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: TRYON, NC **COOP ID: 318744**

Climate Division: NC 1 **NWS Call Sign:** **Elevation: 1,080 Feet** **Lat: 35˚12N** **Lon: 82˚14W**

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	51.9	30.3	41.1	80+	1975	31	51.1	1974	-8	1985	21	30.1	1977	740	0	.0	.0	18.3	.8	17.0	@
Feb	56.9	32.3	44.6	82+	1996	26	50.0+	1990	4+	1958	18	36.6	1978	571	0	.0	.0	20.8	.4	13.5	.0
Mar	65.2	39.0	52.1	89	1995	23	58.0	1997	11	1960	5	47.3	1996	403	4	.0	.0	28.7	@	6.7	.0
Apr	73.9	45.5	59.7	94	1986	27	64.1	1999	26+	1985	10	55.8	1983	176	16	.0	.4	29.8	.0	1.4	.0
May	80.3	54.2	67.3	98+	1964	28	71.6	1998	30	1971	4	63.6	1992	47	118	.0	1.3	31.0	.0	@	.0
Jun	86.0	62.0	74.0	105	1964	22	77.3	1981	41	1966	2	70.0	1972	2	273	.0	8.5	30.0	.0	.0	.0
Jul	89.1	66.8	78.0	104	1952	29	83.2	1993	49+	1961	11	74.1	1979	0	401	.4	15.0	31.0	.0	.0	.0
Aug	87.3	65.8	76.6	103	1988	18	80.2	1988	48+	1968	30	74.0	1992	0	357	.3	10.1	31.0	.0	.0	.0
Sep	81.6	59.8	70.7	103	1954	6	74.5	1998	35	1967	30	68.0	1976	10	182	.0	2.9	30.0	.0	.0	.0
Oct	73.0	48.1	60.6	96	1954	5	67.2	1984	25+	1965	30	55.1	1988	181	42	.0	.1	31.0	.0	1.1	.0
Nov	63.0	39.6	51.3	87	1950	1	59.4	1985	8	1950	26	45.9	1976	413	2	.0	.0	28.0	.0	7.0	.0
Dec	54.5	32.5	43.5	81	1984	30	51.9	1984	0	1962	13	35.5	2000	666	0	.0	.0	21.3	.4	15.8	.0
Ann	71.9	48.0	60.0	105	Jun 1964	22	83.2	Jul 1993	-8	Jan 1985	21	30.1	Jan 1977	3209	1395	.7	38.3	330.9	1.6	62.5	@

\+ 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

(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	5.81	5.13	4.00	1998	8	10.38	1998	.39	1981
Feb	5.11	5.31	5.35	1966	13	10.55	1990	.15	1978
Mar	6.66	6.22	4.21	1975	14	15.43	1975	1.05	1985
Apr	4.75	4.81	3.82	1963	30	10.36	1979	.35	1986
May	5.77	5.74	6.02	1959	26	11.85	1976	1.07	1988
Jun	5.62	5.00	6.25	1982	18	10.54	1994	1.32	1993
Jul	5.26	5.37	5.14	1964	19	9.98	1984	.70	1977
Aug	6.18	5.16	7.15	1995	27	16.21	1986	.30	1997
Sep	5.56	5.29	6.38	1979	1	16.45	1979	.03	1984
Oct	4.95	4.44	5.30	1975	18	11.50	1976	.02	2000
Nov	4.91	4.20	3.75	1948	3	11.85	1985	.91	1981
Dec	4.85	4.60	5.05	1958	28	10.02	1973	.71	1980
Ann	65.43	65.30	7.15	Aug 1995	27	16.45	Sep 1979	.02	Oct 2000

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	10.6	7.9	3.8	1.9
Feb	8.9	6.7	3.8	1.5
Mar	11.5	8.8	4.1	2.0
Apr	9.7	6.8	3.3	1.7
May	11.8	8.2	3.5	1.7
Jun	12.1	8.0	3.4	1.6
Jul	12.2	8.0	3.5	1.5
Aug	11.3	7.4	3.3	1.9
Sep	10.2	6.7	3.2	1.7
Oct	7.7	5.2	2.8	1.7
Nov	9.6	6.8	3.1	1.4
Dec	10.7	7.2	3.4	1.6
Ann	126.3	87.7	41.2	20.2

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	1.74	2.29	3.12	3.83	4.52	5.25	6.04	6.98	8.19	10.08	11.83
Feb	.98	1.44	2.19	2.88	3.58	4.34	5.20	6.23	7.60	9.80	11.89
Mar	2.08	2.72	3.66	4.46	5.24	6.05	6.94	7.98	9.32	11.41	13.35
Apr	1.17	1.62	2.31	2.93	3.54	4.18	4.90	5.75	6.86	8.63	10.28
May	1.71	2.26	3.08	3.79	4.48	5.20	5.99	6.93	8.13	10.02	11.77
Jun	1.60	2.13	2.94	3.64	4.32	5.04	5.83	6.76	7.97	9.87	11.63
Jul	1.46	1.96	2.72	3.38	4.02	4.70	5.45	6.33	7.48	9.28	10.97
Aug	.82	1.32	2.20	3.06	3.97	4.97	6.13	7.55	9.48	12.64	15.69
Sep	.49	.88	1.62	2.40	3.24	4.20	5.34	6.77	8.74	12.03	15.26
Oct	.43	.78	1.44	2.12	2.88	3.73	4.75	6.03	7.79	10.74	13.63
Nov	1.64	2.11	2.79	3.37	3.92	4.49	5.12	5.85	6.79	8.24	9.59
Dec	1.37	1.83	2.53	3.13	3.72	4.34	5.02	5.83	6.87	8.51	10.04
Ann	45.57	49.39	54.29	58.02	61.35	64.57	67.90	71.59	76.07	82.59	88.24

\+ 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

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	3.5	1.3	#	#
Feb	2.2	1.0	#	#
Mar	1.5	.0	#	0
Apr	.0	.0	#	0
May	.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
Dec	1.0	.0	#	0
Ann	8.2	2.3	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	13.0	1988	8	16.5	1988	16	1988	8	3	1988
Feb	7.0	1982	27	17.0	1979	11	1979	19	2	1979
Mar	7.0	1971	26	9.5	1993	10	1993	14	1	1993
Apr	1.0	1983	19	1.0	1983	#	1982	9	#	1982
May	.0	0	0	.0	0	#	2000	14	#	2000
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	1.0	2000	20	1.0	2000	#+	2000	20	#+	2000
Dec	15.0	1971	4	18.0	1971	15	1971	4	1	1971
Ann	15.0	Dec 1971	4	18.0	Dec 1971	16	Jan 1988	8	3	Jan 1988

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	1.2	1.1	.5	.3	@
Feb	.9	.8	.2	.1	.0
Mar	.4	.4	.2	.1	.0
Apr	@	@	.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
Dec	.3	.3	.1	@	@
Ann	2.8	2.6	1.0	.5	@

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	2.6	1.3	.7	.2
Feb	1.3	.6	.2	@
Mar	.7	.4	.2	@
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	.1	@	@
Ann	4.9	2.4	1.1	.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	5/06	5/01	4/28	4/25	4/22	4/19	4/16	4/13	4/08
32	4/23	4/17	4/13	4/09	4/06	4/02	3/29	3/25	3/19
28	4/04	3/29	3/26	3/22	3/19	3/16	3/13	3/09	3/04
24	3/19	3/12	3/07	3/03	2/28	2/24	2/20	2/15	2/09
20	3/12	3/02	2/24	2/18	2/12	2/07	2/01	1/25	1/16
16	2/22	2/14	2/08	2/02	1/28	1/21	1/13	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	10/05	10/10	10/13	10/16	10/19	10/22	10/25	10/28	11/02
32	10/14	10/19	10/22	10/26	10/28	10/31	11/03	11/07	11/12
28	10/25	10/31	11/04	11/08	11/12	11/15	11/19	11/23	11/29
24	11/14	11/18	11/22	11/24	11/27	11/30	12/03	12/06	12/10
20	11/23	12/02	12/08	12/13	12/18	12/23	12/28	1/03	1/12
16	12/10	12/17	12/23	12/28	1/02	1/08	1/16	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	197	191	187	183	179	176	172	168	162
32	225	218	213	209	205	201	197	192	185
28	261	253	247	241	237	232	226	220	212
24	294	287	281	276	272	267	262	257	249
20	346	329	319	312	305	299	292	284	274
16	>365	>365	>365	>365	345	332	322	313	300

***** 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	740	571	403	176	47	2	0	0	10	181	413	666	3209
60	593	431	263	76	10	0	0	0	1	91	274	516	2255
57	505	353	190	38	3	0	0	0	0	54	201	429	1773
55	449	300	149	22	1	0	0	0	0	36	158	372	1487
50	319	184	70	3	0	0	0	0	0	10	75	245	906
32	42	6	0	0	0	0	0	0	0	0	0	18	66

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	325	359	624	830	1094	1260	1424	1380	1161	884	579	374	10294
55	19	10	60	162	382	570	711	667	471	207	47	16	3322
57	13	6	39	118	322	510	649	605	411	163	30	10	2876
60	8	0	18	66	236	420	556	512	322	107	14	4	2263
65	0	0	4	16	118	273	401	357	182	42	2	0	1395
70	0	0	0	1	43	141	250	205	69	11	0	0	720

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	142	204	407	608	864	1034	1187	1142	932	648	359	186	142	346	753	1361	2225	3259	4446	5588	6520	7168	7527	7713
45	68	113	270	460	709	884	1032	987	782	494	231	98	68	181	451	911	1620	2504	3536	4523	5305	5799	6030	6128
50	27	53	156	317	554	734	877	832	632	344	126	45	27	80	236	553	1107	1841	2718	3550	4182	4526	4652	4697
55	5	15	76	190	400	584	722	677	483	207	52	17	5	20	96	286	686	1270	1992	2669	3152	3359	3411	3428
60	0	0	29	98	255	434	567	522	334	101	15	0	0	0	29	127	382	816	1383	1905	2239	2340	2355	2355
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	87	139	261	394	566	706	814	792	624	410	220	115	87	226	487	881	1447	2153	2967	3759	4383	4793	5013	5128

(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