



Drought Information Statement for The Central Tennessee Valley

Sep 13, 2024

Issued By: WFO Huntsville, AL

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

- Drought Expands Since Late August, but Rainfall Associated with the Remnants of Francine May Help to Alleviate Drought Conditions. 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 SINCE LATE AUGUST. HOWEVER, THE EFFECTS FROM FRANCINE ARE NOT FACTORED INTO THE U.S. DROUGHT MONITOR VALID FOR SEPTEMBER 10TH.





U.S. Drought Monitor

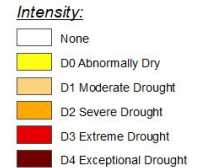
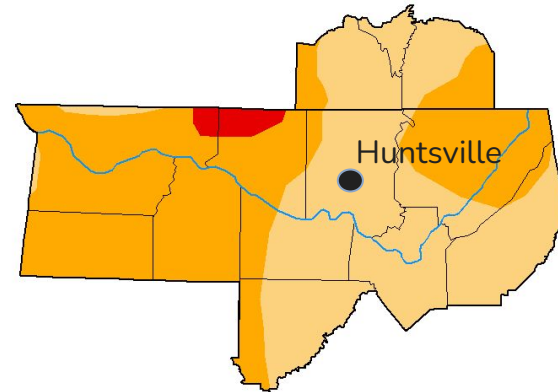
Latest U.S. Drought Monitor Map

• Drought intensity and Extent

- **D4 (Exceptional Drought)**: None
- **D3 (Extreme Drought)**: Portions of northeastern Lauderdale and northern Limestone Counties
- **D2 (Severe Drought)**: Much of western portions of northern Alabama, including a small area of western Lincoln County, TN, southeastern Franklin County (TN), much of northern and central Jackson County, and a small portion of northern DeKalb County.
- **D1 (Moderate Drought)**: Much of north central and north eastern Alabama, including the cities of Cullman, Huntsville, Fayetteville, Lynchburg, Winchester, Guntersville, Albertville, and Fort Payne.
- **D0 (Abnormally Dry)**: None

U.S. Drought Monitor Huntsville, AL WFO

September 10, 2024
(Released Thursday, Sep. 12, 2024)
Valid 8 a.m. EDT



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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National Drought Mitigation Center



droughtmonitor.unl.edu

Image Caption: U.S. Drought Monitor valid 7 AM CDT, September 10, 2024.



Two-Week Change in Drought Intensity

- One-Week U.S. Drought Monitor Class Change
 - **Drought Worsened:** Drought worsened by one category across much of the area as observed in the map on the right, especially across northeastern Alabama and portions of southern Middle Tennessee.
 - **No Change:** Drought remains unchanged over the last two weeks across portions of the area, especially in west and central areas.
 - **Drought Improved:** No areas

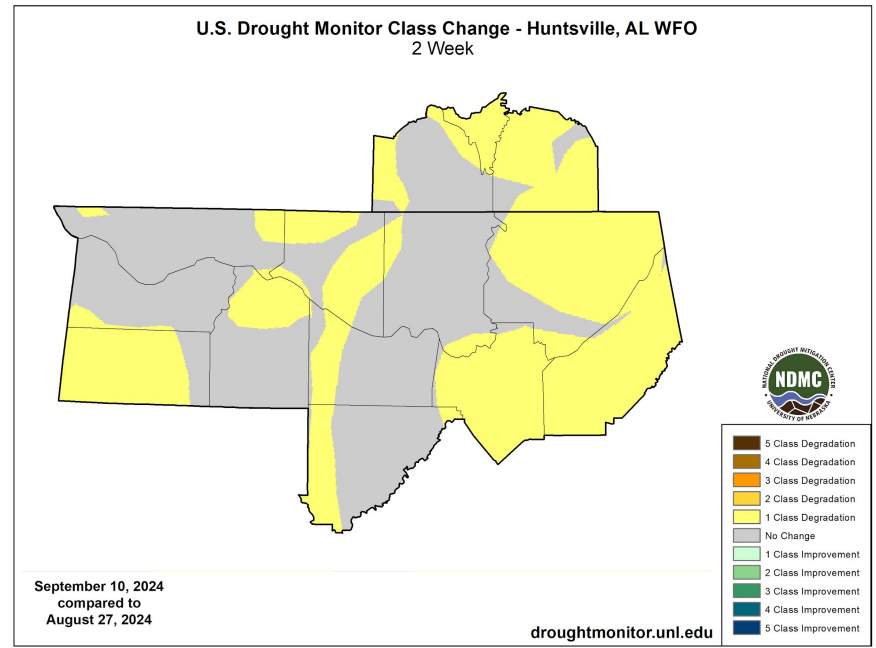


Image Caption: U.S. Drought Monitor 2-week change map valid ending 7AM CDT September 10, 2024.

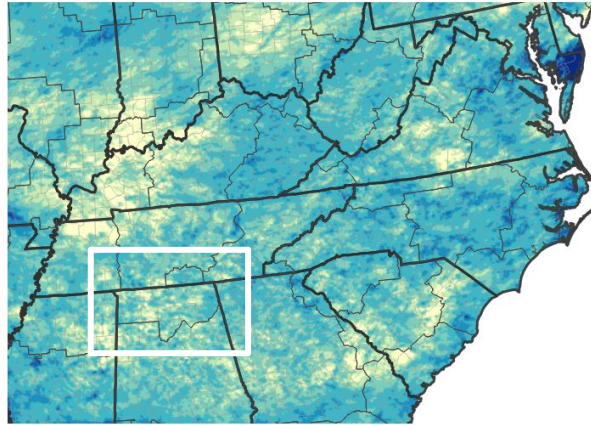


Precipitation - Past 30 Days

Main Takeaways

- Precipitation ending on September 12th ranged from just around one quarter inch in some locations to about 2 inches for the past 30 days.
- Over the last 30 days, rainfall generally ranged from around 10% up to 75% of normal. Normal 30-day rainfall for this time of year is around 3.5 inches.

30-Day Precipitation Accumulations (Inches)

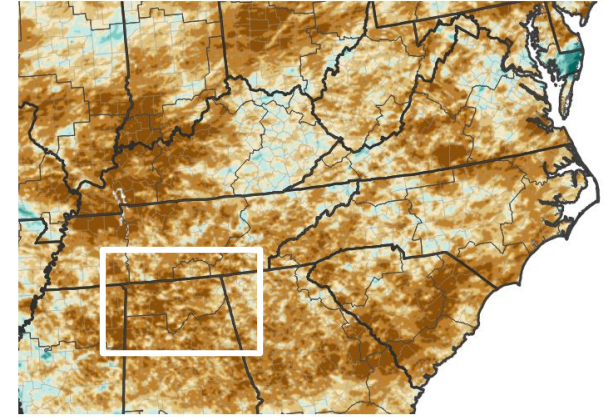


Inches of Precipitation

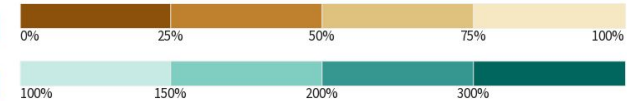


Source(s): National Weather Service Multi-Radar Multi-Sensor System; image courtesy of Drought.gov Last Updated: 09/12/24

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: 09/12/24

Left - 30-Day Precipitation Totals, Right - 30-Day Percent of Normal Precipitation. Data ending Sep 12, 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 began to build again in August into early September due to the dry weather. See the 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, the most significant damage occurred specifically to the corn crop. 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 with the need for supplemental feeding, and even near or total crop failure in some instances. Please see the 2024 Crop and Progress Condition Reports for [Alabama](#) and [Tennessee](#) from the USDA for more information.

Fire Hazard Impacts

- Around 500 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 500-700 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. This remains in effect.
- 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. Lake Stages remain generally near normal.
- Although not shown, USGS wells in Lawrence and Cullman Counties indicate below normal well water levels.

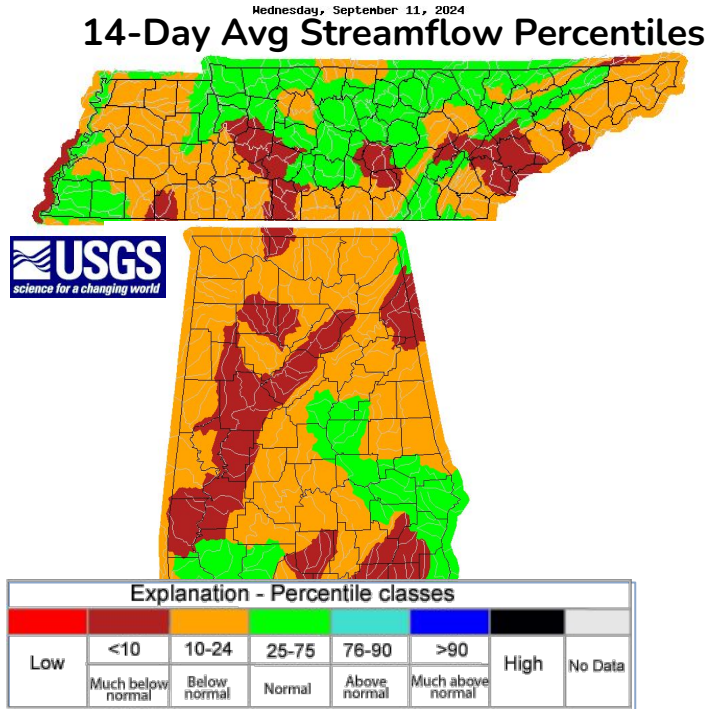


Figure Caption: USGS 14-day streamflow percentiles for Tennessee and Alabama, valid Sep 11, 2024

Lake Stages

Reservoir/ Lake	Pool Elevation (ft)	Current Elevation (ft)	Percent Full
Bear Creek	576	576	100%
Little Bear Creek	620	618	<100%
Cedar Creek	580	579	<100%
Tim's Ford	888	887	<100%
Nickajack	633-635	633	Within Operating Range (WOR)
Guntersville	594-595	594	WOR
Wheeler	555-556	555	WOR
Wilson	506-508	507	WOR
Pickwick	413-414	413	WOR
Lewis Smith	503	503	100%

Table caption: Reservoir conditions as of Sep 12, 2024

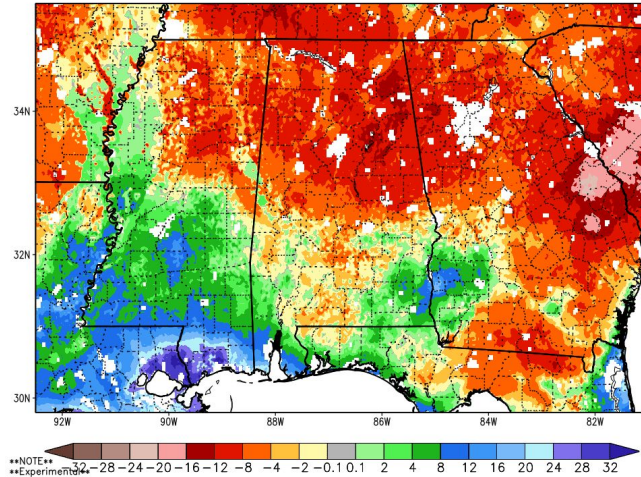




Agricultural Impacts

- 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 8-12 percent.
- 0-200 cm climatological percentiles are in the 10th-30th percentile for most areas, although some portions of northeast Alabama are above the 30th percentile.

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



SPoRT-LIS 0-100 cm Soil Moisture percentile valid 12 Sep 2024

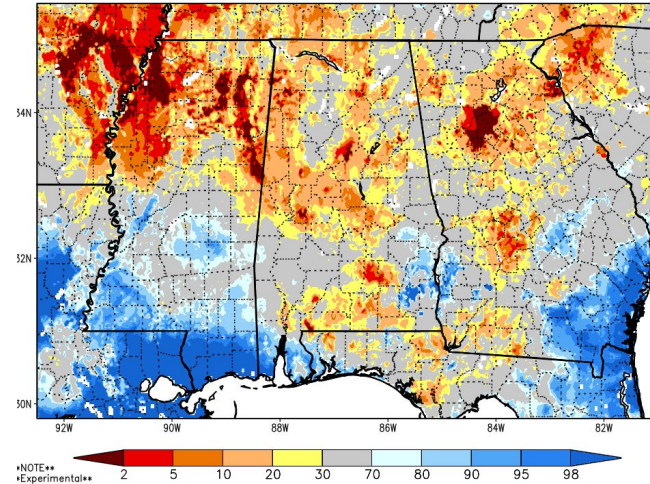


Image Captions:

Left: NASA SPoRT 1-Month Difference in 0-200 cm Relative Soil Moisture, ending Sep 12, 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), Sep 12, 2024





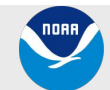
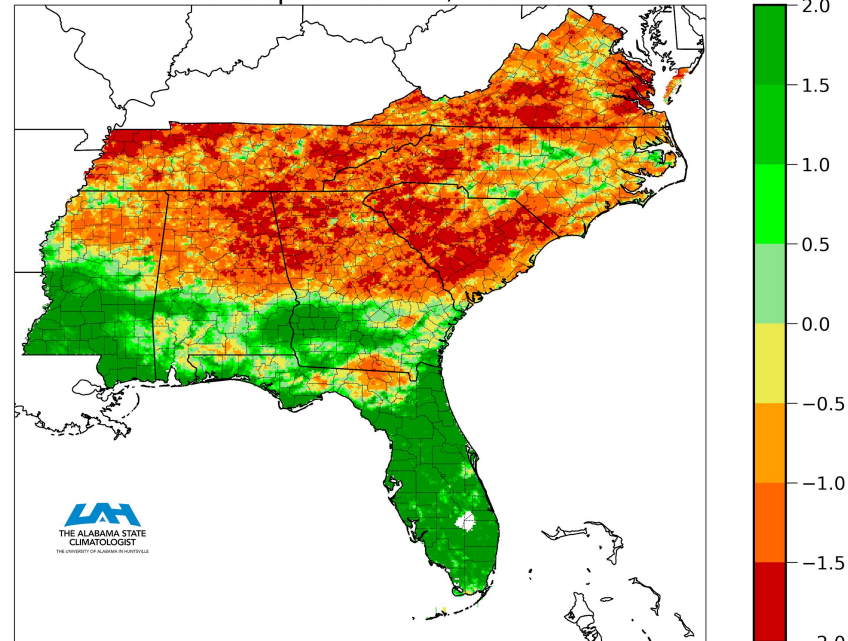
Agricultural Impacts

- The Lawn and Garden Moisture Index for northern Alabama and southern Middle Tennessee has shown general 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 September 12, 2024



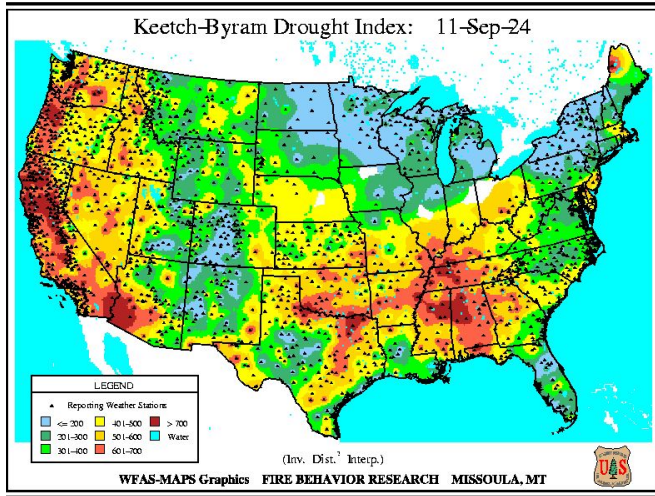


Fire Hazard Impacts

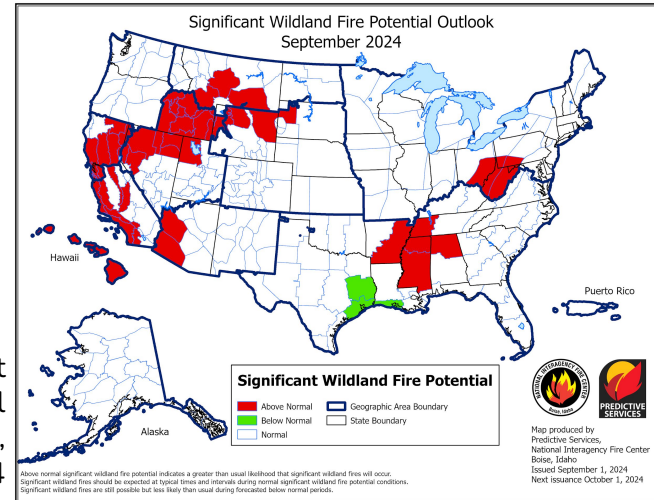
Link to [Wildfire Potential Outlooks from the National Interagency Coordination Center](#).

- 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 Sep 11, 2024



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

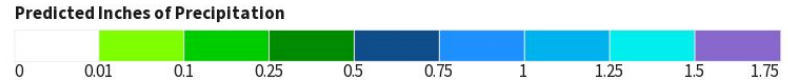
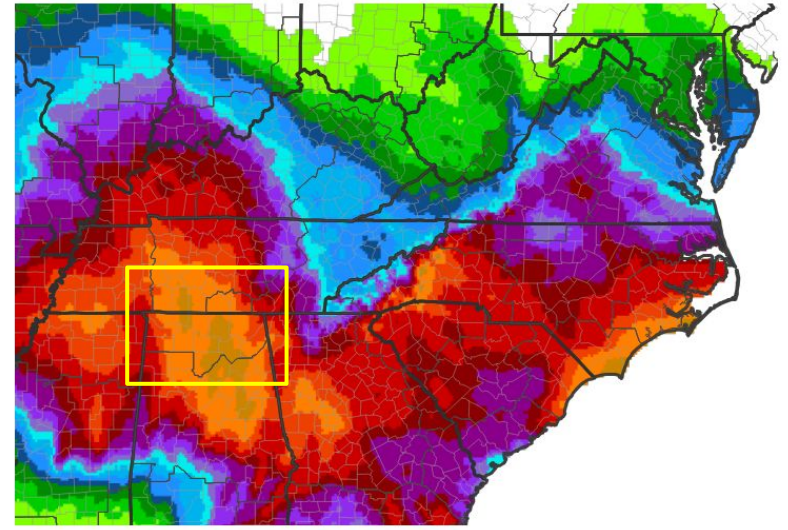




Seven Day Precipitation Forecast

- Forecast Precipitation (Sep 12-Sep 19):
 - Rainfall amounts over the weekly period from Sep 12-19 are expected to be around 4 to 7 inches. This is due largely to the effects of former tropical cyclone Francine. These rainfall amounts will be factored into the US Drought Monitor for next week.
 - Around 0.75 to 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 September 12, 2024-September 19, 2024



Source(s): National Weather Service Weather Prediction Center; image courtesy of Drought.gov Last Updated: 09/12/24

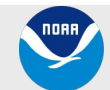
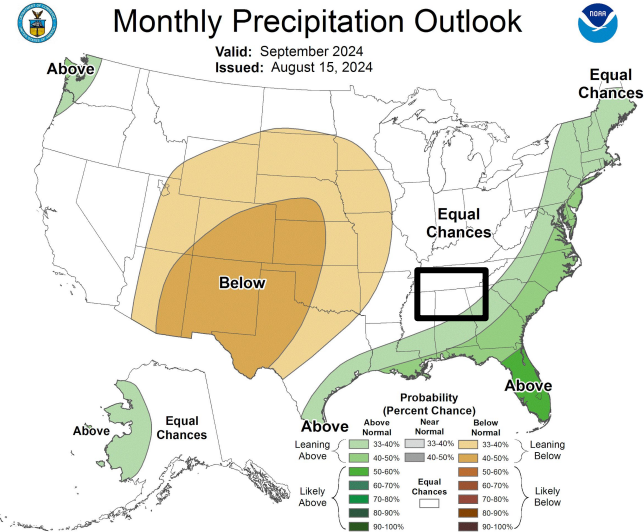
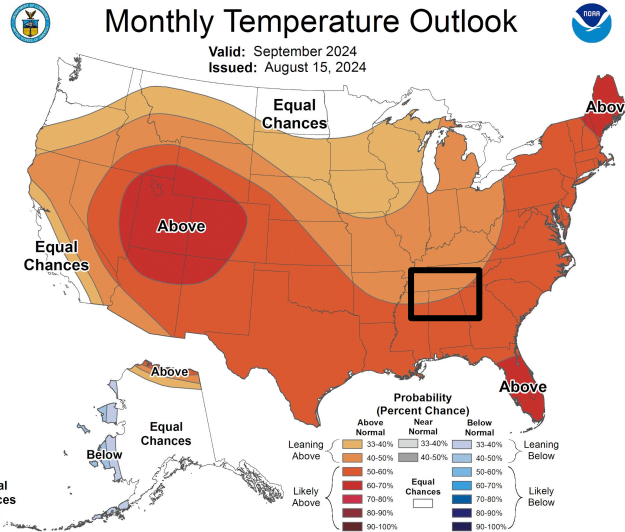
Image Caption: Weather Prediction Center 7-day precipitation forecast valid 7PM Sep 12 – 7PM Sep 19 (CDT)



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

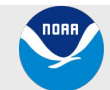
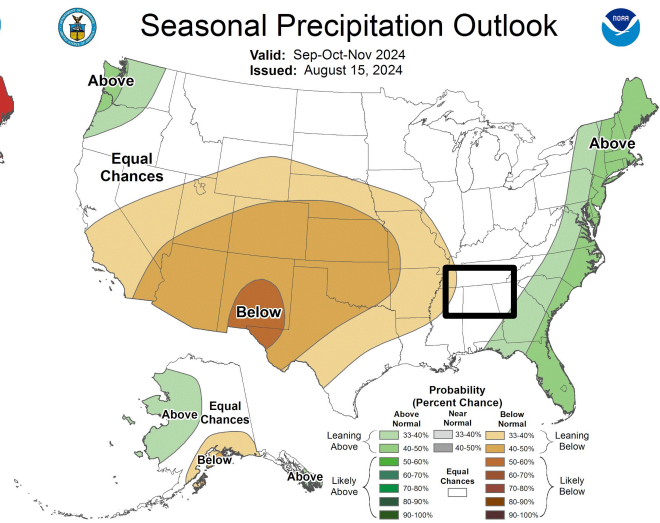
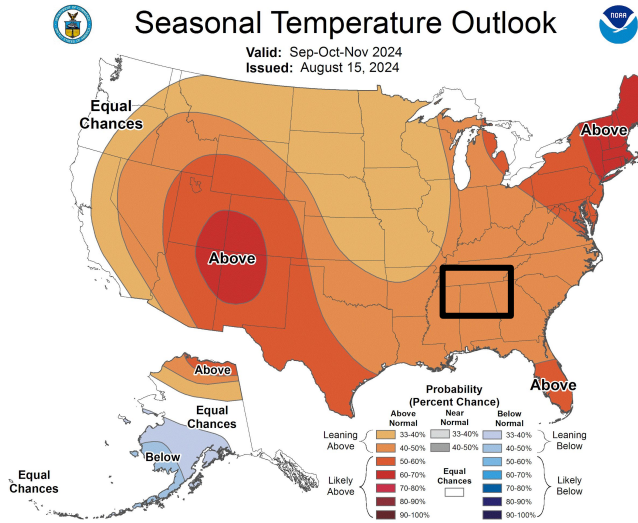
The latest monthly and seasonal outlooks can be found on the [CPC homepage](#)

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

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](#)

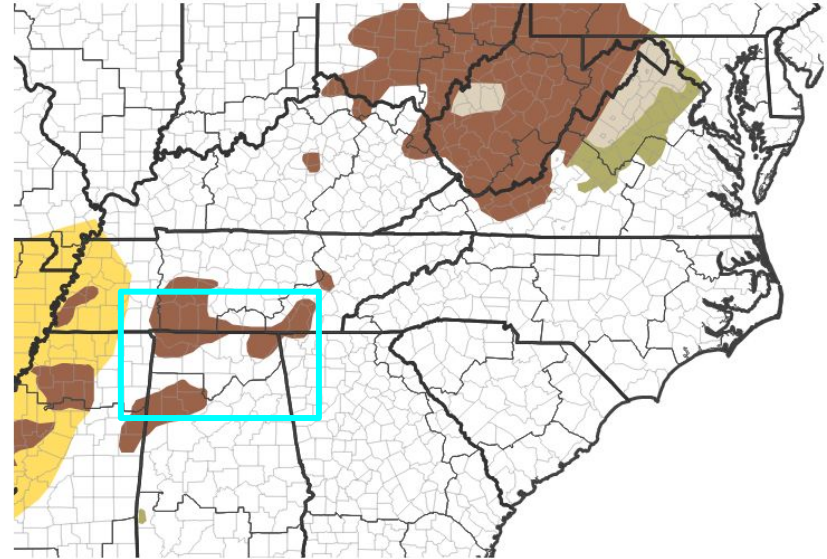
- As of the latest Seasonal Drought Outlook last updated on August 15, 2024, drought conditions were expected to persist across areas where drought levels of D1 or higher existed at the time.

Links to the latest:

[Climate Prediction Center Monthly Drought Outlook](#)

[Climate Prediction Center Seasonal Drought Outlook](#)

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