

Climatology of the United States

No. 20 1971-2000

Station: TUCUMCARI 4 NE, NM

COOP ID: 299156

Climate Division: NM 3

NWS Call Sign:

Elevation: 4,086 Feet Lat: 35° 12N

Lon: 103° 41W

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	52.7	22.9	37.8	80+	1911	30	44.0	1986	-22	1963	13	28.5	1979	843	0	.0	.0	20.7	2.4	26.4	.3
Feb	57.6	27.1	42.4	83+	1962	11	49.5	2000	-16	1933	8	36.6	1978	634	0	.0	.0	22.0	1.5	19.9	.4
Mar	65.0	33.9	49.5	92+	1907	19	54.9	1974	-3	1948	5	45.2	1987	482	0	.0	.1	28.0	.3	12.4	.0
Apr	72.4	41.5	57.0	97+	1965	22	63.1	1981	14	1973	8	50.5	1997	263	22	.0	.8	28.8	@	4.4	.0
May	80.9	51.2	66.1	103	2000	24	73.4	1996	25	1917	7	61.9	1983	79	111	.3	5.4	30.9	.0	.1	.0
Jun	89.9	60.2	75.1	109	1990	25	82.3	1990	37	1919	2	70.4	1983	7	308	3.8	17.4	30.0	.0	.0	.0
Jul	93.0	64.3	78.7	107+	1934	13	82.7	1980	22	1941	6	74.7	1975	0	424	4.4	24.5	31.0	.0	.0	.0
Aug	90.7	62.7	76.7	107+	1944	2	82.6	2000	49+	1910	25	72.3	1971	1	364	1.5	20.4	31.0	.0	.0	.0
Sep	83.9	55.2	69.6	104	1995	6	75.2	2000	30	1970	26	64.2	1974	30	167	.4	9.7	29.9	.0	@	.0
Oct	74.3	44.0	59.2	97	2000	4	62.4	1979	12	1993	30	54.2	1984	198	17	.0	1.4	30.1	@	1.9	.0
Nov	61.5	32.4	47.0	87	1980	8	53.8	1999	-2	1976	28	39.1	1972	544	2	.0	.0	25.3	.4	14.3	@
Dec	53.0	24.2	38.6	82	1980	17	46.1	1980	-12	1990	23	29.9	1983	819	0	.0	.0	20.7	2.2	25.3	.5
Ann	72.9	43.3	58.1	109	Jun 1990	25	82.7	Jul 1980	-22	Jan 1963	13	28.5	Jan 1979	3900	1415	10.4	79.7	328.4	6.8	104.7	1.2

+ 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

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1904-2001

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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	Median	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	.41	.29	1.15	1968	22	1.68	1999	.01	2000	3.5	1.3	.1	@	.03	.05	.10	.16	.22	.30	.39	.50	.66	.93	1.20
Feb	.43	.34	1.61	1931	28	1.63	1983	.00+	2000	3.2	1.3	.2	@	.00	.00	.02	.08	.16	.25	.37	.52	.74	1.12	1.51
Mar	.81	.58	2.06	1985	20	3.40	1985	.00	1996	3.7	2.0	.6	.1	.02	.08	.20	.31	.44	.59	.77	.99	1.31	1.83	2.35
Apr	1.12	.81	2.10	1905	22	4.89	1997	.00+	1996	3.9	2.5	.7	.2	.00	.00	.29	.48	.67	.88	1.12	1.42	1.80	2.44	3.05
May	1.84	1.47	3.79	1944	11	5.83	1999	.08	1998	6.2	3.5	1.3	.4	.20	.34	.60	.86	1.13	1.44	1.80	2.24	2.85	3.86	4.84
Jun	2.19	2.10	4.41	1971	21	5.34	1986	.07	1990	6.7	4.6	1.4	.5	.22	.38	.68	.98	1.31	1.69	2.13	2.67	3.43	4.68	5.90
Jul	2.64	2.22	3.77	1960	6	8.72	1996	.24	1987	7.3	4.8	1.6	.7	.40	.62	1.00	1.37	1.75	2.16	2.64	3.23	4.01	5.29	6.52
Aug	2.73	2.51	3.62	1980	14	6.30	1980	.24	1976	8.8	5.2	1.8	.6	.44	.67	1.07	1.45	1.84	2.26	2.74	3.34	4.13	5.41	6.64
Sep	1.68	1.47	2.80	1919	16	4.56	1972	.05	2000	6.2	3.3	1.2	.3	.21	.34	.58	.81	1.06	1.33	1.65	2.05	2.59	3.47	4.33
Oct	1.44	1.01	2.91	1960	17	4.71	1985	.00	1975	4.3	2.6	1.1	.4	.03	.12	.30	.50	.74	1.01	1.33	1.75	2.34	3.35	4.34
Nov	.75	.50	1.90	1986	4	3.45	1986	.00+	1989	3.2	1.9	.3	.1	.00	.04	.14	.26	.38	.53	.70	.92	1.24	1.76	2.29
Dec	.53	.37	1.64	1959	15	2.70	1997	.00+	1981	3.3	1.6	.2	.1	.00	.01	.07	.14	.23	.33	.46	.63	.88	1.31	1.74
Ann	16.57	15.77	4.41	Jun 1971	21	8.72	Jul 1996	.00+	Feb 2000	60.3	34.6	10.5	3.4	10.81	11.89	13.29	14.37	15.34	16.29	17.27	18.37	19.71	21.67	23.38

+ 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: 1904-2001

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

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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	5.2	3.8	1	0	8.0	1987	18	19.5	1987	14	1987	18	3	1987	2.4	1.7	.6	.2	.0	4.0	2.0	1.1	.4
Feb	3.5	.1	#	0	10.0	1986	7	17.5	1983	14	1986	10	4	1983	1.6	.8	.5	.3	.1	2.2	1.2	1.0	.5
Mar	1.9	1.5	#	0	5.0	1999	18	6.5	1999	7	1999	19	#	1999	1.1	.8	.3	.1	.0	.9	.3	.1	.0
Apr	1.6	.0	#	0	12.0	1988	1	15.0	1988	12	1988	1	1+	1997	.4	.4	.3	.2	.1	.6	.2	.2	@
May	.0	.0	#	0	.0	0	0	.0	0	0	0	0	#	2000	.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	.4	.0	#	0	5.0	1991	31	5.0	1991	5	1991	31	#	1997	.2	.2	.1	.1	.0	.2	@	@	.0
Nov	1.7	.8	#	0	8.0	1982	27	8.0	1982	8	1982	27	#	2000	1.0	.6	.2	.1	.0	.7	.2	.1	.0
Dec	5.1	3.5	#	0	10.0	1997	23	19.0	1997	14	1997	23	3	1997	2.3	1.5	.8	.3	.1	3.2	1.6	.8	.2
Ann	19.4	9.7	N/A	N/A	12.0	Apr 1988	1	19.5	Jan 1987	14+	Dec 1997	23	4	Feb 1983	9.0	6.0	2.8	1.3	.3	11.8	5.5	3.3	1.1

+ 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	5/14	5/09	5/05	5/02	4/30	4/27	4/24	4/20	4/15
32	4/27	4/23	4/20	4/18	4/15	4/13	4/11	4/08	4/04
28	4/15	4/11	4/08	4/06	4/03	4/01	3/29	3/26	3/22
24	4/10	4/04	3/30	3/26	3/22	3/18	3/14	3/09	3/03
20	3/30	3/22	3/17	3/12	3/08	3/04	2/27	2/22	2/14
16	3/25	3/15	3/08	3/01	2/23	2/17	2/11	2/03	1/24
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	9/28	10/02	10/06	10/08	10/11	10/14	10/16	10/20	10/24
32	10/10	10/15	10/19	10/22	10/25	10/27	10/31	11/03	11/08
28	10/21	10/26	10/29	10/31	11/03	11/06	11/08	11/11	11/16
24	10/31	11/05	11/09	11/12	11/15	11/18	11/22	11/25	12/01
20	11/07	11/12	11/16	11/19	11/22	11/24	11/27	12/01	12/06
16	11/11	11/20	11/26	12/01	12/06	12/10	12/16	12/22	12/30
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	182	175	171	167	164	160	156	152	146
32	206	201	197	194	191	188	185	182	177
28	231	225	220	217	213	209	206	201	195
24	263	254	248	243	238	232	227	221	212
20	282	273	268	262	258	253	248	242	234
16	325	311	301	293	285	276	268	258	244

* 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	843	634	482	263	79	7	0	1	30	198	544	819	3900
60	688	494	331	154	28	0	0	0	6	92	403	664	2860
57	595	413	247	103	12	0	0	0	1	51	324	572	2318
55	534	361	195	75	7	0	0	0	0	33	276	511	1992
50	389	238	94	27	1	0	0	0	0	9	174	367	1299
32	44	14	0	0	0	0	0	0	0	0	10	36	104

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	224	303	541	749	1056	1291	1447	1386	1127	841	458	241	9664
55	1	7	23	134	349	601	734	673	437	161	35	3	3158
57	0	3	13	102	293	541	672	611	378	118	23	1	2755
60	0	0	4	63	216	451	579	518	293	65	12	0	2201
65	0	0	0	22	111	308	424	364	167	17	2	0	1415
70	0	0	0	6	44	181	270	218	77	2	0	0	798

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	107	185	346	536	826	1068	1217	1162	910	620	280	117	107	292	638	1174	2000	3068	4285	5447	6357	6977	7257	7374
45	45	101	223	393	672	918	1062	1007	761	469	171	59	45	146	369	762	1434	2352	3414	4421	5182	5651	5822	5881
50	10	44	121	266	518	768	907	852	613	324	89	18	10	54	175	441	959	1727	2634	3486	4099	4423	4512	4530
55	0	13	52	157	372	619	752	697	465	198	37	1	0	13	65	222	594	1213	1965	2662	3127	3325	3362	3363
60	0	0	15	73	233	470	597	542	324	102	9	0	0	0	15	88	321	791	1388	1930	2254	2356	2365	2365
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	120	171	267	363	529	680	785	756	585	407	210	120	120	291	558	921	1450	2130	2915	3671	4256	4663	4873	4993

(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/normal/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
- 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/normal.html
U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normal/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