

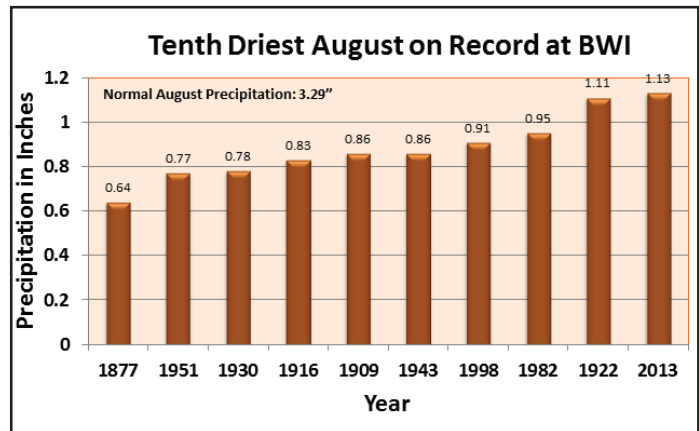
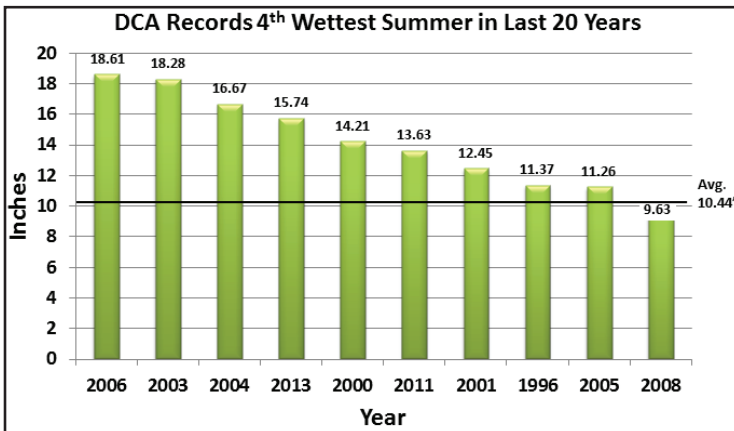


# PRESTO

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



## AUGUST 2013: Coolest in Washington Since 2008 SUMMER: Excessively Wet Start, Dry Ending; Coolest Summer Since 2009 at DCA and BWI; 2008 at IAD



### August Highlights

- Subnormal average temperatures at all three major airports: DCA, -1.0°F; BWI, -0.9°F; IAD, -1.8°F
- No day with highs 95°F or greater at DCA, BWI or IAD; only 2<sup>nd</sup> such occurrence at DCA since 2005
- Well below normal precipitation across area: DCA, 1.34" (-1.59"); BWI, 1.13" (-2.16"); IAD, 1.95" (-1.58")
- About dawn on the 13<sup>th</sup>, an EF-0 tornado was confirmed near Harford Furnace, MD, with peak wind speed of 70 mph and tree damage but no injuries
- During the evening of the 13<sup>th</sup>, thunderstorms in DC caused tree damage at American University, near the National Arboretum, and near the National Zoo
- On 31<sup>st</sup>, severe thunderstorms in Albemarle County, VA, resulted in trees damage and traffic delays in Charlottesville and delayed a University of Virginia football game

### Summer Seasonal Highlights

- Slightly above normal seasonal temperatures: DCA, +1.4°F; BWI, +0.3°F; IAD, +2.0°F; coolest summer since 2009 in Washington
- DCA recorded 23 days with highs at or above 90°F, fewest since 2009, and just 5 days with highs at or above 95°F, least since 2008
- On June 10, four EF-0 tornadoes struck in Maryland at Fork (Baltimore County), Locust Point (Baltimore City), Coltons Point (St. Marys County) and Woodbine (Howard County). Coltons Point recorded 65 mph estimated maximum winds, the other three locations measured 80 mph maximums. Numerous locations reported torrential downpours: 5.05" in Damascus (Montgomery County) and 3.85" in Franconia, VA (Fairfax County); DCA marked a daily record of 2.77"
- On June 13, an 18 mile long track EF-0 tornado moved through Montgomery County, MD. There were no fatalities or injuries. Maximum wind speeds were 75 mph with a path width of 150 yards. Significant damage occurred to 14 homes from fallen trees in northern Rockville. The Manor Country Golf Club Golf Course in Norbeck lost 30 trees with additional property damage in Aspen Hill and the Layhill area. Additionally, there was a parallel 7 mile path of damage just south of the tornado from southern Rockville to Glenmont.
- A second long track tornado on June 13 occurred in St. Marys County covering 13.8 miles, with a width of 200 yards and extending from Oakley to California, MD. Four additional EF-0 tornadoes touched down: two in Spotsylvania County, the first near Thornburg, with wind speeds to 80 mph, causing tree and property damage; and the second near Alsop with winds to 70 mph, causing tree damage; the third tornado was sited in California, MD (St. Mary's County), wind speeds to 75 mph and tree damage, and the fourth twister was verified in King George County, VA, with wind speeds to 70 mph and tree damage. In addition, winds gusted to 59 mph in Ashburn, VA (Loudoun County), funnel clouds were observed near Countryside and at BWI, and baseball size hail (2.75") struck near Callaway (St. Marys County), MD.
- The summer marked just one major heat wave from July 15-21 with maximum readings at or above 90°F daily at DCA, BWI and IAD; DCA and BWI recorded 5 consecutive days with highs at or above 95°F, July 15-19; DCA recorded 5 consecutive days, July 16-21, with minimums at or above 80°F, longest period on record in Washington
- From evening of July 11-12, torrential downpours from thunderstorms resulted in flash flooding, road closures, and water rescues. Northern and central Virginia were most impacted. Rainfall totals included 6.31" near Rixeyville (Culpeper County), 5.99" near Warrenton (Fauquier County), and 5.0" in West Springfield (Fairfax County). IAD recorded a 2-day total of 4.85", greatest July total on record; IAD set a daily record on 11<sup>th</sup> of 3.71". Maryland totals included 3.36" near Morningside (Prince Georges County), and 3.34" near Bethesda (Montgomery County); the District measured up to 3.13".
- Two EF-0 tornadoes struck Maryland in July: On July 1, a tornado in Clinton (Prince George's County) slammed the area with estimated wind speeds to 60 mph, a maximum path width of 75 yards and path length of 2.3 miles. The tornado caused some tree and property damage. The second tornado struck just after midnight on the 23<sup>rd</sup> near Darlington (Harford County). The tornado caused some tree, property and crop damage. Wind speeds were estimated at 80 mph with a maximum path width of 100 yards and length of 0.8 miles.

## August 2013

**Temperatures:** In sharp contrast to recent summer months, all three major airports recorded subnormal average temperatures. Negative departures were -1.0°F at DCA, -0.9°F at BWI, and -1.8°F at IAD. DCA recorded no extended periods of excessive heat and only 6 days with highs at or above 90°F, the least such days since 2009. IAD maximum of 90°F equaled its lowest all-time monthly maximum temperature from 1969 and 1974. Maximum readings were often much cooler than average with DCA reporting 5 days with highs in the 70s, BWI, 7 such days and IAD, 8. Minimum temperatures were frequently chilly: BWI's minimum of 53°F on the 15<sup>th</sup> and 16<sup>th</sup> was its first such occurrence for 2 consecutive days with August lows of 53°F or cooler since 1979.

**Precipitation:** For the first month this summer, the area recorded subnormal precipitation: DCA, 1.34" (-1.59"); BWI, 1.13" (-2.16"); and IAD, 1.95" (-1.58"). BWI did not record a single day with 0.50" or greater rainfall, its first such occurrence since 1982. Despite the dry conditions, there was isolated severe weather on several days. About dawn on the 13<sup>th</sup>, an EF-0 tornado was confirmed near Harford Furnace (Harford County), MD. The peak wind speed was 70 mph resulting in some tree damage. The tornado's path length was 1 mile with a maximum width of 75 yards. Straightline downburst winds from a severe thunderstorm caused additional tree damage near Havre De Grace; Norrisville, MD, was soaked by 1.93". That evening, strong thunderstorms in D.C. caused tree damage at American University, near the National Arboretum and near the National Zoo.

A few days earlier on the 9<sup>th</sup>, parts of Southern Maryland were impacted by strong thunderstorms. Strong winds resulted in damage near Bel Alton (Charles County) and near Leonardtown (St. Mary's County) and torrential rainfall led to flash flooding. Greatest amounts included 3.95" in Charlotte Hall and 2.95" in Hollywood (St. Mary's County). On the 22<sup>nd</sup>, 1.0" hail struck Faber, VA, and 1.73" of rain deluged Shipman (Nelson County). On the 24<sup>th</sup>, water spouts were observed off Taylors Island and near Patuxent River, MD. The month ended with severe thunderstorms impacting Albemarle County, VA, causing downed trees and blocking traffic in Charlottesville. The strong thunderstorms delayed the University of Virginia football game in Charlottesville. Barboursville (Orange County) reported 1.45".

### August 2013 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	YTD
National (DCA)	84.7	69.4	77.1	78.1	-1.0	94/27	60/15	1.34	2.93	-1.59	28.32
Baltimore (BWI)	83.6	64.9	74.2	75.1	-0.9	92/27	52/15,16	1.13	3.29	-2.16	25.57
Dulles (IAD)	83.1	64.2	73.6	75.4	-1.8	90/27,31	53/15,16	1.95	3.53	-1.58	27.85

**Summer (June, July, August) Temperatures:** For the 9<sup>th</sup> consecutive year, DCA and IAD recorded above normal summer temperatures, 4<sup>th</sup> consecutive year for BWI. The season was warmer than normal, despite a slightly cooler than normal August. Seasonal departures were +1.4 at DCA, +0.3 at BWI, and +2.0 at IAD. In contrast to the last 3 years though, the three major airports recorded only slightly above normal temperatures. June started the season without the major airports recording a maximum temperature of 95°F or greater. DCA observed only 6 days with highs at or above 90°F, BWI and IAD, 4 such days.

In July, the three major airports recorded above normal readings, but temperatures were significantly cooler than the previous three Julys. The season's only major heat wave occurred from July 15-21, when maximum readings reached at or above 90°F daily. DCA and BWI recorded 5 consecutive days during this period with highs at or above 95°F, July 15-19. August ended the season cooler than normal (see monthly summary).

**Summer Precipitation, Severe Weather:** Despite a dry August, seasonal rainfall was above normal for all three major airports with plenty of severe weather. Localized thunderstorms resulted in notable rainfall totals: DCA, 15.74" (+5.30"); BWI, 11.71" (+0.89"); and IAD, 13.86" (+2.68"). After a dry spring, June was the wettest month in Washington since May 2008 and tied for 7<sup>th</sup> wettest month in Baltimore. On June 10, four EF-0 tornadoes struck in Maryland resulting in tree and some property damage. The event featured torrential downpours including 5.05" in Damascus (Montgomery County); DCA marked a daily record of 2.77". On June 13, a weakening Derecho struck near Reese, MD (Carroll County), with 1.5" hail. A waterspout was observed 3 miles from the Bay Bridge. In the afternoon, a second round of severe weather produced an 18 mile track EF-0 tornado in Montgomery County; causing significant damage to 14 homes but no injuries. A second long track tornado that day struck in St. Marys County, covering 13.8 miles with a width of 200 yards from Oakley to California, MD, resulting in tree damage. Four additional short track EF-0 tornadoes also touched down: two in Spotsylvania County, VA, one in California, MD (St. Mary's County) and one in King George County, VA, resulting in tree damage. Other locations experienced damaging winds, hail and flash flooding including baseball size hail (2.75") near Callaway (St. Marys County).

July precipitation varied with IAD measuring 7.27" (+3.60"), it's 2<sup>nd</sup> wettest July on record. The majority of the month's rainfall fell from the 11<sup>th</sup>-12<sup>th</sup> when thunderstorms were accompanied by torrential downpours across much of northern and central Virginia. The rainfall resulted in flash flooding, road closures and water rescues in Virginia. Virginia rainfall totals included 6.31" near Rixeyville (Culpeper County). IAD recorded a 2-day total of 4.85", its greatest ever in July, and a daily record on the 11<sup>th</sup> of 3.71". Severe weather also produced two EF-0 tornadoes in Maryland. On the 1<sup>st</sup>, a tornado struck Clinton (Prince George's County) with estimated wind speeds on 60 mph, maximum path width of 75 yards and path length, 2.3 miles. On the 23<sup>rd</sup>, a tornado hit near Darlington (Harford County). Both tornadoes caused some tree and property damage. August observed a drier than normal month (see monthly summary).

### Summer 2013 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	YTD
National (DCA)	85.8	70.7	78.3	76.9	+1.4	97/7-17	59/6-5	15.74	10.44	+5.30	
Baltimore (BWI)	84.8	66.7	75.7	75.4	+0.3	97/7-18	53/6-5	11.71	10.82	+0.89	
Dulles (IAD)	84.2	65.9	75.0	73.7	+2.0	96/7-18	51/6-5	13.86	11.18	+2.68	

**Looking Ahead to September:** After a slightly warmer and wetter than normal summer with a lot of variation, what does autumn hold for the Washington area?

#### Seasonal Temperature Extremes

**Coldest:** 1917 (Average Temperature: 52.9°F; Dep. Nml.: -6.5°F)  
**Warmest:** 1973 and 1931 (Average Temperature: 63.1°F; Dep. Nml. +3.7°F)  
**Extreme Minimum Temperature:** 11°F (Nov. 30, 1929)  
**Extreme Maximum Temperature:** 104°F (Sep. 7, 1881)  
**Most Days With Lows < 32°F,** 19 (1901); **Highs > 90°F,** 14 (1980)

#### Seasonal Precipitation Extremes

**Wettest:** 1934 (Total Precipitation: 21.78"; Dep. Nml.: +11.74")  
**Driest:** 1930 (Total Precipitation: 1.83"; Dep. Nml. -8.21")  
**Snowiest:** 1987 (Total Snowfall: 11.5")  
**Most 1 Day Precipitation:** 5.16" (Sep. 2, 1922)  
**Most Snowfall in 1 Day:** 11.5" (Nov. 11, 1987)