

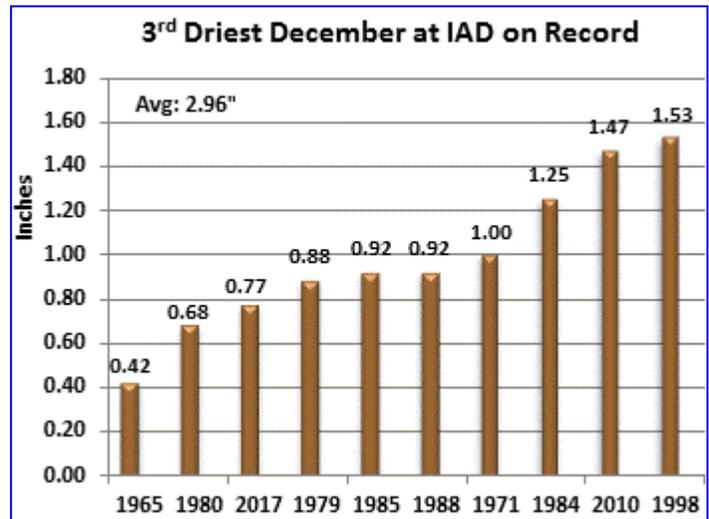
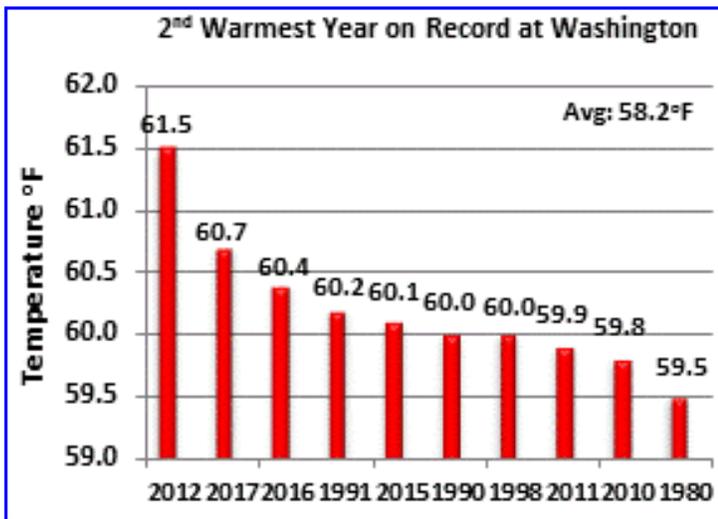


# PRESTO

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



## DECEMBER 2017: Very Dry with Cold Wave After Christmas ANNUAL 2017: Well Above Normal Temperatures; Monthly Precipitation Highly Variable



### December Highlights

- First December with subnormal temperatures at all three airports since 2010: DCA, -0.5°F, BWI, -1.2°F; IAD, -1.6°F
- Extended cold wave from 27<sup>th</sup> thru month end and into 2018 with near to subfreezing temperatures; on the 28<sup>th</sup>; BWI's maximum of 24°F and minimum of 10°F equaled daily records; IAD 23°F maximum set a daily record low maximum reading
- Very dry with monthly totals 0.50" at DCA; 0.95" at BWI and 0.77" at IAD; 5<sup>th</sup> driest in Washington and driest since 1965; 8<sup>th</sup> driest at BWI and driest since 1985; 3<sup>d</sup> driest at IAD and driest since 1980
- Seasons first measurable snowfall on 9<sup>th</sup> with amounts generally between 2"-3" in the DC suburbs with higher amounts elsewhere in Maryland: 6.5" in Westminster (Carroll County) and Ridge (St. Mary's County), 6.0" in Bentley Springs and in Dunkirk (Calvert County); in Northern Virginia, highest totals were 5.0" in Woolsey (Prince William County) and 4.5" in Ashburn (Loudoun County); IAD reported 4.0", BWI, 2.8", and DCA 1.5"

### Annual Highlights for 2017

- Second warmest on record in Washington; warmest since 2012 at BWI and IAD
- Nine months with at or above normal temperatures at DCA, 8 at BWI and IAD
- DCA recorded 31 days with maximum readings at or above 90°F, BWI, 23, and IAD, 19; readings were at or above 95°F at DCA on 4 days, BWI, 2, and IAD, none
- DCA recorded 6 days with maximum temperatures at or below 32°F at DCA, 8 at BWI and IAD
- The year's first major snowfall dumped significant amounts over Southern Maryland and portions of Virginia south of Washington on January 7 but much less fell in the metro area. Storm totals in Maryland included 9.7" near Ridge and 8.0" and near California (St. Mary's County); in Virginia, highest totals were 5.5" in Jersey (King George County) and 3.4" near Sealston and near Fredericksburg (Stafford County)
- On March 2, powerful wind gusts swept through the region: 78 mph at Quantico (Prince William County), VA, 66 mph at Germantown (Montgomery County), MD, stripping roof shingles and siding on four buildings in an apartment complex in White Marsh (Baltimore County), MD, and other damages
- On April 6, an intense line of showers and thunderstorms spawned seven EF-0 (wind speeds 70-85 mph) tornadoes across Virginia and D.C., causing tree and property damage. Two injuries were reported. The longest path length was 5.9 miles measured in the tornado north of Airlie in Fauquier County, VA. The widest path width was 175 yards, measured from the tornado north of Unionville in Orange County, VA.
- On June 19, an EF-0 tornado with winds estimated at 70 mph, was confirmed in Silver Spring, (Montgomery County), MD; path width, 100 yards and path length 0.2 miles. Two injuries and significant damage to homes; high winds also caused amage to vehicles and trees elsewhere; 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; 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 included 7.52" in Severn (Anne Arundel County), MD, and 7.18" in Falls Church (Fairfax County). 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"
- Six consecutive days in October with highs at or above 80°F at all three major airports (5<sup>th</sup>-10<sup>th</sup>); IAD maximum reading of 87°F on Oct. 10 set calendar day record
- Extended dry spell ended on October 8; first measurable rainfall since September 14 at DCA and IAD (24 days) and at BWI since September 18 (19 days)

## December 2017

**Temperatures:** The beginning of an extended cold wave in late December resulted in slightly below normal temperatures across the area: DCA, -0.5 °F; BWI, -1.2°F; IAD, and -1.6°F. It was the first December since 2010 with subnormal temperatures at all three airports. DCA recorded 4 days with maximum temperatures at or below freezing; BWI and IAD, observed 6 such days. During the end of month, an Arctic blast impacted the region resulting in maximum readings near or below freezing with readings in the 20s on the 28<sup>th</sup> and on New Years Eve day. On the 28<sup>th</sup>, BWI's maximum of 24°F and minimum of 10°F equaled daily records, while IAD 23°F set a daily record low maximum. IAD first subfreezing high of the season, 29°F on the 15<sup>th</sup>, also set a record low maximum for the date. In sharp contrast, DCA, BWI and IAD recorded 3 days of 60°F or greater. The month's warmest day occurred on the 23<sup>rd</sup> when maximum temperatures were a balmy 65°F at DCA, 64°F at BWI and 62°F at IAD.

**Precipitation:** Very dry conditions prevailed throughout the month with no event greater than one half inch at any of three major airports: DCA, 0.50" (-2.55"); BWI, 0.95" (-2.42"); and IAD, 0.77" (-2.19"). It was the 5<sup>th</sup> driest in Washington and driest since 1965. It was the 8<sup>th</sup> driest at BWI and driest since 1985, while at IAD was the 3<sup>rd</sup> driest and driest since 1980 (see graphic).

Despite the dryness, the month featured several snowfall events. The first event of the season occurred on the 9<sup>th</sup> when wet snow started falling after dawn and continued until early evening. Amounts were generally between 2"-3" in the D.C. suburbs with higher amounts elsewhere in Maryland: 6.5" in Westminster (Carroll County) and in Ridge (St. Mary's County); 6.0" in Bentley Springs and in Dunkirk (Calvert County). Lesser amounts were measured in Northern Virginia: 5.0" in Woolsey (Prince William County) and 4.5" in Ashburn (Loudoun County). IAD reported 4.0", BWI 2.8" and DCA 1.5". On the 15<sup>th</sup>, a light snowfall occurred; although their was little snow, subfreezing temperatures made road conditions hazardous. Highest amounts occurred in Baltimore County with 2.0" in Kingsville. A similar event occurred on the 30<sup>th</sup> with the largest amount at 2.1" in Thurmont (Frederick County), MD.

Gusty winds buffeted the area on the evening of the 23<sup>rd</sup> and on Christmas Day. Wind gusts clocked 48 mph in Upper Marlboro, (Prince Georges County), MD, on the 23<sup>rd</sup> and 55 mph in Lovettsville (Loudoun County), VA on Christmas morning.

### December 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	Snow	Full Year
National (DCA)	46.3	32.1	39.2	39.7	-0.5	65/23	16/28,31	0.50	3.05	-2.55	1.9	35.60
Baltimore (BWI)	44.4	26.6	35.5	36.7	-1.2	64/23	8/31	0.95	3.37	-2.42	4.3	38.27
Dulles (IAD)	44.4	25.6	35.0	36.6	-1.6	62/23	9/28	0.77	2.96	-2.19	4.6	40.63

**Annual (Jan-Dec) Temperatures:** The year closed as the second warmest on record at DCA and well above normal temperatures at BWI and IAD: DCA, 60.7°F (+2.5°F), BWI, 57.3°F (+2.2°F) and IAD, 57.2°F (+1.9°F). January started warm. On Jan 12, DCA soared to 72°F and BWI and IAD reached 70°F. February was the warmest on record at the three major airports. Maximum temperatures in the 70s were reported on 7 days at BWI, an all-time high number; 6 days at DCA, 2<sup>nd</sup> most on record, and 6 days at IAD. High temperature readings were set at all three airports on February 7<sup>th</sup> and 8<sup>th</sup>: 73°F and 74°F at DCA; 72°F at BWI both days and 72°F and 71°F at IAD. Additionally, the 77°F reading at IAD on the 23<sup>rd</sup> topped another high maximum for the calendar day. The warmth continued into March with temperatures reaching 80°F on March 1 and IAD hitting 78°F on March 25. April's monthly average of 63.8°F at DCA easily shattered the airport's previous warmest average of 62.0°F, set in 1981 and 1994. IAD's average of 61.0°F also easily surpassed its previous warmest April, 60.1°F, set in 1994. DCA's 91°F reading on April 29 marked its first 90°F of the season, 17 days earlier than normal, while IAD broke a calendar day record at 89°F. IAD also equaled a high reading of 86°F on April 30. In contrast, on May 9, BWI equaled a calendar day minimum of 36°F. In a quick flip, on May 17, BWI tied a calendar day high of 93°F. The heat continued in June hitting 95°F on the 12<sup>th</sup>. Despite a summer that didn't break 100°F, the area was warmer than normal. On June 13, BWI equaled a daily maximum of 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 set minimum high reading of 73°F. The summer briefly turned cooler on June 28 when BWI observed a calendar day low of 51°F. On July 1, IAD tied a high minimum reading of 72°F. September started cool but by the second week warmed up. On September 11, IAD's maximum temperature of 71°F equaled the previous coolest calendar day high temperature. October was the 3<sup>rd</sup> warmest in Washington, 4<sup>th</sup> warmest at IAD and warmest since 2007 at BWI. IAD's maximum reading of 87°F on the 10<sup>th</sup> set a calendar day high. BWI's minimum readings of 74°F on the 8<sup>th</sup> and 72°F on the 9<sup>th</sup> were both records; IAD's reading of 73°F on the 8<sup>th</sup> also was a new high. In November, the weather again turned colder on Veterans Day, Nov 10; DCA and BWI hit new lows: DCA, 26°F, and BWI, 21°F. December was cold (see monthly summary above).

**Annual Precipitation:** Precipitation was well below normal at DCA, 35.60" (-4.14") and BWI, 38.27" (-3.61") and slightly below normal at IAD, 40.63" (-0.91") with scant snowfall: DCA, 4.3" (-4.9"); BWI, 5.0" (-4.3"); and IAD, 6.2" (-2.2"). On January 7, a snowstorm dumped significant amounts over Southern Maryland and parts of Virginia but only about an inch of snow fell in the metro area. February was dry with just a trace of snow in the metro area but some high winds and severe weather including an EF-1 tornado (estimated wind speed of 90 mph) near La Plata and Waldorf (Charles County), MD. On March 13-14, a winter storm resulted in hazardous road conditions and closures or delays. In northern Maryland, snowfall totals included 11.0" near Sabillasville (Frederick County) while IAD recorded a calendar day record 4.1". On April 6, an intense line of showers and thunderstorms spawned seven EF-0 (wind speeds 70-85 mph) tornadoes across Virginia and the District; two injuries were reported. May was the first above normal precipitation month in 2017 and also featured three tornadoes, which resulted in tree and property damages but no injuries. 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. On July 28-29, torrential rainfall of 3"-7" resulted in flooding in some areas. 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 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. Autumn was dry with most of the rain coming from the remnants of Hurricanes Harvey in September and Nate in October. December continued dry and included the first snowfall of the season (see monthly summary above).

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

Location	Station Temperatures (°F)					Extreme/Month-Day		Precipitation (inches)			
	AvMx	AvMin	AvgT	NmlT	DepNml	Max	Min	Total	Nml	DepNml	Snow
National (DCA)	69.2	52.4	60.7	58.2	+2.5	98/7-20	15/1-8	35.60	39.74	-4.14	4.3
Baltimore (BWI)	67.4	47.3	57.3	55.1	+2.2	98/7-20	8/12-31	38.27	41.88	-3.61	5.0
Dulles (IAD)	67.4	46.9	57.2	55.3	+1.9	95/6-15	7/1-9	40.63	41.54	-0.91	6.2

**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	'06-'07	'08-'09	'10-'11	'11-'12	'12-'13	'13-'14	14-15	15-16	16-17	17-18
December	T	T	2.1	T	0.2	1.5	T	0	T	1.9
January	1.3	1.9	7.3	2.0	0.9	6.6	3.6	18.8	1.4	?