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: LAS ANIMAS, CO **COOP ID: 054834**

Climate Division: CO 1 **NWS Call Sign:** **Elevation: 3,890 Feet** **Lat: 38˚04N** **Lon: 103˚13W**

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	46.5	13.6	30.1	81+	1986	30	39.7	1986	-32	1948	28	19.4	1979	1083	0	.0	.0	13.4	5.4	30.6	3.3
Feb	52.8	19.2	36.0	83+	1989	25	42.4	1999	-23	1960	28	24.0	1989	812	0	.0	.0	18.1	3.1	26.8	1.5
Mar	61.3	27.2	44.3	91+	1989	11	49.9	1986	-26	1948	11	40.1	1980	644	0	.0	.1	25.4	.6	22.0	.1
Apr	69.6	36.0	52.8	100+	1992	30	58.9	1981	5	1957	8	46.5	1973	374	9	.1	1.1	27.9	.1	8.9	.0
May	78.5	46.9	62.7	104	1989	23	67.0	1996	24+	1967	1	57.9	1995	132	62	.3	5.1	30.8	.0	.6	.0
Jun	89.9	56.5	73.2	112	1936	18	77.8	1994	29	1976	7	68.1	1982	10	256	4.8	17.8	30.0	.0	@	.0
Jul	94.8	61.9	78.4	114	1933	1	82.6	1980	40	1931	1	75.4	1992	0	413	9.7	25.0	31.0	.0	.0	.0
Aug	92.5	60.0	76.3	110+	1937	15	80.9	1983	40+	1944	31	72.1	1992	3	351	5.3	21.9	31.0	.0	.0	.0
Sep	83.8	50.4	67.1	104+	2000	6	72.0	1998	22	1985	30	63.1	1984	60	123	1.4	10.6	29.8	.0	.5	.0
Oct	73.0	36.7	54.9	98+	1947	1	58.5	1979	6	1997	27	48.9	1984	320	4	.0	1.4	29.6	.2	8.4	.0
Nov	57.1	23.2	40.2	90	1932	4	47.3	1999	-13	1976	28	31.4	1972	746	0	.0	.0	21.7	1.0	25.5	.5
Dec	47.7	15.1	31.4	81	1955	24	38.7	1980	-22	1961	12	20.6	1983	1041	0	.0	.0	14.5	4.4	30.3	2.2
Ann	70.6	37.2	54.0	114	Jul 1933	1	82.6	Jul 1980	-32	Jan 1948	28	19.4	Jan 1979	5225	1218	21.6	83.0	303.2	14.8	153.6	7.6

\+ 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: 1930-2001

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

Issue Date: February 2004

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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	.34	.25	1.17	1944	26	1.18	1990	.00	1982
Feb	.41	.36	.66+	1993	10	1.34	1987	.00	1994
Mar	.86	.77	1.26	1996	14	3.06	1973	.00	1977
Apr	1.22	.97	2.02	1999	30	5.04	1999	.01	1992
May	2.11	2.17	2.28	1936	23	6.96	1995	.31	1986
Jun	1.65	1.52	2.60	2001	7	4.81	1982	.28	1985
Jul	2.23	2.06	3.60	1958	5	8.53	1998	.12	1993
Aug	1.51	1.44	2.70	1953	17	3.10	1986	.10	1990
Sep	1.07	.88	2.67	1941	23	3.05	1986	.00	1983
Oct	.79	.51	1.51	1971	18	3.21	1997	.00+	1980
Nov	.52	.38	1.14	1975	19	1.68	1992	.00+	1995
Dec	.28	.21	.80	1943	2	1.02	1997	.00+	1999
Ann	12.99	13.06	3.60	Jul 1958	5	8.53	Jul 1998	.00+	Dec 1999

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	3.2	1.3	.1	.0
Feb	2.9	1.4	.2	.0
Mar	4.7	2.7	.4	.1
Apr	5.4	3.0	.7	.2
May	8.1	4.5	1.4	.4
Jun	6.1	3.7	1.0	.4
Jul	7.0	4.2	1.7	.5
Aug	6.2	3.3	.9	.2
Sep	4.8	2.8	.5	.1
Oct	3.5	2.0	.4	.1
Nov	3.0	1.3	.2	@
Dec	2.6	1.0	@	.0
Ann	57.5	31.2	7.5	2.0

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	.01	.04	.09	.14	.19	.25	.33	.42	.54	.75	.96
Feb	.01	.04	.09	.15	.22	.29	.38	.50	.67	.95	1.23
Mar	.04	.11	.23	.36	.50	.65	.83	1.05	1.36	1.87	2.37
Apr	.09	.17	.32	.49	.68	.90	1.16	1.49	1.94	2.72	3.48
May	.44	.64	.95	1.23	1.51	1.81	2.15	2.56	3.10	3.96	4.77
Jun	.32	.47	.71	.94	1.16	1.41	1.68	2.01	2.45	3.16	3.83
Jul	.35	.55	.87	1.18	1.50	1.84	2.24	2.73	3.37	4.43	5.44
Aug	.18	.30	.51	.72	.94	1.19	1.48	1.84	2.32	3.12	3.90
Sep	.06	.16	.32	.48	.65	.83	1.05	1.32	1.68	2.28	2.86
Oct	.00	.00	.08	.18	.31	.47	.68	.94	1.32	1.99	2.66
Nov	.00	.01	.07	.14	.23	.33	.46	.62	.86	1.27	1.69
Dec	.00	.00	.04	.09	.15	.21	.27	.36	.47	.66	.85
Ann	8.49	9.33	10.43	11.27	12.02	12.76	13.52	14.37	15.42	16.94	18.27

\+ 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: 1930-2001
(3) Derived from 1971-2000 serially complete daily data

Complete documentation available from:
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Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	3.8	3.1	1	#
Feb	2.8	2.8	#	#
Mar	3.7	2.5	#	#
Apr	1.2	.0	#	0
May	.1	.0	#	0
Jun	.0	.0	0	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	.2	.0	#	0
Oct	1.4	.0	#	0
Nov	3.8	2.5	#	#
Dec	3.3	2.7	1	#
Ann	20.3	13.6	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	5.5	1990	19	10.0	1984	10	1984	21	4	1984
Feb	12.0	1990	20	14.0	1990	8	1990	20	1	1997
Mar	13.0	1973	30	13.5	1973	13	1973	30	1	1998
Apr	9.0	1988	1	12.0	1988	9	1988	1	1	1988
May	1.5	1990	2	2.5	1990	2	1990	2	#+	1990
Jun	.0	0	0	.0	0	0	0	0	0	0
Jul	.0	0	0	.0	0	0	0	0	0	0
Aug	.0	0	0	.0	0	0	0	0	0	0
Sep	3.0	1984	29	4.0	1984	#	1985	29	#	1985
Oct	30.0	1997	25	31.5	1997	30	1997	25	4	1997
Nov	7.7	1992	24	18.0	1972	11	1992	25	2	1992
Dec	5.0	1972	12	11.0	1997	8	1979	31	2	1972
Ann	30.0	Oct 1997	25	31.5	Oct 1997	30	Oct 1997	25	4+	Oct 1997

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	2.4	1.7	.4	.1	.0
Feb	1.8	1.2	.4	.2	@
Mar	1.2	1.0	.6	.2	.1
Apr	.4	.4	.2	@	.0
May	.1	.1	.0	.0	.0
Jun	.0	.0	.0	.0	.0
Jul	.0	.0	.0	.0	.0
Aug	.0	.0	.0	.0	.0
Sep	.1	.1	@	.0	.0
Oct	.2	.2	.1	.1	@
Nov	1.6	1.3	.5	.2	.0
Dec	1.9	1.5	.4	.1	.0
Ann	9.7	7.5	2.6	.9	.1

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	6.6	2.2	1.0	.2
Feb	2.9	.9	.1	.0
Mar	1.0	.4	.2	@
Apr	.3	.2	.1	.0
May	.1	.0	.0	.0
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.0	.0	.0	.0
Oct	.3	.3	.3	.2
Nov	2.3	1.2	.4	@
Dec	4.8	1.3	.4	.0
Ann	18.3	6.5	2.5	.4

+ 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	5/25	5/20	5/17	5/14	5/11	5/08	5/05	5/01	4/26
32	5/15	5/10	5/07	5/03	5/01	4/28	4/25	4/21	4/16
28	4/28	4/24	4/21	4/19	4/16	4/14	4/11	4/08	4/04
24	4/19	4/14	4/11	4/08	4/06	4/03	4/01	3/28	3/24
20	4/13	4/07	4/03	3/31	3/28	3/24	3/21	3/17	3/12
16	4/04	3/28	3/23	3/19	3/15	3/11	3/07	3/02	2/24

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	9/16	9/20	9/23	9/26	9/28	10/01	10/03	10/07	10/11
32	9/24	9/29	10/02	10/05	10/08	10/10	10/13	10/16	10/21
28	10/04	10/09	10/12	10/15	10/18	10/21	10/24	10/28	11/01
24	10/15	10/20	10/23	10/25	10/28	10/30	11/02	11/05	11/09
20	10/27	10/31	11/02	11/04	11/06	11/08	11/11	11/13	11/17
16	11/01	11/06	11/10	11/12	11/15	11/18	11/21	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	159	152	148	144	140	136	132	127	120
32	182	174	168	164	159	155	150	144	137
28	203	197	192	188	184	180	176	172	165
24	223	217	212	208	204	201	197	192	185
20	243	236	231	227	223	219	215	210	203
16	269	261	254	249	244	239	234	228	219

***** 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)

Heating Degree Days (1)

Base Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	1083	812	644	374	132	10	0	3	60	320	746	1041	5225
60	928	672	489	245	58	1	0	0	17	186	596	886	4078
57	835	588	397	180	31	0	0	0	6	121	509	793	3460
55	773	535	338	142	19	0	0	0	3	87	453	731	3081
50	623	405	203	68	4	0	0	0	0	32	319	582	2236
32	185	78	4	0	0	0	0	0	0	0	39	155	461

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	125	190	383	624	952	1236	1436	1372	1053	708	282	137	8498
55	0	3	4	76	258	546	723	659	366	81	6	0	2722
57	0	0	2	54	209	486	661	597	309	54	2	0	2374
60	0	0	0	29	143	397	568	504	230	25	0	0	1896
65	0	0	0	9	62	256	413	351	123	4	0	0	1218
70	0	0	0	1	19	138	259	210	53	0	0	0	680

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	25	75	217	428	735	1019	1209	1142	841	487	126	31	25	100	317	745	1480	2499	3708	4850	5691	6178	6304	6335
45	2	25	116	294	581	869	1054	987	691	341	54	5	2	27	143	437	1018	1887	2941	3928	4619	4960	5014	5019
50	0	3	53	179	429	719	899	832	546	216	16	0	0	3	56	235	664	1383	2282	3114	3660	3876	3892	3892
55	0	0	16	92	291	569	744	677	400	111	1	0	0	0	16	108	399	968	1712	2389	2789	2900	2901	2901
60	0	0	2	37	168	421	589	522	266	43	0	0	0	0	2	39	207	628	1217	1739	2005	2048	2048	2048
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	63	115	215	321	466	628	751	712	529	364	147	67	63	178	393	714	1180	1808	2559	3271	3800	4164	4311	4378

(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:
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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