

Climatology of the United States

No. 20

1971-2000

Station: OTIS, NM

COOP ID: 296465

Climate Division: NM 1

NWS Call Sign:

Elevation: 6,880 Feet Lat: 36° 19N

Lon: 107° 52W

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	38.4	18.8	28.6	63	1986	30	35.3	1981	-21	1963	13	21.6	1979	1129	0	.0	.0	3.2	7.7	30.3	.7
Feb	44.6	23.3	34.0	68	1976	2	41.1	1995	-10	1989	6	27.6	1974	870	0	.0	.0	7.6	3.1	26.2	.3
Mar	53.3	28.3	40.8	74	1989	10	47.0	1972	3	1966	3	35.0	1973	750	0	.0	.0	19.4	.3	22.7	.0
Apr	61.7	33.5	47.6	86	1981	10	54.9	1989	10	1980	1	41.0	1973	521	0	.0	.0	26.1	.0	12.9	.0
May	71.4	42.2	56.8	90	2000	29	62.5	1996	19	1967	1	53.2	1983	270	15	.0	@	30.8	.0	2.8	.0
Jun	82.2	52.1	67.2	96	1990	30	71.5	1994	26	1974	9	63.8	1983	45	110	.0	4.0	30.0	.0	@	.0
Jul	86.2	57.1	71.7	99	1981	7	74.0	1972	45	1995	4	68.7	1992	2	208	.0	6.2	31.0	.0	.0	.0
Aug	83.0	55.5	69.3	94+	1962	15	72.4	1995	35	2000	21	66.8	1999	9	140	.0	1.9	31.0	.0	.0	.0
Sep	76.0	49.3	62.7	89+	1957	6	66.9	1998	25	1971	19	58.8	1985	115	45	.0	.0	30.0	.0	.3	.0
Oct	64.1	39.4	51.8	81	1963	2	56.3	1988	14	1993	30	45.1	1984	413	2	.0	.0	28.5	.1	5.7	.0
Nov	48.9	27.4	38.2	76+	1977	2	46.3	1999	-6	1976	28	32.2	2000	805	0	.0	.0	14.6	1.7	21.9	.1
Dec	40.1	20.5	30.3	63+	1981	9	38.2	1980	-12	1990	24	23.3	1990	1075	0	.0	.0	3.9	6.1	29.6	.6
Ann	62.5	37.3	49.9	99	Jul 1981	7	74.0	Jul 1972	-21	Jan 1963	13	21.6	Jan 1979	6004	520	.0	12.1	256.1	19.0	152.4	1.7

+ 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: 1957-2001

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

068-A

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: OTIS, NM

COOP ID: 296465

Climate Division: NM 1

NWS Call Sign:

Elevation: 6,880 Feet Lat: 36°19N

Lon: 107°52W

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	.64	.53	1.07	1977	1	2.09	1993	.00	1999	5.2	2.3	.1	@	.01	.05	.13	.22	.33	.45	.59	.78	1.04	1.49	1.94
Feb	.43	.34	.61	1976	10	1.56	1987	.00	1995	4.3	1.9	@	.0	.02	.05	.11	.18	.24	.32	.41	.52	.68	.94	1.19
Mar	.68	.50	1.50	1992	31	2.14	1992	.00+	1997	4.8	2.4	.3	.1	.00	.00	.10	.20	.32	.46	.62	.83	1.12	1.62	2.12
Apr	.56	.38	1.47	1990	18	2.94	1985	.00+	1996	4.0	1.6	.3	.1	.00	.00	.08	.16	.26	.37	.51	.68	.93	1.34	1.76
May	.65	.53	.75	1978	2	2.09	1992	.00+	1998	4.5	2.1	.3	.0	.00	.00	.10	.21	.33	.47	.62	.82	1.09	1.53	1.97
Jun	.57	.35	1.25	1988	27	3.21	1988	.00+	1995	3.5	1.6	.3	@	.00	.00	.05	.13	.23	.35	.50	.70	.98	1.45	1.93
Jul	1.46	1.44	2.00	1994	25	3.42	1975	.21	1978	6.5	3.3	.7	.2	.28	.41	.63	.82	1.02	1.24	1.48	1.77	2.16	2.78	3.38
Aug	1.84	1.90	1.69	1976	20	3.66	1982	.02	1985	8.7	4.8	1.2	.2	.34	.50	.77	1.02	1.27	1.55	1.86	2.24	2.75	3.56	4.33
Sep	1.04	.90	.88	1971	29	2.08	1990	.11	1979	5.7	2.9	.6	.0	.24	.33	.49	.62	.76	.90	1.06	1.26	1.51	1.92	2.30
Oct	1.04	.78	1.72	1972	19	4.67	1972	.00+	1999	5.1	2.9	.5	.1	.00	.00	.13	.29	.46	.67	.93	1.26	1.73	2.53	3.34
Nov	.79	.56	1.06	1978	3	3.06	1986	.02	1999	4.6	2.6	.3	@	.05	.10	.20	.30	.42	.57	.74	.95	1.26	1.77	2.28
Dec	.53	.40	.60	1971	13	1.99	1982	.00+	1998	4.2	1.8	.1	.0	.00	.00	.08	.16	.25	.35	.48	.65	.88	1.27	1.66
Ann	10.23	9.91	2.00	Jul 1994	25	4.67	Oct 1972	.00+	Oct 1999	61.1	30.2	4.7	.7	6.33	7.04	7.97	8.70	9.35	9.99	10.66	11.40	12.32	13.67	14.85

+ 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: 1957-2001

(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: OTIS, NM

COOP ID: 296465

Climate Division: NM 1

NWS Call Sign:

Elevation: 6,880 Feet

Lat: 36° 19N

Lon: 107° 52W

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	7.0	7.0	2	1	6.5	1990	18	17.5	1983	13	1979	31	7	1979	3.3	2.4	.8	.3	.0	7.7	3.5	1.5	.0
Feb	4.8	3.6	1	#	10.0	1987	19	27.0	1987	15	1987	27	4	1982	2.3	1.6	.5	.1	@	2.8	.6	.0	.0
Mar	3.6	2.0	#	#	10.0	1973	9	20.0	1973	15	1987	1	2	1987	1.7	1.1	.2	.1	@	1.4	.6	.3	.1
Apr	1.2	1.0	#	0	6.5	1975	12	7.5	1975	5	1975	12	#+	1999	.9	.5	.1	@	.0	.3	.2	@	.0
May	.4	.0	#	0	9.0	1978	5	9.5	1978	9	1978	5	#+	1999	.2	@	@	@	.0	.1	.1	@	.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	.6	.0	#	0	3.0	1980	27	3.5	1972	6	1991	31	#+	1997	.4	.3	@	.0	.0	.2	@	.0	.0
Nov	2.9	2.6	#	#	7.5	1991	16	10.5	1991	7	1991	16	1	1991	1.6	1.0	.2	.1	.0	1.5	.6	.3	.0
Dec	4.3	3.3	1	#	7.3	1990	16	13.3	1990	11	1990	23	3	1990	2.5	1.5	.2	.1	.0	2.2	.7	.1	.0
Ann	24.8	19.5	N/A	N/A	10.0+	Feb 1987	19	27.0	Feb 1987	15+	Mar 1987	1	7	Jan 1979	12.9	8.4	2.0	.7	@	16.2	6.3	2.2	.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

Complete documentation available from:

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Lat: 36° 19N

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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	6/12	6/05	6/01	5/28	5/24	5/21	5/17	5/13	5/06
32	5/26	5/21	5/18	5/15	5/12	5/10	5/07	5/04	4/29
28	5/22	5/15	5/09	5/05	4/30	4/26	4/22	4/16	4/09
24	5/07	4/30	4/25	4/21	4/17	4/13	4/09	4/04	3/28
20	4/23	4/16	4/11	4/07	4/03	3/30	3/26	3/21	3/14
16	4/06	3/27	3/20	3/13	3/08	3/02	2/23	2/16	2/06
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	9/13	9/19	9/23	9/27	10/01	10/04	10/08	10/12	10/18
32	9/24	9/29	10/03	10/06	10/09	10/13	10/16	10/20	10/25
28	10/04	10/10	10/14	10/18	10/21	10/24	10/28	11/01	11/07
24	10/18	10/22	10/26	10/28	10/31	11/03	11/06	11/09	11/14
20	10/24	10/29	11/02	11/05	11/08	11/10	11/13	11/17	11/22
16	11/05	11/10	11/13	11/16	11/19	11/22	11/24	11/28	12/02
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	151	143	138	133	128	124	119	113	105
32	171	163	158	153	149	145	141	135	128
28	199	190	183	178	173	168	162	156	147
24	222	213	207	201	196	191	186	180	171
20	246	236	229	223	218	212	206	199	190
16	287	276	268	262	256	249	243	235	224

* 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	1129	870	750	521	270	45	2	9	115	413	805	1075	6004
60	974	730	595	378	153	11	0	0	43	271	655	920	4730
57	881	646	503	298	99	3	0	0	20	197	565	827	4039
55	819	590	443	248	72	1	0	0	10	153	506	765	3607
50	664	450	302	144	25	0	0	0	1	71	364	610	2631
32	182	69	18	2	0	0	0	0	0	0	38	136	445

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	76	123	291	471	768	1055	1228	1154	920	612	224	84	7006
55	0	0	4	26	127	366	515	441	240	52	1	0	1772
57	0	0	1	16	93	308	453	379	190	34	0	0	1474
60	0	0	0	7	53	225	360	287	123	14	0	0	1069
65	0	0	0	0	15	110	208	140	45	2	0	0	520
70	0	0	0	0	2	37	80	37	9	0	0	0	165

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	1	22	102	254	523	824	973	904	676	374	80	6	1	23	125	379	902	1726	2699	3603	4279	4653	4733	4739
45	0	3	36	143	371	674	818	749	526	241	25	0	0	3	39	182	553	1227	2045	2794	3320	3561	3586	3586
50	0	0	7	62	232	524	663	594	379	125	2	0	0	0	7	69	301	825	1488	2082	2461	2586	2588	2588
55	0	0	0	18	118	376	508	439	240	46	0	0	0	0	0	18	136	512	1020	1459	1699	1745	1745	1745
60	0	0	0	0	44	235	353	285	119	8	0	0	0	0	0	0	44	279	632	917	1036	1044	1044	1044
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	1	20	84	188	340	533	640	586	417	226	58	6	1	21	105	293	633	1166	1806	2392	2809	3035	3093	3099

(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