

Climatology of the United States

No. 20

1971-2000

Station: WALHALLA, SC

COOP ID: 388887

Climate Division: SC 2

NWS Call Sign:

Elevation: 980 Feet Lat: 34°45N Lon: 83°05W

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	52.2	27.2	39.7	80	1949	11	51.0	1974	-5	1985	21	30.5	1977	784	0	.0	.0	18.9	.5	18.3	.1
Feb	57.2	28.9	43.1	82	1996	27	48.4	1990	-4	1958	17	36.0	1978	615	0	.0	.0	21.3	.3	15.7	.0
Mar	65.0	35.3	50.2	86+	1995	23	54.9	1974	3	1980	3	44.3	1971	461	0	.0	.0	28.9	@	9.4	.0
Apr	73.4	42.2	57.8	93	1986	27	61.8	1999	22	1992	3	53.6	1983	225	8	.0	.1	29.9	.0	3.8	.0
May	80.5	52.1	66.3	99	1953	31	70.5	1987	28	1971	4	61.5	1997	69	108	.0	.8	31.0	.0	.1	.0
Jun	86.9	60.0	73.5	105	1954	27	77.2	1986	39	1972	1	69.1	1972	3	257	.0	6.5	30.0	.0	.0	.0
Jul	90.5	63.8	77.2	105+	1980	17	81.4	1986	50	1996	4	74.6	1979	0	376	.5	14.0	31.0	.0	.0	.0
Aug	88.8	63.4	76.1	106	1954	17	79.5	1983	49	1964	13	73.0	1992	0	344	.4	8.9	31.0	.0	.0	.0
Sep	83.3	57.5	70.4	101	1957	2	74.6	1998	32	1967	30	68.0	1982	14	175	@	3.0	30.0	.0	.0	.0
Oct	73.3	44.9	59.1	98	1954	4	66.1	1984	20	1952	21	52.5	1988	215	32	.0	.1	30.9	.0	2.3	.0
Nov	63.4	36.0	49.7	87	1961	1	58.5	1985	9+	1950	26	44.1	1976	463	2	.0	.0	28.2	.0	10.4	.0
Dec	54.3	29.4	41.9	81	1955	25	49.5	1984	-3	1962	13	35.2	2000	718	0	.0	.0	21.3	.2	17.6	.0
Ann	72.4	45.1	58.8	106	Aug 1954	17	81.4	Jul 1986	-5	Jan 1985	21	30.5	Jan 1977	3567	1302	.9	33.4	332.4	1.0	77.6	.1

+ 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

056-A

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: WALHALLA, SC

COOP ID: 388887

Climate Division: SC 2

NWS Call Sign:

Elevation: 980 Feet Lat: 34°45N

Lon: 83°05W

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	5.86	5.67	4.02	1964	25	10.02	1974	.55	1981	10.8	8.3	4.3	2.0	2.13	2.68	3.47	4.14	4.77	5.42	6.13	6.95	8.00	9.61	11.10	
Feb	5.22	5.54	5.06	1966	13	9.45	1998	.54	1978	9.0	7.3	3.7	1.9	1.54	2.03	2.78	3.42	4.05	4.70	5.42	6.26	7.36	9.07	10.66	
Mar	6.24	5.61	5.27	1990	17	15.93	1980	1.21	1985	10.6	8.4	4.0	2.1	1.79	2.38	3.28	4.05	4.81	5.60	6.47	7.50	8.84	10.93	12.88	
Apr	4.35	4.34	4.59	1963	30	10.78	1979	.94	1976	8.4	6.4	3.2	1.3	1.09	1.49	2.13	2.69	3.24	3.83	4.48	5.26	6.27	7.88	9.38	
May	5.44	5.22	6.93	1976	29	16.40	1976	.24	2000	10.3	7.6	3.6	1.7	1.10	1.59	2.39	3.12	3.86	4.65	5.55	6.62	8.05	10.32	12.48	
Jun	4.49	3.62	6.90	1967	4	11.76	1989	.61	1986	9.9	6.8	3.3	1.4	1.19	1.61	2.26	2.84	3.40	3.99	4.64	5.42	6.43	8.02	9.50	
Jul	4.77	4.10	5.11	1964	3	13.00	1984	1.33	1995	10.3	7.5	3.3	1.3	1.34	1.80	2.48	3.08	3.66	4.27	4.95	5.74	6.77	8.40	9.91	
Aug	5.36	4.70	5.90	1994	17	14.48	1994	.90	1997	10.9	7.5	3.4	1.5	.98	1.45	2.24	2.97	3.71	4.52	5.43	6.54	8.01	10.39	12.65	
Sep	4.72	4.42	4.82	1990	13	10.80	1975	.02	1984	9.2	6.5	3.1	1.5	.59	.96	1.63	2.29	2.98	3.76	4.65	5.76	7.27	9.74	12.14	
Oct	4.40	4.26	6.06	1950	20	9.87	1995	.05	2000	6.8	5.1	2.9	1.5	.38	.69	1.27	1.88	2.55	3.32	4.22	5.36	6.93	9.55	12.12	
Nov	4.92	4.23	4.75	1979	2	10.76	1992	2.03	1981	9.0	7.2	3.6	1.5	1.87	2.32	2.98	3.53	4.05	4.58	5.15	5.82	6.66	7.97	9.16	
Dec	4.88	4.79	3.95	1961	12	10.47	1983	.51	1980	10.4	7.8	3.6	1.5	1.30	1.76	2.47	3.09	3.70	4.34	5.05	5.89	6.99	8.71	10.33	
Ann	60.65	62.99	6.93	May 1976	29	16.40	May 1976	.02	Sep 1984	115.6	86.4	42.0	19.2	43.09	46.49	50.84	54.15	57.09	59.93	62.86	66.10	70.04	75.74	80.68	

+ 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

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Station: WALHALLA, SC

COOP ID: 388887

Climate Division: SC 2

NWS Call Sign:

Elevation: 980 Feet

Lat: 34°45N

Lon: 83°05W

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	2.0	.0	#	0	8.0	1988	8	11.0	1988	11	1988	8	1	1988	.7	.5	.3	.1	.0	.6	.3	.1	.0
Feb	1.4	.0	#	0	5.0	1980	9	10.0	1980	7	1979	19	1	1979	.4	.4	.2	.1	.0	.3	.2	.1	.0
Mar	.9	.0	#	0	9.0	1971	26	9.0	1971	4	1971	27	#+	1993	.3	.2	.1	.1	.0	.1	.0	.0	.0
Apr	#	.0	0	0	#	1973	10	#	1973	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	.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	.0	.0	#	0	.5	2000	20	.5	2000	#	1975	23	#	1975	@	.0	.0	.0	.0	.0	.0	.0	.0
Dec	.4	.0	#	0	6.0	1971	4	9.0	1971	6	1971	4	#+	2000	.2	.1	.1	@	.0	.1	.1	@	.0
Ann	4.7	.0	N/A	N/A	9.0	Mar 1971	26	11.0	Jan 1988	11	Jan 1988	8	1+	Jan 1988	1.6	1.2	.7	.3	.0	1.1	.6	.2	.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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No. 20
1971-2000**

Station: WALHALLA, SC

COOP ID: 388887

Climate Division: SC 2

NWS Call Sign:

Elevation: 980 Feet

Lat: 34° 45N

Lon: 83° 05W

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	5/20	5/14	5/09	5/05	5/01	4/27	4/23	4/19	4/12
32	5/03	4/28	4/25	4/23	4/20	4/18	4/15	4/12	4/08
28	4/20	4/14	4/10	4/06	4/02	3/30	3/26	3/21	3/15
24	4/04	3/28	3/24	3/20	3/17	3/13	3/09	3/05	2/27
20	3/22	3/13	3/07	3/02	2/25	2/20	2/15	2/08	1/31
16	3/09	2/28	2/22	2/17	2/12	2/07	2/01	1/25	1/15
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	10/01	10/04	10/07	10/09	10/11	10/13	10/16	10/18	10/22
32	10/07	10/12	10/16	10/19	10/21	10/24	10/27	10/31	11/04
28	10/18	10/24	10/29	11/02	11/05	11/09	11/13	11/17	11/23
24	11/03	11/08	11/11	11/14	11/17	11/20	11/23	11/26	12/01
20	11/15	11/22	11/27	12/01	12/05	12/08	12/13	12/17	12/24
16	11/29	12/09	12/16	12/23	12/29	1/04	1/11	1/19	1/31
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	185	177	172	167	163	158	153	148	140
32	200	195	190	187	183	180	176	172	166
28	236	229	224	220	216	212	208	203	196
24	269	261	255	249	245	240	234	228	220
20	310	300	294	288	282	277	271	264	254
16	>365	342	330	322	315	309	302	295	285

* 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

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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	784	615	461	225	69	3	0	0	14	215	463	718	3567
60	629	475	316	109	21	0	0	0	2	116	323	563	2554
57	545	392	236	60	8	0	0	0	0	74	247	476	2038
55	487	340	189	37	4	0	0	0	0	52	201	417	1727
50	350	214	97	7	0	0	0	0	0	17	110	281	1076
32	48	7	0	0	0	0	0	0	0	0	1	21	77

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	286	316	562	773	1062	1244	1399	1367	1151	840	530	327	9857
55	12	5	38	120	353	554	686	654	461	179	41	9	3112
57	8	1	23	83	295	494	624	592	401	139	26	6	2692
60	0	0	10	42	215	404	531	499	313	88	13	0	2115
65	0	0	0	8	108	257	376	344	175	32	2	0	1302
70	0	0	0	1	40	125	225	194	68	7	0	0	660

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	136	191	375	567	820	1003	1150	1117	920	626	335	173	136	327	702	1269	2089	3092	4242	5359	6279	6905	7240	7413
45	66	103	241	418	665	853	995	962	770	473	213	89	66	169	410	828	1493	2346	3341	4303	5073	5546	5759	5848
50	28	46	138	279	511	703	840	807	620	323	118	40	28	74	212	491	1002	1705	2545	3352	3972	4295	4413	4453
55	4	14	63	161	357	553	685	652	470	194	52	15	4	18	81	242	599	1152	1837	2489	2959	3153	3205	3220
60	0	0	22	72	217	403	530	497	321	98	13	0	0	0	22	94	311	714	1244	1741	2062	2160	2173	2173
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	85	133	251	371	538	681	784	768	613	405	217	110	85	218	469	840	1378	2059	2843	3611	4224	4629	4846	4956

(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