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: BAYBORO 3 E, NC **COOP ID: 310576**

Climate Division: NC 7 **NWS Call Sign:** **Elevation: 10 Feet** **Lat: 35˚09N** **Lon: 76˚43W**

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	55.6	33.8	44.7	80	1974	27	55.7	1974	-1	1985	21	33.7	1977	633	0	.0	.0	22.2	.4	14.4	@
Feb	58.9	35.1	47.0	83	1989	3	55.0	1990	4	1973	13	36.4	1978	503	0	.0	.0	21.8	.3	12.8	.0
Mar	66.0	41.2	53.6	91	1985	30	59.8	1997	10	1980	4	48.7	1981	361	8	.0	.1	29.2	@	7.0	.0
Apr	74.2	48.4	61.3	93+	1990	27	65.5	1995	27+	1996	10	57.1	1983	144	33	.0	.8	30.0	.0	1.1	.0
May	80.5	57.4	69.0	96+	1996	20	73.8	1991	35	1986	11	64.3	1992	23	145	.0	2.2	31.0	.0	.0	.0
Jun	86.1	65.6	75.9	102	1985	10	80.7	1981	44	1977	8	71.6	1972	1	325	@	8.2	30.0	.0	.0	.0
Jul	89.3	69.8	79.6	100+	1983	17	82.3	1986	50	1975	2	76.5	1974	0	452	.1	16.0	31.0	.0	.0	.0
Aug	87.9	68.5	78.2	107	1999	1	80.7	1999	49	1976	19	75.1	1976	0	409	.1	12.2	31.0	.0	.0	.0
Sep	84.2	63.4	73.8	98	1993	1	77.1	1980	40	1981	24	69.8	1994	4	269	.0	4.0	30.0	.0	.0	.0
Oct	75.5	51.7	63.6	96	1986	4	69.9	1985	26	1976	29	57.3	1988	130	88	.0	.2	31.0	.0	.5	.0
Nov	67.5	43.2	55.4	88	1996	2	64.9	1985	16	1996	28	47.7	1976	306	17	.0	.0	29.2	.0	5.5	.0
Dec	58.9	36.1	47.5	82	1998	6	55.1	1971	-4	1989	25	37.1	1989	550	6	.0	.0	25.3	.2	11.8	@
Ann	73.7	51.2	62.5	107	Aug 1999	1	82.3	Jul 1986	-4	Dec 1989	25	33.7	Jan 1977	2655	1752	.2	43.7	341.7	.9	53.1	.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: 1968-2001

(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	4.52	4.89	3.15	1992	3	7.63	1994	1.20	1981
Feb	3.25	3.39	2.62	1998	17	7.10	1983	.92	1986
Mar	4.08	3.94	3.24	1994	2	8.08	1980	1.59	1995
Apr	3.34	3.40	3.45	1974	5	7.26	2000	.34	1995
May	4.71	4.13	6.15	1976	29	9.53	1998	1.69	1986
Jun	4.76	4.49	3.50	1995	6	9.82	1995	.03	1978
Jul	6.29	5.64	4.72	1997	11	13.01	1997	1.93	1992
Aug	7.34	6.89	4.78	1981	20	16.02	1981	1.46	1993
Sep	5.41	4.72	8.58	1971	30	15.74	1999	.16	1986
Oct	4.04	3.04	5.88	1971	23	16.18	1971	.17	2000
Nov	3.32	2.69	4.15	1985	4	8.60	1985	.92+	1998
Dec	3.68	3.72	2.77	1989	8	10.20	1973	.62	1988
Ann	54.74	55.02	8.58	Sep 1971	30	16.18	Oct 1971	.03	Jun 1978

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	10.7	7.8	3.1	1.3
Feb	8.6	5.9	2.0	.7
Mar	9.6	6.5	3.0	1.0
Apr	8.1	5.5	2.4	1.0
May	10.7	7.4	2.8	1.2
Jun	10.3	7.2	3.3	1.4
Jul	12.7	8.7	4.0	1.9
Aug	12.5	9.1	4.4	2.3
Sep	9.4	6.5	3.3	1.7
Oct	7.2	4.6	2.4	1.2
Nov	6.7	4.6	2.1	.9
Dec	7.5	5.3	2.1	.6
Ann	114.0	79.1	34.9	15.2

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	1.62	2.04	2.66	3.17	3.66	4.17	4.72	5.36	6.18	7.44	8.59
Feb	.93	1.23	1.70	2.11	2.50	2.92	3.37	3.91	4.61	5.71	6.73
Mar	1.77	2.14	2.65	3.07	3.46	3.85	4.28	4.76	5.38	6.31	7.15
Apr	.65	.95	1.44	1.89	2.35	2.84	3.39	4.06	4.95	6.37	7.72
May	1.47	1.92	2.58	3.15	3.70	4.27	4.90	5.64	6.59	8.07	9.44
Jun	.85	1.27	1.97	2.62	3.28	4.00	4.81	5.80	7.12	9.25	11.28
Jul	2.13	2.73	3.60	4.33	5.04	5.77	6.56	7.49	8.68	10.52	12.22
Aug	2.16	2.86	3.91	4.81	5.69	6.61	7.62	8.81	10.35	12.76	15.00
Sep	.70	1.13	1.90	2.66	3.45	4.33	5.35	6.61	8.31	11.10	13.79
Oct	.38	.67	1.22	1.78	2.39	3.08	3.90	4.92	6.33	8.67	10.97
Nov	1.00	1.31	1.78	2.19	2.58	3.00	3.45	3.98	4.67	5.74	6.74
Dec	1.00	1.35	1.88	2.35	2.80	3.28	3.81	4.44	5.25	6.53	7.73
Ann	40.80	43.54	47.03	49.66	51.99	54.22	56.52	59.06	62.11	66.52	70.32

\+ 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: 1968-2001
(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	.3	.0	#	0
Feb	.8	.0	#	0
Mar	.9	.0	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	.7	.0	#	0
Ann	2.7	.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	2.5	1980	31	2.5	1980	3	1980	31	#+	2000
Feb	14.0	1973	10	14.5	1973	14	1973	10	2	1973
Mar	18.0	1980	3	20.0	1980	0	0	0	0	0
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	.0	0	0	.0	0	0	0	0	0	0
Dec	8.5	1989	24	13.0	1989	12	1989	24	1	1989
Ann	18.0	Mar 1980	3	20.0	Mar 1980	14	Feb 1973	10	2	Feb 1973

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	.2	.1	.0	.0	.0
Feb	.2	.1	@	@	@
Mar	.2	.1	@	@	@
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	.1	.1	.1	.1	.0
Ann	.7	.4	.1	.1	@

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	.1	@	.0	.0
Feb	.2	.2	.2	.1
Mar	.0	.0	.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	.2	.1	.1
Ann	.6	.4	.3	.2

+ 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	4/30	4/26	4/22	4/19	4/17	4/14	4/11	4/07	4/03
32	4/18	4/12	4/08	4/05	4/02	3/30	3/26	3/22	3/17
28	4/03	3/28	3/24	3/21	3/18	3/14	3/11	3/07	3/01
24	3/19	3/12	3/07	3/03	2/27	2/22	2/18	2/13	2/06
20	3/12	3/04	2/27	2/22	2/18	2/14	2/09	2/04	1/27
16	2/16	2/08	2/02	1/27	1/22	1/16	1/08	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	10/13	10/18	10/22	10/25	10/29	11/02	11/07	11/13
32	10/15	10/23	10/28	11/02	11/06	11/10	11/15	11/20	11/27
28	10/30	11/06	11/11	11/15	11/19	11/23	11/27	12/02	12/09
24	11/17	11/23	11/27	12/01	12/05	12/08	12/12	12/16	12/22
20	11/28	12/10	12/19	12/26	1/02	1/09	1/17	1/26	2/07
16	12/16	12/25	12/31	1/06	1/12	1/19	1/30	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	216	208	201	196	191	186	181	175	166
32	245	235	229	223	217	212	206	199	190
28	267	260	254	250	246	242	237	232	225
24	305	296	290	285	280	275	270	264	256
20	>365	341	330	321	313	306	299	290	278
16	>365	>365	>365	>365	>365	350	338	327	314

***** 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	633	503	361	144	23	1	0	0	4	130	306	550	2655
60	489	374	226	60	3	0	0	0	0	62	190	406	1810
57	406	300	161	30	0	0	0	0	0	35	135	326	1393
55	354	254	125	17	0	0	0	0	0	22	103	278	1153
50	241	159	56	3	0	0	0	0	0	6	44	178	687
32	23	7	0	0	0	0	0	0	0	0	0	10	40

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	417	428	670	879	1145	1314	1475	1432	1255	981	701	490	11187
55	35	30	82	206	432	624	762	719	565	290	114	44	3903
57	25	20	56	159	370	564	700	657	505	240	85	31	3412
60	15	11	28	99	280	474	607	564	415	174	50	17	2734
65	0	0	8	33	145	325	452	409	269	88	17	6	1752
70	0	0	0	6	52	186	297	254	137	33	3	0	968

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	216	254	438	645	912	1081	1241	1195	1019	731	469	277	216	470	908	1553	2465	3546	4787	5982	7001	7732	8201	8478
45	125	157	299	495	757	931	1086	1040	869	576	333	169	125	282	581	1076	1833	2764	3850	4890	5759	6335	6668	6837
50	64	86	182	353	602	781	931	885	719	424	211	89	64	150	332	685	1287	2068	2999	3884	4603	5027	5238	5327
55	28	42	102	224	447	631	776	730	569	286	113	41	28	70	172	396	843	1474	2250	2980	3549	3835	3948	3989
60	7	14	46	121	298	481	621	575	420	163	52	15	7	21	67	188	486	967	1588	2163	2583	2746	2798	2813
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	138	169	280	414	605	751	868	843	702	474	293	172	138	307	587	1001	1606	2357	3225	4068	4770	5244	5537	5709

(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.
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