

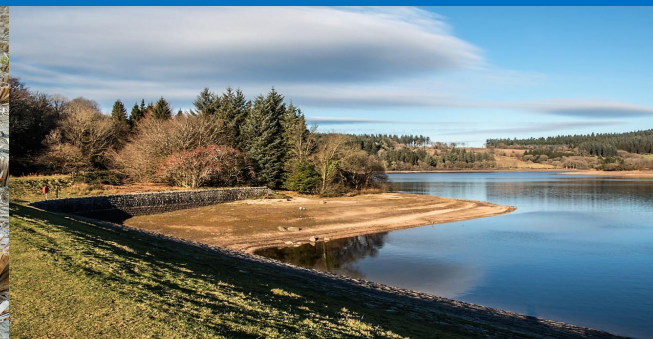


Drought Information Statement for the Central Tennessee Valley

Issued by: WFO Huntsville, AL

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

- Since much of the area is in D2-D3 drought, this product will be updated at least once per month, but statements may be updated otherwise to communicate any significant information.
- Please see all currently available products at <https://drought.gov/drought-information-statements>
- Please visit <https://www.weather.gov/hun/DroughtInformationStatement> for previous statements





U.S. Drought Monitor

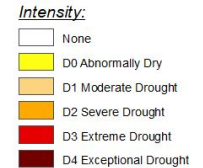
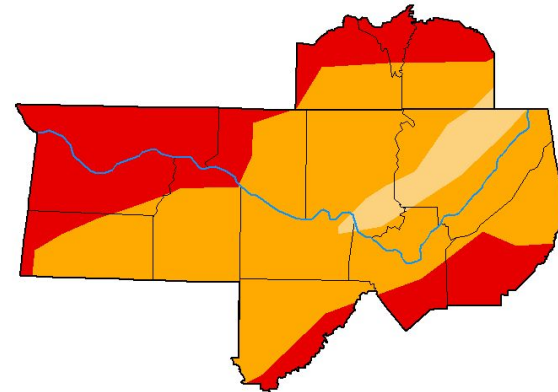
Latest U.S. Drought Monitor Map

- **Drought intensity and Extent**

- **D4 Exceptional Drought:** None
- **D3 Extreme Drought:** Much of northwestern Alabama, northern Lincoln and Franklin (TN) Counties, and most of Moore County. Also, southern portions of DeKalb and Marshall Counties, and SE Cullman County.
- **D2 Severe Drought:** A SW to NE swath, stretching from Franklin County (AL) to Jackson, Franklin (TN) and DeKalb Counties, which includes most of the Huntsville-Decatur metropolitan area.
- **D1 Moderate Drought:** A generally narrow area from far NE Morgan County, northeastward into central and northern Jackson County and far SE Franklin County (TN)
- **D0 Abnormally Dry:** None

U.S. Drought Monitor Huntsville, AL WFO

December 12, 2023
(Released Thursday, Dec. 14, 2023)
Valid 7 a.m. EST



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:
Curtis Riganti
National Drought Mitigation Center



droughtmonitor.unl.edu

Image Caption: U.S. Drought Monitor valid 7AM CDT, December 12, 2023.



National Oceanic and
Atmospheric Administration

U.S. Department of Commerce

National Weather Service
Huntsville, AL



Recent Change in Drought Intensity

- One Week U.S. Drought Monitor Class Change
 - **Drought Worsened:** No areas
 - **No Change:** Various locations, but drought remains generally unchanged in northwest Alabama.
 - **Drought Improved:** Several swaths of improvement mainly in NC and NE Alabama and in portions of southern Middle Tennessee.

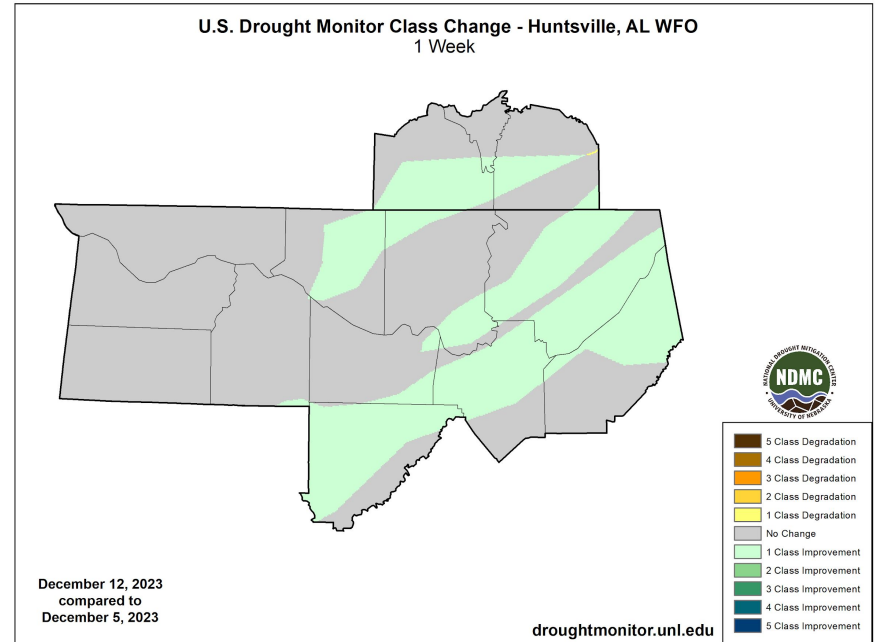
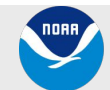


Image Caption: U.S. Drought Monitor 1-week change map valid 7AM CDT Dec 12, 2023.



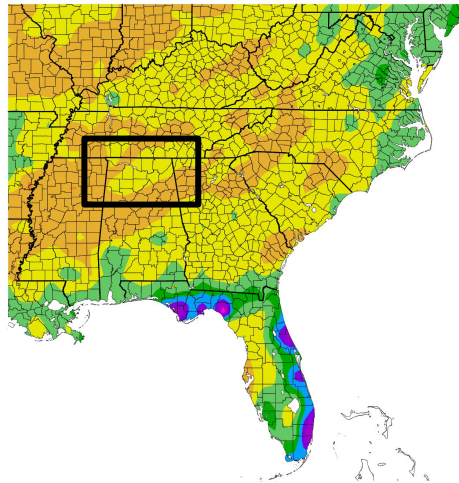


Precipitation - Past 90 Days

Main Takeaways

- Rainfall has largely totaled around 3 to 9 inches over the past 90 days, with a good portion of that rain falling recently in early December. The heaviest rainfall on those dates occurred from the Bankhead National Forest areas of Franklin and Lawrence counties northeastern across portions of Morgan, Madison, and Jackson Counties. This includes the Flint River basins. Normal 90-day rainfall for this time of year is around 12 inches.
- Rainfall amounts range from around 30-70% of normal for the past 90 days as shown in the graphic on the right.

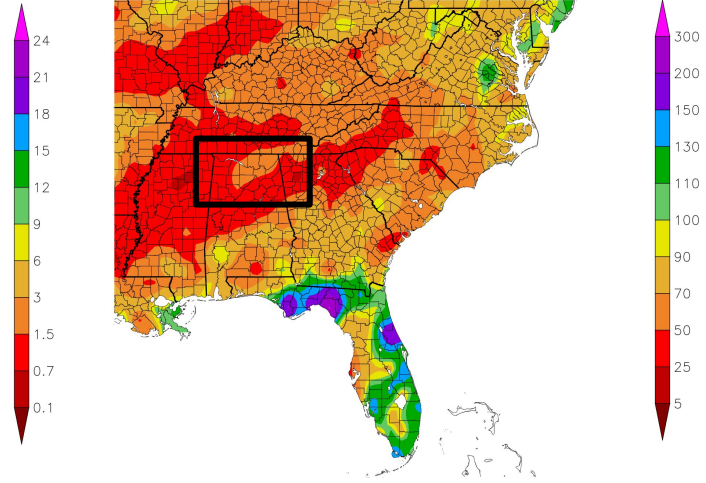
Precipitation (in)
9/16/2023 - 12/14/2023



2023 at HPRCC using provisional data.

NOAA Regional Climate C

Percent of Normal Precipitation (%)
9/16/2023 - 12/14/2023



023 at HPRCC using provisional data.

NOAA Regional Climate C

Image Captions from ACIS High Plains Regional Climate Center:

Left - 90-Day Precipitation Totals, Right - 90-Day Percent of Normal Precipitation. Data ending December 14, 2023



Summary of Impacts

Hydrologic Impacts

- No hydrologic impacts of note, although streamflows fell over recent months due to the dry weather. However, streamflows have experienced periodic rises with recent rainfall since about mid-November, but continue to fall to a below normal base state.
- See next slide for more hydrologic information and streamflows and lake levels.

Agricultural Impacts

- Recent USDA Crop and Progress Condition Reports noted that recent rainfall allowed some operators to seed winter crops, while other operators had been delayed from planting crops. Pastures for grazing were reported to be in poor to very poor condition. Operators continued to feed supplemental hay to cattle due to the poor conditions. Please see the latest Crop and Progress Condition Reports for [Alabama](#) and [Tennessee](#) from the USDA for more information.

Fire Hazard Impacts

- The dry weather that quickly caused deterioration in conditions resulted in the Alabama Forestry Commission (AFC) issuing Fire Alerts earlier this fall. However, on December 4th, the 'No Burn' order was lifted across the state, including the counties in the Huntsville County Warning and Forecast Area. Thus, burn permits will be issued as normal. Debris burn permits are currently required in TN counties as usual this time of year. [AFC link](#); [TN Wildland Fire Link](#).

Drought Mitigation Actions

- On December 12, The Alabama Dept. of Economic and Community Affairs - Office of Water Resources placed Drought Region 1 in a Drought Advisory. Drought Region 3 (which includes Cullman County) remains in a Drought Warning.
- Water managers are urged to carefully monitor conditions and encourage the wise and efficient use of our water resources.
- Public water system customers are encouraged to follow their local water system's recommendations regarding water use.
- All other water users should make prudent decisions on their water use to protect available resources
- You can see the latest Alabama Drought Declaration here... <https://adeca.alabama.gov/wp-content/uploads/DroughtDeclaration.pdf>.
- Please refer to your municipality and/or water provider for any mitigation information in the future.





Hydrologic Conditions

Main Takeaways

- Some improvements have occurred in streamflows in recent weeks. However, some basins in the area are experiencing 7-Day avg flows in the 10th-24th percentile for this time of year. Portions of southern middle Tennessee remain below the 10th percentile.
- Lake/Reservoir levels remain generally near normal.

Additional data:

None at this time to report

Thursday, December 14, 2023 7-Day Avg Streamflow Percentiles

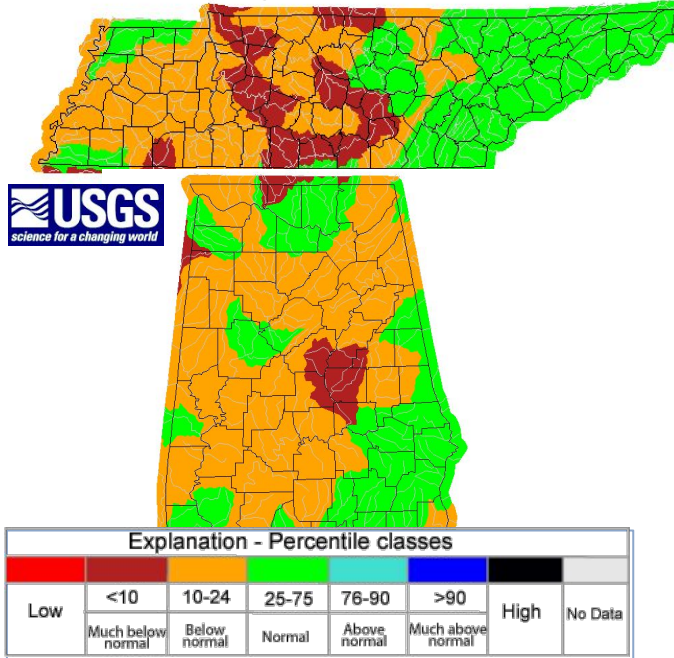


Figure Caption: USGS 7-day streamflow percentiles for Tennessee and Alabama, valid Dec 14, 2023

Lake Stages

Reservoir/Lake	Pool Elevation (ft)	Current Elevation (ft)	Percent Full
Bear Creek	566	566	100%
Little Bear Creek	609	609	100%
Cedar Creek	567	567	100%
Tim's Ford	876	876	100%
Nickajack	634	634	Within Operating Range (WOR)
Guntersville	593	593	WOR
Wheeler	552	551	WOR
Wilson	505-506	506	WOR
Pickwick	409	409	WOR
Lewis Smith	496	499	>100%

Table caption: Reservoir conditions as of Dec 14, 2023



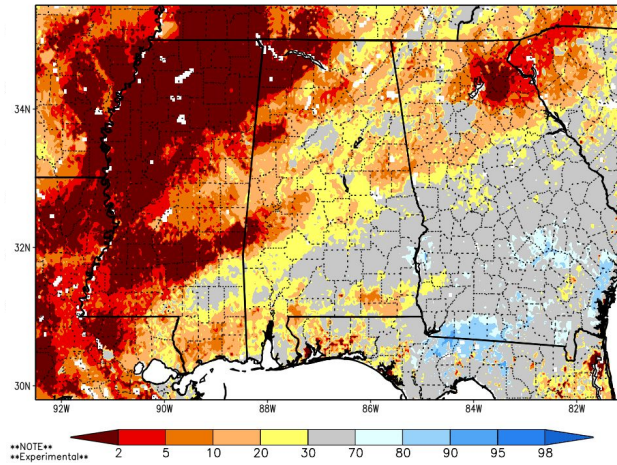


Agricultural Impacts

Main Takeaways

- Soil Moisture values have decreased in recent months due to below normal rainfall. Recent rainfall however contributed to some increases in soil moisture, especially in parts of northeastern Alabama.
- 0-100 cm depth soil moisture percentiles (left image) indicate values largely at or below the 5th percentile across NW Alabama, with values generally around the 5th to 30th ranking percentile elsewhere.
- Meanwhile, the crop moisture index (right image) indicates values were Abnormally Moist for the weekly period ending Dec 9, 2023.

SPoRT-LIS 0-100 cm Soil Moisture percentile valid 14 Dec 2023



Crop Moisture Index by Division
Weekly Value for Period Ending DEC 9, 2023
Short Term Need vs. Available Water in a Shallow Soil Profile

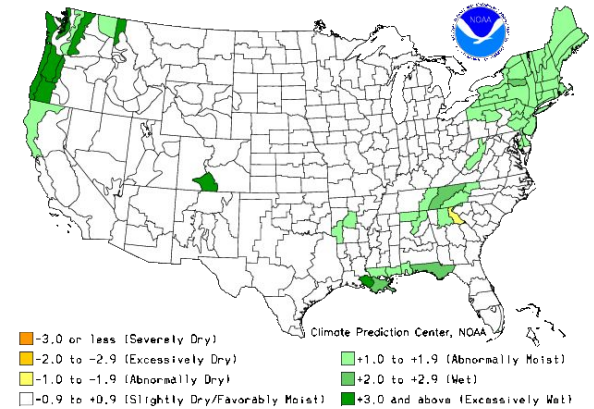
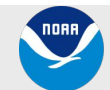


Image Captions:

Left: NASA Short-term Prediction Research and Transition Center 0-100 cm Soil Moisture Ranking Percentile based on a 33-year climatology (1981-2013), Dec 14, 2023

Right: Crop Moisture Index by Division. Weekly value for period ending Dec 9, 2023





Other Impacts

Main Takeaways

- Lack of normal rainfall from late August to mid-November has led to impacts especially to the agricultural industry.

Impacts

- The overall lack of normal rainfall from late summer through much of the fall has resulted in very dry soils and lack of necessary grasses and forages for livestock farmers. Numerous reports from around the region over recent weeks indicate that the lack of grass and ability to grow cold season grasses has resulted in the need for supplemental hay feeding. Also, stress to livestock has been reported due to the dry, hard ground conditions. Farm water resources such as retention ponds are drying up or have dried up, resulting in increased hauling of outside water resources. Some producers have indicated the need to sell livestock.
- Some reports have indicated increased wildlife foraging near people.

You can go to the [Condition Monitoring Observer Reports](#) page from the National Drought Mitigation Center to see individual reports of drought impacts at various timescales across the region.

Further Drought Mitigation Actions

- All counties in the Huntsville County Warning and Forecast area have been placed as Primary Counties in the USDA Secretarial Disaster Declaration for Drought. To learn more, go to the [USDA Disaster Designation Information](#) web page.





Seven Day Precipitation Forecast

- Next 7 days:

- A low pressure system is expected to develop in the Gulf this weekend, but heaviest rainfall is expected to stay to the east of our area. Otherwise, about one tenth to one half of an inch of precipitation is expected over the next seven days, through December 23rd.
- Around 1.25 to 1.50 inches of precipitation is normal for this time of year for a weekly period.

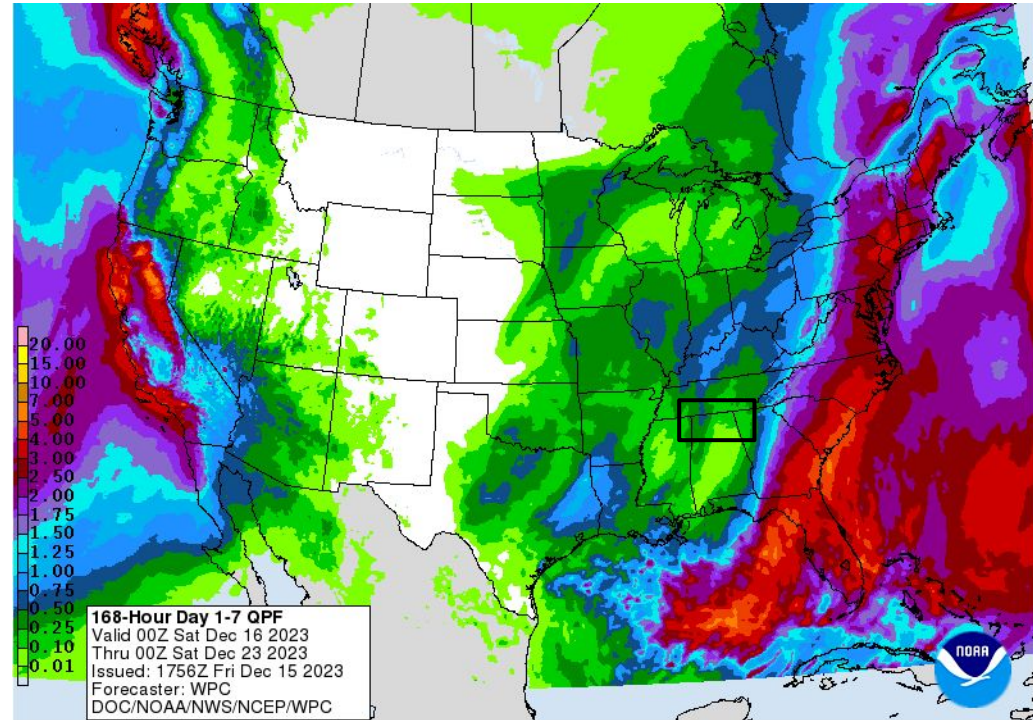
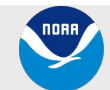


Image Caption: Weather Prediction Center 7-day precipitation forecast valid 7PM Dec 16 to 7PM Dec 23 (CST)





8-14 Day Outlook

Temperature and Precipitation Outlook

Main Takeaways

- Above Normal temperatures are favored for the area.
- Above Normal precipitation is slightly favored for the period.

Possible Impact

Conditions may be near steady-state during this period. .

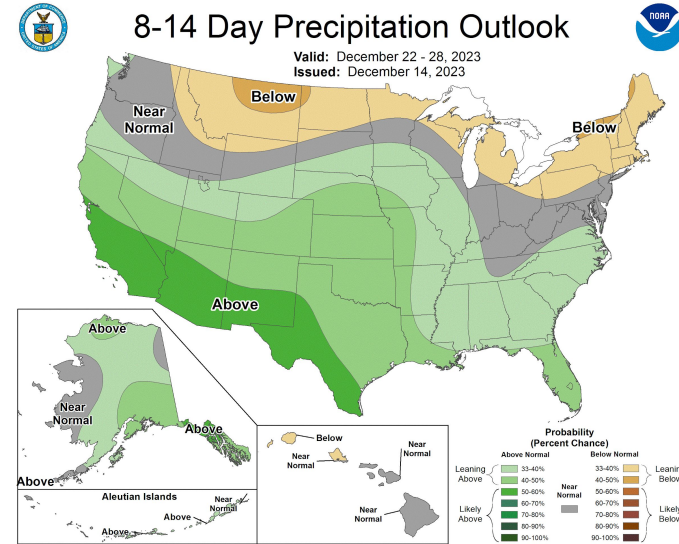
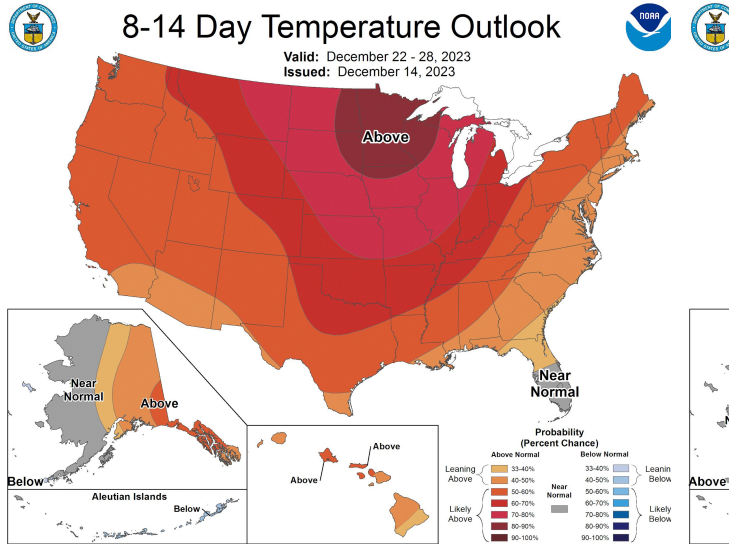
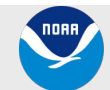


Image Captions:
Left - Climate Prediction Center 8-14 Day Temperature Outlook
Right - Climate Prediction Center 8-14 Day Precipitation Outlook
Valid December 22 to December 28, 2023





Monthly Outlooks

Monthly Temperature and Precipitation Outlook

Main Takeaways

- Above normal temperatures are moderately favored (30-50% chance) for the eastern half of the area, and slightly favored (33-40% chance) for the western half of the area during December.
- Above normal precipitation is slightly favored (33-40% chance) for most of the area during December, with moderate chances (40-50%) in far southeast areas.

Possible Impact

Some improvement in drought conditions is possible during December. However, confidence is still relatively low for above normal precipitation. The best odds for improvement will be in southeast portions of the area.

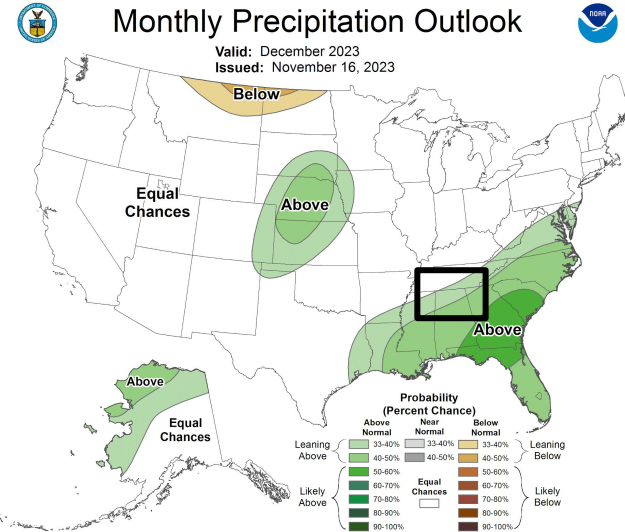
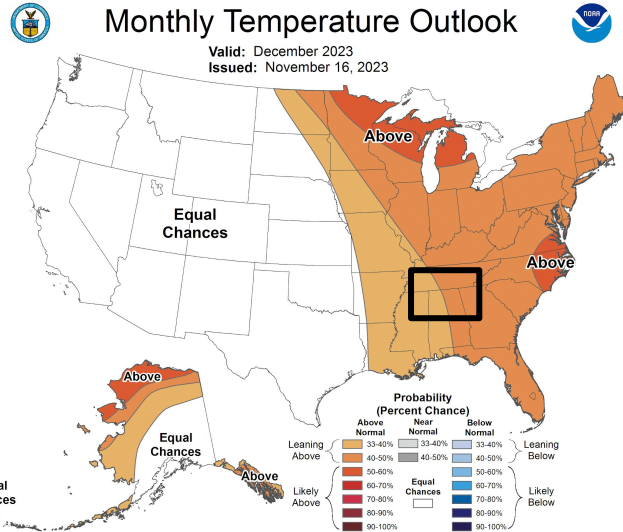


Image Captions:
Left - Climate Prediction Center Monthly Temperature Outlook.
Right - Climate Prediction Center Monthly Precipitation Outlook.
Valid December 2023





Seasonal Outlook (December to February)

Seasonal Temperature and Precipitation Outlook

Main Takeaways

- **Temperatures:** Equal chances for below, near, or above normal temperatures for the Dec-Feb timeframe.
- **Precipitation:** Above Normal precipitation is slightly favored (33-40% chance) for about the northern half of the area, with moderate chances (40-50%) for the southern half.

Possible Impact

Some improvement in drought conditions is possible overall during the December to February period. Although, confidence is not high for specific temperature and precipitation conditions.

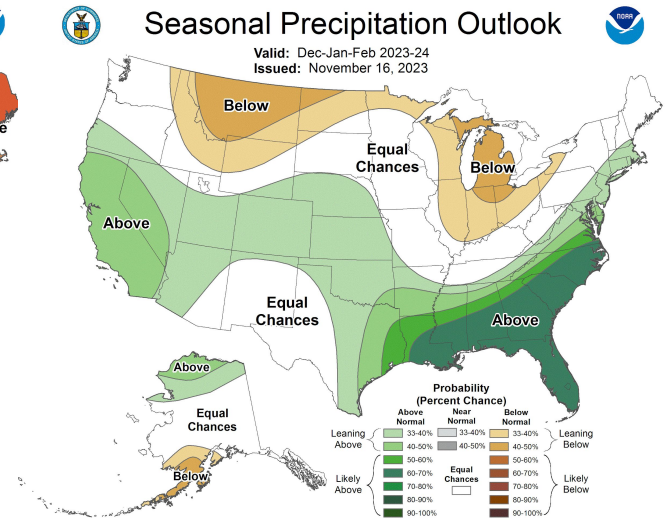
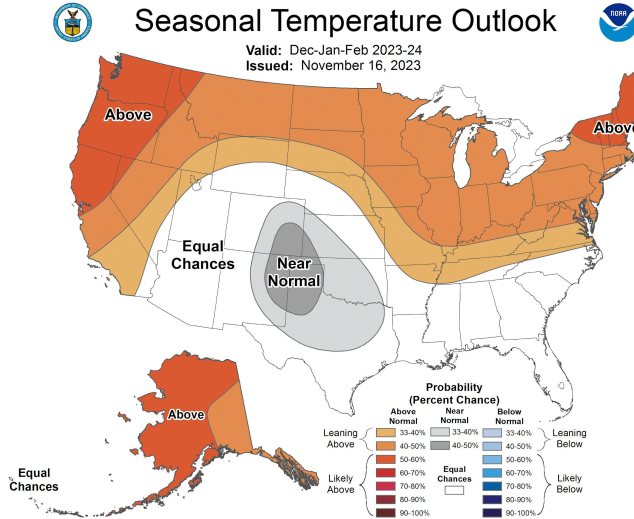
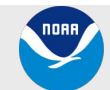


Image Captions:
Left - Climate Prediction Center Seasonal Temperature Outlook.
Right - Climate Prediction Center Seasonal Precipitation Outlook.
Valid December 2023 to February 2024





Local Drought Outlook

Seasonal Outlook

Main Takeaways

- Drought conditions are anticipated to persist, but some improvement is possible through February, per the latest Seasonal Drought Outlook.

U.S. Seasonal Drought Outlook Valid for December 1, 2023 - February 29, 2024 Drought Tendency During the Valid Period Released November 30, 2023

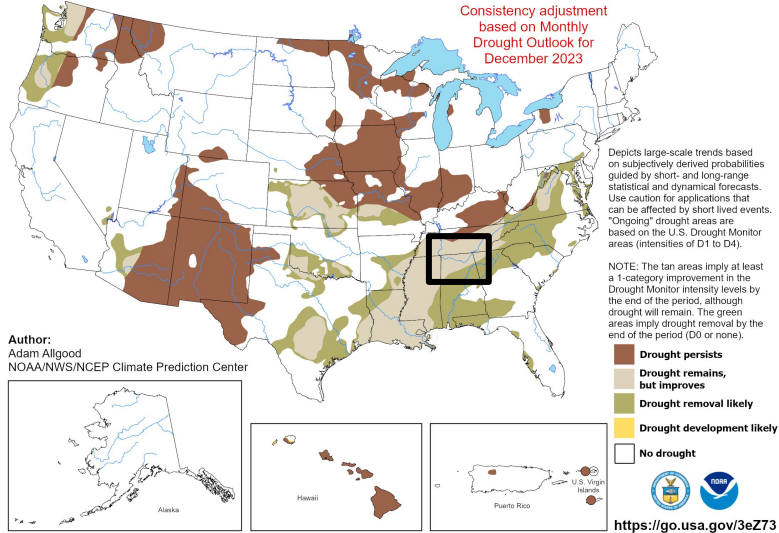


Image Caption:

Climate Prediction Center *Seasonal* Drought Outlook for December 1, 2023 to February 29, 2024, released November 30, 2023 (https://www.cpc.ncep.noaa.gov/products/expert_assessment/season_drought.png)