



Drought Information Statement for The Central Tennessee Valley

December 5, 2024

Issued By: WFO Huntsville, AL

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

- Drought remains in the region as below normal precipitation has continued. This statement will be updated weekly. The next update will be provided by December 13, 2024.
 - 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 REMAINS ENTRENCHED ACROSS MOST OF THE REGION.





U.S. Drought Monitor

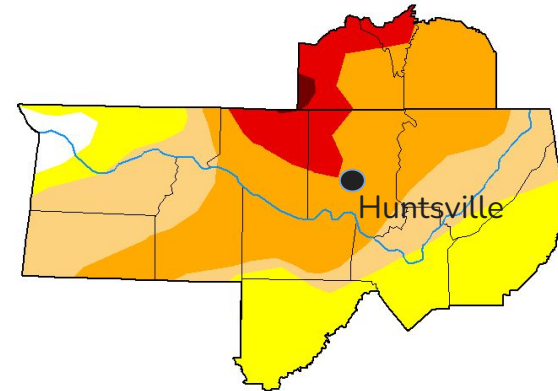
Latest U.S. Drought Monitor Map

• Drought intensity and Extent

- **D4 (Exceptional Drought):** A small area in southwest Lincoln County, and north-central Limestone County
- **D3 (Extreme Drought):** Areas from northern Limestone and northwest Madison, through western Lincoln and northern Moore Counties
- **D2 (Severe Drought):** Much of north-central portions of the area and southern Middle Tennessee; from southeast Franklin County (AL), through Lawrence, Morgan, southern/western Limestone, Madison, northern Jackson, and into Lincoln, Moore, and Franklin (TN) Counties.
- **D1 (Moderate Drought):** Areas around northwest and northeast Alabama, including a small area in northeast Franklin (TN) County.
- **D0 (Abnormally Dry):** Portions of northwest Alabama, and also, areas from Cullman County northeastward through southern Marshall and much of DeKalb Counties.

U.S. Drought Monitor
Huntsville, AL WFO

December 3, 2024
(Released Thursday, Dec. 5, 2024)
Valid 7 a.m. EST



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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Western Regional Climate Center



droughtmonitor.unl.edu

Image Caption: U.S. Drought Monitor valid 7 AM CDT, December 3, 2024.



National Oceanic and
Atmospheric Administration

U.S. Department of Commerce

National Weather Service
Huntsville, AL



Four-Week Change in Drought Intensity

- Four-Week U.S. Drought Monitor Class Change
 - **Drought Worsened:** Over small portions of north-central Alabama, and in much of the southern Middle Tennessee counties (Lincoln, Moore, and Franklin)
 - **No Change:** much of northern Alabama, and small portions of the three southern Middle Tennessee counties
 - **Drought Improved:** Portions of northwest Alabama, but most especially in Cullman County northeastward through southern Marshall, much of DeKalb, and southern portions of Jackson Counties

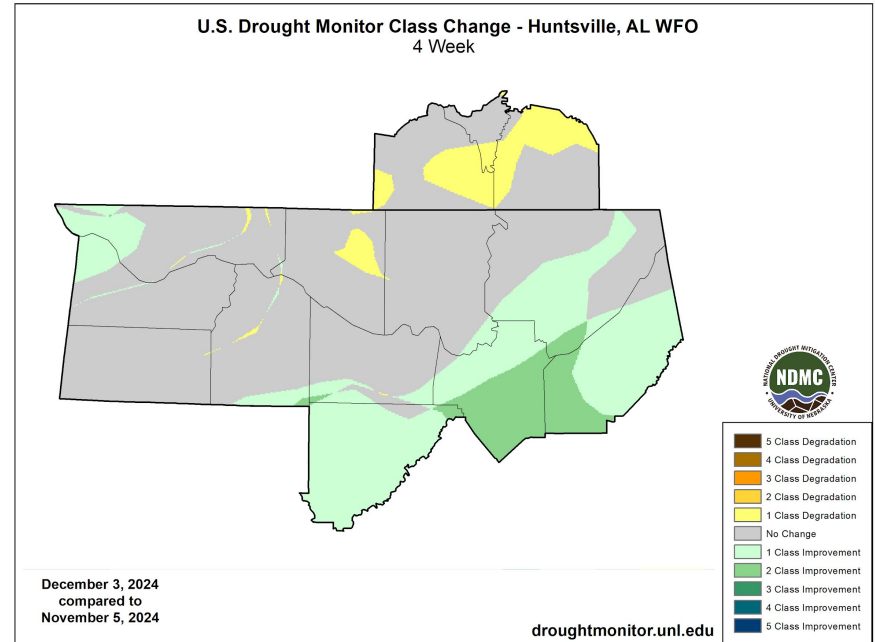
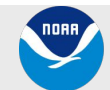


Image Caption: U.S. Drought Monitor 4-week change map valid ending 7AM CDT December 3, 2024.



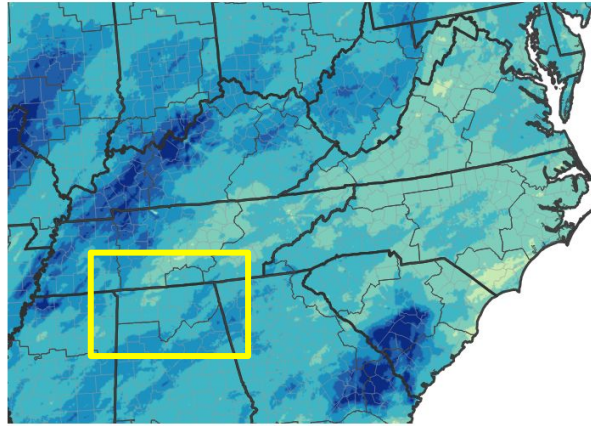


Precipitation - Past 30 Days

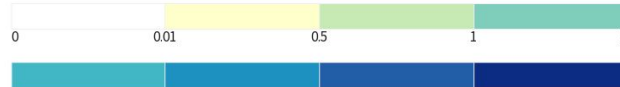
Main Takeaways

- Precipitation ending December 5 totaled around 2-4 inches for most areas. However, amounts around 4-6 inches occurred in southeastern portions of the area, from Cullman County northeastward through portions of Marshall, DeKalb and Jackson Counties, and mainly in western portions of Lauderdale County.
- Rainfall was generally around 25-50% of normal for most locations, but portions of NW Alabama where a bit lower at 10-25%. A small sliver of Marshall County actually saw slightly above normal precipitation.

30-Day Precipitation Accumulations (Inches)

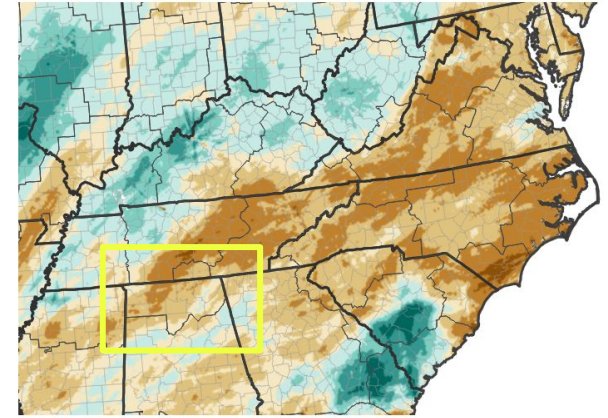


Inches of Precipitation



Source(s): National Weather Service Multi-Radar Multi-Sensor System; image courtesy of Drought.gov Last Updated: 12/05/24

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: 12/05/24

Left - 30-Day Precipitation Totals, Right - 30-Day Percent of Normal Precipitation. Data ending Dec 5, 2024.





Summary of Impacts

Hydrologic Impacts

- The marked swings from deficits to surpluses in rainfall since the summer began have produced no significant hydrologic issues, other than a Major Flood that resulted on Big Nance Creek due to the impacts from tropical cyclone Francine. Some impacts have been provided that indicate low or dry wells in some areas.

Agricultural Impacts

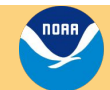
- USDA Crop and Progress Condition Reports in the early summer indicated crops had been negatively impacted due to the hot, dry weather, with corn, soybeans, cotton, hay and pastures all being affected. However, the most significant damage occurred specifically to the corn crop. More recently, reports have continued to indicate poor grazing conditions, with the need to supplement with hay, and very low water in creeks and retention ponds. Some producers have experienced delays with planting winter wheat due to the dry conditions. Please see the 2024 Crop and Progress Condition Reports for [Alabama](#) and [Tennessee](#) from the USDA.

Fire Hazard Impacts

- As reported by the Alabama Forestry Commission, since late June over 1000 acres have burned in northern Alabama within the Huntsville County Warning and Forecast Area. This includes the following larger fires: 100 acres in Colbert County (controlled on Sep 10th), 130 acres in Lawrence County (controlled on September 17th), and 135 acres in Colbert County (controlled on June 26th).

Mitigation Actions

- All TN and AL counties in the Huntsville County Warning and Forecast Area have been included in a USDA Secretarial Disaster Declaration for Drought. Go to this link for more information: <https://www.fsa.usda.gov/programs-and-services/disaster-assistance-program/disaster-designation-information/index>
- 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.





Hydrologic Conditions

- 14-Day average streamflows remain in the 10-24th percentile for most areas, but flows below the 10th percentile have been observed in northern areas. The lowest recent flows have occurred along the Elk River at Prospect, TN (5th percentile), Big Wills Creek (7th percentile), Shoal Creek (8th percentile), and Limestone Creek near Athens (11th percentile)
- Lake Stages remain generally near normal.

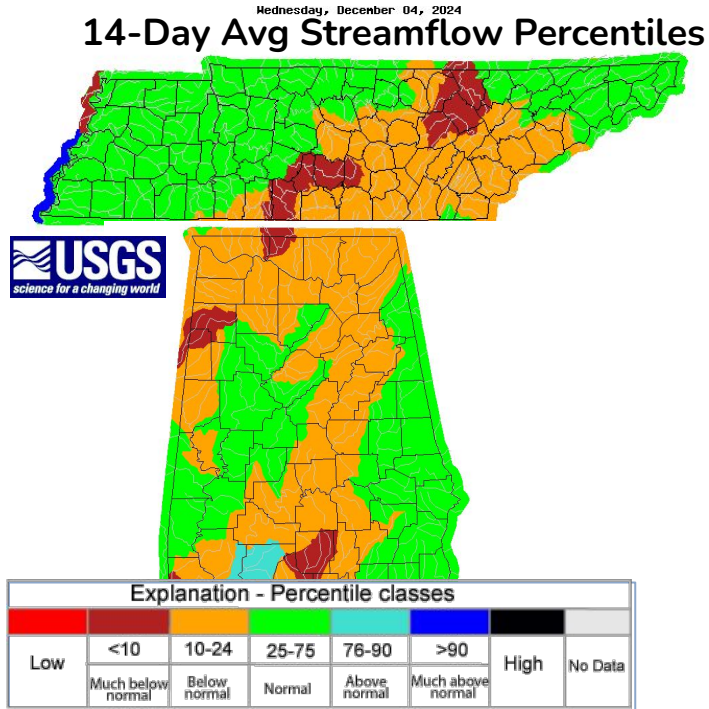
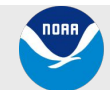


Figure Caption: USGS 14-day streamflow percentiles for Tennessee and Alabama, valid Dec 4, 2024

Lake Stages

Reservoir/ Lake	Pool Elevation (ft)	Current Elevation (ft)	Percent Full
Bear Creek	576	576	100%
Little Bear Creek	613	613	100%
Cedar Creek	572	573	>100%
Tim's Ford	876	878	>100%
Nickajack	633-635	633	Within Operating Range (WOR)
Guntersville	593-594	594	WOR
Wheeler	551-552	552	WOR
Wilson	506-508	507	WOR
Pickwick	408-410	410	WOR
Lewis Smith	496	500	>100%

Table caption: Reservoir conditions as of Dec 4, 2024

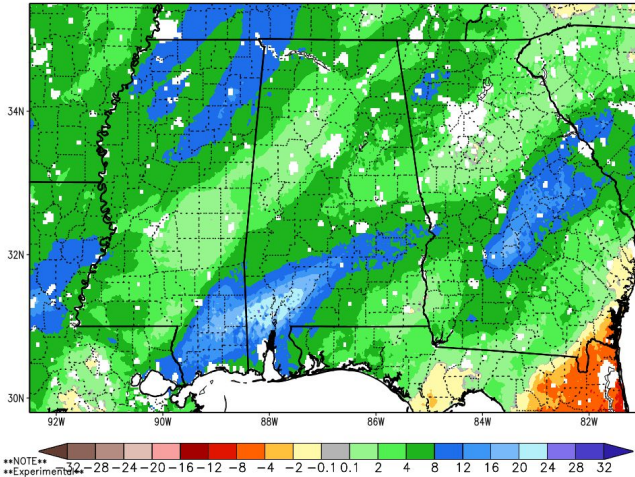




Agricultural Impacts - Soils

- Per the latest NASA SPoRT soil moisture data, 0-200 cm relative soil moisture has generally increased modestly, around 4-10% over the last 30 days.
- 0-200 cm soil moisture is still around the 5th to 20th percentiles especially in central portions of the area.

1-Month Difference in Column Relative Soil Moisture (%) valid 12z 05 Dec 2024



SPoRT-LIS 0-200 cm Soil Moisture percentile valid 05 Dec 2024

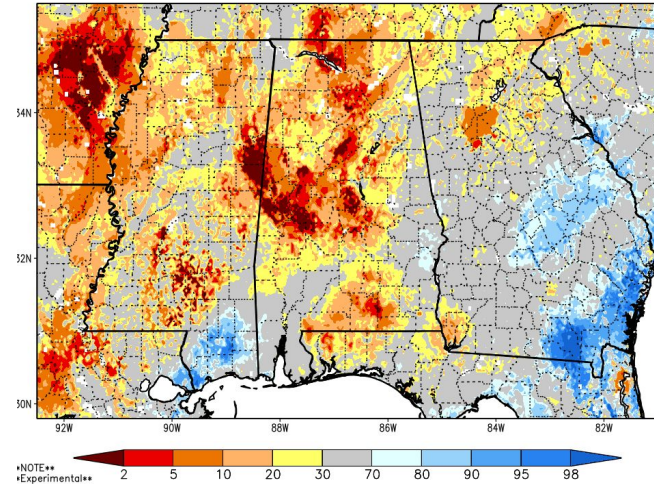
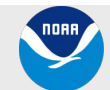


Image Captions:

Left: NASA SPoRT 1-Month Difference in 0-200 cm Relative Soil Moisture, ending Dec 5, 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), Dec 5, 2024





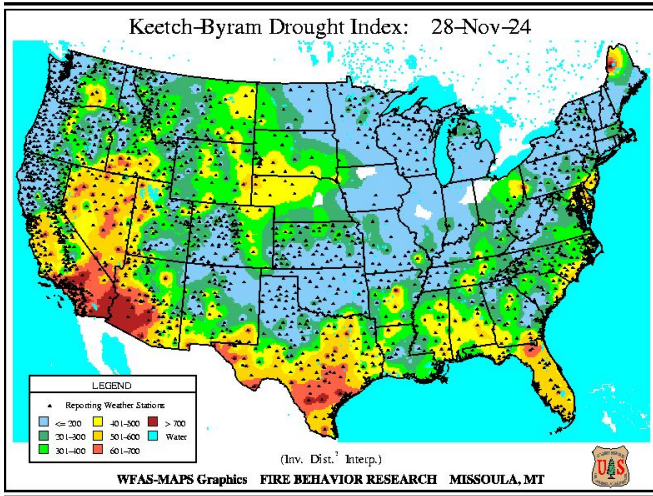
Fire Hazard Impacts

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

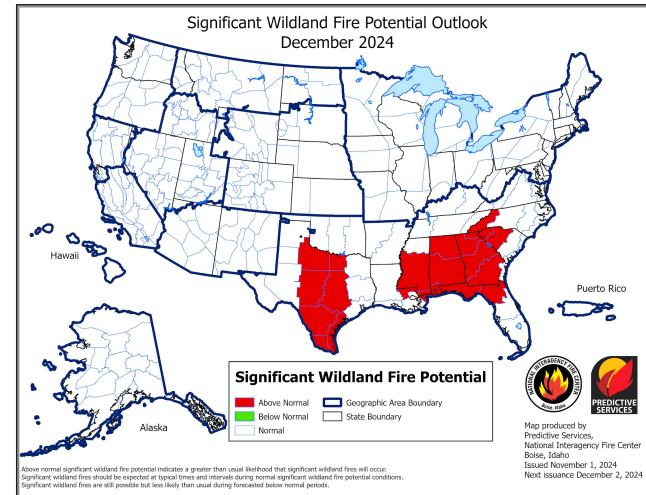
- [Keetch Byram Drought Index \(KBDI\)](#) values have fallen in the past several weeks with values generally ranging from 200-500.
- NWS offices may issue Red Flag Warnings when KBDI values climb above 300 in Alabama, although other weather criteria based on wind speeds and relative humidity must also 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.

- On Oct 30th, the Alabama Forestry Commission expanded a Fire Danger Advisory to cover all counties in Alabama, but that was later rescinded for all counties on November 15th.
- Burn Permits are required in Tennessee from Oct 15 to May 15 for debris pile fires in areas without local restrictions.



Left Image Caption: Keetch-Byram Drought Index (KBDI) for the Continental U.S., estimated for Nov 28, 2024



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

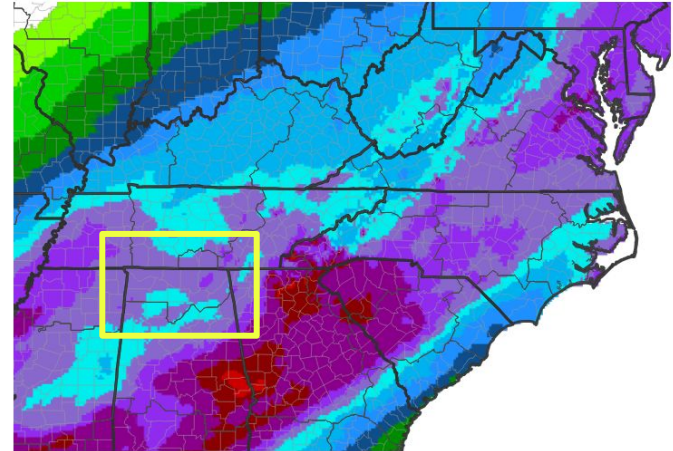




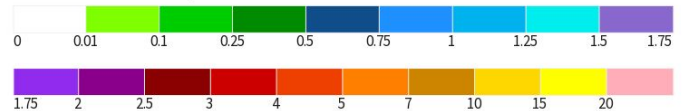
Seven Day Precipitation Forecast

- Forecast Precipitation (Dec 5-12):
 - Rainfall is forecast to range from around 1.25" to 1.75" over the next seven days, from Dec 7 to Dec 14.
 - Around 1.25 - 1.50 inches of precipitation is normal for this time of year for a weekly period, so precipitation is forecast to be near normal during the period.

7-Day Quantitative Precipitation Forecast for December 7, 2024–December 14, 2024



Predicted Inches of Precipitation



Source(s): National Weather Service Weather Prediction Center; image courtesy of Drought.gov Last Updated: 12/07/24

Image Caption: Weather Prediction Center 7-day precipitation forecast, valid Dec 5 to Dec 12, 2024



Monthly Outlooks - December 2024

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

- For December, odds are slightly in favor (33-40%) of Above Normal Temperatures for the period. It's important to note that the Monthly Outlook includes probabilities for 3-categories: Above, Near, and Below Normal Temperatures.
- For December, there are Equal Chances for Below, Near, or Above Normal Precipitation for the majority of the Tennessee Valley region.

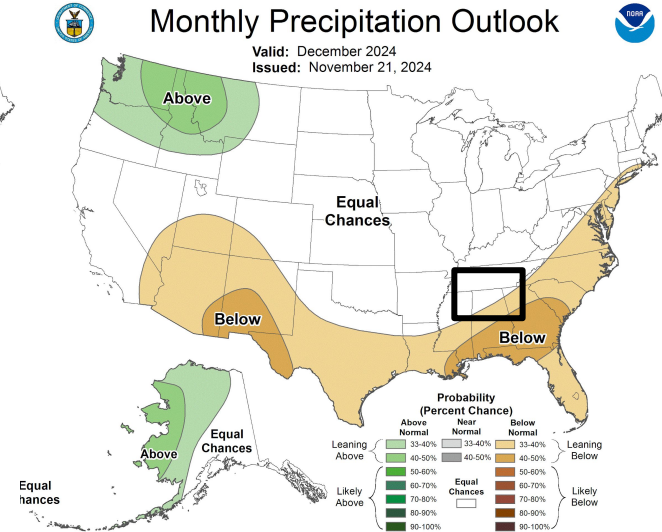
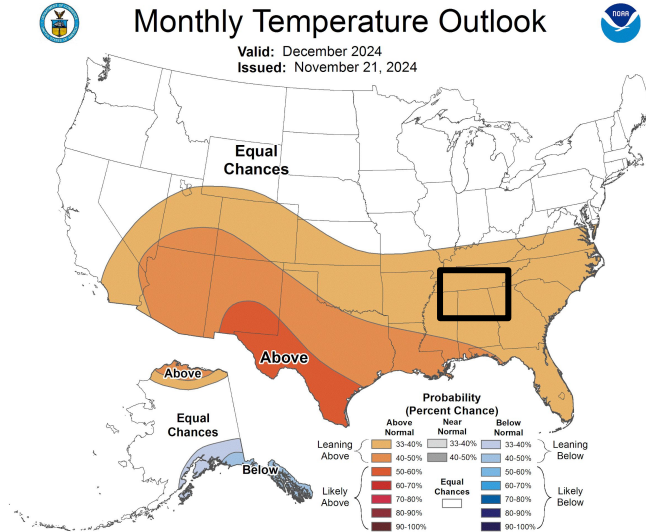
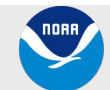


Image Caption: Climate Prediction Center Monthly Outlooks for Temperatures (left) and Precipitation (right) for December 2024





Seasonal Outlooks - December to February

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 nearly all of the area for the December to February period.
- **Precipitation:** Below Normal
Precipitation is slightly favored for about the southeast half of the area for the period. Equal Chances for Below, Near, or Above Normal Precipitation is outlooked for the remainder of the area.

Possible Impact

Drought conditions would tend to persist or deteriorate across the area.

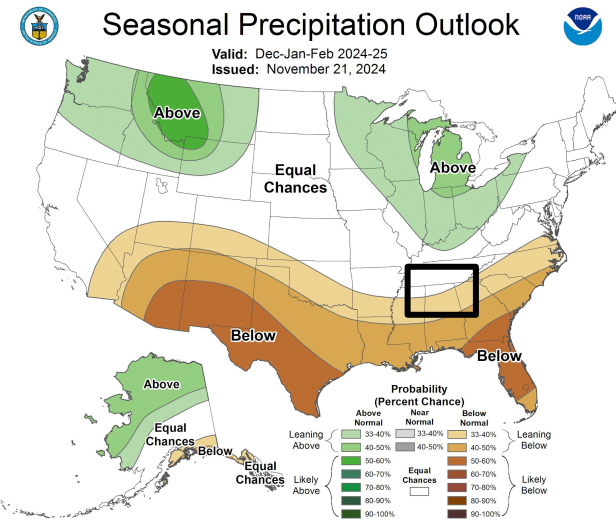
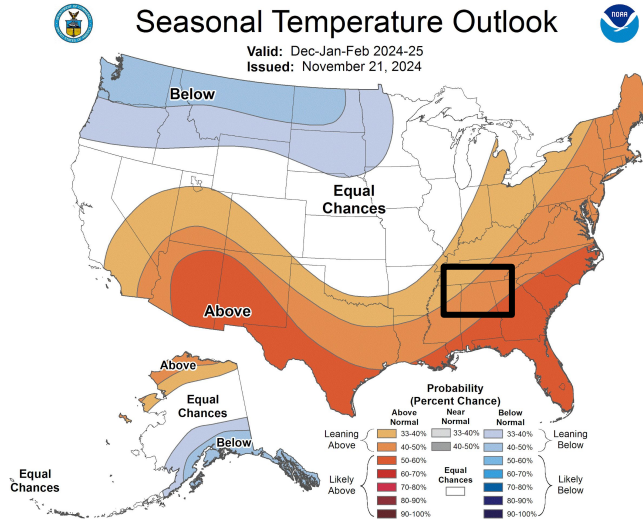


Image Caption: Climate Prediction Center Seasonal Outlooks for Temperatures (left) and Precipitation (right) for December 2024 to February 2025

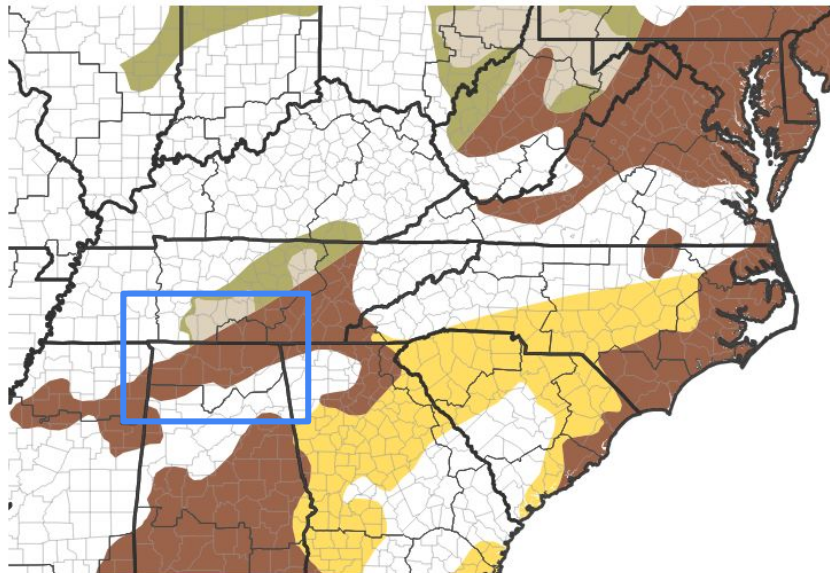


Seasonal Drought Outlook

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

- As of the latest Seasonal Drought Outlook for the period from November 30, 2024 through February 28, 2025, drought conditions are expected to generally persist across drought-stricken areas.

Seasonal (3-Month) Drought Outlook for November 30, 2024–February 28, 2025



Drought Is Predicted To...



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

Last Updated: 11/30/24

Links to the latest:

[Climate Prediction Center Monthly Drought Outlook](#)

[Climate Prediction Center Seasonal Drought Outlook](#)