

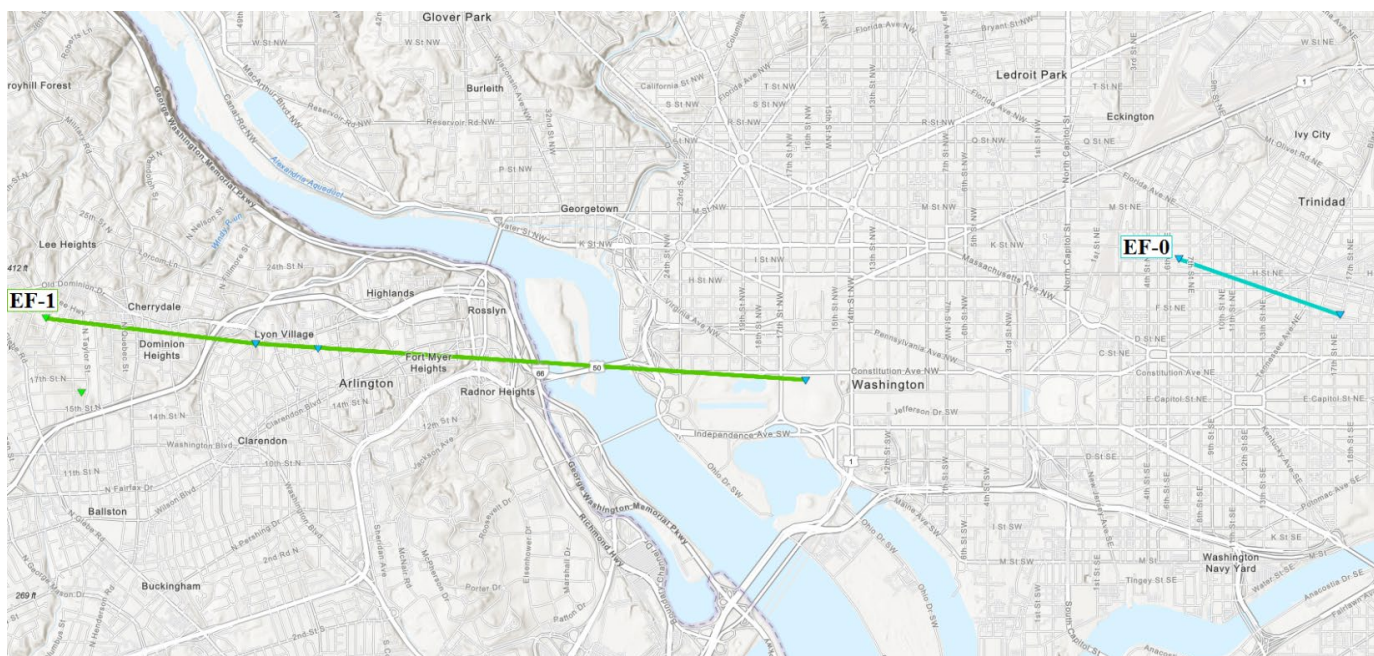


# PRESTO

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



## JULY 2021: Near to Slightly Above Normal Temperatures; Near to Below Normal Rainfall; Two Tornadoes Hit DC on 7/1



### July Highlights

- Near to above normal **temperatures**: DCA 80.9°F (-0.1); BWI 80.2°F (+1.9); IAD 78.3°F (+1.1)
- Variable **precipitation**, overall near to below normal: DCA 4.24" (-0.09); BWI 3.65" (-0.83); IAD 2.43" (-1.72)
- 1<sup>st</sup> – Several rounds of storms impacted the D.C. metro and vicinity. An **EF1** tornado with estimated winds of **90 mph** crossed from Arlington, VA to downtown D.C., and an **EF0** tornado (est. **80 mph**) struck Northeast D.C. Hail up to **1.75"** in diameter fell in Bowie (Prince Georges Co.), MD, and five people were injured when **winds collapsed a building** in Brightwood Park, D.C. A long path of damage from winds (est. as high as **80 mph**) occurred from Mitchellville (Prince George's Co.) to south of the Bay Bridge; an **EF1** tornado with estimated winds of **90 mph** crossed from Arlington, VA to downtown D.C., followed by an **EF0** (est. **80 mph**) which struck Northeast D.C.
- 8<sup>th</sup> – Tropical Storm Elsa aided strong storms that caused damage in Rose Hill (Fairfax Co.) and Alexandria, VA.
- 14<sup>th</sup> – Late day storms led to a dozen reports of downed trees across the VA Piedmont, but more notably, numerous trees were downed in Fredericksburg, VA, and Charles and St. Mary's Counties in MD. The Fredericksburg Airport (in Spotsylvania Co.), VA measured a **63 mph** gust, and two water spouts were observed on the Potomac River south of St. Mary's County, MD.
- 17<sup>th</sup> – Widespread severe storms from the mountains to points north of DC. A **microburst** caused tree damage near Martinsburg, WV, and one person was injured when a tree went through a windshield in Brandywine (Pendleton Co.), WV. Southeastern Baltimore County saw flooding which led to **water rescues**, and a downed tree damaged an apartment building. Roads were blocked in and near Frederick, MD, and Winchester and Warrenton in VA due to trees and power lines being down.
- 25<sup>th</sup> – Flooding from very heavy rains near the Susquehanna River was the worst in Cecil County, MD, where many vehicles were stranded near Farmington, Main Street was washed out in Port Deposit, and a **water rescue** was needed in Perrysville.
- 29<sup>th</sup> – Supercells downed trees across central MD and spawned a brief **EF0** tornado (est. **70 mph**) in Columbia (Howard Co.), MD. A **downburst** (est. **90 mph**) hit the Fredericksburg area, with **2.25" hail** near Falmouth (Stafford Co.), VA.

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## July 2021

**July Temperatures:** The average monthly temperatures for July were close to normal. Stations west of the metros were slightly below normal in general while stations in and near the metro were generally slightly above normal. BWI had the greatest departure from normal at +1.9°F. IAD had a +1.1°F departure from normal, and DCA was 0.1°F below normal. To the west, Charlottesville, VA was 0.5°F above normal, Hagerstown, MD was 0.1°F above normal, and Martinsburg, WV was 0.2°F below normal. The tally of 90+ days through the end of July found DCA with 30 (near their mean/median of the previous 10 years), while IAD's 31 was the site's second-highest total since 2011.

A mild heat wave occurred during the 11<sup>th</sup>-17<sup>th</sup>, with temperatures typically in the low to mid 70s to low 90s at DCA/IAD. DCA and IAD set new record high minimum temperatures on the 12<sup>th</sup> (78°F and 74°F, respectively) while BWI tied a record high minimum of 77°F. IAD also set a record high minimum of 75°F on the 13<sup>th</sup>. Coolest conditions were found on the 2<sup>nd</sup>-4<sup>th</sup> and the 22<sup>nd</sup>-24<sup>th</sup>. Extremes ranged from 98°F at BWI on the 16<sup>th</sup> to 46°F at Mill Gap (Highland Co.), VA on the 3<sup>rd</sup>.

**July Precipitation and Severe Weather:** Rainfall for July was below normal in most locations. IAD had the greatest departure from normal at -1.72"; followed by BWI at -0.83" while DCA was just below normal with a -0.09" departure. For areas outside the metros, Martinsburg, WV was 1.39 below normal, Hagerstown, MD was 1.26" below and Charlottesville was 0.85" below normal. Extremes ranged from a maximum of ~7"-8" in parts of Cecil and St. Mary's Counties to a minimum of less than 1" in Harrisonburg, VA.

Only 5 tornadoes have tracked within the District of Columbia since records began in 1950, with the latest 2 occurring on July 1<sup>st</sup>. The **EF-1** that started in Waverly Hills (Arlington Co.), VA, had peak estimated winds of 90 mph, a max width of 125 yards, and tracked 4.4 miles, intermittently downing trees and power lines, crossing Rosslyn and the Roosevelt Bridge, and downing more trees along Constitution Avenue before mangling fencing installed for the 7/4 celebration and finally ending on the mall just south of the Ellipse. Minutes later, the **EF-0** (80 mph, 75 yards, 0.75 miles) tracked from H Street Corridor to Kingman Park, downing several trees. Rainfall reports from the day's thunderstorms were also impressive, with **2.82"** near Crofton (Anne Arundel Co.), MD, **2.79"** in west Arlington, VA, and **2.26"** in Friendship Heights (Northwest), DC.

Despite generally dry conditions, severe weather was frequent (please see page 1 *Highlights* for further details of the greatest events). The 7<sup>th</sup>'s storms spread damage from western VA to central MD, and especially in southern Baltimore County, with **2.75"** observed near Leesburg (Loudoun Co.), VA. On the 8<sup>th</sup>, most of Elsa's heavy rains stayed south of the region, but **3.91"** was measured near Great Mills (St. Mary's Co.), MD. The 9<sup>th</sup>'s generally strong storms caused wind damage and flooding near Washington as well as Calvert and Cecil Counties in MD, with **2.62"** reported southeast of Brandywine (Prince George's Co.), MD. Thunderstorms on the 12<sup>th</sup> spread from eastern WV/western MD to northeastern MD, while heavy rains as great as **2.78"** near Jacksonville (Baltimore Co.), MD, led to a **swift water rescue** in Aberdeen (Harford Co.), MD.

The month's most extreme downpours occurred on the 25<sup>th</sup> and caused flooding in northeastern MD. The greatest rainfall total was **4.55"** in Rising Sun (Cecil Co.), MD. Storms on the 26<sup>th</sup> then brought widespread wind damage from western VA, where large hail fell across Augusta County, VA, including **1.50" hail** near Afton...through the DC metro where **2.17"** was reported in Mount Vernon (Fairfax Co.), VA, and a **67 mph** gust was recorded at Catholic University (Northwest), DC. On the 27<sup>th</sup>, thunderstorms caused widespread tree damage across central VA and **2.44"** in Staunton, VA. The 28<sup>th</sup>'s storms downed many trees around the DC metro, but large hail was perhaps just as notable between hailstones as large as **1.75"** covering the ground in California (St. Mary's Co.) and **2.00" hail** reported in Scottsville (Albemarle Co.), VA.

### July 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)	89.5	72.2	80.9	81.0	-0.1	97/26	63/3	4.24	4.33	-0.09	26.11
Baltimore (BWI)	91.0	69.3	80.2	78.3	+1.9	98/16	59/3	3.65	4.48	-0.83	23.00
Dulles (IAD)	89.3	67.3	78.3	77.2	+1.1	95/17,27	58/4	2.43	4.15	-1.72	19.66

**Looking Ahead:** DCA and IAD normally see the greatest decrease in monthly precipitation of any consecutive months from July to August. BWI also decreases from July to August, yet the site's greatest drop is from March to April (-0.62"). Since most of the region was dry for July, will August still have the typical decrease in rainfall and be another dry month?

Station	Normal Precipitation (Inches)		
	July	August	Difference
DCA	4.33	3.25	-1.08
BWI	4.48	4.09	-0.39
IAD	4.15	3.53	-0.62