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: GREENVILLE, NC **COOP ID: 313638**

Climate Division: NC 7 **NWS Call Sign:** **Elevation: 32 Feet** **Lat: 35˚38N** **Lon: 77˚24W**

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	51.6	31.3	41.5	82	1937	26	51.5	1974	-4	1985	21	30.4	1977	730	0	.0	.0	17.6	1.2	17.5	@
Feb	55.2	33.5	44.4	84	1997	27	52.3	1990	4	1996	5	33.6	1978	578	0	.0	.0	19.0	.5	14.5	.0
Mar	63.3	40.3	51.8	91	1985	30	55.9	1976	15+	1980	4	46.7	1971	410	1	.0	.1	27.8	.1	7.4	.0
Apr	72.4	48.3	60.4	96	1990	27	64.5	1994	27	1997	10	56.8	1975	162	23	.0	.9	29.7	.0	.6	.0
May	79.3	57.3	68.3	98+	1964	21	73.3	1991	33	1966	11	64.9	1992	38	140	.0	3.2	31.0	.0	.0	.0
Jun	85.7	65.5	75.6	102+	1964	21	79.1	1981	44+	1972	11	71.2	1979	1	319	.1	9.9	30.0	.0	.0	.0
Jul	89.1	70.2	79.7	104	1977	9	83.8	1993	51+	1975	2	76.5	1971	0	455	.5	17.0	31.0	.0	.0	.0
Aug	87.4	68.6	78.0	104+	1988	18	81.5	1988	47	1965	30	74.9	1981	0	402	.3	13.2	31.0	.0	.0	.0
Sep	82.4	62.5	72.5	100	1983	11	75.6	1980	40+	1983	25	69.3	1984	6	230	@	4.3	30.0	.0	.0	.0
Oct	73.1	49.2	61.2	95	1986	4	67.2	1984	23	1962	27	55.4	1988	177	58	.0	.3	30.9	.0	.9	.0
Nov	64.6	40.7	52.7	88	1961	1	61.5	1985	14	1970	25	45.3	1976	378	8	.0	.0	27.5	.0	7.5	.0
Dec	55.4	33.8	44.6	82+	1998	8	52.9	1971	1	1989	25	35.2	1989	632	0	.0	.0	21.5	.4	15.6	.0
Ann	71.6	50.1	60.9	104+	Aug 1988	18	83.8	Jul 1993	-4	Jan 1985	21	30.4	Jan 1977	3112	1636	.9	48.9	327.0	2.2	64.0	@

\+ 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: 1933-2001

(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	4.43	4.51	3.49	1992	4	9.34	1987	1.04	1981
Feb	3.45	3.36	3.29	1998	4	7.54	1998	.77	1991
Mar	4.07	4.02	2.24	1991	30	7.12	1980	1.38	1981
Apr	3.19	3.10	4.63	1938	9	7.20	1989	.13	1976
May	4.05	3.51	4.00	1977	24	8.51	1989	.55	1987
Jun	4.38	3.93	3.95	1966	17	11.64	1995	1.17	1975
Jul	5.20	4.36	4.21	1965	28	11.53	1984	.88	1977
Aug	5.89	5.22	7.60	1998	27	17.36	1986	.94	1975
Sep	5.39	4.43	10.75	1999	16	26.71	1999	.16	1986
Oct	3.27	2.82	3.89	1971	1	10.36	1971	.15	2000
Nov	2.79	2.81	3.70	1969	2	6.57	1992	.61	1981
Dec	3.23	3.07	2.84	1964	27	7.76	1973	.44	1988
Ann	49.34	47.67	10.75	Sep 1999	16	26.71	Sep 1999	.13	Apr 1976

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	12.9	8.2	2.9	1.2
Feb	10.0	6.4	2.5	.8
Mar	11.3	7.3	3.0	1.1
Apr	8.8	5.6	2.1	.9
May	10.9	7.0	2.8	.9
Jun	10.1	7.4	2.8	1.1
Jul	11.0	7.3	3.5	1.6
Aug	10.5	7.4	3.4	1.8
Sep	8.7	6.0	3.2	1.6
Oct	8.0	4.8	2.2	1.0
Nov	8.9	5.2	2.3	.5
Dec	11.1	6.6	2.4	.6
Ann	122.2	79.2	33.1	13.1

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	1.97	2.36	2.91	3.35	3.77	4.19	4.64	5.16	5.81	6.79	7.68
Feb	1.07	1.40	1.89	2.31	2.71	3.13	3.59	4.14	4.84	5.93	6.94
Mar	1.82	2.19	2.69	3.09	3.47	3.86	4.27	4.73	5.32	6.22	7.03
Apr	.67	.96	1.42	1.85	2.28	2.74	3.25	3.87	4.69	6.00	7.24
May	1.21	1.59	2.17	2.67	3.15	3.65	4.20	4.85	5.69	7.01	8.23
Jun	1.40	1.82	2.44	2.96	3.47	3.99	4.56	5.24	6.10	7.45	8.69
Jul	1.76	2.25	2.97	3.58	4.17	4.77	5.43	6.19	7.18	8.71	10.11
Aug	1.45	2.00	2.86	3.62	4.38	5.17	6.07	7.13	8.51	10.71	12.77
Sep	.58	.99	1.73	2.48	3.29	4.20	5.26	6.58	8.38	11.37	14.28
Oct	.58	.86	1.34	1.79	2.24	2.74	3.30	3.98	4.89	6.36	7.76
Nov	.92	1.18	1.57	1.90	2.22	2.55	2.91	3.33	3.87	4.71	5.48
Dec	.84	1.15	1.62	2.03	2.43	2.86	3.33	3.90	4.63	5.79	6.87
Ann	37.81	40.10	43.00	45.18	47.10	48.94	50.83	52.91	55.41	59.00	62.08

+ 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: 1933-2001
(3) Derived from 1971-2000 serially complete daily data

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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	.9	.0	#	0
Feb	1.3	.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	.3	.0	#	0
Ann	3.6	.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	5.0	1988	5	1988	8	#+	1996
Feb	9.0	1989	25	9.0	1989	7	1980	7	#+	1996
Mar	12.8	1980	3	16.0	1980	16	1980	3	1	1980
Apr	1.0	1989	11	1.0	1989	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	.0	0	0	.0	0	0	0	0	0	0
Dec	6.0	2000	4	6.0	2000	6	2000	4	#+	2000
Ann	12.8	Mar 1980	3	16.0	Mar 1980	16	Mar 1980	3	1	Mar 1980

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	.6	.3	.1	@	.0
Feb	.7	.5	.2	.1	.0
Mar	.2	.2	.1	.1	@
Apr	@	@	.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	.1	.1	.1	.1	.0
Ann	1.6	1.1	.5	.3	@

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	.1	@	@	.0
Feb	.4	.1	.1	.0
Mar	.2	.1	@	@
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	@	@	@	.0
Ann	.7	.2	.1	@

+ 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

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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	4/25	4/20	4/18	4/15	4/13	4/10	4/08	4/05	4/01
32	4/12	4/07	4/04	4/01	3/29	3/26	3/23	3/20	3/15
28	4/01	3/26	3/22	3/19	3/16	3/12	3/09	3/05	2/27
24	3/20	3/11	3/05	2/28	2/23	2/18	2/13	2/07	1/29
20	3/08	2/26	2/18	2/12	2/06	1/31	1/25	1/17	1/07
16	2/21	2/12	2/06	1/31	1/25	1/18	1/10	0/00	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	10/10	10/15	10/18	10/21	10/23	10/26	10/28	11/01	11/05
32	10/19	10/24	10/28	10/31	11/03	11/06	11/09	11/13	11/18
28	10/27	11/03	11/08	11/13	11/17	11/22	11/26	12/02	12/09
24	11/12	11/18	11/22	11/25	11/29	12/02	12/06	12/10	12/16
20	11/28	12/06	12/13	12/18	12/23	12/28	1/03	1/09	1/18
16	12/16	12/24	12/30	1/04	1/09	1/15	1/23	0/00	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	210	204	200	196	193	189	186	181	175
32	240	233	227	223	218	214	209	204	196
28	276	266	258	252	246	240	233	226	215
24	309	299	291	284	278	272	266	258	247
20	>365	338	328	322	316	310	305	298	289
16	>365	>365	>365	>365	354	341	331	321	309

***** 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	730	578	410	162	38	1	0	0	6	177	378	632	3112
60	587	445	267	68	7	0	0	0	1	94	248	487	2204
57	501	368	192	33	2	0	0	0	0	58	183	402	1739
55	446	318	149	18	0	0	0	0	0	40	146	348	1465
50	321	210	69	2	0	0	0	0	0	13	72	232	919
32	49	16	0	0	0	0	0	0	0	0	0	19	84

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	342	362	614	851	1126	1308	1478	1425	1213	904	621	410	10654
55	26	20	50	179	413	618	765	712	523	231	76	26	3639
57	19	13	31	134	353	558	703	650	463	188	53	18	3183
60	12	7	13	79	265	468	610	557	374	130	29	10	2554
65	0	0	1	23	140	319	455	402	230	58	8	0	1636
70	0	0	0	3	56	182	301	249	105	19	1	0	916

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	154	203	393	622	890	1076	1237	1186	986	667	394	208	154	357	750	1372	2262	3338	4575	5761	6747	7414	7808	8016
45	85	121	262	473	735	926	1082	1031	836	512	271	120	85	206	468	941	1676	2602	3684	4715	5551	6063	6334	6454
50	39	65	158	335	580	776	927	876	686	365	165	62	39	104	262	597	1177	1953	2880	3756	4442	4807	4972	5034
55	15	27	82	208	425	626	772	721	536	231	89	34	15	42	124	332	757	1383	2155	2876	3412	3643	3732	3766
60	2	10	41	116	284	476	617	566	386	125	39	11	2	12	53	169	453	929	1546	2112	2498	2623	2662	2673
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	100	135	247	393	579	739	856	825	669	421	253	135	100	235	482	875	1454	2193	3049	3874	4543	4964	5217	5352

(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