

Climatography of the United States

No. 20

1971-2000

Station: NEW RAYMER, CO

COOP ID: 055922

Climate Division: CO 4

NWS Call Sign:

Elevation: 4,783 Feet Lat: 40° 36N

Lon: 103° 51W

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	38.3	9.4	23.9	73+	1997	3	31.9	1999	-30	1984	18	11.7	1979	1275	0	.0	.0	7.0	8.3	30.6	5.6
Feb	44.2	14.0	29.1	77	1986	25	37.1	1999	-29+	1989	5	18.6	1989	1005	0	.0	.0	12.1	4.3	27.4	2.4
Mar	52.3	21.1	36.7	82	1967	29	41.8	1986	-10+	1980	1	31.2	1984	878	0	.0	.0	20.2	2.0	27.4	.5
Apr	60.7	29.7	45.2	88+	1992	30	51.9	1981	-7	1975	2	36.2	1984	593	0	.0	.0	25.1	.4	18.1	.1
May	70.0	40.2	55.1	95	1989	28	60.4	1994	19	1983	12	49.6	1983	316	8	.0	.5	30.3	.0	3.6	.0
Jun	81.5	49.9	65.7	103	1980	26	70.8	1988	29	1984	10	59.8	1983	85	106	.4	6.8	29.9	.0	.1	.0
Jul	88.4	55.7	72.1	105+	1977	17	75.5	1980	39	1970	1	68.9	1990	5	223	1.4	16.6	31.0	.0	.0	.0
Aug	86.2	53.9	70.1	104	1980	6	73.6	2000	38+	1993	31	66.8	1974	17	174	.4	12.8	31.0	.0	.0	.0
Sep	77.2	43.6	60.4	100	1983	2	66.6	1998	10	1985	30	56.1	1993	178	40	@	4.0	29.3	.0	2.2	.0
Oct	65.5	31.7	48.6	89	1967	3	51.2	1979	2	1969	14	42.1	1984	509	0	.0	.0	28.4	.3	14.0	.0
Nov	47.8	18.4	33.1	81	1999	9	44.2	1999	-14	1983	30	21.6	1985	957	0	.0	.0	15.1	4.1	27.4	1.1
Dec	40.0	11.3	25.7	72+	1998	2	33.7	1994	-32	1989	22	10.4	1983	1220	0	.0	.0	8.2	6.8	30.4	4.2
Ann	62.7	31.6	47.1	105+	Jul 1977	17	75.5	Jul 1980	-32	Dec 1989	22	10.4	Dec 1983	7038	551	2.2	40.7	267.6	26.2	181.2	13.9

+ 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/normal/usnormals.html

Issue Date: February 2004

(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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Climatology 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: NEW RAYMER, CO

COOP ID: 055922

Climate Division: CO 4

NWS Call Sign:

Elevation: 4,783 Feet Lat: 40°36N

Lon: 103°51W

Precipitation (inches)																								
	Precipitation Totals									Mean Number of Days (3)				Precipitation Probabilities (1) Probability that the monthly/annual precipitation will be equal to or less than the indicated amount										
	Means/ Medians(1)		Extremes							Daily Precipitation				Monthly/Annual Precipitation vs Probability Levels These values were determined from the incomplete gamma distribution										
Month	Mean	Med-ian	Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year	>= 0.01	>= 0.10	>= 0.50	>= 1.00	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	.28	.20	.38	1990	19	.90	1979	.00	1983	3.5	1.2	.0	.0	.01	.03	.07	.11	.15	.20	.26	.34	.45	.63	.81
Feb	.20	.08	.50	1987	27	1.16	1987	.00+	1999	2.9	.5	@	.0	.00	.00	.02	.04	.07	.11	.16	.23	.33	.52	.72
Mar	.85	.54	1.77	1996	14	3.07	1992	.05	1994	5.2	2.2	.3	.2	.06	.11	.22	.33	.47	.62	.80	1.03	1.36	1.91	2.45
Apr	1.38	1.21	1.73	1971	22	3.63	1977	.00	1992	6.9	3.5	.7	.1	.19	.37	.60	.80	.99	1.20	1.43	1.70	2.06	2.64	3.18
May	2.49	2.37	2.15	1988	19	5.89	1975	.16	1974	10.0	5.9	1.5	.4	.64	.88	1.24	1.56	1.87	2.20	2.57	3.01	3.59	4.49	5.33
Jun	2.57	2.32	3.28	1995	3	9.50	1995	.49	1990	8.0	4.9	1.6	.5	.56	.79	1.17	1.51	1.86	2.22	2.63	3.12	3.77	4.81	5.79
Jul	2.57	1.99	3.60	1997	30	7.49	1997	.88	1993	8.3	4.9	1.5	.6	.82	1.07	1.43	1.74	2.03	2.34	2.68	3.08	3.59	4.38	5.12
Aug	2.01	1.69	2.94	1979	10	5.66	1979	.03	1973	7.4	3.9	1.3	.4	.19	.33	.60	.88	1.19	1.53	1.94	2.45	3.16	4.33	5.48
Sep	1.39	1.22	3.55	1951	6	5.39	1999	.05	1978	5.5	3.1	.8	.2	.10	.19	.37	.56	.77	1.02	1.31	1.69	2.21	3.08	3.94
Oct	.87	.42	1.99	1994	6	4.15	1994	.00	1977	3.8	2.1	.5	.2	.01	.05	.15	.27	.41	.57	.78	1.04	1.42	2.07	2.72
Nov	.49	.47	.81	1979	20	1.11	1993	.00+	1988	3.9	1.7	.1	.0	.00	.06	.15	.23	.31	.39	.49	.61	.76	1.02	1.27
Dec	.23	.24	.55	1967	26	.63	1979	.00+	1996	2.7	.9	.0	.0	.00	.00	.07	.11	.15	.19	.24	.30	.37	.50	.62
Ann	15.33	14.49	3.60	Jul 1997	30	9.50	Jun 1995	.00+	Feb 1999	68.1	34.8	8.3	2.6	9.29	10.39	11.84	12.96	13.98	14.98	16.02	17.19	18.63	20.76	22.62

+ 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

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Station: NEW RAYMER, CO

COOP ID: 055922

Climate Division: CO 4

NWS Call Sign:

Elevation: 4,783 Feet

Lat: 40°36N

Lon: 103°51W

Snow (inches)																							
Snow Totals															Mean Number of Days (1)								
Means/Medians (1)					Extremes (2)										Snow Fall >= Thresholds					Snow Depth >= Thresholds			
Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median	Highest Daily Snow Fall	Year	Day	Highest Monthly Snow Fall	Year	Highest Daily Snow Depth	Year	Day	Highest Monthly Mean Snow Depth	Year	0.1	1.0	3.0	5.0	10.0	1	3	5	10
Jan	4.9	5.0	2	2	6.0	1980	19	14.5	1980	12	1980	31	9	1986	3.8	1.9	.5	.1	.0	11.2	6.8	3.6	.1
Feb	3.3	2.4	1	#	6.0	2000	11	13.5	2000	13	1980	10	9	1980	2.7	1.2	.3	.1	.0	6.5	3.3	.5	.0
Mar	5.7	5.6	#	#	12.8	1971	5	14.6	1990	12	1971	5	2	1971	3.8	2.4	.8	.3	.1	3.9	1.7	.7	@
Apr	4.9	3.4	#	#	12.0	1984	2	28.0	1984	14	1984	2	2	1984	2.6	1.5	.7	.2	@	1.8	.9	.4	.1
May	.4	.0	#	0	4.6	1978	6	6.0	1979	3	1978	6	#+	1983	.2	.1	.1	.0	.0	@	@	.0	.0
Jun	.0	.0	#	0	.0	0	0	.0	0	1	1992	14	#	1992	.0	.0	.0	.0	.0	.0	.0	.0	.0
Jul	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Aug	.0	.0	#	0	.0	0	0	.0	0	#	1998	10	#	1998	.0	.0	.0	.0	.0	.0	.0	.0	.0
Sep	.9	.0	#	0	4.0	1999	28	6.5	1999	4	1999	28	#+	2000	.4	.3	.1	.0	.0	.3	.1	.0	.0
Oct	2.3	1.5	#	#	10.3	1997	25	19.3	1997	19	1997	26	2	1997	1.0	.7	.3	.1	@	.8	.3	.1	.1
Nov	6.0	5.0	1	#	12.3	1979	20	20.7	1972	13	1979	21	4	1979	3.2	2.2	.6	.2	.1	6.3	3.5	1.7	.3
Dec	4.4	4.1	2	1	9.0	1979	27	12.0	1979	14	1979	28	6	1992	3.0	1.8	.3	.1	.0	10.0	6.3	3.1	.2
Ann	32.8	27.0	N/A	N/A	12.8	Mar 1971	5	28.0	Apr 1984	19	Oct 1997	26	9+	Jan 1986	20.7	12.1	3.7	1.1	.2	40.8	22.9	10.1	.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:

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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	6/10	6/04	5/31	5/27	5/24	5/20	5/17	5/12	5/07
32	5/28	5/23	5/20	5/17	5/14	5/11	5/08	5/04	4/29
28	5/13	5/10	5/07	5/05	5/03	5/01	4/29	4/27	4/23
24	5/08	5/03	4/29	4/26	4/23	4/20	4/17	4/13	4/08
20	4/25	4/20	4/16	4/12	4/09	4/06	4/02	3/29	3/24
16	4/19	4/12	4/07	4/03	3/31	3/27	3/23	3/18	3/11
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	9/08	9/12	9/14	9/16	9/18	9/20	9/22	9/25	9/28
32	9/14	9/18	9/20	9/23	9/25	9/27	9/30	10/03	10/07
28	9/19	9/23	9/27	9/30	10/03	10/06	10/09	10/12	10/17
24	10/01	10/07	10/10	10/14	10/17	10/20	10/23	10/26	11/01
20	10/05	10/11	10/15	10/19	10/22	10/26	10/29	11/03	11/09
16	10/10	10/17	10/22	10/27	10/31	11/04	11/08	11/13	11/20
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	137	130	125	121	117	113	109	104	97
32	153	147	142	138	134	130	126	121	114
28	170	164	159	155	152	148	145	140	134
24	198	191	185	180	176	171	167	161	153
20	225	215	208	201	196	190	184	177	167
16	243	233	226	219	213	207	201	194	183

* 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:

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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	1275	1005	878	593	316	85	5	17	178	509	957	1220	7038
60	1120	865	723	448	188	32	0	3	87	356	807	1065	5694
57	1027	781	630	365	127	15	0	1	49	268	717	972	4952
55	965	725	568	313	93	8	0	0	31	214	657	910	4484
50	810	587	416	197	36	1	0	0	7	104	517	760	3435
32	317	181	48	8	0	0	0	0	0	1	132	292	979

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	65	99	193	405	716	1010	1241	1180	852	516	165	94	6536
55	0	0	0	19	96	329	528	467	193	15	0	0	1647
57	0	0	0	12	67	275	466	406	152	7	0	0	1385
60	0	0	0	5	36	202	373	315	99	2	0	0	1032
65	0	0	0	0	8	106	223	174	40	0	0	0	551
70	0	0	0	0	1	42	97	67	11	0	0	0	218

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	4	31	102	241	507	792	1022	963	663	335	70	14	4	35	137	378	885	1677	2699	3662	4325	4660	4730	4744
45	0	6	42	140	361	643	867	808	519	210	26	2	0	6	48	188	549	1192	2059	2867	3386	3596	3622	3624
50	0	0	11	66	223	495	712	653	379	108	5	0	0	0	11	77	300	795	1507	2160	2539	2647	2652	2652
55	0	0	0	23	118	349	557	498	249	41	0	0	0	0	0	23	141	490	1047	1545	1794	1835	1835	1835
60	0	0	0	1	47	218	402	345	136	12	0	0	0	0	0	1	48	266	668	1013	1149	1161	1161	1161
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	25	56	125	212	341	499	639	605	441	276	84	34	25	81	206	418	759	1258	1897	2502	2943	3219	3303	3337

(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.
Complete documentation for the 1971-2000 Normals is available on the internet from:
www.ncdc.noaa.gov/oa/climate/normal/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 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/normal.html
U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normal/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