



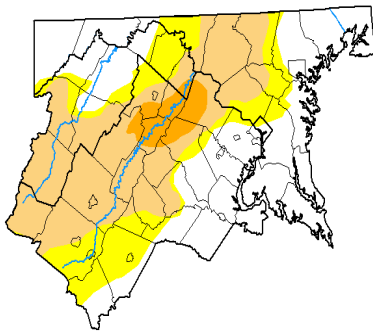
PRESTO



PREcipitation Summary and Temperature Observations
for the Washington, DC and Baltimore, MD Area

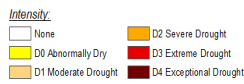
Fall: Warm and Dry; Drought Intensifies November: Near Normal Temperatures and Precipitation

U.S. Drought Monitor Baltimore, MD/ Washington, DC WFO



August 29, 2023
(Released Thursday, Aug. 31, 2023)
Valid 8 a.m. EDT

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	40.68	59.32	39.80	4.66	0.00	0.00
Last Week 08-22-2023	40.76	59.24	19.10	0.00	0.00	0.00
3 Months Ago 05-30-2022	38.75	61.25	16.93	0.00	0.00	0.00
Start of Calendar Year 01-01-2023	98.83	1.17	0.00	0.00	0.00	0.00
Start of Water Year 09-20-2022	78.78	21.22	0.00	0.00	0.00	0.00
One Year Ago 08-30-2022	99.12	0.88	0.00	0.00	0.00	0.00



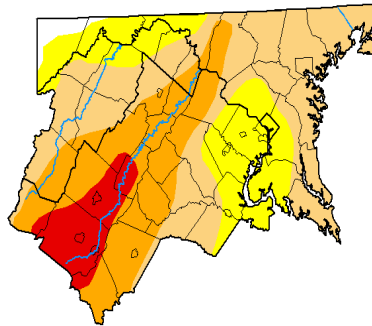
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

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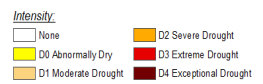
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U.S. Drought Monitor Baltimore, MD/ Washington, DC WFO



November 21, 2023
(Released Wednesday, Nov. 22, 2023)
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	1.63	98.37	76.25	35.42	8.87	0.00
Last Week 11-14-2023	1.63	98.37	64.06	23.79	8.55	0.00
3 Months Ago 08-20-2023	40.76	59.24	19.10	0.00	0.00	0.00
Start of Calendar Year 01-01-2023	98.83	1.17	0.00	0.00	0.00	0.00
Start of Water Year 09-20-2022	29.91	70.09	39.52	13.18	0.00	0.00
One Year Ago 10-20-2022	93.08	6.92	0.00	0.00	0.00	0.00



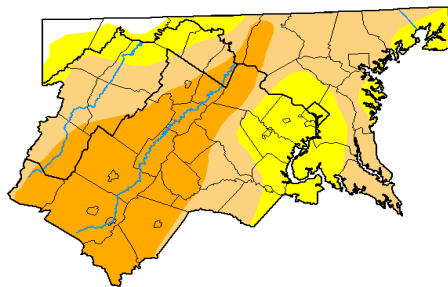
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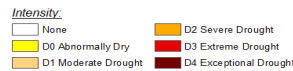
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U.S. Drought Monitor Baltimore, MD/ Washington, DC WFO



November 28, 2023
(Released Thursday, Nov. 30, 2023)
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	2.43	97.57	72.94	35.49	0.00	0.00
Last Week 11-21-2023	1.63	98.37	76.25	35.42	8.87	0.00
3 Months Ago 08-29-2023	40.68	59.32	39.80	4.66	0.00	0.00
Start of Calendar Year 01-01-2023	98.83	1.17	0.00	0.00	0.00	0.00
Start of Water Year 09-20-2022	29.91	70.09	39.52	13.18	0.00	0.00
One Year Ago 11-28-2022	93.08	6.92	0.00	0.00	0.00	0.00



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Drought Conditions for the NWS Baltimore/Washington Service Area for 8-29-2023 (upper left), 11-21-2023 (upper right), and 11-28-2023 (lower center). Moderate to Severe Drought Conditions expanded from 8-29 through Fall and peaked with extreme drought conditions in parts of western VA on 11-21-2023. Widespread 2 to 3-inch rains on 11-21 eased the drought conditions by the end of November.

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November Highlights

Month

- ☁ **Temperature** – Near normal temperatures occurred for most areas. Monthly anomalies were DCA -0.3F, IAD -0.1F, and BWI 0.0F.
- ☁ **Precipitation** – Rainfall was slightly below normal. Anomalies were IAD -0.64 inches, DCA -0.40 inches, and BWI -0.33 inches.
- ☁ **1st** – 2 to 3-inch snowfalls in mountains of western MD and eastern WV.
- ☁ **21st** – Light, freezing rain and wind damage in mountains of western MD and eastern WV. IAD sets a daily record rainfall with 2.15 inches, and Martinsburg, WV set a daily record with 2.27 inches. Roughly 90% of the monthly rainfall for most locations fell on this day as a widespread 2-3 inch rainfall occurred.
- ☁ **28th** – Up to 6 inches of snow in mountains of western MD and eastern WV (6 inches near Accident, MD).

Fall Highlights

September

- ☁ **3rd – 7th** – Record heat across the area.
IAD: Daily records on the 3rd, 4th, 5th, 6th, and 7th of 99F, 99F, 99F, 100F, and 97F. The 100F on the 6th is an all-time monthly record for September. The previous record was 99, set in 1980 and 1983.
BWI: Daily records on the 4th, 5th, and 6th of 99F, 99F, and 100F.
DCA: Daily records on the 4th, 5th, and 6th of 98F, 99F, and 98F. 98F on the 6th tied the daily record.
- ☁ **6th, 7th, 8th, and 9th** – Widespread large hail and wind damage, including a 75 mph wind gust and 1.25 inch diameter hail in Falling Waters, WV (7th). On the 8th, 1.5-inch hail fell at the NWS office in Sterling, and a 71 mph wind gust occurred in Arcola, VA (Loudon County).
- ☁ **11th** – Daily record rainfall at IAD of 1.45 inches.
- ☁ **23rd** – Martinsburg, WV set a record daily low maximum temperature of 59F.

October

- ☁ **26th-28th** – Record warmth across the area. Daily high temperature records for IAD (81F, 84F, and 86F) were set on the 26th, 27th, and 28th. Daily high temperature records for BWI (83F and 82F tied) occurred on the 26th and 27th. Martinsburg tied a record high of 79F on the 26th.

November Summary

Temperature:

Overall monthly temperatures were close to average. There were no extremes in temperature and no records broken. BWI and DCA had their first freezing temperatures of the season (the 27th for BWI and the 28th for DCA).

Precipitation:

For the most part, the month was very dry with only a few days of measurable rainfall. However, on the 21st, a widespread rainfall of 2-3 inches fell across the area. Roughly 90% of the monthly rainfall occurred on the 21st. IAD set a daily record with 2.15 inches, and Martinsburg, WV set a daily record with 2.27 inches. This rain helped ease drought conditions across the area.

Fall Summary

Temperature:

Monthly temperatures were generally 1-2F above normal for the fall period. BWI had the largest anomaly at 2.2F. September and October each saw warmer than average temperatures, while November was near average. Record high temperatures (monthly and daily) occurred in a hot stretch from September 3rd through the 7th. Temperatures were near 100F, with Dulles setting a monthly record high temperature of 100F on September 6th. Another stretch with daily record high temperatures occurred from October 26th through the 28th, with high temperatures in the low to mid 80s.

Precipitation:

Fall continued the dry year for the area as most locations were below normal for the period. DCA had the largest anomaly at -3.74 inches. Drought conditions worsened for most areas however, two days of widespread heavy rainfall helped ease the drought somewhat. September 11th and 12th saw 1-2 inch rains in most places, although DCA missed out on the heavy rain. On November 21st, widespread 2-3 inch rains fell. In between, there were long stretches with no rainfall.

Yearly precipitation deficits continue to grow in many places across the area. As of November 30, 2023, moderate to severe [drought conditions](#) have developed across parts of the area, mainly from central VA and MD westward to eastern WV. There were areas of extreme drought conditions in central and western VA just before the heavy rains of the 21st (see cover images). The dry conditions led to several wildfires in central Virginia which produced smoke, haze, and poor air quality across the area during November 25th through the 29th.

The yearly precipitation anomalies (as of Nov. 30, 2023) for sites across the area are:

Charlottesville, VA	-15.98 inches
Martinsburg, WV	-12.15 inches
IAD	-10.91 inches
Hagerstown, MD	-9.46 inches
DCA	-9.16 inches
BWI	-6.19 inches

November Stats:

Location	Station Temperatures (°F)					Extreme/Day		Precipitation (inches)			
	Avg Max	Avg Min	Avg. Temp	Normal Temp	Departure from Normal	Max	Min	Total	Departure from Normal	Year/Departure from Normal	Snow
National (DCA)	59.0	40.3	49.6	49.9	-0.3	76/7	24/9	2.51	-0.40	29.25/-9.16	0
Baltimore (BWI)	58.6	35.2	46.9	46.9	0.0	77/9	23/29	2.80	-0.33	35.10/-6.19	T
Dulles (IAD)	59.4	32.5	45.9	46.0	-0.1	81/9	19/29	2.49	-0.64	29.03/-10.91	0

Fall (Sep., Oct., and Nov.) Stats:

Location	Station Temperatures (°F)					Extreme/Day		Precipitation (inches)			
	Avg Max	Avg Min	Avg Temp	Normal Temp	Departure from Normal	Max	Min	Total	Normal	Departure from Normal	Snow
National (DCA)	71.1	52.9	62.0	61.0	+1.0	99*/Sep 5	24/Nov 29	6.76	10.50	-3.74	0
Baltimore (BWI)	70.9	49.1	60.0	57.8	+2.2	100*/Sep 6	23/Nov 29	10.20	11.40	-1.20	T
Dulles (IAD)	71.3	47.1	59.2	57.1	+2.1	100**/Sep 6	19/Nov 29	9.81	10.72	-0.91	0

* - Daily Record

** - Monthly record

Looking Ahead: Normal and Extreme Temperature and Precipitation Values for December

Location	Station Temperatures (°F)			Extreme/Day		Precipitation (inches)			Normal Snow/Max/Year
	Max	Min	Monthly	Record Max/Date	Record Min/Date	Normal	Precip. Max/Year	Precip. Min/Year	
National (DCA)	48.4	34.5	41.7	79/7/1998	-13/31/1880	3.41	7.56/1901	0.19/1889	1.7/16.6/2009
Baltimore (BWI)	47.5	29.6	38.6	77/7/1998*	-3/30/1880	3.71	8.06/2009	0.20/1955	2.5/20.4/1966
Dulles (IAD)	46.5	29.0	37.3	79/6/1998	-4/25/1989	3.30	6.74/1969	0.42/1965	2.8/24.2/1966

* - Latest of more than one occurrence