

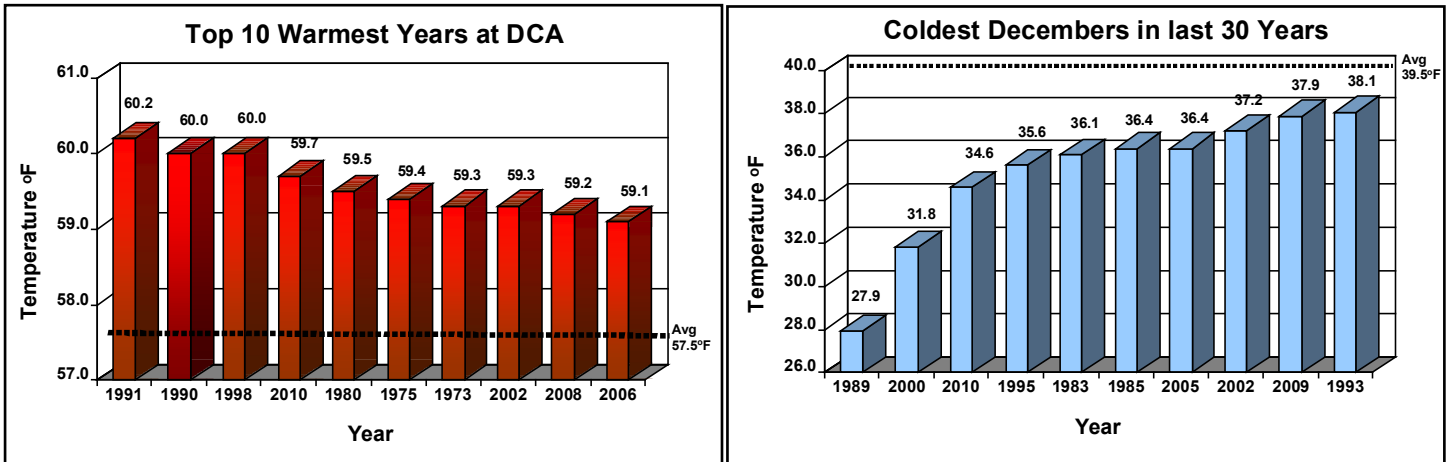


# PRESTO

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



## Annual 2010: "Snowmageddon," Record Heat, and Intense Severe Weather Events December: Cold, Dry and Windy



### December Highlights

- Subnormal temperatures at DCA (-4.9°F), BWI (-4.3°F), and IAD (-5.1°F)
- First occurrence of subnormal monthly average temperatures since February
- Highs at or above 50°F on only 3 days at BWI; 2 at DCA and IAD
- Highs at or below freezing on 4 days at BWI and IAD, 2 at DCA
- Minimums at or below freezing on 30 days at BWI and IAD, 27 days at DCA; most since 2000
- Subnormal precipitation at DCA, BWI and IAD with amounts under 2 inches
- EF-0 tornado (winds up to 80 mph) struck northern portion of Charles County on 1<sup>st</sup>; caused thunderstorm wind damage and localized flooding
- First snowfall of season closes portions of I-270 in upper Montgomery County on 10<sup>th</sup> due to frozen, untreated road surfaces
- First 1 inch or greater snowfall of the winter season across area on 16<sup>th</sup>
- Up to 5 inches of snow fell across parts of St. Mary's County, MD, on 26<sup>th</sup> from coastal storm; metro area observed amounts less than 1 inch
- Very windy conditions impact region on numerous days throughout month

### Annual Highlights

- Above normal temperatures across the Washington-Baltimore Area: DCA, +2.2°F; BWI, +1.3°F; IAD +2.0°F
- Precipitation totals between 34"- 44" at three major airports, below normal at DCA and IAD, slightly above normal at BWI
- "Snowmageddon" on Feb. 5<sup>th</sup>-6<sup>th</sup> and the "Blizzard of 2010" on 9<sup>th</sup>-10<sup>th</sup> dump record snowfall across area; Maryland and Virginia declare State of Emergency as transportation system came to a halt; airports closed, roads become impassable, government, business and schools close.
- All-time February snowfall record set at BWI and IAD and seasonal snowfall records set at DCA, BWI and IAD; Monthly: DCA: 32.1" (2<sup>nd</sup> greatest in Washington); BWI: 50"; IAD 46.1". Seasonal: DCA: 56.1"; BWI 80.4"; IAD 73.2"
- Warmest spring on record at IAD, average temp. 58.6°F; 2<sup>nd</sup> warmest at DCA, average temp. 60.5°F, highest since 1977; 7<sup>th</sup> warmest at BWI
- Record high temperatures at IAD on April 5-7, and at BWI on April 6-7, when many locations recorded their first 90°F or greater readings
- Severe thunderstorms hit parts of D.C. on April 8, knocking down a large tree near the U.S. Capital; wind gusts measured up to 59 mph at DCA
- Warmest summer on record at three major airports with average temperature of 81.3°F at DCA; 79.3°F at BWI and 77.8°F at IAD
- First time on record average maximum summer temperature greater than 90°F at DCA (90.2°F)
- Average minimum June temperature at DCA warmest on record (72.4°F)
- Hottest June on record at DCA and IAD, 2<sup>nd</sup> hottest at BWI
- On July 6, BWI soared to 105°F; 2<sup>nd</sup> hottest day ever in Baltimore (107°F, 7/10/36); at or above 100°F at BWI on 5 days, most on record
- On July 25, damaging straight line thunderstorm winds with gusts 60-75 mph and isolated gusts to 90 mph resulted in three deaths from wind and one from lightning, widespread damage from downed trees and power lines, and loss of power to more than 300,000 customers
- On August 12, a rapidly moving line of severe thunderstorms brought an EF-0 tornado to Virginia and 80-90 mph to parts of Montgomery County
- Record rainfall on Sept. 30: totals of 6.02" at BWI, 2<sup>nd</sup> greatest total of any calendar day; 4.66" at DCA and 4.74" at IAD, 3<sup>rd</sup> greatest in September at both locations. Rainfall totals over a foot across parts of southern Maryland and 4"-8" across most of metro area resulted in road closures
- On Sept. 30, EF-0 tornado in Ann Arundel County, with a maximum path of 200 yards, path length of 1 mile, snapped and uprooted trees
- On November 17, EF-1 tornado with winds to 100 mph struck Baltimore area, resulting in three injuries and property damage; straight-line wind damage from strong to severe thunderstorms across area with downed trees and wires, and loss of power in some locations

## December 2010

**Temperature:** The first month of meteorological winter featured well below normal temperatures. Negative departures were -4.9°F at DCA, -4.3°F at BWI and -5.1°F at IAD, the coldest observed in December since 2000. December broke a string of nine months with above normal temperatures. While no record lows were set, cold continued nearly the entire month with 23 out of 31 days recording subnormal readings. DCA recorded only 2 days with highs at or above 50°F, its fewest since 1942. The month's coldest conditions occurred the 14<sup>th</sup>-16<sup>th</sup> when most locations recorded at or below freezing highs, including BWI and IAD. IAD's maximum readings of 25°F on the 14<sup>th</sup> and 24°F on the 16<sup>th</sup> tied records for the dates. Minimum readings also were consistently below freezing. BWI and IAD recorded all but the 12<sup>th</sup> with subfreezing lows, the most days since December 2000.

**Precipitation:** The area was dry with totals generally less than 2 inches. Monthly totals included 1.78" (-1.27") at DCA; 1.96" at BWI (-1.39"); and 1.47" (-1.60") at IAD. This was the driest December since 2006 at DCA, BWI and at IAD. The majority of the month's precipitation occurred from two events. On the 1st, a powerful storm brought severe weather, flooding and heavy rainfall to the region. An EF0 (winds to 80 mph) tornado struck Mill Hill Estates in Charles County, MD, while numerous trees and wires were down from strong thunderstorm wind gusts throughout the area. Winds gusted to 62 mph near Mt. Torry Furnace in Nelson County, VA, and 54 mph near Willwood in Harford County, MD. Meanwhile, flash flooding closed Interstate 295 at Benning Rd. in Washington, D.C., while Routes 657 and 618 were closed along Crooked Run at the Madison Culpepper County Line in Virginia. Rainfall totals included 2.20" near Advance Falls, VA (Albemarle County) and 1.38" near Cockeysville, MD (Baltimore County). The three major airports recorded about ¾" rainfall. The second major rainfall occurred on the 11<sup>th</sup>-12<sup>th</sup> with ¾" to about an inch at most locations. The first one inch snowfall of the season was measured on the 16<sup>th</sup>. Amounts were between 1"-2" throughout the region. The Washington/Baltimore metro area escaped a major east coast snowstorm on the 26<sup>th</sup>, observing amounts generally under 1 inch. Southern Maryland received between 4"-5". Windy conditions were also prevalent throughout the month. On the 13<sup>th</sup>, winds gusted to 57 mph at Golf Estates in Montgomery County, MD, and on the following day, Rosslyn (Arlington County), VA, measured a peak gust of 48 mph. Then on the 27<sup>th</sup>, following passage of the coastal storm, a 66 mph gust was observed near Flint, MD (Frederick County) and 55 mph measured at DCA.

### DECEMBER 2010 WEATHER STATISTICS FOR THE WASHINGTON/BALTIMORE AREA

Location	Station Temperatures (°F)				Extreme/Day			Precipitation (Inches)				
	AvMx	AvMn	AvgT	NmIT	DepNml	Max	MinT	Total	Norm	DepNml	Yr to Date	Snow
National (DCA)	40.7	28.5	34.6	39.5	-4.9	65/1	21/15,16	1.78	+3.05	-1.27	34.78	2.1
Baltimore (BWI)	39.9	24.9	32.4	35.7	-4.3	62/1	16/16	1.96	+3.35	-1.39	43.47	1.2
Dulles (IAD)	38.3	23.5	30.9	36.0	-5.1	64/1	11/17	1.47	+3.07	-1.60	39.10	1.5

**ANNUAL Temperatures:** This year marked the 4<sup>th</sup> warmest in Washington since 1871 with an average temperature of 59.7°F (see cover). Above normal temperatures were reported at all three major airports: +2.2°F at DCA, +1.3°F at BWI, and +2.0°F at IAD. All three airports recorded above normal readings for all but February and December. Despite above normal average temperatures, January was a mix, ending with coldest minimum temperatures of 2010 on the 31<sup>st</sup>: +16°F at DCA, 8°F at BWI, and +6°F at IAD. February was one of only two below normal months. BWI's monthly maximum of 46°F was its coldest ever; DCA tied with 1934 for coldest and IAD observed its chilliest monthly maximum since 1969. In March, warmer weather returned. IAD recorded its 8<sup>th</sup> warmest March ever. It was the warmest March since 2000 at DCA and BWI. April 5 marked the year's first 90°F readings, the earliest ever observed at IAD, tied for second earliest at BWI and earliest in season in Washington since 1942. In May, IAD established three record highs: 90°F on the 1<sup>st</sup>, 88°F on the 2<sup>nd</sup> and 89°F on the 14<sup>th</sup> and all three airports set record high minimum temperatures on the 3<sup>rd</sup>. June was the warmest ever with records set in Washington and at IAD. DCA's average temperature of 80.6°F was its first June average ever above 80°F. Record highs were set at all three airports in late June. July continued hot with the average monthly temperature in Washington equaling July 1993 as its hottest month ever (83.1°F) and numerous record highs set, including a record number of days at 100 or above at BWI. August heat resulted in the hottest summer ever. In September, all three airports set records for the number of 90°F+ days for the year as well as numerous other monthly heat records. October temperatures soared above 80°F on three days, including a summer-like 88°F at DCA on the 11<sup>th</sup> and a record high of 86°F at IAD. On the next day, IAD tied another record high, 83°F. November continued warm. December ushered in cold temperatures (see above.)

**ANNUAL Precipitation:** DCA and IAD recorded below normal precipitation for the year: DCA, 34.78" (-4.57"), IAD, 38.80" (-3.0") while BWI was above normal, 43.47" (+1.53"). Snowfall was well above normal: DCA, 41.6" (+26.3"), BWI, 58.7" (+40.5) and IAD, 53.3" (+32.3"). January started the year with above normal snowfall across the area as a result on an event on the 30<sup>th</sup>. February brought "snowmageddon," breaking all time records for monthly and seasonal snowfall as a result of three major events that closed down the area for nearly a week. Monthly totals were 32.1" at DCA (2<sup>nd</sup> greatest in Washington, exceeded only in February 1899), 49.7" at BWI and 46.1" at IAD. April-June were dry but impacted by high winds and hail from numerous severe weather events. July was wet but continued the severe weather including an event on the 25<sup>th</sup> with gusts up to 80-90 mph in some areas. August recorded five major severe events including wind gusts to 70-80 mph and EF-0 tornado (winds to 80 mph) with heavy damage in Silver Spring and Gaithersburg, MD. On August 24<sup>th</sup>, tropical downpours resulted in up to 5.51" near Afton (Augusta County). After a long dry start, September 29<sup>th</sup>-30<sup>th</sup> observed heavy rains, high winds and hail from the remnants of Tropical Storm Nichole. October rainfall was near to below normal but an event on the 27<sup>th</sup> resulted in a water spout off Rock Point, MD. In November, Baltimore City and County were hit by an EF-1 tornado (winds up to 100 mph). December ended the year dry (see monthly above).

### ANNUAL WEATHER STATISTICS FOR THE WASHINGTON/BALTIMORE AREA

Location	Station Temperatures (°F)				Extreme/Day			Precipitation (Inches)			
	AvMx	AvMn	AvgT	NmIT	DepNml	Max	MinT	Total	Norm	DepNml	Snow
National (DCA)	68.2	51.2	59.7	57.5	+2.2	102/7-6,7	16/1-3,31, 2-7	34.78	39.35	-4.57	41.6
Baltimore (BWI)	66.7	47.0	56.9	55.6	+1.3	105/7-5	8/1-31	43.47	41.94	+1.53	58.7
Dulles (IAD)	67.0	46.3	56.6	54.6	+2.0	101/7-7	6/2-1	39.10	41.80	-2.70	53.3

**Looking Ahead to January:** With the local airports running about -5.0°F below normal in December, will cold conditions continue through January? Listed below are the most recent 10 Decembers with a negative departure of at least -5.0°F at DCA and the corresponding January readings.

Year	2010	2000	1989	1963	1962	1960	1958	1955	1945	1935
December Dep. Nml.	-4.9°F	-7.7°F	-11.6°F	-8.4°F	-6.3°F	-8.5°F	-6.6°F	-5.9°F	-6.6°F	-7.4°F
January Dep. Nml.	?	+0.6°F	+8.7°F	+1.4°F	-3.6°F	-5.1°F	0°F	-0.4°F	+1.9°F	-3.3°F