United States Department of Agriculture

Water and Climate Update

November 3, 2016

The Natural Resources Conservation Service produces this weekly report using data and products from the National Water and Climate Center and other agencies. The report focuses on seasonal snowpack, precipitation, temperature, and drought conditions in the U.S.

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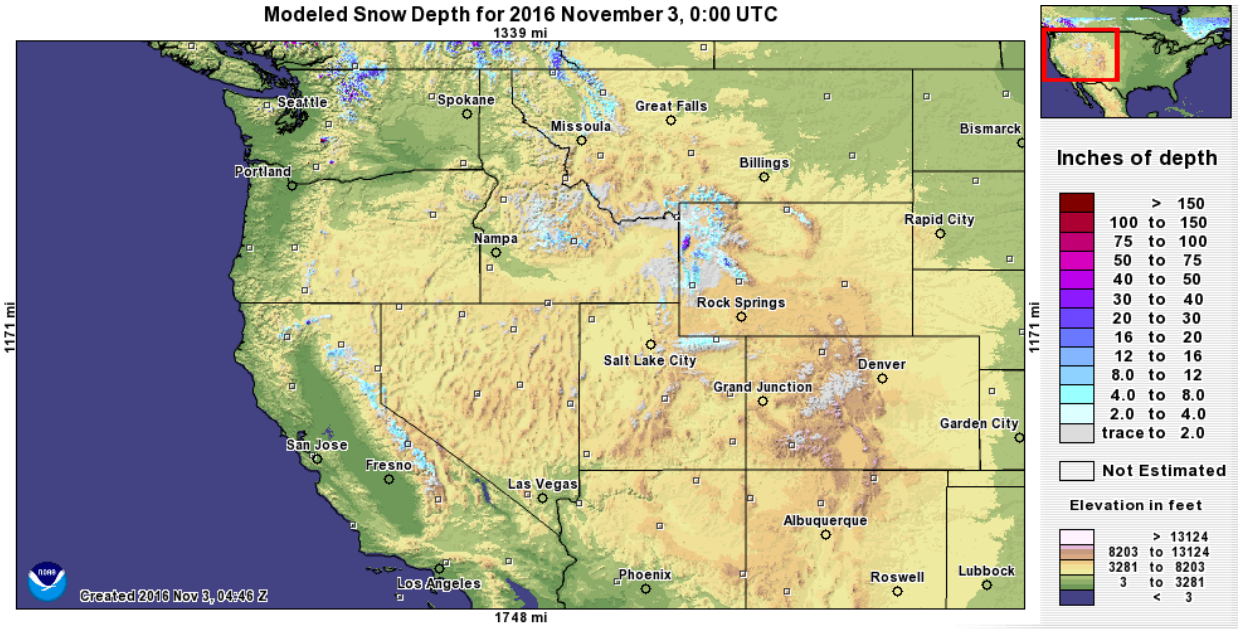
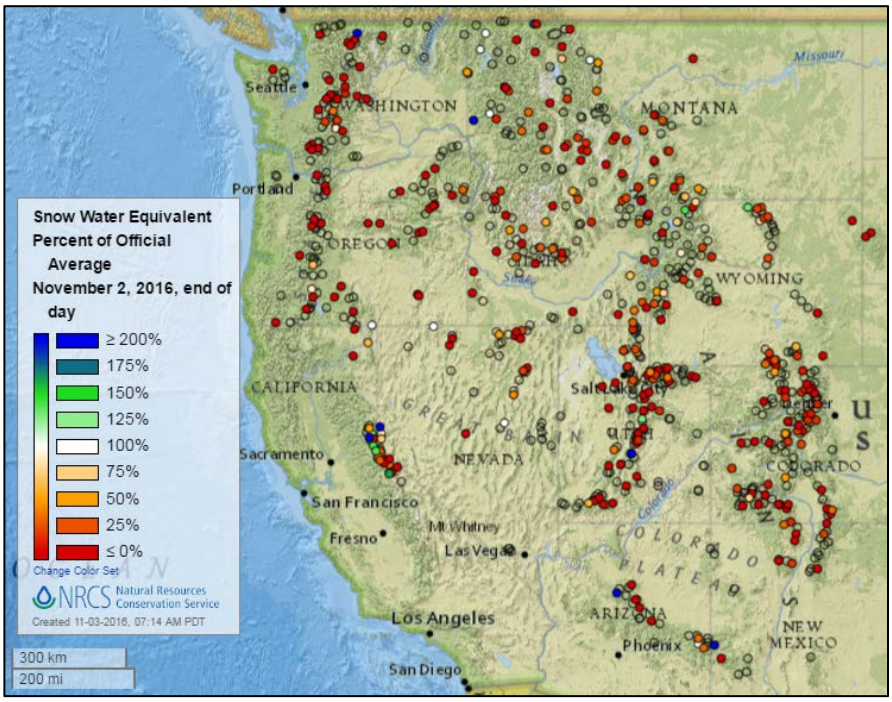
Winter snowpack underway in the western mountains



High-elevation snowpack has begun to accumulate in the mountains of the West. The map of the western U.S. modeled snow depth is from the National Weather Service, National Operational Hydrologic Remote Sensing Center. The northern Cascades and northern Rocky Mountains have over two feet of snow in the higher elevations, whereas the Sierra Nevada snowpack is over one foot at the highest peaks. The central and southern Rockies have been warm and dry and are reporting a few inches of snow depth in the south to nearly two feet farther north in the Grand Teton Mountains of western Wyoming.

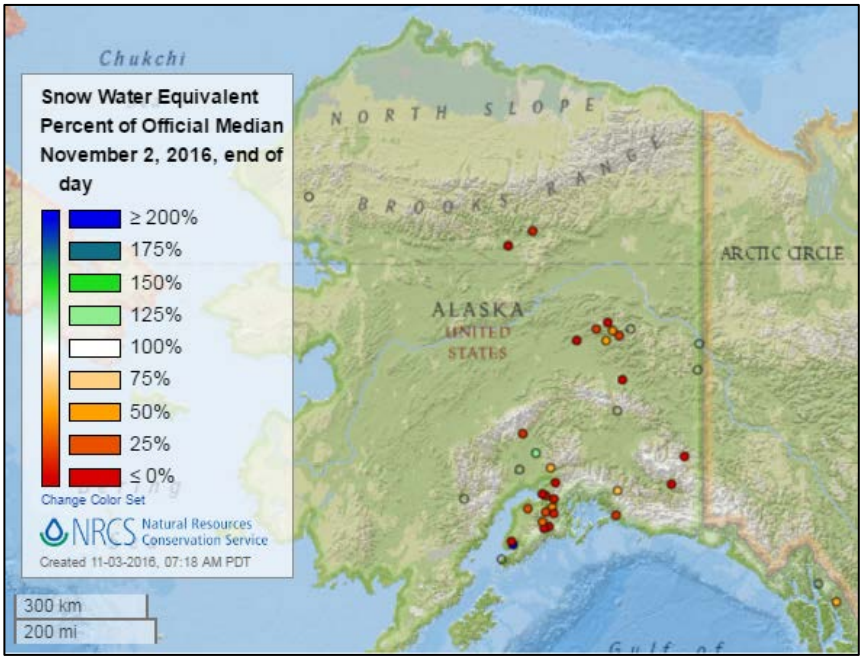
Snow

Current Snow Water Equivalent, NRCS SNOTEL Network



[Snow water equivalent percent of median map]

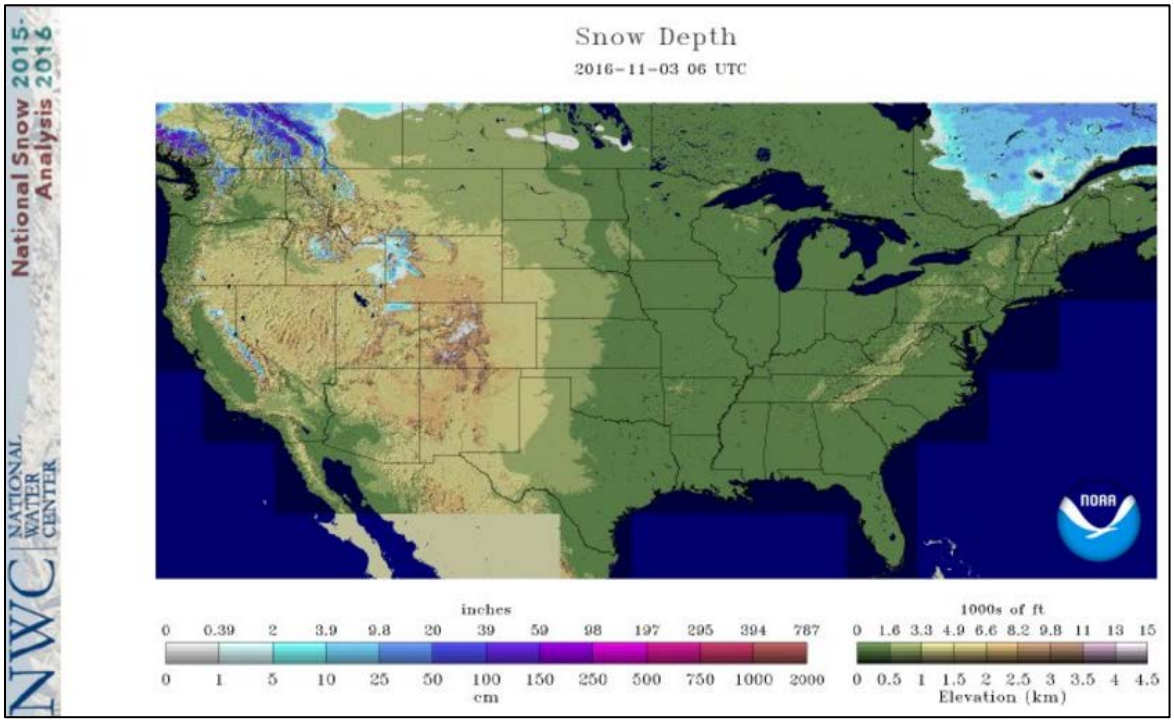
See also:
[Snow water equivalent values (inches) map]



[Alaska snow water equivalent percent of median map]

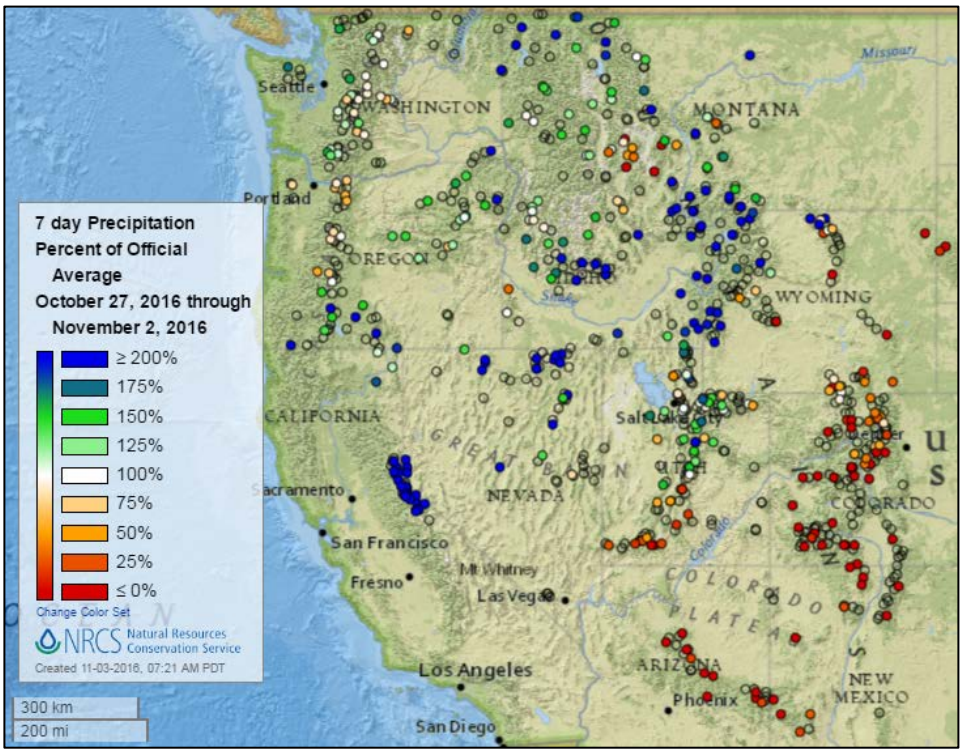
See also:
[Alaska snow water equivalent values (inches) map]

Current Snow Depth, National Weather Service (NWS) Networks



Precipitation

Last 7 Days, Western Mountain Sites (NRCS SNOTEL Network)

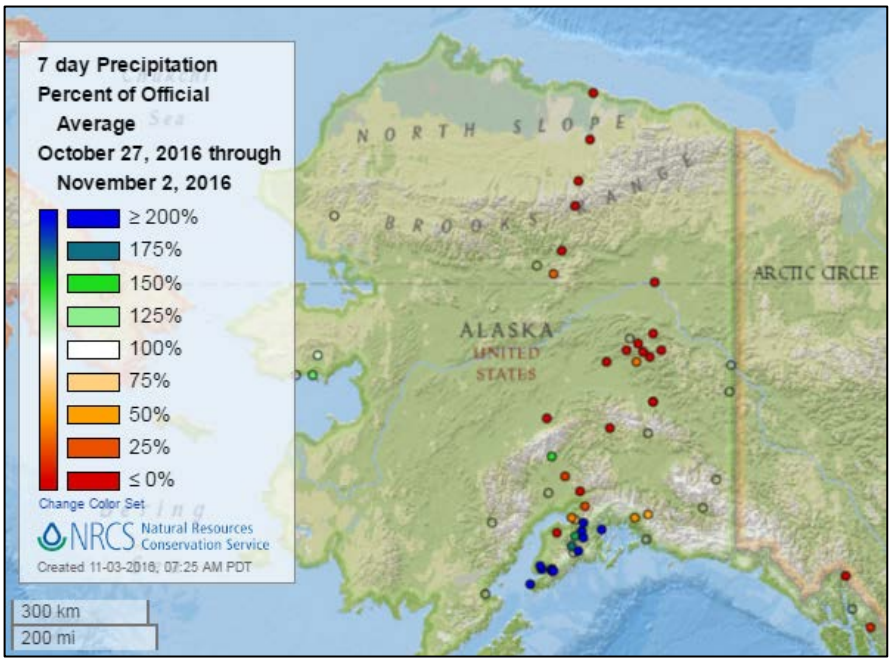


[7-day precipitation percent of average map]

See also:
[7-day total precipitation values (inches) map]

Alaska 7-day precipitation percent of average map

See also: Alaska 7-day total precipitation values (inches) map

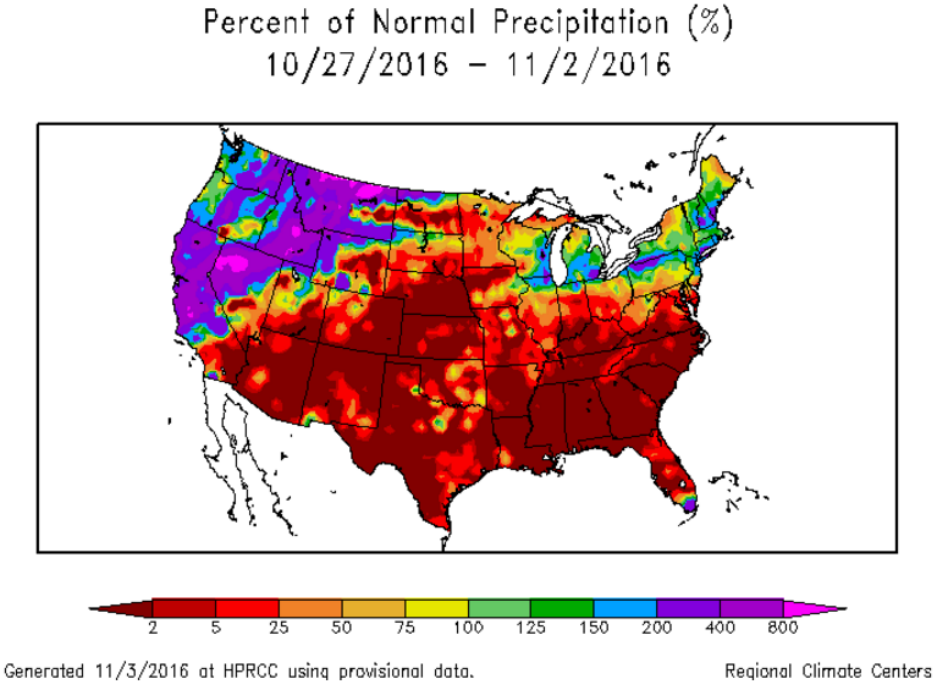


Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

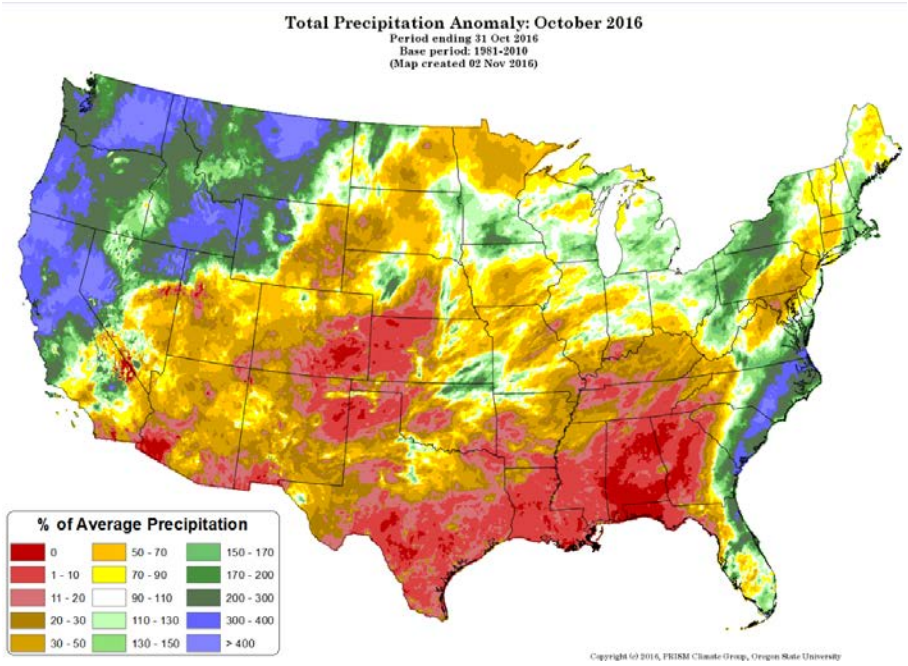
7-day precipitation percent of normal map for the continental U.S.

See also: 7-day total precipitation values (inches) map



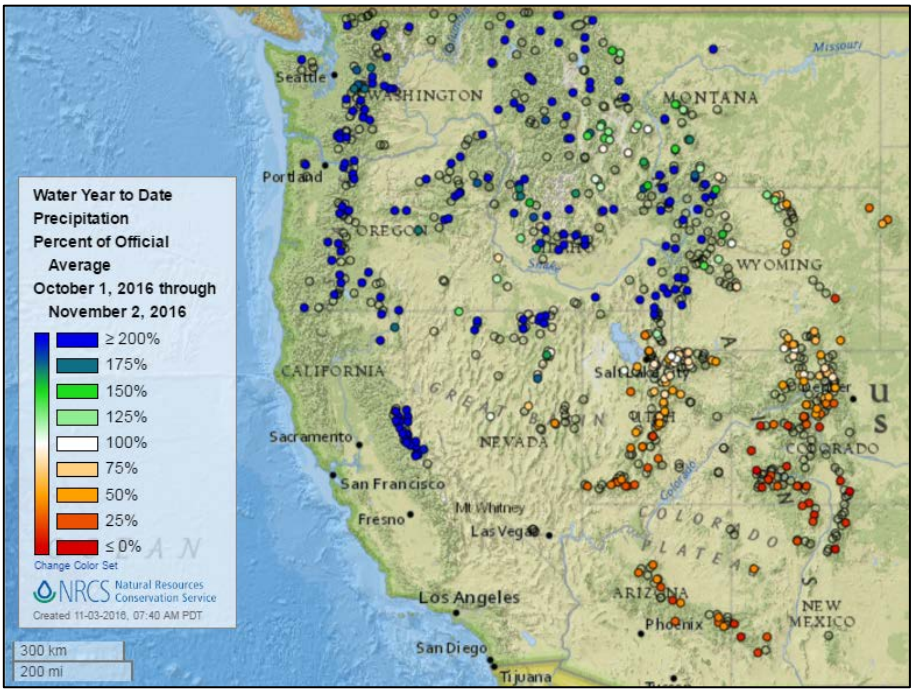
Previous Month, All Available Data Including SNOTEL and NWS Networks

Source: PRISM



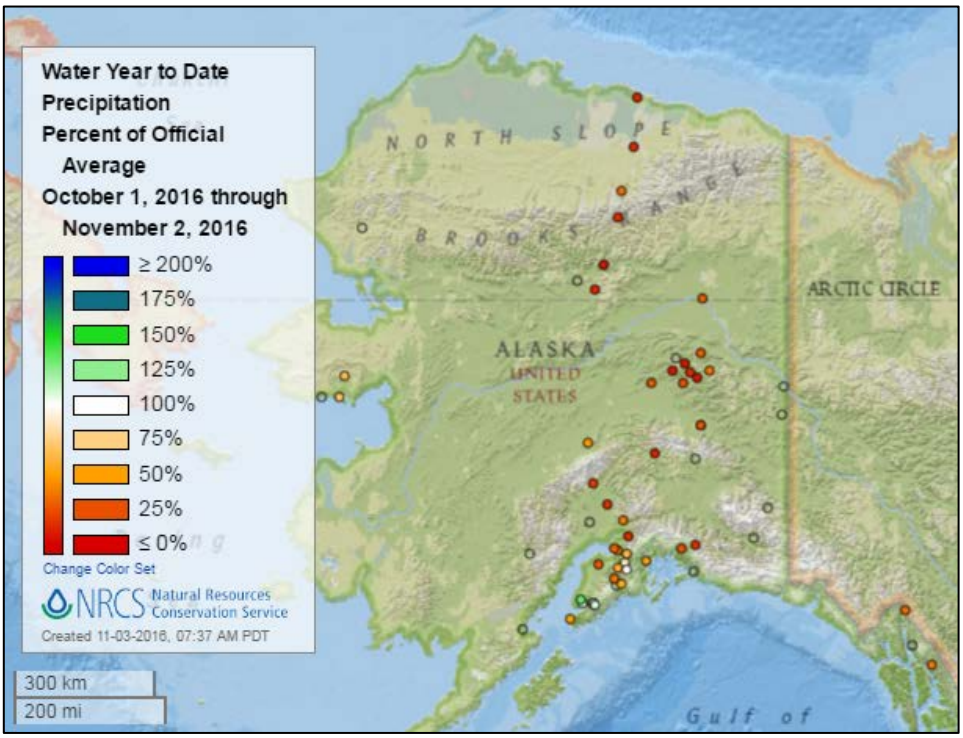
[Previous month national precipitation percent of average map]

Water Year-to-Date, Western Mountain Sites (NRCS SNOTEL Network)



[2017 water year-to-date precipitation percent of average map]

See also: [2017 water year-to-date precipitation values (inches)]



[Alaska 2017 water year-to-date precipitation percent of average map](#)

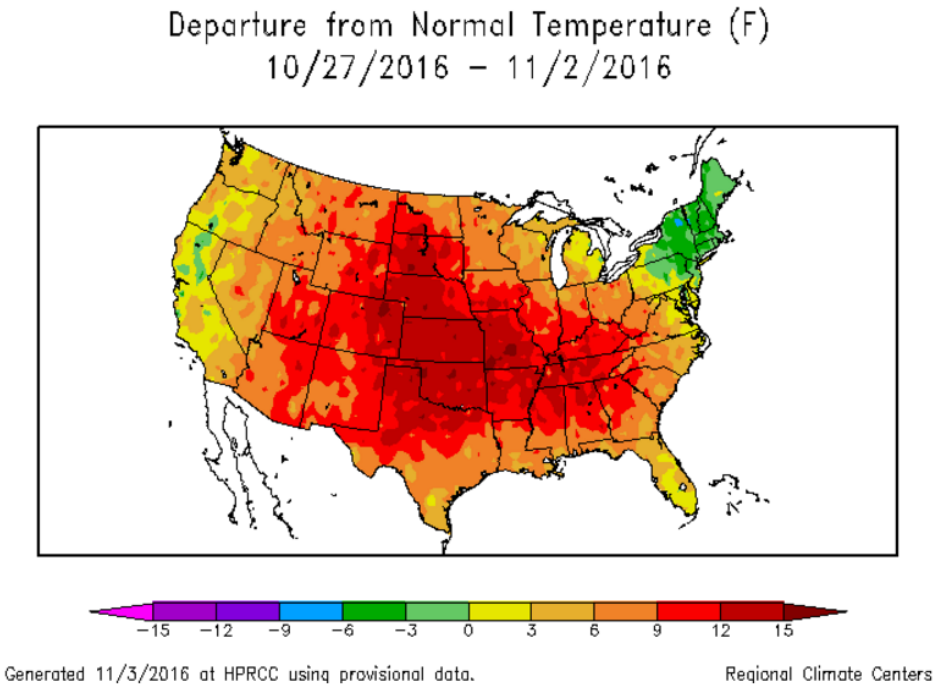
See also: [Alaska 2017 water year-to-date precipitation values (inches) map](#)

Temperature

Last 7 Days, National Weather Service (NWS) Networks Source: Regional Climate Centers

[7-day temperature anomaly map](#) for the continental U.S.

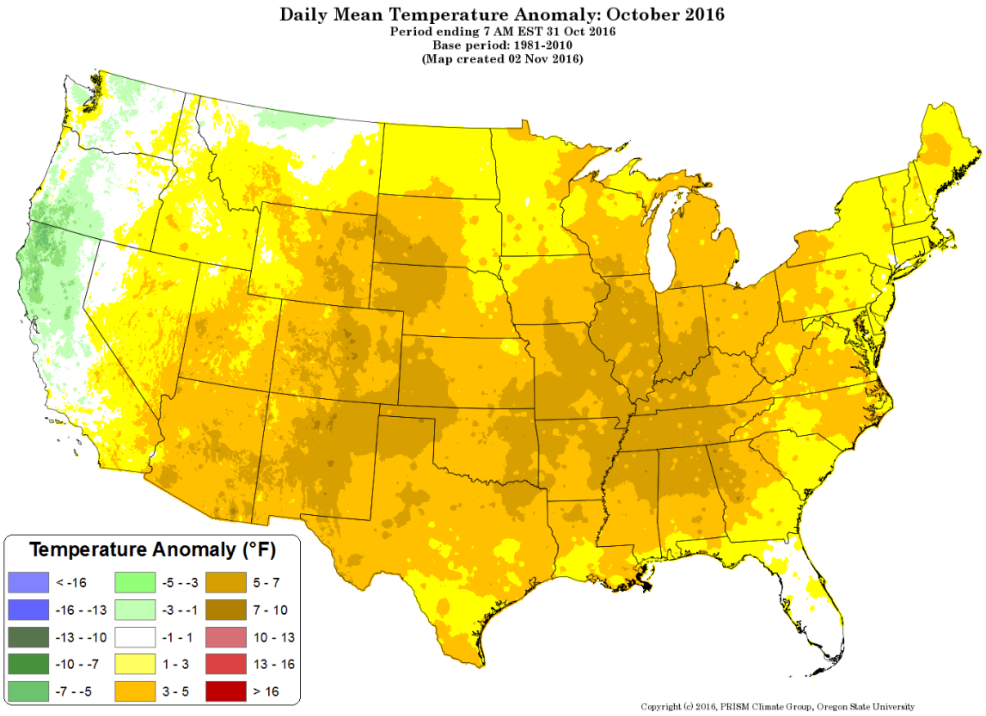
See also: [7-day temperature (° F) map](#)



Previous Month, All Available Data Including SNOTEL and NWS Networks

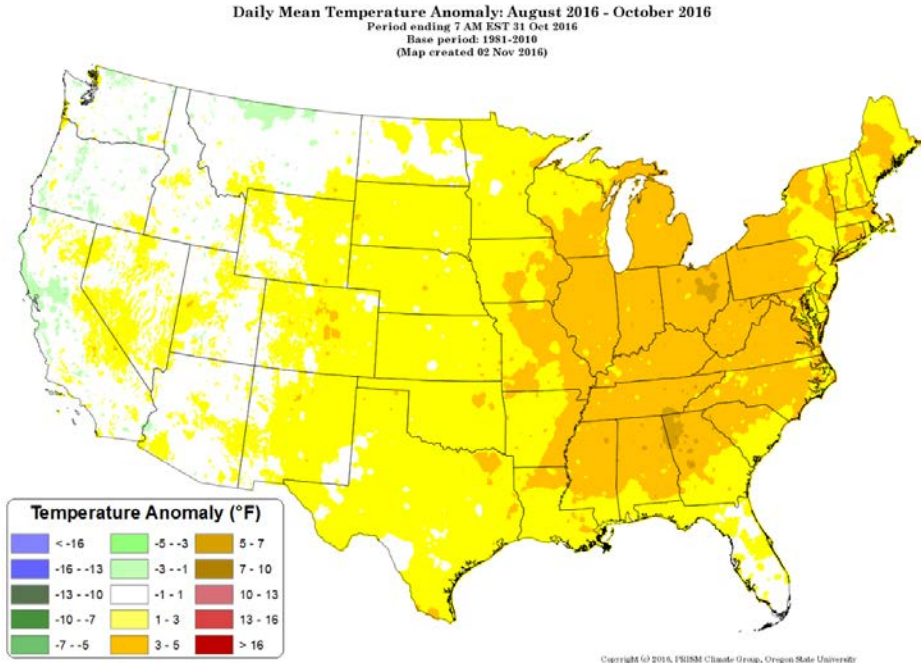
Source: PRISM

[Previous month national daily mean temperature anomaly map]



Last 3 Months, All Available Data Including SNOTEL and NWS Networks

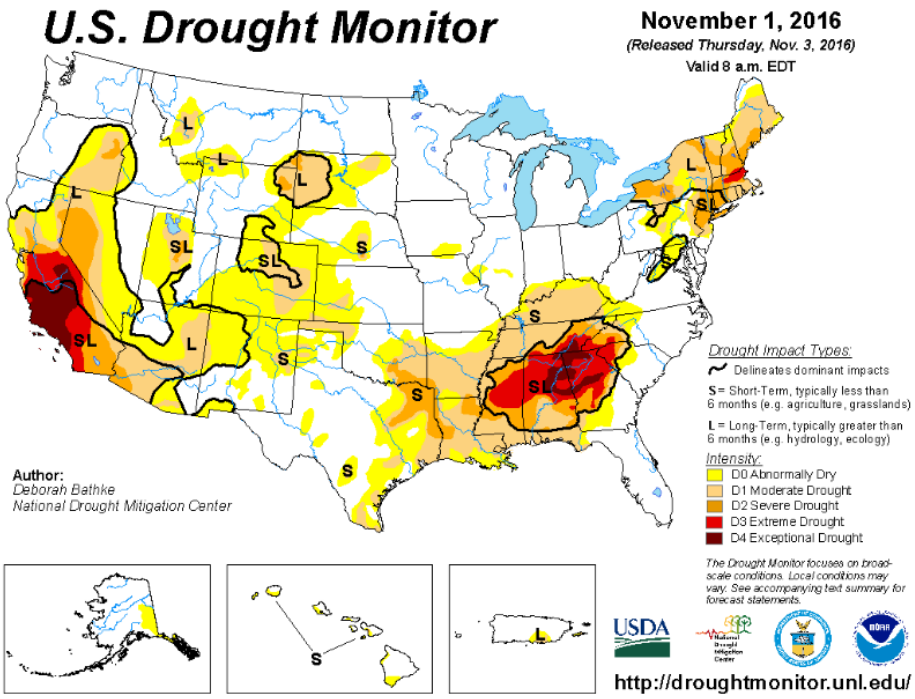
Source: PRISM



[August through October daily mean temperature anomaly map]

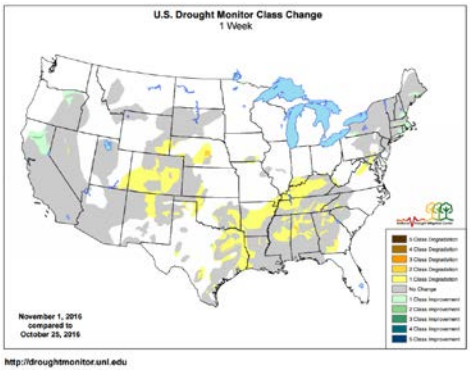
Drought

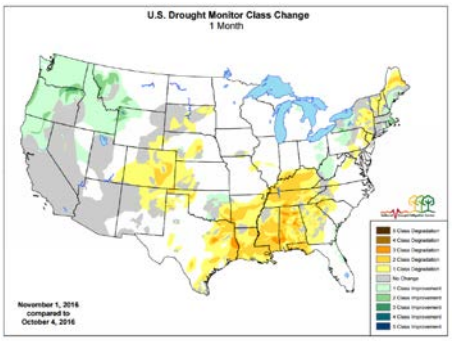
U.S. Drought Monitor See map below. U.S. Drought Portal Comprehensive drought resource.

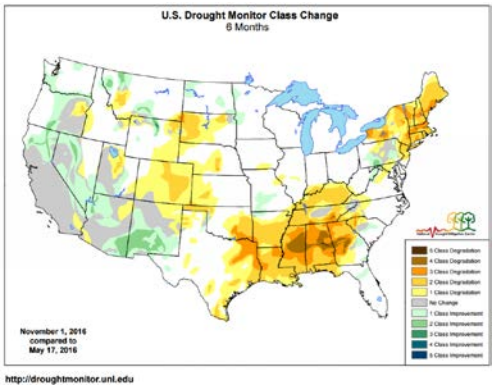


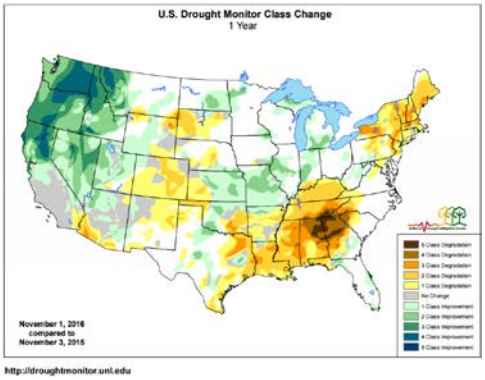
Changes in Drought Monitor Categories over Time

Click any map to enlarge









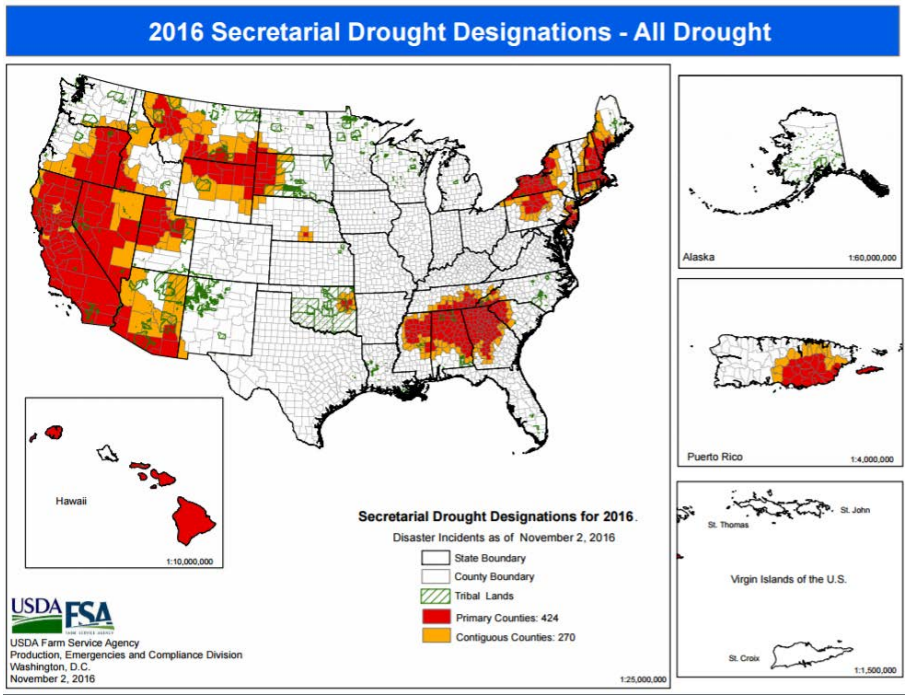
Changes in drought conditions over the last 12 months

Current National Drought Summary, November 1, 2016

Author: Deborah Bathke, National Drought Mitigation Center

"The U.S. Drought Monitor saw continued deterioration of drought conditions in the south and southeast as dry conditions and above average temperatures prevailed during the past week further impacting soil moisture and agriculture across the region. Parts of the interior U.S. also saw a deterioration in conditions due to a continued lack of rainfall combined with well above average temperatures. Conversely, rains along the coast in New England and in the Pacific Northwest provided relief to those drought stricken areas."

USDA 2016 Secretarial Drought Designations

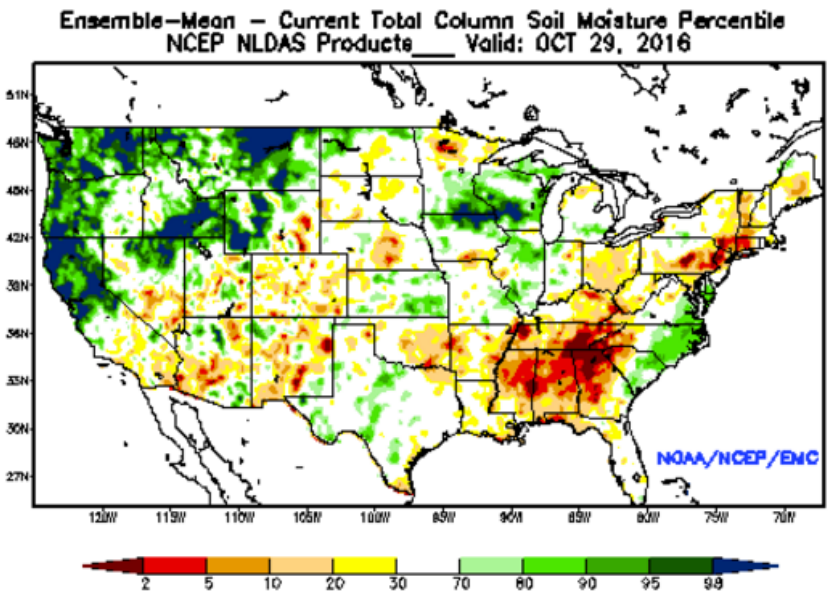


Highlighted Drought Resources

- Drought Impact Reporter
- Quarterly Regional Climate Impacts and Outlook
- U.S. Drought Portal Indicators and Monitoring
- U.S. Population in Drought, Weekly Comparison
- USDA Disaster and Drought Information

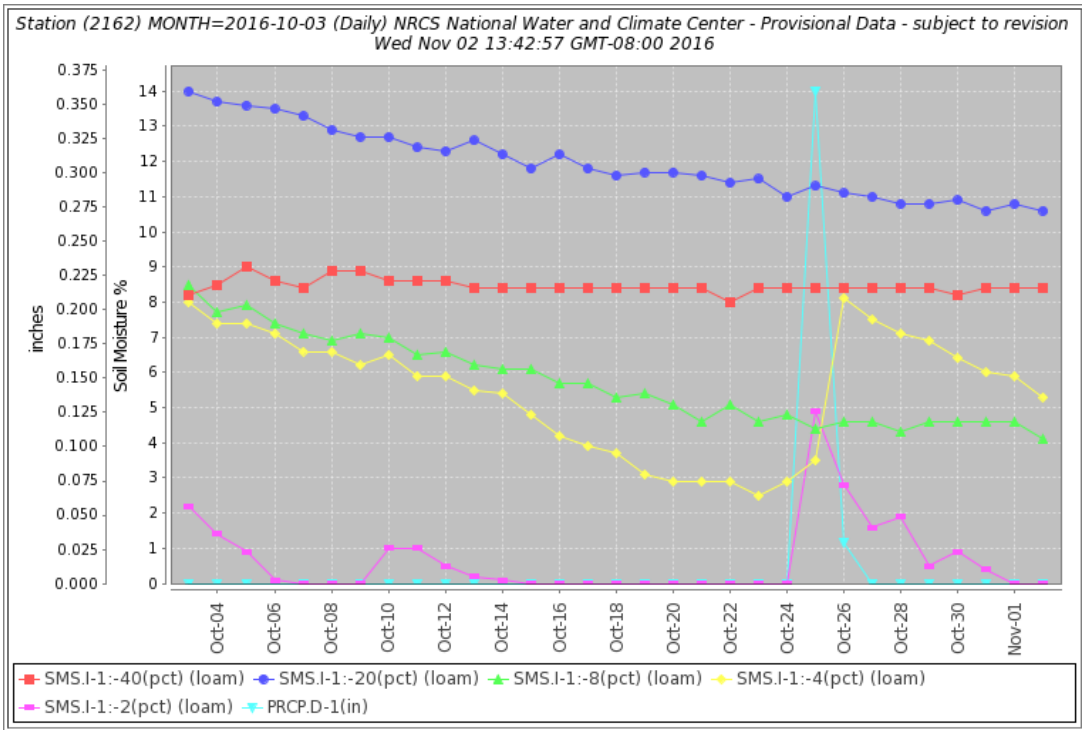
Other Climatic and Water Supply Indicators

Soil Moisture



Modeled soil moisture percentiles as of October 29, 2016.

Soil Moisture Data: NRCS Soil Climate Analysis Network (SCAN)



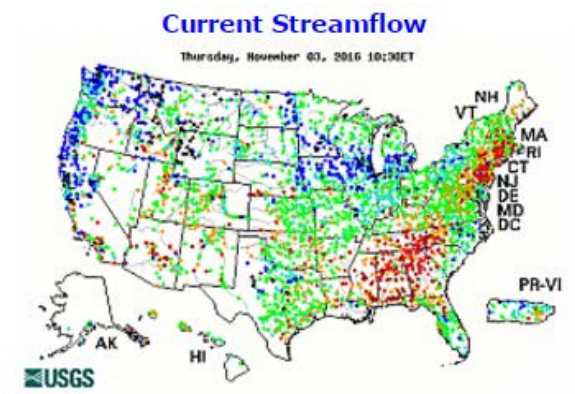
Soil moisture (at 2-, 4-, 8-, 20-, and 40-inch depths) and precipitation for the past 30 days at the Vermillion SCAN station 2162 in Utah. Precipitation on October 25 and 26 resulted in increased soil moisture at the 2- and 4-inch sensor levels. The 8-inch sensor leveled off from its drying trend, whereas the deeper soil moisture sensors reported little to no change in their trends.

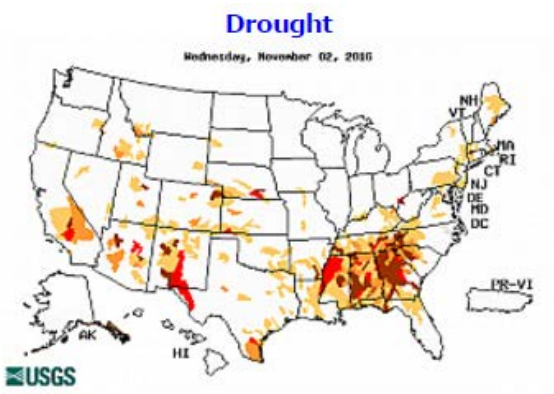
Soil Moisture Data Portals

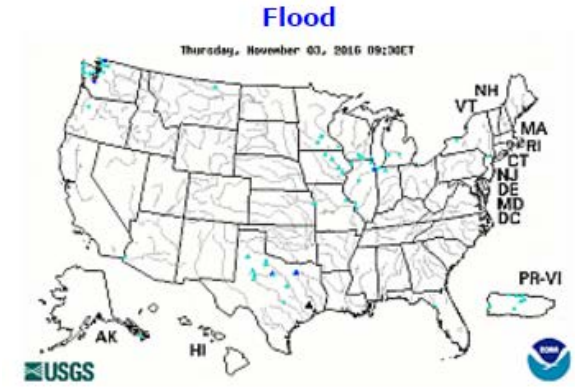
CRN Soil Moisture
Texas A&M University North American Soil Moisture Database
University of Washington Experimental Modeled Soil Moisture

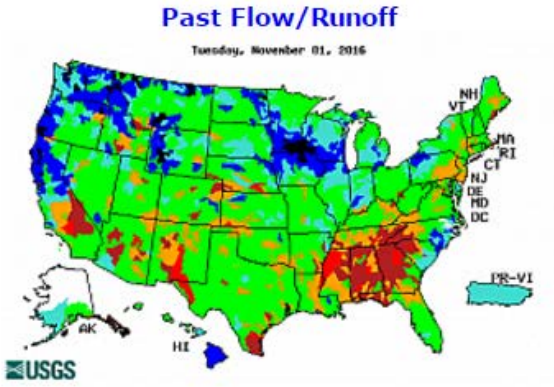
Streamflow

Source: USGS









Click to enlarge and display legends

Current streamflow maps

Current Reservoir Storage

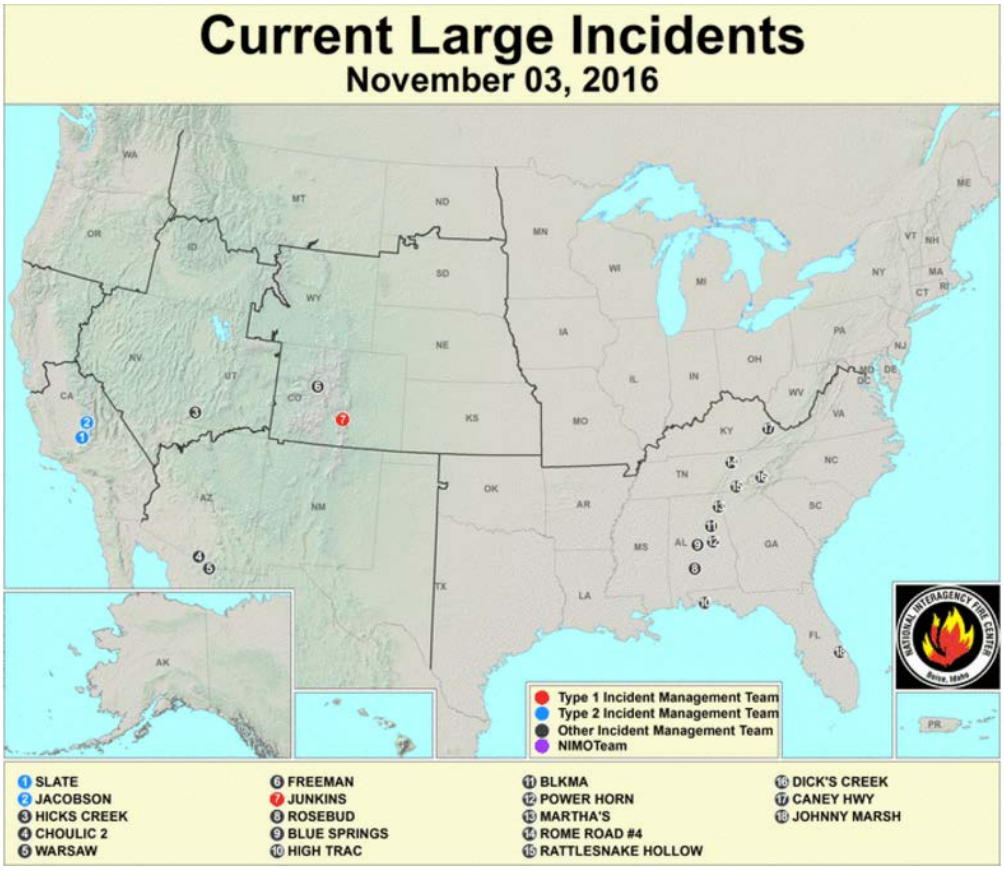
National Water and Climate Center Reservoir Data

U.S. Bureau of Reclamation Hydromet Tea Cup Reservoir Depictions:

- Upper Colorado
- Pacific Northwest/Snake/Columbia
- Sevier River Water, Utah
- Upper Missouri, Kansas, Oklahoma, Texas

California Reservoir Conditions

Wildfires: [USDA Forest Service Active Fire Mapping]



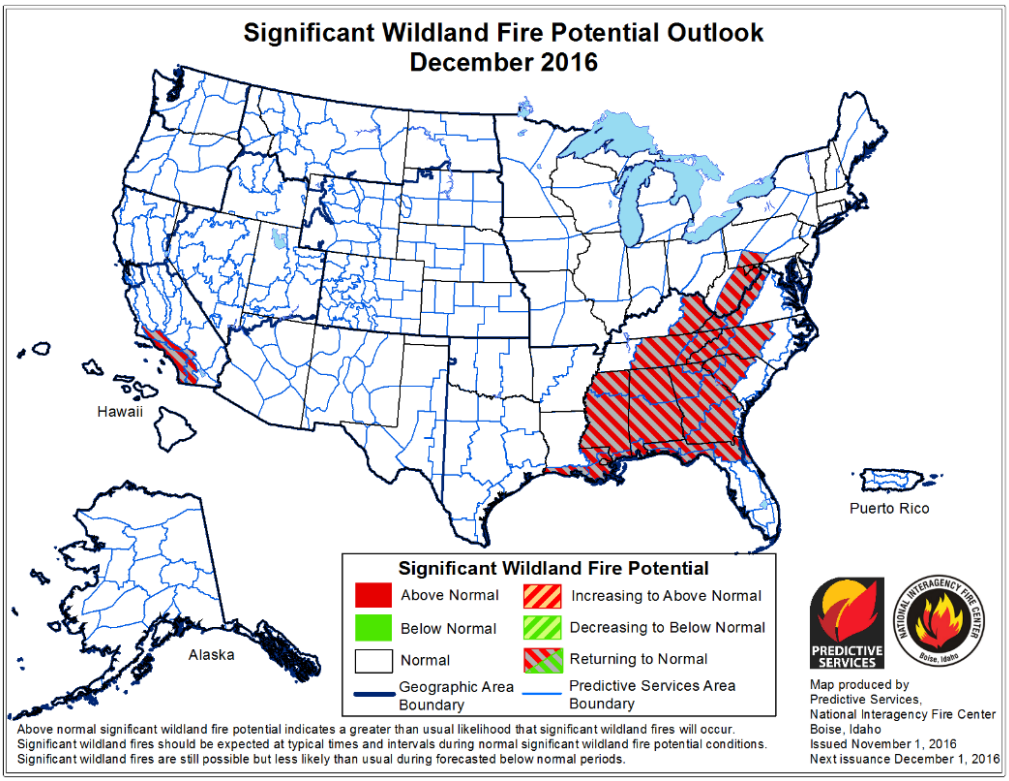
Short- and Long-Range Outlooks

Agricultural Weather Highlights

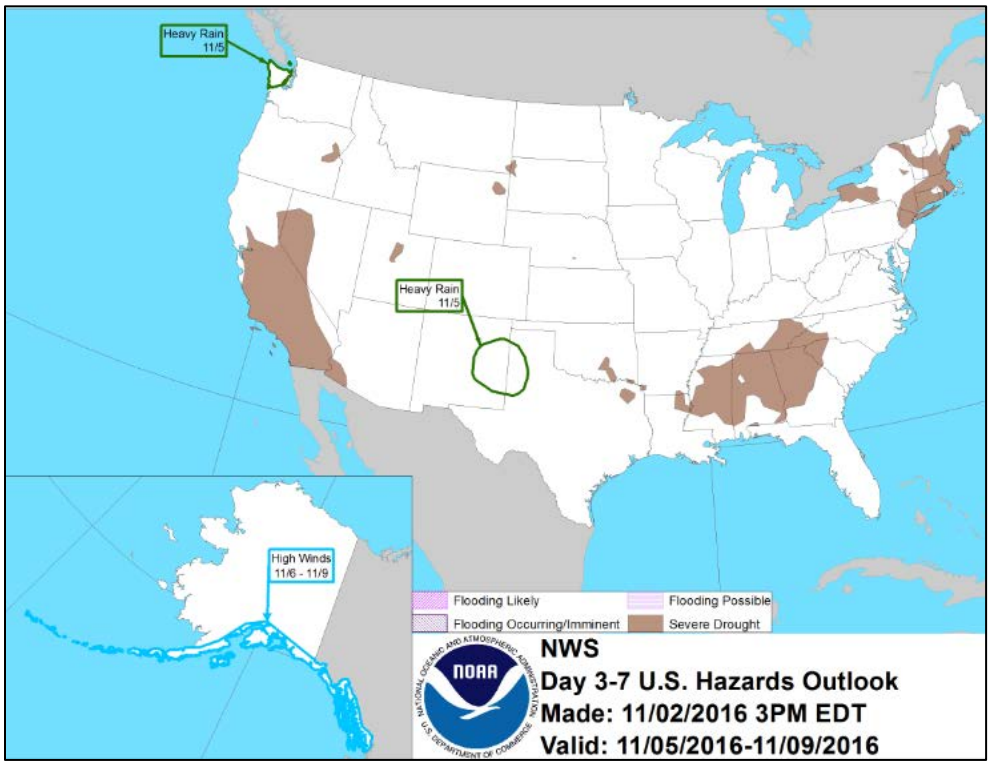
Author: Brad Rippey, Agricultural Meteorologist, USDA/OCE/WAOB

National Outlook, November 3, 2016**:** "A cold front will push eastward, clearing the Atlantic Coast (except Florida's peninsula) by Friday, but the tail of the front will stall across the Deep South. Specifically, a multi-day rain event could result in 1- to 4-inch totals from eastern Arizona to Texas, providing significant relief from short-term dryness. Most of the remainder of the U.S., except the Pacific Northwest, will receive little or no precipitation during the next 5 days. In addition, late season warmth will continue to dominate the country, except for cool conditions along the Atlantic Seaboard. In particular, record-setting warmth can be expected across the northern Plains and upper Midwest. The NWS 6- to 10-day outlook for November 8 – 12 calls for the likelihood of near- to above-normal temperatures nationwide, except for cooler-than-normal conditions in the southern Atlantic region. Meanwhile, near- to below-normal precipitation across most of the U.S. will contrast with wetter-than-normal weather in the south-central U.S."

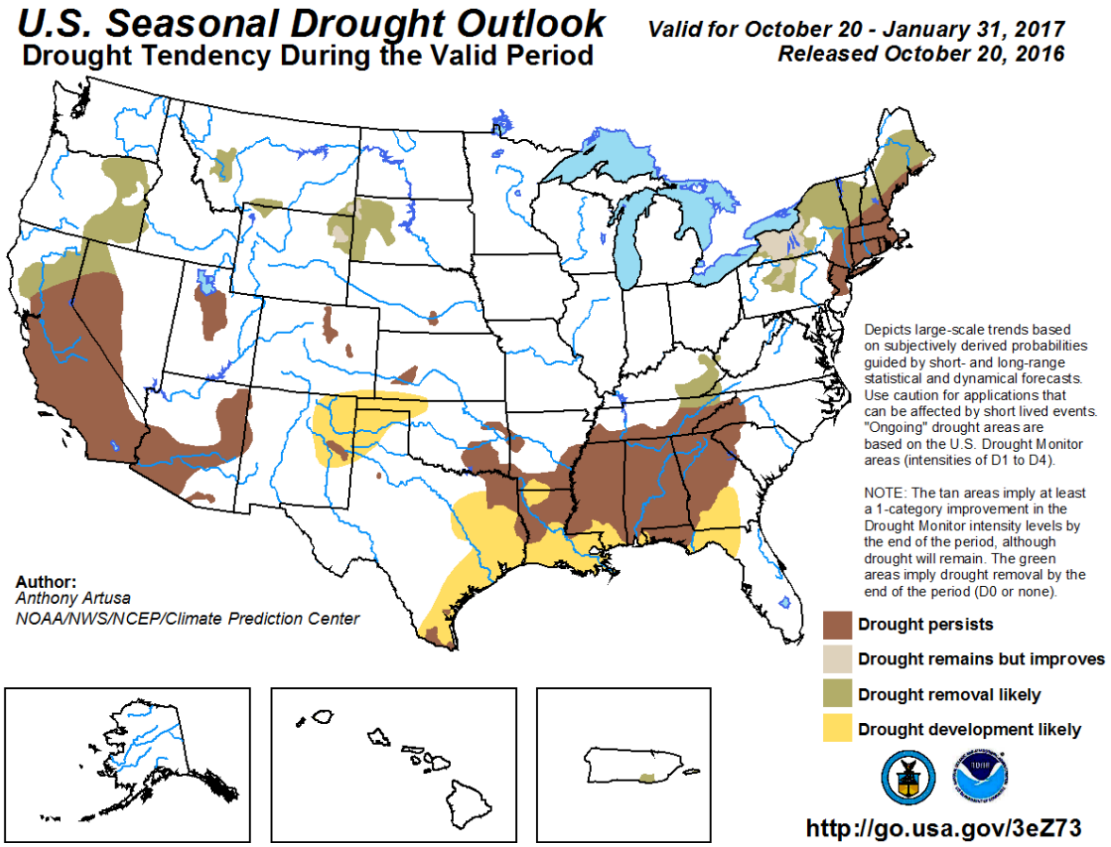
Fire Potential Outlook: December 2016



NWS Climate Prediction Center Weather Hazard Outlook: October 29–November 2, 2016

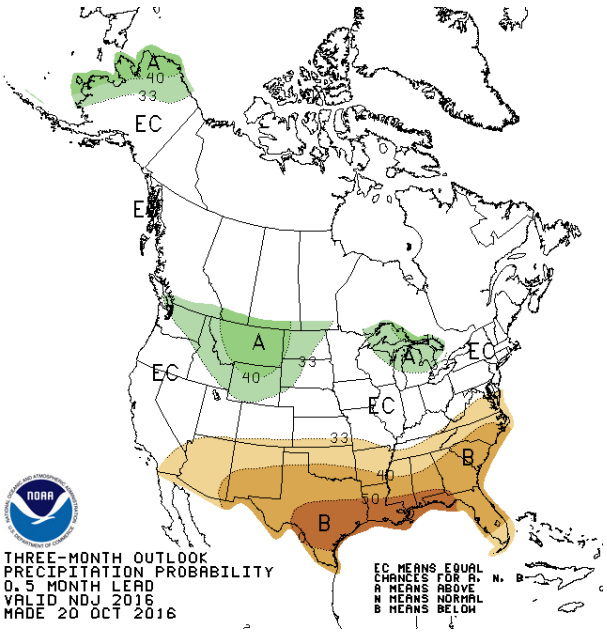


Seasonal Drought Outlook: October 20, 2016 – January 31, 2017

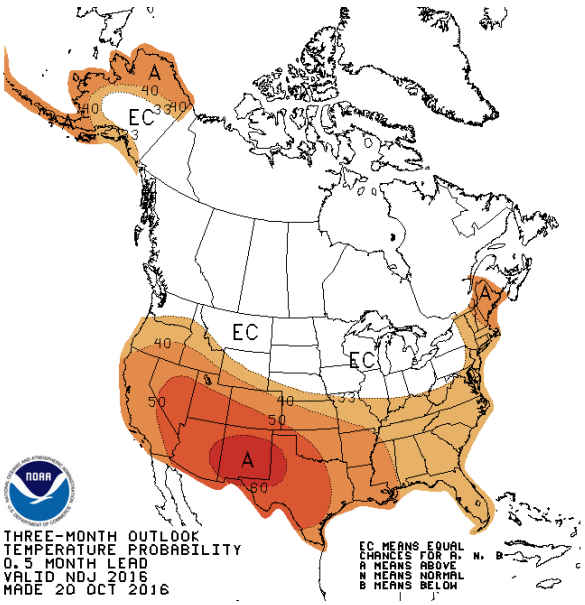


NWS Climate Prediction Center 3-Month Outlook

Precipitation



Temperature



November-December-January (NDJ) 2016/2017 precipitation outlook summary

November-December-January (NDJ) 2016/2017 temperature outlook summary

More Information

The NRCS National Water and Climate Center publishes this weekly report. We welcome your feedback. If you have questions or comments, please contact us.