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: JEFFERSON 2 E, NC **COOP ID: 314496**

Climate Division: NC 2 **NWS Call Sign:** **Elevation: 2,770 Feet** **Lat: 36˚25N** **Lon: 81˚26W**

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	42.8	20.4	31.6	70	1999	28	43.4	1974	-15+	1987	27	19.6	1977	1036	0	.0	.0	9.6	5.4	25.4	1.1
Feb	45.7	22.1	33.9	74	1989	15	39.8	1976	-13	1970	4	25.1	1978	871	0	.0	.0	11.9	3.9	22.1	.4
Mar	53.7	28.6	41.2	81	1986	31	46.0	1997	2+	1996	11	35.8	1971	740	0	.0	.0	21.4	.9	17.6	.0
Apr	62.3	35.5	48.9	84	1974	1	53.5	1981	13	1985	10	44.7	1983	484	0	.0	.0	27.2	.1	9.0	.0
May	70.4	44.9	57.7	90	1996	21	63.5	1991	22	1986	4	52.9	1997	244	17	.0	@	30.8	.0	2.3	.0
Jun	77.2	53.2	65.2	90	1985	5	69.2	1994	28	1988	5	60.8	1972	62	68	.0	@	30.0	.0	@	.0
Jul	81.3	58.0	69.7	94	1988	16	73.3	1993	36	1988	2	67.0	1971	7	151	.0	.7	31.0	.0	.0	.0
Aug	80.4	56.2	68.3	96	1988	17	71.5	1995	33	1986	29	65.0	1976	15	117	.0	.5	31.0	.0	.0	.0
Sep	74.7	49.6	62.2	94	1998	14	66.0	1998	26	1983	24	59.0	1976	117	32	.0	.1	29.9	.0	.7	.0
Oct	65.2	36.9	51.1	82+	1997	7	59.3	1984	16	1988	14	44.8	1988	435	3	.0	.0	29.4	.0	9.2	.0
Nov	55.9	29.5	42.7	77+	1974	3	51.1	1985	-5	1970	24	36.9	1976	670	0	.0	.0	21.4	.3	17.5	.0
Dec	46.9	22.9	34.9	74+	1998	8	42.5	1984	-9	1983	25	26.0	1989	933	0	.0	.0	13.4	3.1	23.8	.3
Ann	63.0	38.2	50.6	96	Aug 1988	17	73.3	Jul 1993	-15+	Jan 1987	27	19.6	Jan 1977	5614	388	.0	1.3	287.0	13.7	127.6	1.8

\+ 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

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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	4.02	3.84	4.12	1998	8	10.26	1995	.91	1981
Feb	3.73	3.80	2.60	1984	14	7.60	1998	.69	1978
Mar	4.61	4.20	3.95	1979	24	9.01	1983	1.00	1988
Apr	3.93	3.57	3.30	1957	5	8.71	1987	.16	1986
May	4.89	5.26	6.05	1973	28	9.69	1973	1.09	1987
Jun	4.39	4.09	3.99	1976	17	12.34	1976	.50	1986
Jul	4.40	4.19	3.39	1967	8	9.54	1989	1.01	1983
Aug	4.31	3.96	5.22	1994	17	11.15	1994	.54	1997
Sep	3.93	3.51	5.46	1959	30	12.37	1979	.65	1984
Oct	3.35	2.73	5.36	1990	13	11.31	1990	.00	2000
Nov	3.84	3.52	4.06	1977	7	10.31	1985	.86	1990
Dec	3.28	3.16	2.90	1958	29	6.88	1986	.41	1985
Ann	48.68	49.24	6.05	May 1973	28	12.37	Sep 1979	.00	Oct 2000

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	9.5	7.2	2.4	1.0
Feb	8.7	6.4	2.6	1.0
Mar	10.4	8.0	2.9	1.1
Apr	9.0	6.7	2.7	1.1
May	11.2	8.4	3.4	1.3
Jun	10.0	7.1	2.7	1.1
Jul	11.0	8.2	2.6	1.1
Aug	9.8	7.4	2.7	1.2
Sep	8.2	6.0	2.8	1.1
Oct	6.8	4.7	2.3	1.1
Nov	8.5	6.1	2.6	1.1
Dec	9.0	6.3	2.0	.7
Ann	112.1	82.5	31.7	12.9

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	1.27	1.66	2.22	2.70	3.17	3.65	4.19	4.81	5.61	6.86	8.01
Feb	1.18	1.54	2.06	2.51	2.94	3.39	3.88	4.46	5.20	6.35	7.42
Mar	1.44	1.88	2.53	3.09	3.63	4.19	4.80	5.52	6.45	7.91	9.25
Apr	.63	.97	1.54	2.08	2.64	3.25	3.94	4.79	5.93	7.77	9.54
May	1.69	2.15	2.82	3.39	3.93	4.49	5.10	5.82	6.73	8.14	9.43
Jun	.97	1.38	2.02	2.60	3.18	3.80	4.50	5.33	6.43	8.18	9.83
Jul	1.65	2.06	2.65	3.14	3.61	4.09	4.60	5.21	5.97	7.15	8.23
Aug	1.00	1.40	2.03	2.59	3.16	3.76	4.43	5.23	6.28	7.95	9.53
Sep	.93	1.29	1.87	2.38	2.89	3.43	4.04	4.76	5.70	7.20	8.62
Oct	.18	.50	1.01	1.51	2.03	2.61	3.29	4.13	5.27	7.15	8.98
Nov	1.03	1.39	1.94	2.43	2.91	3.41	3.97	4.63	5.49	6.83	8.10
Dec	.83	1.14	1.62	2.04	2.45	2.89	3.38	3.96	4.72	5.91	7.03
Ann	34.95	37.62	41.03	43.61	45.90	48.11	50.40	52.92	55.98	60.41	64.23

\+ 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)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	7.4	6.0	1	#
Feb	7.2	6.0	1	#
Mar	2.8	.5	#	#
Apr	.5	.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	.1	.0	#	0
Nov	.8	.0	#	0
Dec	3.6	2.0	#	#
Ann	22.4	14.5	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	23.0	1998	28	23.0	1998	20	1998	28	4	1977
Feb	11.0	1983	11	24.3	1979	14	1983	12	5	1983
Mar	11.0	1981	23	14.5	1981	24	1993	14	1	1993
Apr	4.0	1983	19	5.1	1983	3	1983	19	#+	1983
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	2.0	1977	17	3.0	1977	1	1977	17	#+	1981
Nov	4.0	1971	24	8.0	1971	5	1971	25	1	1971
Dec	9.0	1974	1	14.8	1981	10	1974	3	5	1974
Ann	23.0	Jan 1998	28	24.3	Feb 1979	24	Mar 1993	14	5+	Feb 1983

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	2.9	2.0	.7	.3	.1
Feb	3.0	2.1	.8	.4	.1
Mar	1.5	.9	.3	.1	@
Apr	.4	.2	@	.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	.2	.1	.0	.0	.0
Nov	.8	.5	@	.0	.0
Dec	2.0	1.0	.4	.2	.0
Ann	10.8	6.8	2.2	1.0	.2

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	6.2	4.0	2.2	.1
Feb	5.8	3.0	1.8	.2
Mar	1.6	.8	.4	@
Apr	.3	@	.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
Nov	.8	.2	@	.0
Dec	3.5	1.6	.8	.1
Ann	18.2	9.6	5.2	.4

+ 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	6/10	6/04	5/30	5/26	5/22	5/18	5/14	5/09	5/03
32	5/24	5/19	5/16	5/13	5/10	5/07	5/04	5/01	4/26
28	5/17	5/10	5/05	5/01	4/27	4/24	4/19	4/15	4/08
24	4/24	4/19	4/15	4/12	4/09	4/06	4/03	3/30	3/25
20	4/14	4/08	4/04	3/31	3/28	3/24	3/20	3/16	3/10
16	3/29	3/22	3/18	3/14	3/10	3/06	3/02	2/26	2/19

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	9/10	9/15	9/18	9/21	9/24	9/27	9/30	10/04	10/09
32	9/19	9/23	9/27	9/30	10/02	10/05	10/08	10/11	10/16
28	10/01	10/05	10/08	10/10	10/13	10/15	10/17	10/20	10/24
24	10/10	10/15	10/18	10/21	10/24	10/27	10/30	11/03	11/08
20	10/19	10/25	10/30	11/03	11/07	11/11	11/15	11/20	11/26
16	11/05	11/11	11/15	11/19	11/22	11/26	11/29	12/04	12/09

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	147	139	134	129	124	120	115	110	102
32	164	157	152	148	144	141	137	132	125
28	190	182	177	172	168	163	158	153	145
24	217	210	206	202	198	194	190	185	179
20	252	242	235	229	224	218	212	205	195
16	283	274	267	262	257	252	246	240	231

***** 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	1036	871	740	484	244	62	7	15	117	435	670	933	5614
60	881	731	585	336	131	15	0	1	42	294	520	778	4314
57	788	647	492	251	81	5	0	0	19	219	432	685	3619
55	726	591	432	200	55	2	0	0	10	176	375	623	3190
50	583	452	290	95	15	0	0	0	2	91	243	480	2251
32	170	80	16	0	0	0	0	0	0	0	11	99	376

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	157	133	299	507	796	995	1167	1125	904	591	331	188	7193
55	0	0	2	16	138	307	454	412	225	54	6	0	1614
57	0	0	0	8	101	250	392	350	174	36	2	0	1313
60	0	0	0	2	59	170	299	258	107	17	0	0	912
65	0	0	0	0	17	68	151	117	32	3	0	0	388
70	0	0	0	0	3	14	46	29	4	0	0	0	96

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	45	64	172	341	587	781	935	890	675	372	169	70	45	109	281	622	1209	1990	2925	3815	4490	4862	5031	5101
45	16	27	90	216	433	631	780	735	525	236	87	36	16	43	133	349	782	1413	2193	2928	3453	3689	3776	3812
50	0	5	38	120	287	481	625	580	378	126	36	12	0	5	43	163	450	931	1556	2136	2514	2640	2676	2688
55	0	0	6	50	161	334	470	425	240	55	7	0	0	0	6	56	217	551	1021	1446	1686	1741	1748	1748
60	0	0	1	13	69	195	315	270	127	9	0	0	0	0	1	14	83	278	593	863	990	999	999	999
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	32	51	120	224	362	502	619	582	420	245	120	53	32	83	203	427	789	1291	1910	2492	2912	3157	3277	3330

(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