



Drought Information Statement for The Central Tennessee Valley

Aug 23, 2024

Issued By: WFO Huntsville, AL

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

- Moderate Drought Expands Again, with Severe Drought Returning for Some Locations. 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 EXPAND ONCE AGAIN ACROSS PARTS OF THE AREA.



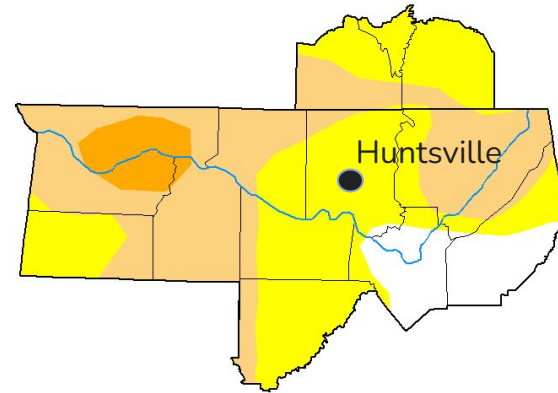
U.S. Drought Monitor

Latest U.S. Drought Monitor Map

- **Drought intensity and Extent**
 - **D4 (Exceptional Drought):** None
 - **D3 (Extreme Drought):** None
 - **D2 (Severe Drought):** A relatively small area in portions of southern/eastern Lauderdale, NE Colbert, and NW Lawrence Counties (includes the Quad Cities area)
 - **D1 (Moderate Drought):** Much of NW Alabama, small portions of NE Alabama and southern Middle Tennessee.
 - **D0 (Abnormally Dry):** Mainly portions of Franklin, Cullman, Morgan, Madison, all of Moore and most of Franklin County (TN).

U.S. Drought Monitor
Huntsville, AL WFO

August 20, 2024
(Released Thursday, Aug. 22, 2024)
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>

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droughtmonitor.unl.edu

Image Caption: U.S. Drought Monitor valid 7 AM CDT, August 20, 2024.





Recent Change in Drought Intensity

- Two-Week U.S. Drought Monitor Class Change
 - **Drought Worsened:** Generally northwest and north central areas, including areas from around Cullman to the Bankhead Nat'l Forest, Moulton, the Quad Cities, and Waterloo
 - **No Change:** Much of the area remained status-quo
 - **Drought Improved:** A small area of southeastern Franklin County (TN) and north-central Jackson County

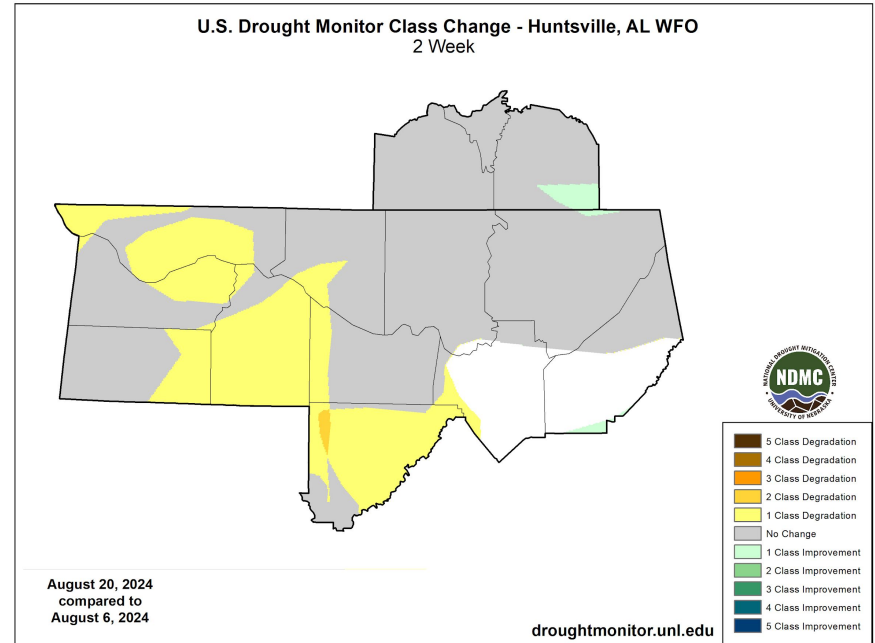
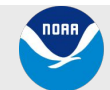


Image Caption: U.S. Drought Monitor 2-week change map valid 7AM CDT August 20, 2024.



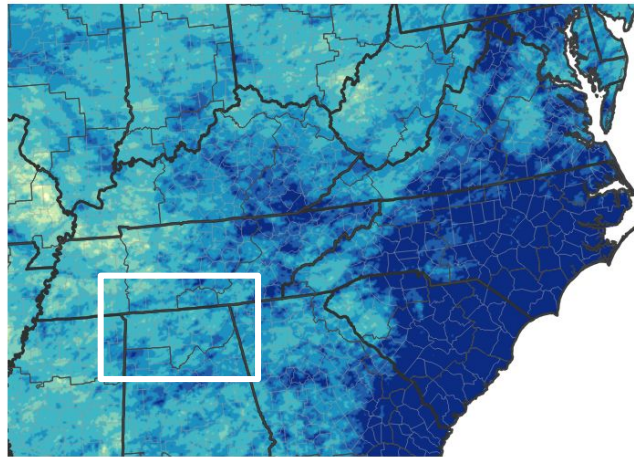


Precipitation - Past 30 Days

Main Takeaways

- Generally, rainfall has ranged around 1.5 to 3 inches for the past 30 days, but most of this rainfall fell in late July into early August for western and central locations.
- Rainfall in the driest portions of the area in northwestern and north central AL range generally from the 25th to 50th percentiles.

30-Day Precipitation Accumulations (Inches)



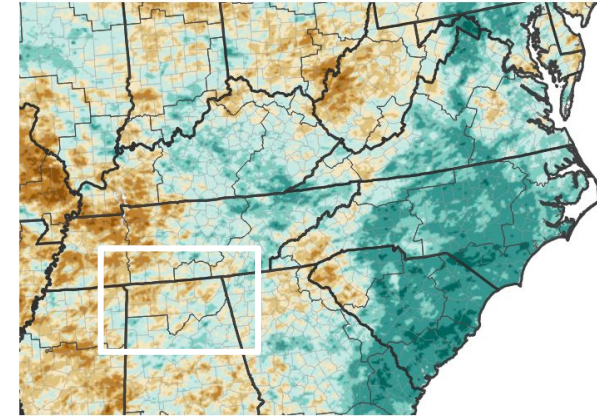
Inches of Precipitation



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

Last Updated: 08/23/24

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: 08/23/24

Left - 30-Day Precipitation Totals, Right - 30-Day Percent of Normal Precipitation. Data ending Aug 23, 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. Rainfall in July especially reduced soil moisture deficits, but deficits have begun climbing again recently due to the dry weather, especially in northwestern and north central portions of the area. See next slide for more hydrologic information including streamflows and lake levels.

Agricultural Impacts

- USDA Crop and Progress Condition Reports during June and July indicated that crops had been negatively impacted due to the hot and generally dry weather from early June to early July, 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 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 two weeks have indicated wilting with some row crops and stress to soybeans. Please see the 2024 Crop and Progress Condition Reports for [Alabama](#) and [Tennessee](#) from the USDA for more information.

Fire Hazard Impacts

- No significant fire activity has been reported over the last 30 days, although more than 35 acres burned have been reported in northern Alabama over the last week by the Alabama Forestry Commission. 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.
- Water managers are urged to carefully monitor conditions and encourage the wise and efficient use of our water resources.





Hydrologic Conditions

- 14-Day average streamflows are generally near the 25th percentile for this time of year, but recent significant decreases in streamflow have been observed on smaller timescales.

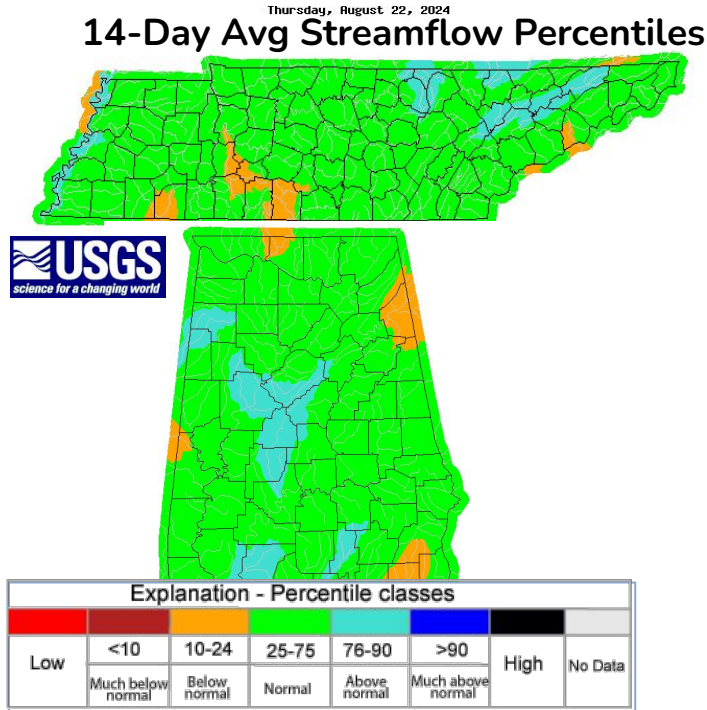


Figure Caption: USGS 14-day streamflow percentiles for Tennessee and Alabama, valid Aug 22, 2024

Lake Stages

Reservoir/ Lake	Pool Elevation (ft)	Current Elevation (ft)	Percent Full
Bear Creek	576	578	>100%
Little Bear Creek	620	619	<100%
Cedar Creek	580	580	100%
Tim's Ford	888	888	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	505	505	100%

Table caption: Reservoir conditions as of Aug 23, 2024

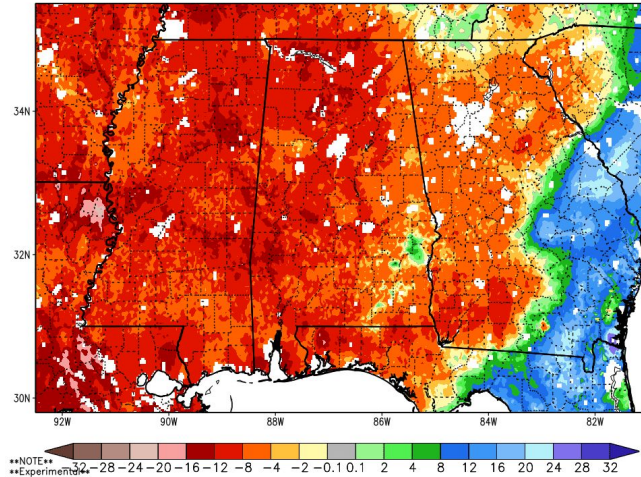




Agricultural Impacts

- 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 around 8-12 percent.
- 0-200 cm climatological percentiles are largely around the 10th to 30th percentile in the driest areas of north central and northwest Alabama.

1-Month Difference in Column Relative Soil Moisture (%) valid 12z 23 Aug 2024



SPoRT-LIS 0-100 cm Soil Moisture percentile valid 23 Aug 2024

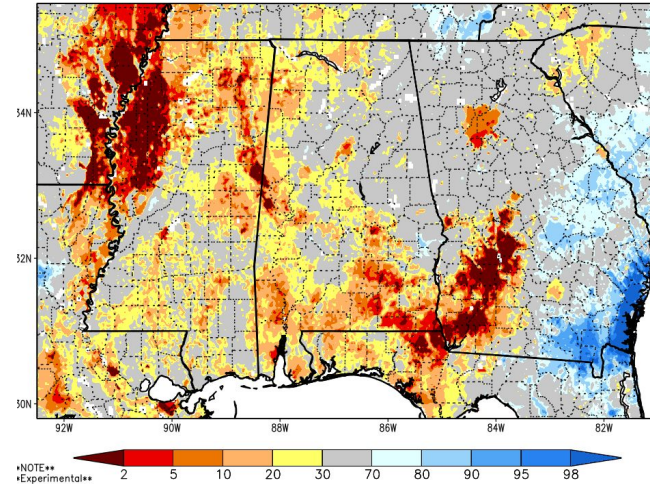


Image Captions:

Left: NASA SPoRT 1-Month Difference in 0-200 cm Relative Soil Moisture, ending Aug 23, 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 23, 2024





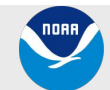
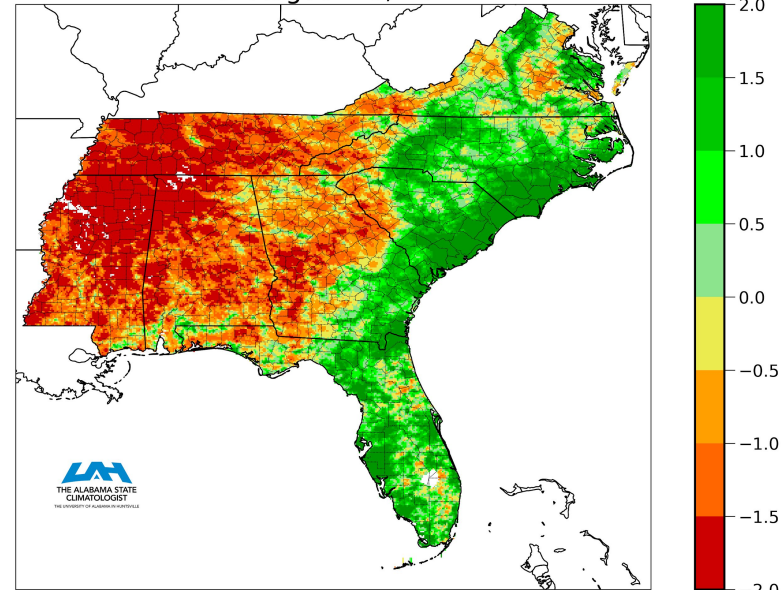
Agricultural Impacts

- 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 23, 2024



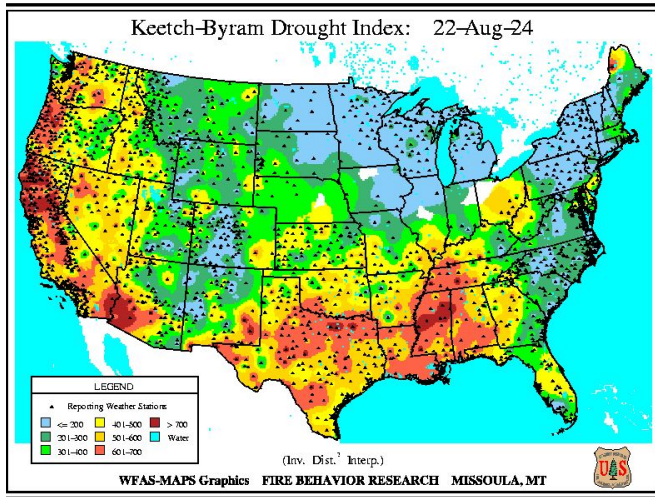


Fire Hazard Impacts

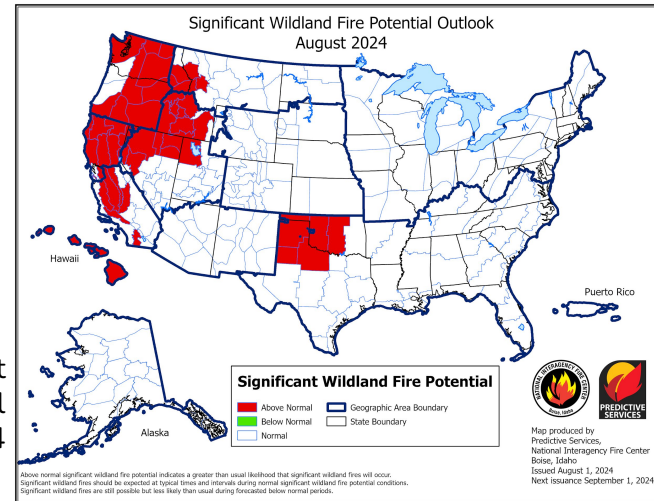
Link to [Wildfire Potential Outlooks from the National Interagency Coordination Center](#).

- Keetch Byram Drought Index (KBDI) values have fallen in the last couple of weeks 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 22, 2024



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

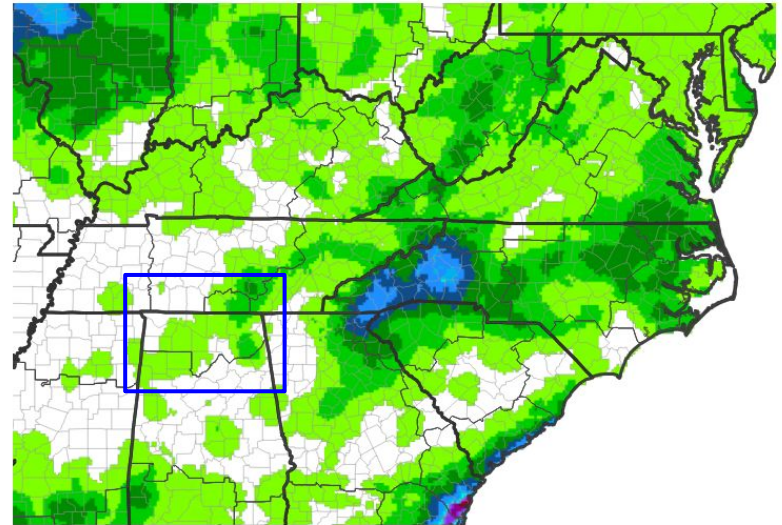




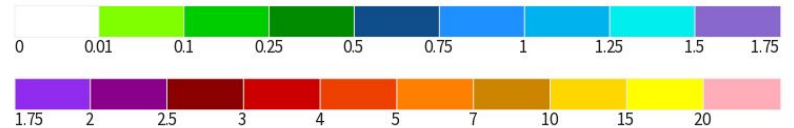
Seven Day Precipitation Forecast

- Forecast Precipitation (Aug 23-31):
 - Rainfall amounts over the next week are expected to be below normal, with amounts generally below 0.10".
 - Around 1.00 inch of precipitation is normal for this time of year for a weekly period.

7-Day Quantitative Precipitation Forecast



Predicted Inches of Precipitation



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

Last Updated: 08/23/24

Image Caption: Weather Prediction Center 7-day precipitation forecast valid 7PM Aug 23 – 7PM Aug 31 (CDT)





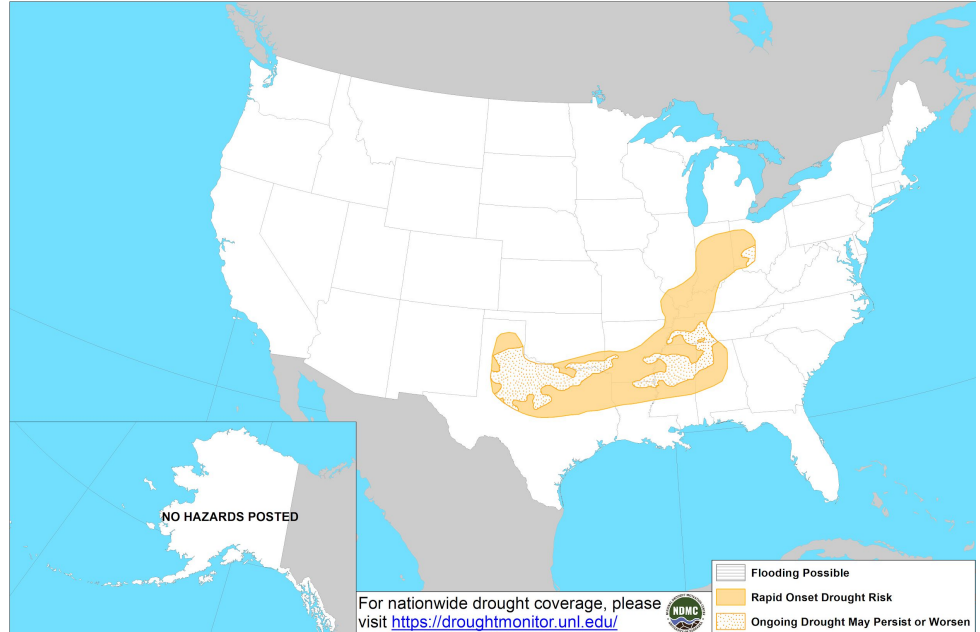
Rapid Onset Drought Outlook

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: 08/30/2024-09/05/2024



Climate Prediction Center
Made: 08/22/2024 3PM EDT

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www.cpc.ncep.noaa.gov

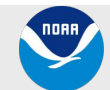
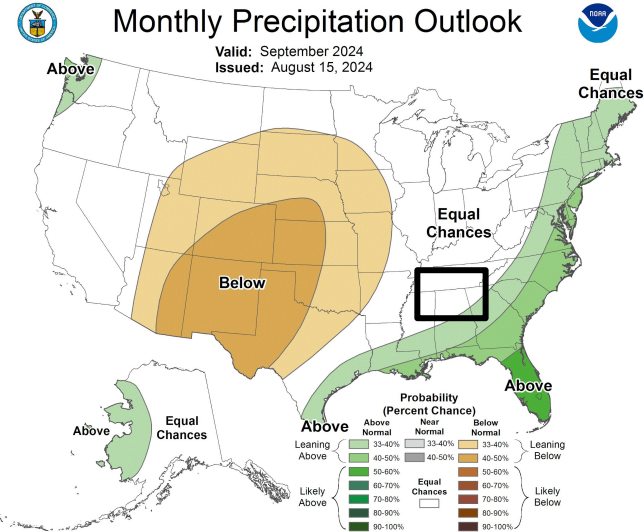
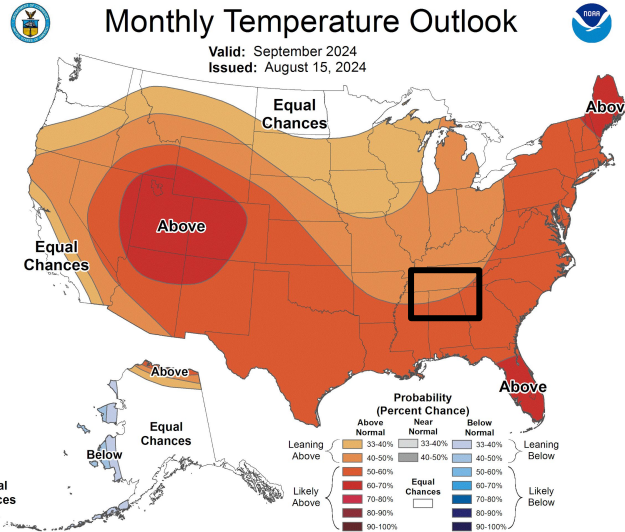




Monthly Outlooks - Sep 2024

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

- 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.





Seasonal Outlooks - Sep to Nov

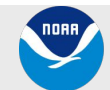
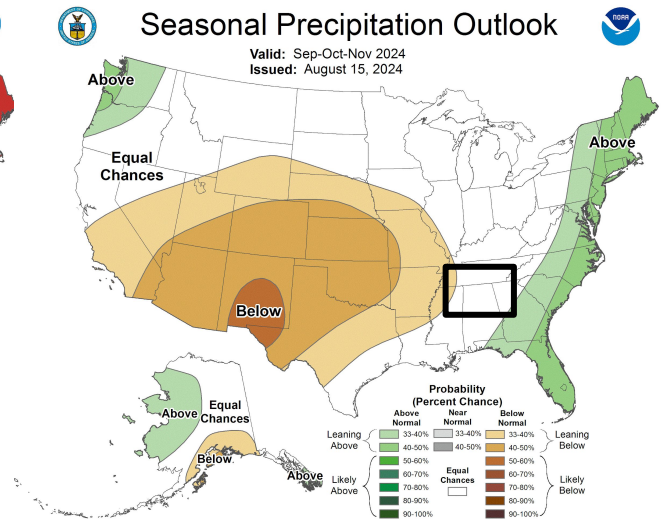
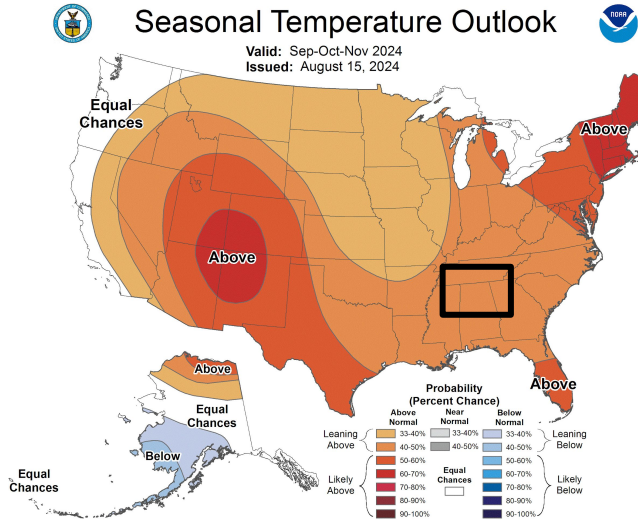
The latest monthly and seasonal outlooks can be found on the [CPC homepage](#)

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

The possibility for wetter than normal conditions may keep drought conditions from worsening during this period, although the prospects for above normal temperatures would help drive evaporative water losses from the environment.



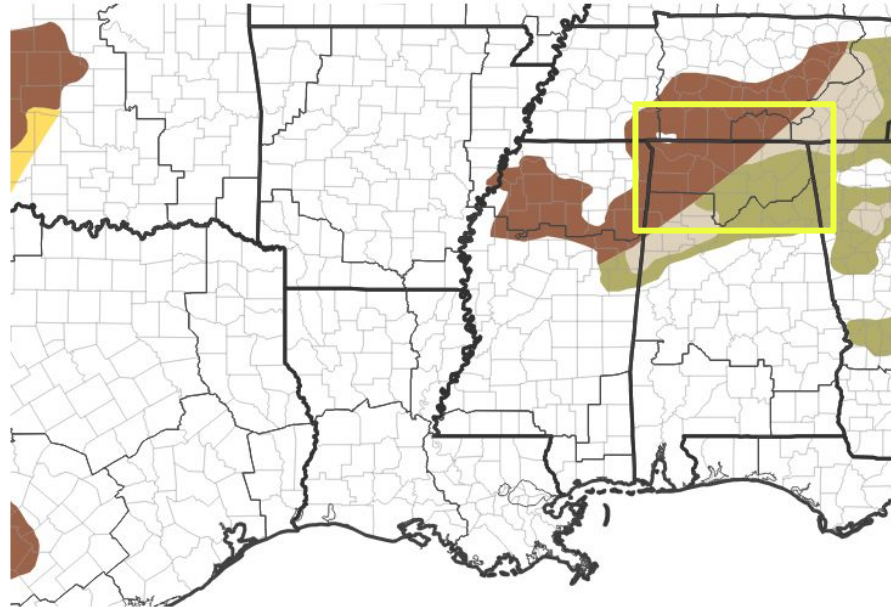


Drought Outlook

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

- As of the latest Monthly Drought Outlook last updated on July 31, 2024, drought conditions are expected to persist across the northwest half of the area, with improved conditions expected for the southeast half of the area.

1-Month Drought Outlook



Drought Is Predicted To...



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

Last Updated: 07/31/24

Links to the latest:

[Climate Prediction Center Monthly Drought Outlook](#)

[Climate Prediction Center Seasonal Drought Outlook](#)

