

**JULY 2004:** Excessively wet and near-normal temperatures highlighted weather conditions across the Washington/Baltimore area in July. Temperatures averaged slightly cooler than normal at DCA (-0.7°F) and BWI (-0.3°F) and slightly above normal at IAD (+0.1°F). DCA recorded 18 days with at or below normal temperatures. In addition, there were no heat waves during the month: DCA and BWI had only four days (2<sup>nd</sup>, 5<sup>th</sup>, 14<sup>th</sup>, and 22<sup>nd</sup>) with highs at or above 90°F; IAD had only two 90°F or hotter days. Through July, DCA has recorded only 8 days with 90°F+ highs. Despite the cooler weather, temperatures for the month were near normal due mostly to frequent rainfall and high humidity which resulted in lows generally above normal. In fact, DCA observed 23 days with lows at or above 70°F, including the first 14 days of the month. DCA's extreme low for the month was a relatively warm 66°F (15<sup>th</sup>), while the normally cooler suburbs observed only somewhat lower readings (IAD recorded 59°F on the 17<sup>th</sup>). Cloudy conditions held daytime highs below 80°F on 4 days at DCA and IAD and 5 days at BWI. The June-July 2004 period marked the first consecutive months with subnormal temperatures in Washington since December 2003-January 2004. It was also the second consecutive year with a cooler than normal June and July, the first such occurrence since June-July 1962 and 1963.

The Washington/Baltimore area observed significant variations in monthly precipitation totals, not uncommon for summertime. Locations to the east, including Washington and Baltimore, experienced several torrential rainfall events from slow-moving thunderstorms, resulting in excessively high monthly precipitation totals. The 8.69" of rain that fell at BWI produced its wettest July on record (see cover graphic) while DCA's 6.98" was the most July rainfall since 1975. Some areas recorded monthly rainfall totals of over 12". In sharp contrast, western areas received much less precipitation, including IAD (3.73") which was only 0.16" above normal. Numerous significant thunderstorms impacted the area. On the 1<sup>st</sup>, a small but intense thunderstorm dropped golf ball-size hail, knocking out power to thousands of customers and damaging trees, according to press reports. On July 4<sup>th</sup>, daytime thunderstorms deluged the area: DCA recorded 2.18", producing the wettest Independence Day on record in Washington. Rainfall was even heavier in portions of southeastern Montgomery County, MD, where over 4" drenched the area, resulting in flooded roads. Three days later, the Baltimore, MD, metropolitan area was hit by torrential downpours, yielding 3"-5" of rain in less than two hours, causing flash flooding, damaging homes and businesses and resulting in several water rescues, according to press reports. On the 12<sup>th</sup>, Northeast and Port Deposit, MD, received major flooding from slow moving thunderstorms that dumped 6" to 8" of rain. The resultant flooding covered numerous roads, stranding motorists, damaged several homes and destroyed one home. The rain caused creeks and streams to overflow their banks, prompting a limited state of emergency declaration, according to press reports. On the evening of the 27<sup>th</sup>, 2" to 5" of rain from evening thunderstorms produced flash flooding and water rescues as numerous streams and creeks again overflowed their banks in Montgomery, Prince Georges and Calvert Counties, Maryland and Fairfax County in Virginia and Washington, D.C. BWI reported a daily rainfall record as 4.45", more than double the previous record, inundated the airport; DCA observed 2.10". The next morning, downpours of more than 2" flooded portions of northern Montgomery and Howard Counties, MD, and Loudoun County, VA. July 2003 and 2004 were the wettest back-to-back Julys since 1969 and 1970.

## **JULY 2004 WEATHER STATISTICS FOR THE WASHINGTON/BALTIMORE AREA**

| Station         | Temperatures (°F) |             |             |             |               | Extreme/Day |             | Precipitation (In.) |             |               |                   |
|-----------------|-------------------|-------------|-------------|-------------|---------------|-------------|-------------|---------------------|-------------|---------------|-------------------|
| <u>Location</u> | <u>AvMx</u>       | <u>AvMn</u> | <u>AvgT</u> | <u>NmlT</u> | <u>DepNml</u> | <u>MaxT</u> | <u>MinT</u> | <u>Total</u>        | <u>Norm</u> | <u>DepNml</u> | <u>Yr to Date</u> |
| National (DCA)  | 85.8              | 71.3        | 78.5        | 79.2        | -0.7          | 92/5        | 66/15       | 6.98                | 3.13        | +3.32         | 24.12             |
| Baltimore (BWI) | 84.9              | 67.5        | 76.2        | 76.5        | -0.3          | 92/5        | 61/10       | 8.69                | 3.43        | +4.84         | 29.63             |
| Dulles (IAD)    | 85.1              | 66.7        | 75.8        | 75.7        | +0.1          | 91/5        | 59/17       | 3.73                | 3.57        | +0.16         | 22.44             |
| Andrews (ADW)   | 85.0              | 68.0        | 76.5        | N/A         | N/A           | 90/2*       | 63/1#       | 6.05                | 4.30        | +1.75         | 26.24             |

Additional occurrences: \*5-6, #17

### **Looking Ahead to August: Wettest Summers in Washington.**

With a wetter than normal June and July already behind us, the question arises whether August will also bring wetter than normal weather. The June (4.60") and July (6.98") precipitation total of 11.58" at DCA has already exceeded the airport's normal **summer** precipitation total (10.23"). Even with normal precipitation in August (3.44") at DCA, the summer precipitation total would be far below the wettest summer on record in Washington. Below is a look at the 10 wettest summers recorded in Washington.

| Year | June Total<br>Precipitation (In.) | July Total<br>Precipitation (In.) | August Total<br>Precipitation (In.) | Summer Total<br>Precipitation (In.) |
|------|-----------------------------------|-----------------------------------|-------------------------------------|-------------------------------------|
| 1906 | 5.89                              | 6.80                              | 14.36                               | 27.05                               |
| 1905 | 4.52                              | 9.95                              | 9.75                                | 24.22                               |
| 1878 | 6.33                              | 8.37                              | 8.89                                | 23.59                               |
| 1933 | 3.88                              | 6.71                              | 9.91                                | 20.50                               |
| 1969 | 3.46                              | 9.44                              | 6.98                                | 19.88                               |
| 1886 | 6.75                              | 10.63                             | 2.43                                | 19.81                               |
| 1942 | 3.73                              | 4.31                              | 11.61                               | 19.65                               |
| 1955 | 2.76                              | 2.32                              | 14.31                               | 19.39                               |
| 1928 | 2.66                              | 2.17                              | 14.41                               | 19.24                               |
| 1948 | 5.44                              | 4.31                              | 9.00                                | 18.75                               |