

VIRGINIA DROUGHT MONITORING TASK FORCE

Drought Status Report

October 26, 2023

Summary

On Thursday October 26, 2023, the Virginia Drought Monitoring Task Force (DMTF) met to discuss the drought indicators identified by the Virginia Drought Assessment and Response Plan. Indicators have shown no or minimal improvements throughout the past fourteen-day period with declines of surface water, groundwater, and precipitation indicators observed across the central and western half of the Commonwealth. Near record low observations have continued at some stations within the Shenandoah drought evaluation region. The Task Force will continue closely monitoring drought indicators and will meet on November 21, 2023.

The Task Force recommends either closely monitoring or issuing a Drought Watch for the Middle James, Northern Piedmont, Roanoke, and Upper James drought evaluation regions due to declines in surface water, groundwater, and precipitation indicators.

The Task Force recommends closely monitoring the Eastern Shore, Northern Virginia, and York James drought evaluation and maintaining the Drought Watch if conditions do not improve.

The Task Force recommends closely monitoring the Shenandoah drought evaluation region and maintaining the Drought Warning if conditions do not improve.

Precipitation over the past 30-60 day period showed minimal localized events within the eastern portions of the state along the I-95 corridor. Precipitation percent of normal over the recent seven and 14-day period show exceptional dryness focused within Shenandoah Valley and the majority of Virginia below historical averages. Area-averaged rainfall since the beginning of the current water year (October 1, 2023) has remained below long-term normal values for the majority of the Commonwealth. (See [DEQ website](#) for more info on drought indicators).

Streamflow over the past 14-day period has declined along much of the Blue Ridge and south central portions of the Commonwealth, with no significant improvements throughout regions impacted by drought conditions. Flows are currently below the 25th percentile for five of the 11 drought evaluation regions including; Upper James, Northern Piedmont, Northern Virginia, Shenandoah, and Roanoke. Two regions are currently ranked within “Warning” including the Shenandoah and Northern Piedmont with streamflow observed below the 10th percentile.

Groundwater levels for monitoring wells in the Climate Response Network have shown continued declines within many northern, central, and western portions of the state. Seven of 11 drought evaluation regions are below the 25th percentile including the Big Sandy, Eastern Shore, Middle James, Northern Virginia, Shenandoah, Roanoke, and York-James. Levels are currently below the 10th percentile for three of 11 drought evaluation regions including the Northern Virginia, Shenandoah, and Roanoke.

The most recent weekly [U.S. Drought Monitor \(USDM\)](#) web page map for Virginia ([Appendix A](#), released October 26, 2023) showed abnormally dry (D0) conditions mapped across approximately 66% of the Commonwealth, and moderate drought (D1) conditions mapped across approximately 27% of the Commonwealth. Severe drought (D2) conditions were mapped across approximately 11% of the Commonwealth. Appendix B includes presentations from the United States Geological Survey and National Weather Service.

Reports:

The U.S. Army Corps of Engineers (USACE) reported that Lake Moomaw (Philpott Lake) and J. H. Kerr Reservoir have received below normal inflows over the past month. As Philpott hydropower units remain out of service, USACE continues coordinating with fisheries experts to maintain sufficient releases at Philpott to support downstream aquatic life. Currently, Kerr Reservoir is approximately 1.0ft below guide curve and dropping approximately a third of a foot per week. Power generation is operating at minimum weekly energy, with inflows approximately 1000cfs less than minimum energy releases. The USACE will continue to generate minimum energy as long as the reservoir level is below the guide curve to conserve power pool storage.

The DEQ report presents a map of current conditions of DEQ Drought Indicators, and summary of current conditions at the four large multi-purpose reservoirs listed as key reservoir storage indicators in the [Virginia Drought Assessment and Response Plan](#) (All remain above drought watch levels at this time).

Virginia Department of Agriculture and Consumer Services

Producers in the Northern, Valley, and Southwest regions of the Commonwealth report that dry conditions continue and crop yields, overall, are below average. Pond, river, and stream levels in these regions are low, and producers in the far southwestern region of the state report that some small streams are completely dry. While the dry conditions have facilitated the planting of small grains for both grain and cover crops throughout these regions, these crops will need rain in the near future.

As widespread impacts to producers throughout the Commonwealth have been experienced information regarding assistance programs was provided by VDACS. Information regarding the U.S. Department of Agriculture's Disaster Assistance Programs is available here: <https://www.fsa.usda.gov/programs-and-services/disaster-assistance-program/index>.

Information regarding the federal disaster declaration process is available here: <https://www.fsa.usda.gov/Assets/USDA-FSA->

[Public/usdfiles/FactSheets/emergency disaster designation declaration process-factsheet.pdf](https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdfiles/FactSheets/emergency%20disaster%20designation%20declaration%20process-factsheet.pdf)

Contact information for each locality's USDA Farm Service Agency office can be found by clicking-through the map available here: <https://offices.sc.egov.usda.gov/locator/ap>

Virginia Department of Environmental Quality

Conditions of Major Drought Indicator Reservoirs

Four large multi-purpose reservoirs are identified as drought indicators in the Virginia Drought Assessment and Response Plan. Below is a snapshot of reported conditions at these reservoirs and the subsequent table provides status of reservoirs used to monitor drought conditions. Storage at major water supply reservoirs throughout Virginia remain within normal ranges at this time, with exception of the Skidmore Fork Lake (Switzer Lake) located within the Shenandoah drought evaluation region reported below normal. The City of Harrisonburg continues to report withdrawals and reservoir conditions daily.

[Smith Mountain Lake](#) on the Staunton River in the Roanoke drought evaluation region was at an adjusted elevation of 793.11 feet, which is .11 feet above Watch level (793 ft). The adjusted elevation is the level the lake would be if the water currently held in the lower Leesville Lake for reuse were pumped back into Smith Mountain Lake. Recent 7, 14, and 28-day inflows were below normal for this time of year.

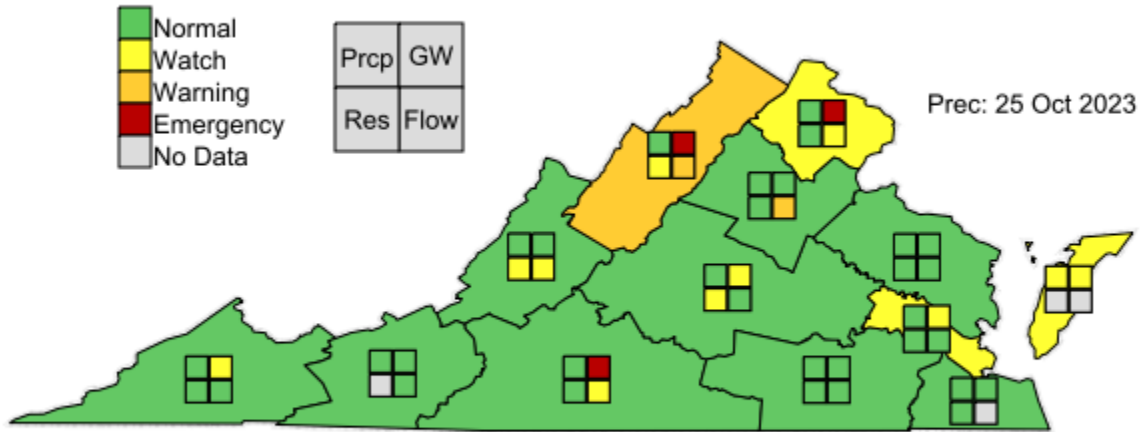
[Lake Moomaw](#) at Gathright Dam on the Jackson River in the Upper James drought evaluation region was reported at an elevation of 1559.13 feet, which is 5.87 feet below Watch level (1565 ft). Recent 7, 14, and 28-day average inflows were much below normal for this time of year. The current lake level is 9.24 feet below the operational average for this date, with approximately 18.2% of conservation storage remaining.

[Lake Anna](#) on the North Anna River in the Northern Piedmont drought evaluation region was reported at an elevation of 249 feet, which is 1 foot above Watch level (248 ft). 7 and 14 day inflows were below normal for this time of year.

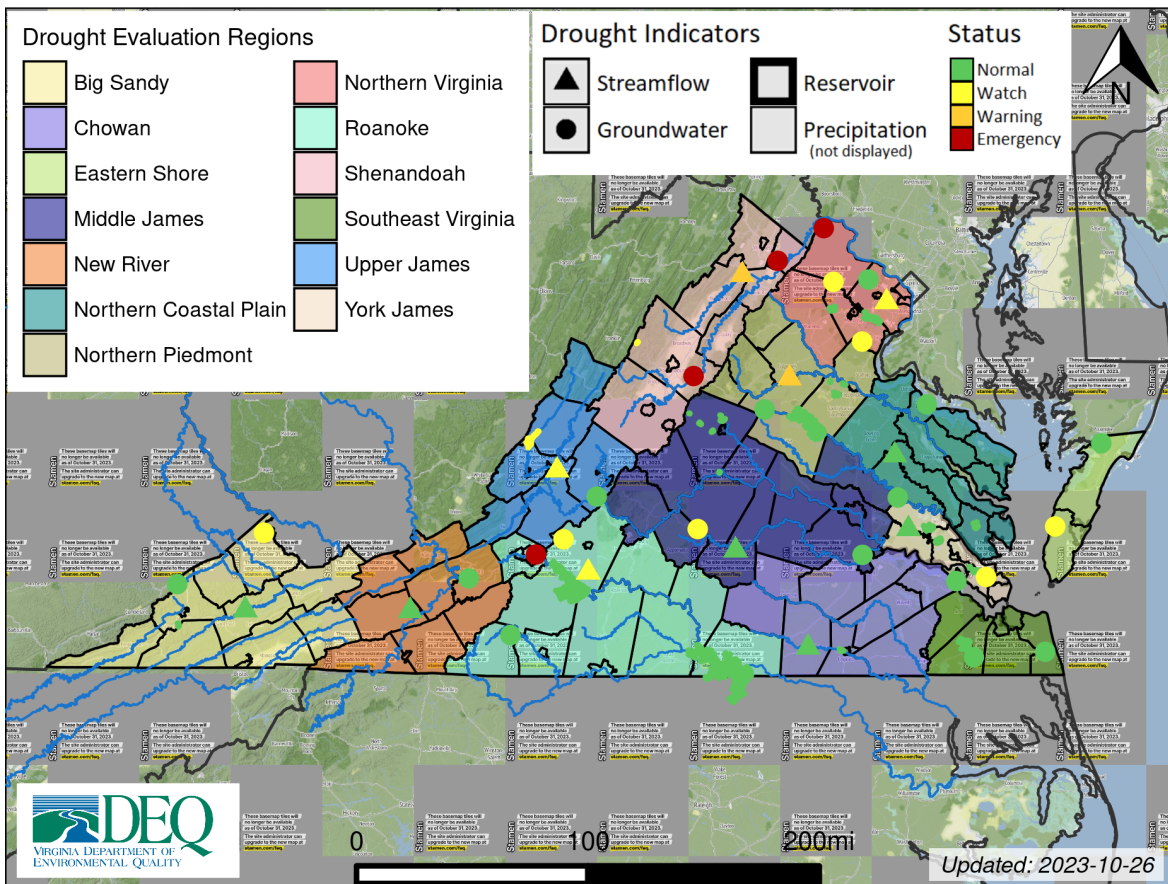
[J. H. Kerr Reservoir](#) on the Staunton River in the Roanoke drought evaluation region was reported at an elevation of 297.54 ft, which was .36ft below the guide curve elevation for this time period (297.90 feet) and 2.6ft above the Watch level (Watch level is 3 to 6 ft below guide curve). Recent 7, 14, and 28-day average inflows were below normal for this time of year.

DEQ Daily Drought Status Summary: 10/26/2023

Drought Summary Map:



Drought Indicator Map:



Regional Drought Response:

#	Region	Reduction Type	Target Reduction %
1	Shenandoah	voluntary	5-10%
2	Eastern Shore	none	none
3	Big Sandy	none	none
4	Upper James	none	none
5	Roanoke	none	none
6	Southeast Virginia	none	none
7	Northern Coastal Plain	none	none
8	New River	none	none
9	Middle James	none	none
10	Chowan	none	none
11	York James	none	none
12	Northern Virginia	none	none
13	Northern Piedmont	none	none

Precipitation Indicators:

#	Region	Start Date	End Date	Water Year % of Normal
1	Eastern Shore	10/1/2023	10/24/2023	49.25
2	Northern Piedmont	10/1/2023	10/24/2023	32.39
3	Shenandoah	10/1/2023	10/24/2023	38.88
4	Roanoke	10/1/2023	10/24/2023	40.09
5	Middle James	10/1/2023	10/24/2023	40.89
6	Northern Virginia	10/1/2023	10/24/2023	43.33
7	New River	10/1/2023	10/24/2023	45.79
8	Chowan	10/1/2023	10/24/2023	46.78
9	Southeast Virginia	10/1/2023	10/24/2023	49.48
10	Upper James	10/1/2023	10/24/2023	50.12
11	Northern Coastal Plain	10/1/2023	10/24/2023	54.11
12	York James	10/1/2023	10/24/2023	54.4
13	Big Sandy	10/1/2023	10/24/2023	61.85

Surface Water Indicators:

#	Region	Gage Name	Start Date	End Date	Percentile	Status
1	Shenandoah	N F SHENANDOAH RIVER NEAR STRASBURG, VA	10/19/2023	10/25/2023	5.12	Warning
2	Northern Piedmont	RAPIDAN RIVER NEAR CULPEPER, VA	10/19/2023	10/25/2023	6.67	Warning
3	Upper James	COWPASTURE RIVER NEAR CLIFTON FORGE, VA	10/19/2023	10/25/2023	16.18	Watch
4	Roanoke	GOOSE CREEK NEAR HUDDLESTON, VA	10/19/2023	10/25/2023	16.57	Watch
5	Northern Virginia	ACCOTINK CREEK NEAR ANNANDALE, VA	10/19/2023	10/25/2023	19.43	Watch
6	Chowan	MEHERRIN RIVER NEAR LAWRENCEVILLE, VA	10/19/2023	10/25/2023	31.02	Normal
7	New River	REED CREEK AT GRAHAMS FORGE, VA	10/19/2023	10/25/2023	37.02	Normal
8	Northern Coastal Plain	MATTAPONI RIVER NEAR BEULAHVILLE, VA	10/19/2023	10/25/2023	37.57	Normal
9	Middle James	APPOMATTOX RIVER AT FARMVILLE, VA	10/19/2023	10/25/2023	43.31	Normal
10	York James	CHICKAHOMINY RIVER NEAR PROVIDENCE FORGE, VA	10/19/2023	10/25/2023	45.42	Normal
11	Big Sandy	CLINCH RIVER AT CLEVELAND, VA	10/19/2023	10/25/2023	50.79	Normal

Groundwater Indicators:

#	Region	Well Name	Start Date	End Date	Percentile	Status
1	Northern Virginia	Harper's Ferry DEQ Observation Well (49Y 1 SOW 022)	10/19/2023	10/25/2023	1.32	Emergency
2	Roanoke	Roanoke-Nelson DEQ Observation Well (31G 1 SOW 008)	10/19/2023	10/25/2023	0.0	Emergency
3	Shenandoah	McGaheysville USGS Observation Well (41Q 1)	10/19/2023	10/25/2023	3.28	Emergency
4	Shenandoah	Blandy Farm USGS Observation Well (46W 175)	10/19/2023	10/25/2023	2.91	Emergency
5	Big Sandy	Buchanan County USGS Observation Well (15G 19 SOW 222)	10/19/2023	10/25/2023	22.64	Watch
6	Eastern Shore	P. C. Kellam DEQ Observation Well (63H 6 SOW 103A)	10/19/2023	10/25/2023	14.86	Watch
7	Middle James	Buckingham USGS Observation Well (41H 3)	10/19/2023	10/25/2023	20.87	Watch
8	Northern Virginia	Prince William County USGS Observation Well (51S 7)	10/19/2023	10/25/2023	14.59	Watch
9	Northern Virginia	Prince William County USGS Observation Well (49V 1)	10/19/2023	10/25/2023	22.25	Watch
10	Roanoke	Bedford County USGS Observation Well (33G 1 SOW 224)	10/19/2023	10/25/2023	18.67	Watch
11	York James	York County DEQ Observation Well (59F74 SOW 184C)	10/19/2023	10/25/2023	14.8	Watch
12	Big Sandy	U.S. Forest Service - SOW 223 Cane Patch Well	10/19/2023	10/25/2023	81.67	Normal
13	Chowan	Slade Farm DEQ Observation Well (57E 31 SOW 094C)	10/19/2023	10/25/2023	50.86	Normal
14	Eastern Shore	Withams DEQ Observation Well (66M 19 SOW 110S)	10/19/2023	10/25/2023	45.71	Normal
15	Middle James	Colonial Heights USGS Observation Well (51G 1)	10/19/2023	10/25/2023	59.52	Normal
16	New River	Christiansburg DEQ Observation Well (27F 2 SOW 019)	10/19/2023	10/25/2023	64.84	Normal
17	Northern Coastal Plain	George Washington Birthplace USGS Observation Well (55P 9)	10/19/2023	10/25/2023	38.85	Normal
18	Northern Piedmont	Gordonsville DEQ Observation Well (45P 1 SOW 030)	10/19/2023	10/25/2023	34.21	Normal
19	Northern Virginia	Fairfax County USGS Observation Well (52V 2D)	10/19/2023	10/25/2023	63.49	Normal
20	Roanoke	Fairystone State Park USGS Observation Well (30C 1 SOW 010)	10/19/2023	10/25/2023	57.92	Normal
21	Southeast Virginia	Pungo DEQ Observation Well (62B 1 SOW 098A)	10/19/2023	10/25/2023	44.91	Normal
22	Southeast Virginia	Brinkley USGS Observation Well (58B 13)	10/19/2023	10/25/2023	38.53	Normal
23	Upper James	Glasgow DEQ Observation Well (35K 1 SOW 063)	10/19/2023	10/25/2023	48.48	Normal
24	York James	Hanover County DEQ Observation Well (53K 19 SOW 080)	10/19/2023	10/25/2023	53.19	Normal

Reservoir Indicators:

Note, these reservoir statuses require manual review as they are NOT automated at this time

#	Region	Reservoir	Date	Status
1	Middle James	Lake Moomaw	10/26/2023	Watch
2	Shenandoah	Skidmore Fork Lake (Switzer Lake)	10/26/2023	Watch
3	Upper James	Lake Moomaw	10/26/2023	Watch
4	Big Sandy	Big Cherry Reservoir	10/26/2023	Normal
5	Chowan	Emporia Reservoir	10/26/2023	Normal
6	Middle James	Sugar Hollow	10/26/2023	Normal
7	Middle James	Beaver Creek Reservoir	10/26/2023	Normal
8	Middle James	Totier Creek Reservoir	10/26/2023	Normal
9	Middle James	South Fork Rivanna River Reservoir	10/26/2023	Normal
10	Middle James	Ragged Mountain	10/26/2023	Normal
11	Northern Coastal Plain	Beverdam Reservoir	10/26/2023	Normal
12	Northern Piedmont	Ni River Reservoir	10/26/2023	Normal
13	Northern Piedmont	Lake Anna	10/26/2023	Normal
14	Northern Piedmont	Motts Run Reservoir	10/26/2023	Normal
15	Northern Piedmont	Hunting Run Reservoir	10/26/2023	Normal
16	Northern Virginia	Occoquan Reservoir	10/26/2023	Normal
17	Northern Virginia	Lake Manassas	10/26/2023	Normal
18	Roanoke	Smith Mountain Lake	10/26/2023	Normal
19	Roanoke	Kerr Reservoir	10/26/2023	Normal
20	Southeast Virginia	Kerr Reservoir	10/26/2023	Normal
21	Southeast Virginia	Lake Cohoon	10/26/2023	Normal
22	Southeast Virginia	Lake Meade	10/26/2023	Normal
23	Southeast Virginia	Lake Kilby	10/26/2023	Normal
24	Southeast Virginia	Speights Run Reservoir	10/26/2023	Normal
25	York James	Harwoods Mill Reservoir	10/26/2023	Normal
26	York James	Lee Hall - City Reservoir	10/26/2023	Normal
27	York James	Little Creek Reservoir	10/26/2023	Normal
28	York James	Diascund Creek Reservoir	10/26/2023	Normal
29	York James	Skiffes Creek Reservoir	10/26/2023	Normal

Appendix A

U.S. Drought Monitor Virginia

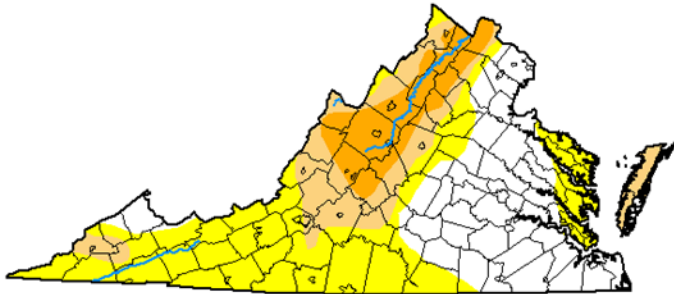
October 24, 2023

(Released Thursday, Oct. 26, 2023)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	33.79	66.21	27.69	11.94	0.00	0.00
Last Week 10-17-2023	33.79	66.21	27.69	11.94	0.00	0.00
3 Months Ago 07-25-2023	86.71	13.29	5.55	0.00	0.00	0.00
Start of Calendar Year 01-03-2023	89.75	10.25	0.80	0.00	0.00	0.00
Start of Water Year 09-26-2023	51.40	48.60	24.99	6.12	0.00	0.00
One Year Ago 10-25-2022	66.28	33.72	1.52	0.00	0.00	0.00



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:

Rocky Bilotta
NCEI/NOAA



droughtmonitor.unl.edu

Appendix B



USGS Drought Status Summary

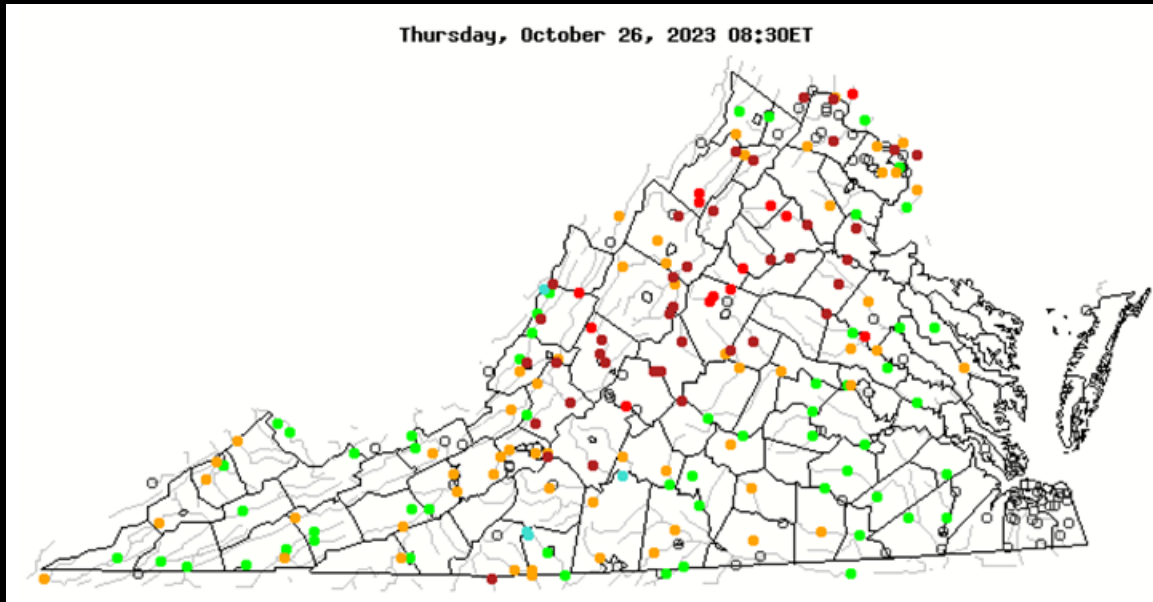
Streamflows and Groundwater Levels in Virginia

Virginia Drought Monitoring Task Force

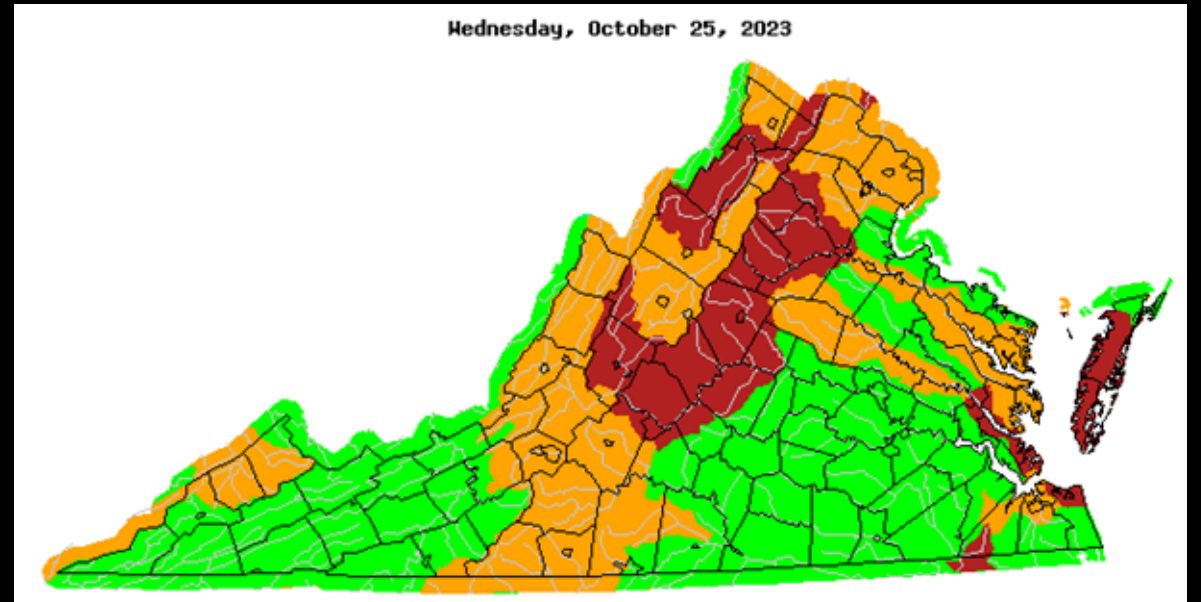
October 26, 2023

U.S. Department of the Interior
U.S. Geological Survey

Current Streamflow Conditions



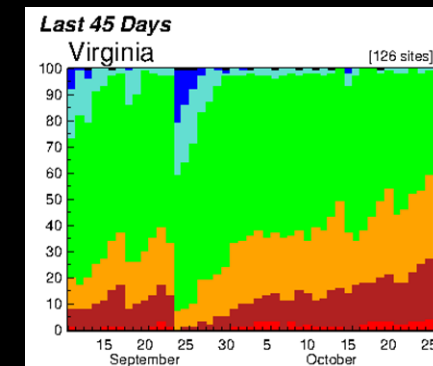
Realtime USGS Streamgages



Daily Flow HUC 8s

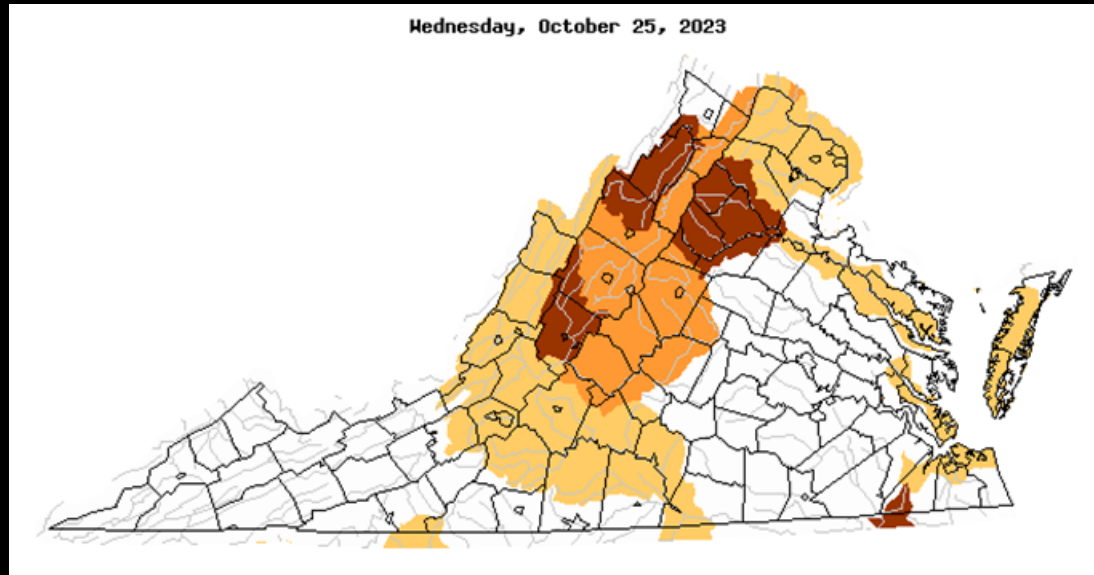
- Data from 10/26/2023
- Low flows spread throughout Virginia

Explanation - Percentile classes							
●	●	●	●	●	●	●	○
Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High	Not-ranked

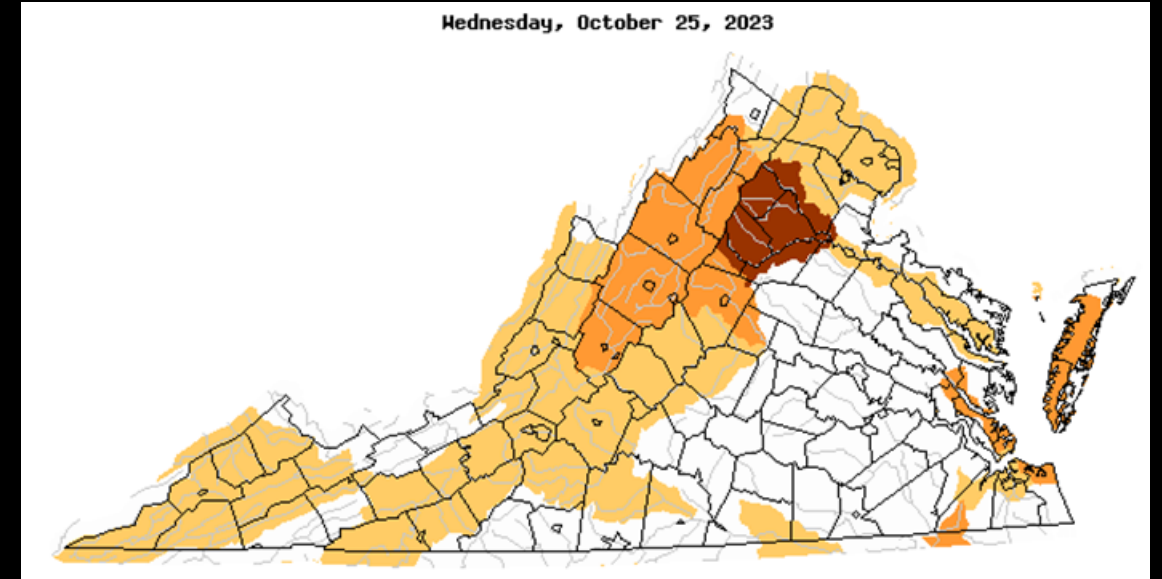


https://waterwatch.usgs.gov/index.php?id=pa01d&sid=w__map|m__pa01d_nwc&r=va

Below-Normal Streamflow Conditions



7-Day

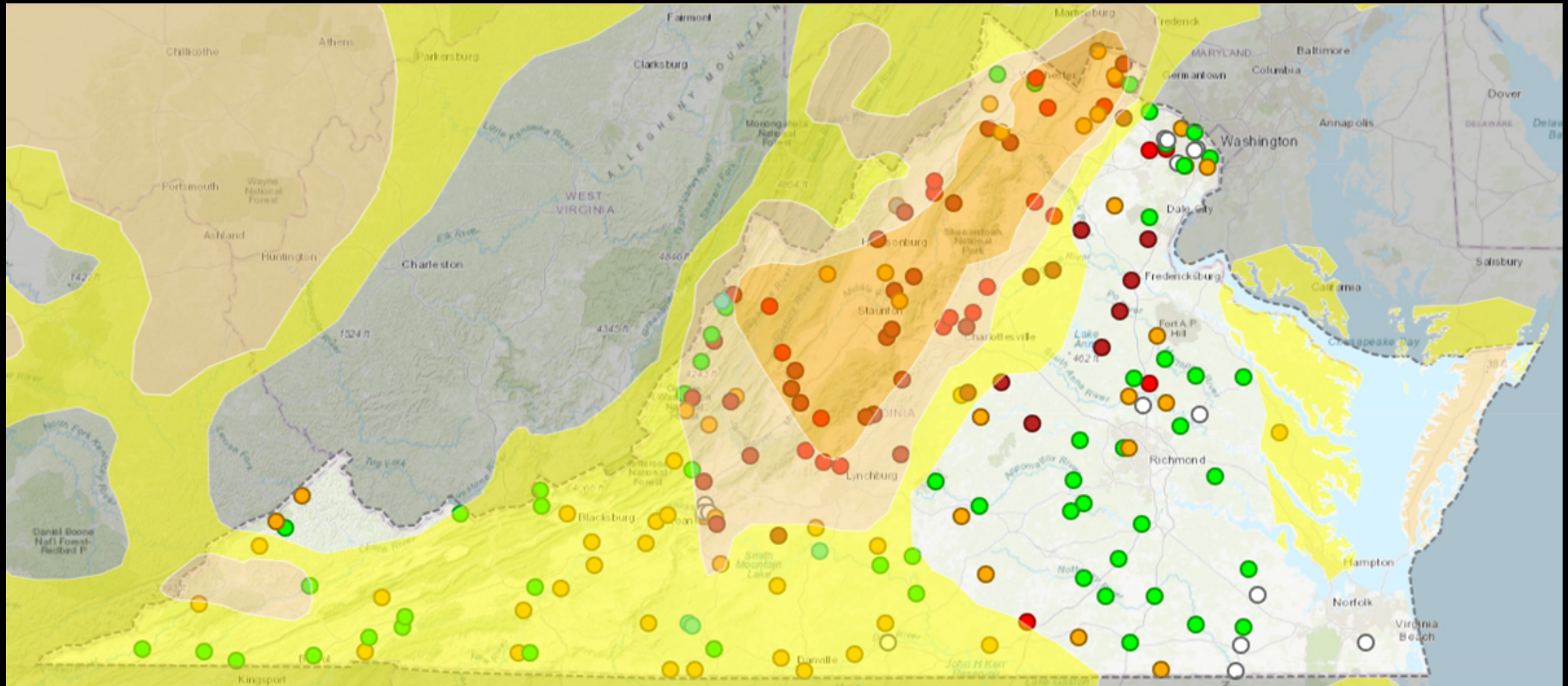


28-Day

- 40% of VA below normal, mostly central and east
- Shenandoah and Maury in moderate drought
- Rapidan/Rappahannock in severe drought

Explanation - Percentile classes			
Low	<=5	6-9	10-24
Extreme hydrologic drought	Severe hydrologic drought	Moderate hydrologic drought	Below normal

USGS National Water Dashboard



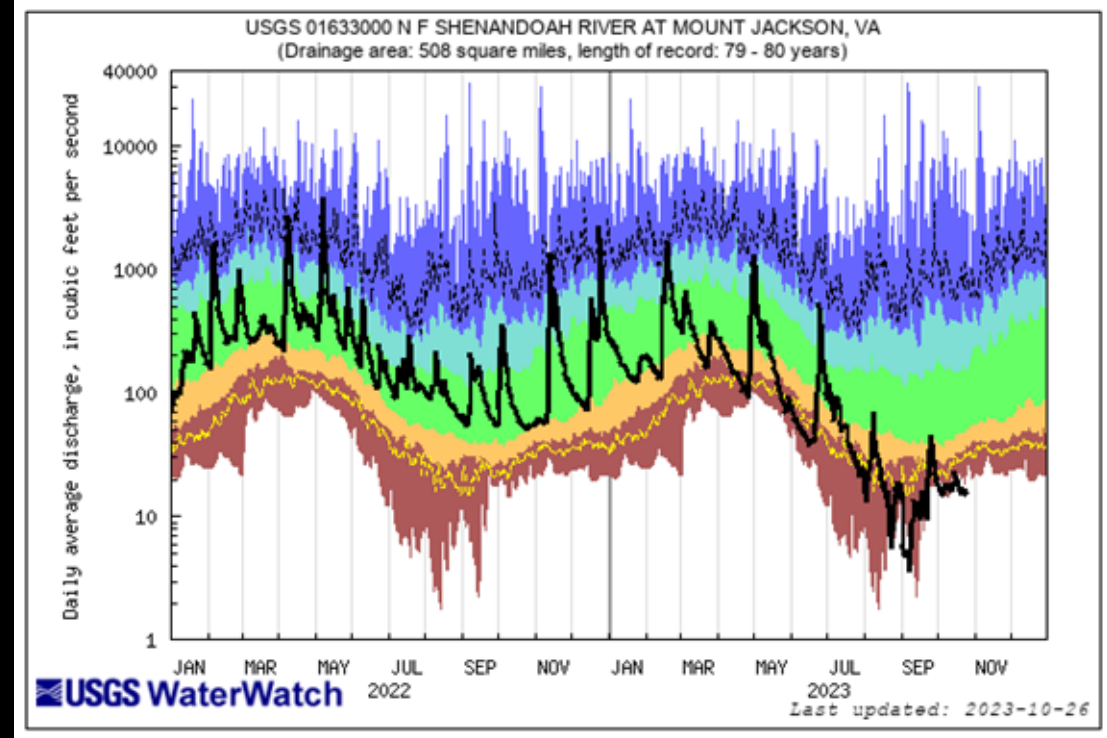
<https://dashboard.waterdata.usgs.gov/app/nwd/?region=lower48&aoi=state-va>

Streamflow Conditions for 01633000 NF Shenandoah River near Mt Jackson, VA

N F Shenandoah River at Mount Jackson, VA - 01633000

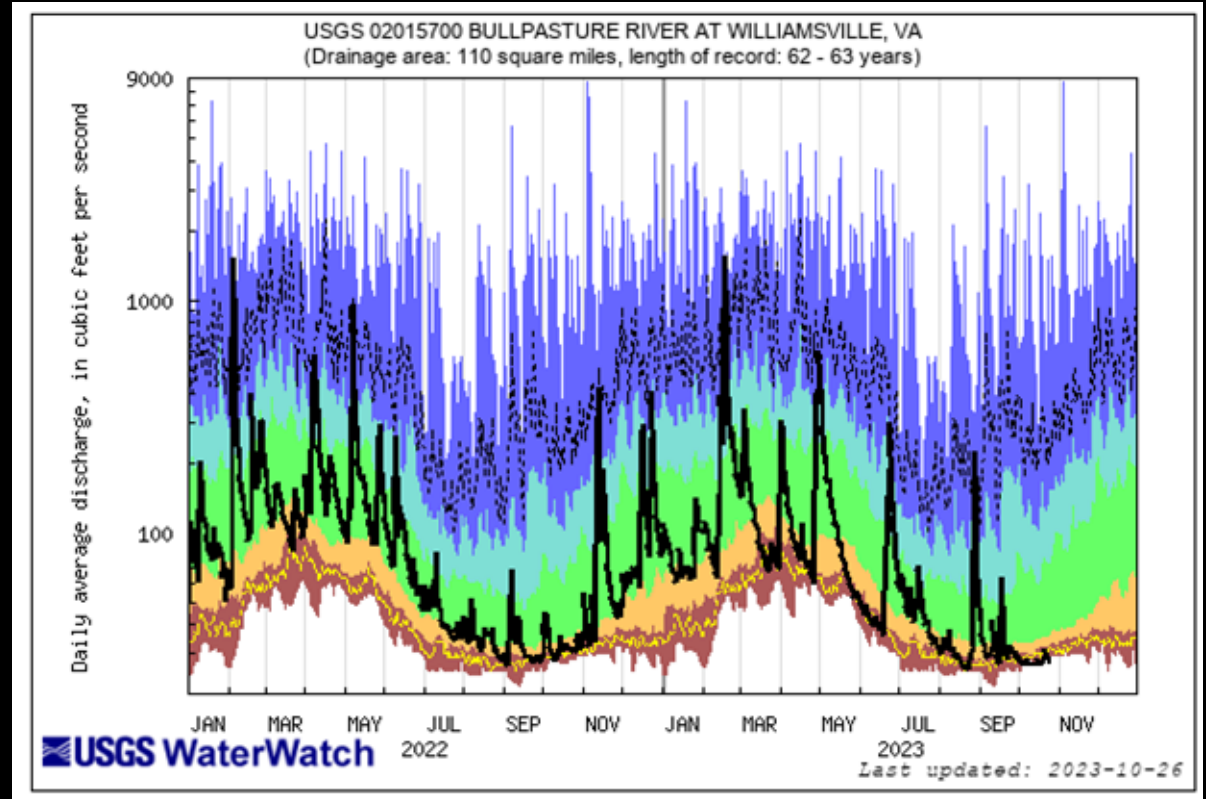
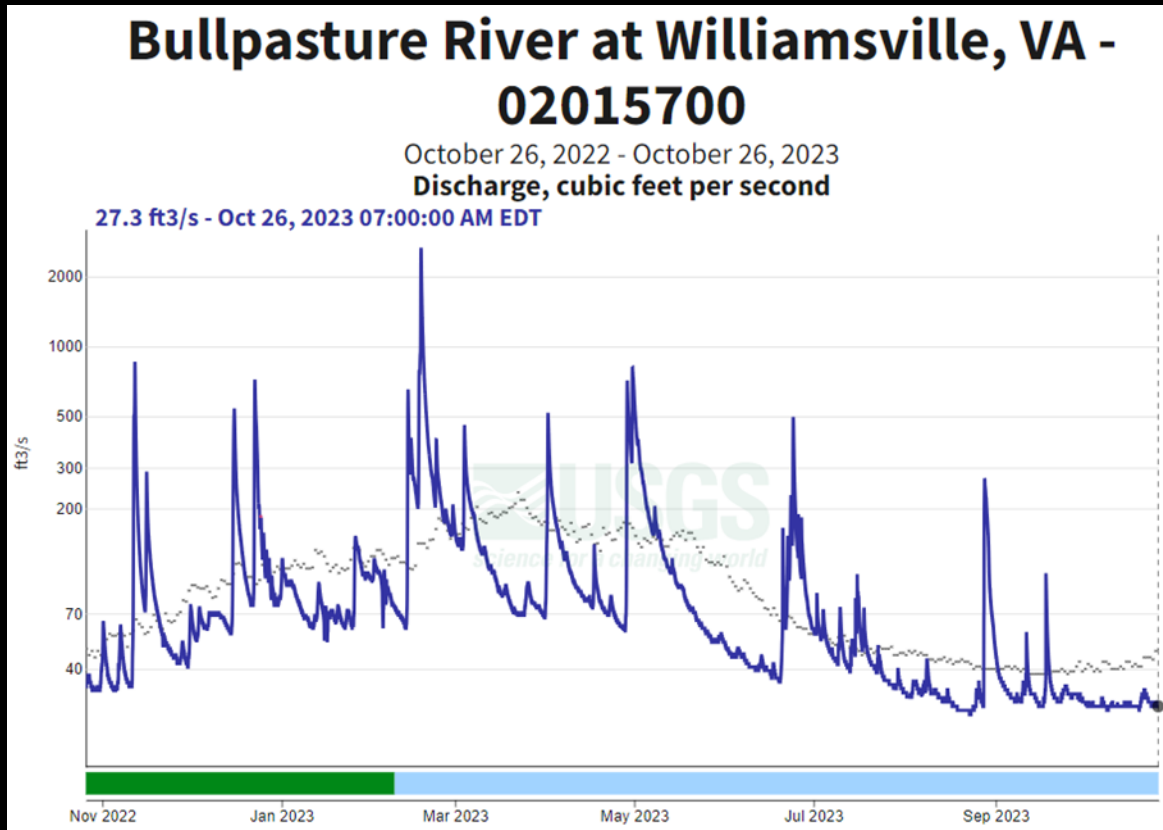
October 26, 2022 - October 26, 2023
Discharge, cubic feet per second

15.8 ft³/s - Oct 26, 2023 07:00:00 AM EDT



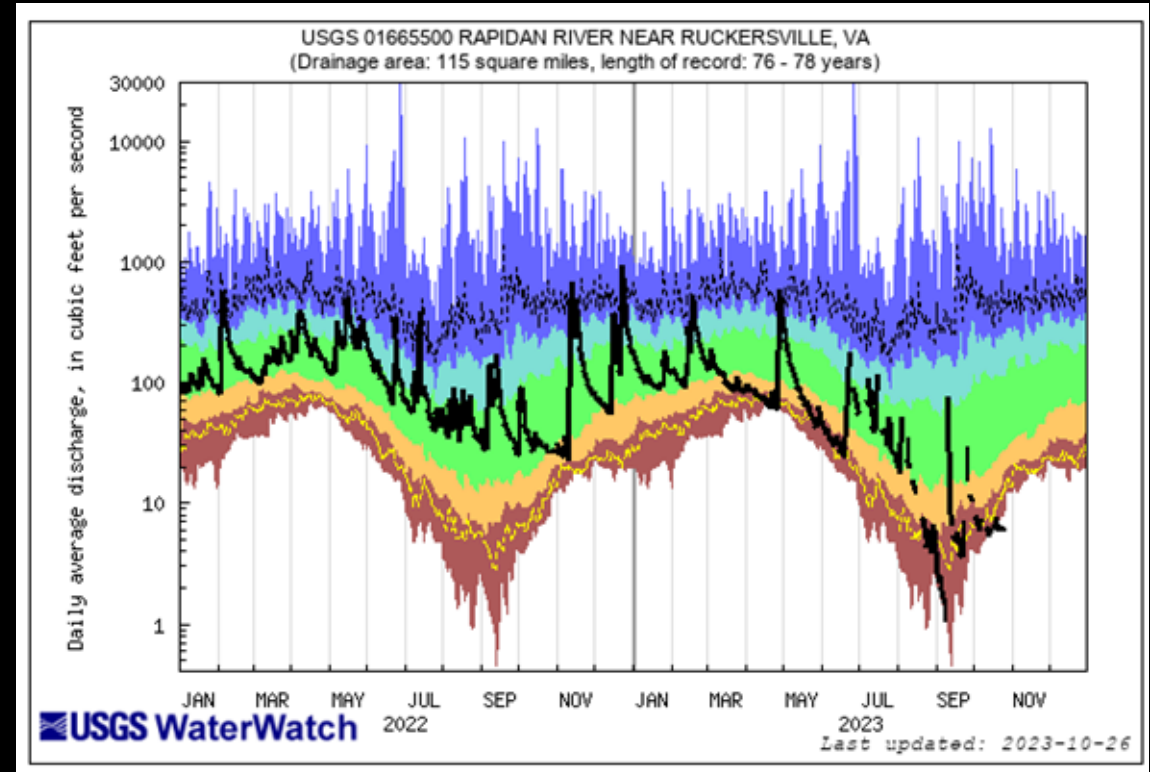
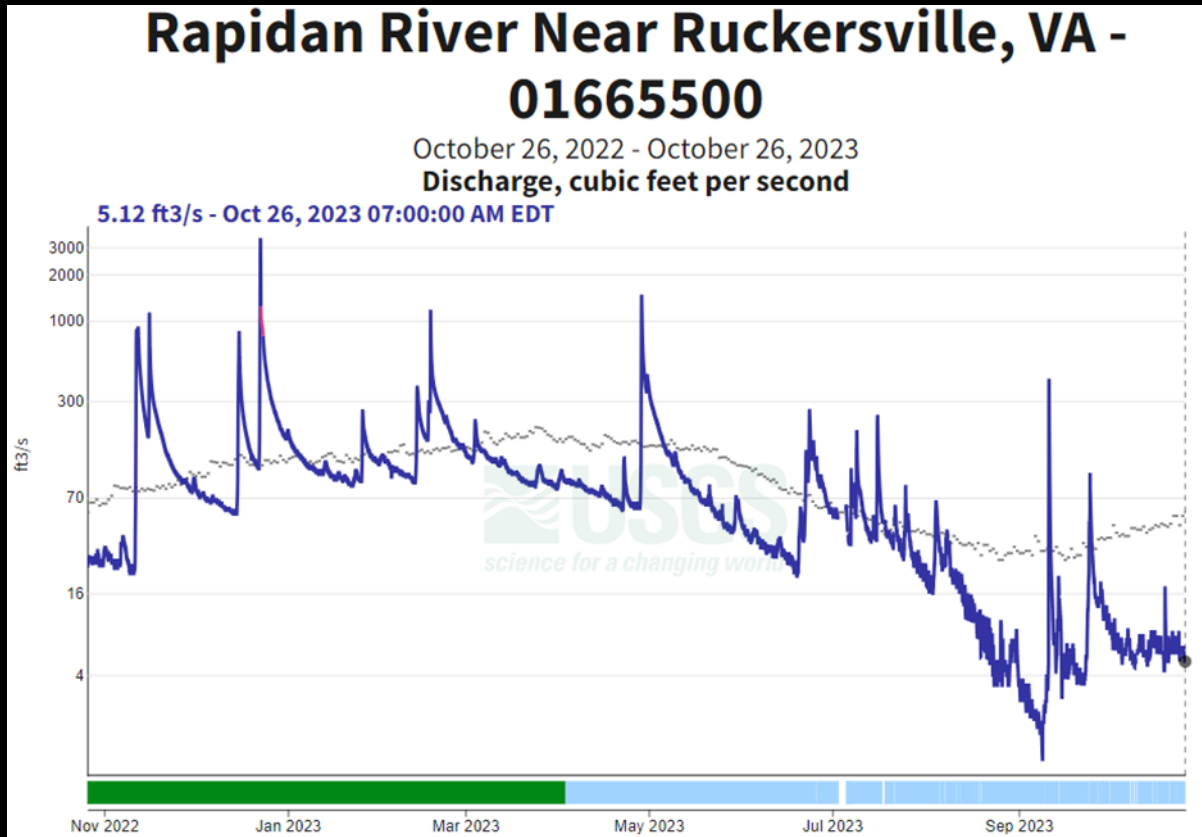
- 508 sq miles
- 79 years of data

Streamflow Conditions for 02015700 Bullpasture River near Williamsville, VA



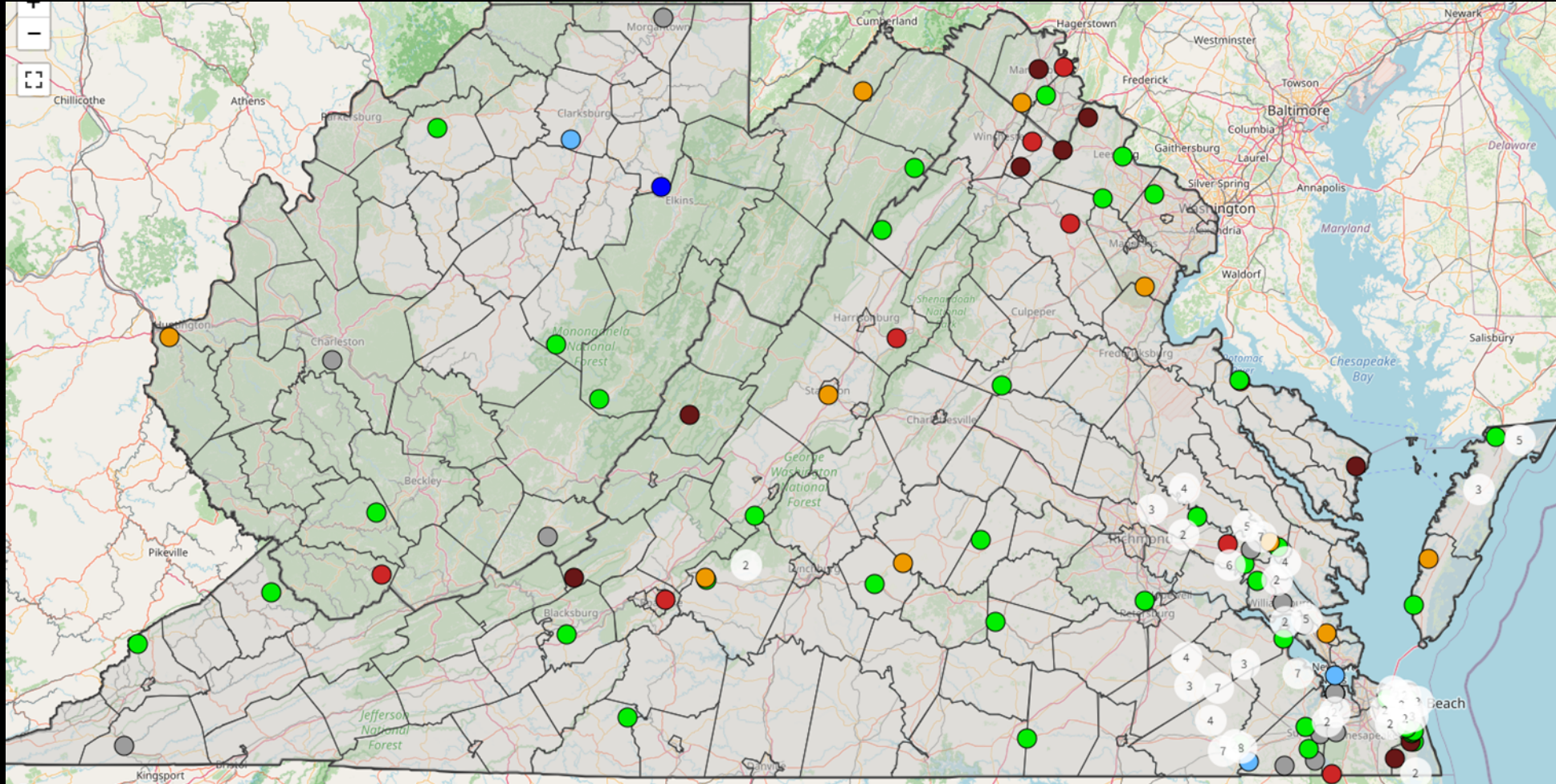
- 110 sq miles
- 63 years of data

Streamflow Conditions for 01665500 Rappahannock River near Ruckersville, VA



- 115 sq miles
- 78 years of data

Groundwater Levels – All USGS Wells



- Valley & Ridge monitoring wells in the lowest percentile ranges

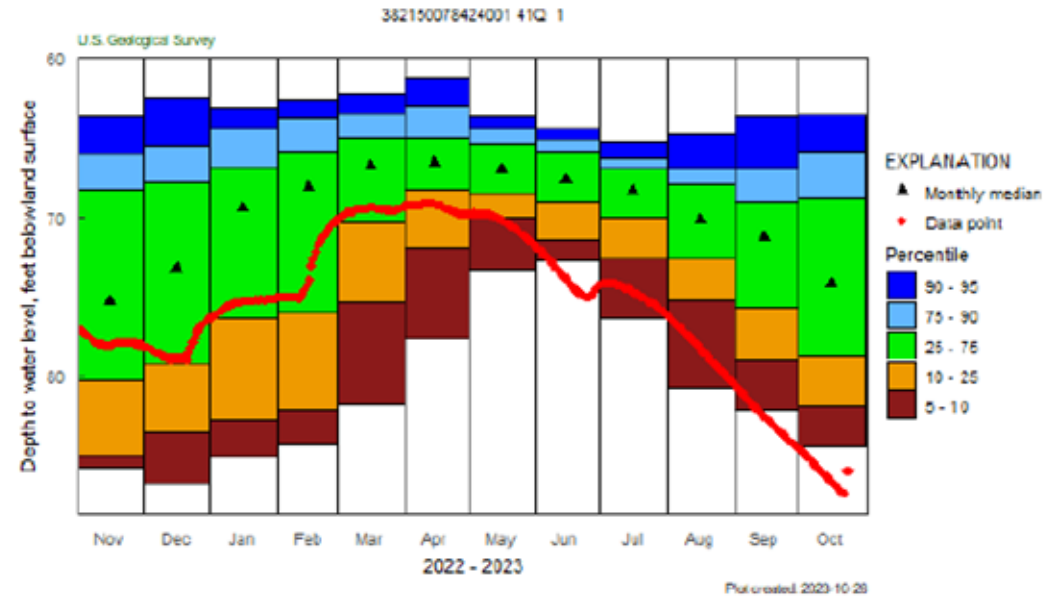
New VA-WV WSC Developed Page: <https://rconnect.usgs.gov/vawv-groundwater/>

Groundwater Levels - Climate Response Network

Site Information



Recent Groundwater Levels

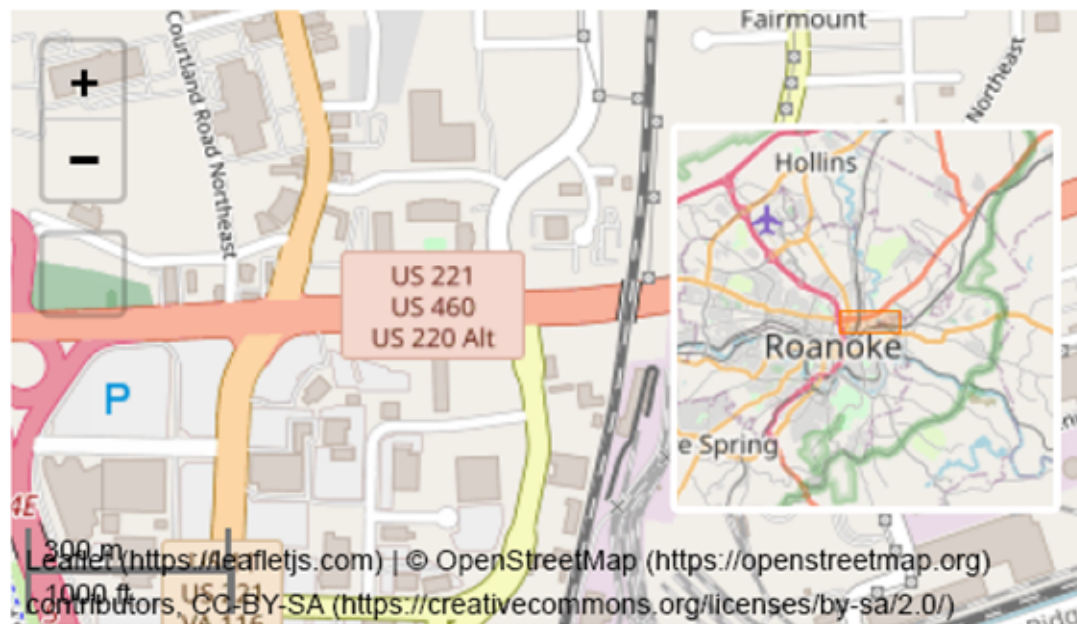


- 41Q 1
- Rockingham County
- 310 ft deep

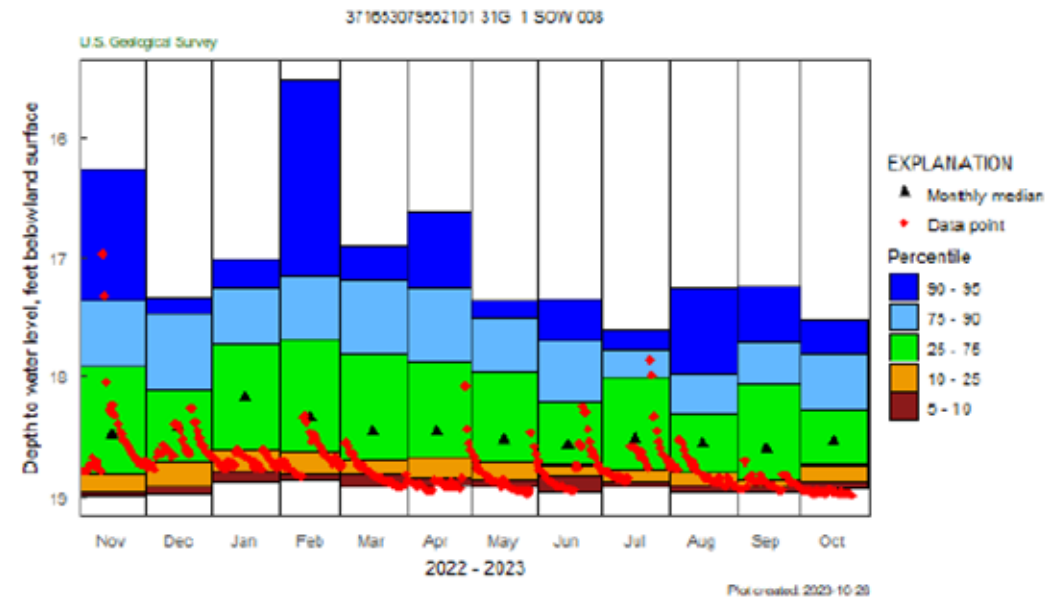
- 53 year record
- Well below 5th percentile

Groundwater Levels - Climate Response Network

Site Information



Recent Groundwater Levels



- 31G 1 SOW 008
- Roanoke City
- 55 ft deep

- 57 year record
- Below 5th percentile

VA Drought Monitoring Task Force

Jonathan McGee

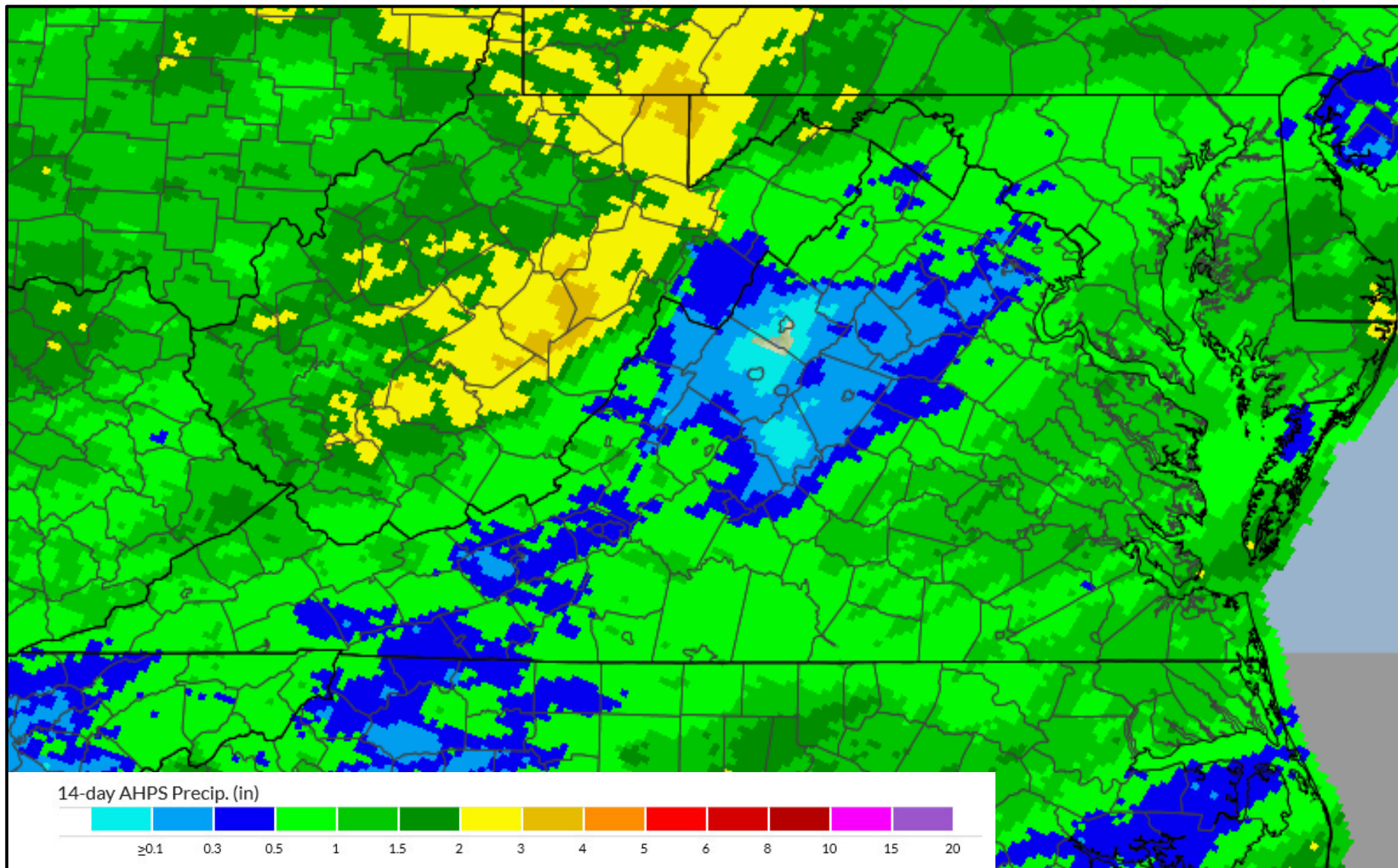
National Weather Service – Wakefield, VA

October 26, 2023

14-Day Precipitation Totals



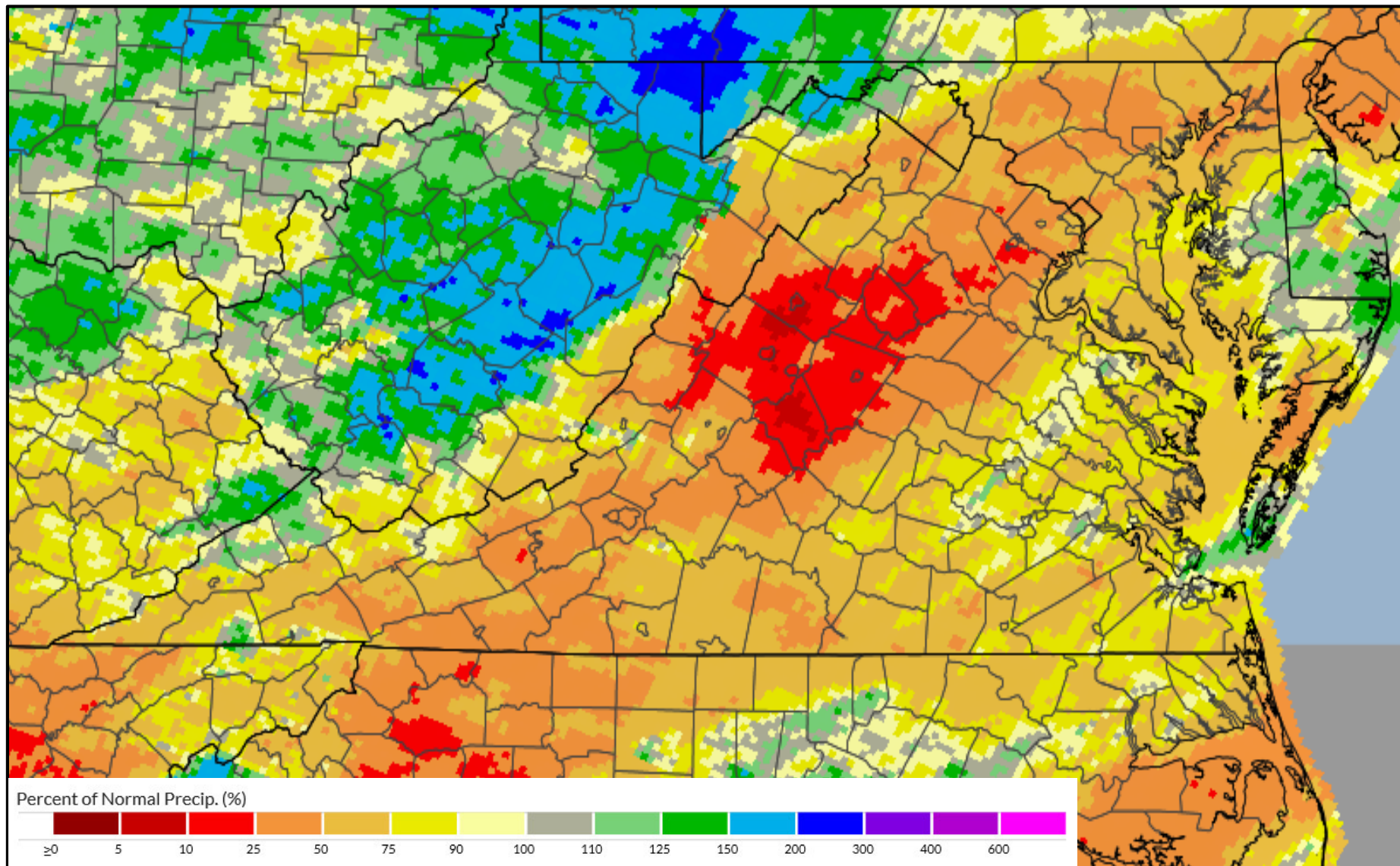
Wakefield, VA
WEATHER FORECAST OFFICE



14-Day Percent of Normal Precipitation



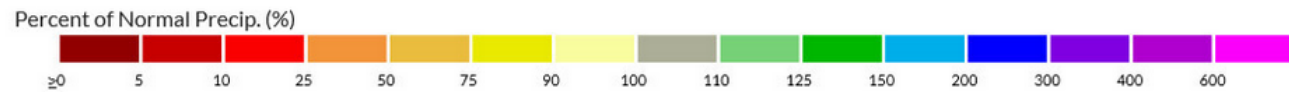
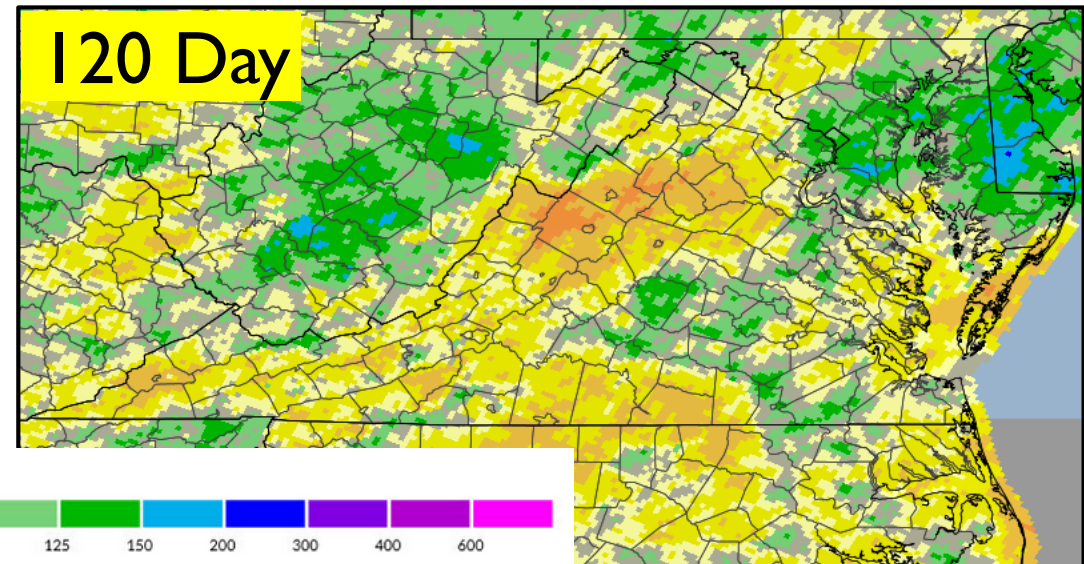
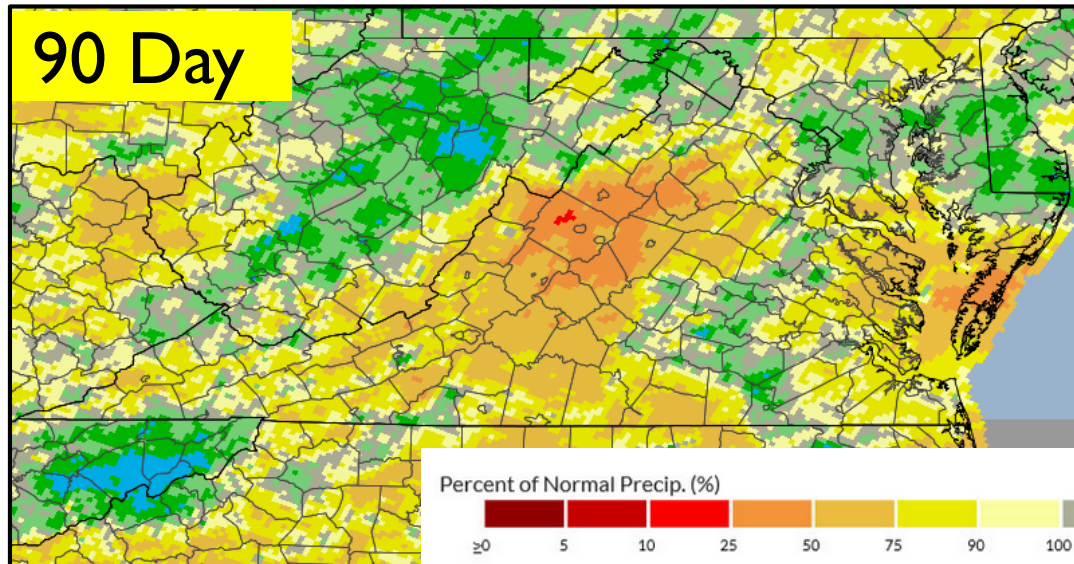
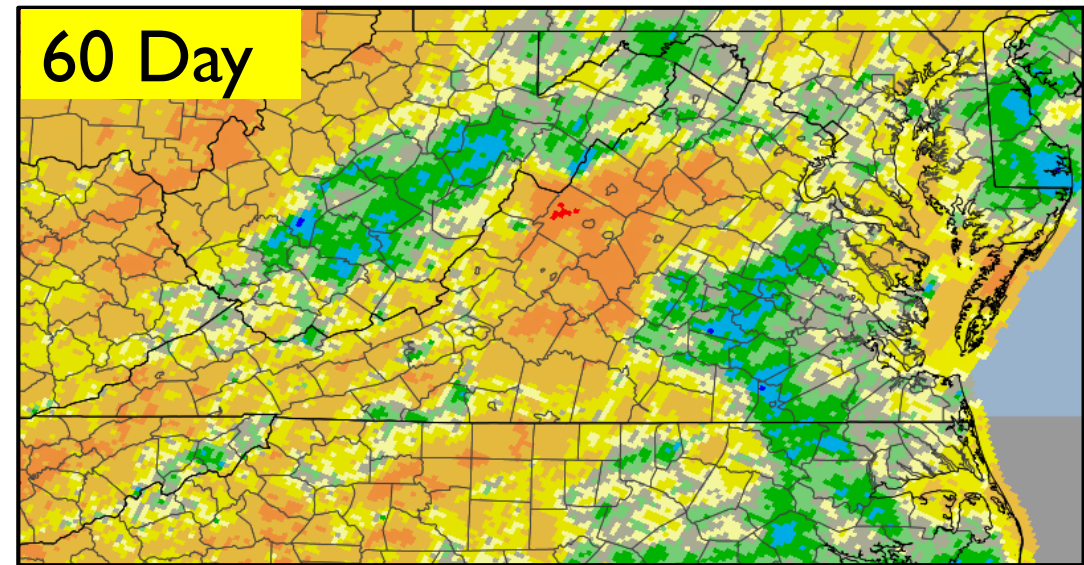
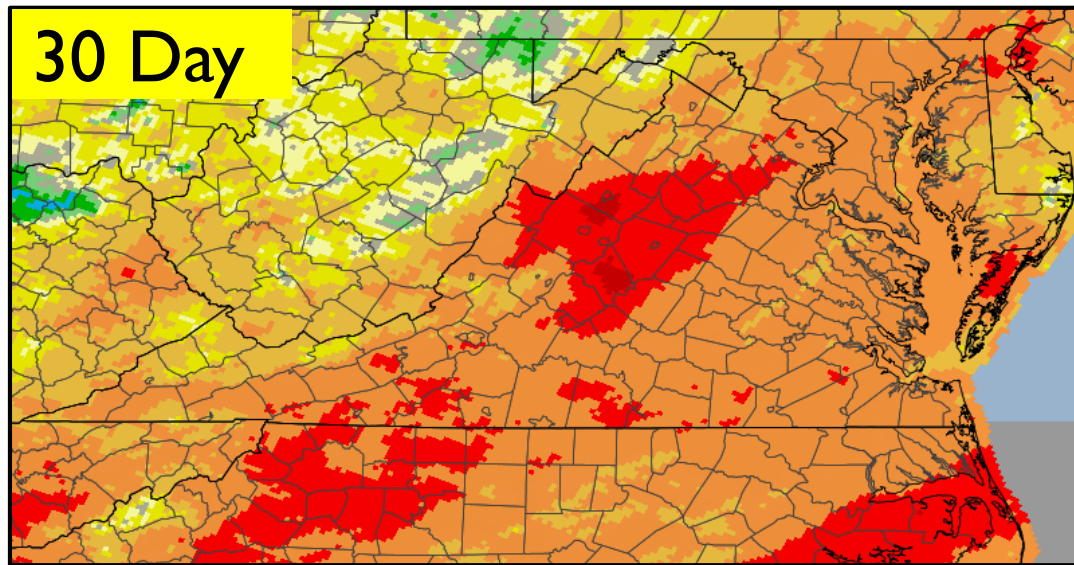
Wakefield, VA
WEATHER FORECAST OFFICE



Percent of Normal Precipitation



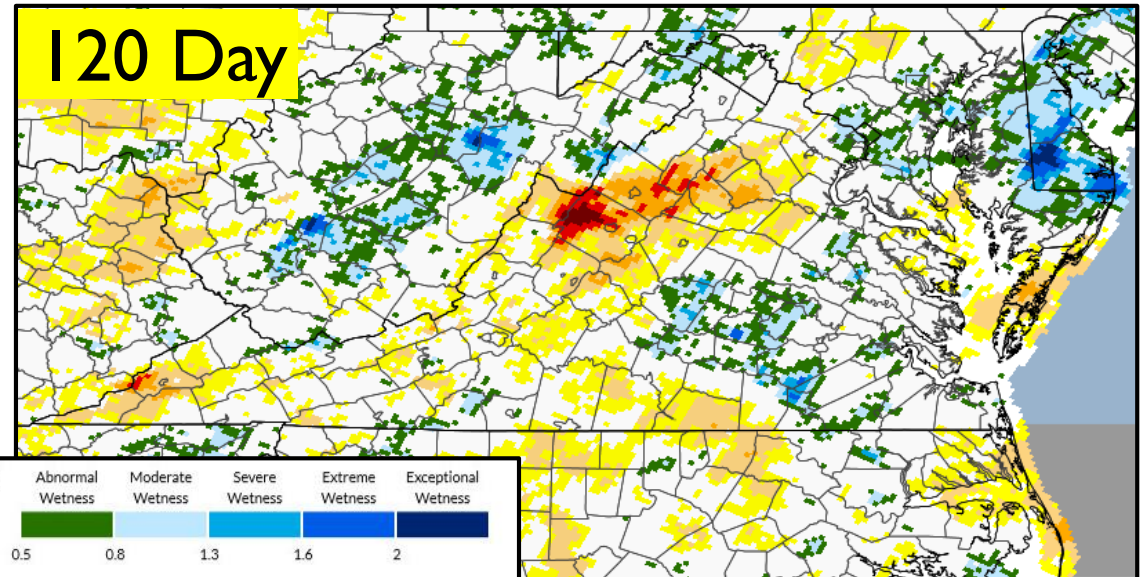
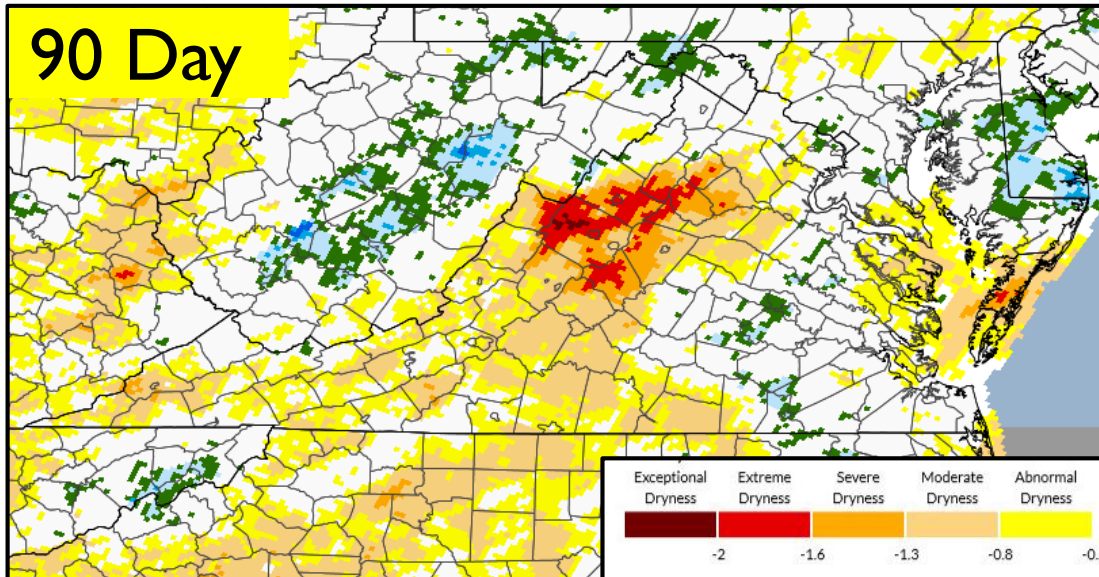
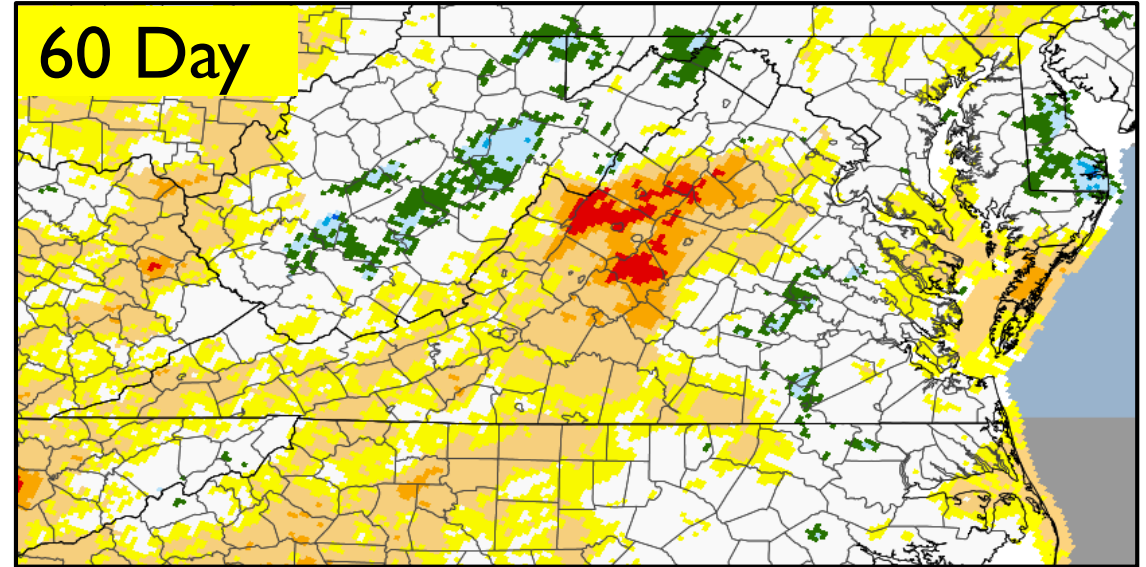
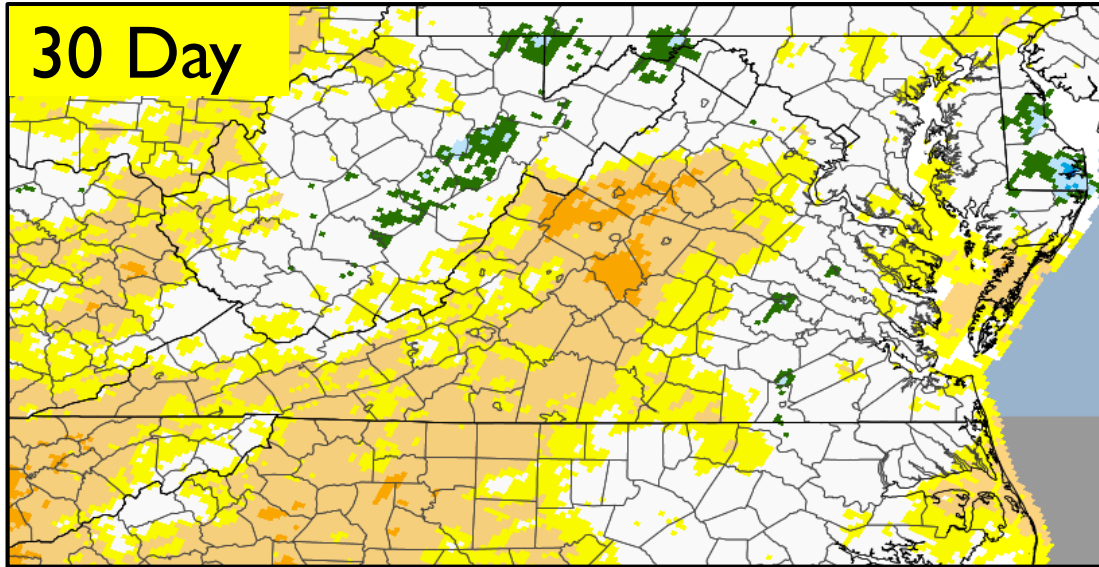
Wakefield, VA
WEATHER FORECAST OFFICE



SPI Blends



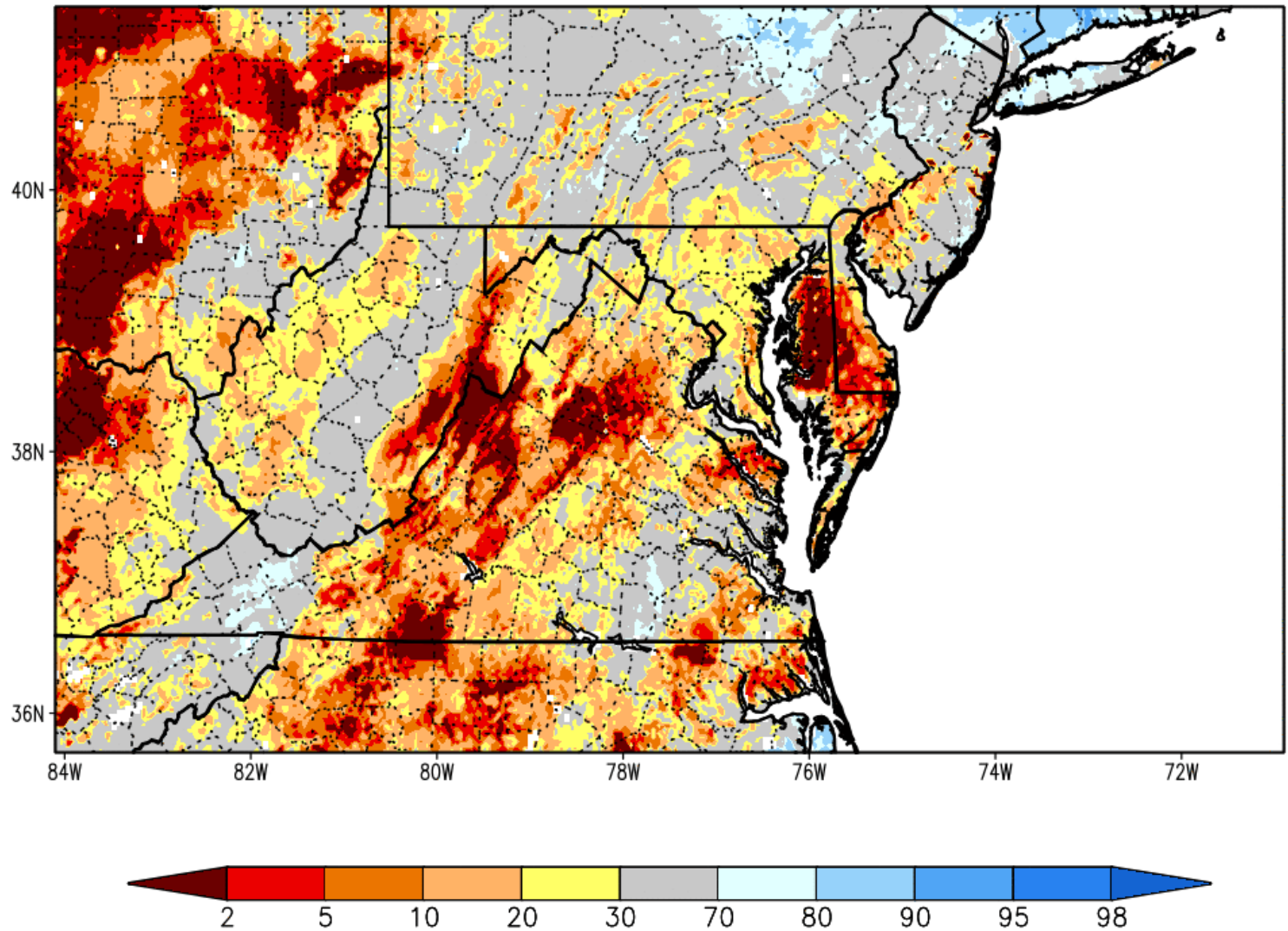
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Soil Moisture Percentile (0-2 meter)



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Drought Monitor (As of October 26th)

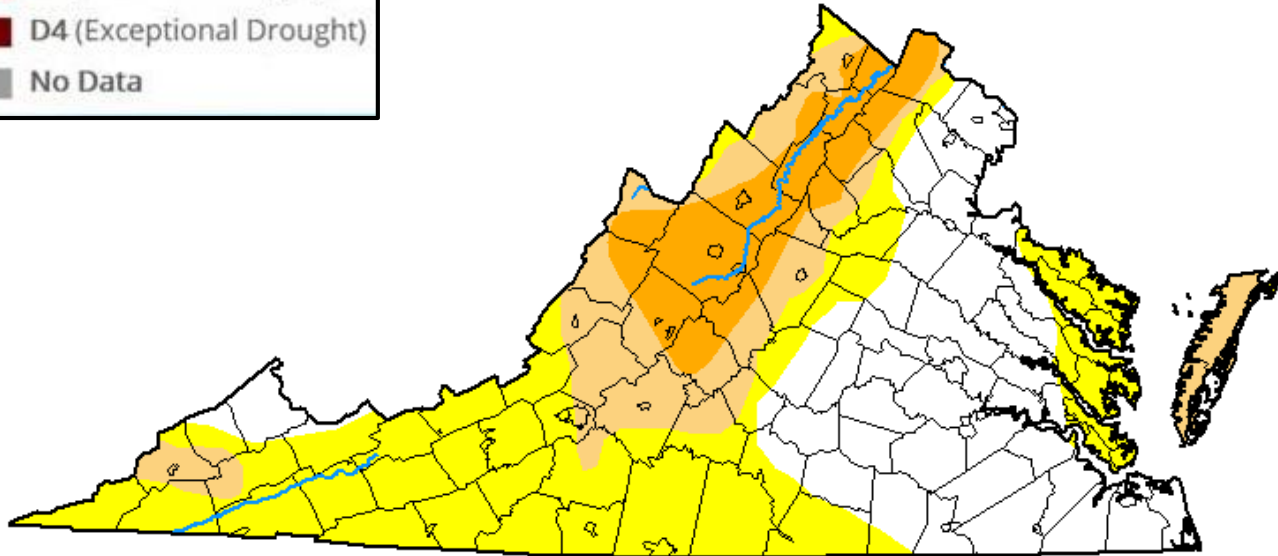
For more info, visit: droughtmonitor.unl.edu



Wakefield, VA
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Intensity:

- None
- D0 (Abnormally Dry)
- D1 (Moderate Drought)
- D2 (Severe Drought)
- D3 (Extreme Drought)
- D4 (Exceptional Drought)
- No Data



Potential Impacts

Category	Impact
D0	Crop growth is stunted; planting is delayed
	Fire danger is elevated; spring fire season starts early
	Lawns brown early; gardens begin to wilt
	Surface water levels decline
D1	Irrigation use increases; hay and grain yields are lower than normal
	Honey production declines
	Wildfires and ground fires increase
	Trees and landscaping are stressed; fish are stressed
D2	Voluntary water conservation is requested; reservoir and lake levels are below normal capacity
	Specially crops are impacted in both yield and fruit size
	Producers begin feeding cattle; hay prices are high
	Warnings are issued on outdoor burns; air quality is poor
	Golf courses conserve water
	Trees are brittle and susceptible to insects
D3	Fish kills occur; wildlife move to farms for food
	Water quality is poor; groundwater is declining; irrigation ponds are dry; outdoor water restrictions are implemented
	Crop loss is widespread; Christmas tree farms are stressed; dairy farmers are struggling financially
	Well drillers and bulk water haulers see increased business
D3	Water recreation and hunting are modified; wildlife disease outbreak is observed
	Extremely reduced flow to ceased flow of water is observed; river temperatures are warm; wells are running dry; people are digging more and deeper wells

Drought Monitor (From September 21st)

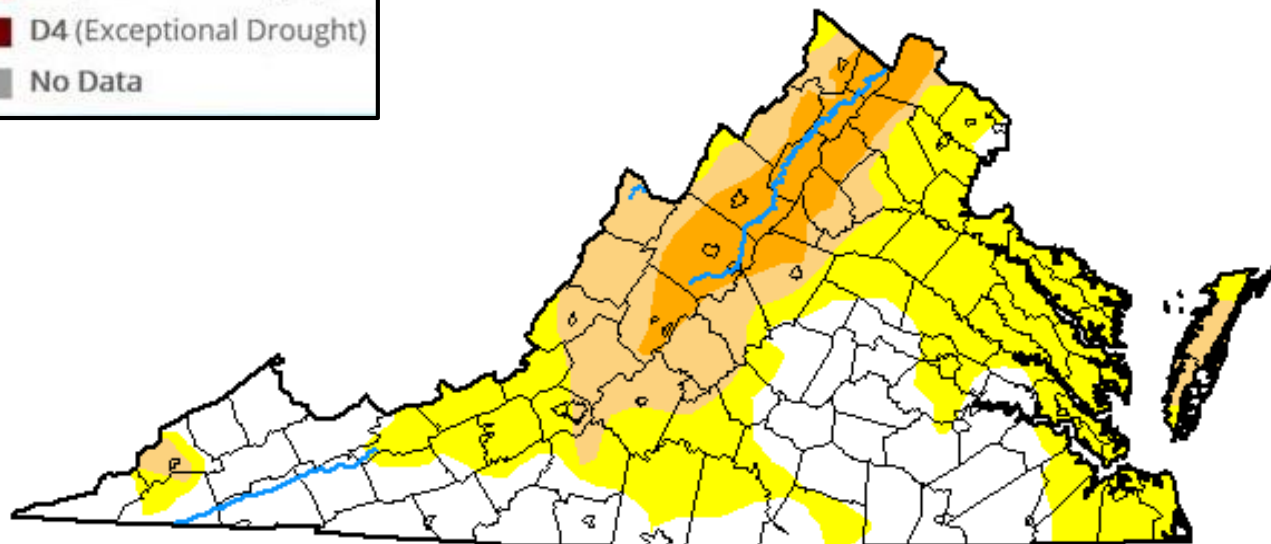
For more info, visit: droughtmonitor.unl.edu



Wakefield, VA
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Intensity:

- None
- D0 (Abnormally Dry)
- D1 (Moderate Drought)
- D2 (Severe Drought)
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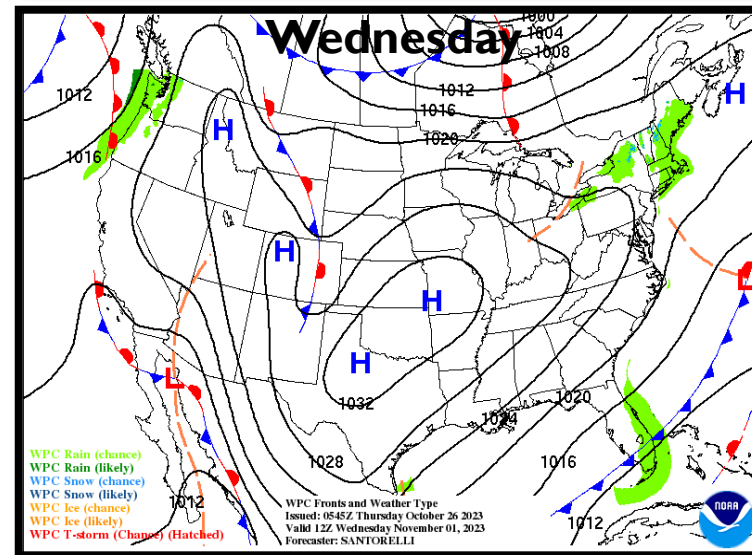
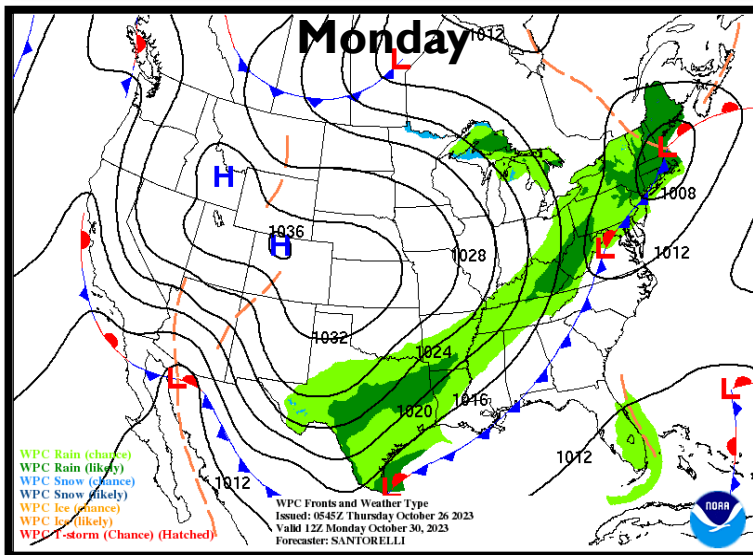
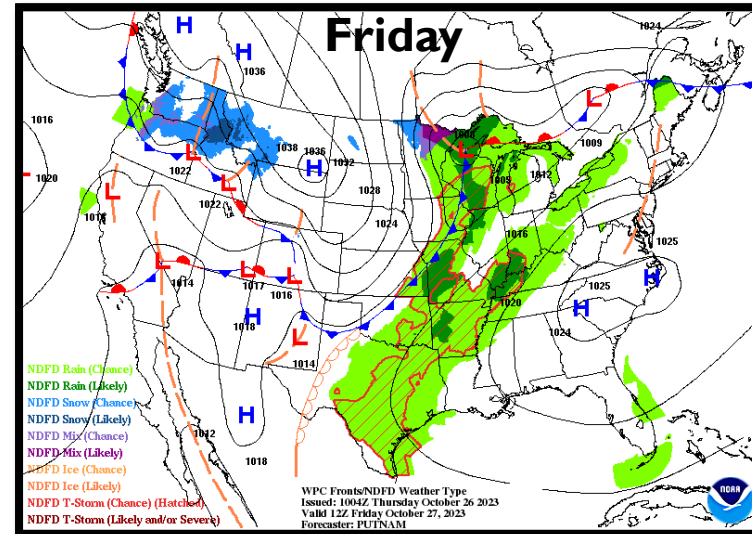
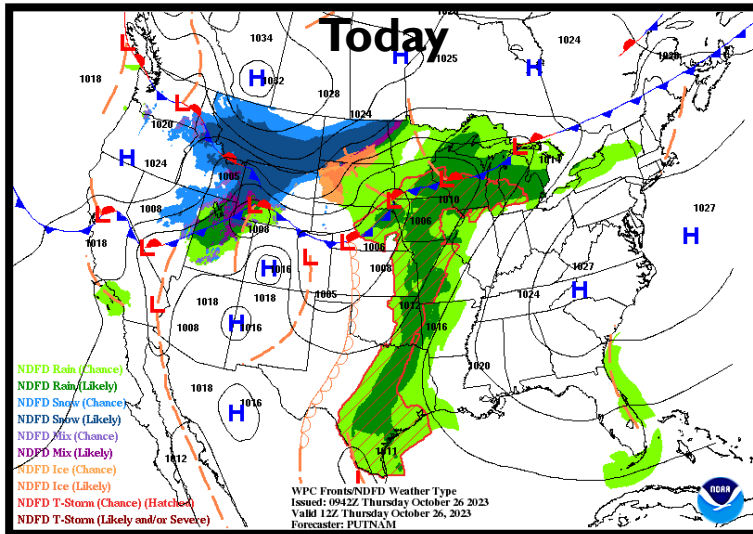
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Upcoming Weather Pattern



Wakefield, VA
WEATHER FORECAST OFFICE



Key Points:

- Unseasonably warm and dry through the weekend.
- A cold front produces showers Monday and Tuesday.
- Turning much cooler and drying out again by the middle of next week.

Precipitation Forecasts

Courtesy of the Weather Prediction Center (www.wpc.ncep.noaa.gov)

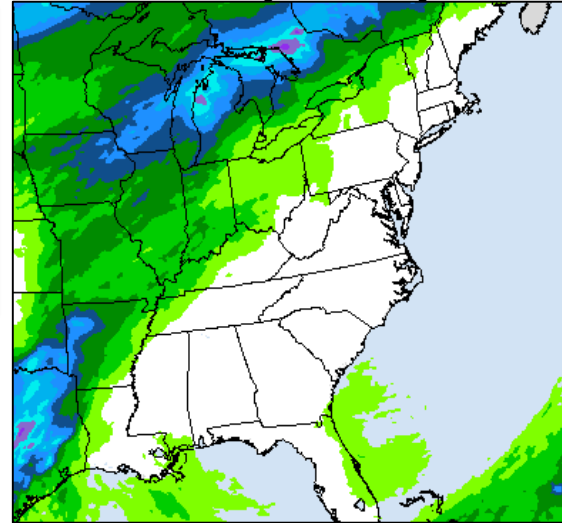


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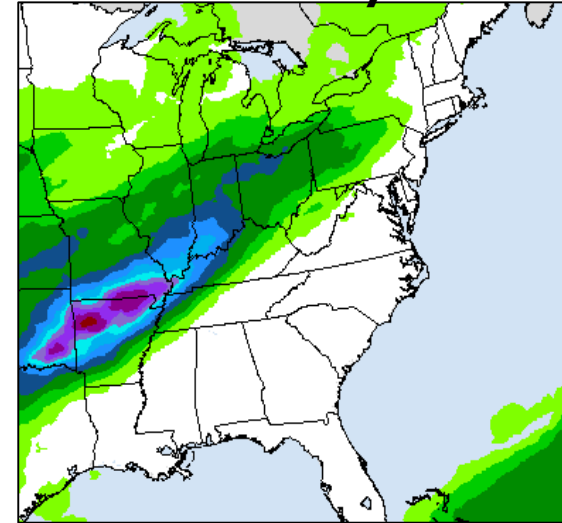
Forecast Daily Rainfall Through Wednesday (Nov 1st)

➤ **Generally less than 0.10" of rain is forecast.**

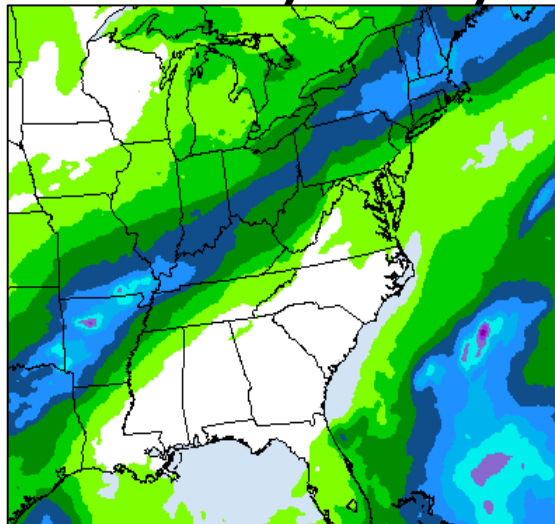
Today-Friday



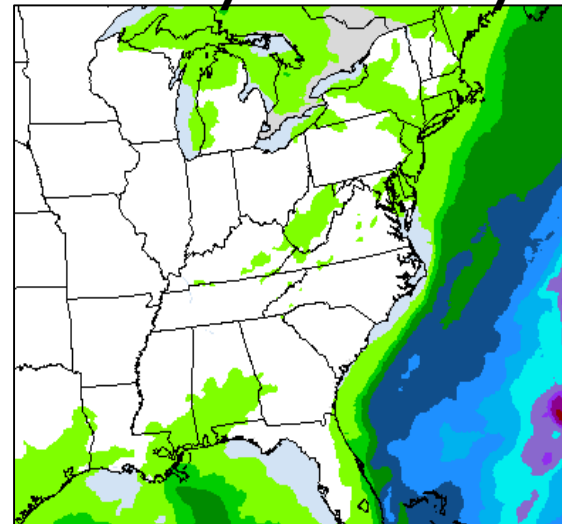
Saturday



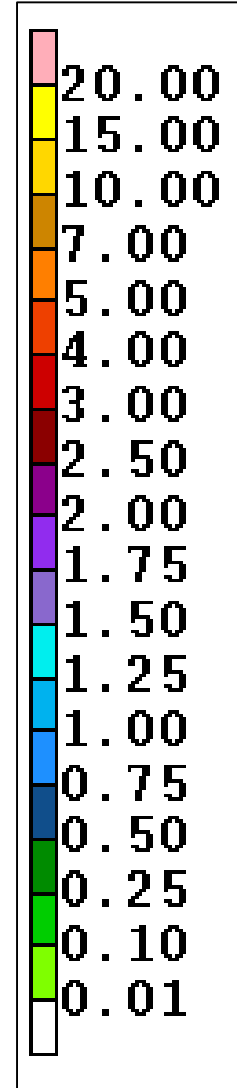
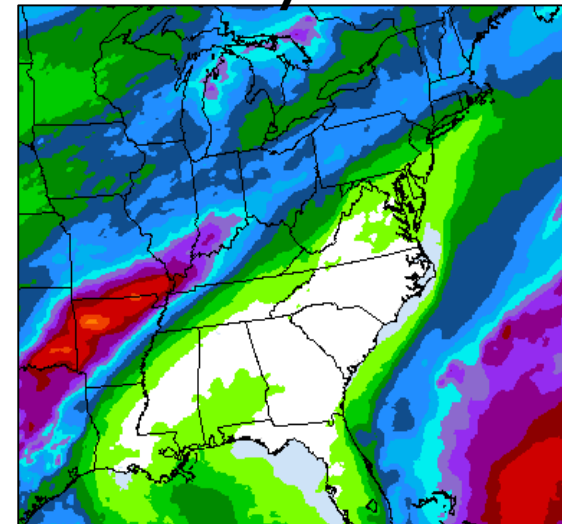
Sunday-Monday



Tuesday-Wednesday



7 Day Total

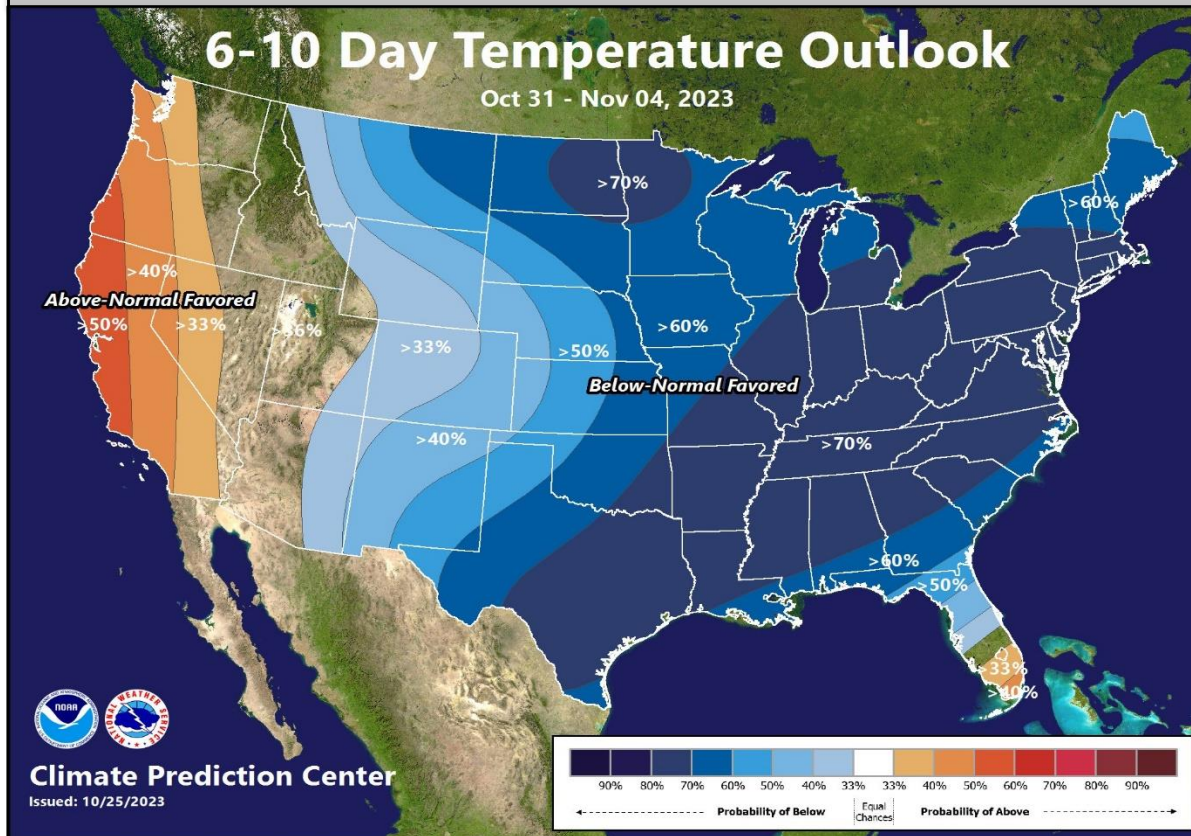


6 to 10 Day Outlook: Oct 31st – Nov 4th

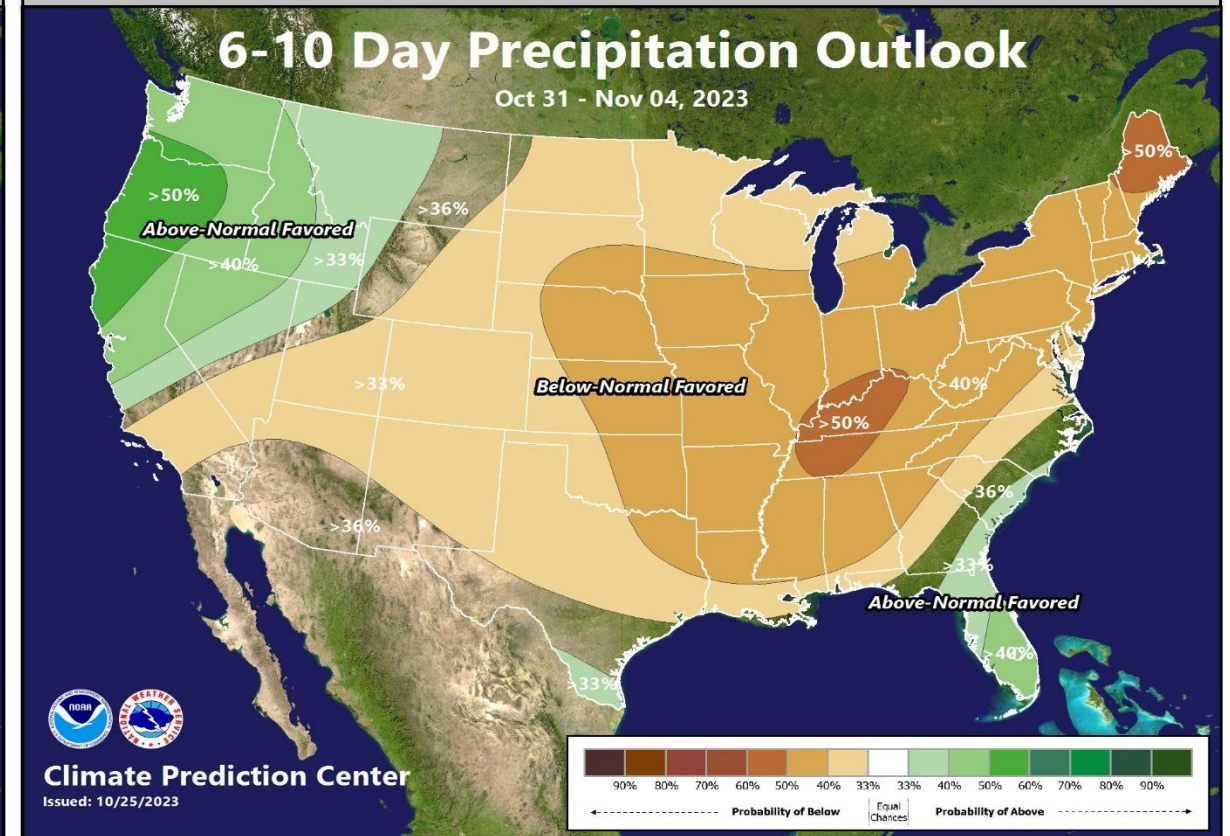


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Temperature



Precipitation



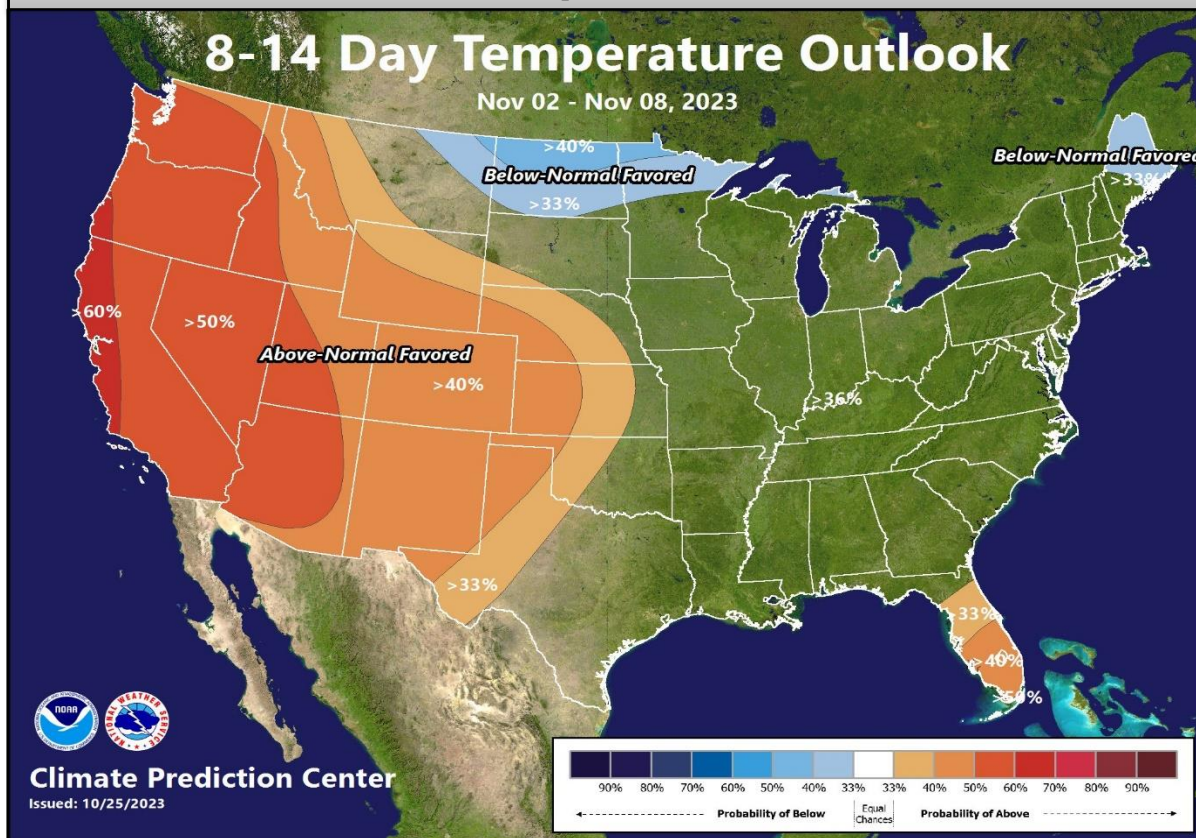
- Below normal temperatures favored.
- Below normal precipitation chances favored.

8 to 14 Day Outlook: Nov 2nd – Nov 8th

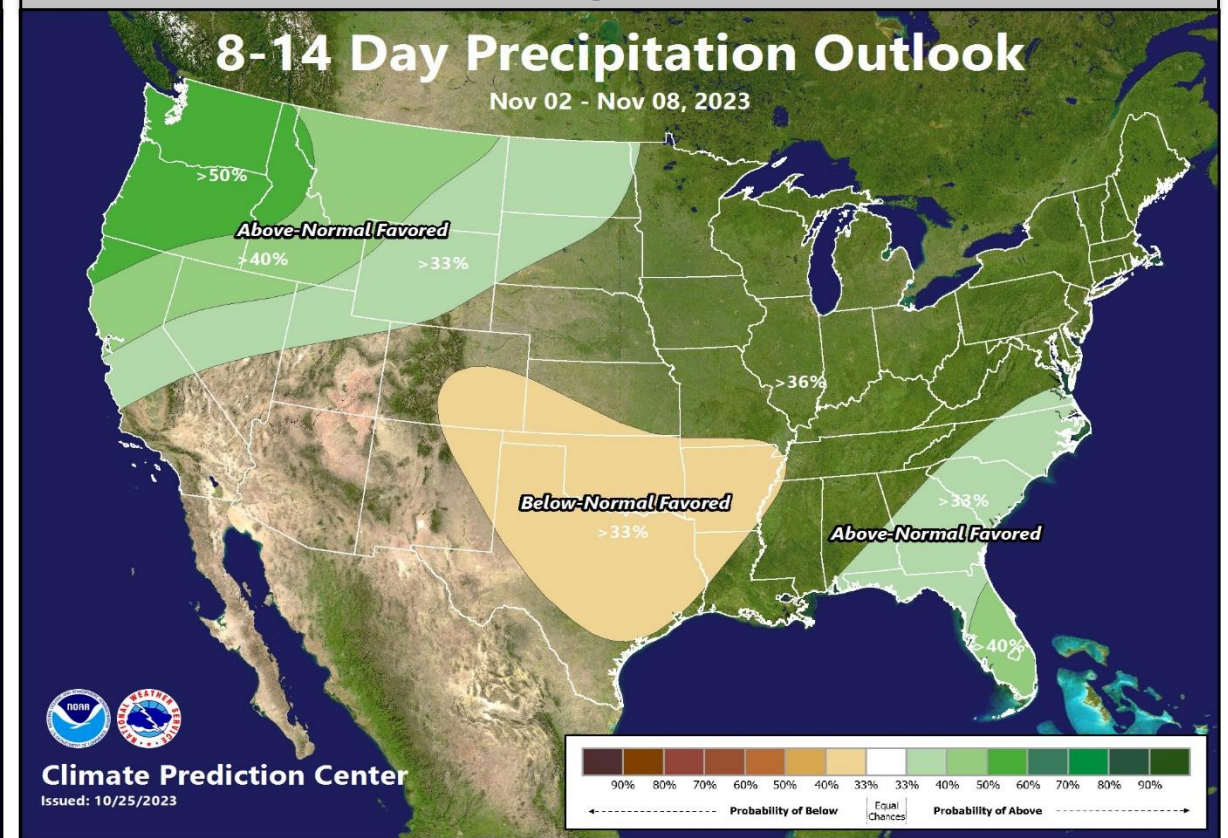


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Temperature



Precipitation



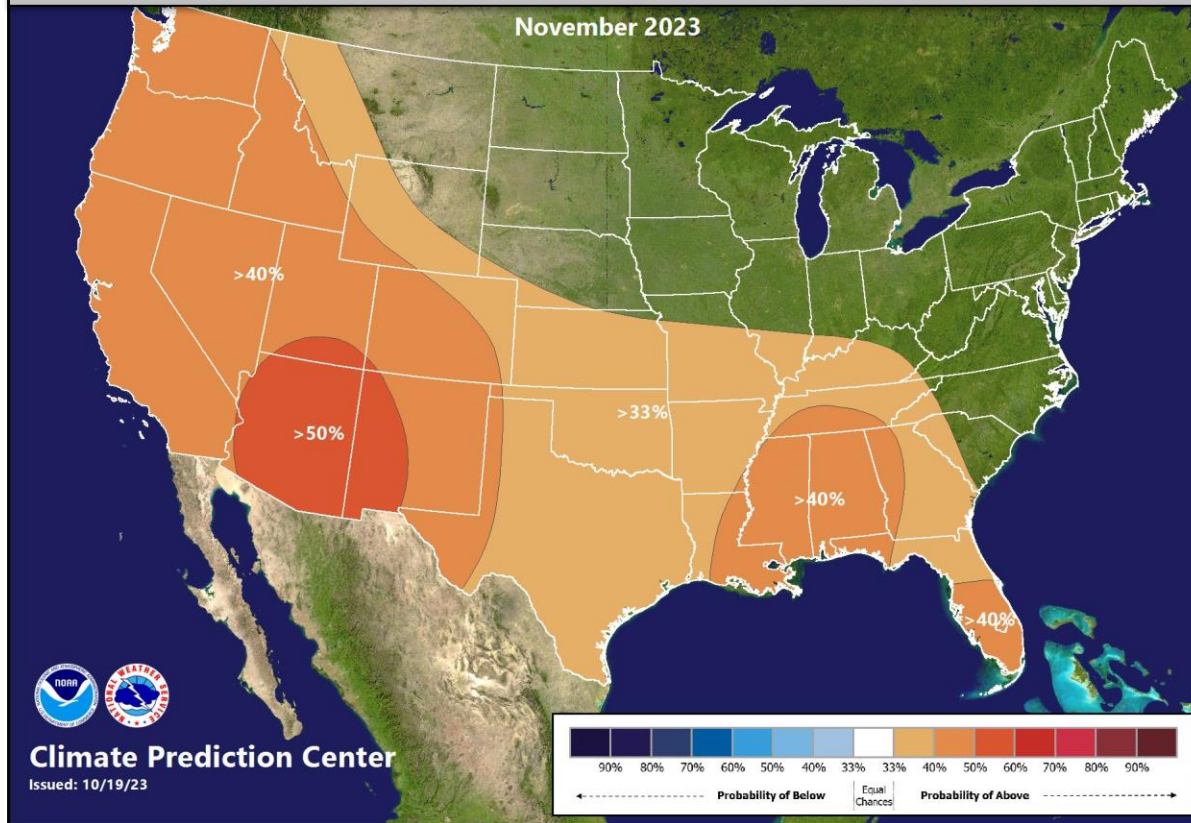
- Near normal temperatures favored.
- Near normal precipitation chances favored.

One-Month Outlook: November

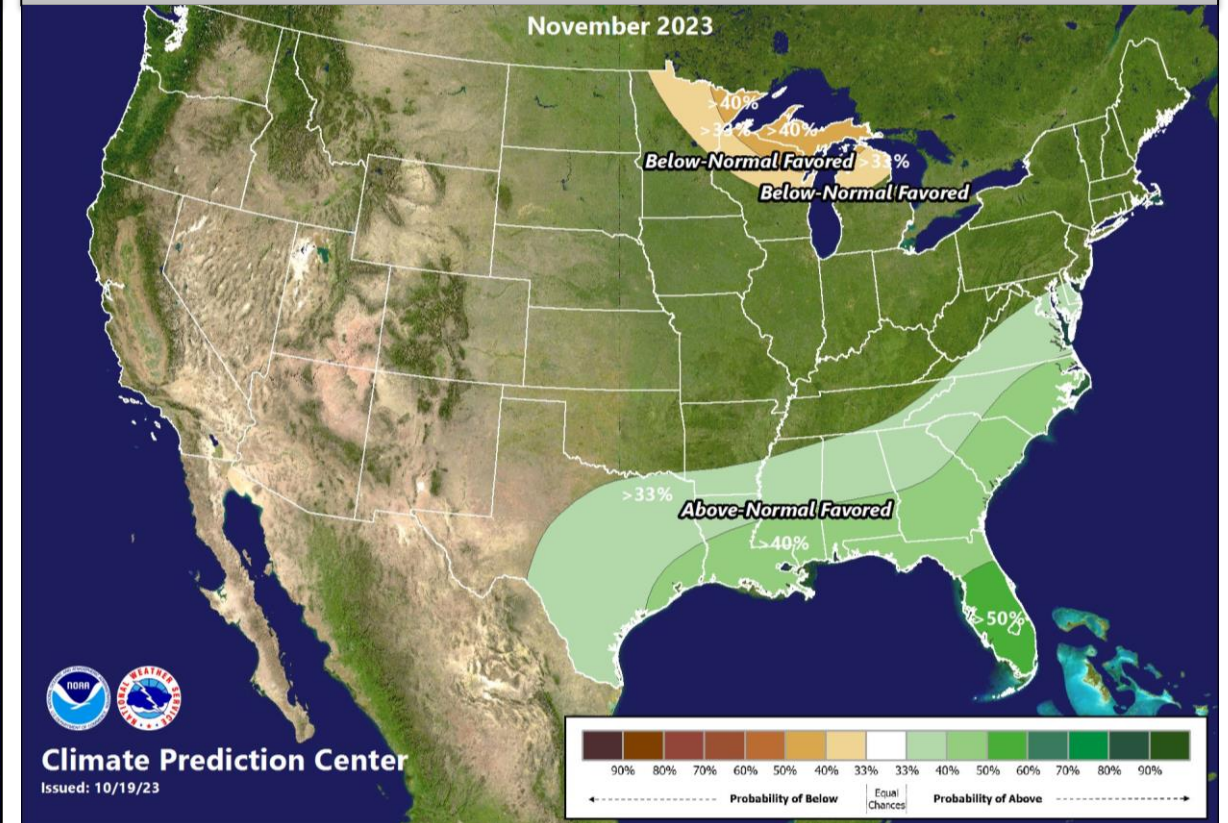


Wakefield, VA
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Temperature



Precipitation



- Near normal temperatures favored for November.
- Near- to above normal precipitation chances favored for November.

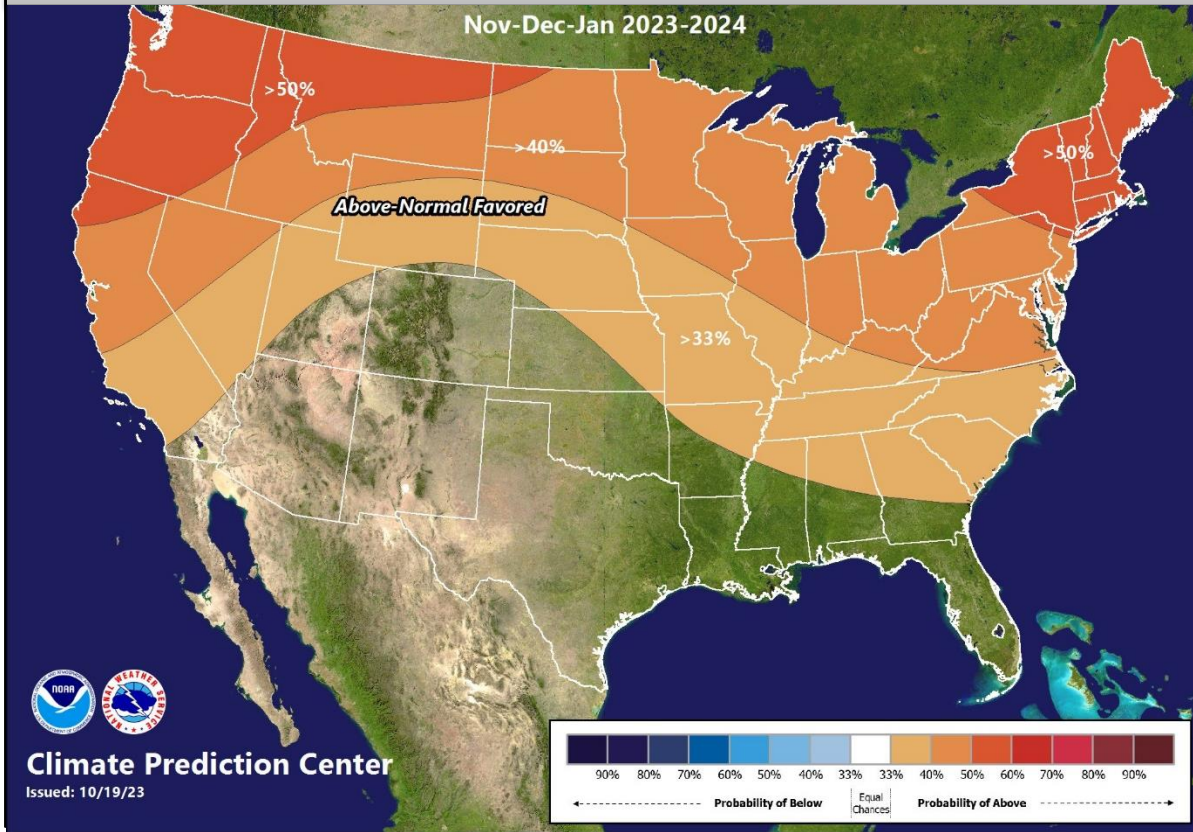
Three-Month Outlook: Nov-Dec-Jan



Wakefield, VA
WEATHER FORECAST OFFICE

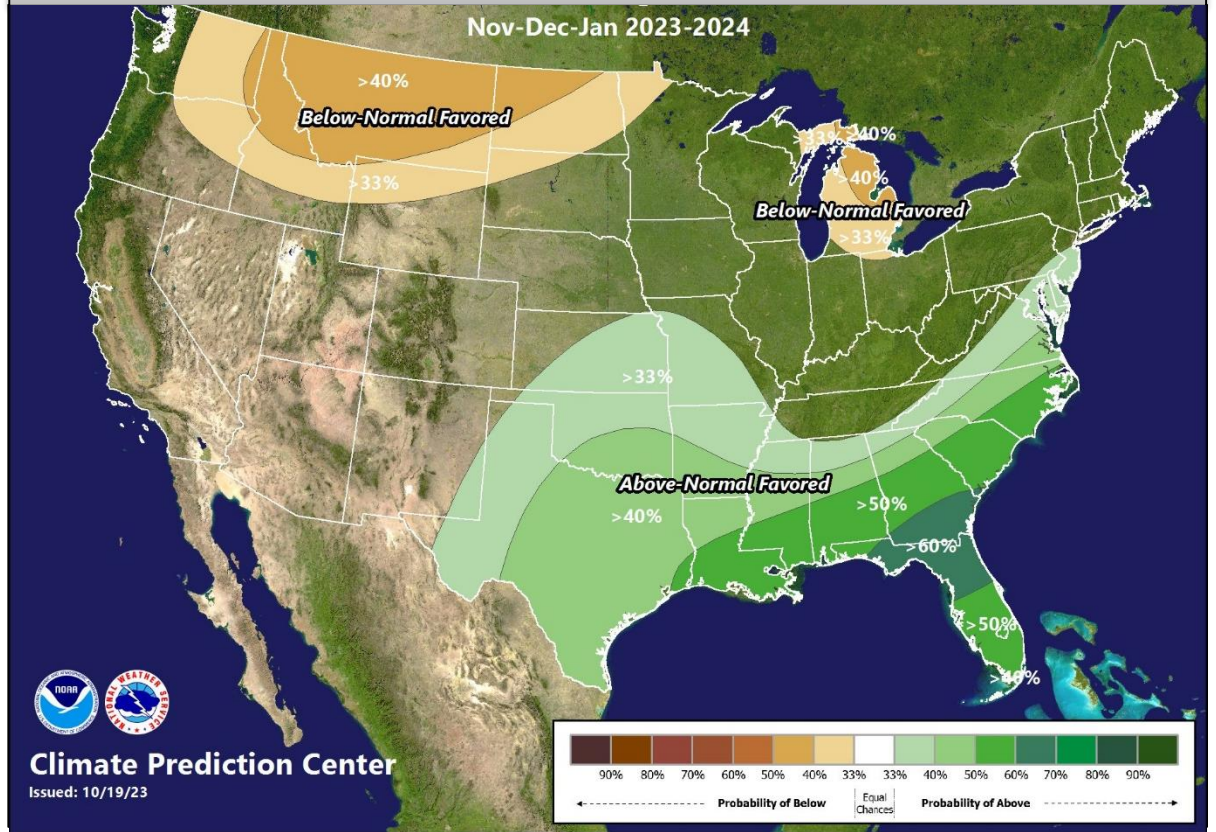
Temperature

Nov-Dec-Jan 2023-2024



Precipitation

Nov-Dec-Jan 2023-2024



- Above normal temperatures favored through January.
- Near- to above normal precipitation chances favored through January.

VIRGINIA DROUGHT MONITORING TASK FORCE

Drought Status Report

October 26, 2023

Summary

On Thursday October 26, 2023, the Virginia Drought Monitoring Task Force (DMTF) met to discuss the drought indicators identified by the Virginia Drought Assessment and Response Plan. Indicators have shown no or minimal improvements throughout the past fourteen-day period with declines of surface water, groundwater, and precipitation indicators observed across the central and western half of the Commonwealth. Near record low observations have continued at some stations within the Shenandoah drought evaluation region. The Task Force will continue closely monitoring drought indicators and will meet on November 21, 2023.

The Task Force recommends either closely monitoring or issuing a Drought Watch for the Middle James, Northern Piedmont, Roanoke, and Upper James drought evaluation regions due to declines in surface water, groundwater, and precipitation indicators.

The Task Force recommends closely monitoring the Eastern Shore, Northern Virginia, and York James drought evaluation and maintaining the Drought Watch if conditions do not improve.

The Task Force recommends closely monitoring the Shenandoah drought evaluation region and maintaining the Drought Warning if conditions do not improve.

Precipitation over the past 30-60-day period showed minimal localized events within the eastern portions of the state along the I-95 corridor. Precipitation percent of normal over the recent seven and 14-day period show exceptional dryness focused within Shenandoah Valley and the majority of Virginia below historical averages. Area-averaged rainfall since the beginning of the current water year (October 1, 2023) has remained below long-term normal values for the majority of the Commonwealth. (See [DEQ website](#) for more info on drought indicators).

Streamflow over the past 14-day period has declined along much of the Blue Ridge and south central portions of the Commonwealth, with no significant improvements throughout regions impacted by drought conditions. Flows are currently below the 25th percentile for five of the 11 drought evaluation regions including; Upper James, Northern Piedmont, Northern Virginia, Shenandoah, and Roanoke. Two regions are currently ranked within “Warning” including the Shenandoah and Northern Piedmont with streamflow observed below the 10th percentile.

Groundwater levels for monitoring wells in the Climate Response Network have shown continued declines within many northern, central, and western portions of the state. Seven of 11 drought evaluation regions are below the 25th percentile including the Big Sandy, Eastern Shore, Middle James, Northern Virginia, Shenandoah, Roanoke, and York-James. Levels are currently below the 10th percentile for three of 11 drought evaluation regions including the Northern Virginia, Shenandoah, and Roanoke.

The most recent weekly [U.S. Drought Monitor \(USDM\)](#) web page map for Virginia ([Appendix A](#), released October 26, 2023) showed abnormally dry (D0) conditions mapped across approximately 66% of the Commonwealth, and moderate drought (D1) conditions mapped across approximately 27% of the Commonwealth. Severe drought (D2) conditions were mapped across approximately 11% of the Commonwealth. Appendix B includes presentations from the United States Geological Survey and National Weather Service.

Reports:

The U.S. Army Corps of Engineers (USACE) reported that Lake Moomaw (Philpott Lake) and J. H. Kerr Reservoir have received below normal inflows over the past month. As Philpott hydropower units remain out of service, USACE continues coordinating with fisheries experts to maintain sufficient releases at Philpott to support downstream aquatic life. Currently, Kerr Reservoir is approximately 1.0ft below guide curve and dropping approximately a third of a foot per week. Power generation is operating at minimum weekly energy, with inflows approximately 1000cfs less than minimum energy releases. The USACE will continue to generate minimum energy as long as the reservoir level is below the guide curve to conserve power pool storage.

The DEQ report presents a map of current conditions of DEQ Drought Indicators, and summary of current conditions at the four large multi-purpose reservoirs listed as key reservoir storage indicators in the [Virginia Drought Assessment and Response Plan](#) (All remain above drought watch levels at this time).

Virginia Department of Agriculture and Consumer Services

Producers in the Northern, Valley, and Southwest regions of the Commonwealth report that dry conditions continue and crop yields, overall, are below average. Pond, river, and stream levels in these regions are low, and producers in the far southwestern region of the state report that some small streams are completely dry. While the dry conditions have facilitated the planting of small grains for both grain and cover crops throughout these regions, these crops will need rain in the near future.

As widespread impacts to producers throughout the Commonwealth have been experienced information regarding assistance programs was provided by VDACS. Information regarding the U.S. Department of Agriculture's Disaster Assistance Programs is available here: <https://www.fsa.usda.gov/programs-and-services/disaster-assistance-program/index>.

Information regarding the federal disaster declaration process is available here: <https://www.fsa.usda.gov/Assets/USDA-FSA->

[Public/usdfiles/FactSheets/emergency disaster designation declaration process-factsheet.pdf](https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdfiles/FactSheets/emergency%20disaster%20designation%20declaration%20process-factsheet.pdf)

Contact information for each locality's USDA Farm Service Agency office can be found by clicking-through the map available here: <https://offices.sc.egov.usda.gov/locator/ap>

Virginia Department of Environmental Quality

Conditions of Major Drought Indicator Reservoirs

Four large multi-purpose reservoirs are identified as drought indicators in the Virginia Drought Assessment and Response Plan. Below is a snapshot of reported conditions at these reservoirs and the subsequent table provides status of reservoirs used to monitor drought conditions. Storage at major water supply reservoirs throughout Virginia remain within normal ranges at this time, with exception of the Skidmore Fork Lake (Switzer Lake) located within the Shenandoah drought evaluation region reported below normal. The City of Harrisonburg continues to report withdrawals and reservoir conditions daily.

[Smith Mountain Lake](#) on the Staunton River in the Roanoke drought evaluation region was at an adjusted elevation of 793.11 feet, which is .11 feet above Watch level (793 ft). The adjusted elevation is the level the lake would be if the water currently held in the lower Leesville Lake for reuse were pumped back into Smith Mountain Lake. Recent 7, 14, and 28-day inflows were below normal for this time of year.

[Lake Moomaw](#) at Gathright Dam on the Jackson River in the Upper James drought evaluation region was reported at an elevation of 1559.13 feet, which is 5.87 feet below Watch level (1565 ft). Recent 7, 14, and 28-day average inflows were much below normal for this time of year. The current lake level is 9.24 feet below the operational average for this date, with approximately 18.2% of conservation storage remaining.

[Lake Anna](#) on the North Anna River in the Northern Piedmont drought evaluation region was reported at an elevation of 249 feet, which is 1 foot above Watch level (248 ft). 7 and 14 day inflows were below normal for this time of year.

[J. H. Kerr Reservoir](#) on the Staunton River in the Roanoke drought evaluation region was reported at an elevation of 297.54 ft, which was .36ft below the guide curve elevation for this time period (297.90 feet) and 2.6ft above the Watch level (Watch level is 3 to 6 ft below guide curve). Recent 7, 14, and 28-day average inflows were below normal for this time of year.