



Drought Information Statement for The Central Tennessee Valley

July 12, 2024

Issued By: WFO Huntsville, AL

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

- Widespread Moderate (D1) drought has developed in the area, with some areas of Severe (D2) Drought. Since the area is not in Extreme (D3) Drought, this product will be updated if conditions deteriorate substantially.
 - 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 HAVE DEVELOPED IN THE TENNESSEE VALLEY OVER THE LAST SEVERAL WEEKS.





U.S. Drought Monitor

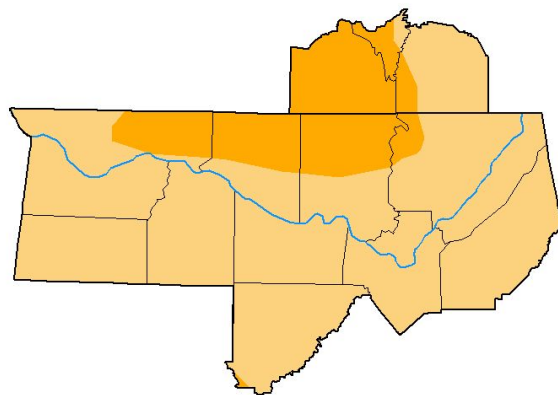
Latest U.S. Drought Monitor Map

- **Drought intensity and Extent**

- **D4 (Exceptional Drought):** None
- **D3 (Extreme Drought):** None
- **D2 (Severe Drought):** All of Lincoln County, TN, including western portions of Moore and Franklin Counties in TN. In northern AL, a relatively small area of NW Jackson County, about the northern half of Limestone and Madison Counties, and much of eastern Lauderdale County. Also, a very small area in southern Cullman County.
- **D1 (Moderate Drought):** All areas not in D2 Drought are in D1 Drought.
- **D0 (Abnormally Dry):** None

U.S. Drought Monitor Huntsville, AL WFO

July 9, 2024
(Released Thursday, Jul. 11, 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>

Author:

Brian Fuchs
National Drought Mitigation Center



droughtmonitor.unl.edu

Image Caption: U.S. Drought Monitor valid 7 AM CDT, July 9, 2024.



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Recent Change in Drought Intensity

- Four Week U.S. Drought Monitor Class Change
 - **Drought Worsened:** Over the past four weeks, drought has increased three categories in the current area of D2 Drought, with a two category increase across the areas with D1 Drought.
 - **No Change:** None
 - **Drought Improved:** None

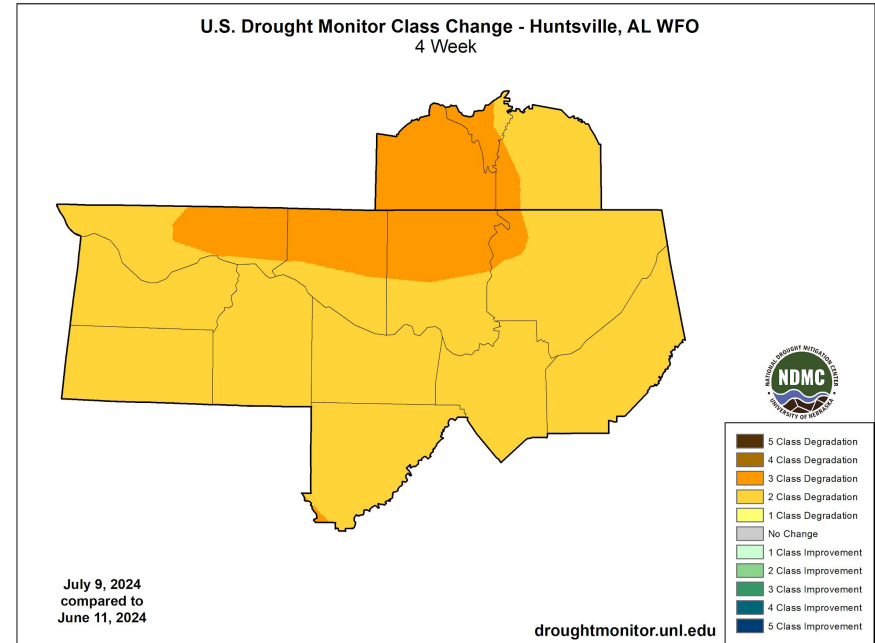


Image Caption: U.S. Drought Monitor 4-week change map
valid 7AM CDT July 9, 2024.

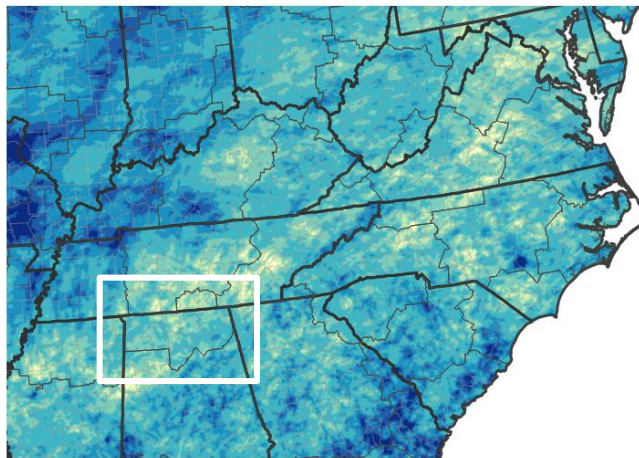


Precipitation - Past 30 Days

Main Takeaways

- Generally, rainfall has ranged around 1-2 inches for the past 30 days, with some areas receiving smaller amounts below one inch. Few, small areas have experienced heavier rainfall.
- These rainfall amounts are generally around 25-50% of normal for the past 30 day period.

30-Day Precipitation Accumulations (Inches)



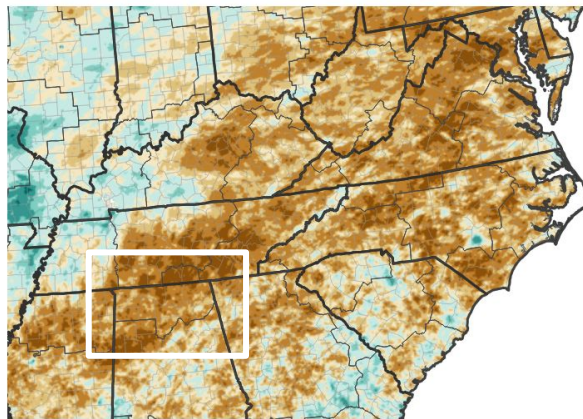
Inches of Precipitation



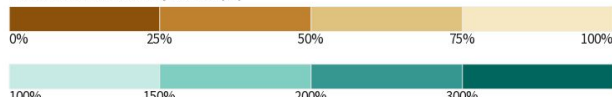
Source(s): National Weather Service Multi-Radar Multi-Sensor System;
image courtesy of Drought.gov

Last Updated: 07/11/24

30-Day Percent of Normal Precipitation



Percent of Normal Precipitation (%)

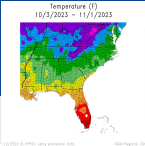


Source(s): National Weather Service Multi-Radar Multi-Sensor System;
image courtesy of Drought.gov

Last Updated: 07/11/24

Left - 30-Day Precipitation Totals, Right - 30-Day Percent of Normal Precipitation. Data ending July 11, 2024

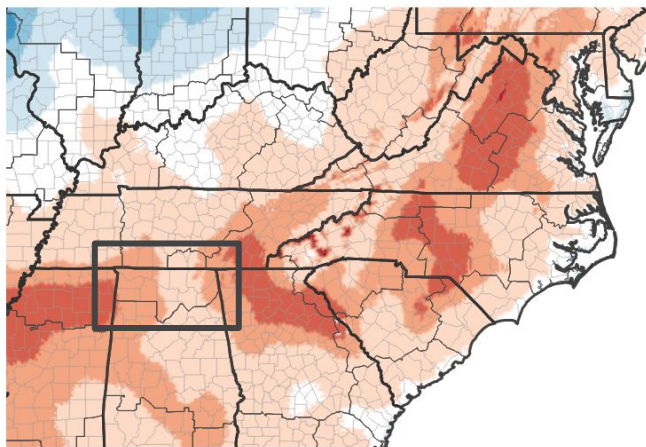




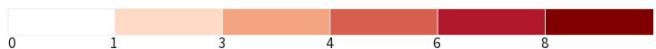
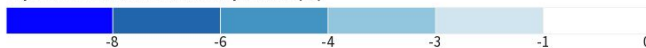
Temperature

- Temperatures have largely averaged around 1-3 degrees (F) above normal over the past 7 days, and 1-2 degrees above normal over the last 30 days. Note: the data period ends on July 7.

7-Day Temperature Anomaly



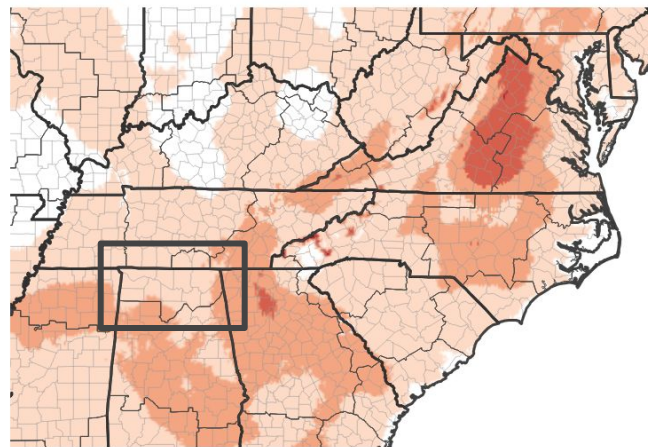
Departure from Normal Max Temperature (°F)



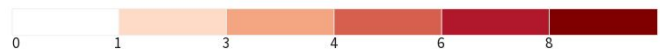
Source(s): NOAA's National Centers for Environmental Information; image courtesy of Drought.gov

Data Valid: 07/07/24

30-Day Temperature Anomaly



Departure from Normal Max Temperature (°F)



Source(s): NOAA's National Centers for Environmental Information; image courtesy of Drought.gov

Data Valid: 07/07/24

Image Captions:

Left - 7-Day Departure from Normal Temperature
Right - 30-Day Departure from Normal Temperature
Data Courtesy High Plains Regional Climate Center.
Data period ending July 7, 2024



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Summary of Impacts

Hydrologic Impacts

- No hydrologic impacts of note currently, although streamflows and soil moisture have fallen significantly since early June due to the dry and hot conditions. See next slide for more hydrologic information including streamflows and lake levels.

Agricultural Impacts

- USDA Crop and Progress Condition Reports have recently indicated that some crops have been negatively impacted due to the hot and mostly dry weather in recent weeks, in particular the corn crop. Also, livestock producers have indicated lack of sufficient grazing grasses due to the hot, dry weather, and that supplemental feeding has been required to maintain livestock conditions. 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. However, Keeth-Byram Drought Index (KBDI) values have increased significantly in recent weeks. KBDI values across the area now range from around 500 to over 600. Values of this magnitude indicate that lower duff and litter layers actively contribute to fire intensity and will burn actively. To see more information about recent fire activity and burn restrictions or permits visit: [Alabama Forestry Commission](#), [TN Wildland Fire](#)

Other Impacts

- None to report at this time.

Mitigation Actions

- On June 18, 2024, The Alabama Dept. of Economic and Community Affairs - Office of Water Resources placed Drought Region 3 (which includes Cullman County) in a Drought Advisory.
- Water managers are urged to carefully monitor conditions and encourage the wise and efficient use of our water resources.





Hydrologic Conditions

- Streamflows have fallen significantly over the last several weeks, with 14-day average streamflow values around the 10th to 24th percentile for many streams, and even lower in some cases. Big Wills Creek in Fort Payne was at the 4th percentile for this time of year. Other notable streamflow percentiles are as follows: Elk River (9th percentile), Big Nance Creek (11th percentile), Paint Rock River (17th percentile).

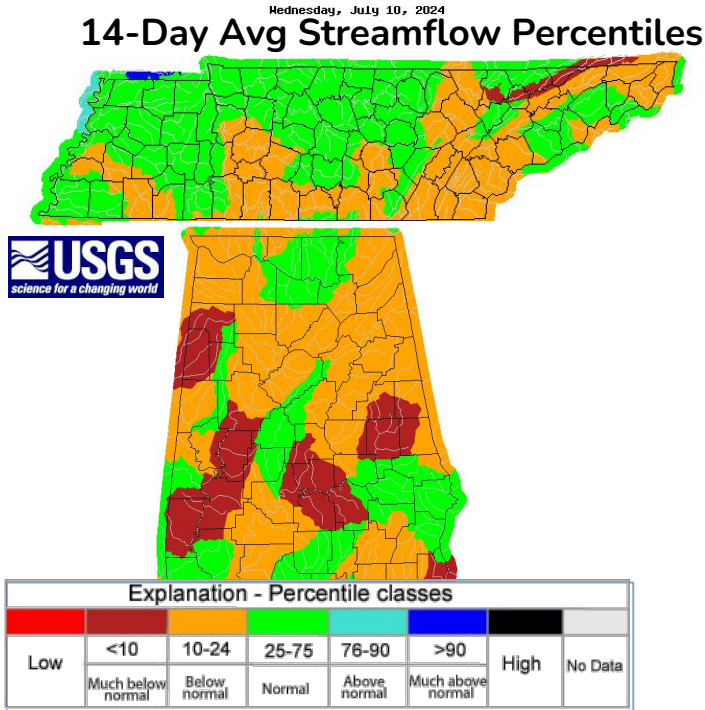


Figure Caption: USGS 14-day streamflow percentiles for Tennessee and Alabama, valid July 10, 2024

Lake Stages

Reservoir/ Lake	Pool Elevation (ft)	Current Elevation (ft)	Percent Full
Bear Creek	576	577	100%
Little Bear Creek	620	619	<100%
Cedar Creek	580	580	100%
Tim's Ford	887	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	509	508	<100%

Table caption: Reservoir conditions as of Jul 10, 2024

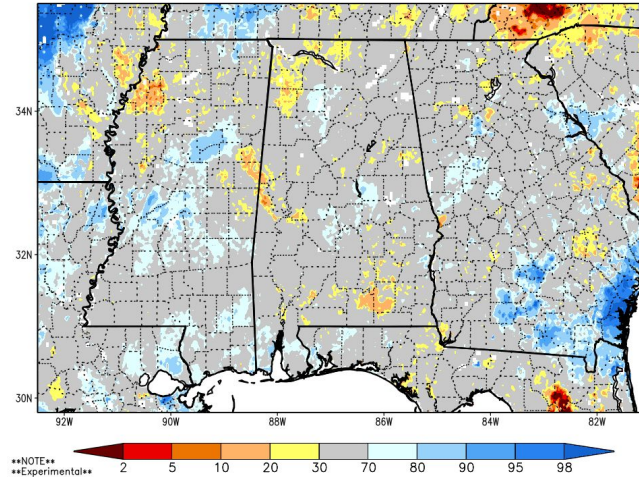




Agricultural Impacts

- Per the latest NASA SPoRT soil moisture data, 0-200 cm relative soil moisture values have decreased considerably, around 12-20% during the last 30 days. Relative soil moisture values in the deep 0-200 cm layer are currently around 20-40%, but are lower in more shallow layers (not shown).

SPoRT-LIS 0-200 cm Soil Moisture percentile valid 11 Jul 2024



1-Month Difference in Column Relative Soil Moisture (%) valid 12z 11 Jul 2024

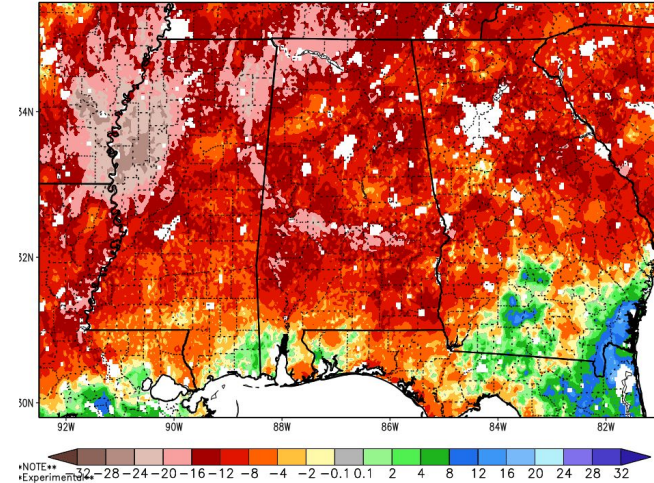


Image Captions:

Left: NASA Short-term Prediction Research and Transition (SPoRT) Center 0-200 cm Soil Moisture Ranking Percentile based on a 33-year climatology (1981-2013), July 11, 2024

Right: NASA SPoRT 1-Month Difference in 0-200 cm Relative Soil Moisture, ending July 11, 2024

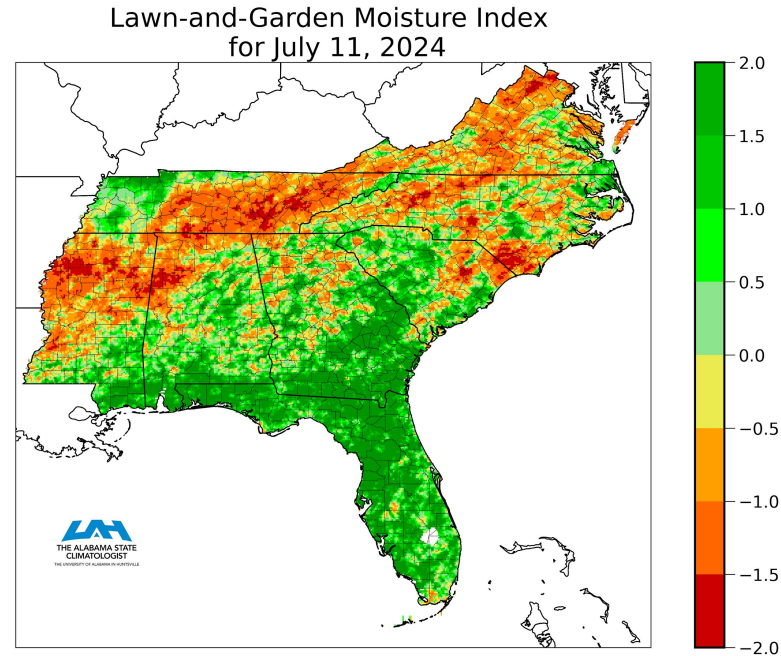


Agricultural Impacts

- The Lawn and Garden Moisture Index for northern Alabama and southern Middle Tennessee indicates much drier than normal soil conditions for the production of healthy lawns and gardens across much of the area. Values are largely around -1.0 to -1.5, indicating a 1.0 to 1.5 inch effective precipitation deficit for this time of year to maintain healthy lawns and gardens. However, recent rainfall on July 8-9 increased soil moisture values in a swath from NW Cullman and SW Morgan Counties eastward through portions of southern DeKalb County.

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. To learn more about the Lawn and Garden Index, please visit...https://www.nsstc.uah.edu/aosc/lawn_garden_se.html



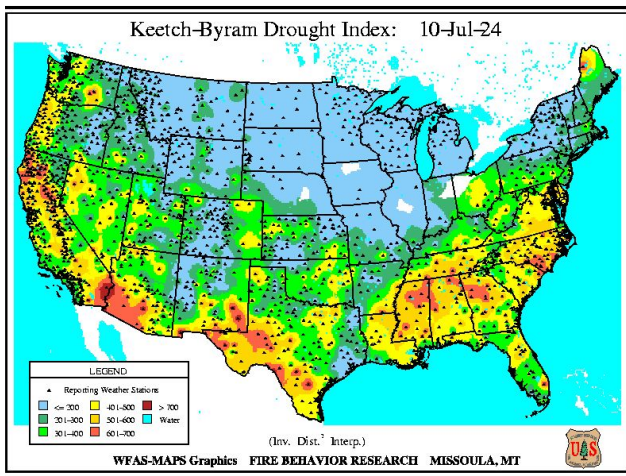


Fire Hazard Impacts

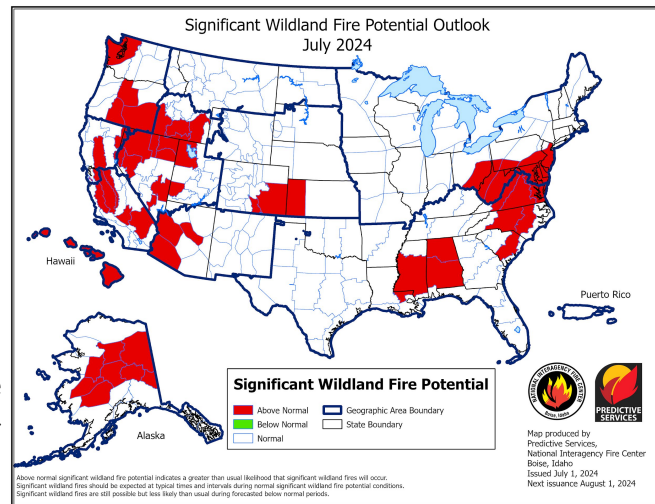
Link to [Wildfire Potential Outlooks from the National Interagency Coordination Center](#).

- Keetch Byram Drought Index (KBDI) values have increased to around 500-600.
- NWS offices may issue Red Flag Warnings when KBDI values climb above 300 in Alabama, although other weather criteria must be met.
- All of northern AL is in an Above Normal Significant Wildland Fire Potential for July, from the Predictive Services of the Southern Area Coordination Center.

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 July 10,
2024



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



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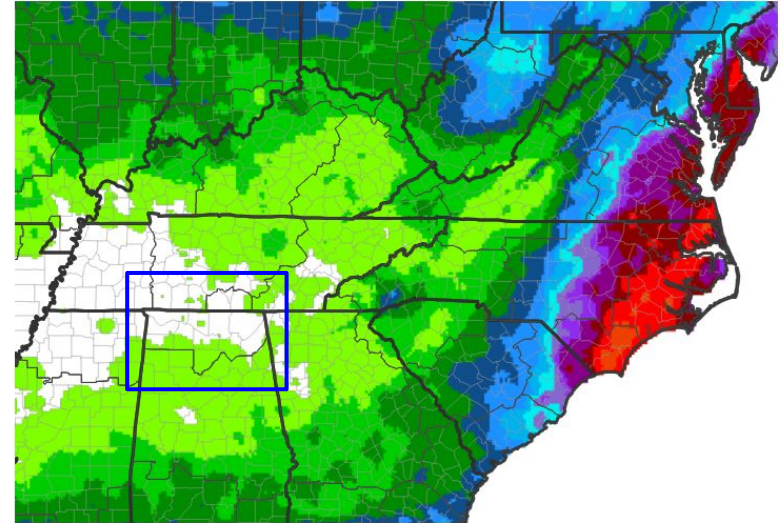
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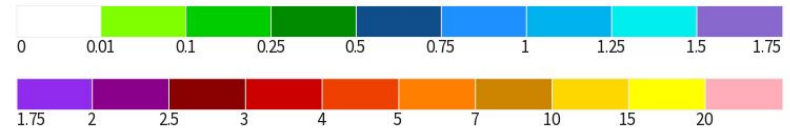
Seven Day Precipitation Forecast

- Forecast Precipitation (July 10-17):
 - Around 0.10 inch of rainfall is expected for the weekly period ending July 17, although the latest forecast information suggests heavier rainfall may materialize on July 17th or 18th.
 - Around 1.00 to 1.25 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: 07/11/24

Image Caption: Weather Prediction Center 7-day precipitation forecast valid 7PM July 10 – 7PM July 17 (CDT)



Monthly Outlooks

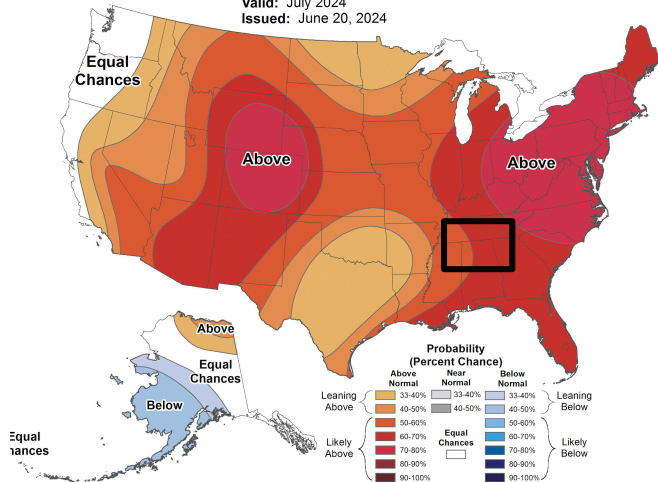
The latest monthly and seasonal outlooks can be found on the [CPC homepage](https://cpc.ncep.noaa.gov)

- Above Normal temperatures are favored (50-70% chance) for July.
- Equal Chances for Below, Near, or Above Normal precipitation exist across the area for July. Although, Below Normal precipitation is slightly favored just to our north, across most of Middle Tennessee, while Above Normal precipitation is favored just to our south.



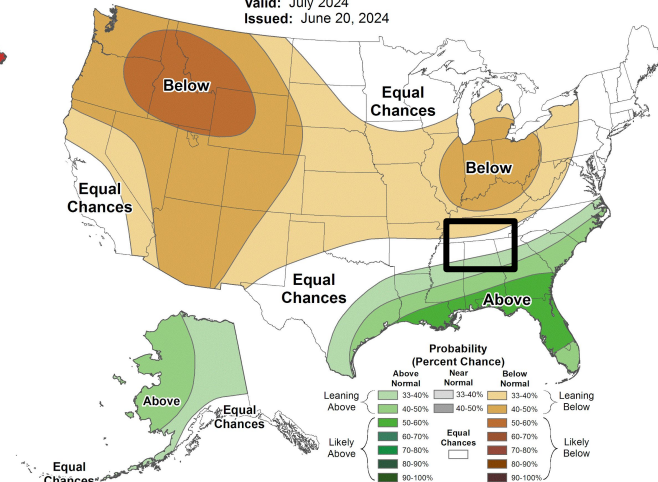
Monthly Temperature Outlook

Valid: July 2024
Issued: June 20, 2024



Monthly Precipitation Outlook

Valid: July 2024
Issued: June 20, 2024



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Seasonal Outlooks

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

Main Takeaways

- **Temperatures:** Above Normal temperatures are favored (40-50% probability) across the area for the July to September three month period.
- **Precipitation:** Above Normal precipitation is slightly favored (33-40% chance) for July through September.

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.

