

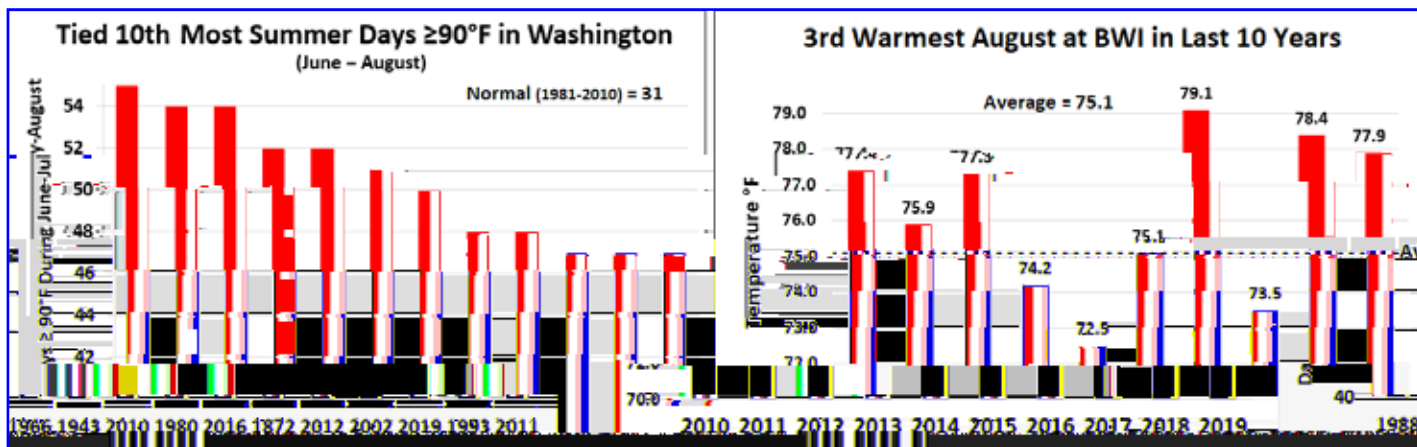


PRESTO

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



AUGUST 2019: Another Hot Summer Month; Numerous Storms SUMMER: Well Above Normal Temperatures; Frequent Episodes of Severe Weather



August Highlights

- Temperatures well above normal: DCA, +2.0°F; BWI, +2.8°F; IAD, +0.8°F; 13th hottest on record at DCA
- Intense heat and humidity from 17th-22nd at all three airports; temperatures were at or above 90°F; DCA and BWI exceeding 95°F from the 18th-20th
- DCA equaled a calendar day record of 98°F on the 19th, while BWI broke its record at 99°F and then equaled a calendar day record on the 18th at 96°F; IAD equaled their record maximum at 95°F on the 19th
- Monthly precipitation totals were well below normal at DCA, 1.99" (-0.96") and IAD 2.39" (-0.90") but well above normal at IAD, 4.79" (+1.26")
- Widespread severe weather on the 20th, hail measured 1.25" on the DC Mall, near the U.S. Capitol and at Andrews AFB (Prince Georges County), MD, while 1.00" hail struck near the National Zoo in DC and in Herndon (Fairfax County). Winds gusted to 61 mph near New Market (Shenandoah County), VA; rainfall measured 2.86" in Nanjemoy (Charles County), MD, and 2.47" in King George (King George County), VA

Summer Highlights

- Above normal temperatures: DCA, +1.8°F; BWI, +3.1°F and IAD, +1.2°
- DCA numbered 47 days with highs at or above 90°F, BWI, 45; and IAD, 42
- DCA and BWI marked their 10th consecutive summer with above normal temperatures
- The three major airports recorded above normal readings for each month of meteorological summer (June-August) for just the 6th time since 1962 but 4th such occurrence this decade
- DCA and BWI marked 10 consecutive Junes with above normal temperatures, IAD, 5
- On June 2, thunderstorm wind damage caused a tree to fall on a house in Aspen Hill and in Norbeck (Montgomery County), MD. Many areas were hit with hail including 1.75" hail measured in Rockville (Montgomery County) and in Great Falls (Fairfax County), VA, and 1.25" near American University, DC
- On the June 28, thunderstorm winds knocked down numerous trees, blocking roads, falling onto wires, and damaging three homes in Suitland-Silver Hill (Prince Georges County), MD. Dozens of trees were downed across Nelson County, VA. In Anne Arundel County, MD, a vehicle was trapped in high water near Crownsville and Pasadena measured 2.42" of rain.
- Baltimore equaled its 9th hottest month on record (graphic) and its hottest July since 2012.
- Heat wave from July 11-22 with readings at or above 90°F at DCA and IAD on all 12 days and for 11 days at BWI (12th-22nd). The most intense heat occurred from July 19-22 with high temperatures at or above 95°F at DCA and BWI. Readings reached the century mark at BWI on the 20th-21st and at IAD on the 21st.
- During the morning rush hour on July 8, a large thunderstorm complex with intense rain impacted much of the area, causing flash flooding, water rescues, flooding homes and businesses and closing portions of the Capital Beltway with water seeping into the White House, according to press reports. Drivers were stranded on vehicle rooftops on Canal Road, NW, in DC, while standing water was reported up to parked car windshields in Reston (Fairfax County), VA. DCA measured a calendar day record 3.44", including 3.30" in 57 minutes. Highest Maryland totals include 6.30" in Frederick (Frederick County), and 5.55" in North Potomac (Montgomery County); In Virginia, 5.01" near Merrifield (Fairfax County) and 4.50" near Westover (Arlington County).
- On July 22, a fatality occurred in Finksburg (Carroll County), MD, when thunderstorm winds caused a tree to fall on a man. Multiple trees were uprooted and knocked down near Friendship (Montgomery County) and winds gusted to 58 mph near Adams Morgan, DC, and near Green Valley (Frederick County), MD. Rainfall totaled 2.68" in Norrisville (Harford County), MD, and 1.77" in Hillsboro (Loudoun County), VA.

Author: Andy Horvitz, Editor: Melody Magnus, NWS Analyze Forecast and Support Office

Contact: Andy.Horvitz@noaa.gov, Melody.Magnus@noaa.gov, Alexander.McGinnis@noaa.gov PRESTO online at: <https://www.weather.gov/publications/presto>

August 2019

Temperatures: Readings were well above normal: DCA, +2.0°F; BWI, +2.8°F; IAD, +0.8°F. Temperatures were at or above 90°F on 16 days at DCA, 15 days at BWI and 13 at IAD. The most intense period of heat and humidity occurred from the 17th-22nd when all 3 airports were at or above 90°F. DCA and BWI exceeded 95°F from the 18th-20th. DCA equaled a calendar day record of 98°F on the 19th while BWI broke its record at 99°F and then equaled a calendar day record on the 18th at 96°F. IAD equaled its record maximum at 95°F on the 19th. DCA recorded 8 days when minimum readings were 75°F or greater. DCA equaled a record high minimum of 78°F on the 18th. In sharp contrast, IAD set a record low maximum temperature of 75°F on the 26th during 5 consecutive days with maximum readings below 80°F.

Precipitation: Amounts varied significantly across the area including the airports due to the areal coverage and intensity of showers and thunderstorms: DCA, 1.99" (-0.96") and BWI, 2.39" (-0.90") but IAD, 4.79" (+1.26"). The counties as well observed highly variable amounts. Montgomery County, MD, had monthly totals ranging from about 2" to 9" and Fairfax, VA, totals ranged from less than 2" to more than 7". There were numerous events with strong to severe thunderstorms. On the 1st, golf ball size hail (1.75") struck near Ferndale (Anne Arundel County), MD, and quarter size (1.00") near Staunton (Augusta County), VA. Some areas received copious rainfall, including Mechanicsville (St. Mary's County), MD, 2.15".

On the 6th, thunderstorm winds gusted to 70 mph near Fells Point with numerous reports of tree damage across the southern and eastern part of Baltimore City. Rainfall was heavy in parts of Maryland, including 2.36" in Greenbelt (Prince George's County) and 2.32" at Congressional Manor (Montgomery County). The following day (7th), thunderstorm winds knocked down a tree in Adams Morgan, DC. Heaviest rainfall included 2.97" in Germantown (Montgomery County) and 2.14" in Reston (Fairfax County).

On the 15th, numerous severe storms occurred across Virginia: 1.25" hail was measured near Hermitage (Augusta County) and roads were flooded in Fairfax. Rainfall totaled 3.01" in Oakton (Fairfax County); IAD reported a calendar day record 2.18". On the following day, a waterspout was observed over the Potomac River near Piney Point, (St. Mary's County) MD.

On the 18th, multiple trees were uprooted and snapped which caused damage to homes near Green Valley (Frederick County), MD. The next day in Virginia thunderstorms damaged numerous trees downed by winds near Barracks (Albemarle County). Vienna (Fairfax County) reported 1.40" of rain. Then on the 20th, severe thunderstorms impacted the region including the immediate metro area. Hail measured 1.25" on the Mall, near the U.S. Capitol in DC and at Andrews AFB (Prince Georges County), MD, while 1.00" hail struck near the National Zoo in DC and in Herndon (Fairfax County). Winds gusted to 61 mph near New Market (Shenandoah County), VA; rainfall measured 2.86" in Nanjemoy (Charles County), MD, and 2.47" in King George, VA. On the 21st, 1.77" soaked Silver Spring (Montgomery County), MD. The following day, multiple trees and wires were down in Gaithersburg (Montgomery County) and 2.50" deluged Cockeysville (Baltimore County). Finally on the 31st, roads were flooded in parts of Augusta County, VA, with Churchville recording 3.38".

August 2019 Weather Statistics for the Washington/Baltimore Area

Location	Station Temperatures (°F)					Extreme/Day		Precipitation			
	AvMx	AvMin	AvgT	NmlT	DepNml	Max	Min	Total	Nml	DepNml	Year to Date
National (DCA)	88.8	71.4	80.1	78.1	+2.0	98/19	64/24,26	1.99	2.95	-0.96	30.78
Baltimore (BWI)	88.4	67.4	77.9	75.1	+2.8	99/19	58/30	2.39	3.29	-0.90	27.09
Dulles (IAD)	87.7	64.8	76.2	75.4	+0.8	95/19	55/30	4.79	3.53	+1.26	29.84

Summer (June-August) Temperatures: Seasonal temperatures were higher than normal: DCA, +1.8°F; BWI, +3.1°F and IAD, +1.2°F. DCA and BWI marked their 10th consecutive summer with above normal temperatures. The season's second heat wave occurred toward the end of June when BWI recorded readings at or above 90°F from the 24th-30th, DCA, from the 25th-30th and IAD from the 26th-30th. High humidity combined with readings that reached the mid to upper 90s resulting in sweltering conditions. For the month, DCA and BWI reported 9 days at or above 90°F, and IAD, 8 such days. In sharp contrast, minimum readings were in the 40s at IAD on June 3-4, and BWI equaled a calendar day record low of 46°F on the 4th. July continued hot. The Baltimore area equaled its 9th hottest month on record. DCA recorded 22 days with maximum readings at or above 90°F; BWI and IAD, 21 days. The longest heat wave was 12 days with temperatures at or above 90°F from the 11th-22nd at DCA and IAD and 11 such days at BWI (12th-22nd). Readings reached 100°F at BWI on the 20th and 21st and at IAD on the 21st. BWI equaled a calendar day record with 98°F on the 30th. IAD equaled a record high minimum at 74°F on the 18th. August continued hot (see monthly summary above).

Summer Precipitation: Rainfall varied monthly and seasonally due to localized thunderstorms with somewhat above normal rainfall at DCA and slightly below normal at BWI and IAD: DCA, 12.75" (+2.31"); BWI, 9.19" (-1.63"); IAD, 9.96" (+1.22"). The summer featured numerous severe weather events. June included three events with golf ball size hail and localized heavy rain. The most intense event was June 28-29 when thunderstorm winds knocked down numerous trees, blocked roads and fell onto wires. The storm resulted in damage to three homes in Suitland-Silver Hill (Prince Georges County), MD, and downed dozens of trees across Nelson County, VA. In Anne Arundel County, a vehicle was trapped in high water near Crownsville and Pasadena measured 2.42" of rain. July featured seven significant severe events. The month's most damaging storm occurred July 8 when a large thunderstorm complex with extreme rainfall rates impacted the area, resulting in water rescues, flooded homes and businesses, and closing parts of the Beltway; water seeped into the White House, according to press reports. Drivers were stranded on vehicle rooftops, while some swam to safety on Canal Road, NW, in DC. Standing water was reported up to parked car windshields in Reston (Fairfax County). DCA measured a calendar day record 3.44", including 3.30" in 57 minutes. Highest totals in Maryland included 6.30" in Frederick (Frederick County); in Virginia, 5.01" fell near Merrifield (Fairfax County). August again featured thunderstorms, damaging wind, hail and flooding. (See monthly summary above).

Summer 2019 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)	88.3	70.7	79.5	77.7	+1.8	99/7-21	54/6-4	12.75	10.44	+2.31
Baltimore (BWI)	88.7	67.2	78.0	74.9	+3.1	100/7-20,21	46/6-4	9.19	10.82	-1.63
Dulles (IAD)	87.5	64.8	76.1	74.9	+1.2	100/7-21	44/6-4	9.96	11.18	-1.22

Looking Ahead to September: After a warmer than normal summer with varied precipitation, what does autumn hold for the Washington area?

Autumn 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)

Autumn 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)