# Climatography of the United States No. 20 1971-2000

National Climatic Data Center Federal Building 151 Patton Avenue Asheville, North Carolina 28801 www.ncdc.noaa.gov

COOP ID: 365573

**Station: MCKEESPORT, PA** 

Climate Division: PA 9 NWS Call Sign:

Elevation: 740 Feet Lat: 40°20N Lon: 79°52W

									ŗ	Tempe	eratui	re (°F)									
	Mean (1)							Extr	emes			Degree Days (1) Base Temp 65		Mean Number of Days (3)							
Month	Daily Max	Daily Min	Mean	Highest Daily(2)	Year	Day	Highest Month(1) Mean	Year	Lowest Daily(2)	Year	Day	Lowest Month(1) Mean	Year	Heating	Cooling	Max >= 100	Max >= 90	Max >= 50	Max <= 32	Min <= 32	Min <= 0
Jan	37.4	19.8	28.6	74	1999	24	38.0	1998	-19	1994	19	15.0	1977	1128	0	.0	.0	4.6	12.0	28.0	3.1
Feb	39.3	21.3	30.3	76	2000	27	38.8	1998	-2	1995	6	18.1	1978	971	0	.0	.0	5.9	8.4	23.8	1.7
Mar	50.3	28.6	39.5	84+	1998	30	47.6	1973	2	1996	11	31.7	1984	792	0	.0	.0	15.1	2.3	21.9	.2
Apr	62.0	37.7	49.9	90	1990	29	54.5	1985	20	1997	11	44.4	1975	455	1	.0	.1	24.6	.1	11.0	.0
May	71.3	47.7	59.5	92	1991	30	68.0	1991	29+	1996	14	54.1	1971	218	48	.0	.1	30.8	.0	1.4	.0
Jun	79.9	56.4	68.2	96+	1994	20	71.3+	1994	38	1975	8	62.8	1972	39	133	.0	1.5	30.0	.0	.0	.0
Jul	84.5	61.6	73.1	101	1988	16	77.3	1999	44+	1988	1	69.4	2000	1	252	.1	4.7	31.0	.0	.0	.0
Aug	82.8	60.3	71.6	97	1988	17	77.4	1995	46	1994	7	68.0	1982	10	213	.0	2.5	31.0	.0	@	.0
Sep	75.5	53.1	64.3	92	1993	3	68.2	1971	35	1991	29	60.6	1975	76	55	.0	.7	30.0	.0	.1	.0
Oct	64.3	41.2	52.8	82+	1988	1	59.7	1971	22+	1988	30	46.0	1988	388	7	.0	.0	28.5	.0	5.9	.0
Nov	52.5	33.2	42.9	77+	1987	5	49.2	1985	13	1991	5	34.6	1976	665	0	.0	.0	16.8	.7	16.1	.0
Dec	41.5	25.0	33.3	74	2001	6	40.8	1982	2	1988	13	19.7	1989	984	0	.0	.0	6.8	6.2	25.2	.7
Ann	61.8	40.5	51.2	101	Jul 1988	16	77.4	Aug 1995	-19	Jan 1994	19	15.0	Jan 1977	5727	709	.1	9.6	255.1	29.7	133.4	5.7

<sup>+</sup> Also occurred on an earlier date(s)

Complete documentation available from: www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

Issue Date: February 2004 035-A

- (1) From the 1971-2000 Monthly Normals
- (2) Derived from station's available digital record: 1948-2001
- (3) Derived from 1971-2000 serially complete daily data

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

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Climate Division: PA 9 NWS Call Sign: Elevation: 740 Feet Lat: 40°20N Lon: 79°52W

		Precipitation (inches)																									
	Mea Medi		P	recipi	itatio	on Totals					ean N of D	ays (3	)	Precipitation Probabilities (1)  Probability that the monthly/annual precipitation will be equal to or less than the indicated amount  Monthly/Annual Precipitation vs Probability Levels  These values were determined from the incomplete gamma distribution													
Month	Mean	Med- ian	Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year	>= 0.01	>= 0.10	>= 0.50	>= 1.00	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95			
Jan	2.59	2.15	1.72	1966	3	5.21	1978	1.03	1980	13.0	7.2	1.4	.2	.89	1.14	1.49	1.80	2.08	2.38	2.71	3.09	3.57	4.33	5.02			
Feb	2.47	2.32	2.05	1966	14	5.23	1975	.62	1977	10.4	5.5	1.3	.4	.96	1.19	1.51	1.78	2.04	2.30	2.58	2.91	3.32	3.96	4.54			
Mar	3.24	3.28	2.08	1963	4	6.11	1989	.94	1995	13.4	7.7	2.0	.5	1.19	1.50	1.93	2.30	2.64	3.00	3.39	3.83	4.40	5.29	6.09			
Apr	3.07	3.12	2.00	1999	9	5.38	1981	.52	1971	12.9	7.3	1.7	.2	1.21	1.49	1.90	2.23	2.55	2.87	3.21	3.61	4.12	4.90	5.61			
May	4.04	4.23	2.80	1971	6	6.54	1997	1.31	1993	13.1	7.8	2.2	.6	1.87	2.23	2.71	3.11	3.48	3.84	4.24	4.68	5.25	6.10	6.87			
Jun	3.93	3.75	4.01	1972	23	10.91	1972	1.19	1999	11.6	7.8	2.3	.7	1.52	1.88	2.41	2.84	3.25	3.67	4.12	4.64	5.31	6.33	7.26			
Jul	3.90	3.79	3.03	1988	20	7.39	1992	1.37	1995	8.8	6.1	2.2	.8	1.75	2.10	2.58	2.97	3.33	3.70	4.09	4.54	5.11	5.97	6.74			
Aug	3.15	2.79	2.62	1970	23	9.90	1994	1.26+	1989	9.7	5.9	2.1	.7	1.09	1.38	1.82	2.18	2.53	2.89	3.29	3.75	4.33	5.24	6.08			
Sep	3.13	3.06	2.41	1972	30	6.31	1972	1.02	1985	9.6	5.4	1.9	.6	1.33	1.62	2.01	2.34	2.64	2.95	3.28	3.66	4.14	4.87	5.53			
Oct	2.35	2.29	1.50	1954	4	4.62	1976	.56	1994	10.6	6.2	1.3	.3	.76	.98	1.31	1.59	1.86	2.14	2.45	2.81	3.27	3.99	4.66			
Nov	3.05	3.08	2.00	1950	25	8.20	1985	.59	1978	12.6	7.0	2.0	.4	.90	1.19	1.63	2.00	2.37	2.75	3.17	3.66	4.30	5.30	6.23			
Dec	2.86	2.69	2.00	1991	3	5.26	1978	.72	1988	12.2	7.0	1.6	.4	1.17	1.44	1.80	2.11	2.39	2.68	2.99	3.35	3.81	4.50	5.13			
Ann	37.78	37.42	4.01	Jun 1972	23	10.91	Jun 1972	.52	Apr 1971	137.9	80.9	22.0	5.8	30.39	31.89	33.77	35.17	36.40	37.58	38.77	40.08	41.65	43.90	45.81			

<sup>+</sup> Also occurred on an earlier date(s)

Complete documentation available from:

www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

<sup>#</sup> Denotes amounts of a trace

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>\*\*</sup> Statistics not computed because less than six years out of thirty had measurable precipitation

<sup>(1)</sup> From the 1971-2000 Monthly Normals

<sup>(2)</sup> Derived from station's available digital record: 1948-2001

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Climate Division: PA 9 NWS Call Sign: Elevation: 740 Feet Lat: 40°20N Lon: 79°52W

										Snov	v (incl	nes)														
						Sno	ow To	tals							Mean Number of Days (1)											
	Mean	s/Medi	<b>ans</b> (1)	1					Extre	mes (2)			ow Fa		Snow Depth >= Thresholds											
Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median	Highest Daily Snow Fall	Year	Day	Highest Monthly Snow Fall	Year	Highest Daily Snow Depth	Year	Day	Highest Monthly Mean Snow Depth	Year	0.1	1.0	3.0	5.0	10.0	1	3	5	10			
Jan	1.8	-99.9	2	0	9.0	1994	5	9.0	1994	13	1994	5	13	1994	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9			
Feb	1.6	.5	#	#	4.0	1995	4	5.0	1995	5	1995	4	#+	1996	2.2	1.3	.2	.0	.0	-9.9	-9.9	-9.9	-9.9			
Mar	2.1	2.0	1	0	16.5	1993	14	16.5	1993	17	1993	14	9	1993	1.4	.9	.3	.1	.1	-9.9	-9.9	-9.9	-9.9			
Apr	.1	.0	#	0	1.0	1988	15	1.0	1988	1	1988	15	#	1988	.1	.1	.0	.0	.0	.1	.0	.0	.0			
May	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0			
Jun	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0			
Jul	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0			
Aug	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0			
Sep	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0			
Oct	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0			
Nov	.2	.0	#	0	1.0	1995	16	1.8	1996	1+	1995	13	#+	1995	.6	.2	.0	.0	.0	.1	.0	.0	.0			
Dec	2.3	2.4	#	0	6.0	1990	27	6.0	1990	3	1987	16	#+	1999	1.9	.6	.2	.1	.0	-9.9	-9.9	-9.9	-9.9			
Ann	8.1	-9.9	N/A	N/A	16.5	Mar 1993	14	16.5	Mar 1993	17	Mar 1993	14	13	Jan 1994	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9			

<sup>+</sup> Also occurred on an earlier date(s) #Denotes trace amounts

Complete documentation available from: www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>-9/-9.9</sup> represents missing values Annual statistics for Mean/Median snow depths are not appropriate

<sup>(1)</sup> Derived from Snow Climatology and 1971-2000 daily data

<sup>(2)</sup> Derived from 1971-2000 daily data

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Lon: 79°52W

Lat: 40°20N

**Station: MCKEESPORT, PA** 

**Climate Division: PA 9 NWS Call Sign:** 

16

300

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Freeze Data Spring Freeze Dates (Month/Day) Probability of later date in spring (thru Jul 31) than indicated(\*) Temp (F) .10 .20 .30 .40 .70 .80 .90 36 5/31 5/25 5/20 5/16 5/12 5/09 5/05 4/30 4/24 32 5/07 5/16 5/11 5/04 5/01 4/28 4/25 4/21 4/16 28 5/06 4/30 4/26 4/23 4/19 4/16 4/12 4/08 4/03 24 4/26 4/20 4/15 4/11 4/08 4/04 3/31 3/26 3/20 20 4/10 4/05 4/02 3/29 3/26 3/23 3/20 3/17 3/12 16 4/04 3/28 3/23 3/19 3/15 3/11 3/06 3/01 2/22 Fall Freeze Dates (Month/Day) Probability of earlier date in fall (beginning Aug 1) than indicated(\*) Temp (F) .20 .30 .40 .50 .70 .10 .60 .80 .90 9/24 36 9/15 9/20 9/27 9/30 10/03 10/06 10/10 10/15 32 9/25 10/01 10/06 10/10 10/14 10/17 10/21 10/26 11/02 28 10/11 10/17 10/21 10/25 10/28 11/01 11/04 11/08 11/14 24 10/18 10/25 10/30 11/03 11/07 11/11 11/15 11/20 11/26 20 11/04 11/11 11/16 11/20 11/24 11/28 12/02 12/07 12/13 12/05 12/09 12/23 12/30 16 11/19 11/26 12/01 12/13 12/18 Freeze Free Period **Probability of longer than indicated freeze free period (Days)** Temp (F) .10 .20 .30 .40 .50 .60 .70 .80 .90 164 150 145 140 135 130 124 36 156 116 32 190 182 175 170 165 160 155 148 140 28 217 208 202 174 165 196 191 186 181 24 241 231 224 218 212 207 201 194 184 259 247 242 224 20 268 252 236 231 215

275

0/00 Indicates that the probability of occurrence of threshold temperature is less than the indicated probability.

282

Derived from 1971-2000 serially complete daily data

248

238

256

269

263

<sup>\*</sup> Probability of observing a temperature as cold, or colder, later in the spring or earlier in the fall than the indicated date.

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	Degree Days to Selected Base Temperatures (°F)														
Base						Heatin	g Degree l	Days (1)							
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann		
65	1128	971	792	455	218	39	1	10	76	388	665	984	5727		
60	973	831	637	310	124	10	0	0	22	255	515	829	4506		
57	880	747	547	230	80	4	0	0	8	187	428	736	3847		
55	818	691	490	182	57	2	0	0	4	149	373	680	3446		
50	672	559	350	85	20	0	0	0	0	75	243	536	2540		
32	229	170	49	0	0	0	0	0	0	0	14	147	609		

Base	Cooling Degree Days (1)														
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann		
32	124	123	280	535	852	1085	1273	1226	969	642	339	186	7634		
55	0	0	8	27	196	396	560	513	283	78	9	5	2075		
57	0	0	3	15	158	338	498	451	228	54	3	0	1748		
60	0	0	0	5	108	254	405	358	151	29	1	0	1311		
65	0	0	0	1	48	133	252	213	55	7	0	0	709		
70	0	0	0	0	16	49	117	99	10	0	0	0	291		

	Growing Degree Units (2)																												
Base		Growing Degree Units (Monthly)														Growing Degree Units (Accumulated Monthly)													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec					
40	23	32	117	293	595	838	995	952	717	383	159	47	23	55	172	465	1060	1898	2893	3845	4562	4945	5104	5151					
45	4	9	66	183	442	688	840	797	567	241	88	24	4	13	79	262	704	1392	2232	3029	3596	3837	3925	3949					
50	2	1	29	103	302	538	685	642	418	136	43	4	2	3	32	135	437	975	1660	2302	2720	2856	2899	2903					
55	0	0	10	54	181	389	530	487	277	63	13	2	0	0	10	64	245	634	1164	1651	1928	1991	2004	2006					
60	0	0	1	21	91	252	378	339	161	22	2	0	0	0	1	22	113	365	743	1082	1243	1265	1267	1267					
Base		Growing Degree Units for Corn (Monthly)													Gr	owing D	egree Un	its for C	orn (Acc	umulate	d Month	ly)							
50/86	18	26	88	194	366	546	668	636	454	237	94	33	18	44	132	326	692	1238	1906	2542	2996	3233	3327	3360					

(1) Derived from the 1971-2000 Monthly Normals

(2) Derived from 1971-2000 serially complete daily data

**Note:** For corn, temperatures below 50 are set to 50, and temperatures above 86 are set to 86

### Notes

- a. The monthly means are simple arithmetic averages computed by summing the monthly values for the period 1971-2000 and dividing by thirty. Prior to averaging, the data are adjusted if necessary to compensate for data quality issues, station moves or changes in station reporting practices. Missing months are replaced by estimates based on neighboring stations.
- b. The median is defined as the middle value in an ordered set of values. The median is being provided for the snow and precipitation elements because the mean can be a misleading value for precipitation normals.
  - c. Only observed validated values were used to select the extreme daily values.
  - d. Extreme monthly temperature/precipitation means were selected from the monthly normals data.

Monthly snow extremes were calculated from daily values quality controlled to be consistent with the Snow Climatology.

e. Degree Days were derived using the same techniques as the 1971-2000 normals.

Compete documentation for the 1971-2000 Normals is available on the internet from:

www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

f. Mean "number of days statistics" for temperature and precipitation were calculated from a serially complete daily data set .

Documentation of the serially complete data set is available from the link below:

g. Snowfall and snow depth statistics were derived from the Snow Climatology.

Documentation for the Snow Climatology project is available from the link under references.

## **Data Sources for Tables**

Several different data sources were used to create the Clim20 climate summaries. In some cases the daily extremes appear inconsistent with the monthly extremes and or the mean number of days statistics. For example, a high daily extreme value may not be reflected in the highest monthly value or the mean number of days threshold that is less than and equal to the extreme value. Some of these difference are caused by different periods of record. Daily extremes are derived from the station's entire period of record while the serial data and normals data were are for the 1971-2000 period. Therefore extremes observed before 1971 would not be included in the 1971-2000 normals or the 1971-2000 serial daily data set. Inconsistencies can also occur when monthly values are adjusted to reflect the current observing conditions or were replaced during the 1971-2000 Monthly Normals processing and are not reconciled with the Summary of the Day data.

- a. Temperature/ Precipitation Tables
  - 1. 1971-2000 Monthly Normals
  - 2. Cooperative Summary of the Day
  - 3. National Weather Service station records
  - 4. 1971-2000 serially complete daily data

- c. Snow Tables
  - 1. Snow Climatology
  - 2. Cooperative Summary of the Day
- d. Freeze Data Table

1971-2000 serially complete daily data

- b. Degree Day Table
  - 1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals
  - 2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data

## References

U.S. Climate Normals 1971-2000, www.ncdc.noaa.gov/normals.html

U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normals/usnormalsprods.html

Snow Climatology Project Description, www.ncdc.noaa.gov/oa/climate/monitoring/snowclim/mainpage.html

Eischeid, J. K., P. Pasteris, H. F. Diaz, M. Plantico, and N. Lott, 2000: Creating a serially complete, national daily time series of temperature and precipitation for the Western United States. J. Appl. Meteorol., 39, 1580-1591,

www1.ncdc.noaa.gov/pub/data/special/ serialcomplete\_jam\_0900.pdf