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: GETTYSBURG, SD **COOP ID: 393294**

Climate Division: SD 2 **NWS Call Sign:** **Elevation: 2,070 Feet** **Lat: 45˚01N** **Lon: 99˚58W**

Temperature (˚F)

Month	Mean (1)			Extremes										Degree Days (1) Base Temp 65		Mean Number of Days (3)					
	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	22.8	3.5	13.2	63	1981	24	26.7	1990	-33	1966	29	-1.0	1978	1607	0	.0	.0	.8	21.6	30.9	13.5
Feb	29.5	10.3	19.9	70	1958	25	31.4	1999	-34	1994	9	5.5	1979	1263	0	.0	.0	2.8	15.3	27.8	8.3
Mar	40.5	20.9	30.7	81	1988	28	38.7	2000	-28	1962	1	22.1	1996	1064	0	.0	.0	8.3	8.4	28.1	2.6
Apr	55.9	33.1	44.5	97	1980	22	51.5	1987	0	1975	1	37.5	1995	616	1	.0	.1	20.5	1.2	15.5	@
May	68.3	44.6	56.5	103	1969	27	62.2	1977	19	1967	2	51.1	1979	290	24	@	.6	29.5	.0	2.5	.0
Jun	77.6	54.1	65.9	108	1988	25	76.0	1988	32	1950	3	60.4	1982	92	117	.2	2.7	29.9	.0	.0	.0
Jul	84.6	59.2	71.9	108	1949	3	77.7	1974	38	1971	30	63.3	1992	27	240	1.5	9.0	31.0	.0	.0	.0
Aug	83.7	57.5	70.6	110	1959	18	76.5	1973	36	1950	20	64.6	1977	40	214	1.1	8.3	31.0	.0	.0	.0
Sep	73.3	46.7	60.0	105	1976	7	66.8	1998	20+	1974	30	54.3	1993	196	46	.3	2.5	29.3	.0	1.7	.0
Oct	59.2	35.0	47.1	98	1954	8	51.6	1973	1	1991	30	43.0	1976	555	0	.0	.2	24.1	.5	12.7	.0
Nov	39.3	20.8	30.1	80+	1999	8	42.1	1999	-17	1959	14	17.8	1985	1050	0	.0	.0	7.5	9.6	27.2	1.6
Dec	27.2	8.4	17.8	65+	1998	1	27.8	1997	-32	1967	31	1.4	1983	1463	0	.0	.0	1.3	18.2	30.8	8.9
Ann	55.2	32.8	44.0	110	Aug 1959	18	77.7	Jul 1974	-34	Feb 1994	9	-1.0	Jan 1978	8263	642	3.1	23.4	216.0	74.8	177.2	34.9

\+ 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/normals/usnormals.html

(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

Issue Date: February 2004

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: GETTYSBURG, SD **COOP ID: 393294**

Climate Division: SD 2 **NWS Call Sign:** **Elevation: 2,070 Feet** **Lat: 45˚01N** **Lon: 99˚58W**

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	.41	.39	.75	1982	7	1.32	1982	.00	1994
Feb	.55	.45	1.20	1958	27	2.24	1987	.01	1985
Mar	1.20	.99	1.21	1990	14	4.17	1977	.00	1994
Apr	1.93	1.51	2.15	1989	28	5.92	1986	.08	1987
May	2.86	2.62	4.03	1956	27	6.09	1999	.44	1989
Jun	3.07	3.02	4.15	1952	28	6.16	1991	.70	1976
Jul	2.64	2.27	4.50	1994	7	7.00	1994	.53	1976
Aug	2.15	1.95	2.90	1979	28	4.80	1979	.32	1982
Sep	1.37	1.21	2.27	1999	2	6.25	1996	.05	1972
Oct	1.57	1.10	3.37	2001	10	4.98	1998	.07	1992
Nov	.72	.55	2.23	1956	2	3.75	1977	.00	1995
Dec	.47	.29	.85	1965	11	1.54	1972	.00+	1994
Ann	18.94	18.88	4.50	Jul 1994	7	7.00	Jul 1994	.00+	Nov 1995

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	4.3	1.5	.1	.0
Feb	4.6	1.7	.2	.0
Mar	6.2	3.0	.6	.1
Apr	7.1	4.1	1.3	.4
May	9.6	5.9	1.8	.5
Jun	9.5	6.4	2.1	.6
Jul	8.3	5.3	1.9	.4
Aug	6.9	4.3	1.3	.6
Sep	5.6	3.0	.9	.3
Oct	5.6	3.3	.9	.4
Nov	4.7	2.3	.3	@
Dec	4.4	1.5	.1	.0
Ann	76.8	42.3	11.5	3.3

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	.01	.04	.10	.16	.22	.30	.39	.50	.67	.94	1.21
Feb	.04	.08	.15	.23	.32	.41	.53	.67	.88	1.22	1.55
Mar	.05	.15	.33	.51	.70	.91	1.16	1.47	1.90	2.62	3.32
Apr	.29	.45	.73	1.00	1.27	1.58	1.93	2.36	2.93	3.87	4.77
May	.62	.88	1.30	1.68	2.06	2.46	2.92	3.47	4.19	5.34	6.43
Jun	.97	1.26	1.69	2.06	2.42	2.79	3.20	3.67	4.29	5.25	6.13
Jul	.74	.99	1.37	1.70	2.02	2.36	2.73	3.18	3.75	4.65	5.49
Aug	.50	.70	1.02	1.30	1.58	1.88	2.21	2.61	3.13	3.96	4.74
Sep	.09	.18	.35	.54	.75	1.00	1.29	1.66	2.18	3.06	3.93
Oct	.12	.22	.42	.64	.88	1.15	1.48	1.90	2.48	3.45	4.41
Nov	.01	.05	.14	.24	.36	.49	.66	.87	1.17	1.69	2.21
Dec	.00	.00	.08	.15	.23	.33	.44	.58	.77	1.10	1.42
Ann	12.39	13.62	15.21	16.44	17.53	18.60	19.72	20.96	22.47	24.69	26.62

\+ 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

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Services

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: GETTYSBURG, SD **COOP ID: 393294**

Climate Division: SD 2 **NWS Call Sign:** **Elevation: 2,070 Feet** **Lat: 45°01N** **Lon: 99°58W**

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	4.3	3.5	2	#	7.0	1992	15	17.0	1992	16	1986	8	10	1986	3.1	1.6	.4	.2	.0	-9.9	-9.9	-9.9	-9.9
Feb	8.8	9.1	2	#	9.0	1991	18	27.0	1987	18	1986	24	11	1986	3.5	2.3	1.1	.5	.0	-9.9	-9.9	-9.9	-9.9
Mar	11.5	6.4	1	#	12.0	1975	24	33.0	1975	20	1985	5	4	1989	2.8	2.0	.9	.6	.2	9.3	5.8	3.5	1.0
Apr	2.1	.0	#	0	9.0	1986	14	17.0	1986	12	1986	15	1	1986	.6	.5	.3	.1	.0	.8	.2	.1	.1
May	.0	.0	#	0	.5	1991	3	.5	1991	#	1996	3	#	1996	@	.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	#	1985	30	#+	1985	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Oct	1.0	.0	#	0	4.0	1971	28	6.5	1971	4	1971	28	#+	1987	.4	.4	.1	.0	.0	.1	.1	.0	.0
Nov	5.0	1.2	1	0	7.5	1989	27	26.2	1985	13	1985	30	6	1985	2.5	1.9	.9	.1	.0	4.4	2.6	1.8	.6
Dec	5.7	5.8	2	#	7.0	1988	26	14.5	1988	22	1985	21	17	1985	2.7	1.5	.4	.2	.0	-9.9	-9.9	-9.9	-9.9
Ann	38.4	26.0	N/A	N/A	12.0	Mar 1975	24	33.0	Mar 1975	22	Dec 1985	21	17	Dec 1985	15.6	10.2	4.1	1.7	.2	-9.9	-9.9	-9.9	-9.9

+ 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/normals/usnormals.html

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: GETTYSBURG, SD **COOP ID: 393294**

Climate Division: SD 2 **NWS Call Sign:** **Elevation: 2,070 Feet** **Lat: 45˚01N** **Lon: 99˚58W**

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	5/24	5/20	5/18	5/15	5/13	5/10	5/07	5/02
32	5/20	5/15	5/12	5/09	5/06	5/04	5/01	4/27	4/23
28	5/08	5/04	5/01	4/29	4/26	4/24	4/21	4/19	4/14
24	5/01	4/26	4/22	4/19	4/16	4/14	4/10	4/07	4/02
20	4/21	4/16	4/13	4/10	4/07	4/04	4/01	3/29	3/24
16	4/12	4/07	4/04	4/01	3/29	3/26	3/23	3/20	3/15

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	9/10	9/14	9/16	9/18	9/20	9/22	9/24	9/26	9/29
32	9/15	9/19	9/22	9/25	9/27	9/29	10/02	10/05	10/09
28	9/21	9/26	9/29	10/03	10/06	10/09	10/12	10/16	10/21
24	9/28	10/03	10/07	10/11	10/14	10/17	10/21	10/25	10/30
20	10/10	10/16	10/19	10/23	10/26	10/29	11/01	11/05	11/10
16	10/23	10/29	11/02	11/05	11/08	11/11	11/15	11/19	11/24

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	146	140	135	131	127	123	119	114	107
32	164	156	151	147	143	139	135	130	123
28	179	173	169	165	162	158	154	150	144
24	201	194	189	184	180	176	171	166	159
20	223	215	210	205	201	197	192	187	180
16	247	239	233	228	224	219	214	208	200

***** 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:
www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

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: GETTYSBURG, SD **COOP ID: 393294**

Climate Division: SD 2 **NWS Call Sign:** **Elevation: 2,070 Feet** **Lat: 45˚01N** **Lon: 99˚58W**

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	1607	1263	1064	616	290	92	27	40	196	555	1050	1463	8263
60	1452	1123	909	472	176	37	8	13	102	401	900	1308	6901
57	1359	1039	816	390	123	18	1	5	60	310	810	1215	6146
55	1297	985	754	338	93	11	0	2	40	253	750	1153	5676
50	1145	857	607	223	40	2	0	0	10	132	612	1000	4628
32	637	427	178	16	0	0	0	0	0	3	206	503	1970

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	53	88	138	390	757	1015	1237	1197	840	471	146	63	6395
55	0	2	0	23	137	336	524	486	190	8	0	0	1706
57	0	0	0	15	105	284	463	426	151	3	0	0	1447
60	0	0	0	7	65	212	377	341	102	1	0	0	1105
65	0	0	0	1	24	117	240	214	46	0	0	0	642
70	0	0	0	0	6	52	136	118	16	0	0	0	328

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	0	5	38	201	514	777	986	945	599	257	32	0	0	5	43	244	758	1535	2521	3466	4065	4322	4354	4354
45	0	0	12	113	367	627	831	790	455	152	11	0	0	0	12	125	492	1119	1950	2740	3195	3347	3358	3358
50	0	0	3	62	234	478	676	635	319	78	1	0	0	0	3	65	299	777	1453	2088	2407	2485	2486	2486
55	0	0	0	27	134	337	522	480	201	32	0	0	0	0	0	27	161	498	1020	1500	1701	1733	1733	1733
60	0	0	0	8	65	203	371	333	118	8	0	0	0	0	0	8	73	276	647	980	1098	1106	1106	1106
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	0	4	38	140	308	478	641	604	376	175	29	0	0	4	42	182	490	968	1609	2213	2589	2764	2793	2793

(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.
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