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: AZTEC RUINS NATL MNMNT, NM **COOP ID: 290692**

Climate Division: NM 1 **NWS Call Sign:** **Elevation: 5,643 Feet** **Lat: 36˚50N** **Lon: 108˚00W**

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	43.3	17.6	30.5	69	1981	1	37.7	1986	-23	1971	7	23.6	1977	1071	0	.0	.0	6.8	3.2	30.3	2.3
Feb	50.6	22.6	36.6	78	1958	21	42.6	1995	-16+	1948	13	30.0	1979	795	0	.0	.0	14.7	.7	26.2	.4
Mar	59.5	27.7	43.6	82	1989	10	48.7	1989	2	1952	23	39.3	1980	663	0	.0	.0	27.1	@	25.1	.0
Apr	68.0	33.6	50.8	88	1981	30	55.7	1989	10	1955	4	45.9	1983	426	0	.0	.0	28.7	.0	16.2	.0
May	77.3	42.3	59.8	96+	2000	29	64.2	1984	12	1975	7	56.3	1995	180	20	.0	1.0	30.9	.0	4.1	.0
Jun	87.9	51.5	69.7	103	1954	22	73.7	1981	24	1974	9	65.2	1995	23	164	.4	12.2	30.0	.0	.4	.0
Jul	92.0	59.8	75.9	105	1971	13	79.8	1971	40	1978	6	72.1	1995	0	338	1.0	22.6	31.0	.0	.0	.0
Aug	89.3	59.3	74.3	105	1960	4	77.3	1982	36	1978	27	70.1	1989	1	289	.1	15.4	31.0	.0	.0	.0
Sep	82.1	50.5	66.3	98	1978	5	69.5	1981	22	1978	20	62.3	1996	54	92	.0	3.3	30.0	.0	1.1	.0
Oct	70.0	39.0	54.5	92	1999	5	58.3	1974	13	1989	30	49.3	1984	330	4	.0	@	29.9	.0	9.9	.0
Nov	54.6	27.4	41.0	76	1999	6	45.5	1999	-5	1976	28	34.5	1979	719	0	.0	.0	20.1	.3	25.2	.1
Dec	44.7	19.2	32.0	65+	1973	1	36.9	1977	-20	1961	12	22.6	1990	1025	0	.0	.0	8.2	2.6	29.9	1.3
Ann	68.3	37.5	52.9	105+	Jul 1971	13	79.8	Jul 1971	-23	Jan 1971	7	22.6	Dec 1990	5287	907	1.5	54.5	288.4	6.8	168.4	4.1

\+ 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: 1948-2001

(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	.98	.74	.91	1993	8	3.06	1993	.03	1976
Feb	.82	.70	.90	1987	26	2.91	1987	.00	1972
Mar	1.00	.87	.89	2000	31	2.69	1973	.00	1997
Apr	.73	.52	1.33	1952	28	2.48	1985	.00	1989
May	.75	.67	.87+	1949	11	2.51	1992	.00+	1998
Jun	.32	.17	1.10	1988	11	1.56	1988	.00+	1998
Jul	1.01	.72	1.22	1997	30	3.02	1986	.00	1993
Aug	1.30	1.18	1.55	1949	3	3.71	1999	.07	1975
Sep	1.00	.92	1.44	1970	6	2.96	1986	.00	1979
Oct	1.21	.83	1.38	1953	20	5.19	1972	.00+	1999
Nov	.94	.92	1.16	1986	1	3.37	1986	.00+	1989
Dec	.72	.60	.87	1978	18	2.06	1983	.01	1989
Ann	10.78	10.39	1.55	Aug 1949	3	5.19	Oct 1972	.00+	Oct 1999

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	6.2	3.2	.4	.0
Feb	5.8	3.2	.3	.0
Mar	6.8	3.5	.3	.0
Apr	4.9	2.2	.3	.1
May	5.1	2.3	.2	.0
Jun	2.8	1.0	.1	@
Jul	5.9	2.7	.5	.2
Aug	7.3	3.4	.7	.1
Sep	5.9	2.7	.5	.1
Oct	5.5	3.6	.7	.1
Nov	5.4	2.9	.4	@
Dec	5.0	2.3	.2	.0
Ann	66.6	33.0	4.6	.6

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	.07	.14	.27	.40	.55	.73	.93	1.19	1.56	2.17	2.77
Feb	.05	.14	.27	.39	.51	.65	.82	1.01	1.28	1.72	2.15
Mar	.01	.06	.16	.30	.45	.65	.89	1.20	1.65	2.43	3.21
Apr	.03	.08	.19	.29	.41	.54	.70	.89	1.16	1.61	2.05
May	.00	.00	.15	.28	.41	.55	.72	.94	1.22	1.70	2.17
Jun	.00	.00	.00	.00	.06	.14	.24	.37	.57	.91	1.25
Jul	.03	.09	.23	.37	.53	.72	.94	1.23	1.63	2.30	2.97
Aug	.18	.28	.47	.65	.84	1.05	1.29	1.59	1.99	2.64	3.27
Sep	.05	.14	.29	.43	.59	.76	.97	1.23	1.57	2.15	2.72
Oct	.00	.00	.25	.46	.67	.90	1.18	1.52	1.97	2.73	3.47
Nov	.00	.07	.23	.37	.53	.71	.91	1.16	1.51	2.09	2.66
Dec	.03	.07	.15	.24	.35	.49	.65	.87	1.17	1.69	2.21
Ann	6.56	7.33	8.34	9.12	9.83	10.52	11.24	12.06	13.05	14.52	15.82

\+ 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)

Extremes (2)

Mean Number of Days (1)

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	5.0	4.3	1	#	8.0	1974	18	16.5	1979	11	1973	31	7	1973	2.7	2.0	.7	.3	.0	4.6	2.2	1.3	.6
Feb	1.4	.4	#	0	6.0	1987	26	8.0	1989	8	1973	3	5	1973	1.1	.7	.3	.2	.0	1.5	1.2	1.0	.0
Mar	.6	.0	#	0	3.3	1991	16	3.6+	1991	1	1971	1	#+	1998	.5	.3	.1	.0	.0	@	.0	.0	.0
Apr	.1	.0	#	0	2.0	1983	13	2.0	1983	#	1997	25	#	1997	.1	.1	.0	.0	.0	.0	.0	.0	.0
May	#	.0	#	0	#	1995	7	#	1995	#	1995	7	#	1995	.0	.0	.0	.0	.0	.0	.0	.0	.0
Jun	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.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	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Oct	.2	.0	#	0	4.0	1972	31	4.0	1972	4	1972	31	#+	1997	.1	.1	@	.0	.0	@	@	.0	.0
Nov	.7	.0	#	0	4.0	1987	26	4.0	1987	4	1996	30	#+	1996	.5	.3	.1	.0	.0	.2	@	.0	.0
Dec	3.9	1.5	#	0	11.0	1990	17	23.5	1990	7	1971	14	3	1972	1.6	1.3	.4	.2	@	2.6	1.3	.2	.0
Ann	11.9	6.2	N/A	N/A	11.0	Dec 1990	17	23.5	Dec 1990	11	Jan 1973	31	7	Jan 1973	6.6	4.8	1.6	.7	@	8.9	4.7	2.5	.6

+ 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	6/22	6/15	6/10	6/06	6/02	5/29	5/25	5/20	5/14
32	6/11	6/04	5/29	5/25	5/21	5/16	5/12	5/06	4/29
28	5/30	5/22	5/16	5/11	5/07	5/02	4/27	4/21	4/13
24	5/15	5/07	5/02	4/27	4/23	4/18	4/13	4/08	3/31
20	4/29	4/21	4/15	4/09	4/05	3/31	3/26	3/20	3/11
16	4/20	4/10	4/02	3/27	3/21	3/15	3/08	3/01	2/18

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	9/09	9/14	9/17	9/21	9/23	9/26	9/30	10/03	10/08
32	9/14	9/20	9/24	9/27	9/30	10/04	10/07	10/11	10/17
28	9/27	10/03	10/07	10/11	10/14	10/18	10/22	10/26	11/01
24	10/10	10/15	10/19	10/22	10/26	10/29	11/01	11/05	11/10
20	10/22	10/27	10/30	11/02	11/05	11/07	11/10	11/13	11/18
16	11/02	11/06	11/10	11/13	11/16	11/19	11/22	11/25	11/30

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	138	129	123	118	112	107	102	95	87
32	164	153	145	138	132	126	119	111	100
28	192	181	173	166	160	153	147	139	128
24	211	202	196	190	185	180	175	169	160
20	241	232	225	219	213	208	202	195	185
16	276	263	254	246	239	232	225	216	203

***** 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	1071	795	663	426	180	23	0	1	54	330	719	1025	5287
60	916	655	508	285	78	3	0	0	13	196	569	870	4093
57	823	571	416	208	40	1	0	0	4	130	480	777	3450
55	761	515	356	163	23	0	0	0	2	95	421	715	3051
50	606	375	218	77	4	0	0	0	0	36	282	560	2158
32	147	32	3	0	0	0	0	0	0	0	14	107	303

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	99	161	363	564	862	1130	1361	1312	1028	698	285	105	7968
55	0	0	4	37	173	440	648	599	340	80	2	0	2323
57	0	0	1	22	127	381	586	537	282	53	1	0	1990
60	0	0	0	9	72	294	493	444	201	26	0	0	1539
65	0	0	0	0	20	164	338	289	92	4	0	0	907
70	0	0	0	0	2	69	191	147	28	0	0	0	437

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	3	35	137	310	588	848	1062	1004	736	409	93	4	3	38	175	485	1073	1921	2983	3987	4723	5132	5225	5229
45	0	6	53	190	433	698	907	849	587	266	27	0	0	6	59	249	682	1380	2287	3136	3723	3989	4016	4016
50	0	0	13	85	282	548	752	694	437	144	5	0	0	0	13	98	380	928	1680	2374	2811	2955	2960	2960
55	0	0	1	27	151	399	597	539	293	54	0	0	0	0	1	28	179	578	1175	1714	2007	2061	2061	2061
60	0	0	0	4	60	254	442	384	163	10	0	0	0	0	0	4	64	318	760	1144	1307	1317	1317	1317
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	17	60	161	277	426	549	660	646	494	315	99	16	17	77	238	515	941	1490	2150	2796	3290	3605	3704	3720

(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