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: PHILADELPHIA 1 WSW, MS **COOP ID: 226894**

Climate Division: MS 6 **NWS Call Sign:** **Elevation: 413 Feet** **Lat: 32˚46N** **Lon: 89˚08W**

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	54.6	33.7	44.2	82	1972	14	52.9	1974	-3	1962	12	33.8	1977	653	0	.0	.0	20.8	1.3	16.6	@
Feb	59.7	36.9	48.3	86	1951	27	55.0	1990	0	1951	2	38.4	1978	468	1	.0	.0	21.8	.7	11.5	.0
Mar	68.1	44.3	56.2	89	1995	24	61.4	1997	14	1980	3	50.9	1971	288	16	.0	.0	28.9	@	4.4	.0
Apr	75.1	50.9	63.0	93	1987	22	68.9	1981	27	1987	4	58.5	1983	115	54	.0	.1	29.9	.0	.7	.0
May	81.7	59.6	70.7	100	1951	31	74.8	2000	37+	1960	13	65.3	1976	23	198	.0	1.8	31.0	.0	.0	.0
Jun	88.5	66.9	77.7	103+	1954	29	81.4	1998	42	1956	3	73.7	1974	0	380	.1	14.2	30.0	.0	.0	.0
Jul	91.1	70.4	80.8	103+	1952	26	83.6	1980	52	1967	15	78.0	1972	0	489	.6	20.5	31.0	.0	.0	.0
Aug	90.8	69.4	80.1	106	2000	30	84.0	2000	46	1956	22	76.9	1992	0	469	.9	19.5	31.0	.0	.0	.0
Sep	86.1	63.5	74.8	105	2000	1	80.3	1980	35+	1967	29	70.3	1974	8	303	.4	10.0	30.0	.0	.0	.0
Oct	76.6	50.3	63.5	98	1954	6	68.6	1984	21+	1952	29	57.5	1976	123	74	.0	.8	30.9	.0	.6	.0
Nov	66.5	42.5	54.5	88+	1984	1	60.5	1985	11	1959	30	45.6	1976	329	15	.0	.0	28.0	.0	6.7	.0
Dec	57.7	36.2	47.0	84	1998	7	56.4	1984	0+	1989	23	38.4	2000	567	7	.0	.0	23.4	.6	14.2	.1
Ann	74.7	52.1	63.4	106	Aug 2000	30	84.0	Aug 2000	-3	Jan 1962	12	33.8	Jan 1977	2574	2006	2.0	66.9	336.7	2.6	54.7	.1

+ 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: 1949-2001

(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	6.35	5.74	6.25	1950	6	13.16	1979	.89	1986
Feb	5.29	5.21	6.05	1990	16	15.61	1990	1.61	2000
Mar	6.30	5.69	5.47	1983	5	19.98	1976	1.67	1992
Apr	5.67	5.02	6.10	1962	12	15.42	1991	.84	1986
May	5.21	4.49	5.10	1967	22	13.87	1991	1.34	1992
Jun	3.99	3.36	4.20	1961	26	11.47	1989	.77	1988
Jul	4.77	4.07	3.90	1988	17	11.67	1973	1.42	2000
Aug	3.68	3.36	5.06	1992	27	10.34	1995	.35	1990
Sep	3.24	2.72	4.00	1964	30	9.55	1977	.07	1984
Oct	3.47	2.96	4.48	1975	17	9.73	1975	.00	1991
Nov	5.44	4.95	4.52	1988	20	11.01	1977	1.20	1981
Dec	5.37	4.22	5.62	1990	23	13.63	1982	.90	1984
Ann	58.78	55.60	6.25	Jan 1950	6	19.98	Mar 1976	.00	Oct 1991

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	8.9	8.6	4.7	2.1
Feb	6.7	6.5	3.7	2.2
Mar	7.7	7.3	4.2	2.1
Apr	6.0	5.7	3.3	2.1
May	7.9	7.4	3.9	1.6
Jun	7.3	6.2	2.8	1.2
Jul	7.5	7.2	3.6	1.4
Aug	6.1	5.7	2.2	1.1
Sep	5.4	5.2	1.8	1.0
Oct	4.6	4.2	2.4	1.2
Nov	6.7	6.5	3.6	2.0
Dec	7.5	7.3	3.5	1.6
Ann	82.3	77.8	39.7	19.6

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	1.84	2.44	3.35	4.14	4.90	5.71	6.59	7.63	8.98	11.10	13.07
Feb	1.54	2.04	2.79	3.45	4.09	4.75	5.49	6.35	7.48	9.23	10.87
Mar	2.06	2.65	3.53	4.28	5.00	5.75	6.56	7.52	8.74	10.65	12.41
Apr	.98	1.48	2.30	3.08	3.88	4.74	5.73	6.92	8.52	11.09	13.55
May	1.16	1.64	2.40	3.09	3.78	4.51	5.34	6.32	7.62	9.68	11.63
Jun	1.00	1.37	1.95	2.47	2.98	3.52	4.12	4.83	5.76	7.23	8.61
Jul	1.39	1.84	2.52	3.11	3.69	4.29	4.95	5.73	6.74	8.32	9.79
Aug	.60	.92	1.46	1.96	2.48	3.05	3.70	4.49	5.55	7.27	8.91
Sep	.48	.75	1.21	1.66	2.13	2.65	3.24	3.96	4.94	6.52	8.05
Oct	.32	.71	1.28	1.79	2.31	2.87	3.51	4.29	5.33	7.01	8.61
Nov	1.49	2.01	2.79	3.48	4.15	4.85	5.63	6.56	7.76	9.64	11.40
Dec	1.51	2.02	2.79	3.46	4.12	4.81	5.57	6.46	7.63	9.46	11.17
Ann	40.64	44.12	48.59	52.00	55.03	57.98	61.02	64.40	68.51	74.48	79.66

\+ 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: 1949-2001
(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	.5	.0	#	0	3.8	1977	31	7.2	1977	#	1987	22	#	1987	.3	.1	.1	.0	.0	.0	.0	.0	.0
Feb	.0	.0	#	0	.5	1978	1	.5	1978	1	1978	1	#+	1989	.1	.0	.0	.0	.0	@	.0	.0	.0
Mar	.3	.0	#	0	5.0	1993	13	5.0	1993	#	1978	10	#	1978	.1	.1	.1	.1	.0	.0	.0	.0	.0
Apr	.1	.0	#	0	1.0	1987	3	1.0	1987	1	1987	3	#	1987	.1	.1	.0	.0	.0	@	.0	.0	.0
May	.0	.0	#	0	.0	0	0	.0	0	1	1978	17	#	1978	.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	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Dec	#	.0	#	0	#	1989	9	#+	1989	#	1973	21	#	1973	.0	.0	.0	.0	.0	.0	.0	.0	.0
Ann	.9	.0	N/A	N/A	5.0	Mar 1993	13	7.2	Jan 1977	1+	Apr 1987	3	#+	Feb 1989	.6	.3	.2	.1	.0	@	.0	.0	.0

+ 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	4/20	4/15	4/12	4/08	4/06	4/03	3/31	3/27	3/22
32	4/10	4/05	4/01	3/28	3/25	3/22	3/19	3/15	3/09
28	3/25	3/18	3/13	3/09	3/05	3/01	2/25	2/20	2/13
24	3/12	3/05	2/27	2/22	2/18	2/14	2/09	2/03	1/27
20	3/05	2/24	2/18	2/12	2/07	2/02	1/28	1/21	1/11
16	2/19	2/09	2/01	1/25	1/17	1/06	0/00	0/00	0/00

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	10/07	10/12	10/16	10/19	10/22	10/25	10/29	11/02	11/07
32	10/20	10/26	10/30	11/03	11/06	11/09	11/13	11/17	11/23
28	11/03	11/09	11/13	11/16	11/19	11/23	11/26	11/30	12/06
24	11/13	11/22	11/29	12/04	12/10	12/15	12/21	12/28	1/06
20	11/19	12/03	12/12	12/21	12/29	1/06	1/14	1/25	2/10
16	12/12	12/22	12/31	1/08	1/17	1/29	0/00	0/00	0/00

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	215	210	206	202	199	196	192	188	183
32	250	242	235	230	225	220	215	208	200
28	285	276	269	264	259	253	248	241	232
24	327	314	306	299	292	286	280	272	261
20	>365	>365	337	325	316	308	300	291	279
16	>365	>365	>365	>365	>365	>365	351	332	315

***** 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)

Heating Degree Days (1)

Base Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	653	468	288	115	23	0	0	0	8	123	329	567	2574
60	508	339	170	44	4	0	0	0	1	53	209	424	1752
57	425	266	116	20	1	0	0	0	0	28	152	344	1352
55	373	222	86	11	0	0	0	0	0	16	119	295	1122
50	260	133	33	1	0	0	0	0	0	4	56	194	681
32	30	4	0	0	0	0	0	0	0	0	0	14	48

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	407	461	751	929	1198	1370	1512	1492	1285	975	675	476	11531
55	37	35	124	250	485	680	799	779	595	278	104	45	4211
57	27	23	92	199	424	620	737	717	535	227	77	32	3710
60	16	12	53	133	335	530	644	624	446	160	44	18	3015
65	0	1	16	54	198	380	489	469	303	74	15	7	2006
70	0	0	3	14	95	234	334	316	178	26	3	0	1203

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	203	280	505	684	952	1133	1266	1249	1048	734	441	259	203	483	988	1672	2624	3757	5023	6272	7320	8054	8495	8754
45	117	181	366	536	797	983	1111	1094	898	580	310	158	117	298	664	1200	1997	2980	4091	5185	6083	6663	6973	7131
50	61	104	238	389	642	833	956	939	748	427	200	96	61	165	403	792	1434	2267	3223	4162	4910	5337	5537	5633
55	30	54	140	256	487	683	801	784	598	284	111	45	30	84	224	480	967	1650	2451	3235	3833	4117	4228	4273
60	6	18	66	147	335	533	646	629	449	166	54	22	6	24	90	237	572	1105	1751	2380	2829	2995	3049	3071
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	135	187	320	442	640	780	872	862	715	481	287	169	135	322	642	1084	1724	2504	3376	4238	4953	5434	5721	5890

(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