

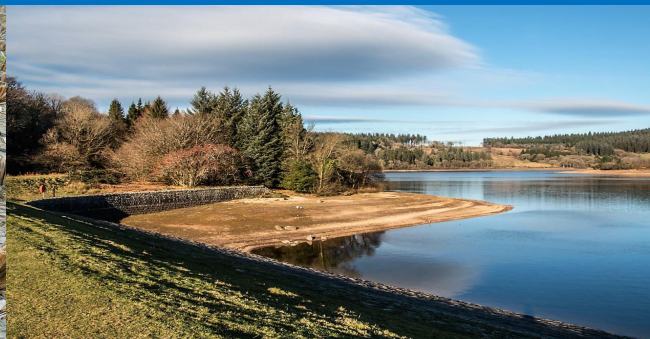


Drought Information Statement for the Central Tennessee Valley

Issued by: WFO Huntsville, AL

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

- Since much of the area is in D3 (Extreme) drought or higher, this product will be updated at least once per month, but statements may be updated otherwise to communicate any significant new 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





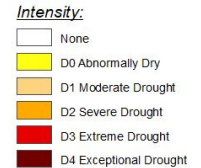
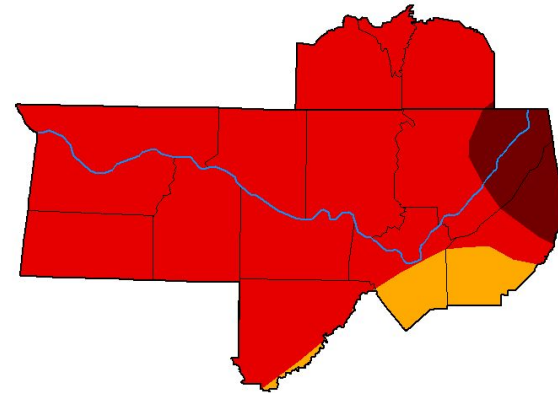
U.S. Drought Monitor

Latest U.S. Drought Monitor Map

- Drought intensity and Extent
 - D4 Exceptional Drought: Added in far northeast Alabama in eastern Jackson and DeKalb Counties.
 - D3 Extreme Drought: Most of the NWS Huntsville County Warning and Forecast Area, with the exception of small southeastern portions of Cullman County, about the southern half of Marshall County, and southern portions of DeKalb County
 - D2 Severe Drought: Southeast portions of Cullman, and southern Marshall and DeKalb Counties
 - D1 Moderate Drought: None
 - D0: Abnormally Dry: None

U.S. Drought Monitor Huntsville, AL WFO

November 7, 2023
(Released Thursday, Nov. 9, 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:
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National Drought Mitigation Center



droughtmonitor.unl.edu

Image Caption: U.S. Drought Monitor valid 7 AM CDT, November 7, 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: An upgrade to D4 (Exceptional) drought occurred across far northeast Alabama in eastern Jackson and Dekalb counties.
 - No Change: Drought remains in D3 (Extreme) and D2 (Severe) across the remainder of the Tennessee Valley. No additional changes were made from last week's outlook.
 - Drought Improved: No areas

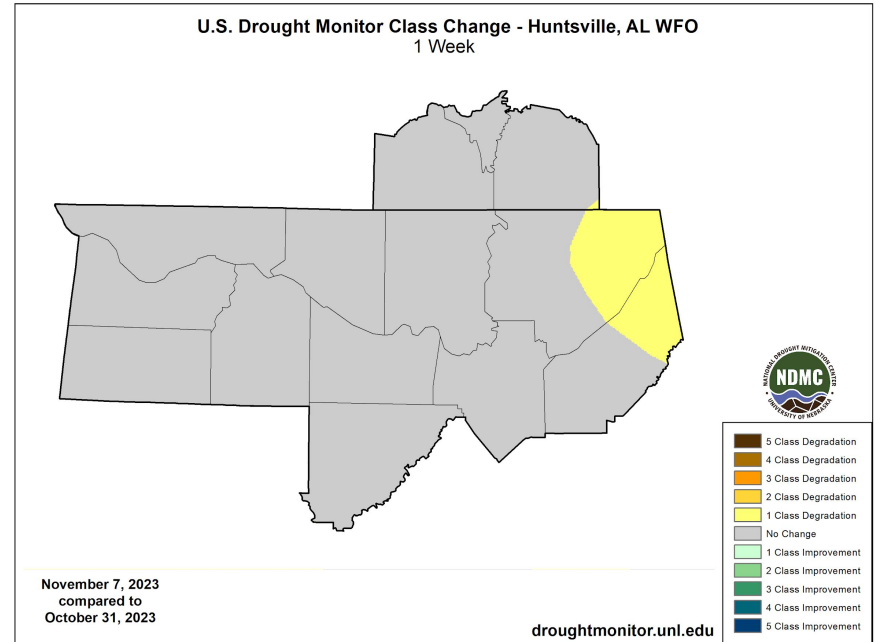
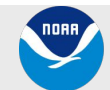


Image Caption: U.S. Drought Monitor 1-week change map valid 7 AM CDT October 31, 2023.



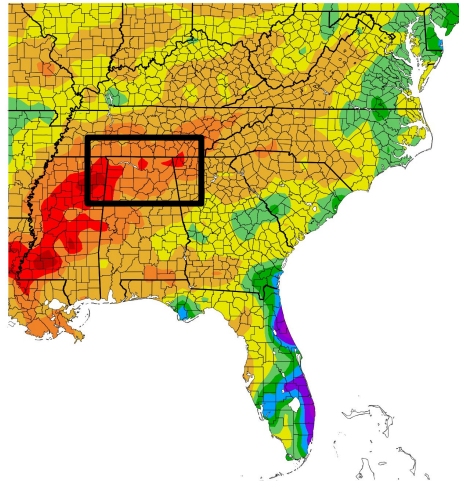


Precipitation - Past 60 Days

Main Takeaways

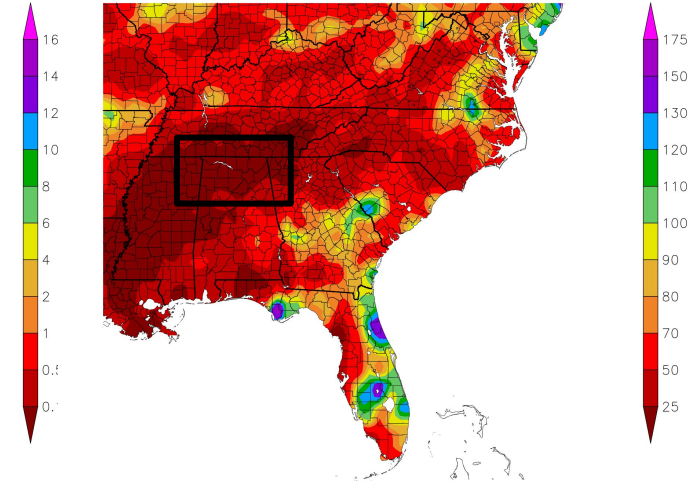
- Rainfall has largely totaled around one to two inches, with some locations even below one inch. Normal 60-day rainfall this time of year is around 7 to 8 inches. Precipitation since September 1st has only totaled 0.44 inch at Muscle Shoals and 1.65 inches at Huntsville.
- Rainfall amounts are less than 25% of normal for the last 60 days (dark red shading), as shown in the graphic on the right.

Precipitation (in)
9/10/2023 - 11/8/2023



23 at HPRCC using provisional data.

Percent of Normal Precipitation (%)
9/10/2023 - 11/8/2023



NOAA Regional Climate 023 at HPRCC using provisional data.

NOAA Regional Climate Cen

Image Captions from ACIS High Plains Regional Climate Center:

Left - 60-Day Precipitation Totals, Right - 60-Day Percent of Normal Precipitation. Data ending November 8, 2023



Summary of Impacts

Hydrologic Impacts

- No hydrologic impacts of note, although streamflows have fallen significantly over recent weeks.
- See next slide for more details

Agricultural Impacts

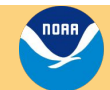
- Per recent USDA Crop and Progress Condition Reports, reporters noted that continued dry weather prevented operators from planting winter wheat and other winter crops. Also, pastures were reported to be in poor to fair condition. Operators continued to feed supplemental hay to cattle due to increasingly poor pasture conditions. Late planted soybeans and the apple crop, especially in Cullman County, have been negatively impacted. Please see the latest Crop and Progress Condition Reports for [Alabama](#) and [Tennessee](#) from the USDA.

Fire Hazard Impacts

- The Alabama Forestry Commission (AFC) updated a Fire Alert on October 24th to indicate that no burn permits will currently be issued for all counties in northern Alabama. Additionally, on November 8th, Alabama Governor Kay Ivey issued a declaration prohibiting burning across the state. The AFC has reported that fires have burned around 1000 acres of land in northern AL in the past two weeks. Debris burn permits are currently required in TN counties. [AFC link](#); [TN Wildland Fire Link](#).

Drought Mitigation Actions

- The Alabama Dept of Economic and Community Affairs - Office of Water Resources upgraded Drought Regions 1 and 3 to a Drought Warning as of November 8, 2023.
- 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

- Degradation in streamflows has occurred in recent weeks. Many basins in the area are experiencing 7-Day avg flows in the 10th-24th percentile for this time of year. However, streamflows at some individual basins have fallen below the 10th percentile (e.g., Paint Rock River: 5th percentile).
- Lake/Reservoir levels remain generally near normal.

Additional data:

None at this time to report

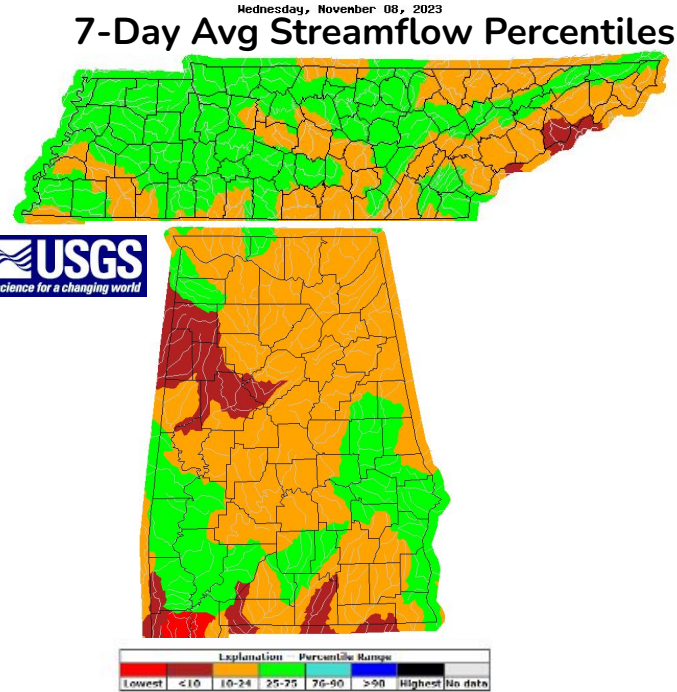
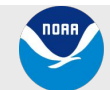


Figure Caption: USGS 7-day streamflow percentiles for Tennessee (top) and Alabama (bottom) , valid Nov 8, 2023

Lake Stages

Reservoir/ Lake	Pool Elevation (ft)	Current Elevation (ft)	Percent Full
Bear Creek	576	576	100%
Little Bear Creek	619	618	~95%
Cedar Creek	580	579	~93%
Tim's Ford	884	884	100%
Nickajack	634	633	Within Operating Range (WOR)
Guntersville	594	594	WOR
Wheeler	553	553	WOR
Wilson	N/A	507	WOR
Pickwick	411	412	Above Operating Range
Lewis Smith	499	499	100%

Table caption: Reservoir conditions as of Nov 8, 2023



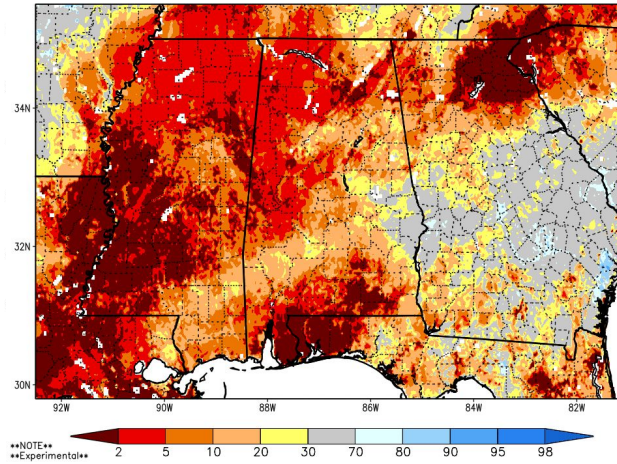


Agricultural Impacts

Main Takeaways

- Soil Moisture values have decreased in recent months due to below normal rainfall.
- 0-100 cm depth soil moisture percentiles (left image) indicate values largely at or below the 5th percentile. However, some locations in northwest AL and the Sand Mountain plateau have one meter soil moisture around the 2nd percentile.
- Meanwhile, the crop moisture index (right image) indicates values are abnormally dry for northern Alabama climate division zones for the weekly period ending Oct 28, 2023.

SPoRT-LIS 0-100 cm Soil Moisture percentile valid 02 Nov 2023



Crop Moisture Index by Division
Weekly Value for Period Ending NOV 4, 2023
Short Term Need vs. Available Water in a Shallow Soil Profile

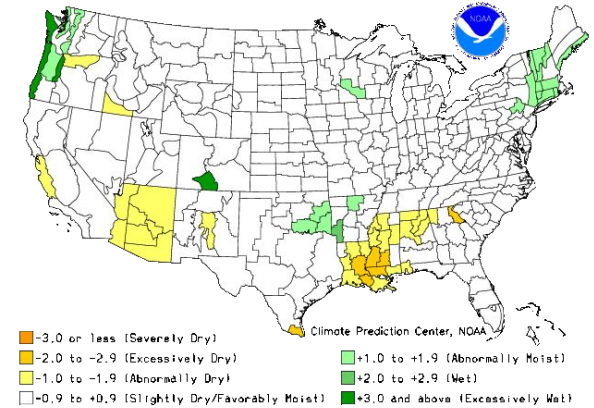
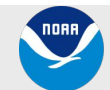


Image Captions:

Left: NASA Short-term Prediction Research and Transition Center 0-100 cm Soil Moisture Ranking Percentile based on 33-year climatology (1981-2013), Nov 2, 2023

Right: Crop Moisture Index by Division. Weekly value for period ending Nov 4, 2023



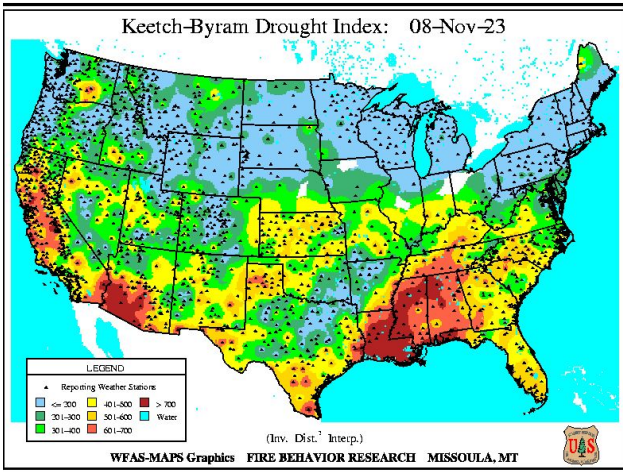


Fire Hazard Impacts

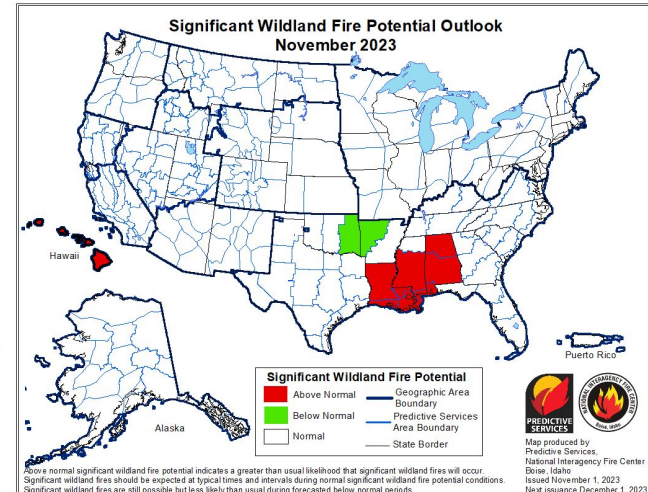
Main Takeaways

- Keetch Byram Drought Index (KBDI) values have increased significantly in recent weeks, with values around 600-700.
- National Weather Service offices may issue Red Flag Warnings when values climb above 300 in Alabama, although other weather criteria must be met. At this time, the Alabama Forestry Commission has issued a Fire Alert for all of northern Alabama, with a burn ban in place. To see more about wildfire and burn restrictions, click for [Alabama](#) and [Tennessee](#).
- All of northern AL is in an Above Normal Significant Wildland Fire Potential for November, 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 Nov 8, 2023.



Right Image Caption: Significant Wildland Fire Potential Outlook, November 2023





Seven Day Precipitation Forecast

- Next 7 days:

- A slightly more active pattern will begin to take shape this week, as between 0.5" to 1" of rainfall is forecast across much of the Tennessee Valley over the next week.
- Around 1.00 inch of precipitation is normal for this time of year for a weekly period.

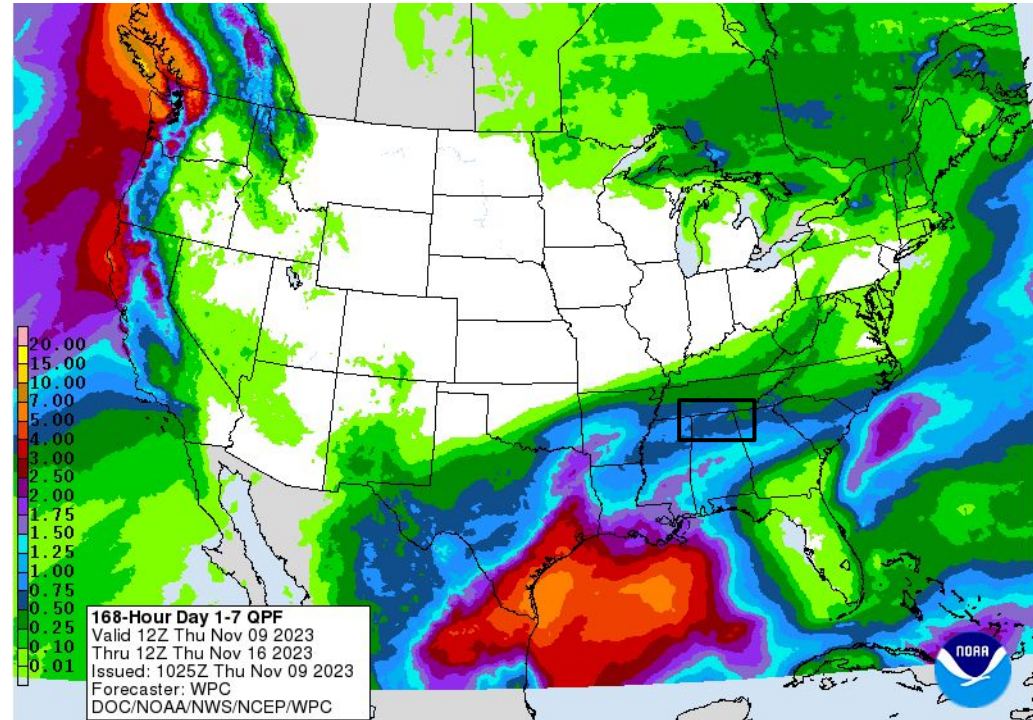
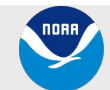


Image Caption: Weather Prediction Center 7-day precipitation forecast valid 7 AM Nov 9 to 7 AM Nov 16 (CDT)





8-14 Day Outlook

Temperature and Precipitation Outlook

Main Takeaways

- Above Normal temperatures are moderately favored (40-50% chance) for about the SW half of the area, with slight chances (33-40%) for above normal temperatures favored in the NE half.
- Above Normal precipitation is slightly favored (33-40%) for the region.

Possible Impact

Conditions may remain steady-state or improve slightly during this period.

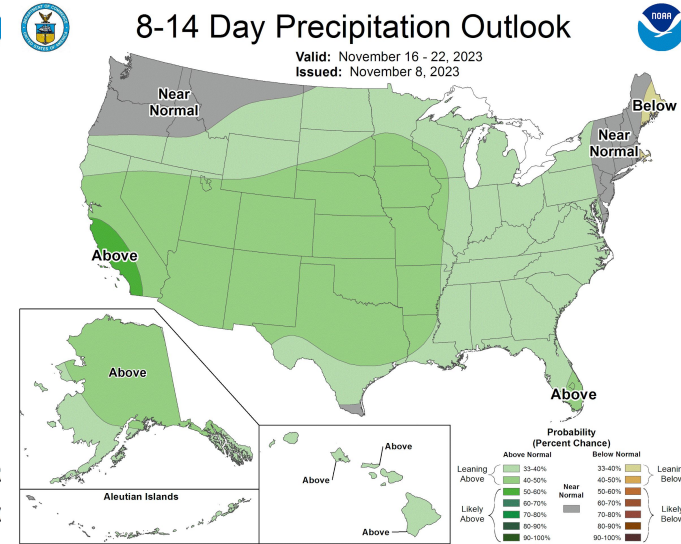
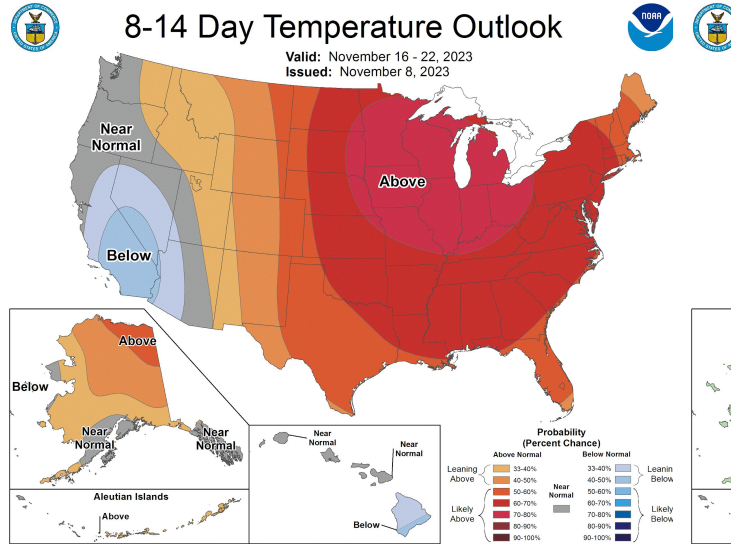
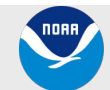


Image Captions:
 Left - Climate Prediction Center 8-14 Day Temperature Outlook
 Right - Climate Prediction Center 8-14 Day Precipitation Outlook
 Valid November 16 to November 22, 2023





Monthly Outlooks

Monthly Temperature and Precipitation Outlook

Main Takeaways

- Equal chances for Above, Near, or Below Normal temperatures in November.
- The Tennessee Valley is slightly favored (33-40%) for below normal precipitation in November.

Possible Impact

Possible degradation of conditions may eventually occur due to the expectations for above normal temperatures. However, this will ultimately depend on precipitation amounts, which are uncertain at this time.

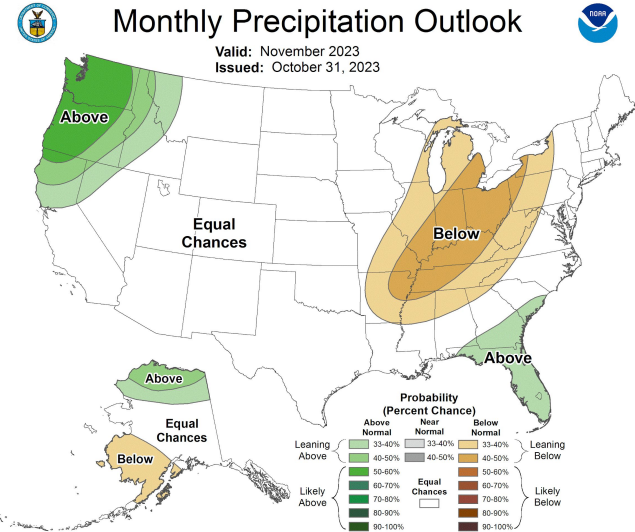
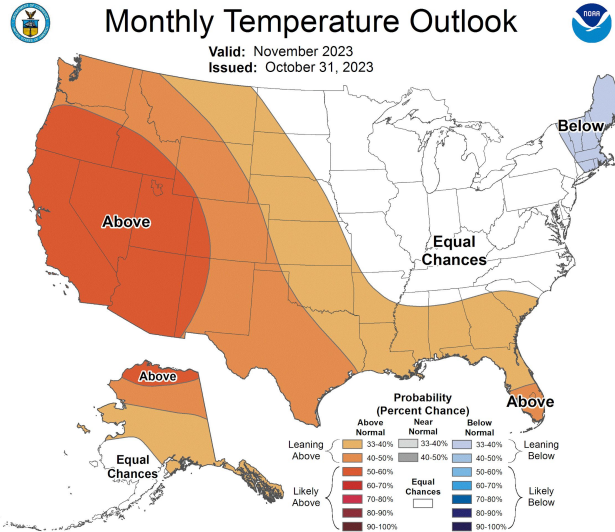
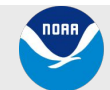


Image Captions:

Left - Climate Prediction Center Monthly Temperature Outlook.

Right - Climate Prediction Center Monthly Precipitation Outlook.

Valid November 2023





Seasonal Outlook (November to January)

Seasonal Temperature and Precipitation Outlook

Main Takeaways

- **Temperatures:** Above normal temperatures are slightly favored (33-40%) for the Nov-Jan season.
- **Precipitation:** Above Normal precipitation is slightly favored (33-40% chance) for most areas in northern Alabama, although equal chances for Below, Near or Above Normal precipitation are outlooked for much of Tennessee.

Possible Impact

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

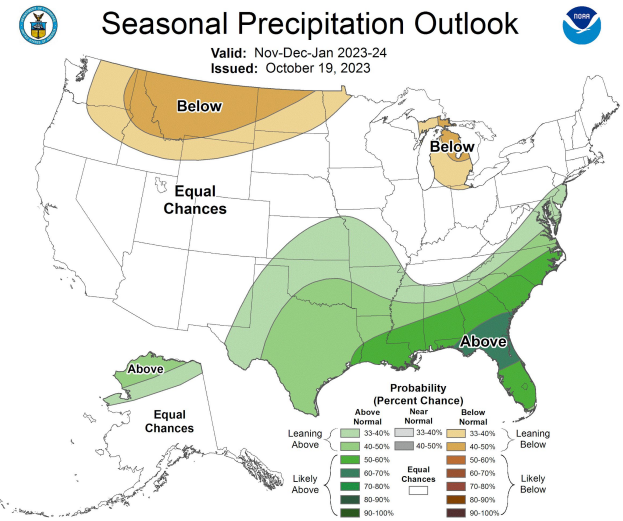
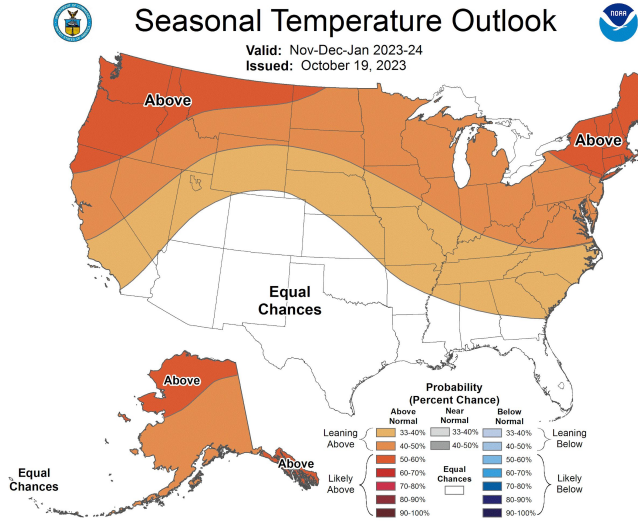
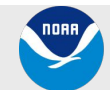


Image Captions:

Left - Climate Prediction Center Seasonal Temperature Outlook.
Right - Climate Prediction Center Seasonal Precipitation Outlook.
Valid November 2023 to January 2024





Local Drought Outlook

Monthly and Seasonal Outlooks

Main Takeaways

- Drought conditions are anticipated to persist, but some improvement is possible from early November through January, per the latest Monthly Drought Outlook.

U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period

Valid for November 1, 2023 - January 31, 2024
Released October 31, 2023

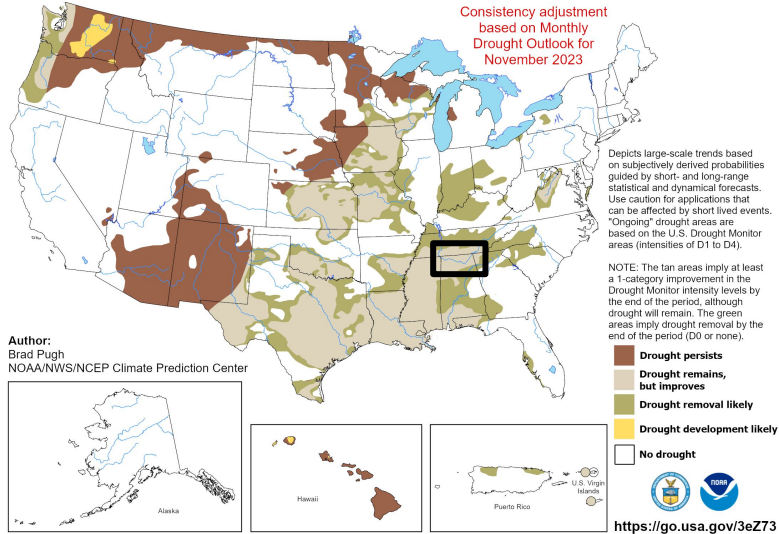


Image Caption:

Climate Prediction Center *Seasonal Drought Outlook* for November 1, 2023 to Jan 31, 2024, released October 31, 2023 (https://www.cpc.ncep.noaa.gov/products/expert_assessment/season_drought.png)