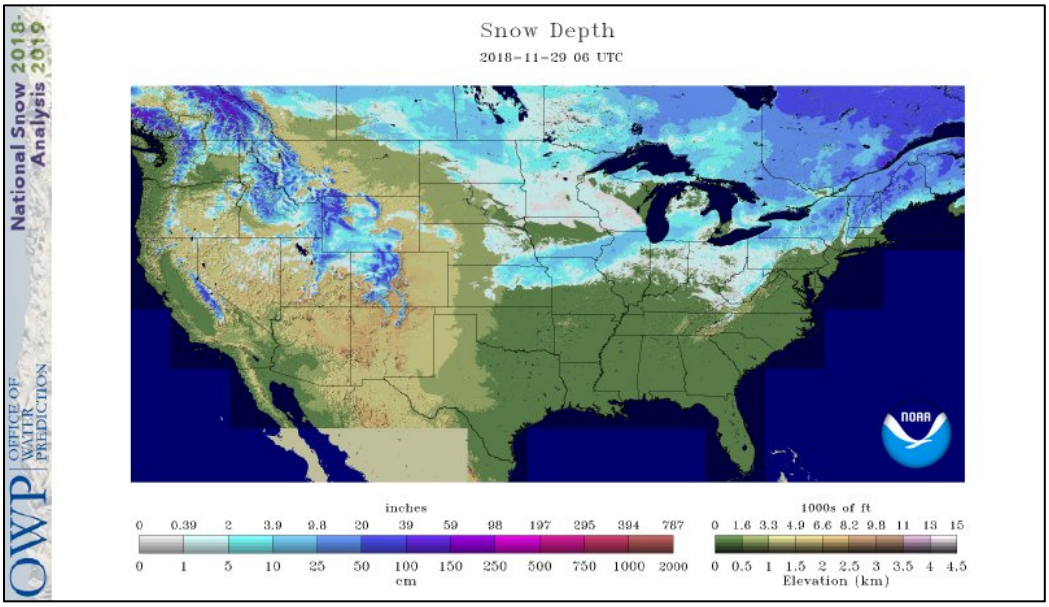
United States Department of Agriculture

Water and Climate Update

November 29, 2018

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.

Winter storms blanket parts of the Midwest and Northeast



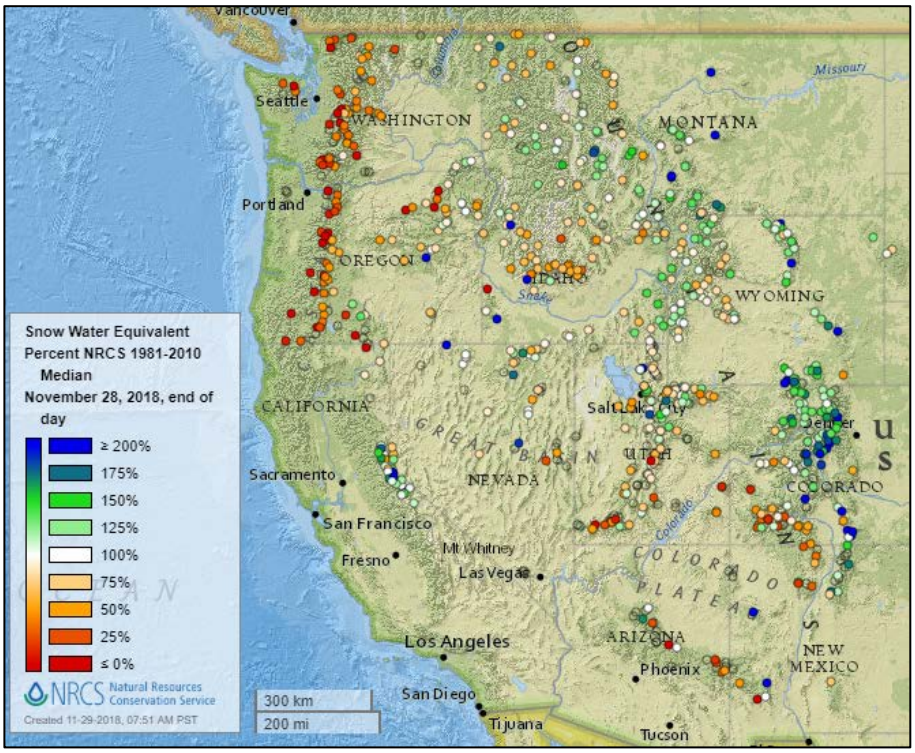
A strong November snowstorm impacted the Midwest and Northeast starting last Sunday, causing widespread flight cancellations and dangerous travel conditions on one of the busiest travel days of the year. Kansas Governor Jeff Colyer declared a state of emergency for dangerous road conditions, where up to 16 inches of snow fell. Some areas in the Midwest experienced blizzard conditions, with Chicago and other parts of Illinois receiving over a foot of snow. There were over 350,000 people without power by Sunday night, and additional thousands elsewhere along the storm path. As the system moved eastward it also caused lake-effect snow, with Buffalo N.Y. receiving nearly 20 inches of snow. More than a foot of snow has fallen in other parts of New England, with snow showers continuing to the end of the week.

Related:

Chicago area digging out, cleaning up after massive snow storm - WGN9 (IL)
See How Much Snow Fell on the Midwest During an Unusually Strong November Storm - Time
Eastern Great Lakes, New England brace for heavy snow – WISC-TV (WI)
Heavy snow prompts travel advisories in Chautauqua, Cattaraugus counties – The Buffalo News (NY)
Storm dumps more than 30 inches of snow on parts of Western New York – WKBW (NY)
WATCH: Snow lingers in parts of the state Wednesday – WMUR (NH)
Heavy, wet snow causes thousands of outages – WCAX3 (VT)

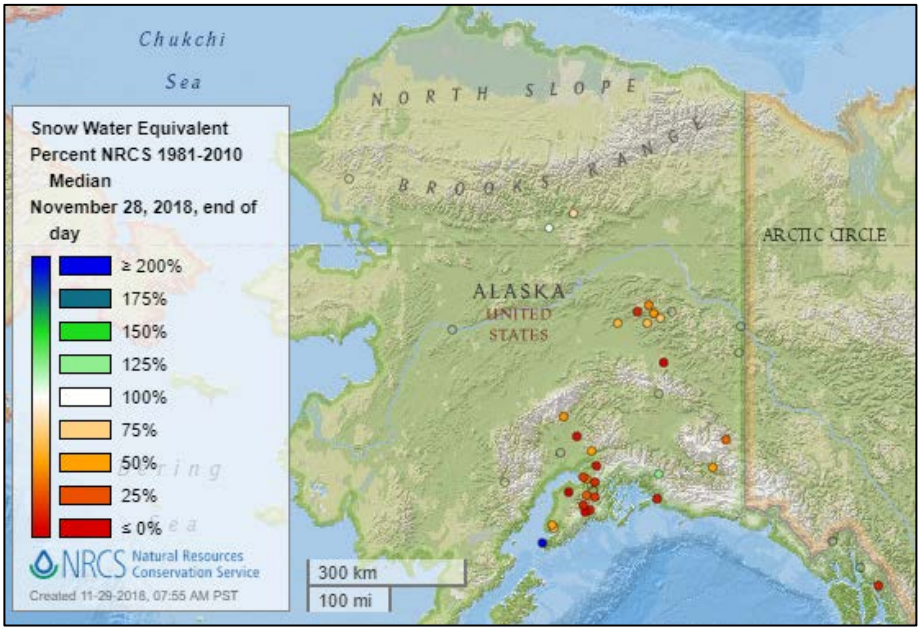
Snow

Current Snow Water Equivalent, NRCS SNOTEL Network



[Snow water equivalent percent of median map]

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

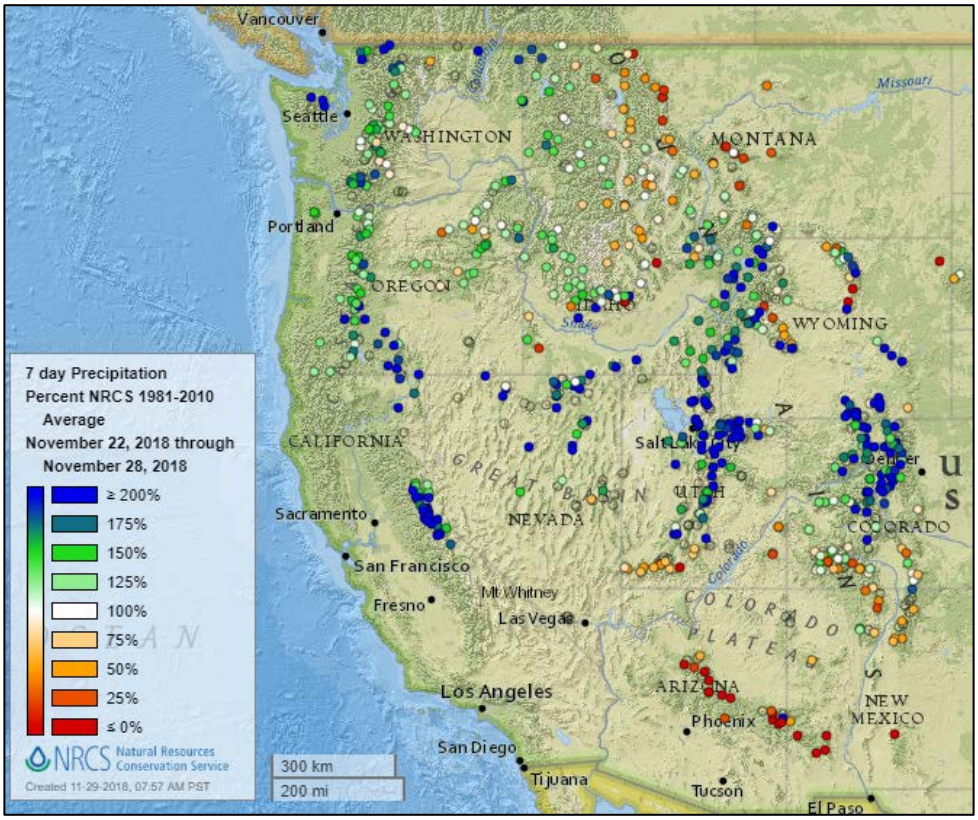


[Alaska snow water equivalent percent of median map]

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

Precipitation

Last 7 Days, NRCS SNOTEL Network

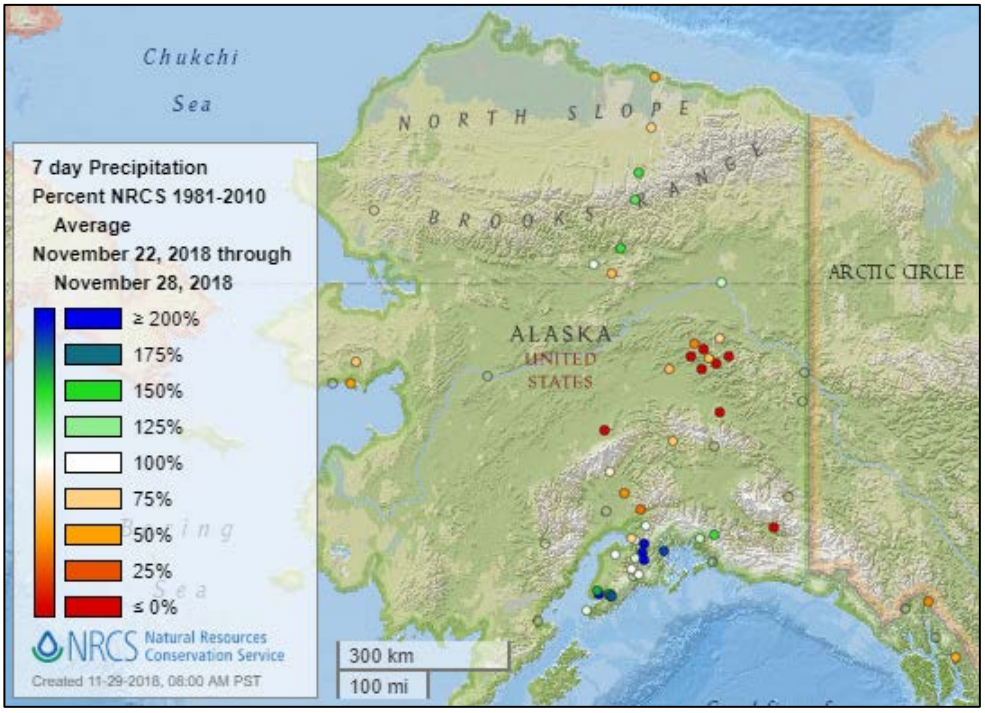


[7-day precipitation percent of average map]

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]

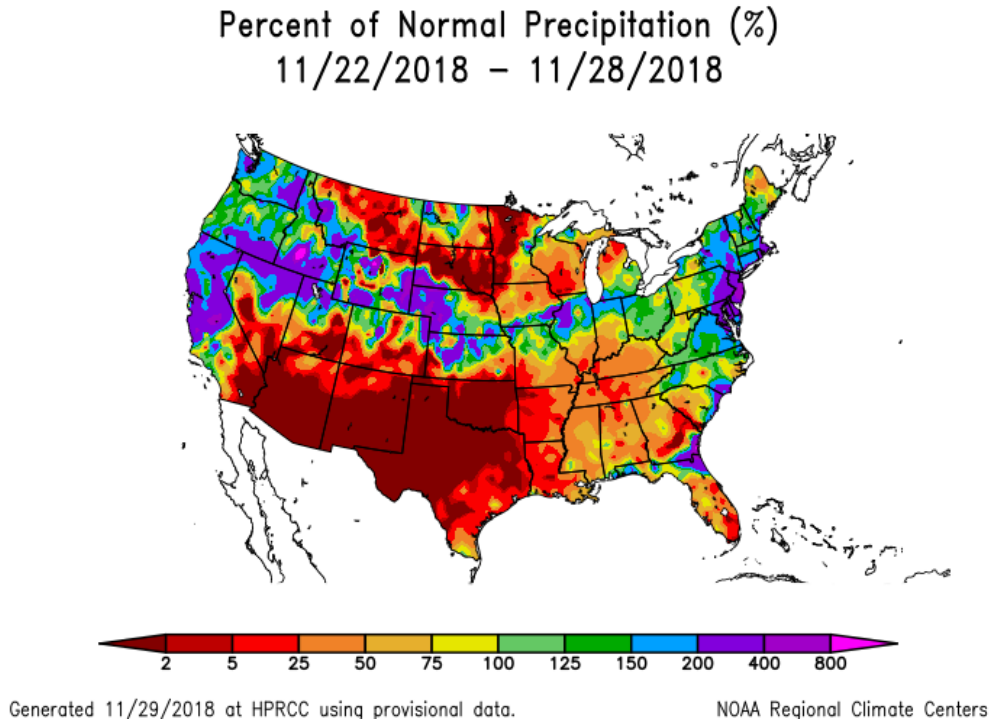


Last 7 Days, National Weather Service (NWS) Networks

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]

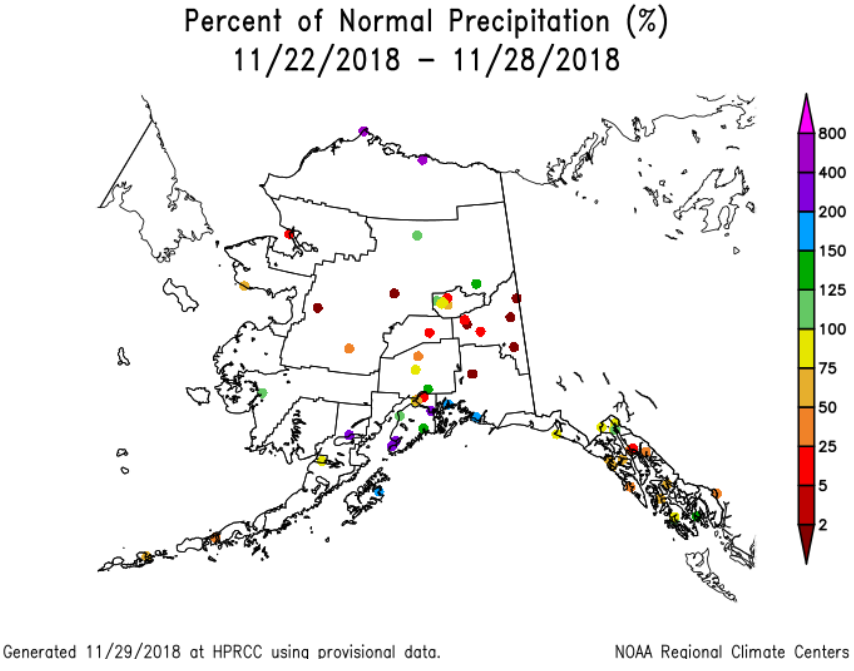


Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

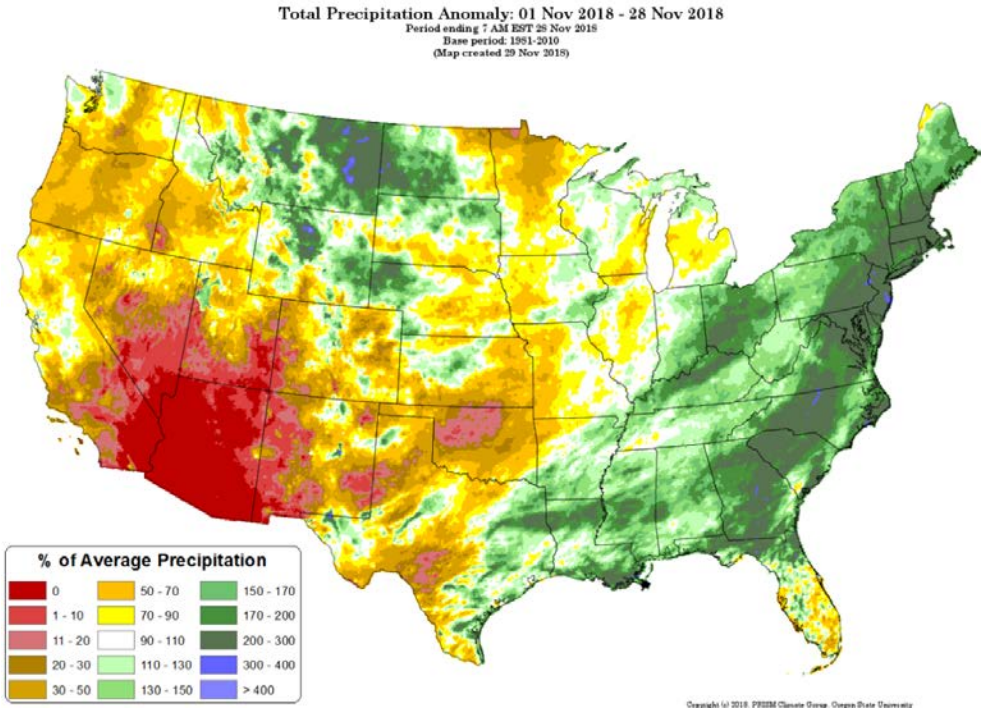
[7-day precipitation anomaly map] for Alaska.

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



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

Source: PRISM

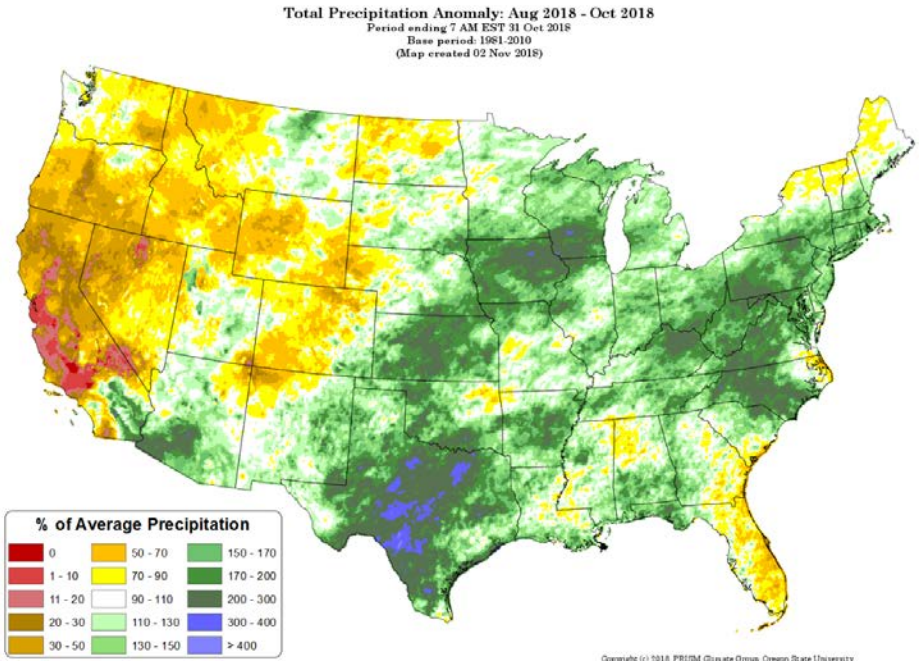


Month-to-date national total precipitation percent of average map

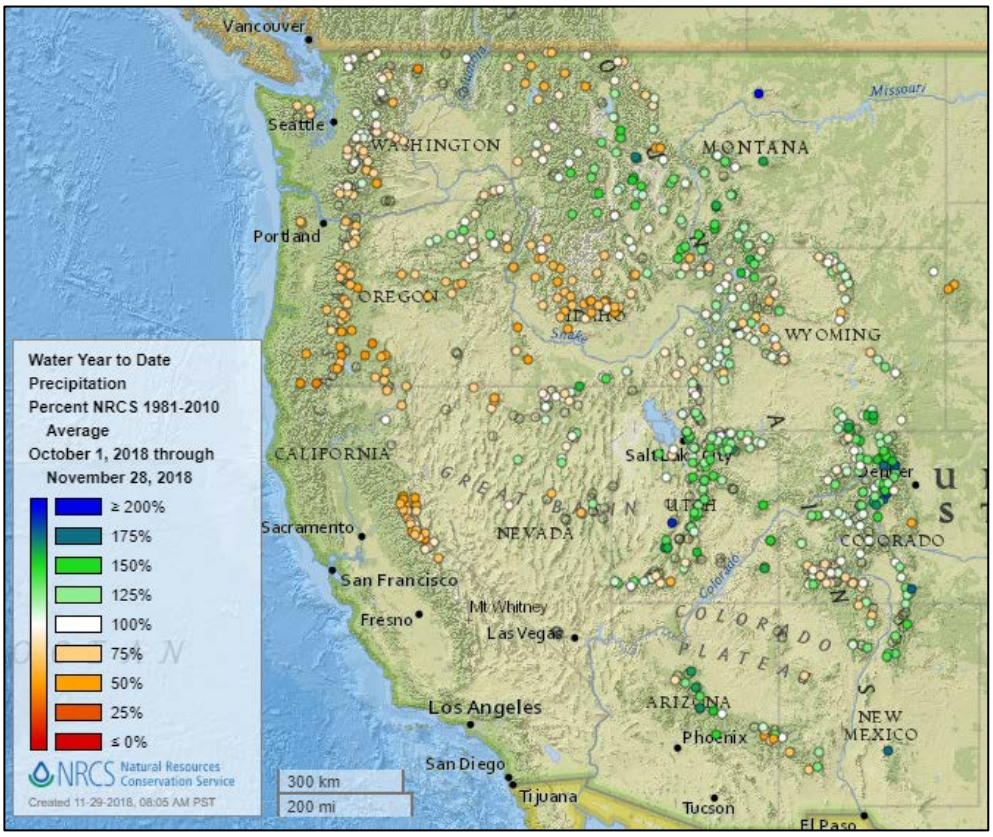
Last 3 Months, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

August through October 2018 total precipitation percent of average map

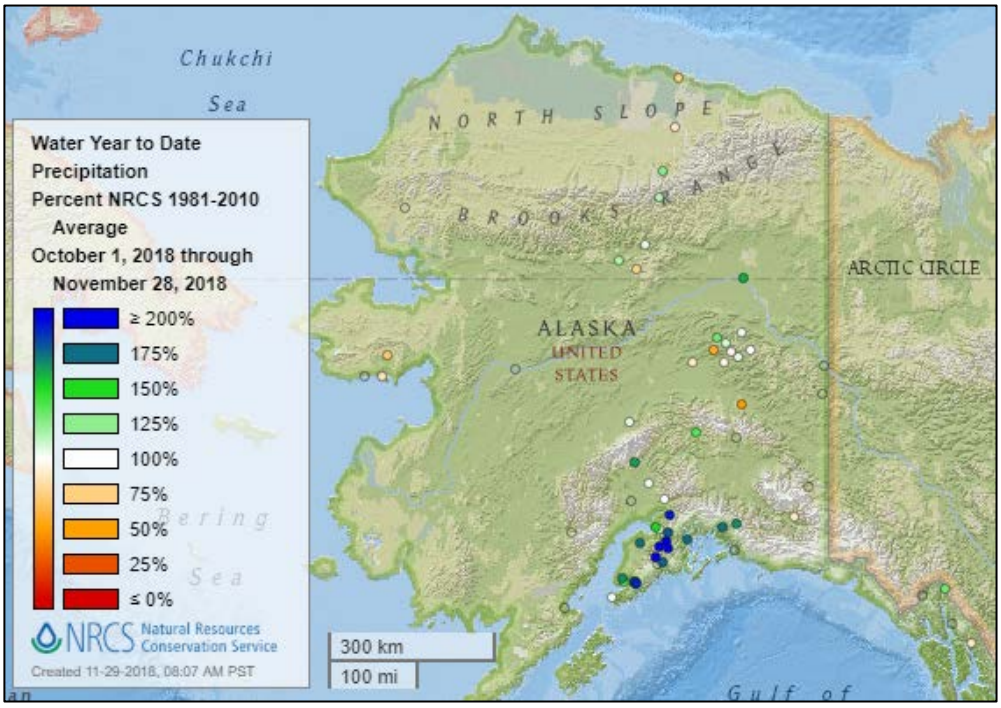


Water Year to Date, NRCS SNOTEL Network



[2019 water year-to-date precipitation percent of average map]

See also:
[2019 water year-to-date precipitation values (inches) map]



[Alaska 2019 water year-to-date precipitation percent of average map]

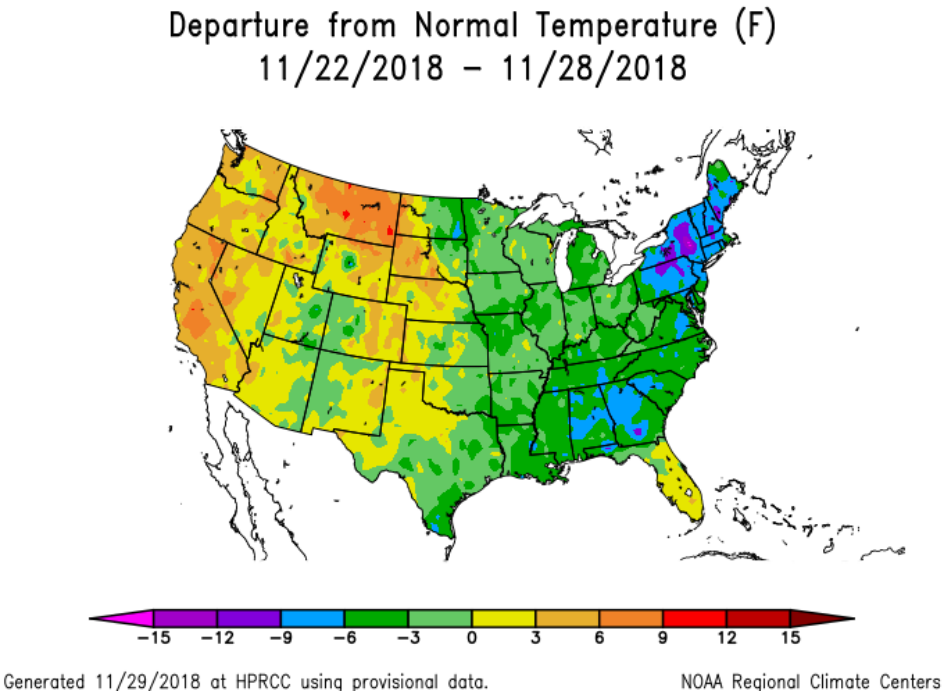
See also:
[Alaska 2019 water year-to-date precipitation values (inches) map]

Temperature

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

7-day temperature anomaly map for the contiguous U.S.

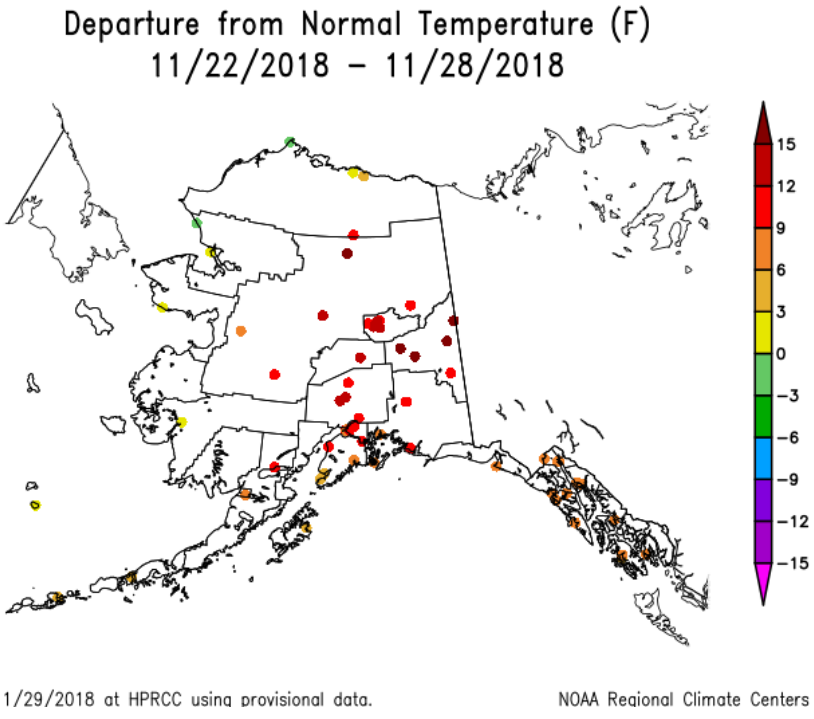
See also: 7-day temperature (° F) map



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

7-day temperature anomaly map for Alaska.

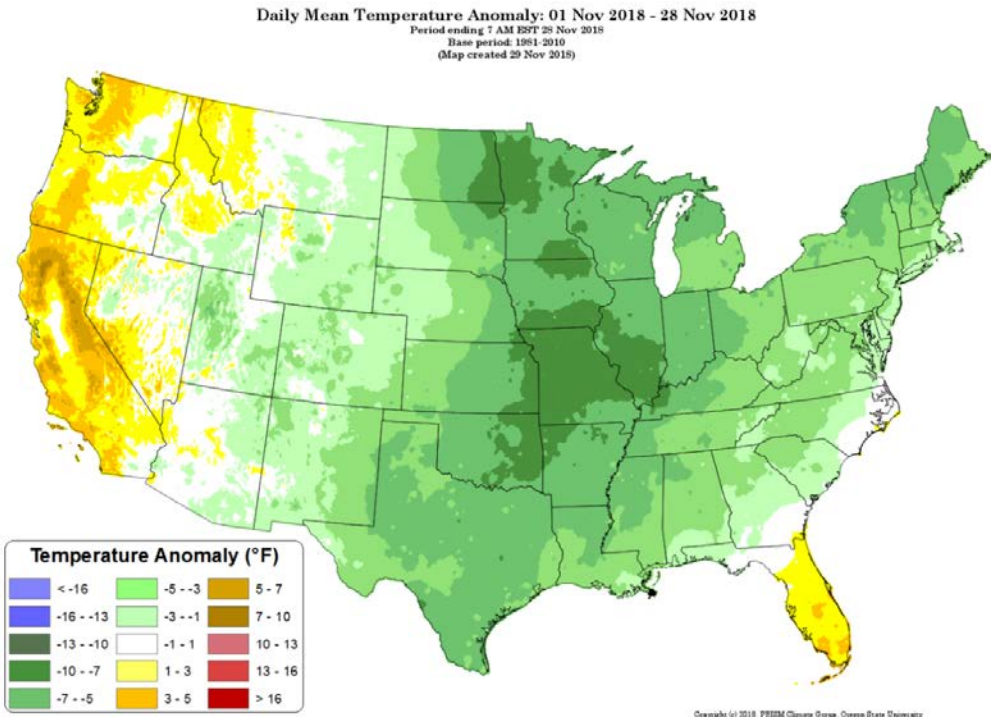
See also:
7-day temperature (° F) map



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

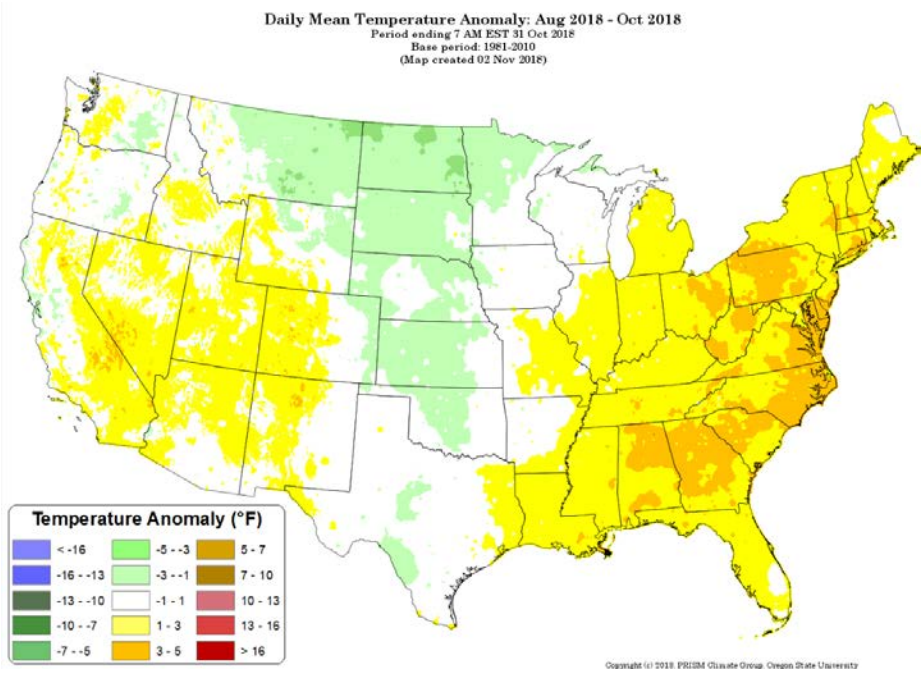
Source: PRISM

Month-to-date national daily mean temperature anomaly map



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

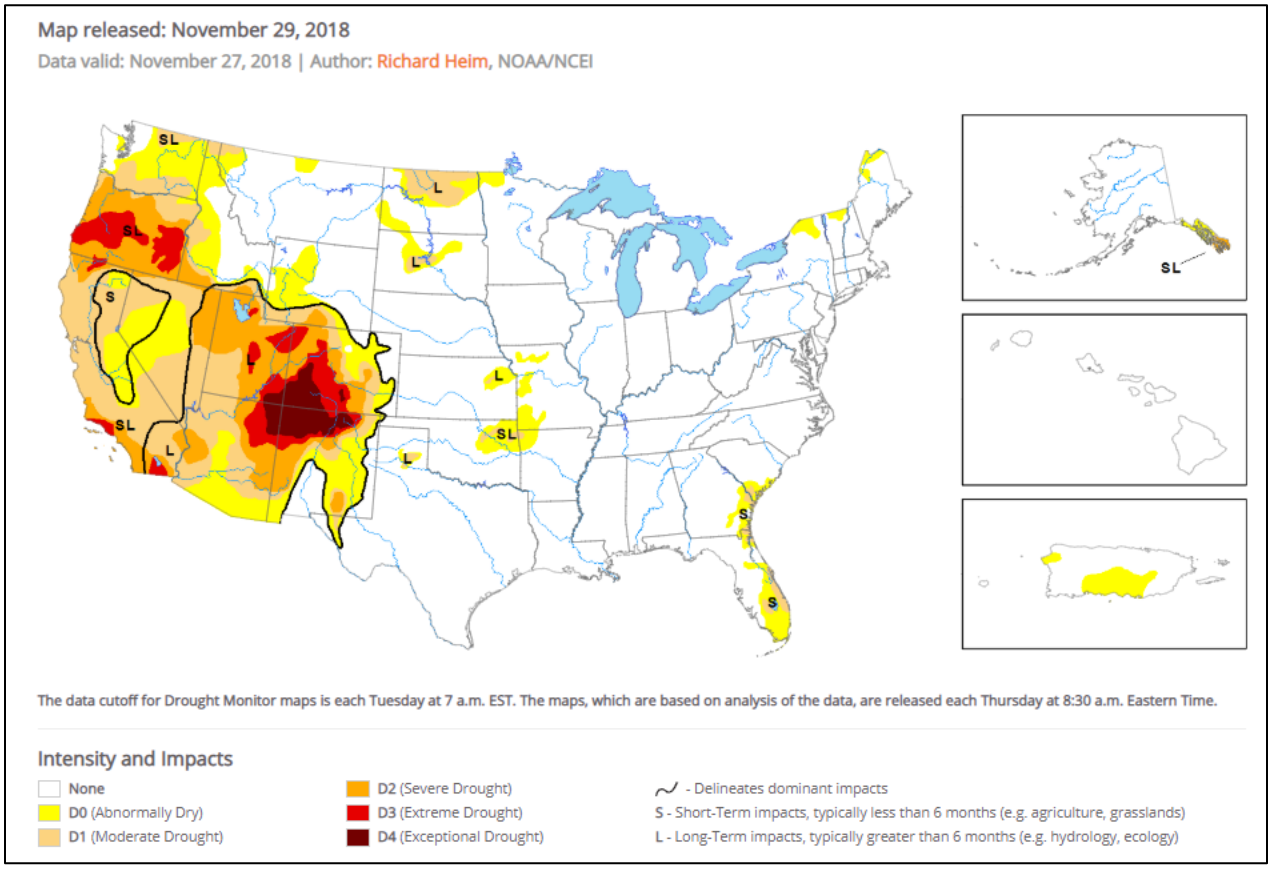
Source: PRISM



August through October 2018 daily mean temperature anomaly map

Drought

U.S. Drought Monitor Select map below. **U.S. Drought Portal** Comprehensive drought resource.



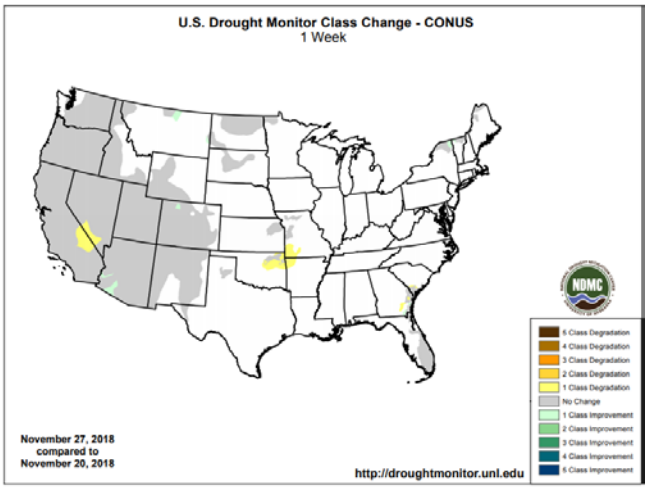
Current National Drought Summary, November 29, 2018

Author: Richard Heim, NOAA/NCEI

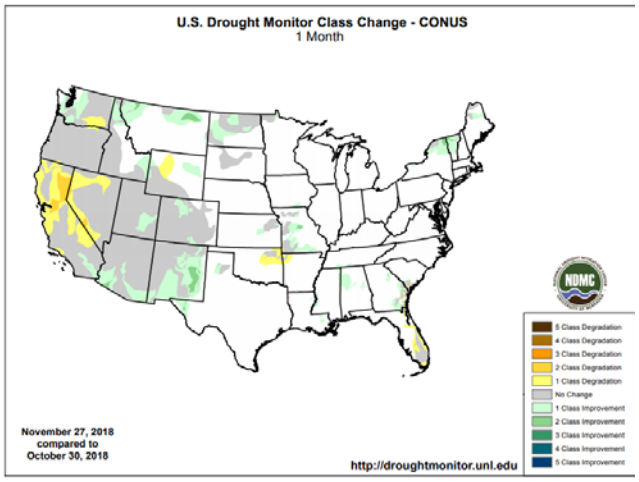
“A series of upper-level weather systems, and their associated surface lows and fronts, moved across the contiguous U.S. (CONUS) during this U.S. Drought Monitor (USDM) week. They brought beneficial precipitation to much of the Pacific coast; parts of the northern and central Rockies, central Plains, Midwest, and Gulf of Mexico coast; and much of the Mid-Atlantic to Northeast. But they missed much of the Southwest, northern Plains, and southern Plains, where no precipitation, or less than a tenth of an inch, fell. Based on precipitation recorded through the 12z (7:00 a.m. EST) cutoff on Tuesday morning, the precipitation was less than the weekly normal across parts of the interior Pacific Northwest and northern New England, and much of the Midwest and Southeast. While beneficial, the precipitation in the West was mostly not enough to overcome months of precipitation deficits. Slight contraction of drought or abnormal dryness occurred in parts of Arizona (a reassessment), Colorado, and Montana, while expansion occurred in southern California and Nevada. Building precipitation deficits prompted expansion in the southern Plains. Rain and snow from the weather systems this week – and previous weeks to the last 6 months – have built up precipitation surpluses across much of the country east of the Mississippi River, with streamflow mostly above normal and November 25 reports from the U.S. Department of Agriculture (USDA) showing soil moisture surpluses in most states here, Florida and coastal Georgia and South Carolina being the exceptions. Contraction and expansion of abnormal dryness occurred in coastal Georgia and South Carolina to accommodate a variable precipitation pattern.”

Changes in Drought Monitor Categories over Time

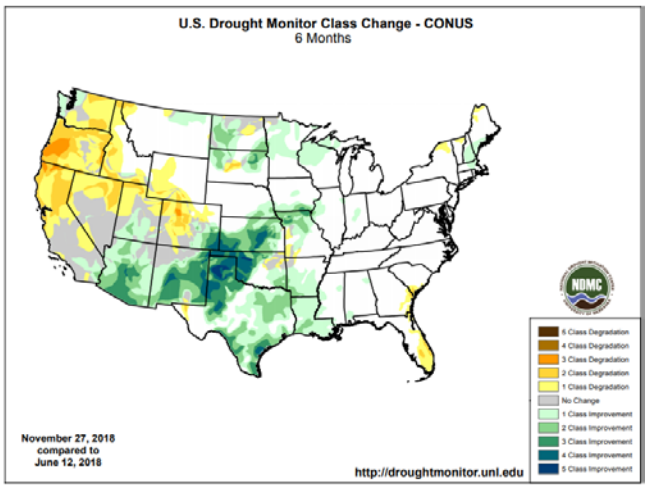
1 Week



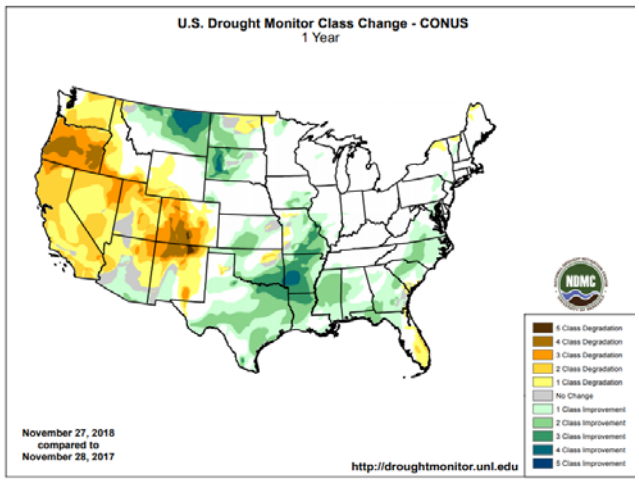
1 Month



6 Months



1 Year

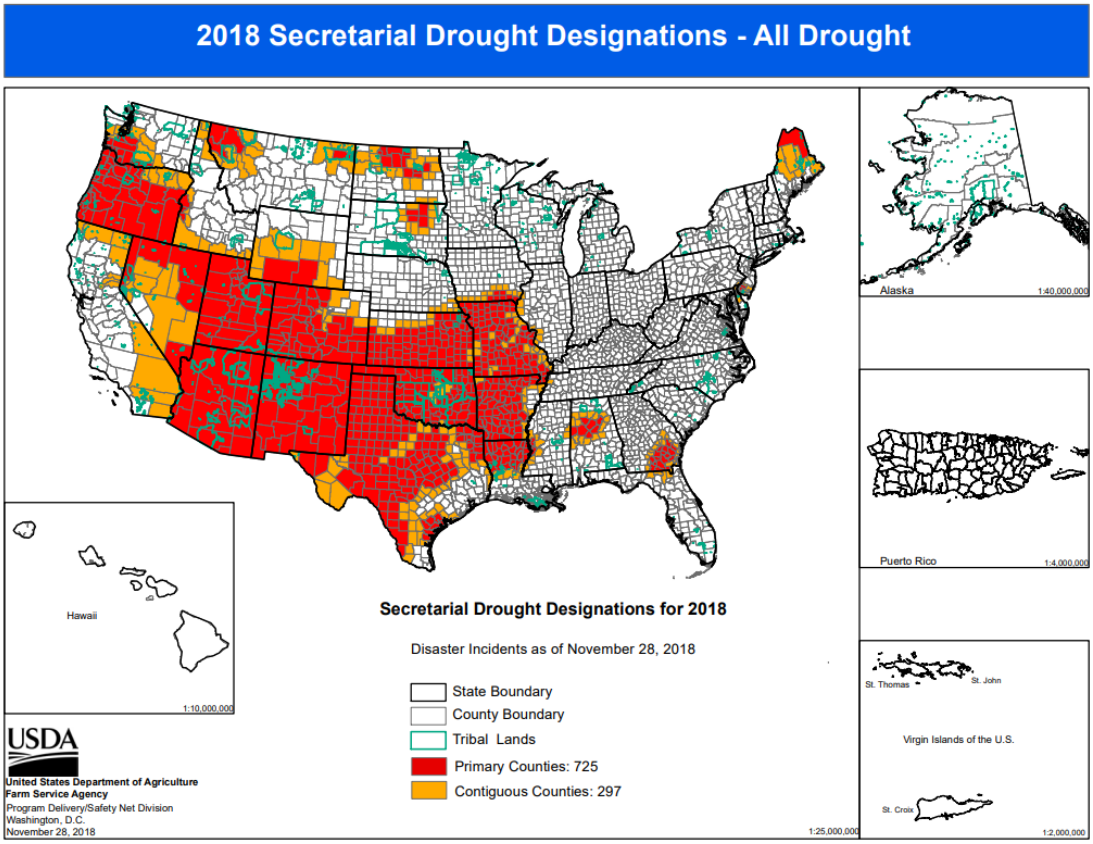


Changes in drought conditions over the last 12 months

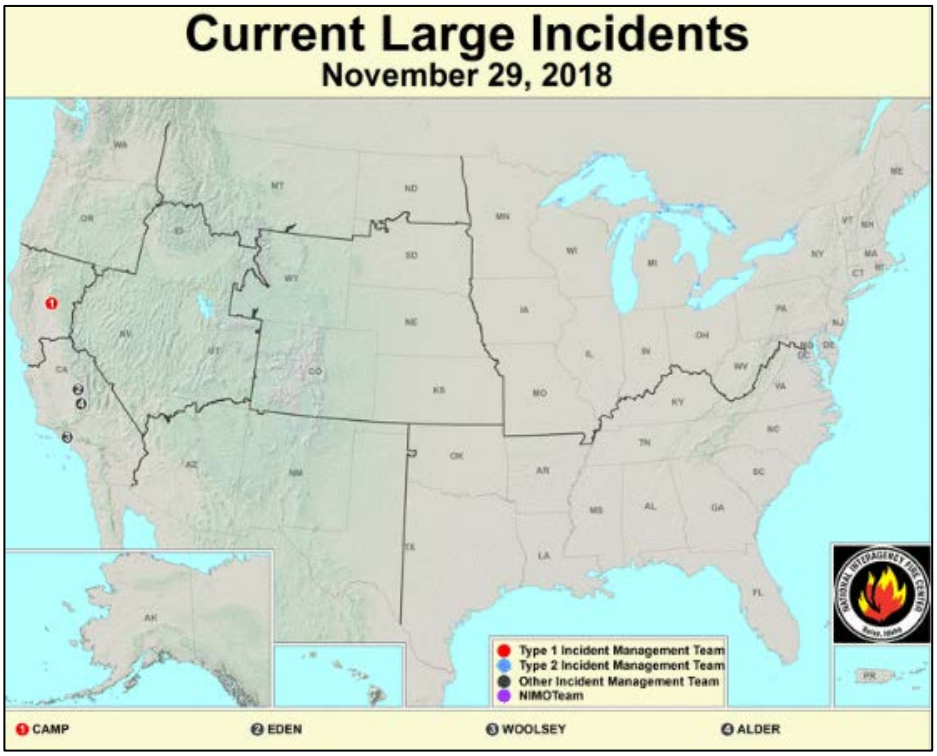
Highlighted Drought Resources

- 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

USDA 2018 Secretarial Drought Designations



Wildfires: USDA Forest Service Active Fire Mapping



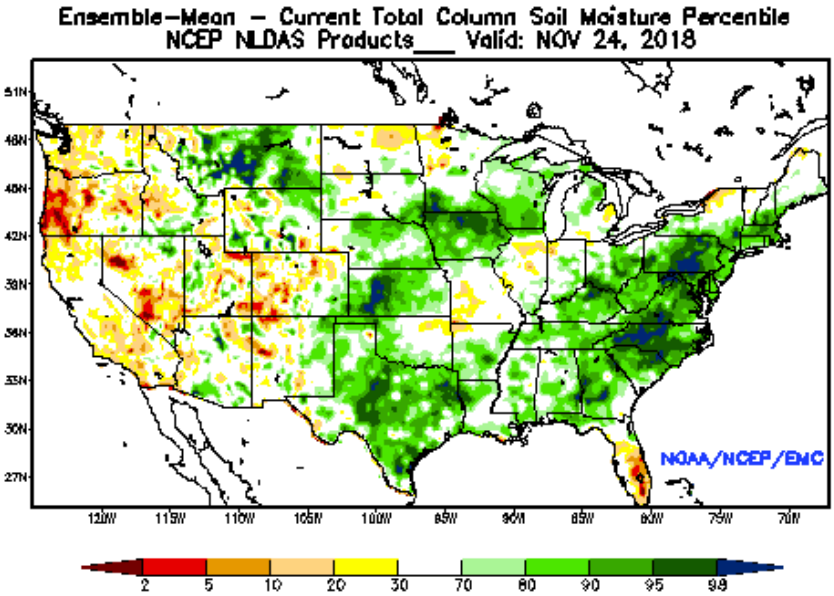
Highlighted Wildfire Resources

- National Interagency Fire Center
- InciWeb Incident Information System
- Significant Wildland Fire Potential Outlook

Other Climatic and Water Supply Indicators

Soil Moisture

Source: NOAA National Centers for Environmental Prediction



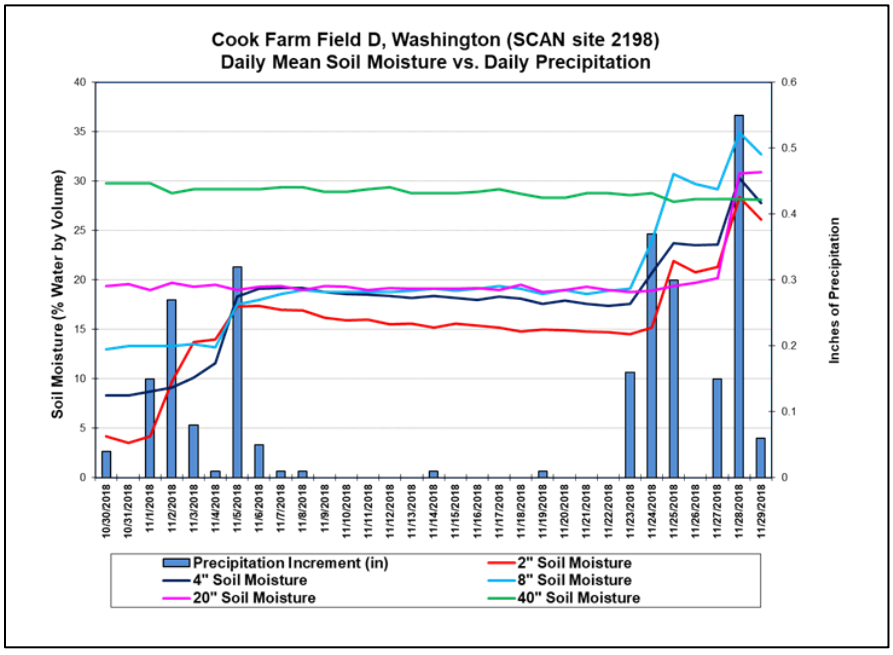
Modeled soil moisture percentiles as of November 24, 2018

Soil Moisture Data Portals

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

Soil Moisture Data

Source: NRCS Soil Climate Analysis Network (SCAN)

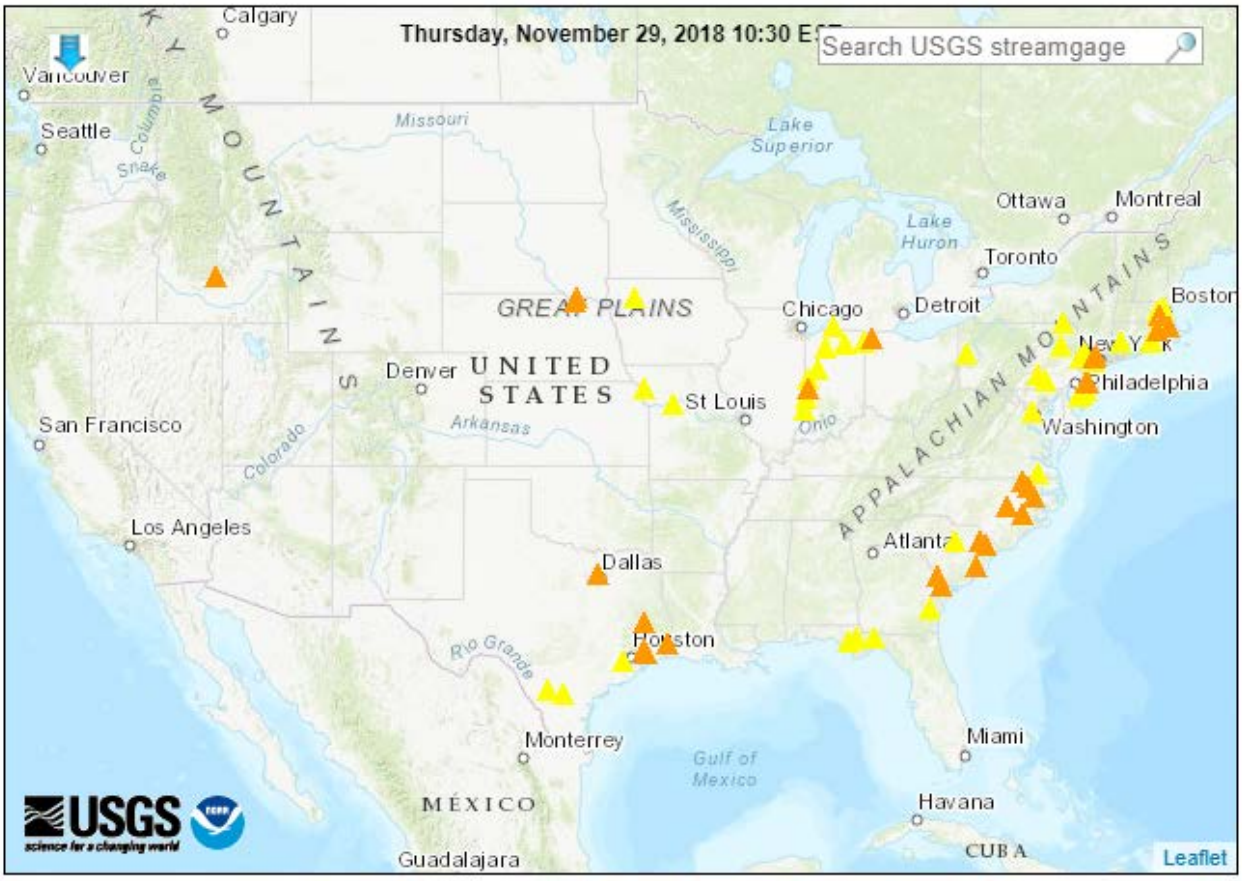


This graph shows the precipitation and soil moisture for the last 30 days at the Cook farm Field D SCAN site 2198 in eastern Washington. In the period between 11/23/18 – 11/28/18, this site received 1.53 inches of precipitation and overall soil moisture levels increased at the 2-, 4-, 8-, and 20-inch sensor depths.

Streamflow

Source: USGS

Map of flood and high flow conditions



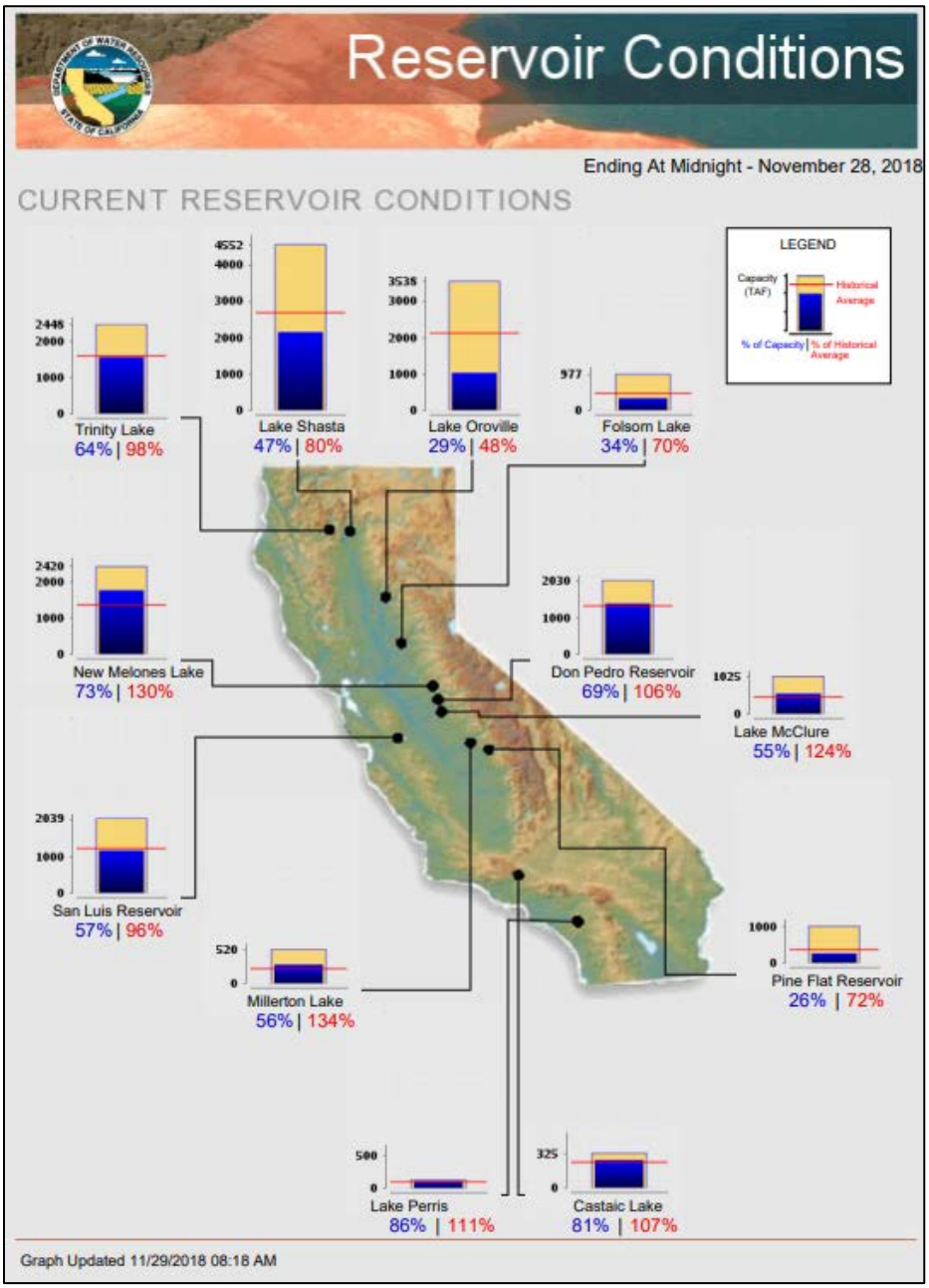
Explanation - Percentile classes						
<95	95-98	>= 99	Above action stage	Above flood stage	Above moderate flood stage	Above major flood stage
△ Streamgage with flood stage ○ Streamgage without flood stage						

[WaterWatch: Streamflow, drought, flood, and runoff conditions]

Reservoir Storage

Current California Reservoir Conditions

Source: California Department of Water Resources



Current California Reservoir Conditions

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

Short- and Long-Range Outlooks

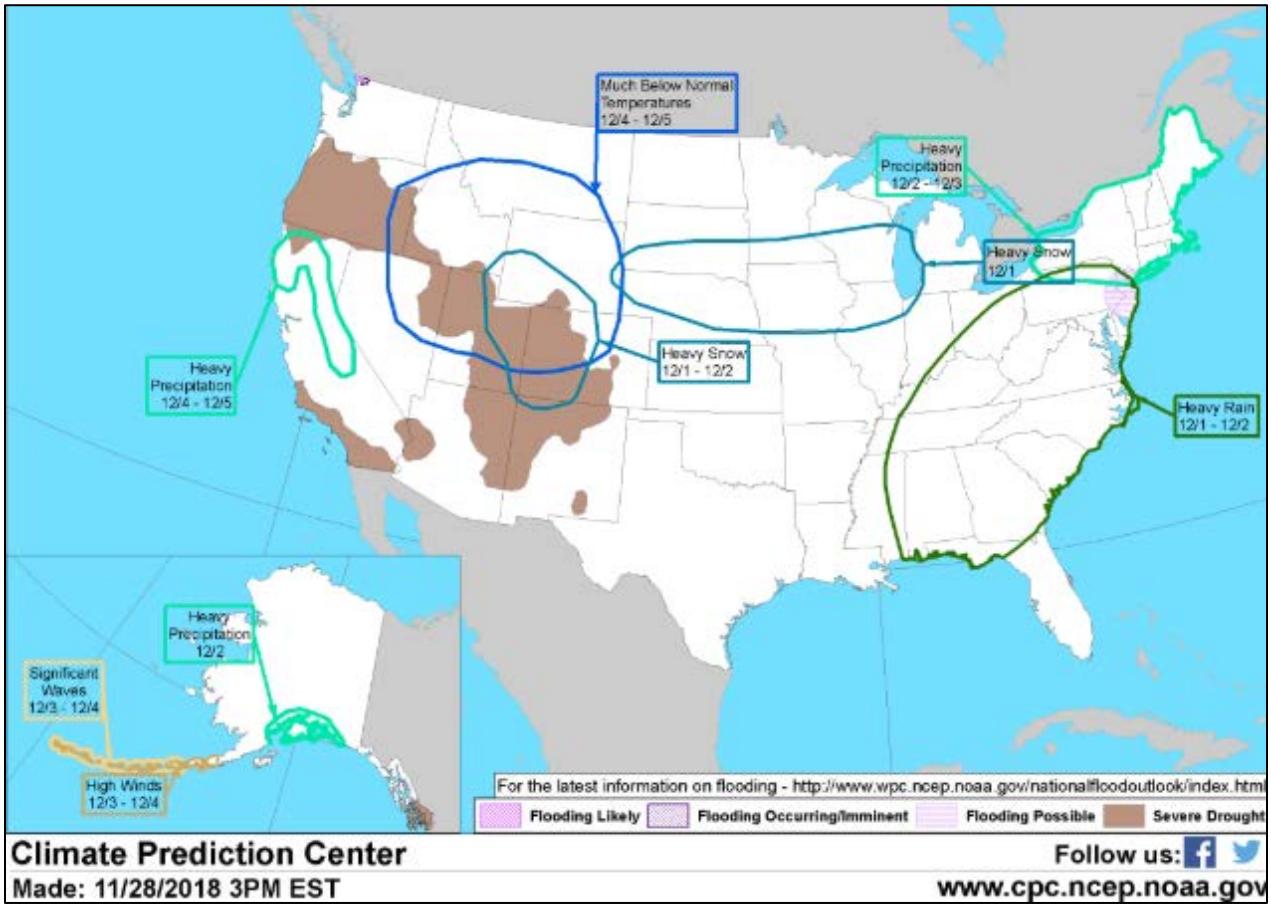
Agricultural Weather Highlights

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

National Outlook, Thursday, November 29: “A series of storms will maintain unsettled, showery weather across large parts of the country. Five-day precipitation totals could reach 1 to 2 inches or more across large parts of the Midwest, mid-South, and Southeast. In addition, significant, late-week snow will fall across portions of the northern Plains and upper Midwest. Snow will also blanket higher elevations of the West. Early next week, yet another round of snow may occur from the Midwest into the Northeast. Elsewhere, a brief spell of warm weather across the Midwest, South, and East will yield to another cold wave, with the transition starting during the weekend. The NWS 6- to 10-day outlook for December 4 – 8 calls for colder-than-normal conditions nationwide, except for near- or above-normal temperatures across Florida’s peninsula. Meanwhile, drier-than-normal weather in Maine and northern sections of the Rockies and High Plains will contrast with near- or above-normal precipitation across the remainder of the country.”

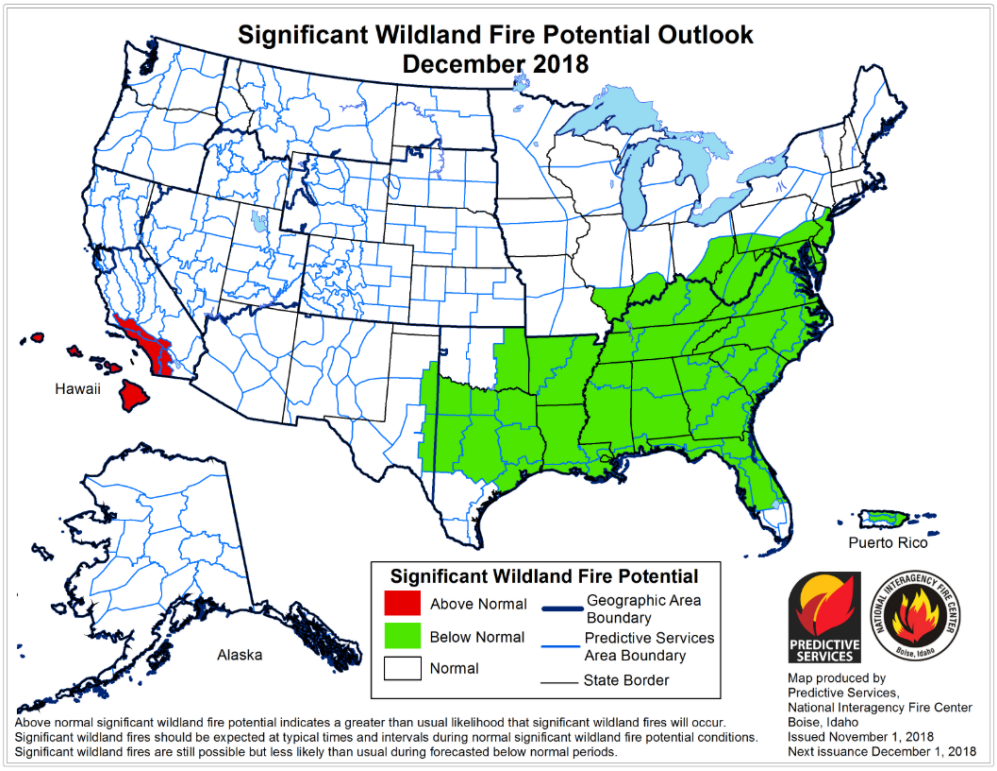
Weather Hazards Outlook December 1 – 5, 2018

Source: Climate Prediction Center



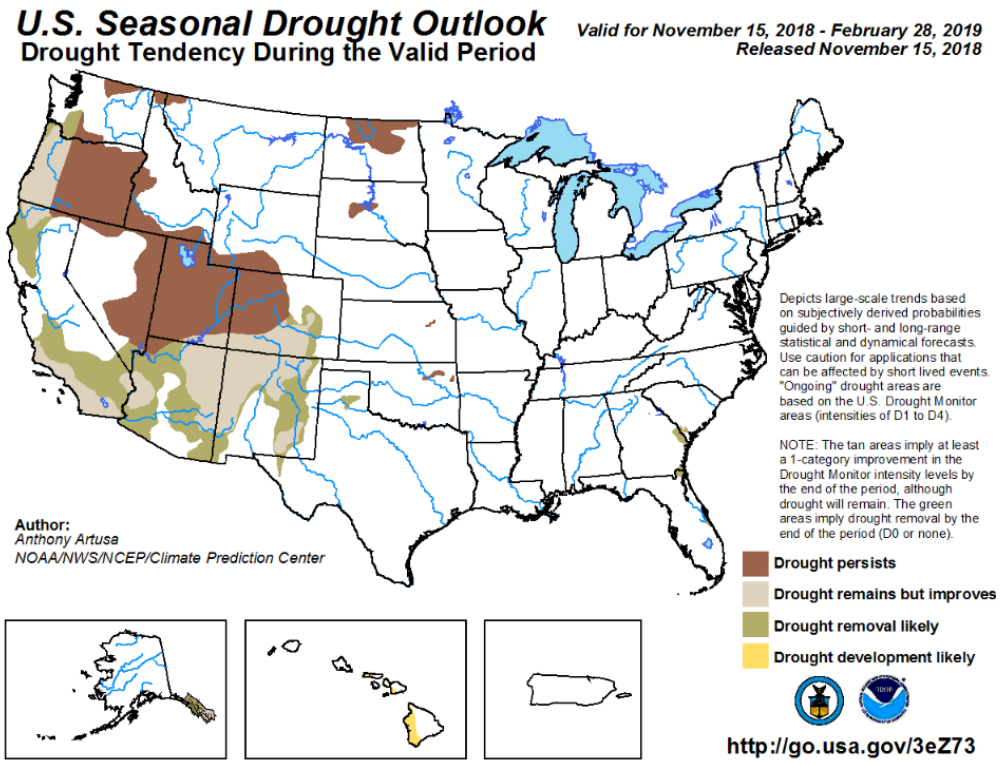
Significant Wildland Fire Potential Outlook

Source: National Interagency Fire Center



Seasonal Drought Outlook: November 15, 2018 – February 28, 2019

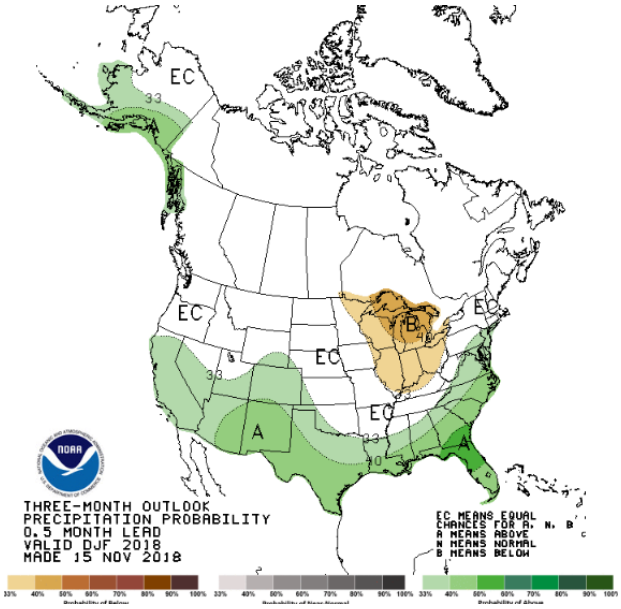
Source: National Weather Service



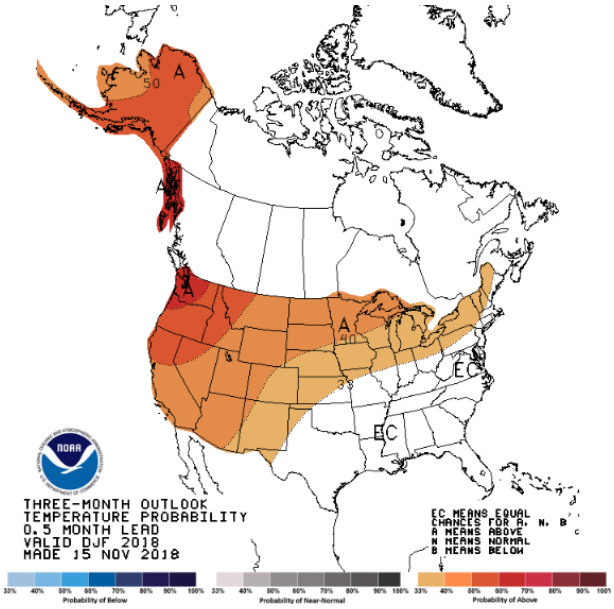
Climate Prediction Center 3-Month Outlook

Source: National Weather Service

Precipitation



Temperature



December-January-February (DJF) 2018-2019 precipitation and temperature outlook summaries

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.