

Climatography of the United States

No. 20

1971-2000

Station: MONTROSE, PA

COOP ID: 365915

Climate Division: PA 6

NWS Call Sign:

Elevation: 1,420 Feet Lat: 41° 52N

Lon: 75° 51W

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	30.6	12.4	21.5	67+	1932	13	31.1	1990	-29	1977	29	10.2	1977	1350	0	.0	.0	1.4	18.4	29.6	5.5
Feb	33.3	13.6	23.5	67	1954	17	31.5	1984	-20+	1943	15	12.7	1979	1164	0	.0	.0	1.9	14.1	26.6	4.5
Mar	42.5	22.4	32.5	83	1998	31	39.1	1973	-8+	1926	6	24.9	1984	1010	0	.0	.0	7.0	6.4	26.1	.8
Apr	54.3	32.8	43.6	88	1976	19	48.3	1991	8+	1964	1	36.5	1975	644	0	.0	.0	18.5	.6	15.6	.0
May	66.7	43.4	55.1	89+	1934	6	62.4	1991	20	1931	1	49.6	1997	320	12	.0	.0	29.5	.0	3.0	.0
Jun	74.8	52.3	63.6	95+	1952	27	67.5	1991	30+	1926	4	59.7	1972	88	46	.0	.3	30.0	.0	.1	.0
Jul	79.3	56.8	68.1	100	1936	9	72.6	1988	38+	1963	9	64.0	1976	27	121	.0	1.0	31.0	.0	.0	.0
Aug	77.7	55.2	66.5	96	1944	14	70.5	1980	34+	1965	30	63.1	1982	46	91	.0	.4	31.0	.0	.0	.0
Sep	70.0	47.4	58.7	98	1953	3	62.2	1971	23	2000	29	54.6	1975	199	10	.0	.1	29.8	.0	1.4	.0
Oct	59.1	36.5	47.8	88	1927	2	54.5	1971	13	1976	28	42.8	1972	533	1	.0	.0	24.9	.0	10.6	.0
Nov	46.3	28.5	37.4	78	1982	3	42.6	1975	-3+	1929	30	30.2	1976	828	0	.0	.0	10.0	2.7	20.8	@
Dec	35.1	18.4	26.8	66+	1927	1	33.6	1984	-22	1933	29	13.9	1989	1186	0	.0	.0	2.4	13.1	28.7	1.8
Ann	55.8	35.0	45.4	100	Jul 1936	9	72.6	Jul 1988	-29	Jan 1977	29	10.2	Jan 1977	7395	281	.0	1.8	217.4	55.3	162.5	12.6

+ 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: 1926-2001

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

038-A

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: MONTROSE, PA

COOP ID: 365915

Climate Division: PA 6

NWS Call Sign:

Elevation: 1,420 Feet Lat: 41°52N

Lon: 75°51W

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	3.27	2.65	2.05	1978	26	8.46	1978	.75	1980	15.4	8.1	1.9	.4	.88	1.19	1.66	2.08	2.48	2.91	3.38	3.94	4.67	5.82	6.89
Feb	2.84	2.40	2.00	1938	27	6.16	1981	.80	1987	13.3	7.0	1.6	.3	1.14	1.40	1.77	2.08	2.37	2.66	2.98	3.34	3.81	4.52	5.17
Mar	3.40	3.44	2.36	1986	15	5.68	1993	1.04	1981	14.0	8.0	2.0	.5	1.52	1.82	2.24	2.58	2.90	3.22	3.56	3.95	4.45	5.20	5.88
Apr	4.02	3.39	3.85	1983	16	10.45	1983	1.65	1971	13.4	8.1	2.9	.8	1.50	1.87	2.41	2.86	3.29	3.73	4.20	4.75	5.46	6.54	7.52
May	4.06	4.00	3.18	1988	20	8.73	2000	1.42	1993	13.3	8.2	3.0	.8	1.70	2.07	2.59	3.01	3.41	3.82	4.25	4.75	5.39	6.35	7.23
Jun	4.39	4.69	3.83	1972	22	11.21	1972	.75	1991	13.3	9.1	2.8	.9	1.34	1.76	2.38	2.92	3.43	3.97	4.56	5.26	6.15	7.55	8.85
Jul	4.10	3.95	3.75	1952	10	8.38	1992	1.07	1983	12.0	7.7	3.1	.9	1.82	2.19	2.70	3.11	3.50	3.89	4.30	4.78	5.38	6.29	7.12
Aug	3.55	3.34	2.74	1970	31	7.88	1994	.91	1980	11.6	7.2	2.3	.8	1.11	1.45	1.95	2.38	2.79	3.22	3.70	4.25	4.96	6.08	7.11
Sep	4.07	3.73	3.95	1999	17	8.62	1999	1.35	1982	12.3	7.3	2.7	1.0	1.44	1.82	2.38	2.85	3.30	3.76	4.26	4.84	5.58	6.73	7.79
Oct	3.51	3.18	3.87	1937	23	7.98	1976	.74	1982	11.7	6.6	2.3	.9	1.08	1.41	1.91	2.34	2.75	3.18	3.65	4.20	4.91	6.02	7.05
Nov	3.88	3.71	3.54	1972	9	9.24	1972	1.48	1976	14.1	8.1	2.4	.9	1.78	2.12	2.59	2.98	3.33	3.69	4.07	4.51	5.06	5.89	6.65
Dec	3.39	3.13	2.52	1983	13	7.34	1973	1.28	1989	14.5	8.1	1.9	.5	1.23	1.55	2.01	2.39	2.76	3.14	3.54	4.02	4.62	5.55	6.41
Ann	44.48	45.12	3.95	Sep 1999	17	11.21	Jun 1972	.74	Oct 1982	158.9	93.5	28.9	8.7	33.24	35.46	38.27	40.40	42.27	44.07	45.93	47.97	50.44	53.99	57.04

+ 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

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

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Station: MONTROSE, PA

COOP ID: 365915

Climate Division: PA 6

NWS Call Sign:

Elevation: 1,420 Feet

Lat: 41°52N

Lon: 75°51W

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	20.5	18.4	7	6	25.0	1996	13	58.4	1987	40	1996	13	19	1994	13.2	6.8	2.3	.8	.2	22.5	19.5	15.2	7.7
Feb	17.9	16.7	9	7	19.0	1978	7	42.3	1972	35	1978	7	23	1978	11.0	5.2	2.0	.8	.2	21.6	19.1	16.5	10.4
Mar	16.0	13.3	5	3	20.0	1993	14	42.6	1993	30	1978	4	18	1994	8.9	4.7	1.9	.8	.2	13.7	10.2	8.0	4.3
Apr	6.7	5.0	1	#	14.0	1983	20	34.3	1983	13	1983	21	2	1983	3.9	1.9	.8	.3	.1	2.5	1.3	.7	.2
May	.4	.0	#	0	4.5	1973	18	5.0	1977	2	1973	18	#+	1989	.2	.1	.1	.0	.0	.1	.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	#	1989	24	#	1989	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Oct	.7	.0	#	0	4.5	1993	31	5.7	1988	2	1993	31	#+	2000	.8	.3	.1	.0	.0	.2	.0	.0	.0
Nov	9.2	7.0	1	#	15.0	1980	18	30.9	1995	21	1995	13	3	1995	5.9	3.1	.8	.4	.1	4.9	2.1	1.1	.2
Dec	15.9	16.2	3	3	12.5	1972	1	35.1	1981	17	1995	26	8	1995	10.5	5.0	1.9	.7	.2	14.4	9.6	6.3	1.1
Ann	87.3	76.6	N/A	N/A	25.0	Jan 1996	13	58.4	Jan 1987	40	Jan 1996	13	23	Feb 1978	54.4	27.1	9.9	3.8	1.0	79.9	61.8	47.8	23.9

+ 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:

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Climate Division: PA 6

NWS Call Sign:

Elevation: 1,420 Feet

Lat: 41° 52N

Lon: 75° 51W

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	6/12	6/06	6/02	5/29	5/26	5/23	5/19	5/15	5/09
32	5/31	5/25	5/21	5/17	5/14	5/10	5/07	5/02	4/26
28	5/11	5/07	5/04	5/01	4/28	4/26	4/23	4/20	4/16
24	5/01	4/26	4/23	4/21	4/18	4/15	4/13	4/10	4/05
20	4/16	4/13	4/10	4/07	4/05	4/03	4/01	3/29	3/25
16	4/10	4/06	4/03	3/31	3/29	3/26	3/24	3/21	3/16
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	9/05	9/10	9/13	9/16	9/18	9/21	9/23	9/27	10/01
32	9/15	9/20	9/23	9/27	9/29	10/02	10/05	10/09	10/14
28	9/27	10/03	10/06	10/10	10/13	10/16	10/19	10/23	10/28
24	10/11	10/16	10/20	10/23	10/26	10/29	11/01	11/05	11/10
20	10/27	11/01	11/05	11/08	11/11	11/15	11/18	11/22	11/27
16	11/03	11/10	11/15	11/19	11/24	11/28	12/02	12/07	12/14
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	132	126	121	118	114	111	107	103	97
32	162	154	148	143	138	133	128	122	114
28	188	181	175	171	167	162	158	152	145
24	213	205	200	195	190	186	181	175	167
20	241	233	228	224	220	215	211	206	198
16	267	257	251	245	239	234	228	221	211

* 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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Climate Division: PA 6 NWS Call Sign: Elevation: 1,420 Feet Lat: 41°52N Lon: 75°51W

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	1350	1164	1010	644	320	88	27	46	199	533	828	1186	7395
60	1195	1024	855	495	196	26	4	8	90	386	678	1031	5988
57	1102	940	762	407	137	9	0	1	48	304	588	938	5236
55	1040	884	700	350	103	4	0	0	30	254	529	876	4770
50	885	744	546	222	44	0	0	0	7	149	385	721	3703
32	368	275	117	7	0	0	0	0	0	4	45	249	1065

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	42	35	131	353	715	947	1118	1068	801	494	207	86	5997
55	0	0	0	7	106	262	405	355	141	31	1	0	1308
57	0	0	0	3	77	207	343	294	99	20	0	0	1043
60	0	0	0	1	43	133	253	208	51	9	0	0	698
65	0	0	0	0	12	46	121	91	10	1	0	0	281
70	0	0	0	0	2	8	39	25	0	0	0	0	74

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	6	6	48	171	468	703	862	811	551	254	78	11	6	12	60	231	699	1402	2264	3075	3626	3880	3958	3969
45	0	0	23	91	321	553	707	656	404	152	35	2	0	0	23	114	435	988	1695	2351	2755	2907	2942	2944
50	0	0	10	48	199	407	552	501	268	72	16	0	0	0	10	58	257	664	1216	1717	1985	2057	2073	2073
55	0	0	3	22	108	268	397	349	154	27	4	0	0	0	3	25	133	401	798	1147	1301	1328	1332	1332
60	0	0	0	6	48	147	251	204	74	6	0	0	0	0	0	6	54	201	452	656	730	736	736	736
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	2	35	109	276	435	556	514	326	156	45	4	0	2	37	146	422	857	1413	1927	2253	2409	2454	2458

(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/normal/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