





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

AUGUST 2024: Drought Alleviated; Remnants of Hurricane Debby Produce Excessive Rains After Tornadoes SUMMER 2024: Hot and Dry, With Rains at End

Accumulated Precipitation - Martinsburg Area, WV (ThreadEx)



Accumulated precipitation for Martinsburg, WV (MRB) during August 2024. It was the wettest August on record for the Martinsburg Area (11.04"). The remnants of Hurricane Debby affected the area Aug. 6-9 when 8.48" fell at MRB. 2.00"+ fell on each day Aug. 6-8.

August Highlights

- Month (temperature) Slightly above normal for most areas: IAD +1.2°F, BWI +0.8°F and DCA -0.1°F
- Month (precipitation) Above normal throughout the area. Record wettest August at Martinsburg, WV (11.04"); BWI had a monthly anomaly of +2.13", while IAD recorded a +1.60" anomaly and DCA had a +1.33" anomaly
- 1st BWI sets a record high of 101°F
- ⁹ 2nd IAD sets a record high of 101°F, BWI ties record at 100°F; 78 mph (marine) wind gust 7 SE of Aberdeen Proving Ground, MD
- 6th, 7th & 8th IAD ties a record high of 96°F (6th); Martinsburg, WV sets daily rainfall records with 2.43" (7th) and 3.41" (8th); IAD sets a daily rainfall record with 1.39" (8th)
- 8th Remnants of Hurricane Debby spawns three tornadoes across western VA and eastern WV. See <u>summary</u> for details.
- 22nd IAD sets a record low of 49°F
- **28**th Record highs set at IAD (99°F) and DCA (101°F)
- 29th IAD sets a daily rainfall record with 1.92"; hail up to 2.5" in diameter falls in Countryside (Loudoun Co.), VA

Summer Highlights

JUNE

- 5th Tornado outbreak across WV, VA and MD, see Summary
- 22nd Record high temperatures at IAD (100°F) and BWI (101°F), and a record high minimum at IAD (75°F)
- **23**rd Record highs at DCA, BWI and IAD (99°F, 98°F and 98°F, respectively), and a record high minimum at BWI (81°F); also thunderstorm wind damage across western and central MD
- 26nd Record highs at BWI and IAD (both 99°F); also thunderstorm wind damage in many locations, with gusts to 70 mph in Point Lookout (St. Mary's Co.), MD and 65 mph in Shepherdstown (Jefferson Co.), WV

JULY

• 14th-16th – Record highs at DCA each day (101°F, 102°F and 104°F), BWI (101°F (tied), 102°F, and 104°F (tied), and on the 14th and 15th at IAD (98°F (tied) and 99°F); thunderstorm wind damage around the metros and eastward, with a 68 mph wind gust recorded at Saunders Point Light, MD (14th)

August Summary

Temperatures: Monthly temperatures were slightly above normal for most areas. Anomalies were IAD +1.2°F, BWI +0.8°F, and DCA -0.1°F. Several record highs were set during the month's first week and final days, with even one record low on the 22nd. A stretch of cool weather near the end of month offset some of the warmth of the beginning of the month. See the August Highlights (above) for a list of the daily records.

Precipitation: Rainfall was above normal for all of the area. Martinsburg, WV (MRB) recorded its wettest August with 11.04". BWI had a monthly anomaly of +2.13", while IAD recorded a +1.60" anomaly and DCA had a +1.33". Most of the rain occurred from the remnants of Hurricane Debby: MRB observed 8.48" over August 6th-9th with over 3" on August 8th. See the August Highlights (above) for a list of daily and monthly precipitation records. The rain was welcomed as it alleviated Extreme <u>Drought conditions</u> across the area.

Severe Weather: The remnants of Hurricane Debby produced three tornadoes – across northern and western VA and the eastern WV panhandle. See this <u>summary</u> from the NWS office in Sterling, VA for more details.

Summer Summary

Temperature: The summer began with Washington having the 2nd-warmest June on record (behind 80.6°F in 2010), with a departure of +3.4°F. IAD also recorded its 2nd-warmest on record (behind 76.8°F in 2010), with a departure of +4.1°F. Baltimore observed its 5th warmest June, with a departure of +4.0°F. The hottest part of the month was the 22nd through the 26th when several daily record high and high minimum temperatures were set. DCA and BWI both observed 15 days at or above 90°F, including 11 consecutive days during the 17th-27th; IAD also observed 14 such days. BWI and IAD hit 100°F (or higher) for the first time in June since 2012.

July was another hot month with well above average temperatures. It was the 2nd-warmest July on record for Baltimore (+3.9°F) and 3rd-warmest at IAD (+3.6°F) while Washington (+2.7°F) recorded its 4th warmest July. The 14th through the 17th proved to be the hottest stretch with widespread record high temperatures and some places reaching 100°F or more for the first time since 2012. DCA and BWI had 4 consecutive days with high temperatures of 100°F or more. Washington has observed only two other 4-day stretches with 100°F plus temperatures: July 19-22, 1930 and July 5-8, 2012; Baltimore has only recorded one other such period, July 19-22, 1930.

August brought milder temperatures as monthly average temperatures were near or slightly above normal. The monthly temperature anomalies were IAD $+1.2^{\circ}$ F, BWI $+0.8^{\circ}$ F, and DCA -0.1° F. There were several high temperature records set and even one low temperature record during a stretch of cooler weather near the end of month which offset some of the early-month warmth. See the August Highlights (above) for a list of the daily records.

The overall frequency of very hot days was anomalous, if not record setting at the three airports. Days reaching 95°F+ at DCA, BWI, and IAD tallied 20, 24, and 23, respectively; Baltimore and Dulles both observed the most on record, while Washington had the 9th-most. Meanwhile days peaking at 100°F+ ranged from 6 at DCA and 8 at BWI, to 3 at IAD; Baltimore's total was an all-time record, while Washington and Dulles both tied for the 4th-most on record and the most since 2012.

The 2024 summer was overall anomalous for the three airports, with Washington's average temperature (80.9°F) yielding the third-hottest summer since 1872 (behind 2010 and 2011), Baltimore's 78.9°F also finishing third-hottest (since 1873, behind 2010 and 1943), and Dulles' 78.1°F the **all-time hottest summer** since records began in 1963 (surpassing 2010's 77.8°F).

Precipitation: Dry weather persisted for most of June. June was the 2nd driest on record at IAD (behind 0.58" in 1988) with a departure of -3.61", while it was the 4th driest June for the Washington Area (departure -3.21"). Baltimore did not have a top 10 driest June (with a departure of -2.58") yet it was the city's driest since 2017. Drought conditions escalated quickly during the month with widespread moderate drought by the 25th, and even areas of severe drought (in eastern WV, northern VA, and the MD mountains by month's end), although drought intensity was less near and east of Baltimore.

Dry weather persisted for most of July, especially in the Shenandoah Valley and Potomac Highlands of West Virginia where Extreme Drought conditions developed by the end of the month. Following only two days that measured over 0.16", and none that exceeded 0.47", July was the 11th (tied) driest on record at Baltimore with a departure of –3.07". IAD observed a mere 0.56" over July's last two weeks and finished 1.49" below normal for July. DCA received ample late-month rainfalls (1.57" on the 22nd, 1.28" on the 25th) which guided an above normal month (+0.49").

Welcomed rain during August alleviated <u>drought conditions</u> across the area with well above normal rainfall. Martinsburg, WV (MRB) set a record for its wettest August on record with 11.04 inches. BWI had a monthly anomaly of 2.13 inches, while IAD recorded a 1.60-inch anomaly and DCA had a 1.33-inch anomaly. Most of the rain occurred from the remnants of Hurricane Debby. MRB recorded 8.48 inches of rain from August 6-9 with over 3 inches on August 8th. See the August Highlights section for a list of daily and monthly rainfall records.

August Statistics:

	,	Extreme/Day		Precipitation (inches)							
Location	Av Max	Av Min	Avg T	Nml T	ΔNml	Max	Min	Total	Nml Dep	Yearly Precip	Yearly Departure
National (DCA)	87.8	70.9	79.3	79.4	-0.1	101*/28	58/22	4.58	+1.33	29.09	+1.18
Baltimore (BWI)	87.1	66.8	77.0	76.2	+0.8	101*/1	53/22**	6.22	+2.13	29.32	-0.46
Dulles (IAD)	87.9	65.9	76.9	75.7	+1.2	101*/2	49/22	5.13	+1.60	25.78	-3.44

^{*}Daily Record

Summer Statistics:

	Station Temperatures (°F)					Extreme/D	Precipitation			
Location	Av Max	Av Min	Avg T	Nml T	ΔNml	Мах	Min	Total	Nml	Nml Dep
National (DCA)	89.8	72.0	80.9	78.9	+2.0	104*/Jul 16	58/Aug 22**	10.55	11.78	-1.23
Baltimore (BWI)	89.6	68.3	78.9	76.0	+2.9	104*/Jul 16	53/Aug 22	9.03	12.55	-3.52
Dulles (IAD)	89.4	66.7	78.1	75.2	+2.9	101*/Aug 2**	47/Jun 1	8.48	11.98	-3.50

^{*}Daily Record

Looking Ahead – Normals for September:

	Station Temperatures (°F)			Extrem	e/Day	Precipitation (inches)			
Location	Max	Min	Monthly	Record Max/Date	Record Min/Date	Nml	Precip. Max/Year	Precip. Min/Year	
National (DCA)	80.7	64.1	72.4	104/7/1881	36/23/1904	3.93	17.45/1934	0.11/2005	
Baltimore (BWI)	79.7	58.8	69.2	101/7/1881	35/25/1963	4.44	13.32/2011	0.09/1884	
Dulles (IAD)	79.3	57.9	68.6	100/6/2023	30/24/1974	3.94	11.26/1975	0.15/2005	

^{*}Latest of more than one occurrence

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