

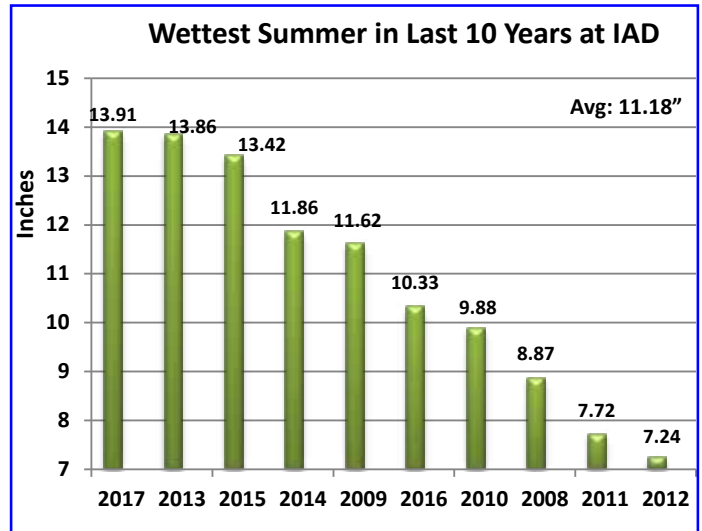
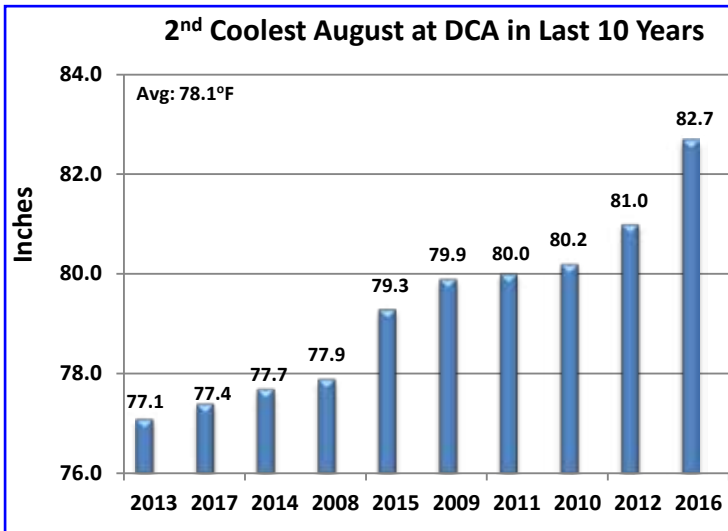


# PRESTO

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



## AUGUST 2017: Subnormal Temperatures, Numerous Events of Flooding and Severe Weather SUMMER 2017: No Extreme Heat, Above Normal Rainfall



### August Highlights

- ✦ Negative departures were -0.7°F at DCA, -1.6°F at BWI and -2.1°F at IAD
- ✦ Only 2 days at or above 90°F at IAD, fewest in August since 2013
- ✦ Daily maximum readings held in the chilly 60s on the 29<sup>th</sup> with IAD establishing a record cool high of 67°F
- ✦ Rainfall was above normal at all three major airports: DCA 4.58" (+1.65"); BWI 4.60" (+1.31"); and IAD 3.83" (+0.30")
- ✦ On the 3<sup>rd</sup>, damaging thunderstorm winds caused a tree to fall onto a vehicle, killing one and injuring three occupants in the car near Timonium in Baltimore County
- ✦ On the 11<sup>th</sup>, an EF-0 tornado was reported in Broad Run (Fauquier County), VA. Winds were estimated at 75 mph with a maximum path width of 100 yards. Numerous trees were uprooted and large branches snapped with some falling onto power lines and homes. Torrential rainfall also occurred resulting in a severe mudslide at George Washington's Mount Vernon estate resulting in damage in excess of \$1 million, according to press reports. Rainfall totals included 4.65" in Ft. Washington (Prince Georges County), 3.58" in Alexandria and 3.06" in Franconia (Fairfax County), VA.
- ✦ On the 18<sup>th</sup>, lightning struck a Call Center injuring 10 in Bel Air (Harford County), a funnel cloud was observed near Countryside (Loudoun County) and a water rescue occurred near the National Zoo. Highest rainfall amounts included 5.25" in Hickory (Harford County) and 2.94" in Annapolis (Ann Arundel County), MD.

### Summer Highlights

- ✦ Slightly above normal summer temperatures: DCA 78.8°F (+1.1); BWI 75.3°F (+0.4); IAD 74.7°F, (+0.2)
- ✦ DCA recorded 37 days with highs at or above 90°F, BWI, 26, IAD, 21
- ✦ DCA recorded just 9 days with highs at or above 95°F, BWI, 4, and IAD only 1
- ✦ Well above normal rainfall at DCA (+4.42"); BWI (+2.29") and IAD (+2.73")
- ✦ Summer's first heat wave occurred from June 11-14 with maximum temperatures at or above 90°F at DCA and IAD; at BWI, from the 11<sup>th</sup>-13<sup>th</sup>. On June 12, DCA equaled a daily record at 95°F; on the 13<sup>th</sup>, BWI equaled a daily record at 97°F and IAD set a new record at 95°F
- ✦ On June 19, an EF-0 tornado with winds estimated at 70 mph, was confirmed in the Four Corners section of Silver Spring, (Montgomery County), MD; path width, 100 yards and path length 0.2 miles. Two injuries and significant damage to some homes was reported; Elsewhere, vehicles and power lines were damaged from falling trees with at least one home uninhabitable; part of a tree snapped off, landing near a major intersection of Adelphi Road and University Blvd in Adelphi (Prince Georges County); a tree landed on a house near Annapolis (Ann Arundel County). Trees were also down near Paeonian Springs (Loudoun County). Winds gusted to 58 mph in Chantilly (Fairfax County), VA. Rainfall was significant in some areas: 2.87" near Rixeyville (Culpeper County) VA, 2.43" near Park Hall (St. Mary's County), MD.
- ✦ Well above to record July rainfall amounts: DCA, 9.15" (+5.42"); BWI, 7.11" (+3.04"); IAD, 8.80" (+5.13"). It was the wettest July on record at IAD (see graphic); at DCA, it was wettest July since 1969 at DCA and 7<sup>th</sup> wettest on record; BWI observed its wettest July since 2005
- ✦ On July 28-29, the area was deluged with 3-7+" of rainfall, flooding roads and leading to numerous water rescues. Highest rainfall totals in Maryland included 7.52" in Severn (Anne Arundel County), and 6.88" in Kensington (Montgomery County). In Virginia, 7.18" was reported in Falls Church (Fairfax County) and 4.97" in Ballston (Arlington County). In D.C, the National Arboretum measured 4.80". DCA set a calendar day rainfall record on the 28<sup>th</sup> (3.31"), only the 2<sup>nd</sup> such record in July since 1978; BWI also set a calendar day rainfall record of 2.58"

## August 2017

**Temperature:** Monthly temperatures were below normal at all three major airports for only the second time since May 2016. Negative departures were -0.7°F at DCA, -1.6°F at BWI and -2.1°F at IAD. There were no periods of excessive heat with the monthly maximum reading a modest 93°F at IAD and 92°F at DCA and BWI. The month featured only 2 days at or above 90°F at IAD, the fewest in August since 2013. DCA reported 9 days at or above 90°F and BWI 4 such days. Daily maximum readings held in the chilly 60s on the 29<sup>th</sup> with IAD setting a record cool high of 67°F. The 7<sup>th</sup> was unseasonably cool as well with IAD breaking another record cool high temperature at 74°F. In contrast, the month featured numerous days with high humidity and uncomfortably warm overnight minimum readings. DCA recorded 21 days with minimum readings at or above 70°F; IAD's low of 75°F on the 18<sup>th</sup> broke a daily record.

**Precipitation:** Rainfall was above normal at all three major airports: DCA, 4.58" (+1.65"); BWI, 4.60" (+1.31"); and IAD 3.83" (+0.30"). While not the intensity of July rainfall, the month featured numerous severe weather hazards. On the 1<sup>st</sup>, heavy rainfall caused Broad Branch Creek to overflow its banks onto the roadway in D.C. while Hyattsville, (Prince Georges County), MD, reported 2.04". The following day, 1.0" hail struck near Baltimore Martin (Baltimore City) and trees and thunderstorm winds downed wires near Fallston (Harford County), MD. Then on the 3<sup>rd</sup>, thunderstorm winds caused a tree to fall on a vehicle, killing one and injuring three occupants near Timonium in Baltimore County; siding was blown off a building in Falls Church, VA and a tree was downed near Catholic University in D.C.. Highest rainfall totals were 1.89" in Greenbelt (Prince Georges County) and 1.41" in Herndon (Fairfax County), VA. On the 7<sup>th</sup>, a water spout was recorded over Tangier Sound, VA. Rainfall was heavy in some areas, including 2.72" in Staunton, (Augusta County), VA , 2.17" in Huntingtown (Calvert County), MD, and 1.47" at DCA.

On the 11<sup>th</sup>, an EF-0 tornado was reported in Broad Run (Fauquier County), VA; winds were estimated at 75 mph with a maximum path width of 100 yards. Numerous trees were uprooted and large branches downed power lines and damaged homes. Torrential rainfall resulted in a severe mudslide at Mount Vernon, resulting in damage in excess of \$1 million to this historic site, according to press reports. Rainfall totals included 4.65" in Ft. Washington (Prince Georges County), 3.58" in Alexandria and 3.06" in Franconia (Fairfax County), VA. The following day, widespread damaging thunderstorm winds moved through the region downing trees near Friendship (Howard County), MD, near the U.S. Capitol and near Lincoln (Loudoun County) VA. Rainfall totaled 1.98" in Brandywine (Prince Georges County) and 1.41" in Leesburg, (Loudoun County).

On the 15<sup>th</sup>, torrential downpours caused flooded roads in Jarrettsville (Harford County), MD, and at American University in D.C.; rainfall totals included 3.26" in Scarboro (Harford County) and 1.97" in D.C. On the 18<sup>th</sup>, lightning struck a Call Center injuring 10 in Bel Air (Harford County), a funnel cloud was observed near Countryside (Loudoun County) and a water rescue occurred from flash flooding near the National Zoo. Highest rainfall amounts included 5.25" in Hickory (Harford County) and 2.94" in Annapolis (Ann Arundel County), MD. The following day, powerful thunderstorm winds knocked down trees in Walkersville (Frederick County), MD, and in Cresthill (Rappahannock County), VA, with rainfall totaling 2.25" in Cockeysville, (Baltimore County). Finally on the 21<sup>st</sup>, 1.0" hail struck near Dundalk and Essex (Baltimore County) and high water flooded roads in Dentsville (Charles County); rainfall totaled 1.30" in Leonardtown, (St. Mary's County), MD.

### August 2017 Weather Statistics for the Washington/Baltimore Area

Location	Station Temperatures (°F)					Extreme/Day		Precipitation (inches)			
	AvMx	AvMin	AvgT	NmlT	DepNml	Max	Min	Total	Nml	DepNml	Year to Date
National (DCA)	84.7	70.2	77.4	78.1	-0.7	92/22	62/30	4.58	2.93	+1.65	29.65
Baltimore (BWI)	82.9	64.2	73.5	71.9	-1.6	92/18,22	56/28	4.60	3.29	+1.31	30.24
Dulles (IAD)	82.9	63.8	73.3	75.4	-2.1	93/18	54/28	3.83	3.53	+0.30	33.00

**Summer (June-August) Temperatures:** In a change from previous hot summers, seasonal temperatures were near normal: DCA, +1.1°F; BWI, +0.4°F; and IAD, +0.2°F. June started the season above normal. The summer's first heat wave occurred June 11-14 with maximum temperatures at or above 90°F at DCA and IAD (11<sup>th</sup>-13<sup>th</sup> at BWI). On the 12<sup>th</sup>, DCA equaled a daily record at 95°F. On the 13<sup>th</sup>, BWI equaled a daily record at 97°F; IAD set a new record at 95°F and DCA broke the record for its warmest daily minimum at 75°F. On the 18<sup>th</sup>, IAD set a daily record high minimum reading of 73°F. June did feature some cooler days. On the 28<sup>th</sup>, BWI broke a calendar day record low reading of 51°F. July was also above normal but never broke 100°F. DCA recorded 20 days with maximum readings at or above 90°F and 7 days at or above 95°F, including 4 consecutive days: 19<sup>th</sup>-22<sup>nd</sup>. BWI reported 14 days at or above 90°F and 3 days at or above 95°F. IAD recorded 13 days with highs at or above 90°F. IAD tied a record at 72°F for a high minimum on July 1. August was cool (see monthly summary above).

**Summer Precipitation:** Seasonal rainfall was well above normal across the area: DCA, 14.86" (+4.42"); BWI, 13.11" (+2.29") and IAD, 13.91" (+2.73"). It was the wettest summer in the last 10 years at IAD (see graphic). June started the season dry. DCA recorded no measurable precipitation until the 16<sup>th</sup>, falling shy by 1 day of equaling its longest period of only a trace since 1967. At IAD, it was the 4<sup>th</sup> driest and driest since 1988; at BWI it was the driest since 1991. On June 19 a line of strong to severe thunderstorms struck the metro area spawning an EF-0 tornado in the Four Corners section of Silver Spring, (Montgomery County), MD; path width was 100 yards and path length 0.2 miles. Two injuries were reported and falling trees significantly damaged homes, vehicles and power lines with at least one home uninhabitable. Part of a tree snapped off landing near a major intersection of Adelphi Road and University Blvd in Adelphi (Prince Georges County) and a tree landed on a house near Annapolis (Ann Arundel County). July brought well above to record rainfall. DCA marked its wettest July since 1969 and 7<sup>th</sup> wettest on record. The month's largest rainfall event occurred on the 28<sup>th</sup>-29<sup>th</sup> when most locations reported 3"-7", leading to numerous water rescues. Multiple vehicles were trapped in high water in Wheaton (Montgomery County), MD. A water damaged wall collapsed at an apartment complex in D.C. and a water spout was observed near Plum Point, MD. On the 1<sup>st</sup>, a fast moving line of thunderstorms caused a tree limb to fall on a house in College Park (Prince Georges County), MD, and a downed tree blocked roads in Clifton (Fairfax County), VA. On the 5<sup>th</sup>, localized storms closed roads in Greene County, VA. On the 14<sup>th</sup>, thunderstorm winds downed trees in Delaplane (Fauquier County), and Alexandria and Vienna (Fairfax County), VA. On the 15<sup>th</sup>, a waterspout was observed over the Chester River near Lover Point, MD. On the 17<sup>th</sup>, localized storms flooded roads and 1" hail struck Laytonsville. On the 22<sup>nd</sup>, one person was injured when damaging thunderstorm winds caused a tree to fall on a car in Harpers Ferry (Washington County), MD. August was wet. (see monthly summary above).

### Summer 2017 Weather Statistics for the Washington/Baltimore Area

Location	Station Temperatures (°F)					Extreme/Day		Precipitation (inches)		
	AvMx	AvMin	AvgT	NmlT	DepNml	Max	Min	Total	Nml	DepNml
National (DCA)	87.0	70.6	78.8	77.7	+1.1	98/7-20	56/6-8	14.86	10.44	4.42
Baltimore (BWI)	85.5	65.1	75.3	74.9	+0.4	98/7-20	48/6-8	13.11	10.82	2.29
Dulles (IAD)	85.0	64.5	74.7	74.9	+0.2	95/6-13	50/6-8,28	13.91	11.18	2.73

**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)