

Climatography of the United States

No. 20

1971-2000

Station: GRNVL SPART AP GREER, SC

COOP ID: 383747

Climate Division: SC 2

NWS Call Sign: GSP

Elevation: 957 Feet Lat: 34° 54N Lon: 82° 13W

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	50.2	31.4	40.8	79	1975	31	51.5	1974	-6	1966	30	30.4	1977	750	0	.0	.0	16.5	1.1	17.6	@
Feb	54.8	33.9	44.4	81	1996	27	50.7	1990	8+	1996	5	36.5	1978	586	0	.0	.0	19.2	.5	13.4	.0
Mar	62.7	40.5	51.6	89	1995	23	57.2	1997	11+	1993	15	46.2	1971	420	5	.0	.0	27.8	@	6.9	.0
Apr	71.0	47.0	59.0	93	1986	27	63.6	1981	25+	1983	20	54.1	1983	197	30	.0	.2	29.8	.0	1.2	.0
May	78.2	56.2	67.2	97	1967	28	71.5	2000	31	1989	8	61.9	1976	47	127	.0	1.2	30.9	.0	@	.0
Jun	85.1	64.3	74.7	100	1985	5	80.0	1981	40	1972	1	70.0	1976	3	304	@	8.2	30.0	.0	.0	.0
Jul	88.8	68.7	78.8	104	1999	31	83.2	1993	54	1979	1	74.7	1979	0	430	.8	15.4	31.0	.0	.0	.0
Aug	87.1	67.9	77.5	103	1983	22	81.5	1999	52	1968	29	74.3	1976	0	384	.3	10.0	31.0	.0	.0	.0
Sep	81.1	61.7	71.4	96	1975	4	74.4	1977	36	1967	30	67.5	1976	19	207	.0	2.9	30.0	.0	.0	.0
Oct	71.4	49.7	60.5	92	1986	2	67.8	1984	25	1976	29	54.4	1976	178	35	.0	.1	30.9	.0	.7	.0
Nov	61.3	41.0	51.1	85+	1974	3	58.4	1985	12	1970	25	43.5	1976	417	3	.0	.0	27.2	.0	6.9	.0
Dec	52.7	34.3	43.5	76+	1998	6	50.2	1971	5	1985	26	35.8	2000	655	1	.0	.0	19.8	.3	14.9	.0
Ann	70.4	49.7	60.0	104	Jul 1999	31	83.2	Jul 1993	-6	Jan 1966	30	30.4	Jan 1977	3272	1526	1.1	38.0	324.1	1.9	61.6	@

+ 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: 1962-2001

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

028-A

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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

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Climate Division: SC 2

NWS Call Sign: GSP

Elevation: 957 Feet Lat: 34°54N

Lon: 82°13W

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	4.41	4.35	3.05	1995	14	7.19+	1993	.29	1981	11.3	7.4	3.2	1.1	1.38	1.80	2.42	2.96	3.47	4.01	4.59	5.28	6.17	7.56	8.84
Feb	4.24	4.59	3.42	1987	28	7.43	1971	.53	1978	9.3	6.5	3.0	1.1	1.20	1.60	2.21	2.74	3.26	3.80	4.39	5.10	6.01	7.44	8.78
Mar	5.31	4.80	3.80	1963	5	11.37	1980	1.13	1985	11.0	8.1	3.6	1.7	1.83	2.33	3.07	3.68	4.27	4.88	5.54	6.32	7.31	8.84	10.25
Apr	3.54	3.19	3.34	1963	29	10.15	1979	.69	1976	8.7	6.0	2.7	1.0	.89	1.23	1.74	2.19	2.64	3.12	3.65	4.27	5.09	6.39	7.60
May	4.59	4.92	3.25	1986	27	8.89	1972	1.31	1987	10.6	7.2	3.0	1.4	1.42	1.85	2.50	3.06	3.60	4.16	4.77	5.50	6.43	7.89	9.23
Jun	3.92	3.76	4.21+	1969	16	10.12	1994	.17	1993	10.2	6.5	2.7	1.0	.77	1.12	1.70	2.23	2.76	3.34	3.99	4.78	5.81	7.48	9.06
Jul	4.65	4.31	3.64	1964	18	13.57	1984	.75	1993	11.8	7.4	2.8	1.4	.90	1.32	2.00	2.63	3.26	3.95	4.73	5.66	6.90	8.90	10.79
Aug	4.08	3.30	9.32	1995	26	17.37	1995	.79	1999	10.2	6.3	2.6	1.0	.75	1.11	1.71	2.27	2.83	3.44	4.14	4.98	6.09	7.89	9.60
Sep	3.97	3.31	4.38	1973	14	11.65	1975	.27	1978	9.1	5.7	2.7	1.2	.76	1.11	1.69	2.23	2.78	3.36	4.03	4.83	5.89	7.60	9.23
Oct	3.88	3.36	4.48	1990	12	9.51	1971	.00	2000	7.1	4.7	2.3	1.0	.20	.55	1.14	1.71	2.32	3.00	3.79	4.78	6.12	8.35	10.52
Nov	3.79	3.95	2.80	1962	9	7.85	1992	1.34	1973	9.4	6.3	2.6	1.2	1.52	1.87	2.36	2.77	3.16	3.55	3.97	4.46	5.09	6.04	6.90
Dec	3.86	3.67	2.68	1972	15	8.45	1983	.64	1980	10.3	6.6	2.9	1.1	1.19	1.55	2.10	2.57	3.02	3.50	4.02	4.63	5.41	6.64	7.78
Ann	50.24	51.06	9.32	Aug 1995	26	17.37	Aug 1995	.00	Oct 2000	119.0	78.7	34.1	14.2	35.82	38.61	42.19	44.91	47.32	49.65	52.05	54.71	57.94	62.61	66.65

+ 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: 1962-2001

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

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NWS Call Sign: GSP

Elevation: 957 Feet

Lat: 34° 54N

Lon: 82° 13W

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	2.4	.6	#	0	12.0	1988	7	12.0	1988	12	1988	8	2	1988	1.1	.6	.3	.1	.1	1.6	.8	.3	@
Feb	1.5	.4	#	0	8.2	1979	18	12.3	1979	8	1979	19	1	1979	.9	.4	.2	.1	.0	.5	.2	@	.0
Mar	1.2	.0	#	0	9.4	1993	13	9.8	1993	5	1983	25	#	1999	.4	.3	.1	.1	.0	.3	.1	@	.0
Apr	.0	.0	0	0	.3	1987	3	.3	1987	0	0	0	0	0	.1	.0	.0	.0	.0	.0	.0	.0	.0
May	.0	.0	#	0	.0	0	0	.0	0	0	0	0	#	2000	.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	.1	.0	#	0	2.5	2000	19	2.5	2000	1	2000	20	#	2000	.1	.0	.0	.0	.0	@	.0	.0	.0
Dec	.7	.0	#	0	11.4	1971	3	11.4	1971	10	1971	4	1	1971	.3	.1	.1	@	@	.2	.1	@	@
Ann	5.9	1.0	N/A	N/A	12.0	Jan 1988	7	12.3	Feb 1979	12	Jan 1988	8	2	Jan 1988	2.9	1.4	.7	.3	.1	2.6	1.2	.3	.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

Complete documentation available from:

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NWS Call Sign: GSP

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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	5/06	4/30	4/25	4/22	4/18	4/14	4/11	4/06	3/31
32	4/24	4/17	4/12	4/08	4/04	4/01	3/27	3/23	3/16
28	4/07	4/01	3/28	3/24	3/21	3/17	3/14	3/09	3/03
24	3/20	3/14	3/09	3/05	3/01	2/26	2/22	2/17	2/11
20	3/09	3/01	2/24	2/19	2/15	2/10	2/06	1/31	1/23
16	2/27	2/18	2/11	2/06	1/31	1/25	1/18	1/08	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	10/08	10/13	10/16	10/19	10/22	10/25	10/27	10/31	11/05
32	10/17	10/24	10/28	11/01	11/04	11/08	11/11	11/16	11/22
28	10/31	11/06	11/10	11/14	11/18	11/21	11/25	11/29	12/05
24	11/11	11/18	11/23	11/28	12/02	12/06	12/10	12/15	12/22
20	11/29	12/05	12/10	12/14	12/18	12/22	12/26	12/31	1/07
16	12/14	12/25	1/01	1/08	1/14	1/21	1/29	2/11	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	209	201	196	191	186	181	177	171	163
32	241	231	224	218	213	207	202	195	185
28	269	259	252	246	241	236	230	223	213
24	296	288	283	279	275	270	266	261	253
20	332	323	317	311	306	301	295	289	279
16	>365	>365	>365	360	347	337	329	320	308

* 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: SC 2 NWS Call Sign: GSP Elevation: 957 Feet Lat: 34° 54N Lon: 82° 13W

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	750	586	420	197	47	3	0	0	19	178	417	655	3272
60	602	438	277	92	17	0	0	0	1	93	283	516	2319
57	514	360	202	50	6	0	0	0	0	56	211	429	1828
55	457	308	160	30	3	0	0	0	0	38	170	373	1539
50	325	191	77	6	0	0	0	0	0	11	87	247	944
32	42	7	0	0	0	0	0	0	0	0	0	19	68

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	300	357	614	822	1107	1294	1455	1408	1179	884	576	371	10367
55	7	13	65	174	396	604	742	695	489	200	55	15	3455
57	4	7	44	134	337	544	680	633	430	156	37	10	3016
60	1	3	22	85	251	454	587	540	343	99	19	4	2408
65	0	0	5	30	127	304	430	384	207	35	3	1	1526
70	0	0	0	4	46	168	279	232	97	7	0	0	833

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	131	193	382	590	866	1061	1215	1168	948	644	352	181	131	324	706	1296	2162	3223	4438	5606	6554	7198	7550	7731
45	64	106	253	440	711	911	1060	1013	798	490	227	99	64	170	423	863	1574	2485	3545	4558	5356	5846	6073	6172
50	28	48	144	301	558	761	905	858	648	341	127	47	28	76	220	521	1079	1840	2745	3603	4251	4592	4719	4766
55	4	15	71	182	404	611	750	703	499	207	54	16	4	19	90	272	676	1287	2037	2740	3239	3446	3500	3516
60	0	0	29	89	262	461	595	548	351	101	18	0	0	0	29	118	380	841	1436	1984	2335	2436	2454	2454
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	73	123	231	368	570	731	839	815	639	395	207	101	73	196	427	795	1365	2096	2935	3750	4389	4784	4991	5092

(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