



# Drought Information Statement for The Central Tennessee Valley

Aug 29, 2024

Issued By: WFO Huntsville, AL

Contact Information: **sr-hun.webmaster@noaa.gov**

- Moderate Drought Expands Again, with Severe Drought Expanding in Some Areas. This information will be updated when drought conditions or impacts change significantly.
  - Please see all currently available products at <https://drought.gov/drought-information-statements>
  - Please visit <https://www.weather.gov/hun/DroughtInformationStatement> for previous statements
  - Please visit <https://www.drought.gov/dews/Southeast>
- 
- DROUGHT CONDITIONS INTENSIFY ACROSS PARTS OF THE AREA.





# U.S. Drought Monitor

Latest U.S. Drought Monitor Map

- **Drought intensity and Extent**
  - **D4 (Exceptional Drought)**: None
  - **D3 (Extreme Drought)**: None
  - **D2 (Severe Drought)**: Much of western portions of northern Alabama (mainly excluding much of Franklin County and northern portions of Lawrence County), including a small area of southwestern Lincoln County, TN; This includes the Quad Cities area.
  - **D1 (Moderate Drought)**: Much of north central Alabama, including Cullman, Morgan and Madison Counties, and also much of Jackson County; Most of Lincoln County, and mainly southern and eastern areas of Franklin County (TN).
  - **D0 (Abnormally Dry)**: Most of Marshall, DeKalb, and Moore Counties, along with NW portions of Franklin County (TN)

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

**August 27, 2024**  
(Released Thursday, Aug. 29, 2024)  
Valid 8 a.m. EDT

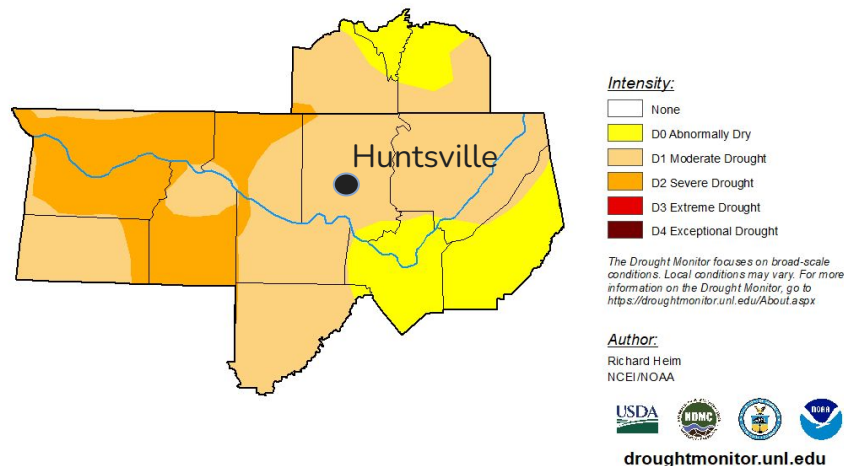


Image Caption: U.S. Drought Monitor valid 7 AM CDT, August 27, 2024.



National Oceanic and  
Atmospheric Administration

U.S. Department of Commerce

National Weather Service  
Huntsville, AL



# One-Week Change in Drought Intensity

- One-Week U.S. Drought Monitor Class Change
  - **Drought Worsened:** Drought worsened across most of the area by one category over the last week.
  - **No Change:** Drought remains unchanged since last week primarily across portions of northeast Alabama and southern Middle Tennessee, along with an area around the Quad Cities eastward to around Courtland.
  - **Drought Improved:** None

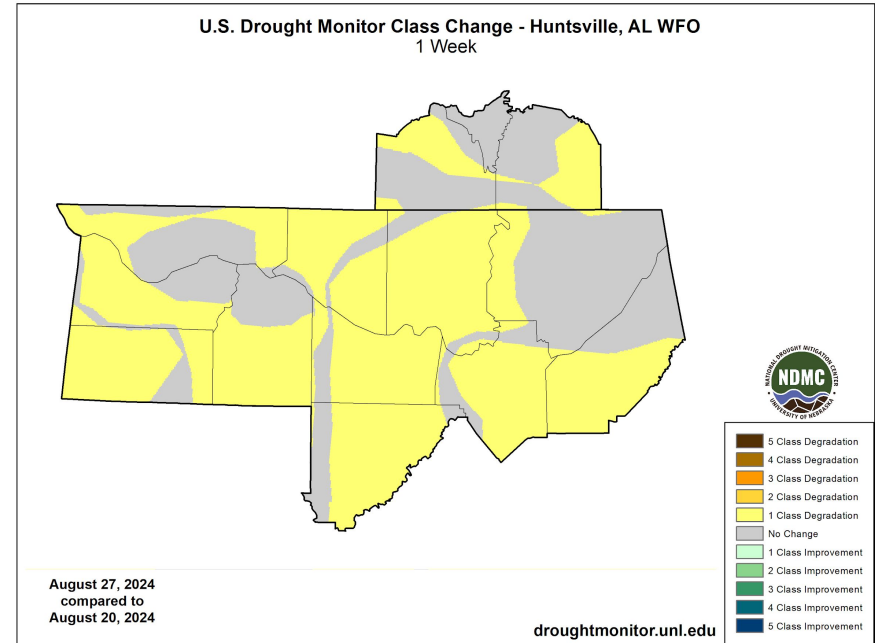


Image Caption: U.S. Drought Monitor 2-week change map  
valid 7AM CDT August 27, 2024.

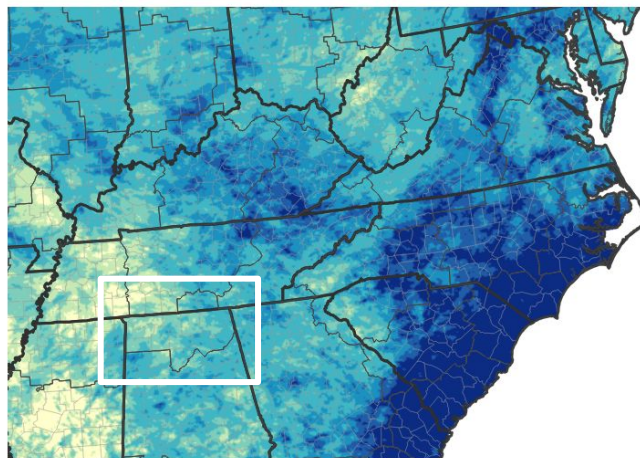


# Precipitation - Past 30 Days

## Main Takeaways

- Generally, rainfall has ranged from near zero amounts in portions of northwest Alabama, to around 2-3 inches in portions of northeast Alabama and southern Middle Tennessee. For the past 30 days.
- Rainfall percentiles in the driest portions of the area in northwestern AL range from the 1st percentile to about the 10th percentile of climatology for this time of year. Rainfall in eastern portions of the area are generally in the 25th to 75th percentile. Normal 30-day rainfall for this time of year is around four inches.

30-Day Precipitation Accumulations (Inches)



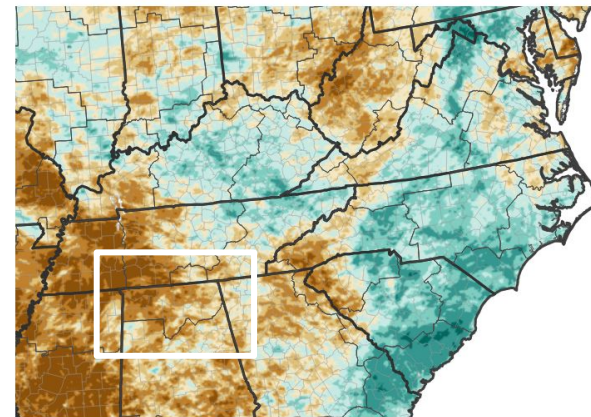
Inches of Precipitation



Source(s): National Weather Service Multi-Radar Multi-Sensor System;  
image courtesy of Drought.gov

Last Updated: 08/28/24

30-Day Percent of Normal Precipitation



Percent of Normal Precipitation (%)



Source(s): National Weather Service Multi-Radar Multi-Sensor System;  
image courtesy of Drought.gov

Last Updated: 08/28/24

Left - 30-Day Precipitation Totals, Right - 30-Day Percent of Normal Precipitation. Data ending Aug 28, 2024







# Summary of Impacts

## Hydrologic Impacts

- No hydrologic impacts of note currently, although streamflows and soil moisture fell significantly from early June into early/mid July due to the mostly dry and hot conditions. However, deficits have begun climbing again in August due to the dry weather, especially in northwestern and north central portions of the area. See next slide for more hydrologic information.

## Agricultural Impacts

- USDA Crop and Progress Condition Reports in the early summer indicated crops had been negatively impacted due to the hot, dry weather, with corn, soybeans, cotton, hay and pastures all being affected. However, it's been noted that the most significant damage has occurred specifically to the corn crop. Also, livestock producers had indicated a lack of sufficient grazing grasses due to the hot, dry weather, and that supplemental feeding was required to maintain livestock conditions. Very recent reports over the last few weeks have indicated wilting with some row crops, stress to soybeans, and continuation of poor grazing conditions for livestock. Please see the 2024 Crop and Progress Condition Reports for [Alabama](#) and [Tennessee](#) from the USDA for more information.

## Fire Hazard Impacts

- Over 300 acres have burned due to wildfire activity over the last week in northern Alabama as reported by the Alabama Forestry Commission. One of these fires burned 203 acres in western Lawrence County, which was reported as controlled on the morning of August 29th. Keetch-Byram Drought Index (KBDI) values have increased to around 500-600 recently.

## Mitigation Actions

- On July 17, 2024, The Alabama Dept. of Economic and Community Affairs - Office of Water Resources placed Drought Regions 1 and 3 (which encompasses all of the Huntsville, AL NWS County Warning and Forecast Area) in a Drought Watch.
- Some local water providers in Colbert County have begun asking customers to conserve water. Users may need to check with their local water providers concerning water conservation efforts.





# Hydrologic Conditions

- 14-Day average streamflows are around the 10th-25th percentile for this time of year. Although, some streams are below the 10th percentile, such as Flint Creek in western Morgan County, which is at the 2nd percentile, and the Elk River, at the 8th percentile.
- Lake Stages remain generally near normal.
- Although not shown, USGS wells in Lawrence and Cullman Counties indicate below normal well water levels.

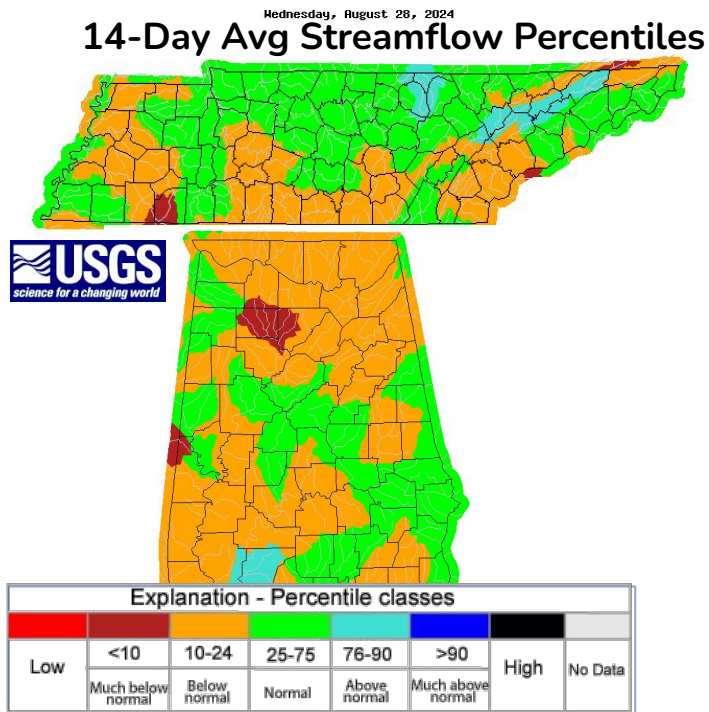


Figure Caption: USGS 14-day streamflow percentiles for Tennessee and Alabama, valid Aug 28, 2024

## 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	888	887	<100%
Nickajack	633-635	634	Within Operating Range (WOR)
Guntersville	594-595	595	WOR
Wheeler	555-556	556	WOR
Wilson	506-508	507	WOR
Pickwick	413-414	414	WOR
Lewis Smith	504	504	100%

Table caption: Reservoir conditions as of Aug 28, 2024

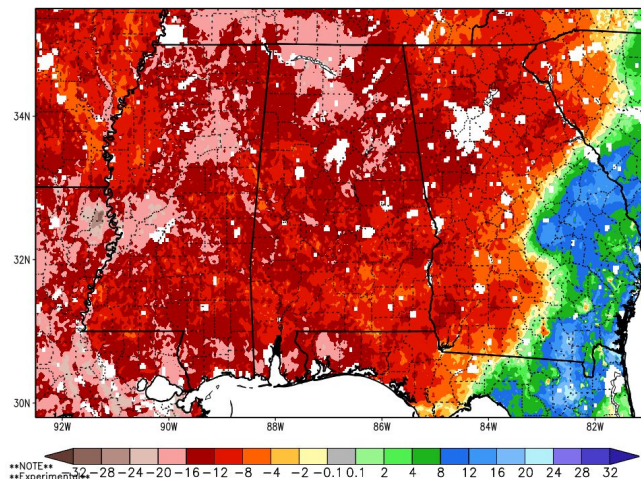




# Agricultural Impacts

- Per the latest NASA SPoRT soil moisture data, 0-200 cm relative soil moisture values have decreased significantly in most areas over the last 30 days, with decreases of largely around 10-20 percent.
- 0-200 cm climatological percentiles are in the 20th-30th percentiles for most areas, although percentiles are around the 5th-20th percentiles especially in portions of northwestern and north central Alabama.

1-Month Difference in Column Relative Soil Moisture (%) valid 12z 29 Aug 2024



SPoRT-LIS 0-100 cm Soil Moisture percentile valid 29 Aug 2024

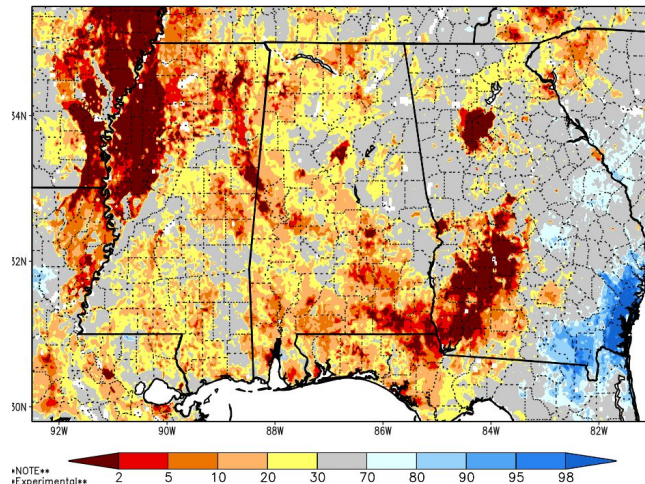


Image Captions:

Left: NASA SPoRT 1-Month Difference in 0-200 cm Relative Soil Moisture, ending Aug 29, 2024  
Right: NASA Short-term Prediction Research and Transition (SPoRT) Center 0-200 cm Soil Moisture Ranking Percentile based on a 33-year climatology (1981-2013), Aug 29, 2024





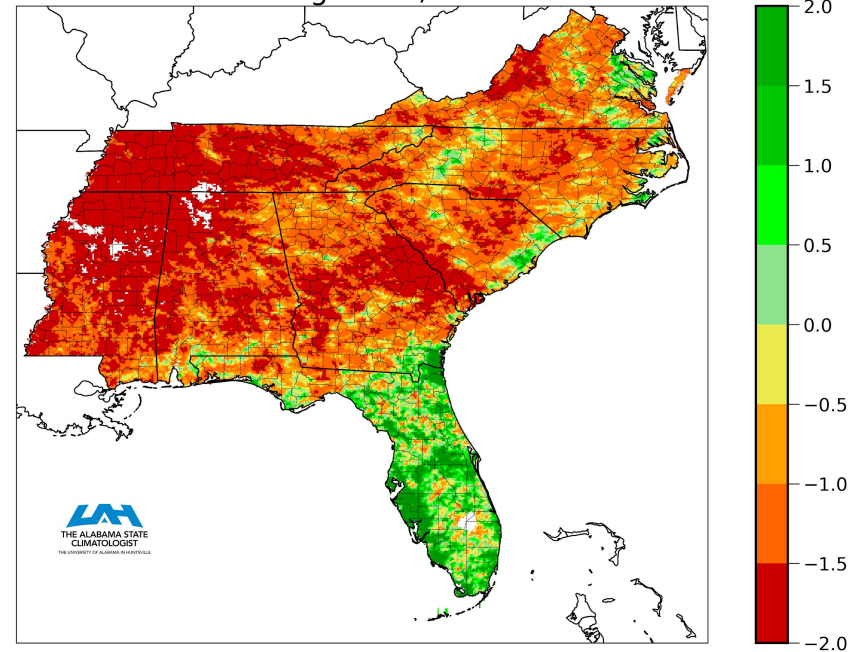
# Agricultural Impacts

- The Lawn and Garden Moisture Index for northern Alabama and southern Middle Tennessee has shown mostly decreases in recent weeks. Values are largely around negative 1-2, indicating at least one to two inch rainfall deficits in most areas for the maintenance of healthy lawns and gardens.

## Image Captions:

The image to the right is the Lawn and Garden Moisture Index from the Office of the State Climatologist of Alabama. Negative values (warm colors) indicate soil moisture deficits, while positive values (shades of green) indicate moisture surplus.

Lawn-and-Garden Moisture Index  
for August 28, 2024





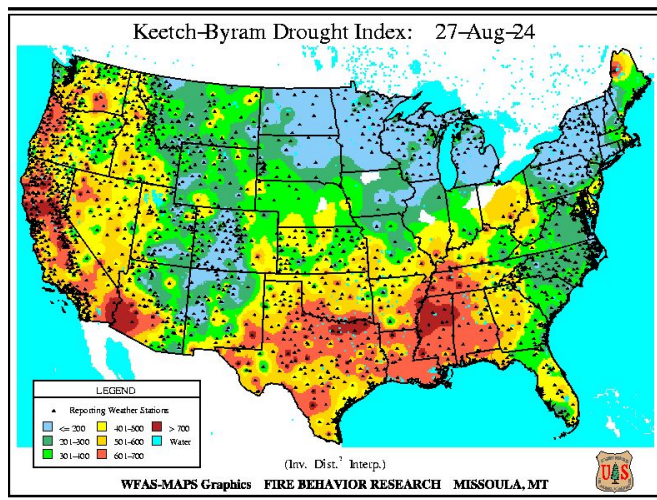


# Fire Hazard Impacts

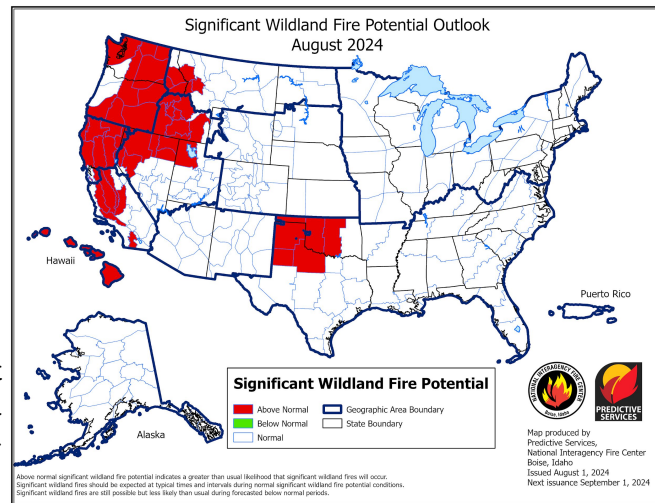
Link to [Wildfire Potential Outlooks from the National Interagency Coordination Center](#).

- Keetch Byram Drought Index (KBDI) values have risen in the month especially, with values around 500-600 in the east and 600-700 in western areas.
- NWS offices may issue Red Flag Warnings when KBDI values climb above 300 in Alabama, although other weather criteria must be met.

The Alabama Forestry Commission uses the 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.



Left Image Caption:  
Keetch-Byram Drought Index  
(KBDI) for the Continental  
U.S., estimated for Aug 27,  
2024



Right Image Caption: Significant  
Wildland Fire Potential  
Outlook, August 2024



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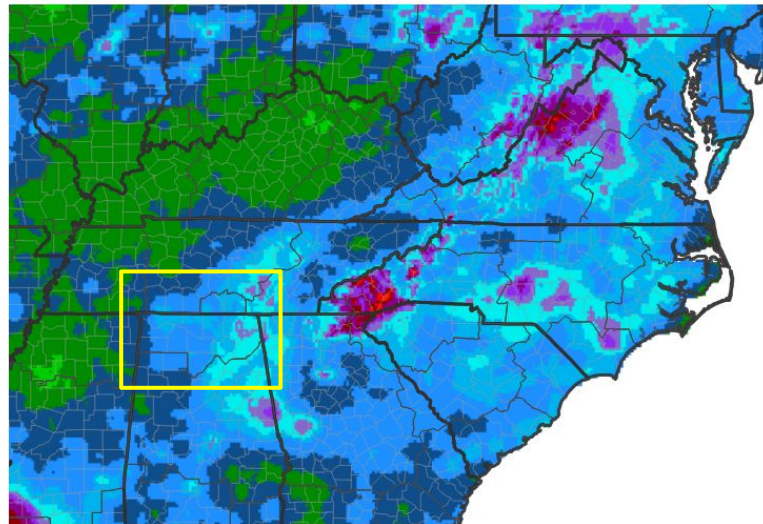


# Seven Day Precipitation Forecast

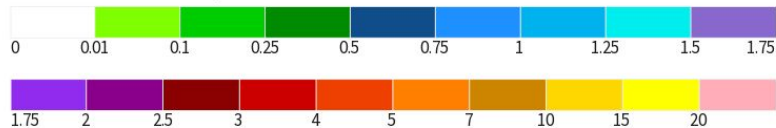
- Forecast Precipitation (Aug 28-Sep 4):

- Rainfall amounts over the next week are expected to range from around 0.50" in the far west to around 1.5-2" in the east.
- Around 1.00 inch of precipitation is normal for this time of year for a weekly period. Thus, eastern locations have better chances for above normal rainfall over the next week.

## 7-Day Quantitative Precipitation Forecast for August 28, 2024–September 4, 2024



Predicted Inches of Precipitation



Source(s): National Weather Service Weather Prediction Center; image courtesy of Drought.gov

Last Updated: 08/28/24

Image Caption: Weather Prediction Center 7-day precipitation forecast valid 7PM Aug 28 – 7PM Sep 4 (CDT)





# Rapid Onset Drought Outlook

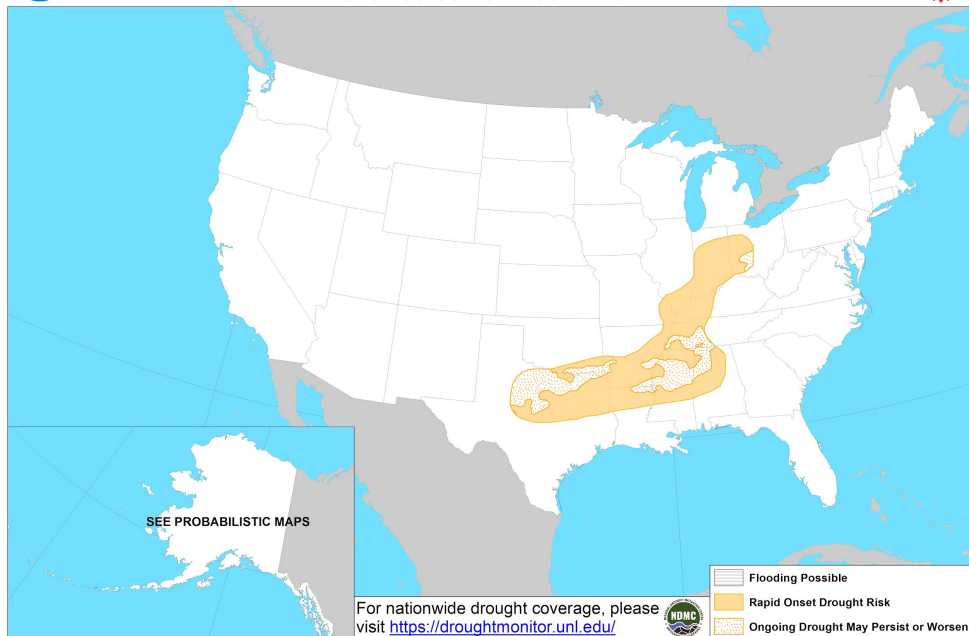
Links to the latest Climate Prediction Center 8 to 14 day [Temperature Outlook](#) and [Precipitation Outlook](#).

- Rapid Onset Drought Risk has increased across much of the area, with the exception of portions of northeast Alabama and southern Middle Tennessee. This means that drought deterioration of two more more categories are possible over the next month.



Day 8-14 U.S. Hazards Outlook

Valid: 09/05/2024-09/11/2024



Climate Prediction Center

Made: 08/28/2024 3PM EDT

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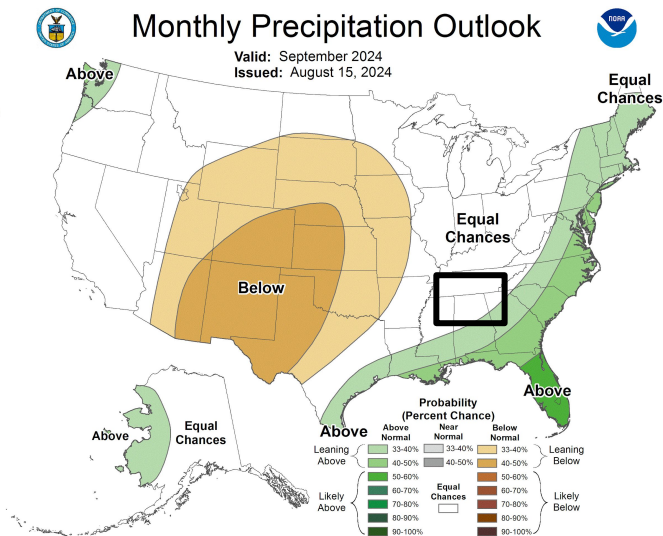
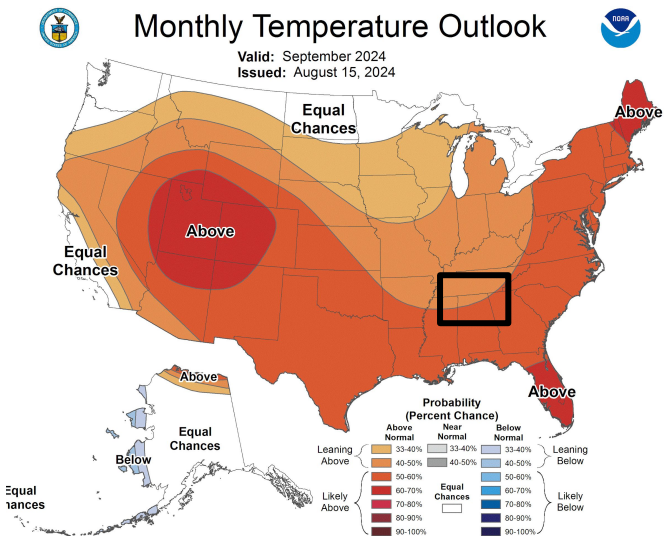
National Weather Service  
Huntsville, AL



# Monthly Outlooks - Sep 2024

The latest monthly and seasonal outlooks can be found on the [CPC homepage](https://cpc.ncep.noaa.gov)

- Above Normal temperatures are favored (40-50% chance) for September for about the northern half of the area, with higher chances (50-60%) for the southern half.
- For September, there area Equal Chances for Below, Near, or Above Normal Precipitation.





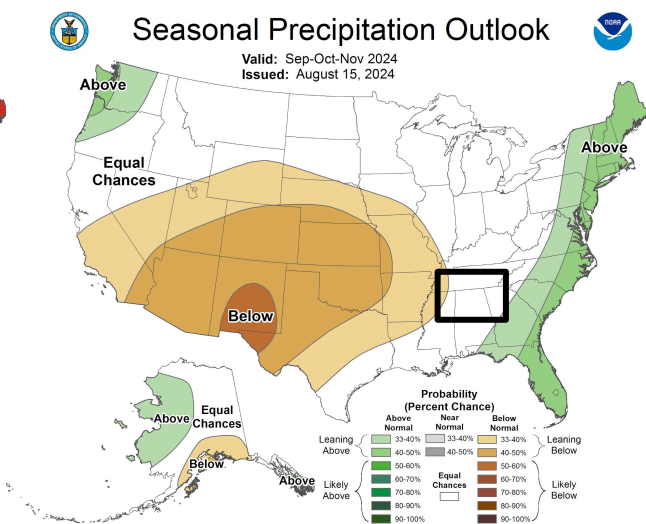


## Main Takeaways

- **Temperatures:** Above Normal temperatures are moderately favored (40-50% probability) for the September to November period.
- **Precipitation:** Equal Chances for Below, Near, or Above Normal Precipitation for the September to November period.

## Possible Impact

Uncertainty in the precipitation outlook limits the ability to assess impacts, however, above normal temperatures would generally help to exacerbate drought conditions due to increased evaporation and evapotranspiration potential.



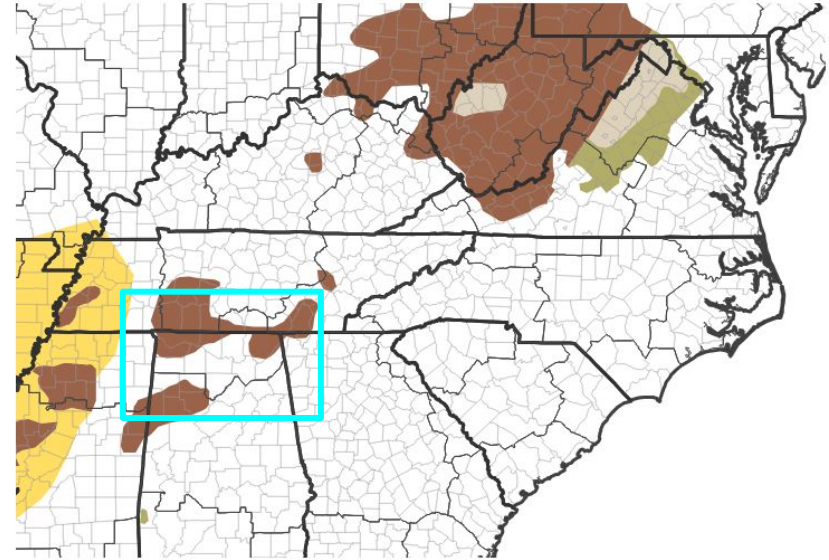


# Drought Outlook

The latest monthly and seasonal drought outlooks can be found on the [CPC homepage](#)

- As of the latest Seasonal Drought Outlook last updated on August 15, 2024, drought conditions were expected to persist across areas where drought levels of D1 or higher existed at the time.

## Seasonal (3-Month) Drought Outlook for August 15, 2024–November 30, 2024



Drought Is Predicted To...



Source(s): Climate Prediction Center; image courtesy of Drought.gov

Last Updated: 08/15/24

Links to the latest:

[Climate Prediction Center Monthly Drought Outlook](#)

[Climate Prediction Center Seasonal Drought Outlook](#)