

Climatology of the United States

No. 20

1971-2000

Station: PORTALES, NM

COOP ID: 297008

Climate Division: NM 3

NWS Call Sign:

Elevation: 4,010 Feet Lat: 34° 10N

Lon: 103° 21W

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	54.1	23.0	38.6	80+	1950	21	43.6	1999	-17	1979	2	33.2	1979	821	0	.0	.0	21.7	1.8	27.5	.3
Feb	59.7	26.5	43.1	85	1962	12	50.1	2000	-15	1951	1	37.8	1989	613	0	.0	.0	23.0	1.0	21.7	.1
Mar	67.7	32.7	50.2	91+	1950	31	55.6	1974	5+	1965	20	46.4	1987	459	0	.0	.0	29.4	.1	14.6	.0
Apr	75.3	40.5	57.9	100	1965	22	62.2	1986	10	1980	7	51.5	1973	236	23	.0	.6	29.3	.0	4.7	.0
May	83.2	50.6	66.9	103	2000	24	74.0	1996	27	1967	1	63.4	1973	68	127	.2	6.3	31.0	.0	.1	.0
Jun	90.6	60.0	75.3	109	1968	28	81.9	1990	37	1955	5	71.8	1979	5	313	2.7	17.8	30.0	.0	.0	.0
Jul	91.5	63.9	77.7	106+	1954	27	81.6	1980	50+	1964	13	74.3	1988	0	394	1.4	20.9	31.0	.0	.0	.0
Aug	89.2	62.6	75.9	107	1969	17	79.6	2000	46	1976	29	72.5	1971	1	339	.3	16.7	31.0	.0	.0	.0
Sep	84.2	55.3	69.8	103	1948	6	74.3	1998	29	1983	21	64.5	1974	28	170	@	7.5	29.9	.0	.1	.0
Oct	75.0	43.4	59.2	95+	1967	3	62.3	1998	12	1991	31	54.1	1976	192	12	.0	.3	30.5	.0	2.7	.0
Nov	62.3	31.3	46.8	90	1950	6	51.5	1981	-1	1979	25	40.2	1972	547	0	.0	.0	25.8	.1	16.7	@
Dec	54.2	23.6	38.9	78	1958	4	45.1	1977	-12	1978	9	31.7	1983	810	0	.0	.0	21.5	1.6	26.5	.5
Ann	73.9	42.8	58.4	109	Jun 1968	28	81.9	Jun 1990	-17	Jan 1979	2	31.7	Dec 1983	3780	1378	4.6	70.1	334.1	4.6	114.6	.9

+ 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: 1948-2001

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

071-A

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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: PORTALES, NM

COOP ID: 297008

Climate Division: NM 3

NWS Call Sign:

Elevation: 4,010 Feet Lat: 34°10N

Lon: 103°21W

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	.50	.36	1.90	1987	18	3.01	1987	.00+	2000	2.8	1.5	.2	.1	.00	.00	.03	.10	.18	.29	.42	.60	.86	1.30	1.75
Feb	.40	.26	.78	1948	5	1.19	1975	.00+	2000	3.1	1.4	.1	.0	.00	.02	.08	.15	.21	.29	.38	.50	.66	.92	1.19
Mar	.52	.22	1.61	1985	20	2.73	1985	.01	1996	2.9	1.3	.2	.1	.01	.02	.07	.13	.21	.30	.43	.60	.86	1.31	1.78
Apr	.78	.57	1.39	1979	18	3.53	1997	.00+	1996	3.6	1.8	.4	.2	.00	.00	.13	.28	.42	.58	.76	.99	1.30	1.80	2.29
May	1.63	1.32	3.30	1957	27	5.56	1992	.04	2000	6.0	3.3	1.2	.3	.11	.21	.42	.64	.89	1.18	1.53	1.98	2.59	3.63	4.66
Jun	2.57	2.02	3.20	1948	20	7.01	2000	.00	1990	6.9	4.5	1.8	.8	.08	.27	.62	.99	1.40	1.87	2.44	3.15	4.13	5.78	7.41
Jul	2.63	2.61	4.36	1948	23	6.35	1973	.12	1980	7.6	4.7	2.0	.6	.52	.76	1.15	1.50	1.86	2.24	2.68	3.20	3.90	5.01	6.07
Aug	3.20	2.62	5.15	1952	12	8.29	1987	.07	1983	9.4	5.7	1.9	.8	.46	.73	1.19	1.63	2.10	2.61	3.19	3.91	4.88	6.46	7.98
Sep	1.95	1.98	2.88	1963	15	4.52	1988	.01	2000	6.4	4.1	1.2	.4	.19	.34	.60	.87	1.17	1.50	1.89	2.38	3.04	4.15	5.24
Oct	1.59	.81	3.84	1974	23	6.42	1998	.00	1989	4.5	2.8	.9	.4	.02	.10	.28	.49	.74	1.05	1.42	1.91	2.61	3.81	5.02
Nov	.73	.49	2.86	1978	4	3.54	1978	.00+	1999	3.7	1.7	.4	.1	.00	.00	.15	.30	.43	.58	.74	.94	1.21	1.63	2.05
Dec	.67	.39	1.53	1991	22	3.65	1991	.00+	1990	3.4	1.9	.4	@	.00	.00	.03	.13	.25	.39	.57	.81	1.15	1.72	2.32
Ann	17.17	16.74	5.15	Aug 1952	12	8.29	Aug 1987	.00+	Feb 2000	60.3	34.7	10.7	3.8	11.43	12.52	13.92	15.00	15.96	16.90	17.88	18.96	20.28	22.21	23.89

+ 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

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Station: PORTALES, NM

COOP ID: 297008

Climate Division: NM 3

NWS Call Sign:

Elevation: 4,010 Feet

Lat: 34° 10N

Lon: 103° 21W

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	2.4	2.3	#	#	4.2	1999	29	8.0	1973	6	1987	18	1	1979	1.4	.9	.2	.0	.0	1.0	.4	.0	.0
Feb	3.0	2.5	#	0	7.6	1973	22	10.0	1975	7	1973	22	1	1980	1.3	.9	.4	.2	.0	.6	.3	.1	.0
Mar	1.0	.0	#	0	4.9	1999	18	7.0	1975	3	1978	3	#+	1999	.4	.3	.1	.0	.0	.1	@	.0	.0
Apr	.2	.0	#	0	1.5	1980	12	2.2	1997	2	1988	1	#	1988	.2	.2	.0	.0	.0	@	.0	.0	.0
May	.0	.0	#	0	.0	0	0	.0	0	#	1988	31	#	1988	.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	3.0	1976	28	4.0	1976	2+	1991	31	#+	1991	.2	.1	.1	.0	.0	.1	.0	.0	.0
Nov	1.0	.0	0	0	5.0	1980	16	9.0	1980	6	1976	13	1+	1980	.6	.4	.2	.1	.0	.3	.2	@	.0
Dec	4.4	2.0	#	0	8.0	1997	21	22.0	1997	6	1978	8	4	1971	1.2	.9	.6	.2	.0	.6	.3	.1	.0
Ann	12.3	6.8	N/A	N/A	8.0	Dec 1997	21	22.0	Dec 1997	7	Feb 1973	22	4	Dec 1971	5.3	3.7	1.6	.5	.0	2.7	1.2	.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:

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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	5/15	5/11	5/08	5/05	5/03	4/30	4/27	4/24	4/20
32	5/02	4/28	4/24	4/21	4/18	4/16	4/13	4/09	4/05
28	4/20	4/15	4/12	4/10	4/07	4/05	4/02	3/30	3/25
24	4/15	4/09	4/05	4/01	3/28	3/25	3/21	3/16	3/10
20	4/06	3/30	3/26	3/21	3/17	3/14	3/09	3/05	2/26
16	3/23	3/15	3/09	3/04	2/27	2/22	2/17	2/11	2/02
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	9/27	10/01	10/04	10/07	10/09	10/12	10/14	10/18	10/22
32	10/05	10/10	10/14	10/17	10/20	10/23	10/27	10/30	11/05
28	10/16	10/21	10/25	10/29	11/01	11/04	11/08	11/11	11/17
24	10/25	10/31	11/04	11/08	11/12	11/15	11/19	11/23	11/29
20	11/01	11/07	11/11	11/14	11/18	11/21	11/24	11/28	12/04
16	11/05	11/13	11/19	11/24	11/29	12/04	12/09	12/15	12/23
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	178	171	167	163	159	155	151	147	140
32	204	197	192	188	184	180	176	171	164
28	223	218	214	210	207	204	201	197	191
24	253	244	238	233	228	222	217	211	202
20	268	260	254	249	244	240	235	229	221
16	311	298	289	282	274	267	260	251	238

* 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	821	613	459	236	68	5	0	1	28	192	547	810	3780
60	666	473	307	131	23	0	0	0	5	81	402	655	2743
57	573	390	223	83	10	0	0	0	1	41	321	562	2204
55	511	337	171	57	5	0	0	0	0	24	270	502	1877
50	360	212	73	17	0	0	0	0	0	5	163	356	1186
32	20	6	0	0	0	0	0	0	0	0	6	27	59

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	222	317	564	777	1082	1298	1417	1361	1132	843	450	240	9703
55	0	4	22	144	374	608	704	648	442	155	23	2	3126
57	0	1	12	110	317	548	642	586	383	109	14	0	2722
60	0	0	3	67	237	458	549	493	297	56	6	0	2166
65	0	0	0	23	127	313	394	339	170	12	0	0	1378
70	0	0	0	6	53	182	243	191	79	1	0	0	755

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	84	160	338	545	842	1064	1178	1123	903	603	244	92	84	244	582	1127	1969	3033	4211	5334	6237	6840	7084	7176
45	30	78	205	403	687	914	1023	968	753	451	141	38	30	108	313	716	1403	2317	3340	4308	5061	5512	5653	5691
50	1	27	103	267	533	764	868	813	604	308	65	5	1	28	131	398	931	1695	2563	3376	3980	4288	4353	4358
55	0	2	39	148	379	614	713	658	456	176	16	0	0	2	41	189	568	1182	1895	2553	3009	3185	3201	3201
60	0	0	5	65	239	464	558	503	315	78	1	0	0	0	5	70	309	773	1331	1834	2149	2227	2228	2228
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	117	172	287	391	546	682	776	746	587	402	205	115	117	289	576	967	1513	2195	2971	3717	4304	4706	4911	5026

(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.
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 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">a. Temperature/ Precipitation Tables<ol style="list-style-type: none">1. 1971-2000 Monthly Normals2. Cooperative Summary of the Day3. National Weather Service station records4. 1971-2000 serially complete daily datab. Degree Day Table<ol style="list-style-type: none">1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data | <ol style="list-style-type: none">c. Snow Tables<ol style="list-style-type: none">1. Snow Climatology2. Cooperative Summary of the Dayd. 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