

# Climatography of the United States No. 20

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

Station: REDROCK 1 NNE, NM

1971-2000

COOP ID: 297340

Climate Division: NM 8

NWS Call Sign:

Elevation: 4,050 Feet Lat: 32°42N

Lon: 108°44W

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	58.1	25.3	41.7	79	1971	18	45.1	1993	0	1962	11	39.0	1973	722	0	.0	.0	27.3	.1	25.8	.0
Feb	62.9	28.4	45.7	82	1986	26	50.5	1996	5	1964	15	40.9	1974	542	0	.0	.0	26.5	.3	20.4	.0
Mar	69.0	32.1	50.6	89+	1989	10	55.6	1972	11	1965	4	46.2	1977	448	0	.0	.0	30.7	.0	16.5	.0
Apr	76.9	36.7	56.8	95+	1965	21	61.4	1981	20	1999	5	51.4	1983	257	11	.0	.8	30.0	.0	8.4	.0
May	85.0	44.3	64.7	102+	1958	27	69.1	1984	24+	1967	1	60.8	1971	77	67	.2	7.7	31.0	.0	1.0	.0
Jun	94.4	53.2	73.8	109+	1980	28	77.7+	1994	34	1971	4	69.7	1991	8	273	6.6	24.3	30.0	.0	.0	.0
Jul	94.5	62.6	78.6	108+	1958	11	82.6	1980	44	1983	3	76.0	1986	0	420	6.3	25.6	31.0	.0	.0	.0
Aug	91.5	62.2	76.9	105	1972	1	79.3	1995	45	1968	24	72.7	1990	0	367	.9	22.1	31.0	.0	.0	.0
Sep	87.3	55.0	71.2	102	1982	2	75.8	1997	31	1965	30	67.8	1986	12	196	.3	12.1	30.0	.0	.0	.0
Oct	77.3	42.5	59.9	96	1979	3	65.2	1987	20+	1970	27	56.2	1976	181	24	.0	1.4	30.9	.0	3.4	.0
Nov	65.9	30.2	48.1	86	1980	9	52.4	1999	11+	1959	28	43.7	1992	507	0	.0	.0	29.0	.0	19.1	.0
Dec	58.0	24.9	41.5	76	1987	4	45.4	1980	-3	1978	8	37.1	1974	730	0	.0	.0	27.2	.1	26.1	.1
Ann	76.7	41.5	59.1	109+	Jun 1980	28	82.6	Jul 1980	-3	Dec 1978	8	37.1	Dec 1974	3484	1358	14.3	94.0	354.6	.5	120.7	.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: 1948-2001

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

077-A

# 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: REDROCK 1 NNE, NM**

**COOP ID: 297340**

**Climate Division: NM 8**

**NWS Call Sign:**

**Elevation: 4,050 Feet Lat: 32°42N**

**Lon: 108°44W**

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	.98	.77	1.40	1993	8	4.56	1993	.01	1996	5.6	2.7	.5	.1	.05	.10	.21	.34	.49	.67	.89	1.18	1.59	2.28	2.98
Feb	.89	.86	1.25	1980	14	2.55	1980	.00+	1999	5.2	2.5	.5	.1	.00	.00	.20	.35	.51	.68	.88	1.13	1.45	2.01	2.54
Mar	.72	.55	.75	1998	15	1.80	1986	.00+	1996	4.5	2.3	.3	.0	.00	.00	.20	.32	.45	.58	.73	.91	1.15	1.55	1.92
Apr	.24	.12	.90	1992	2	1.96	1988	.00+	2000	1.9	.7	.1	.0	.00	.00	.00	.02	.07	.13	.20	.29	.42	.64	.87
May	.45	.18	.99	1972	30	3.53	1992	.00+	2000	2.6	1.3	.2	.0	.00	.00	.00	.02	.08	.18	.31	.49	.77	1.27	1.80
Jun	.50	.28	2.02	2000	29	3.29	2000	.00+	1993	3.5	1.6	.1	@	.00	.00	.07	.15	.23	.33	.46	.61	.83	1.21	1.58
Jul	2.40	2.35	2.15	1979	18	4.56	1999	.46	1995	10.6	5.4	1.3	.4	.62	.85	1.19	1.50	1.81	2.12	2.48	2.90	3.45	4.32	5.13
Aug	2.63	2.43	2.80	1977	13	5.88	1977	.28	1975	10.2	5.6	1.6	.5	.61	.85	1.23	1.58	1.92	2.29	2.70	3.19	3.83	4.85	5.80
Sep	1.67	1.46	4.00	1980	10	5.13	1980	.00	2000	6.1	3.7	.8	.2	.08	.23	.48	.72	.98	1.28	1.62	2.05	2.64	3.61	4.56
Oct	1.46	1.12	1.94	1972	19	5.60	1972	.00+	1995	5.3	3.3	.9	.2	.00	.04	.20	.40	.64	.93	1.28	1.75	2.41	3.56	4.72
Nov	.80	.61	1.27	1994	12	2.79	1994	.00+	1999	3.6	2.1	.4	.1	.00	.06	.19	.32	.45	.60	.77	.99	1.29	1.79	2.28
Dec	1.16	.58	1.24	1948	27	4.47	1991	.00+	1999	4.7	2.8	.6	.2	.00	.00	.10	.25	.44	.67	.97	1.38	1.95	2.97	4.01
Ann	13.90	14.46	4.00	Sep 1980	10	5.88	Aug 1977	.00+	Sep 2000	63.8	34.0	7.3	1.8	8.14	9.17	10.54	11.60	12.57	13.53	14.53	15.65	17.03	19.09	20.89

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

# 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](http://www.ncdc.noaa.gov)

Station: REDROCK 1 NNE, NM

COOP ID: 297340

Climate Division: NM 8

NWS Call Sign:

Elevation: 4,050 Feet

Lat: 32° 42N

Lon: 108° 44W

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	.9	.0	#	0	6.0	1978	20	6.5	1978	3	1978	20	#+	1997	.6	.5	.1	@	.0	.2	@	.0	.0
Feb	.6	.0	#	0	4.0	1985	4	6.5	1985	2	1985	3	#+	1990	.5	.3	@	.0	.0	@	.0	.0	.0
Mar	.3	.0	#	0	2.5	1976	4	4.3	1975	1+	1987	29	#+	1987	.2	.1	.0	.0	.0	.1	.0	.0	.0
Apr	.0	.0	0	0	1.0	1976	16	1.0	1976	0	0	0	0	0	@	@	.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	.0	.0	0	0	1.0	1996	26	1.0	1996	0	0	0	0	0	@	@	.0	.0	.0	.0	.0	.0	.0
Nov	.2	.0	#	0	2.0	1973	27	2.0	1973	1	1991	30	#+	1996	.1	.1	.0	.0	.0	@	.0	.0	.0
Dec	1.1	.0	#	0	6.0	1990	21	8.0	1990	5	1985	12	1	1990	.5	.4	.1	.1	.0	.7	.2	@	.0
Ann	3.1	.0	N/A	N/A	6.0+	Dec 1990	21	8.0	Dec 1990	5	Dec 1985	12	1	Dec 1990	1.9	1.4	.2	.1	.0	1.0	.2	@	.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

Complete documentation available from:

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

**Climatography  
of the United States  
No. 20  
1971-2000**

**Station: REDROCK 1 NNE, NM**

**COOP ID: 297340**

**Climate Division: NM 8**

**NWS Call Sign:**

**Elevation: 4,050 Feet**

**Lat: 32° 42N**

**Lon: 108° 44W**

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	5/30	5/24	5/20	5/17	5/13	5/10	5/06	5/02	4/26
32	5/20	5/13	5/07	5/03	4/29	4/25	4/20	4/15	4/08
28	5/05	4/28	4/23	4/18	4/14	4/10	4/06	3/31	3/24
24	4/16	4/08	4/03	3/29	3/24	3/20	3/15	3/10	3/02
20	3/24	3/14	3/07	3/01	2/24	2/18	2/12	2/05	1/27
16	3/02	2/20	2/12	2/05	1/30	1/23	1/16	1/08	12/26
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	10/07	10/11	10/14	10/16	10/18	10/21	10/23	10/26	10/30
32	10/10	10/15	10/18	10/21	10/24	10/26	10/29	11/02	11/06
28	10/17	10/22	10/26	10/30	11/02	11/05	11/09	11/13	11/18
24	10/28	11/02	11/06	11/09	11/12	11/15	11/18	11/22	11/27
20	11/13	11/17	11/21	11/24	11/27	11/29	12/02	12/06	12/11
16	11/18	11/26	12/02	12/08	12/12	12/17	12/23	12/29	1/08
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	176	170	165	161	157	154	150	145	139
32	200	192	187	182	177	173	168	162	154
28	227	218	212	206	201	196	190	184	175
24	261	251	244	238	232	226	220	213	203
20	306	296	288	281	275	269	262	255	244
16	>365	344	332	322	314	306	298	289	276

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

**Climatography  
of the United States  
No. 20  
1971-2000**

**Station: REDROCK 1 NNE, NM**

**COOP ID: 297340**

**Climate Division: NM 8**

**NWS Call Sign:**

**Elevation: 4,050 Feet    Lat: 32°42N    Lon: 108°44W**

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	722	542	448	257	77	8	0	0	12	181	507	730	3484
60	567	402	296	140	21	0	0	0	1	80	358	575	2440
57	474	319	211	88	7	0	0	0	0	42	272	482	1895
55	412	265	159	60	3	0	0	0	0	25	218	420	1562
50	258	142	63	17	0	0	0	0	0	4	106	269	859
32	0	0	0	0	0	0	0	0	0	0	0	1	1

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	301	382	575	744	1013	1255	1443	1390	1174	865	483	294	9919
55	0	3	21	114	303	565	730	677	484	177	11	0	3085
57	0	0	11	81	244	505	668	615	424	132	5	0	2685
60	0	0	3	43	166	415	575	522	335	78	1	0	2138
65	0	0	0	11	67	273	420	367	196	24	0	0	1358
70	0	0	0	1	17	151	266	214	87	4	0	0	740

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	106	191	343	515	777	1026	1207	1152	946	633	262	102	106	297	640	1155	1932	2958	4165	5317	6263	6896	7158	7260
45	32	89	201	369	622	876	1052	997	796	478	141	30	32	121	322	691	1313	2189	3241	4238	5034	5512	5653	5683
50	0	25	88	231	467	726	897	842	646	328	55	0	0	25	113	344	811	1537	2434	3276	3922	4250	4305	4305
55	0	1	24	114	315	576	742	687	496	192	11	0	0	1	25	139	454	1030	1772	2459	2955	3147	3158	3158
60	0	0	1	37	170	426	587	532	346	88	0	0	0	0	1	38	208	634	1221	1753	2099	2187	2187	2187
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	147	206	306	415	539	617	761	754	610	440	251	148	147	353	659	1074	1613	2230	2991	3745	4355	4795	5046	5194

(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)