



# Drought Information Statement for the Central Tennessee Valley

Issued by: WFO Huntsville, AL

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- Since portions of the area are in D3 (Extreme) drought, this product will be updated weekly. However, statements may be updated otherwise to communicate any significant information.
- Please see all currently available products at <https://drought.gov/drought-information-statements>
- Please visit <https://www.weather.gov/hun/DroughtInformationStatement> for previous statements





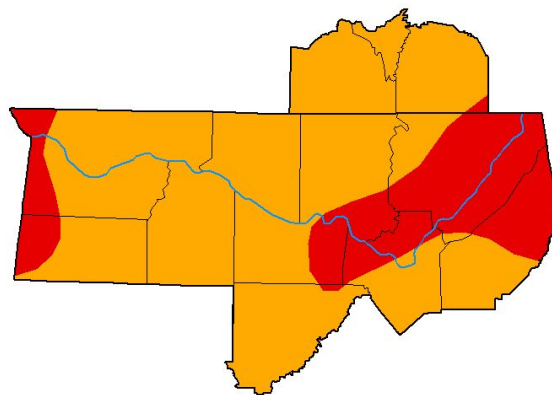
# U.S. Drought Monitor

## Latest U.S. Drought Monitor Map

- Drought intensity and Extent
  - D4 Exceptional Drought: None
  - D3 Extreme Drought: Western portions of Lauderdale, Colbert, and Franklin counties & much of Jackson County, northern DeKalb, northern Marshall, eastern Morgan, southeastern Madison, and very small sections of northeastern Cullman and southeastern Franklin (TN) Counties.
  - D2 Severe Drought: The remainder of the area not in D3 status is in D2 status, which includes the cities of Huntsville, Decatur, Athens, the Quad Cities, Courtland, Cullman, Guntersville, Albertville, Fayetteville, Winchester, and Lynchburg.
  - D1 Moderate Drought: None
  - D0: Abnormally Dry: None

### U.S. Drought Monitor Huntsville, AL WFO

**October 24, 2023**  
(Released Thursday, Oct. 26, 2023)  
Valid 8 a.m. EDT



#### Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

#### Author:

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[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)

Image Caption: U.S. Drought Monitor valid 7 AM CDT, October 24, 2023.



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Huntsville, AL**



# Recent Change in Drought Intensity

- One Week U.S. Drought Monitor Class Change
  - Drought Worsened: Small portions of southeastern Cullman, and southern Marshall and DeKalb Counties were changed from D1 to D2 drought. Drought deteriorated from D2 to D3 status in western portions of Lauderdale, Colbert, and Franklin counties & much of Jackson County, northern DeKalb, northern Marshall, eastern Morgan, southeastern Madison, and very small sections of northeastern Cullman and southeastern Franklin (TN) Counties.
  - No Change: Elsewhere, drought status remained unchanged at D2 status across much of the area.
  - Drought Improved: No areas

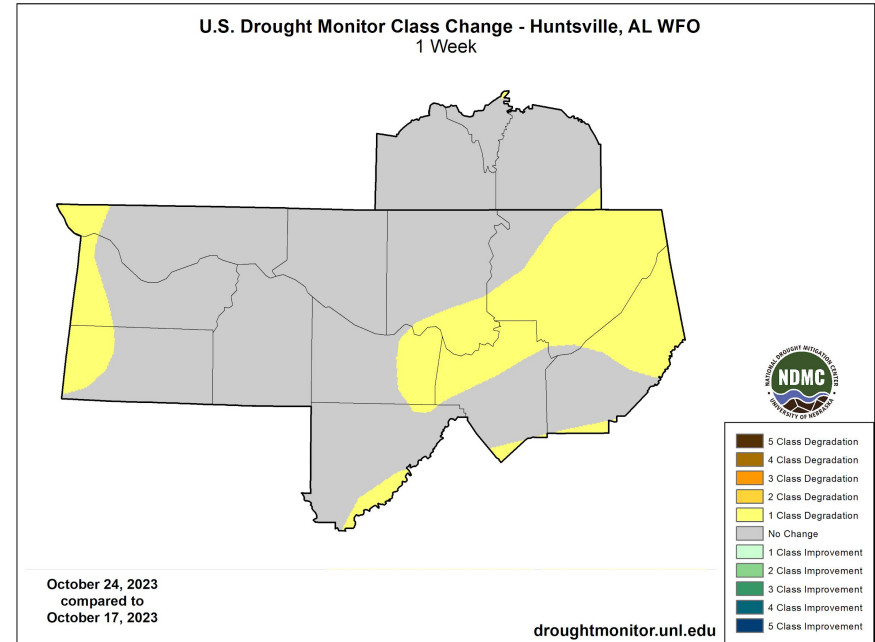
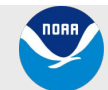


Image Caption: U.S. Drought Monitor 1-week change map valid 7 AM CDT October 24, 2023.

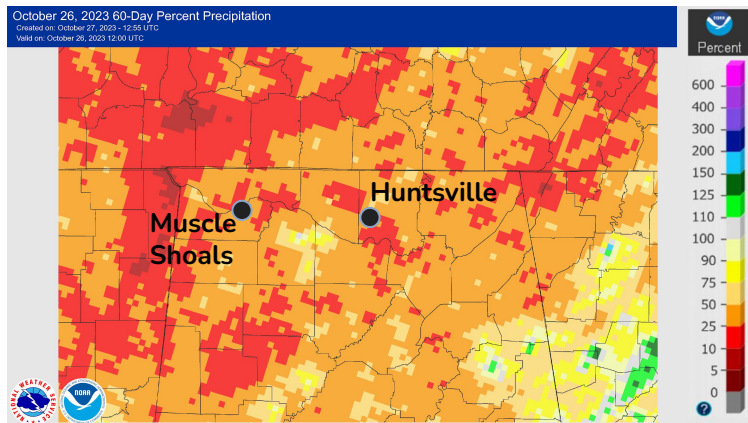
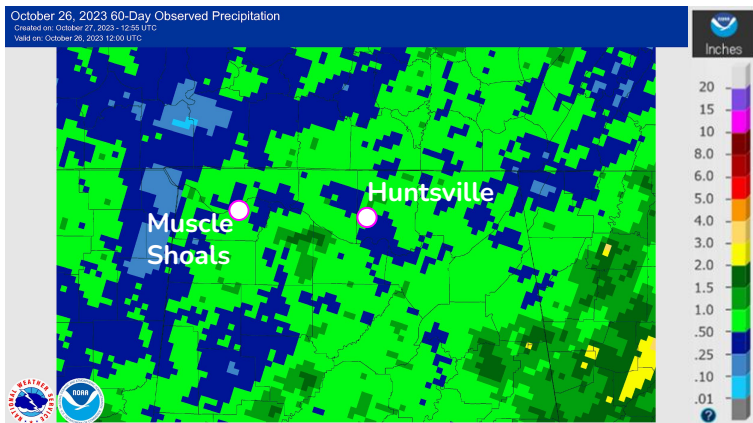




# Precipitation - Past 60 Days

## Main Takeaways

- During the last 60 days (ending 7 AM CDT Oct 26), rainfall largely totaled around 0.50 to 1.0 inch. Normal 60-day rainfall this time of year is around 7 to 8 inches. Precipitation since September 1st has only totaled 0.40 inch at Muscle Shoals and 1.60 inches at Huntsville.
- Rainfall amounts are largely around 25-50% of normal for the last 60 days (orange shading), with some locations just around 10-25% of normal (red shading), as shown in the graphic on the right.



### Image Captions:

Left - 60-Day Precipitation from the Advanced Hydrologic Prediction Service (AHPS), Right - 60-Day Percent of Normal Precipitation from AHPS. Data ending October 26, 2023







# Summary of Impacts

## Hydrologic Impacts

- No significant hydrologic impacts, although streamflows have fallen markedly over recent weeks.
- See next slide for more details

## Agricultural Impacts

- Per the latest USDA Crop and Progress Condition Report on October 23rd, reporters noted that continued dry weather prevented some operators from planting winter wheat and other winter crops. Also, pastures were reported to be in poor to fair condition. Operators continued to feed supplemental hay to cattle due to increasingly poor pasture conditions. Late planted soybeans and the apple crop, especially in Cullman County, have been negatively impacted. Please see the latest Crop and Progress Condition Reports for [Alabama](#) and [Tennessee](#) from the USDA.

## Fire Hazard Impacts

- The Alabama Forestry Commission (AFC) updated a Fire Alert on October 24th to indicate that no burn permits will currently be issued for all counties in northern Alabama. The AFC has reported that fires have burned over 600 acres of land in northern AL in the past week. Debris burn permits are currently required in TN counties. [AFC link](#); [TN Wildland Fire Link](#)

## Drought Mitigation Actions

- The Alabama Dept of Economic and Community Affairs - Office of Water Resources upgraded Drought Regions 1 and 3 to a Drought Watch as of October 11, 2023. Water managers are urged to monitor water conditions and encourage the wise and efficient usage of our water resources. You can see the latest Alabama Drought Declaration here... <https://adeca.alabama.gov/wp-content/uploads/DroughtDeclaration.pdf>.
- Please refer to your municipality and/or water provider for any mitigation information in the future.





# Hydrologic Conditions

## Main Takeaways

- Degradation in streamflows has occurred in recent weeks. Many basins in the area are experiencing 7-Day avg flows in the 10th-24th percentile for this time of year. However, streamflows at some individual locations have fallen below the 10th percentile (e.g., Big Nance Creek: 4th percentile).
- Lake/Reservoir levels remain near normal.

Additional data:

None at this time to report

## 7-Day Avg Streamflow Percentiles

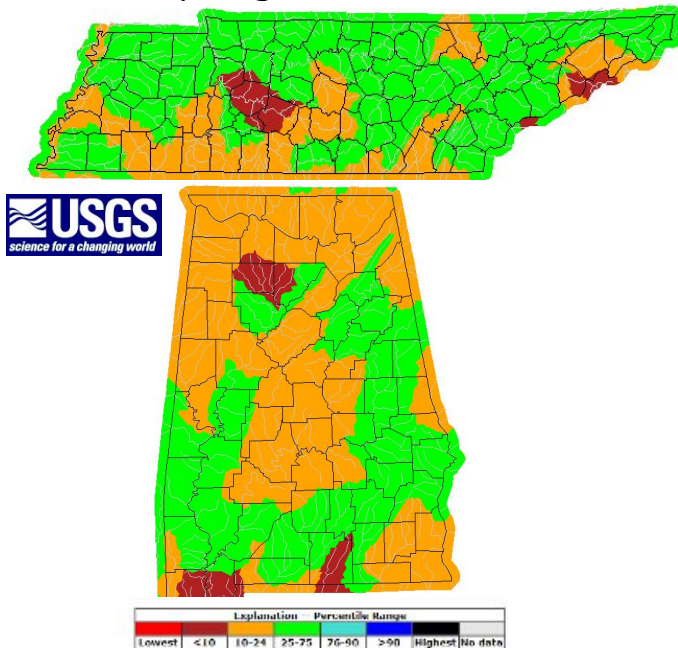


Figure Caption: USGS 7-day streamflow percentiles for Tennessee (top) and Alabama (bottom) , valid Oct 26 , 2023

## Lake Stages

Reservoir/ Lake	Pool Elevation (ft)	Current Elevation (ft)	Percent Full
Bear Creek	576	576	100%
Little Bear Creek	620	619	~100%
Cedar Creek	580	579	~100%
Tim's Ford	882	886	>100%
Nickajack	634	634	100%
Guntersville	594	594	100%
Wheeler	553	553	~100%
Wilson	N/A	507	Within Normal Range
Pickwick	411	412	~100%
Lewis Smith	499	500	~100%

Table caption: Reservoir conditions as of Oct 26, 2023



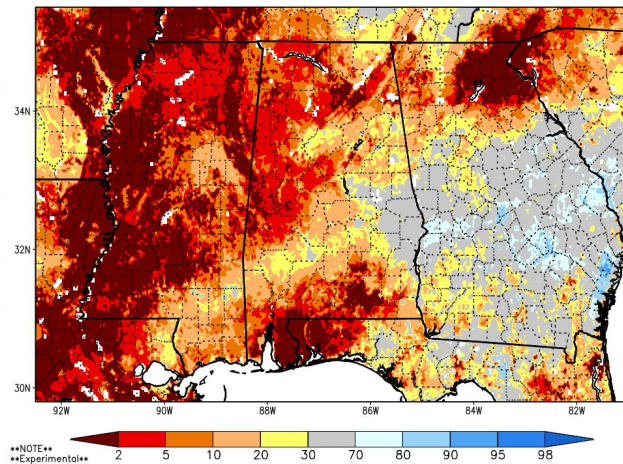


# Agricultural Impacts

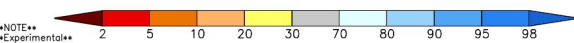
## Main Takeaways

- Soil Moisture values have decreased in recent weeks due to below normal rainfall.
- 0-100 cm depth soil moisture percentiles (left image) indicate values largely below the 20th percentile. However, many locations in northwest AL and the Sand Mountain plateau have one meter soil moisture below the 5th percentile.
- Meanwhile, the crop moisture index (right image) indicates values are abnormally dry for NW portions of Alabama for the weekly period ending Oct 21, 2023.

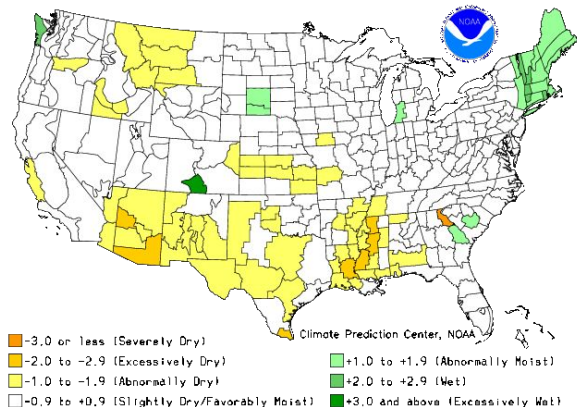
SPoRT-LIS 0-100 cm Soil Moisture percentile valid 27 Oct 2023



\*\*NOTE\*\*  
\*\*Experimental\*\*



Crop Moisture Index by Division  
Weekly Value for Period Ending OCT 21, 2023  
Short Term Need vs. Available Water in a Shallow Soil Profile



Climate Prediction Center, NOAA

## Image Captions:

Left: NASA Short-term Prediction Research and Transition Center 0-100 cm Soil Moisture Ranking Percentile based on 33-year climatology (1981-2013), Oct 27, 2023

Right: Crop Moisture Index by Division. Weekly value for period ending Oct 21, 2023





# Fire Hazard Impacts

## Main Takeaways

- Keetch Byram Drought Index values have increased significantly in recent weeks, with values around 600-700. National Weather Service offices may issue Red Flag Warnings when values climb above 300 in Alabama, although other weather criteria must be met. At this time, the Alabama Forestry Commission has issued a Fire Alert for all of northern Alabama, with a burn ban in place. To see more about wildfire and burn restrictions, click for [Alabama](#) and [Tennessee](#).

The Alabama Forestry Commission uses the Keetch-Byram Drought Index (KBDI) as a system for relating current and recent weather conditions to potential or expected fire behavior. It is a numerical index calculated daily for each county. Each number is an estimate of the amount of rain, in hundredths of an inch, needed to bring the soil back to saturation. The index ranges from 0 to 800, with 0 representing a saturated soil and 800 a completely dry soil.

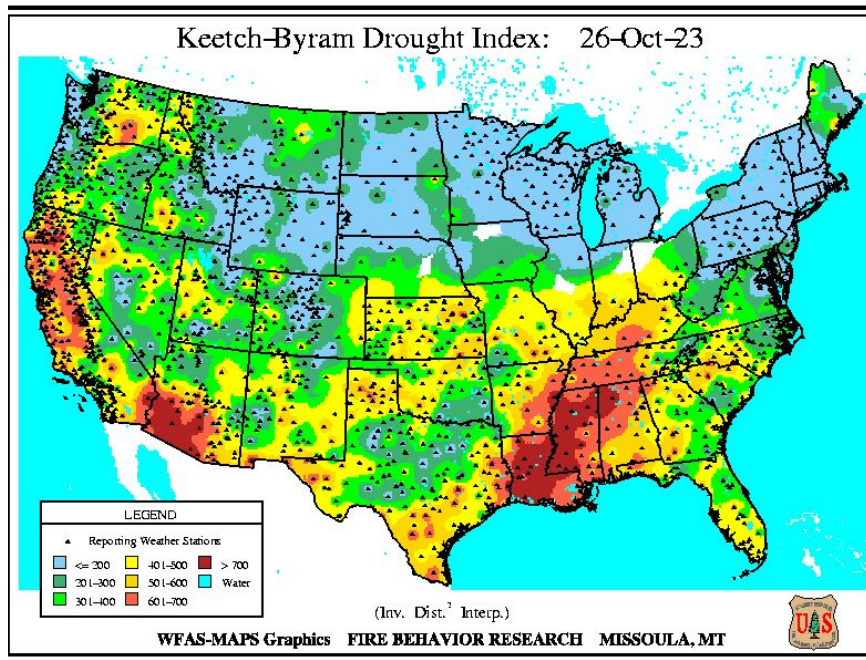


Image Caption: Keetch-Byram Drought Index (KBDI) for the Continental U.S., estimated for Oct 26, 2023.







# Seven Day Precipitation Forecast

- Next 7 days:

- Climatologically dry conditions are forecast over the next 7 days, with precipitation amounts generally near or less than 0.10 inch. Around 0.80 to 1.00 inch of precipitation is normal for this time of year for a weekly period.

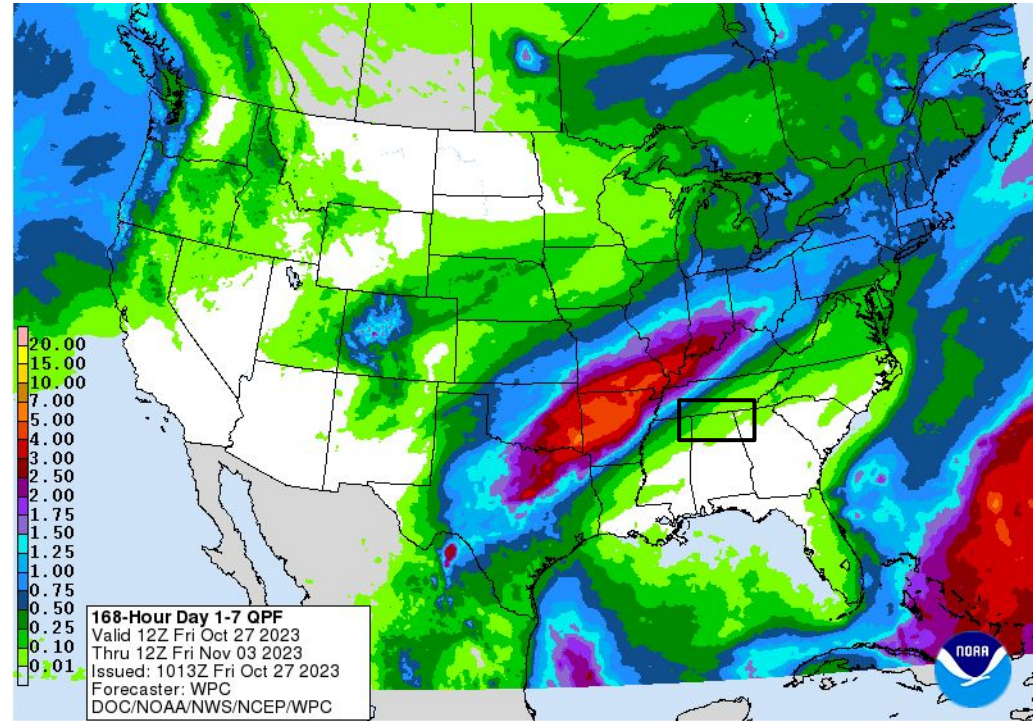
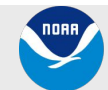


Image Caption: Weather Prediction Center 7-day precipitation forecast valid 7 AM Oct 27 to 7 AM Nov 3 (CDT)





# 8-14 Day Outlook

## Temperature and Precipitation Outlook

### Main Takeaways

- Above Normal temperatures are slightly favored (33-40% chance) for the area.
- Near Normal precipitation is slightly favored (33-40%) for most of the area in the 8-14 Day Outlook, with a small area in NW Alabama slightly favored for below normal precipitation.

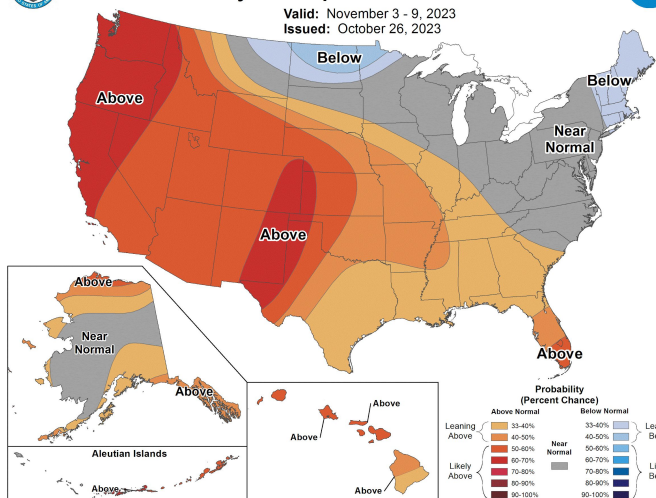
### Possible Impact

Conditions may remain steady-state or deteriorate slightly during this period.



### 8-14 Day Temperature Outlook

Valid: November 3 - 9, 2023  
Issued: October 26, 2023



### 8-14 Day Precipitation Outlook

Valid: November 3 - 9, 2023  
Issued: October 26, 2023

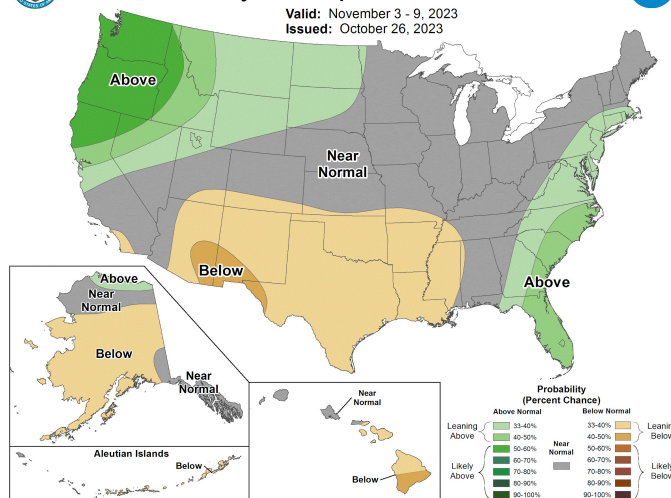


Image Captions:

Left - Climate Prediction Center 8-14 Day Temperature Outlook

Right - Climate Prediction Center 8-14 Day Precipitation Outlook

Valid November 3 to November 9, 2023



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# Monthly Outlooks

## Monthly Temperature and Precipitation Outlook

### Main Takeaways

- Above Normal temperatures are moderately favored (40-50% chance) during November, per the CPC Monthly Outlook.
- Equal chances for Above, Near, or Below Normal precipitation in November.

### Possible Impact

Possible degradation of conditions may eventually occur due to the expectations for above normal temperatures. However, this will ultimately depend on precipitation amounts, which are uncertain at this time.

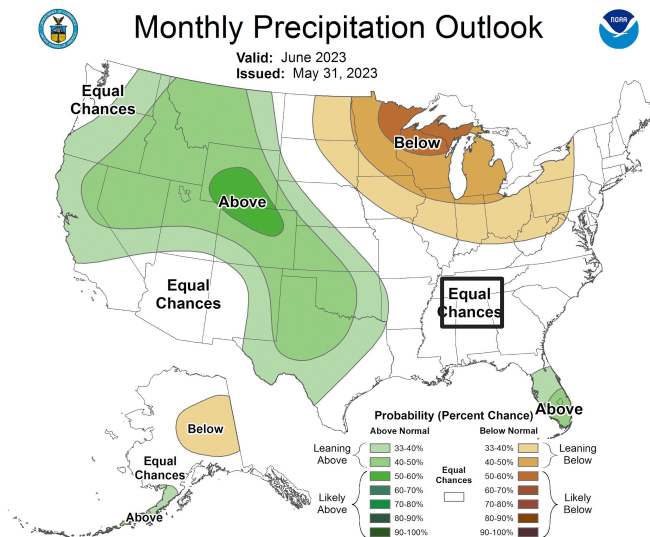
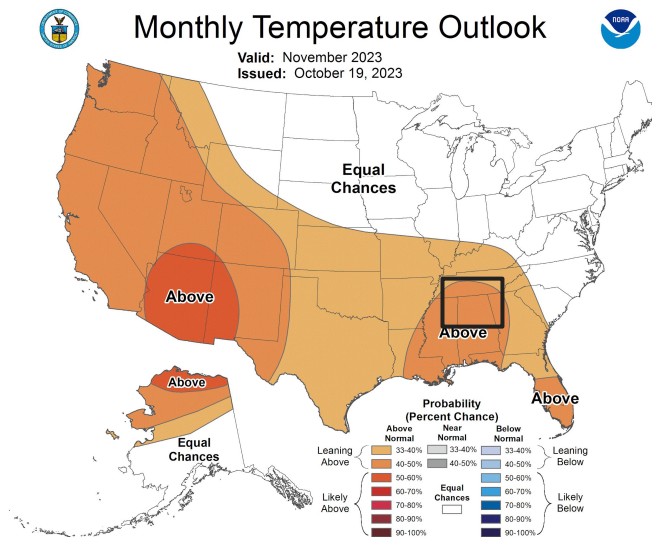


Image Captions:

Left - Climate Prediction Center Monthly Temperature Outlook.

Right - Climate Prediction Center Monthly Precipitation Outlook.

Valid November 2023



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# Seasonal Outlook (November to January)

## Seasonal Temperature and Precipitation Outlook

### Main Takeaways

- **Temperatures:** Above normal temperatures are slightly favored (33-40%) for the Nov-Jan season.
- **Precipitation:** Above Normal precipitation is slightly favored (33-40% chance) for most areas in northern Alabama, although equal chances for Below, Near or Above Normal precipitation are outlooked for much of Tennessee.

### Possible Impact

Some improvement in drought conditions is possible overall during the November to January period. Although, confidence is not high for specific temperature and precipitation conditions.

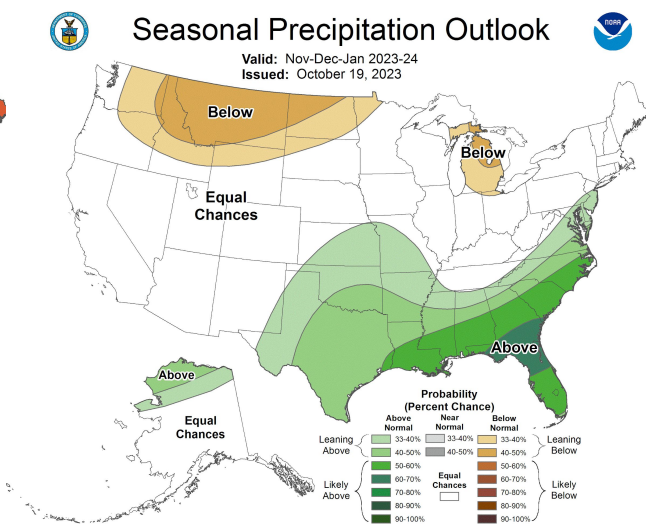
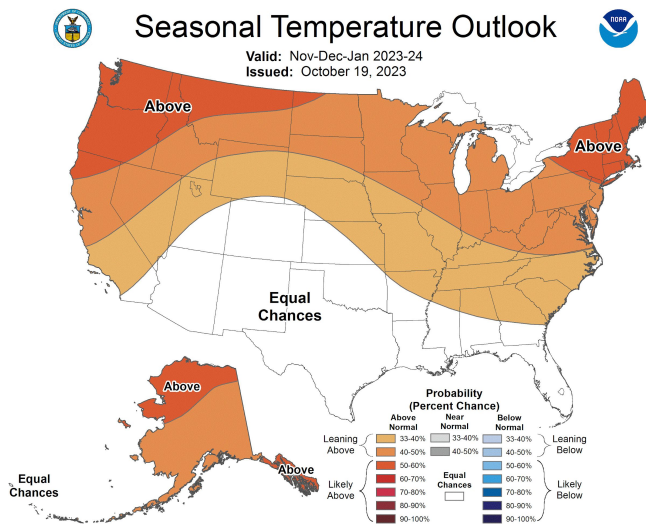


Image Captions:

Left - Climate Prediction Center Seasonal Temperature Outlook.

Right - Climate Prediction Center Seasonal Precipitation Outlook.

Valid November 2023 to January 2024



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# Local Drought Outlook

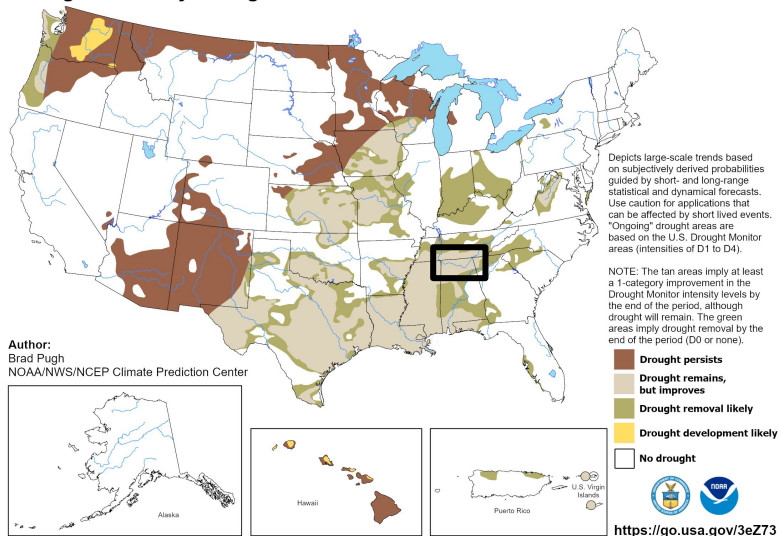
## Monthly and Seasonal Outlooks

### Main Takeaways

- Drought conditions are anticipated to persist, but some improvement is possible from late October through January, per the latest Monthly Drought Outlook.

### U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period

Valid for October 19, 2023 - January 31, 2024  
Released October 19, 2023



### Image Caption:

Climate Prediction Center Seasonal Drought Outlook for Oct 19, 2023 to Jan 31, 2024, released October 19, 2023 ([https://www.cpc.ncep.noaa.gov/products/expert\\_assessment/season\\_drought.png](https://www.cpc.ncep.noaa.gov/products/expert_assessment/season_drought.png))

