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: RED RIVER, NM **COOP ID: 297323**

Climate Division: NM 2 **NWS Call Sign:** **Elevation: 8,676 Feet** **Lat: 36˚42N** **Lon: 105˚24W**

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	36.1	6.4	21.3	58	1971	31	27.9	1999	-40	1963	13	15.9	1979	1356	0	.0	.0	1.8	8.1	30.9	9.2
Feb	39.4	10.5	25.0	61+	1986	25	32.0	1995	-35	1948	12	20.7	1975	1122	0	.0	.0	3.6	4.8	28.1	5.4
Mar	45.0	17.4	31.2	66	1986	29	36.1	1972	-23	1962	14	26.8	1987	1047	0	.0	.0	10.8	1.5	30.1	1.6
Apr	52.8	22.8	37.8	76	1986	28	42.6	2000	-11	1973	8	30.1	1973	816	0	.0	.0	21.6	.5	28.1	.4
May	62.0	30.0	46.0	83	2000	29	52.2	1996	2	1970	2	42.8	1983	588	0	.0	.0	29.1	.0	22.2	.0
Jun	72.3	36.5	54.4	88+	1981	22	57.9	1994	18+	1951	2	50.8	1983	319	0	.0	.0	30.0	.0	6.4	.0
Jul	75.4	41.7	58.6	92	1963	30	60.8	1980	29	1968	1	56.2	1975	201	0	.0	@	31.0	.0	.2	.0
Aug	73.0	41.1	57.1	85	1951	31	59.5	1995	26	1992	27	53.5	1974	248	0	.0	.0	31.0	.0	.9	.0
Sep	67.6	34.8	51.2	83+	1960	4	54.6	1997	18+	1952	14	48.9	1985	414	0	.0	.0	29.7	.0	10.7	.0
Oct	57.4	25.6	41.5	80	1981	11	44.2	1987	-2	1996	22	38.2	1984	728	0	.0	.0	26.0	.2	26.4	@
Nov	43.7	15.5	29.6	67	1989	20	35.8	1999	-23	1976	28	22.7	1979	1062	0	.0	.0	9.9	3.3	29.0	2.6
Dec	37.1	8.3	22.7	60	1980	27	30.8	1980	-34	1961	12	17.2	1974	1312	0	.0	.0	2.1	7.8	30.8	8.2
Ann	55.2	24.2	39.7	92	Jul 1963	30	60.8	Jul 1980	-40	Jan 1963	13	15.9	Jan 1979	9213	0	.0	@	226.6	26.2	243.8	27.4

\+ 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	1.10	.94	1.40	1949	2	2.45	1979	.26	1998
Feb	1.20	1.16	1.23	1987	26	3.02	1993	.16	1974
Mar	2.08	2.09	2.01	1985	12	3.69	1973	.35	1997
Apr	1.88	1.61	2.28	1999	30	5.11	1999	.27	1972
May	2.00	2.08	2.66	1955	18	5.13	1995	.03	1996
Jun	1.52	1.42	2.58	1974	8	4.27	1986	.00	1980
Jul	2.74	2.57	1.58	1961	7	6.00	1998	.51	1987
Aug	3.06	2.90	1.77	1966	2	6.33	1993	1.08	1973
Sep	1.79	1.54	1.37	1988	13	3.71	1986	.48	1992
Oct	1.87	1.39	1.79	1980	15	4.73	1998	.05	1995
Nov	1.72	1.63	1.70	1975	29	4.25	1994	.06	1989
Dec	1.18	.85	1.38	1984	28	3.40	1978	.17	1999
Ann	22.14	22.24	2.66	May 1955	18	6.33	Aug 1993	.00	Jun 1980

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	7.7	3.9	.2	@
Feb	7.7	3.6	.5	.1
Mar	11.2	6.2	1.0	.1
Apr	10.0	5.5	.9	.1
May	10.9	5.4	.9	.2
Jun	9.8	4.4	.5	.1
Jul	15.8	8.1	1.5	.2
Aug	17.0	9.1	1.7	.2
Sep	9.7	5.5	.8	.1
Oct	7.7	4.6	1.2	.2
Nov	8.3	4.4	1.0	.2
Dec	7.5	3.4	.5	.1
Ann	123.3	64.1	10.7	1.6

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	.29	.39	.55	.69	.83	.97	1.13	1.32	1.57	1.96	2.32
Feb	.23	.33	.51	.67	.84	1.02	1.22	1.47	1.79	2.31	2.81
Mar	.55	.74	1.05	1.31	1.57	1.85	2.15	2.51	2.98	3.72	4.42
Apr	.40	.57	.85	1.10	1.35	1.61	1.92	2.28	2.76	3.52	4.24
May	.23	.39	.67	.95	1.25	1.58	1.96	2.45	3.10	4.17	5.22
Jun	.31	.53	.78	.99	1.18	1.38	1.60	1.86	2.19	2.71	3.20
Jul	.93	1.19	1.57	1.89	2.19	2.51	2.86	3.26	3.78	4.58	5.33
Aug	1.25	1.53	1.92	2.25	2.56	2.87	3.20	3.59	4.08	4.82	5.50
Sep	.53	.70	.95	1.17	1.39	1.61	1.86	2.15	2.53	3.12	3.67
Oct	.26	.41	.68	.94	1.21	1.51	1.86	2.29	2.86	3.80	4.70
Nov	.27	.42	.67	.90	1.15	1.42	1.72	2.10	2.60	3.42	4.20
Dec	.16	.26	.43	.59	.76	.95	1.17	1.44	1.80	2.39	2.96
Ann	16.64	17.73	19.10	20.14	21.06	21.94	22.84	23.84	25.04	26.77	28.26

\+ 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	19.9	16.4	10	12
Feb	21.8	19.5	11	6
Mar	36.2	34.0	9	4
Apr	25.2	20.9	3	1
May	8.6	5.0	#	#
Jun	.1	.0	0	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	.9	.0	#	0
Oct	9.7	8.5	#	#
Nov	23.3	23.5	3	2
Dec	18.9	15.8	7	6
Ann	164.6	143.6	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	20.0	1985	9	46.5	1975	47	1979	31	28	1973
Feb	25.0	1987	26	56.0	1989	64	1989	8	41	1979
Mar	36.0	1985	12	73.1	1973	56	1975	11	35	1975
Apr	18.0	1974	4	66.0	1994	50	1973	8	27	1973
May	15.0	1978	5	45.0	1978	15+	1999	1	2	1978
Jun	2.0	1974	8	2.0+	1975	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	12.0	1971	17	20.0	1971	4	1971	17	#+	1986
Oct	20.0	1980	15	32.0	1980	17	1996	27	3	1996
Nov	34.0	1975	29	63.0	1975	49	1975	30	8	1975
Dec	20.0	1978	6	49.8	1978	44	1975	1	21	1978
Ann	36.0	Mar 1985	12	73.1	Mar 1973	64	Feb 1989	8	41	Feb 1979

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	6.9	5.2	2.7	1.3	.2
Feb	7.3	5.5	2.6	1.6	.5
Mar	9.9	8.1	4.3	2.7	.9
Apr	7.0	5.6	3.4	1.8	.6
May	2.4	2.1	1.1	.7	.2
Jun	.1	.1	.0	.0	.0
Jul	.0	.0	.0	.0	.0
Aug	.0	.0	.0	.0	.0
Sep	.2	.2	.1	.1	@
Oct	3.0	2.5	1.5	.8	.2
Nov	6.5	5.1	2.5	1.5	.6
Dec	6.8	5.0	2.4	1.4	.4
Ann	50.1	39.4	20.6	11.9	3.6

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	24.3	22.3	20.1	14.3
Feb	20.8	17.5	14.9	10.2
Mar	17.7	14.5	12.6	9.0
Apr	6.9	5.6	4.7	3.4
May	1.2	.8	.4	.2
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.1	.1	.0	.0
Oct	2.8	1.7	.9	.2
Nov	12.7	8.8	5.8	2.6
Dec	20.5	16.5	14.6	9.1
Ann	107.0	87.8	74.0	49.0

+ 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	7/31	7/24	7/19	7/16	7/12	7/08	7/04	6/29	6/23
32	7/08	7/03	6/29	6/26	6/23	6/20	6/16	6/13	6/07
28	6/19	6/15	6/11	6/09	6/06	6/03	6/01	5/28	5/24
24	5/31	5/26	5/22	5/19	5/16	5/13	5/10	5/06	5/01
20	5/16	5/13	5/10	5/07	5/05	5/03	5/01	4/28	4/24
16	5/05	4/30	4/26	4/22	4/19	4/16	4/12	4/08	4/03

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	7/31	8/05	8/09	8/13	8/16	8/19	8/23	8/27	9/01
32	8/16	8/22	8/27	8/31	9/03	9/07	9/11	9/15	9/22
28	9/04	9/09	9/12	9/15	9/18	9/20	9/23	9/26	10/01
24	9/18	9/23	9/26	9/29	10/01	10/04	10/07	10/10	10/14
20	9/30	10/05	10/08	10/11	10/14	10/17	10/19	10/23	10/27
16	10/10	10/14	10/17	10/20	10/23	10/25	10/28	10/31	11/04

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	64	54	47	40	34	28	22	15	5
32	96	88	82	77	72	67	62	56	47
28	123	116	111	107	103	99	94	89	83
24	159	152	146	142	138	133	129	124	116
20	178	172	168	164	161	158	154	150	144
16	207	200	195	190	186	181	177	172	164

***** 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	1356	1122	1047	816	588	319	201	248	414	728	1062	1312	9213
60	1201	982	892	666	433	177	63	107	266	573	912	1157	7429
57	1108	898	799	576	342	107	17	50	182	480	822	1064	6445
55	1046	842	737	516	284	71	5	25	133	418	762	1002	5841
50	891	702	582	371	156	18	0	2	42	265	612	847	4488
32	344	217	109	32	1	0	0	0	0	5	146	302	1156

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	11	19	85	207	436	671	822	776	576	301	74	13	3991
55	0	0	0	0	6	52	114	88	18	0	0	0	278
57	0	0	0	0	2	29	64	51	8	0	0	0	154
60	0	0	0	0	0	8	17	15	2	0	0	0	42
65	0	0	0	0	0	0	0	0	0	0	0	0	0
70	0	0	0	0	0	0	0	0	0	0	0	0	0

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	0	0	10	62	221	453	595	548	358	118	6	0	0	0	10	72	293	746	1341	1889	2247	2365	2371	2371
45	0	0	0	10	98	304	440	393	214	32	0	0	0	0	0	10	108	412	852	1245	1459	1491	1491	1491
50	0	0	0	0	27	164	285	238	87	4	0	0	0	0	0	0	27	191	476	714	801	805	805	805
55	0	0	0	0	2	54	134	91	14	0	0	0	0	0	0	0	2	56	190	281	295	295	295	295
60	0	0	0	0	0	8	25	6	0	0	0	0	0	0	0	0	0	8	33	39	39	39	39	39
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	1	28	96	217	358	413	379	286	152	27	0	0	1	29	125	342	700	1113	1492	1778	1930	1957	1957

(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

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