

Climatology of the United States

No. 20

1971-2000

Station: CIMARRON, CO

COOP ID: 051609

Climate Division: CO 2

NWS Call Sign:

Elevation: 6,896 Feet Lat: 38° 27N

Lon: 107° 34W

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	33.1	2.0	17.6	60	1969	7	26.3	1999	-43	1963	13	7.9	1989	1471	0	.0	.0	.6	14.2	30.9	15.9
Feb	38.3	7.6	23.0	65	1986	25	32.9	1995	-40+	1955	22	10.0	1974	1177	0	.0	.0	2.7	7.3	28.0	9.2
Mar	48.2	19.1	33.7	76	1963	30	39.7	1999	-25	1952	23	26.0	1984	972	0	.0	.0	14.0	.8	30.0	1.8
Apr	57.2	25.2	41.2	79+	2000	27	47.8	1989	-9	1973	8	33.7	1983	713	0	.0	.0	23.1	.1	25.8	.3
May	68.1	32.1	50.1	89	1956	31	54.2	1984	4	1972	1	46.3	1982	461	0	.0	.0	29.8	.0	19.3	.0
Jun	79.8	37.3	58.6	96	1962	16	62.2	1988	19	1973	19	55.5	1975	199	6	.0	1.3	30.0	.0	7.3	.0
Jul	84.5	44.3	64.4	98	1961	30	66.8	1975	29+	1997	2	61.6	1995	60	41	.0	4.2	31.0	.0	.7	.0
Aug	82.4	43.9	63.2	94+	1979	5	66.3	1984	27	1975	29	60.1	1975	92	34	.0	1.9	31.0	.0	1.3	.0
Sep	74.9	35.1	55.0	94	1979	10	59.6	1998	13	1978	21	51.1	1971	302	2	.0	.3	30.0	.0	12.3	.0
Oct	63.5	24.7	44.1	86	1958	16	47.3	1988	5+	1976	29	40.5	1976	649	0	.0	.0	28.5	.2	26.7	.0
Nov	46.4	15.9	31.2	72	1952	3	35.9	1995	-22	1952	29	24.0	2000	1016	0	.0	.0	11.3	2.6	29.0	2.2
Dec	35.1	4.5	19.8	59	1951	24	29.8	1980	-33+	1990	24	8.4	1978	1401	0	.0	.0	1.6	11.4	30.9	12.8
Ann	59.3	24.3	41.8	98	Jul 1961	30	66.8	Jul 1975	-43	Jan 1963	13	7.9	Jan 1989	8513	83	.0	7.7	233.6	36.6	242.2	42.2

+ 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: 1951-2001

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

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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: CIMARRON, CO

COOP ID: 051609

Climate Division: CO 2

NWS Call Sign:

Elevation: 6,896 Feet Lat: 38°27N

Lon: 107°34W

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	.92	.83	6.00	1962	20	2.90	1974	.10+	1992	6.8	3.4	.4	@	.12	.19	.32	.45	.58	.73	.91	1.13	1.42	1.90	2.37
Feb	.75	.70	.72	1987	14	1.96	1993	.01	1973	6.9	3.4	.1	.0	.07	.13	.23	.33	.45	.57	.72	.91	1.17	1.59	2.01
Mar	1.02	.80	1.50	1952	31	3.11	1995	.07	1999	6.8	3.3	.4	@	.12	.20	.34	.48	.64	.81	1.00	1.25	1.58	2.13	2.67
Apr	1.12	1.00	1.41	1995	30	3.65	1990	.01	1982	6.5	3.4	.3	.1	.11	.19	.34	.50	.67	.86	1.08	1.36	1.75	2.39	3.02
May	1.20	.89	2.35	1953	17	3.84	1992	.00	1974	7.0	3.8	.6	.0	.06	.18	.36	.54	.72	.93	1.18	1.48	1.89	2.57	3.23
Jun	.84	.56	5.25	1952	3	2.67	1972	.00	1971	4.2	2.5	.3	.1	.03	.09	.21	.33	.46	.62	.80	1.03	1.34	1.88	2.40
Jul	1.28	1.20	1.75+	1983	18	3.46	1981	.00+	1994	6.2	3.8	.6	.1	.00	.42	.68	.87	1.04	1.20	1.38	1.59	1.86	2.26	2.64
Aug	1.36	1.41	2.20	1952	10	2.41	1999	.00	1996	7.2	4.2	.7	@	.25	.43	.66	.85	1.03	1.21	1.42	1.66	1.98	2.48	2.94
Sep	1.41	1.35	3.60	1952	21	3.87	1985	.00+	1979	6.1	4.2	.7	.1	.00	.16	.41	.64	.87	1.12	1.41	1.76	2.24	3.03	3.78
Oct	1.38	1.42	1.75	1978	21	2.70	1998	.00	1983	5.5	4.1	.7	@	.27	.46	.69	.88	1.06	1.25	1.45	1.69	2.01	2.49	2.95
Nov	1.12	.95	1.08	1986	1	3.10	1986	.00	1976	6.6	4.1	.4	@	.10	.23	.41	.57	.74	.92	1.13	1.39	1.72	2.27	2.80
Dec	.76	.65	1.00+	1995	31	2.52	1983	.02+	1994	5.9	2.9	.2	@	.06	.12	.22	.32	.44	.57	.73	.92	1.20	1.65	2.10
Ann	13.16	13.05	6.00	Jan 1962	20	3.87	Sep 1985	.00+	Aug 1996	75.7	43.1	5.4	.4	8.83	9.65	10.71	11.52	12.25	12.96	13.69	14.51	15.50	16.95	18.21

+ 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: 1951-2001

(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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No. 20

1971-2000

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Station: CIMARRON, CO

COOP ID: 051609

Climate Division: CO 2

NWS Call Sign:

Elevation: 6,896 Feet

Lat: 38°27N

Lon: 107°34W

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	12.3	11.4	5	1	9.0	1972	13	31.5	1988	28	1984	25	25	1984	4.6	3.3	1.7	.9	.0	-9.9	-9.9	-9.9	-9.9
Feb	10.8	9.3	5	#	10.0	1984	10	27.5	1984	46	1984	18	32	1984	4.6	2.8	1.5	.6	@	-9.9	-9.9	-9.9	-9.9
Mar	7.9	6.0	3	0	8.0	1984	3	23.2	1985	38	1984	4	32	1984	3.6	2.9	1.2	.3	.0	-9.9	-9.9	-9.9	-9.9
Apr	5.2	4.5	#	0	8.0	1974	3	13.0+	1991	15	1984	3	5	1984	1.7	1.5	.7	.2	.0	.3	.1	.0	.0
May	.5	.0	0	0	4.0	1973	1	4.0+	1999	0	0	0	0	0	.2	.2	.1	.0	.0	.0	.0	.0	.0
Jun	#	.0	0	0	#	1984	8	#	1984	0	0	0	0	0	.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	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Sep	.0	.0	#	0	.5	1996	27	.5	1996	#	2000	29	#	2000	@	.0	.0	.0	.0	.0	.0	.0	.0
Oct	2.0	.0	#	0	6.0	1984	16	17.0	1984	4	1984	16	#+	1986	.4	.4	.2	.1	.0	.2	.1	.0	.0
Nov	11.1	11.3	1	0	8.0	1973	24	27.0	1991	14	1983	25	7	1983	3.2	2.8	1.4	.5	.0	3.0	1.1	.5	.0
Dec	15.7	13.1	2	#	12.0	1995	31	45.0	1983	30	1983	20	19	1983	4.7	3.8	2.1	.8	.1	-9.9	-9.9	-9.9	-9.9
Ann	65.5	55.6	N/A	N/A	12.0	Dec 1995	31	45.0	Dec 1983	46	Feb 1984	18	32+	Mar 1984	23.0	17.7	8.9	3.4	.1	-9.9	-9.9	-9.9	-9.9

+ 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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Climate Division: CO 2

NWS Call Sign:

Elevation: 6,896 Feet

Lat: 38° 27N

Lon: 107° 34W

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	7/23	7/18	7/14	7/11	7/08	7/06	7/03	6/29	6/24
32	7/10	7/06	7/02	6/30	6/27	6/24	6/21	6/18	6/13
28	6/19	6/14	6/09	6/06	6/03	5/30	5/27	5/22	5/17
24	6/13	6/06	5/31	5/27	5/23	5/18	5/14	5/08	5/01
20	5/29	5/21	5/15	5/10	5/05	4/30	4/25	4/19	4/11
16	5/10	5/02	4/26	4/21	4/17	4/12	4/07	4/01	3/24
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	8/01	8/07	8/12	8/16	8/20	8/24	8/28	9/01	9/08
32	8/15	8/22	8/26	8/30	9/03	9/06	9/10	9/15	9/21
28	9/04	9/09	9/13	9/16	9/19	9/21	9/24	9/28	10/03
24	9/15	9/19	9/22	9/24	9/27	9/29	10/01	10/04	10/08
20	9/21	9/26	9/29	10/02	10/04	10/07	10/09	10/12	10/17
16	9/29	10/05	10/09	10/13	10/16	10/20	10/23	10/28	11/03
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	66	57	51	46	42	37	32	26	18
32	92	84	77	72	67	62	57	51	42
28	135	125	118	113	107	102	96	89	80
24	151	142	136	131	126	122	116	110	102
20	180	170	163	157	151	146	140	133	123
16	210	200	193	187	182	176	170	163	153

* 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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Station: CIMARRON, CO

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Elevation: 6,896 Feet Lat: 38° 27N Lon: 107° 34W

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	1471	1177	972	713	461	199	60	92	302	649	1016	1401	8513
60	1316	1037	817	563	308	85	8	23	167	494	866	1246	6930
57	1223	953	724	475	224	41	1	7	102	401	776	1153	6080
55	1161	897	662	418	174	22	0	2	67	339	716	1091	5549
50	1006	757	508	283	78	3	0	0	16	195	566	936	4348
32	474	301	93	19	0	0	0	0	0	1	111	398	1397

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	26	48	144	296	562	797	1004	965	690	376	85	20	5013
55	0	0	0	5	23	129	291	255	67	1	0	0	771
57	0	0	0	2	12	88	230	197	42	0	0	0	571
60	0	0	0	0	3	42	144	120	17	0	0	0	326
65	0	0	0	0	0	6	41	34	2	0	0	0	83
70	0	0	0	0	0	0	4	3	0	0	0	0	7

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	15	102	307	553	758	720	454	158	9	0	0	0	15	117	424	977	1735	2455	2909	3067	3076	3076
45	0	0	0	35	171	403	603	565	306	62	0	0	0	0	0	35	206	609	1212	1777	2083	2145	2145	2145
50	0	0	0	4	70	259	448	410	170	11	0	0	0	0	0	4	74	333	781	1191	1361	1372	1372	1372
55	0	0	0	0	13	131	293	255	67	0	0	0	0	0	0	0	13	144	437	692	759	759	759	759
60	0	0	0	0	0	36	142	113	13	0	0	0	0	0	0	0	0	36	178	291	304	304	304	304
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	2	54	138	283	450	528	508	378	225	45	0	0	2	56	194	477	927	1455	1963	2341	2566	2611	2611

(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/normal/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.

- | | |
|---|---|
| <ol style="list-style-type: none">a. Temperature/ Precipitation Tables<ol style="list-style-type: none">1. 1971-2000 Monthly Normals2. Cooperative Summary of the Day3. National Weather Service station records4. 1971-2000 serially complete daily datab. Degree Day Table<ol style="list-style-type: none">1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data | <ol style="list-style-type: none">c. Snow Tables<ol style="list-style-type: none">1. Snow Climatology2. Cooperative Summary of the Dayd. 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