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: MCGAFFEY 5 SE, NM **COOP ID: 295560**

Climate Division: NM 1 **NWS Call Sign:** **Elevation: 8,000 Feet** **Lat: 35˚20N** **Lon: 108˚27W**

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	39.3	8.2	23.8	69	1981	1	31.8	1986	-32	1971	7	18.2	1979	1278	0	.0	.0	3.4	6.5	31.0	7.8
Feb	42.3	12.1	27.2	66	1951	11	34.2	1996	-25+	1951	1	21.6	1985	1059	0	.0	.0	6.4	3.9	28.2	3.8
Mar	47.9	18.4	33.2	71	1989	10	41.5	1972	-19	1966	4	28.6	1977	987	0	.0	.0	14.0	1.3	30.7	1.1
Apr	55.6	23.9	39.8	80	2000	28	45.1	1992	-3	1975	2	33.6	1973	758	0	.0	.0	22.4	.3	27.3	.1
May	65.6	31.3	48.5	88	2000	28	54.5	2000	10	1986	9	45.2	1975	514	0	.0	.0	29.8	.0	17.1	.0
Jun	76.8	39.0	57.9	96	1961	25	62.2	1994	16	2001	14	54.8	1995	222	9	.0	.7	30.0	.0	4.3	.0
Jul	80.0	46.0	63.0	99+	1960	28	65.4	1996	28	1992	2	60.6	1986	80	18	.0	1.4	31.0	.0	.1	.0
Aug	77.1	45.6	61.4	92	1962	13	64.4	1995	20	1957	5	58.5+	1990	122	9	.0	.2	31.0	.0	@	.0
Sep	72.0	38.4	55.2	88	2000	15	59.2	1998	18+	1985	21	50.4	1985	296	2	.0	@	29.9	.0	5.3	.0
Oct	62.2	27.6	44.9	85	1963	11	49.4	1988	0	1996	22	39.7	1984	624	0	.0	.0	27.5	.1	23.9	@
Nov	48.7	16.5	32.6	74	1999	8	40.1	1999	-21	1976	28	24.8	2000	972	0	.0	.0	15.1	1.9	29.6	2.0
Dec	40.9	9.7	25.3	65+	1965	6	33.5	1980	-30	1990	23	21.1+	1992	1231	0	.0	.0	6.1	5.1	30.9	6.3
Ann	59.0	26.4	42.7	99+	Jul 1960	28	65.4	Jul 1996	-32	Jan 1971	7	18.2	Jan 1979	8143	38	.0	2.3	246.6	19.1	228.4	21.1

\+ 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: 1949-2001

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

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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	1.90	1.47	2.57	1957	8	6.13	1993	.10	1972
Feb	1.61	1.27	1.83	1980	15	4.18	1980	.00	1984
Mar	2.04	1.86	2.20	1984	27	5.12	1991	.00	1972
Apr	1.19	1.06	1.35	1999	4	3.06	1988	.00	1989
May	1.04	.93	2.10	1993	21	3.19	1992	.00+	2000
Jun	.68	.39	1.53	1952	2	3.35	1988	.00+	1998
Jul	2.31	2.16	2.00	1975	13	5.70	1999	.26	1993
Aug	2.75	2.32	2.60	1995	12	6.29	1995	.57	1978
Sep	1.79	1.62	1.77	1958	7	4.25	1971	.44	1979
Oct	1.65	1.40	2.25	1998	26	6.79	1972	.00+	1999
Nov	1.88	1.93	1.80	1998	7	3.74	1982	.00	1999
Dec	1.48	.92	1.98	1983	26	4.21	1983	.00	1976
Ann	20.32	21.02	2.60	Aug 1995	12	6.79	Oct 1972	.00+	May 2000

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	5.0	4.4	1.4	.3
Feb	5.1	4.2	1.2	.2
Mar	6.0	5.3	1.1	.2
Apr	4.1	3.5	.7	.1
May	3.9	3.0	.6	@
Jun	2.8	2.0	.5	.1
Jul	9.6	6.3	1.2	.2
Aug	10.7	7.3	1.5	.2
Sep	6.3	4.6	1.1	.2
Oct	4.3	3.7	1.1	.2
Nov	4.3	3.9	1.3	.3
Dec	3.9	3.4	.8	.3
Ann	66.0	51.6	12.5	2.3

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	.14	.27	.51	.78	1.07	1.40	1.80	2.31	3.01	4.19	5.36
Feb	.11	.27	.53	.76	1.01	1.29	1.60	1.99	2.52	3.38	4.21
Mar	.12	.31	.63	.93	1.25	1.60	2.01	2.51	3.20	4.33	5.42
Apr	.07	.18	.37	.54	.73	.93	1.17	1.46	1.86	2.52	3.15
May	.00	.00	.14	.32	.52	.73	.98	1.30	1.74	2.46	3.17
Jun	.00	.00	.00	.07	.20	.36	.56	.82	1.18	1.83	2.46
Jul	.52	.73	1.07	1.37	1.68	2.00	2.36	2.80	3.37	4.28	5.14
Aug	.76	1.02	1.41	1.76	2.10	2.45	2.85	3.31	3.92	4.87	5.76
Sep	.47	.64	.90	1.13	1.35	1.59	1.85	2.15	2.56	3.19	3.78
Oct	.00	.00	.53	.82	1.09	1.39	1.71	2.10	2.60	3.42	4.19
Nov	.24	.48	.80	1.06	1.33	1.62	1.94	2.32	2.82	3.63	4.39
Dec	.02	.09	.27	.46	.70	.98	1.33	1.78	2.43	3.53	4.65
Ann	13.09	14.44	16.19	17.53	18.75	19.93	21.16	22.53	24.20	26.66	28.81

\+ 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: 1949-2001
(3) Derived from 1971-2000 serially complete daily data

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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	10.6	7.3	3	1
Feb	10.2	8.8	1	#
Mar	8.0	8.2	1	#
Apr	4.9	3.0	#	0
May	.5	.0	#	0
Jun	#	.0	0	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	.1	.0	0	0
Oct	1.6	.0	#	0
Nov	8.4	8.0	#	0
Dec	9.2	8.1	1	#
Ann	53.5	43.4	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	12.0	1997	27	27.0	1980	30	1997	31	30	1997
Feb	12.0	1998	26	32.0	1987	18	1987	26	4	1986
Mar	22.0	1984	27	26.2	1984	22	1984	27	3+	1991
Apr	8.0	1988	17	16.4	1998	8	1998	17	3	1976
May	4.0	1973	1	7.0	1973	8	1978	6	5	1978
Jun	#	1991	1	#	1991	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	2.0	1986	24	2.0	1986	0	0	0	0	0
Oct	11.5	1991	31	11.5	1991	15	1991	31	1	1991
Nov	19.0	1975	29	21.7	1983	19	1975	29	1	1990
Dec	13.0	1997	10	22.0	1982	13	1991	13	7	1991
Ann	22.0	Mar 1984	27	32.0	Feb 1987	30	Jan 1997	31	30	Jan 1997

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	2.8	2.8	1.6	.7	.1
Feb	2.8	2.5	1.6	.9	.2
Mar	3.0	2.9	1.2	.6	.1
Apr	1.7	1.7	.6	.2	.0
May	.2	.2	.1	.0	.0
Jun	.0	.0	.0	.0	.0
Jul	.0	.0	.0	.0	.0
Aug	.0	.0	.0	.0	.0
Sep	@	@	.0	.0	.0
Oct	.7	.6	.3	.2	@
Nov	1.6	1.6	1.0	.4	.1
Dec	2.6	2.5	1.0	.6	.1
Ann	15.4	14.8	7.4	3.6	.6

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	-9.9	-9.9	-9.9	-9.9
Feb	1.5	.7	.4	.1
Mar	1.7	.8	.4	.1
Apr	1.8	.8	.3	.0
May	.1	.1	.0	.0
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.0	.0	.0	.0
Oct	.3	.2	.1	.0
Nov	1.2	.6	.2	.1
Dec	1.9	.4	.1	.0
Ann	-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	7/10	7/05	7/01	6/28	6/25	6/22	6/19	6/15	6/10
32	6/30	6/25	6/22	6/19	6/16	6/13	6/10	6/07	6/02
28	6/22	6/15	6/11	6/07	6/03	5/31	5/27	5/22	5/16
24	6/05	5/30	5/26	5/22	5/19	5/15	5/12	5/07	5/02
20	5/31	5/24	5/19	5/14	5/10	5/05	5/01	4/26	4/18
16	5/15	5/07	5/01	4/27	4/22	4/18	4/13	4/07	3/31

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	8/18	8/24	8/28	9/01	9/04	9/07	9/11	9/15	9/21
32	9/08	9/12	9/15	9/17	9/19	9/21	9/24	9/27	9/30
28	9/14	9/18	9/21	9/23	9/26	9/28	9/30	10/03	10/07
24	9/21	9/26	9/29	10/02	10/05	10/08	10/11	10/14	10/19
20	9/29	10/05	10/09	10/13	10/16	10/20	10/23	10/28	11/02
16	10/07	10/13	10/17	10/21	10/24	10/27	10/31	11/04	11/09

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	92	84	79	74	70	66	61	56	48
32	114	107	102	98	95	91	87	82	76
28	137	129	123	118	114	109	104	99	91
24	164	155	149	143	139	134	128	122	114
20	184	176	169	164	159	154	148	142	133
16	208	200	194	189	184	179	174	168	160

***** 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	1278	1059	987	758	514	222	80	122	296	624	972	1231	8143
60	1123	919	832	608	362	109	12	30	161	470	822	1076	6524
57	1030	835	739	518	276	62	2	8	98	378	732	983	5661
55	968	779	677	458	223	39	0	3	66	319	672	921	5125
50	813	639	522	314	113	9	0	0	17	188	523	766	3904
32	277	173	86	15	0	0	0	0	0	4	103	236	894

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	22	39	122	248	509	777	961	910	696	403	121	28	4836
55	0	0	0	0	19	127	248	199	72	5	0	0	670
57	0	0	0	0	10	89	187	143	44	2	0	0	475
60	0	0	0	0	3	46	104	72	17	0	0	0	242
65	0	0	0	0	0	9	18	9	2	0	0	0	38
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	0	0	21	97	279	547	725	669	468	197	24	0	0	0	21	118	397	944	1669	2338	2806	3003	3027	3027
45	0	0	0	33	154	400	570	514	320	93	1	0	0	0	0	33	187	587	1157	1671	1991	2084	2085	2085
50	0	0	0	4	61	257	415	359	184	24	0	0	0	0	0	4	65	322	737	1096	1280	1304	1304	1304
55	0	0	0	0	11	132	261	208	74	3	0	0	0	0	0	0	11	143	404	612	686	689	689	689
60	0	0	0	0	0	48	115	74	13	0	0	0	0	0	0	0	0	48	163	237	250	250	250	250
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	1	14	48	123	254	407	475	432	341	209	61	10	1	15	63	186	440	847	1322	1754	2095	2304	2365	2375

(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