

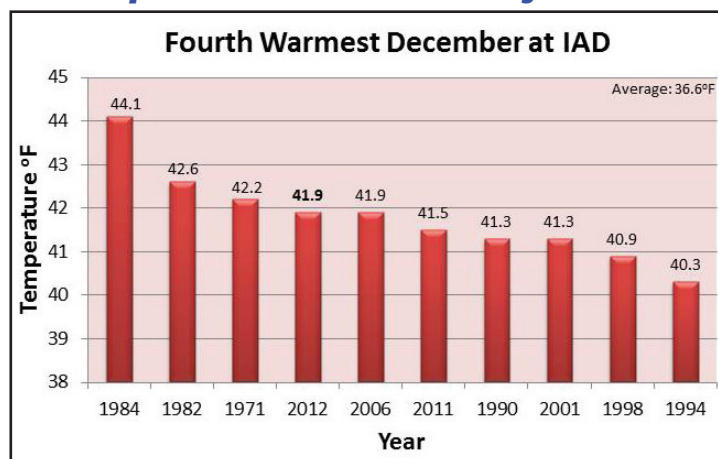
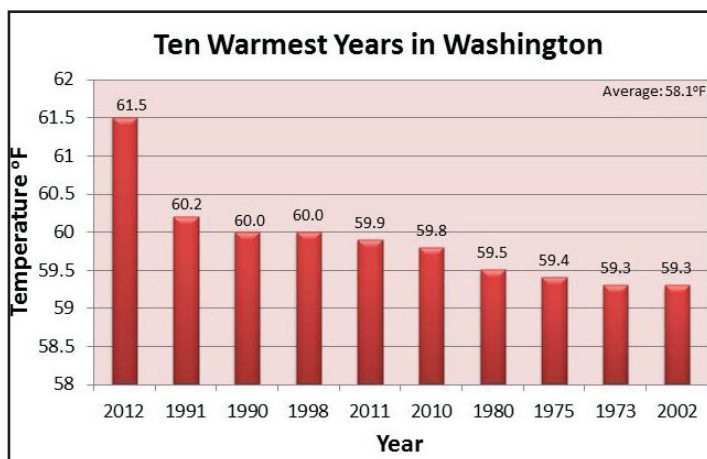


# PRESTO

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



## DECEMBER 2012: Significantly Warmer than Normal ANNUAL 2012: Warmer and Drier than Normal with Destructive Derecho and Tropical Storm Sandy



### December Highlights

- Well above normal temperatures: +5.6°F at DCA, +6.0°F at BWI, and +5.3°F at IAD
- Consistently above normal temperatures: 28 days at DCA, 29 at BWI and 26 at IAD
- Record 71°F at DCA on 3<sup>rd</sup> with highs into 70s area wide on 3<sup>rd</sup> and 4<sup>th</sup>
- No arctic blasts of cold: minimum for month 29°F at DCA, 25°F at BWI and 21°F at IAD
- Six out of 10 Decembers with above normal temperatures at DCA, BWI and IAD
- Soaking rains greater than one inch area wide on the 20<sup>th</sup>-21<sup>st</sup> and 26<sup>th</sup> with totals close to 2 inches in Baltimore County on the 20<sup>th</sup>-21<sup>st</sup> and close to 2 inches in Fairfax County, VA and Ann Arundel County, MD on the 26<sup>th</sup>
- Accumulating snowfall totaling 3"-4" across portions of Carroll and Frederick Counties in MD and Loudoun County VA on 24<sup>th</sup>, 26<sup>th</sup> and 29<sup>th</sup>

### Highlights for 2012

- Warmest spring on record at all three major airports
- Warmest average March temperature on record in Washington, 56.8°F, and at IAD, 54.3°F; 3<sup>rd</sup> warmest at BWI, 55.7°F, and warmest since 1945
- DCA recorded 8 days with highs at or above 100°F; BWI, 6; IAD, 4; DCA recorded 48 days with highs at or above 90°F; BWI, 40; IAD 35
- Hottest June day on record: 104°F in Washington and 102°F at IAD on the 29<sup>th</sup>; Record 99°F at DCA on June 21; 100°F at BWI ties record for date
- On June 1, 12 tornadoes confirmed across Maryland: 4 EF-1 (estimated wind speeds up to 100 mph) and eight EF-0 (estimated wind speeds up to 85 mph). Two injuries were reported in the EF-1 tornado near Bel Air (Harford County), MD; Property and tree damage were the main impacts; damaging thunderstorm winds, including gusts to 60 mph in Falls Church (Arlington County), VA, and torrential rainfall in some areas, including 4.56" near Long Green (Baltimore County), MD, and 3.06" near McLean (Fairfax County), VA; over an inch soaked BWI (1.55") and DCA (1.22")
- On the June 29, a derecho, a fast moving, long lasting line of intense thunderstorms, blew through the metro area late evening. The event featured widespread wind gusts from 60-90 mph, frequent lightning and heavy rain. The storms resulted in five fatalities. There was also extensive property damage and loss of power to a reported 1.3 million residents. PEPCO, the utility for DC and its Maryland suburbs, noted the largest amount of outages for any weather event outside of a tropical storm: winds gusted to 71 mph at IAD, 70 mph at DCA, and 68 mph at BWI.
- July was second hottest month on record at DCA (avg. 84.5°F), IAD (avg. 80.6°F); tied for 5<sup>th</sup> hottest at BWI (avg. 81.4°F)
- Record 7 days in July at or above 100°F at DCA, 4 such days at BWI (2<sup>nd</sup> most on record), 3 such days at IAD (tying record)
- On the July 8, seven people were injured near Fredericksburg, (Spotsylvania County), VA, when a microburst tore a roof off a gym and a wall collapsed.
- On the Sep. 8, strong to severe thunderstorms with damaging winds cut power to 188,000 customers, according to press reports. Winds gusted to 63 mph near IAD in Loudoun County, VA, and to 58 mph at DCA. Wind damage caused windows to blow out on 29 vehicles at the Lorton, VA, train station parking lot. A waterspout was observed near Cape St. Claire, MD.
- On the Sep.18, strong to severe thunderstorms were again accompanied by damaging winds and torrential rainfall. Winds gusted to 61 mph at DCA, 60 mph in Columbia, MD (Howard County) and to 47 mph at BWI. A funnel cloud was observed near Reva, VA (Culpeper County), where numerous roads were flooded
- Post Tropical Hurricane Sandy resulted in major impacts to metro area from 28<sup>th</sup>-30<sup>th</sup> and especially on the 29<sup>th</sup>. Many businesses, as well as Federal Government and schools closed, up to 200,000 lost power according to press reports; area deluged with 4"-7" rainfall and tropical storm force winds to 60 mph.
- Sandy also resulted in heavy snowfall across portions of West Virginia including 24.0" near Kitzmiller (Mineral County)
- November marked first month in 2012 with below normal temperatures at all three airport

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## December 2012

**Temperatures:** The Washington/ Baltimore area returned to above normal temperatures in December. Positive departures were significant: +5.6°F at DCA, +6.0°F at BWI and +5.3°F at IAD (4<sup>th</sup> warmest on record, see graphic). Average daily temperatures were above normal on all but 3 days at DCA, 2 days at BWI, and 5 at IAD. Maximum readings soared into the 70s on the 3<sup>rd</sup> and 4<sup>th</sup> at many locations including a record 71°F at DCA on the 3<sup>rd</sup>. There were no intrusions of arctic air. DCA recorded just 5 days with minimums at or below freezing. The lowest minimum for the month was just 29°F at DCA, 25°F at BWI and 21°F at IAD.

**Precipitation:** Normal to slightly below average precipitation was observed at the three major airports: DCA, 3.03", (-0.02"); BWI, 3.11" (-0.26") and IAD, 2.87" (-0.09"). A majority of the month's precipitation occurred in two events. The first brought a soaking rain during the early morning hours of the 21<sup>st</sup>. Rainfall totals were between 1"-2" in many locations including 1.94" in Long Green, MD (Baltimore County), 1.55" at the Dalecarlia Reservoir in Washington, D.C., and 1.39" in McLean, VA (Fairfax County). On the 26<sup>th</sup>, wet snow changed to heavy rain; precipitation totals included 1.82" at Riviera Beach, MD (Anne Arundel County), 1.81" in Herndon, VA (Fairfax County) and 1.51" at the National Arboretum in Washington. The wet snow accumulated several inches north and west of the metro area before changing to rain. Totals included 4.0" near Emmitsburg (Frederick County), 3.0" near Taneytown, MD (Carroll County) and 3.6" near Round Hill, VA (Loudoun County). Across the northern and western suburbs, measurable snowfall fell on the 24<sup>th</sup> and 29<sup>th</sup>. The highest totals on the 24<sup>th</sup> included 4.0" in Eldersburg, MD (Carroll County) and 3.8" in Bluemont, VA. (Loudoun County). On the 29<sup>th</sup>, 3.5" accumulated near Taneytown and 3.3" in Millers (Carroll County). Strong winds occurred on the 2<sup>nd</sup> and 30<sup>th</sup>. Winds gusted to 50 mph in Springdale, MD (Prince Georges County) on the 27<sup>th</sup>; on the 30<sup>th</sup> gusts were measured at 53 mph in Arbutus (Baltimore County), near Flint (Frederick County), MD, and to 52 mph near Quantico, VA (Prince William County).

### **December 2012 Weather Statistics for the Washington/Baltimore Area**

Location	Station Temperatures (°F)					Extreme/Day		Precipitation (Inches)				
	AvMx	AvMn	AvgT	NmlT	DepNml	Max	MinT	Total	Nml	DepNml	Yr to Date	Snow
National (DCA)	52.3	38.4	45.3	39.7	+5.6	72/4	29/23,31	3.03	3.05	-0.02	32.45	0.2
Baltimore (BWI)	50.7	34.7	42.7	36.7	+6.0	70/3,4	25/14,24	3.11	3.37	-0.26	37.42	1.4
Dulles (IAD)	50.4	33/4	41.9	36.6	+5.3	71/4	21/14,23	2.87	2.96	-0.09	35.62	2.2

**Temperature, 2012:** All three airports recorded well above average temperatures for the year, only November marked below average readings at DCA and BWI; April, June and November were below normal at IAD. Departures were +3.3°F at DCA, +3.6°F at BWI and +2.4°F at IAD. The year started warm. In January, IAD set several temperature records, including a 66°F maximum reading on Jan. 31. DCA observed only 1 day (Jan 22) with maximum readings at freezing and none below 32°F. February started balmy with DCA observing 72°F on Feb. 1; IAD set another record at 69°F that day. March was the warmest on record in Washington, matching the April average temperature. The average maximum and minimum temperatures were either the highest on record or near record values. DCA's maximum of 82°F on Mar. 15 set a new record for the date. IAD broke high temperature records on Mar. 15 (84°F) and 19<sup>th</sup> (76°F), and equaled a record on the 23<sup>rd</sup> (83°F). April and May brought more seasonable weather with above normal readings at DCA and BWI and slightly below normal readings at IAD. On Apr. 16, BWI's thermometer soared to 90°F for the first time in 2012, equaling a record high. On Jun. 29, DCA sizzled to 104°F, a record for the date and the highest June reading on record. In July, DCA recorded its warmest average daily temperature on Jul. 7, 94°F. BWI peaked at 104°F on Jul. 7 and 18, only the second such occurrence in Baltimore on record. August and September continued above average. On Oct 24, DCA's 84°F equaled an all-time maximum for the date. November was the first cooler than normal month of the year. December ended the year warm.

**Precipitation, 2012:** The year marked well below normal precipitation across the area: departures for the year at DCA were 32.45" (-7.21), BWI, 37.42" (-4.37"), and IAD 35.62" (-5.85). Snowfall was significantly below normal. Across the metro region, there were no snowstorms in 2012. Annual snowfall totalled just 2.2" at DCA, 3.2" at BWI and 5.3" at IAD. DCA failed to record 1.0" of snow on any one calendar day in 2012. The year started dry with only one significant rainfall event on Jan. 11-12 and no snow. February continued drier than normal with minimal snowfall. The majority of February's precipitation fell on Leap day as a soaking rain with well over 2" in some areas. March and April were dry across most of the metro area. Washington's total of 1.02" was its 6<sup>th</sup> driest March total on record. Outlying areas saw some snow, heavy rain, severe weather and wildfires. May rainfall was variable. DCA and BWI were below normal but IAD was well above normal. The month also featured some severe weather. For the summer, localized rainfall brought BWI's total above normal and kept DCA and IAD below. The most significant event of the season was a destructive derecho on June 29. The thunderstorm complex, which started in Iowa, raced east at speeds up to 60 mph and wind gusts reached 60-90 mph, along with frequent lightning and heavy rain. The event resulted in five deaths and widespread power outages to a reported 1.3 million residents. Earlier, on June 1, Maryland recorded 12 confirmed tornadoes, resulting in one injury and damages. On July 8, seven people were injured near Fredericksburg, (Spotsylvania County), VA, when a microburst tore a roof off a gym and a wall collapsed. The event included torrential rainfall across northern Maryland including 3.58" in Mt. Airy (Carroll County), MD. On July 15, a waterspout moved onshore along Windy Lane near Coltons Point (St. Mary's County), MD. Property damage was reported consistent with EF-0 tornado winds up to 75 mph. August continued the summer of severe weather with localized heavy rain and hail in Maryland and two waterspouts near the Chesapeake. On Aug. 22, BWI recorded a daily record rainfall of 3.36". The major event was Autumn was Post Tropical Storm Sandy in late October which brought much needed rainfall to the area as well as destructive winds, a waterspout and heavy snow to outlying areas. November and December observed below average precipitation and minimal snowfall.

### **Annual 2012 Weather Statistics for the Washington/Baltimore Area**

Location	Station Temperatures (°F)					Extreme/Day		Precipitation (Inches)				
	AvMx	AvMn	AvgT	NmlT	DepNml	Max	MinT	Total	Nml	DepNml	Snow	
National (DCA)	70.1	52.9	61.5	58.2	+3.3	105/7-7	17/1-4	32.45	39.74	-7.29	2.2	
Baltimore (BWI)	68.6	48.6	57.3	53.7	+3.6	104/7-7,7-18	13/1-4	37.42	41.88	-4.46	3.2	
Dulles (IAD)	68.6	47.2	57.9	55.5	+2.4	101/7-8,7-18	14/1-4	35.62	41.54	-5.91	5.3	

**Looking Ahead to January:** Will January snowfall continue subnormal? Listed below are the most recent 10 years when DCA observed less than an inch of snowfall in December and the corresponding January total.

Year	'94-'95	96-97	97-98	98-99	'99-'00	'04-'05	'06-'07	'08-'09	'11-'12	'12-'13
December	T	0.2	0.1	0.5	T	0.1	T	T	T	0.2
January	3.9"	2.3	T	2.2	14.5	6.4	1.3	1.9	2.0	?