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: CANON CITY, CO **COOP ID: 051294**

Climate Division: CO 1 **NWS Call Sign:** **Elevation: 5,330 Feet** **Lat: 38˚27N** **Lon: 105˚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	48.5	19.7	34.1	76	1997	3	42.7	1981	-23	1963	12	24.8	1979	959	0	.0	.0	16.1	4.0	26.9	2.1
Feb	52.4	22.9	37.7	77	1986	26	44.3	1972	-16+	1989	7	25.9	1989	766	0	.0	.0	17.1	2.6	23.8	1.3
Mar	57.8	27.6	42.7	82+	1989	11	49.9	1972	-5+	1960	3	38.3	1996	691	0	.0	.0	22.8	.8	21.0	.5
Apr	64.6	34.7	49.7	88	1989	22	57.3	1981	7	1989	10	44.5	1997	462	1	.0	.0	26.0	.3	10.4	.0
May	73.4	44.2	58.8	98	2000	31	63.9	1974	15	1978	9	53.7	1995	217	24	.0	.7	30.3	.0	1.4	.0
Jun	84.3	53.1	68.7	102	1998	30	74.1	1972	20	1975	21	63.5	1995	49	160	.3	7.1	29.9	.0	.1	.0
Jul	89.6	59.0	74.3	107	1954	11	80.4	1980	41	1978	25	70.5	1992	2	291	.2	14.3	31.0	.0	.0	.0
Aug	87.1	58.0	72.6	100+	1979	8	76.1	1980	37	1968	30	69.2	1992	7	241	.1	9.2	31.0	.0	.0	.0
Sep	79.1	48.4	63.8	100	1971	3	69.4	1998	25	1985	29	59.8	1993	105	68	@	2.6	29.5	@	1.1	.0
Oct	68.7	38.1	53.4	91	1979	8	57.8	1979	12+	1993	30	49.5	1984	360	1	.0	@	29.1	.2	7.6	.0
Nov	55.6	27.7	41.7	83	1999	16	50.3	1999	-24	1976	29	33.7	1985	700	0	.0	.0	20.0	1.6	21.4	.2
Dec	49.0	21.1	35.1	76	1980	18	45.3	1980	-25+	1990	22	22.6	1983	928	0	.0	.0	16.3	3.8	26.4	1.5
Ann	67.5	37.9	52.7	107	Jul 1954	11	80.4	Jul 1980	-25+	Dec 1990	22	22.6	Dec 1983	5246	786	.6	33.9	299.1	13.3	140.1	5.6

\+ 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

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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	.46	.35	3.00	1982	29	3.50	1982	.00	1998
Feb	.38	.22	1.03	1997	21	1.82	1997	.00	1979
Mar	1.06	1.08	1.38	1972	27	2.67	2000	.05	1978
Apr	1.47	1.01	3.21	1999	30	6.44	1999	.00	1981
May	1.64	1.28	2.74	1955	18	6.57	1980	.05	1984
Jun	1.24	1.13	2.27	1978	5	4.65	1978	.00+	1985
Jul	1.78	1.58	1.84	1956	30	3.96	1999	.19	1980
Aug	2.05	1.72	2.15	1996	9	4.83	1992	.31	1974
Sep	1.21	1.17	1.65	1959	29	2.55	1982	.04	1992
Oct	.72	.66	1.75	1969	12	2.12	1990	.00	1977
Nov	.80	.74	1.03	1956	19	2.00	1985	.02	1989
Dec	.49	.36	.63	1969	5	1.38	1978	.00+	1980
Ann	13.30	12.74	3.21	Apr 1999	30	6.57	May 1980	.00+	Jan 1998

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	3.5	1.2	.1	@
Feb	3.4	1.3	.1	@
Mar	5.2	2.7	.4	.1
Apr	6.0	3.4	.7	.2
May	8.3	4.3	1.0	.1
Jun	6.5	3.2	.5	.2
Jul	9.8	4.3	.9	.2
Aug	9.3	4.8	1.1	.4
Sep	6.6	3.2	.6	.2
Oct	4.5	2.3	.4	.1
Nov	4.4	2.0	.4	.0
Dec	3.8	1.6	.1	@
Ann	71.3	34.3	6.3	1.5

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	.14	.21	.30	.41	.55	.76	1.11	1.47
Feb	.00	.02	.05	.10	.16	.23	.32	.45	.62	.93	1.25
Mar	.16	.25	.40	.55	.70	.87	1.06	1.30	1.61	2.13	2.62
Apr	.07	.20	.42	.64	.87	1.13	1.43	1.81	2.33	3.19	4.03
May	.17	.29	.51	.74	.99	1.26	1.59	2.00	2.56	3.48	4.38
Jun	.00	.18	.43	.63	.82	1.03	1.27	1.55	1.94	2.55	3.14
Jul	.37	.53	.79	1.03	1.27	1.53	1.82	2.17	2.63	3.36	4.06
Aug	.43	.62	.92	1.20	1.47	1.77	2.10	2.49	3.02	3.85	4.65
Sep	.21	.32	.49	.66	.83	1.01	1.22	1.47	1.81	2.35	2.87
Oct	.03	.08	.19	.29	.41	.54	.69	.88	1.15	1.60	2.03
Nov	.12	.18	.30	.41	.53	.65	.80	.98	1.22	1.61	1.99
Dec	.00	.06	.15	.23	.31	.39	.49	.61	.78	1.04	1.30
Ann	8.71	9.57	10.69	11.55	12.32	13.07	13.85	14.72	15.78	17.34	18.70

+ 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

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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	6.2	6.6	1	1
Feb	4.4	2.8	1	#
Mar	7.6	6.5	1	#
Apr	4.5	2.6	#	#
May	.6	.0	#	0
Jun	.0	.0	0	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	.1	.0	#	0
Oct	2.5	.0	#	0
Nov	6.3	5.0	1	#
Dec	7.2	6.2	1	1
Ann	39.4	29.7	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	7.5	1989	12	14.4	1987	25	1974	22	15	1974
Feb	22.5	1997	21	22.5	1997	19	1997	21	4	1997
Mar	13.0	1972	27	19.8	1985	13	1985	29	5	1974
Apr	12.0	1990	30	13.3	1990	8	1984	29	1	1998
May	8.0	1990	1	9.7	1990	14	1990	1	1	1990
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	2.0	1985	29	2.0	1985	2	1985	29	#	1985
Oct	9.5	1997	25	11.5	1991	9	1991	31	1	1997
Nov	8.0	1985	14	19.0	1991	9	1985	15	2	1991
Dec	10.2	1972	11	19.2	1989	13	1983	25	8	1972
Ann	22.5	Feb 1997	21	22.5	Feb 1997	25	Jan 1974	22	15	Jan 1974

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	3.0	1.6	.8	.3	.0
Feb	2.6	1.7	.6	.2	@
Mar	2.7	2.0	.8	.4	.1
Apr	1.5	1.4	.5	.3	.1
May	.3	.2	@	@	.0
Jun	.0	.0	.0	.0	.0
Jul	.0	.0	.0	.0	.0
Aug	.0	.0	.0	.0	.0
Sep	@	@	.0	.0	.0
Oct	.7	.6	.3	.1	.0
Nov	2.6	2.0	.9	.2	.0
Dec	3.8	2.9	.8	.4	.1
Ann	17.2	12.4	4.7	1.9	.3

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	6.3	3.0	1.0	.0
Feb	4.4	1.8	.7	.1
Mar	2.6	1.2	.6	.1
Apr	1.2	.6	.3	.0
May	.1	.0	.0	.0
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	@	.0	.0	.0
Oct	.7	.4	.2	.0
Nov	3.8	2.0	.6	.0
Dec	9.3	4.5	1.4	.4
Ann	28.4	13.5	4.8	.6

+ 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	6/04	5/29	5/24	5/20	5/16	5/12	5/08	5/03	4/26
32	5/24	5/17	5/12	5/08	5/04	4/30	4/25	4/20	4/13
28	5/04	4/29	4/25	4/22	4/18	4/15	4/12	4/08	4/03
24	4/25	4/19	4/15	4/11	4/08	4/05	4/01	3/28	3/22
20	4/20	4/13	4/08	4/03	3/30	3/26	3/21	3/16	3/09
16	4/16	4/07	3/31	3/25	3/19	3/14	3/08	3/01	2/19

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	9/15	9/19	9/23	9/25	9/28	10/01	10/03	10/07	10/11
32	9/20	9/25	9/28	10/01	10/04	10/07	10/10	10/13	10/18
28	9/29	10/05	10/09	10/12	10/16	10/19	10/23	10/27	11/02
24	10/12	10/18	10/22	10/26	10/29	11/01	11/05	11/09	11/15
20	10/25	10/30	11/02	11/05	11/07	11/10	11/13	11/16	11/21
16	10/28	11/03	11/08	11/12	11/15	11/19	11/23	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	154	147	142	138	134	131	126	122	115
32	178	169	163	158	153	148	143	136	128
28	206	197	191	185	180	174	169	162	153
24	227	219	213	208	203	198	193	187	179
20	244	236	231	226	222	217	213	207	200
16	270	260	252	246	240	235	228	221	211

***** 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	959	766	691	462	217	49	2	7	105	360	700	928	5246
60	804	626	536	320	111	15	0	1	39	216	553	773	3994
57	711	542	444	242	66	6	0	0	17	143	470	682	3323
55	649	491	383	195	43	3	0	0	9	103	414	624	2914
50	503	362	241	101	11	0	0	0	0	38	288	480	2024
32	106	55	6	0	0	0	0	0	0	0	35	108	310

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	171	213	338	529	831	1101	1312	1257	952	664	325	203	7896
55	0	5	1	34	161	414	599	544	271	53	14	5	2101
57	0	0	0	21	121	357	537	482	219	32	10	2	1781
60	0	0	0	9	73	276	444	389	151	12	3	0	1357
65	0	0	0	1	24	160	291	241	68	1	0	0	786
70	0	0	0	0	5	77	153	115	21	0	0	0	371

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	58	92	171	328	595	859	1060	995	715	431	154	75	58	150	321	649	1244	2103	3163	4158	4873	5304	5458	5533
45	23	36	87	208	446	709	905	840	569	290	81	33	23	59	146	354	800	1509	2414	3254	3823	4113	4194	4227
50	1	10	31	116	302	559	750	685	423	174	37	8	1	11	42	158	460	1019	1769	2454	2877	3051	3088	3096
55	0	1	8	49	179	412	595	530	289	84	7	0	0	1	9	58	237	649	1244	1774	2063	2147	2154	2154
60	0	0	0	18	83	271	440	375	166	25	0	0	0	0	0	18	101	372	812	1187	1353	1378	1378	1378
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	69	95	147	227	373	548	691	652	462	300	132	76	69	164	311	538	911	1459	2150	2802	3264	3564	3696	3772

(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