

# Climatology of the United States

No. 20

1971-2000

Station: ZUNI, NM

COOP ID: 299897

Climate Division: NM 1

NWS Call Sign: ZUN

Elevation: 6,310 Feet Lat: 35°04N

Lon: 108°50W

## 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	47.4	16.6	32.0	70	1986	29	38.3	1986	-26+	1963	13	27.1	1977	1024	0	.0	.0	11.6	1.4	30.2	1.8
Feb	52.6	20.4	36.5	74	1986	25	42.1	1995	-16	1965	12	31.8	1975	798	0	.0	.0	16.9	.7	27.0	.3
Mar	58.8	24.8	41.8	81	1989	10	48.3	1972	-10	1953	4	35.8	1973	719	0	.0	.0	24.9	@	27.2	@
Apr	67.4	29.6	48.5	86+	1989	19	53.8	1989	3	1975	2	43.6	1983	496	0	.0	.0	28.1	.0	21.0	.0
May	76.3	37.2	56.8	96	2000	29	61.2	2000	9	1975	6	52.7	1975	262	7	.0	.6	30.9	.0	7.3	.0
Jun	86.8	45.5	66.2	102	1990	29	71.2	1974	27+	1993	7	62.6	1998	57	92	.1	8.4	30.0	.0	.4	.0
Jul	90.0	53.3	71.7	105	1989	19	74.6	1972	36+	1992	2	67.4	1987	5	211	.4	13.8	31.0	.0	.0	.0
Aug	87.1	52.8	70.0	99+	1995	3	74.1	1995	35	1981	28	67.2	1987	10	163	.0	7.1	31.0	.0	.0	.0
Sep	81.6	45.6	63.6	96	2000	14	68.0	1997	24	1988	29	59.3	1985	97	56	.0	1.1	30.0	.0	1.0	.0
Oct	70.7	34.4	52.6	93	1980	1	56.5	1979	9	1989	30	46.0	1984	388	2	.0	.1	30.0	@	12.6	.0
Nov	57.1	23.6	40.4	79	1999	13	46.4	1999	-8	1958	18	34.9	1992	740	0	.0	.0	22.5	.3	27.0	.2
Dec	48.9	17.2	33.1	73	1980	7	43.1	1980	-20+	1990	23	26.8	1990	990	0	.0	.0	14.5	1.2	29.9	1.1
Ann	68.7	33.4	51.1	105	Jul 1989	19	74.6	Jul 1972	-26+	Jan 1963	13	26.8	Dec 1990	5586	531	.5	31.1	301.4	3.6	183.6	3.4

+ 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/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: 1949-2001

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

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## No. 20 1971-2000

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

**Station: ZUNI, NM**

**COOP ID: 299897**

**Climate Division: NM 1**

**NWS Call Sign: ZUN**

**Elevation: 6,310 Feet Lat: 35°04N**

**Lon: 108°50W**

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	.95	.73	1.22	1993	8	3.63	1993	.00	1986	5.2	3.1	.4	@	.01	.06	.18	.31	.46	.64	.86	1.14	1.55	2.25	2.95
Feb	.74	.63	1.22	1980	15	2.74	1980	.01	1984	4.5	2.4	.3	@	.05	.10	.20	.30	.41	.54	.70	.89	1.17	1.63	2.08
Mar	1.00	.97	1.16	1954	22	3.27	1981	.00+	1997	4.6	2.9	.3	.0	.00	.00	.21	.38	.56	.75	.97	1.26	1.63	2.25	2.86
Apr	.60	.34	1.07	1988	16	2.48	1988	.00+	2000	3.3	1.9	.3	.1	.00	.00	.05	.12	.22	.34	.49	.71	1.01	1.56	2.11
May	.56	.43	.78	1992	6	3.29	1992	.00+	2000	3.3	1.8	.2	.0	.00	.00	.04	.12	.22	.34	.48	.67	.94	1.40	1.87
Jun	.41	.22	1.08	1952	2	1.64	1987	.00+	1998	2.6	1.2	.2	.1	.00	.00	.00	.00	.09	.20	.33	.50	.73	1.14	1.53
Jul	1.96	1.94	1.62	1973	8	4.52	1992	.05	1993	8.0	4.1	1.0	.3	.23	.39	.66	.93	1.22	1.55	1.93	2.39	3.03	4.07	5.08
Aug	2.35	2.04	2.13	1982	13	5.90	1988	.17	1985	8.9	5.3	1.3	.3	.55	.77	1.11	1.42	1.72	2.05	2.41	2.85	3.42	4.32	5.18
Sep	1.26	1.14	2.46	1971	29	4.64	1984	.03	1979	5.8	3.1	.4	.1	.09	.17	.33	.50	.69	.92	1.18	1.53	2.00	2.80	3.60
Oct	1.23	.95	1.91	1998	26	6.65	1972	.00+	1999	4.8	3.2	.8	.1	.00	.10	.31	.50	.71	.94	1.20	1.53	1.99	2.74	3.47
Nov	.88	.87	.89	1986	19	2.54	1986	.00+	1999	3.3	2.4	.4	.0	.00	.10	.26	.40	.54	.70	.88	1.09	1.39	1.87	2.33
Dec	.84	.87	1.28	1986	8	2.03	1990	.00+	1996	3.9	2.1	.4	@	.00	.05	.18	.31	.45	.61	.80	1.04	1.37	1.93	2.48
Ann	12.78	12.45	2.46	Sep 1971	29	6.65	Oct 1972	.00+	May 2000	58.2	33.5	6.0	1.0	8.45	9.26	10.32	11.13	11.85	12.56	13.29	14.10	15.10	16.55	17.82

+ 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: 1949-2001

(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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**Station: ZUNI, NM**

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**Climate Division: NM 1**

**NWS Call Sign: ZUN**

**Elevation: 6,310 Feet**

**Lat: 35°04N**

**Lon: 108°50W**

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	1.3	.6	#	0	7.0	1987	16	7.0	1987	6	1997	26	2	1977	1.7	.9	.3	.1	.0	1.0	.2	@	.0
Feb	1.7	.3	#	0	5.5	1989	6	6.5+	1989	6+	1989	6	1	1986	1.4	.8	.1	.1	.0	.5	.2	.1	.0
Mar	.8	.0	#	0	3.0	1984	27	4.0+	1998	2	1998	7	#+	1999	.6	.3	.1	.0	.0	.3	.0	.0	.0
Apr	.3	.0	#	0	1.5	1977	2	2.0	1972	2	1972	14	#+	1998	.3	.2	.0	.0	.0	.1	.0	.0	.0
May	.1	.0	0	0	1.1	1979	9	1.1	1979	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	.3	.0	#	0	4.5	1972	31	6.1	1972	3	1972	31	#+	1972	.1	.1	@	.0	.0	@	@	.0	.0
Nov	.9	.0	#	0	4.3	1972	12	8.2	1972	5	1972	13	1	1972	.5	.4	.1	.0	.0	.3	.1	.0	.0
Dec	3.8	3.2	#	0	9.0	1971	13	11.9	1972	9	1971	14	2	1971	1.3	.9	.4	.2	.0	.7	.5	.2	.0
Ann	9.2	4.1	N/A	N/A	9.0	Dec 1971	13	11.9	Dec 1972	9	Dec 1971	14	2+	Jan 1977	5.9	3.6	1.0	.4	.0	2.9	1.0	.3	.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	6/21	6/17	6/13	6/10	6/08	6/05	6/02	5/30	5/25
32	6/09	6/04	5/31	5/28	5/25	5/22	5/19	5/16	5/11
28	6/02	5/27	5/23	5/20	5/16	5/13	5/10	5/06	4/30
24	5/18	5/11	5/07	5/02	4/28	4/25	4/20	4/15	4/09
20	5/07	4/29	4/23	4/18	4/14	4/09	4/04	3/30	3/22
16	4/21	4/11	4/04	3/29	3/24	3/18	3/12	3/05	2/24
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	9/09	9/14	9/18	9/21	9/23	9/26	9/29	10/02	10/07
32	9/20	9/25	9/28	10/01	10/04	10/07	10/10	10/14	10/19
28	10/02	10/06	10/10	10/12	10/15	10/17	10/20	10/23	10/27
24	10/07	10/12	10/15	10/18	10/21	10/24	10/27	10/30	11/04
20	10/15	10/20	10/24	10/28	10/31	11/03	11/07	11/11	11/16
16	10/21	10/27	11/01	11/05	11/08	11/11	11/15	11/19	11/25
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	123	117	113	110	107	104	100	96	91
32	154	146	141	136	131	127	122	116	108
28	172	164	159	155	151	146	142	137	129
24	198	190	184	179	175	170	165	160	152
20	227	218	211	205	199	194	188	181	172
16	266	253	244	236	228	221	213	203	190

\* 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	1024	798	719	496	262	57	5	10	97	388	740	990	5586
60	869	658	564	349	137	14	0	0	33	245	590	835	4294
57	776	574	471	266	81	4	0	0	13	171	500	742	3598
55	714	518	410	215	53	2	0	0	6	128	441	680	3167
50	559	379	265	111	13	0	0	0	0	52	298	525	2202
32	101	32	6	0	0	0	0	0	0	0	14	83	236

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	100	158	310	494	768	1025	1229	1176	949	637	264	116	7226
55	0	0	1	19	108	336	516	463	265	52	1	0	1761
57	0	0	0	10	73	279	454	401	212	33	0	0	1462
60	0	0	0	3	36	199	361	309	142	13	0	0	1063
65	0	0	0	0	7	92	211	163	56	2	0	0	531
70	0	0	0	0	0	29	87	56	13	0	0	0	185

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	8	37	111	262	508	770	967	911	685	381	92	15	8	45	156	418	926	1696	2663	3574	4259	4640	4732	4747
45	0	4	36	138	355	620	812	756	535	239	24	0	0	4	40	178	533	1153	1965	2721	3256	3495	3519	3519
50	0	0	2	55	212	470	657	601	386	117	0	0	0	0	2	57	269	739	1396	1997	2383	2500	2500	2500
55	0	0	0	11	97	323	502	446	243	39	0	0	0	0	0	11	108	431	933	1379	1622	1661	1661	1661
60	0	0	0	0	27	185	347	291	118	8	0	0	0	0	0	0	27	212	559	850	968	976	976	976
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	36	76	145	256	397	522	611	585	462	314	127	45	36	112	257	513	910	1432	2043	2628	3090	3404	3531	3576

(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)