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: UNIONTOWN 1 NE, PA **COOP ID: 369050**

Climate Division: PA 9 **NWS Call Sign:** **Elevation: 956 Feet** **Lat: 39˚55N** **Lon: 79˚43W**

Temperature (˚F)

Month	Mean (1) Daily Max	Mean (1) Daily Min	Mean (1) Mean	Extremes Highest Daily(2)	Year	Day	Highest Month(1) Mean	Year	Lowest Daily(2)	Year	Day	Lowest Month(1) Mean	Year	Degree Days (1) Base Temp 65 Heating	Cooling	Mean Number of Days (3) Max >= 100	Max >= 90	Max >= 50	Max <= 32	Min <= 32	Min <= 0
Jan	38.4	19.3	28.9	79	1950	25	38.1	1998	-22+	1994	21	14.6	1977	1121	0	.0	.0	6.5	10.4	26.4	2.6
Feb	41.7	21.0	31.4	77+	1932	11	38.9	1990	-16+	1934	28	17.8	1978	944	0	.0	.0	8.0	7.2	23.1	1.7
Mar	51.7	27.9	39.8	88	1929	25	49.0	1973	-3+	1980	3	33.4	1999	781	0	.0	.0	16.8	2.1	21.2	.3
Apr	62.5	36.2	49.4	93	1986	29	53.5	1985	15+	1982	8	44.5	1997	470	0	.0	.1	25.2	.2	11.9	.0
May	72.4	46.3	59.4	93+	1934	21	65.9	1991	23	1978	1	53.7	1997	212	37	.0	.2	30.6	.0	2.2	.0
Jun	80.5	55.4	68.0	97+	1933	8	71.8	1971	33	1972	11	63.5	1992	39	127	.0	2.2	30.0	.0	.0	.0
Jul	84.0	60.1	72.1	102+	1934	21	75.3	1999	37	1988	1	68.2	2000	3	221	@	5.7	31.0	.0	.0	.0
Aug	82.5	58.4	70.5	102	1930	4	75.5	1995	34	1982	29	66.0	1982	18	187	.0	3.5	31.0	.0	.0	.0
Sep	76.2	51.1	63.7	99+	1932	1	68.2	1971	29	1983	25	60.5	1984	93	52	.0	.9	30.0	.0	.4	.0
Oct	65.0	38.9	52.0	95	1927	2	58.9	1971	16	1992	20	46.1	1988	410	6	.0	.0	28.7	.0	8.6	.0
Nov	53.4	31.5	42.5	85	1948	5	49.1	1985	-1	1929	30	35.5	1976	676	0	.0	.0	17.7	.8	17.5	.0
Dec	43.1	24.3	33.7	77+	1982	4	41.3	1982	-14	1989	22	18.9	1989	969	0	.0	.0	9.1	5.9	24.0	.8
Ann	62.6	39.2	51.0	102+	Jul 1934	21	75.5	Aug 1995	-22+	Jan 1994	21	14.6	Jan 1977	5736	630	@	12.6	264.6	26.6	135.3	5.4

\+ 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/normals/usnormals.html

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1926-2001

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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	2.98	2.85	1.66	1986	20	5.65	1999	.76	1981
Feb	2.80	2.40	1.74	1939	3	5.37	1989	.62	1978
Mar	3.66	3.64	3.23	1972	13	7.51	1994	1.52	1987
Apr	3.73	3.64	2.20	1928	28	6.34	1983	.95	1971
May	4.36	4.52	2.65	1987	27	7.13	1983	1.24	1993
Jun	4.30	3.80	4.34	1972	23	10.92	1972	1.31	1991
Jul	4.62	4.08	3.82	1980	22	8.60	1990	1.56	1975
Aug	3.92	3.74	3.40	1956	5	8.96	1980	1.16	1981
Sep	3.56	3.23	3.11	1950	21	6.30	1996	1.07	1985
Oct	2.90	2.71	4.60	1954	15	5.96	1986	.72	1982
Nov	3.42	2.98	3.23	1985	27	12.62	1985	.70	1976
Dec	3.10	2.70	2.29	1974	2	6.83	1990	1.25	1989
Ann	43.35	43.26	4.60	Oct 1954	15	12.62	Nov 1985	.62	Feb 1978

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	16.5	8.3	1.5	.3
Feb	13.6	6.9	1.7	.3
Mar	14.7	8.2	2.4	.5
Apr	14.4	8.7	2.5	.5
May	14.3	9.5	2.8	.9
Jun	12.2	8.7	2.8	.8
Jul	12.0	7.9	3.5	1.1
Aug	10.9	7.1	2.9	1.0
Sep	11.0	7.4	2.6	.7
Oct	10.9	6.3	1.9	.6
Nov	13.2	8.0	2.0	.6
Dec	15.6	8.1	1.7	.4
Ann	159.3	95.1	28.3	7.7

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	1.00	1.28	1.70	2.05	2.38	2.73	3.11	3.55	4.12	5.00	5.80
Feb	.86	1.12	1.52	1.86	2.19	2.54	2.92	3.36	3.94	4.83	5.66
Mar	1.52	1.86	2.33	2.71	3.08	3.44	3.84	4.30	4.87	5.75	6.55
Apr	1.56	1.90	2.38	2.77	3.14	3.51	3.91	4.38	4.96	5.86	6.67
May	1.95	2.34	2.88	3.32	3.73	4.14	4.58	5.08	5.72	6.68	7.55
Jun	1.40	1.80	2.41	2.92	3.41	3.93	4.49	5.14	5.98	7.30	8.51
Jul	1.99	2.41	2.99	3.47	3.91	4.36	4.84	5.40	6.10	7.16	8.12
Aug	1.32	1.70	2.24	2.70	3.14	3.60	4.09	4.68	5.42	6.58	7.64
Sep	1.47	1.80	2.26	2.63	2.99	3.35	3.73	4.18	4.74	5.60	6.39
Oct	.81	1.09	1.50	1.87	2.22	2.60	3.01	3.50	4.13	5.12	6.05
Nov	1.03	1.35	1.84	2.26	2.67	3.09	3.55	4.10	4.81	5.91	6.94
Dec	1.32	1.60	1.99	2.32	2.62	2.92	3.25	3.62	4.10	4.82	5.48
Ann	33.71	35.65	38.09	39.92	41.53	43.08	44.66	46.40	48.48	51.48	54.04

\+ 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: 1926-2001
(3) Derived from 1971-2000 serially complete daily data

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Snow (inches)

Snow Totals

Means/Medians (1)

Extremes (2)

Mean Number of Days (1)

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	4.4	4.8	1	1	20.0	1996	8	20.0	1996	20	1996	10	7	1994	3.6	2.9	1.2	.5	.1	8.0	4.2	2.4	1.0
Feb	3.5	3.0	1	#	8.0	1983	12	9.0	1971	8	1983	12	2	1995	2.9	2.1	.5	.2	.0	4.4	1.2	.7	.0
Mar	5.0	.5	1	#	16.0	1993	14	22.3	1993	19	1993	14	3	1994	1.9	1.4	.6	.3	.1	3.5	2.0	.9	.3
Apr	.6	.0	#	0	6.0	1987	5	6.0	1987	2	1977	6	#+	2000	.4	.2	@	@	.0	.2	.0	.0	.0
May	#	.0	0	0	#	1989	7	#+	1989	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	#	1992	19	#+	1992	#	1992	19	#	1992	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	1.1	.0	#	0	5.0	1987	11	10.6	1995	6	1995	16	1	1995	.6	.3	.1	.1	.0	.6	.3	.2	.0
Dec	2.8	1.1	1	#	10.0	1992	11	13.4	1989	16	1992	12	3	1992	2.1	1.5	.3	.2	.1	4.9	2.4	1.1	.1
Ann	17.4	9.4	N/A	N/A	20.0	Jan 1996	8	22.3	Mar 1993	20	Jan 1996	10	7	Jan 1994	11.5	8.4	2.7	1.3	.3	21.6	10.1	5.3	1.4

+ 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	6/06	5/31	5/26	5/23	5/19	5/16	5/12	5/08	5/02
32	5/20	5/16	5/13	5/11	5/08	5/06	5/04	5/01	4/27
28	5/06	5/02	4/29	4/26	4/24	4/21	4/19	4/16	4/12
24	4/25	4/21	4/18	4/15	4/13	4/11	4/08	4/05	4/01
20	4/13	4/08	4/04	4/01	3/29	3/26	3/22	3/19	3/14
16	4/05	3/29	3/24	3/20	3/17	3/13	3/09	3/04	2/25

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	9/25	9/28	10/01	10/05	10/09
32	9/24	9/28	10/01	10/04	10/07	10/09	10/12	10/15	10/20
28	10/09	10/13	10/15	10/18	10/20	10/22	10/25	10/28	11/01
24	10/16	10/22	10/25	10/29	11/01	11/04	11/07	11/11	11/16
20	10/28	11/03	11/07	11/11	11/14	11/18	11/21	11/25	12/01
16	11/08	11/15	11/21	11/25	11/29	12/03	12/07	12/12	12/19

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	145	139	135	132	128	125	121	117	112
32	168	162	158	154	151	147	144	140	134
28	195	189	185	182	179	175	172	168	162
24	220	214	209	205	201	197	193	188	182
20	253	245	239	234	230	225	220	215	207
16	283	274	267	262	257	251	246	240	231

***** 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	1121	944	781	470	212	39	3	18	93	410	676	969	5736
60	966	804	626	324	113	9	0	3	31	273	526	814	4489
57	873	720	535	243	70	3	0	0	12	202	439	721	3818
55	811	664	479	193	48	1	0	0	6	162	384	667	3415
50	668	533	338	94	14	0	0	0	1	83	253	523	2507
32	232	155	42	0	0	0	0	0	0	0	16	143	588

Base — Cooling Degree Days (1)

Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	134	135	284	520	848	1078	1241	1192	950	619	330	197	7528
55	0	0	7	23	183	390	528	479	266	67	8	8	1959
57	0	0	2	13	143	332	466	417	212	46	3	0	1634
60	0	0	0	4	93	248	373	327	140	24	0	0	1209
65	0	0	0	0	37	127	221	187	52	6	0	0	630
70	0	0	0	0	10	46	93	86	11	0	0	0	246

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	38	46	137	308	609	847	1006	953	716	390	165	65	38	84	221	529	1138	1985	2991	3944	4660	5050	5215	5280
45	15	20	80	198	457	697	851	798	566	255	96	33	15	35	115	313	770	1467	2318	3116	3682	3937	4033	4066
50	3	6	39	112	313	547	696	643	418	143	46	10	3	9	48	160	473	1020	1716	2359	2777	2920	2966	2976
55	0	0	19	60	196	399	541	489	280	69	16	1	0	0	19	79	275	674	1215	1704	1984	2053	2069	2070
60	0	0	4	25	102	263	388	338	164	24	5	0	0	0	4	29	131	394	782	1120	1284	1308	1313	1313
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	29	36	107	215	387	553	672	634	461	258	116	40	29	65	172	387	774	1327	1999	2633	3094	3352	3468	3508

(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