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: TRANSOU, NC **COOP ID: 318694**

Climate Division: NC 2 **NWS Call Sign:** **Elevation: 2,875 Feet** **Lat: 36˚24N** **Lon: 81˚18W**

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	40.9	18.5	29.7	72	1999	28	41.0	1974	-24	1985	21	16.7	1977	1094	0	.0	.0	8.7	5.6	26.4	1.4
Feb	44.2	21.1	32.7	77	1957	26	39.3	1990	-15	1996	5	22.8	1978	906	0	.0	.0	11.4	3.7	23.0	.5
Mar	52.4	27.9	40.2	78+	1998	31	45.5	1997	-8	1960	8	35.0	1981	771	0	.0	.0	21.3	.8	19.0	.1
Apr	61.1	35.1	48.1	83+	1986	28	52.1	1981	13	1985	10	44.2	1983	507	0	.0	.0	27.1	@	10.6	.0
May	69.1	43.9	56.5	89	1996	20	62.3	1991	19	1981	3	52.4	1992	276	13	.0	.0	30.7	.0	3.1	.0
Jun	75.8	51.8	63.8	91+	1954	27	67.3	1998	28	1966	2	59.6	1972	84	47	.0	@	30.0	.0	.1	.0
Jul	79.7	55.9	67.8	94	1954	14	72.0	1993	35	1988	2	65.3	1979	22	109	.0	.3	31.0	.0	.0	.0
Aug	78.3	54.4	66.4	93	1988	18	70.5	1995	32	1986	29	63.2	1976	38	79	.0	.4	31.0	.0	@	.0
Sep	72.3	48.1	60.2	90+	1954	6	64.5	1998	23	1983	24	56.0	1984	163	18	.0	.0	29.9	.0	1.2	.0
Oct	62.9	35.7	49.3	84+	1954	5	56.4	1984	11	1962	27	43.4	1987	488	1	.0	.0	29.5	.0	11.2	.0
Nov	53.2	28.4	40.8	77	1950	1	49.3	1985	-1	1950	25	34.0	1976	726	0	.0	.0	20.8	.4	18.7	.0
Dec	44.5	21.2	32.9	77	1956	7	40.5	1984	-12+	1989	23	23.7	1989	998	0	.0	.0	11.6	3.3	24.8	.7
Ann	61.2	36.8	49.0	94	Jul 1954	14	72.0	Jul 1993	-24	Jan 1985	21	16.7	Jan 1977	6073	267	.0	.7	283.0	13.8	138.1	2.7

\+ 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

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: TRANSOU, NC

COOP ID: 318694

Climate Division: NC 2 **NWS Call Sign:** **Elevation: 2,875 Feet** **Lat: 36˚24N** **Lon: 81˚18W**

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	4.42	3.91	6.22	1995	15	12.82	1995	1.09	1981
Feb	4.00	3.94	4.00	1966	13	7.78	1998	.88	1978
Mar	5.59	4.87	4.95	1952	11	11.73	1973	1.64	1988
Apr	4.72	4.44	4.41	1980	14	11.39	1980	.75	1986
May	5.60	5.13	5.72	1973	28	10.02	1973	1.03	2000
Jun	5.11	4.38	4.99	1992	5	12.71	1992	.58	1986
Jul	4.76	4.41	5.00	1990	14	12.58	1989	1.26	1976
Aug	4.62	3.82	7.61	1998	16	15.73	1996	.89	1981
Sep	4.86	4.83	7.12	1959	30	14.09	1979	.95	1990
Oct	4.48	3.41	4.51	1976	8	15.22	1990	.10	2000
Nov	4.90	4.38	5.27	1989	16	14.67	1992	.84	1998
Dec	3.65	3.43	4.95	1958	28	8.81	1973	.82	1980
Ann	56.71	57.51	7.61	Aug 1998	16	15.73	Aug 1996	.10	Oct 2000

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	11.9	7.3	3.1	1.2
Feb	10.5	6.7	2.7	1.1
Mar	12.4	8.4	3.8	1.6
Apr	11.2	7.3	2.6	1.2
May	14.1	9.3	3.4	1.6
Jun	13.2	8.2	3.2	1.4
Jul	14.3	8.7	2.8	1.0
Aug	13.5	7.1	2.9	.8
Sep	11.2	6.9	3.1	1.4
Oct	9.5	5.8	2.6	1.3
Nov	10.3	6.8	2.9	1.5
Dec	11.5	6.5	2.4	.9
Ann	143.6	89.0	35.5	15.0

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	1.34	1.76	2.39	2.93	3.45	4.00	4.60	5.30	6.21	7.63	8.95
Feb	1.38	1.76	2.31	2.77	3.22	3.68	4.18	4.76	5.51	6.67	7.74
Mar	1.81	2.34	3.12	3.79	4.43	5.09	5.82	6.67	7.77	9.48	11.05
Apr	1.22	1.67	2.35	2.96	3.55	4.18	4.88	5.70	6.78	8.48	10.07
May	2.03	2.55	3.31	3.95	4.55	5.17	5.85	6.63	7.64	9.18	10.60
Jun	1.22	1.70	2.45	3.11	3.77	4.47	5.26	6.19	7.41	9.35	11.18
Jul	1.71	2.16	2.80	3.35	3.87	4.40	4.98	5.65	6.51	7.84	9.06
Aug	.93	1.35	2.03	2.65	3.28	3.95	4.71	5.62	6.83	8.76	10.59
Sep	1.01	1.45	2.17	2.82	3.47	4.17	4.96	5.91	7.16	9.16	11.05
Oct	.43	.75	1.35	1.98	2.65	3.42	4.32	5.46	7.01	9.60	12.13
Nov	1.11	1.57	2.29	2.93	3.57	4.26	5.03	5.94	7.15	9.07	10.87
Dec	1.08	1.43	1.95	2.40	2.83	3.29	3.79	4.38	5.14	6.33	7.43
Ann	40.37	43.53	47.58	50.66	53.39	56.03	58.75	61.77	65.42	70.72	75.30

\+ 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:
www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Services

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: TRANSOU, NC **COOP ID: 318694**

Climate Division: NC 2 **NWS Call Sign:** **Elevation: 2,875 Feet** **Lat: 36°24N** **Lon: 81°18W**

Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	7.4	5.0	1	1
Feb	6.4	5.1	1	#
Mar	3.0	.5	#	#
Apr	1.5	.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	.1	.0	#	0
Nov	1.1	.0	#	0
Dec	3.0	1.0	#	#
Ann	22.5	11.6	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	24.0	1996	7	28.0	1987	24+	1998	28	6	1987
Feb	12.0	1979	18	23.6	1979	17	1983	11	5	1983
Mar	11.0	1981	23	17.0	1999	28	1993	14	2	1993
Apr	6.0	1987	4	8.0	1987	7	1987	4	1	1987
May	#	1971	29	#	1971	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	2.0	1977	14	2.5	1977	1	1993	31	#+	1993
Nov	5.0	1971	24	6.0	1971	3+	1995	14	#+	2000
Dec	8.0	1974	1	12.0	1993	8	1993	21	3	1989
Ann	24.0	Jan 1996	7	28.0	Jan 1987	28	Mar 1993	14	6	Jan 1987

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	2.9	2.2	1.1	.6	.1
Feb	2.9	2.1	.6	.4	.1
Mar	1.4	.9	.3	.2	@
Apr	.6	.5	.2	.1	.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	.1	.1	.0	.0	.0
Nov	.7	.5	.1	@	.0
Dec	1.9	1.0	.3	.2	.0
Ann	10.5	7.3	2.6	1.5	.2

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	6.6	4.8	2.5	.4
Feb	5.6	3.1	1.5	.4
Mar	1.1	.4	.2	.0
Apr	.3	.1	.1	.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
Nov	.3	@	.0	.0
Dec	2.5	1.5	.7	.0
Ann	16.4	9.9	5.0	.8

+ 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

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

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: TRANSOU, NC **COOP ID: 318694**

Climate Division: NC 2 **NWS Call Sign:** **Elevation: 2,875 Feet** **Lat: 36˚24N** **Lon: 81˚18W**

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	6/15	6/09	6/05	6/01	5/28	5/25	5/21	5/17	5/11
32	6/02	5/28	5/24	5/21	5/17	5/14	5/11	5/07	5/02
28	5/19	5/14	5/09	5/06	5/02	4/29	4/25	4/21	4/15
24	5/02	4/26	4/22	4/18	4/15	4/11	4/07	4/03	3/28
20	4/19	4/13	4/09	4/05	4/02	3/29	3/25	3/21	3/15
16	4/03	3/27	3/22	3/17	3/13	3/09	3/05	2/28	2/21

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	9/01	9/07	9/11	9/14	9/17	9/20	9/23	9/27	10/03
32	9/12	9/17	9/21	9/24	9/27	9/30	10/04	10/08	10/13
28	9/26	9/30	10/03	10/05	10/07	10/09	10/11	10/14	10/18
24	10/03	10/08	10/12	10/15	10/18	10/20	10/23	10/27	11/01
20	10/15	10/22	10/26	10/30	11/03	11/06	11/10	11/15	11/21
16	11/01	11/07	11/11	11/14	11/17	11/20	11/24	11/27	12/03

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	136	127	121	116	111	106	101	94	86
32	153	146	141	136	132	128	124	119	112
28	177	170	165	161	157	153	148	143	136
24	207	199	194	190	185	181	176	171	164
20	238	230	224	219	214	210	205	199	191
16	275	266	259	254	248	243	237	230	221

***** 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

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

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: TRANSOU, NC **COOP ID: 318694**

Climate Division: NC 2 **NWS Call Sign:** **Elevation: 2,875 Feet** **Lat: 36˚24N** **Lon: 81˚18W**

Degree Days to Selected Base Temperatures (˚F)

Base	Heating Degree Days (1)												
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	1094	906	771	507	276	84	22	38	163	488	726	998	6073
60	939	766	616	358	156	23	1	4	68	342	576	843	4692
57	846	682	523	272	101	8	0	0	35	261	487	750	3965
55	784	626	464	218	71	4	0	0	20	213	428	688	3516
50	642	487	321	106	23	0	0	0	4	115	290	541	2529
32	215	101	26	0	0	0	0	0	0	1	16	130	489

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	143	119	278	483	759	954	1110	1064	845	537	280	155	6727
55	0	0	3	11	117	267	397	351	175	36	2	0	1359
57	0	0	0	5	85	212	335	289	130	23	0	0	1079
60	0	0	0	1	47	137	243	200	73	10	0	0	711
65	0	0	0	0	13	47	109	79	18	1	0	0	267
70	0	0	0	0	2	8	28	15	1	0	0	0	54

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	39	55	158	318	555	750	895	856	642	352	147	62	39	94	252	570	1125	1875	2770	3626	4268	4620	4767	4829
45	11	20	81	196	404	600	740	701	494	218	72	28	11	31	112	308	712	1312	2052	2753	3247	3465	3537	3565
50	0	4	35	102	261	452	585	546	351	114	29	4	0	4	39	141	402	854	1439	1985	2336	2450	2479	2483
55	0	0	7	43	144	305	430	391	216	45	2	0	0	0	7	50	194	499	929	1320	1536	1581	1583	1583
60	0	0	0	6	56	171	278	237	109	7	0	0	0	0	0	6	62	233	511	748	857	864	864	864
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	30	45	113	214	349	478	591	554	404	238	108	43	30	75	188	402	751	1229	1820	2374	2778	3016	3124	3167

(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