## **United States Department of Agriculture**

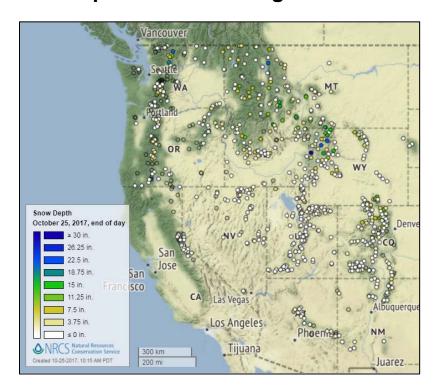
# **Water and Climate Update**

October 26, 2017

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

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## Snowpack accumulating in the West



Winter has arrived in the West as snowpack starts to build in the northern mountains. Snow depths of over two feet have been reported at a few SNOTEL stations in the central and northern Rockies and northern Cascades, with lesser amounts elsewhere. Much of the current snow was provided by the cool, atmospheric river aimed at the Northwest.

The <u>NOAA winter outlook</u> for 2017-2018 forecasts a cooler and wetter season for the Northern Tier states from Washington to North Dakota, with warm and dry weather for much of the rest of the contiguous U.S.

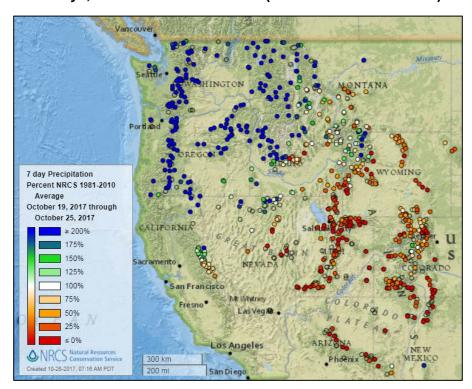
#### Related:

NOAA Releases Winter 2017-2018 Outlook, WHNT News, Alabama
Let it snow? Wetter-than-normal winter likely but too early to predict Montana's snowfall, Bozeman
Daily Chronicle, Montana

SR20 North Cascades Highway to reopen Wednesday at 10am, KPQ Newsradio, Washington

# **Precipitation**

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



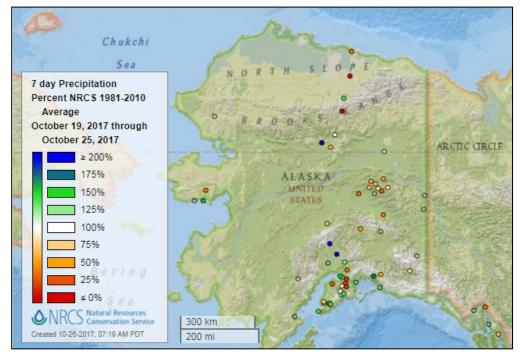
7-day precipitation percent of average map

#### See also:

7-day total precipitation values (inches) map

Alaska 7-day precipitation percent of average map

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

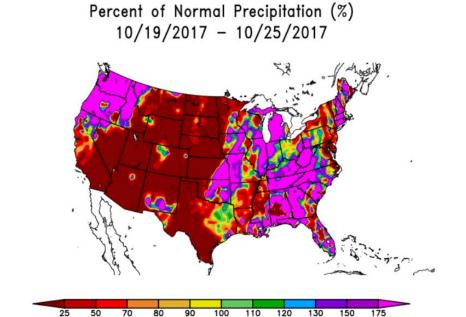


## Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

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

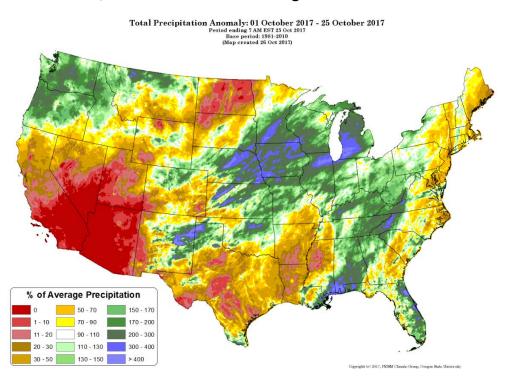
See also: 7-day total precipitation values (inches) map



Generated 10/26/2017 at HPRCC using provisional data.

NOAA Regional Climate Centers

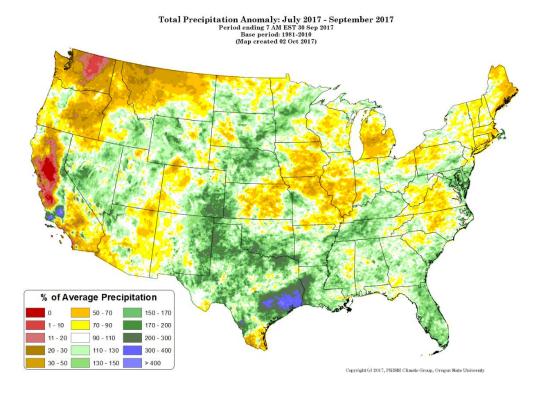
#### Month-to-Date, All Available Data Including SNOTEL and NWS Networks Source: PRISM



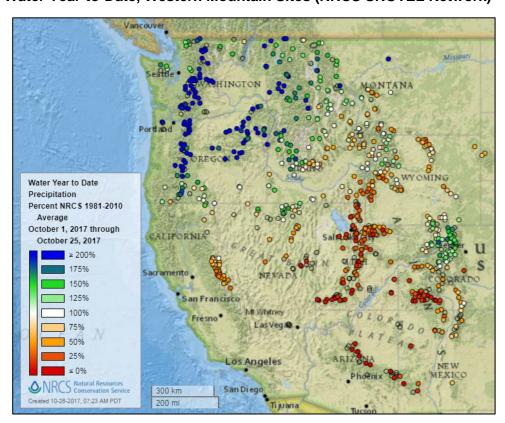
Month-to-date national precipitation percent of average map

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

July through September 2017 total precipitation anomaly map



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



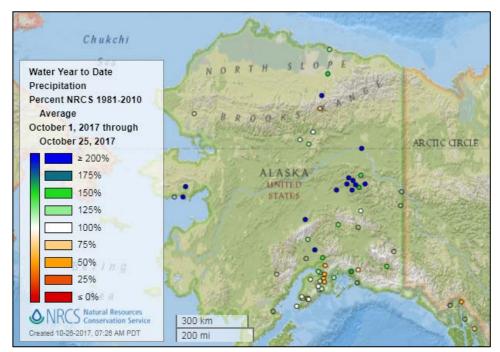
**Note:** October 1 marked the beginning of the 2018 Water Year

Source: PRISM

2018 water year-todate precipitation percent of average map

See also: 2018 water year-to-date precipitation values (inches)

#### **Water and Climate Update**



Alaska 2018 water year-to-date precipitation percent of average map

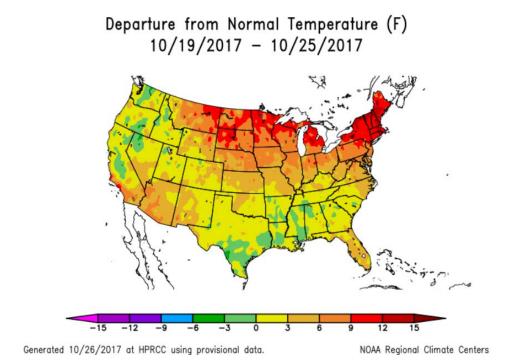
See also: Alaska 2018 water year-todate precipitation values (inches) map

## **Temperature**

## Last 7 Days, National Weather Service (NWS) Networks

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

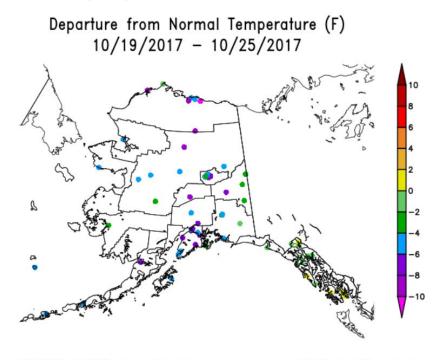
See also: 7-day temperature (° F) map



## Last 7 Days, National Weather Service (NWS) Networks

7-day temperature anomaly map for Alaska.

See also: 7-day temperature (° F) map



Generated 10/26/2017 at HPRCC using provisional data.

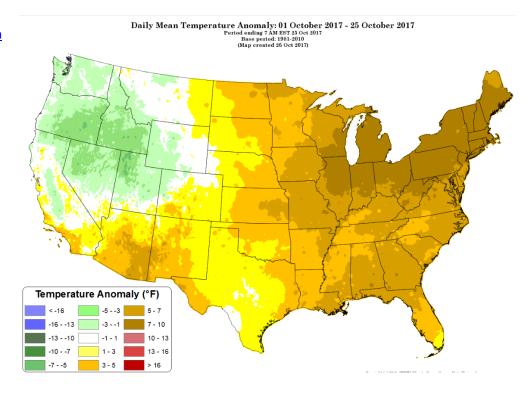
NOAA Regional Climate Centers

Source: Regional Climate Centers

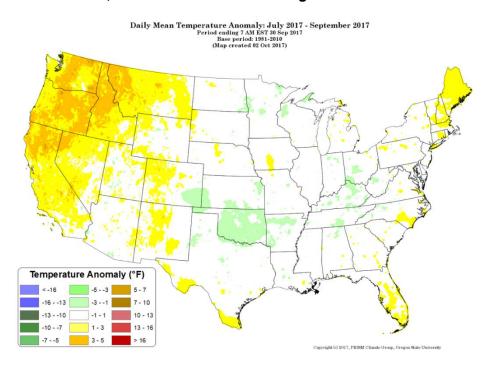
Source: Regional Climate Centers

## 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



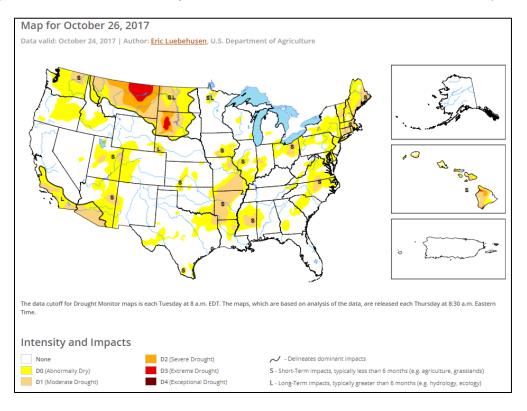
July through September 2017 daily mean temperature anomaly map

## **Drought and Wildfires**

U.S. Drought Monitor Select map below.

U.S. Drought Portal Comprehensive drought resource.

PLEASE NOTE – The Drought Monitor reflects observed precipitation through Tuesday, 1200 UTC (8 am, EDT); any rain that fell after the Tuesday 1200 UTC cutoff will be reflected in next week's map.

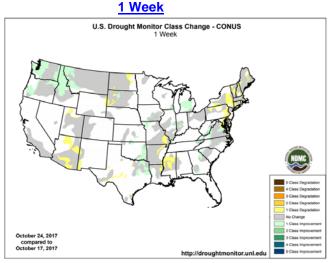


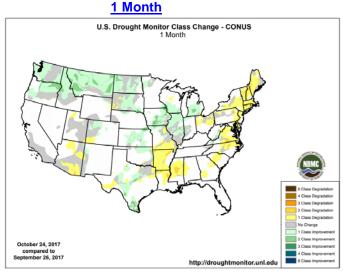
## Current National Drought Summary, October 24, 2017

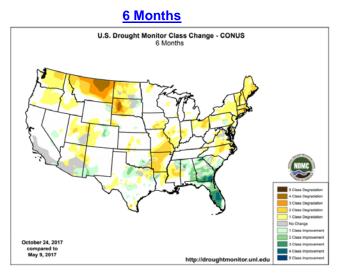
Author: Eric Luebehusen, U.S. Department of Agriculture

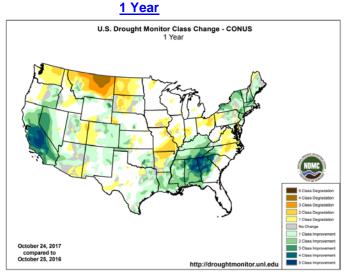
"During the 7-day period (ending Tuesday morning), widespread moderate to heavy rain eased drought from eastern Texas and the southeastern Plains to the Great lakes and central Appalachians. Furthermore, a vigorous storm system brought much-needed rain and snow to the Northwest and northern Rockies. Conversely, hot, dry weather exacerbated developing drought in the lower Four Corners Region, while unseasonably warm, dry weather continued to worsen drought conditions across much of the Northeast."

## **Changes in Drought Monitor Categories over Time**







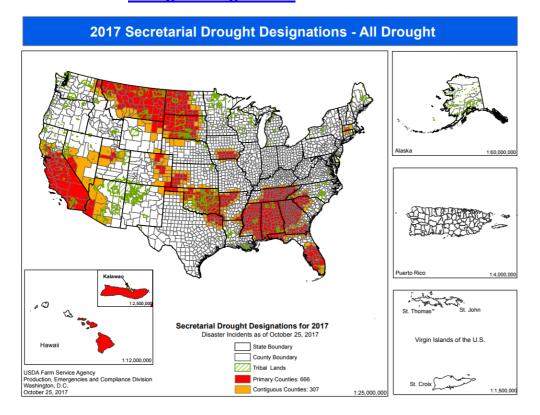


Changes in drought conditions over the last 12 months

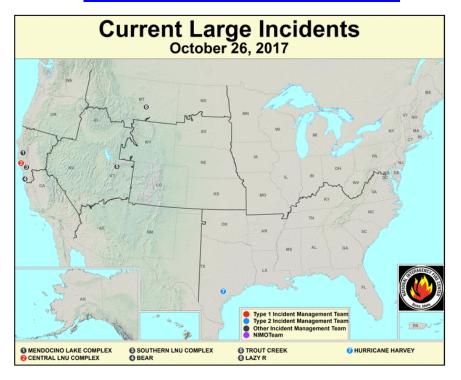
## **Highlighted Drought Resources**

- 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 2017 Secretarial <u>Drought Designations</u>**



## Wildfires: USDA Forest Service Active Fire Mapping

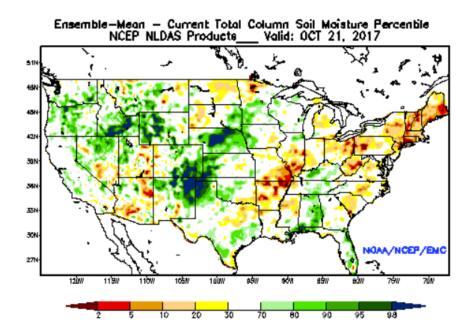


# Highlighted Wildfire Resources

- National Interagency Fire Center
- InciWeb Incident
   Information System
- <u>Significant Wildland Fire</u> <u>Potential Outlook</u>

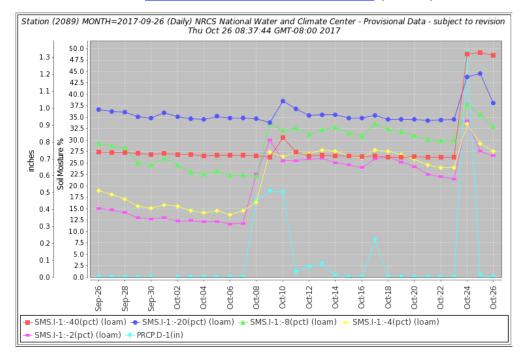
## Other Climatic and Water Supply Indicators

#### **Soil Moisture**



Modeled soil moisture percentiles as of October 21, 2017.

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



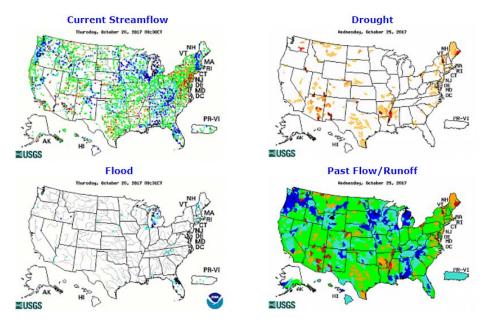
The chart shows precipitation and soil moisture for the last 30 days at the Reynolds Homestead SCAN site 2089 in Virginia. The chart shows dry conditions until precipitation events on October 8-14, October 17, and a large event of 1.3 inches on October 24. The larger precipitation events caused soil moisture increases at all the sensor levels.

#### **Soil Moisture Data Portals**

**CRN Soil Moisture** 

<u>Texas A&M University North American Soil Moisture Database</u> University of Washington Experimental Modeled Soil Moisture

Streamflow Source: USGS

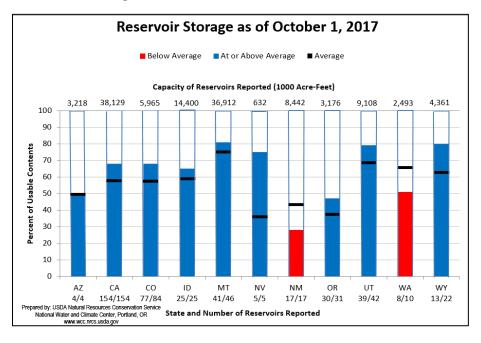


WaterWatch: Streamflow, drought, flood, and runoff conditions

## **Reservoir Storage**

Western States Reservoir Storage





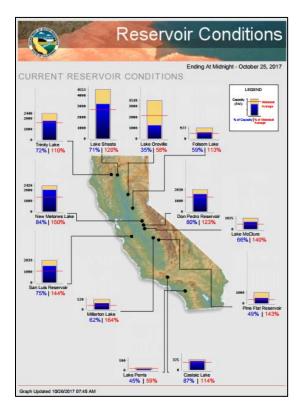
October 1 Reservoir Storage: Chart | Dataset

#### 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

#### **Current California Reservoir Conditions**

Source: California Department of Water Resources



California Current Reservoir Conditions

## **Short- and Long-Range Outlooks**

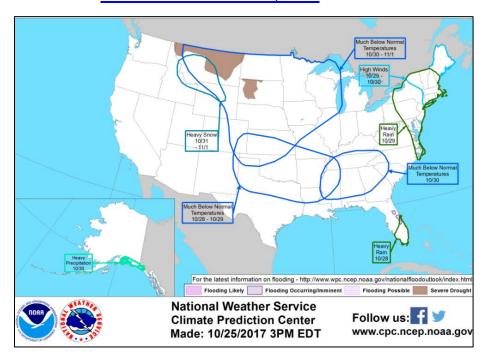
#### **Agricultural Weather Highlights**

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

National Outlook, Thursday, October 26, 2017: "Two surges of cold air will arrive across the central U.S.—today and again early next week. During the weekend, freezes should end the growing season north of a line from northern Texas into the mid-South. On Saturday, temperatures could fall below 10°F as far south as Nebraska, possibly burning back recently emerged winter wheat. By Monday, temperatures will again plunge across the nation's mid-section. Farther east, rain will develop east of the Mississippi River, starting on Friday, while snow will blanket the upper Great Lakes region. Five-day precipitation totals could reach 3 to 6 inches in the Northeast, with the heaviest rain falling late in the weekend and early next week. Other areas of the eastern U.S. could locally receive 1 to 2 inches, except for 2 to 4 inches in southern Florida. Elsewhere, dry weather will prevail in most areas from the Pacific Coast to the Plains, with late-season warmth continuing in the Far West. The NWS 6- to 10-day outlook for October 31 – November 4 calls for the likelihood of above-normal temperatures in the Northeast and from California to the Rio Grande Valley, while cooler-than-normal conditions will cover the Plains, Midwest, and interior Southeast. Meanwhile, near-to below-normal precipitation in much of the U.S. should contrast with wetter-than-normal weather in the western Gulf Coast region and across the nation's northern tier from Montana to interior New England."

## Weather Hazard Outlook October 28 - November 1, 2017

Source: Climate Prediction Center

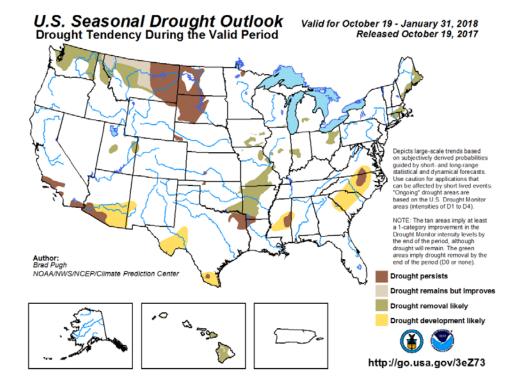


## **Significant Wildland Fire Potential Outlook**

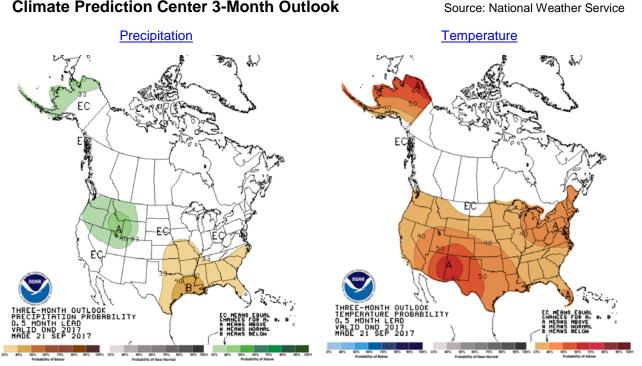
Source: National Interagency Fire Center



Seasonal Drought Outlook: October 19, 2017 - January 31, 2018 Source: National Weather Service



#### **Climate Prediction Center 3-Month Outlook**



Nov-Dec-Jan (NDJ) 2017-2018 precipitation and temperature outlook summaries

## **Water and Climate Update**

# **More Information**

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