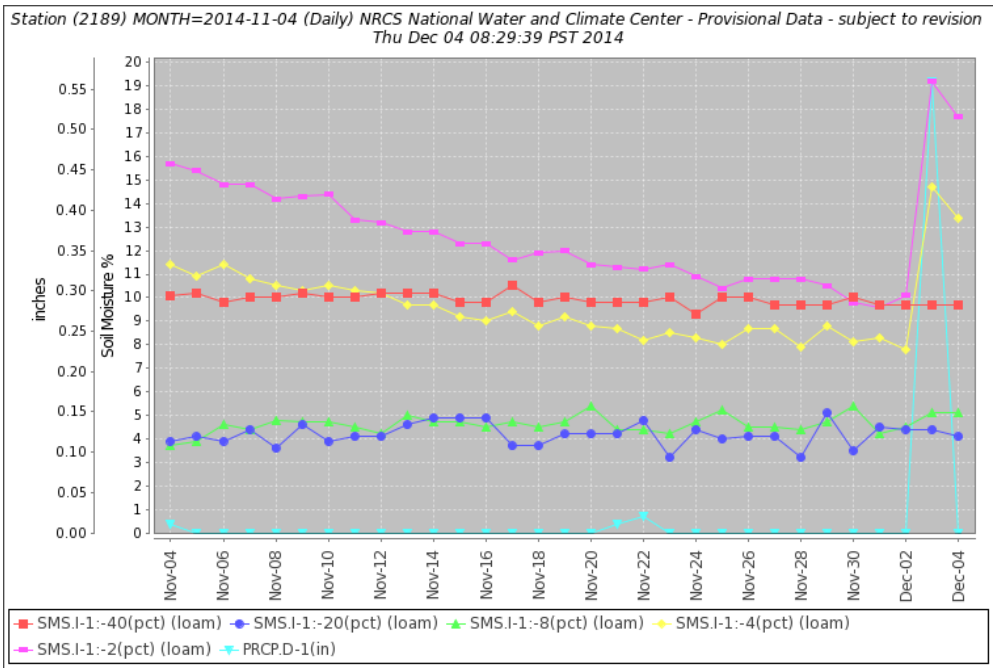
Soil Moisture



The national soil moisture model ranking in percentile as of December 2, 2014, shows dryness over most of the Southwest. The driest areas were centered in southern California, Nevada, Arizona, New Mexico, northern Texas, and Wyoming. There were also scattered dry areas in Minnesota, Nebraska, Kansas, Oklahoma, eastern Oregon, Washington, and in scattered areas of the eastern states. Another exceptionally dry area was in eastern Maryland. Moist soils dominated north central Montana, northern Michigan, northern Wisconsin, and Florida. Slightly moist soils were also scattered elsewhere throughout the country.

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

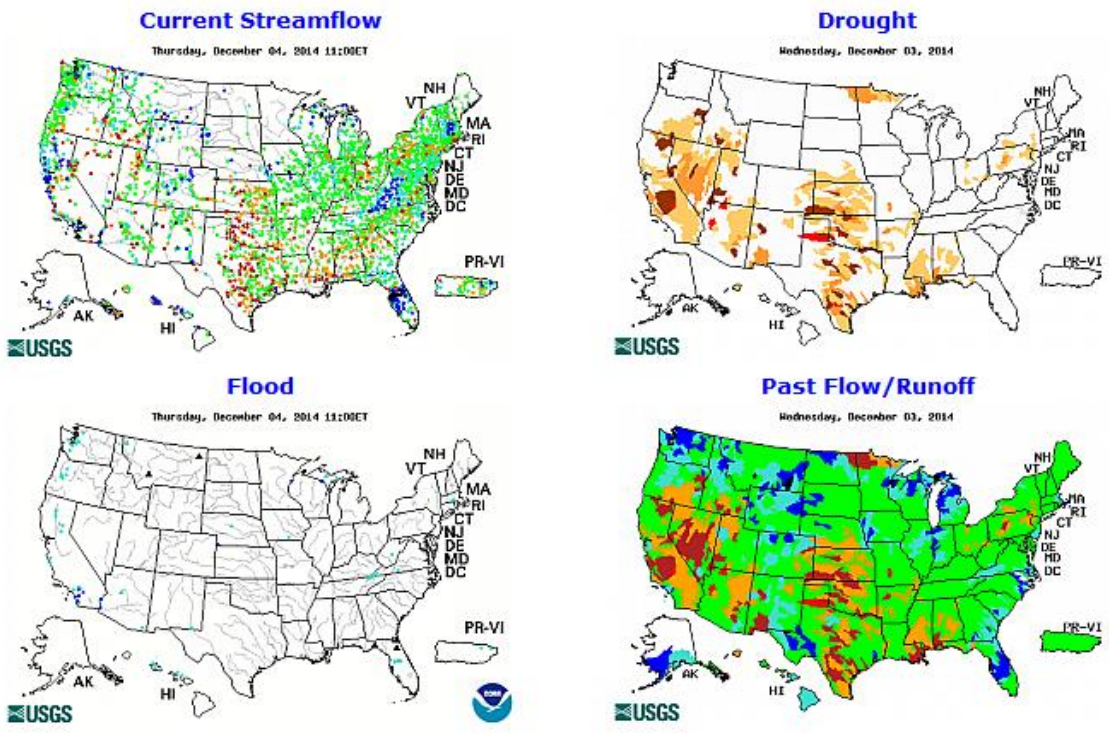
Soil Climate Analysis Network (SCAN)



This NRCS resource shows soil moisture data for the last month at the Cochora Ranch (2189) SCAN site in California. The precipitation in the area was heavy (0.56 Inches) on December 3 (graphed in light blue). This first rainfall in a very long time resulted in increased soil moisture for the 2- and 4-inch sensors. The deeper sensors show little to no change.

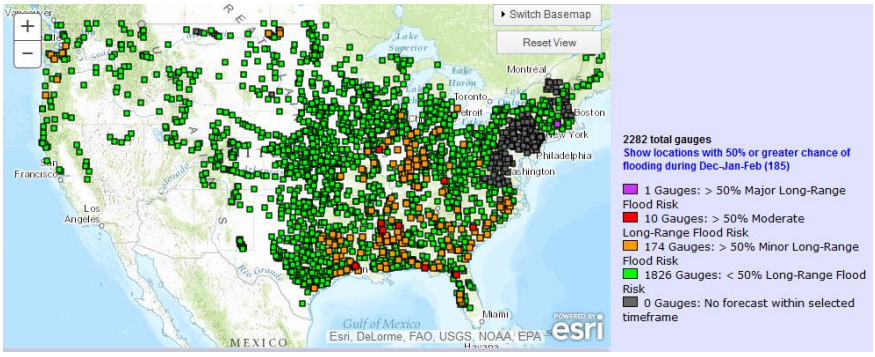
Useful Agriculture Links: *Vegetation Drought Response Index; Evaporative Stress Index; Vegetation Health Index; NDVI Greenness Map; GRACE-Based Surface Soil Moisture; North American Soil Moisture Network. Monthly Wild Fire Forecast Report.*

Streamflow



Scattered gages in the U.S. are reporting above normal streamflow. The highest concentration of high streamflow is in Florida, Virginia, North Carolina, Massachusetts, northern Michigan and Wisconsin, southern Iowa, Montana, Wyoming, Colorado, California, Oregon, and Washington (left maps). Western Alaska, Hawaii, and eastern Puerto Rico are also reporting a few rivers with high streamflow. The rivers above flood stage are the Jefferson River near Three Forks, MT, Poplar River near Poplar MT, Aucilla River near Nutall Rise, FL, St. Johns River at Jacksonville, FL, Dunns Creek near Satsuma, FL, and St. Johns River near Buffalo Bluff near Satsuma, FL.

National Long-Range Outlook



Click maps to enlarge and update

Currently the Upper Midwest part of the map has not been calculated for the long range flood outlook (dark gray dots).

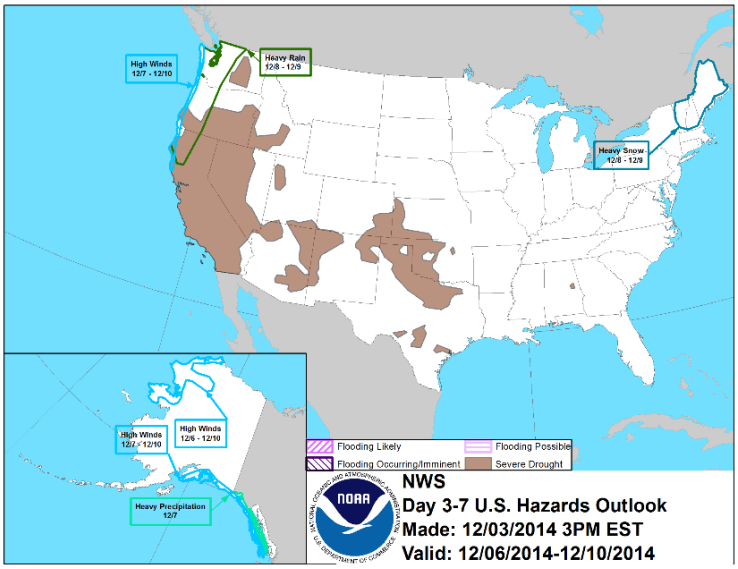
During the next three months, there is a risk of flooding in much of the eastern U.S. The Southeast, the Northeast, the Pacific Northwest, and northern Great Plains have gages with a slight to higher risk of flooding. Currently, **1** gage has a greater than 50% chance to experience major flooding; 10 gages for moderate flooding, and **174** gages for minor flooding.

These numbers represent a 55 gage increase in the greater than 50 percent chance of minor flooding category in the last 2 weeks.

National Weather Hazards

Heavy snow (outlined in medium blue) is expected during the next week in Maine, Vermont, and New Hampshire (12/8-9). Heavy rains are expected across western Oregon and Washington (12/7-10), and in southeast Alaska (12/7). High winds are expected along the Oregon, Washington, and northern California coast (12/7-10), as well as in northwest and southeast Alaska (12/6-12/10)

Severe drought remains a large issue in much of the south-central and western U.S.



National Drought Summary for December 2, 2014

Prepared by the Drought Monitor Author: Anthony Artusa, NOAA/NWS/NCEP/CPC.

Summary
"The first half of the past week was dominated by an upper-air ridge over the far western contiguous United States (CONUS), and a deep trough over the east-central CONUS. A major storm developed along the Southeast Coast and tracked northeastward just prior to Thanksgiving. This nor'easter brought moderate rain (0.5-2.0 inches) to the Southeast, a mix of rain, sleet, and snow (though mostly rain) along the middle and northern Atlantic coastal plain, and significant amounts of snow across the interior Northeast (up to a foot of snow was reported in the higher terrain of northwest New Jersey and eastern Pennsylvania). By Friday and Saturday, energy diving southward out of British Columbia into the Pacific Northwest and then eastward across the northern Rockies brought heavy mountain snow to these areas. Some precipitation made it as far south as north-central California, but these amounts were generally under an inch (liquid equivalent). Late in the period, light precipitation (0.5-inch or less) fell over central portions of California, and along the far southern coast, though amounts were nowhere near sufficient to offset longer-term precipitation deficits.

Alaska, Hawaii, and Puerto Rico
In Hawaii, several inches of rain fell across northern portions of the Big Island this past week, while monitored streams in the area were running above-average. This prompted the removal of the residual D0 area. The rest of the Hawaiian drought depiction remains unchanged, as water use restrictions remain in place. Neither the Alaska depiction nor the Puerto Rico depiction was modified this week.

California
Despite respectable amounts of precipitation falling across the northern half of the state (generally between 0.5-4.0 inches) no changes were rendered to the California drought depiction this week. Though the rainy season is underway, the Water-Year-To-Date (WYTD, since Oct 1) PNP's range from 5-25 percent of normal over the eastern half of southern California, and 25-75 percent of normal over the western half of southern California, with only a few scattered locales in far northern portions of the state depicting marginal surpluses. The 8-station precipitation index which ranges from Lake Tahoe to Shasta Reservoir is 79 percent of average to date for December 1, while the 5-station precipitation index (which covers the mountains of the San Joaquin River Basin) is only 47 percent of average to date. Snowpack is just starting to form, and is below what is normally expected for December 1, while reservoirs are just starting to receive more water than is being lost, which is later than would normally occur. December 1 marks the start of the wettest time of the year for California. Typically, about one-half of California's annual precipitation is expected to fall during the December-February season. However, more than this is needed to offset the accumulated deficits. Finally, stream base flow levels in many areas are still low and indicative

of a lack of groundwater response in watersheds so far this cold season. This suggests that groundwater reservoirs still require replenishment.

Mississippi Valley

Cold, dry conditions prevailed across much of the region during November. Deficits of 4-6 inches have mounted over the last 90-days across the Arrowhead region of northeast Minnesota. As a result, abnormal dryness (D0) was expanded to include the rest of St. Louis, Lake, and Cook Counties, which is also supported by the objective short-term drought blend. No alterations were made to the depiction this week over the central and southern Mississippi Valley.

Northeast and mid-Atlantic regions

The nor'easter that affected the Eastern Seaboard early in the period brought widespread precipitation (0.5-2.0 inches, with a few 2-3 inch totals reported) to the mid-Atlantic and Northeast regions. In general, a mix of rain, sleet, and snow was reported across coastal regions (though predominantly rain), and up to a foot of snow in northwest New Jersey and eastern Pennsylvania. As a result, abnormal dryness (D0) was trimmed from portions of eastern Massachusetts, while a 1-category upgrade (from D1 to D0) was rendered to the drought depiction over parts of coastal Connecticut. Abnormal dryness (D0) was also removed from New York City, Long Island, most of New Jersey, and southeast Pennsylvania. In northwest New Jersey, where some D0 was retained, more moisture is needed to replenish depleted groundwater and stream flows. Abnormal dryness was also removed from portions of southeastern Virginia and the extreme southern Delmarva Peninsula due to 2.0-2.5 inches of precipitation received with the nor'easter.

Northern and Central Plains

Precipitation deficits of 2-4 inches have accumulated in the last 90-days over the eastern halves of the Dakotas, and little if any precipitation was measured during this past week. Abnormal dryness (D0) was expanded westward from northeast South Dakota to the Missouri River, while moderate drought (D1) was expanded slightly to the southwest into adjacent counties. Abnormal dryness was also expanded westward in south-central North Dakota to the Missouri River, including the counties of Logan, McIntosh and Emmons. In north-central and central Kansas, abnormal dryness (D0) was expanded due to several factors. November precipitation in these areas was about 7 percent of normal, stream flows were in the D2-D3 range, and moderate temperatures in the past week lessened snow/ice cover, leading to increased evaporation.

Ohio/Tennessee Valleys

No adjustments were made to the drought depiction this week in either region. In Kentucky, precipitation was below normal in November, which also turned out to be one of the ten coldest Novembers on record. Three-month and 6-month SPI's, 30-day and 90-day precipitation deficits, and subsoil moisture levels are becoming a concern in western Kentucky. However, a wet October and decent top soil moisture, along with the cold temperatures in November, are probably enough to justify holding off on the introduction of any D0.

Pacific Northwest

In north-central Washington (Okanogan County) minor improvements were made to the map based on short and long-term PNP's (30-, 60-, and 90-days) and SPI's (3-, 6-, and 9-months). Though it's still early in the cold season, the far northern Cascades and north-central Washington have adequate SWE's (74 to 96 percent of median, as of December 3). However, one area that is not faring so well is southwest Oregon, where snowpack is off to a slow start. November precipitation has been generally below normal in this area, and temperatures about 2.5-4.0 degrees F above normal. As a result, snowpack is below normal on individual peaks and almost non-existent on mountain ridges. This area will be reassessed next week, and in the weeks to come.

Rockies

The higher terrain of the Upper Colorado River Basin (UCRB) received another round of beneficial snowfall over the past week and basin Snow Water Equivalent (SWE) percent of normal values have recovered over the northern portion of the UCRB from the dry October. The southern basins received slightly less moisture and are still lagging slightly behind where snowpack should be (compared to normal) for this time of year. In eastern Colorado, shorter-term SPI's are starting to dry out on the northeast plains, but that area had abundant moisture this past growing season and long-term SPI's are wet. The southeast plains, however, are still in severe drought. No alterations were made this week.

Southeast
Moderate precipitation (0.5-2.0 inches) fell across the region in association with the Wednesday nor'easter (day before Thanksgiving). Between 2-3 inches was observed in the eastern Piedmont/Upper Coastal Plain region of North Carolina (resulting in the reduction of coverage of D0), and even higher totals (4-6 inches) were reported in north-central Florida. In east-central Georgia, moderate drought (D1) was expanded slightly southwestward. In Alabama, USGS stream flows fell within the lowest decile of the historical distribution across southern Mobile and southern Baldwin counties abutting the Gulf Coast. Given these stream flows and a cold, dry November, a one-category deterioration was made to the depiction from moderate drought (D1) to severe drought (D2). In east-central Alabama, little precipitation produced by this latest frontal system (and consideration of Percent of Normal Precipitation (PNP) values out through 90-days) prompted the southwest expansion of the D1 area into Autauga, Montgomery, and Elmore Counties. In far southeastern Alabama, moderate drought (D1) was removed based on 60-day PNP values which are close to normal. In the northwest portion of the state, no changes were made to the drought depiction, as stream flows and soil moisture values remain adequate.

Southern Plains
Most of the region was dry this past week. In Texas, drought impacts are mostly longer-term, and with temperatures generally cooler than normal, conditions are slow to change. One exception is over parts of northeast Texas, which have accumulated significant precipitation deficits (greater than 6 inches) over the last 90-days. This warranted a one-category degradation in the drought depiction, from abnormal dryness (D0) to moderate drought (D1), for the counties of Fannin, Lamar, Red River, and much of Bowie. No alterations were made in Oklahoma this week, though northwest and north-central portions of the state will need to be reassessed next week. In these areas, soil moisture levels have not recovered (and continue to diminish) as they miss out on storms.

Southwest
Continuing dryness/drought across New Mexico prompted some revisions in this week's depiction. Abnormal dryness (D0) was expanded in southeast New Mexico across Chaves, De Baca, and Roosevelt Counties. Moderate drought (D1) was expanded in west-central portions of the state (from eastern Cibola County to the Rio Grande Valley), while severe drought (D2) was expanded in northeast New Mexico. In northwest New Mexico, extreme drought (D3) was expanded eastward into more of both San Juan and McKinley Counties.

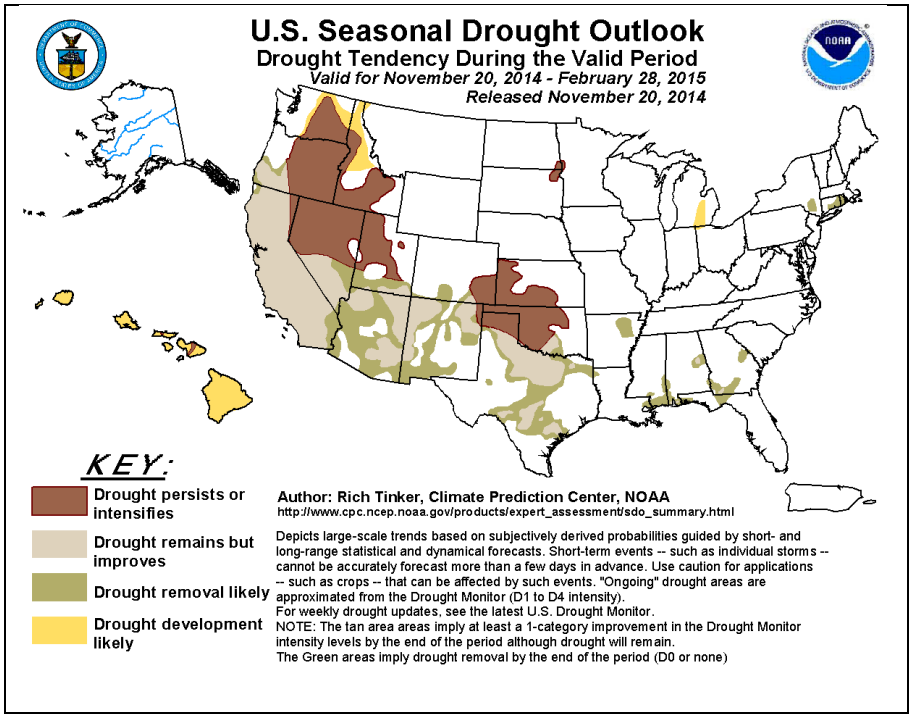
Looking Ahead
For the upcoming 5-day period (December 4-8), moderate precipitation (1-2 inches) is predicted from eastern sections of the southern Great Plains northeastward to the central Appalachians, while 0.5-1.0 inch amounts of precipitation are forecast across parts of the Four Corners region and northern Rockies. Anywhere from 3-7 inches of precipitation (liquid equivalent) is anticipated for the coastal ranges of the Pacific Northwest (including northwest California), as well as parts of the Sierras. For the ensuing 5-day period (December 9-13), above-median precipitation is favored for much of the West, southern Plains and Northeast, while modest probabilities for below-median precipitation are predicted for the northern and central Great Plains, and a large portion of the east-central CONUS."

Supplemental Drought Information

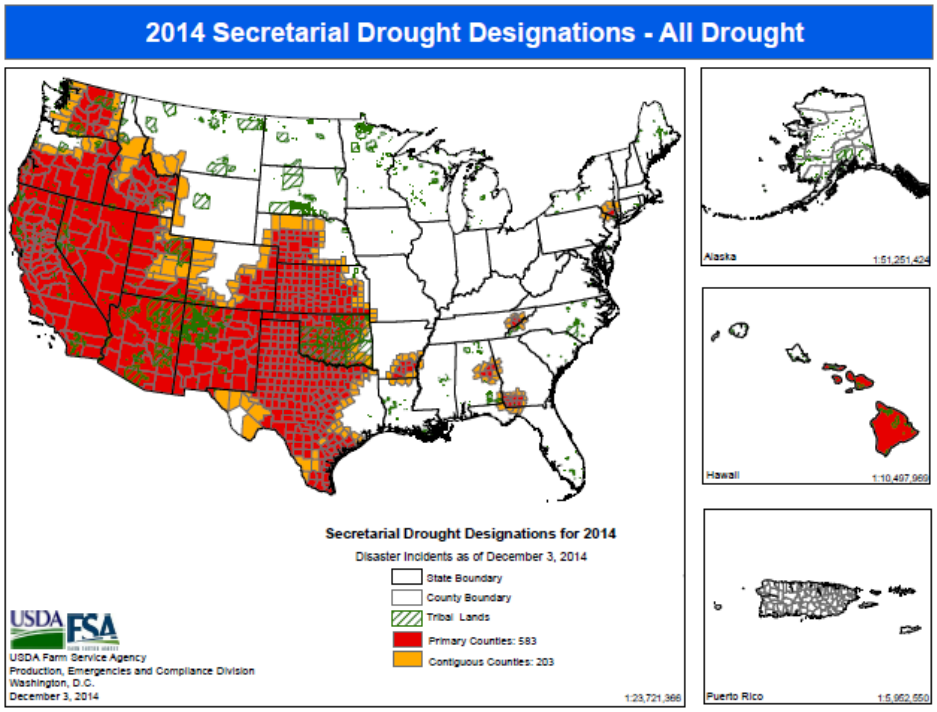
National Seasonal Drought Outlook

Nationally, drought is expected to persist or intensify over much of the West and south-central U.S., including Nevada, Oregon, Washington, Idaho, Utah, Texas, Oklahoma, Nebraska, and Colorado. Improvements are expected in California and in parts of the Southwest and Texas. Some areas of drought are likely to develop in Washington, Idaho, and Michigan.

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.



2014 USDA Secretarial Drought Designations

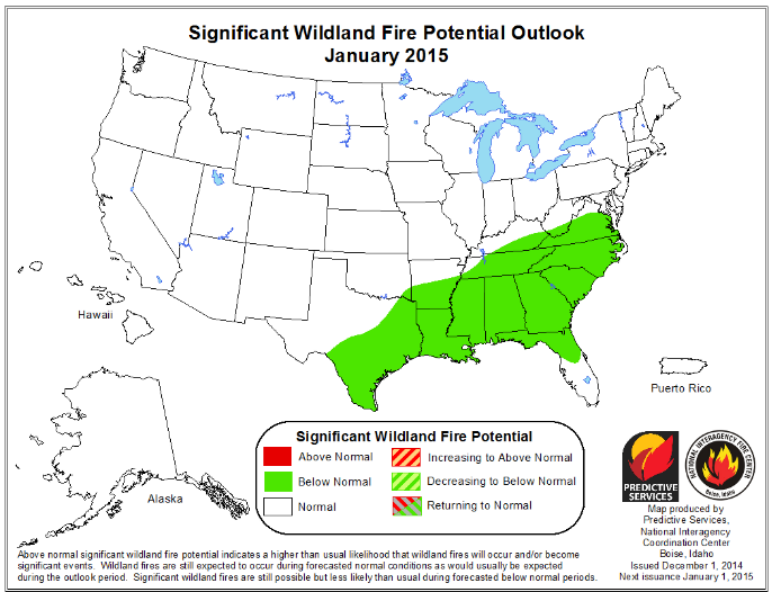


Refer to the USDA Drought Assistance website and National Sustainable Agriculture Information Service.

Read about the new USDA Regional Climate Hubs.

New useful resource: NASS Quick Stats

National Fire Potential Outlook



January Fire Forecast

In January, much of the U.S. has normal fire potential.

The below normal fire potential area in green on the map is forecast for Texas, through the Southeast, to the Mid-Atlantic States.

Additional Maps

U.S. Maps PowerPoint presentation: http://dmcommunity.unl.edu/maps/US-Maps.ppt.

Regional zooms of ACIS station data percent-of-normal precipitation: http://dmcommunity.unl.edu/maps/All-CONUS-ACIS-PNP.pptx.

National Water and Climate Center (NWCC) Surface Water Supply Index (SWSI) maps: http://www.wcc.nrcs.usda.gov/wsf/swsi.html

Supplemental Drought-Agriculture News

Download archived "U.S. Crops in Drought" files.

Due to the Thanksgiving holiday, there is a limited collection of drought-related news stories from the past seven days or so for this past week. Past Impact information from these articles is entered into the Drought Impact Reporter. A number of these articles are 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.

Turf rebate program not popular in Santa Fe Irrigation District in San Diego County, California Dec 2. Residential water customers in the Santa Fe Irrigation District replaced less than an acre of grass in 2014, despite rebate programs to encourage the switch and requests for water conservation. Los Angeles Times

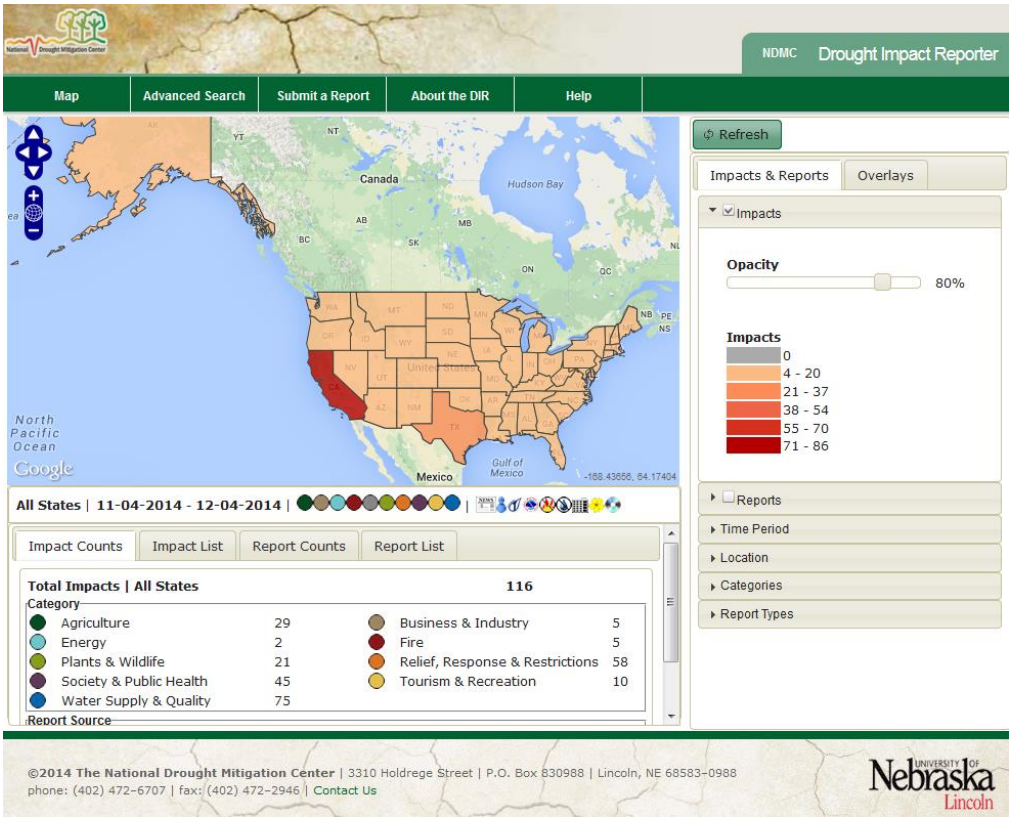
Residential water customers in Rancho Santa Fe, California used an average of nearly five times as much as other coastal Southern California homes Dec 2. Rancho Santa Fe residents used an average of nearly five times as much water as other coastal Southern California homes. In June and July, daily per capita water consumption exceeded 600 gallons, as calculated by the State Water Resources Control Board. Water use fell to 584 gallons, in contrast to 119 gallons per person daily among other coastal Southern California communities. Residents of Rancho Santa Fe are the biggest water users in the state. Water use for Solana Beach, Fairbanks Ranch and Rancho Santa Fe, all served by the Santa Fe Irrigation District, dipped by just 2 percent in September 2014, compared to the previous year. For the South Coast region, water use dropped an average of 7.5 percent. Los Angeles Times (Calif)

20 to 30 percent of tree acreage lost in Terra Bella, California Nov 29. Terra Bella growers had a difficult summer and lost 20 to 30 percent of the tree acreage. Some growers were able to get irrigation water, while others were less fortunate. Groundwater is not much of an option because there is very little in the area. The Terra Bella Irrigation District managed to buy water here and there, amounting to about 11,000 acre-feet of water or half as much as the district normally buys. Some orchards were kept alive, thanks to the purchase, but the water was expensive. For half of the usual volume of water, the price tag was $10 million, whereas a full year's delivery costs $2.5 million to $3 million. Farmers foresee a very difficult, painful future if plentiful precipitation does not fall this winter. One farmer would like to get out of the business, but doesn't know what else he could do. Another farmer loves the way of life and does not want to do anything else. Money is very tight, and growers are praying for rain. Fresno Bee (Calif.)

Different recreational opportunities at Washoe Lake State Park near Carson City, Nevada. Nov. 29 Employees at Washoe Lake State Park have come up with new activities to entertain visitors rather than using water-based activities because the lake is very low. Park visitors can enjoy moonlight hikes and stargazing. While Washoe Lake used to be 4 miles long and 2 miles wide, the lake has shrunk to roughly one-tenth of its former size. The lake used to border U.S. Highway 395, but has retreated several hundred yards. Las Vegas Sun (Nev.)

California's Department of Water Resources announced initial water allocation of 10 percent. Dec 1. California's Department of Water Resources announced an initial water allocation of 10 percent, based on a more optimistic rain and snow forecast for 2015. The estimate could also be revised downward if the precipitation does not materialize. Only 5 percent was delivered in 2014. Fresno Bee (Calif.), Dec. 1, 2014

City council in Odessa, Texas offered more than $38 million to boost production from Ward County well fields. Nov 26. The Odessa City Council decided to make an offer of more than $38 million to the Colorado River Municipal Water District to increase water production of the Ward County well fields to provide additional water to supplement lake water during times of drought. The city council would like to see well output increased from the current withdrawal rate of 45 million gallons daily to 65 million gallons daily. The mayor stated that the city's water supply was a hindrance to luring businesses to Odessa. Odessa American (Texas)

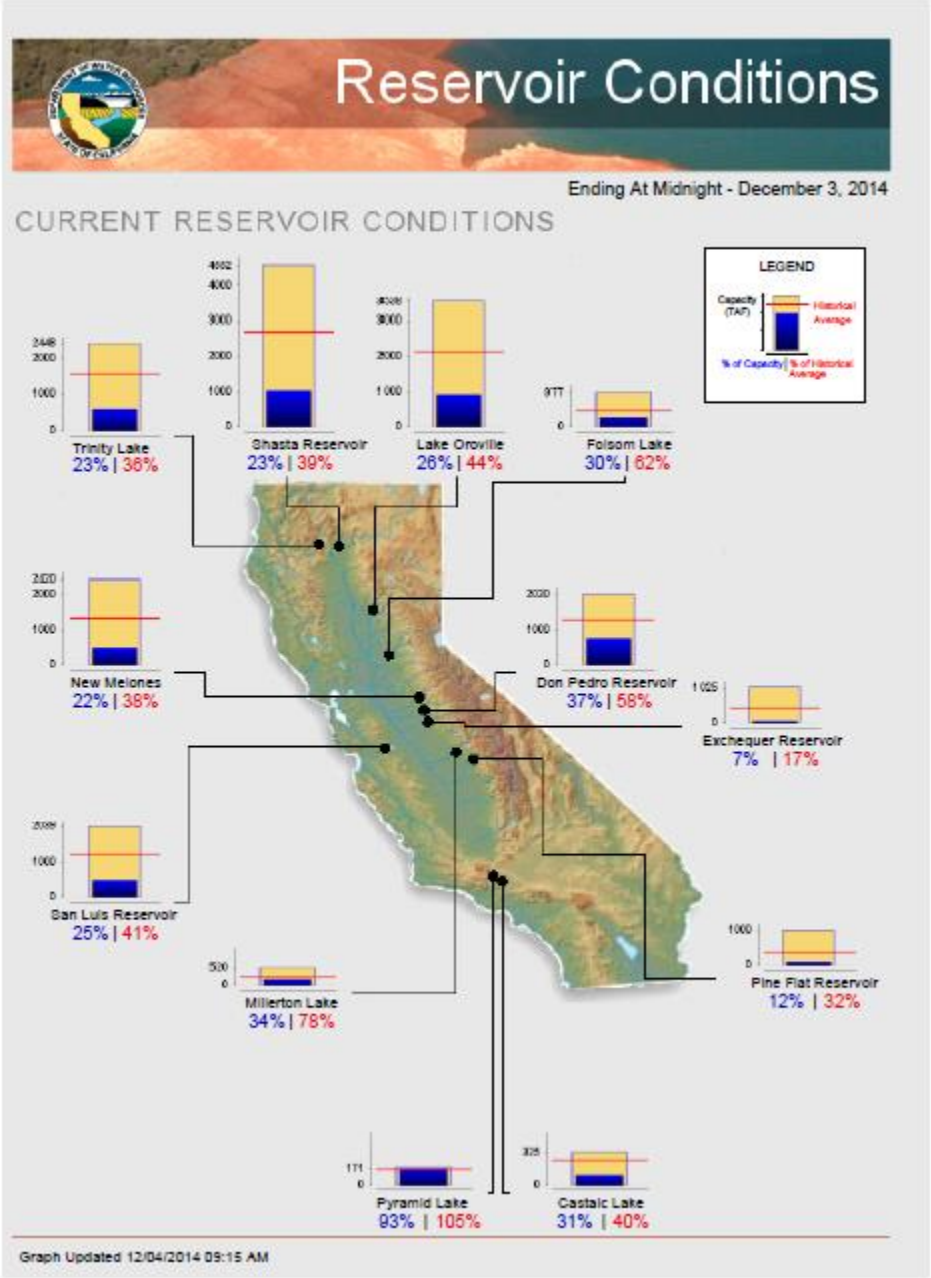


Tea Cup Reservoir Depictions

- http://www.usbr.gov/uc/water/basin/ ← Upper Colorado
- 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 ← 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)

California Reservoir Conditions

California Major Reservoir conditions from the CA Department of Water Resources



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 Water and Climate Updates 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

Deputy Chief, Soil Science and Resource Assessment