

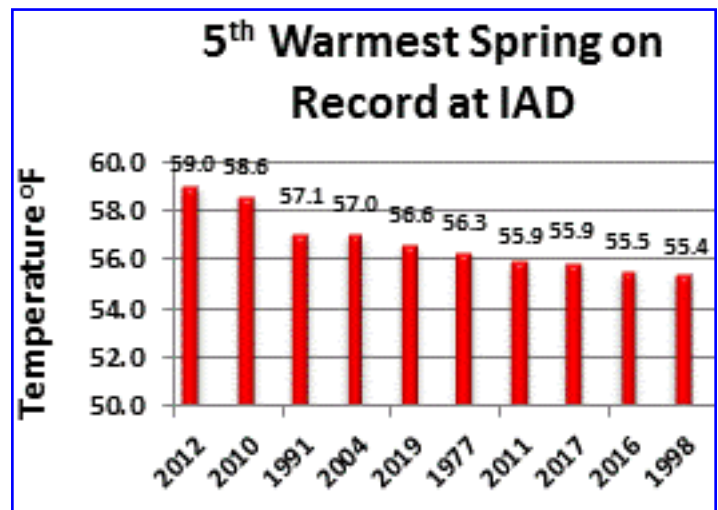
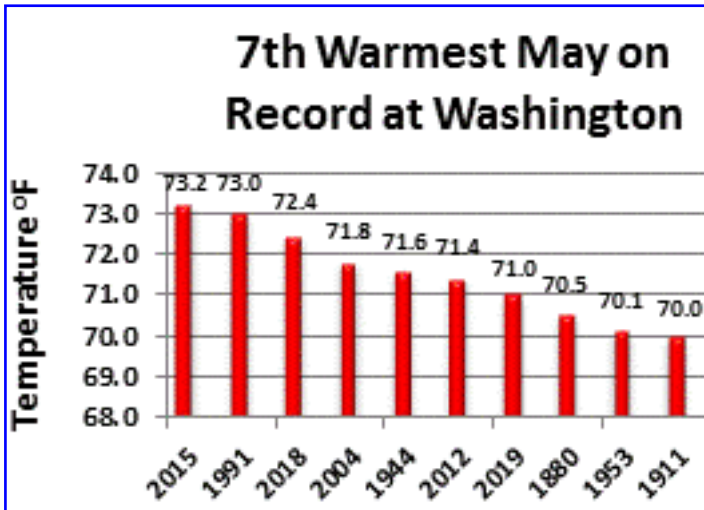


PRESTO

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



MAY 2019: : Well Above Normal Temperatures; Tornadoes in Howard and Fredrick County MD SPRING: Above Normal Temperatures and Severe Weather



May Highlights

- Well above normal temperatures: +5.0°F at DCA, +5.4°F at BWI and +4.7°F at IAD
- Season's first heat wave 28th-30th when maximum readings soared to 90°F or greater at DCA and BWI; IAD equaled calendar day record of 90°F on 28th
- Above normal precipitation: 4.97" at DCA (+0.98"); 5.51" at BWI (+1.52") and 5.05" at IAD (+0.50"); 4th consecutive May with rainfall above 4.95" at all three airports
- On 23rd, a severe thunderstorm spawned an EF-1 tornado from Clarksville to Columbia (Howard County), MD; estimated maximum wind speeds 95 mph, maximum path width, 150 yards and path length, 5.5 miles. There was one injury, significant tree damage including to a home. An office building lost part of a roof. Additional severe thunderstorms caused a tree to fall on a house near Potomac Heights (Charles County), MD, and near Bethesda (Montgomery County), MD, while a tree fell on a car in Westover (Arlington County), VA. Winds gusted to 67 mph at DCA.
- On the 29th, a macroburst with estimated wind speeds at 80-90 mph impacted portions of Baltimore and Harford counties and resulted in tree damage including several large limbs falling on home rooftops; two wooden telephone poles were snapped by damaging winds.
- On the 30th, severe thunderstorms spawned two tornadoes in Maryland. The first occurred near Ijamsville (Frederick County). This EF-0 had estimated wind speeds of 85 mph, path length of 6.5 miles and maximum width of 75 yards. The tornado snapped and uprooted numerous trees and was on the ground for 11 minutes. An EF-1 with estimated peak winds of 100 mph struck Gleneig (Howard County) with a 4.5 mile path length, 100 yard maximum width. The tornado caused property damage and uprooted trees. No injuries or fatalities were reported in either tornado.

Spring Seasonal Highlights

- Well above normal temperatures: DCA, +3.6°F; BWI, +3.5°F; and IAD, +2.7°F
- Above normal precipitation: DCA, 11.21" (+0.68"); BWI, 11.11" (+0.03"); and IAD, 12.52" (+1.02")
- On March 21st-22nd, copious amounts of rain impacted the region with numerous reports of flooded roads. In Maryland, a vehicle was stranded in flood waters near Perry Hall (Baltimore County) and near Fort Meade (Anne Arundel County). In Virginia, Rte. I-29 was closed near Chantilly (Fairfax County) and high water closed several roads near Round Hill (Loudoun County). Highest totals in Maryland included 3.87" near Bel Air, (Harford County), and 3.27" near Buckeystown (Frederick County); In Virginia, 3.50" was reported near Reston, (Fairfax County) and 3.40" near Bluemont (Loudoun County); IAD's total of 2.69" not only set a calendar day record rainfall but also a record rainfall for any day in March
- Washington observed its 2nd warmest April on record, Baltimore and IAD, 4th
- On April 19, an EF-0 tornado struck Reston (Fairfax County), VA, with estimated peak winds of 70 mph, maximum path length of 4 miles and maximum path width of 100 yards; the tornado caused tree and property damage along its path. A 2nd tornado was confirmed as an EF-1 near Shipman (Nelson County), VA, with estimated maximum winds of 100 mph, maximum path length of 1.5 miles and maximum path width of 125 yards. The tornado downed up to 200 trees, killing a horse and causing some property damage.
- On the April 26, an EF-1 tornado was confirmed in Monkton, (Baltimore County), MD. The estimated peak winds were 90 mph, a maximum path length of 3 miles and a maximum path width of 150 yards. Numerous trees were topped or snapped in its path.

May 2019

Temperature: Washington reported its 7th warmest May on record (see graphic) with area temperatures well above normal: DCA, +5.0°F; BWI, +5.4°F; and +4.7°F at IAD. The area marked its first heat wave, the 28th-30th, when maximum readings soared to 90°F or greater at DCA and BWI. The season's initial 90°F or greater day occurred on the 20th at DCA and BWI and on the 26th at IAD. IAD also equaled a calendar day record of 90°F on the 28th. IAD reported maximum readings at or above 80°F on 17 days, DCA, 16 such days and BWI, 15. Minimum temperatures stayed at or above 70°F on 6 days at DCA, including a record high minimum of 73°F on the 20th and a calendar day record minimum at IAD, 69°F; BWI equaled its daily record of 71°F.

Precipitation: The month was wetter than normal: DCA, 4.97" (+0.98"); BWI, 5.52" (+1.52") and IAD, 5.05" (+0.50") with six major severe weather events or storms. On the 2nd, a line of strong to severe thunderstorms rolled through the area in the afternoon. Multiple trees were downed near Rockville (Montgomery County), MD, and Countryside (Loudoun County), VA. Lightning caused a fire at a senior living complex, displacing 75 people near Oxon Hill (Prince Georges County), MD. Rainfall was torrential in some areas with 2.33" in Annapolis (Anne Arundel County). On the 5th, an all-day soaking rainfall exceeded an inch across much of the region with numerous reports of flooded roads including near Annandale (Fairfax County), VA, and near Mount Pleasant (Frederick County), MD. Rainfall totaled 2.35" in Ridge (St. Mary's County), MD, and 1.84" in Haymarket (Prince William County), VA.

On the 23rd, a severe thunderstorm spawned an EF-1 tornado from Clarksville to Columbia (Howard County), estimated maximum wind speeds were 95 mph, maximum path width, 150 yards, and path length, 5.5 miles, causing was one injury, downed trees, damage to a house by a tree limb, and roof damage to an office building. Additional severe thunderstorms caused a tree to fall on a house near Potomac Heights (Charles County), MD, and near Bethesda (Montgomery County), MD. A tree fell on a car in Westover (Arlington County), VA. Winds gusted to 67 mph at DCA.

On the 25th, severe thunderstorms in the Shenandoah Valley resulted in 1.75" hailstones near Montevideo and Grottoes (Rockingham County), VA. A funnel cloud was seen near Warrenton (Fauquier County), VA, where a deluge of 2.75" was measured. On the 29th, a macroburst (large downburst with winds extending in excess of 2.5 miles long), impacted parts of Baltimore and Harford counties. Estimated wind speeds peaked at 80-90 mph, resulting in tree and home damage and snapping two telephone poles.

Finally, on the 30th, severe thunderstorms spawned two tornadoes in Maryland. An EF-0 occurred near Ijamsville (Frederick County) with estimated wind speeds of 85 mph, path length of 6.5 miles and maximum width of 75 yards and was on the ground for 11 minutes. Less than an hour later, an EF-1 with estimated peak winds of 100 mph struck Gleneig (Howard County), path length 4.5 miles and maximum width, 100 yards. The tornadoes caused property damage and uprooted trees but no injuries or fatalities were reported. Additional severe thunderstorms caused wind gusts also to 71 mph in Gainesville (Prince William County, 66 mph at Davison Army Airfield (Fairfax County); 1.75" hail struck near Nasons (Orange County) and 1.0" hail near Parker (Spotsylvania County).

May 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	Year to Date
National (DCA)	79.5	62.5	71.0	66.0	+5.0	93/29	50/13,15	4.97	3.99	+0.98	18.03
Baltimore (BWI)	78.1	58.4	68.3	62.9	+5.4	94/29	44/14,15	5.52	4.00	+1.52	17.90
Dulles (IAD)	78.2	57.6	67.9	63.2	+4.7	91/29	41/14	5.05	4.55	+0.50	19.88

Spring (Mar-May) Temperatures: The three major airports recorded well above normal seasonal temperatures: DCA, +3.6°F ; BWI, +3.5°F; and IAD, +2.7°F. March ushered in spring with well below normal temperatures during the first 9 days. On March 6, highs failed to rise above freezing at BWI (32°F) and IAD (31°F) and minimum readings dropped to the teens on the 6th and 7th. In sharp contrast, monthly maximum temperatures soared to 79°F at DCA on the 30th, to 78°F at BWI on the 15th and to 77°F at IAD on the 15th and 30th. DCA's last freezing temperature of the season occurred on the 8th (32°F).

April was the 2nd warmest on record in Washington and 4th warmest at Baltimore and IAD. DCA reported 5 days with maximum temperatures at or above 80°F with 4 such days at BWI and IAD. DCA observed 18 days with maximum readings at or above 70°F and BWI and IAD, 16 such days. IAD recorded its final freeze of the season on the 3rd (27°F); BWI recorded its final seasonal freeze on the 2nd (30°F). (May was warm, see summary above.)

Spring Precipitation: The season was slightly wetter than normal: DCA, 11.21" (+0.68"), BWI, 11.11" (+0.03"), and IAD, 12.52" (+1.02"). March was slightly wetter with a touch of winter weather. On March 1, 1"-3" of snow fell in the metro area with more across northern Maryland including 4.1" near Sabillasville (Frederick County). On the 4th, wet snow fell in the metro area with larger totals north and west of the cities. Highest total in Maryland was 7.3" near Sabillasville; in Virginia, 4.5" near Basye (Shenandoah County). The month's largest precipitation event occurred on the 21st-22nd when more than 3 inches of rain fell in some areas. In Maryland, a vehicle was stranded in flood waters near Perry Hall (Baltimore County) and near Fort Meade (Anne Arundel County). In Virginia, Rte I-29 was closed near Chantilly (Fairfax County) and high water closed several roads near Round Hill (Loudoun County). Highest totals in Maryland included 3.87" near Bel Air, (Harford County). In Virginia, 3.50" was reported near Reston, (Fairfax County). IAD's total of 2.69" set a calendar day record rainfall and also a rainfall record for any day in March.

April was the first month since October 2018 with below normal precipitation at the three major airports. The month did feature severe weather. On the 14th, strong to severe thunderstorms resulted in one fatality and two injuries when a tree fell onto a house in Stafford, VA. On April 19, severe thunderstorms spawned two tornadoes in Virginia. An EF-0 struck Reston (Fairfax County), VA, with estimated peak winds of 70 mph, maximum path length of 4 miles and maximum path width of 100 yards; causing tree and property damage. The second tornado was an EF-1 near Shipman (Nelson County), VA, with estimated maximum winds of 100 mph, maximum path length of 1.5 miles and maximum path width of 125 yards; the twister killed a horse, downed about 200 trees and caused property damage. Highest rainfall amounts from the event included 2.14" near Thurmont, 1.70" near Leesburg (Loudoun County), VA, and a calendar day record 1.26" at IAD. On the 26th, an EF-1 tornado was confirmed in Monkton, (Baltimore County), MD, with estimated peak winds at 90 mph, maximum path length of 3 miles and a maximum path width of 150 yards, causing trees damage. Debris from damaging thunderstorm winds blocked a ramp on I-695 Baltimore Beltway near Arbutus, along the outer loop of I-495 Capital Beltway near Garrett Park (Montgomery County), and near the inner loop of I-495 near Hillandale (Prince Georges County). (May was wet, see monthly summary above).

Spring 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	Snow
National (DCA)	69.0	51.0	60.1	56.5	+3.6	93/5-29	22/3-15	11.21	10.53	+0.68	0.3
Baltimore (BWI)	67.3	46.5	56.9	53.4	+3.5	94/5-29	18/3,6,7	11.11	11.08	+0.03	2.7
Dulles (IAD)	67.4	45.6	56.6	53.9	+2.7	91/5-29	16/3-7	12.52	11.40	+1.12	1.6

Looking Ahead to Summer: Does a warm spring lead to a hot summer? Below is a listing of the last 10 warmer than normal springs and the subsequent summer temperatures at DCA.

Average Spring Temperatures at DCA and Subsequent Average Summer Temperatures										
Year	2019	2018	2017	2016	2015	2012	2011	2010	2008	2006
Spring	+3.6	+2.4	+2.3	+1.6	+2.8	+5.7	+1.1	+4.0	+1.0	+1.0
Summer	?	+1.8	-0.7	+2.8	+1.9	+2.7	+3.4	+3.6	+1.2	+0.8