# 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

**COOP ID: 310286** 

Lon: 79°50W

**Station: ASHEBORO 2 W, NC** 

Climate Division: NC 4 NWS Call Sign:

Temperature (°F) Degree Days (1) Mean (1) Mean Number of Days (3) **Extremes** Base Temp 65 Max Max Max Max Min Min Highest Lowest Daily Daily Highest Lowest Month(1) Month(1) Cooling >= >= >= <= <= <= Month Mean Year Day Year Year Day Year Heating Max Min Daily(2) Daily(2) Mean Mean 100 90 50 32 32 0 48.5 30.2 39.4 79+ 1949 25 48.9 1974 -8 1985 21 27.4 1977 796 0 .0 .0 15.6 1.4 18.4 Jan 53.2 32.7 43.0 82 1977 26 50.6 1976 2 1996 5 33.8 1978 618 0 .0 .0 18.3 .7 14.0 0. Feb Mar 61.7 39.7 50.7 92 1945 17 55.1 1976 8 1980 3 45.0 1996 444 2 .0 @ 27.7 .1 7.2 0. 47.0 24+1983 Apr 71.0 59.0 93 +1985 20 63.3 1994 1985 10 54.3 196 16 .0. .4 29.6 .0 1.3 0. May 77.4 55.6 66.5 97+ 1941 29 71.6 1991 33 1989 8 63.4 1992 58 105 .0 1.1 31.0 .0 .0 .0 83.9 73.9 1954 78.3 39 70.0 Jun 63.9 103 27 1986 1996 1979 4 271 .0 6.2 30.0 .0 .0 .0 Jul 87.7 78.2 103 1952 28 82.6 1993 51+ 1988 2 74.9 1984 408 13.3 31.0 .0 68.6 .4 .0 .0 85.6 67.4 76.5 105 1988 18 79.6 1988 47 1946 31 73.6 1992 0 357 .3 10.2 31.0 .0 .0 .0 Aug 15 @ Sep 79.6 61.1 70.4 100 1983 11 74.0 1980 36+ 1950 26 67.8 1974 175 3.1 30.0 .0 .0 .0 70.3 27 54.5 202 Oct 49.0 59.7 96 1954 5 66.7 1984 21 1962 1988 36 .0 .2 30.9 .0 .6 .0 60.7 40.1 50.4 87 1974 2 57.8 1985 10 1950 26 43.0 1976 440 2 .0 .0 26.4 .0 .0 Nov 6.8 Dec 51.5 33.0 42.3 79+ 1984 30 50.7 1984 -1 1983 25 34.3 1989 705 0 .0 .0 19.0 .6 15.3 **(**a) Aug Jul Jan Jan 69.3 49.0 59.2 105 1988 18 82.6 1993 -8 1985 21 27.4 1977 3478 1372 .7 34.5 320.5 2.8 63.6 .1 Ann

Complete documentation available from: www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

Issue Date: February 2004 004-A

(1) From the 1971-2000 Monthly Normals

Elevation: 870 Feet Lat: 35°42N

- (2) Derived from station's available digital record: 1933-2001
- (3) Derived from 1971-2000 serially complete daily data

<sup>+</sup> Also occurred on an earlier date(s)

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

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										Pı	recipi	tation	(incl	nes)										
	Mea	ans/	P	recip	itatio	on Total						ays (3	)	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										
	Medi	ans(1)				Extremes	8			Daily Precipitation				These values were determined from the incomplete gamma distribution										
Month	Mean	Med- ian	Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year	>= 0.01	>= 0.10	>= 0.50	>= 1.00	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	4.43	4.36	2.63	1962	6	8.72	1978	.81	1981	11.5	8.0	3.4	1.2	1.42	1.84	2.46	2.99	3.50	4.03	4.61	5.29	6.16	7.52	8.78
Feb	3.71	3.63	2.61	1946	10	7.09	1989	.62	1978	9.9	6.3	2.6	1.1	1.06	1.42	1.95	2.41	2.86	3.33	3.85	4.46	5.25	6.50	7.66
Mar	4.27	4.02	2.85	1952	4	8.35	1993	1.40	1985	10.7	7.4	3.4	1.0	1.60	2.00	2.57	3.05	3.50	3.97	4.47	5.05	5.79	6.93	7.98
Apr	3.49	3.70	4.04	1992	21	7.21	1987	.48	1976	8.7	6.2	2.3	.9	.91	1.24	1.75	2.19	2.63	3.09	3.60	4.21	5.00	6.25	7.41
May	4.19	4.34	2.74	1993	4	9.70	1975	.61	1999	11.0	7.2	3.0	1.3	1.05	1.45	2.06	2.60	3.13	3.69	4.32	5.07	6.04	7.58	9.03
Jun	3.93	3.09	5.53	1976	3	9.44	1972	.81	1986	10.6	6.2	2.5	.9	.95	1.32	1.89	2.40	2.91	3.44	4.04	4.76	5.69	7.17	8.56
Jul	4.12	3.55	5.03	1944	14	13.88	1975	1.21	1993	10.8	7.4	2.8	1.1	1.07	1.46	2.06	2.59	3.11	3.65	4.26	4.98	5.91	7.39	8.77
Aug	4.26	3.73	9.50	1949	16	10.94	1985	.72	1984	10.2	6.9	2.7	1.1	1.36	1.77	2.37	2.88	3.37	3.88	4.44	5.10	5.94	7.25	8.47
Sep	4.22	3.62	5.19	1979	5	11.23	1999	.04	1985	8.9	5.6	2.8	1.3	.42	.73	1.30	1.89	2.53	3.24	4.09	5.15	6.59	9.00	11.35
Oct	3.59	2.65	8.84	1954	15	13.70	1990	.00	2000	7.4	4.7	2.2	1.1	.32	.73	1.32	1.85	2.39	2.97	3.63	4.44	5.52	7.26	8.93
Nov	3.16	2.62	3.34	1963	6	9.80	1985	.57	1981	9.1	5.5	2.4	.8	.93	1.23	1.68	2.07	2.45	2.84	3.28	3.79	4.46	5.50	6.46
Dec	3.26	3.11	2.45	1962	4	6.27	1972	.81	1988	10.5	6.6	2.4	.6	1.14	1.44	1.89	2.27	2.63	3.00	3.40	3.87	4.48	5.41	6.27
Ann	46.63	46.59	9.50	Aug 1949	16	13.88	Jul 1975	.00	Oct 2000	119.3	78.0	32.5	12.4	35.35	37.58	40.42	42.55	44.43	46.24	48.10	50.14	52.60	56.14	59.18

<sup>+</sup> Also occurred on an earlier date(s)

Complete documentation available from:

www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

<sup>#</sup> Denotes amounts of a trace

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>\*\*</sup> Statistics not computed because less than six years out of thirty had measurable precipitation

<sup>(1)</sup> From the 1971-2000 Monthly Normals

<sup>(2)</sup> Derived from station's available digital record: 1933-2001

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Climate Division: NC 4 NWS Call Sign: Elevation: 870 Feet Lat: 35°42N Lon: 79°50W

										Snov	v (incl	hes)													
						Sno	ow To	tals							Mean Number of Days (1)										
	Mean	s/Medi	ans (1)	1	Extremes (2)											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	1.7	.0	#	0	9.5	2000	25	9.5	2000	8	1988	8	2	1988	.7	.6	.3	.2	.0	1.2	.7	.4	.0		
Feb	2.2	.5	#	0	12.0	1979	18	17.0	1979	12	1979	18	2	1979	.9	.8	.2	.1	@	1.1	.3	.1	@		
Mar	1.0	.0	#	0	5.6	1983	24	6.5	1980	6+	1983	24	#+	1983	.4	.3	.2	.1	.0	.4	.2	.1	.0		
Apr	#	.0	0	0	#	1983	18	#+	1983	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	.2	.0	0	0	4.6	2000	19	4.6	2000	0	0	0	0	0	.1	.1	@	.0	.0	.0	.0	.0	.0		
Dec	.6	.0	#	0	5.0	1971	3	5.5	1973	5	1973	17	#+	1999	.3	.2	.1	@	.0	.2	.1	.1	.0		
Ann	5.7	.5	N/A	N/A	12.0	Feb 1979	18	17.0	Feb 1979	12	Feb 1979	18	2+	Jan 1988	2.4	2.0	.8	.4	@	2.9	1.3	.7	@		

<sup>+</sup> Also occurred on an earlier date(s) #Denotes trace amounts

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<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>-9/-9.9</sup> represents missing values Annual statistics for Mean/Median snow depths are not appropriate

<sup>(1)</sup> Derived from Snow Climatology and 1971-2000 daily data

<sup>(2)</sup> Derived from 1971-2000 daily data

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				Freez	e Data							
			Spri	ng Freeze D	ates (Month/	(Day)						
Tomp (F)		P	robability of	later date i	n spring (thr	u Jul 31) tha	n indicated	(*)				
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90			
36	5/03	4/28	4/24	4/21	4/18	4/15	4/12	4/08	4/03			
32	4/20	4/15	4/11	4/08	4/04	4/01	3/29	3/25	3/20			
28	4/12	4/04	3/30	3/25	3/21	3/17	3/12	3/07	2/27			
24	3/28	3/20	3/14	3/09	3/05	2/28	2/23	2/18	2/10			
20	3/13	3/05	2/28	2/23	2/19	2/14	2/09	2/04	1/27			
16	3/04	2/22	2/15	2/08	2/02	1/27	1/20	1/10	0/00			
,		1	Fal	l Freeze Da	tes (Month/D	ay)	1	1				
Probability of earlier date in fall (beginning Aug 1) than indicated(*)												
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90			
36	10/09	10/13	10/16	10/19	10/21	10/24	10/26	10/30	11/03			
32	10/16	10/22	10/26	10/30	11/02	11/05	11/09	11/13	11/18			
28	11/01	11/06	11/09	11/12	11/15	11/17	11/20	11/24	11/28			
24	11/10	11/17	11/22	11/26	11/30	12/04	12/08	12/13	12/20			
20	11/26	12/04	12/09	12/13	12/18	12/22	12/27	1/01	1/08			
16	12/02	12/13	12/21	12/28	1/04	1/11	1/19	1/30	0/00			
				Freeze F	ree Period							
To (E)			Probability	of longer th	an indicated	freeze free p	eriod (Days)	)				
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90			
36	204	198	193	189	186	182	178	174	167			
32	231	224	219	215	211	207	202	197	190			
28	262	254	248	243	238	233	228	222	214			
24	297	288	281	275	269	264	258	251	242			
20	330	320	313	307	301	296	290	282	273			
16	>365	>365	>365	342	330	321	312	303	291			

<sup>\*</sup> 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.

Complete documentation available from:

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	Degree Days to Selected Base Temperatures (°F)														
Base						Heatin	g Degree l	Days (1)							
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann		
65	796	618	444	196	58	4	0	0	15	202	440	705	3478		
60	648	480	301	93	14	0	0	0	2	106	301	556	2501		
57	560	403	224	51	5	0	0	0	0	66	225	469	2003		
55	502	351	180	31	2	0	0	0	0	45	181	412	1704		
50	367	234	92	6	0	0	0	0	0	14	94	284	1091		
32	61	18	1	0	0	0	0	0	0	0	1	30	111		

Base						Coolin	g Degree l	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	288	324	581	810	1070	1258	1431	1380	1150	857	553	348	10050
55	16	13	47	151	358	568	718	667	460	189	43	17	3247
57	11	8	30	111	299	508	656	605	401	148	27	12	2816
60	7	2	14	63	216	418	563	512	312	95	13	6	2221
65	0	0	2	16	105	271	408	357	175	36	2	0	1372
70	0	0	0	2	36	143	257	208	69	9	0	0	724

										Gro	wing l	Degre	e Uni	ts (2)										
Base					Growin	g Degree	Units (M	Ionthly)					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	126	194	392	609	851	1040	1202	1149	938	644	362	184	126	320	712	1321	2172	3212	4414	5563	6501	7145	7507	7691
45	65	111	261	462	696	890	1047	994	788	489	242	105	65	176	437	899	1595	2485	3532	4526	5314	5803	6045	6150
50	29	56	158	319	541	740	892	839	638	342	141	52	29	85	243	562	1103	1843	2735	3574	4212	4554	4695	4747
55	7	20	79	202	388	590	737	684	489	210	76	26	7	27	106	308	696	1286	2023	2707	3196	3406	3482	3508
60	0	7	34	107	247	442	582	529	342	105	26	4	0	7	41	148	395	837	1419	1948	2290	2395	2421	2425
Base				Gro	wing De	gree Unit	s for Co	rn (Mont	hly)						Gr	owing D	egree Un	its for C	orn (Acc	umulate	d Month	ly)		
50/86	72	121	240	385	557	717	834	802	631	397	216	104	72	193	433	818	1375	2092	2926	3728	4359	4756	4972	5076

(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

### 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

- c. Snow Tables
  - 1. Snow Climatology
  - 2. Cooperative Summary of the Day
- d. Freeze Data Table

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

## 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