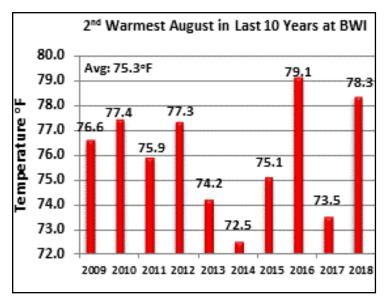


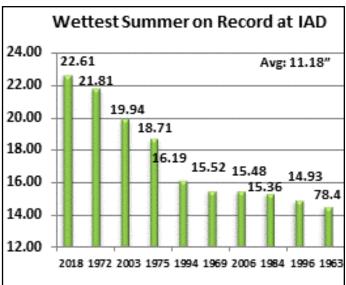




PREcipitation Summary and Temperature Observations For the Washington, DC and Baltimore, MD Area

AUGUST 2018: 6th Warmest in Washington, 10th Warmest at IAD; Numerous Flooding Events SUMMER: Very Wet with Long Period of Excessive Dryness





August Highlights

- Temperatures well above normal: +2.9°F at DCA, +3.3°F at BWI and +1.8°F at IAD; 6th hottest on record at DCA and 10th at IAD
- CA observed 13 days with minimum readings at or above 75°F
- Rainfall was well above normal across much of the region: 5.19" (+2.26") at DCA, 3.84" (+0.55") at BWI and 7.23" (+3.70") at IAD
- no the 1st, flooded roads resulted in a swift water rescue near Wolf Trap (Fairfax County) and near Nokesville (Prince William County), VA. Totals included 4.57 in Orange, 3.06 in Chantilly (Fairfax County), 1.78 at Congressional Manor (Montgomery County), MD, and a calendar day record of 1.09 at IAD
- On the 2nd, a tornado struck Avon Park, south of Charlottesville (Albemarle County), VA. The tornado was rated an EF-0 with estimated wind speeds of 70 mph, maximum path width of 75 yards, path length of 2.0 miles. The event caused some property damage.
- On the 3rd, additional storms produced up to 7.0" of rain near Lineboro (Carroll County), MD, resulting in several roads washed out by flooding.
- On the 12th, severe thunderstorms struck Culpeper County, VA, when winds uprooted 75-100 trees near Stevensburg, and golf ball size hail (1.25") was measured near Elkwood. Rainfall in portions of the county totaled 4.75".
- On the 21st, two rounds of thunderstorms produced torrential downpours and flooded many roads across the region including a vehicle trapped in high water near Potomac (Montgomery County). Rainfall totaled 5.23" in Centerville (Fairfax County) and 3.89" in Largo (Prince Georges County). Daily calendar records were set at IAD (2.72") and DCA (2.46").
- On the 31st, flooding rainfall resulted in two fatalities when a car was swept underneath a bridge in Harford County, MD. Water rescues also occurred near Annapolis and Arnold (Ann Arundel County), MD. Rainfall totals included 6.24" Near Scarboro (Harford County), 5.07" near Middle River (Baltimore County) and 4.72" near Rivercrest (Fairfax County).

Summer Highlights

- \$\text{Above normal temperatures: DCA, +1.8°F; BWI, +1.4°F and IAD, +0.5°F}
- DCA recorded 35 days at 90°F or above, BWI, 29, and IAD, 23
- Minimums were also high: DCA recorded 26 days with minimums at or above 75°F
- Well above normal rainfall: DCA, +10.44"; BWI, +10.82", IAD,+11.18"
- Wettest summer in Washington since 1942, since 1955 in Baltimore and wettest on record at IAD (see graphic).
- On June 3, 3"-5"+ of rain resulted in flooded roads and overflowing creeks, streams and rivers already high from heavy May rainfall. Highest totals in Maryland included 5.39" near Eldersburg (Carroll County). Closer in suburbs totals included 4.82" in Greenbelt (Prince Georges County), MD, 3.30" near Lincolnia (Fairfax County), VA, and 2.75" at the National Arboretum in Washington. On the 1st, totals included 3.24" near Alonzaville (Shenandoah County), VA, and 2.49" in Frederick. MD, where some roads were flooded.
- On June 21, Shenandoah area of Virginia was pounded by torrential downpours with 6.14" measured in Madison and 4.24" near Culpeper. Most of the county roads flooded across Madison County and officials were forced to close eight roads across Greene County.
- The season's longest heat wave ran from June 29 thru July 5 with maximum readings daily at or above 90°F at each of the three airports. The heat peaked on the July 3 with 99°F at BWI, 97°F at DCA and 96°F at IAD
- No measurable rainfall during the first 16 days in July, a first in Washington
- From July 17-31, region was deluged with 7" to more than 16" of rain. BWI's monthly total 16.73" was second wettest month, trailing only August 1955 (18.35"). IAD's total of 11.21" was its wettest July and 4th wettest month ever. DCA's monthly amount of 9.73" was its 5th wettest July and wettest since 1945

August 2018

Temperatures: August featured readings well above normal: +2.9°F at DCA, +3.3°F at BWI and +1.8°F at IAD. While there were few 95°F or greater days, consistently hot temperatures along with oppressive humidity frequently made conditions uncomfortable. DCA reported 17 days at or above 90°F including 8 consecutive days (4th-12th), BWI had 12 such days and IAD, 10. It was the 6th hottest on record at DCA and 10th at IAD, partly due to warm overnight readings. DCA broke two records and tied one for high minimum temperatures while IAD set one record and equaled another. DCA observed 13 days with minimum readings at or above 75°F.

Precipitation: Rainfall was well above normal across much of the region: 5.19" (+2.26") at DCA, 3.84" (+0.55") at BWI and 7.23" (+3.70") at IAD. August featured numerous events with strong to severe thunderstorms resulting in heavy rainfall and localized flooding. During the early morning hours on the 1st, flooded roads resulted in a swift water rescue for occupants trapped in a car near Wolf Trap (Fairfax County), VA, and near Nokesville (Prince William County), VA. Totals included 4.57" in Orange (Orange County), VA, 3.06" in Chantilly (Fairfax County), 1.78" at Congressional Manor (Montgomery County), MD, and a calendar day record of 1.09" at IAD. On the following day, a tornado struck Avon Park, just south of Charlottesville (Albemarle County), VA. The tornado was rated EF-0 with estimated wind speeds of 70 mph, maximum path width of 75 yards and path length of 2.0 miles; the event caused some property damage. Rainfall was heavy in some areas with 2.22" in Oxon Hill (Prince Georges County), MD, and 2.04" in Alexandria (Fairfax County). On the 3rd, additional storms produced up to 7.0" near Lineboro (Carroll County), MD, washing out several roads. Additional totals included 2.56" near Clarksville (Howard County), MD, and 2.50" near Afton, (Nelson County), VA.

During the afternoon of the 7th, damaging thunderstorm winds knocked down trees in DC including one onto a house on 30th Street, NW. On the 11th, flooding was reported in Prince Frederick County, MD, when storms dumped 4.65". On the 12th, severe thunderstorms struck Culpeper County, VA, with winds uprooting 75-100 trees near Stevensburg and golf ball size hail (1.25") measured near Elkwood. Rainfall in parts of the county totaled 4.75". The following day, hail was measured at 1.50" in Burke (Fairfax County), and 1.0" near Independent Hill (Prince William County), VA, and near College Park (Prince Georges County), MD. Mt. Washington (Baltimore City) was deluged with 3.12".

Then on the 21st, afternoon and late evening thunderstorms produced torrential downpours and flooded many roads across the region, resulting in a vehicle trapped in high water near Potomac (Montgomery County). Rainfall totaled 5.23" in Centerville (Fairfax County) and 3.89" in Largo (Prince Georges County). Daily calendar records were set at IAD (2.72") and DCA (2.46").

The final day of August produced more intense rain. Flooding resulted on multiple road closures resulting in water rescues in Harford County, MD. There were also two fatalities reported when a car was swept underneath a bridge. Water rescues occurred near Annapolis and Arnold (Ann Arundel County), MD. Rainfall totals included 6.24" Near Scarboro (Harford County), MD, 5.07" near Middle River (Baltimore County) and 4.72" near Rivercrest (Fairfax County) and 1.92" at IAD.

August 2018 Weather Statistics for the Washington/Baltimore Area

		Station	Extreme/Day		Precipitation						
Location	AvMx	AvMin	AvgT	NmlT	DepNml	Max	Min	Total	Nml	DepNml	Year to Date
National (DCA)	88.8	73.2	81.0	78.1	+2.9	94/28,29	63/24	5.19	2.93	+2.26	40.10
Baltimore (BWI)	87.7	69.2	78.4	75.1	+3.3	96/29	56/24	3.84	3.29	+0.55	45.26
Dulles (IAD)	86.7	67.7	77.2	75.4	+1.8	96/28	54/24	7.23	3.53	+3.70	43.26

Summer (June-August) Temperatures: Seasonal temperatures were warmer than normal: DCA, +1.8°F; BWI, +1.4°F and IAD, +0.5°F. June included 6 days at DCA with highs at or above 90°F, 5 at BWI, 4 at IAD. On June 18, IAD equaled a calendar day record of 94°F. On the 19th, DCA and IAD set record calendar day high minimums of 77°F and 71°F, respectively. June included some cool days. On the 11th, IAD set a daily record low maximum reading of 65°F. The season's longest heat wave ran June 29th thru July 5th with maximum readings daily at or above 90°F at the three airports. The heat peaked on July 3 with 99°F at BWI, 97°F at DCA and 96°F at IAD. High heat returned on July 16 when DCA's recorded its monthly maximum, 98°F, and BWI reported 96°F. (August continued warm, see monthly summary above).

Summer Precipitation: It was a much wetter than normal summer in the area: DCA, +10.44"; BWI, +10.82", IAD,+11.18" resulting in wettest summer in Washington since 1942, since 1955 in Baltimore and wettest on record at IAD (see graphic). On June 3, an all-day rain dumped 3"-5" of rain, resulting in flooded roads and overflowing rivers. Highest rainfall totals included 5.39" near Eldersburg (Carroll County), MD, 3.30" near Lincolnia (Fairfax County), VA, and 2.75" at the National Arboretum in D.C. On June 21, the Shenandoah area of Virginia measured up to 6.14" in Madison, VA, forcing officials to close eight roads across Greene County. July was a month of extremes. For the first time ever in Washington, there was no measurable rainfall during the first 16 days. Then from July 17-31, the region was deluged with 7" to more than 16" of rain. BWI's monthly total of 16.73" (+12.66") was its second wettest month ever, trailing only August 1955 (18.35"). IAD's total of 11.21" (+7.54") was its wettest July on record. DCA's July total, 9.73" (+6.00"), was its wettest since 1945. Extreme weather caused two deaths according to press reports: one on July 23 when a tree fell on a house in Fairfax County, VA, and a second in Howard County, MD, when a firefighter fell through the floor of a home struck by lightning. On July 24, an EF-0 tornado slightly damaged Jefferson High School in Lincolnia (Fairfax County), VA. Thunderstorms resulted in a water rescue of 2-3 people in Leonardtown (St. Mary's County), MD; 3 people also were rescued from a school bus stuck in rising waters near Cockeysville (Baltimore County), MD. BWI marked a daily record 4.07". On July 25, flash flooding caused a mail truck to overturn near the National Zoo in D.C. and a funnel cloud was observed near Culpeper, VA. IAD also set a calendar day record of 1.29" on the 30th and DCA measured 1.35" on the 22nd in a historic month. (August continued wet, see monthly summary above).

Summer 2018 Weather Statistics for the Washington/Baltimore Area

		Station	Temperatu	ıres (°F)		Extre	me/Day	Precipitation (inches)			
Location	AvMx	AvMin	AvgT	NmlT	DepNml	Max	Min	Total	Nml	DepNml	
National (DCA)	87.3	71.3	79.3	77.7	+1.8	98/7-16	56/6-4	20.13	10.44	+9.69	
Baltimore (BWI)	86.0	66.7	76.3	74.9	+1.4	99/7-3	50/6-12	25.34	10.82	+14.52	
Dulles (IAD)	85.3	65.7	75.4	74.9	+0.5	96/7-3	52/6-5,6-12	22.61	11.18	+11.43	

Looking Ahead to September: After a slightly warmer and wetter than normal summer, what does autumn hold for the Washington area?

Seasonal Temperature Extremes

Coldest: 1917 (Average Temperature: 52.9°F; Dep. Nml.: -6.5°F) **Warmest:** 1973 and 1931 (Average Temperature: 63.1°F; Dep. Nml. +3.7°F)

Extreme Minimum Temperature: 11°F (Nov. 30, 1929) Extreme Maximum Temperature: 104°F (Sep. 7, 1881) Most Days With Lows < 32°F, 19 (1901); Highs > 90°F, 14 (1980)

Seasonal Precipitation Extremes

Wettest: 1934 (Total Precipitation: 21.78"; Dep. Nml.: +11.74")
Driest: 1930 (Total Precipitation: 1.83"; Dep. Nml. -8.21")

Snowiest: 1987 (Total Snowfall: 11.5")

Most 1 Day Precipitation: 5.16" (Sep. 2, 1922) Most Snowfall in 1 Day: 11.5" (Nov. 11, 1987)