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: WILSON 3 SW, NC **COOP ID: 319476**

Climate Division: NC 7 **NWS Call Sign:** **Elevation: 110 Feet** **Lat: 35˚42N** **Lon: 77˚57W**

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	51.2	29.5	40.4	81	1952	2	51.0	1974	-5	1985	21	30.8	1977	765	0	.0	.0	16.9	1.4	19.7	.1
Feb	54.9	31.6	43.3	84	1975	24	50.7	1990	5+	1996	6	33.2	1978	610	0	.0	.0	18.1	.6	16.5	.0
Mar	63.0	38.7	50.9	91	1990	13	56.0	1976	7	1980	4	45.8	1996	440	1	.0	.1	26.9	.1	8.2	.0
Apr	72.5	46.6	59.6	96	1990	28	64.0	1977	26	1985	10	55.8	1997	184	20	.0	.7	29.7	.0	1.1	.0
May	79.7	55.5	67.6	98	1953	23	72.8	1991	33+	1966	11	62.4	1992	45	125	.0	3.0	31.0	.0	.0	.0
Jun	86.9	63.7	75.3	106+	1954	27	79.5	1981	43+	1988	5	71.2	1979	3	312	.1	11.3	30.0	.0	.0	.0
Jul	90.2	68.2	79.2	107	1952	22	83.5	1993	49	1988	2	76.6	1989	0	440	.9	18.1	31.0	.0	.0	.0
Aug	88.6	66.6	77.6	105+	1988	19	80.5	1983	45	1965	30	74.1	1981	0	390	.5	14.7	31.0	.0	.0	.0
Sep	83.3	60.3	71.8	104	1954	6	76.2	1973	38+	1989	29	67.8	1988	14	217	.1	5.5	30.0	.0	.0	.0
Oct	73.4	47.6	60.5	99+	1954	6	67.2	1971	21	1962	27	52.5	1988	200	61	.0	.4	30.9	.0	1.6	.0
Nov	64.3	39.3	51.8	89	1950	1	60.0	1985	16	1950	26	43.6	1980	405	9	.0	.0	27.3	.0	8.9	.0
Dec	54.8	32.5	43.7	81+	1991	4	52.5	1971	3	1989	25	33.9	1989	662	0	.0	.0	20.8	.6	17.1	.0
Ann	71.9	48.3	60.1	107	Jul 1952	22	83.5	Jul 1993	-5	Jan 1985	21	30.8	Jan 1977	3328	1575	1.6	53.8	323.6	2.7	73.1	.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: 1948-2001

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

Issue Date: February 2004

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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	4.31	4.09	3.23	1954	22	7.75	1987	1.38	1981
Feb	3.42	2.97	2.35	1984	14	6.18	1984	.82	1991
Mar	4.40	4.29	3.66	1998	9	7.48	1989	1.05	1985
Apr	3.12	3.00	3.08	1950	28	7.90	1989	.52	1985
May	4.08	3.79	3.45	1983	21	7.38	1984	1.18	2000
Jun	3.82	3.10	4.25	1953	22	9.34	1989	1.24	1993
Jul	5.22	4.43	7.42	1960	29	12.60	1984	1.45	1987
Aug	4.46	3.86	4.94	1998	27	11.13	1986	.98	1983
Sep	4.93	4.01	9.53	1999	16	24.62	1999	.31	1990
Oct	3.05	2.67	4.95	1999	18	7.35	1971	.00	2000
Nov	3.05	2.72	3.88	1977	7	6.51	1992	.62	1981
Dec	3.32	3.67	3.49	1964	26	7.27	1973	.50	1988
Ann	47.18	47.85	9.53	Sep 1999	16	24.62	Sep 1999	.00	Oct 2000

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	12.2	7.9	3.3	1.1
Feb	9.8	6.6	2.4	.9
Mar	11.0	7.3	3.4	1.2
Apr	8.4	5.8	2.1	.8
May	10.5	7.2	3.1	1.0
Jun	9.7	6.4	2.5	.9
Jul	11.2	7.6	3.3	1.6
Aug	10.0	6.5	3.1	1.5
Sep	8.4	5.8	3.0	1.6
Oct	7.8	4.8	2.2	.9
Nov	8.3	5.2	2.4	.7
Dec	11.1	6.4	2.4	.8
Ann	118.4	77.5	33.2	13.0

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	1.90	2.29	2.82	3.26	3.67	4.08	4.52	5.02	5.66	6.63	7.51
Feb	1.11	1.44	1.92	2.32	2.72	3.12	3.57	4.09	4.75	5.79	6.75
Mar	1.80	2.20	2.77	3.24	3.68	4.13	4.61	5.16	5.87	6.94	7.92
Apr	.77	1.06	1.51	1.92	2.32	2.74	3.21	3.77	4.50	5.66	6.75
May	1.46	1.84	2.40	2.86	3.31	3.76	4.26	4.84	5.58	6.72	7.77
Jun	1.17	1.54	2.08	2.54	2.99	3.46	3.98	4.58	5.36	6.58	7.71
Jul	1.63	2.12	2.86	3.49	4.10	4.73	5.43	6.24	7.29	8.93	10.45
Aug	1.24	1.66	2.30	2.86	3.41	3.98	4.62	5.37	6.34	7.87	9.29
Sep	.72	1.13	1.85	2.53	3.24	4.02	4.92	6.03	7.51	9.93	12.25
Oct	.43	.83	1.35	1.78	2.21	2.66	3.16	3.76	4.54	5.79	6.96
Nov	.95	1.24	1.67	2.04	2.40	2.77	3.17	3.65	4.27	5.24	6.13
Dec	.95	1.26	1.74	2.15	2.55	2.97	3.44	3.99	4.70	5.82	6.85
Ann	33.33	36.00	39.43	42.03	44.35	46.59	48.90	51.46	54.57	59.08	62.98

\+ 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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Snow (inches)

Snow Totals

Means/Medians (1)

Extremes (2)

Mean Number of Days (1)

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	.5	.0	#	0	4.0	1980	31	4.0	1980	3	1981	31	#+	1996	.2	.2	.1	.0	.0	.1	@	.0	.0
Feb	1.9	.0	#	0	8.0	1979	19	12.5	1979	8	1979	19	1	1980	.7	.7	.2	.1	.0	.3	.2	@	.0
Mar	1.3	.0	#	0	12.0	1980	3	16.3	1980	12	1980	3	1	1980	.3	.2	.2	.1	.1	.2	.2	.1	.1
Apr	#	.0	0	0	#	1989	11	#	1989	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	#	1987	12	#+	1987	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Dec	.4	.0	#	0	3.5	1971	3	3.5	1971	3	1971	3	#+	1973	.1	.1	.1	.0	.0	.1	@	.0	.0
Ann	4.1	.0	N/A	N/A	12.0	Mar 1980	3	16.3	Mar 1980	12	Mar 1980	3	1+	Mar 1980	1.3	1.2	.6	.2	.1	.7	.4	.1	.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	5/01	4/25	4/21	4/17	4/14	4/10	4/07	4/02	3/27
32	4/18	4/12	4/08	4/05	4/02	3/30	3/27	3/23	3/17
28	4/04	3/28	3/24	3/20	3/16	3/12	3/09	3/04	2/26
24	3/20	3/12	3/06	3/01	2/24	2/20	2/15	2/09	2/01
20	3/12	2/28	2/20	2/12	2/06	1/30	1/22	1/13	12/30
16	2/20	2/12	2/06	1/31	1/26	1/19	1/11	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	10/07	10/12	10/16	10/20	10/23	10/26	10/29	11/02	11/08
32	10/13	10/20	10/25	10/29	11/02	11/06	11/10	11/15	11/22
28	10/25	11/02	11/07	11/11	11/15	11/20	11/24	11/29	12/07
24	11/10	11/19	11/25	11/30	12/05	12/10	12/16	12/22	12/31
20	11/25	12/04	12/11	12/17	12/23	12/29	1/04	1/12	1/24
16	12/17	12/27	1/03	1/09	1/16	1/23	2/04	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	217	208	202	196	191	186	181	175	166
32	242	232	225	219	213	208	201	194	185
28	274	263	256	250	244	238	231	224	213
24	318	306	297	290	283	276	269	261	249
20	>365	353	334	324	315	308	300	291	280
16	>365	>365	>365	>365	355	344	335	326	315

***** 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	765	610	440	184	45	3	0	0	14	200	405	662	3328
60	620	472	296	86	10	0	0	0	3	113	275	514	2389
57	533	395	219	46	3	0	0	0	1	75	208	427	1907
55	477	344	175	28	1	0	0	0	0	54	169	372	1620
50	347	228	88	6	0	0	0	0	0	20	90	248	1027
32	58	17	0	0	0	0	0	0	0	0	0	21	96

Base — Cooling Degree Days (1)

Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	316	331	585	826	1103	1299	1463	1413	1194	884	594	382	10390
55	22	14	47	164	391	609	750	700	504	225	73	20	3519
57	16	9	29	122	331	549	688	638	444	184	51	13	3074
60	10	2	13	72	245	459	595	545	356	130	29	7	2463
65	0	0	1	20	125	312	440	390	217	61	9	0	1575
70	0	0	0	3	47	180	286	238	103	22	1	0	880

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	128	183	363	598	863	1069	1226	1176	962	646	371	188	128	311	674	1272	2135	3204	4430	5606	6568	7214	7585	7773
45	70	103	234	448	708	919	1071	1021	812	493	250	102	70	173	407	855	1563	2482	3553	4574	5386	5879	6129	6231
50	30	54	137	310	553	769	916	866	662	344	151	53	30	84	221	531	1084	1853	2769	3635	4297	4641	4792	4845
55	9	21	68	191	400	619	761	711	512	215	77	23	9	30	98	289	689	1308	2069	2780	3292	3507	3584	3607
60	0	6	27	103	260	469	606	556	368	113	35	7	0	6	33	136	396	865	1471	2027	2395	2508	2543	2550
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	91	127	229	375	557	723	836	803	644	412	245	125	91	218	447	822	1379	2102	2938	3741	4385	4797	5042	5167

(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