

AUGUST 1999: After four consecutive months very dry weather, above normal precipitation fell on the Washington/Baltimore area during August. More than 5 inches of rain were observed at the 5 local airports with most of the precipitation falling during the week of the 22nd-28th. The 5.02" monthly total observed at DCA was the most since January 1999 while the 6.14" at BWI and 5.43" at IAD were the largest monthly totals since February 1998 and June 1998, respectively. DCA reported 4.38" of rain between the 23rd and 27th which accounted for 87% of the monthly total while at IAD 4.85" fell during this same 5-day period, accounting for nearly 90% of the monthly total. The abundant late-month rains provided only short-term relief from the extreme drought conditions that have plagued most of the area since last year and unfortunately they came too late to benefit agricultural interests and did little to raise river levels which remained near record low levels. The month began with dry weather. Both DCA and IAD reported less than an inch of rain during the first 21 days. During the last full week of the month an abrupt change occurred, the result of a slow moving storm system in the Ohio Valley that drifted over the area and allowed copious amounts of Gulf moisture to infiltrate the region, producing heavy rains. DCA observed 2.03 inches of rain on the 26th, their highest single-day total since August 20, 1997. This rainfall combined with the previous day's yielded a total of 3.40", the largest 2-day total at the airport since November 27-28th, 1993 and more than the June-July 1999 total. At IAD, 3.03" of rain fell on the 25th, establishing a new daily record. At BWI, more than an inch of rain was observed on 3 consecutive days (24th-26th) and downtown Baltimore was deluged with up to 4.50" of rain in less than two hours on the 26th. These storms generated flash floods that stranded numerous motorists in low-lying intersections, and frequent lightning sparked and knocked out power to 48,000 customers. Up to 7 inches of rain fell at Riviera Beach in Anne Arundel County, Maryland. Monthly rainfall totals were generally between four and seven inches, but some sections of Anne Arundel County and portions of Southern Maryland recorded over eight inches.

Monthly temperatures averaged slightly above normal by just a degree at both DCA and IAD. Hot weather prevailed most of the month with 90°F+ highs reported on 15 of the first 19 days. The hottest period was from the 11th-14th as highs at DCA reached or exceeded 95°F each day. Cooler conditions prevailed during the week of the intense rains and highs only topped the 90°F mark one time (29th) during the final 11 days of the month at DCA. In addition, the last two days were unusually cool as highs generally remained in the low seventies, more typical of early October.

AUGUST 1999 WEATHER STATISTICS FOR THE WASHINGTON/BALTIMORE AREA:

Station Location	Temperatures (°F)					Extreme/Day		Precipitation (In)			
	AvMx	AvMn	AvgT	NmIT	DepNml	MaxT	MinT	Total	Norm	DepNml	Yr to Date
National (DCA)	88.8	70.5	79.6	78.5	+1.1	99/17	62/30	5.02	3.91	+1.11	23.49
Baltimore (BWI)	85.7	65.7	75.7	75.6	+0.1	96/17	54/10	6.14	3.92	+2.22	25.04
Dulles (IAD)	87.5	63.2	75.4	74.2	+1.2	97/1*	51/10	5.43	3.94	+1.49	27.34
Ft. Belvoir (DAA)	90.5	68.4	79.5	N/A	N/A	100/17	59/10	6.65	4.4	+2.2	29.74
Andrews AFB (ADW)	87.7	66.6	77.2	N/A	N/A	97/1*	57/10	5.71	4.4	+1.3	23.35

Other Occurrences: * August 13th & 17th; # August 13th, 14th & 17th.

SUMMER (JUNE-AUGUST) 1999: The Summer was highlighted by extreme drought, frequent periods of excessive heat and humidity and the second hottest July (and month) ever recorded in Washington. Seasonal temperature departures were only 1°F above normal at DCA, but that was significant enough to yield the fifth warmest summer (tied with 1995 & 1983) on record in Washington. Overall, there were 46 summer days with 90°F+ highs at DCA (36 at BWI; 39 at IAD) and 3 days when the mercury reached or exceeded 100°F. The summer commenced with slightly cooler than normal temperatures in June and monthly temperature departures between -0.2°F and -1.0°F at the three major airports. There were 16 June days with subnormal temperatures at DCA, including three (17th, 20th, & 21st) when highs never rose above 70°F (about 15°F below normal), mainly due to overcast skies. In sharp contrast, a brief but intense heat wave enveloped the local area June 7th-9th, when readings soared to 98°F for three consecutive days at DCA. The two 98°F readings observed on the 7th and 8th established daily records for Washington. Both BWI and IAD established three daily record highs (96°F, 97°F & 96°F at BWI and 96°F, 95°F & 96°F at IAD). July featured extremely hot conditions as Washington recorded an average temperature of 82.9°F (the second warmest month ever recorded in Washington) and a monthly temperature departure of +2.9°F. There were 26 warmer than normal July days at DCA. Highs at or above 90°F were reported on each day from July 3rd-10th, with the most intense heat occurring on the 5th and 6th as the mercury soared to 102°F and 103°F, respectively. A high of 99°F at DCA on July 4th marked the hottest "Independence Day" since 1919 in Washington. Highs later topped 90°F on 14 of the last 16 days and hit the century mark on the 31st at DCA. Overall, there were 22 July days with 90°F+ highs, the most (tied w/1994) since 1993 (the hottest month ever recorded in Washington). Hot conditions prevailed during the first three weeks of August as temperatures averaged more than 3°F above normal at DCA from the 1st-19th. There were 16 days with 90°F+ highs and 22 days with at or above normal temperatures at DCA. The final third of the month was marked by lower temperatures, including 2 days (30th and 31st) when highs remained below 75°F at DCA.

Very dry conditions enveloped the local region during the summer, resulting in one of the worst droughts in the Washington/Baltimore area in recent memory. The extremely dry conditions eventually led to mandatory water restrictions across the entire state of Maryland and portions of northern Virginia in late summer. The drought also caused significant crop losses for area farmers and many counties in Maryland, Virginia and West Virginia were declared federal disaster areas. The summer began with a drier than normal June, with monthly shortfalls between 1 and 2 inches common across the area. The first 12 days of June combined with a 7-day period without measurable precipitation (≥ 0.01") at the end of May, resulted in nearly 3 weeks without measurable precipitation at DCA. Most of the June total at many locations was the result of only two significant precipitation events. On June 14th, late-afternoon thunderstorms generated heavy rain across portions of the local area. DCA recorded over an inch of precipitation while both BWI and IAD recorded about 0.25 inches. On June 20th, an all-day rain accompanied by unusually cool weather provided another 0.50" to 0.75". Some locations, especially to the west of Washington, received brief, heavy rains from thunderstorms on June 13th (more than an inch of rain at IAD). The lack of significant rainfall occasionally accompanied by hot weather stressed local crops and turned many area lawns brown by the end of June. During July, very dry conditions continued to plague the area, resulting in mandatory water restrictions in some areas. July marked the fourth consecutive month with subnormal rainfall (monthly departures between 1 and 3 inches) at the three major airports (driest April-July period on record in Washington) and the eleventh month since July 1998 with subnormal precipitation at DCA. In fact, the driest July-July period (13 months) on record was observed in Washington with a precipitation deficit of 16.51". Measurable precipitation (≥ 0.01") fell on 8 July days at DCA, but there was no single rain event that produced more than 0.28". IAD recorded 16 July days with measurable precipitation, producing a monthly precipitation total of 2.53", but no single rain event generated more than 0.75". However, isolated thunderstorms occasionally provided brief, intense rainfall. At BWI, a thunderstorm on the July 22nd, generated more than an inch of rain at the airport, and over three inches in some parts of northern and eastern Maryland. Unfortunately, most of these heavy rains occurred in a very short period of time, leading to rapid runoff that did very little to alleviate the severe drought. In August, dry conditions prevailed most of the month with less than an inch of rain observed at many locations during the first three weeks. Finally, by the last full week of the month, heavy rains soaked much of the local area with weekly totals between 3 and 6 inches reported at most locations. The abundant rainfall provided short-term relief, greening many area lawns, but fell too late in the summer to save many local crops. In addition, the heavy rains only made a dent in the drought as much of the area was still under severe drought conditions at month's end. According to press reports, many rivers and streams were flowing at or near record low levels.

SUMMER 1999 WEATHER STATISTICS FOR THE WASHINGTON/BALTIMORE AREA:

Station Location	Temperatures (°F)					Extreme/Month-Day		Precipitation (In)		
	AvMx	AvMn	AvgT	NmIT	DepNml	MaxT	MinT	Total	Norm	DepNml
National (DCA)	88.4	69.8	79.1	78.1	+1.0	103/7-6	57/6-18*	8.29	11.09	-2.80
Baltimore (BWI)	86.3	65.1	75.7	75.1	+0.6	102/7-5	50/6-5*	10.24	11.28	-1.04
Dulles (IAD)	86.8	62.9	74.9	73.7	+1.2	99/7-5	48/6-5*	10.96	11.35	-0.39
Ft. Belvoir (DAA)	90.2	67.4	78.8	N/A	N/A	104/7-5*	52/6-19	11.93	11.9	0.0
Andrews AFB (ADW)	87.0	65.5	76.3	N/A	N/A	100/7-5*	50/6-19	9.44	12.4	-3.0

Other Occurrences: * June 8th & 9th; # June 19th; @ July 12th.

LOOKING AHEAD TO AUTUMN: Some noteworthy seasonal statistics.

With a hot, dry summer behind us, we now look ahead to the meteorological Autumn (September-November) the season that often produces the finest weather in Washington. 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. Temp: 52.9°F; Dep. Nml.: -7.4)
 Warmest: 1973 & 1931 (Avg. Temp: 63.1°F; Dep. Nml.: +2.8)
 Extreme Minimum Temp.: 11°F (Nov. 30, 1929)
 Extreme Maximum Temp.: 104°F (Sep. 7, 1881)
 Most days with: lows ≤ 32°F: 19 (1901); highs ≥ 90°F: 14 (1980)

Precipitation Extremes

Wettest: 1934 (Tot. Prec.: 21.78; Dep. Nml.: +12.33)
 Driest: 1930 (Tot. Prec.: 1.83; Dep. Nml.: -7.62)
 Snowiest: 1987 (Tot. Snowfall: 11.5")
 Most precipitation in one day (liquid): 5.16" (Sep. 2, 1922)
 Most snowfall in one day: 11.5" (Nov. 11, 1987)