AUGUST 2003: Above normal temperatures and rainfall highlighted weather conditions across the region. Precipitation totaled more than 5 inches at IAD ( $5.577^{\prime \prime}$ ) and more than 4 inches at DCA (4.65") and BWI (4.61"). August was the fourth consecutive month with above normal precipitation and the seventh such month this year with April being the only month with below normal precipitation at DCA. While amounts were generally less than in the three previous months, measurable rains still fell on 14 days at DCA, 17 at BWI and 18 at IAD. Monthly precipitation highlights included severe thunderstorms that pounded the area on the 26th and 27th. On the 26th, high winds toppled trees and power lines as winds gusted to 78 mph . On the 27th, winds gusted up to 70 mph across eastern Loudoun County, VA, causing property damage. Together the two storms resulted in loss of power to more than 200,000 customers across the region. Fortunately, warnings were timely and there were no reports of fatalities or serious injuries. While not as widespread or severe, storms on the $5^{\text {th }}$ produced wind gusts to 55 mph in some areas and caused some road flooding. Lightning struck a house in Reston, VA, starting a fire according to press reports. In mid August, storms in Northern Virginia produced heavy rainfall on the 13th (1.48") and 16th (1.45")at IAD.

Temperatures averaged above normal across the Washington/Baltimore area, yielding monthly temperature departures between $+1^{\circ} \mathrm{F}$ and $+2^{\circ} \mathrm{F}$ at the three major airports. DCA recorded 22 days with at or above normal temperatures; however, consistent with this summer's weather pattern, there were no prolonged periods of heat. DCA recorded only eight days with highs at or above $90^{\circ} \mathrm{F}$ while both BWI and IAD observed just five such days. In sharp contrast to 2002, the three major airports recorded no $95^{\circ} \mathrm{F}+$ or highs. The above normal temperatures were often accompanied by high humidity, producing uncomfortable daytime conditions and warm, muggy nights. DCA recorded 22 days ( 15 at BWI, and 8 at IAD ) with minimum temperatures at or above $70^{\circ} \mathrm{F}$. On the $24^{\text {th }}$, a brief intrusion of cool Canadian air infiltrated the local area, producing lows in the 50 's at many locations outside of Washington. At BWI, the low dipped to $53^{\circ} \mathrm{F}$ and at IAD a low of $56^{\circ} \mathrm{F}$ was recorded on the $24^{\text {th }}$.

AUGUST 2003 WEATHER STATISTICS FOR THE WASHINGTON/BALTIMORE AREA

| Station | Temperatures ( ${ }^{\circ} \mathrm{F}$ ) |  |  |  |  | Extreme/Day |  | Precipitation (In) |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Location | AvMx | AvMn | AvgT | NmIT | DepNml | MaxT | MinT | Total | Norm | DepNml | Yr to Date |
| National (DCA) | 85.9 | 71.6 | 78.8 | 77.4 | +1.4 | 94/22 | 64/24 | 4.65 | 3.44 | +1.21 | 41.48 |
| Baltimore (BWI) | 84.7 | 68.1 | 76.4 | 74.4 | +1.9 | 92/22 | 53/24 | 4.61 | 3.78 | +0.87 | 39.80 |
| Dulles (IAD) | 85.3 | 67.1 | 76.2 | 74.5 | +1.8 | 92/22 | 56/24 | 5.57 | 3.74 | +1.79 | 44.10 |
| Andrews AFB (ADW) | 86.0 | 68.0 | 77.0 | N/A | N/A | 93/22 | 55/24 | 6.51 | 4.40 | +2.11 | 42.71 |

SUMMER (JUNE-AUGUST) 2003: Summer 2003 was unseasonably wet and slightly cooler than normal across most of the local area. The three major airports reported below normal temperatures of $-0.1^{\circ} \mathrm{F}$ and $-1.1^{\circ} \mathrm{F}$ and 3 -month precipitation surpluses of more than 6 inches. It was the third summer out of the last four with below temperatures and the wettest such season since 1969 at DCA. The longest stretch of $90^{\circ} \mathrm{F}+$ highs fell from July 4-7, a mere four days. There were no days with highs at or above $95^{\circ} \mathrm{F}+$ in the area. June temperatures were $-1.5^{\circ} \mathrm{F}$ and $-3.5^{\circ} \mathrm{F}$ below average. Frequent stormy conditions kept highs as much as $25^{\circ} \mathrm{F}$ below normal. In fact, there were seven days with highs at or below $70^{\circ} \mathrm{F}$ at IAD. DCA's high of $90^{\circ} \mathrm{F}$ on June 24 was the first $90^{\circ} \mathrm{F}+$ reading of 2003 and the latest $90^{\circ} \mathrm{F}+$ reading in more than 20 years. Slightly below-normal temperatures prevailed during July with monthly temperatures down between $-0.5^{\circ} \mathrm{F}$ and $1.5^{\circ} \mathrm{F}$. There were only eight days with $90^{\circ} \mathrm{F}+$ highs at DCA, a sharp contrast to the 19 days recorded in July 2002. August brought warmer than normal conditions at most locations with monthly temperatures up $+1^{\circ} \mathrm{F}$ to $+2^{\circ} \mathrm{F}$ at the three major airports.

Persistent wet weather in June and July resulted in DCA's wettest summer in more than 30 years. Measurable precipitation ( $\geq 0.01^{\prime \prime}$ ) fell on 52 of 92 summer days yielding a summer surplus of more than 8 inches. In June, nearly 8 inches of rain was recorded at DCA (8.34" at IAD). In July, some locations recorded more than 10 inches of rain, mainly the result of torrential downpours from thunderstorms. In addition, strong thunderstorms on July $10^{\text {th }}$ spawned two tornadoes in Virginia (F0: winds between 40-72 mph in Stafford County; and F1: winds between 73-112 mph in King George County), causing property damage but no reported injuries or fatalities. January-June 2003 precipitation totals (29.54") more than doubled those for the same period last year (14.61"). August also featured wetter than normal conditions with monthly precipitation totals exceeding 4 inches at most locations. The August precipitation totals combined with those observed during the first seven months of 2003 resulted in the wettest January-August period (41.48") in nearly 100 years at Washington, $6^{\text {th }}$ overall. In addition, the January-August precipitation total surpassed the normal annual precipitation total (39.35") at DCA.

## SUMMER 2003 WEATHER STATISTICS FOR THE WASHINGTON/BALTIMORE AREA:

| Station | Temperatures ( ${ }^{\circ} \mathrm{F}$ ) |  |  |  |  | Extreme/Month-Day |  | Precipitation (In) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Location | AvMx | AvMn | AvgT | NmIT | DepNml | MaxT | MinT | Total | Norm | DepNml |
| National (DCA) | 83.4 | 68.4 | 75.9 | 77.0 | -2.0 | 94/7-5* | 53/6-2 | 18.28 | 10.23 | +8.05 |
| Baltimore (BWI) | 82.6 | 65.2 | 73.9 | 74.3 | -1.0 | 93/6-26 | 45/6-2 | 17.13 | 11.02 | +6.11 |
| Dulles (IAD) | 82.8 | 64.4 | 73.6 | 73.7 | -0.9 | 93/7-5 | 45/6-2 | 19.98 | 11.42 | +8.56 |
| Andrews AFB (ADW) | 83.2 | 65.6 | 74.4 | N/A | N/A | 93/7-5* | 52/6-2 | 19.62 | 12.40 | +7.12 |

Other Occurrences: *August 22
LOOKING AHEAD TO AUTUMN: With a wet, cool summer behind us, what does the meteorological Autumn (September-November) hold? The season often produces some of the finest weather in this area. Below is a list of some of the autumn extremes that have occurred in Washington since records began in 1871.

## Temperature Extremes

Coldest: 1917 (Avg. Temperature: $52.9^{\circ} \mathrm{F}$; Dep. Nml.: -6.5 ${ }^{\circ} \mathrm{F}$ )
Warmest: 1973 \& 1931 (Avg. Temperature: $63.1^{\circ} \mathrm{F}$; Dep. Nml.: $+3.7^{\circ} \mathrm{F}$ )
Extreme Minimum Temperature: $11^{\circ} \mathrm{F}$ (Nov. 30,1929)
Extreme Maximum Temperature: $104^{\circ} \mathrm{F}$ (Sep. 7, 1881)
Most days with: lows < $32^{\circ} \mathrm{F}$ : 19 (1901); highs $>90^{\circ} \mathrm{F}$ : 14 (1980)

## Precipitation Extremes

Wettest: 1934 (Tot. Prec.: 21.78; Dep. Nml.: +11.74)
Driest: 1930 (Tot. Prec.: 1.83; Dep. Nml.: -8.21)
Snowiest: 1987 (Tot. Snowfall: 11.5 ")
Most one day precipitation (liquid): 5.16" (Sep. 2, 1922)
Most snowfall in one day: $11.5^{\prime \prime}$ (Nov. 11, 1987)

