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: RUXTON PARK, CO **COOP ID: 057309**

Climate Division: CO 1 **NWS Call Sign:** **Elevation: 9,050 Feet** **Lat: 38˚51N** **Lon: 104˚58W**

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	32.1	4.9	18.5	58+	2001	7	28.8	1999	-35	1963	12	11.8	1979	1441	0	.0	.0	1.2	14.0	30.9	8.9
Feb	34.3	5.6	20.0	60+	1979	13	30.3	1999	-33	1985	1	11.8	1985	1261	0	.0	.0	2.0	10.3	28.2	6.9
Mar	38.1	10.9	24.5	65	1978	31	30.5	1989	-21	1965	3	18.7	1973	1257	0	.0	.0	4.8	7.5	30.7	3.8
Apr	44.4	18.5	31.5	71	1981	26	38.5	1981	-18	1983	6	23.8	1973	1007	0	.0	.0	11.7	4.0	29.2	1.1
May	54.3	28.1	41.2	81+	2000	31	49.6	2000	3+	1982	6	32.1	1995	739	0	.0	.0	22.3	.6	24.0	.0
Jun	65.5	35.5	50.5	86+	1990	29	55.3	1990	14	1975	11	45.3	1995	436	0	.0	.0	28.7	.0	8.9	.0
Jul	70.4	39.9	55.2	86	1990	2	58.2+	2000	28	1985	3	52.3	1994	306	0	.0	@	31.0	.0	1.4	.0
Aug	68.2	38.6	53.4	86	1979	3	58.3	2000	24+	1992	27	50.7	1993	359	0	.0	.0	30.8	.0	2.1	.0
Sep	62.0	31.6	46.8	81+	2000	17	54.4	1998	4	1985	29	41.2	1996	547	0	.0	.0	27.5	.2	14.8	.0
Oct	52.2	22.8	37.5	76	1991	18	42.8	1998	-9	1997	26	32.0	1984	852	0	.0	.0	20.8	1.6	28.2	.4
Nov	39.0	12.2	25.6	66	1980	11	35.9	1999	-25	1976	28	16.6	1972	1183	0	.0	.0	5.9	7.9	29.6	3.7
Dec	33.7	5.7	19.7	63	1980	18	30.2	1980	-30	1990	21	14.8	1983	1404	0	.0	.0	1.8	13.0	30.8	8.0
Ann	49.5	21.2	35.4	86+	Jul 1990	2	58.3	Aug 2000	-35	Jan 1963	12	11.8+	Feb 1985	10792	0	.0	@	188.5	59.1	258.8	32.8

\+ 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: 1959-2001

(3) Derived from 1971-2000 serially complete daily data

Issue Date: February 2004

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Climate Division: CO 1 **NWS Call Sign:** **Elevation: 9,050 Feet** **Lat: 38°51N** **Lon: 104°58W**

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	.57	.54	1.00+	2001	30	1.45	1980	.00	1998
Feb	.72	.54	1.39	1987	27	3.53	1987	.00	1998
Mar	1.89	1.87	1.32	1972	28	3.97	1983	.00	1998
Apr	3.15	2.54	3.00+	1997	24	13.30	1997	.25	2000
May	2.67	2.42	2.77	1995	18	6.52	1980	.00	1998
Jun	2.51	2.24	2.40	1997	7	8.47	1997	.17	1990
Jul	3.72	3.80	3.05	1996	18	8.13	1990	1.14	1987
Aug	4.00	3.75	2.11	1964	4	6.94	1984	1.24	1974
Sep	1.64	1.57	1.60	1959	29	3.77	1976	.25	1978
Oct	1.25	.94	2.16	1984	5	7.46	1984	.01	2000
Nov	.99	.73	1.34	1992	21	3.50	1991	.00	1997
Dec	.94	.74	2.60	1999	3	4.01	1999	.00	1980
Ann	24.05	23.37	3.05	Jul 1996	18	13.30	Apr 1997	.00+	May 1998

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	5.0	2.3	.1	.0
Feb	5.2	2.3	.2	@
Mar	9.1	5.5	1.1	.1
Apr	9.3	6.0	1.8	.7
May	10.0	6.3	1.5	.5
Jun	10.5	5.7	1.4	.4
Jul	15.0	9.2	2.1	.6
Aug	16.4	10.2	2.4	.5
Sep	8.4	4.8	.9	.1
Oct	5.0	3.2	.7	.2
Nov	5.4	3.0	.4	.1
Dec	5.2	2.7	.3	.1
Ann	104.5	61.2	12.9	3.3

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	.13	.21	.30	.38	.45	.52	.60	.69	.81	.99	1.16
Feb	.07	.15	.27	.37	.48	.60	.73	.88	1.09	1.43	1.75
Mar	.28	.52	.85	1.11	1.37	1.65	1.96	2.33	2.81	3.58	4.30
Apr	.53	.81	1.27	1.70	2.14	2.62	3.18	3.85	4.74	6.19	7.58
May	.40	.75	1.20	1.57	1.94	2.33	2.76	3.28	3.95	5.02	6.03
Jun	.48	.71	1.07	1.41	1.76	2.13	2.55	3.05	3.72	4.80	5.83
Jul	1.38	1.73	2.23	2.65	3.04	3.45	3.89	4.40	5.05	6.06	6.98
Aug	1.60	1.97	2.49	2.92	3.33	3.74	4.19	4.71	5.36	6.37	7.28
Sep	.41	.56	.80	1.01	1.22	1.45	1.69	1.98	2.37	2.97	3.54
Oct	.08	.16	.32	.49	.68	.90	1.17	1.51	1.99	2.79	3.59
Nov	.06	.16	.31	.46	.62	.79	.98	1.23	1.56	2.10	2.62
Dec	.10	.21	.36	.50	.64	.79	.96	1.16	1.43	1.87	2.29
Ann	15.32	16.94	19.05	20.68	22.14	23.57	25.06	26.72	28.76	31.75	34.37

\+ 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: 1959-2001
(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	9.4	9.0	7	8
Feb	13.6	10.7	8	6
Mar	28.7	26.4	11	10
Apr	31.3	26.0	10	5
May	12.9	10.5	2	#
Jun	1.8	.0	#	0
Jul	.0	.0	#	0
Aug	.0	.0	0	0
Sep	1.8	.0	#	0
Oct	11.4	9.0	1	#
Nov	16.1	11.0	4	2
Dec	17.1	15.5	7	5
Ann	144.1	118.1	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	10.0	1985	1	21.5	1994	27	1994	31	17	1988
Feb	14.0	1971	20	51.5	1987	44	1987	27	24	1987
Mar	29.0	1972	28	59.0	1994	44	1985	30	34	1987
Apr	42.0	1997	24	92.0	1995	49	1994	12	31	1973
May	23.0	1995	18	51.5	1995	33	1995	18	11	1995
Jun	32.0	1975	10	35.0	1975	4	1983	5	#+	1997
Jul	1.0	1995	1	1.0	1995	2	1996	18	#+	1997
Aug	.0	0	0	.0	0	0	0	0	0	0
Sep	7.0	1973	26	8.0	1973	8	1971	17	1	1971
Oct	38.0	1984	16	54.7	1984	38	1984	16	14	1984
Nov	19.0	1972	1	56.0	1991	31	1991	19	15	1991
Dec	36.0	1999	3	57.7	1999	30	1991	3	20	1992
Ann	42.0	Apr 1997	24	92.0	Apr 1995	49	Apr 1994	12	34	Mar 1987

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	4.6	3.5	1.3	.4	@
Feb	4.9	3.9	1.4	.6	.2
Mar	8.2	7.0	3.8	2.0	.4
Apr	7.1	6.4	3.7	2.3	1.0
May	3.8	3.1	1.5	1.0	.3
Jun	.4	.4	.1	@	@
Jul	@	@	.0	.0	.0
Aug	.0	.0	.0	.0	.0
Sep	.7	.6	.2	.1	.0
Oct	3.2	2.6	1.3	.8	.2
Nov	4.6	3.8	1.8	.8	.3
Dec	5.0	4.2	2.0	1.1	.3
Ann	42.5	35.5	17.1	9.1	2.7

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	23.7	21.2	19.7	9.0
Feb	21.6	19.1	16.6	11.6
Mar	21.6	18.5	15.9	11.6
Apr	15.8	14.0	12.2	8.7
May	6.2	5.2	4.3	2.5
Jun	.3	.1	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.4	@	.0	.0
Oct	4.0	2.5	2.0	.9
Nov	18.6	14.1	11.3	6.1
Dec	22.2	19.9	17.1	10.8
Ann	134.4	114.6	99.1	61.2

+ 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	8/06	7/31	7/26	7/23	7/19	7/16	7/12	7/07	7/01
32	7/25	7/16	7/10	7/05	6/30	6/25	6/19	6/13	6/04
28	6/23	6/18	6/15	6/12	6/09	6/06	6/03	5/30	5/25
24	6/11	6/04	5/30	5/26	5/23	5/19	5/15	5/10	5/04
20	6/02	5/26	5/21	5/17	5/14	5/10	5/06	5/01	4/24
16	5/21	5/15	5/11	5/07	5/04	4/30	4/27	4/22	4/17

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	7/26	7/31	8/03	8/06	8/09	8/12	8/15	8/19	8/24
32	8/08	8/14	8/18	8/22	8/26	8/29	9/02	9/07	9/13
28	8/30	9/03	9/07	9/09	9/12	9/15	9/18	9/21	9/25
24	9/10	9/14	9/17	9/20	9/22	9/25	9/27	9/30	10/05
20	9/18	9/22	9/26	9/28	10/01	10/03	10/06	10/09	10/14
16	9/22	9/29	10/04	10/08	10/12	10/15	10/20	10/24	10/31

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	46	37	31	25	20	15	10	4	0
32	88	77	69	63	56	50	43	36	25
28	118	110	104	99	95	90	85	79	71
24	146	138	132	127	122	117	112	106	98
20	163	155	149	144	140	135	130	124	116
16	184	176	170	165	160	156	151	145	137

***** 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	1441	1261	1257	1007	739	436	306	359	547	852	1183	1404	10792
60	1286	1121	1102	857	585	295	161	208	397	697	1033	1249	8991
57	1193	1037	1009	767	495	217	91	127	311	604	943	1156	7950
55	1131	981	947	707	437	172	58	84	257	542	883	1094	7293
50	976	841	792	560	301	85	10	20	140	391	733	939	5788
32	422	350	253	132	28	0	0	0	1	38	244	391	1859

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	4	14	20	115	312	554	717	664	444	209	51	9	3113
55	0	0	0	0	8	36	62	35	10	0	0	0	151
57	0	0	0	0	4	21	34	16	5	0	0	0	80
60	0	0	0	0	1	9	10	4	0	0	0	0	24
65	0	0	0	0	0	0	0	0	0	0	0	0	0
70	0	0	0	0	0	0	0	0	0	0	0	0	0

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	0	0	2	25	127	352	493	433	248	71	4	0	0	0	2	27	154	506	999	1432	1680	1751	1755	1755
45	0	0	0	2	54	216	338	279	127	18	0	0	0	0	0	2	56	272	610	889	1016	1034	1034	1034
50	0	0	0	0	14	106	188	133	44	0	0	0	0	0	0	0	14	120	308	441	485	485	485	485
55	0	0	0	0	2	39	67	29	10	0	0	0	0	0	0	0	2	41	108	137	147	147	147	147
60	0	0	0	0	0	7	8	0	0	0	0	0	0	0	0	0	0	7	15	15	15	15	15	15
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	0	0	6	37	120	256	335	301	205	94	18	0	0	0	6	43	163	419	754	1055	1260	1354	1372	1372

(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