

Climatography of the United States

No. 20

1971-2000

Station: CHESTERTOWN, MD

COOP ID: 181750

Climate Division: MD 5

NWS Call Sign:

Elevation: 40 Feet

Lat: 39°13N

Lon: 76°04W

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	41.5	24.8	33.2	75+	1950	26	41.4	1990	-7+	1982	17	22.3	1977	988	0	.0	.0	6.3	6.7	24.8	.4
Feb	44.9	26.9	35.9	77	2000	25	42.9	1976	-5	1979	14	24.4	1979	814	0	.0	.0	8.9	4.2	21.1	.1
Mar	54.3	34.4	44.4	89	1998	30	49.7	1977	9	1960	11	38.6	1984	640	0	.0	.0	19.5	.6	13.5	.0
Apr	65.1	43.0	54.1	93+	1976	17	59.0	1994	21	1982	7	49.5	1975	330	2	.0	.2	28.2	.0	2.1	.0
May	74.9	52.9	63.9	97	1962	19	70.2	1991	33	1978	1	60.4	1992	103	69	.0	1.5	31.0	.0	.0	.0
Jun	83.5	61.9	72.7	100+	1952	26	75.9	1994	43	1986	3	68.2	1972	6	237	@	5.7	30.0	.0	.0	.0
Jul	87.8	66.9	77.4	103	1957	22	81.1	1987	50	1977	28	72.8	2000	0	382	.3	11.5	31.0	.0	.0	.0
Aug	86.4	65.2	75.8	103	1953	31	79.4	1988	44	1982	29	72.5	1992	0	334	.1	8.0	31.0	.0	.0	.0
Sep	79.6	58.0	68.8	100	1983	11	72.6	1980	35	1974	24	65.6	2000	24	138	@	2.5	30.0	.0	.0	.0
Oct	68.3	46.0	57.2	93	1954	4	63.5	1984	26+	1969	24	52.5	1976	265	21	.0	.0	30.7	.0	1.2	.0
Nov	56.9	37.2	47.1	86	1950	1	52.9	1985	13	1976	30	40.4	1976	539	0	.0	.0	22.2	.1	9.6	.0
Dec	46.2	29.0	37.6	78	1998	6	44.4	1984	2	1983	25	25.2	1989	850	0	.0	.0	11.0	2.9	20.7	.0
Ann	65.8	45.5	55.7	103+	Jul 1957	22	81.1	Jul 1987	-7+	Jan 1982	17	22.3	Jan 1977	4559	1183	.4	29.4	279.8	14.5	93.0	.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

007-A

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No. 20 1971-2000

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801
www.ncdc.noaa.gov

Station: CHESTERTOWN, MD

COOP ID: 181750

Climate Division: MD 5

NWS Call Sign:

Elevation: 40 Feet

Lat: 39°13N

Lon: 76°04W

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	3.56	3.13	2.20	1998	23	8.10	1979	.56	1981	10.1	6.8	2.6	.8	1.22	1.56	2.05	2.46	2.86	3.27	3.72	4.24	4.91	5.94	6.89
Feb	3.03	3.17	2.48	1973	2	6.30	1971	.76	1977	9.3	6.1	2.1	.6	1.01	1.29	1.71	2.07	2.42	2.77	3.16	3.61	4.19	5.10	5.93
Mar	4.16	4.63	3.21	2000	21	8.59	1994	1.12	1987	10.2	7.2	3.0	1.1	1.39	1.78	2.36	2.85	3.32	3.80	4.33	4.95	5.75	6.99	8.13
Apr	3.34	3.24	2.55	2000	17	8.09	1983	.57	1985	10.1	7.1	2.4	.7	1.12	1.44	1.90	2.29	2.67	3.06	3.48	3.98	4.61	5.60	6.51
May	4.09	4.19	3.20	1968	28	7.22	1990	1.12	1999	10.6	7.3	3.0	1.0	1.49	1.87	2.43	2.89	3.33	3.79	4.28	4.85	5.58	6.71	7.74
Jun	4.26	3.79	6.28	1972	22	15.44	1989	1.06	1988	9.2	6.8	2.7	1.2	.84	1.22	1.85	2.42	3.00	3.63	4.33	5.18	6.31	8.12	9.84
Jul	3.94	3.40	3.48	1953	22	8.57	1975	.82	1983	9.3	6.3	2.6	1.1	1.01	1.38	1.95	2.46	2.96	3.48	4.07	4.76	5.66	7.09	8.43
Aug	3.76	3.31	4.96	1955	12	11.21	1971	.62	1987	8.3	5.5	2.4	1.2	.78	1.13	1.68	2.18	2.69	3.23	3.84	4.58	5.55	7.10	8.57
Sep	4.30	3.49	11.06	1999	16	18.09	1999	.73	1986	8.1	6.0	2.9	1.1	.81	1.20	1.83	2.41	3.00	3.64	4.37	5.24	6.41	8.27	10.05
Oct	3.37	3.11	3.57	1971	24	9.23	1971	.31	2000	7.8	5.3	2.3	1.0	.74	1.05	1.54	1.99	2.44	2.91	3.45	4.09	4.93	6.27	7.54
Nov	3.34	2.82	2.66	1950	25	8.37	1972	.21	1976	8.6	6.1	2.4	.9	.55	.84	1.32	1.78	2.26	2.77	3.36	4.08	5.03	6.59	8.07
Dec	3.69	3.15	2.67	1983	12	8.66	1996	.82	1985	9.9	6.5	2.6	1.0	.88	1.22	1.76	2.24	2.72	3.23	3.79	4.47	5.35	6.76	8.08
Ann	44.84	42.95	11.06	Sep 1999	16	18.09	Sep 1999	.21	Nov 1976	111.5	77.0	31.0	11.7	31.41	33.99	37.31	39.84	42.08	44.26	46.51	49.00	52.02	56.41	60.22

+ 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:
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Climate Division: MD 5

NWS Call Sign:

Elevation: 40 Feet

Lat: 39°13N

Lon: 76°04W

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	5.7	4.5	1	#	10.5	1987	22	19.8	1987	13	1987	26	4	1982	3.1	2.1	.6	.2	@	6.8	2.9	1.8	.2
Feb	6.1	3.2	1	#	14.0	1987	23	26.1	1979	20	1979	19	6	1979	2.1	1.5	.7	.3	.2	4.8	2.9	1.7	.5
Mar	1.8	.5	#	#	6.5	1993	13	9.5	1978	7	1978	4	2	1978	1.1	.6	.2	.1	.0	1.0	.5	.2	.0
Apr	.1	.0	#	0	1.0	1997	1	1.0	1997	#+	1996	10	#+	1996	.2	@	.0	.0	.0	.0	.0	.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	#	1979	10	#+	1979	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.4	.0	#	0	3.2	1989	23	5.2	1989	3	1989	23	#+	1997	.2	.1	@	.0	.0	.2	@	.0	.0
Dec	1.6	.2	#	#	7.0	1982	12	11.0	1989	7	1989	13	3	1989	1.1	.6	.2	@	.0	1.7	.9	.3	.0
Ann	15.7	8.4	N/A	N/A	14.0	Feb 1987	23	26.1	Feb 1979	20	Feb 1979	19	6	Feb 1979	7.8	4.9	1.7	.6	.2	14.5	7.2	4.0	.7

+ 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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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	5/04	4/30	4/27	4/24	4/21	4/18	4/15	4/12	4/08
32	4/16	4/13	4/11	4/09	4/07	4/05	4/03	3/31	3/28
28	4/10	4/05	4/01	3/29	3/26	3/23	3/20	3/16	3/11
24	3/26	3/22	3/19	3/17	3/14	3/12	3/09	3/06	3/02
20	3/17	3/11	3/07	3/03	2/28	2/25	2/21	2/17	2/11
16	3/09	3/02	2/25	2/21	2/17	2/13	2/09	2/04	1/28
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	10/02	10/07	10/10	10/13	10/16	10/19	10/22	10/26	10/31
32	10/14	10/19	10/23	10/26	10/29	11/02	11/05	11/09	11/14
28	10/27	11/02	11/06	11/09	11/13	11/16	11/19	11/23	11/29
24	11/09	11/15	11/19	11/23	11/26	11/30	12/04	12/08	12/14
20	11/26	12/03	12/07	12/11	12/15	12/19	12/23	12/27	1/03
16	12/06	12/14	12/19	12/24	12/29	1/02	1/07	1/13	1/21
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	201	193	187	182	178	173	168	162	154
32	222	216	212	208	205	202	198	194	188
28	256	247	241	236	231	226	221	215	206
24	278	270	265	261	256	252	248	243	235
20	310	303	298	293	289	285	281	276	269
16	341	332	325	319	314	309	303	296	287

* 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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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	988	814	640	330	103	6	0	0	24	265	539	850	4559
60	833	674	485	194	37	0	0	0	4	153	394	695	3469
57	740	590	394	127	16	0	0	0	1	102	312	604	2886
55	678	534	338	89	8	0	0	0	0	75	261	547	2530
50	535	405	206	29	1	0	0	0	0	29	153	405	1763
32	137	73	7	0	0	0	0	0	0	0	3	69	289

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	172	183	390	662	989	1221	1405	1357	1104	779	455	243	8960
55	0	0	7	61	284	531	692	644	415	141	22	7	2804
57	0	0	2	38	230	471	630	582	355	106	13	2	2429
60	0	0	0	16	158	381	537	489	269	64	5	0	1919
65	0	0	0	2	69	237	382	334	138	21	0	0	1183
70	0	0	0	0	20	116	233	189	47	4	0	0	609

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	43	71	188	428	746	987	1158	1112	867	534	244	78	43	114	302	730	1476	2463	3621	4733	5600	6134	6378	6456
45	17	28	103	288	591	837	1003	957	717	383	140	36	17	45	148	436	1027	1864	2867	3824	4541	4924	5064	5100
50	6	13	49	166	436	687	848	802	567	244	71	10	6	19	68	234	670	1357	2205	3007	3574	3818	3889	3899
55	0	1	19	79	290	537	693	647	419	135	29	3	0	1	20	99	389	926	1619	2266	2685	2820	2849	2852
60	0	0	4	35	166	388	538	492	276	57	10	0	0	0	4	39	205	593	1131	1623	1899	1956	1966	1966
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	25	40	109	243	457	664	800	767	563	314	135	42	25	65	174	417	874	1538	2338	3105	3668	3982	4117	4159

(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