

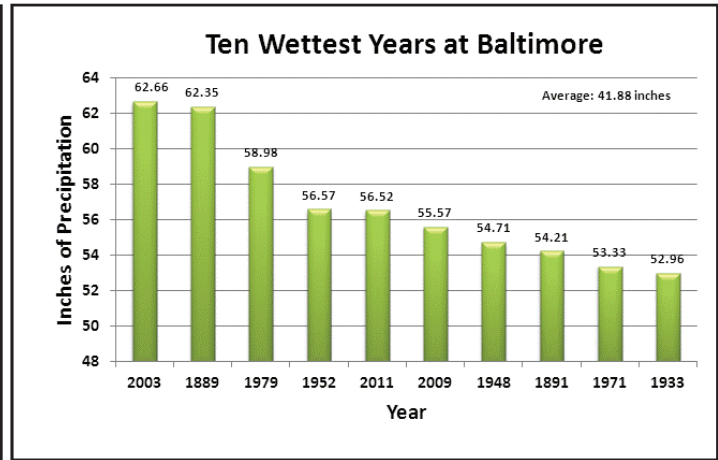
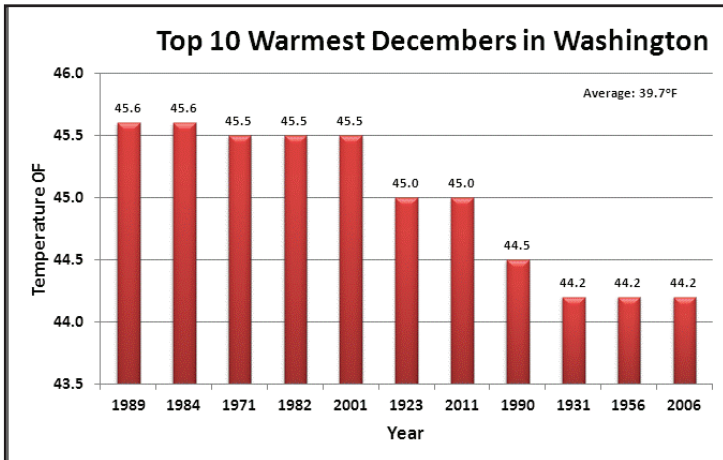


# PRESTO

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



## **DECEMBER 2011: Consistently Warm; Unprecedented Daily Rainfall Record In Washington ANNUAL: Above Normal Temperatures; Numerous Major Storms**



### **December Highlights**

- Well above normal temperatures across the area: +5.3°F at DCA, +5.5°F at BWI, and +4.8°F at IAD
- December was tied for the 6<sup>th</sup> warmest on record at DCA (see graphic); at IAD, 5<sup>th</sup> warmest and warmest since 2001
- Third latest freeze on record at DCA, 10<sup>th</sup>; only 4 days with lows at or below 32°F; equaling all-time fewest
- DCA 29°F monthly minimum is all-time warmest for December
- Major storm system on 6<sup>th</sup>-7<sup>th</sup> with excessive rainfall including an all-time December daily record of 3.10" on the 7<sup>th</sup>. Rainfall totals from well over 2" to well over 4" flooded numerous roads across the area; rain changed to wet snow in high elevations in Loudoun County, VA, and accumulated 4.0" near Bluemont; strong winds followed storm with gusts to 46 mph at BWI on 8<sup>th</sup>

### **Annual Highlights**

- Above normal temperatures at all three major airports; positive departures were DCA, +1.7°F; BWI, +2.7°F; IAD, +1.7°F
- DCA and IAD marked 2<sup>nd</sup> hottest summer on record, next to 2010; BWI, 8<sup>th</sup> hottest
- DCA and BWI recorded 5 days with highs at or above 100°F; IAD, 3; highs at or above 95°F: DCA, 24; BWI, 18; IAD, 15
- BWI recorded 17 consecutive days at or above 90°F, Jul. 17- Aug. 2; DCA and IAD, 16 days, Jul. 18- Aug. 2
- Above to well above normal precipitation across the area; annual totals at DCA were +7.15, at BWI, +14.64; and at IAD, +4.66
- High impact winter event on Jan. 26 with a rapid start of moderate to heavy sleet then wet snow with thunder and lightning in some areas. Accumulations from 5" to up to a foot in some areas beginning mid to late afternoon during rush hour resulted in transportation nightmares. Heavy wet snow resulted in tree damage and power loss to a reported 400,000 users across the area--
- Region impacted by 18 tornadoes from April 27-28, including long track EF-2 (winds to 130 mph) that traveled more than 30 miles in the Shenandoah Valley, resulting in two injuries; 5 EF-1 tornadoes (wind speeds to 100 mph), the strongest near Churchville, VA (Augusta County) and 12 EF-0 tornadoes (wind speeds to 80 mph) with the strongest in Reston, VA (Fairfax County) and near Town Creek and Green Ridge, MD (Allegany County). Widespread property and tree damage but no deaths or injuries.
- Hurricane Irene lashed the area on the 27<sup>th</sup>-28<sup>th</sup> with strong winds, heavy rain, flooding and widespread power outages; significant damage occurred across Southern Maryland with rainfall totals over 11"; metro area totaled 3"-5"; near hurricane force wind gusts reached 74 mph near Cobb Island and 72 mph at Chesapeake Beach, (Calvert County); metro area gusts were reported at 62 mph in Dundalk (Baltimore County), 59 mph near Chevy Chase in northwest D.C. and 60 mph at DCA
- Torrential rainfall drenched area from Sep. 5-9, largely from remnants of Tropical Storm Lee: 5"-8" total rainfall across most of the metro area with some locations recording more than a foot, including parts of Fairfax, VA; in Maryland, Baltimore County, MD, had close to a foot; significant flash flooding from excessive rainfall on saturated soils led to flooded roads, homes and businesses; four fatalities in area from record rainfall; about 100 residents had to leave their mobile home park in Prince William County, VA, due to flooding; closed parts of I-66 and the Capital Beltway
- Five EF-0 tornadoes in Northern Virginia on Oct. 13 resulted in tree and property damage; wind speeds up to 80 mph during the Aquia Harbor (Stafford County) tornado; 3" to more than 4" of rainfall across portions of Virginia
- Rare early winter storm occurred on Oct. 29 with nearly a foot of snow across northern Maryland and portions of the Shenandoah; more than 5" in portions of Loudoun County (5.7" near Bluemont, VA) and Baltimore County (5.5" near Lineboro, MD); daily record 0.6" at IAD and trace at DCA, BWI; earliest in season at DCA, BWI and IAD since October 10, 1979

## December 2011

**Temperatures:** Well above normal temperatures were observed across the Washington/Baltimore area. Positive departures were +5.3°F at DCA, +5.5°F at BWI and +4.8°F at IAD. December tied for the 6<sup>th</sup> warmest on record at DCA (see graphic); warmest since 2001 and 5<sup>th</sup> warmest at IAD. There were no intrusions of Arctic air keeping maximum temperatures at or above 40°F at all three major airports for the first such time in December. DCA marked 8 days with highs at or above 60°F, BWI, 7 such days, and IAD, 6. On the 21<sup>st</sup>, BWI and IAD set a record highs, 62°F, and 61°F respectively. Minimum readings also were well above normal. DCA's first freeze of the season didn't occur until the 10<sup>th</sup>, third latest on record. All three airports set daily minimum high temperature records on the 6<sup>th</sup>: 55°F at DCA, 56°F at BWI and IAD.

**Precipitation:** Above normal precipitation was recorded across the area with amounts between 4"-5" at the three major airports and no measurable snowfall. Monthly totals were 4.90" (+1.85") at DCA, 4.50" (+1.13") at BWI and 4.46" (+1.50") at IAD. The month featured three significant storm systems. The first event, on the 6<sup>th</sup>-7<sup>th</sup>, deluged the area with the heaviest rainfall of the month. Totals ranged from well over 2" to well over 4" in some locations resulting in urban and small stream flooding, and numerous road closures due to high water. Rainfall totals included 4.40" near Tracy's Landing (Calvert County), MD, and 4.36" near Morningside, (Prince Georges County), MD, and 4.32" near Fredericksburg, (Spotsylvania County), VA. The three major airports set daily rainfall records on the 7<sup>th</sup> with 3.10" at DCA, 2.38" at BWI, and 2.14" at IAD. This event was the greatest total rainfall in Washington for any day between November and March. The storm ended as wet snow that accumulated in higher elevations well north and west of the metro area. Totals included 4.0" near Bluemont, (Loudoun County), VA, and 2.0" near Ft. Ritchie (Frederick County), MD. Strong winds lashed the area in the storm's wake with gusts to 51 mph at Patuxent River Naval Air Station (St. Mary's County), MD, and to 46 mph near Smith Island, VA. The next significant storm system impacted the area with a soaking rain from the 22<sup>nd</sup>-23<sup>rd</sup>. Amounts were greater than an inch in many locations, including 1.67" near Marriottsville (Howard County), MD, and 1.44" near Boston (Culpeper County), VA. IAD set their second daily rainfall record of the month with 1.12" on the 22<sup>nd</sup>. The year's final major event occurred with an all-day rainfall on the 27<sup>th</sup> that brought more than one half to up to an inch across the area.

### December 2011 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	Yr to Date
National (DCA)	52.6	37.4	45.0	39.7	+5.3	63/15	29/12,29	4.90	2.64	+2.26	T	46.89
Baltimore (BWI)	52.4	32.1	42.2	36.7	+5.5	63/6,15	22/12	4.50	3.37	+1.13	T	56.52
Dulles (IAD)	51.5	31.4	41.4	36.6	+4.8	62/15,16	19/12	4.46	2.96	+1.50	T	46.20

**Annual 2011 Temperatures:** Above normal readings were recorded at all three major airports: DCA, +1.7°F; BWI, +2.7°F; IAD, +1.7°F. DCA recorded 9 months above normal; IAD, 10; and BWI, 11. January was the only month all three airport reported below normal readings. February observed record highs across the area on the 18<sup>th</sup>, including 77°F at DCA and 75°F at IAD. March was near normal but observed a record 81°F on the 18<sup>th</sup> at BWI. It was the warmest April at BWI since 1994. Maximum temperatures reached 80°F or greater on 7 days at the three major airports, the most since 2002 at DCA, and since 1985 at BWI. On April 4, BWI set a daily record high of 86°F. On May 30<sup>th</sup>, BWI and IAD tied all-time highs for the date: 98°F and 94°F, respectively. Then on May 31<sup>st</sup>, BWI broke a record with a maximum reading of 97°F. June started summer with record heat on the 1<sup>st</sup>: DCA and BWI, 98°F, IAD, 95°F. The season's first major heat wave ran from June 7-12, including 102°F on the 9<sup>th</sup> at Washington, equaling its hottest recorded June maximum, at BWI, 100°F, and at IAD, 97°F. Additional records were set on the 8<sup>th</sup>: 99°F at DCA and BWI. It was the hottest July on record at all three major airports. Numerous record maximum and minimum temperature records were set including DCA's 102°F on the 23<sup>rd</sup> and 104°F on the 30<sup>th</sup>, which tied for its 5<sup>th</sup> highest reading. BWI soared to 106°F on the 22<sup>nd</sup>, its 2<sup>nd</sup> highest temperature on record. August kept up the heat with a record 100°F at DCA and 99°F at BWI and IAD. September was just slightly above normal. October started cold with record low maximum readings tied or broken on Oct 2-3 at the three major airports but warmed up to the 80s on the 9<sup>th</sup>-10<sup>th</sup>. The season's first freeze occurred on October 30 at BWI and IAD. November and December continued the above normal trend.

**Annual 2011 Precipitation:** All three major airports recorded above normal precipitation. Annual totals at DCA were 46.89" (+7.15); BWI, 56.52" (+14.64); and IAD, 46.20" (+4.66). January brought Commuteagedon, the year's only significant snowfall on the 26<sup>th</sup>, accumulations from about 5" in Washington to a foot in some suburban areas caused traffic nightmares. March was the first month with above normal rainfall at DCA since October 2010 and at BWI and IAD since September 2010. On March 9-10, EF-1 and EF-0 tornadoes struck Northern Virginia. On April 5, thunderstorms spawned a EF-0 tornado in Virginia. On April 16, four tornadoes, causing property damage, were reported, including two EF-1 tornadoes and two EF-0 tornadoes. Flash flooding caused the death of a child near Waynesboro, VA. On April 27-28, a final storm system that ravaged much of the South spawned 18 tornadoes in the area. The strongest was a long track EF-2 tornado in the Shenandoah Valley of Virginia. In June, Harford County, Maryland was struck by two EF-0 tornadoes. On July 3, a cyclist was killed near Bluemont, VA, when a tree was blown down by winds gusting up to 63 mph. August brought well above normal rainfall to DCA and IAD thanks, in part, to Hurricane Irene. The month also featured frequent severe weather. In September, the remnants of Tropical Storm Lee were partially responsible for BWI's wettest September ever and its 3<sup>rd</sup> wettest month on record. It was the wettest September since 1999 at DCA and IAD and the 5<sup>th</sup> wettest month on record at both airports; the event resulted in four fatalities and left about 100 people homeless in Virginia. Five EF-0 tornadoes impacted Northern Virginia on October 13. A significant winter storm impacted the area on Oct. 29 with measurable snow in the metro area and heavy snow north of the region. The year ended wet but without more than a trace of snow.

### Annual 2011 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)	68.3	51.5	59.8	58.1	+1.7	102/7-6,7	17/1-22,24	46.89	39.74	+7.15	8.0
Baltimore (BWI)	67.4	47.6	57.7	55.0	+2.7	105/7-5	8/1-24	56.52	41.88	+14.64	13.2
Dulles (IAD)	67.1	46.7	56.9	55.2	+1.7	101/7-7	6/1-24	46.20	41.54	+4.66	11.6

**Looking Ahead to January:** Will January snowfall continue subnormal? Listed below are the most recent 10 years when DCA observed only a trace or zero snowfall in December and the corresponding January total.

Year	'53-'54	'59-'60	'68-'69	'78-'79	'79-'80	'86-'87	'87-'88	'99-'00	'06-'07	'08-'09	'11-'12
December	T	T	T	T	T	T	T	T	T	T	T
January	11.3	T	0.2	4.0	8.6	20.8	13.1	14.5	1.3	1.9	?