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

## September: Third Warmest in Washington; Record Rainfall at Months' End



## September Highlights

* Well above normal temperatures across area: $+5.0^{\circ} \mathrm{F}$ at DCA, $+3.6^{\circ} \mathrm{F},+4.0^{\circ} \mathrm{F}$ at IAD
* Seventh consecutive month with above normal temperature readings at all three major airports
* DCA and IAD recorded 9 days and BWI 7 days with highs at or above $90^{\circ} \mathrm{F}$, most since 1998 at DCA and BWI, since 2007 at IAD
* Highs at or above $90^{\circ} \mathrm{F}$ at DCA on 67 days in 2010, equals 1980 as most on record; BWI set new record with 59 such days; IAD, with 58
* On $24^{\text {th }}$, record $99^{\circ} \mathrm{F}$ at DCA and $97^{\circ} \mathrm{F}$ at IAD; hottest readings on record so late in a calendar year
* Record rainfall on $30^{\text {th }}$ : totals of 6.02" at BWI (2 $2^{\text {nd }}$ greatest total of any calendar day); 4.66" at DCA and 4.74 " at IAD ( $3^{\text {rd }}$ greatest in Sept. at both locations). Amounts over a foot across parts of southern Maryland and 4"-8" across most of metro area resulted in road closures
* On 30th , EF0 (winds to 80 mph ) tornado near Lake Shore in Ann Arundel County with a maximum path of 200 yards, path length of 1 mile, snapped and uprooted trees, and caused some property damage
* Severe weather on the $22^{\text {nd }}$ with thunderstorm wind gusts up to 58 mph in Four Corners (Montgomery County), MD; hail up to 1.50 " near Wintergreen (Nelson County), 1.0 " in Purcellville (Loudoun County) VA, resulted in loss of power to 20,000 customers across the area, according to press reports
* Wettest September at BWI since 1999


## September 2010

Temperature: For the $7^{\text {th }}$ consecutive month, temperatures were above normal across the Washington/Baltimore area. Positive departures were $+5.0^{\circ} \mathrm{F}$ at DCA, $+3.6^{\circ} \mathrm{F},+4.0^{\circ} \mathrm{F}$ at IAD. Summerlike temperatures lingered, causing DCA and IAD to record 9 days highs at or above $90^{\circ} \mathrm{F}$, and BWI, 7 days, the most since 1998 at DCA and BWI and since 2007 at IAD. The hot temperatures resulted in a record number of $90^{\circ} \mathrm{F}+$ readings for the calendar year at BWI, 59 , and IAD, 58 . DCA's total of 67 equaled 1980 for the most recorded in a calendar year. Numerous other heat records were set: On the $8^{\text {th }}$, IAD tied a record high, $93^{\circ}$. A 4 -day heat wave from the $22^{\text {nd }}-25^{\text {th }}$ broke additional records at all three major airports. IAD tied another record when it reached $94^{\circ} \mathrm{F}$ on the $22^{\text {nd }}$ and $93^{\circ} \mathrm{F}$ on the $23^{\text {rd }}$. Many locations recorded their highest temperatures of the month on the $24^{\text {th }}$, unusually late in the year. DCA's maximum reading of $99^{\circ} \mathrm{F}$ and IAD $97^{\circ} \mathrm{F}$ were the hottest temperatures observed on record for thse dates. On the final $90^{\circ} \mathrm{F}$ day of the month, IAD set yet another record with a high of $93^{\circ} \mathrm{F}$ and a record high minimum of $68^{\circ} \mathrm{F}$; DCA's low also was a record high minimum: $74^{\circ} \mathrm{F}$.

Precipitation: Most of September featured very dry conditions but the month concluded with record rainfall on the final day, resulting in well above normal precipitation. Monthly amounts were 6.02 " at DCA ( +2.23 "), $8.26^{\prime \prime}$ at BWI ( $+4.28^{\prime \prime}$ ) and $6.16^{\prime \prime}\left(+2.34^{\prime \prime}\right)$ at IAD. On the $8^{\text {th }}$, gusty breezes with temperatures in the low 90 s and dew points in the 30 s resulted in relative humidity values at just $15 \%$. The month's first rainfall did not occur until the $12^{\text {th }}$, with amounts generally between 0.50 " and $0.75^{\prime \prime}$ across the area. This event marked the first rainfall at most locations in 18 days. The month's major severe weather event occurred on the $22^{\text {nd }}$ when severe thunderstorms rolled through many locations accompanied by damaging wind gusts up to 58 mph in Four Corners (Montgomery County), MD, resulting in power loss to about 20,000 users across the area, according to press reports. Hail up to $1.50^{\prime \prime}$ was measured near Wintergreen (Nelson County), and to $1.0^{\prime \prime}$ in Purcellville (Loudoun County), VA; rainfall totaled $1.28^{\prime \prime}$ in Norrisville (Harford County), MD. On the $27^{\text {th }}$, heavy downpours resulted in excessive rainfall including 3.73" near Boston (Culpeper County), 2.80" in Faber (Nelson County), VA, and 2.0" near Millers (Carroll County) and in Roxbury Hills (Howard County), MD.

The final days of the month featured a tropical moisture plume beginning on the $29^{\text {th }}$ and ending early afternoon on the $30^{\mathrm{th}}$, followed by more heavy rainfall from the remnants of Tropical Storm Nichole in the evening into the early hours on October 1 . Daily rainfall records were set on the $30^{\text {th }}$ at all three major airports with totals of $6.02^{\text {" }}$ at BWI ( $2^{\text {nd }}$ greatest total of any calendar day); 4.66 " at DCA and 4.74 " at IAD, $3^{\text {rd }}$ highest total for 1 day in September at DCA and IAD. Rainfall was much heavier near the Chesapeake Bay and across southern Maryland. Amounts included 14.07" in Portneys Overlook and 13.80 " in Widewood (St. Mary's County); 13.48" in Solomons (Calvert County). Totals in the metro area included 10.17" near Kingsville (Baltimore County), 6.18" in Brentwood Manor (Howard County), 5.89" near Dranesville (Fairfax County), and 4.67 " at the National Arboretum in Washington, D.C. The torrential rains impacted transportation, which resulted in numerous road closures. Isolated severe weather was reported as well as an EF0 tornado (winds to 80 mph ) near Lake Shore in Ann Arundel County. The maximum path was 200 yards with a path length of 1 mile. The tornado snapped and uprooted trees and caused property damage.

SEPTEMBER 2010 WEATHER STATISTICS FOR THE WASHINGTON/BALTIMORE AREA

|  | Station Temperatures ( ${ }^{\circ} \mathrm{F}$ ) |  |  |  | Extreme/Day |  |  | Precipitation (Inches) |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Location | AvMx | AvMn | AvgT | NmIT | DepNmI | Max | MinT | Total | Norm | DepNmI $\mathbf{~ Y r ~ t o ~ D a t e ~}$ |  |
| National (DCA) | 85.4 | 65.6 | 75.5 | 70.5 | +5.0 | $99 / 24$ | $56 / 21$ | 6.02 | 3.79 | +2.23 | 27.38 |
| Baltimore (BWI) | 82.5 | 59.6 | 71.0 | 67.4 | +3.6 | $95 / 1,24$ | $47 / 21$ | 8.26 | 3.98 | +4.28 | 36.52 |
| Dulles (IAD) | 83.8 | 58.8 | 71.3 | 67.3 | +4.0 | $97 / 24$ | $46 / 21$ | 6.16 | 3.82 | +2.34 | 32.75 |

Looking Ahead to October: The first freeze! October traditionally marks the first freeze in suburban locations. When will the Washington/Baltimore area record its first freeze in 2010? Below is a list of the first $32^{\circ} \mathrm{F}$ or lower readings at DCA and IAD in the last 10 years.

Year First $32^{\circ} \mathrm{F}$ (or lower) reading DCA 2009 December 6
2008 November 18
2007 November 24
2006 November 4
$\begin{array}{lll}2006 & \text { November 4 } & \text { October 15 } \\ 2005 & \text { November 17 } & \text { November 11* }\end{array}$
*Latest date for first freeze ever recorded
IAD
November 6
October 20
October 29
October 15

Year First $32^{\circ} \mathrm{F}$ (or lower) reading

DCA

December 4
IAD November 10 October 3
November 27 October 18
December 22* October 9
November 16 October 8

