

Climatography of the United States No. 20

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

Station: SHIPPENSBURG, PA

1971-2000

COOP ID: 368073

Climate Division: PA 4

NWS Call Sign:

Elevation: 680 Feet

Lat: 40°03N

Lon: 77°31W

Temperature (°F)

Mean (1)				Extremes										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	36.5	20.8	28.7	71+	1950	26	37.8	1998	-16	1994	19	17.6	1977	1127	0	.0	.0	3.5	11.3	26.9	.8
Feb	40.7	23.0	31.9	79	1997	27	38.8+	1998	-10	1961	2	21.3	1979	929	0	.0	.0	5.9	6.9	23.0	.4
Mar	50.8	30.5	40.7	87	1998	30	46.7	1977	3+	1960	9	34.2	1984	754	0	.0	.0	15.3	1.6	18.4	.0
Apr	62.4	40.0	51.2	94	1976	18	56.4	1994	15	1982	7	44.5	1975	416	1	.0	.2	25.8	@	5.4	.0
May	72.9	50.1	61.5	97	1996	19	68.5	1991	28+	1966	11	57.7	1997	162	54	.0	1.1	30.9	.0	.1	.0
Jun	81.1	59.0	70.1	99+	1952	26	73.8	1994	39+	1961	16	65.4	1972	20	172	.0	3.7	30.0	.0	.0	.0
Jul	85.7	63.5	74.6	104	1988	16	80.1	1999	47+	1966	21	70.7	2000	4	301	.4	7.9	31.0	.0	.0	.0
Aug	84.0	61.7	72.9	102+	1948	26	77.1	1988	38	1982	29	69.0	1992	7	251	.2	5.3	31.0	.0	.0	.0
Sep	76.3	54.5	65.4	104	1953	2	69.8	1998	29+	1963	24	61.8	1975	62	74	.0	1.2	30.0	.0	@	.0
Oct	65.2	42.9	54.1	94	1951	5	60.4	1984	20+	1969	24	49.4	1976	348	9	.0	.0	29.3	.0	3.3	.0
Nov	52.2	34.2	43.2	83	1950	1	48.9	1975	9	1976	30	36.9	1995	653	0	.0	.0	17.0	.5	12.8	.0
Dec	41.1	25.7	33.4	75+	1984	29	40.1	1984	-8	1960	23	21.2	1989	980	0	.0	.0	5.8	6.2	24.2	.2
Ann	62.4	42.2	52.3	104+	Jul 1988	16	80.1	Jul 1999	-16	Jan 1994	19	17.6	Jan 1977	5462	862	.6	19.4	255.5	26.5	114.1	1.4

+ Also occurred on an earlier date(s)

@ Denotes mean number of days greater than 0 but less than .05

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

Issue Date: February 2004

(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

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Station: SHIPPENSBURG, PA

COOP ID: 368073

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NWS Call Sign:

Elevation: 680 Feet Lat: 40°03N

Lon: 77°31W

Precipitation (inches)																								
	Precipitation Totals									Mean Number of Days (3)				Precipitation Probabilities (1) Probability that the monthly/annual precipitation will be equal to or less than the indicated amount										
	Means/ Medians(1)		Extremes							Daily Precipitation				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	3.17	2.66	2.00	1978	8	8.42	1996	.13	1981	10.0	6.6	2.3	.6	.62	.91	1.37	1.80	2.23	2.70	3.22	3.86	4.70	6.04	7.32
Feb	2.68	2.17	2.54	1984	14	6.44	1998	.82	1980	9.5	5.8	1.6	.4	.83	1.09	1.46	1.79	2.10	2.43	2.79	3.21	3.75	4.60	5.38
Mar	3.63	3.72	3.18	1952	11	9.43	1993	1.05	1995	10.2	7.3	2.4	.9	1.10	1.45	1.96	2.41	2.83	3.28	3.77	4.35	5.09	6.26	7.34
Apr	3.33	3.53	2.23	1998	19	6.46	1993	.62	1985	10.4	6.8	2.3	.7	.92	1.24	1.72	2.14	2.55	2.97	3.45	4.01	4.74	5.89	6.95
May	3.86	3.73	2.45	1953	17	7.59	1989	1.27	1982	11.7	7.6	2.8	.8	1.68	2.02	2.51	2.90	3.27	3.65	4.05	4.51	5.09	5.97	6.77
Jun	3.79	3.48	4.90	1972	23	12.41	1972	.46	1991	11.0	7.0	2.6	1.0	.94	1.30	1.85	2.34	2.82	3.34	3.91	4.59	5.48	6.88	8.20
Jul	3.49	3.07	3.26	1996	30	9.85	1996	.62	1983	10.1	6.7	2.4	.7	1.01	1.35	1.85	2.28	2.70	3.14	3.63	4.20	4.94	6.10	7.18
Aug	2.95	2.72	4.14	1955	13	6.42	1994	1.36	1976	9.4	6.0	1.9	.6	1.25	1.51	1.89	2.20	2.49	2.78	3.09	3.45	3.91	4.61	5.24
Sep	3.72	2.41	4.28	1966	14	10.35	1975	1.03	1983	9.6	6.3	2.2	.8	.74	1.07	1.62	2.12	2.63	3.17	3.79	4.53	5.52	7.09	8.59
Oct	2.91	2.37	3.37	1990	13	9.08	1976	.53	1994	8.0	4.8	1.9	.9	.65	.91	1.34	1.72	2.11	2.52	2.98	3.53	4.25	5.41	6.49
Nov	3.29	3.40	3.30	1950	25	7.62	1997	.65	1998	8.8	6.1	2.2	.9	.85	1.16	1.64	2.06	2.48	2.91	3.40	3.97	4.72	5.91	7.02
Dec	3.01	2.66	2.50	1992	11	6.31	1990	.39	1998	9.4	6.0	2.1	.7	.82	1.11	1.54	1.92	2.29	2.68	3.12	3.63	4.30	5.34	6.32
Ann	39.83	38.37	4.90	Jun 1972	23	12.41	Jun 1972	.13	Jan 1981	118.1	77.0	26.7	9.0	28.77	30.92	33.68	35.76	37.61	39.40	41.24	43.27	45.73	49.29	52.37

+ Also occurred on an earlier date(s)

Denotes amounts of a trace

@ Denotes mean number of days greater than 0 but less than .05

** Statistics not computed because less than six years out of thirty had measurable precipitation

(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

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

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Station: SHIPPENSBURG, PA

COOP ID: 368073

Climate Division: PA 4

NWS Call Sign:

Elevation: 680 Feet

Lat: 40°03N

Lon: 77°31W

Snow (inches)																							
Snow Totals															Mean Number of Days (1)								
Means/Medians (1)					Extremes (2)										Snow Fall >= Thresholds					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	11.4	7.5	2	1	22.5	1996	7	48.7	1996	30	1996	12	12	1996	5.0	3.1	1.2	.6	.2	13.4	8.1	4.9	2.0
Feb	8.9	6.5	3	1	17.7	1983	11	25.1	1986	20	1994	12	14	1994	4.0	2.1	1.1	.5	.1	11.2	7.7	5.6	2.7
Mar	6.6	4.2	1	#	25.5	1993	13	32.9	1993	29	1993	13	12	1994	2.6	1.5	.7	.4	.1	5.0	3.4	2.4	1.3
Apr	.8	.0	#	0	5.5	1982	9	9.5	1982	3	1982	9	#+	2000	.4	.3	.1	@	.0	.2	.1	.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	.8	1972	19	.8	1972	0	0	0	0	0	@	.0	.0	.0	.0	.0	.0	.0	.0
Nov	1.8	.3	#	#	11.0	1971	25	15.0	1971	9	1995	14	2	1995	1.1	.6	.3	.1	.1	1.2	.5	.3	.0
Dec	4.8	2.7	1	#	13.0	1992	10	13.6+	1981	10	1990	28	3	1995	2.7	1.3	.5	.3	@	5.4	2.7	1.3	@
Ann	34.3	21.2	N/A	N/A	25.5	Mar 1993	13	48.7	Jan 1996	30	Jan 1996	12	14	Feb 1994	15.8	8.9	3.9	1.9	.5	36.4	22.5	14.5	6.0

+ Also occurred on an earlier date(s) #Denotes trace amounts

@ Denotes mean number of days greater than 0 but less than .05

-9/-9.9 represents missing values

Annual statistics for Mean/Median snow depths are not appropriate

(1) Derived from Snow Climatology and 1971-2000 daily data

(2) Derived from 1971-2000 daily data

Complete documentation available from:

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COOP ID: 368073

Climate Division: PA 4

NWS Call Sign:

Elevation: 680 Feet

Lat: 40°03N

Lon: 77°31W

Freeze Data									
Spring Freeze Dates (Month/Day)									
Temp (F)	Probability of later date in spring (thru Jul 31) than indicated(*)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	5/15	5/10	5/07	5/05	5/02	4/30	4/27	4/24	4/19
32	5/01	4/27	4/24	4/22	4/19	4/17	4/15	4/12	4/08
28	4/22	4/17	4/14	4/12	4/09	4/07	4/04	4/01	3/28
24	4/09	4/04	4/01	3/30	3/27	3/25	3/22	3/19	3/15
20	3/28	3/24	3/21	3/18	3/16	3/13	3/11	3/08	3/04
16	3/27	3/19	3/13	3/08	3/03	2/26	2/21	2/14	2/06
Fall Freeze Dates (Month/Day)									
Temp (F)	Probability of earlier date in fall (beginning Aug 1) than indicated(*)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	9/24	9/28	10/02	10/05	10/07	10/10	10/13	10/16	10/21
32	10/04	10/09	10/13	10/16	10/19	10/22	10/26	10/29	11/03
28	10/18	10/23	10/26	10/29	10/31	11/03	11/06	11/09	11/13
24	10/28	11/02	11/06	11/10	11/13	11/16	11/20	11/24	11/29
20	11/11	11/18	11/22	11/26	11/30	12/04	12/08	12/12	12/19
16	11/28	12/04	12/08	12/12	12/15	12/18	12/22	12/26	1/01
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	175	169	165	161	158	154	150	146	140
32	205	197	191	187	182	178	173	168	160
28	225	218	213	208	204	200	195	190	183
24	251	243	238	234	230	226	222	217	209
20	281	273	268	263	258	254	249	243	236
16	317	307	299	293	287	281	274	266	256

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

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

Derived from 1971-2000 serially complete daily data

Complete documentation available from:

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COOP ID: 368073

Climate Division: PA 4 NWS Call Sign: Elevation: 680 Feet Lat: 40°03N Lon: 77°31W

Degree Days to Selected Base Temperatures (°F)													
Base	Heating Degree Days (1)												
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	1127	929	754	416	162	20	4	7	62	348	653	980	5462
60	972	789	599	273	78	3	0	0	17	220	504	825	4280
57	879	705	507	197	44	1	0	0	6	157	417	732	3645
55	817	649	448	152	28	0	0	0	3	121	361	670	3249
50	669	513	308	66	7	0	0	0	0	56	234	524	2377
32	217	129	27	0	0	0	0	0	0	0	11	124	508

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	113	124	296	576	915	1142	1320	1267	1002	684	348	167	7954
55	0	0	4	38	230	452	607	554	315	92	8	0	2300
57	0	0	1	23	184	393	545	492	258	66	4	0	1966
60	0	0	0	9	125	305	452	399	178	36	1	0	1505
65	0	0	0	1	54	172	301	251	74	9	0	0	862
70	0	0	0	0	16	73	165	126	18	1	0	0	399

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	38	132	359	679	908	1079	1025	767	447	166	41	23	61	193	552	1231	2139	3218	4243	5010	5457	5623	5664
45	8	15	71	230	524	758	924	870	617	300	89	12	8	23	94	324	848	1606	2530	3400	4017	4317	4406	4418
50	0	3	33	126	373	608	769	715	470	177	44	5	0	3	36	162	535	1143	1912	2627	3097	3274	3318	3323
55	0	0	12	64	238	461	614	560	324	90	14	3	0	0	12	76	314	775	1389	1949	2273	2363	2377	2380
60	0	0	4	28	129	315	459	405	195	37	3	0	0	0	4	32	161	476	935	1340	1535	1572	1575	1575
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	15	27	86	211	409	601	736	695	487	257	88	20	15	42	128	339	748	1349	2085	2780	3267	3524	3612	3632

(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

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

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.
Complete documentation for the 1971-2000 Normals is available on the internet from:
www.ncdc.noaa.gov/oa/climate/normal/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 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.

- | | |
|---|---|
| <ol style="list-style-type: none">a. Temperature/ Precipitation Tables<ol style="list-style-type: none">1. 1971-2000 Monthly Normals2. Cooperative Summary of the Day3. National Weather Service station records4. 1971-2000 serially complete daily datab. Degree Day Table<ol style="list-style-type: none">1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data | <ol style="list-style-type: none">c. Snow Tables<ol style="list-style-type: none">1. Snow Climatology2. Cooperative Summary of the Dayd. Freeze Data Table
1971-2000 serially complete daily data |
|---|---|

References

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