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: LAURENS, SC **COOP ID: 385017**

Climate Division: SC 2 **NWS Call Sign:** **Elevation: 589 Feet** **Lat: 34˚31N** **Lon: 82˚02W**

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	52.4	28.5	40.5	81	1944	28	52.5	1974	-2+	1985	22	31.5	1977	761	0	.0	.0	18.8	.6	20.6	.1
Feb	57.2	30.2	43.7	82+	1996	28	49.9	1976	3	1958	18	36.5	1978	597	0	.0	.0	20.6	.3	18.2	.0
Mar	65.4	38.1	51.8	93	1963	31	57.1	1976	6+	1980	4	46.5	1993	414	3	.0	.0	28.6	@	9.5	.0
Apr	73.9	45.2	59.6	93	1986	28	63.5	1981	23	1983	20	54.7+	1997	187	22	.0	.2	29.8	.0	2.7	.0
May	81.2	54.5	67.9	102	1941	23	72.2	1987	31	1989	8	62.1	1997	55	144	.0	3.1	31.0	.0	@	.0
Jun	88.1	63.1	75.6	107	1994	23	79.8	1981	42	1972	2	70.3	1997	3	322	.4	13.2	30.0	.0	.0	.0
Jul	91.4	67.2	79.3	107	1980	17	83.6	1993	51	1951	7	75.5	1979	0	443	2.1	20.9	31.0	.0	.0	.0
Aug	89.7	65.6	77.7	105+	1983	22	81.9	1987	49+	1997	26	74.7	1981	0	392	1.0	16.4	31.0	.0	.0	.0
Sep	83.9	58.6	71.3	103+	1939	9	75.1	1973	33	2001	28	68.0	1975	14	203	.0	6.5	30.0	.0	.0	.0
Oct	74.0	45.3	59.7	98	1954	6	67.3	1984	21	2001	29	54.4	1987	208	42	.0	.2	31.0	.0	3.0	.0
Nov	64.7	36.6	50.7	88	1961	2	59.0	1985	12	1950	26	43.6	1997	436	6	.0	.0	28.6	.0	11.1	.0
Dec	55.3	30.3	42.8	83	1931	20	50.0	1971	-1	1962	13	35.3	2000	688	0	.0	.0	21.9	.2	19.6	.0
Ann	73.1	46.9	60.1	107+	Jun 1994	23	83.6	Jul 1993	-2+	Jan 1985	22	31.5	Jan 1977	3363	1577	3.5	60.5	332.3	1.1	84.7	.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/normals/usnormals.html

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1930-2001

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

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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	4.99	5.30	3.40	1969	20	7.80	1978	.59	1981
Feb	4.25	4.39	3.75	1979	7	8.07	1979	.66	1978
Mar	5.20	5.05	2.97	1942	15	10.90	1980	.96	1985
Apr	3.35	2.91	3.08	1973	1	10.49	1998	.63	1995
May	3.86	3.73	4.83	1946	3	10.16	1976	.54	2000
Jun	3.58	3.22	4.90	1942	10	12.67	1994	.26	1993
Jul	3.43	2.99	4.68	1997	24	10.25	1984	.60	1980
Aug	3.74	3.00	5.55	1940	13	10.77	1995	.08	1997
Sep	3.65	3.65	5.50	1973	14	7.17	1980	.17	1985
Oct	3.72	3.28	6.52	1976	9	14.19	1990	.00	2000
Nov	3.87	3.60	4.05	1957	18	10.35	1985	.64	1981
Dec	3.86	3.81	3.28	1931	4	8.72	1983	.71	1988
Ann	47.50	49.49	6.52	Oct 1976	9	14.19	Oct 1990	.00	Oct 2000

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	11.2	7.9	3.8	1.5
Feb	9.2	6.8	3.1	1.2
Mar	10.3	7.8	3.5	1.4
Apr	7.9	5.8	2.2	.9
May	9.1	6.1	2.6	1.2
Jun	8.7	6.1	2.5	1.0
Jul	9.2	6.5	2.3	.8
Aug	8.8	5.7	2.3	1.0
Sep	7.8	5.7	2.3	1.0
Oct	6.2	4.3	2.2	1.2
Nov	8.5	6.1	2.9	1.2
Dec	9.9	6.7	2.6	.8
Ann	106.8	75.5	32.3	13.2

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	1.87	2.34	3.01	3.56	4.09	4.63	5.22	5.90	6.76	8.09	9.31
Feb	1.42	1.83	2.42	2.92	3.40	3.89	4.43	5.07	5.88	7.14	8.30
Mar	1.55	2.04	2.78	3.42	4.05	4.69	5.41	6.24	7.33	9.03	10.60
Apr	.92	1.24	1.72	2.14	2.55	2.99	3.47	4.04	4.77	5.94	7.02
May	.76	1.11	1.68	2.20	2.73	3.29	3.93	4.70	5.72	7.36	8.91
Jun	.68	1.00	1.53	2.01	2.50	3.03	3.64	4.36	5.32	6.87	8.34
Jul	.76	1.08	1.58	2.03	2.49	2.97	3.52	4.17	5.02	6.38	7.67
Aug	.64	.97	1.52	2.03	2.56	3.13	3.78	4.57	5.62	7.32	8.95
Sep	.56	.87	1.40	1.90	2.42	3.00	3.65	4.46	5.53	7.28	8.96
Oct	.19	.53	1.10	1.64	2.23	2.88	3.64	4.58	5.86	7.99	10.06
Nov	1.12	1.49	2.04	2.52	2.99	3.48	4.01	4.64	5.46	6.75	7.94
Dec	1.25	1.61	2.16	2.62	3.06	3.52	4.02	4.61	5.37	6.55	7.64
Ann	34.90	37.37	40.52	42.90	45.00	47.03	49.12	51.42	54.21	58.23	61.70

\+ 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: 1930-2001
(3) Derived from 1971-2000 serially complete daily data

Complete documentation available from:
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Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	.8	.0	#	0
Feb	.3	.0	#	0
Mar	.7	.0	#	0
Apr	.0	.0	0	0
May	.0	.0	0	0
Jun	.0	.0	0	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	.0	.0	0	0
Oct	.0	.0	0	0
Nov	#	.0	0	0
Dec	.5	.0	#	0
Ann	2.3	.0	N/A	N/A

Extremes (2)

Month	Highest Daily Snow Fall	Year	Day	Highest Monthly Snow Fall	Year	Highest Daily Snow Depth	Year	Day	Highest Monthly Mean Snow Depth	Year
Jan	5.0	1988	8	6.0	1988	1+	1996	12	#+	1996
Feb	3.8	1979	7	3.8+	1979	7	1979	19	#+	1996
Mar	6.0	1971	26	6.0	1971	4	1983	25	#+	1993
Apr	.0	0	0	.0	0	0	0	0	0	0
May	.0	0	0	.0	0	0	0	0	0	0
Jun	.0	0	0	.0	0	0	0	0	0	0
Jul	.0	0	0	.0	0	0	0	0	0	0
Aug	.0	0	0	.0	0	0	0	0	0	0
Sep	.0	0	0	.0	0	0	0	0	0	0
Oct	.0	0	0	.0	0	0	0	0	0	0
Nov	#	1987	12	#+	1987	0	0	0	0	0
Dec	7.0	1971	4	7.0	1971	3	1993	23	#+	1993
Ann	7.0	Dec 1971	4	7.0	Dec 1971	7	Feb 1979	19	#+	Feb 1996

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	.2	.2	.1	.1	.0
Feb	.1	.1	.1	.0	.0
Mar	.2	.2	.2	.1	.0
Apr	.0	.0	.0	.0	.0
May	.0	.0	.0	.0	.0
Jun	.0	.0	.0	.0	.0
Jul	.0	.0	.0	.0	.0
Aug	.0	.0	.0	.0	.0
Sep	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0
Nov	.0	.0	.0	.0	.0
Dec	.2	.1	.1	.1	.0
Ann	.7	.6	.5	.3	.0

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	.0	.0	.0	.0
Feb	.0	.0	.0	.0
Mar	.1	.1	.0	.0
Apr	.0	.0	.0	.0
May	.0	.0	.0	.0
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.0	.0	.0	.0
Oct	.0	.0	.0	.0
Nov	.0	.0	.0	.0
Dec	.1	@	.0	.0
Ann	.2	.1	.0	.0

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

(1) Derived from Snow Climatology and 1971-2000 daily data

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

(2) Derived from 1971-2000 daily data

-9/-9.9 represents missing values

Annual statistics for Mean/Median snow depths are not appropriate

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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	5/07	5/02	4/29	4/26	4/23	4/21	4/18	4/14	4/10
32	4/26	4/21	4/17	4/14	4/11	4/08	4/05	4/01	3/27
28	4/15	4/08	4/04	3/31	3/27	3/23	3/20	3/15	3/09
24	3/25	3/19	3/14	3/09	3/06	3/02	2/25	2/20	2/14
20	3/14	3/07	3/02	2/26	2/22	2/18	2/14	2/09	2/02
16	3/08	2/26	2/18	2/12	2/06	1/31	1/25	1/17	1/05

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	10/03	10/07	10/11	10/14	10/16	10/19	10/22	10/25	10/30
32	10/08	10/14	10/18	10/21	10/25	10/28	11/01	11/05	11/11
28	10/21	10/26	10/30	11/03	11/06	11/09	11/13	11/17	11/23
24	11/05	11/10	11/14	11/17	11/20	11/23	11/26	11/30	12/05
20	11/16	11/23	11/29	12/04	12/09	12/13	12/18	12/24	1/01
16	11/28	12/09	12/17	12/23	12/29	1/05	1/12	1/20	2/02

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	195	188	183	179	175	171	167	162	155
32	217	210	205	200	196	192	187	182	175
28	246	238	232	228	223	219	214	208	201
24	283	274	269	264	259	254	249	243	235
20	317	306	299	293	287	281	276	269	259
16	>365	>365	341	329	321	313	305	297	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)

Heating Degree Days (1)

Base Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	761	597	414	187	55	3	0	0	14	208	436	688	3363
60	613	457	273	89	16	0	0	0	2	114	301	535	2400
57	526	377	199	49	6	0	0	0	1	74	230	449	1911
55	469	325	156	30	3	0	0	0	0	53	188	392	1616
50	337	204	74	6	0	0	0	0	0	18	103	262	1004
32	48	8	0	0	0	0	0	0	0	0	1	20	77

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	310	334	611	826	1111	1308	1466	1415	1178	857	560	355	10331
55	17	8	55	165	401	618	753	702	488	196	58	14	3475
57	12	3	35	124	342	558	691	640	429	156	39	9	3038
60	7	0	16	74	259	468	598	547	341	103	21	1	2435
65	0	0	3	22	144	322	443	392	203	42	6	0	1577
70	0	0	0	4	64	188	289	239	91	13	0	0	888

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	121	177	378	595	873	1073	1225	1171	943	620	341	164	121	298	676	1271	2144	3217	4442	5613	6556	7176	7517	7681
45	59	96	246	447	718	923	1070	1016	793	466	217	83	59	155	401	848	1566	2489	3559	4575	5368	5834	6051	6134
50	24	43	143	308	564	773	915	861	643	318	118	38	24	67	210	518	1082	1855	2770	3631	4274	4592	4710	4748
55	4	15	67	189	410	623	760	706	493	187	56	11	4	19	86	275	685	1308	2068	2774	3267	3454	3510	3521
60	0	0	25	94	264	473	605	551	347	90	20	1	0	0	25	119	383	856	1461	2012	2359	2449	2469	2470
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	93	140	259	391	571	720	825	794	632	409	242	122	93	233	492	883	1454	2174	2999	3793	4425	4834	5076	5198

(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:
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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