

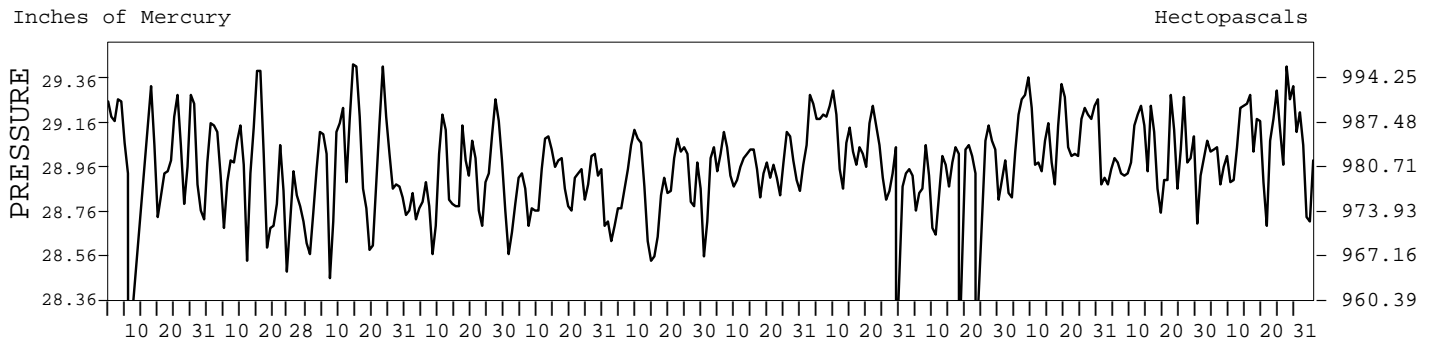
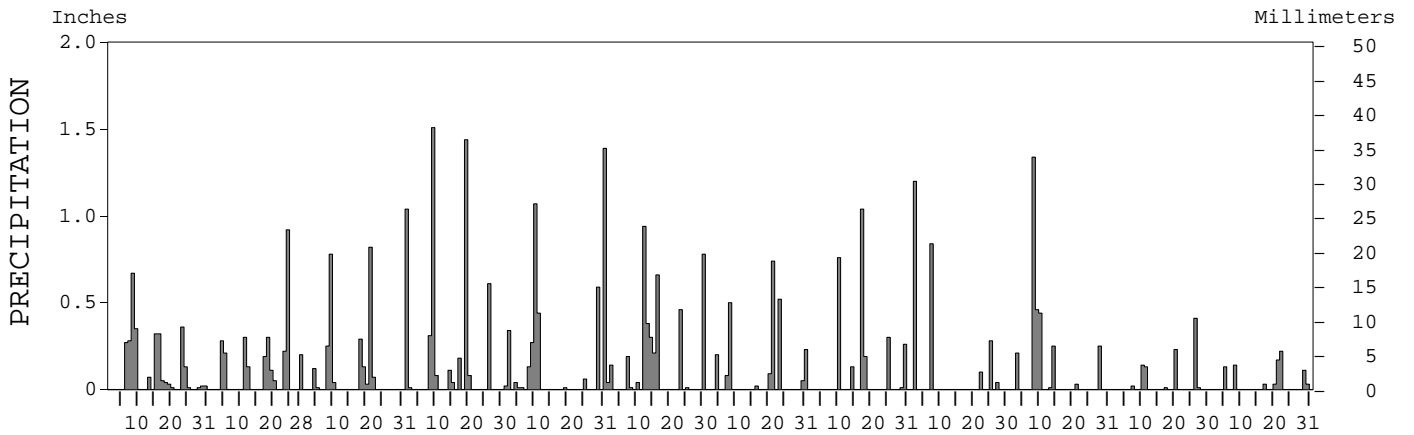
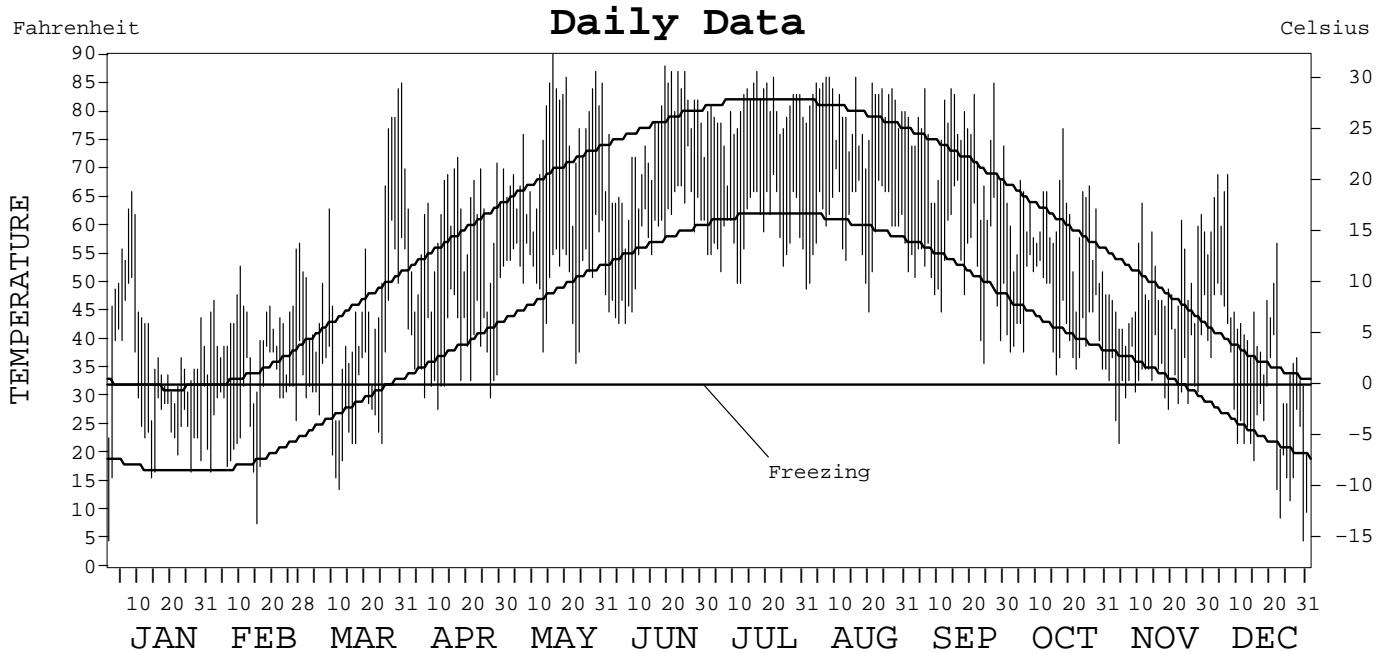
1998

LOCAL CLIMATOLOGICAL DATA
ANNUAL SUMMARY WITH COMPARATIVE DATA



AVOCA, WILKES-BARRE - SCRANTON
PENNSYLVANIA (AVP)

ISSN 0198-4489



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Thomas R. Karl

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	NATIONAL ENVIRONMENTAL AND INFORMATION SERVICE	NATIONAL SATELLITE, DATA, AND INFORMATION SERVICE	NATIONAL CLIMATIC DATA CENTER ASHEVILLE, NORTH CAROLINA	DIRECTOR NATIONAL CLIMATIC DATA CENTER
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METEOROLOGICAL DATA FOR 1998

AVOCA, PA (AVP)

LATITUDE: 41° 20' 20" N LONGITUDE: 75° 43' 36" W ELEVATION (FT): GRND: 930 BARO: 959 TIME ZONE: EASTERN (UTC+ 5) WBAN: 14777

	ELEMENT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	40.5	42.8	49.5	60.0	74.5	74.7	80.0	80.6	74.6	60.0	49.5	43.9	60.9	
	HIGHEST DAILY MAXIMUM	66	57	85	72	90	88	87	86	85	77	64	69	90	
	DATE OF OCCURRENCE	08	28	31	17	16	19	17	16+	27	18	11	07+	MAY 16	
	MEAN DAILY MINIMUM	27.7	27.8	32.6	38.9	52.0	56.7	59.5	60.1	53.5	43.2	34.0	27.8	42.8	
	LOWEST DAILY MINIMUM	5	8	14	28	36	43	50	45	36	34	22	5	5	
	DATE OF OCCURRENCE	01	15	12	11	23	07+	12+	20	24	16	04	30	DEC 30	
	AVERAGE DRY BULB	34.1	35.3	41.1	49.5	63.3	65.7	69.8	70.4	64.1	51.6	41.8	35.9	51.9	
	MEAN WET BULB		31.6	36.0				63.5			47.6	38.4	33.0		
	MEAN DEW POINT		24.8	29.2				59.3			42.8	32.3	27.1		
	NUMBER OF DAYS WITH:														
	MAXIMUM ≥ 90°	0	0	0	0	1	0	0	0	0	0	0	0	0	1
	MAXIMUM ≤ 32°	7	2	3	0	0	0	0	0	0	0	0	5	17	
MINIMUM ≤ 32°	24	22	18	6	0	0	0	0	0	0	11	21	102		
MINIMUM ≤ 0°	0	0	0	0	0	0	0	0	0	0	0	0	0		
H/C	HEATING DEGREE DAYS	949	828	754	460	104	97	2	11	90	408	689	896	5288	
	COOLING DEGREE DAYS	0	0	17	0	59	128	157	184	71	0	0	0	616	
RH	MEAN (PERCENT)	81	68	66	59	71	75	72	72	75	73	69	71	71	
	HOUR 01 LST	82	72	72	66	80	85	87	84	86	83	73	75	79	
	HOUR 07 LST	84	78	79	69	81	81	83	85	88	84	79	81	81	
	HOUR 13 LST	77	59	57	50	59	61	54	56	58	59	59	62	59	
	HOUR 19 LST	80	63	60	54	64	70	62	65	72	70	66	67	66	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	1	2	3	1	1	1	2	0	2	0	0	1	14	
	THUNDERSTORMS	0	0	0	1	2	3	2	1	3	0	0	0	12	
CLOUDINESS	SUNRISE-SUNSET: (OKTAS)														
	CEILOMETER (≤ 12,000 FT.)														
	SATELLITE (> 12,000 FT.)														
	MIDNIGHT-MIDNIGHT: (OKTAS)														
	CEILOMETER (≤ 12,000 FT.)														
	SATELLITE (> 12,000 FT.)														
NUMBER OF DAYS WITH:															
CLEAR															
PARTLY CLOUDY															
CLOUDY															
PR	MEAN STATION PRESS. (IN.)		28.94	28.96	28.91	28.88	28.86	28.97			29.11	29.03	29.08		
	MEAN SEA-LEVEL PRESS. (IN.)		29.96	29.98	29.91	29.87		29.96			30.11	30.04	30.11		
WINDS	RESULTANT SPEED (MPH)		2.9	2.1	2.6	1.3		1.1			2.3	3.2	3.0		
	RES. DIR. (TENS OF DEGS.)		35	26	34	02		26			28	27	26		
	MEAN SPEED (MPH)		6.6	7.6	7.3	6.2		5.7	5.2	5.4	6.3	7.2	6.3		
	PREVAIL. DIR. (TENS OF DEGS.)	32	03	19	36	09	36	10	09	23	22	22	22	22	
	MAXIMUM 2-MINUTE WIND:														
	SPEED (MPH)	23	30	31	30	45		26	24	45	29	33	30		
	DIR. (TENS OF DEGS.)	22	30	30	25	31		36	22	32	32	15	31		
	DATE OF OCCURRENCE	08	25	12	02	31		21+	24	07	01	10	22		
	MAXIMUM 5-SECOND WIND:														
	SPEED (MPH)	34	40	39	36	55		33	30	51	37	40	38		
DIR. (TENS OF DEGS.)	10	28	15	24	31		30	22	29	33	25	32			
DATE OF OCCURRENCE	23+	12	09	02+	31		01	24	07	01	11	30			
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	2.96	2.91	2.54	5.41	4.38	4.16	2.43	2.69	2.46	2.99	0.95	0.86	34.74	
	GREATEST 24-HOUR (IN.)	0.67	1.12	0.85	1.59	1.39	0.94	0.74	1.04	1.20	1.34	0.41	0.39	1.59	
	DATE OF OCCURRENCE	08	23-24	21-22	09-10	31	12	21	17	02	08	26	21-22	APR 09-10	
	NUMBER OF DAYS WITH:														
	PRECIPITATION ≥ 0.01	17	11	10	11	13	13	9	7	5	8	7	8	119	
PRECIPITATION ≥ 0.10	8	10	6	7	7	9	5	6	4	6	4	5	77		
PRECIPITATION ≥ 1.00	0	0	0	3	2	0	0	1	1	1	0	0	8		
SNOWFALL	SNOW, ICE PELLETS, HAIL:														
	TOTAL (IN.)														
	GREATEST 24-HOUR (IN.)														
	DATE OF OCCURRENCE														
	MAXIMUM SNOW DEPTH (IN.)														
	DATE OF OCCURRENCE														
NUMBER OF DAYS WITH:															
SNOWFALL ≥ 1.0															

HEATING DEGREE DAYS (base 65°F) 1998 AVOCA, WILKES-BARRE - SCRANTON PA (AVP)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1969-70	6	15	134	440	765	1212	1459	1094	1022	500	176	76	6899
1970-71	2	5	109	371	695	1162	1404	1051	985	593	292	32	6701
1971-72	5	22	90	263	783	951	1152	1175	992	634	168	109	6344
1972-73	21	20	125	603	860	988	1124	1131	704	521	354	25	6476
1973-74	2	11	140	368	699	1036	1145	1135	934	480	291	65	6306
1974-75	5	2	155	503	655	941	1024	913	902	627	88	25	5840
1975-76	0	8	158	291	509	1043	1322	864	737	451	265	31	5679
1976-77	8	25	155	519	834	1297	1546	1058	756	487	206	90	6981
1977-78	14	37	119	505	653	1090	1252	1279	984	562	240	73	6808
1978-79	38	2	153	436	728	1103	1257	1370	747	552	221	66	6673
1979-80	34	31	120	420	568	900	1144	1175	895	414	137	94	5932
1980-81	1	0	82	466	813	1211	1407	835	886	416	195	19	6331
1981-82	2	5	132	485	706	1105	1426	1034	896	554	147	68	6560
1982-83	17	55	112	390	619	870	1158	992	805	569	292	41	5920
1983-84	7	11	119	392	659	1169	1297	837	1052	493	247	34	6317
1984-85	7	6	148	219	719	852	1342	981	799	421	162	78	5734
1985-86	4	11	127	376	610	1181	1163	1083	777	467	140	61	6000
1986-87	16	50	139	428	823	990	1243	1111	779	425	208	20	6232
1987-88	2	34	119	539	706	995	1326	1082	823	546	176	91	6439
1988-89	13	12	156	574	643	1083	1037	1031	853	575	251	39	6267
1989-90	6	31	133	377	750	1433	915	881	757	465	269	44	6061
1990-91	10	13	152	320	619	894	1153	877	757	402	113	23	5333
1991-92	0	0	160	370	699	989	1121	1001	942	521	209	40	6052
1992-93	4	9	132	488	676	993	1017	1148	975	447	136	39	6064
1993-94	0	4	174	460	703	1077	1428	1131	910	390	270	33	6580
1994-95	0	31	143	427	522	875	986	1072	755	552	189	15	5567
1995-96	0	0	123	264	872	1210	1260	1075	979	525	312	16	6636
1996-97	9	5	140	432	852	938	1222	893	866	577	327	60	6321
1997-98	7	23	150	466	828	1036	949	828	754	460	104	97	5702
1998-	2	11	90	408	689	896							

WBAN : 14777

COOLING DEGREE DAYS (base 65°F) 1998 AVOCA, WILKES-BARRE - SCRANTON PA (AV

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1969	0	0	0	7	34	141	193	178	73	1	0	0	627
1970	0	0	0	10	40	81	189	159	92	2	0	0	573
1971	0	0	0	0	16	145	160	132	113	4	3	0	573
1972	0	0	0	0	20	53	232	167	42	0	0	0	514
1973	0	0	0	4	0	132	212	223	72	7	0	0	650
1974	0	0	0	10	28	52	194	117	46	0	0	0	447
1975	0	0	0	0	91	146	278	207	13	14	0	0	749
1976	0	0	0	46	16	198	145	159	37	0	0	0	601
1977	0	0	2	13	57	62	208	162	59	0	2	0	565
1978	0	0	0	0	52	84	181	194	26	0	0	0	537
1979	0	0	0	2	32	78	218	214	75	15	0	0	634
1980	0	0	0	0	42	107	263	322	122	3	0	0	859
1981	0	0	0	4	42	131	231	172	55	0	0	0	635
1982	0	0	0	1	34	55	208	98	41	3	5	0	445
1983	0	0	0	4	12	125	243	224	118	9	0	0	735
1984	0	0	0	0	20	165	218	248	58	12	0	0	721
1985	0	0	0	20	32	47	169	142	104	0	0	0	514
1986	0	0	2	0	76	104	205	131	44	8	0	0	570
1987	0	0	0	3	62	138	273	141	30	0	0	0	647
1988	0	0	0	0	34	111	356	266	23	3	0	0	793
1989	0	0	0	0	31	109	179	148	57	4	0	0	528
1990	0	0	8	29	2	127	225	160	56	24	0	0	631
1991	0	0	0	12	142	164	264	230	69	14	0	0	895
1992	0	0	0	0	21	85	201	123	71	0	0	0	501
1993	0	0	0	5	41	158	334	249	66	0	0	0	853
1994	0	0	0	13	18	188	280	109	27	0	1	0	636
1995	0	0	0	0	16	167	323	308	54	6	0	0	874
1996	0	0	0	0	38	117	132	155	71	0	0	0	513
1997	0	0	0	0	4	97	178	105	16	11	0	0	411
1998	0	0	17	0	59	128	157	184	71	0	0	0	616

SNOWFALL (inches) 1998 AVOCA, WILKES-BARRE - SCRANTON PA (AVP)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1969-70	0.0	0.0	0.0	T	2.7	33.9	9.5	9.5	20.6	0.6	T	0.0	76.8
1970-71	0.0	0.0	0.0	0.3	T	12.3	15.2	12.1	15.6	1.6	0.0	0.0	57.1
1971-72	0.0	0.0	0.0	0.0	22.5	4.1	5.9	19.7	6.6	3.8	0.0	0.0	62.6
1972-73	0.0	0.0	0.0	0.8	7.9	3.9	5.0	3.1	1.9	0.2	0.4	0.0	23.2
1973-74	0.0	0.0	0.0	T	0.4	16.0	12.8	4.5	15.7	2.8	0.0	0.0	52.2
1974-75	0.0	0.0	0.0	0.2	2.2	5.2	13.7	15.2	5.5	1.2	0.0	0.0	43.2
1975-76	0.0	0.0	0.0	0.0	1.3	3.7	13.0	7.5	10.2	0.5	T	0.0	36.2
1976-77	0.0	0.0	0.0	0.0	6.0	6.7	15.7	13.0	11.2	1.4	2.4	0.0	56.4
1977-78	0.0	0.0	0.0	0.6	8.7	9.8	28.8	18.2	6.5	0.9	0.0	0.0	73.5
1978-79	0.0	0.0	0.0	T	4.1	7.9	12.7	14.3	1.1	4.4	0.0	0.0	44.5
1979-80	0.0	0.0	0.0	T	T	5.5	1.4	8.1	10.5	T	0.0	0.0	25.5
1980-81	0.0	0.0	0.0	T	8.6	8.0	11.1	7.0	5.8	T	0.0	0.0	40.5
1981-82	0.0	0.0	0.0	T	1.0	14.2	14.1	13.5	8.7	8.1	0.0	0.0	59.6
1982-83	0.0	0.0	0.0	0.0	0.5	7.4	8.4	12.3	3.8	26.7	0.0	0.0	59.1
1983-84	0.0	0.0	0.0	0.0	3.1	2.7	11.2	4.0	18.4	0.0	0.0	0.0	39.4
1984-85	0.0	0.0	0.0	0.0	3.0	9.2	10.8	9.1	1.4	1.8	0.0	0.0	35.3
1985-86	0.0	0.0	0.0	0.0	1.7	13.4	12.9	11.6	1.1	8.6	0.0	0.0	49.3
1986-87	0.0	0.0	0.0	0.0	8.6	1.4	29.6	6.4	0.9	0.6	0.0	0.0	47.5
1987-88	0.0	0.0	0.0	T	6.4	6.4	13.0	14.9	4.3	0.7	0.0	0.0	45.7
1988-89	0.0	0.0	0.0	T	T	1.1	2.1	3.0	1.1	T	0.0	0.0	7.3
1989-90	0.0	0.0	0.0	T	2.6	8.3	10.8	7.3	6.2	2.1	0.0	0.0	37.3
1990-91	0.0	0.0	T	T	0.4	8.4	6.6	7.6	7.2	1.1	0.0	0.0	31.3
1991-92	0.0	0.0	0.0	0.0	0.1	3.5	5.4	6.3	8.5	0.7	0.0	0.0	24.5
1992-93	0.0	0.0	T	T	0.5	10.0	3.8	12.1	32.0	1.9	0.0	0.0	60.3
1993-94	0.0	T	T	1.9	0.7	8.0	42.3	16.9	20.6	T	T	0.0	90.4
1994-95	0.0	0.0	0.0	0.0	1.3	0.4	7.6	9.7	5.2	0.8	0.0	0.0	25.0
1995-96	T	0.0	0.0	T	18.6	16.0	37.5	6.5	14.2				
1996-97													
1997-98													
1998-													
POR= 41 YRS	T	T	T	0.2	3.7	8.8	12.2	10.5	9.5	2.8	0.1	0.0	47.8

WBAN : 14777

REFERENCE NOTES:

<p>PAGE 1: THE TEMPERATURE GRAPH SHOWS NORMAL MAXIMUM AND NORMAL MINIMUM DAILY TEMPERATURES (SOLID CURVES) AND THE ACTUAL DAILY HIGH AND LOW TEMPERATURES (VERTICAL BARS).</p> <p>PAGE 2 AND 3: H/C INDICATES HEATING AND COOLING DEGREE DAYS. RH INDICATES RELATIVE HUMIDITY W/O INDICATES WEATHER AND OBSTRUCTIONS S INDICATES SUNSHINE. PR INDICATES PRESSURE. CLOUDINESS ON PAGE 3 IS THE SUM OF THE CEILOMETER AND SATELLITE DATA NOT TO EXCEED EIGHT EIGHTHS(OKTAS).</p> <p>GENERAL: T INDICATES TRACE PRECIPITATION, AN AMOUNT GREATER THAN ZERO BUT LESS THAN THE LOWEST REPORTABLE VALUE. + INDICATES THE VALUE ALSO OCCURS ON EARLIER DATES. BLANK ENTRIES DENOTE MISSING OR UNREPORTED DATA. NORMALS ARE 30-YEAR AVERAGES (1961 - 1990). ASOS INDICATES AUTOMATED SURFACE OBSERVING SYSTEM. PM INDICATES THE LAST DAY OF THE PREVIOUS MONTH. POR (PERIOD OF RECORD) BEGINS WITH THE JANUARY DATA MONTH AND IS THE NUMBER OF YEARS USED TO COMPUTE THE MEAN. INDIVIDUAL MONTHS WITHIN THE POR MAY BE MISSING. WHEN THE POR FOR A NORMAL IS LESS THAN 30 YEARS, THE NORMAL IS PROVISIONAL AND IS BASED ON THE NUMBER OF YEARS INDICATED. 0.* OR * INDICATES THE VALUE OR MEAN-DAYS-WITH IS BETWEEN 0.00 AND 0.05. CLOUDINESS FOR ASOS STATIONS DIFFERS FROM THE NON-ASOS OBSERVATION TAKEN BY A HUMAN OBSERVER. ASOS STATION CLOUDINESS IS BASED ON TIME-AVERAGED CEILOMETER DATA FOR CLOUDS AT OR BELOW 12,000 FEET AND ON SATELLITE DATA FOR CLOUDS ABOVE 12,000 FEET. THE NUMBER OF DAYS WITH CLEAR, PARTLY CLOUDY, AND CLOUDY CONDITIONS FOR ASOS STATIONS IS THE SUM OF THE CEILOMETER AND SATELLITE DATA FOR THE SUNRISE TO SUNSET PERIOD.</p>	<p>GENERAL CONTINUED: CLEAR INDICATES 0 - 2 OKTAS, PARTLY CLOUDY INDICATES 3 - 6 OKTAS, AND CLOUDY INDICATES 7 OR 8 OKTAS. WHEN AT LEAST ONE OF THE ELEMENTS (CEILOMETER OR SATELLITE) IS MISSING, THE DAILY CLOUDINESS IS NOT COMPUTED. WIND DIRECTION IS RECORDED IN TENS OF DEGREES (2 DIGITS) CLOCKWISE FROM TRUE NORTH. "00" INDICATES CALM. "36" INDICATES TRUE NORTH. RESULTANT WIND IS THE VECTOR AVERAGE OF THE SPEED AND DIRECTION. AVERAGE TEMPERATURE IS THE SUM OF THE MEAN DAILY MAXIMUM AND MINIMUM TEMPERATURE DIVIDED BY 2. SNOWFALL DATA COMPRISE ALL FORMS OF FROZEN PRECIPITATION, INCLUDING HAIL. A HEATING (COOLING) DEGREE DAY IS THE DIFFERENCE BETWEEN THE AVERAGE DAILY TEMPERATURE AND 65° F. DRY BULB IS THE TEMPERATURE OF THE AMBIENT AIR. DEW POINT IS THE TEMPERATURE TO WHICH THE AIR MUST BE COOLED TO ACHIEVE 100 PERCENT RELATIVE HUMIDITY. WET BULB IS THE TEMPERATURE THE AIR WOULD HAVE IF THE MOISTURE CONTENT WAS INCREASED TO 100 PERCENT RELATIVE HUMIDITY.</p> <p>ON JULY 1, 1996, THE NATIONAL WEATHER SERVICE BEGAN USING THE "METAR" OBSERVATION CODE THAT WAS ALREADY EMPLOYED BY MOST OTHER NATIONS OF THE WORLD. THE MOST NOTICEABLE DIFFERENCE IN THIS ANNUAL PUBLICATION WILL BE THE CHANGE IN UNITS FROM TENTHS TO EIGHTHS(OKTAS) FOR REPORTING THE AMOUNT OF SKY COVER.</p>
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1998
AVOCA, WILKES-BARRE - SCRANTON
PENNSYLVANIA (AVP)

The Wilkes-Barre Scranton National Weather Service Office is located about midway between the two cities, at the southwest end of the crescent-shaped Lackawanna River Valley. The river flows through this valley and empties into the Susquehanna River and the Wyoming Valley a few miles west of the airport. The surrounding mountains protect both cities and the airport from high winds. They influence the temperature and precipitation during both summer and winter, causing wide departures in both within a few miles of the station. Because of the proximity of the mountains, the climate is relatively cool in summer with frequent shower and thunderstorm activity, usually of brief duration. The winter temperatures in the valley are not severe. The occurrence of sub-zero temperatures and severe snowstorms is infrequent. A high percentage of the winter precipitation occurs as rain.

Although severe snowstorms are infrequent, when they do occur they approach blizzard conditions. High winds cause huge drifts and normal routines are disrupted for several days.

While the incidence of tornadoes is very low, Wilkes-Barre has occasionally been hit with these storms which caused loss of life and great property damage.

The area has felt the effects of tropical storms. Considerable wind damage has occasionally occurred, but the most devastating damage has come from flooding caused by the large amounts of precipitation deposited by the storms. The worst natural disaster to hit the region was the result of the flooding caused by a hurricane.

