

Climatology of the United States

No. 20

1971-2000

Station: STEAMBOAT SPRINGS, CO

COOP ID: 057936

Climate Division: CO 2

NWS Call Sign:

Elevation: 6,636 Feet Lat: 40° 30N

Lon: 106° 52W

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	27.7	.9	14.3	57	1910	24	25.5	1981	-54	1913	7	6.6	1979	1571	0	.0	.0	.2	20.6	31.0	13.7
Feb	33.2	4.0	18.6	59	1947	13	27.5	1995	-48	1933	10	10.5	1974	1299	0	.0	.0	.6	11.4	28.2	9.9
Mar	42.5	15.2	28.9	67	1986	30	36.3	1992	-34	1948	11	22.1	1976	1121	0	.0	.0	7.4	2.9	30.5	2.0
Apr	53.2	23.9	38.6	79+	2000	30	44.6	1989	-15	1945	4	32.0	1984	793	0	.0	.0	19.4	.3	26.9	.2
May	64.2	31.5	47.9	88	2000	31	51.8	1994	8	1927	29	43.8	1975	533	0	.0	.0	28.6	.0	17.2	.0
Jun	75.3	36.0	55.7	96	1990	30	62.0	1988	19+	1919	2	51.4	1975	286	7	.0	.2	29.9	.0	6.8	.0
Jul	82.0	41.9	62.0	97	1931	25	66.4	1998	25	1968	1	58.2	1992	125	30	.0	2.1	31.0	.0	.8	.0
Aug	80.6	40.9	60.8	98+	2001	12	65.3	2000	20+	1910	30	56.8	1974	156	22	.0	1.2	31.0	.0	1.8	.0
Sep	72.0	32.5	52.3	93	1908	7	58.6	1998	6	1926	24	47.8	1971	384	1	.0	.2	29.5	.0	12.9	.0
Oct	59.4	23.5	41.5	89	1910	10	46.6	1988	-16	1919	27	36.7	1984	731	0	.0	.0	25.9	.4	27.1	.1
Nov	40.6	13.3	27.0	72+	1909	6	33.3	1998	-28	1976	28	17.1	2000	1142	0	.0	.0	8.0	6.6	29.4	2.7
Dec	28.7	2.1	15.4	64+	1939	11	27.4	1980	-44	1909	18	9.3	1978	1537	0	.0	.0	.4	19.3	31.0	12.6
Ann	55.0	22.1	38.6	98+	Aug 2001	12	66.4	Jul 1998	-54	Jan 1913	7	6.6	Jan 1979	9678	60	.0	3.7	211.9	61.5	243.6	41.2

+ 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: 1908-2001

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

094-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: STEAMBOAT SPRINGS, CO

COOP ID: 057936

Climate Division: CO 2

NWS Call Sign:

Elevation: 6,636 Feet Lat: 40°30N

Lon: 106°52W

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	2.58	2.23	1.48	1965	29	5.86	1996	.74	1986	13.7	8.5	.9	@	.59	.83	1.21	1.54	1.88	2.24	2.64	3.13	3.76	4.76	5.71
Feb	2.15	1.89	1.93	1986	19	4.69	1986	1.04	1984	11.0	6.9	.7	.1	.96	1.15	1.41	1.63	1.83	2.04	2.26	2.51	2.82	3.30	3.73
Mar	2.04	1.97	2.71	1929	2	3.47	1974	.60	1999	10.9	7.2	.8	.0	.80	.99	1.26	1.48	1.69	1.90	2.13	2.40	2.74	3.26	3.73
Apr	2.31	2.32	1.50	1971	20	4.16	1985	.63	1981	10.5	6.7	1.2	.1	.88	1.09	1.40	1.66	1.90	2.15	2.42	2.73	3.13	3.74	4.30
May	2.31	2.02	1.70	1944	18	5.66	1995	.40	1974	11.9	7.5	.7	.1	.85	1.06	1.37	1.64	1.88	2.14	2.42	2.74	3.15	3.78	4.36
Jun	1.43	1.13	2.57	1921	14	3.90	1984	.10	1980	7.5	4.0	.7	@	.26	.39	.60	.79	.99	1.20	1.45	1.74	2.14	2.77	3.38
Jul	1.46	1.58	1.39	1937	13	3.27	1986	.14	1971	8.7	4.2	.5	.1	.28	.41	.63	.83	1.03	1.24	1.49	1.78	2.17	2.80	3.39
Aug	1.46	1.37	1.15	1965	3	3.46	1997	.42	1996	9.6	4.6	.5	.1	.48	.62	.82	.99	1.16	1.33	1.52	1.74	2.02	2.46	2.87
Sep	1.72	1.59	2.55	1961	22	6.48	1997	.23	1975	9.1	5.1	.5	.2	.38	.54	.79	1.02	1.25	1.49	1.76	2.08	2.51	3.19	3.84
Oct	1.92	1.75	1.75	1911	5	4.29	1981	.24	1988	7.9	5.2	1.3	.1	.42	.60	.88	1.13	1.39	1.66	1.97	2.33	2.81	3.58	4.30
Nov	2.35	2.04	1.57	1919	26	5.59	1985	.54	1976	10.8	7.0	1.2	.1	.75	.98	1.31	1.59	1.86	2.14	2.44	2.80	3.27	3.99	4.65
Dec	2.37	1.97	1.42	1951	30	6.79	1983	.63	1979	12.2	7.6	.7	.1	.53	.75	1.10	1.41	1.72	2.05	2.43	2.87	3.46	4.39	5.26
Ann	24.10	23.12	2.71	Mar 1929	2	6.79	Dec 1983	.10	Jun 1980	123.8	74.5	9.7	1.0	17.80	19.04	20.61	21.79	22.84	23.85	24.89	26.04	27.42	29.42	31.15

+ 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: 1908-2001

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

Complete documentation available from:
www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

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: STEAMBOAT SPRINGS, CO

COOP ID: 057936

Climate Division: CO 2

NWS Call Sign:

Elevation: 6,636 Feet

Lat: 40° 30N

Lon: 106° 52W

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	41.8	35.1	24	23	18.5	1996	31	111.6	1996	61	1997	12	46	1997	13.7	11.6	5.4	2.2	.2	27.8	27.7	27.7	27.5
Feb	27.1	25.9	27	28	11.0	1971	5	51.0	1993	57	1996	1	46	1997	11.0	9.1	3.7	1.4	.1	27.0	26.9	25.8	24.9
Mar	22.3	22.8	14	13	9.0	1984	18	35.1	1980	44	1997	3	28	1978	9.0	7.3	2.4	.9	.0	22.5	21.2	19.9	17.9
Apr	12.3	10.2	2	#	12.5	1971	20	31.4	1985	28	1975	1	9	1975	5.1	3.9	1.6	.6	.1	5.4	4.0	3.0	1.9
May	2.6	.9	#	0	5.3	1979	7	10.3	1983	4	1995	8	#+	2000	1.4	1.0	.4	.1	.0	.2	.1	.0	.0
Jun	.3	.0	0	0	5.6	1976	14	5.6	1976	0	0	0	0	0	.1	.1	@	@	.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	.4	.0	#	0	3.2	1984	25	3.2	1984	2+	2000	24	#+	2000	.3	.1	@	.0	.0	.1	.0	.0	.0
Oct	6.6	5.7	#	#	12.0	1996	29	22.1	1984	15	1996	30	3	1996	3.0	2.6	.9	.4	@	2.2	1.4	.6	.2
Nov	24.1	23.5	4	3	13.0	1973	2	53.5	1985	25	1985	30	14	1996	9.1	7.4	3.3	1.4	@	15.5	12.6	8.8	3.7
Dec	38.0	37.8	14	13	16.5	1989	15	92.6	1983	42	1983	31	28+	1996	11.9	10.0	4.7	2.3	.3	29.0	28.7	27.5	21.0
Ann	175.5	161.9	N/A	N/A	18.5	Jan 1996	31	111.6	Jan 1996	61	Jan 1997	12	46+	Feb 1997	64.6	53.1	22.4	9.3	.7	129.7	122.6	113.3	97.1

+ 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

Complete documentation available from:

www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

Climatography of the United States

No. 20 1971-2000

Station: STEAMBOAT SPRINGS, CO

COOP ID: 057936

Climate Division: CO 2

NWS Call Sign:

Elevation: 6,636 Feet

Lat: 40° 30N

Lon: 106° 52W

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	8/03	7/29	7/25	7/22	7/19	7/15	7/12	7/08	7/03
32	7/16	7/10	7/05	7/01	6/27	6/24	6/20	6/15	6/08
28	6/24	6/16	6/11	6/07	6/02	5/29	5/25	5/19	5/12
24	6/01	5/25	5/21	5/17	5/14	5/10	5/06	5/02	4/25
20	5/13	5/07	5/04	4/30	4/27	4/24	4/21	4/17	4/12
16	4/30	4/24	4/20	4/17	4/14	4/10	4/07	4/03	3/28
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	7/28	8/02	8/07	8/11	8/15	8/19	8/23	8/27	9/03
32	8/11	8/17	8/22	8/26	8/30	9/02	9/06	9/11	9/18
28	8/29	9/03	9/07	9/10	9/13	9/16	9/19	9/23	9/28
24	9/10	9/14	9/17	9/20	9/23	9/25	9/28	10/01	10/05
20	9/19	9/23	9/27	9/30	10/02	10/05	10/08	10/11	10/16
16	9/28	10/04	10/09	10/12	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	56	46	39	33	27	21	15	7	0
32	91	81	74	68	63	57	51	44	35
28	134	123	115	108	102	95	89	81	70
24	153	146	140	136	131	127	122	117	109
20	179	171	166	161	157	153	148	143	135
16	207	200	194	189	185	180	176	170	162

* 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:

www.ncdc.noaa.gov/oa/climate/normal/usnormals.html

**Climatography
of the United States
No. 20
1971-2000**

Station: STEAMBOAT SPRINGS, CO

COOP ID: 057936

Climate Division: CO 2

NWS Call Sign:

Elevation: 6,636 Feet Lat: 40° 30N

Lon: 106° 52W

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	1571	1299	1121	793	533	286	125	156	384	731	1142	1537	9678
60	1416	1159	966	643	378	161	43	63	244	576	992	1382	8023
57	1323	1075	873	553	290	103	17	29	170	483	902	1289	7107
55	1261	1019	811	497	235	72	8	15	128	422	842	1227	6537
50	1106	879	657	358	119	21	0	2	50	273	692	1072	5229
32	555	385	173	44	1	0	0	0	0	9	211	519	1897

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	7	10	75	241	491	710	928	890	607	301	60	5	4325
55	0	0	0	3	12	92	223	192	45	1	0	0	568
57	0	0	0	0	5	63	170	143	28	0	0	0	409
60	0	0	0	0	1	31	103	84	11	0	0	0	230
65	0	0	0	0	0	7	30	22	1	0	0	0	60
70	0	0	0	0	0	0	5	3	0	0	0	0	8

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	6	82	279	492	698	656	399	127	8	0	0	0	6	88	367	859	1557	2213	2612	2739	2747	2747
45	0	0	0	27	147	342	543	501	263	44	0	0	0	0	0	27	174	516	1059	1560	1823	1867	1867	1867
50	0	0	0	5	55	204	388	347	138	7	0	0	0	0	0	5	60	264	652	999	1137	1144	1144	1144
55	0	0	0	0	10	89	234	195	46	0	0	0	0	0	0	0	10	99	333	528	574	574	574	574
60	0	0	0	0	0	19	94	70	10	0	0	0	0	0	0	0	0	19	113	183	193	193	193	193
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	0	17	104	242	393	501	479	341	183	26	0	0	0	17	121	363	756	1257	1736	2077	2260	2286	2286

(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