

Climatography of the United States No. 20

Station: MONTGOMERY LOCK & DAM, PA

1971-2000

COOP ID: 365902

Climate Division: PA 9

NWS Call Sign:

Elevation: 690 Feet

Lat: 40°39N

Lon: 80°23W

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	35.4	18.8	27.1	70	1985	1	36.3	1990	-18	1985	21	12.0	1977	1175	0	.0	.0	4.4	10.8	25.6	1.7
Feb	39.2	20.1	29.7	76	2000	26	37.2	1998	-10+	1979	11	18.4	1978	990	0	.0	.0	6.7	7.1	22.4	.9
Mar	49.3	27.3	38.3	82	1998	31	45.7	1973	-4	1980	2	30.0	1984	827	0	.0	.0	16.2	1.7	19.3	.1
Apr	61.2	36.7	49.0	90	1976	18	54.0	1999	14	1982	8	43.1	1975	481	1	.0	@	26.4	.1	8.5	.0
May	72.1	47.9	60.0	94	1962	18	66.8	1991	26+	1966	11	54.8	1994	201	47	.0	.1	30.9	.0	1.1	.0
Jun	79.5	57.0	68.3	98	1988	22	73.9	1987	34	1972	11	64.0	1972	41	138	.0	1.8	30.0	.0	.0	.0
Jul	83.4	61.6	72.5	105	1983	6	77.9	1987	43+	1963	9	68.7	1976	8	240	.1	4.9	31.0	.0	.0	.0
Aug	81.0	59.9	70.5	100+	1988	13	76.3	1988	39	1982	29	66.3	1992	19	189	.1	2.2	31.0	.0	.0	.0
Sep	74.6	53.4	64.0	94+	1964	9	68.1	1998	30	1974	23	59.1	1974	91	61	.0	.4	30.0	.0	.1	.0
Oct	63.0	41.5	52.3	86+	1969	13	57.7	1971	19	1965	29	46.4	1976	398	4	.0	.0	29.2	.0	2.9	.0
Nov	51.1	32.7	41.9	82	1987	4	48.3	1987	-5	1976	30	32.7	1976	693	0	.0	.0	17.4	.4	12.5	@
Dec	40.2	24.6	32.4	74	1982	4	38.7+	1998	-9	1983	25	19.7	1989	1011	0	.0	.0	6.4	5.6	22.9	.6
Ann	60.8	40.1	50.5	105	Jul 1983	6	77.9	Jul 1987	-18	Jan 1985	21	12.0	Jan 1977	5935	680	.2	9.4	259.6	25.7	115.3	3.3

+ 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: 1961-2001

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

037-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: MONTGOMERY LOCK & DAM, PA

COOP ID: 365902

Climate Division: PA 9

NWS Call Sign:

Elevation: 690 Feet Lat: 40°39N

Lon: 80°23W

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	2.49	2.17	1.96	1998	8	4.82	1979	.65	1981	14.2	6.8	1.2	.2	.82	1.05	1.40	1.69	1.98	2.27	2.59	2.97	3.45	4.20	4.89
Feb	2.08	1.87	1.49	1962	24	4.49	1981	.27	1978	12.2	5.8	1.1	.2	.64	.84	1.13	1.39	1.63	1.89	2.17	2.50	2.92	3.59	4.20
Mar	3.04	3.24	2.23	1964	10	4.98	1994	1.12	1979	13.2	7.7	1.7	.3	1.23	1.51	1.90	2.23	2.54	2.85	3.19	3.58	4.07	4.83	5.52
Apr	3.04	3.01	1.78	1987	24	5.73	1987	.66	1971	13.4	8.2	1.6	.4	1.16	1.44	1.85	2.18	2.50	2.83	3.18	3.59	4.11	4.91	5.64
May	3.79	3.82	1.94	1993	29	7.19	1974	1.54	1976	12.8	8.6	2.6	.5	1.57	1.91	2.40	2.80	3.18	3.56	3.97	4.44	5.04	5.96	6.79
Jun	3.76	4.12	2.10	1996	19	6.46	1996	.82	1988	11.2	7.6	2.7	.7	1.33	1.68	2.20	2.63	3.04	3.47	3.93	4.47	5.15	6.21	7.19
Jul	4.11	3.69	2.67	1999	29	9.07	1980	1.17	1989	10.9	7.6	3.0	1.1	1.49	1.87	2.43	2.90	3.34	3.80	4.30	4.87	5.61	6.75	7.79
Aug	3.30	2.73	3.27	1992	9	7.88	1978	.69	1986	9.7	5.9	2.2	.8	.73	1.03	1.52	1.96	2.39	2.86	3.38	4.01	4.84	6.15	7.39
Sep	3.50	3.63	3.06	1991	11	6.68	1975	.61	1985	10.4	6.5	2.3	.8	.97	1.30	1.80	2.24	2.67	3.12	3.62	4.21	4.97	6.17	7.29
Oct	2.19	2.15	2.08	1975	18	4.79	1983	.47	1982	10.4	5.7	1.3	.2	.71	.92	1.22	1.49	1.74	2.00	2.29	2.62	3.05	3.72	4.34
Nov	3.00	2.80	1.93	1985	5	9.95	1985	.73	1976	13.0	7.3	2.2	.2	.90	1.19	1.62	1.98	2.34	2.71	3.12	3.59	4.21	5.18	6.08
Dec	2.85	2.35	2.72	1990	31	7.89	1990	1.40	1980	13.9	7.1	1.6	.5	1.15	1.41	1.78	2.09	2.38	2.67	2.99	3.35	3.81	4.52	5.16
Ann	37.15	36.35	3.27	Aug 1992	9	9.95	Nov 1985	.27	Feb 1978	145.3	84.8	23.5	5.9	28.94	30.59	32.67	34.22	35.59	36.90	38.25	39.72	41.49	44.03	46.21

+ 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: 1961-2001

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

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Station: MONTGOMERY LOCK & DAM, PA

COOP ID: 365902

Climate Division: PA 9

NWS Call Sign:

Elevation: 690 Feet

Lat: 40°39N

Lon: 80°23W

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	6.5	3.0	2	1	7.0	1978	18	30.0	1978	26	1978	22	11	1977	3.8	2.1	.7	.2	.0	8.8	5.7	3.9	1.6
Feb	3.4	3.1	2	1	6.0	1984	29	8.0	1984	17+	1979	20	10	1979	2.7	1.4	.3	@	.0	6.9	3.5	1.7	.6
Mar	2.8	1.9	#	#	18.0	1993	14	18.0	1993	19	1993	15	2	1993	1.6	1.0	.3	.1	@	2.9	1.2	.4	.1
Apr	.2	.0	#	0	4.0	1985	8	4.0	1985	4	1985	8	#+	1996	.2	@	@	.0	.0	.1	.1	.0	.0
May	.0	.0	0	0	.0	0	0	.0	0	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	#	0	.3	1992	19	.3	1992	#	1992	19	#	1992	@	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.4	.0	#	0	2.0	1976	29	4.0+	1987	5	1980	18	1	1980	.4	.2	.0	.0	.0	.3	.0	.0	.0
Dec	3.4	4.4	1	#	6.0	1992	11	8.0	1976	7	1995	30	4	1989	2.6	1.2	.4	.1	.0	3.4	1.4	.7	.0
Ann	16.7	12.4	N/A	N/A	18.0	Mar 1993	14	30.0	Jan 1978	26	Jan 1978	22	11	Jan 1977	11.3	5.9	1.7	.4	@	22.4	11.9	6.7	2.3

+ 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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NWS Call Sign:

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Lat: 40°39N

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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	5/28	5/23	5/19	5/16	5/13	5/10	5/06	5/02	4/27
32	5/14	5/10	5/07	5/04	5/02	4/29	4/26	4/23	4/19
28	5/06	5/01	4/27	4/24	4/21	4/18	4/14	4/10	4/05
24	4/19	4/15	4/11	4/09	4/06	4/04	4/01	3/29	3/24
20	4/11	4/05	4/01	3/29	3/26	3/23	3/19	3/15	3/10
16	4/01	3/26	3/22	3/18	3/15	3/12	3/08	3/04	2/26
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	9/19	9/24	9/28	10/02	10/05	10/08	10/12	10/16	10/21
32	10/03	10/08	10/13	10/16	10/19	10/23	10/26	10/30	11/05
28	10/16	10/21	10/25	10/28	10/31	11/03	11/06	11/10	11/15
24	10/31	11/05	11/09	11/12	11/15	11/18	11/21	11/25	11/30
20	11/07	11/13	11/18	11/21	11/25	11/28	12/02	12/06	12/13
16	11/18	11/25	11/29	12/04	12/08	12/11	12/16	12/20	12/27
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	165	158	153	149	145	141	136	131	124
32	189	183	178	174	170	166	162	157	151
28	217	209	203	198	193	188	183	177	169
24	245	237	231	227	222	218	213	207	200
20	268	259	253	248	243	239	233	227	219
16	292	283	277	272	267	262	257	250	242

* 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 9 NWS Call Sign: Elevation: 690 Feet Lat: 40°39N Lon: 80°23W

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	1175	990	827	481	201	41	8	19	91	398	693	1011	5935
60	1020	850	672	337	108	10	0	3	30	261	544	856	4691
57	927	766	580	257	67	3	0	0	12	191	457	763	4023
55	865	710	522	208	46	2	0	0	6	150	402	702	3613
50	718	572	380	108	14	0	0	0	1	73	272	558	2696
32	260	169	56	1	0	0	0	0	0	0	22	154	662

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	108	103	251	510	868	1087	1255	1193	960	629	319	166	7449
55	0	0	4	27	201	398	542	480	276	66	9	1	2004
57	0	0	1	16	160	340	480	418	223	45	4	0	1687
60	0	0	0	6	108	257	387	327	151	22	1	0	1259
65	0	0	0	1	47	138	240	189	61	4	0	0	680
70	0	0	0	0	14	56	118	88	15	0	0	0	291

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	28	40	145	351	662	881	1032	988	758	439	180	50	28	68	213	564	1226	2107	3139	4127	4885	5324	5504	5554
45	5	15	79	224	507	731	877	833	608	294	94	22	5	20	99	323	830	1561	2438	3271	3879	4173	4267	4289
50	1	1	38	130	358	581	722	678	458	169	46	5	1	2	40	170	528	1109	1831	2509	2967	3136	3182	3187
55	0	0	14	65	226	431	567	523	315	83	14	0	0	0	14	79	305	736	1303	1826	2141	2224	2238	2238
60	0	0	3	26	122	289	412	369	187	30	5	0	0	0	3	29	151	440	852	1221	1408	1438	1443	1443
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	10	24	100	220	414	585	704	668	481	250	95	27	10	34	134	354	768	1353	2057	2725	3206	3456	3551	3578

(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