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: WAYNESBURG 1 E, PA **COOP ID: 369367**

Climate Division: PA 9 **NWS Call Sign:** **Elevation: 940 Feet** **Lat: 39˚54N** **Lon: 80˚10W**

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	38.1	18.1	28.1	75	1999	24	37.0	1990	-25+	1963	29	14.0	1977	1145	0	.0	.0	6.1	10.7	27.6	3.1
Feb	41.4	19.2	30.3	78	2000	27	37.6	1990	-15	1979	17	17.2	1978	971	0	.0	.0	7.4	7.3	24.3	2.4
Mar	51.7	26.8	39.3	85	1989	29	47.3	1973	-6	1993	15	33.0	1984	800	0	.0	.0	16.6	1.9	22.6	.3
Apr	62.4	34.8	48.6	90	1976	19	53.1	1985	15+	1964	1	43.1	1975	492	0	.0	@	25.3	@	13.4	.0
May	72.1	45.2	58.7	92	1962	17	67.0	1991	23	1963	2	53.4	1997	232	34	.0	.1	30.7	.0	2.4	.0
Jun	80.0	54.3	67.2	96+	1988	23	70.6	1994	31	1972	11	62.2	1972	47	111	.0	1.2	30.0	.0	@	.0
Jul	83.5	58.8	71.2	102	1988	17	74.6	1987	38	1988	1	67.2	1976	9	201	@	4.8	31.0	.0	.0	.0
Aug	82.2	57.3	69.8	100	1948	27	75.4	1995	34	1982	29	65.9	1976	21	170	.0	2.7	31.0	.0	.0	.0
Sep	76.0	49.9	63.0	94+	1964	11	66.3	1971	26	1963	24	58.7	1976	101	39	.0	.8	30.0	.0	.3	.0
Oct	65.1	37.5	51.3	86	1986	1	58.3	1984	16+	1965	29	45.6	1976	430	6	.0	.0	28.7	.0	9.9	.0
Nov	53.2	29.9	41.6	84	1948	5	48.7	1985	2	1976	30	33.6	1976	703	0	.0	.0	17.5	.7	19.5	.0
Dec	42.4	23.1	32.8	77	1982	4	40.0	1982	-16+	1989	22	18.8	1989	999	0	.0	.0	8.5	6.2	25.4	.9
Ann	62.3	37.9	50.2	102	Jul 1988	17	75.4	Aug 1995	-25+	Jan 1963	29	14.0	Jan 1977	5950	561	@	9.6	262.8	26.8	145.4	6.7

\+ 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

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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	2.93	2.35	1.56	1999	3	6.73	1999	.88	1981
Feb	2.52	2.17	1.66	2000	14	4.51	1971	.54	1978
Mar	3.51	3.63	2.40	1994	3	7.96	1994	1.12	1990
Apr	3.25	3.22	2.33	1981	13	6.56	1981	1.05	1971
May	4.18	4.35	2.53+	1971	6	7.14	1985	1.19	1993
Jun	3.64	3.34	2.29	1972	23	8.18	1972	1.02	1999
Jul	4.01	3.80	2.62+	1980	22	8.75	1985	.71	1975
Aug	3.94	3.56	4.09	1975	31	8.46	1975	.92	1981
Sep	3.20	2.52	2.14	1996	17	6.24+	1993	.95	1995
Oct	2.57	2.70	1.97	1999	10	5.84	1976	.63	1982
Nov	3.21	3.02	2.90	1985	27	13.39	1985	.70	1976
Dec	2.79	2.50	3.04	1991	3	5.98	1990	1.15	1989
Ann	39.75	39.90	4.09	Aug 1975	31	13.39	Nov 1985	.54	Feb 1978

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	14.9	7.2	1.5	.6
Feb	12.5	6.4	1.5	.2
Mar	13.2	8.1	2.4	.5
Apr	13.6	7.8	2.1	.4
May	13.9	8.7	2.8	.8
Jun	11.7	7.7	2.4	.7
Jul	11.8	7.5	2.5	.9
Aug	11.0	6.8	2.5	1.0
Sep	10.6	6.5	2.2	.6
Oct	11.2	6.0	1.8	.3
Nov	12.7	7.3	1.9	.5
Dec	14.0	7.2	1.5	.3
Ann	151.1	87.2	25.1	6.8

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	.86	1.14	1.55	1.92	2.27	2.63	3.04	3.51	4.13	5.10	5.99
Feb	.78	1.02	1.38	1.68	1.98	2.28	2.62	3.01	3.52	4.32	5.05
Mar	1.41	1.73	2.19	2.57	2.93	3.29	3.68	4.13	4.71	5.59	6.39
Apr	1.25	1.55	1.98	2.34	2.68	3.02	3.40	3.83	4.39	5.23	6.01
May	1.68	2.07	2.61	3.06	3.49	3.92	4.38	4.92	5.60	6.64	7.59
Jun	1.14	1.49	2.00	2.44	2.87	3.31	3.79	4.36	5.09	6.23	7.29
Jul	1.23	1.61	2.18	2.66	3.14	3.63	4.17	4.80	5.62	6.90	8.08
Aug	1.52	1.89	2.41	2.85	3.26	3.67	4.13	4.65	5.32	6.34	7.27
Sep	1.09	1.39	1.83	2.21	2.57	2.94	3.34	3.81	4.42	5.36	6.22
Oct	.91	1.15	1.50	1.80	2.08	2.37	2.68	3.05	3.52	4.24	4.91
Nov	.95	1.25	1.71	2.11	2.49	2.89	3.33	3.85	4.53	5.58	6.56
Dec	1.14	1.40	1.76	2.06	2.33	2.62	2.92	3.27	3.72	4.40	5.02
Ann	31.26	32.97	35.12	36.73	38.15	39.50	40.89	42.40	44.23	46.84	49.07

\+ 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
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Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	11.1	10.6	2	1
Feb	6.3	4.9	1	1
Mar	5.8	3.9	#	#
Apr	1.0	#	#	#
May	#	.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
Nov	1.8	.5	#	#
Dec	4.4	3.3	#	#
Ann	30.4	23.2	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	17.6	1994	5	41.7	1994	26	1994	5	12	1994
Feb	8.2	1983	12	16.9	1979	14	1979	20	8	1979
Mar	12.6	1994	3	22.8	1999	16	1993	14	3	1978
Apr	7.8	1987	4	12.8	1987	9	1987	5	1	1987
May	#	1989	8	#+	1989	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	#	2000	9	#+	2000	#+	1993	31	#+	1993
Nov	6.0	1971	25	7.2	1987	6	1971	25	1	1971
Dec	9.5	1992	11	13.9	1989	10	1992	11	3	1989
Ann	17.6	Jan 1994	5	41.7	Jan 1994	26	Jan 1994	5	12	Jan 1994

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	8.4	3.5	.9	.3	.1
Feb	5.5	1.8	.4	.2	.0
Mar	3.8	1.7	.5	.2	.1
Apr	.8	.2	.1	@	.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	1.7	.6	.1	.1	.0
Dec	4.8	1.5	.2	.1	.0
Ann	25.0	9.3	2.2	.9	.2

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	11.0	6.8	3.9	1.7
Feb	8.3	3.9	2.9	.7
Mar	3.8	1.5	.8	.1
Apr	.4	.1	.1	.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	.1	.1	.0
Dec	5.3	1.2	.3	@
Ann	29.8	13.6	8.1	2.5

+ 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

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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	6/09	6/02	5/29	5/25	5/21	5/18	5/14	5/09	5/03
32	5/21	5/16	5/13	5/10	5/07	5/04	5/01	4/28	4/23
28	5/06	5/01	4/28	4/25	4/23	4/20	4/17	4/14	4/10
24	4/24	4/20	4/17	4/14	4/12	4/10	4/07	4/04	3/31
20	4/16	4/11	4/07	4/04	4/01	3/29	3/26	3/23	3/18
16	4/01	3/27	3/23	3/19	3/16	3/13	3/10	3/06	2/28

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	9/11	9/16	9/20	9/23	9/26	9/28	10/01	10/05	10/10
32	9/27	10/01	10/04	10/06	10/09	10/11	10/13	10/16	10/20
28	10/08	10/12	10/15	10/18	10/20	10/23	10/26	10/29	11/02
24	10/15	10/20	10/24	10/28	10/31	11/03	11/06	11/10	11/16
20	10/28	11/02	11/06	11/09	11/11	11/14	11/17	11/21	11/25
16	11/05	11/12	11/18	11/22	11/26	11/30	12/04	12/09	12/16

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	148	140	135	131	127	122	118	113	105
32	171	165	161	157	154	150	147	143	137
28	198	192	187	184	180	177	173	169	163
24	220	214	209	205	201	197	193	188	182
20	245	238	232	228	223	219	214	209	202
16	280	271	265	259	254	249	243	237	228

***** 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

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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	1145	971	800	492	232	47	9	21	101	430	703	999	5950
60	990	831	645	346	130	12	0	3	33	293	553	844	4680
57	897	747	552	264	84	4	0	0	14	221	465	751	3999
55	835	691	494	213	59	2	0	0	7	179	408	693	3581
50	689	558	353	109	20	0	0	0	1	96	275	549	2650
32	241	167	44	0	0	0	0	0	0	1	20	155	628

Base — Cooling Degree Days (1)

Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	119	120	268	498	826	1054	1215	1171	928	599	307	179	7284
55	0	0	5	21	172	366	502	458	245	64	5	5	1843
57	0	0	0	11	134	308	440	396	192	44	2	0	1527
60	0	0	0	4	87	226	347	306	121	23	0	0	1114
65	0	0	0	0	34	111	201	170	39	6	0	0	561
70	0	0	0	0	10	38	88	74	6	0	0	0	216

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	33	41	130	297	589	824	976	934	698	370	154	52	33	74	204	501	1090	1914	2890	3824	4522	4892	5046	5098
45	10	15	72	186	437	674	821	779	548	237	82	26	10	25	97	283	720	1394	2215	2994	3542	3779	3861	3887
50	2	1	35	106	296	524	666	624	402	133	42	6	2	3	38	144	440	964	1630	2254	2656	2789	2831	2837
55	0	0	11	53	176	379	511	469	265	63	14	0	0	0	11	64	240	619	1130	1599	1864	1927	1941	1941
60	0	0	3	20	89	241	358	318	153	23	1	0	0	0	3	23	112	353	711	1029	1182	1205	1206	1206
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	29	35	107	210	375	541	652	623	450	254	112	36	29	64	171	381	756	1297	1949	2572	3022	3276	3388	3424

(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:
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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