

Climatography of the United States

No. 20

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801
www.ncdc.noaa.gov

Station: GATEWAY 1 SE, CO

1971-2000

COOP ID: 053246

Climate Division: CO 2

NWS Call Sign:

Elevation: 4,550 Feet Lat: 38°41N

Lon: 108°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	41.7	19.3	30.5	67	1986	29	37.6	1999	-28	1963	13	15.1	1973	1069	0	.0	.0	6.5	5.3	29.1	2.2
Feb	49.8	25.6	37.7	73	1962	11	44.9	1995	-9	1989	6	23.4	1974	765	0	.0	.0	14.5	1.2	23.5	.8
Mar	59.3	33.5	46.4	80	1971	30	52.5	1972	2	1971	8	40.5	1977	577	0	.0	.0	26.8	.0	16.1	.0
Apr	67.7	39.6	53.7	90	1959	30	61.4	1992	15	1977	4	48.5	1975	353	12	.0	.0	28.7	.0	7.6	.0
May	76.6	47.9	62.3	98+	2000	29	66.4	2000	24	1972	1	57.4	1980	141	55	.0	.9	30.9	.0	.8	.0
Jun	87.3	56.0	71.7	104	1959	23	76.6	1994	34	1975	11	64.9	1975	26	226	.7	13.4	30.0	.0	.0	.0
Jul	92.1	61.8	77.0	106+	1971	13	80.6	1971	40	1988	6	73.2	1977	0	371	1.8	21.9	31.0	.0	.0	.0
Aug	89.8	60.1	75.0	106	1958	12	78.4	1994	38+	1975	30	69.5	1975	2	311	.5	16.6	31.0	.0	.0	.0
Sep	82.4	51.1	66.8	98+	1978	4	72.1	1998	25	1978	20	62.1	1971	52	106	.0	4.8	30.0	.0	.3	.0
Oct	70.0	38.6	54.3	91	1956	6	58.9	1988	14	1979	31	50.7	1976	333	2	.0	@	30.0	.0	6.0	.0
Nov	54.6	28.7	41.7	79	1973	8	46.3	1999	-3	1976	29	35.2	1979	700	0	.0	.0	20.1	.1	21.5	@
Dec	43.7	20.7	32.2	70	1995	4	39.8	1980	-11	1978	8	25.8	1978	1018	0	.0	.0	7.3	2.7	29.0	.5
Ann	67.9	40.2	54.1	106+	Jul 1971	13	80.6	Jul 1971	-28	Jan 1963	13	15.1	Jan 1973	5036	1083	3.0	57.6	286.8	9.3	133.9	3.5

+ 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

040-A

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COOP ID: 053246

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NWS Call Sign:

Elevation: 4,550 Feet Lat: 38°41N

Lon: 108°58W

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	.78	.59	1.00	1973	24	2.33	1980	.06	1972	5.6	2.9	.3	@	.08	.14	.24	.35	.47	.60	.76	.95	1.21	1.65	2.08
Feb	.63	.48	1.04	1965	10	2.35	1980	.00+	1988	4.5	2.3	.2	.0	.00	.05	.16	.25	.36	.48	.62	.79	1.02	1.41	1.79
Mar	1.17	1.16	.93	1995	6	2.61	1983	.00+	1999	7.3	4.0	.4	.0	.00	.17	.40	.59	.77	.97	1.20	1.46	1.81	2.39	2.94
Apr	1.08	.99	1.00	1999	24	2.78	1997	.08	1989	5.7	3.1	.5	@	.15	.24	.39	.54	.70	.87	1.07	1.32	1.65	2.19	2.71
May	1.13	1.06	1.32	1967	26	3.35	1992	.00+	1989	6.1	3.6	.4	@	.00	.12	.32	.50	.69	.89	1.12	1.40	1.79	2.42	3.03
Jun	.53	.40	1.16	1969	24	1.81	1983	.00+	1990	3.2	1.7	.2	.0	.00	.00	.08	.17	.27	.38	.50	.66	.88	1.23	1.59
Jul	1.07	.86	1.15	2001	11	2.86	1999	.00	1994	5.3	3.0	.4	.0	.08	.20	.37	.53	.69	.87	1.08	1.33	1.66	2.21	2.74
Aug	1.26	.88	2.82	1957	21	4.64	1982	.00	1998	5.6	3.0	.5	.2	.07	.19	.38	.57	.76	.98	1.24	1.55	1.97	2.67	3.35
Sep	1.05	.85	1.97	1996	6	5.18	1996	.08	1978	4.7	2.7	.4	.1	.08	.16	.29	.44	.60	.78	1.00	1.28	1.67	2.31	2.94
Oct	1.23	1.07	1.33	1957	13	4.84	1972	.06	1988	5.7	3.7	.6	.1	.11	.20	.36	.54	.72	.93	1.19	1.50	1.94	2.66	3.37
Nov	1.03	1.14	1.38	1975	28	2.16	1978	.10+	1995	4.7	2.8	.5	@	.18	.27	.42	.57	.71	.87	1.04	1.26	1.55	2.01	2.45
Dec	.64	.53	.75	1967	19	1.99	1983	.00+	1998	4.6	2.5	.1	.0	.00	.15	.28	.38	.48	.57	.68	.80	.96	1.22	1.46
Ann	11.60	11.34	2.82	Aug 1957	21	5.18	Sep 1996	.00+	Mar 1999	63.0	35.3	4.5	.4	7.54	8.30	9.29	10.05	10.73	11.39	12.08	12.85	13.79	15.16	16.36

+ 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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Station: GATEWAY 1 SE, CO

COOP ID: 053246

Climate Division: CO 2

NWS Call Sign:

Elevation: 4,550 Feet

Lat: 38°41N

Lon: 108°58W

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	6.9	4.7	1	#	14.0	1974	5	33.9	1973	15	1973	17	10	1973	2.9	2.2	.8	.4	.1	4.8	2.8	1.3	.6
Feb	.7	.3	1	0	4.0	1990	14	4.0	1990	11	1974	1	6	1974	.7	.5	@	.0	.0	2.1	1.6	1.1	.1
Mar	2.0	.8	#	0	6.0	1976	4	10.0	1985	3+	2000	20	#+	2000	1.0	.9	.2	.1	.0	.2	.1	.0	.0
Apr	1.2	.0	#	0	6.0	1997	2	8.5	1975	1	1991	28	#+	1991	.6	.4	.1	.1	.0	.0	.0	.0	.0
May	.1	.0	0	0	1.8	1983	17	1.8	1983	0	0	0	0	0	@	@	.0	.0	.0	.0	.0	.0	.0
Jun	#	.0	0	0	#	1975	10	#	1975	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	#	1978	19	#	1978	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Oct	.0	.0	0	0	.5	1972	29	.5+	1975	0	0	0	0	0	.1	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.9	.0	#	0	3.5	1973	26	5.5	1973	2	1979	25	#+	1994	.6	.5	@	.0	.0	.5	.0	.0	.0
Dec	3.1	2.3	#	#	5.0	1971	13	12.5	1983	8	1971	16	3	1971	2.4	1.8	.4	@	.0	1.2	.3	.0	.0
Ann	14.9	8.1	N/A	N/A	14.0	Jan 1974	5	33.9	Jan 1973	15	Jan 1973	17	10	Jan 1973	8.3	6.3	1.5	.6	.1	8.8	4.8	2.4	.7

+ 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: 4,550 Feet

Lat: 38° 41N

Lon: 108° 58W

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	5/28	5/22	5/17	5/14	5/10	5/07	5/03	4/28	4/22
32	5/20	5/12	5/07	5/02	4/27	4/23	4/18	4/12	4/04
28	5/01	4/24	4/19	4/15	4/11	4/07	4/03	3/29	3/22
24	4/21	4/12	4/05	3/31	3/26	3/20	3/15	3/08	2/28
20	4/02	3/23	3/16	3/10	3/04	2/26	2/20	2/13	2/03
16	3/18	3/07	2/27	2/20	2/14	2/07	2/01	1/24	1/13
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	9/21	9/25	9/28	10/01	10/03	10/06	10/08	10/11	10/16
32	9/25	10/01	10/06	10/10	10/13	10/17	10/21	10/26	11/01
28	10/07	10/13	10/17	10/21	10/24	10/27	10/31	11/04	11/09
24	10/21	10/25	10/29	11/01	11/03	11/06	11/09	11/12	11/17
20	11/03	11/08	11/12	11/16	11/19	11/22	11/26	11/30	12/05
16	11/13	11/19	11/23	11/27	12/01	12/04	12/08	12/12	12/18
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	169	161	155	150	145	141	136	130	122
32	199	188	181	174	168	162	156	148	138
28	224	214	207	201	195	189	183	176	166
24	254	243	235	228	222	216	209	201	190
20	295	283	274	266	259	252	245	236	224
16	326	313	304	296	289	282	274	265	253

* 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)

Base	Heating Degree Days (1)												
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	1069	765	577	353	141	26	0	2	52	333	700	1018	5036
60	914	625	426	228	62	6	0	0	12	194	550	863	3880
57	825	541	341	167	33	2	0	0	4	126	461	770	3270
55	767	491	286	133	20	0	0	0	1	89	403	708	2898
50	622	362	170	64	4	0	0	0	0	30	265	553	2070
32	213	61	3	0	0	0	0	0	0	0	12	113	402

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	166	220	450	649	937	1190	1393	1331	1043	692	302	118	8491
55	7	6	20	92	243	501	680	618	355	68	3	0	2593
57	4	0	12	67	194	442	618	556	297	43	1	0	2234
60	0	0	4	37	131	357	525	463	216	18	0	0	1751
65	0	0	0	12	55	226	371	311	106	2	0	0	1083
70	0	0	0	2	16	123	220	171	39	0	0	0	571

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	10	59	209	401	676	948	1142	1093	813	461	121	13	10	69	278	679	1355	2303	3445	4538	5351	5812	5933	5946
45	0	15	108	267	522	798	987	938	663	315	54	3	0	15	123	390	912	1710	2697	3635	4298	4613	4667	4670
50	0	2	43	154	374	648	832	783	513	187	13	0	0	2	45	199	573	1221	2053	2836	3349	3536	3549	3549
55	0	0	10	71	240	499	677	628	366	82	0	0	0	0	10	81	321	820	1497	2125	2491	2573	2573	2573
60	0	0	0	25	123	353	522	473	230	25	0	0	0	0	0	25	148	501	1023	1496	1726	1751	1751	1751
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	16	57	165	278	440	608	736	714	531	320	104	12	16	73	238	516	956	1564	2300	3014	3545	3865	3969	3981

(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.

- | | |
|---|---|
| <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