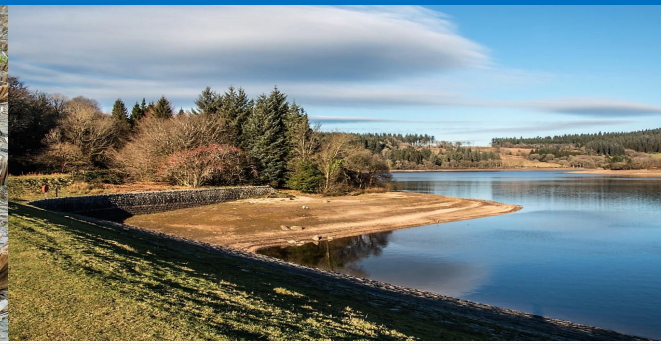
Drought Information Statement for Eastern WV, Central and Western MD, DC, & northern and NW VA

November 23rd, 2023

Issued By: NWS Baltimore/Washington
Contact Information: lwxwebmaster@noaa.gov

- This product will be updated November 29, 2023 or sooner if drought conditions change significantly.
- Please see all currently available products at https://drought.gov/drought-information-statements.
- Please visit https://https://www.weather.gov/lwx/DroughtInformationStatement for previous statements.



U.S. Drought Monitor

Link to the latest U.S. Drought Monitor for [region]

- **Drought intensity and Extent**
  - **D3 (Extreme Drought):** Over 8 percent of the area is in extreme drought. This includes portions of Highland, Rockingham, Nelson, Albemarle, Shenandoah, Page, and Augusta counties.
  - **D2 (Severe Drought):** 35 percent of the area is in severe drought. This includes much of the Shenandoah Valley, northern/central Virginia, & eastern Jefferson Co. West Virginia.
  - **D1 (Moderate Drought):** Over 76 percent of the area is in moderate drought. This includes northern/central Maryland, the eastern West Virginia Highlands, and west-central Virginia.
  - **D0 (Abnormally Dry):** Outside of western Garrett Co. Maryland the remainder of the region is abnormally dry.

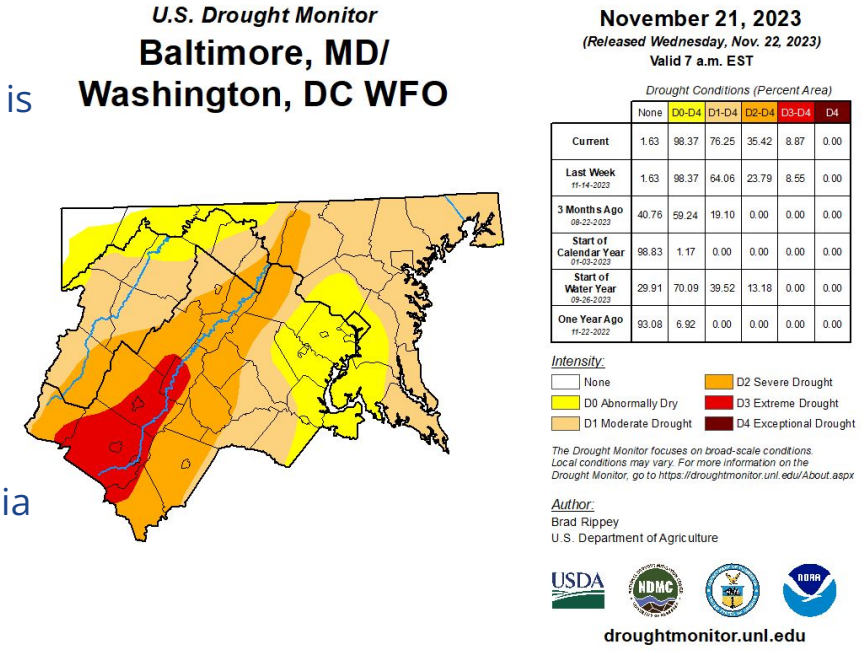


Image Caption: U.S. Drought Monitor valid 7am EST November 21st.

- **This is the first time since 2008 that D3 (Extreme Drought) has been observed in the service area.**

Recent Change in Drought Intensity

Link to the latest 4-week change map for [region]

- **Four Week Drought Monitor Class Change**
  - **Drought Worsened:** Two category degradation has been noted across northern and central Maryland along with the northern neck of Virginia.
  - **Drought Worsened:** One category degradation across areas east of US-15/US-29, western MD, and the southern Shenandoah Valley.
  - **No Change:** There remains no change in drought category across the northern VA, eastern WV highlands, and central Shenandoah Valley

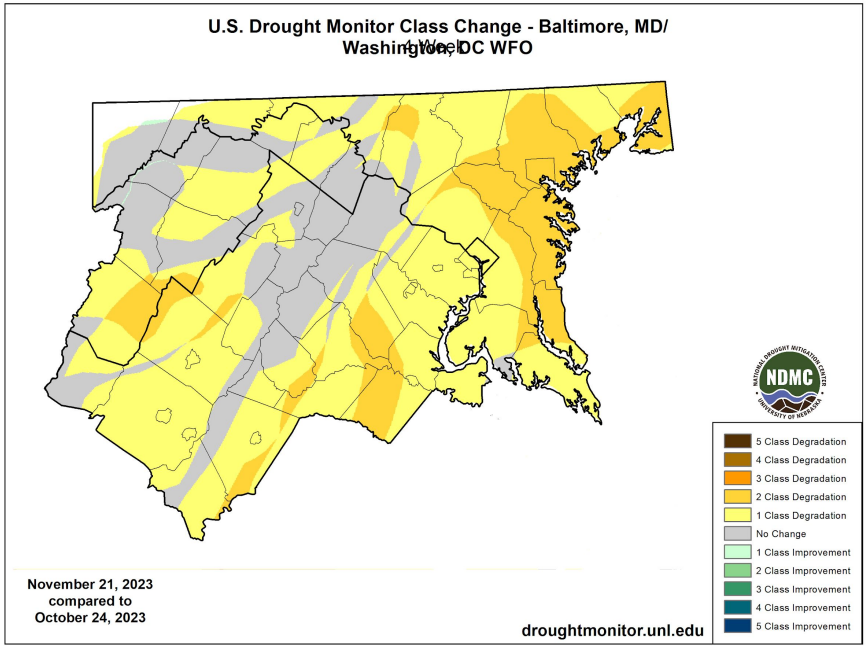
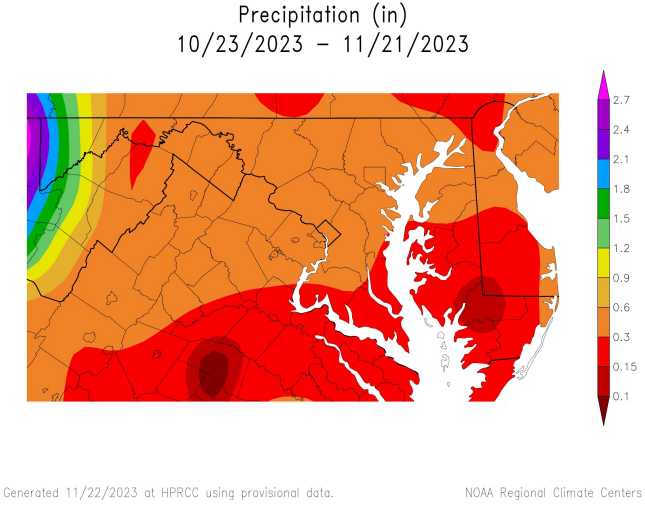


Image Caption: U.S. Drought Monitor 4-week change map valid 8am EST November 21, 2023.

Precipitation

- Most locations from central/northern MD south into northern/central VA have seen **less than 0.50 inch of rain over the last 30 days.**

- **Only 0.10-0.25 inch of rain has been observed across the southern Shenandoah Valley, southern MD, & central VA the last 30 days.** Most of the region east of the Allegheny Front remains around 25 percent of normal for precipitation.



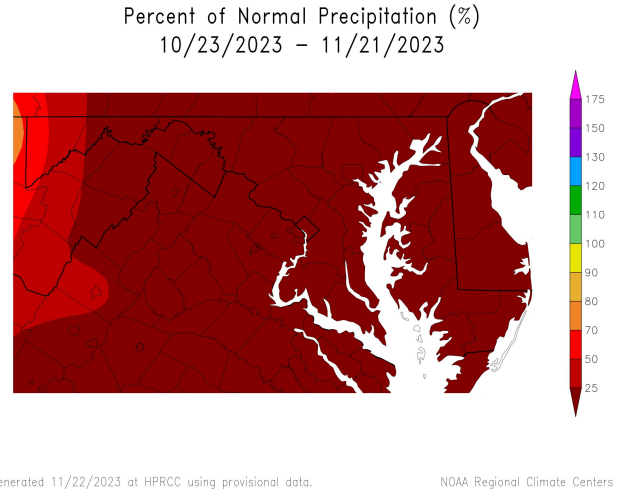
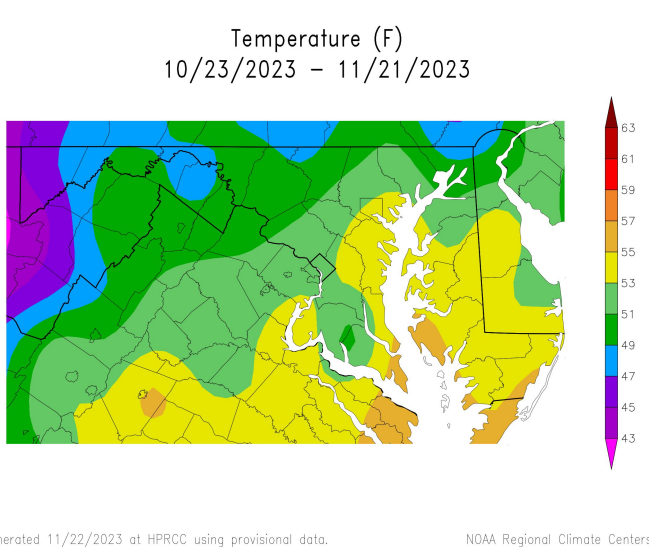


Image Captions:
Left - Precipitation Amount for Mid-Atlantic
Right - Percent of Normal Precipitation for Mid-Atlantic
Data Courtesy High Plains Regional Climate Center.
Data over the past 30 days ending November 21, 2023

Temperature

- Average temperatures over the last 30 days remained 1 to 3 degrees above average.
- Above average temperatures were even recorded along and west of the Allegheny Front where 30 day average temperatures ranged between 49-51 degrees.



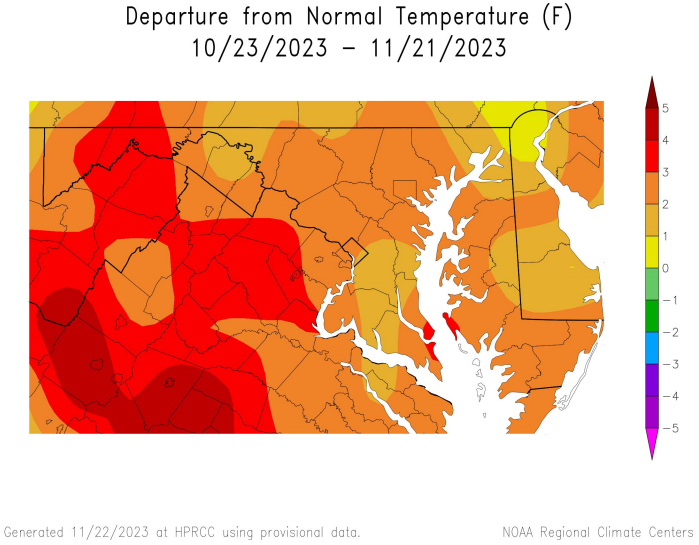


Image Captions:
Left - Average Temperature
Right - Departure from Normal Temperature
Data Courtesy High Plains Regional Climate Center.
Data over the past 30 days ending November 21, 2023

Summary of Impacts

Links: See/submit Condition Monitoring Observer Reports (CMOR) and view the Drought Impacts Reporter

Hydrologic Impacts

- Streamflows have fallen to the below normal to much below normal ranges for much of the hydrologic service area. Several gauges along the Shenandoah River including Strasburg, VA and Luray, VA are near record low status. See slides for more detail.

Agricultural Impacts

- Nearly all of the service area is experiencing soil moisture below the 25th percentile, indicating at least moderate to locally severe dryness areawide. Portions of the Shenandoah Valley seeing soil moistures below the 5th percentile. The lack of precipitation will allow conditions to deteriorate , especially during warm and sunny periods.

Fire Hazard Impacts

- Elevated fire weather concerns for the remainder of fall into early winter. Dry fuels, lower humidity, and the lack of moisture will lead to the potential of significant fire spread, especially in areas west of the Blue Ridge.

Mitigation Actions

- Voluntary water restrictions have been implemented in several northern VA communities. Water conservation efforts are ongoing at Switzer Dam Reservoir as per Virginia Department of Environmental Quality.

Hydrologic Conditions and Impacts

- Average streamflows over the past 28 days continue to diminish across the entire service area. Several gauges are either low or much below normal.

- Several gauges in the much below normal to low range across the Shenandoah River basin. This includes the Shenandoah River at Strasburg and Luray, VA.

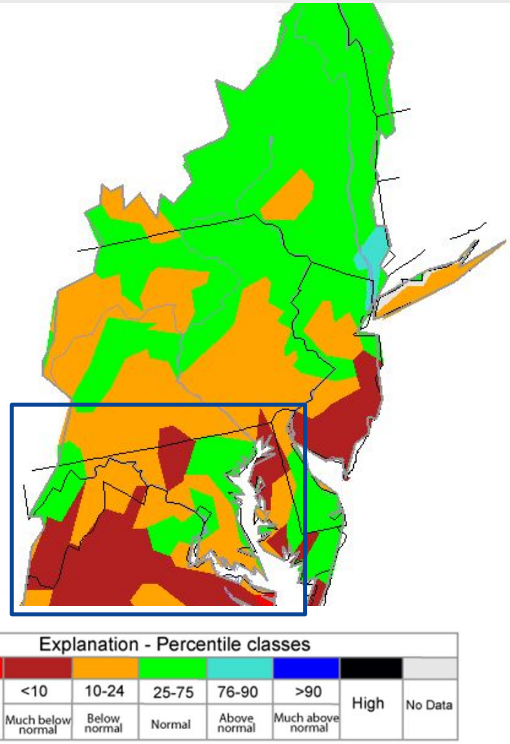
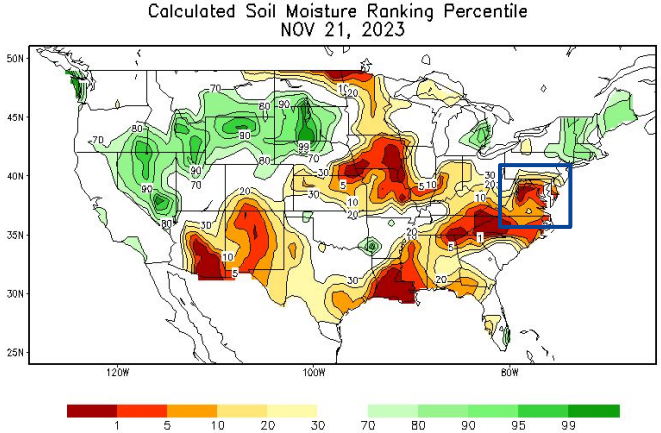


Image Caption: USGS 7 day average streamflow HUC map valid November 22, 2023

Agricultural Impacts

- Nearly all of the service area is experiencing soil moisture below the 25th percentile, indicating at least moderate to locally severe dryness areawide.

- Portions of the Shenandoah Valley seeing soil moistures below the 5th percentile. The lack of precipitation will allow conditions to deteriorate , especially during warm and sunny periods.



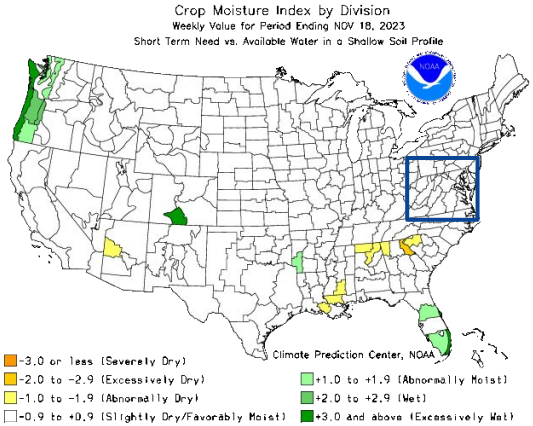


Image Captions:
Left: CPC Calculated Soil Moisture Ranking Percentile valid November 18, 2023
Right: Crop Moisture Index by Division. Weekly value for period ending November 18, 2023

Fire Hazard Impacts

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

- As trees lose their remaining leaves, fire activity is likely to increase as fuels continue to dry.
- [Keetch Byram Drought Index] values have increased to 200 to 400 across the central and southern Shenandoah Valley. The remainder of the service area is experiencing indices of 100 to 200.

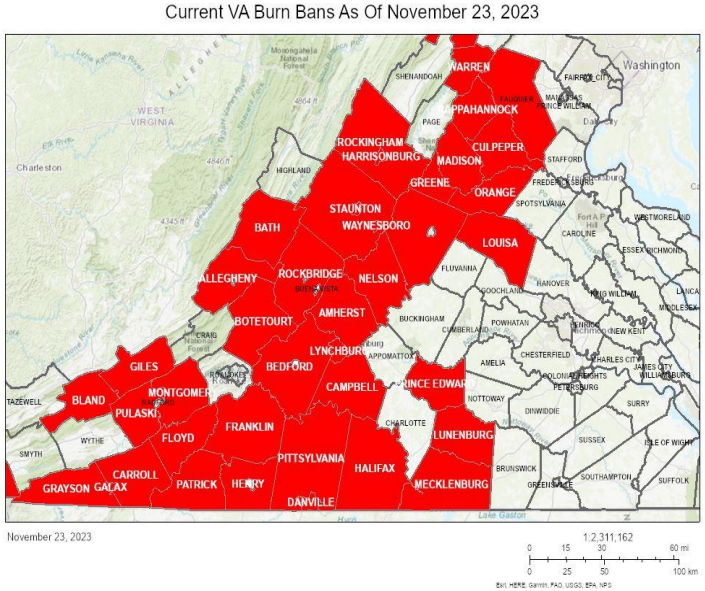


Image Caption: [Burn bans] in effect as of November 23, 2023. See county websites for additional information.

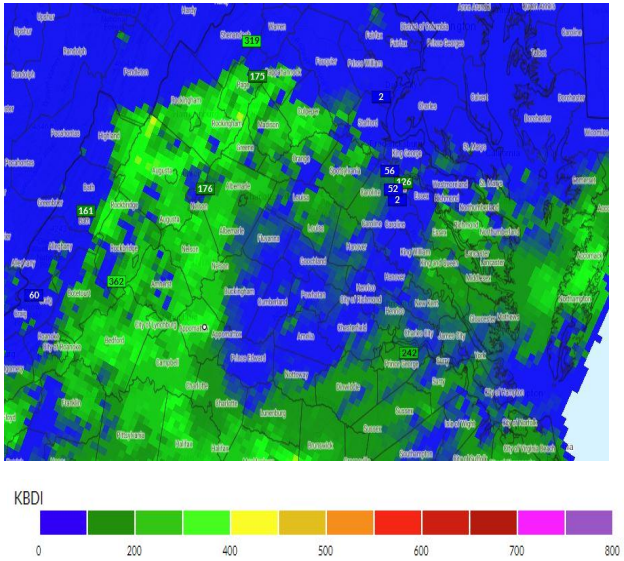


Image Caption: Keetch Byram Drought values are increasing across the central VA Piedmont. Additional info [here].

Seven Day Precipitation Forecast

- No substantial precipitation is expected through the 7 Day period outside of the Allegheny Front.
- The next chance for measurable rainfall arrives on Monday, November 27, 2023.

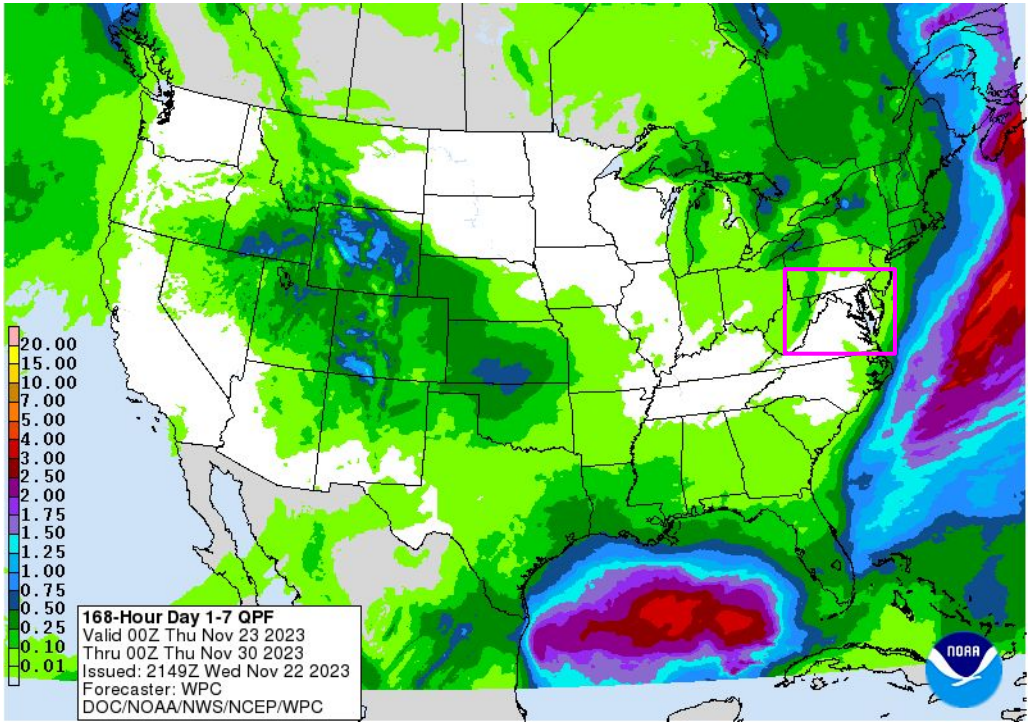


Image Caption: Weather Prediction Center 7-day precipitation forecast valid Monday November 23 to Monday November 30

Rapid Onset Drought Outlook

Links to the latest Climate Prediction Center 8 to 14 day Temperature Outlook and Precipitation Outlook.

- No rapid drought is expected through late November. Conditions look to stay the same if not worsen over the extended period due to the lack of rain.

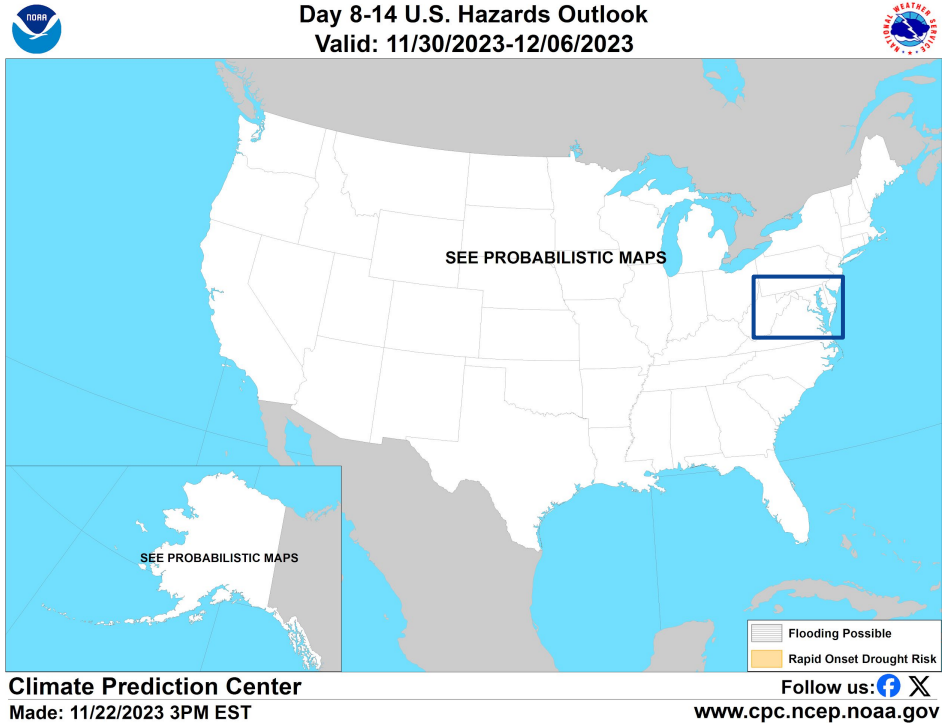
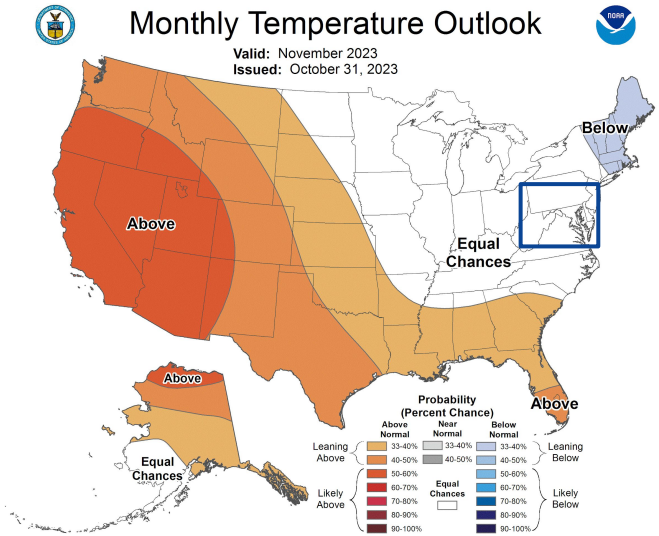


Image Caption:
Days 8 to 14 U.S. Hazards Outlook Valid November 23 to 29.

Long-Range Outlooks

The latest monthly and seasonal outlooks can be found on the CPC homepage

- Normal temperatures, and normal to below normal precipitation chances are expected for much of the remainder of November across the region.



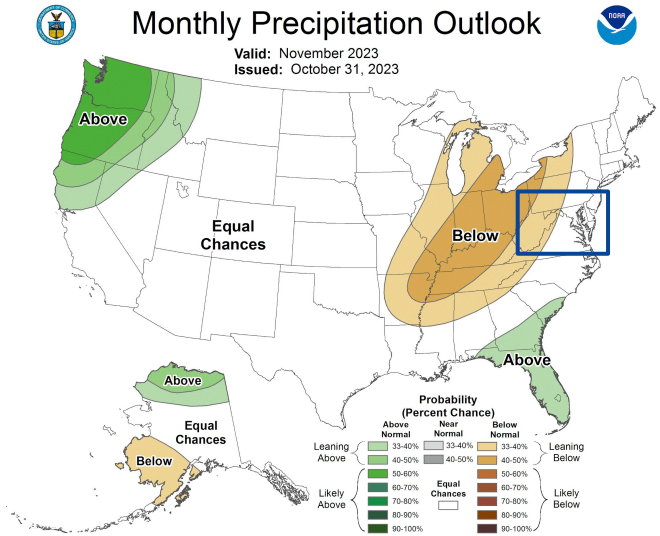


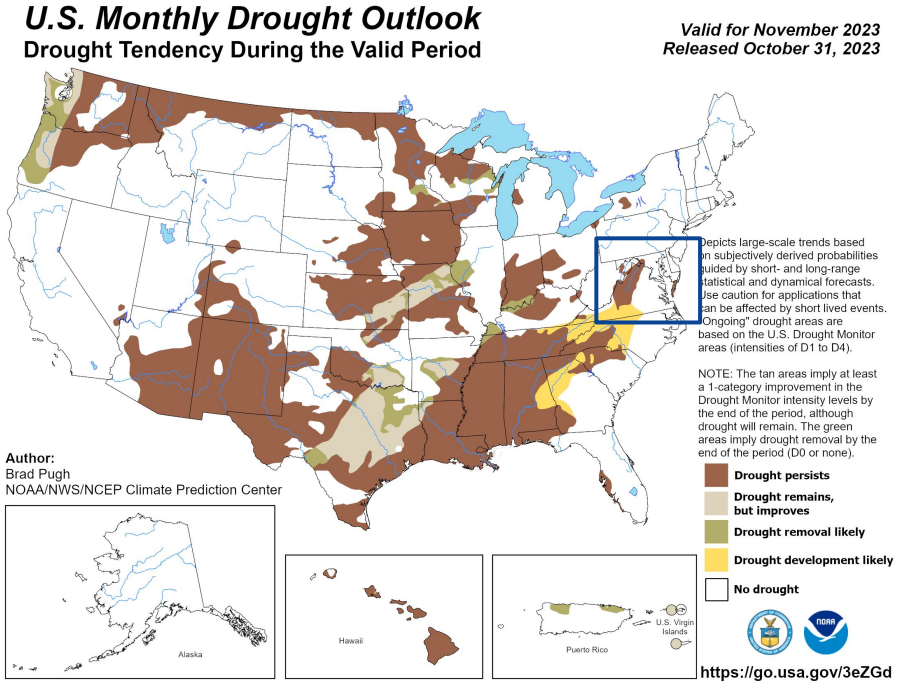
Image Captions:
Left - Climate Prediction Center Monthly Temperature Outlook.
Right - Climate Prediction Center Monthly Precipitation Outlook.
Valid November 2023

Drought Outlook

The latest monthly and seasonal outlooks can be found on the CPC homepage

- During November, drought conditions are expected to persist, and possibly deteriorate across the service area

- Drought improvement is likely across the central/southern Shenandoah Valley and WV Highlands during the mid-winter. It is possible that some drought conditions will linger areawide through February.



Links to the latest:
Climate Prediction Center Monthly Drought Outlook
Climate Prediction Center Seasonal Drought Outlook

Image Caption:
Climate Prediction Center Monthly Drought Outlook Released October 31, 2023 valid for November 2023