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: GOLDSBORO 4 SE, NC **COOP ID: 313510**

Climate Division: NC 7 **NWS Call Sign: GSB** **Elevation: 109 Feet** **Lat: 35˚21N** **Lon: 77˚58W**

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	53.7	33.0	43.4	85	1928	16	53.3	1974	0	1918	4	32.8	1977	679	0	.0	.0	18.1	1.4	15.6	@
Feb	57.6	35.4	46.5	87	1965	12	54.2	1990	2	1912	12	36.2	1978	519	0	.0	.0	19.1	.4	12.3	.0
Mar	65.6	41.6	53.6	96	1907	30	58.6	1997	10	1980	4	48.6	1996	360	7	.0	.1	28.1	.1	5.1	.0
Apr	75.0	49.7	62.4	98+	1930	13	66.1	1977	16	1931	30	57.9	1983	122	42	.0	.8	29.8	.0	.4	.0
May	82.1	58.4	70.3	102	1941	28	75.2	1998	32	1963	2	65.8	1992	24	186	@	4.1	31.0	.0	.0	.0
Jun	88.4	66.4	77.4	106+	1954	28	82.4	1998	40	1900	12	72.9+	1979	1	372	.3	11.4	30.0	.0	.0	.0
Jul	91.4	71.0	81.2	108	1932	22	85.2	1993	43	1900	12	77.3	2000	0	503	1.3	19.7	31.0	.0	.0	.0
Aug	89.3	69.6	79.5	107	1932	31	84.0	1988	45	1900	12	76.4	1996	0	447	.6	14.4	31.0	.0	.0	.0
Sep	84.3	63.5	73.9	105	1932	1	78.7	1998	31	1900	12	70.4	1984	6	272	@	6.0	30.0	.0	.0	.0
Oct	74.9	50.7	62.8	99	1941	6	68.5	1984	22+	1969	24	57.0	1976	147	78	.0	.5	30.8	.0	.5	.0
Nov	66.3	42.6	54.5	90	1900	9	62.6	1985	15	1950	26	46.7	1976	330	13	.0	.0	27.9	.0	5.6	.0
Dec	57.1	35.5	46.3	86	1998	8	53.6	1971	1	1989	25	36.3	1989	583	2	.0	.0	21.7	.5	13.7	.0
Ann	73.8	51.5	62.7	108	Jul 1932	22	85.2	Jul 1993	0	Jan 1918	4	32.8	Jan 1977	2771	1922	2.2	57.0	328.5	2.4	53.2	@

+ 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: 1900-2001

(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	4.54	4.42	2.80	1977	10	8.15	1998	1.91	1986
Feb	3.61	2.82	2.30	1998	4	7.23	1998	1.35	1978
Mar	4.48	4.23	3.08	2001	21	7.95	1983	1.38	1985
Apr	3.39	2.95	4.80	1973	1	8.20	1998	.54	1976
May	3.80	3.52	7.10	1921	14	9.43	1990	.74	1985
Jun	3.97	3.93	3.52	1947	27	10.93	1995	.91	1984
Jul	5.39	4.68	7.35	1950	28	13.64	1991	1.18	1977
Aug	5.70	5.05	7.16	1992	16	16.79	1992	1.31	1975
Sep	5.34	4.06	7.02	1928	18	30.51	1999	.08	1990
Oct	3.07	2.65	7.86	1942	12	9.68	1971	.03	2000
Nov	3.19	2.68	5.00	1977	6	7.80	1985	.53	1981
Dec	3.36	3.05	3.83	1931	4	7.86	1973	.68	1988
Ann	49.84	49.96	7.86	Oct 1942	12	30.51	Sep 1999	.03	Oct 2000

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	11.2	8.0	3.2	1.0
Feb	9.3	6.7	2.7	1.1
Mar	9.9	7.2	3.0	1.3
Apr	8.1	5.8	2.3	.9
May	9.6	6.9	2.5	1.0
Jun	9.4	6.5	2.9	1.1
Jul	11.7	8.2	3.2	1.5
Aug	10.7	8.2	3.7	1.5
Sep	8.3	5.9	2.9	1.8
Oct	6.6	4.8	1.8	.9
Nov	7.8	5.2	2.2	.8
Dec	9.9	6.0	2.4	.9
Ann	112.5	79.4	32.8	13.8

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	1.99	2.40	2.96	3.42	3.86	4.29	4.76	5.30	5.97	7.00	7.93
Feb	1.17	1.51	2.02	2.45	2.86	3.29	3.76	4.32	5.03	6.13	7.15
Mar	1.60	2.02	2.63	3.14	3.63	4.13	4.68	5.32	6.13	7.39	8.54
Apr	.78	1.09	1.59	2.03	2.48	2.95	3.48	4.11	4.94	6.25	7.49
May	1.10	1.46	2.01	2.48	2.94	3.42	3.95	4.57	5.38	6.65	7.82
Jun	.97	1.35	1.93	2.44	2.95	3.49	4.09	4.81	5.75	7.23	8.62
Jul	1.61	2.13	2.89	3.55	4.19	4.86	5.60	6.46	7.58	9.33	10.95
Aug	1.65	2.19	3.01	3.71	4.40	5.12	5.91	6.85	8.06	9.96	11.73
Sep	.35	.67	1.33	2.06	2.88	3.84	5.00	6.47	8.52	12.01	15.46
Oct	.40	.65	1.09	1.52	1.97	2.46	3.04	3.75	4.71	6.28	7.80
Nov	.81	1.11	1.58	1.99	2.39	2.82	3.29	3.86	4.60	5.76	6.85
Dec	.88	1.20	1.68	2.11	2.53	2.98	3.47	4.05	4.81	6.01	7.14
Ann	36.73	39.30	42.58	45.06	47.25	49.36	51.53	53.92	56.81	60.99	64.59

+ 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: 1900-2001
(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	1.2	.0	#	0	7.8	1988	7	10.8	1988	6+	1973	9	1+	1988	.5	.4	.1	.1	.0	1.1	.3	.1	.0
Feb	1.4	.0	#	0	9.0	1979	19	12.5	1979	10	1973	11	1+	1980	.6	.4	.2	.1	.0	.8	.3	.1	@
Mar	.4	.0	#	0	6.0	1983	25	6.0	1983	13	1980	3	1	1980	.2	.1	.1	@	.0	.2	.1	.1	@
Apr	.0	.0	0	0	.5	1989	11	.5	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	#	1999	.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	11	#+	1987	#	1971	28	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Dec	.5	.0	#	0	4.0	1989	23	8.8	1989	8	1989	24	1	1989	.3	.2	.1	.0	.0	.4	.1	.1	.0
Ann	3.5	.0	N/A	N/A	9.0	Feb 1979	19	12.5	Feb 1979	13	Mar 1980	3	1+	Dec 1989	1.6	1.1	.5	.2	.0	2.5	.8	.4	.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	4/25	4/19	4/14	4/10	4/06	4/03	3/30	3/25	3/18
32	4/11	4/05	3/31	3/27	3/24	3/20	3/16	3/12	3/05
28	3/28	3/21	3/17	3/13	3/09	3/05	3/01	2/24	2/18
24	3/12	3/04	2/27	2/22	2/17	2/13	2/08	2/02	1/24
20	2/28	2/19	2/12	2/06	1/31	1/25	1/18	1/09	0/00
16	2/16	2/08	2/02	1/26	1/19	1/06	0/00	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	10/13	10/18	10/21	10/25	10/28	10/30	11/03	11/06	11/11
32	10/21	10/27	10/31	11/04	11/07	11/10	11/14	11/18	11/24
28	11/03	11/09	11/14	11/18	11/22	11/26	11/30	12/04	12/11
24	11/13	11/23	11/29	12/05	12/11	12/16	12/22	12/29	1/10
20	12/04	12/14	12/21	12/28	1/03	1/09	1/16	1/26	0/00
16	12/20	12/29	1/04	1/11	1/18	1/31	0/00	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	229	220	214	208	203	198	193	187	178
32	257	247	239	233	228	222	216	208	199
28	285	276	269	263	257	252	246	239	229
24	332	315	307	300	294	288	282	274	264
20	>365	>365	362	343	332	323	315	306	294
16	>365	>365	>365	>365	>365	361	346	334	321

***** 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	679	519	360	122	24	1	0	0	6	147	330	583	2771
60	534	390	224	46	4	0	0	0	1	73	208	440	1920
57	452	315	159	21	1	0	0	0	0	43	149	358	1498
55	400	269	122	11	0	0	0	0	0	28	116	308	1254
50	285	172	54	1	0	0	0	0	0	8	52	201	773
32	41	10	0	0	0	0	0	0	0	0	0	14	65

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	393	415	670	910	1185	1361	1526	1470	1257	954	673	456	11270
55	39	30	79	231	472	671	813	757	567	269	100	37	4065
57	29	20	53	181	411	611	751	695	507	222	73	25	3578
60	18	11	26	116	321	521	658	602	417	160	41	14	2905
65	0	0	7	42	186	372	503	447	272	78	13	2	1922
70	0	0	0	9	87	231	348	293	144	29	2	0	1143

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	169	227	421	653	928	1115	1271	1222	1021	701	433	233	169	396	817	1470	2398	3513	4784	6006	7027	7728	8161	8394
45	96	136	282	507	773	965	1116	1067	871	546	301	135	96	232	514	1021	1794	2759	3875	4942	5813	6359	6660	6795
50	48	74	172	364	618	815	961	912	721	396	191	70	48	122	294	658	1276	2091	3052	3964	4685	5081	5272	5342
55	21	35	92	235	464	665	806	757	571	259	107	37	21	56	148	383	847	1512	2318	3075	3646	3905	4012	4049
60	4	11	44	131	318	515	651	602	421	147	50	11	4	15	59	190	508	1023	1674	2276	2697	2844	2894	2905
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	102	143	254	408	611	766	884	853	697	445	264	140	102	245	499	907	1518	2284	3168	4021	4718	5163	5427	5567

(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