

# Climatography of the United States

No. 20

1971-2000

Station: HARRISBURG 12 WNW, NE

COOP ID: 253605

Climate Division: NE 1

NWS Call Sign:

Elevation: 4,550 Feet Lat: 41° 38N

Lon: 103° 57W

## 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	38.5	11.6	25.1	70+	1989	31	35.3	1986	-35	1963	19	8.8	1979	1239	0	.0	.0	6.8	9.0	29.9	6.0
Feb	43.7	15.9	29.8	78	1962	13	37.8	1992	-31	1982	5	18.7	1989	985	0	.0	.0	10.3	5.9	26.6	3.6
Mar	50.2	21.9	36.1	81+	1995	22	43.9	1986	-23	1989	5	31.7	1975	897	0	.0	.0	16.4	3.2	27.5	.9
Apr	59.1	29.5	44.3	89	1989	23	50.5	1981	-16	1975	2	38.3	1984	621	0	.0	.0	22.8	.9	18.6	.1
May	68.8	39.6	54.2	95	1994	31	59.9	1994	18	1991	1	48.8	1995	342	7	.0	.4	29.1	.0	4.9	.0
Jun	79.8	48.6	64.2	103	1990	28	70.0	1988	26	1969	2	59.9	1998	98	73	.2	4.5	29.8	.0	.3	.0
Jul	86.6	53.9	70.3	104+	2001	31	73.8	1989	35	1968	1	65.5	1971	14	176	.8	11.7	31.0	.0	.0	.0
Aug	85.3	52.1	68.7	103	1996	13	74.8	2000	33+	1964	30	64.8	1992	36	151	.2	9.3	31.0	.0	.0	.0
Sep	75.8	41.6	58.7	100+	1998	6	65.9	1998	13	1983	21	53.9	1974	220	31	.1	3.0	28.9	@	4.2	.0
Oct	63.6	29.7	46.7	90+	1989	1	49.7	1992	-10	1997	26	42.6	1976	569	0	.0	.1	26.1	.6	17.4	.1
Nov	48.7	19.1	33.9	81	1999	8	41.9	1999	-23	1976	27	25.2	1985	934	0	.0	.0	14.3	4.0	27.5	1.4
Dec	40.8	12.5	26.7	74+	1998	2	35.2	1980	-37	1990	22	14.4	1983	1188	0	.0	.0	8.0	7.4	30.0	4.8
Ann	61.7	31.3	46.6	104+	Jul 2001	31	74.8	Aug 2000	-37	Dec 1990	22	8.8	Jan 1979	7143	438	1.3	29.0	254.5	31.0	186.9	16.9

+ 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](http://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

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# 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: HARRISBURG 12 WNW, NE

COOP ID: 253605

Climate Division: NE 1

NWS Call Sign:

Elevation: 4,550 Feet Lat: 41°38N

Lon: 103°57W

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	.40	.38	.52	1992	8	.87	1992	.00	1989	4.9	1.3	@	.0	.06	.11	.18	.24	.29	.35	.42	.50	.60	.76	.91
Feb	.45	.31	.66	1998	25	1.40	1998	.00+	1996	4.2	1.5	.1	.0	.00	.03	.09	.16	.24	.32	.42	.55	.73	1.03	1.33
Mar	1.07	.87	1.27	1979	19	3.03	1983	.10	1995	6.6	2.8	.5	.1	.18	.27	.43	.57	.72	.89	1.07	1.30	1.60	2.09	2.56
Apr	1.63	1.28	1.84	1997	6	3.92	1984	.25	1992	8.4	4.6	.7	.2	.39	.54	.78	.99	1.20	1.43	1.68	1.98	2.37	3.00	3.58
May	2.58	2.69	2.30	1988	20	4.71	1988	.32	1974	11.0	6.0	1.5	.5	.71	.95	1.32	1.65	1.96	2.30	2.67	3.10	3.67	4.56	5.39
Jun	2.23	2.05	2.75	1986	20	7.10	1986	.58	1980	9.1	5.1	1.4	.3	.55	.76	1.09	1.38	1.66	1.96	2.30	2.70	3.22	4.05	4.82
Jul	2.02	1.69	2.77	1957	29	5.69	1998	.13	1991	8.6	4.7	1.2	.3	.47	.66	.95	1.22	1.48	1.76	2.07	2.45	2.94	3.71	4.45
Aug	1.42	1.40	1.95	1955	5	3.42	1997	.14	1973	7.3	3.7	.9	.2	.27	.40	.61	.80	.99	1.20	1.44	1.73	2.12	2.73	3.32
Sep	1.26	1.08	1.28	1951	1	3.76	1973	.05	1977	6.4	3.4	.8	.1	.12	.22	.39	.56	.75	.97	1.22	1.54	1.97	2.69	3.39
Oct	.99	.75	.97+	1997	25	2.92	1998	.02	1988	5.6	2.8	.5	.0	.10	.17	.30	.44	.59	.76	.96	1.21	1.55	2.11	2.67
Nov	.62	.57	1.13	1993	12	1.46	1993	.08	1971	4.9	2.1	.1	@	.13	.18	.28	.36	.44	.53	.63	.75	.91	1.17	1.41
Dec	.38	.34	.77	1958	4	1.02	1987	.02	1971	4.7	1.6	.0	.0	.04	.07	.12	.17	.23	.29	.36	.46	.59	.80	1.01
Ann	15.05	14.97	2.77	Jul 1957	29	7.10	Jun 1986	.00+	Feb 1996	81.7	39.6	7.7	1.7	10.26	11.17	12.34	13.24	14.04	14.82	15.62	16.51	17.60	19.18	20.55

+ 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

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

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[www.ncdc.noaa.gov](http://www.ncdc.noaa.gov)

**Station: HARRISBURG 12 WNW, NE**

**COOP ID: 253605**

**Climate Division: NE 1**

**NWS Call Sign:**

**Elevation: 4,550 Feet**

**Lat: 41°38N**

**Lon: 103°57W**

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	7.7	7.5	3	2	9.0	1988	19	18.1	1976	16	1974	9	9	1988	4.3	3.2	.9	.3	.0	15.3	9.7	5.4	1.6
Feb	6.5	7.0	2	1	6.0	1987	27	19.5	1993	10	1986	14	6	1993	3.7	3.0	.8	.1	.0	11.4	6.6	3.2	@
Mar	9.7	7.0	1	1	14.0	1979	19	23.5	1980	15	1988	14	6	1988	4.4	3.4	1.1	.5	.1	9.1	4.9	2.7	.6
Apr	6.1	4.0	1	#	8.0	1984	3	18.0	1984	14	1997	11	3	1997	2.6	2.3	.7	.4	.0	3.6	1.9	1.0	.3
May	.7	.0	#	0	3.0	1978	7	6.5	1979	5	1979	10	#+	1991	.4	.3	.1	.0	.0	.3	.1	@	.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	.7	.0	#	0	9.0	2000	24	12.0	2000	8	2000	24	1	2000	.2	.2	.1	@	.0	.3	.1	.1	.0
Oct	2.6	2.0	#	#	12.0	1997	25	16.0	1997	16	1997	27	3	1997	1.1	1.0	.4	.1	@	1.7	1.0	.4	.2
Nov	7.2	5.8	1	1	8.0	1973	3	20.5	1979	18	1979	30	7	1979	3.5	2.8	.8	.4	.0	8.3	3.9	2.0	.5
Dec	7.4	5.9	2	2	7.0	1978	2	20.6	1973	18	1987	28	7	1979	4.0	3.0	1.0	.3	.0	14.4	8.6	4.3	1.1
Ann	48.6	39.2	N/A	N/A	14.0	Mar 1979	19	23.5	Mar 1980	18+	Dec 1987	28	9	Jan 1988	24.2	19.2	5.9	2.1	.1	64.4	36.8	19.1	4.3

+ 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:

[www.ncdc.noaa.gov/oa/climate/normal/usnormals.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormals.html)

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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	6/29	6/22	6/16	6/12	6/08	6/03	5/30	5/25	5/17
32	6/08	6/02	5/29	5/26	5/22	5/19	5/16	5/12	5/06
28	5/19	5/15	5/12	5/09	5/06	5/03	5/01	4/27	4/23
24	5/11	5/06	5/02	4/29	4/26	4/23	4/19	4/15	4/10
20	5/02	4/26	4/22	4/18	4/15	4/12	4/08	4/04	3/29
16	4/17	4/12	4/08	4/06	4/03	3/31	3/28	3/25	3/20
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	8/26	8/31	9/04	9/07	9/10	9/13	9/16	9/20	9/25
32	9/08	9/12	9/14	9/16	9/18	9/20	9/22	9/25	9/28
28	9/14	9/18	9/21	9/24	9/26	9/28	10/01	10/04	10/08
24	9/19	9/24	9/28	10/01	10/04	10/07	10/10	10/14	10/19
20	9/29	10/04	10/07	10/11	10/14	10/17	10/20	10/23	10/28
16	10/07	10/13	10/17	10/20	10/23	10/26	10/30	11/03	11/08
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	119	110	104	98	93	88	83	77	68
32	136	130	125	122	118	114	111	106	100
28	161	155	150	146	142	138	134	130	123
24	180	174	169	164	161	157	153	148	141
20	205	197	191	186	181	176	171	165	156
16	225	217	212	207	203	198	193	188	180

\* 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: NE 1      NWS Call Sign:      Elevation: 4,550 Feet    Lat: 41°38N      Lon: 103°57W**

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	1239	985	897	621	342	98	14	36	220	569	934	1188	7143
60	1084	845	742	473	210	37	1	8	118	415	784	1033	5750
57	991	761	649	386	146	17	0	3	72	323	694	940	4982
55	929	705	587	330	110	9	0	1	49	264	634	878	4496
50	780	572	433	205	45	1	0	0	14	136	492	723	3401
32	310	175	49	5	0	0	0	0	0	1	112	244	896

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	95	114	175	374	688	965	1185	1138	801	455	168	79	6237
55	0	0	0	9	85	284	472	426	160	5	0	0	1441
57	0	0	0	5	59	231	410	366	124	2	0	0	1197
60	0	0	0	1	31	161	318	278	79	0	0	0	868
65	0	0	0	0	7	73	176	151	31	0	0	0	438
70	0	0	0	0	1	22	72	61	9	0	0	0	165

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	12	36	85	204	465	742	958	915	592	278	69	20	12	48	133	337	802	1544	2502	3417	4009	4287	4356	4376
45	0	6	32	119	320	592	803	760	451	164	30	3	0	6	38	157	477	1069	1872	2632	3083	3247	3277	3280
50	0	0	10	56	198	446	648	605	319	82	4	0	0	0	10	66	264	710	1358	1963	2282	2364	2368	2368
55	0	0	1	19	97	306	495	453	201	26	0	0	0	0	1	20	117	423	918	1371	1572	1598	1598	1598
60	0	0	0	1	37	181	341	301	104	5	0	0	0	0	0	1	38	219	560	861	965	970	970	970
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	20	47	95	175	307	473	606	583	401	239	84	35	20	67	162	337	644	1117	1723	2306	2707	2946	3030	3065

(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](http://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](http://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"><li>a. Temperature/ Precipitation Tables<ol style="list-style-type: none"><li>1. 1971-2000 Monthly Normals</li><li>2. Cooperative Summary of the Day</li><li>3. National Weather Service station records</li><li>4. 1971-2000 serially complete daily data</li></ol></li><li>b. Degree Day Table<ol style="list-style-type: none"><li>1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals</li><li>2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data</li></ol></li></ol> | <ol style="list-style-type: none"><li>c. Snow Tables<ol style="list-style-type: none"><li>1. Snow Climatology</li><li>2. Cooperative Summary of the Day</li></ol></li><li>d. Freeze Data Table<br/>1971-2000 serially complete daily data</li></ol> |
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## References

U.S. Climate Normals 1971-2000, [www.ncdc.noaa.gov/normal.html](http://www.ncdc.noaa.gov/normal.html)  
U.S. Climate Normals 1971-2000-Products Clim20, [www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html)  
Snow Climatology Project Description, [www.ncdc.noaa.gov/oa/climate/monitoring/snowclim/mainpage.html](http://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](http://www1.ncdc.noaa.gov/pub/data/special/serialcomplete_jam_0900.pdf)