

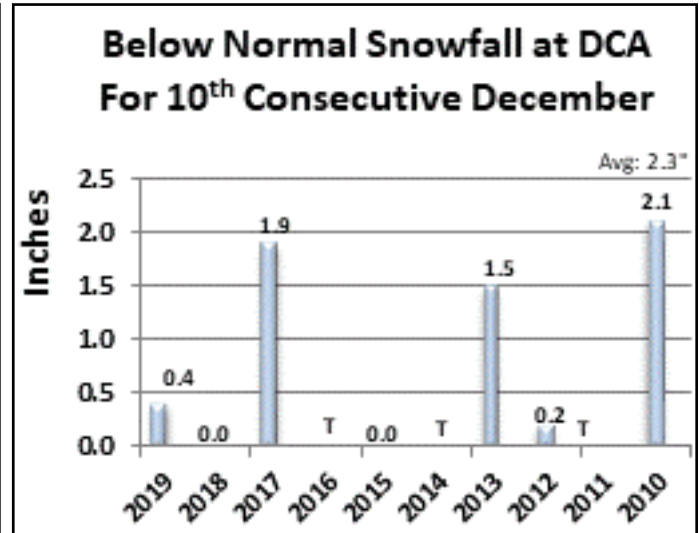
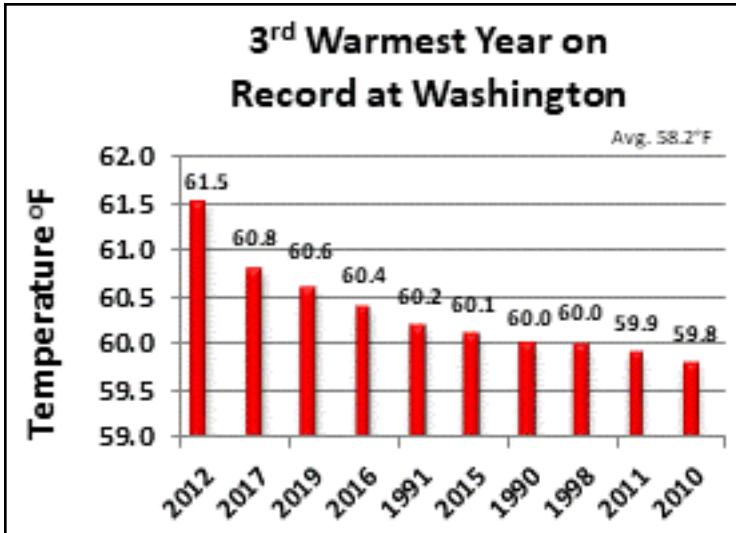


PRESTO

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



DECEMBER 2019: Above Normal Temperatures and Little Snowfall ANNUAL: 3rd Warmest Year on Record at DCA; Near Normal Snowfall



December Highlights

- ✱ Above normal temperatures at all three major airports: DCA, +2.4°F; BWI, +3.2°F; and IAD, +2.4°F
- ✱ Unseasonably warm from 23rd-31st; DCA, BWI and IAD recorded 2 days above 60; all days at or above 50 at IAD and all but 1 day at DCA and BWI
- ✱ Washington's observed 2 days with highs above 65°F (67°F on 28th, 66°F on 30th) from Christmas and New Year's, only its 7th such occurrence on record
- ✱ Precipitation was slightly above normal at all major three airports: DCA, 3.28" (+0.23), BWI, 3.57" (+0.20), IAD, 2.97" (+0.01)
- ✱ Less than 1 inch of snow fell at DCA, BWI and IAD, making it the 10th consecutive year with subnormal December snowfall at DCA; BWI, 9th and IAD, 8th out of the last 10 years with subnormal snowfall

Annual Highlights

- ✱ Above average annual temperatures at DCA for 10th consecutive year, BWI and IAD, 5th such year: DCA, 50.6°F (+2.4°F), BWI, 58.0 (+2.9°F), IAD, 56.9°F (+1.6)
- ✱ Slightly above normal annual precipitation at DCA, 42.34" (+2.60"), below normal at BWI, 38.13" (-3.75") and near normal at IAD, 40.81" (-0.73")
- ✱ DCA marked 62 days of 90°F or greater days (3rd highest total on record), BWI, 59 days (tied with 2010 for most on record), and IAD, 53 (tied for 3rd highest total)
- ✱ A snowstorm on January 12-13 dropped 13.2" near Clarksburg (Montgomery County), MD, 12.1" in Baileys Crossroads (Arlington County), VA; and 10.2" in D.C. at the National Zoo. IAD measured 10.6" and had a daily record of 7.7" on the 13th; DCA measured 10.3", and a daily record of 8.3" on the 13th; BWI observed 6.6"
- ✱ The area was bitterly cold on February 1 with maximum temperatures of 24°F at DCA, 23°F at IAD and 20°F at IAD
- ✱ On February 5, DCA reported a calendar day record 74°F; IAD reached 72°F and BWI, 71°F
- ✱ On February 20th, there was unusual thunder with heavy snow in the eastern West Virginia panhandle
- ✱ On February 24th, frequent wind gusts 50-60 mph with some gusts 65 to 70 mph for areas Frederick west, resulting in widespread power outages for the eastern West Virginia panhandle and peak gust of 66 mph at MPH airport with 40-50 mph gusts in the metro area
- ✱ On March 21-22, heavy rain stranded vehicles in flood waters near Perry Hall (Baltimore County), MD, and near Fort Meade (Anne Arundel County), MD; Virginia, Rte. US-29 was closed near Chantilly (Fairfax County), VA, and high water closed several roads near Round Hill (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, their 4th
- ✱ On April 19, an EF-0 tornado struck Reston (Fairfax County), VA, causing tree and property damage. A 2nd tornado was confirmed as an EF-1 near Shipman (Nelson County), VA, downing up to 200 trees, killing a horse and causing some property damage
- ✱ On April 26, an EF-1 tornado was confirmed in Monkton, (Baltimore County), MD. Numerous trees were topped or snapped in its path.
- ✱ On May 23, a thunderstorm spawned an EF-1 tornado from Clarksville to Columbia (Howard County), MD; there was one injury and significant tree and property.
- ✱ On May 30, thunderstorms spawned two tornadoes in Maryland: an EF-0 near Ijamsville (Frederick County) and an EF-1 struck Gleneig (Howard County)
- ✱ Heat wave from July 11-22 with readings at or above 90°F at DCA and IAD on all 12 days and at BWI, for 11 days (July 12-22). The most intense heat occurred from July 19-22 when high temperatures were at or above 95°F at DCA and BWI; readings reached the century mark at BWI on July 20-21 and at IAD on July 21
- ✱ On July 8, a large thunderstorm complex with intense rain resulted in flash flooding, water rescues, flooded homes and businesses and closing part of the D.C. Beltway; water seeped into the White House, according to press reports; drivers were stranded on vehicle rooftops on Canal Road, NW, in DC, and standing water was reported up to car windshields in Reston (Fairfax County), VA; DCA measured a calendar day record 3.44", including 3.30" in 57 minutes; highest Maryland totals included 6.30" in Frederick (Frederick County); In Virginia, 5.01" near Merrifield (Fairfax County)
- ✱ Intense heat and humidity from August 17-22 at all three airports; temperatures were at or above 90°F; DCA and BWI exceeding 95°F from August 18-20
- ✱ Washington marked its 3rd hottest September on record, warmest since 1980; Baltimore, 5th hottest, warmest since 1931; IAD, 3rd hottest, warmest since 2016
- ✱ On October 2, temperature readings soared to all-time record highs for the calendar day and for October: 98°F at both DCA and BWI and 96°F at IAD
- ✱ On November 17, freezing drizzle coated roads with ice across portions of the Shenandoah area, resulting in a crash between a tour bus and a tractor trailer, and 21 injuries near Afton (Nelson County), VA; the ice also closed state route 664 west of the Blue Ridge Parkway as well as part of Skyline Drive

December 2019

Temperatures: The first month of meteorological winter featured above normal temperatures. Positive departures were +2.4°F at DCA, +3.2°F at BWI and +2.4°F at IAD. A warm spell from the 23rd through New Year's Eve resulted in the above normal readings. IAD was at or above 50°F from the 23rd-31st, while DCA reported only 1 day during this time with maximum temperatures below 50°F and BWI, 2 such days. While no temperature records were set, Washington's 2 days with highs above 65°F (67°F on the 28th and 66°F on the 30th) between Christmas and New Year's was only the 7th such occurrence on record. While cold conditions were prevalent at times, no arctic air impacted the region; none of the three major airports recording subfreezing maximum readings. DCA reported only 2 days with highs in the 30s and its monthly minimum was 22°F on the 19th; at BWI and IAD, monthly minimum readings occurred on the 20th: BWI, 19°F, and IAD, 18°F.

Precipitation: Near normal precipitation with little snowfall highlighted the final month of 2019. Monthly totals were slightly above normal: DCA, 3.28" (+0.23"); BWI, 3.57" (+0.20") and IAD, 2.97" (+0.01"). This December marked the 10th consecutive year with subnormal December snowfall at DCA, 9th of 10 at BWI and 8th of 10 at IAD. While there were numerous precipitation events, neither DCA, BWI or IAD recorded an inch or greater of precipitation on a calendar day; however, some locations did measure a daily total exceeding an inch of rainfall during the month. On the 1st, an all-day rain soaked Norrisville (Harford County), MD, with 1.01" while on the 9th Catonsville (Baltimore County), MD, recorded the same amount. Additional significant rainfall occurred on the 13th with 1.19" near Park Hall (St. Mary's County), MD, and 1.01" near Vienna (Fairfax County), VA. On a rainy 16th and 29th, Jacksonville (Baltimore County), MD, measured 1.03".

The first measurable snow in many locations occurred on the 11th when rain on the 10th changed to snow before ending in the early morning hours on the 11th. The largest amount reported in Maryland was near Westminster (Carroll County) with 1.0"; in Virginia, near Herndon (Fairfax County) with 0.6" and at DCA, 0.3". The 2nd winter event began as snow during the overnight hours on the 16th before changing to rain. Snowfall was somewhat greater especially in the suburbs before changing to rain. Greatest amount in Maryland was near Sabillasville (Frederick County) with 2.3"; in Virginia, near Purcellville (Loudoun County) with 1.3" and 0.4" at IAD. A few locations measured significant icing including 0.50" near Thurmont (Frederick County), MD.

December 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) | 49.4 | 34.9 | 42.1 | 39.7 | +2.4 | 67/28 | 22/19 | 3.28 | 3.05 | +0.23 | 0.4 |
| Baltimore (BWI) | 48.4 | 31.5 | 39.9 | 36.7 | +3.2 | 65/28 | 19/20 | 3.57 | 3.37 | +0.20 | 0.3 |
| Dulles (IAD) | 47.7 | 30.2 | 39.0 | 36.6 | +2.4 | 65/28 | 18/20 | 2.97 | 2.96 | +0.01 | 0.6 |

Annual (Jan-Dec) Temperatures: 2019 was the 10th consecutive year with above normal temperatures at DCA and the 5th consecutive year at BWI and IAD. Positive departures were +2.4 at DCA, +2.9 at BWI, and +1.6 at IAD, resulting in 3rd warmest year on record at DCA, 10th at Baltimore and 8th at IAD. The warmth was consistent throughout most of the year. All three major airports reported 10 months with above normal temperatures. DCA reported 62 days with highs at or above 90°F, 59 days at BWI, most on record, and 53 at IAD. January started warm and ended bitterly cold; IAD recorded three minimum readings below 10°F, including -2°F on January 31. The arctic chill continued for the first 2 days of February with maximum temperatures on February 1 staying below 24°F in the area. March was one of just two subnormal months at BWI and IAD in 2019 (normal at DCA). April was the 2nd warmest on record in Washington and 4th warmest at Baltimore and IAD. Washington marked its 7th warmest May on record. In July, the area marked the year's longest heat wave, 12 days with temperatures at or above 90°F from July 11-22 at DCA and IAD and 11 such days at BWI (July 12-22). Readings reached 100°F at BWI on July 20-21 and at IAD on July 21. September was the 3rd hottest on record and warmest since 1980 at Washington; in Baltimore, 5th hottest and warmest since 1931 and at IAD, the 3rd hottest on record. On October 2, readings soared to all-time record highs not only for the calendar day but also for October: 98°F at DCA and BWI and 96°F at IAD. Readings also soared to 90°F at BWI on October 1 and reached 80°F or greater in Washington on 5 additional October days. November was the only month of the year below normal at all three major airports. (December ended warm, see monthly summary).

Annual Precipitation: Slightly above normal annual precipitation at DCA, 39.74" (+2.60"), below normal at BWI, 41.88" (-3.75") and near normal at IAD, 40.81" (-0.73"). Snowfall was near normal at DCA, 15.6" (+0.2") and IAD, 22.5" (+0.5") and below at BWI, 14.2" (-5.9"). The year featured dramatic swings between dry and wet periods. The year's first significant snowstorm occurred January 12-13. The greatest storm totals included 13.2" near Clarksburg (Montgomery County), MD, and 12.1" in Baileys Crossroads (Arlington County), VA. On March 21-22, heavy rain stranded a vehicle in flood waters near Perry Hall (Baltimore County), MD, and near Fort Meade (Anne Arundel County), MD; Virginia, Rte. US-29 was closed near Chantilly (Fairfax County), VA, and high water closed several roads near Round Hill (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. On April 14, 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. On April 26, 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 tree damage. On May 23, 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 one injury, damage to a house by a tree limb, and roof damage to an office building. On May 30, severe thunderstorms spawned 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), MD, path length 4.5 miles and maximum width, 100 yards. The tornadoes caused property and tree damage. On July 8, a large thunderstorm complex with extreme rainfall rates resulted in water rescues, flooded homes and businesses, and closed parts of the DC Beltway; water seeped into the White House according to press reports. Drivers were stranded on vehicle rooftops on Canal Road in DC. 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. The "Halloween" storm closed October with more heavy rain. Highest totals were 3.32" in Poolesville (Montgomery County), MD, 2.56" in Syria (Madison County), VA, and 1.61" in Washington. Widespread damaging winds accompanied this storm which resulted in one fatality when a tree fell onto a car in Colesville (Montgomery County). A brief EF-0 tornado struck Timberville (Rockingham County), VA, with winds estimated at 75 mph. The path width was 25 yards and path length was 0.5 miles and resulted in tree and property damage. In the early am hours of November 17, light freezing drizzle coated roads with ice across parts of the Shenandoah area resulting in a crash between a tour bus and a tractor trailer that resulted in 21 injuries near Afton (Nelson County), VA. The ice also closed state Route 664 west of the Blue Ridge Parkway as well as parts of Skyline Drive. (December was near normal, see monthly summary.)

2019 Annual Weather Statistics for the Washington/Baltimore Area

| Location | Station Temperatures (°F) | | | | | Extreme/Day | | Precipitation (inches) | | | |
|-----------------|---------------------------|-------|------|------|--------|-------------|----------|------------------------|-------|--------|------|
| | AvMx | AvMin | AvgT | NmlT | DepNml | Max | Min | Year | Nml | DepNml | Snow |
| National (DCA) | 69.0 | 52.2 | 60.6 | 58.2 | +2.4 | 99/7-21 | 10/1-31 | 42.34 | 39.74 | +2.60 | 15.6 |
| Baltimore (BWI) | 68.0 | 48.0 | 58.0 | 55.1 | +2.9 | 100/7-20,21 | 5/1-31 | 38.13 | 41.88 | -3.75 | 14.2 |
| Dulles (IAD) | 67.4 | 46.4 | 56.9 | 55.3 | +1.6 | 100/7-21 | -2/1/311 | 41.54 | 41.54 | -0.73 | 22.5 |

Looking Ahead to January: Will January reverse the trend to above normal snowfall? Listed below are the most recent 10 years when DCA observed subnormal snowfall in December and the corresponding January total. Normal DCA snowfall is 2.3".

| Year | '10-'11 | '11-'12 | '12-'13 | '13-'14 | '14-'15 | '15-'16 | '16-'17 | '17-'18 | '18-'19 | '19-'20 |
|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| December | 2.1 | T | 0.2 | 1.5 | T | 0 | T | 1.9 | 1.4 | 0.4 |
| January | 7.3 | 2.0 | 0.9 | 6.6 | 3.6 | 18.8 | 1.4 | 1.4 | 11.5 | ? |