

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 January 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) precipitation totals for January 2025 at 12 Virginia or near-Virginia locations, 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	January 2025 Observed	Monthly Normal	February 2024 – January 2025 Observed	Annual Normal based on 1991-2020
Blacksburg	3.01	3.23	34.99	42.64
Bluefield	3.05	3.03	40.79	41.24
Bristol	2.49	3.65	41.76	43.97
Charlottesville	1.47	2.96	31.00	41.61
Danville	2.44	3.41	45.13	43.73
Lynchburg	3.13	3.46	40.31	42.76
Norfolk	1.64	3.41	47.92	49.18
Richmond	2.82	3.23	44.70	45.50
Roanoke	2.68	3.17	37.92	42.82
Wallops Island	2.65	3.15	37.16	43.25
Washington-Dulles Airport	2.00	2.94	30.37	43.24
Washington-National Airport	1.95	2.86	33.64	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=mrz> 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.

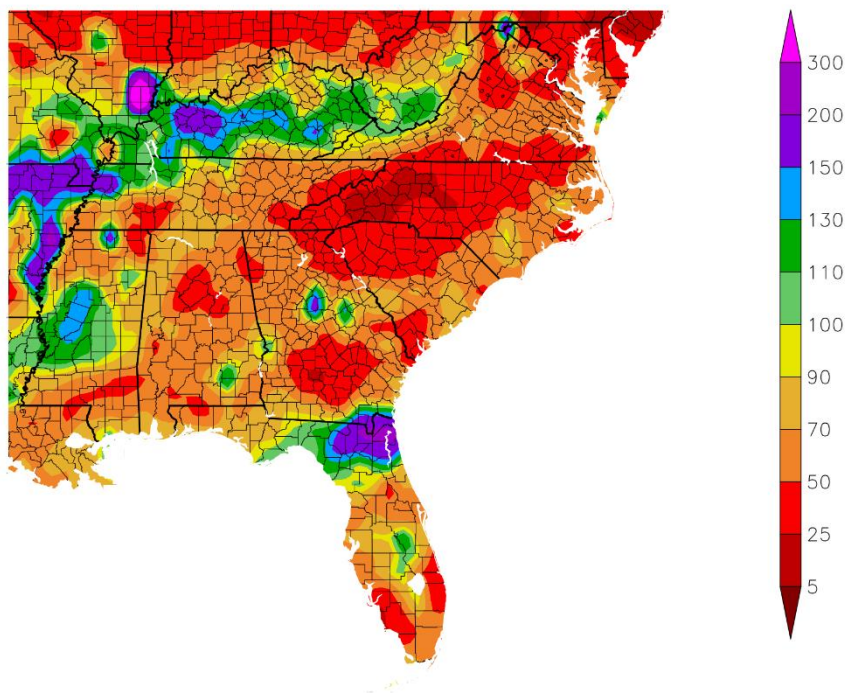
For **graphs** of precipitation, visit the High Plains Regional Climate Center at

<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.

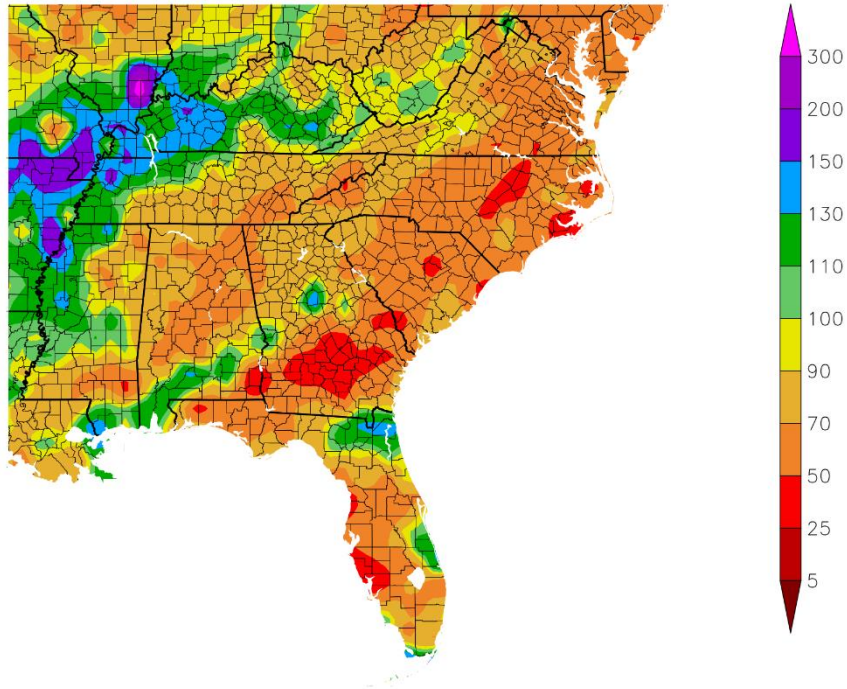
regions; or the NWS' Advanced Hydrologic Prediction Service at <http://water.weather.gov/precip/> for a map

of precipitation nationwide or by state, with capability to show county boundaries, and archives available for specific days, months, or years. Shown below 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 January 31, 2025; and for Virginia, the precipitation and the departure from normal precipitation, both in inches, for the previous 30 days, also through January 31.

## Percent of Normal Precipitation (%) 1/2/2025 – 1/31/2025



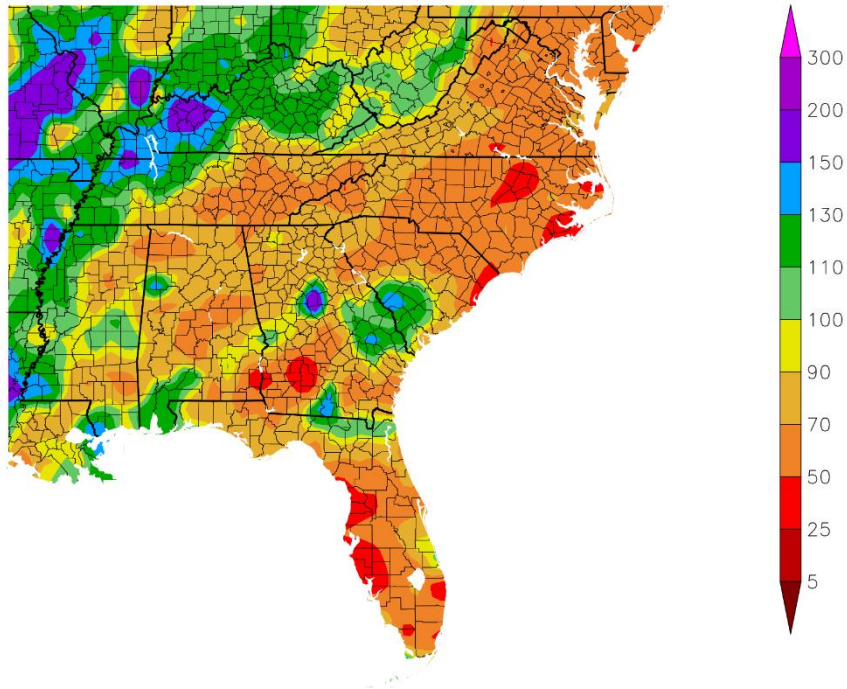
# Percent of Normal Precipitation (%) 12/3/2024 – 1/31/2025



Generated 2/1/2025 at HPRCC using provisional data.

NOAA Regional Climate Centers

# Percent of Normal Precipitation (%) 11/3/2024 – 1/31/2025

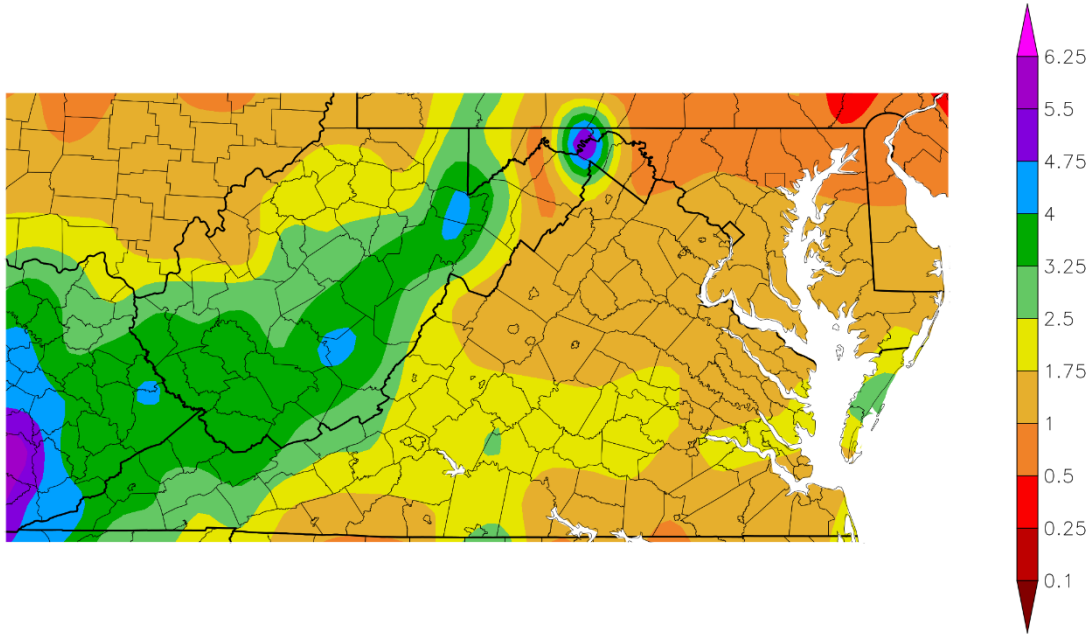


Generated 2/1/2025 at HPRCC using provisional data.

NOAA Regional Climate Centers

# Precipitation (in)

1/2/2025 - 1/31/2025

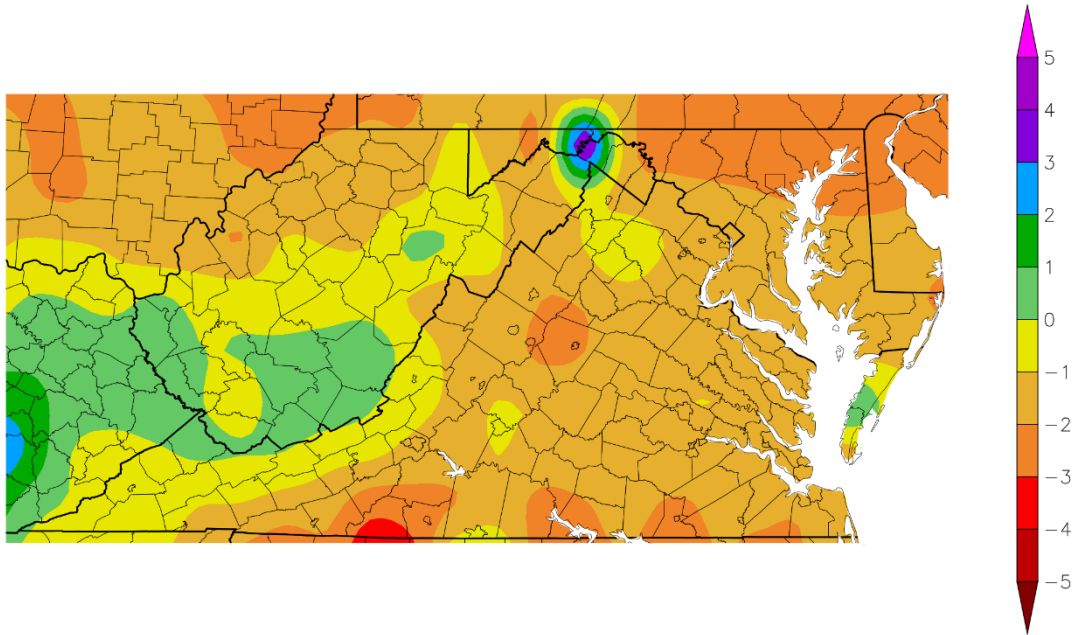


Generated 2/1/2025 at HPRCC using provisional data.

NOAA Regional Climate Centers

# Departure from Normal Precipitation (in)

1/2/2025 - 1/31/2025



Generated 2/1/2025 at HPRCC using provisional data.

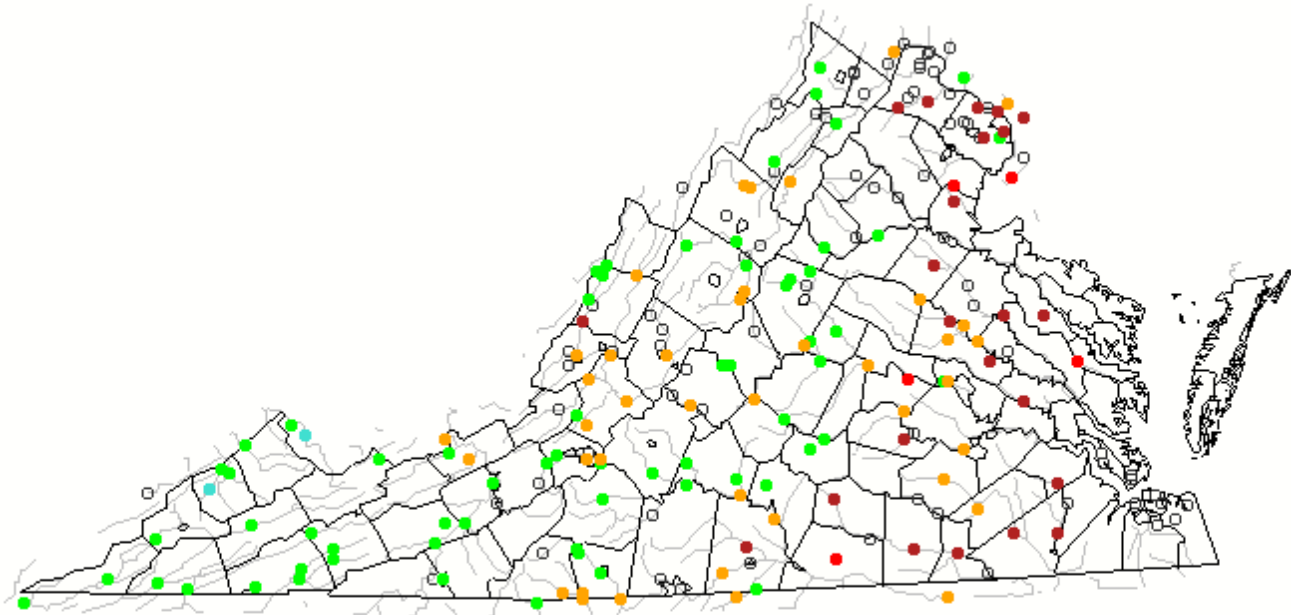
NOAA Regional Climate Centers



## Stream flow

Shown below is a color-coded percentile map of *monthly average stream flow values* for January 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.

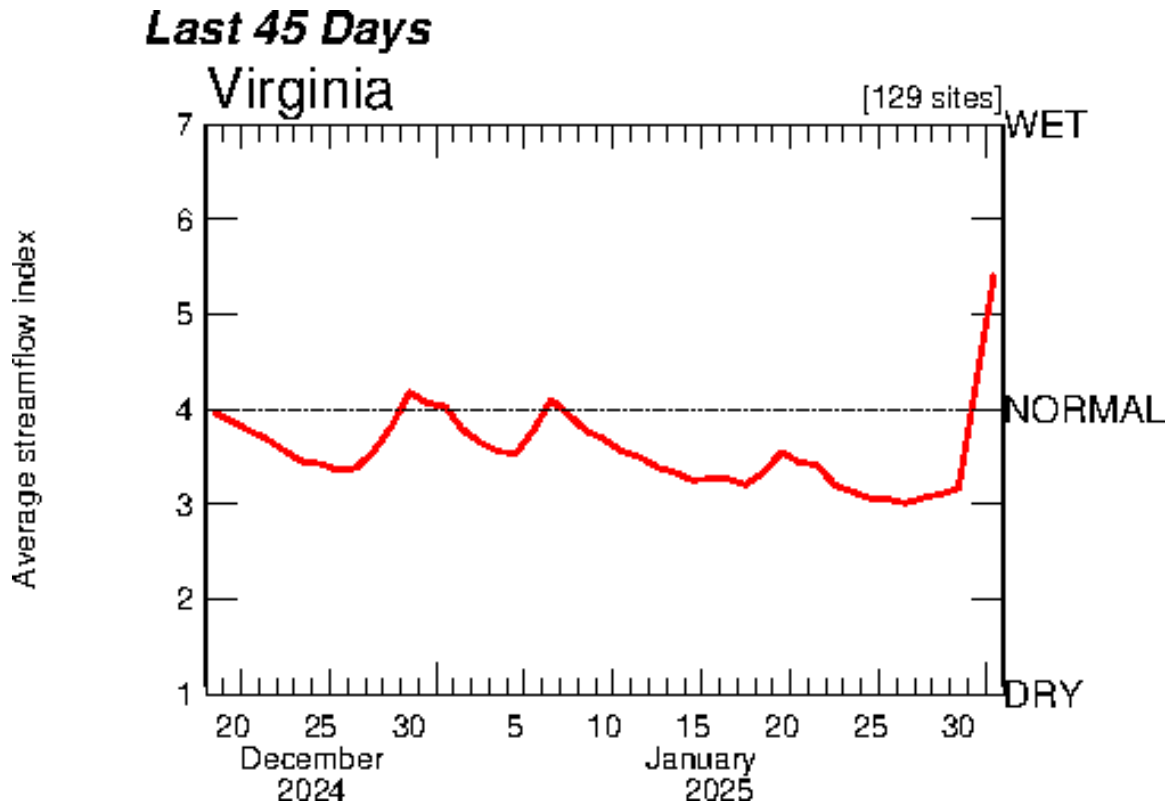
January 2025



### Explanation - Percentile classes

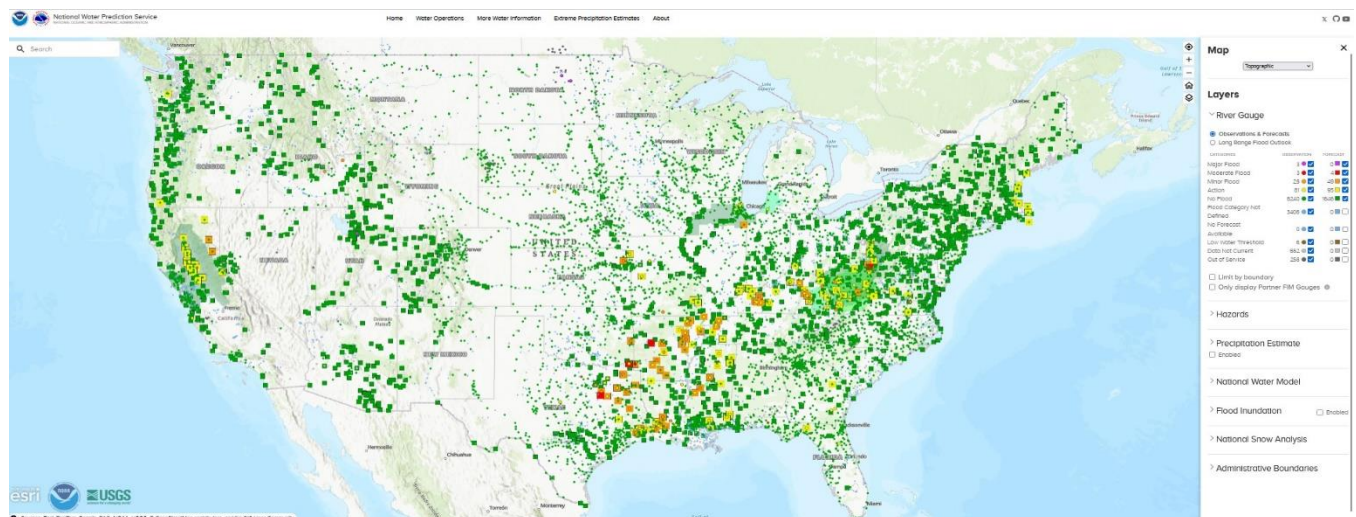
Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High	Not-ranked

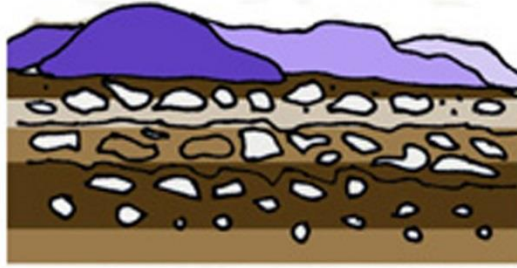
An overall look at Virginia streamflow conditions is provided in the USGS WaterWatch **summary plot of daily average** streamflow conditions, compared to historical records for any given date. Below is the summary plot for 129 Virginia sites during the 45-day period ending January 31, 2025, accessed on February 3, 2025, at [https://waterwatch.usgs.gov/index.php?id=pa01d&sid=w\\_plot&r=va](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 3:50 p.m. EST on January 31, 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 <http://waterdata.usgs.gov/va/nwis/current/?type=gw>.



## Drought watch

### ***DROUGHT IN VIRGINIA***

The weekly **U.S. Drought Monitor report** from the University of Nebraska-Lincoln (<http://droughtmonitor.unl.edu/>) report of January 30, 2025, for conditions as of January 28, 2025, categorized about 95.6% of Virginia as abnormally dry or worse, about 54.9% in moderate drought or worse, and about 9.4% in severe 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:

12/31/24 – 92.5% abnormally dry or worse; 29.8% in moderate drought or worse; 6.6% in severe drought.

11/26/24 – 99.7% abnormally dry or worse, 49.6% in moderate drought or worse, 10.1% in severe drought.

10/29/24 – 90.0% abnormally dry or worse, 13.5% in moderate drought.  
1/30/24 – 1.1% abnormally dry.

Following are **excerpts from Drought Monitor reports in the previous month on conditions in Virginia and nearby areas.**

*From the 1/23/25 report (conditions as of 1/21/25)*

**FROM NORTHEAST REGION SUMMARY**

“Most of the region’s drought status remained unchanged this week. There was a slight expansion of severe drought in portions of southern Maryland and northern Virginia, and some moderate drought expanded over southern Virginia.”

*From the 1/30/25 report (conditions as of 1/28/25)*

**FROM NORTHEAST REGION SUMMARY**

“Abnormally dry conditions have expanded in West Virginia while moderate drought increased over much of southern and northeast Virginia. Severe drought also expanded to cover all of southern Maryland and northeastern Virginia.”

On January 21, 2025, the **Virginia Drought Monitoring Task Force (DMTF)**, a collaboration of state and federal agencies, issued its most recent report (as of 1-31-25). 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 January 21 report.**

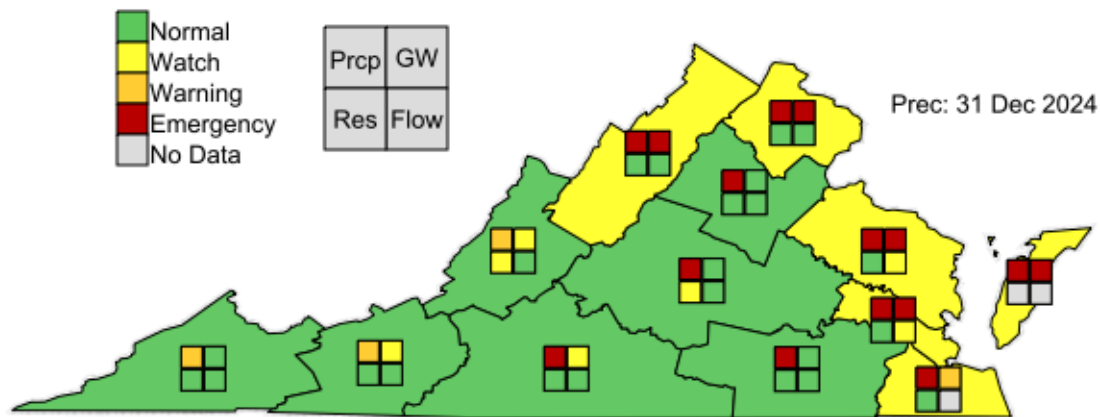
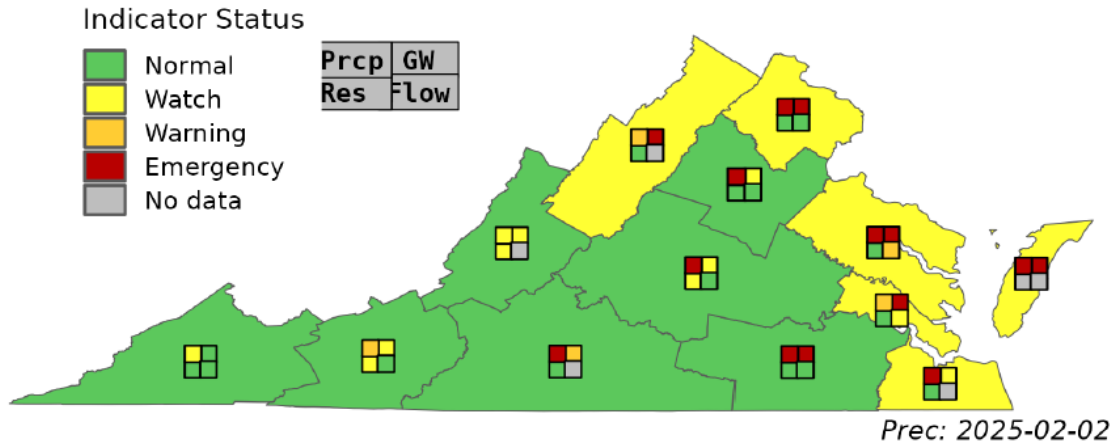
“On Tuesday, January 21, the Virginia Drought Monitoring Task Force (DMTF) met to review drought indicators outlined in the Virginia Drought Assessment and Response Plan. Over the past 14-day period the majority of the Commonwealth received one inch of precipitation, while small regions along the southern and eastern border of the State received up to one-and-a-half inches of precipitation. Despite this precipitation, soil moisture remains largely below the 30th percentile east of the New River region. The Eastern Shore, portions of the Northern Neck and Southeast Virginia are experiencing sub fifth-percentile soil moistures in the 0–2-meter range. Current streamflow gages show below normal streamflow throughout the eastern third of the Commonwealth. Certain gages on the smaller watersheds in northern and eastern Virginia are setting “all-time low for day-of-year” records. The previous 7 and 28-day periods show expansion of sub-25th percentile streamflow throughout the Commonwealth. Groundwater levels remain low throughout the State. Groundwater recharge has slowed or stopped in most wells outside of the far western reaches of Virginia. The U.S. Drought monitor shows 91.68% of the Commonwealth in abnormally dry to severe drought condition.

“Soil moisture and groundwater deficits continue to be observed in the northern and eastern portions of the state with seasonally low surface water flows expanding in the east. ...[T]he Drought Monitoring Task Force recommends maintaining the drought watch status in the following regions: Eastern Shore, Northern Coastal Plain, Northern Virginia, Shenandoah, Southeast Virginia, York James.”

[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 (next page) is the map for February 2, 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 January 30, 2025, U.S. Drought Monitor, for conditions as of January 28, 2025, categorized about 53.5% of the United States (including all or parts of 49 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 14.0% of the country (including all or parts of 29 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:

- 12/31/24 – 56.8% abnormally dry or worse; 12.1% in severe drought or worse;
- 11/26/24 – 61.9% abnormally dry or worse; 13.7% in severe drought or worse;
- 10/29/24 – 73.2% abnormally dry or worse; 23.1% in severe drought or worse;
- 1/30/24 – 37.1% abnormally dry or worse, 9.0% 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 January 28:

- Delaware = 100%;
- Maryland = 60%;
- New Jersey = 68%;
- Wyoming = 59%.

Following are **excerpts from Drought Monitor reports during the previous month** on conditions in various parts of the United States.

*From the 1/16/25 report (conditions as of 1/14/25)*

**FROM NATIONWIDE SUMMARY**

“Severe drought (D2) was expanded to include all of southern California due to the very dry start to the water year to date (WYTD) from October 1, 2024 to January 13, 2025. The D2 coverage coincides with where WYTD precipitation has averaged less than 5 percent of normal. A number of locations, including San Diego, are having their driest start to the water year. The D2 covers Los Angeles and Ventura counties which are being affected by periodic Santa Ana winds drying out vegetation and large wildfires. Following the two wet winters, the large reservoirs throughout California are at or above-normal.”

*From the 1/30/25 report (conditions as of 1/28/25)*

**FROM NATIONWIDE SUMMARY**

“The current week started with a significant, even historical, winter storm event that impacted the coastal areas of the Gulf Coast. Several locations set all-time records for snow amounts with some locations in Louisiana having 9-10 inches of snow for the event. Some locations in the Florida panhandle also recorded 6-9 inches of snow during this event.”

**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](http://www.cpc.ncep.noaa.gov/products/expert_assessment/sdo_summary.php). Shown below is the outlook map available on January 31, 2025.

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

Valid for February 1 - April 30, 2025  
Released January 31, 2025

