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: BURLINGTON FIRE STN #5, NC **COOP ID: 311239**

Climate Division: NC 3 **NWS Call Sign:** **Elevation: 660 Feet** **Lat: 36˚04N** **Lon: 79˚27W**

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	49.7	27.6	38.7	84	1997	4	48.7	1974	-6	1985	21	28.8	1977	816	0	.0	.0	15.3	1.8	22.3	.2
Feb	53.8	29.9	41.9	83	1977	27	50.4	1976	4+	1996	5	33.8	1979	648	0	.0	.0	17.1	.9	18.0	.0
Mar	62.4	37.3	49.9	89	1990	13	55.5	1976	8	1993	15	43.5	1996	472	2	.0	.0	26.5	.1	9.9	.0
Apr	72.1	45.1	58.6	95	1990	27	62.4	1977	22	1986	11	54.3	1983	206	15	.0	.6	29.5	.0	1.6	.0
May	79.1	54.3	66.7	98+	1996	22	71.6	1982	29	1983	10	62.7+	1997	57	109	.0	2.2	31.0	.0	@	.0
Jun	86.8	63.3	75.1	105	1954	27	78.5	1981	43	1996	2	71.3	1997	2	303	.2	10.5	30.0	.0	.0	.0
Jul	90.6	67.9	79.3	105+	1977	8	82.4	1993	48+	1988	4	76.6	1984	0	441	.7	18.0	31.0	.0	.0	.0
Aug	89.0	65.9	77.5	104	1988	19	81.1	1983	41	1986	30	73.9	1992	0	387	.4	14.1	31.0	.0	.0	.0
Sep	82.3	59.1	70.7	103	1954	6	75.4	1980	36	1981	20	67.6	1988	21	193	@	4.6	30.0	.0	.0	.0
Oct	72.6	46.3	59.5	96+	1954	6	65.7	1971	24	1962	27	52.7	1987	212	38	.0	.1	30.6	.0	1.2	.0
Nov	63.1	37.8	50.5	86	1974	3	56.9	1985	15+	1987	12	45.2	1976	438	1	.0	.0	26.8	.0	9.5	.0
Dec	53.4	30.4	41.9	79+	1998	8	50.0	1971	-4	1980	26	31.8	1989	716	0	.0	.0	18.6	.8	19.2	@
Ann	71.2	47.1	59.2	105+	Jul 1977	8	82.4	Jul 1993	-6	Jan 1985	21	28.8	Jan 1977	3588	1489	1.3	50.1	317.4	3.6	81.7	.2

\+ 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: 1950-2001

(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	3.88	3.98	2.70	1962	6	8.43	1978	.96	1986
Feb	3.35	3.34	2.81	1984	14	6.85	1984	1.19	1978
Mar	4.22	3.70	3.10	1993	4	8.50	1993	1.36	1985
Apr	3.24	2.92	3.60	1978	26	7.59	1983	.47	1976
May	4.15	4.09	2.90	1973	28	8.75	1974	1.04	2000
Jun	4.11	3.35	4.60	1980	26	12.00	1995	.89	1990
Jul	4.45	4.24	4.30	1981	4	9.63	1985	.79	1983
Aug	4.04	3.59	4.67	1995	28	10.19	1985	.36	1998
Sep	4.22	3.43	5.15	1996	6	12.80	1999	.07	1985
Oct	3.29	2.78	6.71	1954	15	8.74	1971	.02	2000
Nov	2.99	2.65	2.77	1962	9	8.86	1985	.40	1991
Dec	3.14	3.01	3.35	1958	28	6.95	1983	.75	1994
Ann	45.08	45.76	6.71	Oct 1954	15	12.80	Sep 1999	.02	Oct 2000

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	10.6	7.3	3.1	1.0
Feb	8.9	6.1	2.5	.8
Mar	10.2	7.3	3.2	1.2
Apr	8.5	5.9	2.4	.8
May	10.5	7.3	3.2	1.4
Jun	9.6	6.8	2.5	1.2
Jul	10.2	6.9	3.1	1.4
Aug	8.6	6.0	2.8	1.0
Sep	8.0	5.4	2.7	1.4
Oct	7.2	4.9	2.1	1.2
Nov	8.6	5.5	2.1	.7
Dec	9.8	6.0	2.3	.8
Ann	110.7	75.4	32.0	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	1.32	1.69	2.22	2.68	3.11	3.56	4.05	4.62	5.36	6.49	7.54
Feb	1.16	1.48	1.94	2.33	2.70	3.08	3.50	3.98	4.61	5.57	6.45
Mar	1.49	1.88	2.46	2.95	3.41	3.89	4.41	5.02	5.79	6.99	8.10
Apr	.76	1.06	1.54	1.96	2.38	2.83	3.33	3.92	4.70	5.94	7.10
May	1.39	1.79	2.36	2.85	3.32	3.80	4.33	4.95	5.74	6.97	8.10
Jun	.68	1.04	1.63	2.20	2.78	3.42	4.14	5.02	6.20	8.11	9.94
Jul	1.09	1.51	2.16	2.74	3.31	3.91	4.58	5.38	6.43	8.08	9.64
Aug	1.09	1.47	2.06	2.57	3.07	3.60	4.18	4.88	5.78	7.19	8.51
Sep	.34	.62	1.17	1.75	2.40	3.14	4.02	5.14	6.68	9.27	11.82
Oct	.42	.69	1.15	1.61	2.10	2.63	3.25	4.02	5.05	6.75	8.40
Nov	.76	1.04	1.48	1.86	2.24	2.64	3.09	3.62	4.31	5.41	6.43
Dec	.94	1.24	1.68	2.07	2.44	2.83	3.26	3.76	4.42	5.43	6.38
Ann	34.20	36.37	39.11	41.17	42.98	44.73	46.52	48.49	50.87	54.29	57.22

+ 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: 1950-2001
(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	.7	.0	#	0	6.0	1996	7	6.1	1973	10	1987	22	1	1987	.3	.2	.1	.1	.0	.0	.0	.0	.0
Feb	.4	.0	#	0	3.0	1989	19	3.0	1989	1	1977	19	#+	1999	.4	.3	.1	.0	.0	.1	.0	.0	.0
Mar	.4	.0	#	0	3.5	1971	26	3.5	1971	4	1971	26	#+	1974	.2	.1	.1	.0	.0	@	@	.0	.0
Apr	#	.0	0	0	#	1987	5	#+	1987	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	#	1976	13	#+	1976	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Dec	.7	.0	#	0	6.0	1973	17	6.0	1973	6	1973	17	#+	1997	.2	.2	.1	.1	.0	@	@	@	.0
Ann	2.2	.0	N/A	N/A	6.0+	Jan 1996	7	6.1	Jan 1973	10	Jan 1987	22	1	Jan 1987	1.1	.8	.4	.2	.0	.1	@	@	.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	5/01	4/27	4/23	4/20	4/17	4/15	4/12	4/08	4/04
32	4/21	4/16	4/12	4/09	4/06	4/03	3/31	3/27	3/22
28	4/15	4/08	4/03	3/30	3/26	3/22	3/17	3/13	3/06
24	3/29	3/21	3/15	3/11	3/06	3/01	2/25	2/19	2/11
20	3/15	3/07	3/01	2/24	2/20	2/15	2/10	2/05	1/28
16	3/07	2/25	2/18	2/12	2/06	1/31	1/24	1/14	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	10/03	10/08	10/11	10/14	10/17	10/20	10/23	10/27	11/01
32	10/10	10/17	10/22	10/26	10/30	11/03	11/07	11/12	11/18
28	10/23	10/30	11/03	11/07	11/11	11/15	11/18	11/23	11/29
24	11/08	11/15	11/20	11/25	11/28	12/02	12/07	12/12	12/18
20	11/23	12/01	12/06	12/11	12/15	12/20	12/24	12/30	1/07
16	12/05	12/14	12/21	12/27	1/01	1/07	1/14	1/23	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	204	196	191	186	182	178	173	167	160
32	235	225	218	212	206	200	194	187	177
28	259	249	241	235	229	224	217	210	200
24	295	285	278	272	267	261	255	248	238
20	329	318	310	304	298	292	285	278	267
16	>365	>365	354	338	326	317	307	297	283

***** 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	816	648	472	206	57	2	0	0	21	212	438	716	3588
60	661	508	328	100	14	0	0	0	4	114	298	565	2592
57	576	426	249	57	5	0	0	0	1	72	222	479	2087
55	517	375	203	36	2	0	0	0	0	50	177	422	1782
50	378	250	110	8	0	0	0	0	0	16	90	291	1143
32	59	16	1	0	0	0	0	0	0	0	0	31	107

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	266	293	554	798	1076	1292	1464	1410	1162	849	553	338	10055
55	11	7	43	144	365	602	751	697	472	187	40	15	3334
57	8	2	27	105	305	542	689	635	413	147	25	10	2908
60	0	0	13	59	222	452	596	542	326	96	11	4	2321
65	0	0	2	15	109	303	441	387	193	38	1	0	1489
70	0	0	0	2	38	167	286	237	89	11	0	0	830

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	101	149	331	567	832	1057	1212	1162	920	598	324	146	101	250	581	1148	1980	3037	4249	5411	6331	6929	7253	7399
45	45	80	212	421	677	907	1057	1007	770	448	208	72	45	125	337	758	1435	2342	3399	4406	5176	5624	5832	5904
50	16	35	120	287	522	757	902	852	620	302	117	32	16	51	171	458	980	1737	2639	3491	4111	4413	4530	4562
55	3	13	57	168	369	607	747	697	471	178	50	11	3	16	73	241	610	1217	1964	2661	3132	3310	3360	3371
60	0	1	21	89	230	457	592	542	326	86	14	1	0	1	22	111	341	798	1390	1932	2258	2344	2358	2359
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	72	110	215	359	537	713	825	795	607	380	213	100	72	182	397	756	1293	2006	2831	3626	4233	4613	4826	4926

(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