Here is the *Virginia Water Central* News Grouper's **monthly water-status report on precipitation, stream flow, flooding, and drought,** as of the end of May 2025. The Virginia Water Resources Research Center thanks the agencies mentioned below for providing the data and maps used in this post. Icons for precipitation, stream flow, groundwater, and drought are by George Wills of Blacksburg, Va. (https://www.etsy.com/shop/BlacksburgArt). For previous monthly water status reports, please see this link: http://vawatercentralnewsgrouper.wordpress.com/?s=Water+Status.

Here are National Weather Service (NWS) *preliminary* (still needing verification, as of 6-2-25) precipitation totals for May 2025 at 12 locations in or near Virginia, along with the "normal" (three-decade average) for this month of the year at each location. Also shown are the precipitation totals at each location for the previous 12 months and the annual precipitation normals for each location. The values are in inches.

Location	May 2025 Observed	Monthly Normal	June 2024 – May 2025 Observed	Annual Normal based on 1991-2020
Blacksburg	7.25	4.47	41.65	42.64
Bluefield	4.20	4.61	37.38	41.24
Bristol	4.51	3.82	40.68	43.97
Charlottesville	7.02	4.17	33.81	41.61
Danville	8.39	4.13	46.02	43.73
Lynchburg	7.87	3.98	44.95	42.76
Norfolk	5.35	3.78	43.43	49.18
Richmond	6.50	4.00	45.55	45.50
Roanoke	7.55	4.31	44.36	42.82
Wallops Island	5.12	3.20	39.01	43.25
Washington-Dulles Airport	6.07	4.72	30.99	43.24
Washington-National Airport	7.73	3.94	37.07	41.82

The normal values used by the National Weather Service (NWS) in these provisional reports are based on the period from 1991 to 2020, and were released on May 4, 2021. For information on the normal values, see the "U.S. Climate Normals" page at https://www.ncei.noaa.gov/products/land-based-station/us-climate-normals.

Location Notes

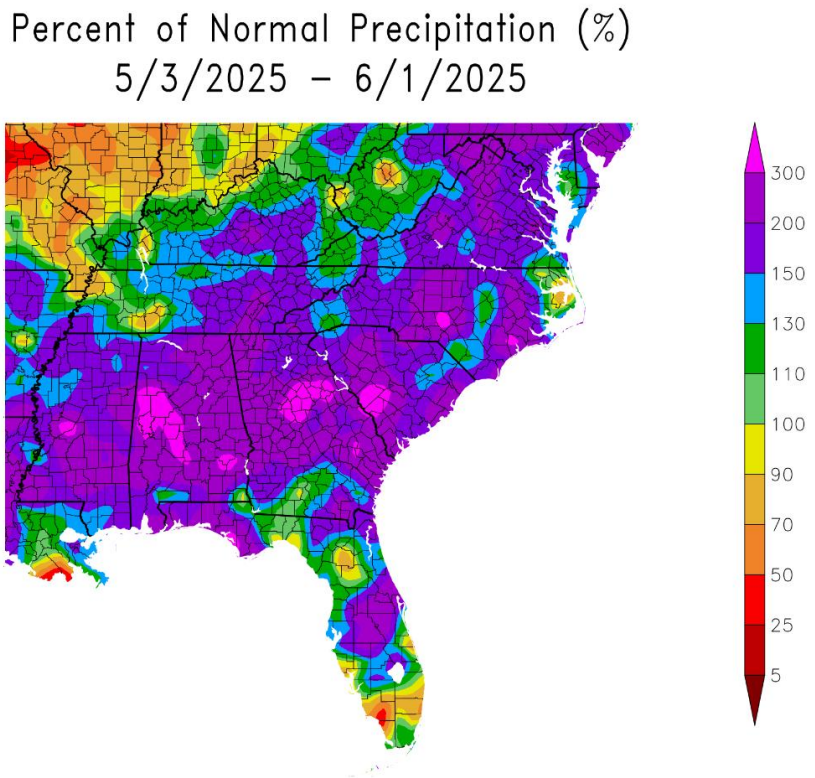
The Blacksburg location is the Blacksburg National Weather Service Office.

The Bluefield location is the Mercer County, W. Va., airport, near the Va.-W.Va. state line.
The Bristol location is the Tri-Cities Airport in Tenn., about 20 miles from Bristol, Va./Tenn.
The Charlottesville location is the Charlottesville-Albemarle Airport.
The Danville location is the Danville Regional Airport.
The Lynchburg location is the Lynchburg Regional Airport.
The Norfolk location is the Norfolk International Airport.
The Richmond location is the Richmond International Airport.
The Roanoke location is the Roanoke-Blacksburg Regional Airport.
The Wallops Island is in Accomack County; the location is the NASA Test Facility.
Washington-Dulles Airport is in Loudoun County, Va.
Washington-National Airport is in Arlington County, Va.

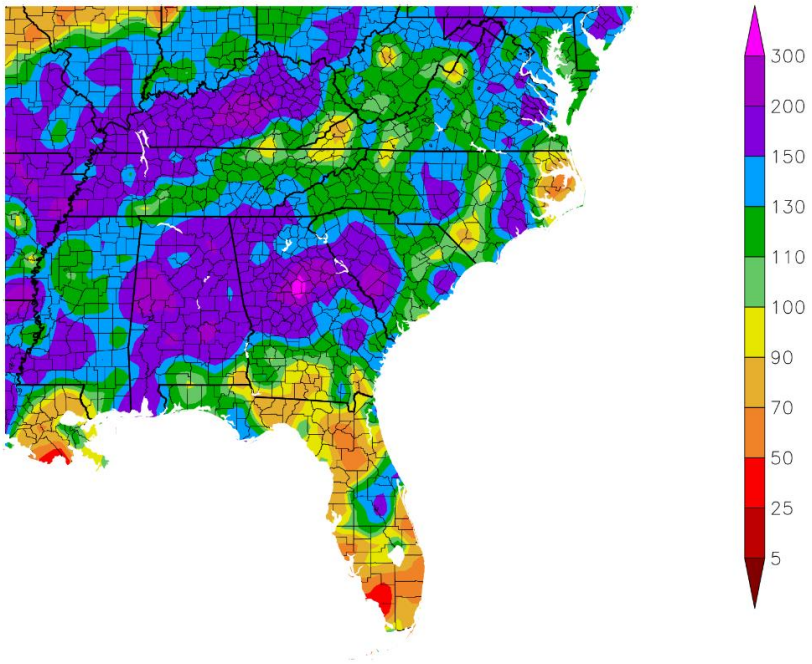
Precipitation Sources

Climate pages of the following National Weather Service Forecast Offices:
Blacksburg, Va., online at https://www.weather.gov/wrh/climate?wfo=rnk, for Blacksburg, Bluefield, Danville, Lynchburg, and Roanoke;
Morristown, Tenn., online at https://www.weather.gov/wrh/climate?wfo=mrx for Bristol;
Baltimore-Washington, online at https://www.weather.gov/wrh/climate?wfo=lwx, for Charlottesville, Reagan-National, and Dulles;
Wakefield, Va., online at https://www.weather.gov/wrh/climate?wfo=akq, for Norfolk, Richmond, and Wallops Island.

For **graphs** of precipitation, visit the High Plains Regional Climate Center at https://hprcc.unl.edu/maps.php?map=ACISClimateMaps), where you can find maps of total precipitation and percent of normal precipitation for the past 7 days or longer periods (up to five years) for all U.S. regions; or the NWS' Advanced Hydrologic Prediction Service at http://water.weather.gov/precip/ for a map of precipitation nationwide or by state, with capability to show county boundaries, and archives available for specific days, months, or years. Following are the preliminary maps from the High Plains Center of the percent-of-normal precipitation for the southeastern United States for the previous 30 days, 60 days, and 90 days, through June 1, 2025; and for Virginia, the precipitation and the departure from normal precipitation, both in inches, for the previous 30 days, also through June 1.



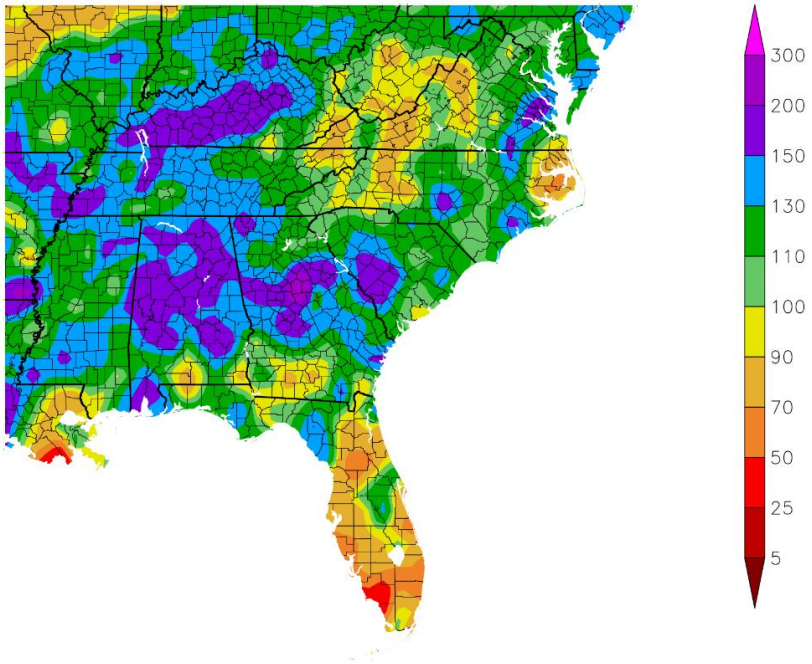
Percent of Normal Precipitation (%)
4/3/2025 - 6/1/2025



Generated 6/2/2025 using provisional data.

ACIS Web Services

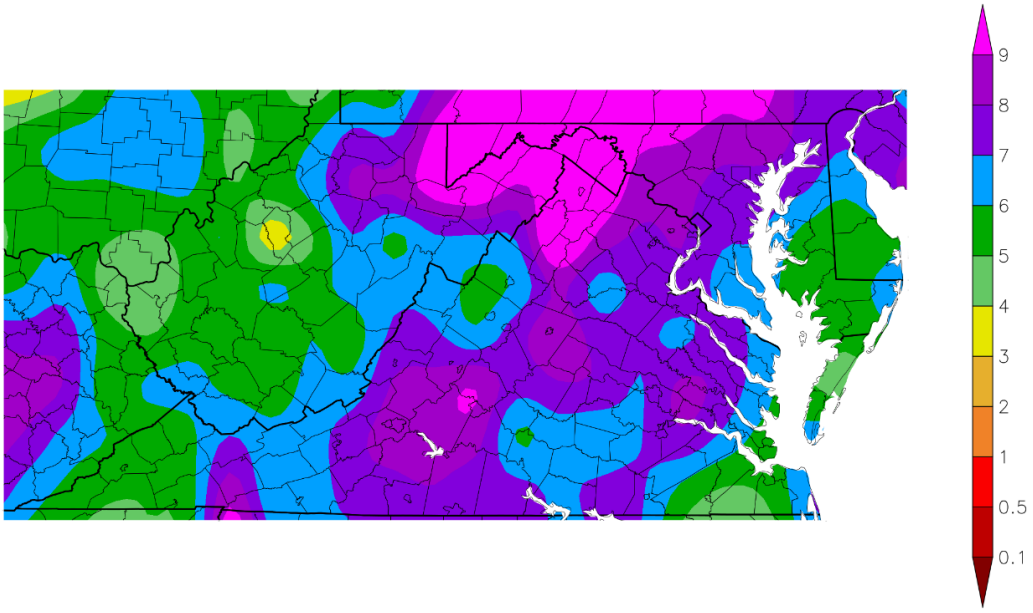
Percent of Normal Precipitation (%)
3/4/2025 - 6/1/2025



Generated 6/2/2025 using provisional data.

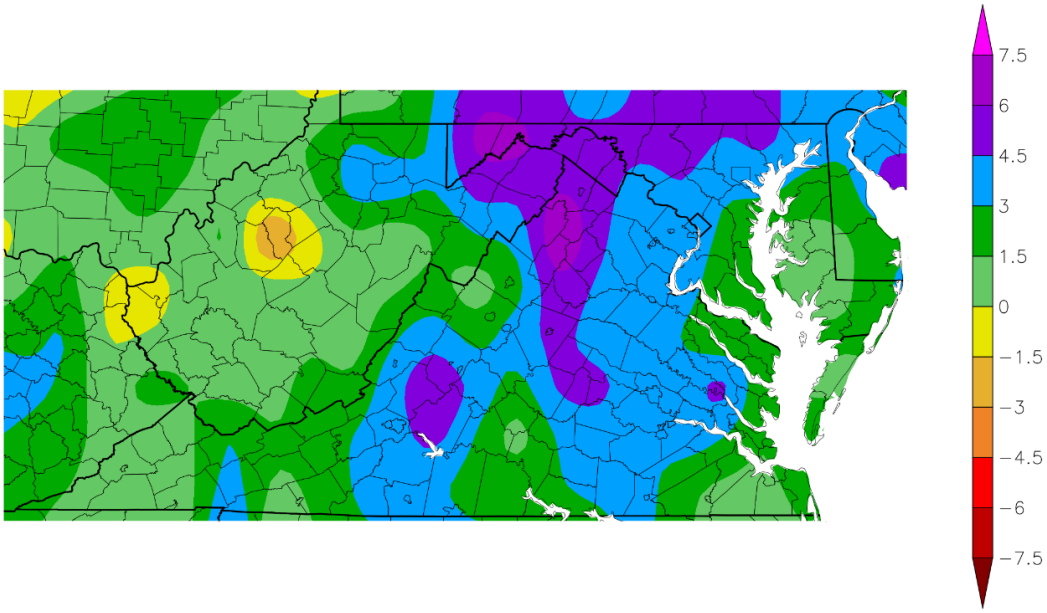
ACIS Web Services

Precipitation (in)
5/3/2025 - 6/1/2025



Generated 6/2/2025 using provisional data. ACIS Web Services

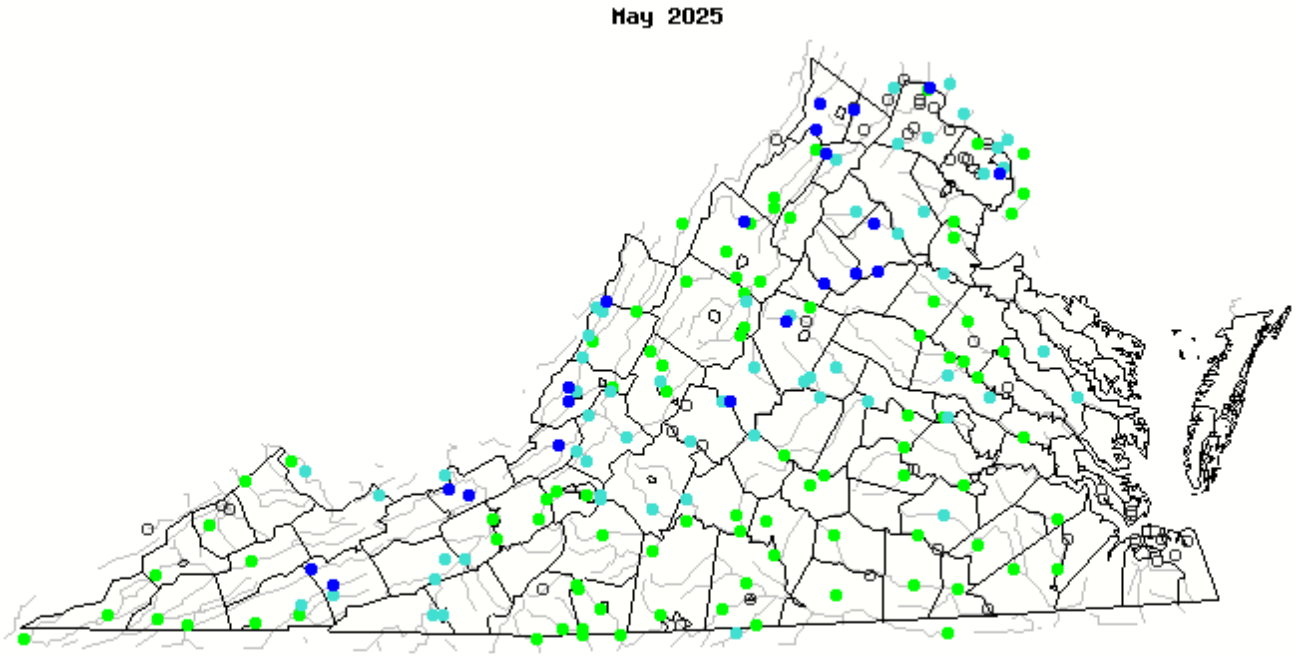
Departure from Normal Precipitation (in)
5/3/2025 - 6/1/2025



Generated 6/2/2025 using provisional data. ACIS Web Services

Stream flow

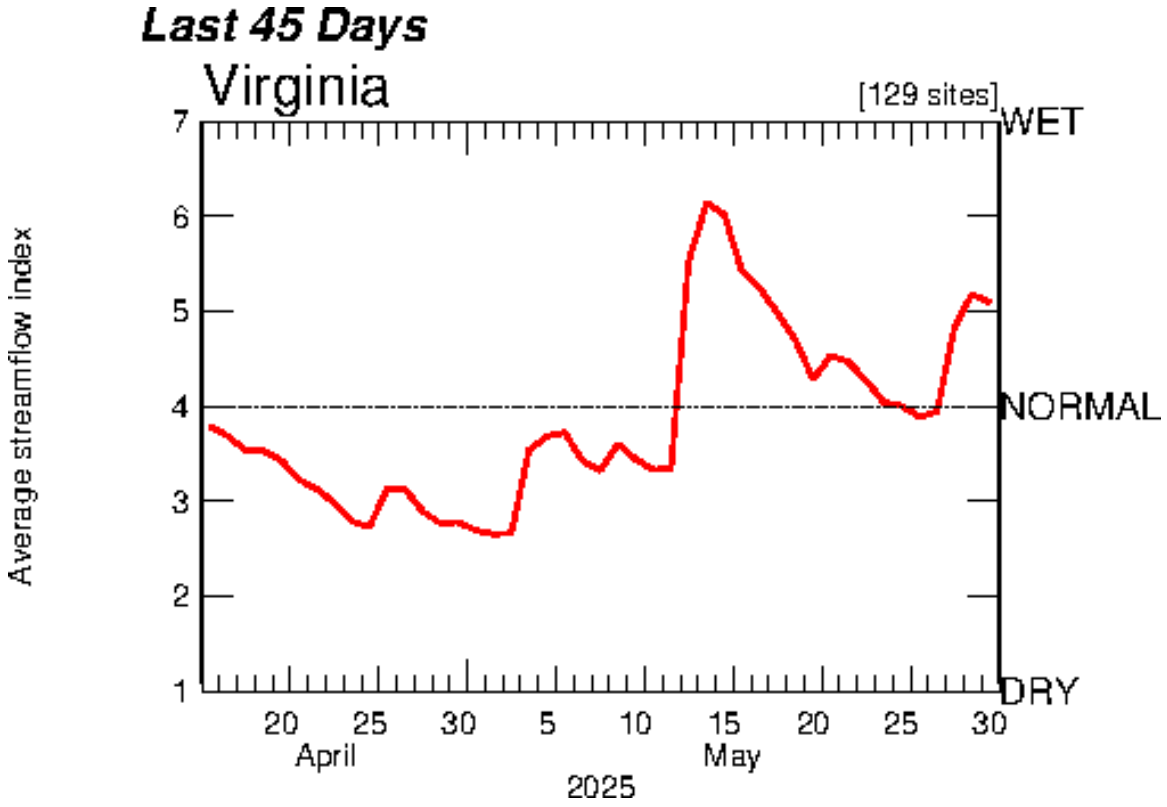
Shown below is a color-coded percentile map of ***monthly*** **average stream flow values** for May 2025 at stream gages in Virginia and just beyond the state border, **compared to the historical range for each gage**. The map is from the **U.S. Geological Survey (USGS) WaterWatch for Virginia**, accessed online at https://waterwatch.usgs.gov/index.php?m=mv01d&r=va&w=map. The chart below the map shows the color codes/percentile classes used by USGS to compare flows to historical records for the month.



USGS

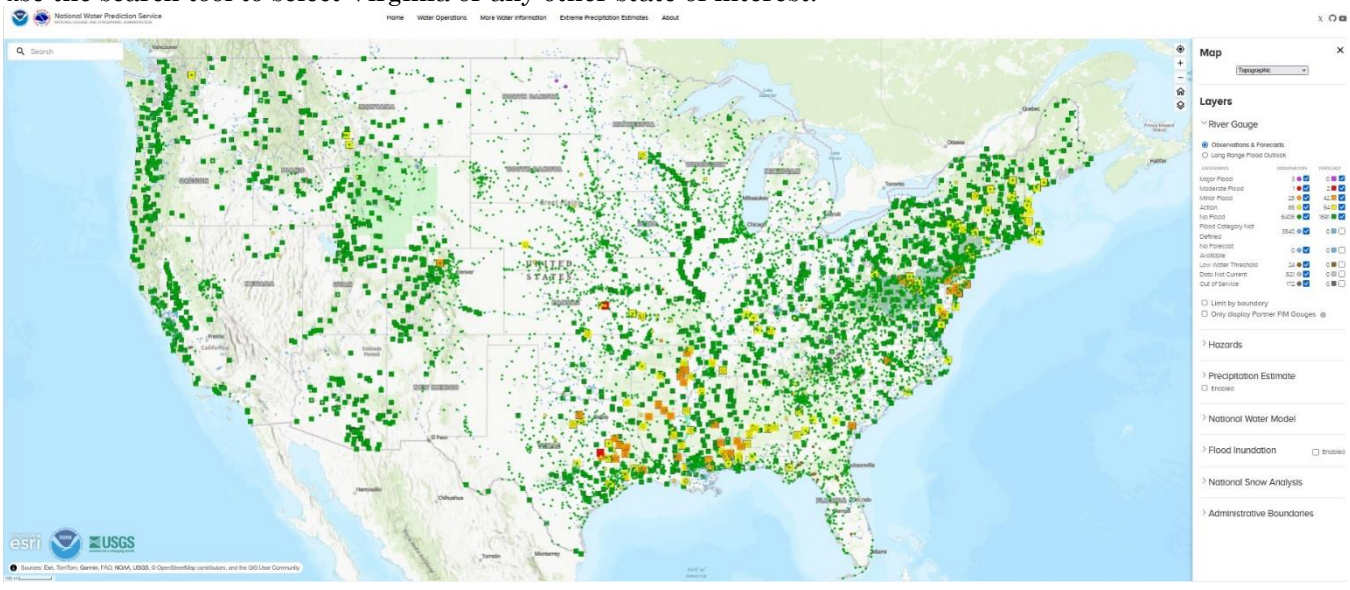
Explanation - Percentile classes							
Low	<10	10-24	25-75	76-90	>90	High	Not-ranked
	Much below normal	Below normal	Normal	Above normal	Much above normal		

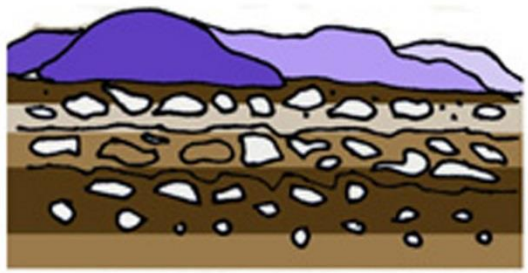
An overall look at Virginia streamflow conditions is provided in the USGS WaterWatch **summary plot of *daily* average** streamflow conditions, compared to historical records for any given date. Below is the summary plot for 129 Virginia sites during the 45-day period ending May 30 2025, accessed on June 2, 2025, at https://waterwatch.usgs.gov/index.php?id=pa01d&sid=w__plot&r=va.



NATIONWIDE FLOODING OVERVIEW

Following is the **National Weather Service's Advanced Hydrologic Prediction Service's (AHPS) map of stream and river levels relative to flood stage** (color-coded) for the continental United States, as of 2:15 p.m. EDT on May 30, 2025. The current map is available online at this link; at that site, one can use the search tool to select Virginia or any other state of interest.





Groundwater levels

Information on **current groundwater levels** in Virginia monitoring wells is available from the U.S. Geological Survey's National Water Information System online at https://waterdata.usgs.gov/state/Virginia/#dataTypes=72019, as of June 2, 2025.

Drought watch

DROUGHT IN VIRGINIA

The weekly **U.S. Drought Monitor report** from the University of Nebraska-Lincoln (http://droughtmonitor.unl.edu/) report of May 29, 2025, for conditions as of May 27, 2025, categorized about 14.1% of Virginia as abnormally dry or worse and about 3.6% in moderate drought.

Drought Monitor categories are as follows:
D0 = abnormally dry;
D1 = moderate drought;
D2 = severe drought;
D3 = extreme drought;
D4 = exceptional drought.

The Drought Monitor notes that it "focuses on broad-scale conditions [and] local conditions may vary."

For comparison, here are Virginia ratings from previous Drought Monitors for conditions as about one month, two months, three months, and one year ago:

4/29/25 – 62.4% abnormally dry or worse, 33.4% in moderate drought or worse, 2.5% in severe drought;
3/25/25 – 71.4% abnormally dry or worse, 10.4% in moderate drought or worse, 2.1% in severe drought;
2/25/25 – 28.0% abnormally dry or worse, 7.0% in moderate drought or worse;
5/28/24 – 4.3% abnormally dry.

Following is an **excerpt from a Drought Monitor report in the previous month on conditions in Virginia or nearby areas.**

From the 5/29/25 report (conditions as of 5/27/25)
FROM SOUTHEAST REGION SUMMARY
"A continued wet pattern and soil moisture recovery led to a reduction in abnormal dryness (D0) and moderate drought (D1) for parts of eastern Georgia, the Carolinas, and Virginia. Despite the beneficial precipitation this month, a long-term drought signal characterized by low groundwater support maintaining moderate drought (D1) for parts of northern Virginia."

On May 13, 2025, the **Virginia Drought Monitoring Task Force (DMTF)**, a collaboration of state and federal agencies, issued its most recent report (as of 6-2-25). A link to that report, along with other current drought-status information, is available online at https://www.deq.virginia.gov/our-programs/water/water-quantity/drought. The DMTF's reports typically include information on weather, surface water, and groundwater from some or all of the following agencies: National Weather Service, U.S. Geological Survey (USGS), and the Virginia departments of Agriculture and Consumer Services, Health, and Environmental Quality.

Following is an **excerpt from the summary of the May 13 report.**

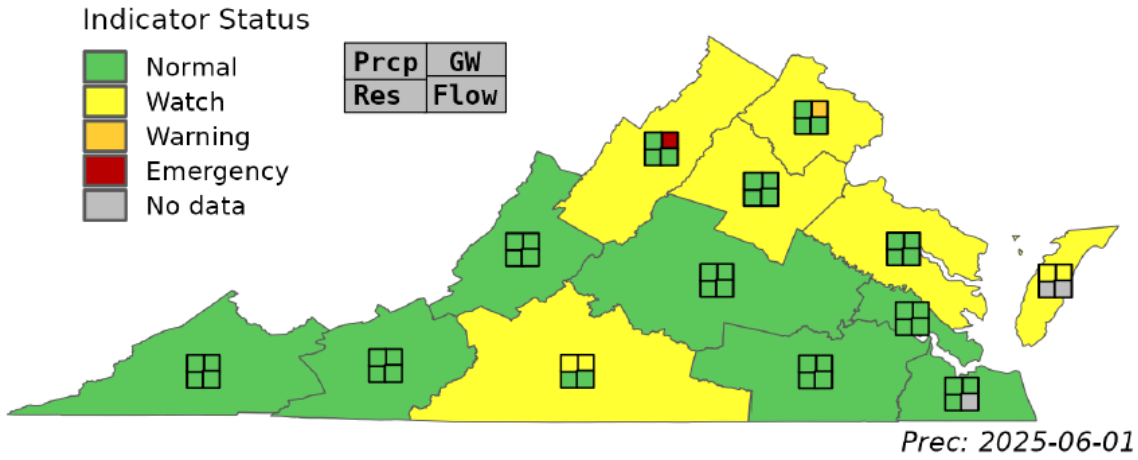
On Tuesday, May 13, 2025, the Virginia Drought Monitoring Task Force (DMTF) met to review drought indicators outlined in the Virginia Drought Assessment and Response Plan. Over the past 14 days, precipitation totals across the Commonwealth generally ranged from one to three inches, with localized deficits observed around the Harrisonburg area, where totals were near 0.5 inches. Thirty-day precipitation totals show that nearly the entire Commonwealth has experienced below-normal precipitation in this period. The Roanoke, Chowan, and Southeast Virginia Drought Evaluation Regions (DERs), along with Harrisonburg and surrounding areas, received less than 50% of normal precipitation over this 30-day period. Longer-term precipitation patterns suggest improving conditions.

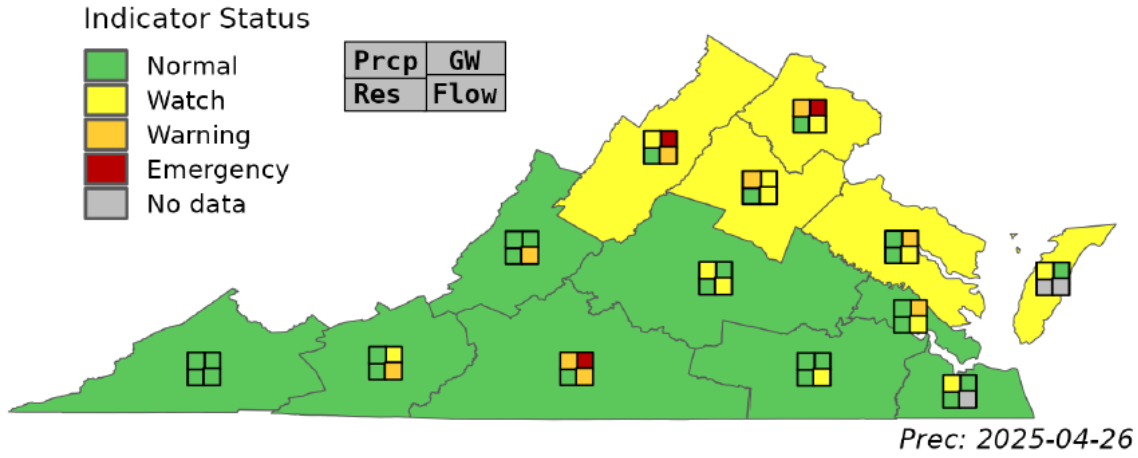
"For the past sixty- and ninety-day observations, widespread 75-100% of normal precipitation fell across the Commonwealth, with areas east of the I-95 corridor generally receiving >100% of normal, and areas around Harrisonburg receiving <50% of normal precipitation. Soil moisture in the top one meter of soil remains low in the Northern Virginia, Shenandoah, and Northern Piedmont DERs. Conversely, soil moisture in the top 40 cm is above the 90th percentile in the New River DER and adjacent areas, indicating localized saturation. Seven-day average streamflows (May 5–12) were generally within the normal range across much of the Commonwealth. Isolated below-normal flows were noted in the central portions of the Commonwealth, particularly within the Shenandoah, Roanoke, and Nottoway River watersheds. A comparison of the seven-day and 28-day streamflow averages indicates some recovery, with the extent of below-normal flows decreasing statewide. Despite this trend, moderate to severe hydrologic drought conditions persist in parts of the Shenandoah River watershed. Groundwater levels have remained relatively stable since the previous DMTF meeting on April 29, 2025. However, much-below-normal groundwater levels continue to be observed in portions of northeastern Virginia. ...

"Low soil moisture, groundwater deficits, and below normal stream flows linger throughout Northern Virginia and the Shenandoah Valley. Long term (28-day) groundwater levels and stream flows likewise remain low in portions of the Northern Coastal Plain and Roanoke River Drought Evaluation Regions however streamflow conditions there are improving. Predicted rainfall for the next seven days indicate totals of 1-3 inches over all of the Commonwealth with the potential for locally higher amounts (4-5 inches) also throughout the Commonwealth. The forecast for the next two weeks suggests above average rainfall and cooler temperatures for Virginia. As a result, the Drought Monitoring Task Force recommends maintaining Drought Watch status for the following regions: Eastern Shore, Northern Coastal Plain, Northern Piedmont, Northern Virginia, Shenandoah, Roanoke."

[END EXCERPT]

The Virginia DEQ produces a **daily map rating drought-status indicators**, also online at https://www.deq.virginia.gov/our-programs/water/water-quantity/drought. Shown below is the map for June 1, 2025, followed by the map from about a month earlier. The status-indicator abbreviations on that map are as follows: GW = groundwater levels, Prcp = precipitation deficits, Res - reservoir storage, and Flow = stream flow conditions. For each region of Virginia, the indicators are color coded for "normal," "watch," "warning," or "emergency" conditions.





DROUGHT ELSEWHERE

The May 29, 2025, U.S. Drought Monitor, for conditions as of May 27, 2025, categorized about 42.6% of the United States (including all or parts of 42 states) as being abnormally dry or worse. (The highest percentage in the abnormally or worse categories—that is, in all categories—reported by the Drought Monitor since it began in 2000 was 72.38% of the country for conditions as of July 17, 2012.) The Drought Monitor categorized about 14.5% of the country (including parts of 18 states) as being in severe drought or worse (categories D2, D3, and D4). (The highest percentage in the severe-or-worse categories reported by the Drought Monitor since it began in 2000 was 38.49% of the country in the report for conditions as of August 7, 2012.)

The nationwide percentages for abnormally dry or worse (categories D0-D4) and severe or worse (categories D2-D4) for conditions in the previous three months and one year ago were as follows:

4/29/25 – 47.4% abnormally dry or worse; 16.4% severe drought or worse
3/25/25 – 58.1% abnormally dry or worse, 17.7% severe drought or worse;
2/25/25 – 57.2% abnormally dry or worse, 14.6% severe drought or worse;
5/28/24 – 22.6% abnormally dry or worse, 3.5% in severe drought or worse.

The following states had over 50% land area categorized by the Drought Monitor as being in severe-or-worse drought, as of May 27:
Arizona = 82%;
New Mexico = 73%.

3-MONTH DROUGHT OUTLOOK

For a look ahead, the National Weather Service/Climate Prediction Center's "U.S. Seasonal Drought Outlook" is available at http://www.cpc.ncep.noaa.gov/products/expert_assessment/sdo_summary.php. Shown below is the outlook map available on June 2, 2025.