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: WHITE SANDS NATL MON, NM **COOP ID: 299686**

Climate Division: NM 8 **NWS Call Sign:** **Elevation: 3,995 Feet** **Lat: 32˚47N** **Lon: 106˚11W**

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	56.4	21.7	39.1	78	1999	25	43.0	1980	-25	1962	11	35.9	1976	804	0	.0	.0	25.7	.2	27.1	.1
Feb	62.2	25.2	43.7	85	1957	12	49.5	1996	-14	1951	2	38.6	1974	596	0	.0	.0	26.4	.3	21.6	.0
Mar	69.8	30.9	50.4	89+	1971	26	54.3	1972	0	1971	3	45.5	1977	454	0	.0	.0	30.8	.0	16.8	@
Apr	77.7	38.3	58.0	97	1965	22	62.2+	1989	16	1974	5	52.9	1983	229	18	.0	1.7	29.9	.0	8.4	.0
May	86.9	48.3	67.6	104+	1951	27	73.8	2000	20	1967	2	63.3	1983	49	128	.6	12.8	31.0	.0	.6	.0
Jun	95.8	57.9	76.9	111+	1981	22	82.3	1994	36	1988	1	72.9	1983	2	356	10.0	26.6	30.0	.0	.0	.0
Jul	96.1	63.4	79.8	110+	1951	8	82.6	1994	48	1956	5	76.9	1975	0	458	10.2	27.9	31.0	.0	.0	.0
Aug	93.4	61.1	77.3	106+	1959	1	81.6	1994	45	1956	21	73.8	1990	0	379	3.2	25.3	31.0	.0	.0	.0
Sep	87.9	53.9	70.9	103	1983	4	76.4	1998	34	1975	24	68.0	1979	13	190	.6	13.5	30.0	.0	.0	.0
Oct	78.1	40.6	59.4	97+	2000	4	62.8	1987	13+	1970	28	54.4	1976	195	20	.0	2.0	30.8	.0	5.3	.0
Nov	64.6	27.4	46.0	85	1952	1	50.3	1998	-12	1976	29	39.7	1979	570	0	.0	.0	28.7	.1	21.3	.1
Dec	55.7	20.9	38.3	77	1958	4	42.5	1977	-8	1953	24	34.3	1987	828	0	.0	.0	25.3	.3	27.3	.3
Ann	77.1	40.8	59.0	111+	Jun 1981	22	82.6	Jul 1994	-25	Jan 1962	11	34.3	Dec 1987	3740	1549	24.6	109.8	350.6	.9	128.4	.5

\+ 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

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: WHITE SANDS NATL MON, NM **COOP ID: 299686**

Climate Division: NM 8 **NWS Call Sign:** **Elevation: 3,995 Feet** **Lat: 32°47N** **Lon: 106°11W**

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	.59	.51	.77	1980	22	1.90	1992	.00	2000
Feb	.37	.32	1.21	1988	5	1.61	1973	.00+	1999
Mar	.27	.20	1.55	1958	6	1.06	1973	.00+	1996
Apr	.28	.10	.67	1993	30	1.16	1983	.00+	1995
May	.48	.42	.82	1992	30	3.25	1992	.00+	2000
Jun	.97	.81	1.64	1984	2	4.73	2000	.00	1989
Jul	1.34	1.40	1.61	1957	25	2.62	1992	.08	1978
Aug	2.11	1.75	2.25	1988	8	9.78	1988	.42	1975
Sep	1.40	1.21	2.20	2001	14	4.68	1980	.00	1993
Oct	1.08	.58	1.77	1985	17	4.13	1985	.00+	1995
Nov	.60	.42	1.31	1986	3	3.02	1986	.00+	1999
Dec	.84	.56	1.25+	1960	9	3.88	1991	.00+	1996
Ann	10.33	10.03	2.25	Aug 1988	8	9.78	Aug 1988	.00+	May 2000

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	3.8	1.9	.1	.0
Feb	2.7	1.2	.1	@
Mar	2.2	.9	.2	.0
Apr	1.5	.9	.1	.0
May	2.7	1.5	.2	.0
Jun	3.4	1.9	.5	.2
Jul	7.0	3.8	.7	.1
Aug	7.7	4.8	1.3	.5
Sep	5.5	3.3	.9	.3
Oct	4.3	2.6	.5	.2
Nov	2.9	1.7	.3	.2
Dec	3.6	2.1	.6	.1
Ann	47.3	26.6	5.5	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	.02	.07	.15	.24	.33	.44	.56	.72	.94	1.30	1.66
Feb	.00	.00	.03	.10	.17	.25	.35	.47	.64	.91	1.20
Mar	.00	.00	.00	.07	.13	.19	.26	.35	.47	.67	.85
Apr	.00	.00	.00	.00	.04	.10	.19	.32	.50	.82	1.16
May	.00	.00	.00	.10	.20	.32	.45	.61	.84	1.22	1.59
Jun	.00	.03	.11	.22	.36	.55	.79	1.12	1.61	2.49	3.39
Jul	.24	.36	.56	.74	.93	1.13	1.36	1.64	2.01	2.60	3.17
Aug	.38	.57	.87	1.16	1.45	1.77	2.13	2.57	3.15	4.09	4.99
Sep	.02	.08	.24	.42	.64	.91	1.24	1.67	2.29	3.35	4.42
Oct	.00	.00	.15	.31	.50	.72	.98	1.33	1.81	2.63	3.44
Nov	.00	.00	.04	.12	.22	.35	.51	.72	1.02	1.54	2.07
Dec	.00	.00	.13	.26	.41	.58	.78	1.04	1.40	2.02	2.63
Ann	6.05	6.82	7.84	8.64	9.36	10.07	10.82	11.66	12.69	14.23	15.58

+ 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

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Services

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: WHITE SANDS NATL MON, NM **COOP ID: 299686**

Climate Division: NM 8 **NWS Call Sign:** **Elevation: 3,995 Feet** **Lat: 32°47N** **Lon: 106°11W**

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	1.3	.0	#	0	5.5	1985	13	9.0	1985	4	1997	7	#+	1999	.6	.4	.2	@	.0	.3	.1	.0	.0
Feb	.3	.0	#	0	3.0	1988	5	3.0	1988	2+	1989	7	#+	1994	.1	.1	@	.0	.0	.1	.0	.0	.0
Mar	#	.0	0	0	#	1989	4	#+	1989	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.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	.1	.0	#	0	1.1	1991	31	1.1	1991	1+	1993	30	#+	1993	.1	.1	.0	.0	.0	.1	.0	.0	.0
Nov	.3	.0	0	0	4.5	1976	28	7.5	1976	0	0	0	0	0	.1	.1	@	.0	.0	.0	.0	.0	.0
Dec	1.0	.0	#	0	12.0	1987	14	12.0	1987	12	1987	14	1	1987	.4	.3	.2	.1	@	.4	.1	.0	.0
Ann	3.0	.0	N/A	N/A	12.0	Dec 1987	14	12.0	Dec 1987	12	Dec 1987	14	1	Dec 1987	1.3	1.0	.4	.1	@	.9	.2	.0	.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

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: WHITE SANDS NATL MON, NM **COOP ID: 299686**

Climate Division: NM 8 **NWS Call Sign:** **Elevation: 3,995 Feet** **Lat: 32˚47N** **Lon: 106˚11W**

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	5/23	5/19	5/16	5/13	5/10	5/08	5/05	5/02	4/28
32	5/12	5/07	5/03	4/30	4/26	4/23	4/20	4/16	4/11
28	5/01	4/26	4/22	4/19	4/16	4/13	4/10	4/06	4/01
24	4/21	4/15	4/11	4/08	4/04	4/01	3/28	3/24	3/18
20	4/08	4/02	3/28	3/24	3/21	3/17	3/13	3/08	3/02
16	3/26	3/16	3/09	3/02	2/25	2/19	2/12	2/05	1/26

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	9/28	10/02	10/05	10/07	10/10	10/12	10/14	10/17	10/21
32	10/06	10/10	10/13	10/16	10/18	10/21	10/23	10/26	10/30
28	10/11	10/17	10/20	10/24	10/27	10/30	11/02	11/06	11/12
24	10/22	10/27	10/30	11/02	11/05	11/07	11/10	11/13	11/18
20	11/01	11/06	11/09	11/12	11/15	11/18	11/21	11/24	11/29
16	11/10	11/17	11/21	11/25	11/29	12/03	12/07	12/12	12/18

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	168	163	158	155	151	148	144	140	134
32	192	186	181	178	174	171	167	163	157
28	214	207	202	197	193	189	184	179	172
24	235	228	223	218	214	209	205	199	192
20	263	254	249	243	239	234	229	223	215
16	311	299	291	283	277	270	263	254	243

***** 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/normals/usnormals.html

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: WHITE SANDS NATL MON, NM **COOP ID: 299686**

Climate Division: NM 8 **NWS Call Sign:** **Elevation: 3,995 Feet** **Lat: 32˚47N** **Lon: 106˚11W**

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	804	596	454	229	49	2	0	0	13	195	570	828	3740
60	649	456	302	121	12	0	0	0	1	92	423	673	2729
57	556	372	216	73	4	0	0	0	0	52	338	580	2191
55	494	317	165	49	2	0	0	0	0	34	285	518	1864
50	340	188	67	13	0	0	0	0	0	8	169	365	1150
32	6	1	0	0	0	0	0	0	0	0	3	12	22

Base — Cooling Degree Days (1)

Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	224	329	569	779	1103	1345	1481	1402	1167	848	423	207	9877
55	0	1	21	138	391	655	768	689	477	168	15	0	3323
57	0	0	11	103	332	595	706	627	417	125	8	0	2924
60	0	0	3	60	247	505	613	534	328	72	3	0	2365
65	0	0	0	18	128	356	458	379	190	20	0	0	1549
70	0	0	0	3	49	217	303	229	84	3	0	0	888

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	88	177	361	577	882	1128	1250	1172	935	619	237	79	88	265	626	1203	2085	3213	4463	5635	6570	7189	7426	7505
45	29	84	225	429	727	978	1095	1017	785	465	129	26	29	113	338	767	1494	2472	3567	4584	5369	5834	5963	5989
50	4	28	114	292	572	828	940	862	635	321	52	1	4	32	146	438	1010	1838	2778	3640	4275	4596	4648	4649
55	0	2	47	171	417	678	785	707	485	184	14	0	0	2	49	220	637	1315	2100	2807	3292	3476	3490	3490
60	0	0	7	77	268	528	630	552	336	87	1	0	0	0	7	84	352	880	1510	2062	2398	2485	2486	2486
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	137	211	338	443	573	672	776	735	596	454	246	131	137	348	686	1129	1702	2374	3150	3885	4481	4935	5181	5312

(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