

NOVEMBER 1998: Extremely dry conditions continued to dominate the Washington/Baltimore area during November as monthly rainfall totals were well below normal at all five airports. Only 0.91" of rain fell at DCA, producing the driest November since 1991, while both BWI and IAD reported their driest November since 1981 with 1.13" and 1.21", respectively. In addition, it was the third month of the last four with monthly precipitation totals of less than one inch at DCA. There were 7 days with measurable precipitation ($\geq 0.01"$), but only one day when more than 0.25" was observed at DCA. The most significant precipitation events occurred on Veteran's Day and again on Thanksgiving morning. On the 11th, morning showers produced up to two-thirds of an inch of rain at some locations, but only 0.20" was reported at DCA. Early-morning showers on the 26th produced similar totals in some areas and the largest daily total (0.39") of the month at DCA. The lack of rainfall exacerbated drought conditions across the Washington/Baltimore area. In fact, many locations reported precipitation deficits for the January-November period after nearly a 10" surplus through the first 6 months of 1998. The prolonged dryness has contributed to the lowest streamflow on the Potomac since 1943 and abetted several wildfires that have charred hundreds of acres of woodland in Maryland and Virginia, according to press reports.

Although November temperatures averaged near normal, the month was marked by an unusually cold start and abnormal warmth at month's end. During the first nine days temperatures averaged more than 6°F below normal at DCA and included the first 32°F or lower reading of the Autumn at DCA (31°F on the 5th). On the 8th, highs remained in the forties across the region. A few days later, readings topped 70°F at DCA and temperatures generally remained above normal for the remainder of the month. During the final 8 days, highs routinely reached into the sixties and averaged more than 5°F above normal at DCA. On the 28th and 29th, both BWI and IAD reported 70°F+ highs. In addition, a record daily high was tied at IAD on the 28th (71°F) and new record highs were established at both BWI & IAD on the 29th when the mercury soared to 73°F.

NOVEMBER 1998 WEATHER STATISTICS FOR THE WASHINGTON/BALTIMORE AREA:

Station Location	Temperatures (°F)					Extreme/Day		Precipitation (In)			
	AvMx	AvMn	AvgT	NmT	DepNml	MaxT	MinT	Total	Norm	DepNml	Yr to Date
National (DCA)	59.4	41.1	50.3	49.8	+0.5	72/29	31/5	0.91	3.12	-2.21	34.18
Baltimore (BWI)	58.4	33.8	46.1	46.8	-0.7	73/29	24/5	1.13	3.32	-2.19	33.12
Dulles (IAD)	59.1	32.0	45.5	45.4	+0.1	73/29	20/5	1.21	3.30	-2.09	35.92
Ft. Belvoir (DAA)	62.4	36.7	49.5	N/A	N/A	75/29	29/5*	1.21	3.0	-1.8	41.49
Andrews AFB (ADW)	58.8	35.4	47.1	N/A	N/A	73/29	27/5	1.76	3.3	-1.5	38.74

Other Occurrences: * November 22nd.

AUTUMN (SEPTEMBER-NOVEMBER) 1998: Unprecedented dryness plagued the Washington/Baltimore area as all three major airports reported their driest Autumn on record. DCA recorded only 3.33" of rainfall (35% of normal) while BWI recorded just 3.46" (40% of normal) and IAD reported 3.97" (40% of normal). September was the "wettest" of the three months at many locations, even though monthly totals were generally below two inches. There were only 7 September days with measurable rainfall ($\geq 0.01"$) at DCA (6 at both BWI and IAD), and only one day with more than one inch of rain (1.24" on the 22nd-the largest single day total since June 15th) at DCA. On the 17th, strong thunderstorms generated heavy rain across portions of Loudoun & Fairfax counties in Virginia and Montgomery County, MD. The storms generated 0.62" of rain at IAD, nearly half of the monthly total. Despite these isolated incidents of heavy rainfall, drought conditions persisted across most of Maryland and northern Virginia, resulting in substantial crop losses in some areas. The dry weather continued throughout October as DCA's monthly total rainfall was a mere 0.59" (equaling the August 1998 total), resulting in the driest month since April 1985 and the driest October since 1963. Measurable rainfall occurred on only 5 October days at DCA, 7 at BWI and 4 at IAD. Both BWI and IAD observed an extended period [17 days (Oct. 11th-27th) and 18 days (Oct. 14th-31st)] with no measurable precipitation. The month's only significant event occurred on the 8th as a steady and often heavy rain fell across most of the area. DCA reported 0.55" (93% of the monthly total) while nearly 1.50" was observed at IAD. This was the second and the last rain event of the Autumn to exceed one-half inch at DCA. Dryness continued unabated throughout the local area during November with all 5 of the local airports recording well below normal rainfall. At DCA, only 0.91" was observed, leading to the driest July-November period ever recorded (5.71") (2nd in overall in Washington). It was also the driest such period ever recorded at both IAD and BWI, with both locations recording less than six inches. The prolonged dry spell exacerbated ongoing drought conditions and numerous counties in Maryland and Virginia were declared federal disaster areas as agricultural losses mounted.

Above-normal seasonal temperatures were reported across the local area due in large part to an abnormally warm September. In fact, it was the warmest Autumn since 1985 at DCA and the third warmest on record at IAD. In September, summer-like warmth prevailed most of the month, yielding the warmest such month on record at IAD, 4th at DCA and 5th at BWI. It was also the first-warmer-than-normal September since 1989 at DCA as temperatures averaged between 3°F and 6°F above normal across most of the area. There were 23 days with above-normal temperatures at DCA, including 10 days that topped 90°F (1 more than in July), the most such September days since 1980 and the first time since 1906 with more 90°F days in September than in July in Washington. In addition, DAA observed 5 days with 100°F+ highs (12th, 14th, 15th, 16th and 27th). More seasonable temperatures dominated during October as there were no prolonged periods of heat or cold. Maximum temperatures topped 80°F on only one day (82°F on the 1st) at DCA versus 8 days last year. In sharp contrast, unusually cool weather prevailed on the 3rd as highs only reached the fifties. The first freeze of Autumn occurred at both BWI and IAD during the month (2nd at IAD, 31st at BWI). In fact, IAD recorded 5 days with lows at or below freezing. November temperatures averaged near normal at most locations, but the month featured a very cold start and an unusual warm spell at month's end. The first nine days produced readings that averaged more than 6°F below normal (and the first 32°F or lower reading at DCA on the 5th), but during the last week readings soared well into the sixties and even topped 70°F at many locations on the 28th and 29th, establishing a few new daily record highs.

AUTUMN 1998 WEATHER STATISTICS FOR THE WASHINGTON/BALTIMORE AREA:

Station Location	Temperatures (°F)					Extreme/Month-Day		Precipitation (In)		
	AvMx	AvMn	AvgT	NmT	DepNml	MaxT	MinT	Total	Norm	DepNml
National (DCA)	71.1	52.8	62.0	60.3	+1.7	95/9-7*	31/11-5	3.33	9.45	-6.12
Baltimore (BWI)	69.8	46.3	58.0	57.3	+0.7	95/9-6*	24/11-5	3.46	9.71	-6.25
Dulles (IAD)	71.3	45.0	58.1	55.9	+2.2	97/9-6	20/11-5	3.97	9.86	-5.87
Ft. Belvoir (DAA)	74.9	49.8	62.3	N/A	N/A	102/14*	29/11-5@	3.89	10.0	-6.1
Andrews AFB (ADW)	70.5	48.9	59.7	N/A	N/A	96/9-6	27/11-5	4.64	10.2	-5.6

Other Occurrences: * September 12th; # September 27th; % September 7th; @ November 22nd.

LOOKING AHEAD TO DECEMBER: Driest July-December Period on Record in Washington?

As mentioned earlier, 5 consecutive months of subnormal precipitation resulted in the driest July-November period on record at the three major airports. Only one other July-November period was drier than 1998 in Washington and that occurred in 1930 (4.75"). This same year also produced the driest July-December period (6.79") on record in Washington. During the July-November 1998 period at DCA, only 5.71" of rain was reported, setting up the possibility that the July-December of 1998 may go down as the driest ever observed in Washington. Below is a list of monthly precipitation totals for the July-December period of 1930 and the July-November totals for 1998. If less than 1.08" of precipitation falls at DCA during December, the July-December period of 1998 would finish as the driest such six-month period ever recorded in Washington. [Normal July-December Precipitation: 20.28"]

Year	Total Precipitation (Inches)					December	July-December
	July	August	September	October	November		
1930	2.30	0.62	0.76	0.28	0.79	2.04	6.79
1998	1.79	0.59	1.83	0.59	0.91	?	?