

Climatography of the United States

No. 20

1971-2000

Station: GLENWOOD SPGS #2, CO

COOP ID: 053359

Climate Division: CO 2

NWS Call Sign:

Elevation: 5,750 Feet Lat: 39° 32N

Lon: 107° 19W

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	36.0	13.2	24.6	68	1923	20	31.5	1981	-38	1913	7	16.4	1979	1252	0	.0	.0	1.7	9.6	30.7	3.9
Feb	43.4	18.5	31.0	67	1981	25	37.2	1995	-30	1905	13	24.4	1989	954	0	.0	.0	6.3	2.7	27.3	1.2
Mar	53.4	26.1	39.8	79	1943	29	45.3	1999	-14	1917	1	34.1	1971	782	0	.0	.0	19.3	.4	26.1	.1
Apr	62.6	31.2	46.9	88	1946	25	53.4	1992	2	1966	5	39.5	1973	544	0	.0	.0	25.2	.1	18.2	.0
May	72.3	38.6	55.5	93	2000	30	59.7	1992	17	1916	16	51.0	1995	302	6	.0	.1	30.5	.0	5.8	.0
Jun	83.6	45.1	64.4	102	1954	23	69.5	1977	27+	1973	20	59.3	1973	95	75	.1	5.8	30.0	.0	.3	.0
Jul	89.1	51.9	70.5	102	1989	7	73.0	1994	30	1903	4	66.2	1973	9	179	.2	14.7	31.0	.0	.0	.0
Aug	87.3	51.0	69.2	100+	2000	1	73.0	1983	28+	1912	9	65.2	1976	24	151	.1	9.7	31.0	.0	.0	.0
Sep	78.9	42.8	60.9	100	1924	4	66.0	1990	20	1907	28	57.5+	1986	159	35	.0	1.7	29.9	.0	3.6	.0
Oct	66.5	32.6	49.6	88+	1947	4	53.1	1978	10+	1970	28	44.2	1976	480	0	.0	.0	28.3	.1	15.4	.0
Nov	48.6	23.2	35.9	80	1975	1	42.8	1999	-9+	1952	27	29.5	2000	873	0	.0	.0	13.6	1.8	27.2	.3
Dec	37.2	14.7	26.0	65	1999	1	36.1	1980	-22+	1909	18	17.7	1972	1211	0	.0	.0	2.1	8.1	30.4	2.2
Ann	63.2	32.4	47.9	102+	Jul 1989	7	73.0+	Jul 1994	-38	Jan 1913	7	16.4	Jan 1979	6685	446	.4	32.0	248.9	22.8	185.0	7.7

+ 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

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1900-2001

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

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No. 20 1971-2000

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

Station: GLENWOOD SPGS #2, CO

COOP ID: 053359

Climate Division: CO 2

NWS Call Sign:

Elevation: 5,750 Feet Lat: 39° 32N

Lon: 107° 19W

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	1.60	1.28	1.30	1952	19	4.44	1996	.16	1973	10.4	5.0	.4	.1	.18	.30	.52	.74	.98	1.25	1.56	1.95	2.48	3.36	4.21
Feb	1.21	1.02	1.30	1967	7	2.96	1980	.10	2000	7.4	4.3	.4	.1	.15	.24	.41	.58	.76	.96	1.19	1.48	1.86	2.50	3.12
Mar	1.55	1.62	1.35	1940	11	3.24	1985	.30	1972	9.4	4.9	.5	.1	.45	.59	.81	1.01	1.19	1.39	1.60	1.86	2.19	2.70	3.18
Apr	1.66	1.44	1.78	1978	1	5.75	1978	.08	1992	9.4	4.7	.8	.2	.23	.36	.60	.83	1.07	1.34	1.65	2.03	2.54	3.38	4.20
May	1.93	1.60	1.30	1999	25	5.83	1995	.16	1974	9.7	5.4	1.0	.1	.35	.52	.80	1.07	1.33	1.62	1.95	2.35	2.88	3.74	4.55
Jun	1.22	1.08	3.20	1969	24	2.99	1973	.05	1980	6.7	3.6	.5	.1	.13	.22	.39	.56	.74	.95	1.19	1.49	1.90	2.58	3.25
Jul	1.27	1.10	1.80	1937	28	3.41	1973	.10	1979	7.4	3.8	.5	@	.26	.38	.57	.74	.91	1.09	1.30	1.54	1.87	2.40	2.89
Aug	1.19	1.18	1.45	1970	21	2.50	1988	.26	1975	8.2	4.0	.4	@	.38	.49	.66	.81	.94	1.09	1.24	1.43	1.66	2.03	2.37
Sep	1.71	1.45	1.93	1982	4	4.40	1982	.08	1979	8.4	4.8	1.0	.1	.22	.36	.60	.84	1.09	1.37	1.70	2.09	2.63	3.52	4.37
Oct	1.86	1.76	1.55	1985	8	4.21	1984	.10	2000	7.4	4.9	1.2	.2	.24	.38	.65	.91	1.18	1.49	1.84	2.28	2.87	3.84	4.78
Nov	1.31	1.06	1.10	1992	2	2.89	1986	.13	1999	8.6	4.6	.4	@	.34	.46	.65	.82	.99	1.16	1.36	1.59	1.89	2.36	2.80
Dec	1.42	1.10	1.47	1951	30	3.61	1983	.17	1976	8.7	4.8	.4	.1	.25	.38	.58	.78	.98	1.19	1.44	1.74	2.13	2.77	3.39
Ann	17.93	17.53	3.20	Jun 1969	24	5.83	May 1995	.05	Jun 1980	101.7	54.8	7.5	1.1	11.35	12.57	14.16	15.39	16.50	17.58	18.71	19.97	21.51	23.77	25.76

+ 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: 1900-2001

(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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COOP ID: 053359

Climate Division: CO 2

NWS Call Sign:

Elevation: 5,750 Feet

Lat: 39°32N

Lon: 107°19W

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	15.9	11.3	6	4	14.5	1996	31	39.6	1982	30	1997	12	16+	1996	7.5	5.3	2.5	.8	.1	-9.9	-9.9	-9.9	-9.9
Feb	10.1	7.1	4	#	13.0	1989	4	34.6	1993	23	1996	2	16	1993	4.5	3.3	1.3	.3	.1	2.3	.4	.0	.0
Mar	5.0	1.5	1	#	7.0	1977	17	17.1+	1991	10	1996	1	2	1997	2.7	1.6	.5	.2	.0	2.3	.8	.5	.0
Apr	1.0	1.0	#	#	3.5	1991	30	3.5	1991	4	1991	30	#+	1999	.9	.6	@	.0	.0	.4	.1	.0	.0
May	.5	.0	#	0	4.5	1978	6	5.8	1978	2+	1983	17	#+	1983	.2	.2	.1	.0	.0	.2	.0	.0	.0
Jun	.0	.0	0	0	1.0	1976	14	1.0	1976	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	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Oct	1.2	.0	#	0	3.5	1984	18	11.3	1984	20	1972	31	1	1972	.7	.5	.1	.0	.0	.3	.0	.0	.0
Nov	6.2	5.3	#	#	14.8	1975	27	25.6	1975	8	1978	30	3	1992	3.5	2.6	.8	.2	@	2.5	.9	.2	.0
Dec	14.4	10.0	4	3	10.0	1988	20	30.0	1971	24	1978	23	16	1978	6.2	4.6	2.4	.8	@	-9.9	-9.9	-9.9	-9.9
Ann	54.3	36.2	N/A	N/A	14.8	Nov 1975	27	39.6	Jan 1982	30	Jan 1997	12	16+	Jan 1996	26.2	18.7	7.7	2.3	.2	-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

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Climate Division: CO 2

NWS Call Sign:

Elevation: 5,750 Feet

Lat: 39° 32N

Lon: 107° 19W

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	6/27	6/20	6/14	6/10	6/06	6/02	5/29	5/24	5/17
32	6/08	6/02	5/28	5/25	5/21	5/17	5/14	5/09	5/03
28	5/28	5/21	5/15	5/10	5/06	5/02	4/27	4/22	4/14
24	5/07	5/01	4/26	4/22	4/18	4/14	4/10	4/05	3/30
20	4/28	4/20	4/14	4/09	4/04	3/31	3/26	3/20	3/12
16	4/10	4/03	3/29	3/24	3/20	3/16	3/11	3/06	2/26
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	8/31	9/06	9/10	9/14	9/17	9/20	9/24	9/28	10/04
32	9/11	9/16	9/20	9/23	9/26	9/29	10/02	10/06	10/11
28	9/17	9/23	9/27	9/30	10/04	10/07	10/10	10/15	10/20
24	9/30	10/07	10/12	10/16	10/20	10/24	10/28	11/02	11/09
20	10/14	10/20	10/25	10/29	11/02	11/06	11/10	11/15	11/21
16	10/21	10/28	11/02	11/06	11/10	11/14	11/18	11/23	11/30
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	130	121	114	108	102	97	91	84	74
32	154	145	138	133	127	122	116	110	100
28	182	171	163	156	150	144	137	129	118
24	211	202	195	190	184	179	173	166	157
20	239	230	223	217	211	205	199	192	182
16	265	254	247	240	234	228	222	214	203

* 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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NWS Call Sign:

Elevation: 5,750 Feet Lat: 39°32N Lon: 107°19W

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	1252	954	782	544	302	95	9	24	159	480	873	1211	6685
60	1097	814	627	400	172	34	1	4	70	329	723	1056	5327
57	1004	730	534	318	111	15	0	1	36	245	633	963	4590
55	942	674	474	267	79	8	0	0	21	195	573	901	4134
50	787	534	328	160	27	1	0	0	4	94	428	746	3109
32	285	116	21	4	0	0	0	0	0	0	63	236	725

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	55	86	262	451	727	970	1194	1151	866	544	180	49	6535
55	0	0	2	23	93	288	481	438	198	25	0	0	1548
57	0	0	1	15	63	235	419	376	153	14	0	0	1276
60	0	0	0	6	31	164	326	286	96	4	0	0	913
65	0	0	0	0	6	75	179	151	35	0	0	0	446
70	0	0	0	0	0	23	68	57	8	0	0	0	156

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	6	82	215	460	723	941	898	609	301	44	1	0	6	88	303	763	1486	2427	3325	3934	4235	4279	4280
45	0	1	26	110	313	573	786	743	459	173	10	0	0	1	27	137	450	1023	1809	2552	3011	3184	3194	3194
50	0	0	1	46	181	426	631	588	312	74	0	0	0	0	1	47	228	654	1285	1873	2185	2259	2259	2259
55	0	0	0	11	82	281	476	434	190	17	0	0	0	0	0	11	93	374	850	1284	1474	1491	1491	1491
60	0	0	0	0	18	155	321	281	85	0	0	0	0	0	0	0	18	173	494	775	860	860	860	860
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	18	92	184	340	480	591	571	426	255	58	4	0	18	110	294	634	1114	1705	2276	2702	2957	3015	3019

(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