U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

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

Station: LEWISTOWN, PA **COOP ID: 364992**

Climate Division: PA 5 **NWS Call Sign:** **Elevation: 460 Feet** **Lat: 40˚35N** **Lon: 77˚34W**

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	35.9	18.6	27.3	72+	1967	25	36.4	1990	-17	1994	21	15.0	1977	1171	0	.0	.0	2.8	10.7	28.2	1.3
Feb	39.6	20.4	30.0	78	1954	17	36.9	1998	-12+	1961	2	19.6	1979	980	0	.0	.0	4.9	6.8	24.6	.6
Mar	49.5	28.4	39.0	87+	1977	30	44.7	2000	3+	1980	2	32.6	1984	807	0	.0	.0	14.4	1.3	21.0	.1
Apr	61.7	37.9	49.8	92+	1960	26	54.4	1985	15	1982	7	43.9	1975	457	0	.0	.3	26.1	.0	6.9	.0
May	72.6	47.5	60.1	97	1962	16	66.5	1991	28+	1974	8	55.7	1973	196	42	.0	.8	30.9	.0	.6	.0
Jun	79.9	56.0	68.0	102	1952	27	71.5	1994	38+	1972	11	64.3	1972	30	120	.0	2.3	30.0	.0	.0	.0
Jul	84.4	60.8	72.6	102	1988	16	76.8	1999	41	1980	9	68.2	1976	5	241	@	6.5	31.0	.0	.0	.0
Aug	83.0	59.3	71.2	103	1948	27	74.9	1995	35	1981	9	67.5	1976	9	199	.0	3.6	31.0	.0	.0	.0
Sep	75.3	52.0	63.7	103+	1953	3	67.9	1998	29	1963	25	59.4	1975	90	51	.0	.9	30.0	.0	.1	.0
Oct	64.0	40.2	52.1	95	1953	1	58.8	1984	21	1988	30	47.6	1988	404	4	.0	.0	29.5	.0	5.0	.0
Nov	51.6	32.4	42.0	85	1950	2	47.5	1999	8	1976	30	34.6	1976	691	0	.0	.0	16.5	.3	15.0	.0
Dec	40.4	24.2	32.3	75	1984	30	39.0	1984	-16	1960	24	20.9	1989	1014	0	.0	.0	4.4	5.8	25.3	.2
Ann	61.5	39.8	50.7	103+	Sep 1953	3	76.8	Jul 1999	-17	Jan 1994	21	15.0	Jan 1977	5854	657	@	14.4	251.5	24.9	126.7	2.2

+ 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/normals/usnormals.html

(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

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

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

Station: LEWISTOWN, PA **COOP ID: 364992**

Climate Division: PA 5 **NWS Call Sign:** **Elevation: 460 Feet** **Lat: 40˚35N** **Lon: 77˚34W**

Precipitation (inches)

Precipitation Totals

Month	Means/ Medians(1) Mean	Means/ Medians(1) Median	Extremes Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year
Jan	2.73	2.11	2.37	1979	25	6.63	1996	.21	1981
Feb	2.42	2.11	2.85	1984	14	6.15	1984	.58	1974
Mar	3.37	3.45	3.27	1994	3	7.61	1994	.67	1981
Apr	3.23	3.04	2.35	1993	17	10.18	1993	.33	1971
May	4.15	3.94	3.33	1953	26	7.36	1978	.64	1977
Jun	4.58	4.01	3.53	1972	22	16.82	1972	1.16	1991
Jul	4.18	3.62	2.65	1989	22	12.98	1989	1.24	1983
Aug	3.18	3.18	2.74	1961	3	7.09	1994	.60	1976
Sep	3.58	3.01	3.28	1996	13	11.99	1996	.34	1984
Oct	3.03	2.26	3.70	1995	21	8.58	1976	.71	1992
Nov	3.47	3.12	3.54	1993	28	8.52	1985	.48	1981
Dec	2.93	2.56	1.90+	1992	11	5.95	1990	.41	1998
Ann	40.85	41.38	3.70	Oct 1995	21	16.82	Jun 1972	.21	Jan 1981

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	10.6	6.3	1.9	.5
Feb	9.2	5.4	1.7	.4
Mar	10.6	6.9	2.1	.6
Apr	12.1	7.4	2.3	.4
May	13.6	8.4	2.9	.7
Jun	11.8	8.3	3.0	.8
Jul	10.8	7.1	2.9	1.2
Aug	10.2	6.0	2.1	.8
Sep	10.5	6.6	2.4	.7
Oct	9.5	5.3	1.9	.8
Nov	10.7	6.3	2.4	.8
Dec	10.0	5.7	2.2	.5
Ann	129.6	79.7	27.8	8.2

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	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	.58	.83	1.23	1.59	1.96	2.35	2.79	3.31	4.01	5.11	6.16
Feb	.62	.85	1.20	1.51	1.82	2.14	2.50	2.93	3.48	4.36	5.18
Mar	1.14	1.46	1.92	2.32	2.70	3.09	3.51	4.01	4.65	5.64	6.55
Apr	.65	.94	1.42	1.85	2.29	2.76	3.29	3.93	4.77	6.13	7.41
May	1.50	1.89	2.45	2.93	3.38	3.84	4.34	4.92	5.66	6.81	7.86
Jun	1.34	1.77	2.43	2.99	3.54	4.12	4.75	5.50	6.47	7.98	9.39
Jul	1.43	1.82	2.40	2.89	3.36	3.84	4.36	4.98	5.76	6.98	8.10
Aug	.78	1.07	1.54	1.95	2.36	2.79	3.27	3.84	4.60	5.79	6.90
Sep	.85	1.18	1.70	2.17	2.63	3.13	3.68	4.33	5.20	6.56	7.85
Oct	.55	.82	1.26	1.67	2.09	2.55	3.07	3.69	4.53	5.87	7.15
Nov	.77	1.09	1.60	2.06	2.52	3.00	3.55	4.21	5.08	6.46	7.76
Dec	.81	1.09	1.51	1.88	2.24	2.62	3.03	3.53	4.17	5.17	6.11
Ann	28.50	30.87	33.92	36.24	38.30	40.30	42.37	44.66	47.44	51.48	54.99

\+ 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

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Services

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

Station: LEWISTOWN, PA **COOP ID: 364992**

Climate Division: PA 5 **NWS Call Sign:** **Elevation: 460 Feet** **Lat: 40°35N** **Lon: 77°34W**

Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	7.0	5.6	2	1
Feb	3.7	3.0	1	#
Mar	4.0	1.0	#	#
Apr	.2	.0	#	0
May	.0	.0	0	0
Jun	.0	.0	0	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	.0	.0	0	0
Oct	.0	.0	0	0
Nov	1.0	.0	#	0
Dec	3.1	2.0	#	#
Ann	19.0	11.6	N/A	N/A

Extremes (2)

Month	Highest Daily Snow Fall	Year	Day	Highest Monthly Snow Fall	Year	Highest Daily Snow Depth	Year	Day	Highest Monthly Mean Snow Depth	Year
Jan	17.0	1996	8	21.0	1987	33	1996	13	10	1971
Feb	10.0	1983	11	12.6	1983	12	1972	20	6	1994
Mar	20.0	1993	14	22.6	1994	22	1994	3	5	1994
Apr	3.0	1982	10	4.5	1982	1	1985	8	#	1985
May	.0	0	0	.0	0	0	0	0	0	0
Jun	.0	0	0	.0	0	0	0	0	0	0
Jul	.0	0	0	.0	0	0	0	0	0	0
Aug	.0	0	0	.0	0	0	0	0	0	0
Sep	.0	0	0	.0	0	0	0	0	0	0
Oct	.0	0	0	.0	0	0	0	0	0	0
Nov	9.5	1971	25	9.5	1971	4	1995	15	1	1995
Dec	12.0	1997	30	12.3	1997	12	1997	30	3	1995
Ann	20.0	Mar 1993	14	22.6	Mar 1994	33	Jan 1996	13	10	Jan 1971

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	3.1	2.3	.9	.3	.2
Feb	2.1	1.9	1.0	.3	.1
Mar	1.6	1.3	.5	.2	.1
Apr	.2	.1	@	.0	.0
May	.0	.0	.0	.0	.0
Jun	.0	.0	.0	.0	.0
Jul	.0	.0	.0	.0	.0
Aug	.0	.0	.0	.0	.0
Sep	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0
Nov	.3	.2	.2	@	.0
Dec	1.4	1.1	.3	.2	.1
Ann	8.7	6.9	2.9	1.0	.5

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	8.0	3.9	1.0	.5
Feb	6.2	3.6	1.9	.1
Mar	2.0	1.2	.6	.2
Apr	.1	.0	.0	.0
May	.0	.0	.0	.0
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.0	.0	.0	.0
Oct	.0	.0	.0	.0
Nov	.5	.2	.0	.0
Dec	3.6	1.4	.6	.1
Ann	20.4	10.3	4.1	.9

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

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

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

Station: LEWISTOWN, PA **COOP ID: 364992**

Climate Division: PA 5 **NWS Call Sign:** **Elevation: 460 Feet** **Lat: 40˚35N** **Lon: 77˚34W**

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	5/20	5/15	5/12	5/10	5/07	5/05	5/02	4/29	4/24
32	5/11	5/06	5/02	4/29	4/26	4/23	4/20	4/16	4/11
28	4/28	4/22	4/19	4/15	4/12	4/09	4/05	4/01	3/27
24	4/16	4/11	4/07	4/04	4/01	3/29	3/26	3/22	3/17
20	4/03	3/29	3/26	3/23	3/20	3/17	3/14	3/11	3/06
16	3/30	3/23	3/18	3/14	3/10	3/06	3/02	2/25	2/19

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	9/16	9/22	9/26	9/30	10/04	10/07	10/11	10/15	10/22
32	9/30	10/05	10/08	10/11	10/14	10/17	10/20	10/24	10/29
28	10/14	10/18	10/22	10/25	10/28	10/30	11/02	11/06	11/11
24	10/24	10/31	11/05	11/09	11/12	11/16	11/20	11/25	12/02
20	11/12	11/19	11/23	11/27	12/01	12/05	12/08	12/13	12/19
16	11/26	12/02	12/07	12/11	12/15	12/18	12/22	12/27	1/02

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	174	165	159	154	149	144	139	133	124
32	193	185	180	175	171	166	161	156	148
28	221	213	208	203	198	193	188	183	175
24	253	243	236	230	225	219	213	206	197
20	279	271	265	260	255	251	246	240	232
16	309	299	291	285	279	273	266	259	248

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

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

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

Station: LEWISTOWN, PA **COOP ID: 364992**

Climate Division: PA 5 **NWS Call Sign:** **Elevation: 460 Feet** **Lat: 40˚35N** **Lon: 77˚34W**

Degree Days to Selected Base Temperatures (˚F)

Heating Degree Days (1)

Base Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	1171	980	807	457	196	30	5	9	90	404	691	1014	5854
60	1016	840	652	310	102	5	0	0	30	266	541	859	4621
57	923	756	559	228	62	1	0	0	12	195	452	766	3954
55	861	700	499	179	41	0	0	0	6	154	395	704	3539
50	706	560	355	80	12	0	0	0	1	75	260	556	2605
32	243	148	38	0	0	0	0	0	0	0	13	137	579

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	95	92	254	534	870	1080	1259	1214	950	623	312	146	7429
55	0	0	1	23	198	390	546	501	266	64	4	0	1993
57	0	0	0	12	156	331	484	439	212	43	2	0	1679
60	0	0	0	4	104	245	391	346	140	21	0	0	1251
65	0	0	0	0	42	120	241	199	51	4	0	0	657
70	0	0	0	0	12	37	114	86	9	0	0	0	258

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	15	25	105	327	639	858	1031	980	728	396	142	26	15	40	145	472	1111	1969	3000	3980	4708	5104	5246	5272
45	2	8	52	200	485	708	876	825	578	255	70	7	2	10	62	262	747	1455	2331	3156	3734	3989	4059	4066
50	0	0	24	109	332	558	721	670	428	140	29	3	0	0	24	133	465	1023	1744	2414	2842	2982	3011	3014
55	0	0	7	51	202	408	566	515	285	65	9	0	0	0	7	58	260	668	1234	1749	2034	2099	2108	2108
60	0	0	1	22	102	268	411	363	166	23	3	0	0	0	1	23	125	393	804	1167	1333	1356	1359	1359
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	8	22	77	204	391	561	693	658	454	237	82	11	8	30	107	311	702	1263	1956	2614	3068	3305	3387	3398

(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.
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

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

c. Snow Tables
   1. Snow Climatology
   2. Cooperative Summary of the Day

d. Freeze Data Table
   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