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: HICKORY RGNL AP, NC **COOP ID: 314020**

Climate Division: NC 1 **NWS Call Sign: HKY** **Elevation: 1,143 Feet** **Lat: 35˚44N** **Lon: 81˚23W**

Temperature (˚F)

Month	Mean (1)			Extremes										Degree Days (1) Base Temp 65		Mean Number of Days (3)					
	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	48.8	29.2	39.0	80	1949	10	47.4	1974	-8	1985	21	26.8	1977	807	0	.0	.0	14.2	1.8	19.5	.1
Feb	53.0	31.5	42.3	83	1982	24	48.6	1976	2+	1996	5	33.8	1978	636	0	.0	.0	17.2	1.0	16.7	.0
Mar	61.2	38.8	50.0	86	1990	12	55.6	1997	9	1980	3	44.1	1971	468	2	.0	.0	26.5	.1	8.0	.0
Apr	70.3	46.3	58.3	92	1981	27	63.9	1981	20	1972	9	53.6	1983	216	14	.0	.1	29.4	.0	1.8	.0
May	77.4	55.1	66.3	97	1953	25	70.9	1991	30+	1989	8	62.6	1992	67	105	.0	.6	30.9	.0	@	.0
Jun	84.2	63.4	73.8	104	1954	27	79.5	1981	41	1972	11	68.8	1974	6	270	@	5.7	30.0	.0	.0	.0
Jul	87.8	67.6	77.7	105+	1952	29	82.0	1993	50	1961	10	74.4	1971	0	394	.3	12.2	31.0	.0	.0	.0
Aug	86.1	66.4	76.3	102+	1988	18	79.5	1983	45	1986	29	73.1	1992	0	348	.2	8.2	31.0	.0	.0	.0
Sep	79.8	59.9	69.9	99	1954	6	73.3	1978	35	1967	30	66.1	1974	17	163	.0	2.5	30.0	.0	.0	.0
Oct	70.6	47.8	59.2	96+	1954	5	67.0	1984	24	1962	27	53.1	1988	215	35	.0	.1	30.7	.0	1.0	.0
Nov	60.6	39.1	49.9	84	1974	2	58.9	1985	10+	1970	25	42.6	1976	457	2	.0	.0	26.0	.0	8.2	.0
Dec	51.8	31.8	41.8	78	1984	30	50.7	1984	1	1962	13	32.3	2000	719	0	.0	.0	17.5	.6	17.6	.0
Ann	69.3	48.1	58.7	105+	Jul 1952	29	82.0	Jul 1993	-8	Jan 1985	21	26.8	Jan 1977	3608	1333	.5	29.4	314.4	3.5	72.8	.1

\+ 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

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1949-2001

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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	4.23	4.11	3.86	1954	22	7.43	1978	.45	1981
Feb	3.87	3.88	3.55	1987	28	7.61	1987	.44	1978
Mar	4.92	4.14	3.86	1991	29	11.81	1975	1.32	1985
Apr	3.70	3.30	2.63	1997	23	7.96	1984	.11	1976
May	4.46	4.37	2.64	1957	14	8.72	1975	.94	1997
Jun	4.74	4.66	4.99	1967	20	9.96	1994	.61	1986
Jul	4.17	3.76	3.26	1979	20	10.27	1989	.07	1983
Aug	3.85	3.75	4.64	1970	9	8.93	1996	.62	1997
Sep	4.24	3.74	4.50	1956	26	10.92	1979	.03	1985
Oct	3.57	2.90	5.49	1990	12	11.57	1990	.00	2000
Nov	3.64	3.22	3.70	1971	1	7.50	1985	.86	1981
Dec	3.59	3.44	3.80	1958	28	8.36	1983	.55	1980
Ann	48.98	47.98	5.49	Oct 1990	12	11.81	Mar 1975	.00	Oct 2000

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	10.1	7.1	3.0	1.2
Feb	8.7	6.5	2.9	1.1
Mar	10.4	7.4	3.3	1.7
Apr	9.0	6.2	2.6	1.2
May	11.0	7.7	3.0	1.5
Jun	10.7	7.1	3.2	1.3
Jul	10.6	6.9	2.9	1.0
Aug	9.5	6.3	2.5	.9
Sep	8.9	6.2	2.7	1.2
Oct	6.7	4.7	2.2	1.1
Nov	8.5	5.8	2.4	.9
Dec	9.6	6.1	2.4	1.0
Ann	113.7	78.0	33.1	14.1

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	1.24	1.64	2.25	2.77	3.28	3.81	4.40	5.09	5.98	7.38	8.68
Feb	1.08	1.44	2.00	2.48	2.96	3.45	4.00	4.65	5.50	6.82	8.06
Mar	1.72	2.19	2.86	3.43	3.97	4.53	5.14	5.85	6.76	8.17	9.46
Apr	.65	.98	1.52	2.02	2.54	3.10	3.74	4.52	5.55	7.21	8.80
May	1.52	1.94	2.56	3.08	3.58	4.09	4.65	5.31	6.15	7.45	8.65
Jun	1.14	1.58	2.28	2.89	3.51	4.15	4.88	5.74	6.87	8.67	10.35
Jul	.86	1.24	1.85	2.41	2.97	3.57	4.25	5.07	6.15	7.88	9.51
Aug	1.02	1.38	1.94	2.43	2.91	3.42	3.98	4.64	5.51	6.88	8.16
Sep	.48	.80	1.39	1.98	2.62	3.32	4.15	5.17	6.57	8.87	11.11
Oct	.24	.60	1.16	1.69	2.24	2.84	3.54	4.40	5.57	7.47	9.31
Nov	1.22	1.56	2.07	2.49	2.91	3.33	3.79	4.34	5.03	6.11	7.10
Dec	.93	1.27	1.79	2.25	2.70	3.18	3.71	4.34	5.16	6.45	7.67
Ann	35.91	38.47	41.73	44.20	46.38	48.48	50.65	53.04	55.92	60.10	63.69

\+ 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: 1949-2001
(3) Derived from 1971-2000 serially complete daily data

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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	3.6	.0	#	0
Feb	2.3	.0	#	0
Mar	1.7	.0	#	0
Apr	.2	.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	.7	.0	#	0
Ann	8.5	.0	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	16.0	1987	22	25.0	1987	11+	1988	8	2	1987
Feb	11.0	1979	18	17.0	1979	10	1979	19	2	1979
Mar	8.0	1993	13	10.0	1993	9+	1993	15	1	1993
Apr	2.0	1983	18	2.0+	1988	#+	1983	19	0	0
May	.0	0	0	.0	0	0	0	0	#	1994
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	#	1991	9	#+	1991	#+	1971	24	0	0
Dec	12.0	1971	3	12.0	1971	12	1971	3	1	1971
Ann	16.0	Jan 1987	22	25.0	Jan 1987	12	Dec 1971	3	2+	Jan 1987

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	.9	.8	.6	.3	@
Feb	.8	.7	.3	.1	@
Mar	.5	.5	.2	.2	.0
Apr	.1	.1	.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	.0	.0
Dec	.2	.2	@	@	@
Ann	2.5	2.3	1.1	.6	@

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	2.6	1.3	.7	.1
Feb	1.7	.4	.2	@
Mar	.8	.4	.3	.0
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	.1	@
Ann	5.4	2.2	1.3	.1

+ 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	4/30	4/27	4/24	4/21	4/18	4/14	4/11	4/06
32	4/27	4/21	4/17	4/13	4/10	4/06	4/03	3/30	3/24
28	4/06	4/01	3/28	3/25	3/21	3/18	3/15	3/11	3/06
24	3/23	3/16	3/11	3/07	3/03	2/27	2/23	2/18	2/11
20	3/16	3/08	3/02	2/24	2/20	2/15	2/09	2/03	1/26
16	3/06	2/25	2/19	2/14	2/09	2/03	1/28	1/21	1/07

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	10/15	10/17	10/20	10/23	10/27	11/01
32	10/13	10/19	10/23	10/27	10/30	11/03	11/06	11/10	11/16
28	10/24	10/30	11/04	11/08	11/11	11/15	11/19	11/23	11/30
24	11/10	11/16	11/21	11/25	11/28	12/02	12/06	12/11	12/17
20	11/23	11/29	12/04	12/08	12/11	12/15	12/18	12/23	12/29
16	12/02	12/13	12/21	12/28	1/04	1/11	1/18	1/28	2/15

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	200	193	188	183	179	175	170	165	158
32	227	219	213	208	203	198	193	187	179
28	260	251	245	239	234	229	223	217	208
24	294	286	280	274	269	265	259	253	245
20	321	311	305	299	294	289	283	276	267
16	>365	>365	342	331	323	317	310	302	291

***** 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	807	636	468	216	67	6	0	0	17	215	457	719	3608
60	652	496	324	108	19	0	0	0	3	117	317	567	2603
57	567	414	245	62	7	0	0	0	1	75	241	481	2093
55	508	363	199	40	3	0	0	0	0	53	196	424	1786
50	370	239	107	9	0	0	0	0	0	18	105	293	1141
32	56	14	1	0	0	0	0	0	0	0	1	30	102

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	272	301	557	788	1061	1254	1417	1371	1136	843	536	334	9870
55	11	7	43	138	351	564	704	658	446	183	41	15	3161
57	8	2	27	100	293	504	642	596	386	143	26	10	2737
60	0	0	13	55	212	414	549	503	298	92	12	2	2150
65	0	0	2	14	105	270	394	348	163	35	2	0	1333
70	0	0	0	1	38	146	243	199	60	9	0	0	696

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	98	151	330	553	820	1020	1175	1130	906	603	316	143	98	249	579	1132	1952	2972	4147	5277	6183	6786	7102	7245
45	45	76	209	406	665	870	1020	975	756	449	195	71	45	121	330	736	1401	2271	3291	4266	5022	5471	5666	5737
50	15	32	115	274	510	720	865	820	606	301	105	32	15	47	162	436	946	1666	2531	3351	3957	4258	4363	4395
55	0	7	52	158	360	570	710	665	456	177	46	11	0	7	59	217	577	1147	1857	2522	2978	3155	3201	3212
60	0	0	15	78	221	420	555	510	312	85	14	0	0	0	15	93	314	734	1289	1799	2111	2196	2210	2210
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	63	99	202	337	528	696	816	787	604	364	187	85	63	162	364	701	1229	1925	2741	3528	4132	4496	4683	4768

(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