

Climatography of the United States

No. 20

1971-2000

Station: NORWOOD, CO

COOP ID: 056012

Climate Division: CO 2

NWS Call Sign:

Elevation: 7,020 Feet Lat: 38°08N

Lon: 108°17W

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	37.7	12.3	25.0	58+	1986	30	32.6	1986	-31+	1963	13	16.9	1979	1240	0	.0	.0	2.2	7.0	30.7	6.3
Feb	42.3	18.0	30.2	65	1986	25	37.7	1995	-27	1989	6	22.1	1974	975	0	.0	.0	4.8	3.0	27.5	2.8
Mar	49.6	25.0	37.3	71	1989	10	42.7	1989	-27	1975	26	32.9	1975	859	0	.0	.0	15.8	.5	27.4	.5
Apr	57.9	30.6	44.3	80	1981	30	50.3	1992	-3	1975	2	39.5	1975	623	0	.0	.0	24.0	.0	20.6	.1
May	67.4	37.7	52.6	89	2000	29	58.6	1996	8	1972	1	47.8	1995	388	2	.0	.0	30.1	.0	9.0	.0
Jun	78.5	45.3	61.9	97	1981	25	66.7	1990	22+	1981	15	58.0	1995	132	39	.0	1.0	30.0	.0	2.0	.0
Jul	82.9	51.5	67.2	96+	1989	6	69.7	1996	29	1979	5	64.7	1992	19	86	.0	3.2	31.0	.0	.1	.0
Aug	80.5	50.4	65.5	95	1979	4	68.7	1994	29	1968	23	63.2	1976	42	57	.0	1.4	31.0	.0	.1	.0
Sep	72.9	43.4	58.2	93	2000	16	61.8	1990	15+	1971	18	53.7	1971	215	9	.0	@	29.9	.0	2.6	.0
Oct	61.4	33.0	47.2	81+	1980	1	51.4	1988	1+	1972	31	41.5	1984	551	0	.0	.0	27.6	.1	15.3	.0
Nov	47.3	22.0	34.7	71	1999	7	42.4	1999	-10	1976	28	28.3	1979	912	0	.0	.0	13.6	2.2	27.9	.9
Dec	39.1	14.0	26.6	60	1995	1	35.6	1980	-27	1978	9	19.0	1978	1193	0	.0	.0	2.9	5.7	30.6	4.2
Ann	59.8	31.9	45.9	97	Jun 1981	25	69.7	Jul 1996	-31+	Jan 1963	13	16.9	Jan 1979	7149	193	.0	5.6	242.9	18.5	193.8	14.8

+ 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

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**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: NORWOOD, CO

COOP ID: 056012

Climate Division: CO 2

NWS Call Sign:

Elevation: 7,020 Feet Lat: 38°08N

Lon: 108°17W

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	1.07	.94	.89	1965	1	3.20	1974	.20	1986	5.6	4.2	.5	.0	.23	.32	.48	.62	.77	.92	1.09	1.30	1.58	2.01	2.43
Feb	.71	.60	.66	1987	14	2.07	1994	.00	1991	4.7	2.8	.2	.0	.07	.15	.26	.37	.47	.59	.72	.87	1.08	1.42	1.75
Mar	1.21	.98	1.08	1985	28	3.72	1995	.14	1988	6.7	4.3	.4	.1	.12	.21	.38	.54	.73	.93	1.18	1.48	1.90	2.59	3.26
Apr	1.17	1.01	1.06	1990	19	3.58	1999	.00	1989	5.9	3.8	.4	@	.09	.21	.40	.57	.75	.94	1.17	1.44	1.82	2.42	3.01
May	1.30	1.16	1.50	1992	24	4.22	1992	.00	1974	5.9	3.9	.6	.1	.10	.25	.46	.65	.85	1.06	1.31	1.61	2.01	2.67	3.30
Jun	.87	.68	1.45	1995	17	2.81	1984	.00	1980	3.6	2.5	.4	.1	.03	.10	.23	.36	.50	.65	.84	1.07	1.39	1.93	2.45
Jul	1.92	1.59	1.86	1989	29	5.19	1999	.21	1994	7.7	5.2	1.0	.2	.31	.48	.75	1.02	1.29	1.59	1.93	2.34	2.89	3.79	4.65
Aug	1.90	1.70	1.81	1969	29	4.19	1999	.00	1978	8.5	5.7	1.1	.1	.14	.34	.64	.92	1.21	1.53	1.89	2.34	2.94	3.93	4.87
Sep	1.66	1.43	1.75	1970	5	4.03	1981	.02	1979	6.9	4.6	.9	.1	.17	.29	.52	.75	1.00	1.28	1.61	2.03	2.59	3.53	4.45
Oct	1.72	1.61	2.90	1996	3	4.36	1972	.07	1976	5.6	4.1	1.0	.1	.24	.38	.63	.87	1.12	1.39	1.71	2.10	2.62	3.48	4.30
Nov	1.41	1.07	1.60	1986	1	3.01	1986	.00	1989	5.3	3.9	.8	.1	.15	.32	.55	.76	.96	1.19	1.44	1.74	2.15	2.80	3.41
Dec	.85	.83	.72	1971	24	2.35	1983	.03	1976	5.3	3.1	.2	.0	.15	.23	.35	.47	.59	.72	.86	1.04	1.27	1.65	2.01
Ann	15.79	16.00	2.90	Oct 1996	3	5.19	Jul 1999	.00+	Feb 1991	71.7	48.1	7.5	.9	11.25	12.13	13.25	14.11	14.87	15.60	16.36	17.20	18.22	19.69	20.96

+ 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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Station: NORWOOD, CO

COOP ID: 056012

Climate Division: CO 2

NWS Call Sign:

Elevation: 7,020 Feet

Lat: 38°08N

Lon: 108°17W

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	13.7	13.8	1	#	11.0	1975	7	30.0	1978	8	1991	5	8	1991	4.8	4.5	1.8	.6	@	-9.9	-9.9	-9.9	-9.9
Feb	9.8	8.3	#	#	8.0	1987	26	31.0	1994	10	1987	27	1	1987	3.7	3.4	1.2	.4	.0	-9.9	-9.9	-9.9	-9.9
Mar	10.7	9.0	1	0	10.0	1990	6	27.0	1975	11	1985	28	6	1985	3.5	3.3	1.6	.5	@	-9.9	-9.9	-9.9	-9.9
Apr	6.7	5.5	#	0	8.5	1971	19	16.0	1973	8	1973	19	8	1973	2.2	2.1	.9	.4	.0	-9.9	-9.9	-9.9	-9.9
May	1.0	.0	#	0	6.5	1979	8	7.0	1983	6	1979	8	#+	1995	.4	.3	.1	.1	.0	.1	.1	.1	.0
Jun	#	.0	#	0	#	1979	9	#	1979	#	1979	9	#	1979	.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	.1	.0	0	0	3.0	1996	18	3.0	1996	0	0	0	0	0	@	@	@	.0	.0	.0	.0	.0	.0
Oct	2.5	1.5	#	0	8.0	1974	29	10.0	1974	8	1972	30	3	1972	.8	.8	.5	.1	.0	.3	.1	.1	.0
Nov	10.6	8.8	#	0	10.0	1996	16	24.5	1994	7	1984	26	1	1985	3.1	2.7	1.1	.6	@	-9.9	-9.9	-9.9	-9.9
Dec	11.4	12.0	1	0	10.0	1990	20	33.0	1971	16	1983	31	10	1983	3.8	3.7	1.4	.5	@	-9.9	-9.9	-9.9	-9.9
Ann	66.5	58.9	N/A	N/A	11.0	Jan 1975	7	33.0	Dec 1971	16	Dec 1983	31	10	Dec 1983	22.3	20.8	8.6	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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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	7/04	6/28	6/24	6/20	6/17	6/14	6/10	6/06	5/31
32	6/28	6/21	6/16	6/12	6/08	6/04	5/31	5/26	5/19
28	6/12	6/05	5/30	5/26	5/22	5/18	5/13	5/08	5/01
24	5/30	5/24	5/19	5/15	5/11	5/07	5/03	4/28	4/21
20	5/19	5/11	5/04	4/29	4/24	4/19	4/14	4/08	3/30
16	5/04	4/26	4/20	4/15	4/10	4/06	4/01	3/26	3/18
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	8/23	8/29	9/03	9/07	9/11	9/14	9/18	9/23	9/29
32	9/02	9/08	9/13	9/17	9/20	9/24	9/28	10/02	10/08
28	9/16	9/21	9/25	9/28	10/01	10/04	10/07	10/10	10/15
24	9/20	9/26	10/01	10/05	10/08	10/12	10/16	10/20	10/26
20	10/04	10/11	10/15	10/19	10/23	10/26	10/30	11/04	11/10
16	10/13	10/19	10/23	10/27	10/30	11/03	11/07	11/11	11/17
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	103	96	90	85	79	73	66	57
32	132	122	115	109	103	98	92	84	75
28	158	149	142	136	131	126	120	114	104
24	177	167	161	155	150	145	139	133	123
20	218	205	196	188	181	173	166	157	144
16	236	224	216	209	202	196	189	181	169

* 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	1240	975	859	623	388	132	19	42	215	551	912	1193	7149
60	1085	835	704	473	245	53	1	5	103	398	762	1038	5702
57	992	751	611	388	170	26	0	1	57	310	672	945	4923
55	930	695	549	332	128	14	0	0	35	255	612	883	4433
50	775	555	398	207	52	2	0	0	7	138	464	728	3326
32	267	128	36	6	0	0	0	0	0	2	76	217	732

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	50	76	200	374	637	897	1090	1038	785	473	154	47	5821
55	0	0	0	9	52	221	377	325	130	13	0	0	1127
57	0	0	0	5	32	172	315	264	91	6	0	0	885
60	0	0	0	1	13	110	223	175	48	2	0	0	572
65	0	0	0	0	2	39	86	57	9	0	0	0	193
70	0	0	0	0	0	8	12	6	0	0	0	0	26

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	5	49	158	381	643	830	783	541	247	36	0	0	5	54	212	593	1236	2066	2849	3390	3637	3673	3673
45	0	0	12	71	244	493	675	628	394	129	6	0	0	0	12	83	327	820	1495	2123	2517	2646	2652	2652
50	0	0	0	23	129	349	520	473	251	49	0	0	0	0	0	23	152	501	1021	1494	1745	1794	1794	1794
55	0	0	0	0	49	211	365	318	127	10	0	0	0	0	0	0	49	260	625	943	1070	1080	1080	1080
60	0	0	0	0	10	97	214	168	42	0	0	0	0	0	0	0	10	107	321	489	531	531	531	531
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	12	59	142	284	442	534	501	364	202	49	1	0	12	71	213	497	939	1473	1974	2338	2540	2589	2590

(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