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: ALAMOGORDO, NM **COOP ID: 290199**

Climate Division: NM 8 **NWS Call Sign:** **Elevation: 4,350 Feet** **Lat: 32˚54N** **Lon: 105˚57W**

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	55.4	28.9	42.2	76	1952	25	45.9	1980	-14	1962	11	37.5	1992	709	0	.0	.0	25.4	.4	21.0	.0
Feb	60.6	33.1	46.9	81+	1986	25	52.4	1976	5	1960	25	42.4	1973	507	0	.0	.0	26.0	.2	12.8	.0
Mar	67.5	39.0	53.3	89	1971	27	59.0	1974	12	1965	3	48.4	1973	366	3	.0	.0	30.7	.0	5.3	.0
Apr	75.1	45.5	60.3	97	1965	22	65.7	2000	24	1975	3	53.9	1983	181	40	.0	.7	29.9	@	1.3	.0
May	84.4	54.6	69.5	104	1951	27	76.9	2000	33+	1953	3	66.1	1992	38	177	.2	8.2	31.0	.0	.0	.0
Jun	93.6	63.0	78.3	110+	1981	22	83.5	1990	41	1975	11	74.9	1987	0	399	6.3	24.3	30.0	.0	.0	.0
Jul	93.0	66.4	79.7	110	1951	8	83.2	1980	51	1955	3	75.7	1976	0	455	4.7	23.8	31.0	.0	.0	.0
Aug	90.3	64.4	77.4	106	1951	7	81.4	1994	51	1953	26	74.1	1979	0	383	.6	19.5	31.0	.0	.0	.0
Sep	85.2	58.5	71.9	102+	1948	4	77.3	1998	39	1965	21	67.9	1991	13	218	.1	9.6	30.0	.0	.0	.0
Oct	76.2	47.9	62.1	94+	1951	5	65.1	1987	24	1993	31	57.4	1976	131	39	.0	.6	30.9	.0	.6	.0
Nov	64.1	35.8	50.0	84+	1966	17	54.8	1999	0	1976	29	44.6	2000	453	1	.0	.0	28.4	.1	9.5	@
Dec	55.6	28.6	42.1	75+	1950	14	46.8	1977	-1	1953	24	38.6	1997	710	0	.0	.0	25.2	.3	21.1	.0
Ann	75.1	47.1	61.1	110+	Jun 1981	22	83.5	Jun 1990	-14	Jan 1962	11	37.5	Jan 1992	3108	1715	11.9	86.7	349.5	1.0	71.6	@

+ 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

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	.77	.80	.82	1983	20	1.98	1992	.00+	2000
Feb	.53	.53	.86	1957	17	1.18	1988	.00+	1999
Mar	.46	.26	1.16	1958	6	2.16	1973	.00+	1996
Apr	.31	.07	.83	1977	14	1.15	1977	.00+	1998
May	.62	.48	1.13	1992	24	3.56	1992	.00+	2000
Jun	.98	.72	2.01	1953	17	2.72	1996	.01	1989
Jul	2.18	2.15	1.80	1954	23	6.36	1976	.29	1980
Aug	2.32	2.24	2.51	1959	27	5.73	1972	.29	1983
Sep	1.87	1.55	1.95	1964	13	6.22	1975	.05	2000
Oct	1.40	.79	1.80	1985	11	6.09	1985	.00+	1995
Nov	.77	.53	1.34	1986	2	3.40	1986	.00+	1999
Dec	.99	.73	2.32	1991	18	5.45	1991	.00+	1996
Ann	13.20	12.48	2.51	Aug 1959	27	6.36	Jul 1976	.00+	May 2000

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	4.3	2.4	.3	.0
Feb	3.6	1.9	.1	.0
Mar	2.9	1.2	.2	@
Apr	1.9	.8	.2	.0
May	3.5	1.7	.4	@
Jun	4.2	2.5	.5	.2
Jul	9.2	5.2	1.4	.4
Aug	9.2	5.7	1.3	.5
Sep	6.9	4.6	1.3	.3
Oct	4.6	2.8	.8	.4
Nov	3.2	1.7	.5	.1
Dec	4.3	2.7	.4	.1
Ann	57.8	33.2	7.4	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	.00	.12	.27	.39	.51	.65	.79	.97	1.20	1.58	1.95
Feb	.00	.07	.17	.25	.34	.43	.53	.66	.82	1.10	1.36
Mar	.00	.00	.00	.10	.19	.29	.42	.57	.79	1.15	1.50
Apr	.00	.00	.00	.00	.03	.10	.20	.34	.55	.92	1.31
May	.00	.00	.02	.10	.21	.34	.51	.74	1.06	1.63	2.22
Jun	.09	.15	.28	.42	.57	.74	.94	1.19	1.53	2.11	2.68
Jul	.52	.73	1.04	1.33	1.61	1.91	2.24	2.64	3.16	3.98	4.76
Aug	.48	.69	1.04	1.34	1.66	1.99	2.37	2.82	3.42	4.37	5.28
Sep	.14	.26	.50	.75	1.04	1.37	1.77	2.27	2.96	4.14	5.30
Oct	.00	.00	.14	.33	.56	.85	1.21	1.68	2.35	3.52	4.71
Nov	.00	.01	.08	.18	.30	.45	.65	.91	1.29	1.95	2.63
Dec	.00	.00	.15	.33	.51	.71	.95	1.25	1.66	2.33	2.99
Ann	8.50	9.38	10.52	11.39	12.18	12.95	13.75	14.64	15.73	17.32	18.72

\+ 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:
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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	1.8	1.0	#	0
Feb	.5	.0	#	0
Mar	.2	.0	0	0
Apr	.1	.0	0	0
May	.0	.0	0	0
Jun	.0	.0	0	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	.0	.0	0	0
Oct	.1	.0	#	0
Nov	.4	.0	#	0
Dec	1.4	.0	#	0
Ann	4.5	1.0	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	5.0	1972	4	6.0	1972	4	1996	2	#+	1999
Feb	4.8	1988	5	4.8	1988	1	1989	7	#+	1989
Mar	3.0	1975	29	3.0+	1989	0	0	0	0	0
Apr	2.0	1983	6	3.5	1983	0	0	0	0	0
May	.0	0	0	.0	0	0	0	0	0	0
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	1.5	1991	31	1.5	1991	1	1991	31	#	1991
Nov	6.0	1976	27	6.0	1976	#	1983	27	#	1983
Dec	7.0	1992	5	8.9	1987	5	1974	26	1	1987
Ann	7.0	Dec 1992	5	8.9	Dec 1987	5	Dec 1974	26	1	Dec 1987

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	.7	.6	.3	.1	.0
Feb	.4	.3	@	.0	.0
Mar	.1	.1	.1	.0	.0
Apr	.1	.1	.0	.0	.0
May	.0	.0	.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	.1	@	.0	.0	.0
Nov	.2	.1	@	@	.0
Dec	.6	.5	.2	.1	.0
Ann	2.2	1.7	.6	.2	.0

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	.2	.1	.0	.0
Feb	.1	.0	.0	.0
Mar	.0	.0	.0	.0
Apr	.0	.0	.0	.0
May	.0	.0	.0	.0
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.0	.0	.0	.0
Oct	.1	.0	.0	.0
Nov	.0	.0	.0	.0
Dec	.2	.1	.1	.0
Ann	.6	.2	.1	.0

+ 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	5/01	4/25	4/21	4/17	4/14	4/11	4/07	4/03	3/28
32	4/14	4/08	4/04	4/01	3/29	3/26	3/23	3/19	3/13
28	4/09	3/31	3/25	3/20	3/15	3/10	3/05	2/27	2/19
24	3/19	3/10	3/03	2/25	2/20	2/14	2/09	2/02	1/23
20	3/07	2/25	2/17	2/10	2/04	1/28	1/21	1/11	12/25
16	2/12	1/30	1/21	1/13	1/05	12/28	12/17	11/27	0/00

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	10/12	10/17	10/21	10/23	10/26	10/29	11/01	11/04	11/09
32	10/24	10/29	11/01	11/03	11/06	11/08	11/11	11/14	11/18
28	10/30	11/05	11/08	11/12	11/15	11/17	11/21	11/24	11/30
24	11/14	11/19	11/23	11/26	11/29	12/02	12/05	12/09	12/14
20	11/24	11/30	12/04	12/08	12/12	12/16	12/21	12/27	0/00
16	12/02	12/10	12/16	12/22	12/27	1/02	1/10	0/00	0/00

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	214	208	203	198	194	190	186	181	174
32	241	234	229	225	221	217	213	208	201
28	274	264	256	250	243	237	231	223	213
24	315	303	295	288	281	275	268	259	248
20	>365	343	329	319	311	303	295	286	274
16	>365	>365	>365	>365	>365	344	332	320	306

***** 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	709	507	366	181	38	0	0	0	13	131	453	710	3108
60	554	368	225	92	10	0	0	0	1	50	309	555	2164
57	461	287	154	54	4	0	0	0	0	23	231	462	1676
55	399	236	114	35	2	0	0	0	0	13	185	400	1384
50	252	125	42	9	0	0	0	0	0	2	92	253	775
32	2	0	0	0	0	0	0	0	0	0	0	2	4

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	316	417	660	849	1163	1389	1478	1406	1195	931	538	315	10657
55	0	8	61	193	451	699	765	693	505	231	33	1	3640
57	0	4	38	152	391	639	703	631	445	180	19	0	3202
60	0	0	17	101	304	549	610	538	356	113	8	0	2596
65	0	0	3	40	177	399	455	383	218	39	1	0	1715
70	0	0	0	11	83	255	300	234	108	8	0	0	999

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	151	251	449	648	944	1174	1249	1177	974	702	334	147	151	402	851	1499	2443	3617	4866	6043	7017	7719	8053	8200
45	59	137	303	499	789	1024	1094	1022	824	547	205	61	59	196	499	998	1787	2811	3905	4927	5751	6298	6503	6564
50	12	54	172	355	634	874	939	867	674	396	105	17	12	66	238	593	1227	2101	3040	3907	4581	4977	5082	5099
55	0	17	77	223	481	724	784	712	524	255	33	0	0	17	94	317	798	1522	2306	3018	3542	3797	3830	3830
60	0	0	19	113	327	574	629	557	375	133	4	0	0	0	19	132	459	1033	1662	2219	2594	2727	2731	2731
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	126	188	303	427	612	744	818	782	640	446	234	129	126	314	617	1044	1656	2400	3218	4000	4640	5086	5320	5449

(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