

# Climatology of the United States

## No. 20

National Climatic Data Center  
Federal Building  
151 Patton Avenue  
Asheville, North Carolina 28801  
www.ncdc.noaa.gov

**Station: TRUTH OR CONSEQUENCES, NM**

**1971-2000**

**COOP ID: 299128**

**Climate Division: NM 8**

**NWS Call Sign:**

**Elevation: 4,382 Feet Lat: 33°09N**

**Lon: 107°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	55.9	27.3	41.6	76+	1994	6	46.1	2000	6	1997	8	37.1	1988	726	0	.0	.0	24.5	.2	25.7	.0
Feb	62.6	31.1	46.9	84	1989	25	53.7	1996	5	1956	10	43.4	1985	509	0	.0	.0	26.2	.3	17.5	.0
Mar	68.6	36.7	52.7	91	1989	12	57.9	1972	12	1951	4	47.8	1987	385	2	.0	@	30.6	.0	9.2	.0
Apr	76.2	43.1	59.7	96+	1989	21	65.4	1989	20	1983	6	54.0	1973	192	32	.0	.9	29.9	.0	1.7	.0
May	85.2	52.3	68.8	105	1951	27	76.2	1996	34+	1953	4	64.9	1987	52	167	.4	7.4	31.0	.0	.1	.0
Jun	94.8	61.9	78.4	112	1994	27	83.5	1994	47+	1986	1	75.4	1987	1	402	6.6	23.8	30.0	.0	.0	.0
Jul	94.7	65.7	80.2	108+	1951	8	83.8	1994	55+	1955	1	76.5	1986	0	471	4.4	25.1	31.0	.0	.0	.0
Aug	91.7	63.6	77.7	105	1994	19	82.8	1994	52+	1956	30	74.6	1974	0	392	1.3	20.3	31.0	.0	.0	.0
Sep	86.9	57.2	72.1	102	1995	7	77.3	1998	43	1993	27	68.9	1988	9	220	.2	10.2	30.0	.0	.0	.0
Oct	76.9	45.9	61.4	93+	1951	1	64.2	1988	23	1993	31	56.7	1976	145	32	.0	.9	30.8	.0	.8	.0
Nov	64.6	33.9	49.3	86	1988	3	54.4	1999	14	1956	21	43.5	1976	473	1	.0	.0	26.8	.1	10.7	.0
Dec	55.1	27.4	41.3	77	1955	23	46.3	1977	-4	1987	27	37.0	1987	736	0	.0	.0	23.9	.3	25.3	.1
Ann	76.1	45.5	60.8	112	Jun 1994	27	83.8	Jul 1994	-4	Dec 1987	27	37.0	Dec 1987	3228	1719	12.9	88.6	345.7	.9	91.0	.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/normal/usnormals.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormals.html)

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1951-2001

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

091-A

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**Lon: 107°13W**

Precipitation (inches)																								
	Precipitation Totals									Mean Number of Days (3)				Precipitation Probabilities (1) Probability that the monthly/annual precipitation will be equal to or less than the indicated amount										
	Means/ Medians(1)		Extremes							Daily Precipitation				Monthly/Annual Precipitation vs Probability Levels These values were determined from the incomplete gamma distribution										
Month	Mean	Med-ian	Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year	>= 0.01	>= 0.10	>= 0.50	>= 1.00	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	.49	.42	1.00	1996	31	1.27	1993	.00+	2000	1.5	.8	.1	@	.00	.00	.15	.24	.32	.40	.50	.62	.77	1.02	1.25
Feb	.29	.22	1.32	1988	5	1.68	1988	.00+	1999	2.2	.9	.1	@	.00	.00	.05	.09	.14	.20	.27	.35	.47	.68	.88
Mar	.29	.22	.78	2000	22	1.47	2000	.00+	1996	2.1	.7	.1	.0	.00	.00	.02	.06	.11	.18	.25	.35	.49	.73	.98
Apr	.12	.04	.73	1957	28	.61	1992	.00+	1999	1.6	.5	.1	.0	.00	.00	.00	.00	.00	.03	.07	.13	.21	.34	.48
May	.29	.13	.90	1992	22	3.10	1992	.00+	1998	2.9	1.2	.2	@	.00	.00	.01	.04	.08	.14	.22	.33	.50	.79	1.10
Jun	.75	.45	2.10	1986	24	3.46	1996	.00+	1998	3.9	1.8	.4	.2	.00	.00	.07	.16	.28	.44	.63	.89	1.26	1.92	2.58
Jul	1.95	1.64	2.50	1999	18	5.44	1999	.52	1995	7.5	4.1	.9	.2	.50	.69	.97	1.22	1.47	1.72	2.01	2.35	2.80	3.50	4.16
Aug	1.99	2.02	2.00	1996	25	4.04	1993	.59	1998	7.7	4.6	1.2	.3	.72	.90	1.17	1.40	1.61	1.84	2.08	2.35	2.71	3.26	3.76
Sep	1.63	1.51	2.54	1997	21	4.69	1990	.02	1998	6.1	3.6	.9	.3	.15	.27	.49	.71	.96	1.24	1.57	1.99	2.56	3.51	4.44
Oct	1.36	1.05	2.49	1985	17	4.14	2000	.00+	1995	5.2	2.9	.8	.3	.00	.09	.30	.51	.74	.99	1.30	1.68	2.20	3.08	3.95
Nov	.60	.35	2.10	1994	12	3.00	1986	.00+	1999	3.4	1.7	.3	.1	.00	.00	.07	.15	.25	.37	.52	.72	1.00	1.49	1.98
Dec	.87	.48	1.53	1994	6	5.29	1991	.00+	1996	3.8	2.0	.6	@	.00	.00	.10	.22	.36	.54	.76	1.05	1.46	2.18	2.90
Ann	10.63	10.63	2.54	Sep 1997	21	5.44	Jul 1999	.00+	Jan 2000	47.9	24.8	5.7	1.4	5.83	6.67	7.79	8.67	9.48	10.28	11.12	12.07	13.25	15.00	16.56

+ 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: 1951-2001

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

Complete documentation available from:  
www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

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**Climate Division: NM 8**

**NWS Call Sign:**

**Elevation: 4,382 Feet**

**Lat: 33°09N**

**Lon: 107°13W**

Snow (inches)																							
Snow Totals															Mean Number of Days (1)								
Means/Medians (1)					Extremes (2)										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	1.6	.0	#	0	6.0	1985	13	10.3	1985	3+	1997	14	#+	1997	.7	.4	.2	.1	.0	.1	.1	.0	.0
Feb	.2	.0	#	0	1.0	1988	19	1.5	1988	1	1989	7	#+	1997	.3	.1	.0	.0	.0	.1	.0	.0	.0
Mar	.2	.0	#	0	2.3	1987	29	2.3	1987	2	1987	29	#	1987	.1	.1	.0	.0	.0	.1	.0	.0	.0
Apr	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
May	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.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	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.1	.0	#	0	2.3	1990	7	2.3	1990	2	1990	7	#	1990	.1	.1	.0	.0	.0	.1	.0	.0	.0
Dec	2.9	.0	#	0	8.0	1987	25	17.9	1987	10	1987	14	2	1987	.6	.6	.4	.2	.0	.6	.4	.1	.0
Ann	5.0	.0	N/A	N/A	8.0	Dec 1987	25	17.9	Dec 1987	10	Dec 1987	14	2	Dec 1987	1.8	1.3	.6	.3	.0	1.0	.5	.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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**Lat: 33° 09N**

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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	5/06	4/30	4/26	4/22	4/19	4/16	4/12	4/08	4/02
32	4/24	4/18	4/13	4/09	4/06	4/02	3/29	3/24	3/18
28	4/15	4/07	3/31	3/26	3/21	3/16	3/11	3/05	2/24
24	3/30	3/20	3/13	3/07	3/02	2/24	2/19	2/12	2/02
20	3/17	3/05	2/24	2/16	2/09	2/02	1/25	1/16	1/01
16	2/16	2/05	1/28	1/20	1/13	1/05	12/26	12/08	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	10/11	10/16	10/19	10/22	10/25	10/27	10/30	11/03	11/07
32	10/21	10/25	10/28	10/31	11/03	11/05	11/08	11/11	11/16
28	10/31	11/04	11/08	11/11	11/13	11/16	11/19	11/22	11/27
24	11/12	11/17	11/21	11/23	11/26	11/29	12/02	12/05	12/10
20	11/24	11/30	12/03	12/06	12/09	12/12	12/16	12/20	12/26
16	12/02	12/09	12/15	12/21	12/26	1/01	1/09	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	210	202	197	192	188	184	179	174	167
32	234	226	220	215	210	206	200	195	186
28	264	254	247	242	236	231	225	218	209
24	301	290	282	275	269	262	255	247	237
20	355	332	320	311	302	294	286	276	262
16	>365	>365	>365	>365	352	339	329	320	308

\* 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

Complete documentation available from:  
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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	726	509	385	192	52	1	0	0	9	145	473	736	3228
60	571	369	241	97	16	0	0	0	0	58	330	581	2263
57	478	288	166	56	7	0	0	0	0	29	252	488	1764
55	417	236	124	36	3	0	0	0	0	17	204	427	1464
50	270	125	47	9	0	0	0	0	0	3	108	281	843
32	6	0	0	0	0	0	0	0	0	0	0	7	13

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	302	415	640	830	1138	1391	1494	1415	1201	911	518	294	10549
55	0	8	51	176	429	701	781	702	511	215	32	1	3607
57	0	3	31	136	370	641	719	640	451	165	20	0	3176
60	0	0	13	87	286	551	626	547	362	101	8	0	2581
65	0	0	2	32	167	402	471	392	220	32	1	0	1719
70	0	0	0	8	80	258	316	242	105	5	0	0	1014

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	109	216	399	608	872	1153	1240	1166	949	664	271	100	109	325	724	1332	2204	3357	4597	5763	6712	7376	7647	7747
45	35	109	251	459	717	1003	1085	1011	799	509	155	35	35	144	395	854	1571	2574	3659	4670	5469	5978	6133	6168
50	3	37	134	322	562	853	930	856	649	361	67	2	3	40	174	496	1058	1911	2841	3697	4346	4707	4774	4776
55	0	7	51	189	407	703	775	701	499	220	19	0	0	7	58	247	654	1357	2132	2833	3332	3552	3571	3571
60	0	0	12	91	260	553	620	546	349	105	1	0	0	0	12	103	363	916	1536	2082	2431	2536	2537	2537
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	120	192	301	416	563	720	803	768	613	430	193	110	120	312	613	1029	1592	2312	3115	3883	4496	4926	5119	5229

(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:  
[www.ncdc.noaa.gov/oa/climate/normals/usnormals.html](http://www.ncdc.noaa.gov/oa/climate/normals/usnormals.html)

## 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.  
Complete documentation for the 1971-2000 Normals is available on the internet from:  
[www.ncdc.noaa.gov/oa/climate/normal/usnormals.html](http://www.ncdc.noaa.gov/oa/climate/normal/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 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.

- |   |   |
|---|---|
| <ol style="list-style-type: none"><li>a. Temperature/ Precipitation Tables<ol style="list-style-type: none"><li>1. 1971-2000 Monthly Normals</li><li>2. Cooperative Summary of the Day</li><li>3. National Weather Service station records</li><li>4. 1971-2000 serially complete daily data</li></ol></li><li>b. Degree Day Table<ol style="list-style-type: none"><li>1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals</li><li>2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data</li></ol></li></ol> | <ol style="list-style-type: none"><li>c. Snow Tables<ol style="list-style-type: none"><li>1. Snow Climatology</li><li>2. Cooperative Summary of the Day</li></ol></li><li>d. Freeze Data Table<br/>1971-2000 serially complete daily data</li></ol> |
|---|---|

## References

U.S. Climate Normals 1971-2000, [www.ncdc.noaa.gov/normal.html](http://www.ncdc.noaa.gov/normal.html)  
U.S. Climate Normals 1971-2000-Products Clim20, [www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html)  
Snow Climatology Project Description, [www.ncdc.noaa.gov/oa/climate/monitoring/snowclim/mainpage.html](http://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](http://www1.ncdc.noaa.gov/pub/data/special/serialcomplete_jam_0900.pdf)