U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

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: BAILEY, CO **COOP ID: 050454**

Climate Division: CO 4 **NWS Call Sign:** **Elevation: 7,730 Feet** **Lat: 39˚24N** **Lon: 105˚29W**

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	37.8	7.6	22.7	65	1956	5	28.5	1986	-46	1963	12	15.1	1979	1311	0	.0	.0	3.8	8.2	30.7	8.0
Feb	41.3	10.3	25.8	70	1954	9	32.1	2000	-48	1951	1	19.1	1989	1099	0	.0	.0	6.1	4.9	28.1	4.8
Mar	46.3	16.9	31.6	72	1971	26	37.2	1972	-25	1965	3	27.9	1973	1035	0	.0	.0	13.5	2.8	30.0	2.0
Apr	52.5	22.7	37.6	78	1959	30	43.2	1992	-15	1975	2	30.0	1983	822	0	.0	.0	19.8	1.5	27.8	.4
May	61.8	30.8	46.3	86+	2000	31	51.2	1996	6+	1962	1	40.9	1983	580	0	.0	.0	27.6	.1	19.2	.0
Jun	73.1	37.6	55.4	95	1954	23	59.5	1994	22	1975	11	50.5	1982	293	3	.0	.2	29.6	.0	5.0	.0
Jul	77.7	43.3	60.5	95+	1973	6	63.2	2000	29	1968	1	58.0	1986	144	4	.0	.6	31.0	.0	.3	.0
Aug	75.6	42.2	58.9	93	1973	29	62.7	2000	26+	1992	27	56.0	1978	193	5	.0	.1	30.9	.0	.8	.0
Sep	68.9	34.1	51.5	91	1948	4	57.0	1998	7+	1985	30	47.6	1974	405	0	.0	.0	28.9	.1	11.0	.0
Oct	58.8	24.0	41.4	83+	1962	13	45.4	1992	-9+	1993	30	34.4	1984	732	0	.0	.0	25.9	.7	28.4	.3
Nov	45.0	15.3	30.2	72+	1959	12	35.6	1995	-26	1950	10	22.1	1972	1046	0	.0	.0	11.8	4.0	29.1	2.7
Dec	37.9	8.6	23.3	66	1955	25	33.8	1980	-33	1978	8	15.2	1983	1295	0	.0	.0	4.2	8.3	30.7	6.4
Ann	56.4	24.5	40.4	95+	Jul 1973	6	63.2	Jul 2000	-48	Feb 1951	1	15.1	Jan 1979	8955	12	.0	.9	233.1	30.6	241.1	24.6

\+ 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

(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

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

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: BAILEY, CO **COOP ID: 050454**

Climate Division: CO 4 **NWS Call Sign:** **Elevation: 7,730 Feet** **Lat: 39˚24N** **Lon: 105˚29W**

Precipitation (inches)

Precipitation Totals

Month	Means/ Medians(1) Mean	Means/ Medians(1) Median	Extremes Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year
Jan	.40	.35	.58	1962	8	1.31	1989	.04	1977
Feb	.54	.52	.76	1971	19	1.28	1971	.03	1973
Mar	1.28	1.20	1.01	1990	7	3.46	1990	.26	1982
Apr	1.92	1.71	2.45	1950	15	5.57	1999	.20	1981
May	2.10	1.76	2.85	1969	7	4.75+	1995	.12	1974
Jun	1.76	1.93	2.32	1949	4	3.96	1997	.00	1980
Jul	2.55	2.61	1.93	1966	18	5.75	1998	.20	1994
Aug	2.68	2.43	2.12	1984	19	8.71	1984	.10	1978
Sep	1.25	1.12	2.48	1959	29	3.21	1996	.13	1992
Oct	1.15	1.09	1.85	1969	3	3.95	1984	.00	1983
Nov	.89	.69	1.18	1986	1	2.09	1991	.01	1984
Dec	.58	.49	1.00	1982	24	1.65	1982	.03	1980
Ann	17.10	16.29	2.85	May 1969	7	8.71	Aug 1984	.00+	Oct 1983

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	4.0	1.5	.1	.0
Feb	4.0	1.9	.1	.0
Mar	6.7	3.7	.6	@
Apr	7.3	4.6	1.2	.3
May	8.7	5.5	1.2	.3
Jun	7.7	4.6	.8	.2
Jul	10.6	6.5	1.4	.2
Aug	12.8	7.2	1.3	.4
Sep	6.4	3.6	.8	.1
Oct	4.8	3.1	.6	.1
Nov	4.9	2.7	.4	.1
Dec	4.1	2.0	.1	@
Ann	82.0	46.9	8.6	1.7

Precipitation Probabilities (1)

Probability that the monthly/annual precipitation will be equal to or less than the indicated amount

Monthly/Annual Precipitation vs Probability Levels
These values were determined from the incomplete gamma distribution

Month	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	.09	.13	.18	.24	.29	.35	.41	.49	.59	.75	.90
Feb	.10	.14	.22	.30	.37	.45	.54	.66	.80	1.04	1.27
Mar	.30	.42	.61	.77	.94	1.11	1.31	1.55	1.86	2.35	2.81
Apr	.44	.61	.90	1.15	1.40	1.67	1.97	2.33	2.81	3.56	4.27
May	.36	.55	.85	1.14	1.44	1.76	2.12	2.56	3.16	4.11	5.02
Jun	.26	.49	.79	1.04	1.28	1.54	1.82	2.16	2.60	3.30	3.96
Jul	.67	.91	1.28	1.61	1.93	2.26	2.64	3.08	3.66	4.57	5.42
Aug	.49	.73	1.12	1.49	1.86	2.26	2.71	3.26	4.00	5.17	6.30
Sep	.23	.34	.53	.70	.87	1.05	1.27	1.52	1.86	2.40	2.92
Oct	.12	.25	.44	.61	.78	.96	1.17	1.42	1.75	2.28	2.79
Nov	.10	.17	.29	.42	.55	.70	.87	1.09	1.38	1.86	2.33
Dec	.08	.12	.20	.28	.37	.46	.57	.70	.88	1.18	1.46
Ann	12.09	13.05	14.29	15.23	16.07	16.88	17.71	18.64	19.76	21.39	22.80

\+ 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

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Services

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: BAILEY, CO **COOP ID: 050454**

Climate Division: CO 4 **NWS Call Sign:** **Elevation: 7,730 Feet** **Lat: 39°24N** **Lon: 105°29W**

Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	7.2	6.5	9	9
Feb	9.1	8.5	9	9
Mar	17.0	17.3	7	5
Apr	16.6	14.0	4	2
May	3.0	.5	1	#
Jun	.3	.0	#	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	1.3	.0	#	0
Oct	7.1	7.0	1	#
Nov	13.1	11.7	4	4
Dec	9.9	9.1	8	7
Ann	84.6	74.6	N/A	N/A

Extremes (2)

Month	Highest Daily Snow Fall	Year	Day	Highest Monthly Snow Fall	Year	Highest Daily Snow Depth	Year	Day	Highest Monthly Mean Snow Depth	Year
Jan	8.0	1989	12	20.9	1989	28	1989	29	22	1998
Feb	10.0	1971	19	23.1	1987	40	1989	5	28	1989
Mar	13.0	1990	7	37.6	1983	31	1987	23	26	1987
Apr	20.0	1986	3	45.3	1999	34	1984	21	24	1984
May	5.5	1983	2	16.7	1979	24	1984	1	5	1973
Jun	4.0	1979	8	4.0	1979	6	1975	10	1	1975
Jul	.0	0	0	.0	0	0	0	0	0	0
Aug	.0	0	0	.0	0	0	0	0	0	0
Sep	9.3	1971	17	9.3+	1971	9	1971	17	1	1985
Oct	15.0	1997	25	21.5	1984	16	1997	26	6	1984
Nov	18.0	1972	1	34.0	1972	19	1997	30	12	1997
Dec	14.0	1982	24	22.3	1982	25	1997	14	23	1997
Ann	20.0	Apr 1986	3	45.3	Apr 1999	40	Feb 1989	5	28	Feb 1989

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	3.9	2.6	.6	.2	.0
Feb	4.3	2.8	1.1	.4	@
Mar	6.0	4.5	2.1	.9	.1
Apr	4.6	3.7	2.0	1.2	.3
May	1.3	1.1	.5	.2	.0
Jun	.1	.1	.1	.0	.0
Jul	.0	.0	.0	.0	.0
Aug	.0	.0	.0	.0	.0
Sep	.5	.4	.2	.1	.0
Oct	2.4	1.8	1.0	.3	.1
Nov	4.3	3.4	1.5	.6	.1
Dec	4.1	2.9	1.1	.6	.1
Ann	31.5	23.3	10.2	4.5	.7

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	26.3	25.6	25.3	14.1
Feb	25.3	24.8	24.5	14.7
Mar	22.2	19.5	16.8	8.3
Apr	10.9	8.6	6.6	4.0
May	1.5	.9	.6	.3
Jun	.1	.1	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.5	.4	.2	.0
Oct	4.3	2.7	1.5	.8
Nov	18.5	15.0	11.4	3.6
Dec	25.2	23.8	20.5	11.1
Ann	134.8	121.4	107.4	56.9

+ 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

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

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

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: BAILEY, CO **COOP ID: 050454**

Climate Division: CO 4 **NWS Call Sign:** **Elevation: 7,730 Feet** **Lat: 39˚24N** **Lon: 105˚29W**

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	7/21	7/16	7/12	7/09	7/06	7/04	7/01	6/27	6/22
32	7/13	7/06	7/02	6/28	6/24	6/20	6/16	6/12	6/05
28	6/16	6/11	6/07	6/03	5/31	5/28	5/25	5/21	5/15
24	6/02	5/27	5/23	5/19	5/16	5/12	5/09	5/04	4/28
20	5/16	5/11	5/09	5/06	5/04	5/01	4/29	4/26	4/22
16	5/08	5/03	4/29	4/26	4/23	4/20	4/17	4/14	4/09

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	8/01	8/08	8/13	8/17	8/21	8/25	8/29	9/03	9/09
32	8/20	8/26	8/30	9/03	9/06	9/09	9/13	9/17	9/23
28	8/30	9/05	9/08	9/12	9/15	9/18	9/21	9/25	9/30
24	9/14	9/19	9/22	9/25	9/27	9/30	10/03	10/06	10/10
20	9/21	9/26	9/30	10/03	10/05	10/08	10/11	10/15	10/19
16	9/26	10/03	10/08	10/12	10/15	10/19	10/23	10/28	11/04

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	69	60	54	49	45	40	35	29	20
32	99	90	84	78	73	68	62	56	47
28	127	120	115	110	106	101	97	91	84
24	158	150	144	139	134	129	124	118	110
20	174	167	162	158	154	150	146	141	134
16	202	192	186	180	175	169	163	157	147

***** 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/normals/usnormals.html

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

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: BAILEY, CO **COOP ID: 050454**

Climate Division: CO 4 **NWS Call Sign:** **Elevation: 7,730 Feet** **Lat: 39˚24N** **Lon: 105˚29W**

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	1311	1099	1035	822	580	293	144	193	405	732	1046	1295	8955
60	1156	959	880	672	426	163	37	75	262	577	896	1140	7243
57	1063	875	787	582	338	103	9	33	185	484	806	1047	6312
55	1001	819	725	522	282	72	3	17	140	423	746	985	5735
50	846	679	570	377	161	22	0	2	57	275	596	830	4415
32	300	197	100	33	2	0	0	0	0	10	149	296	1087

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	12	23	88	202	445	700	884	834	585	301	94	23	4191
55	0	0	0	0	12	82	174	138	35	1	0	0	442
57	0	0	0	0	6	53	118	92	20	0	0	0	289
60	0	0	0	0	2	23	53	41	7	0	0	0	126
65	0	0	0	0	0	3	4	5	0	0	0	0	12
70	0	0	0	0	0	0	0	0	0	0	0	0	0

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	1	0	23	75	237	480	653	607	379	137	17	0	1	1	24	99	336	816	1469	2076	2455	2592	2609	2609
45	0	0	2	22	120	333	498	452	241	48	0	0	0	0	2	24	144	477	975	1427	1668	1716	1716	1716
50	0	0	0	0	43	200	345	299	120	10	0	0	0	0	0	0	43	243	588	887	1007	1017	1017	1017
55	0	0	0	0	7	88	194	152	39	0	0	0	0	0	0	0	7	95	289	441	480	480	480	480
60	0	0	0	0	0	24	68	44	6	0	0	0	0	0	0	0	0	24	92	136	142	142	142	142
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	3	17	48	102	214	364	444	415	309	177	43	5	3	20	68	170	384	748	1192	1607	1916	2093	2136	2141

(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.
Compete documentation for the 1971-2000 Normals is available on the internet from:
www.ncdc.noaa.gov/oa/climate/normals/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 are 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.

a. Temperature/ Precipitation Tables
   1. 1971-2000 Monthly Normals
   2. Cooperative Summary of the Day
   3. National Weather Service station records
   4. 1971-2000 serially complete daily data

b. Degree Day Table
   1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals
   2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data

c. Snow Tables
   1. Snow Climatology
   2. Cooperative Summary of the Day

d. Freeze Data Table
   1971-2000 serially complete daily data

References

U.S. Climate Normals 1971-2000, www.ncdc.noaa.gov/normals.html
U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normals/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