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

COOP ID: 381549

Station: CHARLESTON CITY, SC

Climate Division: SC 7 NWS Call Sign: 1549 Elevation: 10 Feet Lat: 32°47N Lon: 79°56W

					Temperature (°F) Extremes																
	Mea	n (1)						Extr	emes					Degree Base To	Days (1) emp 65		Mean	Numb	er of I	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	57.1	42.4	49.8	81	1949	25	61.7	1974	10	1985	21	40.4	1977	489	3	.0	.0	24.6	.1	4.4	.0
Feb	59.8	44.9	52.4	83	1962	27	58.9	1990	16	1958	17	43.3	1978	362	7	.0	.0	23.9	.1	2.4	.0
Mar	65.8	51.5	58.7	88	1977	16	65.0	1997	22	1980	3	53.7	1971	224	27	.0	.0	30.0	@	.3	.0
Apr	72.9	58.8	65.9	94	1980	23	69.2	1977	36	1982	7	61.5	1993	57	83	.0	.3	30.0	.0	.0	.0
May	79.6	67.4	73.5	99	1953	26	78.5	1998	48+	1957	5	70.5	1997	3	266	.0	1.5	31.0	.0	.0	.0
Jun	84.9	73.8	79.4	104	1985	2	85.6	1998	57+	1967	2	75.0	1997	0	431	.1	5.7	30.0	.0	.0	.0
Jul	88.5	77.0	82.8	103	1977	22	86.0	1998	65	1997	31	80.3	1974	0	551	.3	12.3	31.0	.0	.0	.0
Aug	87.1	76.1	81.6	103	1999	1	84.3	1999	59	1986	29	79.0	1976	0	514	@	9.5	31.0	.0	.0	.0
Sep	83.0	72.2	77.6	98	1985	11	81.3	1998	50	1967	30	74.1	1984	0	377	.0	3.4	30.0	.0	.0	.0
Oct	75.1	61.9	68.5	93+	1986	5	72.7	1985	39+	1962	27	63.2	1987	47	156	.0	.2	31.0	.0	.0	.0
Nov	67.6	53.4	60.5	87	1961	1	68.0	1985	17	1950	25	53.3	1976	183	47	.0	.0	29.6	.0	@	.0
Dec	60.0	45.5	52.8	81+	1998	7	59.7	1971	14	1962	13	44.5	1989	390	11	.0	.0	27.2	.1	2.5	.0
Ann	73.5	60.4	67.0	104	Jun 1985	2	86.0	Jul 1998	10	Jan 1985	21	40.4	Jan 1977	1755	2473	.4	32.9	349.3	.3	9.6	.0

⁺ Also occurred on an earlier date(s)

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

Issue Date: February 2004 014-A

[@] Denotes mean number of days greater than 0 but less than .05

⁽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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Station: CHARLESTON CITY, SC COOP ID: 381549

Climate Division: SC 7 NWS Call Sign: 1549 Elevation: 10 Feet Lat: 32°47N Lon: 79°56W

										Pı	recipit	tation	(incl	nes)										
	Mea Medi		P	recipi	itatio	n Totals					ean North of Double Pres	ays (3)	Proba		Me	nonthly/ onthly/An	annual j indic	precipita ated am	ount vs Probal	ll be equ		less tha	n the
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	3.62	4.07	2.57	1964	12	6.44	1991	.86	1985	10.1	6.5	2.5	.7	1.06	1.40	1.92	2.37	2.80	3.26	3.76	4.35	5.12	6.32	7.44
Feb	2.62	2.38	2.56	1998	16	7.26	1998	.50	1994	8.0	4.9	1.9	.7	.59	.83	1.21	1.56	1.90	2.27	2.69	3.18	3.83	4.87	5.84
Mar	3.83	3.25	3.45	1993	23	9.79	1983	1.02	1995	8.5	5.8	2.8	1.0	1.28	1.65	2.18	2.63	3.06	3.51	4.00	4.57	5.30	6.43	7.48
Apr	2.44	2.33	3.67	1997	28	6.33	1997	.00	1972	7.0	4.6	1.6	.6	.31	.62	1.03	1.38	1.73	2.10	2.52	3.01	3.67	4.71	5.70
May	2.77	1.91	5.40	1976	23	11.93	1976	.02	2000	7.6	4.7	1.8	.7	.25	.44	.81	1.19	1.61	2.09	2.66	3.37	4.35	5.99	7.60
Jun	4.96	3.69	10.38	1973	11	19.24	1973	.98	1978	10.6	6.4	3.0	1.4	.69	1.09	1.80	2.49	3.21	4.01	4.93	6.06	7.58	10.07	12.47
Jul	5.50	5.39	5.89	1950	8	12.81	1990	.54	1986	11.4	7.7	3.8	1.7	1.19	1.70	2.51	3.24	3.97	4.75	5.63	6.68	8.06	10.27	12.36
Aug	6.54	5.28	5.39	1981	19	16.37	1971	.60	1980	11.9	8.7	3.9	2.1	.98	1.53	2.47	3.38	4.32	5.35	6.54	7.99	9.94	13.12	16.17
Sep	6.13	5.22	8.50	1998	21	14.96	1987	.51	1985	9.7	6.8	3.1	1.6	.87	1.38	2.26	3.11	4.00	4.98	6.11	7.49	9.36	12.40	15.33
Oct	3.02	1.85	6.79	1965	18	11.20	1994	.00	2000	6.1	4.1	1.7	.8	.07	.25	.64	1.06	1.54	2.11	2.79	3.67	4.89	6.98	9.05
Nov	2.18	2.03	6.65	1969	1	5.60	1972	.21	1996	7.0	4.0	1.4	.6	.28	.45	.76	1.06	1.38	1.74	2.15	2.66	3.35	4.49	5.59
Dec	2.78	2.78	2.49	1971	3	5.53	1976	.49	1984	9.0	5.4	2.1	.6	.77	1.04	1.44	1.78	2.13	2.48	2.88	3.34	3.95	4.90	5.78
Ann	46.39	45.86	10.38	Jun 1973	11	19.24	Jun 1973	.00+	Oct 2000	106.9	69.6	29.6	12.5	32.43	35.12	38.57	41.19	43.53	45.79	48.12	50.71	53.86	58.43	62.38

⁺ Also occurred on an earlier date(s)

Complete documentation available from:

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

[#] 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

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Station: CHARLESTON CITY, SC

Climate Division: SC 7 NWS Call Sign: 1549

Elevation: 10 Feet Lat: 32°47N Lon: 79°56W

										Snov	w (incl	nes)											
						Sno	ow To	tals									Mea	n Nu	mber	of Day	ys (1)		
	Mean	s/Medi	ians (1)	1					Extre	mes (2)							ow Fa			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	.1	.0	#	0	.7	1977	31	.8	1977	1	1977	31	#	1977	-9.9	-9.9	-9.9	-9.9	-9.9	.1	.0	.0	.0
Feb	.3	.0	#	0	2.1	1979	18	2.2	1979	2	1979	18	#	1979	-9.9	-9.9	-9.9	-9.9	-9.9	.1	.0	.0	.0
Mar	.2	.0	#	0	1.3	1980	2	1.3	1980	1	1980	3	#	1980	.1	.1	.0	.0	.0	.0	.0	.0	.0
Apr	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
May	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	-9.9	-9.9	-9.9	-9.9	-9.9	.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	-9.9	-9.9	-9.9	-9.9	-9.9	.0	.0	.0	.0
Aug	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	-9.9	-9.9	-9.9	-9.9	-9.9	.0	.0	.0	.0
Sep	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	-9.9	-9.9	-9.9	-9.9	-9.9	.0	.0	.0	.0
Oct	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	-9.9	-9.9	-9.9	-9.9	-9.9	.0	.0	.0	.0
Nov	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9
Dec	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9
Ann	.6	.0	N/A	N/A	2.1	Feb 1979	18	2.2	Feb 1979	2	Feb 1979	18	#+	Mar 1980	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9

⁺ Also occurred on an earlier date(s) #Denotes trace amounts

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

[@] 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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COOP ID: 381549

Station: CHARLESTON CITY, SC

Climate Division: SC 7 NWS Call Sign: 154

NWS Call Sign: 154 Elevation: 10 Feet Lat: 32°47N Lon: 79°56W

				Freez	e Data				
			Spri	ng Freeze D	ates (Month	/Day)			
Temp (F)		P	robability of	f later date i	n spring (thr	u Jul 31) tha	n indicated((*)	
Temp (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	3/28	3/20	3/14	3/09	3/04	2/27	2/22	2/16	2/08
32	3/08	2/27	2/20	2/14	2/09	2/04	1/29	1/22	1/13
28	2/23	2/13	2/06	1/30	1/24	1/17	1/09	12/28	0/00
24	2/13	2/02	1/24	1/15	12/30	0/00	0/00	0/00	0/00
20	1/21	1/09	0/00	0/00	0/00	0/00	0/00	0/00	0/00
16	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
1		•	Fa	ll Freeze Da	tes (Month/L	Day)	•		
Tomp (F)		Pro	bability of e	arlier date i	n fall (beginr	ning Aug 1) t	han indicate	d(*)	
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	11/12	11/19	11/25	11/30	12/05	12/09	12/14	12/20	12/28
32	11/28	12/06	12/12	12/17	12/22	12/27	1/01	1/06	1/15
28	12/12	12/20	12/27	1/01	1/06	1/12	1/19	1/29	0/00
24	12/27	1/07	1/17	1/27	2/14	0/00	0/00	0/00	0/00
20	1/08	1/21	0/00	0/00	0/00	0/00	0/00	0/00	0/00
16	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
1		•	•	Freeze F	ree Period		•		
To (E)			Probability	of longer th	an indicated	freeze free p	eriod (Days)		
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	308	296	288	281	275	269	262	254	243
32	353	336	326	319	313	306	300	292	282
28	>365	>365	>365	>365	344	334	326	318	308
24	>365	>365	>365	>365	>365	>365	>365	356	334
20	>365	>365	>365	>365	>365	>365	>365	>365	>365
16	>365	>365	>365	>365	>365	>365	>365	>365	>365

^{*} 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.

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COOP ID: 381549

Station: CHARLESTON CITY, SC

Climate Division: SC 7 NWS Call Sign: 154 Elevation: 10 Feet Lat: 32°47N Lon: 79°56W

				Deg	ree Days t	o Selected	Base Tem	peratures	(°F)				
Base						Heatin	g Degree 1	Days (1)					
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	489	362	224	57	3	0	0	0	0	47	183	390	1755
60	355	238	122	14	0	0	0	0	0	13	97	257	1096
57	285	175	77	5	0	0	0	0	0	5	59	192	798
55	243	140	53	2	0	0	0	0	0	3	40	154	635
50	157	70	17	0	0	0	0	0	0	0	12	79	335
32	10	0	0	0	0	0	0	0	0	0	0	0	10

Base						Coolin	g Degree l	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	560	569	826	1015	1286	1421	1574	1537	1367	1132	854	644	12785
55	80	65	166	327	573	731	861	824	677	422	203	85	5014
57	59	44	128	270	511	671	799	762	617	362	163	60	4446
60	37	23	80	189	418	581	706	669	527	277	111	33	3651
65	3	7	27	83	266	431	551	514	377	156	47	11	2473
70	2	0	7	21	134	286	396	359	232	68	15	1	1521

										Gro	wing	Degre	e Uni	ts (2)										
Base					Growin	g Degree	Units (N	(Ionthly)					Growing Degree Units (Accumulated Monthly)											
	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec													Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
40	328	375	582	772	1035	1176	1323	1289	1125	882	617	410	328	703	1285	2057	3092	4268	5591	6880	8005	8887	9504	9914
45	204	248	432	623	880	1026	1168	1134	975	727	469	275	204	452	884	1507	2387	3413	4581	5715	6690	7417	7886	8161
50	108 146 290 474 725 876 1013 979 825 572 329											156	108	254	544	1018	1743	2619	3632	4611	5436	6008	6337	6493
55	46	70	169	325	570	726	858	824	675	417	203	78	46	116	285	610	1180	1906	2764	3588	4263	4680	4883	4961
60	15	23	79	194	415	576	703	669	525	276	106	32	15	38	117	311	726	1302	2005	2674	3199	3475	3581	3613
Base	Growing Degree Units for Corn (Monthly)														Gr	owing D	egree Ur	its for C	orn (Acc	umulate	d Month	ly)	•	
50/86)/86 149 185 316 480 717 850 961 938 809 573 353 20												149	334	650	1130	1847	2697	3658	4596	5405	5978	6331	6538

(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

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

- c. Snow Tables
 - 1. Snow Climatology
 - 2. Cooperative Summary of the Day
- d. Freeze Data Table

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

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