

**NOVEMBER 1997:** The cool and wet pattern that developed in mid-October continued through November, producing a third consecutive November with below normal temperatures and above normal precipitation in the Washington/Baltimore area. Monthly temperature departures of -3°F and lower were reported at both DCA and BWI, due mainly to numerous cloudy days (21) which kept daytime highs significantly below normal. In fact, monthly average maximum temperatures were more than 4°F below normal at all three of the major airports (-5.1°F at DCA, -4.9°F at IAD, -4.4°F at BWI). DCA observed 24 days (all consecutively; 2nd-25th) with at or below normal temperatures and no days with 70°F+ highs (the first such occurrence since 1988). In addition, there were 6 days with 32°F or lower readings at DCA (12 at both BWI & IAD), including the first such reading of the Autumn on the 16th (31°F).

As mentioned above, wet conditions dominated across the Washington/Baltimore area, yielding the wettest month in almost a year at both DCA and BWI and since September 1996 at IAD. Monthly precipitation totals between 4 and 6 inches were common across most of the local area. In fact, IAD recorded its fifth wettest November (5.48") on record while BWI observed the wettest such month (5.79") since 1986. As was the case in October, most of the month's precipitation fell between Friday and Sunday. At DCA, measurable precipitation ( $\geq 0.01"$ ) was observed on 4 of the 5 weekends while at both BWI and IAD such amounts were recorded on all 5 weekends. Soaking rains fell on the 1st and 2nd with 2-day totals of 0.51" at DCA, 0.89" at BWI, and 1.29" at IAD. A powerful East Coast storm, generated heavy rains and strong winds on the 7th & 8th. Precipitation totals over 2 inches were common across most of the local area on the 7th and all three major airports observed daily precipitation records. During this three day period, precipitation totals topped 2.50" at both DCA (2.70") & IAD (2.87") and more than 3 inches at BWI (3.26"). In fact, this 3-day period was wetter than 5 other months this year at DCA (6 at both BWI and IAD). Additional rainfall occurred on the 14th-15th & again on the 22nd-23rd with totals slightly over half an inch reported at DCA.

### NOVEMBER 1997 WEATHER STATISTICS FOR THE WASHINGTON/BALTIMORE AREA:

Station Location	Temperatures (°F)					Extreme/Day		Precipitation (In)			
	AvMx	AvMn	AvgT	NmlT	DepNml	MaxT	MinT	Total	Norm	DepNml	Yr to Date
National (DCA)	53.1	39.2	46.1	49.8	-3.7	65/3	27/17*	4.60	3.12	+1.48	32.08
Baltimore (BWI)	52.1	35.2	43.7	46.8	-3.1	65/3	21/18	5.79	3.32	+2.47	36.29
Dulles (IAD)	51.8	35.4	43.6	45.4	-1.8	63/3	20/25	5.48	3.30	+2.18	33.82
Ft. Belvoir (DAA)	55.3	37.0	46.1	N/A	N/A	68/3	21/18	6.29	3.0	+3.3	39.67
Andrews AFB (ADW)	51.5	36.6	44.0	N/A	N/A	64/3	21/18	5.52	3.3	+2.2	35.32

Other Occurrences: November 18th.

**AUTUMN (SEPTEMBER-NOVEMBER) 1997:** Autumn was marked by two contrasting weather patterns, relatively warm and dry conditions during the first half and unusually cool and wet weather during the latter half. The first month of meteorological Fall featured slightly below normal temperatures (8th consecutive cooler than normal September at DCA), due mainly to numerous cool nights as lows routinely dipped into the forties and fifties. Monthly highs were near normal, but monthly average minimum temperatures were nearly 2°F below normal at both DCA & IAD, and almost 3°F below normal at both BWI. Both BWI and IAD established daily record lows on the 5th with readings of 47°F and 42°F, respectively, and at IAD a second daily record was tied on the 22nd as the mercury plunged to 38°F. In sharp contrast, abnormally warm conditions enveloped the area on the 1st, 2nd and 20th with 90°F+ highs reported at DCA. October was highlighted by unusually warm conditions during the first half of the month, with temperatures averaging nearly 6°F above normal at DCA. During this period, there were 7 consecutive days (4th-10th) with 80°F+ highs, including the latest 90°F+ reading ever observed (on the 6th) at DCA. There were 42 days with 90°F+ highs at DCA during 1997. The abnormal warmth during the first half of October contributed significantly to the milder than normal first half of Autumn. Around mid-October, a dramatic change in the weather pattern yielded more autumnlike weather across the local region. During the last 17 days, temperatures averaged nearly 5°F below normal at DCA and included 15 consecutive days with subnormal readings (17th-31st). In addition, 4 of the 5 local airports observed their first freeze of the Autumn. DCA (the urban heat island) was the only local airport that failed to record a low of 32°F during October. Cool weather persisted throughout November with monthly temperature departures between -1.8°F and -3.7°F at the three major airports. At DCA, eighty percent of the month featured subnormal temperatures and highs failed to reach 70°F for the first time since 1988.

As mentioned earlier, relatively dry weather dominated during the first half of the season while unusually wet conditions prevailed for the remainder of the Autumn. In fact, only 19% of the seasonal precipitation total at DCA fell between September 1st and October 16th. September was very dry across most of the Washington/Baltimore area with monthly rainfall totals of only 1.59" and 1.47" at DCA and BWI, respectively. There were only 7 days with measurable precipitation ( $\geq 0.01"$ ) at DCA and only one day with amounts  $> 0.50"$ . October began on a dry note with only 0.02" of rain observed during the first two weeks. Around mid-month a much wetter weather pattern developed across the local region, bringing an end to the persistent dryness. The final 17 days of October produced 3.70 inches of rain at DCA and above normal monthly precipitation for the first time since March 1997. On the 17th and 18th, a storm system generated up to 1.50" inches of rain across most of the local area, while a week later similar amounts fell across the region. Significant rainfall prevailed across the area in November, marking the third consecutive such month with above normal precipitation at DCA, BWI and IAD. Monthly precipitation totals over 4 inches were common and almost all (92%) of the measurable precipitation ( $\geq 0.01"$ ) fell during Friday and Sunday of each week. In addition, during the last 9 weeks of Autumn (September 29-November 30) 92% of the measurable precipitation (7.65") at DCA fell during the Friday-Sunday periods.

### AUTUMN 1997 WEATHER STATISTICS FOR THE WASHINGTON/BALTIMORE AREA:

Station Location	Temperatures (°F)					Extreme/Mth-Day		Precipitation (In)		
	AvMx	AvMn	AvgT	NmlT	DepNml	MaxT	MinT	Total	Norm	DepNml
National (DCA)	67.3	50.2	58.7	60.3	-1.6	91/9-1	27/11-17*	9.91	9.45	+0.46
Baltimore (BWI)	66.4	45.2	55.8	57.3	-1.5	91/9-20	21/11-18	10.69	9.71	+0.98
Dulles (IAD)	64.8	43.4	54.1	55.9	-1.8	90/9-2	20/11-25	11.27	9.86	+1.41
Ft. Belvoir (DAA)	69.0	47.1	58.0	N/A	N/A	93/2	21/11-18	14.40	10.0	+4.4
Andrews AFB (ADW)	65.3	46.1	55.7	N/A	N/A	90/2	21/11-18	9.22	10.2	-1.0

Other Occurrences: November 18th.

### LOOKING AHEAD TO DECEMBER: Subnormal December Snowfall Again?

Since 1983, there has been only one December (1989) with above normal snowfall at DCA. In 1991 and 1994, there was no recorded snowfall at DCA. Below is a list of December snowfall totals from 1983-1996 at DCA [Normal December Snowfall at DCA: 3.1"]:

Year	Snowfall (In.)	Year	Snowfall (In.)	Year	Snowfall (In.)	Year	Snowfall (In.)
1996	0.2	1992	1.0	1988	1.2	1984	0.3
1995	1.3	1991	0	1987	Trace	1983	Trace
1994	0	1990	3.0	1986	Trace		
1993	2.6	1989	9.0	1985	0.7		

Additional precipitation statistics courtesy of H. Michael Mogil (301) 762-7669