

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: WEST CHESTER 2 NW, PA

1971-2000

COOP ID: 369464

Climate Division: PA 3

NWS Call Sign:

Elevation: 375 Feet Lat: 39° 58N Lon: 75° 38W

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	39.5	20.6	30.1	73+	1950	26	39.8	1990	-16	1984	22	18.9	1977	1083	0	.0	.0	4.8	8.6	26.6	.9
Feb	42.9	22.5	32.7	74	1949	15	41.6	1990	-6	1961	2	22.0	1979	905	0	.0	.0	6.8	5.9	22.9	.4
Mar	52.3	30.2	41.3	84+	1990	12	46.7	1977	-3	1984	10	32.5	1984	736	0	.0	.0	15.6	1.1	19.5	@
Apr	63.4	39.6	51.5	94	1990	26	55.9	1994	14	1982	7	45.5	1975	406	1	.0	.2	26.7	.0	5.4	.0
May	73.3	49.4	61.4	98	1962	20	67.8	1991	27	1978	1	57.6	1973	151	39	.0	.8	30.8	.0	.5	.0
Jun	81.3	58.5	69.9	101	1963	28	74.1	1987	35	1972	11	65.5	1985	22	168	.0	3.3	30.0	.0	.0	.0
Jul	85.6	63.8	74.7	105	1966	4	79.2	1987	45	1984	9	71.2	2000	2	303	.2	6.6	31.0	.0	.0	.0
Aug	83.8	61.8	72.8	102	2001	10	77.1	1988	38	1982	29	68.8	1982	4	245	@	4.7	31.0	.0	.0	.0
Sep	76.7	53.9	65.3	101+	1953	2	69.8	1980	31+	1983	25	60.7	1984	66	74	.0	1.6	30.0	.0	.1	.0
Oct	66.0	41.5	53.8	90	1959	6	59.0	1971	19	1983	31	48.7	1972	357	7	.0	.0	30.2	.0	4.1	.0
Nov	55.3	34.0	44.7	84	1950	1	49.5	1985	11	1976	30	38.3	1976	611	0	.0	.0	20.6	.1	13.0	.0
Dec	44.2	25.5	34.9	78	2001	6	40.1	1998	-7	1962	31	24.1	1989	936	0	.0	.0	7.5	4.0	23.6	.2
Ann	63.7	41.8	52.8	105	Jul 1966	4	79.2	Jul 1987	-16	Jan 1984	22	18.9	Jan 1977	5279	837	.2	17.2	265.0	19.7	115.7	1.5

+ 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

064-A

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NWS Call Sign:

Elevation: 375 Feet Lat: 39°58N

Lon: 75°38W

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	3.95	3.70	2.35	1979	25	9.96	1979	.61	1981	10.7	7.3	3.1	1.0	1.16	1.53	2.10	2.58	3.06	3.56	4.10	4.75	5.58	6.89	8.10
Feb	3.05	2.85	1.86	1965	8	5.98	1979	.70	1980	9.3	6.0	1.9	.7	1.08	1.37	1.79	2.14	2.47	2.81	3.18	3.62	4.17	5.03	5.82
Mar	4.07	4.04	4.74	2000	22	8.43	2000	1.50	1985	12.0	7.1	2.7	1.1	1.40	1.79	2.34	2.82	3.27	3.74	4.25	4.84	5.60	6.78	7.86
Apr	3.70	3.58	2.17	1970	15	8.61	1983	1.33	1985	11.9	6.4	2.7	.9	1.66	1.99	2.44	2.81	3.16	3.51	3.88	4.31	4.85	5.66	6.40
May	4.56	4.28	2.62	1979	24	8.69	1989	.94	1977	13.3	8.5	3.0	1.1	1.74	2.16	2.77	3.28	3.75	4.24	4.77	5.39	6.17	7.37	8.47
Jun	4.26	3.80	4.56	1972	23	9.58	1972	.47	1988	11.3	6.8	2.4	1.0	.97	1.37	1.99	2.55	3.11	3.70	4.37	5.17	6.22	7.88	9.45
Jul	4.63	4.12	4.20	1991	13	11.57	1975	1.04	1999	12.0	7.3	2.8	1.1	1.29	1.73	2.39	2.97	3.54	4.14	4.79	5.57	6.58	8.16	9.64
Aug	3.70	3.44	5.25	1971	28	9.45	1971	.79	1972	10.4	5.9	2.2	.9	1.18	1.53	2.05	2.49	2.92	3.37	3.85	4.42	5.16	6.31	7.37
Sep	4.75	4.04	7.11	1971	14	14.81	1971	.85	1980	9.8	5.6	3.0	1.5	.92	1.35	2.04	2.69	3.34	4.04	4.83	5.79	7.06	9.10	11.04
Oct	3.36	3.08	2.74	1971	10	6.56	1995	.87	1994	9.2	5.3	2.1	.7	1.32	1.63	2.07	2.44	2.78	3.14	3.52	3.96	4.52	5.38	6.16
Nov	4.07	3.93	5.94	1950	25	8.52	1986	.50	1976	10.4	6.0	2.5	1.3	1.13	1.52	2.10	2.61	3.11	3.64	4.21	4.90	5.78	7.18	8.48
Dec	3.79	3.34	3.18	2000	17	9.05	1983	.74	1980	10.6	6.3	2.6	1.1	.81	1.15	1.71	2.21	2.72	3.26	3.87	4.60	5.57	7.11	8.57
Ann	47.89	46.13	7.11	Sep 1971	14	14.81	Sep 1971	.47	Jun 1988	130.9	78.5	31.0	12.4	35.44	37.89	41.00	43.35	45.43	47.43	49.49	51.76	54.50	58.46	61.87

+ 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

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Station: WEST CHESTER 2 NW, PA

COOP ID: 369464

Climate Division: PA 3

NWS Call Sign:

Elevation: 375 Feet

Lat: 39°58N

Lon: 75°38W

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	8.0	5.5	2	1	6.0	1984	19	16.6	2000	15+	1987	28	6	1987	3.0	2.3	.8	.2	.0	6.2	4.0	2.1	.4
Feb	5.0	5.3	2	1	20.0	1983	12	20.0	1983	22	1983	12	10	1978	2.0	1.3	.4	.1	.1	6.8	3.9	2.1	.8
Mar	1.2	#	#	#	8.5	1984	9	9.9	1984	9	1984	10	2	1984	.5	.3	.1	.1	.0	.5	.3	.3	.0
Apr	.8	.0	#	0	5.0	1983	20	5.0+	1983	5	1983	20	#+	2000	.3	.3	.1	.1	.0	.3	.1	.1	.0
May	#	.0	0	0	#	1977	9	#	1977	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	#	1979	10	#+	1979	#	1972	19	#	1972	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.4	#	#	0	4.0	1989	23	4.0	1989	4+	1989	23	#+	1989	.2	.2	.1	.0	.0	.2	.1	.0	.0
Dec	1.9	.3	#	#	6.0	1981	16	7.5	1981	7	1981	16	2	1989	.9	.5	.2	.1	.0	1.8	.7	.3	.0
Ann	17.3	11.1	N/A	N/A	20.0	Feb 1983	12	20.0	Feb 1983	22	Feb 1983	12	10	Feb 1978	6.9	4.9	1.7	.6	.1	15.8	9.1	4.9	1.2

+ 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 3

NWS Call Sign:

Elevation: 375 Feet

Lat: 39° 58N

Lon: 75° 38W

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	5/26	5/19	5/14	5/10	5/06	5/02	4/28	4/23	4/17
32	5/10	5/03	4/28	4/24	4/20	4/16	4/12	4/07	3/31
28	4/25	4/20	4/16	4/13	4/10	4/07	4/04	3/31	3/26
24	4/11	4/06	4/02	3/30	3/27	3/24	3/21	3/17	3/12
20	3/31	3/27	3/23	3/20	3/17	3/14	3/11	3/08	3/03
16	3/27	3/20	3/14	3/10	3/05	3/01	2/24	2/18	2/09
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	9/20	9/26	10/01	10/05	10/08	10/12	10/16	10/20	10/26
32	10/02	10/08	10/12	10/15	10/18	10/21	10/25	10/29	11/03
28	10/16	10/22	10/26	10/30	11/02	11/05	11/09	11/13	11/19
24	10/24	10/31	11/06	11/10	11/15	11/19	11/24	11/29	12/07
20	11/03	11/12	11/19	11/25	11/30	12/06	12/12	12/19	12/28
16	11/27	12/03	12/08	12/12	12/16	12/20	12/25	12/30	1/07
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	179	171	165	159	154	149	144	138	129
32	210	200	193	186	181	175	169	162	152
28	232	223	216	210	205	200	194	188	178
24	262	251	244	238	232	226	220	213	203
20	289	278	270	264	258	251	245	237	226
16	317	303	295	289	284	279	273	267	258

* 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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Climate Division: PA 3 NWS Call Sign: Elevation: 375 Feet Lat: 39°58N Lon: 75°38W

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	1083	905	736	406	151	22	2	4	66	357	611	936	5279
60	928	765	581	263	64	3	0	0	19	224	461	781	4089
57	835	681	490	187	32	1	0	0	7	158	374	688	3453
55	773	625	432	143	18	0	0	0	3	121	318	626	3059
50	628	491	294	61	3	0	0	0	0	53	192	481	2203
32	198	114	24	0	0	0	0	0	0	0	4	99	439

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	138	133	311	584	910	1137	1324	1264	999	673	383	186	8042
55	0	0	6	37	215	447	611	551	312	81	7	0	2267
57	0	0	2	21	167	387	549	489	256	56	3	0	1930
60	0	0	0	7	106	300	456	396	178	29	0	0	1472
65	0	0	0	1	39	168	303	245	74	7	0	0	837
70	0	0	0	0	8	73	165	117	19	0	0	0	382

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	30	49	126	356	651	910	1064	1041	791	456	198	45	30	79	205	561	1212	2122	3186	4227	5018	5474	5672	5717
45	9	14	61	225	496	760	909	886	641	313	109	13	9	23	84	309	805	1565	2474	3360	4001	4314	4423	4436
50	1	3	29	126	346	610	754	731	491	185	51	4	1	4	33	159	505	1115	1869	2600	3091	3276	3327	3331
55	0	0	13	60	213	461	599	576	344	94	19	1	0	0	13	73	286	747	1346	1922	2266	2360	2379	2380
60	0	0	3	26	111	317	444	421	215	36	4	0	0	0	3	29	140	457	901	1322	1537	1573	1577	1577
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	18	28	79	207	390	600	726	712	509	274	110	29	18	46	125	332	722	1322	2048	2760	3269	3543	3653	3682

(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