

VIRGINIA DROUGHT MONITORING TASK FORCE

Drought Status Report

August 5, 2025

Summary

On Tuesday, August 5th, 2025, the Virginia Drought Monitoring Task Force (DMTF) met to review drought indicators outlined in the Virginia Drought Assessment and Response Plan. The percentage of precipitation remains above normal for a majority of the Commonwealth, with a slight rainfall deficit observed on the Eastern Shore. Standardized Precipitation Index (SPI) blends show a similar trend of wetter than normal conditions across the Commonwealth, with the most notable exception being on the Eastern Shore. Soil moisture conditions in the top two meters show primarily normal conditions, with some dry indications in southern portions of the State and in the Eastern Shore. Seven-day average streamflow conditions in all watersheds were normal to much above normal. Only a few stream gages in southern portions of the Commonwealth indicated below normal flow conditions. Groundwater levels in the Commonwealth have generally improved over the last month, but some pockets of below-normal well levels remain. All indicator reservoirs remain in normal status.

The U.S. Drought Monitor (USDM) shows 100% of the Commonwealth's land area with no drought conditions. This represents the same status to the USDM conditions published on July 10, 2025.

July continued to see plentiful rainfall over the entirety of the Commonwealth. Stream flows within all major watersheds are normal and groundwater levels in wells previously impacted by drought have improved. All water supply reservoirs are at normal levels. The seven-day forecast suggests 0.5 – 1.5 inches of rainfall throughout the central and southern portions of the state, with slightly lower amounts (<0.5 inches) predicted in the northern and western regions. The 8-14 day and 3-4 week outlooks favor above normal precipitation and temperatures. As a result, the Drought Monitoring Task Force recommends maintaining a normal drought advisory status for all 13 drought evaluation regions.

Precipitation

The percentage of precipitation remains above normal for a majority of the Commonwealth, with a slight rainfall deficit observed on the Eastern Shore. Precipitation amounts of 150-300% of normal are most prevalent in the past 30-day period and decreased to primarily 110-200% of normal over the past 120-day period. The Eastern Shore region received only 50-90% of normal precipitation throughout these timeframes. SPI blends show a similar trend of wetter than normal conditions across the Commonwealth, with the most notable exception being on the Eastern Shore. The Eastern Shore is the only drought region with non-normal indicator status, having received 76.93% of normal precipitation for the water year (beginning October 1, 2024). Soil moisture conditions in the top two meters show primarily normal conditions, with some dryness indicated in southern portions of the State and on the Eastern Shore.

Streamflow

Seven-day average streamflow conditions in all watersheds were normal to much above normal. Only a few stream gages in southern portions of the Commonwealth indicated below normal flow conditions. Over the past 45-days, normal to much above normal flow conditions have prevailed throughout the Commonwealth. All 11 of the drought evaluation regions with streamflow

indicators were in normal status, and none of the 11 indicators were below the 50th percentile for the past seven-day period.

Groundwater

Groundwater levels in the Commonwealth have generally improved over the last month, but some pockets of below-normal well levels remain. Indicator wells in the York James and Shenandoah regions were the only wells in warning status (below the 10th percentile). Other wells in these same two drought evaluation regions were in the 90th and 63rd percentiles, respectively. The Roanoke, Northern Virginia, and Eastern Shore regions had indicator wells in watch status (below the 25th percentile), but all three of these regions similarly had other indicator wells which were in normal status.

Reservoirs

Storage at all major water supply reservoirs were at normal status on August 5, 2025. Please see [the DEQ website](#) for more information on drought indicators.

Drought Monitor

The most recent weekly U.S. Drought Monitor (USDM) web page for Virginia (Appendix A, released August 7, 2025) shows 100% of the Commonwealth's land area with no drought conditions. This represents identical conditions to the USDM released on July 10, 2025.

Virginia Department of Agriculture and Consumer Services

The Virginia Department of Agriculture and Consumer Services received reports of negative impacts on agriculture due to dry conditions in Brunswick, Dinwiddie, and Amelia Counties. There were also reports of farmers dealing with wet conditions putting disease pressure on crops.

Information regarding the federal disaster declaration process is available here:

<https://www.fsa.usda.gov/tools/informational/fact-sheets/emergency-disaster-designation-declaration-process>

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 Health

There were no new reports from the Virginia Department of Health.

Virginia Department of Environmental Quality

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](#). Philpott Lake is currently at

970.97 feet and is 2.53 feet below the guide curve elevation (973.50). Pool elevation values referenced below are those observed on August 7, 2025.

Smith Mountain Lake on the Staunton River in the Roanoke drought evaluation region was observed at an adjusted elevation of 794.30 feet, which is 1.3 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 seven and 14-day inflows were above normal, and 28-day inflows were normal.

Lake Moomaw at Gathright Dam on the Jackson River in the Upper James drought evaluation region was observed at an elevation of 1580.91 feet, which is 15.91 feet above Watch level (1565 ft). Recent seven, 14, and 28-day inflows were above normal.

Lake Anna on the North Anna River in the Northern Piedmont drought evaluation region was observed at an elevation of 249.9 feet, which is 1.9 feet above Watch level (248 ft). Recent seven and 14-day inflows were normal, and recent 28-day inflows were above normal.

J. H. Kerr Reservoir on the Staunton River in the Roanoke drought evaluation region was observed at an elevation of 300.44 feet, which is 0.58 feet above the guide curve elevation for this time period (299.86) and 3.58 feet above the watch level (Watch level is three (3) to six (6) feet below guide curve). Recent seven and 14-day inflows were normal, and recent 28-day inflows were above normal.

DEQ Daily Drought Summary

05 August, 2025

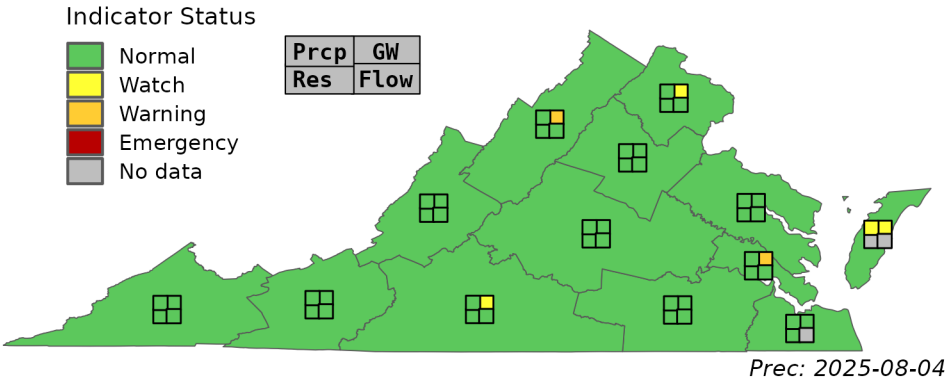
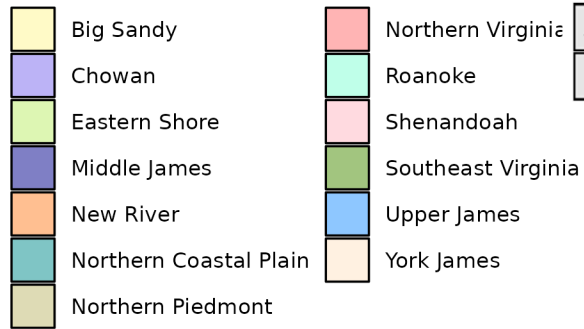
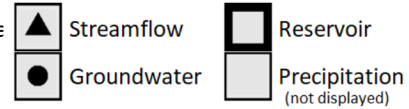


Figure 1: Regional Drought Map

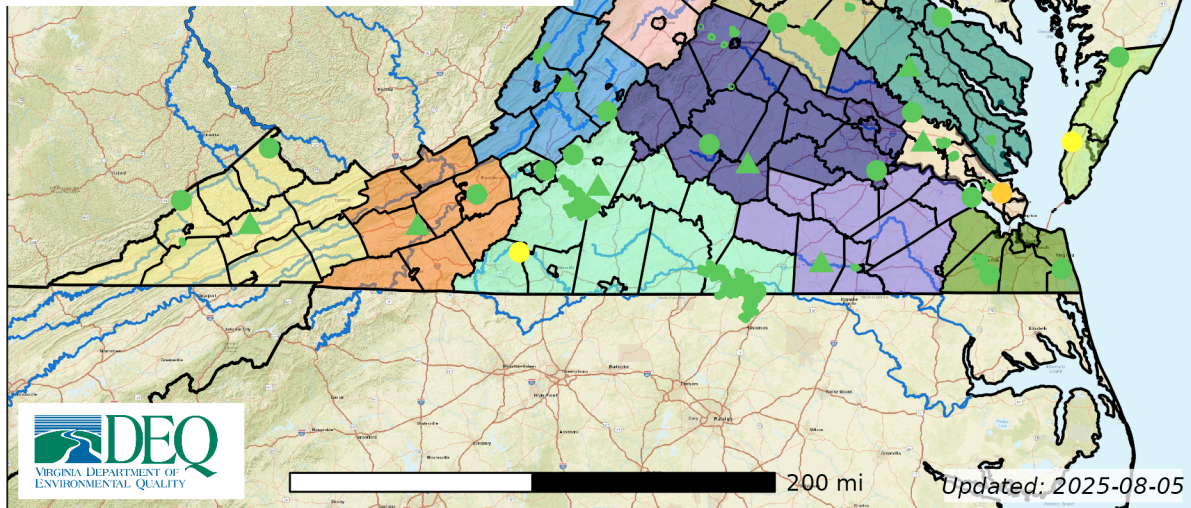
Drought Evaluation Regions



Drought Indicators



Status



Region drought status

Drought Region	Status
Big Sandy	Normal
Chowan	Normal
Eastern Shore	Normal
Middle James	Normal
New River	Normal
Northern Coastal Plain	Normal
Northern Piedmont	Normal
Northern Virginia	Normal
Roanoke	Normal
Shenandoah	Normal
Southeast Virginia	Normal
Upper James	Normal
York James	Normal

Precipitation

- Values are based on Water Year (starting October 1). Any abnormally high or low values may be due to lack of sufficient data.

Drought Region	Date	Water Year % of Normal	Status
Big Sandy	2025-08-04	105.16	Normal
Chowan	2025-08-04	105.04	Normal
Eastern Shore	2025-08-04	76.93	Watch
Middle James	2025-08-04	102.84	Normal
New River	2025-08-04	102.13	Normal
Northern Coastal Plain	2025-08-04	103.51	Normal
Northern Piedmont	2025-08-04	100.86	Normal
Northern Virginia	2025-08-04	99.92	Normal
Roanoke	2025-08-04	89.94	Normal
Shenandoah	2025-08-04	110.32	Normal
Southeast Virginia	2025-08-04	93.88	Normal
Upper James	2025-08-04	109.90	Normal
York James	2025-08-04	111.56	Normal

Surface water level

Drought Region	Gage	Start Date	End Date	Percentile	Status
New River	03167000	2025-07-29	2025-08-04	53.10	Normal
Chowan	02051500	2025-07-29	2025-08-04	59.09	Normal
Northern Virginia	01654000	2025-07-29	2025-08-04	67.00	Normal
York James	02042500	2025-07-29	2025-08-04	70.59	Normal
Middle James	02039500	2025-07-29	2025-08-04	71.98	Normal
Northern Coastal Plain	01674500	2025-07-29	2025-08-04	73.65	Normal
Northern Piedmont	01667500	2025-07-29	2025-08-04	79.95	Normal
Upper James	02016000	2025-07-29	2025-08-04	80.64	Normal
Roanoke	02059500	2025-07-29	2025-08-04	90.78	Normal
Shenandoah	01634000	2025-07-29	2025-08-04	91.56	Normal
Big Sandy	03524000	2025-07-29	2025-08-04	95.14	Normal

Groundwater

Drought Region	Gage	Start Date	End Date	Percentile	Status
York James	370841076275204	2025-07-29	2025-08-04	5.75	Warning
Shenandoah	390348078035501	2025-07-29	2025-08-04	9.56	Warning
Roanoke	364732080070301	2025-07-29	2025-08-04	18.9	Watch
Northern Virginia	383423077245901	2025-07-30	2025-08-05	21.56	Watch
Eastern Shore	372705075555903	2025-07-29	2025-08-04	22.42	Watch
Roanoke	372224079423601	2025-07-29	2025-08-04	25.99	Normal
Southeast Virginia	363928076332901	2025-07-29	2025-08-04	41	Normal
New River	370812080261901	2025-07-29	2025-08-04	44.05	Normal
Roanoke	371653079552101	2025-07-29	2025-08-04	47.11	Normal
Middle James	372608078404601	2025-07-29	2025-08-04	48.08	Normal
Northern Virginia	385638077220101	2025-07-29	2025-08-04	48.75	Normal
Eastern Shore	375723075344404	2025-07-29	2025-08-04	51.16	Normal
Upper James	373758079271601	2025-07-29	2025-08-04	60.71	Normal
Shenandoah	382150078424001	2025-07-30	2025-08-05	63.41	Normal
Chowan	370712076413203	2025-07-29	2025-08-04	69.61	Normal
Northern Virginia	385607077381101	2025-07-29	2025-08-04	70.62	Normal
Southeast Virginia	364126076003501	2025-07-29	2025-08-04	74.54	Normal
Northern Virginia	391542077423801	2025-07-29	2025-08-04	82.03	Normal
Northern Coastal Plain	381132076551001	2025-07-29	2025-08-04	89.45	Normal
York James	373737077083201	2025-07-29	2025-08-04	90.24	Normal
Northern Piedmont	381002078094201	2025-07-29	2025-08-04	91.05	Normal
Big Sandy	371841081584201	2025-07-30	2025-08-05	96.17	Normal
Middle James	371644077244601	2025-07-30	2025-08-05	97.69	Normal
Big Sandy	370604082403901	2025-07-29	2025-08-04	100	Normal

Reservoirs

Drought Region	Reservoir	Status
Big Sandy	Big Cherry Reservoir	Normal
Chowan	Emporia Reservoir	Normal
Middle James	Beaver Creek Reservoir	Normal
Middle James	Totier Creek Reservoir	Normal
Middle James	Ragged Mountain	Normal
Middle James	Sugar Hollow	Normal
Middle James	Lake Moomaw	Normal
Middle James	South Fork Rivanna River Reservoir	Normal
Northern Coastal Plain	Beverdam Reservoir	Normal
Northern Piedmont	Hunting Run Reservoir	Normal
Northern Piedmont	Motts Run Reservoir	Normal
Northern Piedmont	Lake Anna	Normal
Northern Piedmont	Ni River Reservoir	Normal
Northern Virginia	Occoquan Reservoir	Normal
Northern Virginia	Lake Manassas	Normal
Roanoke	Smith Mountain Lake	Normal
Roanoke	Kerr Reservoir	Normal
Shenandoah	Skidmore Fork Lake (Switzer Lake)	Normal
Southeast Virginia	Lake Cohoon	Normal
Southeast Virginia	Lake Kilby	Normal
Southeast Virginia	Speights Run Reservoir	Normal
Southeast Virginia	Lake Meade	Normal
Southeast Virginia	Kerr Reservoir	Normal
Upper James	Lake Moomaw	Normal
York James	Diascund Creek Reservoir	Normal
York James	Lee Hall - City Reservoir	Normal
York James	Harwoods Mill Reservoir	Normal
York James	Little Creek Reservoir	Normal
York James	Skiffes Creek Reservoir	Normal

Appendix A

U.S. Drought Monitor Virginia

August 5, 2025

(Released Thursday, Aug. 7, 2025)

Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	100.00	0.00	0.00	0.00	0.00	0.00
Last Week 07-29-2025	100.00	0.00	0.00	0.00	0.00	0.00
3 Months Ago 05-06-2025	38.21	61.79	33.43	3.91	0.00	0.00
Start of Calendar Year 01-07-2025	8.32	91.68	32.78	6.58	0.00	0.00
Start of Water Year 10-01-2024	82.58	17.42	2.14	0.01	0.00	0.00
One Year Ago 08-06-2024	31.99	68.01	45.13	24.86	11.45	0.00

Intensity:

None	D2 Severe Drought
D0 Abnormally Dry	D3 Extreme Drought
D1 Moderate 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:

Richard Tinker
CPC/NOAA/NWS/NCEP



droughtmonitor.unl.edu

Appendix B





Drought Status Summary

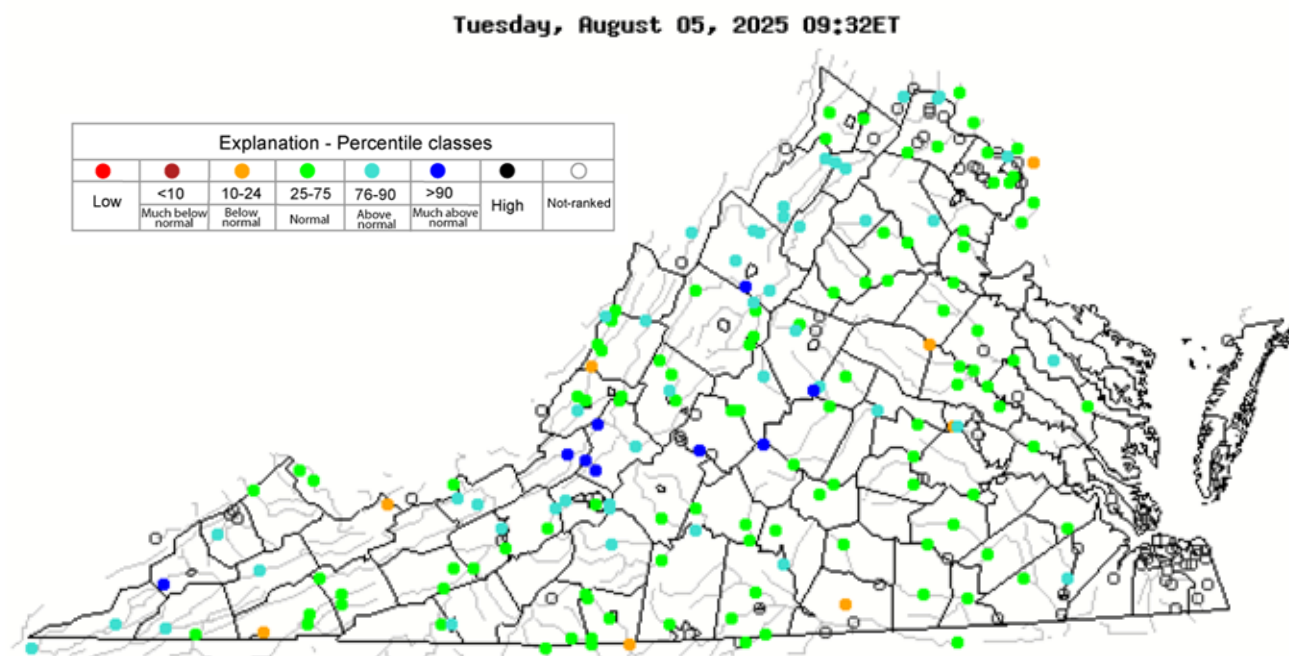
Streamflow and groundwater levels in Virginia

Virginia Drought Monitoring Task Force

August 5, 2025

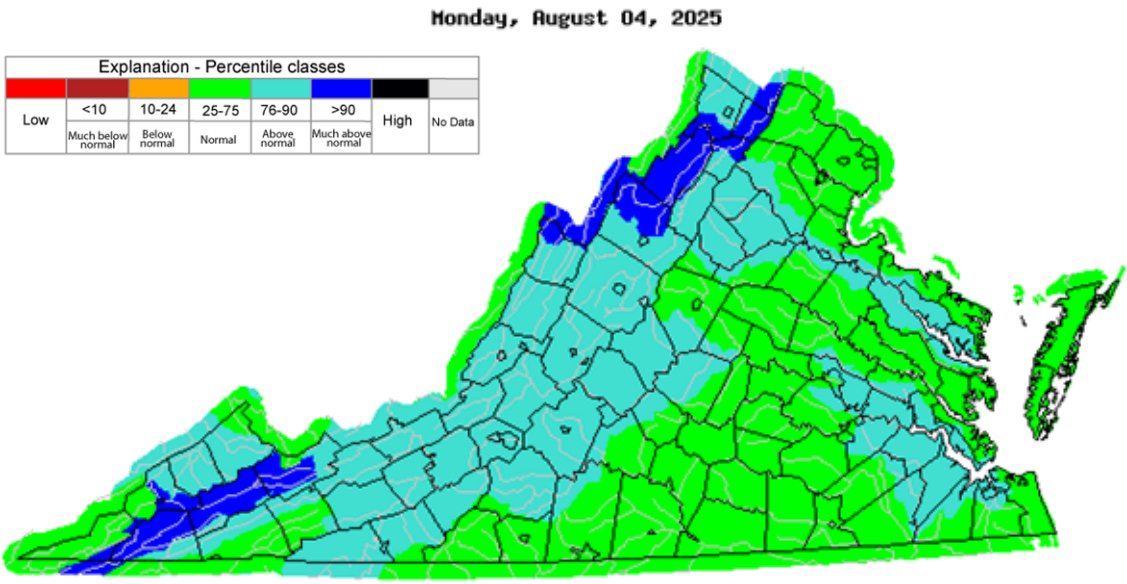
Matt Kearns, Hydrologist
mkearns@usgs.gov
681-340-8389

Virginia-West Virginia Water Science Center
United States Geological Survey
United States Department of the Interior

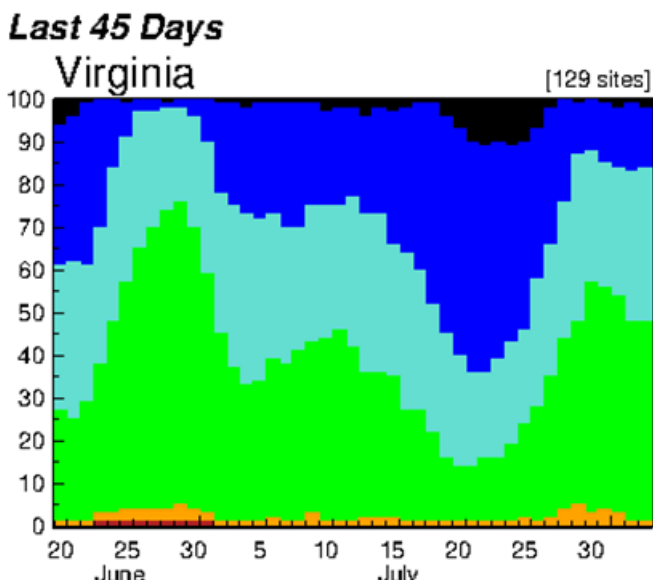


Real-time streamflow compared to historical streamflow for the day of the year

Average Streamflow Conditions



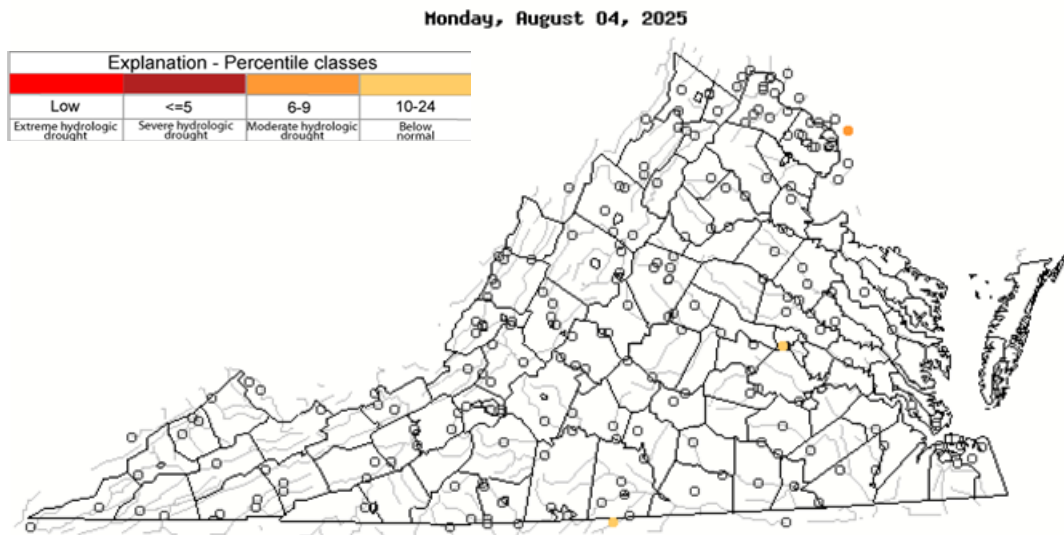
7-day average streamflow compared to historical streamflow for the day of the year



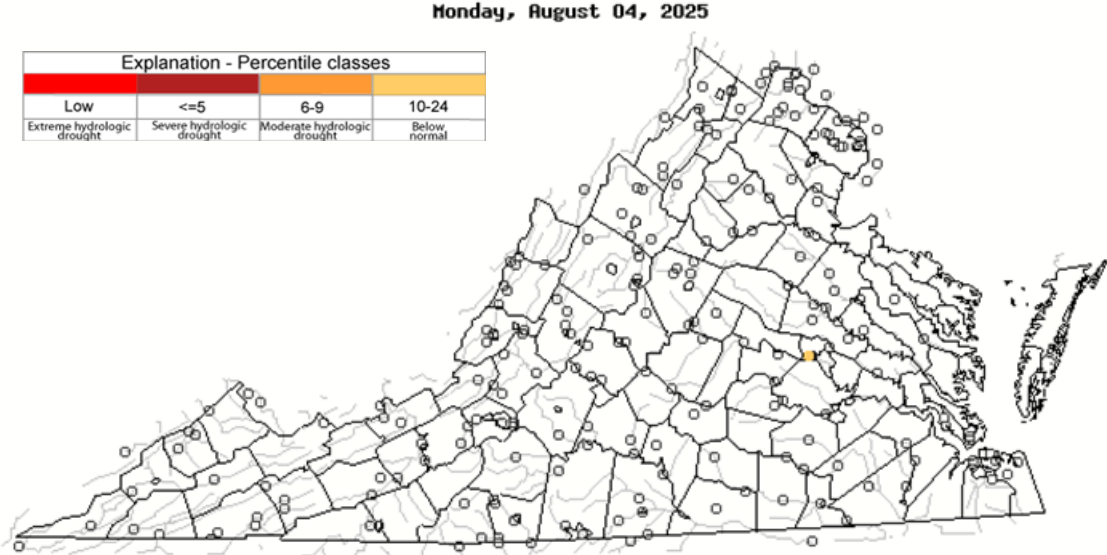
Time-series plot of 7-day average streamflow compared to historical streamflow for the day of the year

Some gages, particularly in southern VA, are below normal but collectively all major watersheds are above normal

Below-Normal Streamflow Conditions



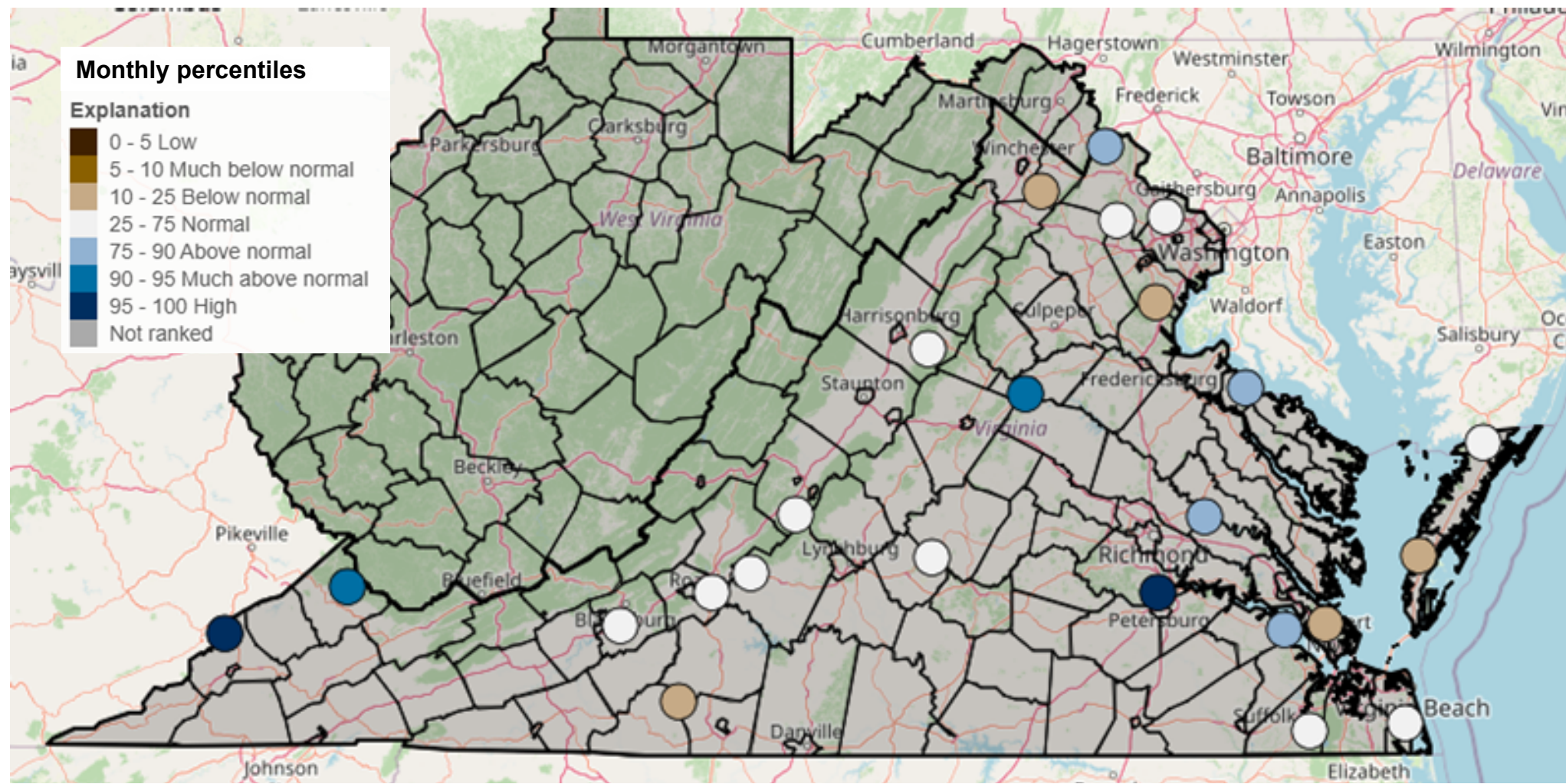
Below-normal 7-day average streamflow compared to historical streamflow for the day of the year



Below-normal 28-day average streamflow compared to historical streamflow for the day of the year

Only James River Canal at Richmond is in 7- or 28- day average streamflow drought.

Groundwater Level Monitoring Wells

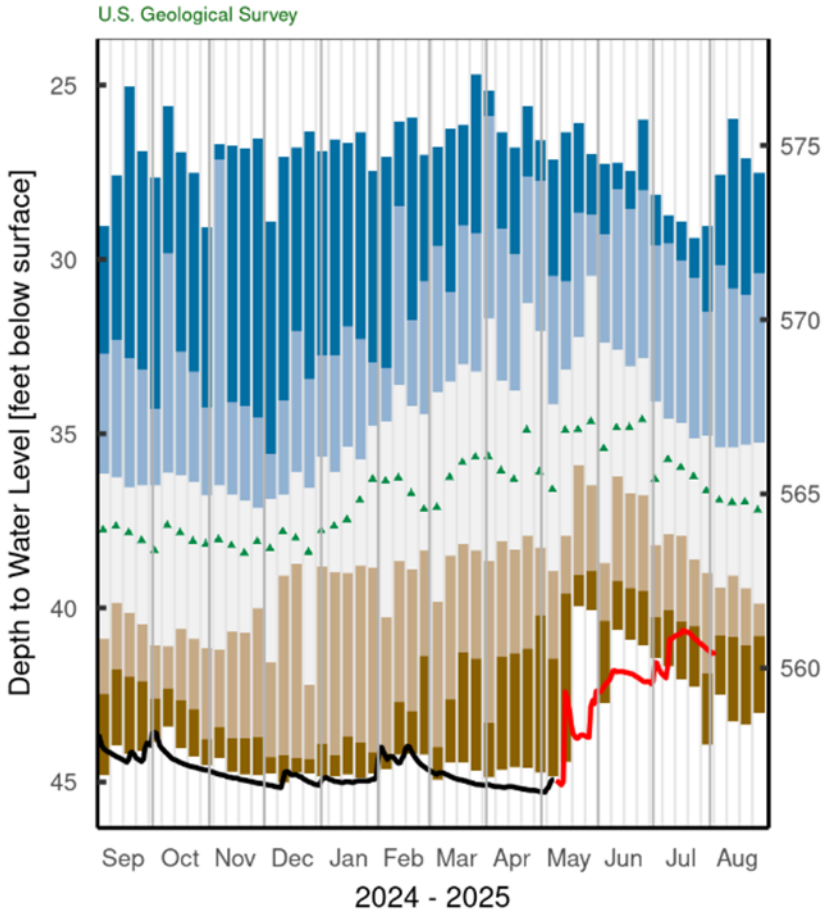


General improvement in GW levels throughout VA. Pockets of below-normal in eastern & south-central VA

Groundwater Level Monitoring Wells

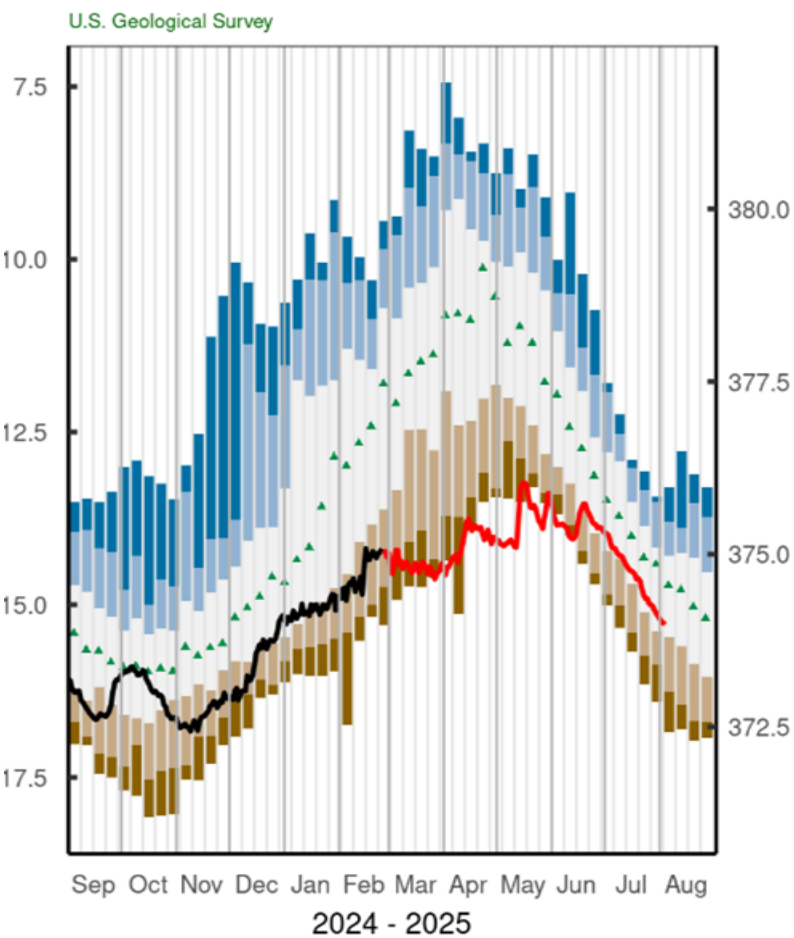
Clarke Co.

Weekly Statistics Plot
390348078035501 46W175



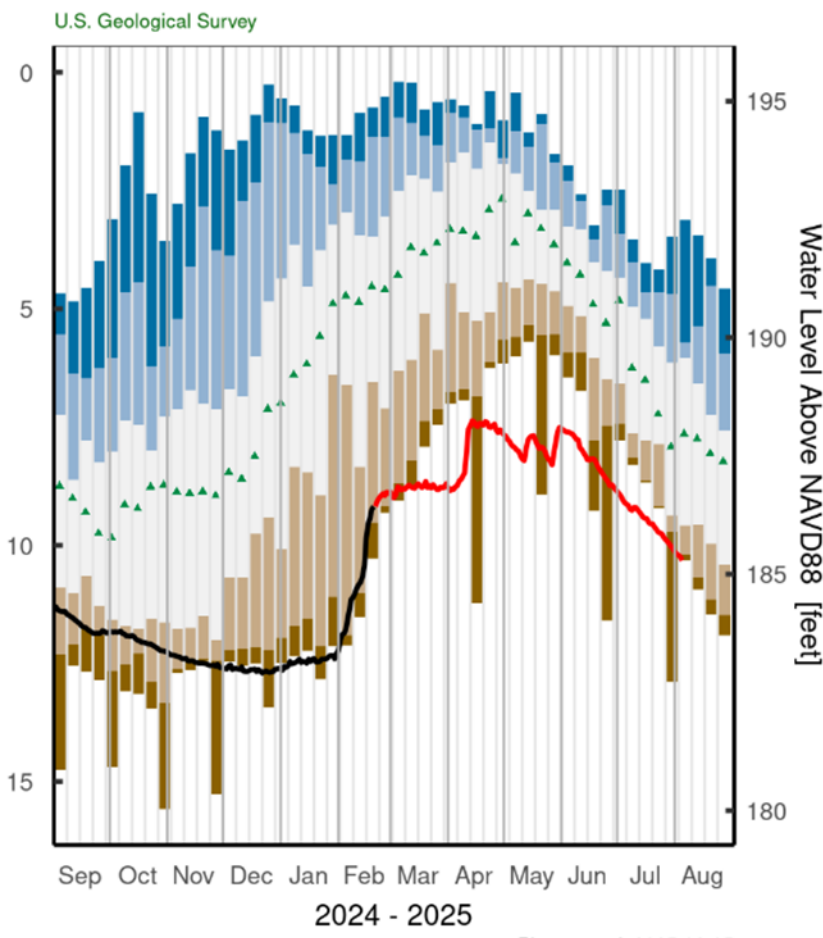
Fairfax Co.

Weekly Statistics Plot
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Prince William Co.

Weekly Statistics Plot
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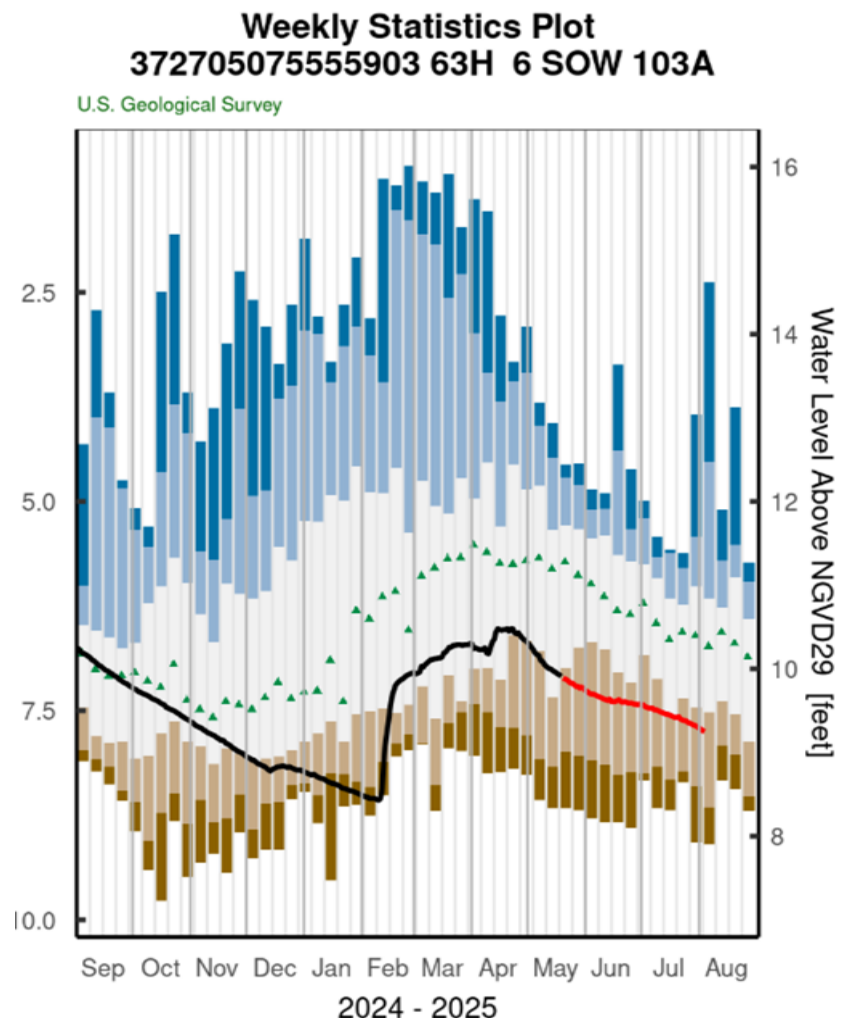
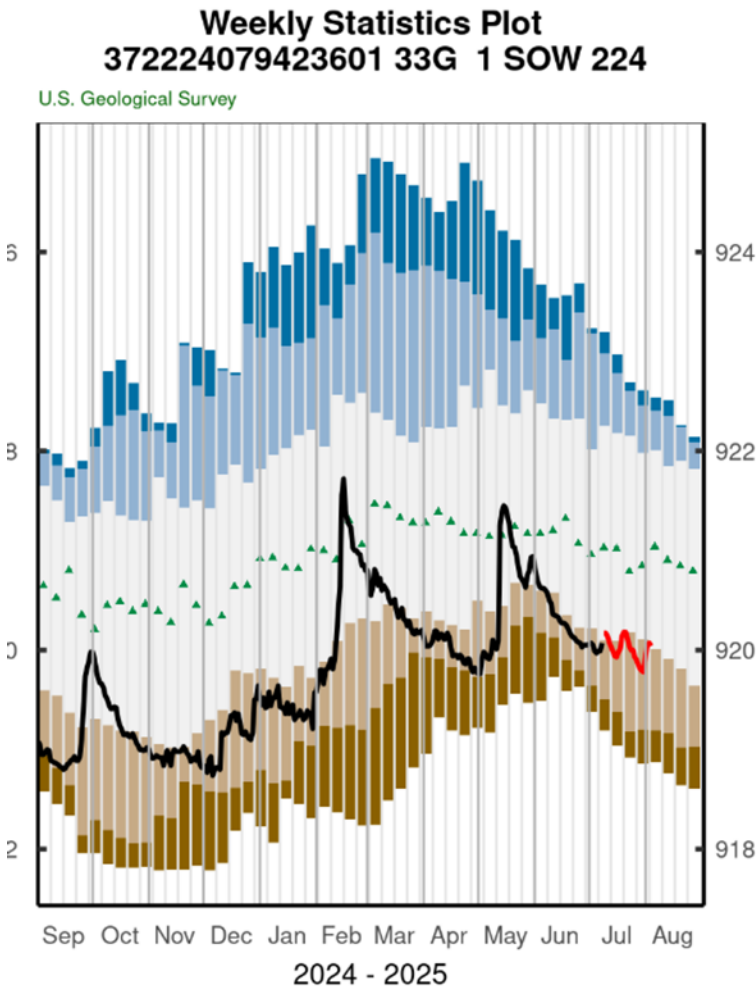
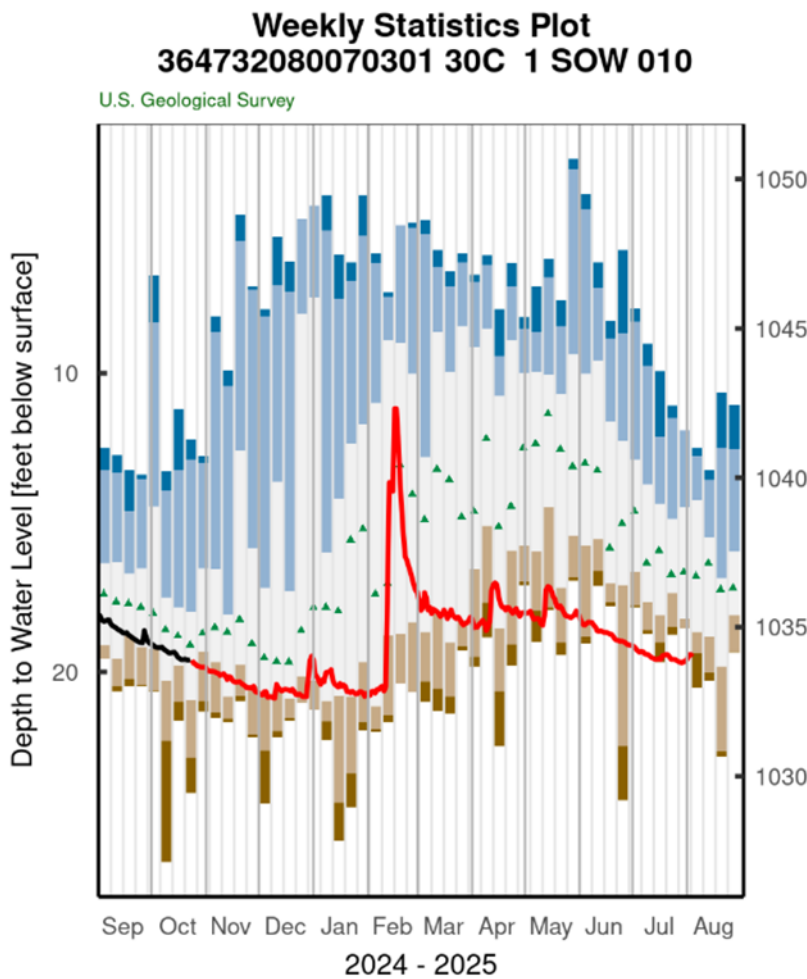


Groundwater Level Monitoring Wells

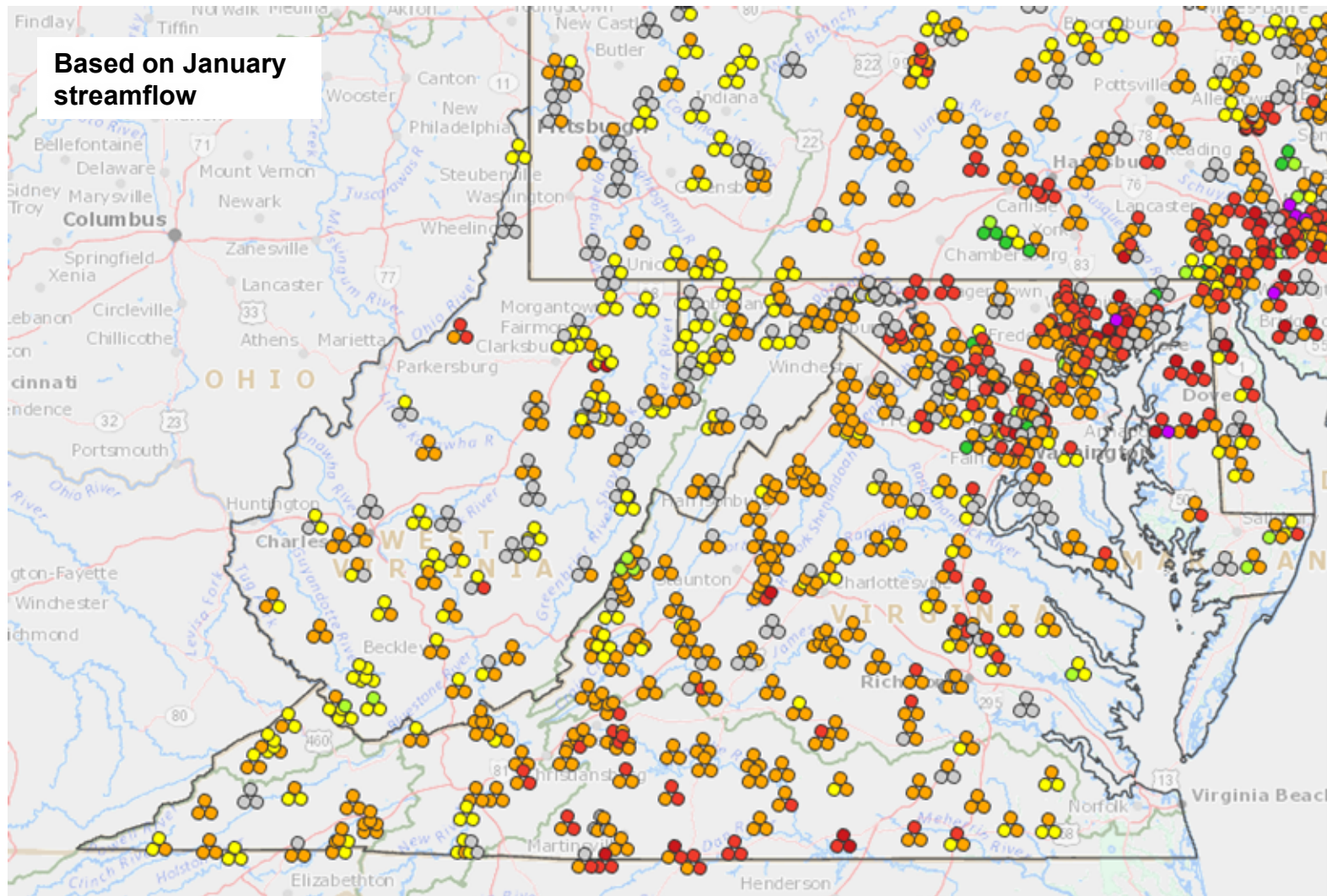
Patrick Co.

Bedford Co.

Northampton Co.



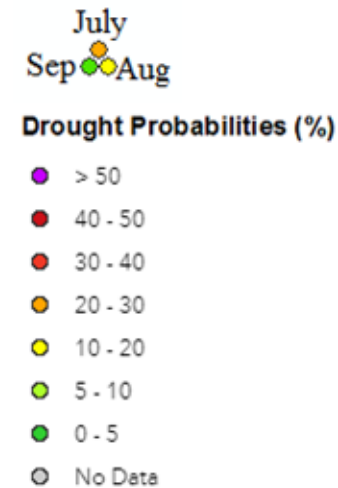
Drought Streamflow Probabilities



Explanation

Custom symbology developed in ArcMap to display three summer month streamflow drought probabilities for each streamgage. Clicking top circle (actual streamgage location) displays pop-up information. Drought probability values are shown using a color coded scale of 7 probability classes and an 8th no-data class. The highest probability values from many Northeast region equations range between 30% and 40% drought flow probability. A few equations have values approaching 100% drought flow probability. Only results from statistically significant relations are presented ($p\text{-value} \leq 0.05$). Equations with $p\text{-values}$ greater than 0.05 are identified as having no-data and are colored gray.

Discrete sites: requested by states to include in the map but do not have daily values.



January streamflow suggests increased likelihood of drought in northern and south-central Virginia

VDEQ DMTF Drought Evaluation Regions w/ USGS Indicators

Streamflow

Big Sandy:

Clinch River at Cleveland, USGS Station 03524000

New River:

Reed Creek at Graham Forge, USGS Station 03167000

Roanoke River:

Goose Creek near Huddleston, USGS Station 02059500

Upper James:

Cowpasture River near Clifton Forge, USGS Station 02016000

Middle James:

Appomattox River at Farmville, USGS Station 02039500

Shenandoah:

North Fork Shenandoah near Strasburg, USGS Station 01634000

Northern Virginia:

Accotink Creek near Annandale, USGS Station 01654000

Northern Piedmont:

Rapidan River near Culpeper, USGS Station 01667500

Chowan:

Meherrin River near Lawrenceville, USGS Station 02051500

Northern Coastal Plain:

Mattaponi River near Beulahville, USGS Station 01674500

York-James:

Chickahominy River near Providence Forge, USGS Station 02042500

Southeast Virginia:

No stream gages available to monitor.

Eastern Shore:

No stream gages available to monitor.

Groundwater

Big Sandy:

Buchanan County Observation Well, USGS Local Number 15G 19 SOW 222

Cane Patch Observation Well USGS Local Number 09E 10 SOW 223

New River:

Christiansburg Observation Well, USGS Local Number 27F 2 SOW 019

Roanoke River:

Roanoke-Nelson Observation Well, USGS Local Number 31G 1 SOW 008

Bedford County Observation Well, USGS Local Number 33G 1 SOW 224

Fairystone State Park Observation Well, USGS Local Number 30C 1 SOW 010

Upper James:

Glasgow Observation Well, USGS local Number 35K 1 SOW 063

Middle James:

Buckingham Observation Well, USGS Local Number 41H 3

Colonial Heights Observation Well USGS Local Number 51G 1

Shenandoah:

McGaheysville Observation Well, USGS Local Number 41Q 1

Blandy Farm Observation Well, USGS Local Number 46W 175

Northern Virginia:

Harper's Ferry Observation Well, USGS Local Number 49Y 1 SOW 022

Prince William County Observation Well, USGS Local Number 51S 7

Prince William County Observation Well, USGS Local Number 49V 1

Fairfax County Observation Well USGS Local Number 52V 2D

Northern Piedmont:

Gordonsville Observation Well, USGS Local Number 45P 1 SOW 030

Chowan:

Slade Farm Observation Well, USGS Local Number 57E 13 SOW 094C

Northern Coastal Plain:

George Washington Birthplace Observation Well, USGS Local Number 55P 9

York-James:

York County DEQ Observation Well 59F 74 SOW 184C

Hanover County Observation Well DEQ 53K 19 SOW 080

Southeast Virginia:

Brinkley Observation Well, USGS Local Number 58B 13

Pungo Observation Well, USGS Local Number 62B 1 SOW 098A

Eastern Shore:

P. C. Kellam Observation Well, USGS Local Number 63H 6 SOW 103A

Withams Observation Well, USGS Local Number 66M 19 SOW 110S

VA Drought Monitoring Task Force

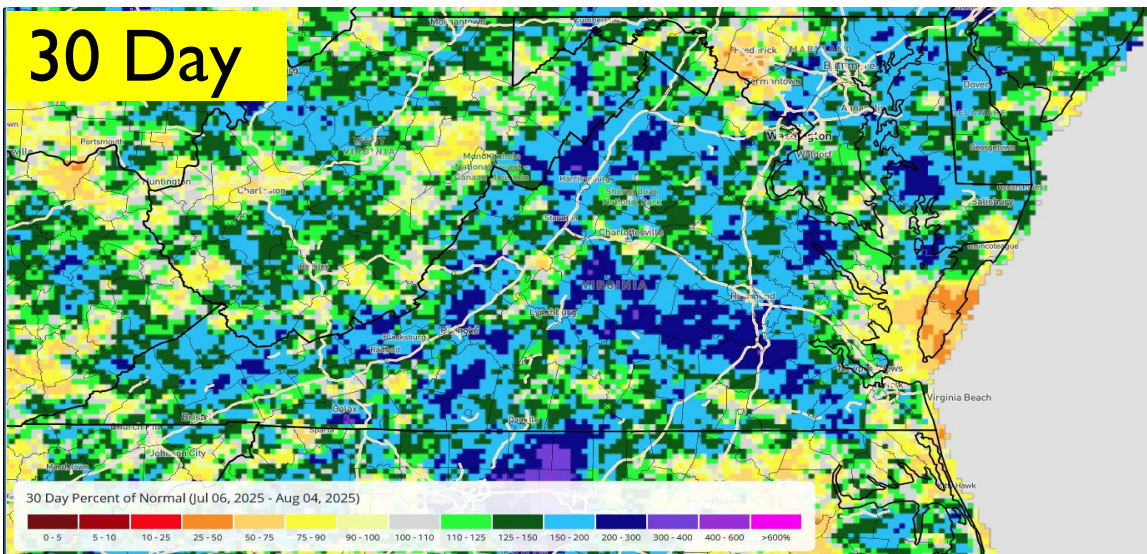
National Weather Service – Wakefield/Blacksburg/Sterling
August 5, 2025

Percent of Normal Precipitation

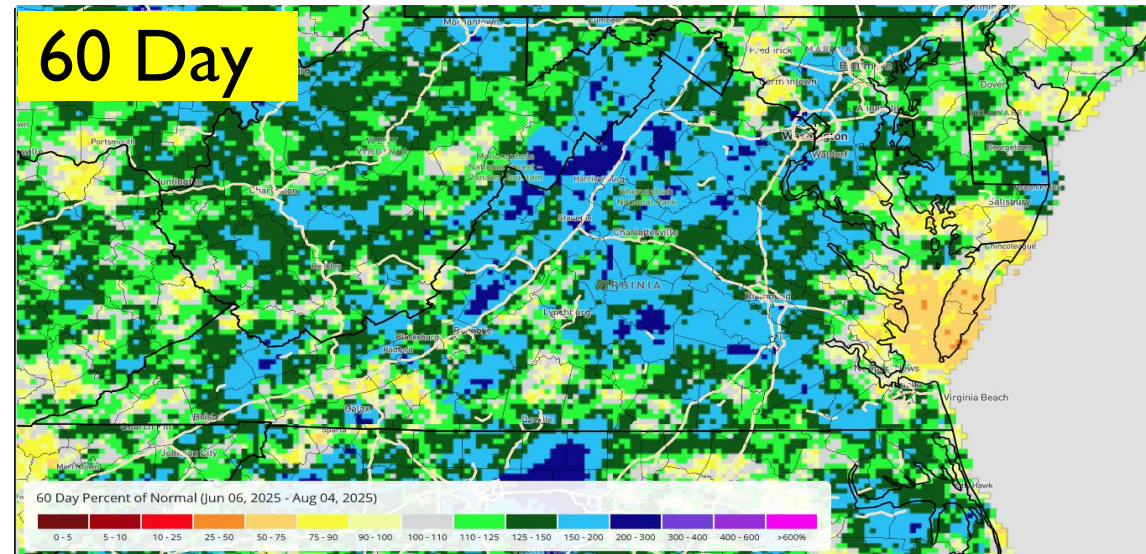


Wakefield, VA
WEATHER FORECAST OFFICE

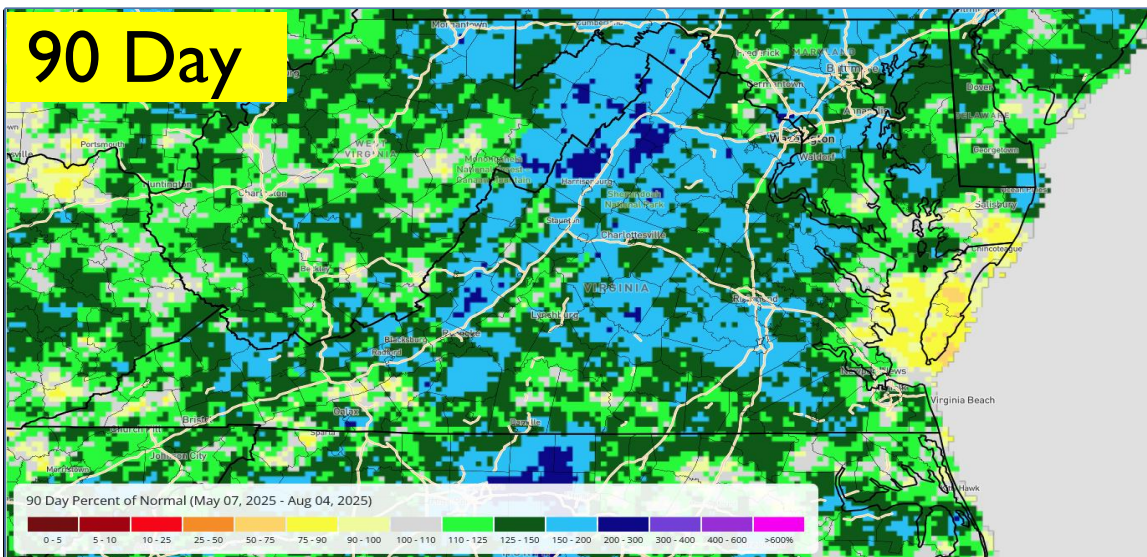
30 Day



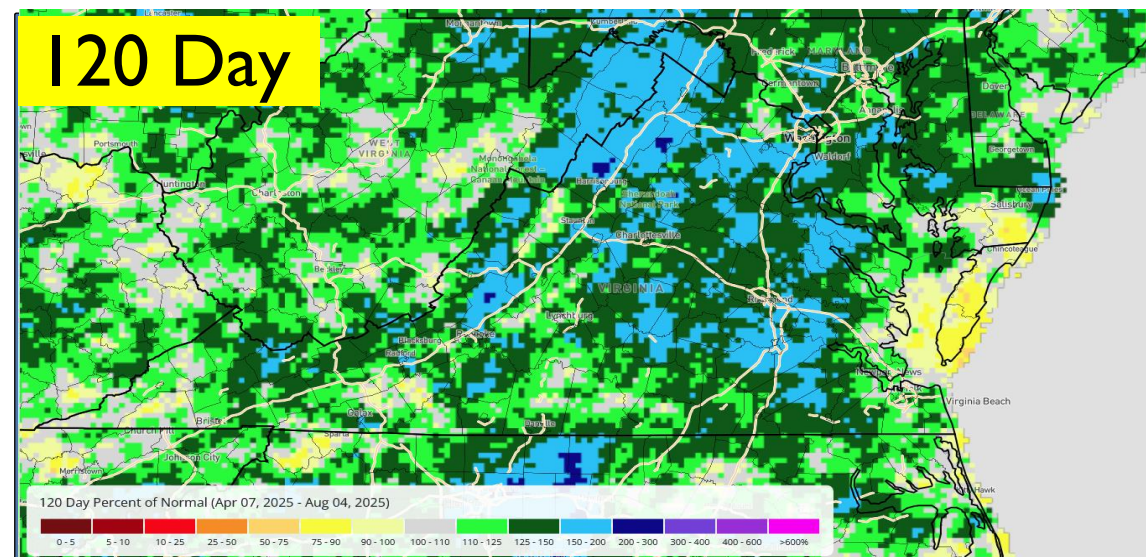
60 Day



90 Day



120 Day



8/5/2025 10:00 AM

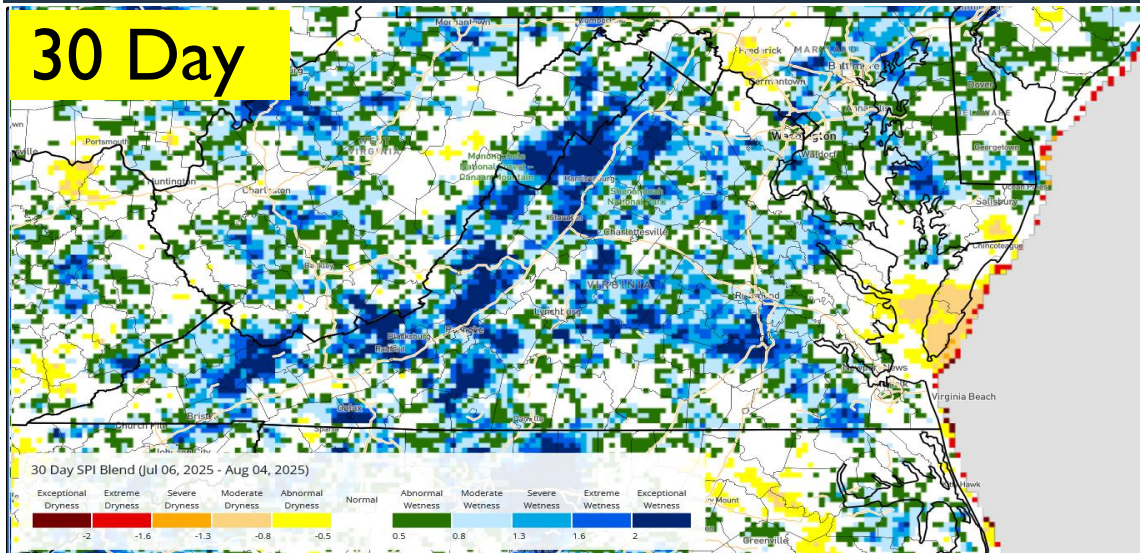
www.weather.gov/akq

SPI Blends

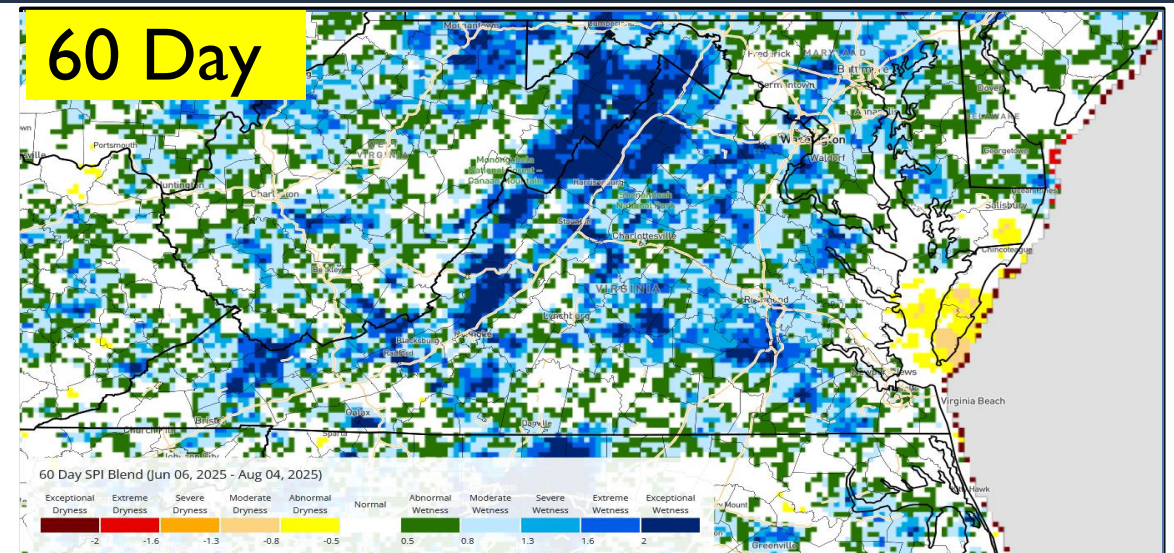


Wakefield, VA
WEATHER FORECAST OFFICE

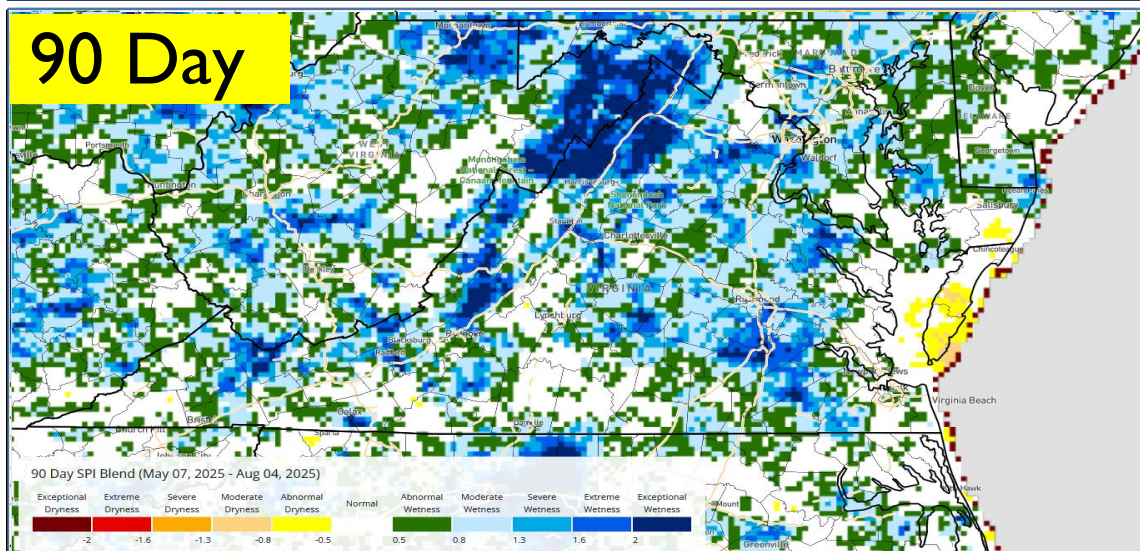
30 Day



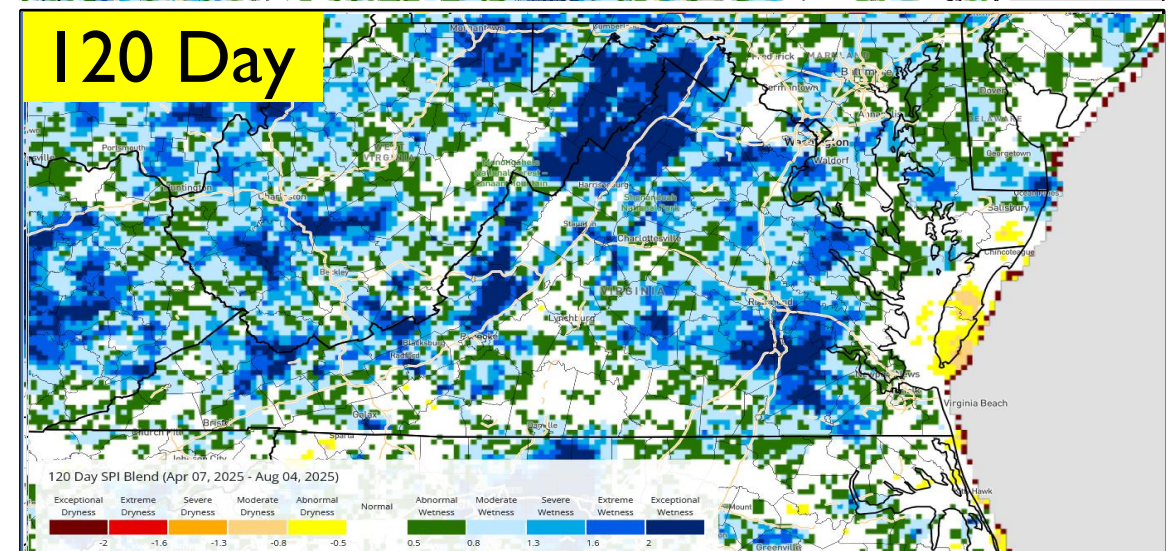
60 Day



90 Day



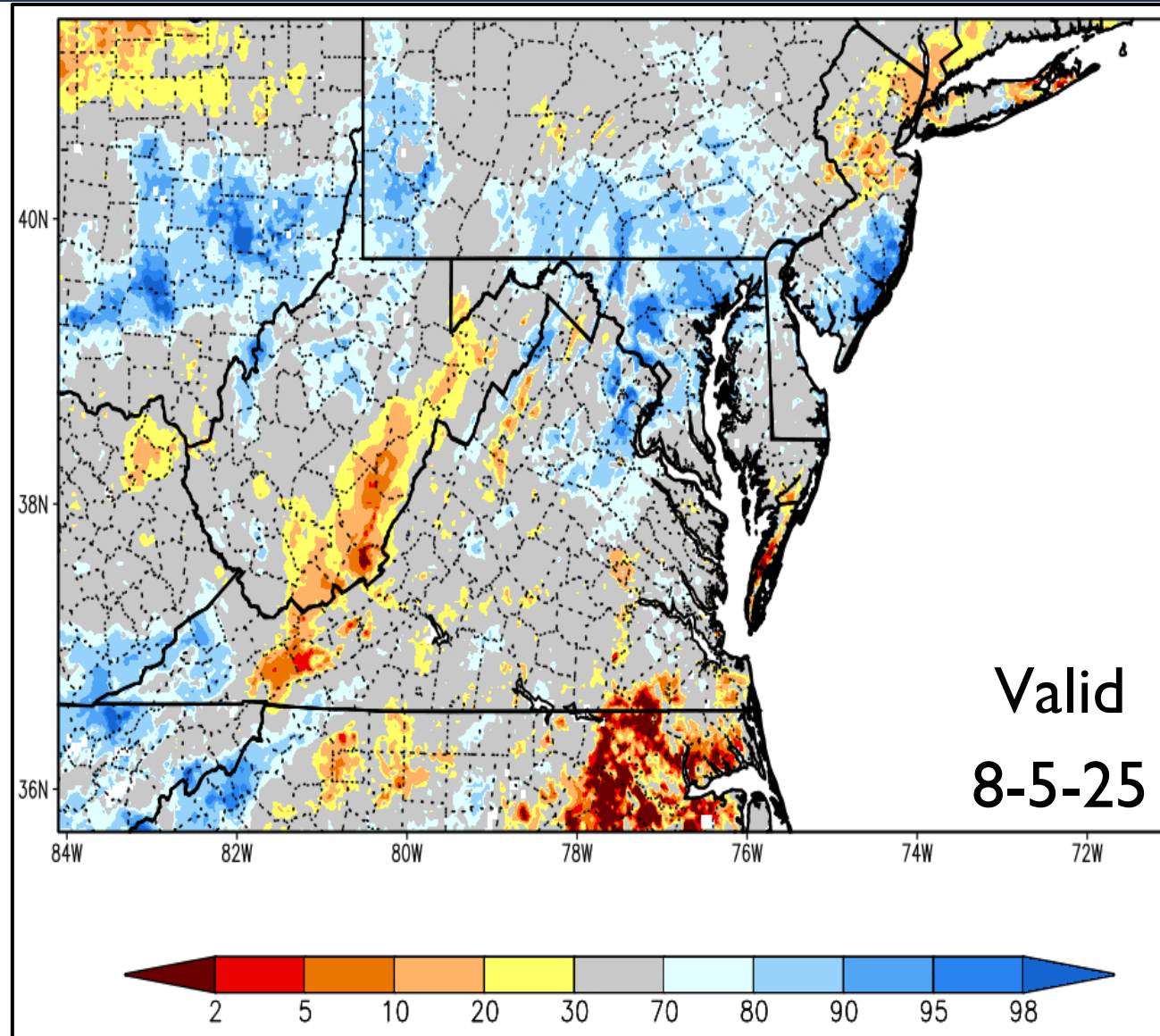
120 Day



Soil Moisture Percentile (0-2 meter)



Wakefield, VA
WEATHER FORECAST OFFICE



Drought Monitor (As of 8-5-25)

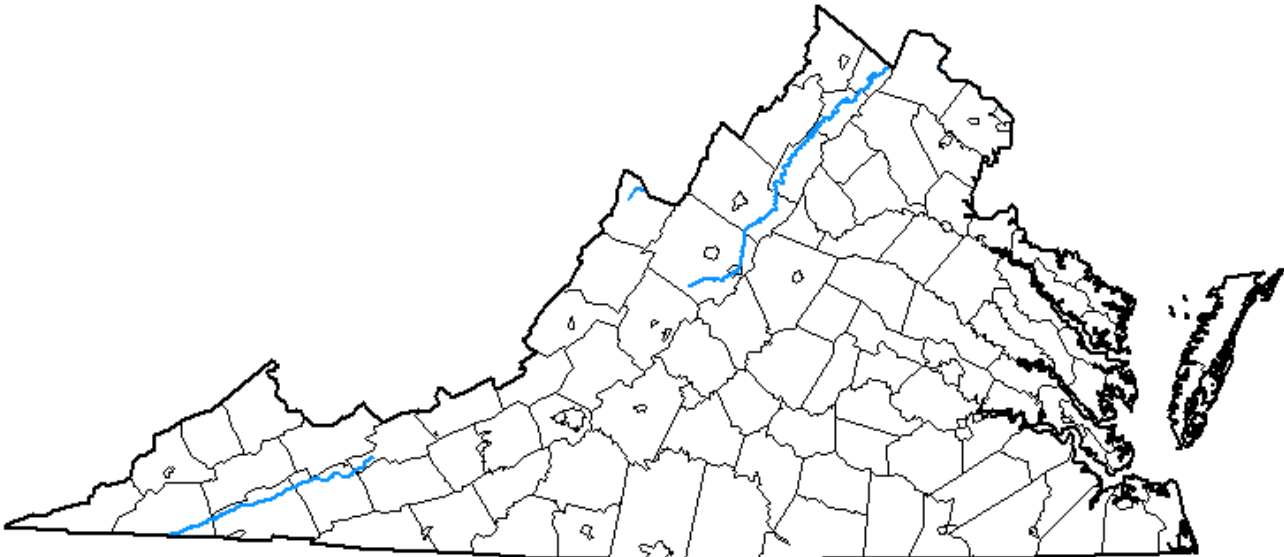
For more info, visit: droughtmonitor.unl.edu



Wakefield, VA
WEATHER FORECAST OFFICE

Intensity:

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



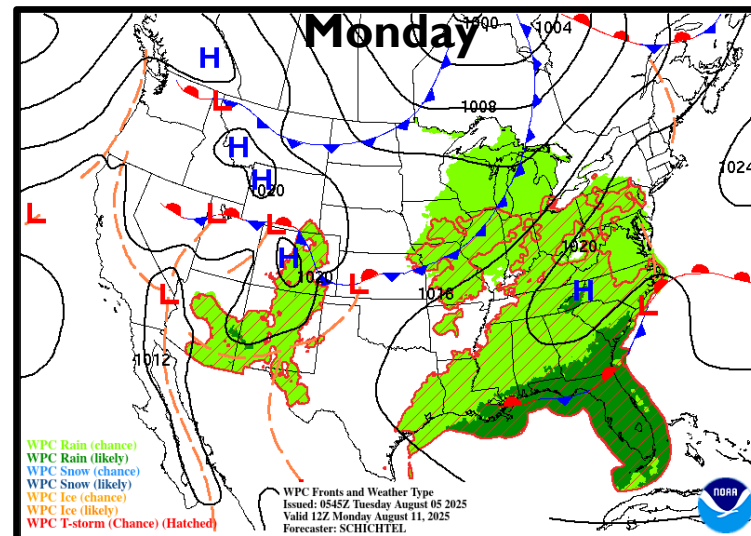
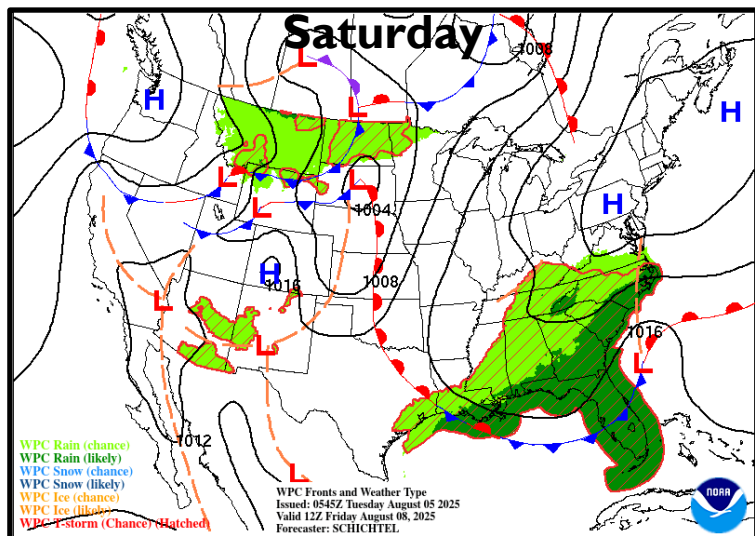
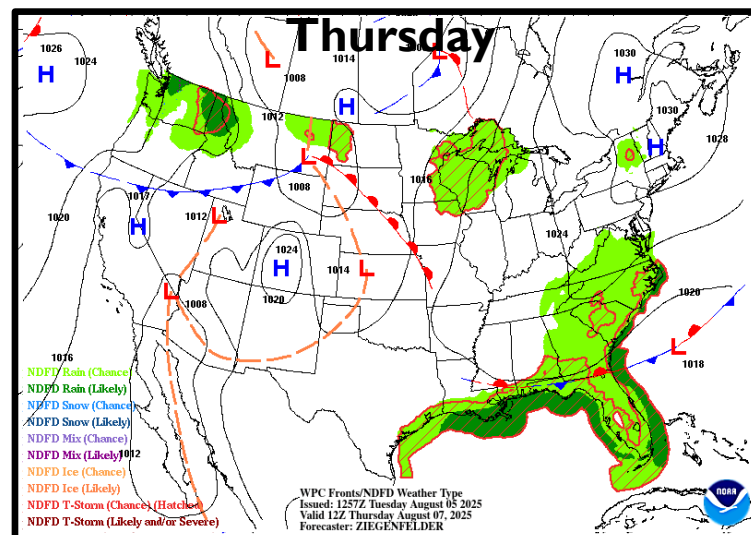
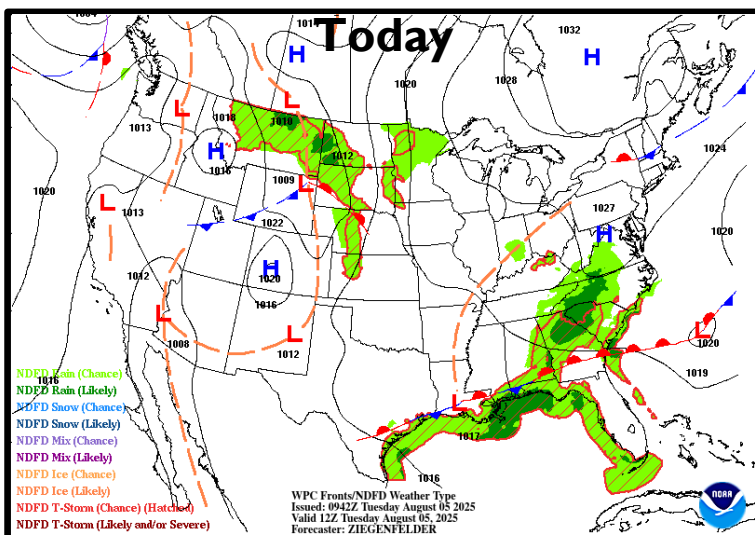
Potential Impacts

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
	Fish kills occur; wildlife move to farms for food
D3	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
	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

Upcoming Weather Pattern



Wakefield, VA
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Key Points:

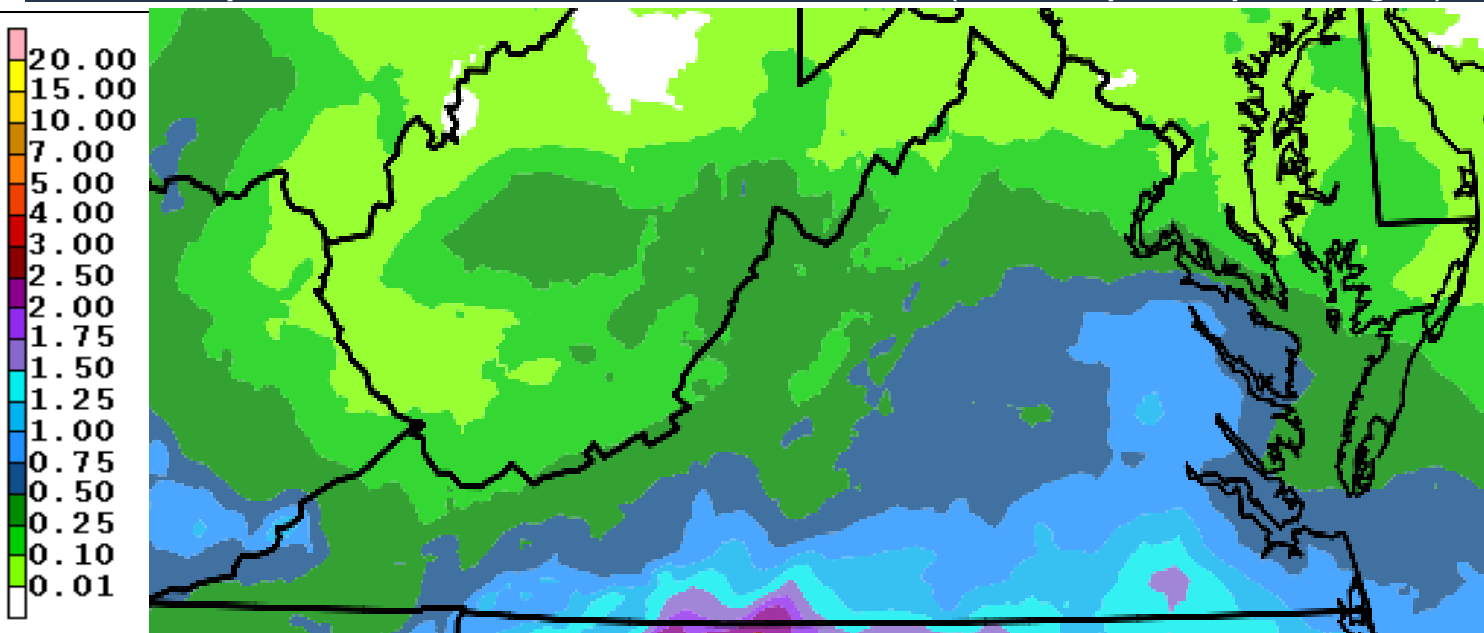
- High pressure will remain in place across the Northeast and mid-Atlantic through the end of the week.
- Despite this, showers and widely scattered afternoon thunderstorms will occur each day.
- Low pressure off the Carolina coast will allow for the continuation of shower and thunderstorm chances through early next week, especially central and SE VA.

7-Day Precipitation Forecast

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



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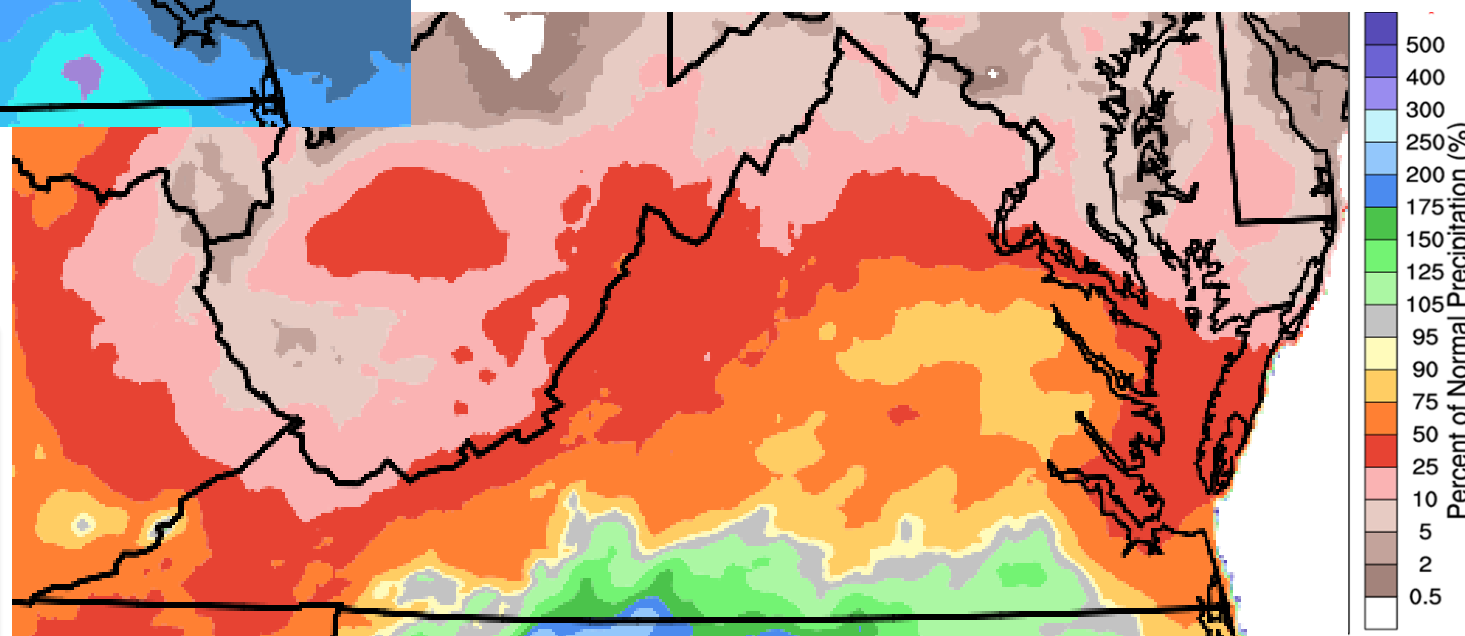


7 Day Precipitation Forecast

**Forecast Daily Rainfall Through
Monday, August 11th**

- **Generally 0.5"-1.5"** central/southern VA.
Lesser amounts northern VA.

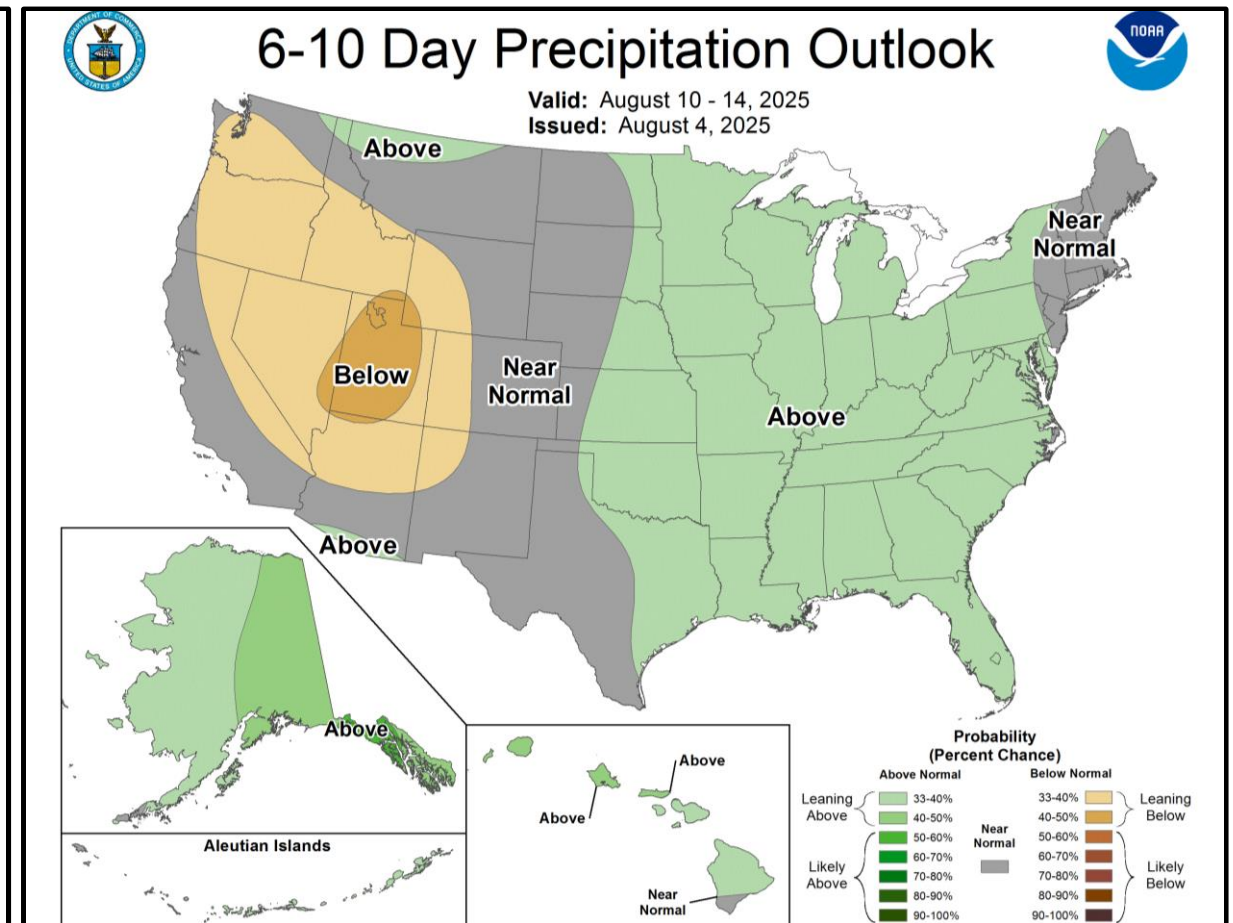
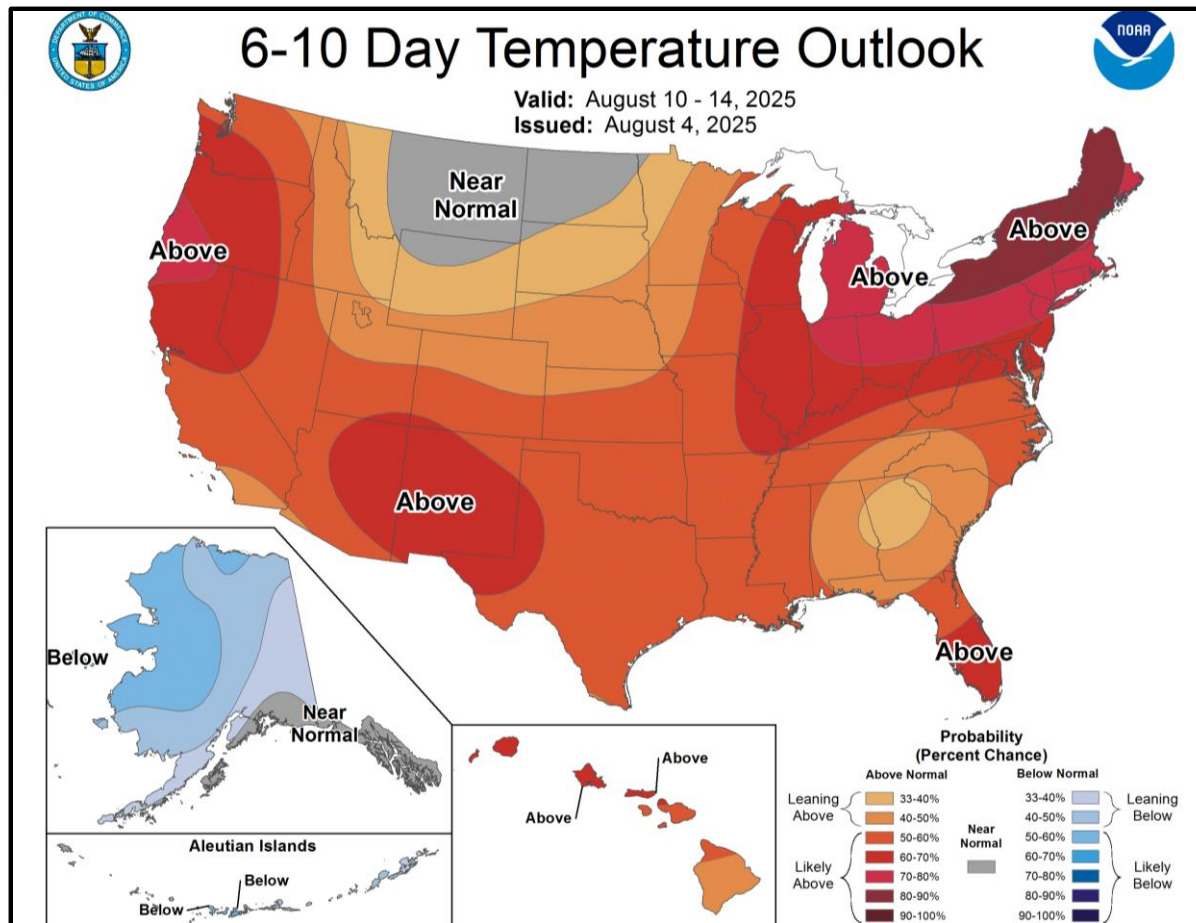
7 Day % of Normal Precipitation Forecast



6 to 10 Day Outlook: August 10th – 14th



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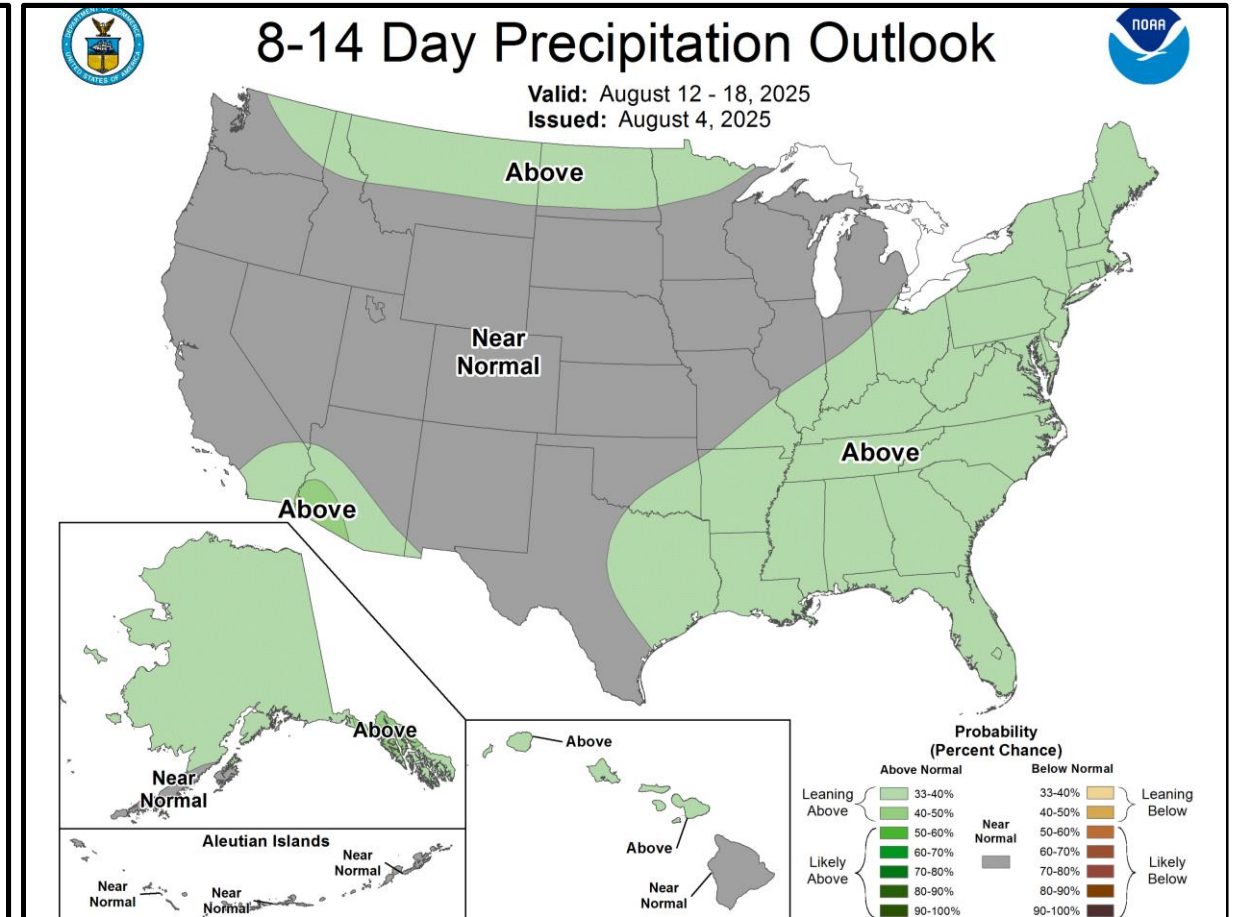
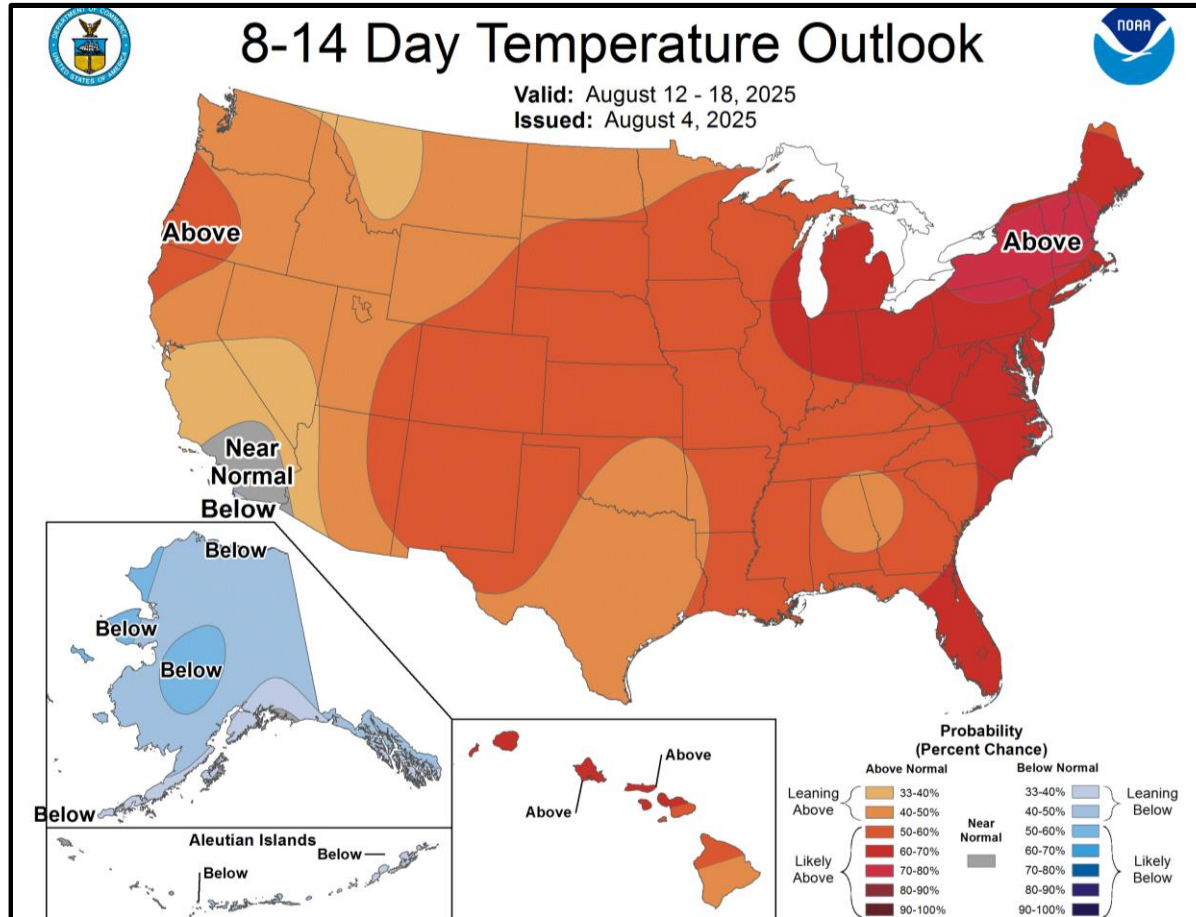


- Above normal temperatures favored.
- Above normal precipitation chances favored.

8 to 14 Day Outlook: August 12th – 18th



Wakefield, VA
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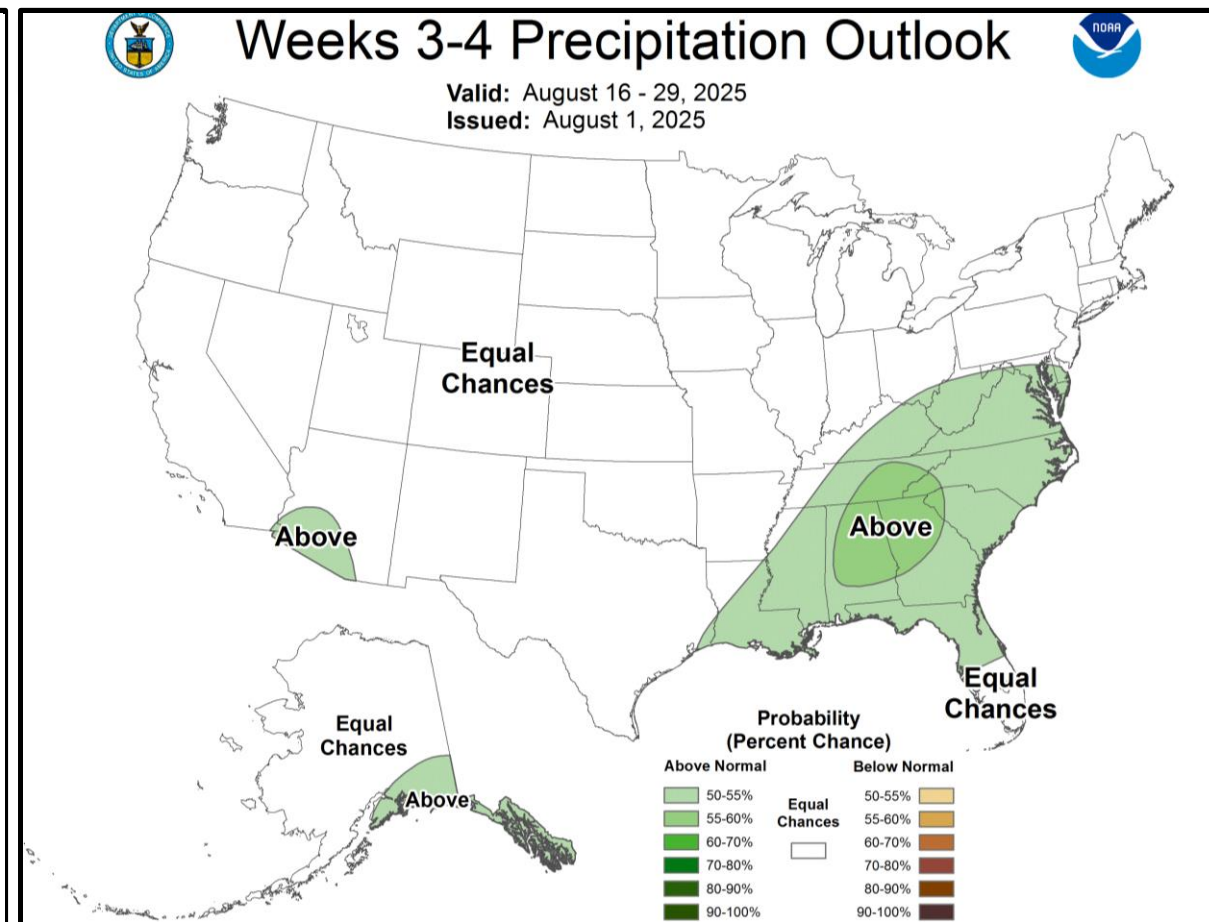
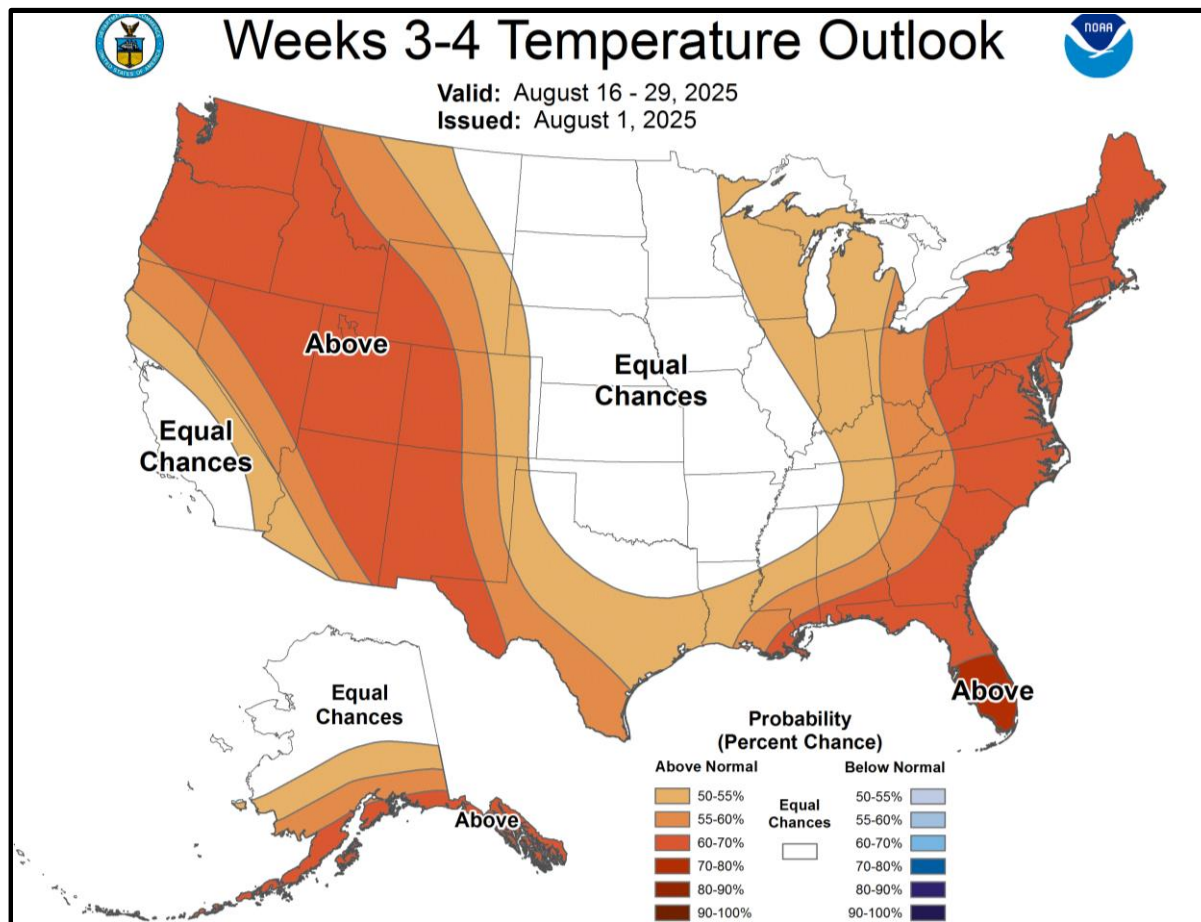


- Above normal temperatures favored.
- Above normal precipitation chances favored.

Weeks 3-4 Outlook: August 16th – 29th



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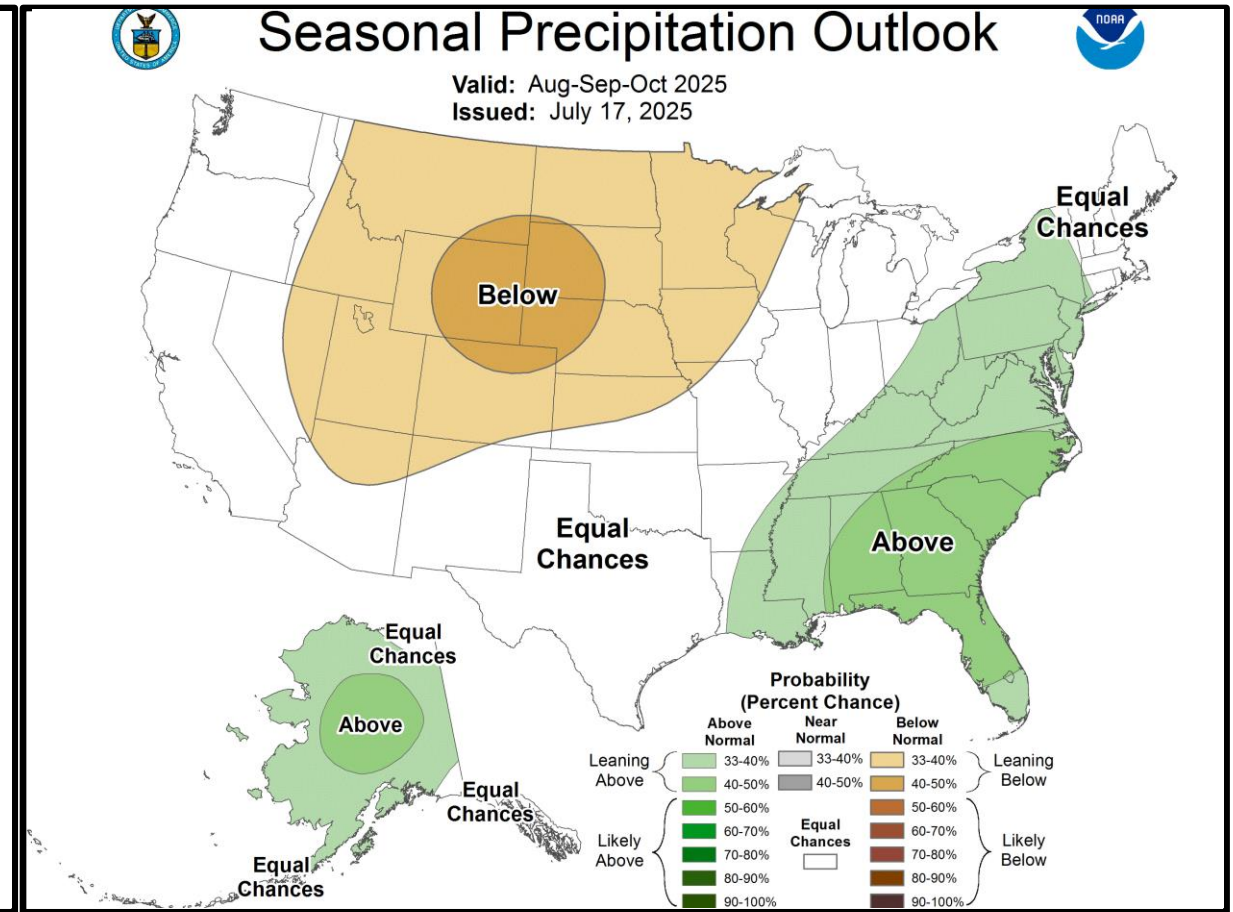
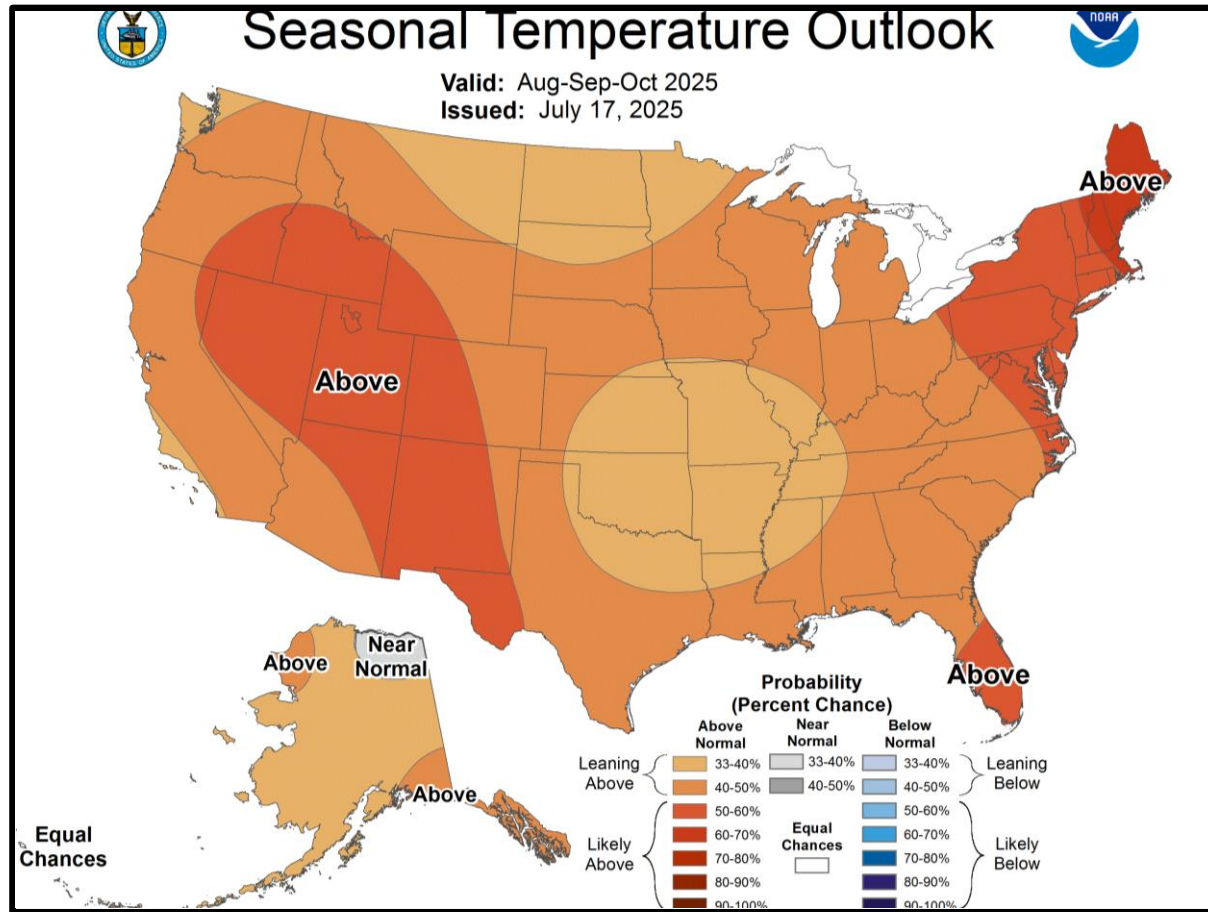


- Above normal temperatures favored.
- Above normal precipitation chances favored.

Three-Month Outlook: Aug-Sep-Oct



Wakefield, VA
WEATHER FORECAST OFFICE



- Above normal temperatures favored.
- Above normal precipitation chances favored.