

# Climatography of the United States

No. 20

1971-2000

Station: STRATTON, CO

COOP ID: 058008

Climate Division: CO 3

NWS Call Sign:

Elevation: 4,403 Feet Lat: 39° 18N

Lon: 102° 36W

## 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	40.8	14.2	27.5	77	1951	26	38.2	1986	-22	1963	12	15.6	1979	1163	0	.0	.0	9.2	7.3	30.1	3.4
Feb	46.0	17.7	31.9	80+	1982	22	40.6	2000	-26+	1989	4	20.5	1989	928	0	.0	.0	13.2	4.6	26.7	1.8
Mar	53.9	24.3	39.1	85+	1989	11	44.3	1986	-19	1960	3	34.1	1980	803	0	.0	.0	20.6	1.9	24.7	.4
Apr	62.4	32.6	47.5	93	1989	22	54.1	1981	5+	1997	12	40.8	1983	526	0	.0	.1	26.0	.4	13.2	.0
May	71.8	43.1	57.5	99	2000	30	62.1+	1998	21	1967	1	51.2	1995	256	21	.0	1.0	30.2	.0	1.5	.0
Jun	84.1	53.9	69.0	106+	1954	24	75.9	1996	30	1951	2	63.8	1989	45	164	.9	10.4	29.9	.0	.0	.0
Jul	89.7	59.2	74.5	108+	1954	11	77.2+	2000	38	1969	6	69.9	1992	1	294	2.5	18.6	31.0	.0	.0	.0
Aug	87.5	57.4	72.5	105	1969	8	77.6	1983	38	1969	23	67.7	1992	15	245	.8	15.6	31.0	.0	.0	.0
Sep	78.8	47.7	63.3	100+	1983	2	69.7	1998	28	1961	30	57.6	1993	122	68	.1	6.1	29.5	.0	1.0	.0
Oct	67.7	35.5	51.6	94+	1999	13	54.1	1975	6+	1993	31	46.9	1984	416	0	.0	.2	28.7	.3	9.2	.0
Nov	50.3	23.3	36.8	83+	1999	16	48.4	1999	-6	1955	16	28.7	1972	846	0	.0	.0	16.8	3.2	25.1	.2
Dec	42.1	15.7	28.9	81	1955	24	36.3	1980	-24	1990	22	14.8	1983	1118	0	.0	.0	10.7	6.1	29.8	2.5
Ann	64.6	35.4	50.0	108+	Jul 1954	11	77.6	Aug 1983	-26+	Feb 1989	4	14.8	Dec 1983	6239	792	4.3	52.0	276.8	23.8	161.3	8.3

+ 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](http://www.ncdc.noaa.gov/oa/climate/normals/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

096-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: STRATTON, CO**

**COOP ID: 058008**

**Climate Division: CO 3**

**NWS Call Sign:**

**Elevation: 4,403 Feet Lat: 39°18N**

**Lon: 102°36W**

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	.36	.26	.56	1962	8	1.21	1995	.07	1983	3.4	1.4	.1	.0	.06	.09	.14	.19	.24	.30	.36	.43	.54	.70	.86
Feb	.47	.39	.60	1971	18	1.48	1987	.00+	1994	3.4	1.6	.2	.0	.00	.00	.10	.18	.26	.35	.46	.59	.77	1.07	1.37
Mar	.94	.71	1.70	1977	11	3.43	1973	.00	1982	5.9	2.9	.4	.1	.01	.05	.14	.26	.41	.59	.82	1.12	1.55	2.30	3.07
Apr	1.71	1.45	1.40	1971	19	4.08	1999	.00	1989	6.6	4.1	1.2	.2	.24	.46	.75	.99	1.23	1.48	1.76	2.10	2.54	3.24	3.89
May	3.07	3.49	2.30	1996	26	5.98	1995	.20	1974	10.3	6.1	1.9	.4	.79	1.07	1.52	1.91	2.30	2.71	3.17	3.71	4.41	5.52	6.57
Jun	2.35	2.13	2.60	1987	24	6.23	1987	.61	1980	8.5	5.3	1.4	.6	.56	.78	1.12	1.43	1.74	2.06	2.42	2.85	3.42	4.31	5.16
Jul	3.25	2.81	3.46	1997	28	9.11	1997	.34	1978	8.8	5.5	2.0	.8	.77	1.07	1.55	1.97	2.39	2.84	3.34	3.93	4.72	5.95	7.12
Aug	2.59	2.37	8.00	1969	23	5.63	1979	.08	1973	7.8	4.5	1.5	.7	.39	.61	.99	1.34	1.71	2.12	2.59	3.16	3.93	5.18	6.38
Sep	.94	.86	2.60	1950	8	2.65	1976	.00	1978	5.1	2.3	.5	.1	.03	.11	.24	.38	.52	.69	.90	1.15	1.50	2.08	2.66
Oct	.99	.68	2.08	1997	26	4.21	1997	.04	1975	4.0	2.3	.5	.1	.07	.13	.25	.39	.54	.71	.93	1.20	1.57	2.21	2.84
Nov	.71	.57	1.11	1975	19	1.96	1972	.09+	1989	4.1	2.1	.4	@	.12	.18	.29	.38	.48	.59	.72	.87	1.07	1.39	1.71
Dec	.33	.23	.80	1953	3	1.26	1973	.00	1976	2.7	1.2	.1	.0	.01	.03	.08	.12	.18	.24	.31	.41	.53	.75	.97
Ann	17.71	16.79	8.00	Aug 1969	23	9.11	Jul 1997	.00+	Feb 1994	70.6	39.3	10.2	3.0	11.44	12.61	14.13	15.30	16.35	17.37	18.44	19.63	21.08	23.21	25.08

+ 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:  
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**Climate Division: CO 3**

**NWS Call Sign:**

**Elevation: 4,403 Feet**

**Lat: 39° 18N**

**Lon: 102° 36W**

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	1	#	5.0	1971	3	9.5	1992	12	1974	12	5	1974	2.8	1.7	.7	.1	.0	5.5	2.9	1.6	.8
Feb	5.2	4.0	#	#	7.5	1997	24	19.7	1997	8+	1997	27	2	1995	2.5	1.5	.7	.1	.0	2.7	1.2	.6	.0
Mar	6.3	5.6	#	#	10.0	1987	28	18.0	1973	8	1993	12	1	1995	3.1	2.0	.8	.2	.1	2.5	.8	.2	.0
Apr	4.5	1.5	#	0	7.5	1995	20	20.0	1995	13	1994	12	4	1974	1.7	1.2	.5	.3	.0	1.0	.7	.5	.1
May	.1	.0	0	0	3.0	1973	1	3.0	1973	0	0	0	0	0	@	@	@	.0	.0	.0	.0	.0	.0
Jun	.0	.0	0	0	.0	0	0	.0	0	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	.5	.0	#	0	4.4	1995	21	4.4	1995	4	1995	21	#+	2000	.2	.2	.1	.0	.0	.1	.1	.0	.0
Oct	2.0	.0	#	0	19.4	1997	26	19.4	1997	28	1997	26	4	1997	.7	.6	.3	.2	.1	.8	.6	.4	.2
Nov	6.2	5.0	1	#	9.0	1975	19	12.5+	1992	14	1991	1	4	1972	2.7	1.6	.7	.4	.0	4.9	3.0	1.8	.0
Dec	3.8	2.5	1	#	7.0	1973	18	15.0	1973	9	1987	27	3	1973	2.3	1.6	.6	.2	.0	5.1	2.7	1.7	.0
Ann	33.5	23.6	N/A	N/A	19.4	Oct 1997	26	20.0	Apr 1995	28	Oct 1997	26	5	Jan 1974	16.0	10.4	4.4	1.5	.2	22.6	12.0	6.8	1.1

+ 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	5/27	5/23	5/20	5/17	5/15	5/12	5/10	5/07	5/02
32	5/17	5/13	5/10	5/08	5/05	5/03	4/30	4/28	4/24
28	5/04	4/30	4/27	4/25	4/22	4/20	4/18	4/15	4/11
24	4/24	4/19	4/16	4/14	4/11	4/09	4/06	4/03	3/30
20	4/16	4/11	4/07	4/03	3/31	3/28	3/24	3/20	3/15
16	4/11	4/03	3/29	3/25	3/21	3/17	3/12	3/07	2/28
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	9/13	9/17	9/20	9/22	9/24	9/27	9/29	10/02	10/06
32	9/19	9/24	9/27	9/29	10/02	10/04	10/07	10/10	10/14
28	10/01	10/05	10/09	10/11	10/14	10/17	10/20	10/23	10/28
24	10/08	10/14	10/18	10/22	10/25	10/29	11/01	11/05	11/11
20	10/18	10/23	10/26	10/29	11/01	11/04	11/07	11/11	11/16
16	10/28	11/03	11/07	11/10	11/13	11/16	11/20	11/24	11/29
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	149	143	139	135	132	128	125	120	114
32	167	161	156	153	149	145	141	137	131
28	190	185	181	177	174	171	167	163	158
24	217	210	205	200	196	192	188	182	175
20	240	231	225	220	215	210	204	198	189
16	268	257	249	243	237	231	224	217	206

\* 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	1163	928	803	526	256	45	1	15	122	416	846	1118	6239
60	1008	788	648	380	142	13	0	3	50	267	696	963	4958
57	915	704	555	298	91	5	0	1	24	187	606	870	4256
55	853	650	493	247	64	2	0	0	13	141	552	808	3823
50	701	520	346	139	21	0	0	0	2	59	414	660	2862
32	242	153	27	1	0	0	0	0	0	0	84	215	722

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	102	149	246	465	788	1109	1316	1254	936	608	228	120	7321
55	0	2	0	21	139	421	603	541	259	36	6	0	2028
57	0	0	0	12	104	364	541	479	210	20	0	0	1730
60	0	0	0	5	62	282	448	388	146	6	0	0	1337
65	0	0	0	0	21	164	294	245	68	0	0	0	792
70	0	0	0	0	4	78	154	128	24	0	0	0	388

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	22	54	142	307	586	898	1106	1041	745	417	105	31	22	76	218	525	1111	2009	3115	4156	4901	5318	5423	5454
45	2	21	71	194	437	748	951	886	598	284	51	12	2	23	94	288	725	1473	2424	3310	3908	4192	4243	4255
50	0	0	25	105	296	598	796	731	455	169	20	0	0	0	25	130	426	1024	1820	2551	3006	3175	3195	3195
55	0	0	7	45	173	449	641	578	321	80	1	0	0	0	7	52	225	674	1315	1893	2214	2294	2295	2295
60	0	0	0	17	82	310	487	425	201	28	0	0	0	0	0	17	99	409	896	1321	1522	1550	1550	1550
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	33	69	141	235	375	564	703	668	477	308	105	46	33	102	243	478	853	1417	2120	2788	3265	3573	3678	3724

(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)