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: FLAGLER 1 S, CO **COOP ID: 052932**

Climate Division: CO 3 **NWS Call Sign:** **Elevation: 4,920 Feet** **Lat: 39˚17N** **Lon: 103˚04W**

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	40.2	11.3	25.8	78	1997	3	36.5	1986	-29	1984	18	14.8	1979	1216	0	.0	.0	9.4	7.4	30.7	4.2
Feb	44.3	15.6	30.0	78	1962	11	38.7	2000	-25	1982	5	20.1	1994	982	0	.0	.0	11.9	5.1	27.3	2.1
Mar	52.2	23.2	37.7	84	1963	28	44.2	1997	-20	1960	3	33.0	1984	847	0	.0	.0	19.7	2.3	27.4	.5
Apr	60.3	30.9	45.6	90+	1992	30	52.0	1981	1	1975	2	38.7	1983	582	0	.0	.1	24.8	.4	17.6	.0
May	69.0	41.4	55.2	99	2000	30	58.9	1974	20	1993	2	49.5	1995	311	7	.0	.5	29.9	.0	3.3	.0
Jun	81.7	51.2	66.5	103+	1963	29	70.7	1990	31	1983	6	61.7	1982	63	105	.3	6.8	30.0	.0	@	.0
Jul	87.0	57.3	72.2	104	1969	3	75.1	1980	37	1994	8	67.9	1994	5	227	1.1	14.9	31.0	.0	.0	.0
Aug	85.2	55.7	70.5	103	1969	12	75.1	1983	33	1993	31	66.4	1994	20	190	.3	11.4	31.0	.0	.0	.0
Sep	76.5	46.2	61.4	99+	1977	8	67.8	1998	21	1983	21	55.2	1993	159	51	.0	3.9	29.5	.0	1.5	.0
Oct	66.1	33.8	50.0	91+	1997	3	52.6	1979	-6	1993	30	44.5	1984	467	1	.0	.1	28.4	.3	12.0	.0
Nov	49.3	20.2	34.8	81+	1980	6	43.4	1999	-15	1976	28	26.0	1992	908	0	.0	.0	16.0	3.7	26.6	.5
Dec	41.5	13.6	27.6	76+	1980	17	35.8	1980	-29	1990	22	15.1	1983	1161	0	.0	.0	10.1	6.1	30.4	3.0
Ann	62.8	33.4	48.1	104	Jul 1969	3	75.1+	Aug 1983	-29+	Dec 1990	22	14.8	Jan 1979	6721	581	1.7	37.7	271.7	25.3	176.8	10.3

\+ 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: 1949-2001

(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	.35	.20	.78	1990	20	1.31	1995	.00	2000
Feb	.36	.31	.92	1987	27	1.53	1987	.00+	1999
Mar	.98	.49	1.50	1973	22	4.18	1981	.04	1994
Apr	1.48	1.29	1.59	1986	4	3.42	1984	.00	1989
May	2.79	2.57	2.23	1973	6	7.08	1995	.29	1992
Jun	2.65	2.42	3.24	1983	26	6.63	1992	.60	1973
Jul	2.72	2.35	3.37	1961	8	5.55	1991	.58	1976
Aug	2.31	2.03	3.45	1954	13	6.66	1999	.23	1973
Sep	1.11	1.12	3.65	1963	21	2.69	1981	.00+	1991
Oct	.79	.60	1.72	2000	29	2.49	1984	.00+	1999
Nov	.67	.54	1.25	1972	13	3.00	1972	.00	1996
Dec	.35	.29	.95	1953	3	1.44	1973	.00+	1999
Ann	16.56	16.12	3.65	Sep 1963	21	7.08	May 1995	.00+	Jan 2000

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	2.2	1.2	.2	.0
Feb	2.2	1.3	@	.0
Mar	3.7	2.5	.5	.1
Apr	5.3	3.7	1.0	.2
May	7.7	5.8	1.9	.6
Jun	7.0	5.2	2.0	.5
Jul	7.3	5.4	2.1	.6
Aug	6.1	4.4	1.4	.7
Sep	4.0	2.6	.6	.2
Oct	3.0	2.1	.3	@
Nov	2.9	1.9	.3	.1
Dec	2.3	1.2	.2	.0
Ann	53.7	37.3	10.5	3.0

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	.01	.03	.08	.13	.18	.25	.32	.42	.56	.80	1.03
Feb	.00	.00	.07	.13	.20	.27	.35	.45	.59	.82	1.05
Mar	.03	.08	.18	.31	.46	.64	.87	1.16	1.59	2.33	3.08
Apr	.20	.39	.64	.85	1.06	1.28	1.53	1.82	2.21	2.83	3.41
May	.74	1.00	1.41	1.76	2.11	2.48	2.88	3.37	4.00	4.99	5.91
Jun	.71	.96	1.34	1.68	2.01	2.36	2.74	3.20	3.79	4.73	5.60
Jul	.76	1.02	1.41	1.75	2.08	2.43	2.82	3.27	3.87	4.80	5.66
Aug	.47	.68	1.02	1.33	1.64	1.97	2.35	2.80	3.40	4.36	5.27
Sep	.00	.00	.28	.47	.66	.87	1.11	1.40	1.79	2.43	3.04
Oct	.00	.00	.11	.29	.45	.61	.80	1.02	1.32	1.78	2.27
Nov	.03	.09	.19	.29	.40	.52	.66	.83	1.06	1.45	1.83
Dec	.00	.00	.05	.11	.18	.25	.33	.44	.58	.81	1.04
Ann	11.33	12.33	13.61	14.59	15.46	16.31	17.19	18.16	19.34	21.07	22.56

\+ 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	4.7	4.0	1	#
Feb	3.8	4.0	#	#
Mar	7.0	3.6	#	#
Apr	5.7	3.3	#	#
May	1.0	.0	#	0
Jun	.0	.0	0	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	.6	.0	#	0
Oct	2.0	.0	#	#
Nov	6.3	5.0	1	#
Dec	4.7	4.0	1	#
Ann	35.8	23.9	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	9.0	1990	20	16.0	1992	12	1990	21	2	1992
Feb	6.0	1984	16	12.0	1984	6	1995	13	1+	1997
Mar	12.0	1981	29	31.0	1981	12	1984	19	2	1981
Apr	10.0	1984	3	28.0	1984	14	1980	2	2	1980
May	8.0	1988	3	8.0	1988	8	1988	3	#+	1995
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	7.0	1995	21	8.0	1971	8	1971	18	#+	2000
Oct	8.0	1986	11	8.0+	1991	6+	1997	25	1	1984
Nov	14.0	1983	27	29.0	1972	15	1975	20	3	1975
Dec	10.0	1972	12	16.0+	1982	10	1982	27	3	1972
Ann	14.0	Nov 1983	27	31.0	Mar 1981	15	Nov 1975	20	3+	Nov 1975

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	1.9	1.7	.7	.2	.0
Feb	1.9	1.5	.7	.1	.0
Mar	2.5	2.3	.8	.3	.1
Apr	1.6	1.4	.9	.3	.1
May	.3	.3	.2	.1	.0
Jun	.0	.0	.0	.0	.0
Jul	.0	.0	.0	.0	.0
Aug	.0	.0	.0	.0	.0
Sep	.2	.2	.1	.1	.0
Oct	.6	.6	.3	.2	.0
Nov	2.1	1.9	.8	.5	.2
Dec	2.1	1.9	.7	.2	.1
Ann	13.2	11.8	5.2	2.0	.5

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	6.0	2.3	.7	.1
Feb	3.6	1.2	@	.0
Mar	3.4	1.2	.7	.1
Apr	1.9	1.0	.4	@
May	.3	.1	@	.0
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.1	.1	.1	.0
Oct	.7	.3	.1	.0
Nov	3.5	1.5	.8	.2
Dec	4.4	2.0	.7	.1
Ann	23.9	9.7	3.5	.5

+ 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	6/13	6/06	6/01	5/28	5/24	5/20	5/16	5/11	5/04
32	5/24	5/19	5/16	5/13	5/11	5/08	5/06	5/03	4/28
28	5/15	5/11	5/08	5/05	5/03	4/30	4/28	4/25	4/21
24	5/02	4/28	4/24	4/21	4/19	4/16	4/13	4/10	4/05
20	4/26	4/21	4/17	4/14	4/12	4/09	4/06	4/02	3/29
16	4/21	4/15	4/10	4/06	4/03	3/30	3/26	3/21	3/15

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	9/10	9/14	9/17	9/19	9/22	9/24	9/27	9/30	10/04
32	9/15	9/19	9/22	9/25	9/28	9/30	10/03	10/06	10/11
28	9/21	9/26	9/30	10/04	10/07	10/10	10/14	10/18	10/23
24	10/03	10/08	10/12	10/15	10/18	10/21	10/24	10/28	11/02
20	10/12	10/17	10/21	10/25	10/28	10/31	11/04	11/08	11/13
16	10/18	10/23	10/27	10/30	11/02	11/05	11/09	11/12	11/18

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	143	135	129	125	120	116	111	105	97
32	160	152	147	143	139	135	131	126	118
28	179	171	166	161	156	152	147	142	134
24	200	193	189	185	182	178	174	170	163
20	221	214	208	203	199	194	189	184	176
16	240	231	224	218	213	208	202	195	186

***** 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	1216	982	847	582	311	63	5	20	159	467	908	1161	6721
60	1061	842	692	438	183	18	0	4	75	318	758	1006	5395
57	968	758	599	355	121	7	0	1	42	236	668	913	4668
55	906	702	537	302	89	3	0	0	26	188	610	851	4214
50	751	568	387	189	34	0	0	0	6	91	471	698	3195
32	268	172	37	7	0	0	0	0	0	1	108	236	829

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	74	113	213	415	718	1032	1244	1193	882	557	190	98	6729
55	0	0	0	21	94	345	531	480	218	31	2	0	1722
57	0	0	0	13	65	289	469	419	174	17	0	0	1446
60	0	0	0	6	33	211	376	329	117	6	0	0	1078
65	0	0	0	0	7	105	227	190	51	1	0	0	581
70	0	0	0	0	1	38	101	85	16	0	0	0	241

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	17	41	107	250	511	812	1017	964	682	361	86	28	17	58	165	415	926	1738	2755	3719	4401	4762	4848	4876
45	2	13	48	145	360	662	862	809	535	230	39	7	2	15	63	208	568	1230	2092	2901	3436	3666	3705	3712
50	0	0	15	71	224	513	707	654	394	126	14	0	0	0	15	86	310	823	1530	2184	2578	2704	2718	2718
55	0	0	0	26	118	368	552	500	265	54	0	0	0	0	0	26	144	512	1064	1564	1829	1883	1883	1883
60	0	0	0	5	47	231	399	347	149	13	0	0	0	0	0	5	52	283	682	1029	1178	1191	1191	1191
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	37	65	127	208	335	510	647	614	440	283	94	44	37	102	229	437	772	1282	1929	2543	2983	3266	3360	3404

(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