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: PEDERNAL 9 E, NM **COOP ID: 296687**

Climate Division: NM 6 **NWS Call Sign:** **Elevation: 6,150 Feet** **Lat: 34˚37N** **Lon: 105˚28W**

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	44.1	19.1	31.6	69+	1967	30	37.4	1986	-29	1971	6	24.1	1992	1036	0	.0	.0	9.7	5.4	30.1	1.2
Feb	50.2	22.0	36.1	73	1986	26	42.1	1995	-13	1986	10	31.9	1974	809	0	.0	.0	15.4	2.4	26.3	.6
Mar	57.9	25.8	41.9	80	1989	12	47.0	1972	-3	1965	4	38.3	1977	719	0	.0	.0	24.4	.5	25.6	@
Apr	65.6	31.8	48.7	89	1965	23	53.4	1981	1	1973	8	42.7	1973	489	0	.0	.0	27.4	.2	16.4	.0
May	75.1	41.7	58.4	98+	2000	30	64.5	1996	15	1991	1	54.0	1975	226	22	.0	.7	30.7	@	3.9	.0
Jun	85.3	51.0	68.2	105	1994	27	74.4	1990	25	1973	1	64.5	1995	40	134	.6	8.6	30.0	.0	.1	.0
Jul	87.8	55.9	71.9	103	1994	1	76.1	1980	38	1961	16	68.9	1975	3	215	.1	12.5	31.0	.0	.0	.0
Aug	84.9	54.9	69.9	100+	1994	18	73.5	1995	38	1965	15	67.4+	1972	10	162	.1	5.8	31.0	.0	.0	.0
Sep	78.6	48.0	63.3	97+	1983	4	67.5	1983	24+	1970	27	59.8	1996	99	47	.0	1.1	29.8	.0	.6	.0
Oct	68.4	37.1	52.8	89	1980	4	56.2	1987	0	1991	31	48.2	1984	380	1	.0	.0	29.6	.2	9.1	.0
Nov	55.4	26.7	41.1	76+	1980	1	46.0	1995	-10	1976	29	34.8	2000	719	0	.0	.0	20.2	1.2	24.5	.2
Dec	45.7	19.6	32.7	69+	1980	19	40.2	1980	-15	1990	24	26.0	1997	1004	0	.0	.0	12.0	4.7	29.7	.9
Ann	66.6	36.1	51.4	105	Jun 1994	27	76.1	Jul 1980	-29	Jan 1971	6	24.1	Jan 1992	5534	581	.8	28.7	291.2	14.6	166.3	2.9

\+ 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

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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	.42	.28	.78	1999	30	1.43	1987	.00+	2000
Feb	.38	.34	1.24	1948	3	1.04	1990	.00+	2000
Mar	.45	.29	1.60	2001	8	2.15	1998	.00+	1996
Apr	.43	.20	1.16	1985	28	2.28	1985	.00+	1996
May	.99	.58	1.70	1987	23	4.08	1992	.00+	1998
Jun	1.32	1.02	1.68	1997	5	5.15	1979	.00+	1998
Jul	1.88	1.45	2.36	1949	22	4.77	1991	.18	1986
Aug	2.76	2.28	2.98	1966	2	6.64	1988	.29	1983
Sep	1.55	1.51	2.36	1991	10	5.30	1997	.02	1973
Oct	1.20	.67	1.98	2000	8	4.28	2000	.00+	1987
Nov	.58	.52	1.10	1994	12	1.74	1986	.00+	1999
Dec	.60	.48	1.17	1987	13	2.13	1997	.00+	1996
Ann	12.56	12.22	2.98	Aug 1966	2	6.64	Aug 1988	.00+	Feb 2000

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	2.6	1.2	.2	.0
Feb	2.7	1.3	.1	.0
Mar	2.7	1.4	.2	@
Apr	2.2	1.2	.2	@
May	3.6	2.2	.5	.2
Jun	3.7	2.5	1.0	.4
Jul	6.6	4.3	1.1	.4
Aug	8.9	5.8	1.7	.7
Sep	6.0	3.5	.8	.3
Oct	3.7	2.6	.8	.2
Nov	2.8	1.6	.3	@
Dec	2.8	1.6	.3	@
Ann	48.3	29.2	7.2	2.2

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	.00	.00	.10	.18	.26	.34	.43	.54	.69	.92	1.14
Feb	.00	.04	.11	.17	.23	.30	.38	.47	.60	.82	1.02
Mar	.00	.00	.05	.12	.20	.30	.41	.56	.77	1.11	1.46
Apr	.00	.00	.03	.08	.16	.24	.36	.51	.73	1.11	1.49
May	.00	.00	.08	.20	.36	.56	.82	1.17	1.67	2.55	3.46
Jun	.00	.00	.19	.39	.61	.88	1.21	1.62	2.20	3.19	4.17
Jul	.31	.48	.75	1.01	1.28	1.56	1.89	2.30	2.83	3.70	4.53
Aug	.48	.73	1.13	1.51	1.89	2.31	2.78	3.36	4.13	5.37	6.55
Sep	.20	.33	.55	.76	.99	1.24	1.53	1.89	2.38	3.18	3.95
Oct	.00	.03	.14	.29	.49	.72	1.02	1.42	1.99	2.99	4.01
Nov	.00	.00	.22	.33	.42	.51	.62	.74	.89	1.14	1.38
Dec	.00	.00	.05	.17	.29	.42	.57	.76	1.03	1.46	1.90
Ann	6.61	7.63	9.01	10.11	11.11	12.11	13.17	14.36	15.85	18.08	20.07

\+ 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

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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	4.7	4.0	1	1
Feb	3.7	2.0	1	#
Mar	2.4	2.0	#	#
Apr	1.0	.0	#	0
May	.0	.0	#	0
Jun	.0	.0	0	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	.0	.0	0	0
Oct	.7	.0	#	0
Nov	1.8	1.0	#	#
Dec	5.9	4.3	1	#
Ann	20.2	13.3	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	1987	17	21.4	1987	21	1987	19	7	1992
Feb	8.0	1987	20	16.8	1990	14	1986	10	6	1985
Mar	6.0	1989	21	8.0	1989	6+	1999	19	3	1977
Apr	7.0	1988	1	9.0	1997	7	1988	1	#+	1997
May	1.0	1986	17	1.0	1986	4	1978	3	#+	1986
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	.0	0	0	.0	0	0	0	0	0	0
Oct	7.0	1996	27	8.8	1996	7	1996	27	#+	2000
Nov	6.0	1986	23	12.0	1986	7	1986	24	1	1992
Dec	14.0	1987	13	20.0+	1997	16	1987	16	4	1987
Ann	14.0	Dec 1987	13	21.4	Jan 1987	21	Jan 1987	19	7	Jan 1992

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	1.2	.9	.4	.2	@
Feb	1.5	1.1	.5	.2	.0
Mar	.9	.7	.2	.1	.0
Apr	.4	.2	.1	.1	.0
May	@	@	.0	.0	.0
Jun	.0	.0	.0	.0	.0
Jul	.0	.0	.0	.0	.0
Aug	.0	.0	.0	.0	.0
Sep	.0	.0	.0	.0	.0
Oct	.2	.2	.1	@	.0
Nov	.9	.8	.2	.1	.0
Dec	1.8	1.6	.8	.3	@
Ann	6.9	5.5	2.3	1.0	@

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	2.6	1.0	.6	.0
Feb	1.2	.5	.1	.0
Mar	1.1	.4	.2	.0
Apr	.2	.1	.1	.0
May	@	.0	.0	.0
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.0	.0	.0	.0
Oct	.2	.1	@	.0
Nov	1.1	.6	.2	.0
Dec	4.2	2.3	.7	.2
Ann	10.6	5.0	1.9	.2

+ 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	6/03	5/30	5/28	5/26	5/24	5/22	5/20	5/17	5/13
32	5/27	5/22	5/19	5/16	5/14	5/11	5/09	5/06	5/01
28	5/21	5/15	5/12	5/09	5/06	5/03	4/29	4/26	4/21
24	5/11	5/04	4/30	4/26	4/22	4/18	4/14	4/09	4/03
20	4/29	4/23	4/19	4/15	4/12	4/08	4/05	3/31	3/25
16	4/17	4/11	4/07	4/04	3/31	3/28	3/24	3/20	3/14

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	9/19	9/22	9/24	9/26	9/28	9/30	10/02	10/05	10/08
32	9/24	9/27	9/30	10/02	10/04	10/06	10/08	10/11	10/15
28	9/30	10/04	10/07	10/10	10/13	10/15	10/18	10/21	10/26
24	10/06	10/12	10/16	10/19	10/22	10/26	10/29	11/02	11/07
20	10/18	10/23	10/27	10/31	11/03	11/06	11/09	11/13	11/18
16	10/26	11/01	11/06	11/10	11/14	11/18	11/22	11/27	12/04

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	140	136	132	129	127	124	121	118	113
32	162	155	150	146	142	138	134	129	123
28	177	171	167	163	159	156	152	148	141
24	207	199	193	188	183	178	173	166	158
20	226	218	213	208	204	200	195	190	182
16	253	244	238	232	227	222	217	210	201

***** 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	1036	809	719	489	226	40	3	10	99	380	719	1004	5534
60	881	669	564	344	117	9	0	1	31	235	569	849	4269
57	788	585	471	262	71	3	0	0	12	162	480	756	3590
55	726	529	409	211	48	1	0	0	5	120	423	694	3166
50	571	389	259	108	13	0	0	0	0	47	288	540	2215
32	122	33	2	0	0	0	0	0	0	0	21	102	280

Base — Cooling Degree Days (1)

Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	110	148	307	501	819	1085	1235	1175	939	644	292	121	7376
55	0	0	0	22	153	396	522	462	254	50	4	0	1863
57	0	0	0	13	115	338	460	400	200	30	2	0	1558
60	0	0	0	5	68	254	367	308	130	11	0	0	1143
65	0	0	0	0	22	134	215	162	47	1	0	0	581
70	0	0	0	0	4	53	87	56	9	0	0	0	209

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	16	47	135	284	550	826	966	911	685	391	113	19	16	63	198	482	1032	1858	2824	3735	4420	4811	4924	4943
45	0	12	55	165	397	676	811	756	536	254	44	2	0	12	67	232	629	1305	2116	2872	3408	3662	3706	3708
50	0	0	15	77	255	526	656	601	390	133	13	0	0	0	15	92	347	873	1529	2130	2520	2653	2666	2666
55	0	0	1	20	136	377	501	446	251	53	0	0	0	0	1	21	157	534	1035	1481	1732	1785	1785	1785
60	0	0	0	0	52	232	346	292	126	12	0	0	0	0	0	0	52	284	630	922	1048	1060	1060	1060
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	26	69	151	249	388	525	614	580	441	292	116	41	26	95	246	495	883	1408	2022	2602	3043	3335	3451	3492

(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

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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