United States Department of Agriculture

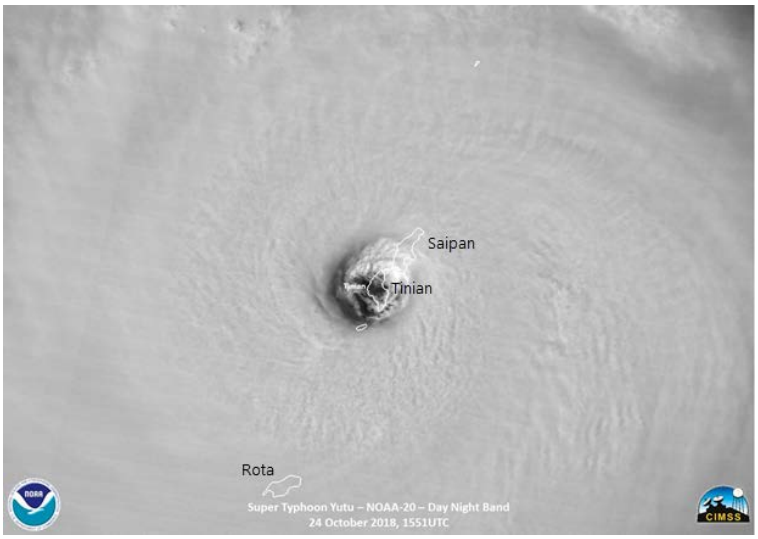
# Water and Climate Update

**October 25, 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.



## Super Typhoon Yutu, strongest storm of 2018, strikes Guam and Northern Mariana Islands




The **#NOAA20** satellite captured the moment the eye of Super Typhoon **#Yutu** passed directly over Tinian Island, one of three main islands of the Northern Mariana Islands and a U.S. commonwealth.

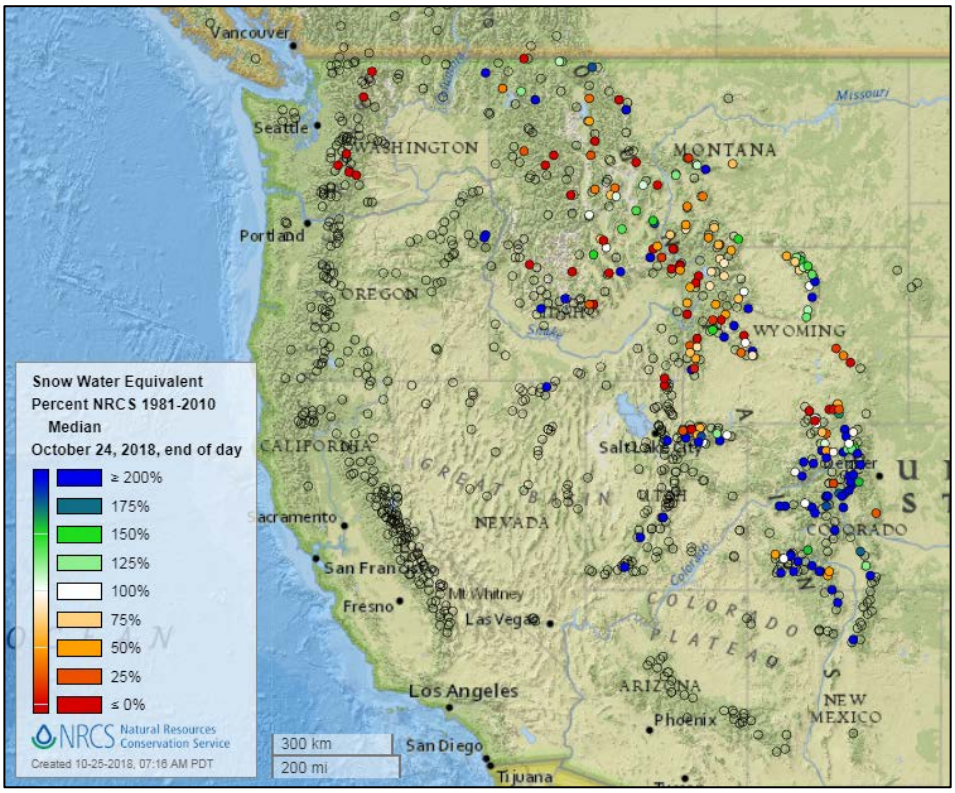
Before Super Typhoon Yutu reached the U.S. Pacific Islands, the National Weather Service in Guam posted typhoon warnings for the region's islands, including Rota, Tinian, Saipan, Guam, Alamagan, Pagan, and Agrihan. Devastating damage is expected from Yutu, which is equivalent to a Category 5+ hurricane. It is the most powerful storm in 2018 to date, and one of the top storms on record. With sustained winds of 180 mph and gusts to 220 mph, the hurricane inundated the islands with torrential rains, coastal flooding of 5 – 7 feet, and combined seas of 30 – 40 feet.

**Related:**

Category 5+ Typhoon Yutu is set to ravage U.S. territories of Saipan, Tinian with 180 mph winds – Washington Post
Super Typhoon Yutu bears down on Guam, Northern Mariana Islands – KHNL (HI)
Super Typhoon Yutu, The Most Powerful Storm Of The Year, Is Now Slamming Into The U.S. - Forbes
Super Typhoon Yutu hits Northern Mariana Islands with 180-mph winds - KHOU
Families take shelter as Super Typhoon Yutu approaches Guam – Pacific Daily News
Satellite images of Super Typhoon Yutu are downright terrifying – MSN
Northern Marianas brace for slow recovery after typhoon – AP on MSN.com

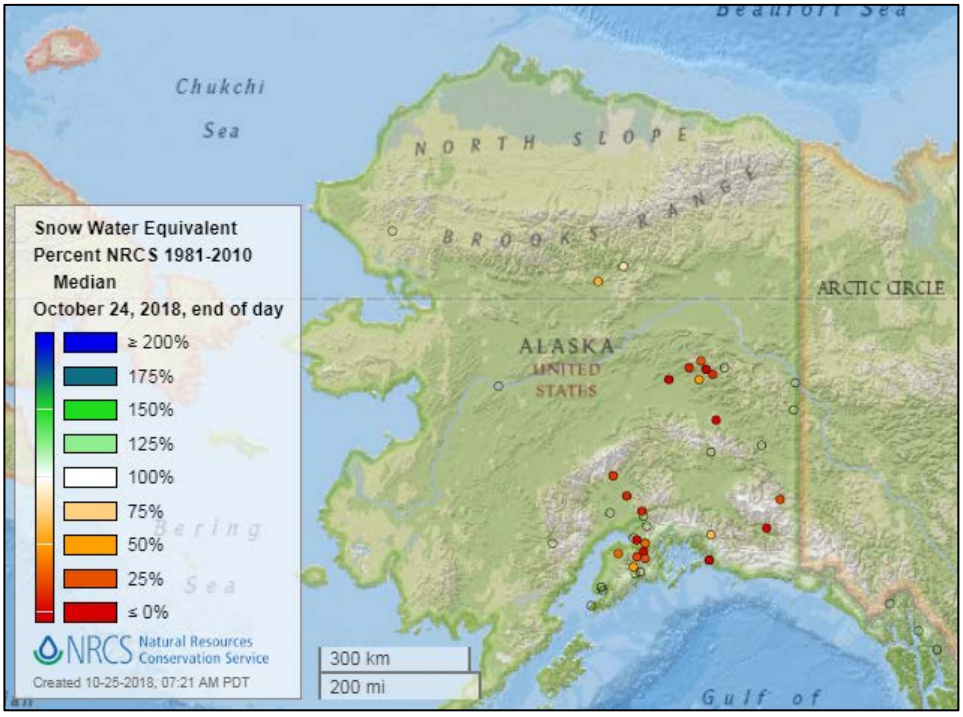
# Snow

## Current Snow Water Equivalent, NRCS SNOTEL Network




[Snow water equivalent percent of median map]

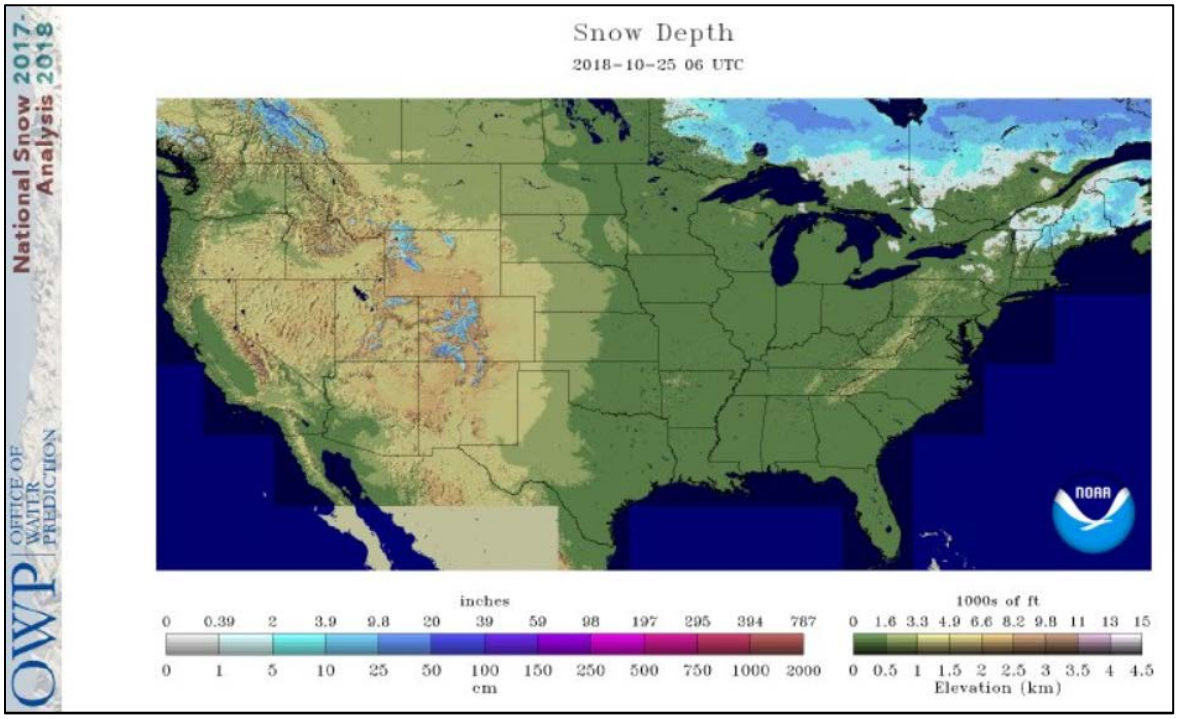
**See also:**
[Snow water equivalent values (inches) map]




[Alaska snow water equivalent percent of median map]

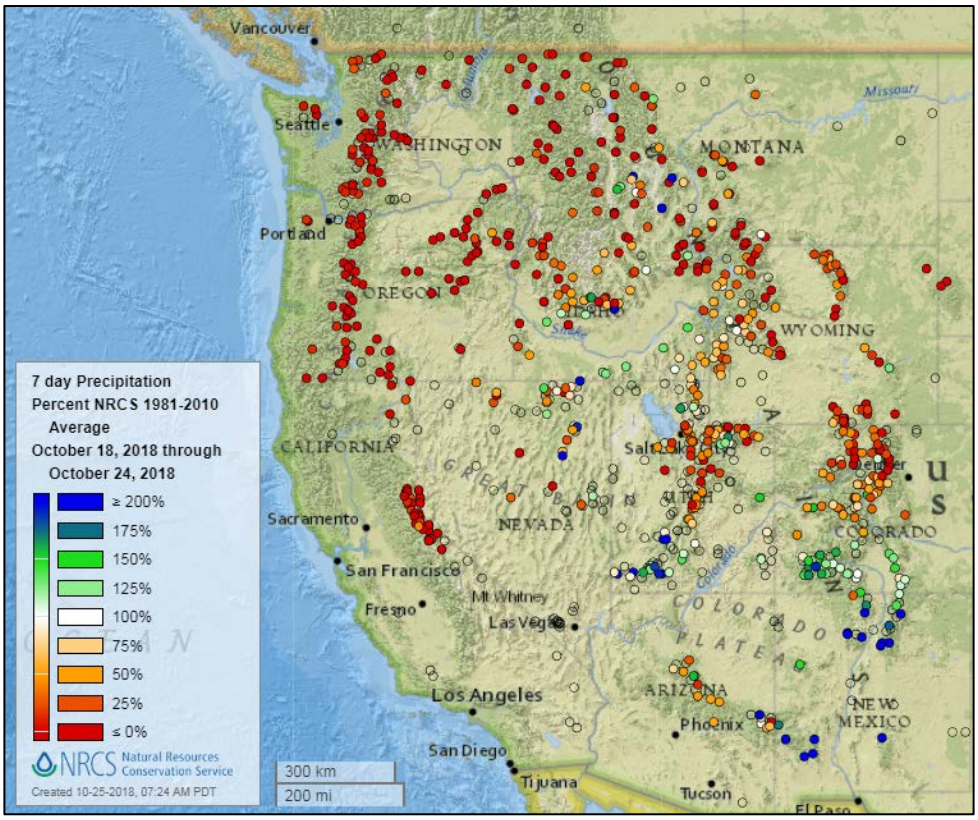
**See also:**
[Alaska snow water equivalent values (inches) map]

## Current Snow Depth, National Weather Service Snow Analysis




# Precipitation

### Last 7 Days, NRCS SNOTEL Network

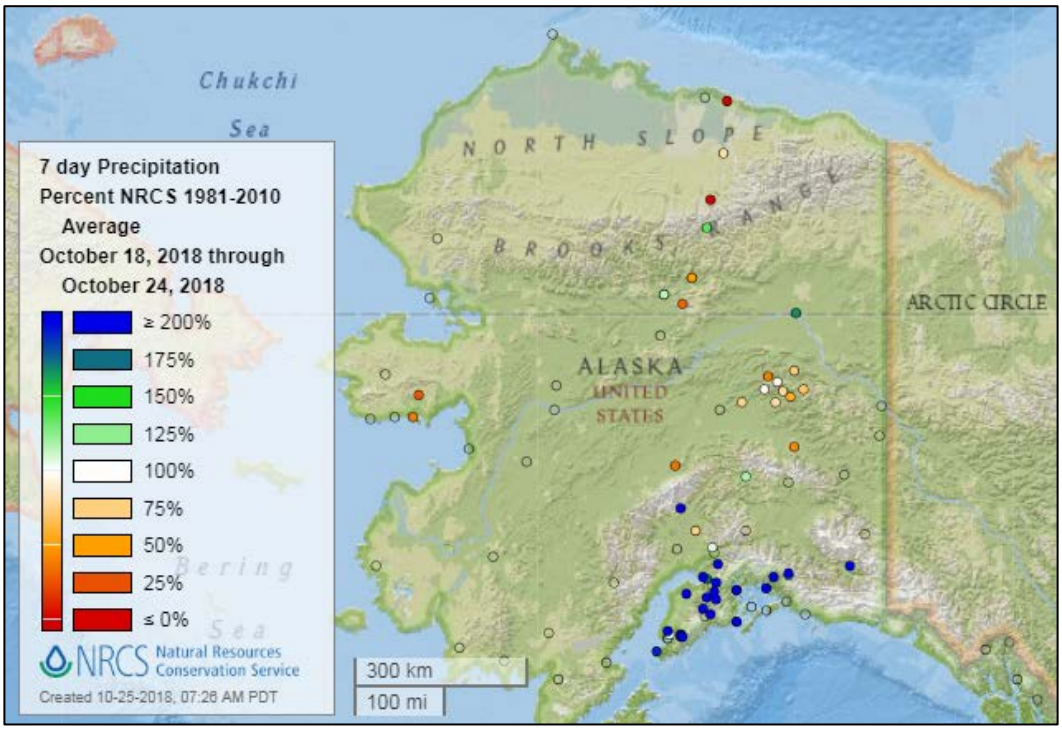



[7-day precipitation percent of average map]

***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

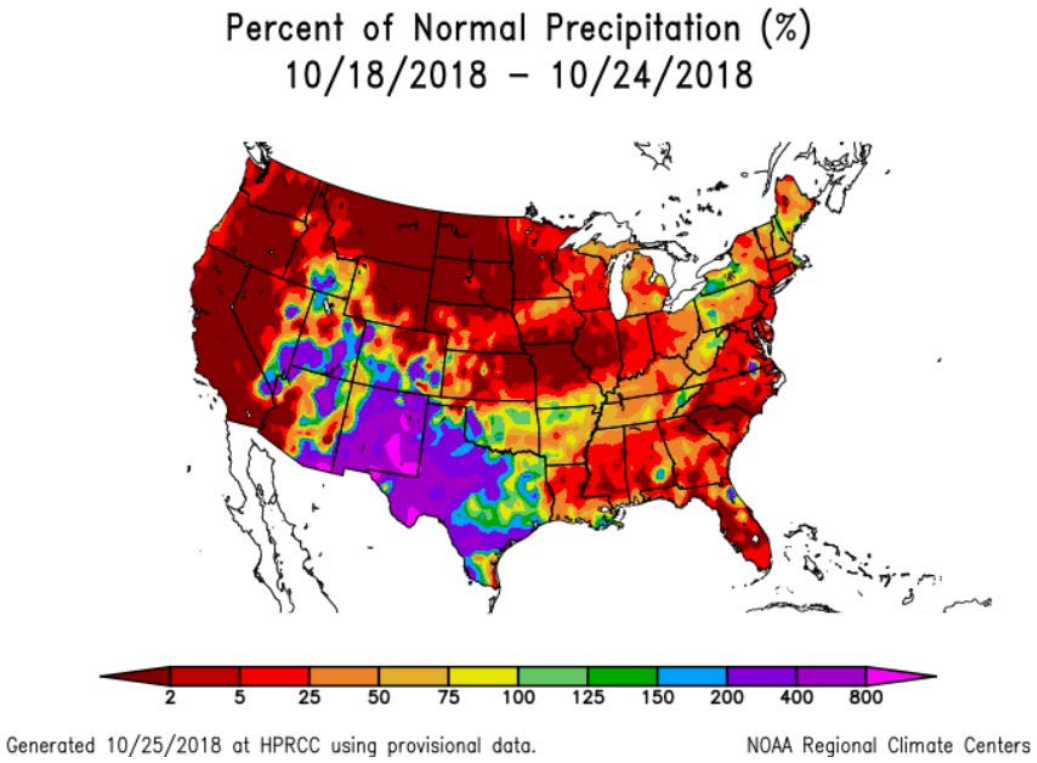



## Last 7 Days, National Weather Service (NWS) Networks

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

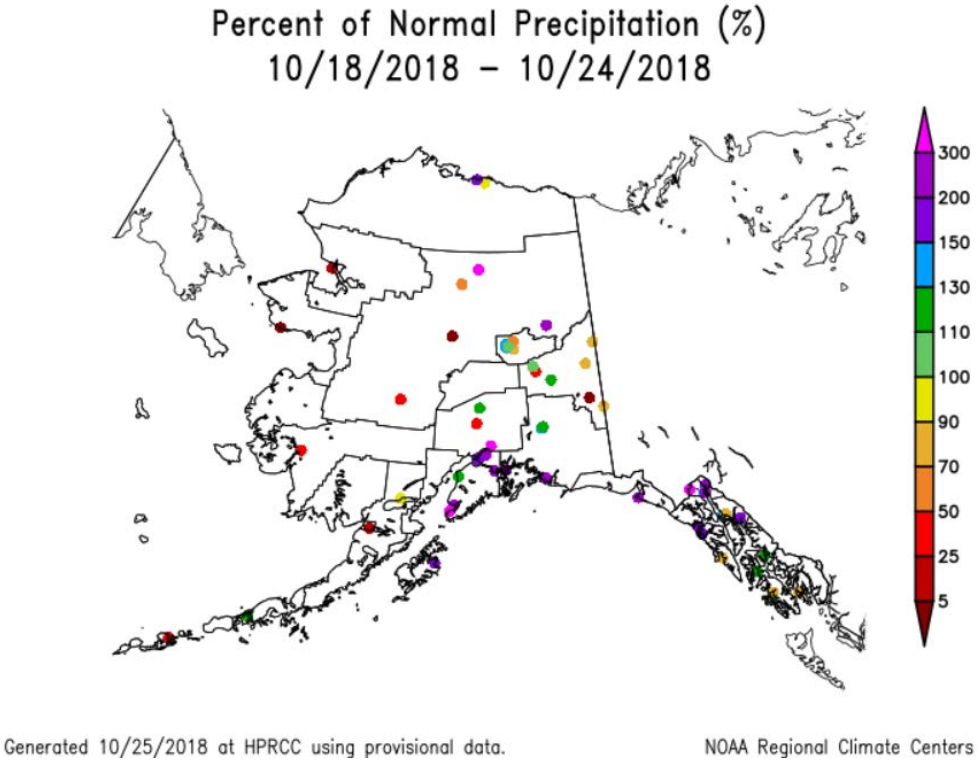


## Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

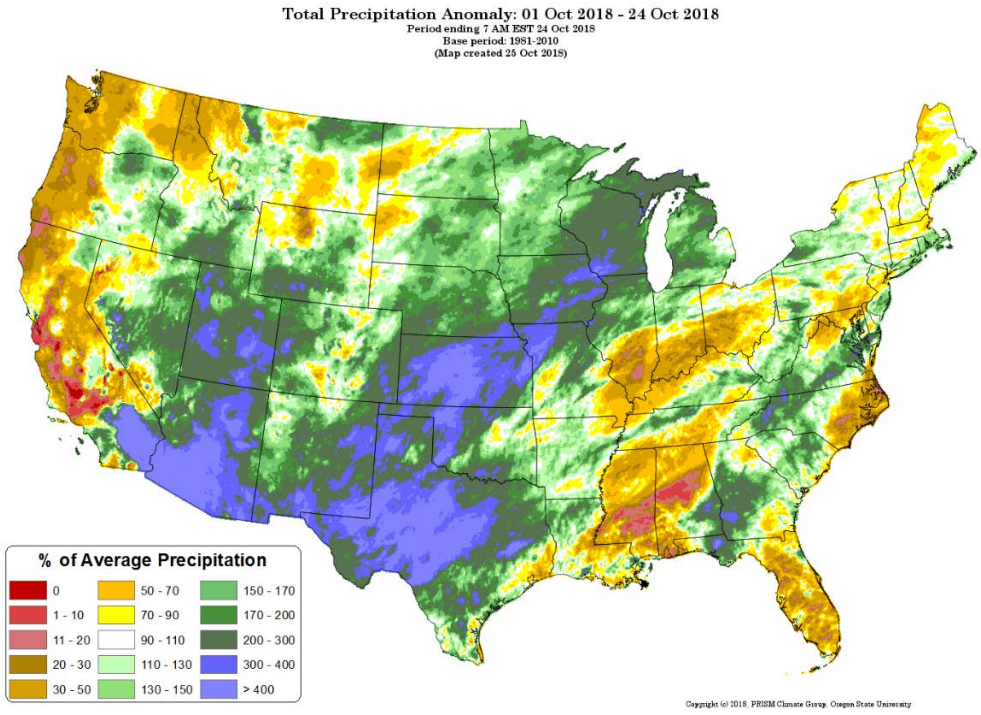
[7-day precipitation anomaly map] for Alaska.

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




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

Source: PRISM

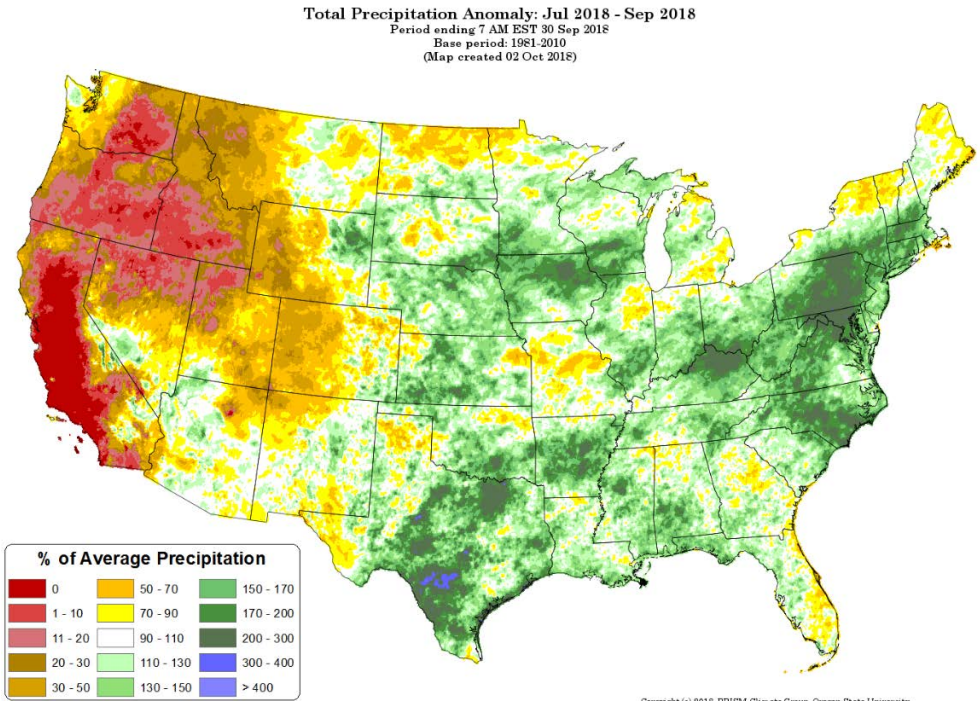



[Month-to-date national total precipitation percent of average map]

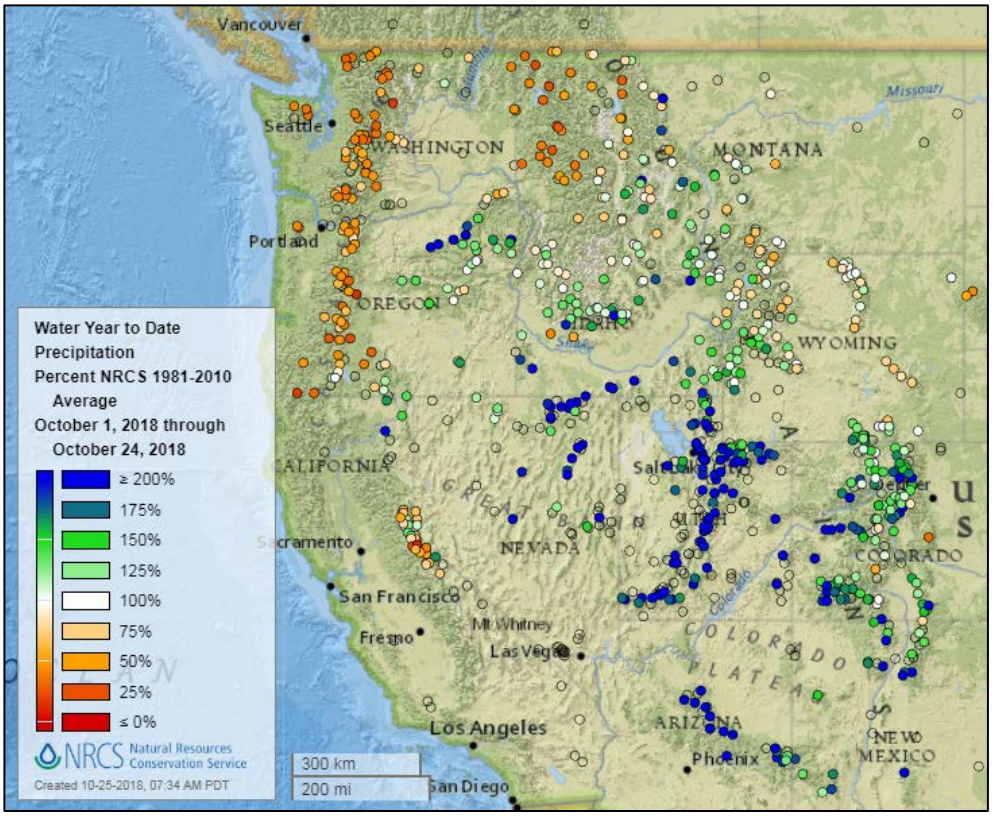
## Last 3 Months, All Available Data Including SNOTEL and NWS Networks

Source: PRISM

[July through September 2018 total precipitation percent of average map]



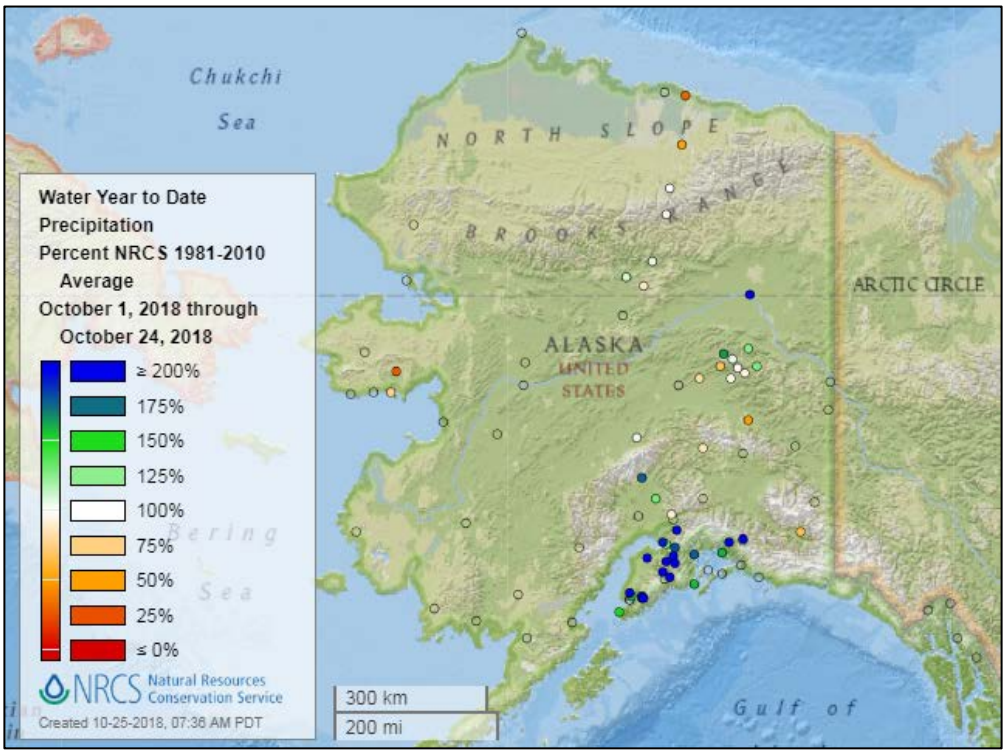

## Water Year to Date, NRCS SNOTEL Network




**Note:**
October 1 is the start of the 2019 Water Year

[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]

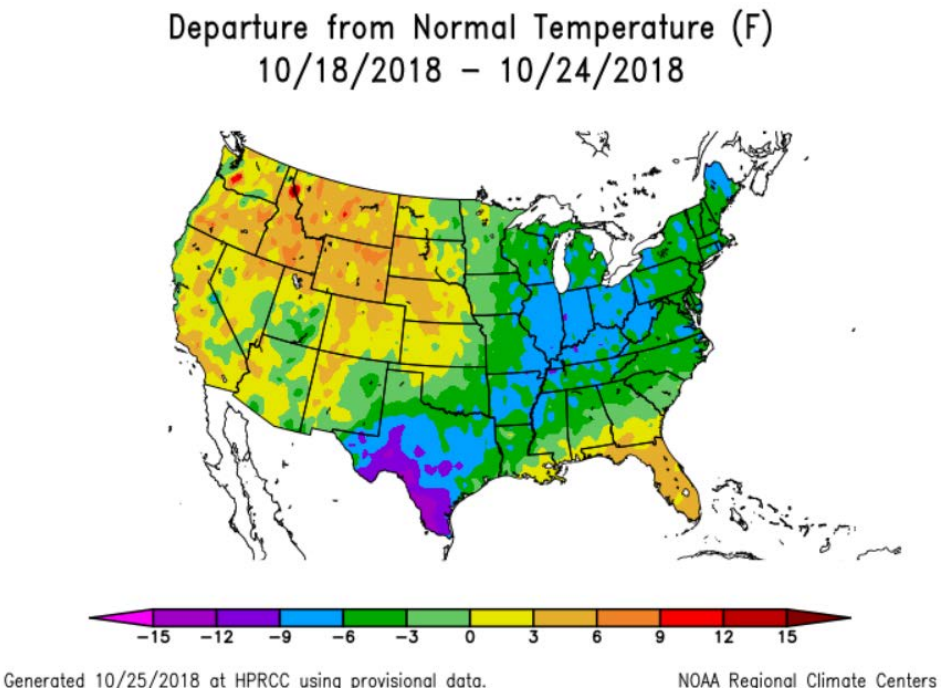
# Temperature

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

Source: Regional Climate Centers

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

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

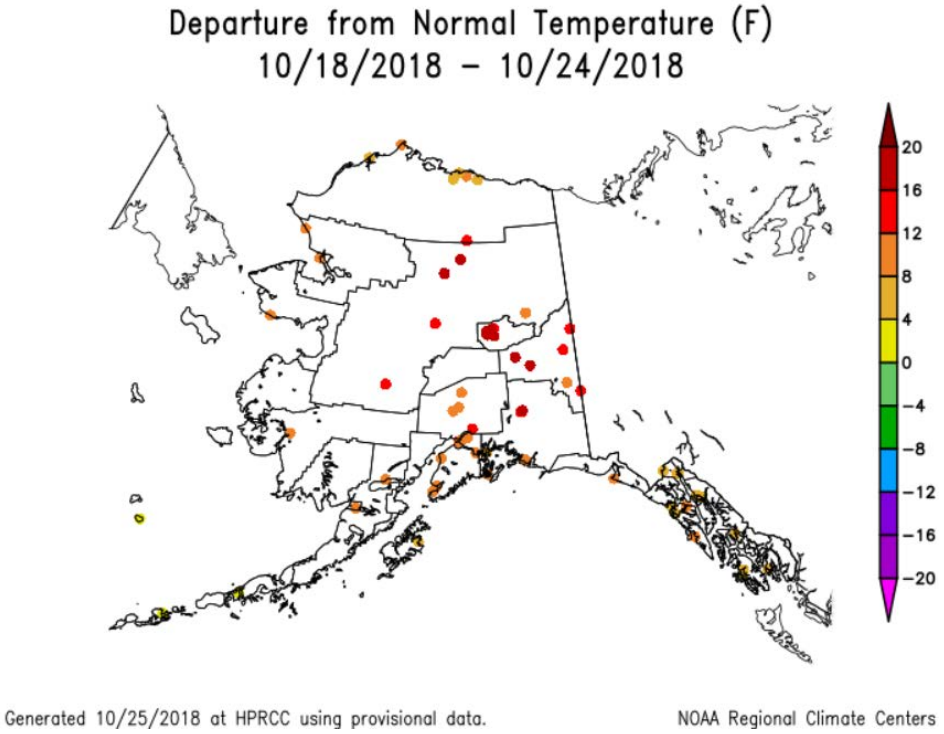



### Last 7 Days, National Weather Service (NWS) Networks

Source: Regional Climate Centers

7-day temperature anomaly map for Alaska.

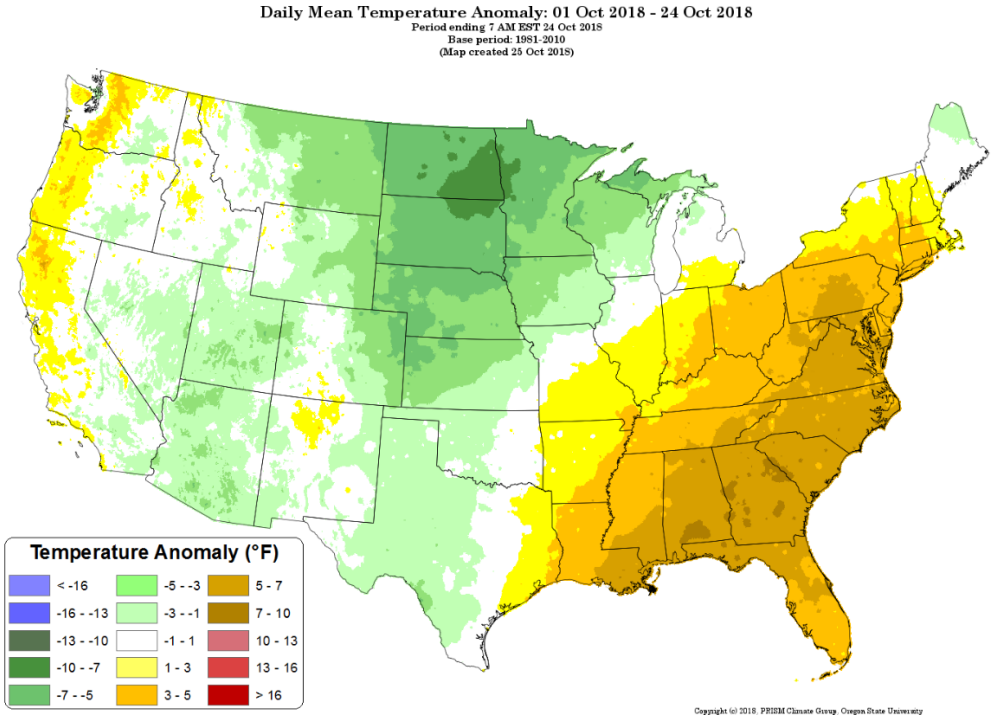
***See also:*** 7-day temperature (° F) map



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

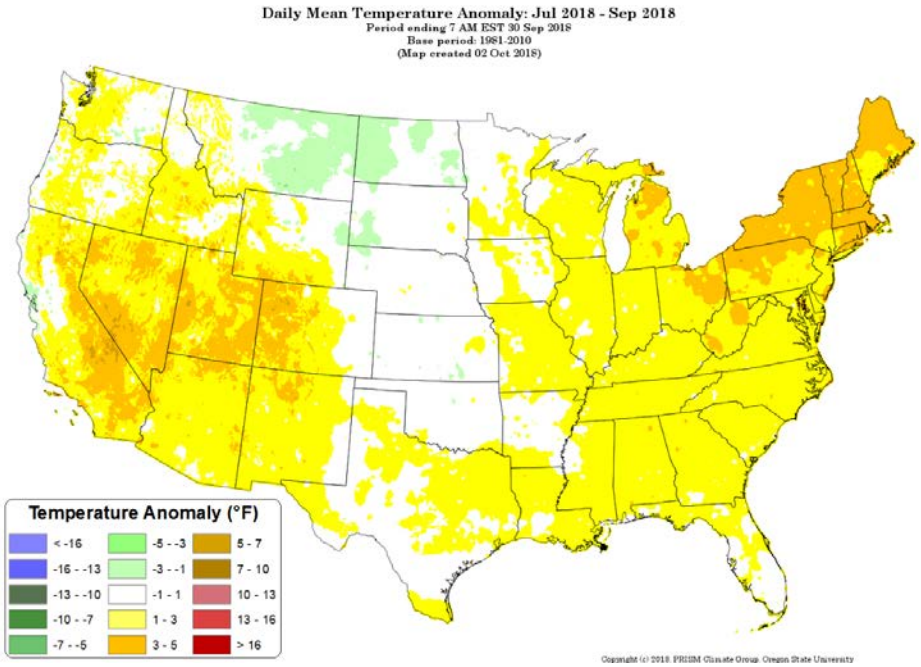
Source: PRISM

Month-to-date national daily mean temperature anomaly map




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

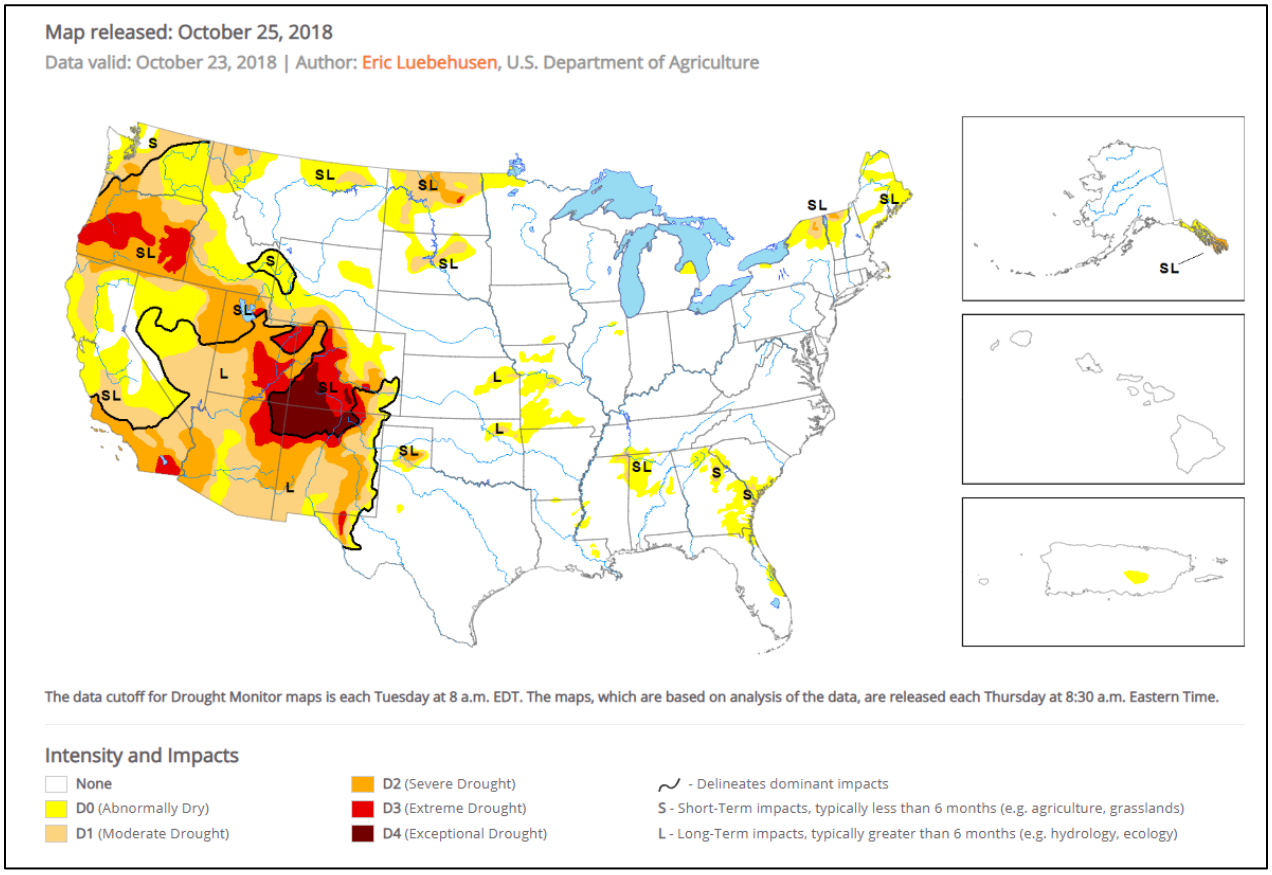
Source: PRISM




July through September 2018 daily mean temperature anomaly map

# Drought

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



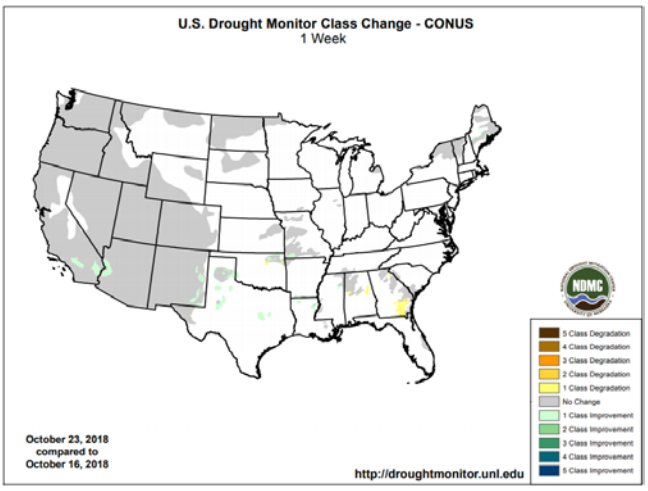

## Current National Drought Summary, October 25, 2018

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

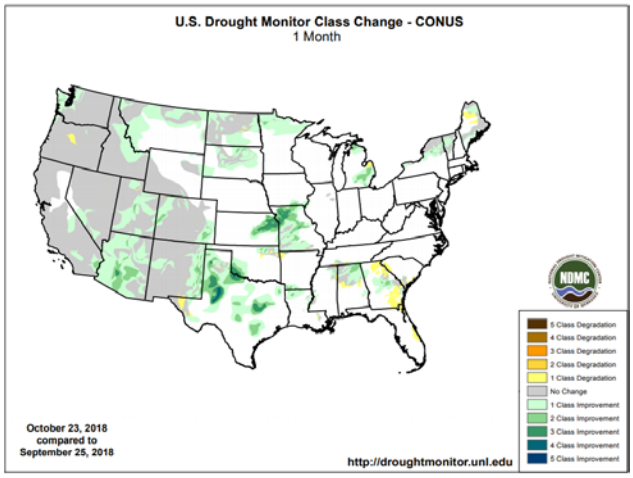
“Outside of additional heavy rain across the southcentral United States, conditions were generally quiet across the Nation. The break from the recent active weather pattern led to a quiet week in the U.S. Drought Monitor, with changes mostly confined to the South. While lingering wetness further reduced or eliminated drought from the Four Corners into Texas, short-term dryness was developing over parts of the Southeast. Note: the weekly drought analysis incorporates rain that has fallen through 12z Tuesday (8 a.m., EDT); any precipitation that falls after the data cutoff will be included in the following week’s assessment. Consequently, the heavy rain — associated in part with the remnants of Eastern Pacific Hurricane Willa — that has impacted (or will impact) much of the southern and eastern U.S. through the weekend will be accounted for next week.”

## Changes in Drought Monitor Categories over Time

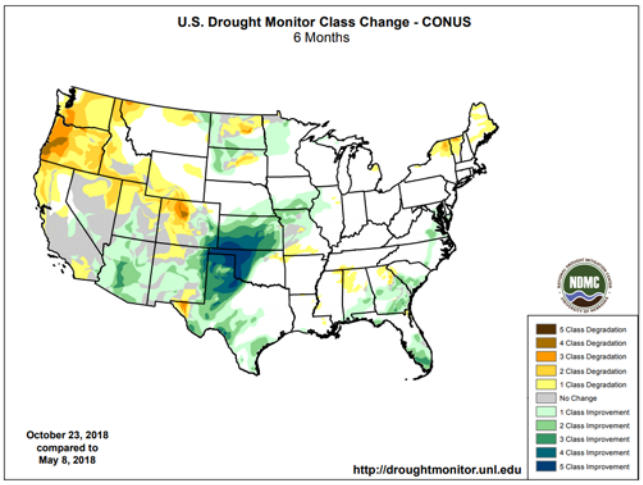
**1 Week**



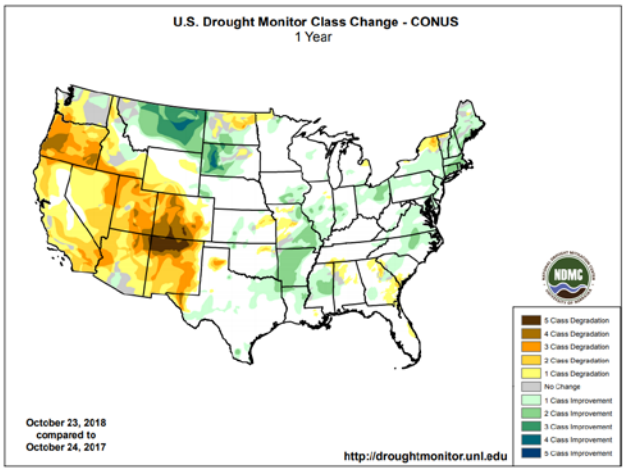

**1 Month**




**6 Months**




**1 Year**

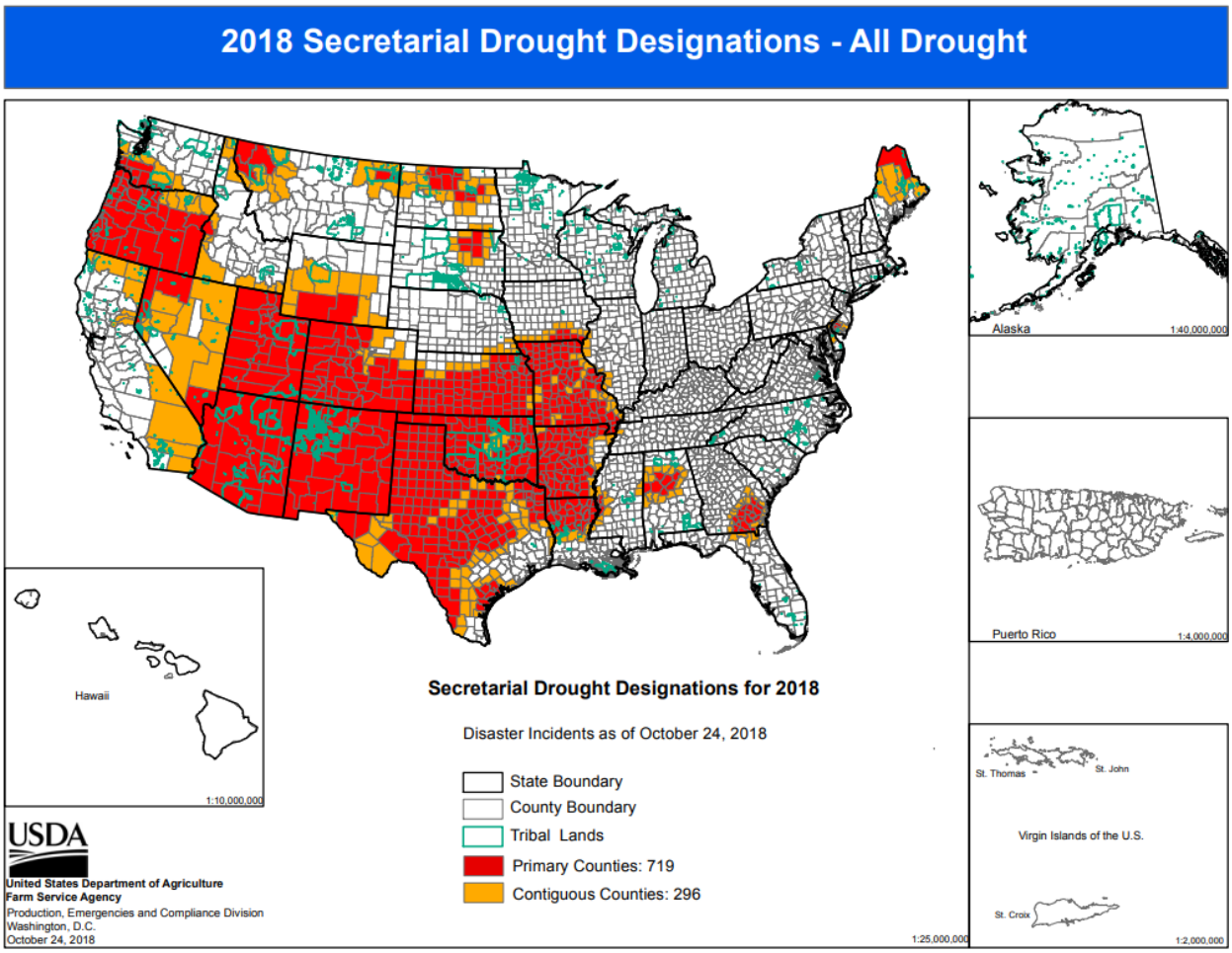



Changes in drought conditions over the last 12 months

## 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

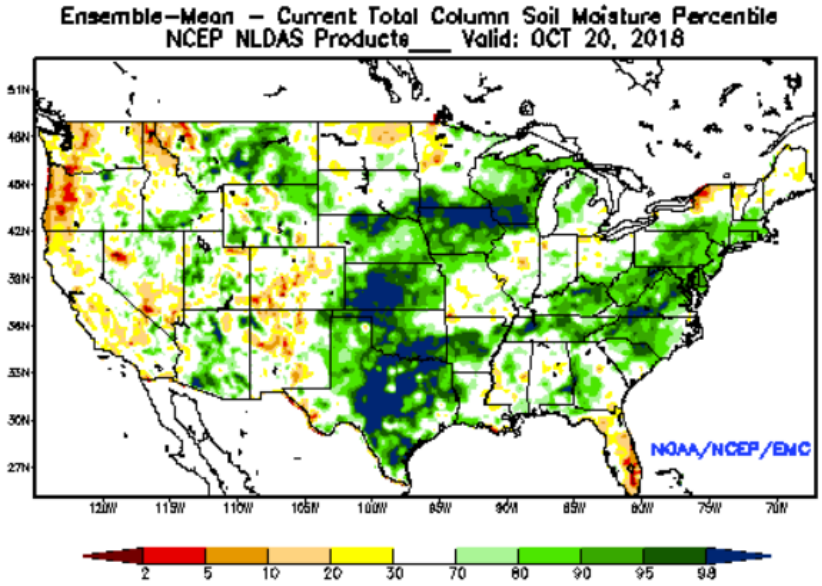
## USDA 2018 Secretarial Drought Designations



# Other Climatic and Water Supply Indicators

## Soil Moisture

Source: NOAA National Centers for Environmental Prediction



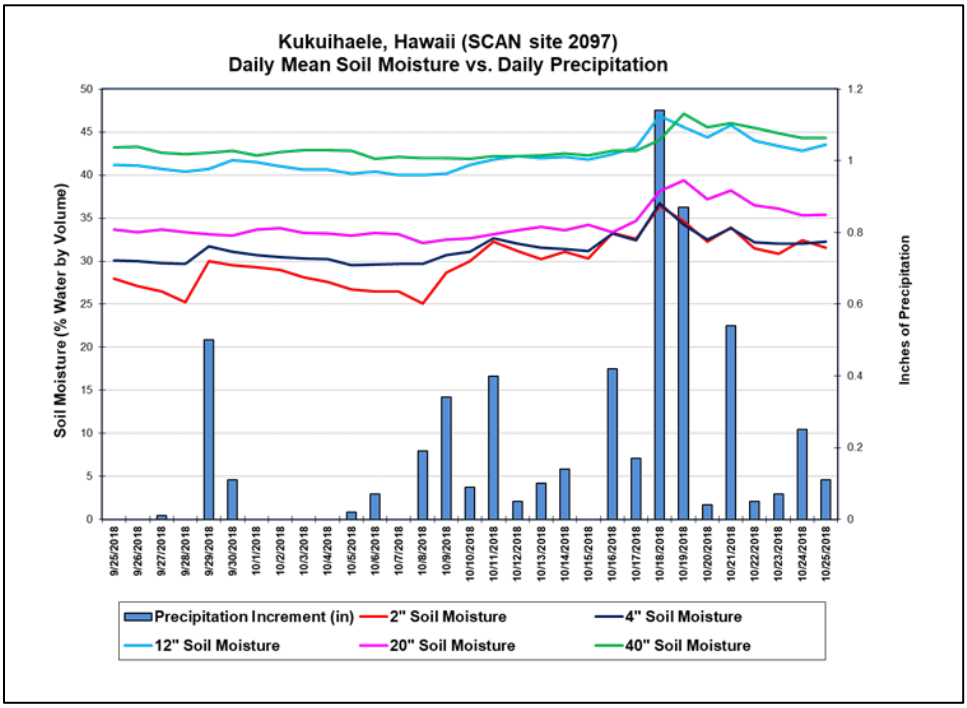

Modeled soil moisture percentiles as of October 20, 2018

### 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)

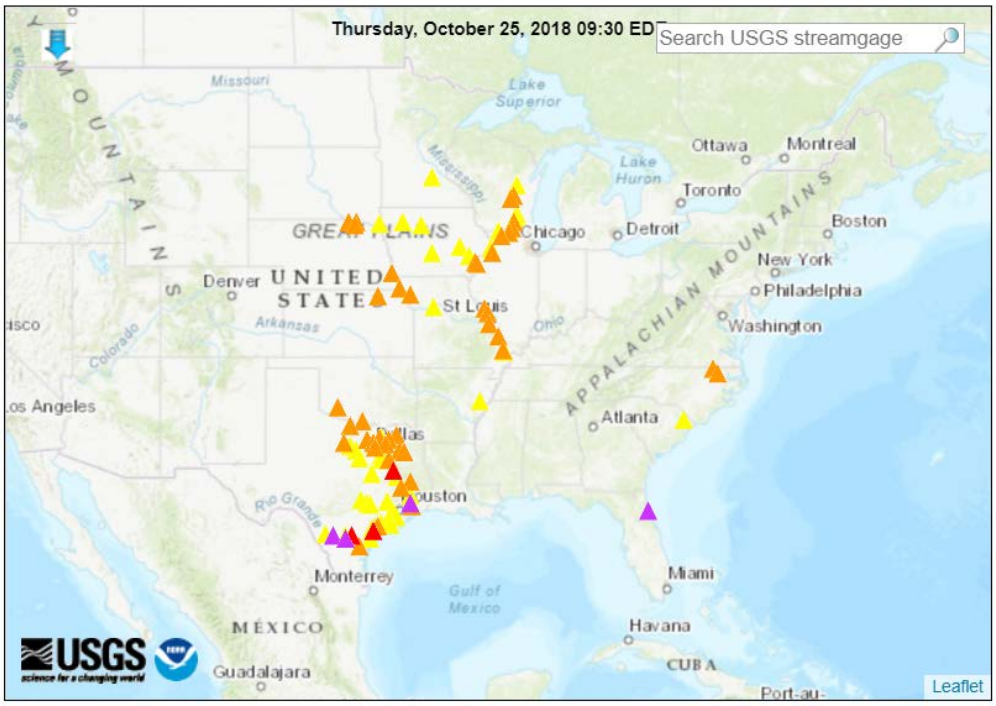



This chart shows the precipitation events during the last 30 days at the Kukuihaele SCAN site in Hawaii. During the period of October 16-19, the site accumulated 2.6 inches of precipitation, with all sensors showing an increase in soil moisture levels.

## Streamflow

Source: USGS

### Map of flood and high flow conditions



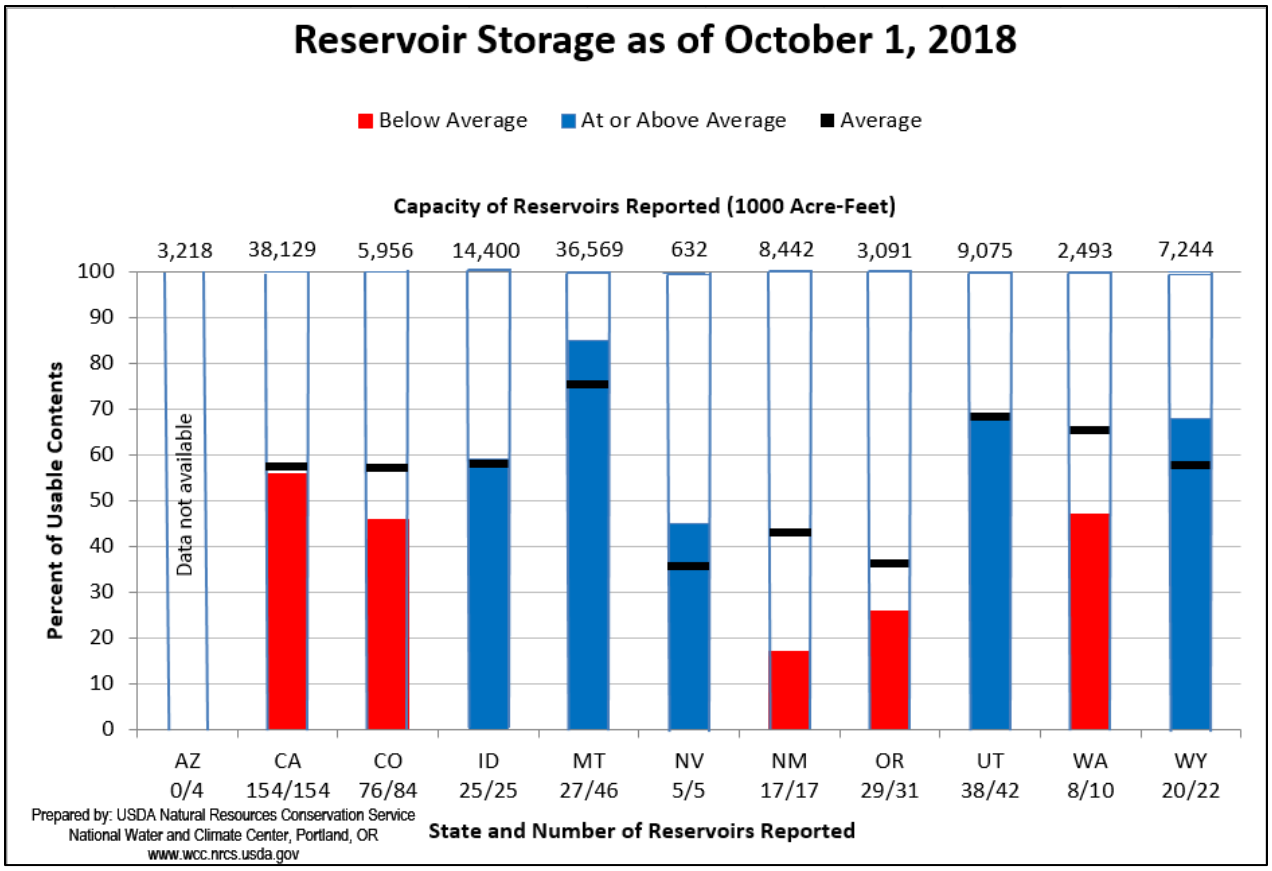

| Explanation - Percentile classes | | | | | | |
|---|---|---|---|---|---|---|
| <95 | 95-98 | >= 99 | Above action stage | Above flood stage | Above moderate flood stage | Above major flood stage |
| △ Streamgage with flood stage ○ Streamgage without flood stage | | | | | | |

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

## Reservoir Storage

### Western States Reservoir Storage

Source: NRCS National Water and Climate Center

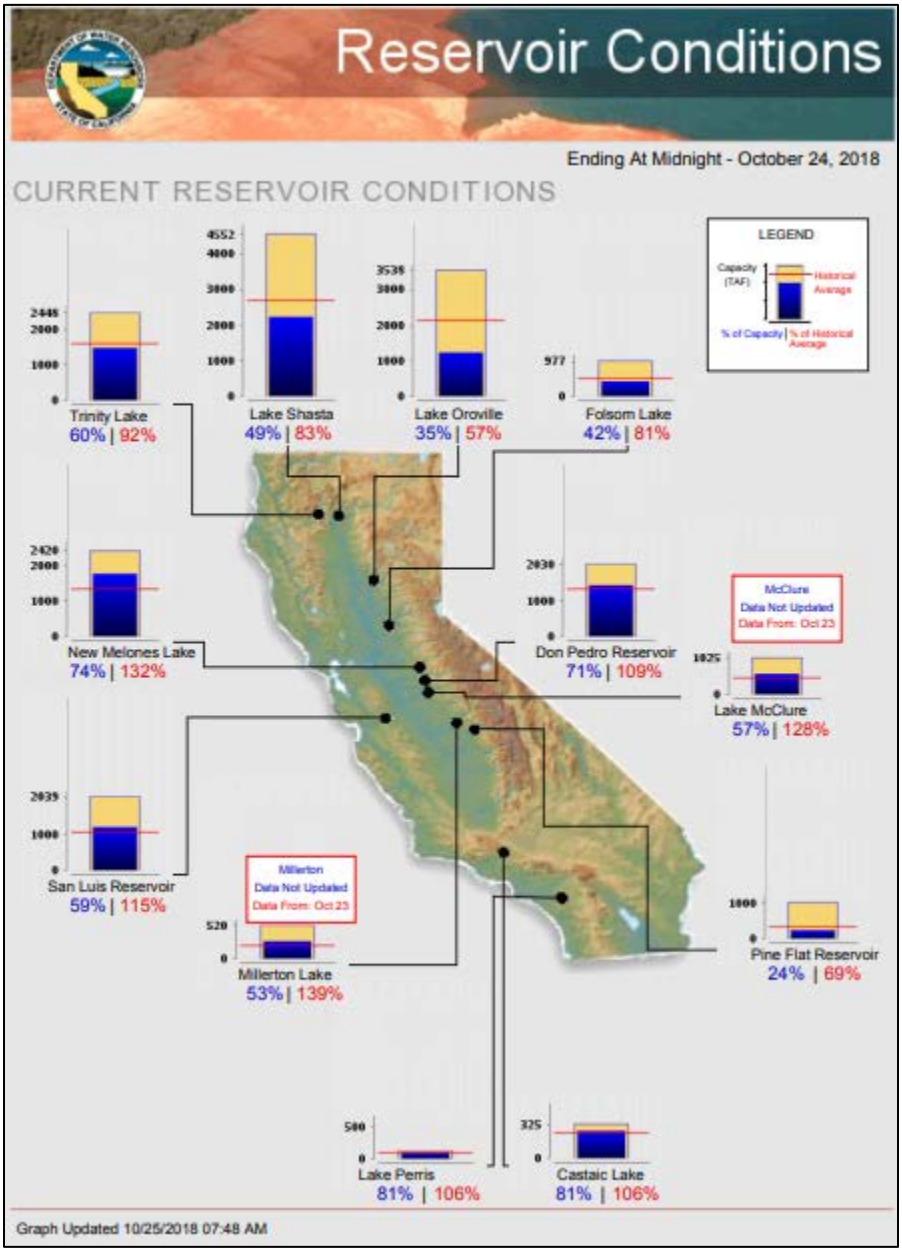



October 1, 2018 Reservoir Storage: Chart | Dataset

### 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




Current California Reservoir Conditions

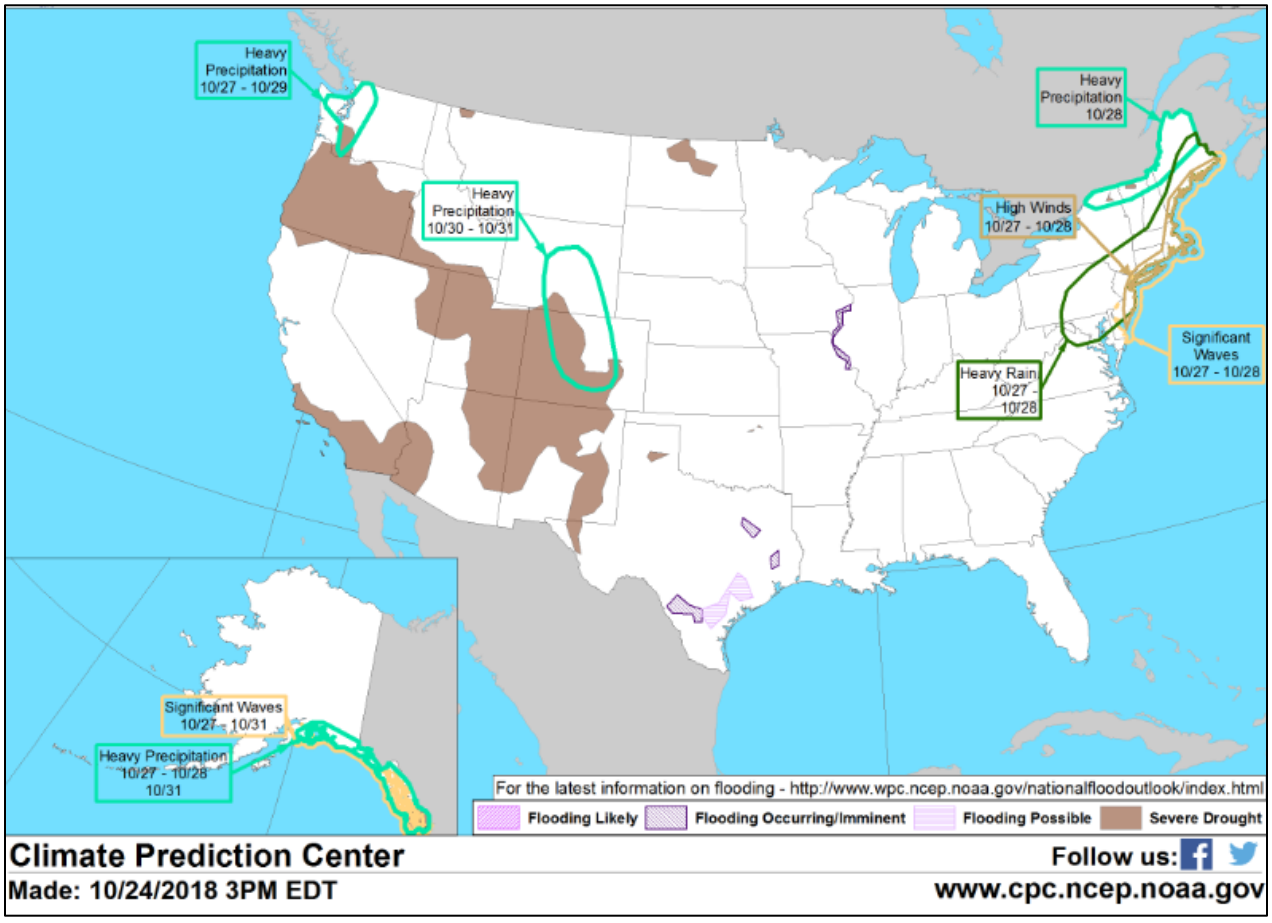
# Short- and Long-Range Outlooks

## Agricultural Weather Highlights

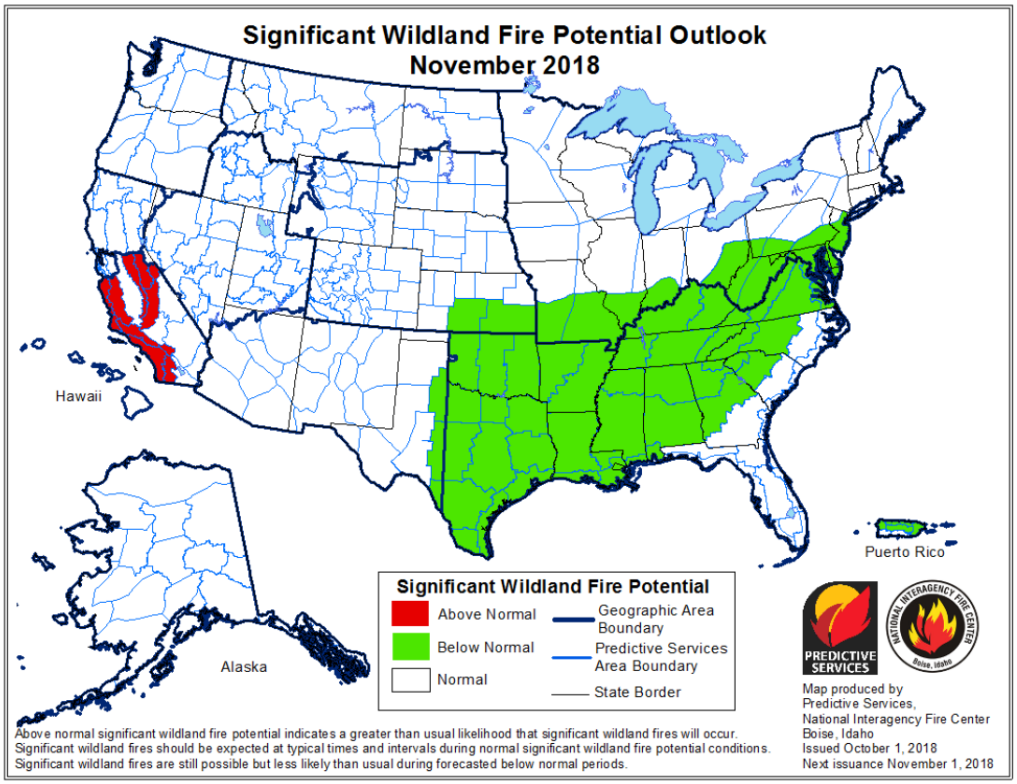
Author: Brad Rippey, Agricultural Meteorologist, USDA/OCE/WAOB

National Outlook, Thursday, October 25: "A developing storm system along the Gulf Coast will turn northward and produce heavy rain and windy conditions along the middle and northern Atlantic Seaboard on October 26-27. Meanwhile, light rain will spread from the central Plains into the Midwest. Rainfall totals could reach 1 to 2 inches across the Southeastern and Atlantic Coast States, with higher amounts possible in coastal New England. Meanwhile, mild, mostly dry weather will prevail across the western half of the U.S., except for periods of rain and high-elevation snow from the Pacific Northwest to the northern Rockies. Chilly conditions will linger, however, in most areas east of the Mississippi River. The NWS 6- to 10-day outlook for October 30 – November 3 calls for near- to below-normal temperatures nationwide, except for warmer-than-normal weather in the western Gulf Coast region and along the Pacific Coast. Meanwhile, above-normal precipitation across most of the country will contrast with drier-than-normal conditions in the Pacific Coast States and the southern Atlantic region."

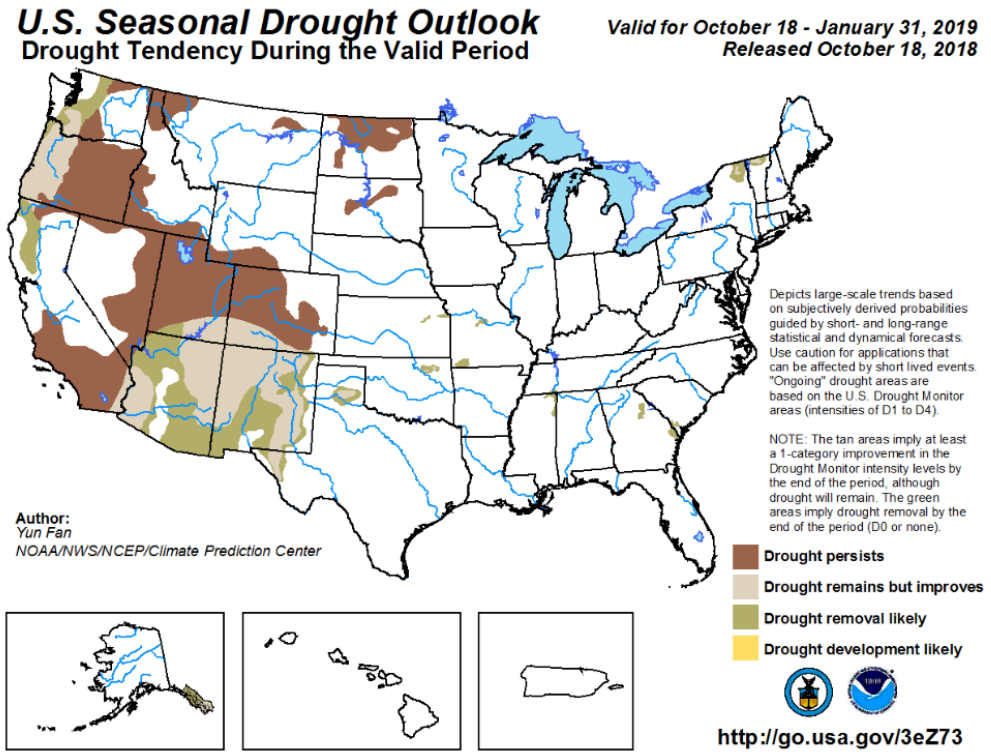
**Weather Hazards Outlook October 27 – 31, 2018** Source: Climate Prediction Center



**Significant Wildland Fire Potential Outlook** Source: National Interagency Fire Center



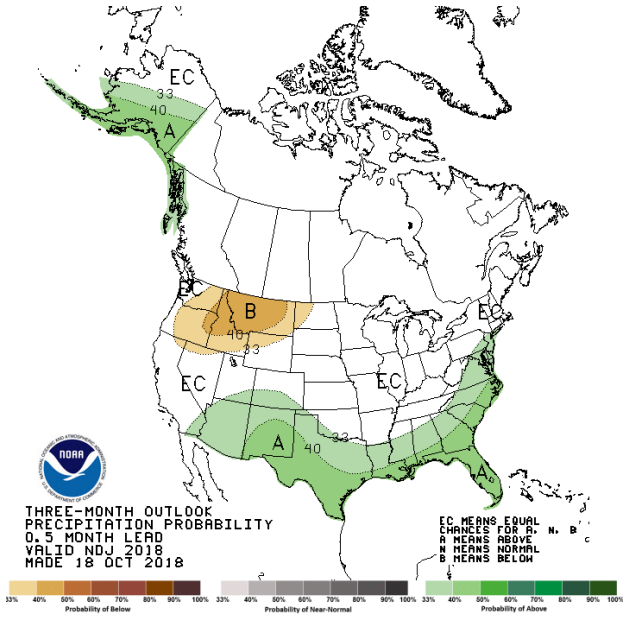

**Seasonal Drought Outlook: October 18, 2018 - January 31, 2019** Source: National Weather Service



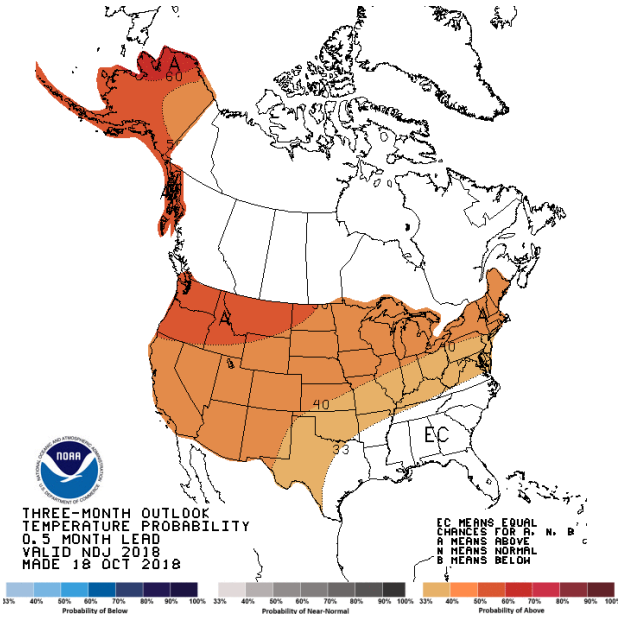
## Climate Prediction Center 3-Month Outlook

Source: National Weather Service

Precipitation




Temperature




November-December-January (NDJ) 2018 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.