

# Climatology of the United States

No. 20

1971-2000

Station: SAGUACHE, CO

COOP ID: 057337

Climate Division: CO 5

NWS Call Sign:

Elevation: 7,692 Feet Lat: 38°05N

Lon: 106°08W

## 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	33.9	1.7	17.8	62	1971	31	28.8	1999	-34	1971	7	6.1	1984	1463	0	.0	.0	2.0	12.7	31.0	12.7
Feb	40.0	8.2	24.1	63+	1986	26	33.3	2000	-25	1979	1	12.2	1974	1145	0	.0	.0	5.3	6.4	28.2	5.5
Mar	48.7	18.1	33.4	75	1971	26	39.5	1999	-6	1965	3	27.3	1977	980	0	.0	.0	15.5	.7	30.8	.3
Apr	57.4	24.7	41.1	81	1981	30	47.4	1981	-3	1973	8	35.1	1975	719	0	.0	.0	24.2	.1	26.6	@
May	66.5	33.1	49.8	89	2000	31	55.4	2000	8	1975	7	44.5	1978	471	0	.0	.0	30.1	.0	13.4	.0
Jun	76.2	41.5	58.9	97	1998	30	63.0	1994	22	1981	16	54.2	1975	198	13	.0	.3	30.0	.0	2.2	.0
Jul	79.8	47.0	63.4	93+	2001	5	67.8	2000	31	1978	6	60.2	1975	92	42	.0	.8	31.0	.0	.1	.0
Aug	77.7	45.5	61.6	92	2000	9	66.5	2000	26	1978	30	56.0	1978	146	40	.0	.2	31.0	.0	2.1	.0
Sep	71.6	37.3	54.5	88+	2000	16	61.0	1998	13	1978	20	49.6	1973	323	6	.0	.0	30.0	.0	8.3	.0
Oct	61.5	26.9	44.2	82	2000	3	48.7	1988	0	1993	31	39.6	1976	645	0	.0	.0	27.8	.2	24.9	@
Nov	46.2	14.5	30.4	69	2001	4	38.1	1999	-22	1975	23	20.4	1972	1044	0	.0	.0	12.3	2.8	29.8	1.7
Dec	35.8	4.0	19.9	60+	1998	4	30.0	1980	-26	1974	31	9.6	1991	1399	0	.0	.0	2.3	10.6	31.0	9.9
Ann	57.9	25.2	41.6	97	Jun 1998	30	67.8	Jul 2000	-34	Jan 1971	7	6.1	Jan 1984	8625	101	.0	1.3	241.5	33.5	228.4	30.1

+ 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](http://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

088-A

# 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: SAGUACHE, CO

COOP ID: 057337

Climate Division: CO 5

NWS Call Sign:

Elevation: 7,692 Feet Lat: 38°05N

Lon: 106°08W

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	.29	.23	.54	1956	17	1.01	1979	.00+	1986	3.2	1.2	.0	.0	.00	.01	.04	.08	.13	.18	.25	.34	.48	.70	.93
Feb	.19	.16	.46	2001	8	.52	1975	.00+	1991	2.3	.7	.0	.0	.00	.00	.04	.08	.11	.14	.19	.24	.30	.42	.53
Mar	.44	.42	.69	1953	30	1.26	1998	.00+	1977	4.2	1.8	@	.0	.00	.04	.11	.18	.25	.33	.43	.55	.71	.97	1.23
Apr	.62	.47	1.10	1994	30	2.70	1994	.00	1972	4.2	1.9	.2	@	.01	.05	.12	.21	.31	.43	.57	.75	1.01	1.44	1.88
May	.77	.78	1.37	1976	7	1.97	1976	.00+	1998	5.4	2.5	.2	@	.00	.10	.24	.36	.49	.62	.77	.96	1.20	1.61	1.99
Jun	.58	.49	1.05	1953	19	1.62	1981	.00	1976	5.0	1.8	.1	.0	.05	.11	.20	.29	.38	.47	.58	.71	.89	1.18	1.46
Jul	1.40	1.29	1.50	1969	17	3.64	1973	.14	1987	8.5	4.2	.6	@	.35	.48	.68	.86	1.04	1.23	1.44	1.69	2.02	2.53	3.02
Aug	1.64	1.41	1.01	1955	19	3.38	1982	.69	1980	10.9	5.0	.7	.0	.64	.79	1.01	1.19	1.35	1.53	1.71	1.93	2.20	2.62	3.00
Sep	1.00	.75	1.03	1997	1	3.13	1997	.14	1979	6.4	3.2	.3	.1	.18	.27	.41	.55	.69	.84	1.01	1.22	1.50	1.95	2.38
Oct	.68	.47	1.06	1978	22	2.40	1998	.00	1982	4.1	2.3	.3	@	.02	.07	.17	.26	.37	.50	.65	.83	1.09	1.52	1.95
Nov	.52	.44	.90	1986	1	1.67	1986	.00+	1999	3.8	1.6	.2	.0	.00	.00	.11	.19	.28	.38	.50	.65	.84	1.17	1.49
Dec	.25	.22	.71	1978	6	1.00	1978	.00+	1993	2.8	.9	@	.0	.00	.00	.04	.07	.12	.17	.23	.30	.41	.59	.77
Ann	8.38	8.08	1.50	Jul 1969	17	3.64	Jul 1973	.00+	Nov 1999	60.8	27.1	2.6	.1	6.23	6.65	7.18	7.58	7.94	8.28	8.63	9.02	9.48	10.15	10.73

+ 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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National Climatic Data Center  
Federal Building  
151 Patton Avenue  
Asheville, North Carolina 28801  
[www.ncdc.noaa.gov](http://www.ncdc.noaa.gov)

**Station: SAGUACHE, CO**

**COOP ID: 057337**

**Climate Division: CO 5**

**NWS Call Sign:**

**Elevation: 7,692 Feet**

**Lat: 38°05N**

**Lon: 106°08W**

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	5.0	4.2	2	#	6.0	1987	15	20.0	1979	23	1979	30	13	1979	2.6	1.6	.5	.2	.0	8.1	6.6	2.6	.3
Feb	2.4	2.3	1	#	7.0	1989	5	7.0	1989	20	1979	3	13	1979	1.8	1.3	.3	@	.0	2.1	.5	.0	.0
Mar	6.5	6.7	1	#	7.0	1974	10	17.6	1998	7	1974	10	3	1985	2.3	1.9	.6	.2	.0	2.0	.8	.2	.0
Apr	3.7	.2	#	#	12.0	1976	18	16.5	1975	7	1983	13	2	1994	1.0	.8	.5	.1	@	.9	.3	.2	.0
May	.4	.0	#	0	6.0	1999	1	6.0	1999	8	1999	1	#+	1999	.2	.1	@	@	.0	.1	.1	.1	.0
Jun	.0	.0	#	0	.0	0	0	.0	0	#	1993	18	#	1993	.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	#	1994	28	#	1994	.0	.0	.0	.0	.0	.0	.0	.0	.0
Sep	.1	.0	#	0	2.1	1971	17	2.1	1971	1+	1976	27	#+	1976	@	@	.0	.0	.0	@	.0	.0	.0
Oct	1.1	.0	#	0	6.4	1997	25	7.0	1996	7	1997	25	1	1997	.4	.3	.1	@	.0	.4	.3	.1	.0
Nov	3.8	1.3	1	#	10.2	1971	18	12.0	1971	11	1978	24	8	1972	1.6	1.1	.3	.1	@	2.1	1.2	.3	.0
Dec	3.9	4.0	2	#	12.0	1978	6	15.0	1978	15	1978	7	11	1972	2.0	1.3	.3	.1	@	6.4	3.6	2.6	.0
Ann	26.9	18.7	N/A	N/A	12.0+	Dec 1978	6	20.0	Jan 1979	23	Jan 1979	30	13+	Feb 1979	11.9	8.4	2.6	.7	@	22.1	13.4	6.1	.3

+ 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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**Station: SAGUACHE, CO**

**COOP ID: 057337**

**Climate Division: CO 5**

**NWS Call Sign:**

**Elevation: 7,692 Feet**

**Lat: 38° 05N**

**Lon: 106° 08W**

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	7/06	6/29	6/24	6/20	6/16	6/12	6/08	6/03	5/28
32	6/23	6/17	6/12	6/08	6/05	6/01	5/29	5/24	5/18
28	6/09	6/02	5/28	5/24	5/20	5/16	5/11	5/06	4/29
24	5/27	5/20	5/15	5/11	5/06	5/02	4/28	4/23	4/16
20	5/14	5/07	5/02	4/27	4/23	4/19	4/15	4/09	4/02
16	4/30	4/23	4/19	4/15	4/11	4/07	4/03	3/29	3/23
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	8/08	8/16	8/22	8/26	8/31	9/05	9/09	9/15	9/23
32	8/19	8/27	9/02	9/07	9/11	9/16	9/21	9/27	10/05
28	8/30	9/08	9/14	9/20	9/25	9/29	10/05	10/11	10/20
24	9/05	9/15	9/21	9/27	10/02	10/07	10/13	10/19	10/29
20	9/11	9/21	9/29	10/05	10/11	10/17	10/23	10/30	11/10
16	9/28	10/07	10/13	10/19	10/24	10/29	11/04	11/10	11/19
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	113	100	91	83	75	68	59	50	37
32	133	121	112	105	98	91	83	75	63
28	161	149	141	134	127	120	113	105	94
24	182	170	162	154	148	141	134	126	114
20	210	196	186	178	170	162	153	143	130
16	232	219	210	203	195	188	181	172	159

\* 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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No. 20  
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**Station: SAGUACHE, CO**

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**Climate Division: CO 5      NWS Call Sign:      Elevation: 7,692 Feet    Lat: 38°05N      Lon: 106°08W**

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	1463	1145	980	719	471	198	92	146	323	645	1044	1399	8625
60	1308	1005	825	569	322	92	23	63	195	490	894	1244	7030
57	1215	921	732	479	241	49	7	31	132	399	804	1151	6161
55	1153	865	670	421	191	29	2	18	97	340	744	1089	5619
50	998	725	515	284	94	5	0	3	35	207	595	934	4395
32	497	295	94	14	0	0	0	0	0	6	159	419	1484

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	57	74	137	286	552	805	973	917	673	384	105	43	5006
55	0	0	0	3	30	144	262	222	80	5	0	0	746
57	0	0	0	1	17	104	205	173	55	2	0	0	557
60	0	0	0	0	6	56	128	112	28	0	0	0	330
65	0	0	0	0	0	13	42	40	6	0	0	0	101
70	0	0	0	0	0	1	7	9	0	0	0	0	17

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	26	116	325	574	737	666	430	178	13	0	0	0	26	142	467	1041	1778	2444	2874	3052	3065	3065
45	0	0	0	40	184	424	582	512	286	77	0	0	0	0	0	40	224	648	1230	1742	2028	2105	2105	2105
50	0	0	0	7	75	279	427	357	157	17	0	0	0	0	0	7	82	361	788	1145	1302	1319	1319	1319
55	0	0	0	0	19	148	272	205	58	0	0	0	0	0	0	0	19	167	439	644	702	702	702	702
60	0	0	0	0	0	52	126	79	12	0	0	0	0	0	0	0	0	52	178	257	269	269	269	269
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	14	60	147	278	405	479	447	339	203	44	0	0	14	74	221	499	904	1383	1830	2169	2372	2416	2416

(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](http://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](http://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"><li>a. Temperature/ Precipitation Tables<ol style="list-style-type: none"><li>1. 1971-2000 Monthly Normals</li><li>2. Cooperative Summary of the Day</li><li>3. National Weather Service station records</li><li>4. 1971-2000 serially complete daily data</li></ol></li><li>b. Degree Day Table<ol style="list-style-type: none"><li>1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals</li><li>2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data</li></ol></li></ol> | <ol style="list-style-type: none"><li>c. Snow Tables<ol style="list-style-type: none"><li>1. Snow Climatology</li><li>2. Cooperative Summary of the Day</li></ol></li><li>d. Freeze Data Table<br/>1971-2000 serially complete daily data</li></ol> |
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## References

U.S. Climate Normals 1971-2000, [www.ncdc.noaa.gov/normal.html](http://www.ncdc.noaa.gov/normal.html)  
U.S. Climate Normals 1971-2000-Products Clim20, [www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html)  
Snow Climatology Project Description, [www.ncdc.noaa.gov/oa/climate/monitoring/snowclim/mainpage.html](http://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](http://www1.ncdc.noaa.gov/pub/data/special/serialcomplete_jam_0900.pdf)