

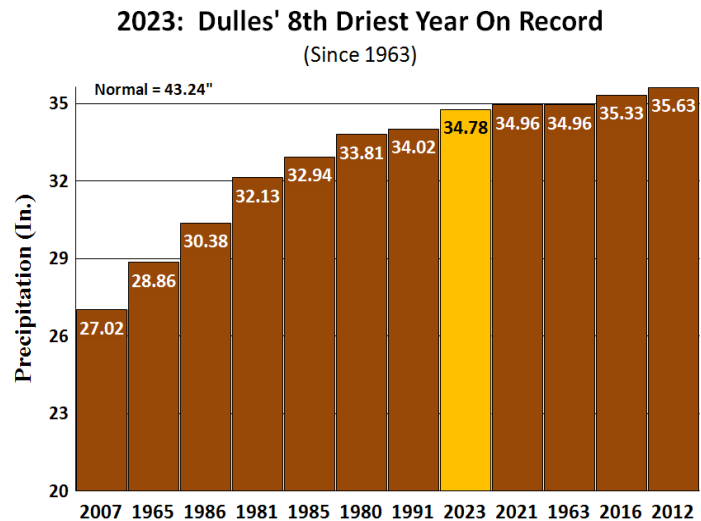
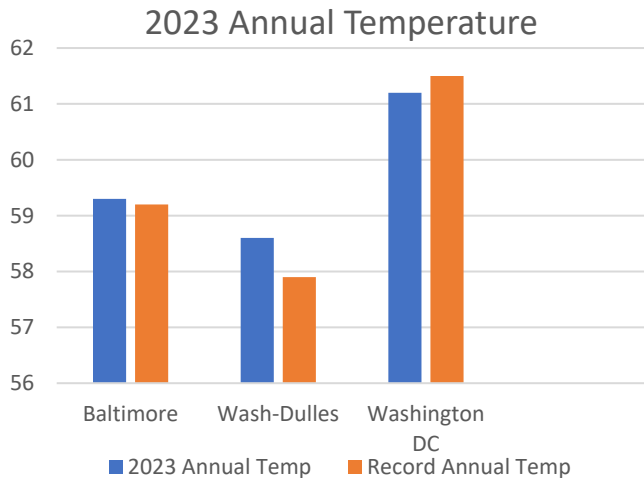


PRESTO



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

Year: Very Warm and Dry; Possibly the Warmest Year on Record at Baltimore, Dulles December: Well Above Normal Temperatures and Precipitation



Accumulated Precipitation – Baltimore Area, MD (ThreadEx)



Upper left: Preliminary data indicates that the annual mean temperature for 2023 in the Baltimore Area (59.3F at BWI) and Washington Dulles (58.6F at IAD) was the warmest on record, while DCA recorded the 2nd warmest on record for the Washington area (61.5F in 2012 is the record). The current official annual mean temperature record for Baltimore is 59.2F (observed in 1931 and 1949); for Washington Dulles, it is 57.9F (observed in 2012). **The 2023 mean annual temperature statistics have not been officially verified at the time of publishing.**

Upper right: Dulles recorded its 8th driest year on record.

Bottom: BWI recorded its 3rd wettest December on record.

December Highlights

Month (temperature) – Well above normal temperatures. Monthly anomalies were, DCA +3.8F, BWI +5.1F, and IAD +5.3F.

(Precipitation) – Well above normal rainfall with very little snow in the lowlands. Anomalies were IAD +2.45 inches, DCA +3.02 inches, and BWI +3.45 inches.

- 5th - 6th – 1 to 4-inch snowfalls in mountains of western MD, eastern WV, and western VA.
- 11th – 1 to 4-inch snowfalls across central VA and MD.
- 17th – 18th – Flooding across central and eastern VA and MD.
- 18th – 58 mph wind gust Occoquan River, VA (marine site) and 58 mph gust at 8NW Taylors Island, MD (marine site).
- 18th and 19th – Up to 8.5 inches of snow in mountains of western MD and eastern WV (8.5 inches near Oakland, MD).
- 27th – 1.62 inches of rain at BWI sets a daily precipitation record.

2023 Highlights

January

- 3rd – DCA, BWI, and IAD set record highs of 69F.
- 27th – 8-10 inches of snowfall in Garrett County, MD.

February

- 1st – Most areas only saw accumulating snowfall for the month and the climatological winter. Amounts were generally less than 1 inch. (BWI 0.2 inches, DCA 0.4 inches, IAD 0.4 inches).
- 9th – IAD sets a record high temperature with 71F and ties a record high minimum temperature with 40F.
- 10th – BWI and IAD set record high temperatures with 66F and 65F respectively. IAD also tied a record high minimum with 41F.
- 17th – Strong winds occurred across central VA. 58 mph gust was recorded at IAD.
- 21st – Nickel sized hail fell in Woodstock, MD (Baltimore County).
- 23rd – Record highs occurred at DCA, IAD, and BWI with 81F, 80F and 79F respectively.

March

- 3rd and 4th – Damaging winds with gusts over 60 mph in western MD and eastern WV, including a 69 mph gust near Streby, WV (Grant County) on the 3rd, a 72 mph gust near Keyser, WV, and a 74 mph gust in Frostburg, MD on the 4th.
- 14th – Widespread wind gusts over 50 mph across much of the area. Mountain snows (3-7 inches) in western MD and eastern WV, including 7 inches near Cherry Grove, WV and 7.5 inches in Frostburg, MD.

April

- 1st – Widespread strong winds and hail. 72 mph gust at Buoy 1 ESE of Bowley's Quarters, MD, 71 mph gust in Cecil NE MD Landfill, 70 mph gust at Patuxent River Naval Air Station, and a 68 mph gust at IAD. 1.5-inch hail observed in Cecil and Harford Counties, MD.
- 5th – DCA and IAD set record highs with 87F and 88F respectively, and BWI tied a record high with 84F.
- 6th – Widespread strong winds and hail. 1.75 inch hail observed in Leonardtown and Hughesville, MD (St Mary's and Cecil Counties) along with a 69 mph gust (marine) 14 miles east of Bay Bridge and a 61 mph gust at Patuxent River Naval Air Station.
- 13th – BWI and IAD tie record highs of 89F and 87F respectively.
- 22nd – A line of severe thunderstorms produced an EF0 tornado along its leading edge as it passed over Fork, Fallston, and western Bel Air, MD during the mid-afternoon.
- 28th – DCA and BWI set daily rainfall records of 1.53 inches and 1.82 inches respectively. Widespread flooding in central VA.

May

- 2nd and 3rd – Heavy snow in the mountains of western MD and eastern WV, with 9 inches reported in Cherry Grove, WV.
- 3rd – IAD sets a record low maximum temperature of 56F. Marine wind gusts up to 43 mph (Eastport, MD) over the Chesapeake Bay.

June

- ☁ **2nd** – BWI set a record high temperature of 97F, while IAD set a record high of 93F.
- ☁ **8th** – Poor air quality (code purple) for much of the local area. There were many days during June which had very poor air quality due to smoke from large wildfires in Canada.
- ☁ **6th and 27th** – Widespread strong winds with hail both days. 1.5-inch hail fell in Montevideo, VA (Rockingham County).

July

- ☁ **1st - 5th** – Widespread thunderstorm wind damage and flooding, mainly over the metro areas and east. A 59 mph wind gust occurred 10 miles northeast of Plum Point (marine buoy over the Chesapeake Bay).
- ☁ **14th** – Thunderstorm wind damage and hail over western, central, and eastern VA. 1.5-inch diameter hail was observed in Herndon, VA. A 66 mph wind gust was recorded in Reston, VA, and a 60 mph gust was recorded in DCA.

August

- ☁ **2nd** – Martinsburg ties a record low of 50F.
- ☁ **7th** – Widespread thunderstorm wind damage and large hail, including 2.5 inch hail in McDowell, VA (Highland county), Staunton, VA, and Earlysville, VA (Albemarle County). An 80 mph gust in Middleburg, MD (Carroll County) occurred.
- ☁ **8th** – Martinsburg, WV sets a daily rainfall record with 1.76 inches of rain.
- ☁ **14th** – Widespread thunderstorm wind damage and flooding, including a 58 mph gust at DCA.
- ☁ **15th** – Waterspout 22 miles northeast of Cove Point (Chesapeake Bay).
- ☁ **27th** – IAD ties a record high temperature of 97F.

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 - 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

- ☁ **21st** – 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.

December Summary

Temperature:

Overall, monthly temperatures were well above average. Monthly anomalies were, DCA +3.8F, BWI +5.1F and IAD +5.3F. While there were no daily or monthly records set, there was no intrusion of very cold air. IAD had its 4th warmest December on record, while DCA tied for its 5th and BWI tied for its 7th warmest.

Precipitation:

Well above average rainfall helped the long-term drought conditions. Monthly anomalies were IAD +2.45 inches, DCA +3.02 inches and BWI +3.45 inches. BWI had its 3rd wettest December on record while DCA had its 4th wettest and IAD had its 6th wettest. Very little snowfall fell outside of the mountains.

2023 Summary

Temperature:

Preliminary (not officially verified) data indicates that the annual mean temperature for 2023 in the Baltimore Area (59.3F at BWI) and Washington Dulles (58.6F at IAD) was the warmest on record, while DCA recorded the 2nd warmest on record for the Washington area (61.5F in 2012 is the record). The current official annual mean temperature record for Baltimore is 59.2F, observed in 1931 and 1949. For Washington Dulles, it is 57.9F observed in 2012. The 2023 mean annual temperature statistics have not been officially verified at the time of publishing.

Continuing the warmth from December 2022, the climatological winter was well above normal in temperature. IAD had its highest monthly average temperature for the climatological winter (Dec. Jan. Feb.) on record with 41.3F. DCA had its 3rd highest with 44.0F, and BWI had its 4th highest with 42.0F. January and February were well above normal – record setting in some cases. IAD had its warmest January on record, and BWI had its warmest February on record.

March and April were well above normal in temperature, but the spring ended with May being well below normal. Monthly temperatures generally averaged from 1.5F to 2.5F above normal during March. April continued the warm trend of 2023, with all stations reporting positive temperature anomalies of 3.9F or greater. DCA tied for its third warmest April on record (63.8 in 2017 is the record) while BWI had its third warmest April on record (the record is 60.5F in 1941). IAD also tied its third warmest April (record is 61.0F in 2017). Widespread record high temperatures occurred on the 5th, 13th, and 20th. Monthly temperatures for May were generally 1.5 to 2 degrees below normal near the metros. Temperatures were even further below average outside of the metros with Martinsburg, WV and Hagerstown, MD, having -4.2F and -2.9F monthly temperature anomalies.

June was a cool month overall. The coolest areas were west of the metros in eastern WV and western MD, where morning lows in the 40s were common during the first half of the month. Martinsburg's monthly average temperature was 5.3F below normal, while Hagerstown, MD was 3.7F below normal during June. Martinsburg had the lowest average monthly minimum temperature on record for June with 52.9F. The previous record was 53.2F in 1927. July monthly temperatures reversed the cool readings of June. Most areas were above normal. August had near normal monthly temperatures for the most part. For the summer, the anomalies for average monthly temperatures were close to normal. IAD ended up 0.8F above normal for the summer, and BWI was 0.6F above normal. DCA ended up being 0.8 below normal for the summer.

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 higher 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. As noted in the December 2023 summary, monthly temperatures were well above normal to close out the year.

2023 was a warm year, with all three stations having a positive annual temperature anomaly of 1.9F or greater. IAD's and BWI's annual temperatures of 58.6F and 59.3F are the warmest on record. DCA's annual temperature of 61.2F was the second warmest on record behind 61.5F in 2012.

Precipitation:

The year began dry with well below normal rain and snow during January and February. There were only a few days with minor accumulations of snow across most of the area. The three primary stations only had one day with measurable snowfall, Feb. 1st. Snowfall was close to 16 inches below normal for IAD and BWI, and about 11 inches below normal for DCA.

Monthly precipitation continued well below normal in March and May, while April had near average precipitation for many areas. The only snow fell in the mountains of MD and WV, with the greatest accumulations occurring on May 2nd and 3rd. Overall, the local area was well below average in precipitation for the spring, with IAD having its 2nd driest spring on record, BWI having its 7th driest, and DCA having its 13th driest. April was dry for most of the month, but heavy rains over the last 3 days of the month pushed totals to near average.

June continued the dry trend for 2023. Most locations were well below normal for rainfall; however, BWI had some rains late in the month which pushed the totals to slightly above average. July saw well above normal rainfall for most areas around the metro and to the east. However, most areas to the west were near or slightly below normal in rainfall. August saw a return to the general dry conditions across most of the area. For the summer, the monthly rainfall anomalies varied quite a bit. BWI was the wettest, being 2.33 inches above normal, while IAD was the driest, being 2.74 inches below normal in rainfall. DCA was close to normal with a +0.49 inches rainfall anomaly.

The fall season 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.

Dulles recorded its 8th driest year on record in 2023. Consistent and sometimes heavy rainfall from mid-November through the end of the year kept Dulles from having its 2nd or 3rd driest year on record and increased the totals at BWI and DCA to well outside of a top 10 driest year on record. BWI ended up with its 3rd wettest December on record. The rainfall also improved [drought conditions](#), which peaked in mid-November for most areas.

BWI observed it is lowest total snowfall for a calendar year, 0.2 inches, however, official snowfall records are defined as a season which runs from July 1st of one year through June 30th of the following year.

December Stats:

Location	Station Temperatures (°F)					Extreme/Day		Precipitation (inches)			
	Average Max	Average Min	Average Temp	Normal	Normal Dep.	Max	Min	Total	Normal	Normal Departure	Snowfall
National (DCA)	53.1	37.9	45.5	41.7	+3.8	63/10	29/14,20	6.43	3.02	+3.41	0.1
Baltimore (BWI)	52.2	35.1	43.7	38.6	+5.1	61/10	23/14,20	7.16	3.45	+3.71	T
Dulles (IAD)	52.7	33.2	43.0	37.7	+5.3	62/28	22/20	5.75	2.45	+3.30	0.5

Year 2023 Stats:

Location	Station Temperatures (°F)					Extreme/Day		Precipitation			
	Average Max	Average Min	Average Temp	Normal	Normal Dep.	Max Temp	Min Temp	Total	Normal	Normal Departure	Snowfall
National (DCA)	70.1	52.3	61.2	59.3	+1.9	99 / 9-5*	16 / 2-4	35.68	41.82	-6.14	0.5
Baltimore (BWI)	69.8	48.8	59.3	56.2	+3.1	100 / 9-6*	14 / 2-4	42.26	45.00	-2.74	0.2
Dulles (IAD)	70.0	47.1	58.6	55.7	+2.9	100 / 9-6**	12 / 2-4	34.78	43.24	-8.46	0.9

*Daily Record

** Monthly record

Looking Ahead: Normals for January

Location	Station Temperatures (°F)			Extreme/Day		Precipitation (inches)			
	Max	Min	Month Average	Record Max/Date	Record Min/Date	Normal	Precip. Max/Year	Precip. Min/Year	Nml Snowfall/Max/Year
National (DCA)	44.8	30.1	37.5	79/21/1950	-14/1/1881	2.86	7.83/1937	0.31/1955	4.9 / 31.5/1922
Baltimore (BWI)	43.2	25.4	34.3	79/26/1950*	-7/22/1984*	3.08	7.84/1979	0.29/1955	6.4 / 32.6/1996
Dulles (IAD)	42.6	25.2	33.9	75/29/1975	-18/22/1984	2.94	6.61/1979	0.40/1981	6.9 / 30.9/1996

* - Latest of more than one occurrence