United States Department of Agriculture

Water and Climate Update

October 6, 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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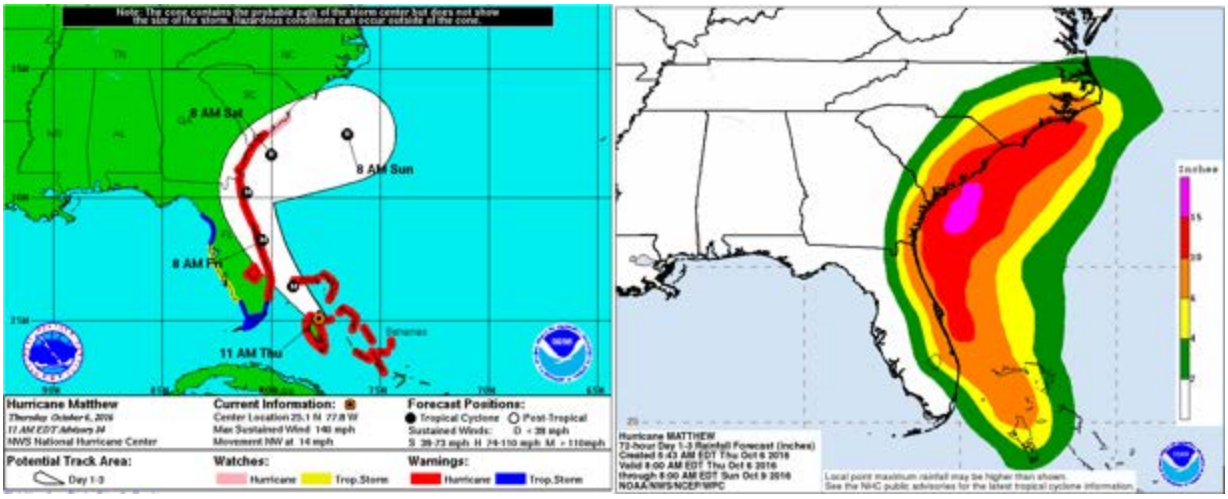
Hurricane Matthew set to make landfall in Florida



The southeast U.S. is bracing for Hurricane Matthew's landfall on the Mainland later today. The NOAA National Hurricane Center has posted hurricane warnings for the east coast of Florida, Georgia, and South Carolina. The latest analysis is that the hurricane has strengthened to a Category 4 storm, with maximum sustained winds near 140 mph. Current predictions of precipitation are greater than 6 inches to nearly 15 inches from today through Sunday for the entire coast affected by the hurricane. People in the immediate area are encouraged to turn to state and local officials for more information.

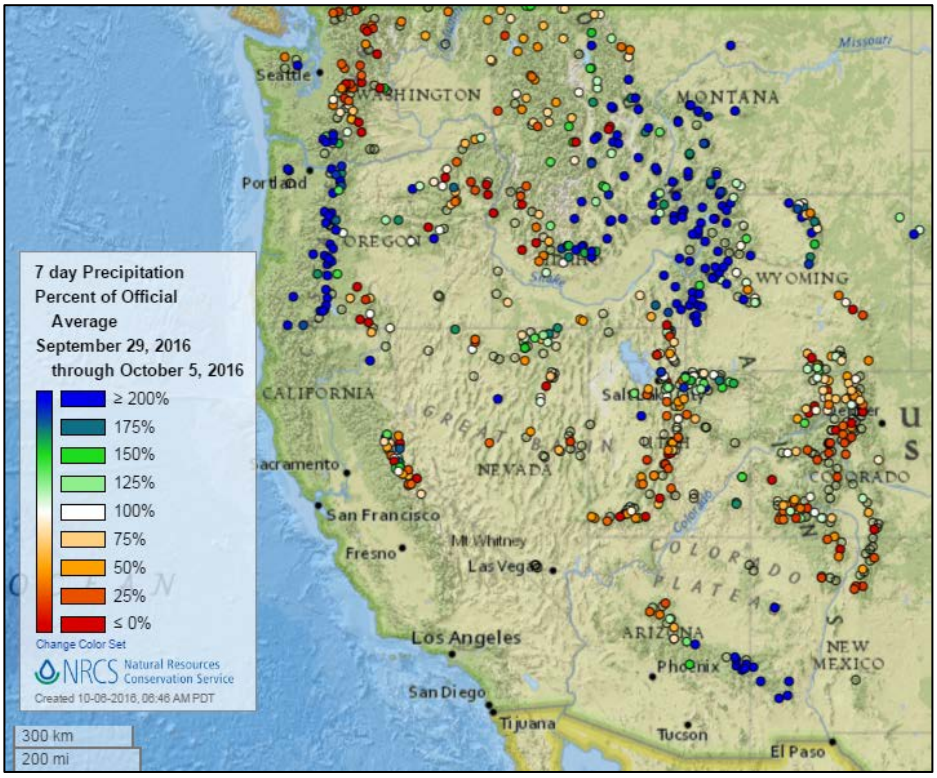
NOAA National Hurricane Center Updates

USDA Prepares for Hurricane Matthew

'This storm will kill you': Hurricane Matthew intensifies to Category 4 as it approaches Florida

Precipitation

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

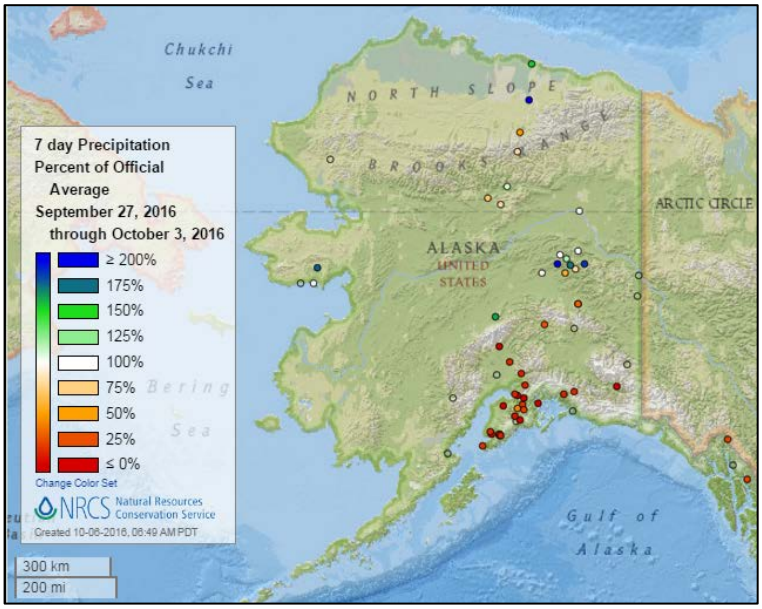


[7-day precipitation percent of average map]

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]

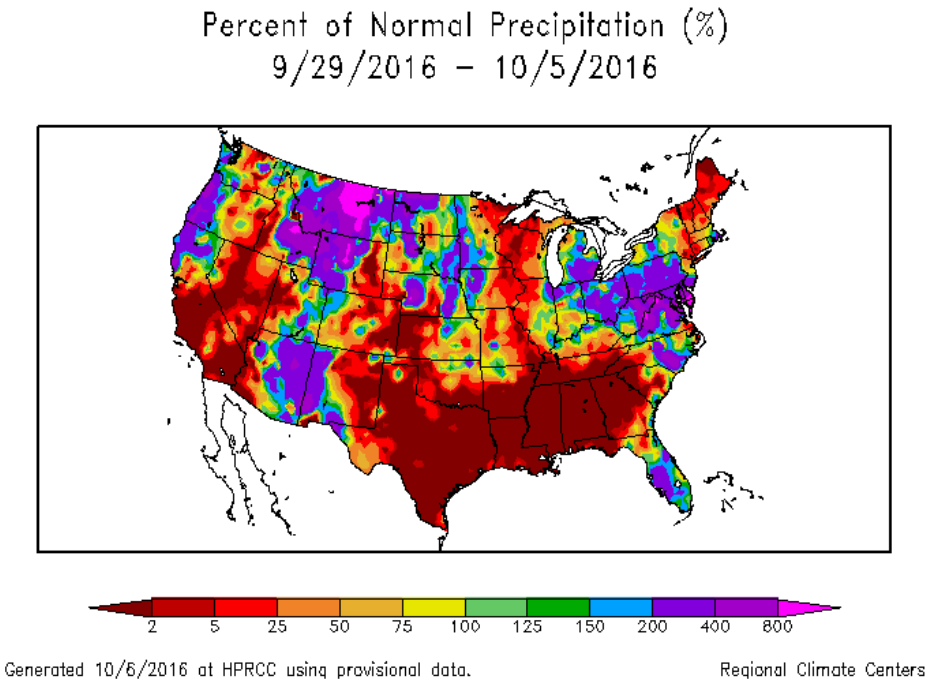


Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

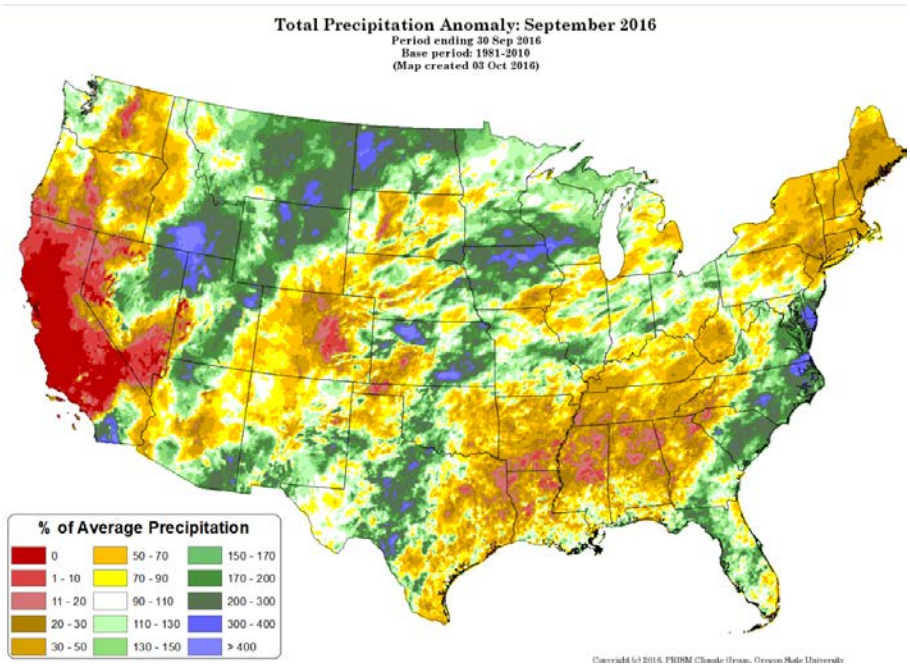
[7-day precipitation percent of normal map](#) for the continental U.S.

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



Previous Month, All Available Data Including SNOTEL and NWS Networks

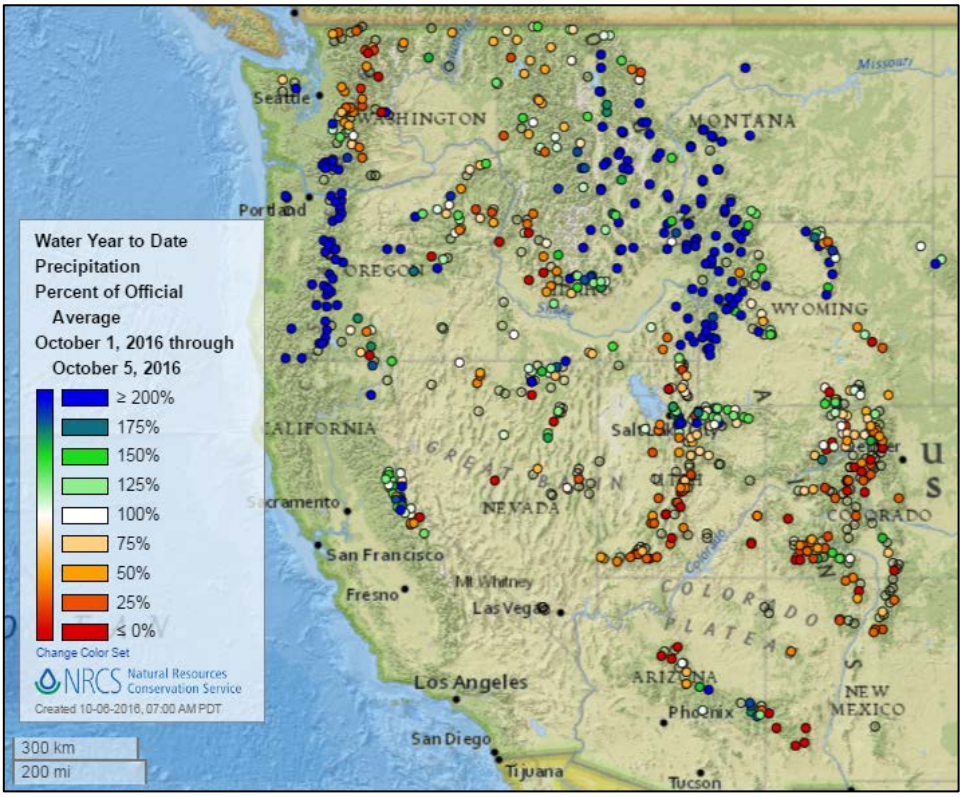
Source: PRISM



[Previous month national precipitation percent of average map](#)

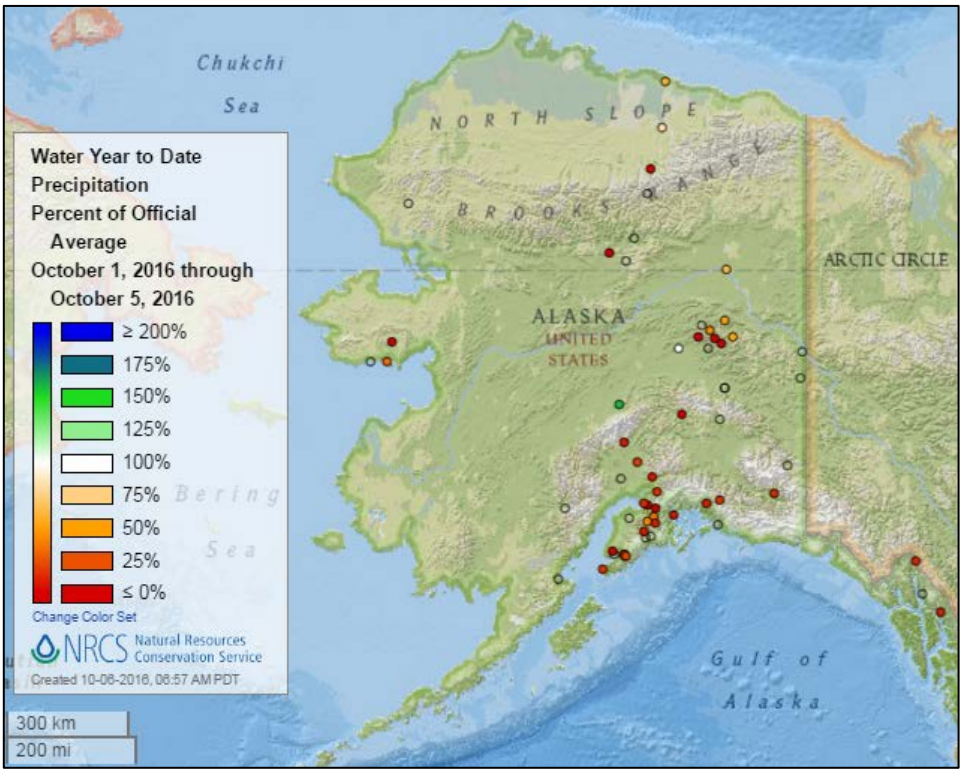
See also: [Previous month national total precipitation values (inches) map](#)

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 2016 water year-to-date precipitation percent of average map]

See also: [Alaska 2016 water year-to-date precipitation values (inches) map]

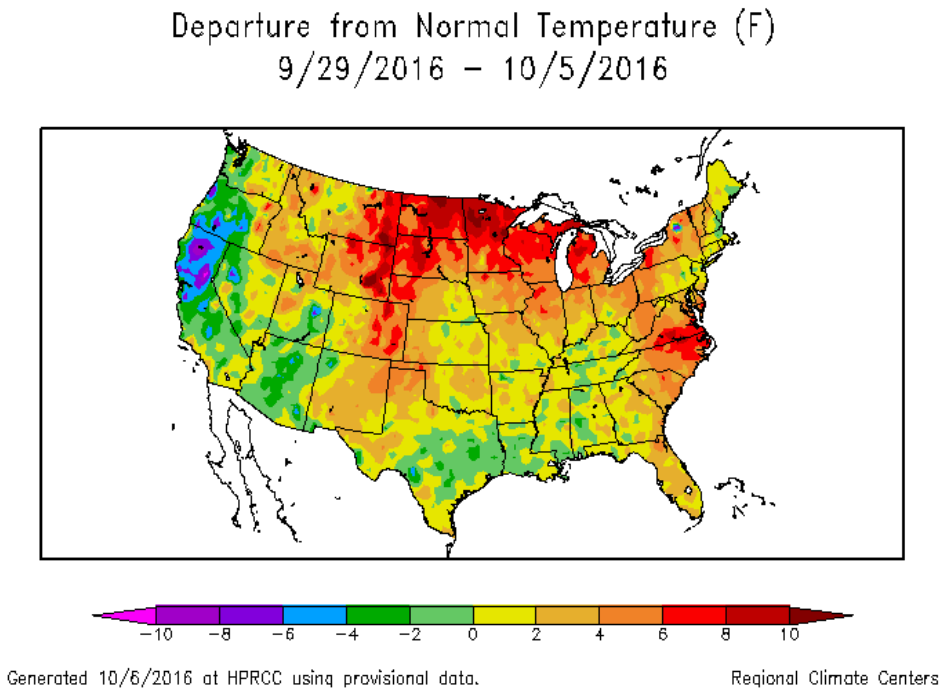
Temperature

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](#)

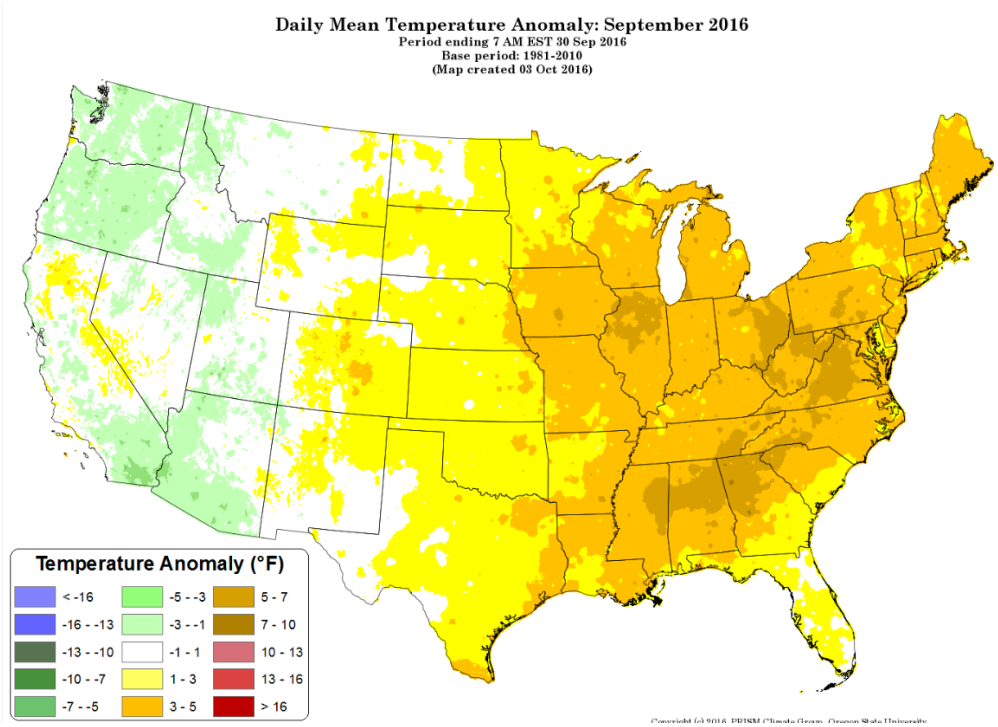


Previous Month, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

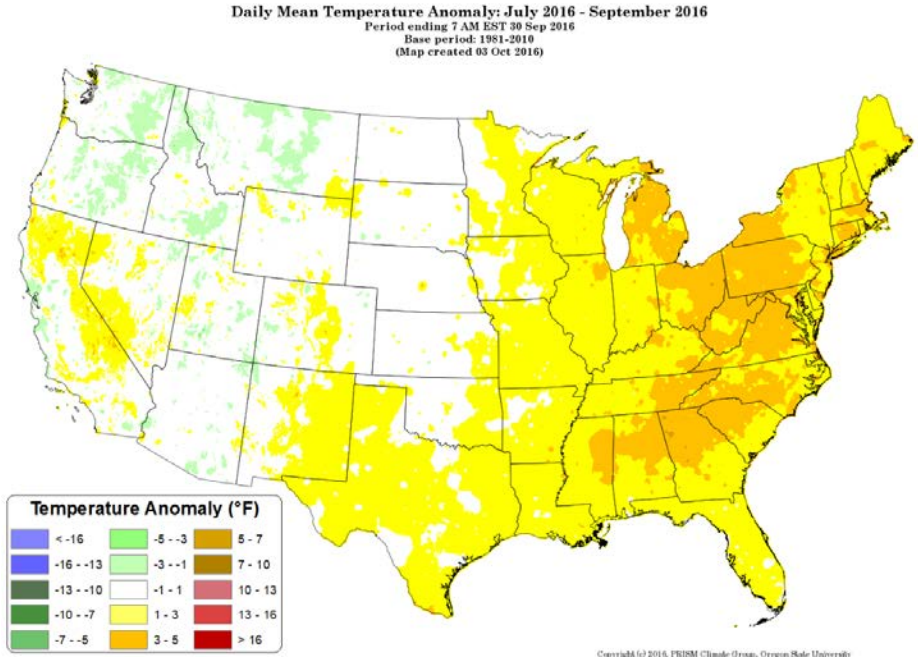
[Previous month national daily mean temperature anomaly map](#)

See also: [Previous month national daily mean temperature (° F) map](#)



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

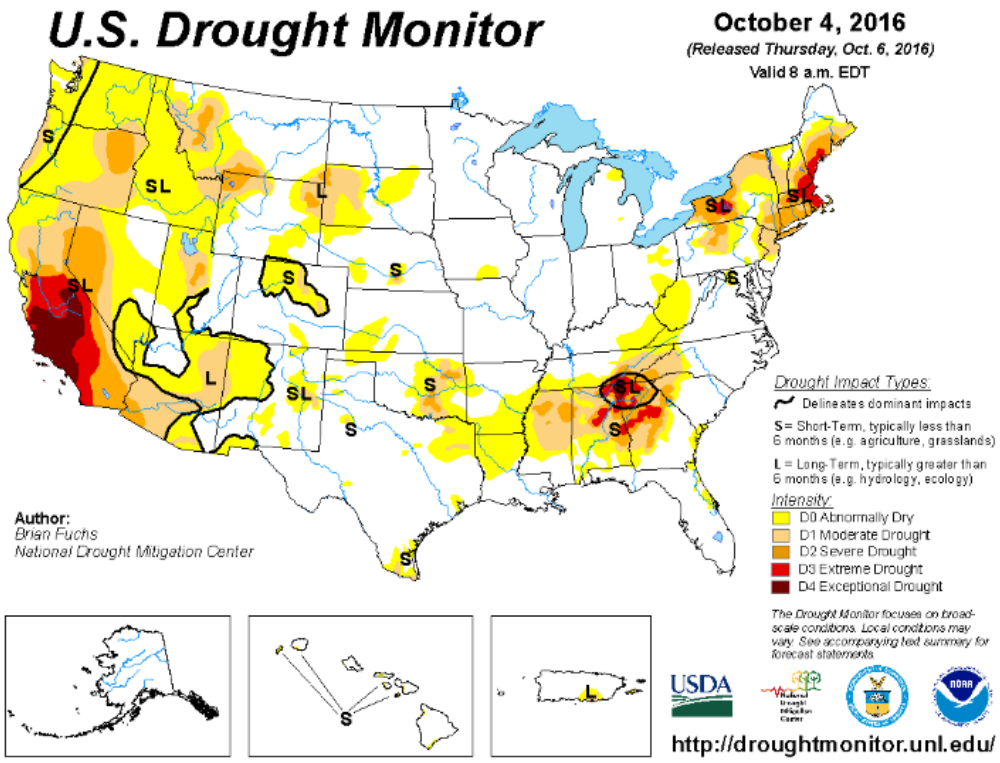
Source: PRISM



[July through September daily mean temperature anomaly map]

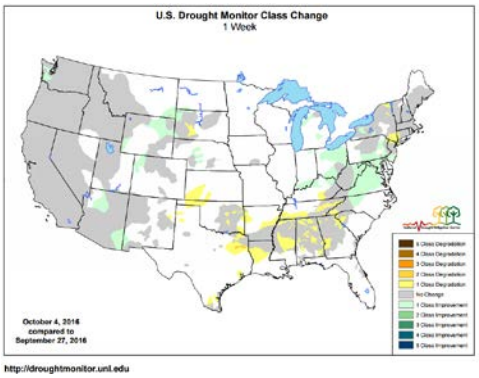
Drought

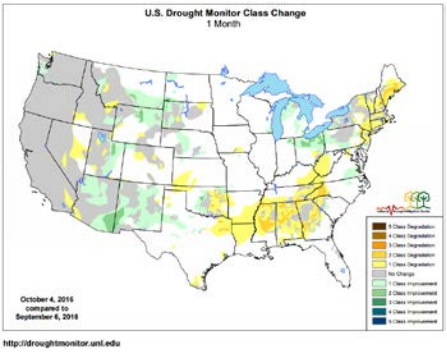
U.S. Drought Monitor See map below. U.S. Drought Portal Comprehensive drought resource.

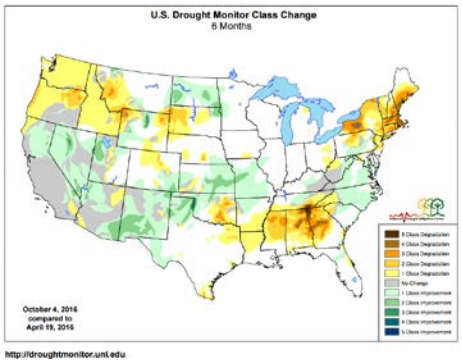


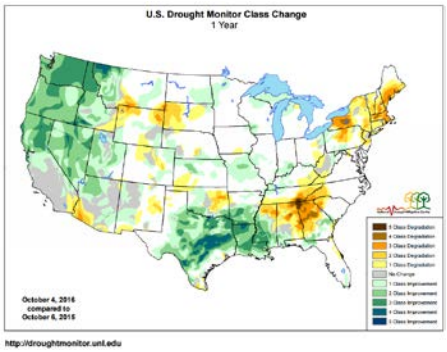
Changes in Drought Monitor Categories over Time

Click any map to enlarge









Changes in drought conditions over the last 12 months

Current National Drought Summary, October 4, 2016

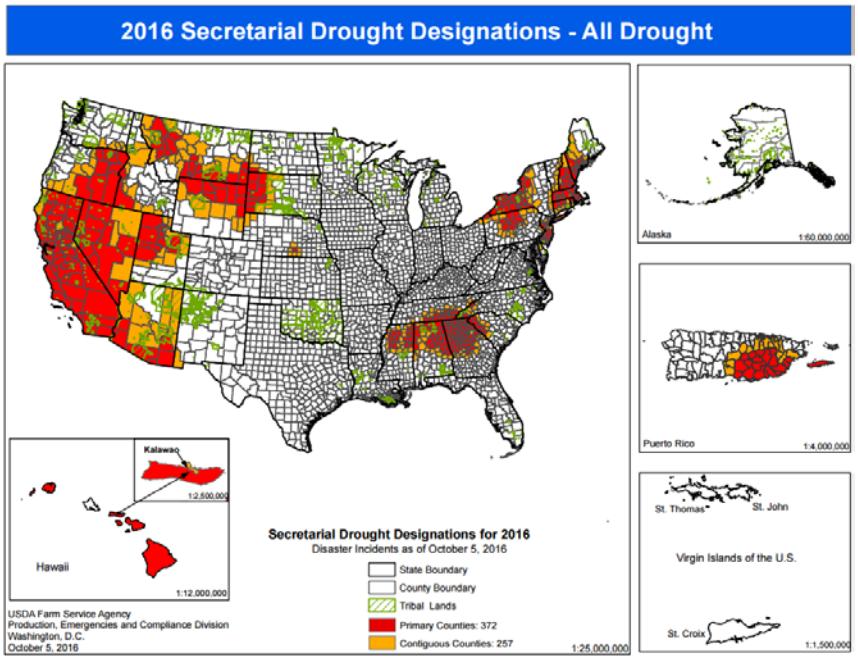
Author: Brian Fuchs, National Drought Mitigation Center

"The current U.S. Drought Monitor period was dry through much of the Midwest and Plains states. Dryness also dominated much of Idaho, the interior regions of Washington and Oregon, much of California and Nevada, and the Southeast. A slow-moving system brought with it soaking rains from eastern Illinois into the Mid-Atlantic. Some areas of the Mid-Atlantic into Virginia and North Carolina recorded over 5 inches of rain with this event. The soils were primed to soak in the moisture and little runoff was observed, as short-term dryness had dominated this area. Eastern Idaho, northwest Wyoming, and central Montana all had good rains this week as well as some of central and eastern Arizona, into western New Mexico. Temperatures were cooler than normal over the coastal regions of the Pacific Northwest and into northern California as well as Arizona where the wet conditions were observed. Much of Texas and Louisiana were cooler than normal; below-normal temperatures also extended up the Mississippi River Valley into portions of Kentucky and Tennessee. Warmer than normal temperatures dominated much of the Rocky Mountains, Central and Northern Plains, Upper Midwest, and East Coast. Some departures in eastern Montana were 6-8 degrees above normal."

News: Svoboda named National Drought Mitigation Center Director

Mark Svoboda, climatologist and internationally known expert on drought monitoring and early warning, is the new director of the National Drought Mitigation Center (NDMC), University of Nebraska officials announced Oct. 4. Svoboda was one of the center's original employees at its founding in 1995. The NDMC is based at University of Nebraska Lincoln's School of Natural Resources. Full press release

USDA 2016 Secretarial Drought Designations

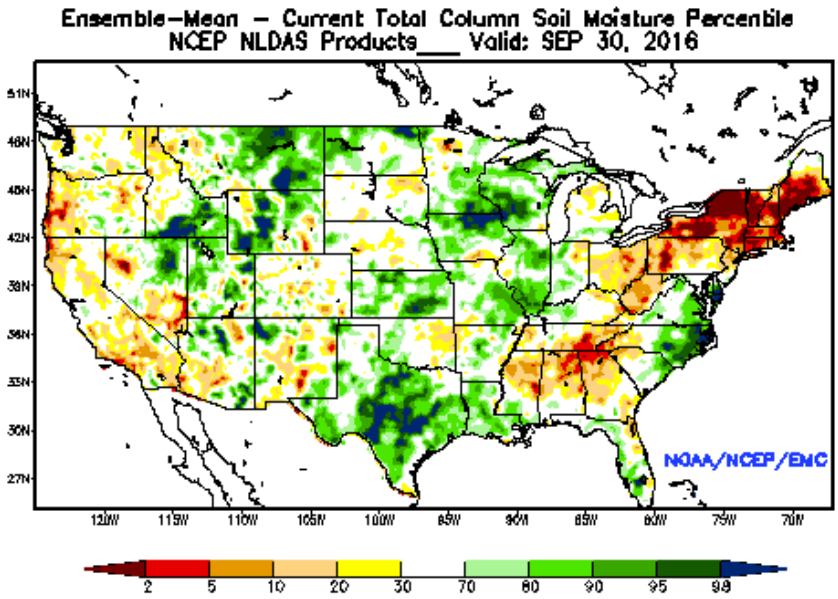


Highlighted Drought Resources

- 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

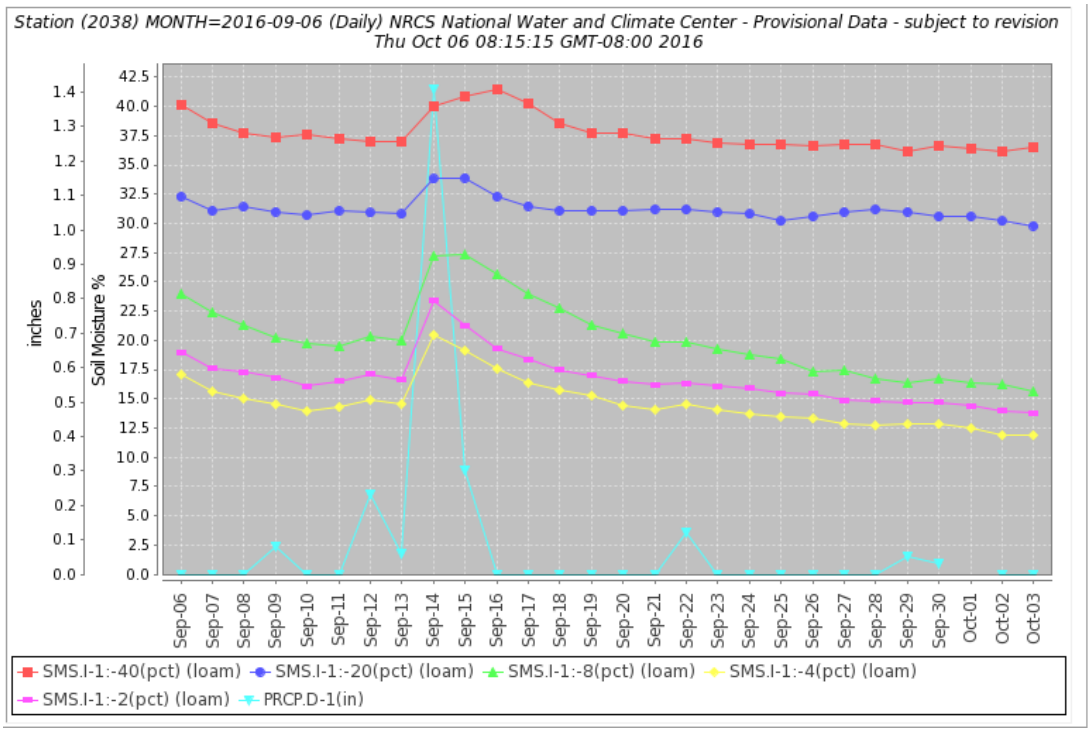
Other Climatic and Water Supply Indicators

Soil Moisture



Modeled soil moisture percentiles as of September 30, 2016.

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



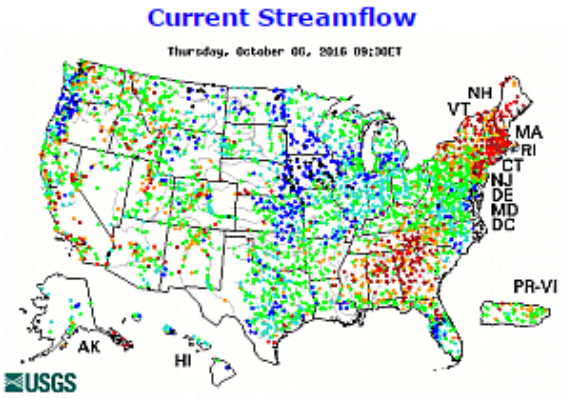
Soil moisture (at 2-, 4-, 8-, 20-, and 40-inch depths) and precipitation for the past 30 days at the Youmans Farm SCAN site 2038 in South Carolina. The large precipitation event from September 12-15 increased soil moisture at all sensor depths. The recent, smaller events have only been noticeable at the shallow 2-, 4-, and 8-inch depth sensors.

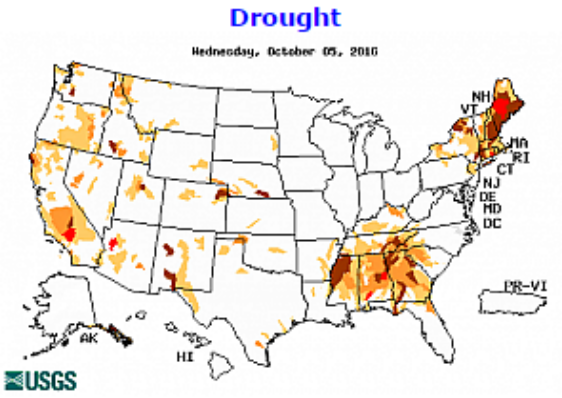
Soil Moisture Data Portals

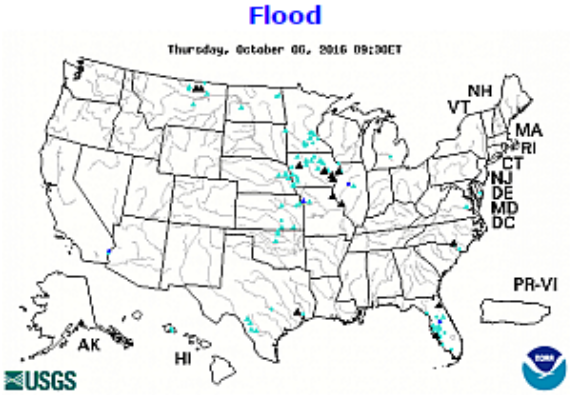
CRN Soil Moisture
Texas A&M University North American Soil Moisture Database
University of Washington Experimental Modeled Soil Moisture

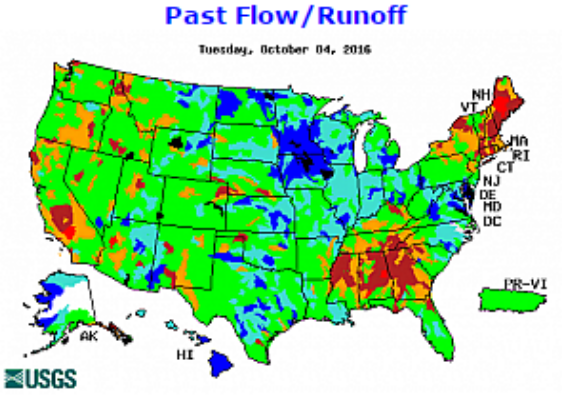
Streamflow

Source: USGS









Click to enlarge and display legends

Current streamflow maps

Current Reservoir Storage

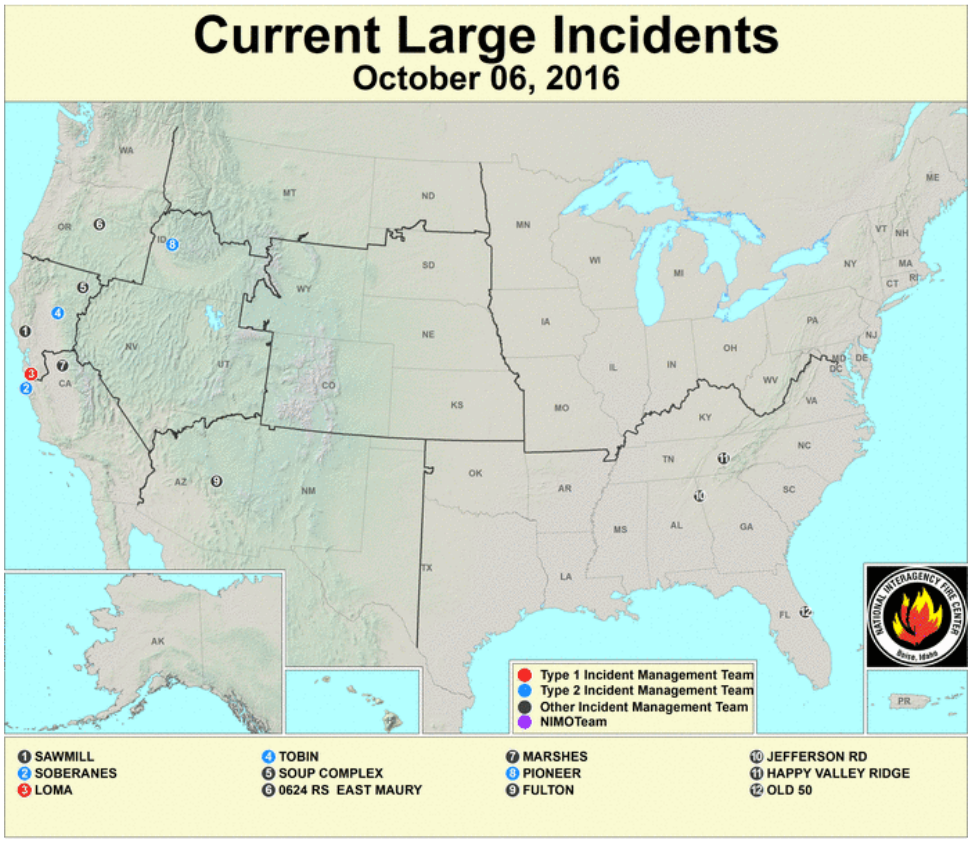
National Water and Climate Center Reservoir Data

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]



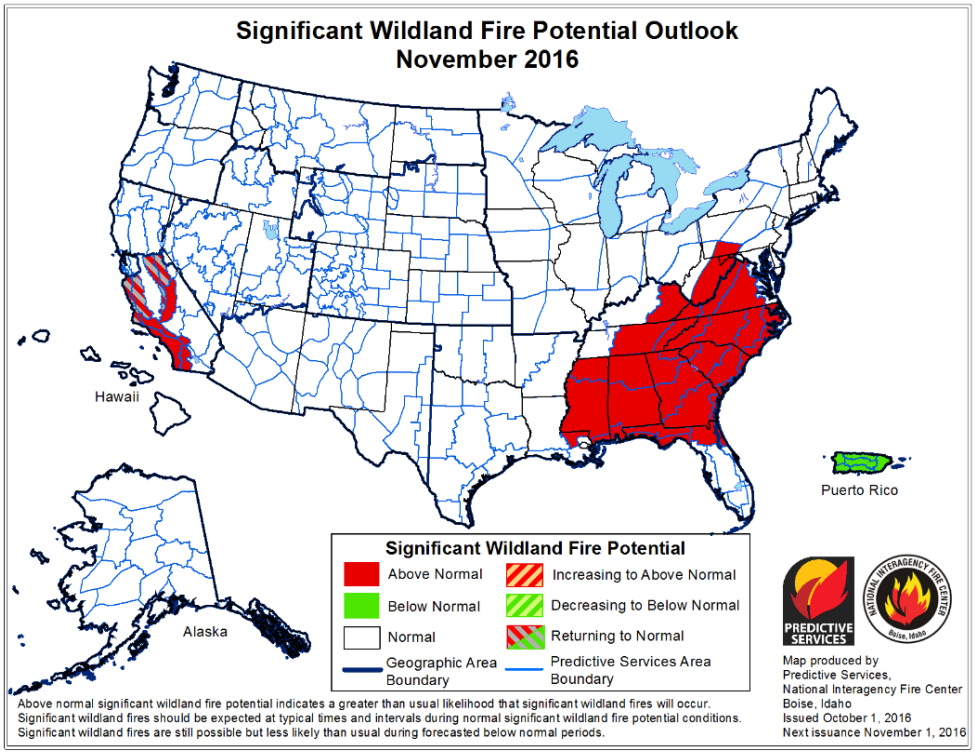
Short- and Long-Range Outlooks

Agricultural Weather Highlights

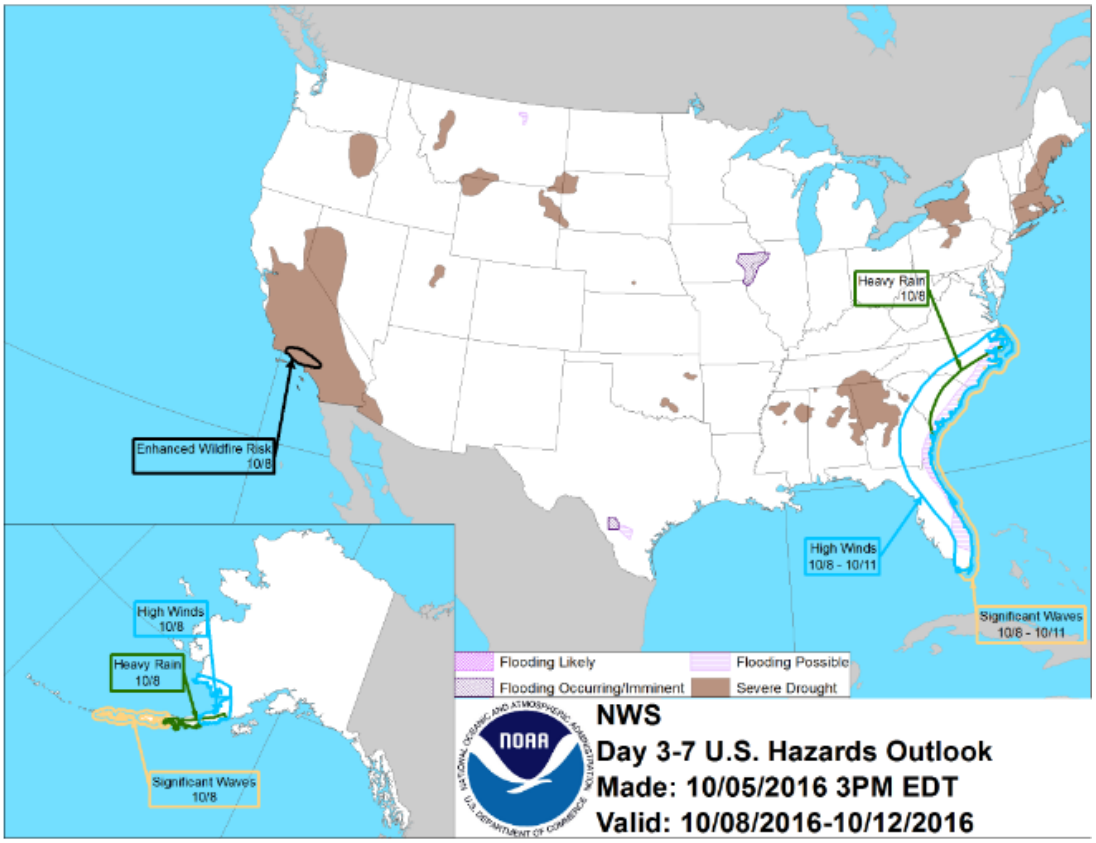
Author: Eric Luebehusen, Agricultural Meteorologist, USDA/OCE/WAOB

National Outlook, October 6, 2016**:** "Intense Hurricane Matthew, currently located southeast of Florida over the western Bahamas, is expected to track north and then northeast along or near the Southeastern Coast, producing heavy rain, strong winds, and a dangerous storm surge from Florida's Atlantic Coast to the Outer Banks. Unfortunately, rain from this system will remain east of the interior Southeast's core drought areas. A stationary frontal boundary will generate heavy showers and thunderstorms over the nation's mid-section before moving toward the Atlantic Coast over the weekend as a cold front; this front will push Matthew offshore, but provide little – if any – much-needed rain to New England. Dry, warmer weather is expected across much of the west, though locally heavy rain is expected to return to the Northwest while monsoon showers resume in the Four Corners Region. The NWS 6- to 10-day outlook for October 11 - 15 calls for above-normal temperatures nation-wide, with the greatest likelihood of abnormal warmth centered over the Rockies, Great Plains, and Corn Belt. In addition to the warmth, near- to below-normal rainfall is expected as well, particularly across the eastern third of the nation and from Texas and the lower Four Corners to the Plains. Above-normal rainfall will be limited to the Northwest and northern California."

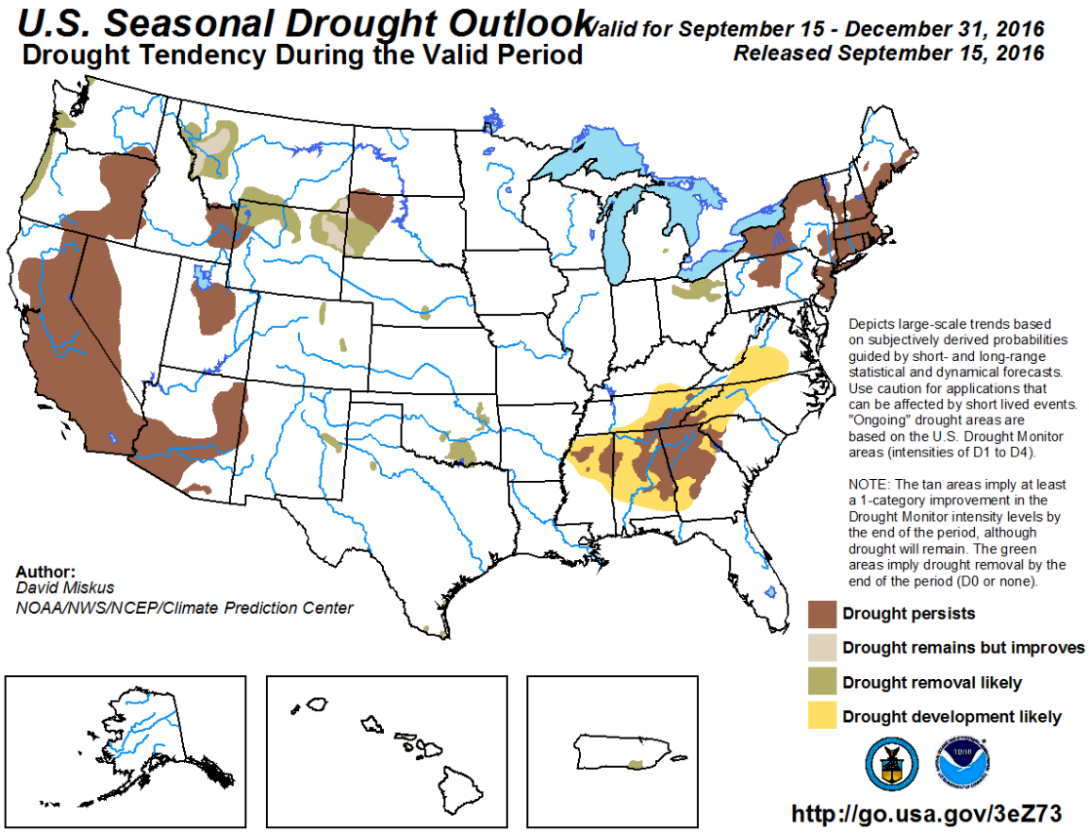
Fire Potential Outlook: November 2016



NWS Climate Prediction Center Weather Hazard Outlook: October 8-12, 2016

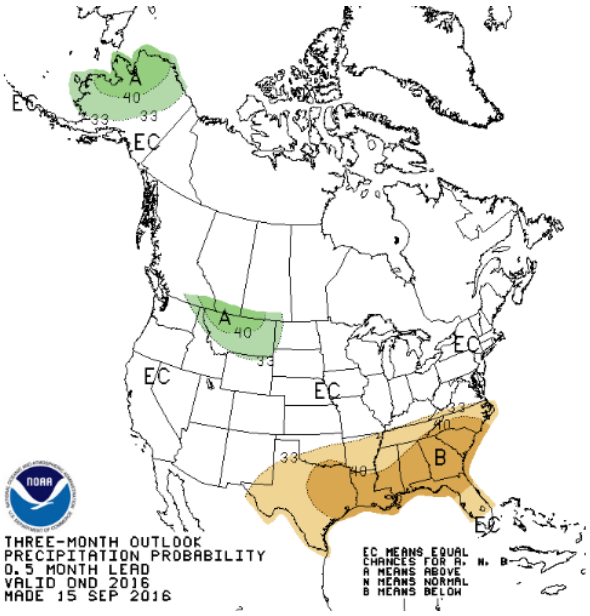


Seasonal Drought Outlook: [September 15-December 31, 2016]



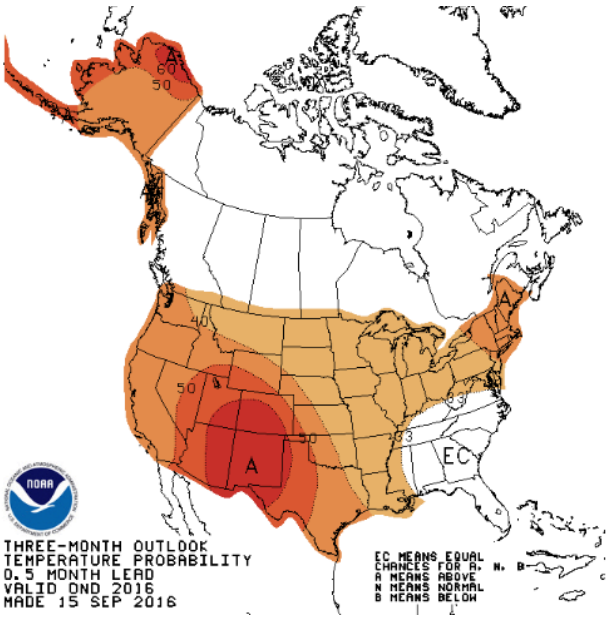
NWS Climate Prediction Center 3-Month Outlook

[Precipitation]



[October-November-December (OND) 2016 precipitation outlook summary]

[Temperature]



[October-November-December (OND) 2016 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.