

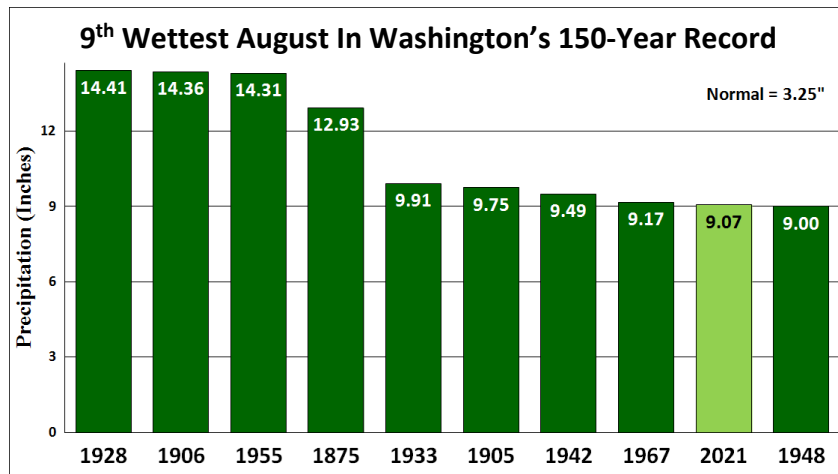


# PRESTO

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



## AUGUST 2021: Hot & Finally Ample Rainfall for All SUMMER: Often Hot; Dry West/Wet East; Frequent Severe Events



### August Highlights

- ☁ Above normal **temperatures**: DCA 80.9°F (+1.5°); BWI 79.7°F (+3.5°); IAD 78.6°F (+2.9°), including **record highs** at IAD on 11<sup>th</sup>-13<sup>th</sup>
- ☁ Near to well above normal **precipitation**: DCA 9.07" (+5.82"); BWI 4.36" (+0.27"); IAD 4.93" (+1.40")
- ☁ 10<sup>th</sup>-11<sup>th</sup> – Widespread thunderstorm damage on both days ... on the 10<sup>th</sup>: **66 mph** wind gust in Germantown (Montgomery Co.), MD and **1.75"** hail in Upperville (Fauquier Co.), VA ... and on the 11<sup>th</sup>: **1.75"** hail near Criglersville (Madison Co.), VA.
- ☁ 13<sup>th</sup> – Widespread thunderstorm wind damage occurred once again across much of WV, VA and MD, including measured severe gusts of **74 mph** at the Warrenton Airport (Fauquier Co.), VA, **63 mph** near High View Manor (Frederick Co.), VA, **61 mph** near Dale Enterprise (Rockingham Co.), VA, and **58 mph** in Germantown, MD; as well as **1.75"** hail in Oakton (Fairfax Co.), VA.
- ☁ 14<sup>th</sup>-15<sup>th</sup> – Heavy rains led to flooding from northern VA to parts of MD, with upwards of **5"** in Fairfax Co., VA & Charles Co., MD
- ☁ 20<sup>th</sup> – Flooding from heavy AM rains of **2-3"** in the DC metro and a few points south, with **3-4"** across parts of Northwest, DC
- ☁ 26<sup>th</sup>-28<sup>th</sup> – Widespread wind damage from storms occurred each day, including **62 mph** wind gusts in Potomac and Gaithersburg (Montgomery Co.), MD (26<sup>th</sup>). Three people were injured (27<sup>th</sup>) when power lines and a tree blew down on a vehicle in Silver Spring (Montgomery Co.), MD. One person was injured (28<sup>th</sup>) by lightning on the Univ. of Virginia campus (Albemarle Co.), VA.

### Summer Seasonal Highlights

- ☁ June and August heat led to above normal **temperatures**: DCA 79.5°F (+0.6); BWI 78.6°F (+2.6); IAD 77.1°F (+1.9)
- ☁ June 23<sup>rd</sup> & 24<sup>th</sup>'s morning lows dropped to the 40s as far east as the MD Piedmont, with 45°F at Martinsburg (Berkeley Co.), WV
- ☁ Near to above normal, yet highly variable, **precipitation**: DCA 18.82" (+7.04); BWI 10.76" (-1.79); IAD 11.01" (-0.97)
- ☁ **June 8<sup>th</sup>-11<sup>th</sup>**: 4-day rainfall totaled **4-8"** for several areas, including around Culpepper Co., VA where flooding occurred
- ☁ June 14<sup>th</sup>: storms dropped **1-1.25"** hail near both metros, while heavy rains led to a **water rescue** in Towson (Baltimore Co.), MD
- ☁ June 21<sup>st</sup>: widespread wind damage from storms, with a **65 mph** maritime gust near Cape St. Claire (Anne Arundel Co.), MD
- ☁ **July 14<sup>th</sup>**: storms brought widespread wind damage south of DC, **63 mph** gust at the Fredericksburg AP (Spotsylvania Co.), VA
- ☁ July 17<sup>th</sup>: **microburst** near Martinsburg, WV, **1 injury** in Pendleton Co., WV, and **water rescues** just east of Baltimore, MD
- ☁ July 26<sup>th</sup>: storms downed over 100 trees in DC, with a **63 mph** gust at Catholic Univ.; while **1-1.50"** hail fell near Staunton, VA
- ☁ July 29<sup>th</sup>: supercells brought a **downburst** and **2.25"** hail to the Fredericksburg, VA area, and an **EF0 tornado** to Howard Co., MD.

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## August & Summer Season 2021

**August Temperatures:** Overall, August was a warm month despite starting out on the cool side. All three stations reported above normal monthly temperature anomalies, with BWI having the greatest anomaly at +3.5. Dulles set **record highs** on three consecutive days (11<sup>th</sup>-13<sup>th</sup>), reaching **100°F** on the 12<sup>th</sup>, as well as record high minimums on the 24<sup>th</sup> (**73°F**) and 30<sup>th</sup> (**72°F**). The 18<sup>th</sup> also found record high minimums at DCA (**79°F**) and BWI (**78°F**). IAD reported its 3<sup>rd</sup> warmest August on record, DCA recorded its 9<sup>th</sup>.

**August Precipitation and Severe Weather:** Rainfall varied considerably across the region with areas west and north of the DC metro much drier than the metro and areas to the south and east. DCA totaled 9.07" for August (+5.82), making it the 9<sup>th</sup> wettest August on record, and the wettest since 1967. This was also the first August at DCA with two days totaling 2"+ since 1955. BWI (+0.27) and IAD (+1.40) were also above normal, but not nearly as wet as DCA. On the 9<sup>th</sup>, heavy rains slowly trained across DC's northern and eastern suburbs, with as much as **4.31"** in White Oak (Montgomery Co.), MD and isolated flooding. On the 16<sup>th</sup>-17<sup>th</sup>, these same areas saw several rounds of rain, with 24-hour totals as high as **3.27"** in Colesville (Montgomery Co.), MD and **3.19"** in Friendship Heights (Northwest), DC. On the 17<sup>th</sup>, several evening storms totaled **3.35"** in Childs (Cecil Co.), MD.

Damaging winds in thunderstorms was the primary severe weather hazard observed, especially on the 13<sup>th</sup>. There were several observed wind gusts over 60 mph that day, including a 74 mph gust at the Warrenton Airport (Fauquier Co.), VA. Waterspouts were observed over the Chesapeake Bay ... offshore Crisfield, MD (21<sup>st</sup>) and just offshore over the tidal Choptank River between Oxford and Trappe, MD (22<sup>nd</sup>). Three people were injured when power lines and a tree fell on a car in Silver Spring (Montgomery Co.), MD on the 27<sup>th</sup>, while one person was injured by lightning on the UVA campus (Albemarle Co.), VA on the 28<sup>th</sup>. See the August Highlights section for more notable events and further information.

### August 2021 Weather Statistics for the Washington/Baltimore Area

Location	Station Temperatures (°F)					Extreme/Day		Precipitation (inches)			
	Av Max	Av Min	Avg T	Nml T	ΔNml	Max	Min	Total	Nml P	ΔNml	Year To Date
National (DCA)	89.0	72.7	80.9	79.4	+1.5	96/12,13	66/2,5	9.07	3.25	+5.82	35.18
Baltimore (BWI)	88.8	70.5	79.7	76.2	+3.5	98/12,13	60/5	4.36	4.09	+0.27	27.36
Dulles (IAD)	88.9	68.3	78.6	75.7	+2.9	100/12	57/2,5	4.93	3.53	+1.40	24.59

**Summer (Jun-Aug) Temperatures:** Overall, the summer was warm despite several cool periods. The three airports all had positive monthly temperature anomalies, with BWI having the largest at +2.6. Dulles was the only station to hit **100°F** this summer (August 12<sup>th</sup>). August was the warmest month of the summer for most locations. Record highs of 92°F and 93°F occurred at IAD on 6/5 and 6/6, respectively. The late June chill dropped minimums to 46°F at both the Winchester and Shenandoah Airports on 6/24.

**Summer Precipitation and Severe Weather:** Rainfall was highly variable during the summer with metro DC and areas south and east well above normal while areas to the north and west of metro DC were generally below normal. There were several long stretches of rainless days for areas west and north of metro DC. DCA had a significant positive rainfall anomaly (+7.04) while BWI (-1.79) and IAD (-0.97) were slightly below normal for the summer. The greatest 1-day rain totals were all in MD: **5.95"** on 6/9 near St. Mary's City (St. Mary's Co.); **8.41"** on 6/11 at Riverside (Charles Co.); and **4.55"** on 7/25 in Rising Sun (Cecil Co.).

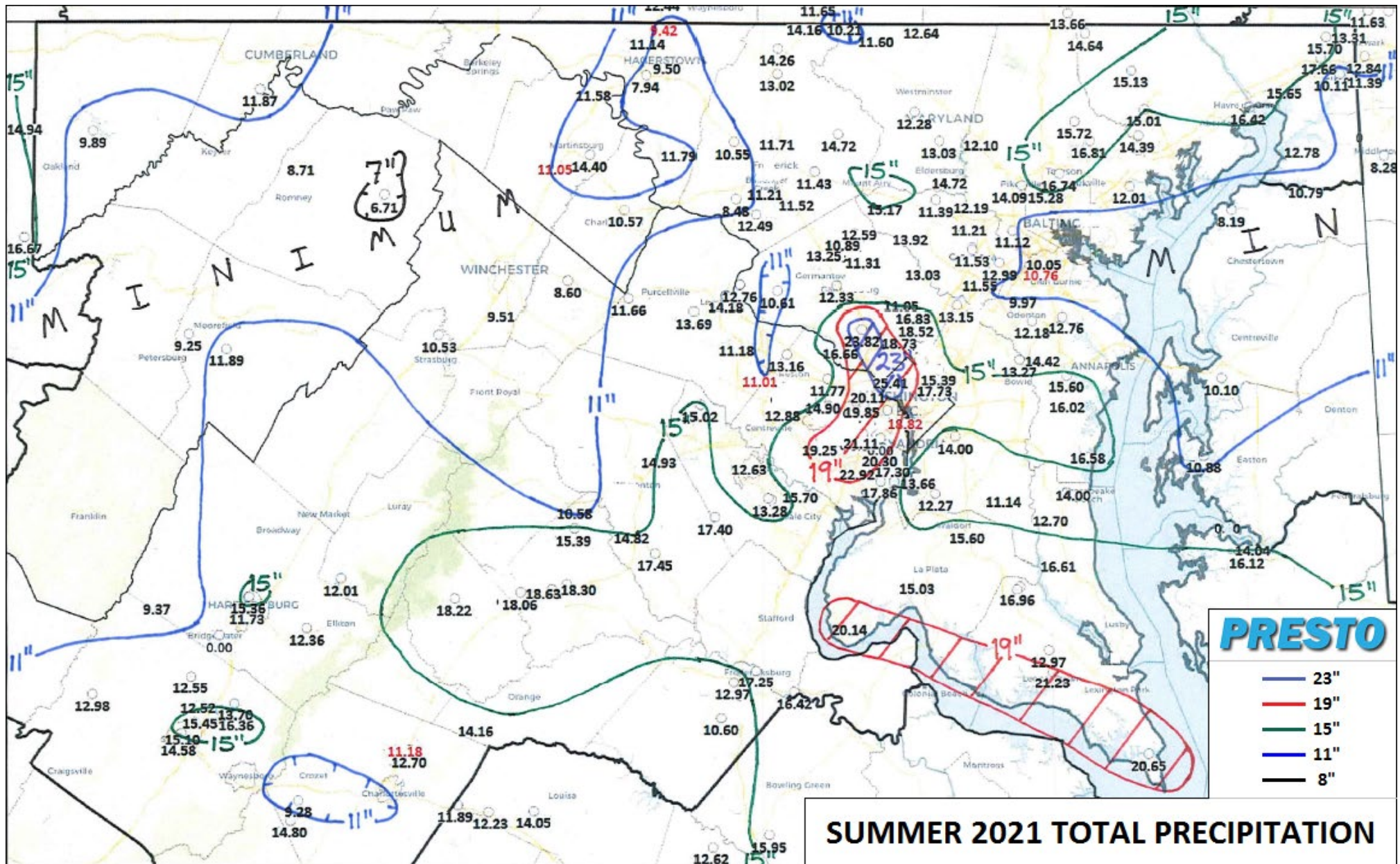
There were **four tornadoes** during the summer...one (**EF0**) occurred on 6/3 near Jacksonville, MD; two more were spawned on 7/1 - one that crossed from Arlington, VA into Northwest DC (**EF1**) and a brief (**EF0**) that hit Northeast DC. Tornadoes in Washington, D.C. are rare, with only three others occurring since 1950 before this year. Five tornadoes have now touched down inside the district since 1950. This summer's last tornado was another brief (**EF0**) that hit Columbia (Howard Co.), MD on July 29<sup>th</sup>. Following the four tornadoes on 5/4, these summer events brought the region's 2021 total to 8 tornadoes.

Severe weather peaked in July with several rounds of widespread damaging thunderstorms. In addition to the most notable severe events (see above highlights), June 30<sup>th</sup> saw numerous damage reports across Loudoun Co., VA and two maritime wind gusts of **67 mph** off of Cecil Co, MD's shores. On July 12<sup>th</sup>, heavy rains and flooding required a **swift water rescue** in Aberdeen (Harford Co.), MD. July 28<sup>th</sup>'s **1-1.75"** hail covered the ground in parts of St. Mary's Co., MD, with **2.00"** hail in Scottsville (Albemarle Co.), VA.

### Summer 2021 Weather Statistics for the Washington/Baltimore Area

Location	Station Temperatures (°F)					Extreme/Day		Precipitation (inches)			
	Av Max	Av Min	Avg T	Nml T	ΔNml	Max	Min	Total	Nml P	ΔNml	Greatest Day
National (DCA)	87.8	71.0	79.5	78.9	+0.6	97/7-26	57/6-1,23	18.82	11.78	+7.04	2.38/8-14
Baltimore (BWI)	88.7	68.4	78.6	76.0	+2.6	99/6-30	51/6-1,23	10.76	12.55	-1.79	1.36/8-1
Dulles (IAD)	87.7	66.5	77.1	75.2	+1.9	100/8-12	49/6-17,23	11.01	11.98	-0.97	1.09/6-10

**Looking Ahead:** It has to get cooler in September, correct? The drop in monthly average temperature from August to September is the first significant decrease of the calendar year, ranging from 7.0-7.5°F across the three airports. The first decrease in normal monthly temperatures during the calendar year occurs from July (the peak) to August, at 1.5-1.9°F. However, the monthly average temperatures in August 2021 were near or slightly above the average temperatures recorded in July 2021.



**SUMMER 2021 TOTAL PRECIPITATION**