United States Department of Agriculture

Water and Climate Update

October 20, 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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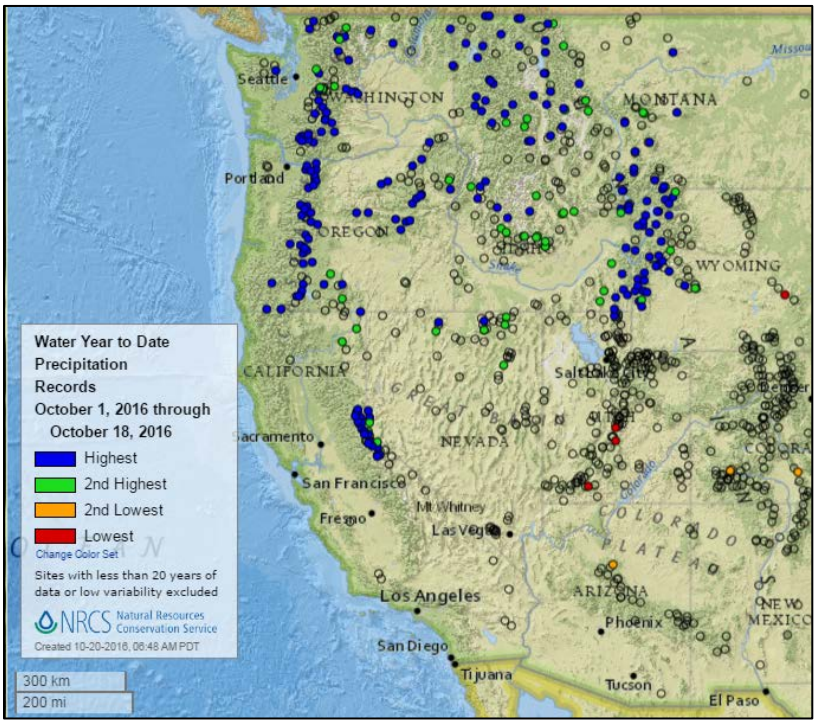
Water Year 2017 begins with record precipitation in many parts of the West

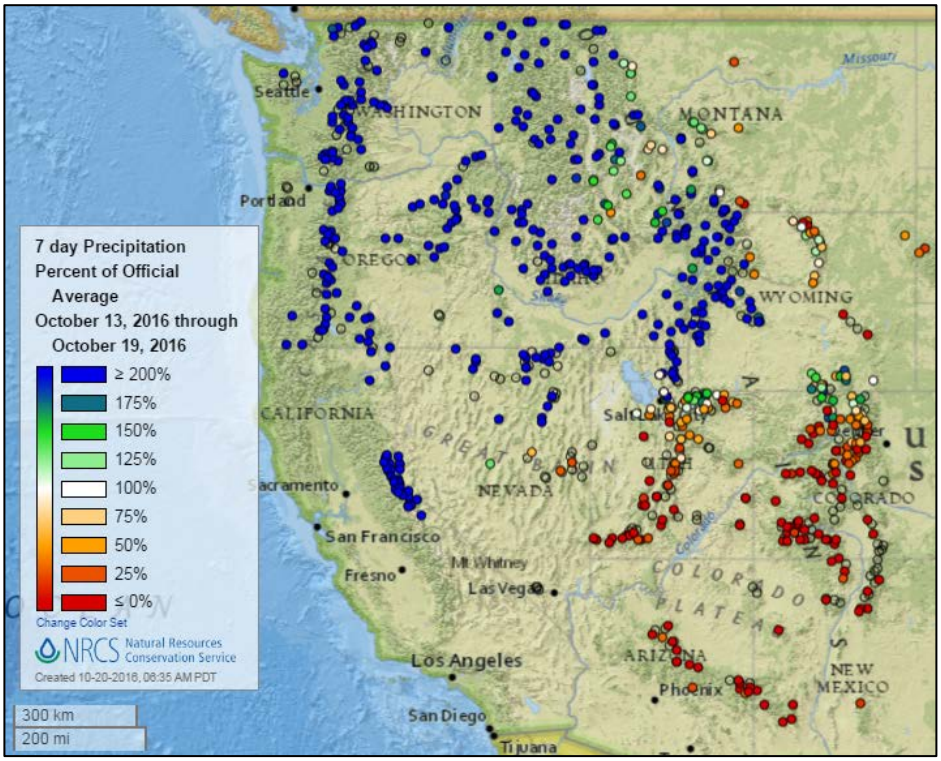


Thus far in October, heavy rains have fallen over a wide region of the West. Wind, rain, and severe storms were reported from the Sierra Nevada throughout the Cascades to Canada and spreading east into the northern Rockies of Idaho, Montana, and western Wyoming. Since October 1, precipitation at SNOTEL sites across this region showed record amounts of precipitation and the onset of high-elevation snowpack.

High winds, heavy rain hammer Pacific Northwest
Northwest Storms: Dangerous High Winds on the Way after Tornadoes Hit Region
Storm Leaves Thousands without Power in Pacific Northwest
Wet system produces flurries across the Sierra Nevada

Precipitation

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

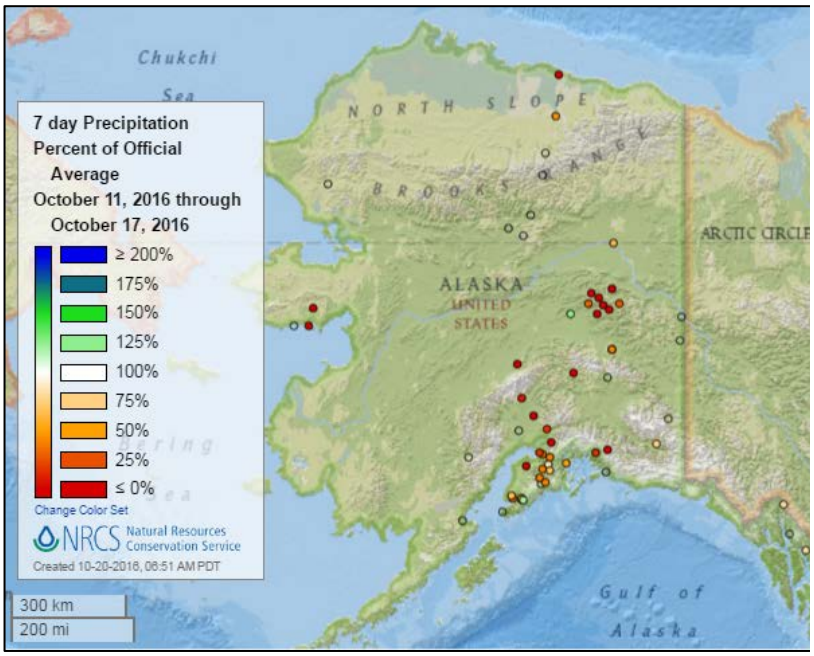


[7-day precipitation percent of average map]

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]

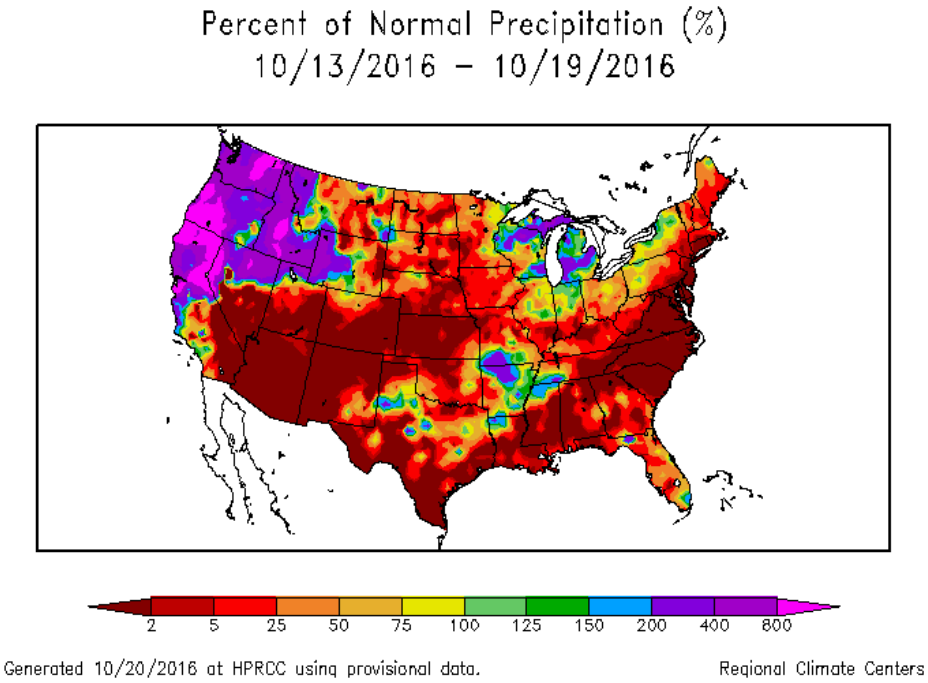


Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

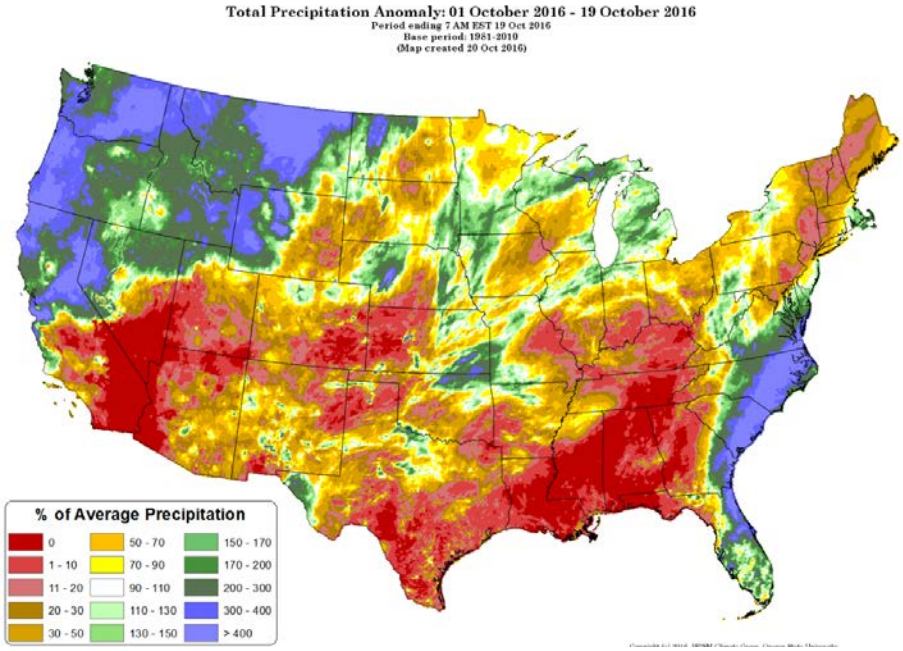
[7-day precipitation percent of normal map](#) for the continental U.S.

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



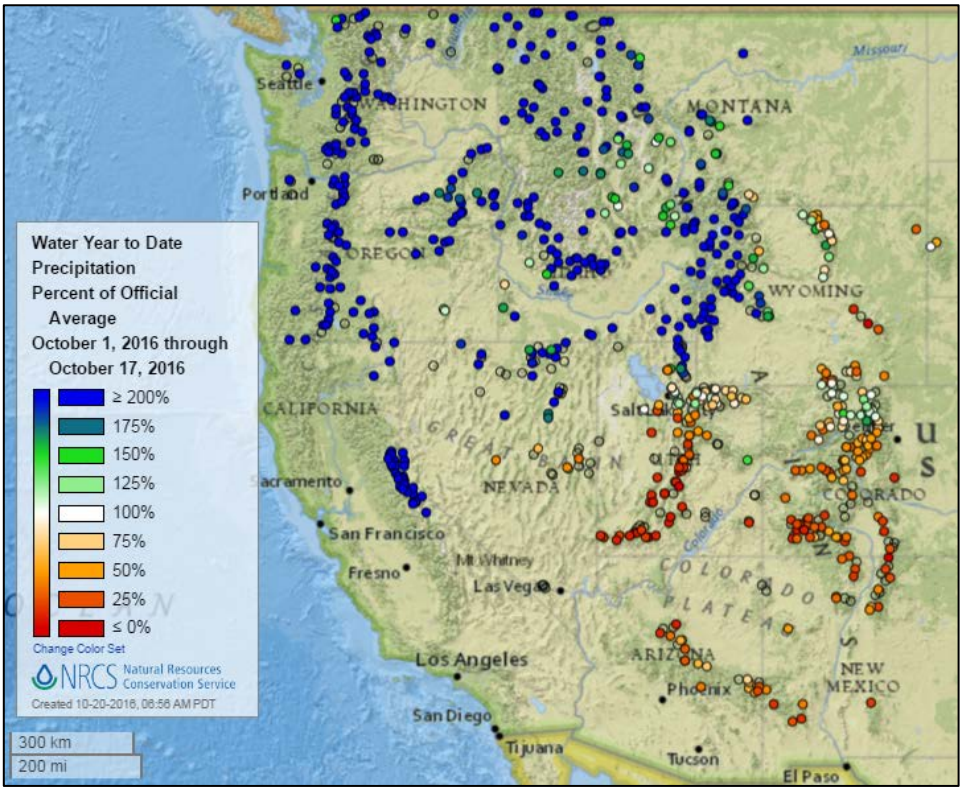
Month-to-date, All Available Data Including SNOTEL and NWS Networks

Source: PRISM



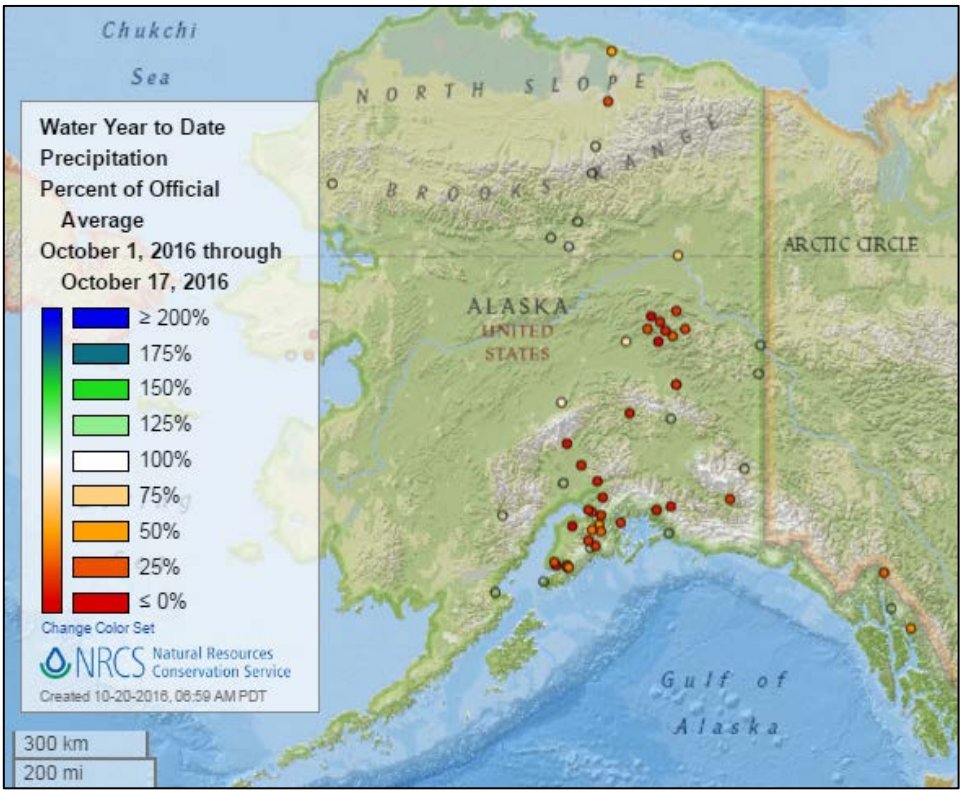
[Month-to-date national precipitation percent of average map](#)

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]

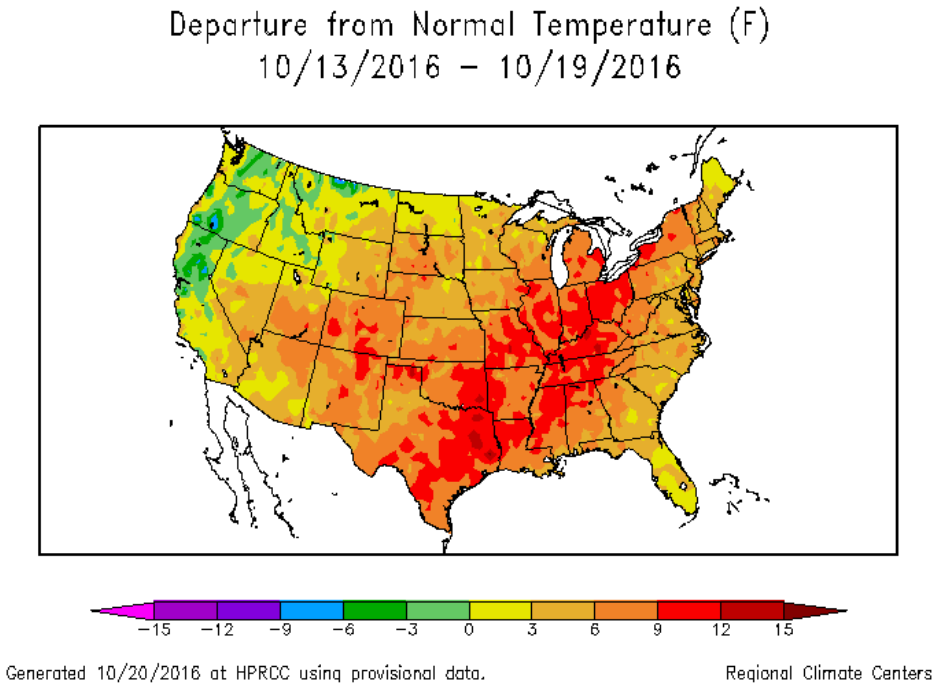
Temperature

Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

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

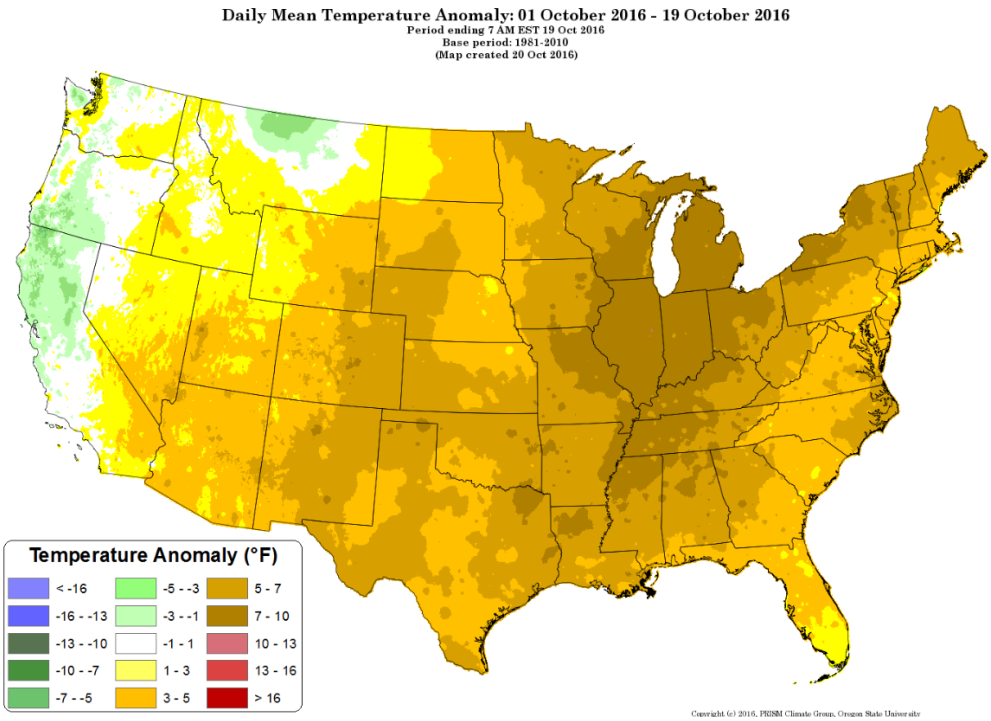
See also: [7-day temperature (° F) map]



Month-to-date, All Available Data Including SNOTEL and NWS Networks

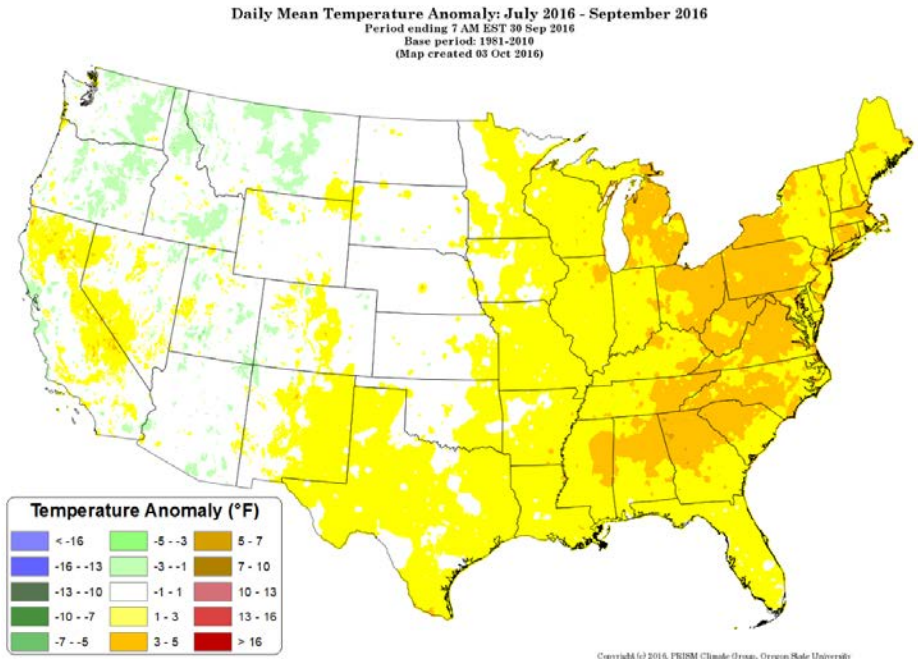
Source: PRISM

[Month-to-date national daily mean temperature anomaly map]



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

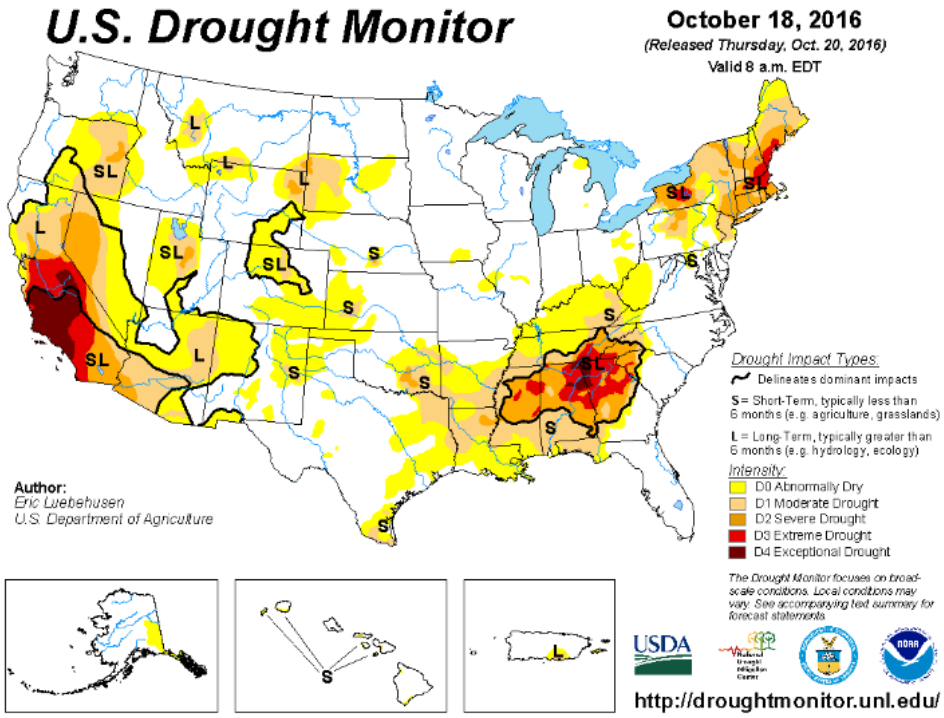
Source: PRISM



[July through September daily mean temperature anomaly map]

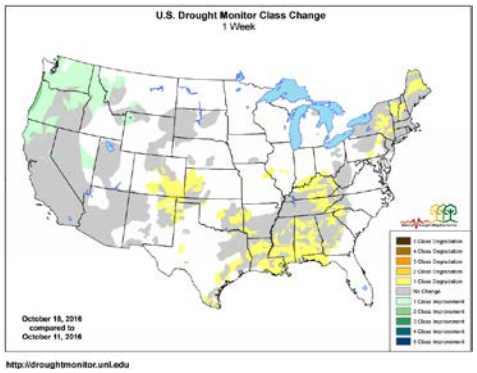
Drought

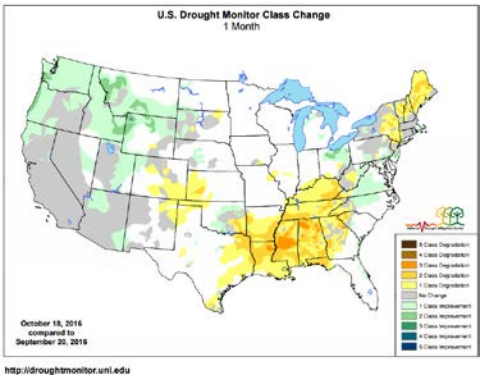
U.S. Drought Monitor See map below. U.S. Drought Portal Comprehensive drought resource.

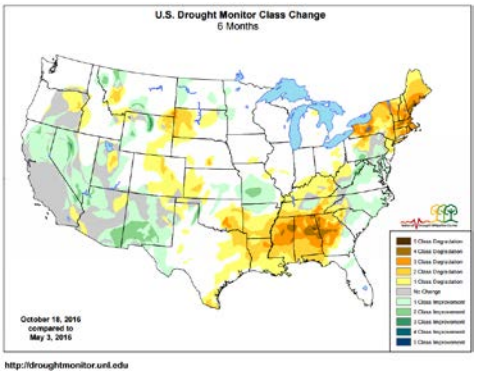


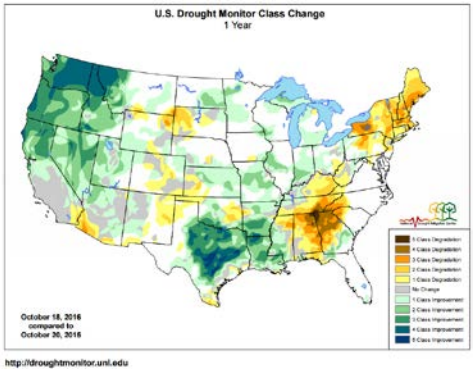
Changes in Drought Monitor Categories over Time

Click any map to enlarge









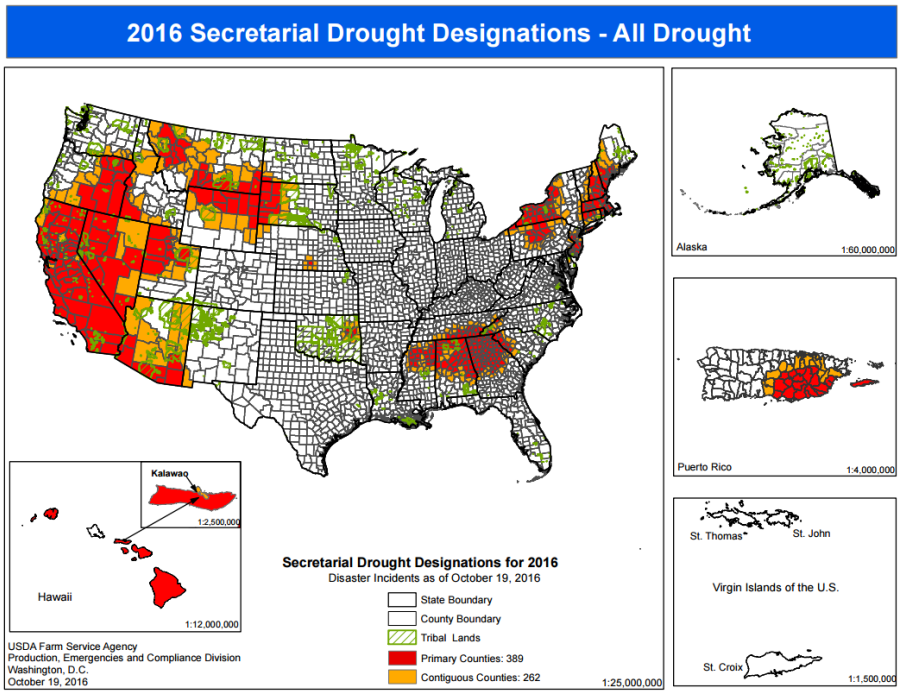
Changes in drought conditions over the last 12 months

Current National Drought Summary, October 18, 2016

Author: Eric Luebehusen, U.S. Department of Agriculture

“Dry, hot conditions across the central and southern U.S. contrasted with heavy rain and mountain snow in the northwestern quarter of the nation. As a result, drought continued to rapidly intensify from the Delta to the Southeast, with drought intensification also noted over portions of the Northeast. Conversely, large swaths of drought were reduced or eliminated from the northern Rockies into the Pacific Northwest.”

USDA 2016 Secretarial Drought Designations

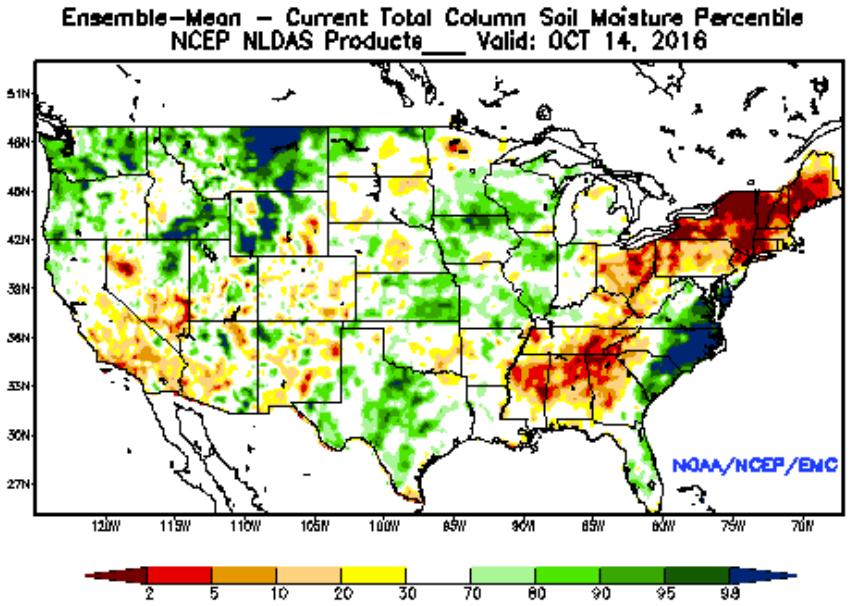


Highlighted Drought Resources

- 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

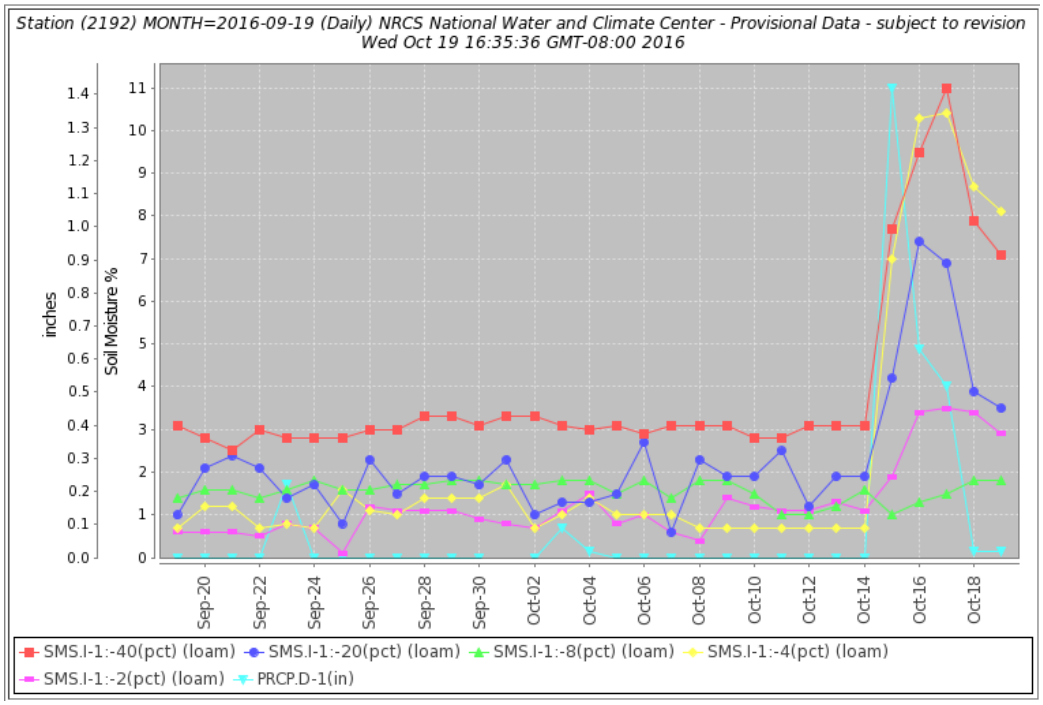
Other Climatic and Water Supply Indicators

Soil Moisture



Modeled soil moisture percentiles as of October 14, 2016.

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



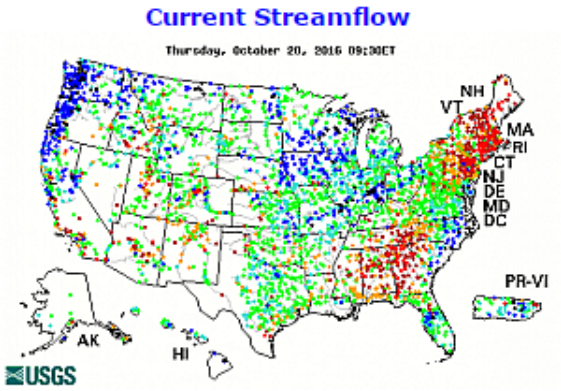
Soil moisture (at 2-, 4-, 8-, 20-, and 40-inch depths) and precipitation for the past 30 days at the Eagle Lake SCAN site 2192 in California. Recent storms from Pacific typhoon remnants provided ample precipitation from October 15-17, creating a soil moisture increase in the very dry soils at all sensor depths.

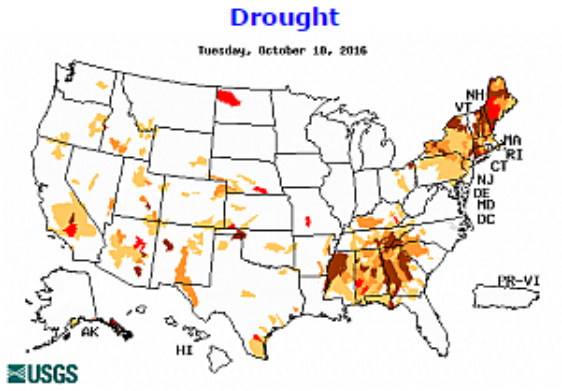
Soil Moisture Data Portals

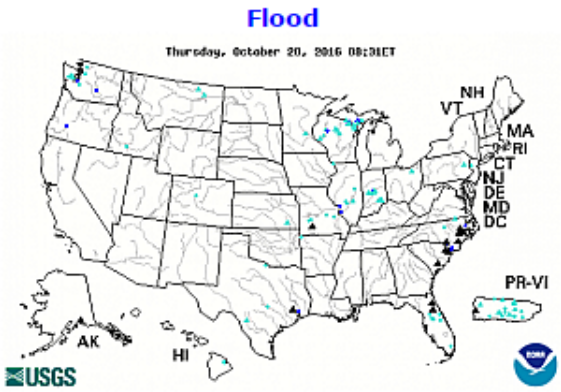
CRN Soil Moisture
Texas A&M University North American Soil Moisture Database
University of Washington Experimental Modeled Soil Moisture

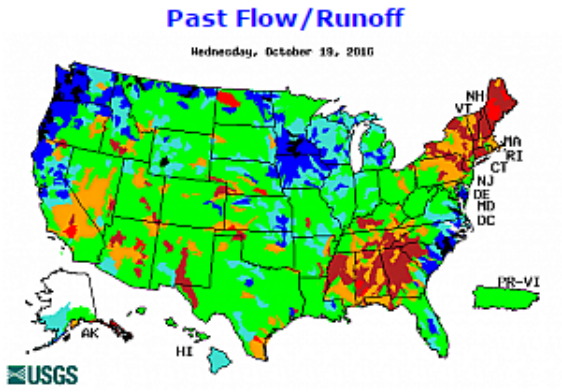
Streamflow

Source: USGS









Click to enlarge and display legends

Current streamflow maps

Current Reservoir Storage

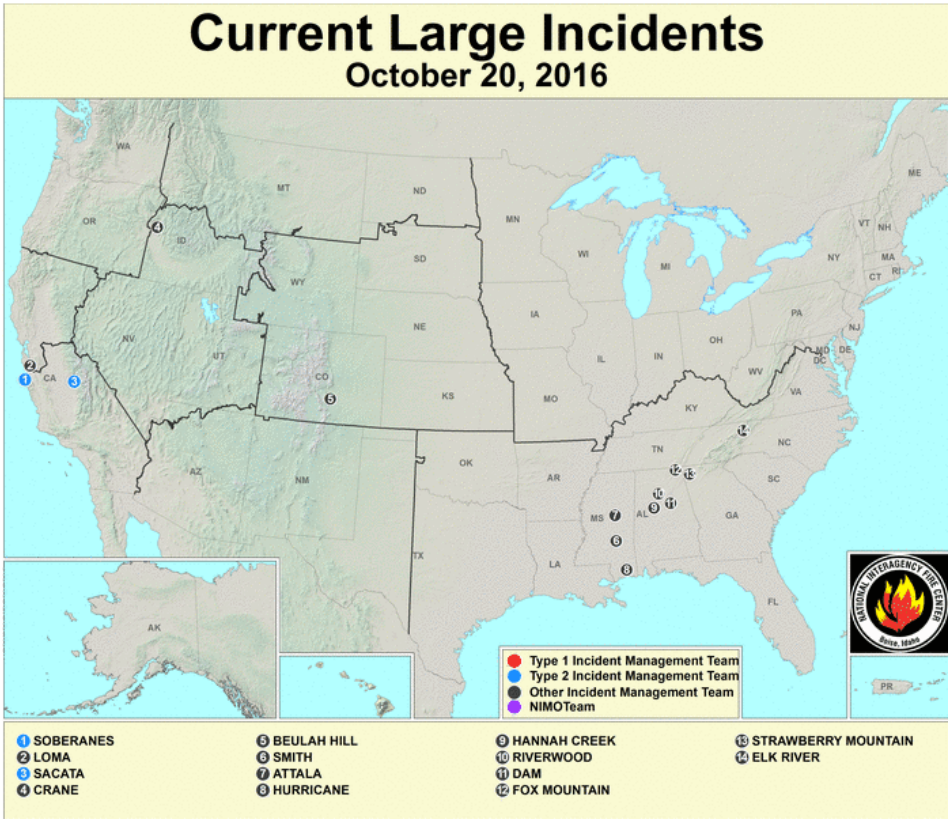
National Water and Climate Center Reservoir Data

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]



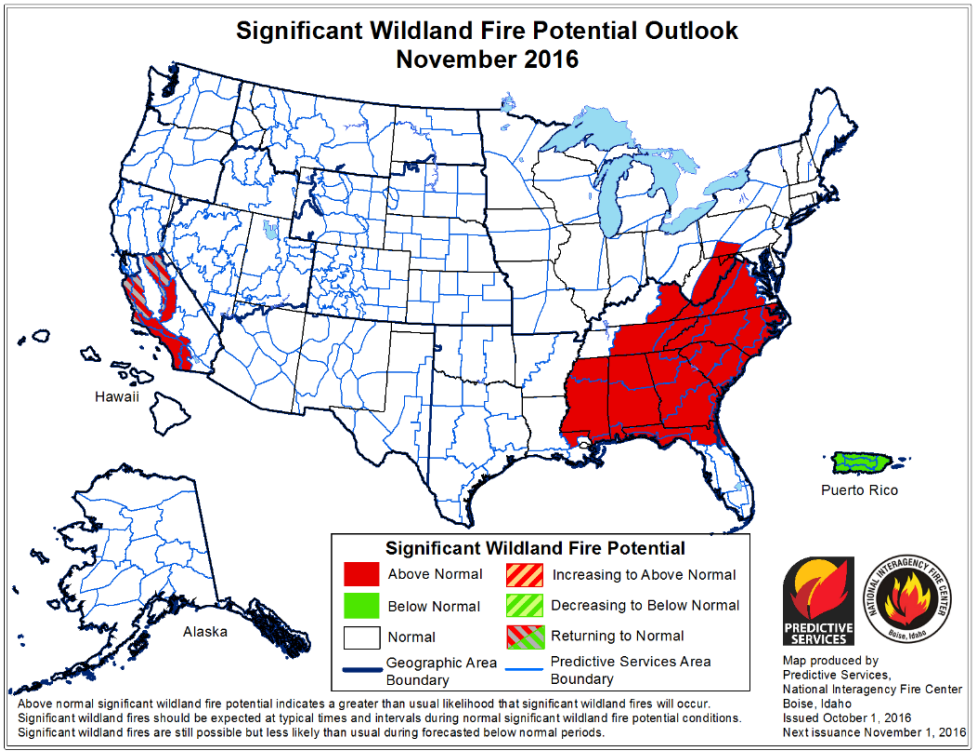
Short- and Long-Range Outlooks

Agricultural Weather Highlights

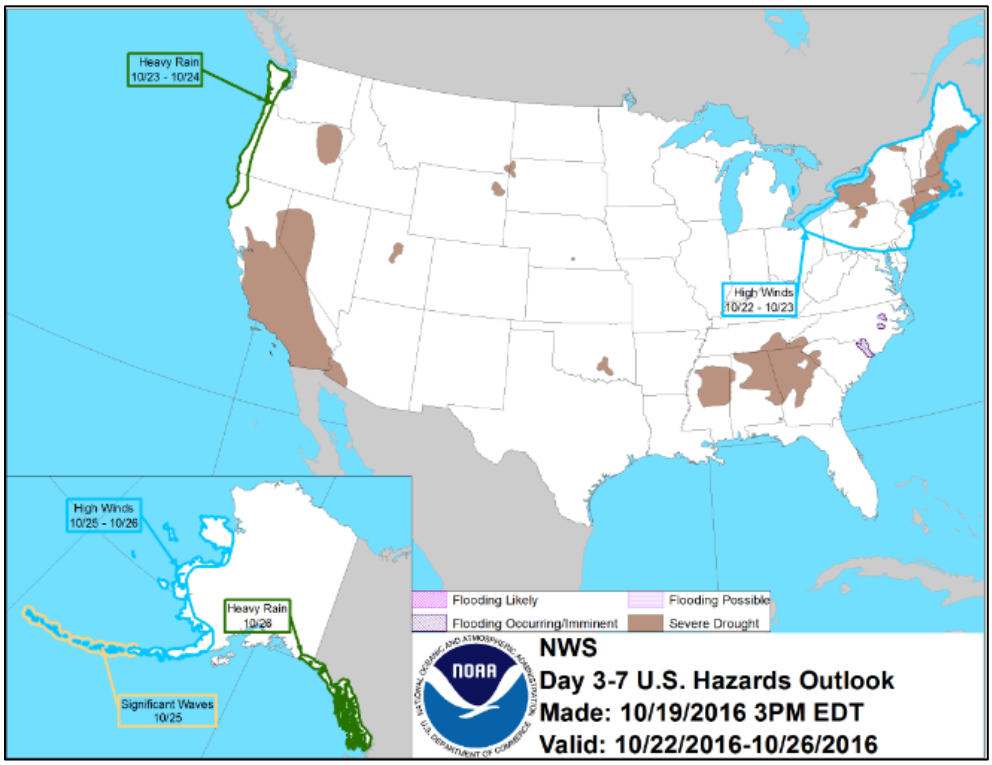
Author: Brad Rippey, Agricultural Meteorologist, USDA/OCE/WAOB

National Outlook, October 19, 2016**:** "Later today, showers and thunderstorms should develop in the vicinity of a cold front from the Ohio Valley to the southeastern Plains. Locally heavy rain will shift into the lower Great Lakes region on Thursday and the Northeast on Friday. Storm-total rainfall could reach 1 to 2 inches in the Ohio Valley and 2 to 5 inches in the Northeast—especially near the Canadian border. Meanwhile, mild but showery weather will prevail in the Pacific Northwest, where 5-day totals could reach 2 to 5 inches. Most of the remainder of the country will remain dry, with cool air arriving in the East and warmth returning across much of the western and central U.S. by week's end. The NWS 6- to 10-day outlook for October 24 - 28 calls for the likelihood of near- to above-normal temperatures nationwide, except for cooler-than-normal conditions in northern California and the Northeast. Meanwhile, below normal precipitation from the southern Plains into the eastern U.S. will contrast with wetter-than-normal weather in the western and north-central U.S."

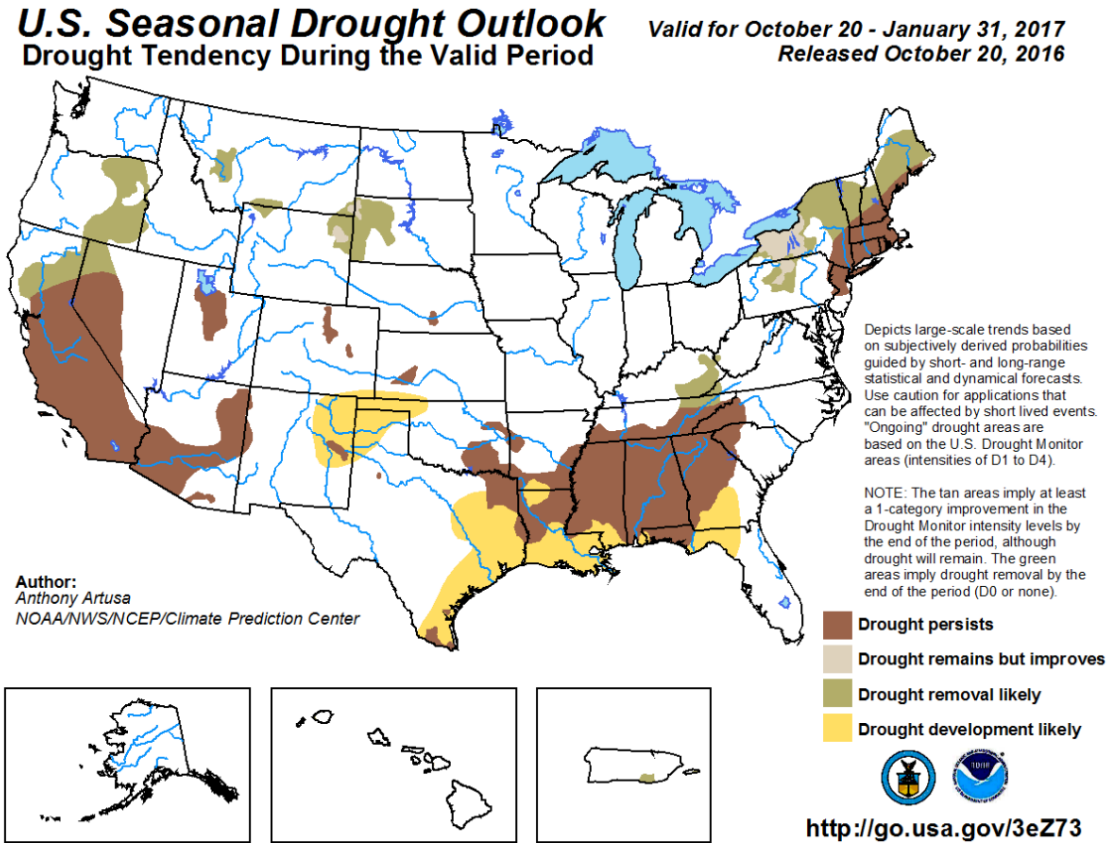
Fire Potential Outlook: November 2016



NWS Climate Prediction Center Weather Hazard Outlook: October 22-26, 2016

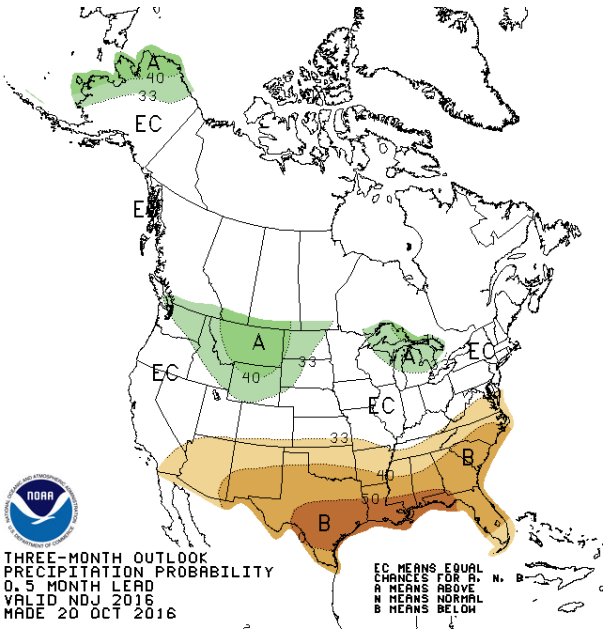


Seasonal Drought Outlook: October 20, 2016 – January 31, 2017

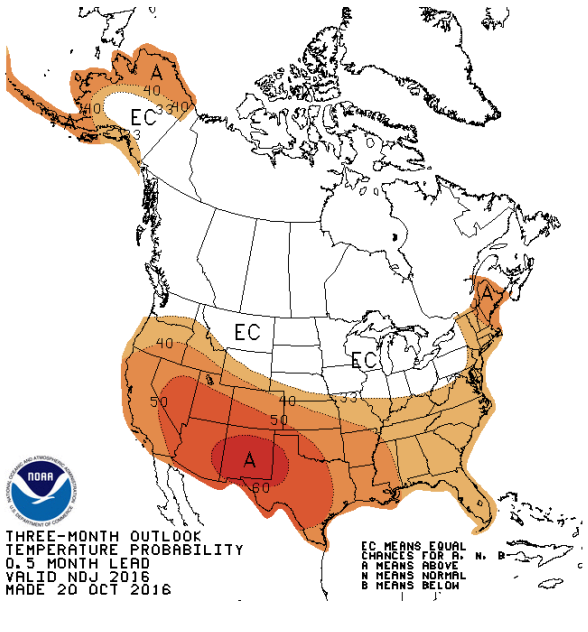


NWS Climate Prediction Center 3-Month Outlook

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.