

Climatology of the United States

No. 20 1971-2000

Station: LOS ALAMOS, CA

COOP ID: 045107

Climate Division: CA 6

NWS Call Sign:

Elevation: 565 Feet

Lat: 34°45N

Lon: 120°17W

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	.0	.0	.0	84+	1996	12	.0	0	25	2001	18	.0	0	0	0	.0	.0	30.9	.0	2.7	.0
Feb	.0	.0	.0	88	1996	8	.0	0	25	2001	8	.0	0	0	0	.0	.0	28.0	.0	1.2	.0
Mar	.0	.0	.0	90	1997	10	.0	0	21	1977	14	.0	0	0	0	.0	.1	30.9	.0	1.3	.0
Apr	.0	.0	.0	99	1996	30	.0	0	29	2001	8	.0	0	0	0	@	.6	30.0	.0	.5	.0
May	.0	.0	.0	98+	1996	11	.0	0	35	1978	24	.0	0	0	0	.0	1.6	31.0	.0	.0	.0
Jun	.0	.0	.0	102	1996	30	.0	0	37+	1999	8	.0	0	0	0	.4	2.7	30.0	.0	.0	.0
Jul	.0	.0	.0	98	1996	1	.0	0	43+	2000	14	.0	0	0	0	.1	4.8	31.0	.0	.0	.0
Aug	.0	.0	.0	102	1997	5	.0	0	44+	2000	21	.0	0	0	0	.2	1.6	31.0	.0	.0	.0
Sep	.0	.0	.0	99	1997	28	.0	0	41+	2000	12	.0	0	0	0	.6	5.5	30.0	.0	5.8	@
Oct	.0	.0	.0	100+	1971	6	.0	0	24	1971	29	.0	0	0	0	.2	2.8	31.0	.0	.1	.0
Nov	.0	.0	.0	95	1997	3	.0	0	24	2000	13	.0	0	0	0	.0	.2	30.0	.0	1.0	.0
Dec	.0	.0	.0	88	1977	5	.0	0	18	1998	23	.0	0	0	0	.0	.0	30.8	.0	5.1	.0
Ann	.0	.0	.0	102+	Aug 1997	5	-99.9	0	18	Dec 1998	23	99.9	0	0	0	1.5	19.9	364.6	.0	17.7	@

+ 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: 1948-2001

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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	3.15	2.34	2.50	1995	10	14.92	1995	.01+	1984	8.0	5.5	2.2	.8	.07	.17	.46	.83	1.30	1.90	2.66	3.68	5.16	7.80	10.49
Feb	3.89	2.59	3.22	1998	2	15.00	1998	.11	1997	7.8	5.5	2.8	1.3	.13	.31	.72	1.21	1.81	2.53	3.44	4.63	6.33	9.29	12.29
Mar	3.70	2.98	4.38	1983	1	12.36	1991	.00+	1997	8.0	6.0	2.5	1.1	.00	.39	1.05	1.64	2.24	2.91	3.68	4.61	5.88	7.97	9.99
Apr	1.08	.53	1.61	1958	3	4.18	1983	.00+	1997	3.6	2.3	.6	.3	.00	.00	.07	.19	.35	.57	.85	1.24	1.81	2.83	3.89
May	.35	.04	1.72	1977	9	2.84	1977	.00+	2000	1.7	.9	.2	@	.00	.00	.00	.00	.00	.02	.12	.30	.59	1.13	1.69
Jun	.07	.00	.54	1995	17	.79	1995	.00+	1999	.4	.2	.1	.0	.00	.00	.00	.00	.00	.00	.00	.00	.06	.22	.42
Jul	.01	.00	.90	1950	10	.15	1992	.00+	2000	.3	@	.0	.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.10
Aug	.04	.00	.36	1983	18	.44+	1983	.00+	2000	.3	.1	.0	.0	**	**	**	**	**	**	**	**	**	**	**
Sep	.36	.00	2.32	1976	11	4.82	1976	.00+	2000	1.0	.6	.2	.1	.00	.00	.00	.00	.00	.00	.03	.19	.51	1.19	1.94
Oct	.59	.40	2.18	1996	30	2.29+	2000	.00+	1999	2.5	1.3	.4	.1	.00	.00	.00	.07	.20	.34	.51	.73	1.04	1.57	2.09
Nov	1.38	1.04	2.16	1961	20	4.64	1982	.00+	2000	4.5	2.8	1.0	.2	.00	.00	.12	.34	.58	.87	1.23	1.69	2.35	3.45	4.56
Dec	2.30	1.88	3.15	1955	25	6.04	1971	.00	1989	5.5	3.7	1.7	.5	.06	.22	.53	.86	1.22	1.65	2.16	2.80	3.71	5.22	6.73
Ann	16.92	15.79	4.38	Mar 1983	1	15.00	Feb 1998	.00+	Nov 2000	43.6	28.9	11.7	4.4	6.17	7.75	10.04	11.96	13.78	15.65	17.68	20.05	23.06	27.71	31.96

+ 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:
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Lat: 34° 45N

Lon: 120° 17W

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	#	.0	0	0	#	1982	21	#	1982	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Feb	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Mar	.0	.0	0	0	.0	0	0	.0	0	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	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Dec	#	.0	#	0	#	1998	21	#+	1998	#	1998	21	#	1998	.0	.0	.0	.0	.0	.0	.0	.0	.0
Ann	#	.0	N/A	N/A	#+	Dec 1998	21	#+	Dec 1998	#	Dec 1998	21	#	Dec 1998	.0	.0	.0	.0	.0	.0	.0	.0	.0

+ Also occurred on an earlier date(s) #Denotes trace amounts

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-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	5/08	4/27	4/18	4/11	4/04	3/28	3/21	3/12	3/01
32	4/16	3/20	3/01	2/13	1/29	1/14	12/29	12/10	11/14
28	3/03	2/04	1/15	12/25	12/02	10/22	0/00	0/00	0/00
24	1/27	12/17	11/03	0/00	0/00	0/00	0/00	0/00	0/00
20	9/06	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
16	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
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	8/14	8/26	9/04	9/11	9/18	9/25	10/02	10/11	10/23
32	8/15	9/05	9/21	10/04	10/16	10/28	11/11	11/26	12/17
28	9/04	10/02	10/25	11/16	12/11	1/25	0/00	0/00	0/00
24	9/29	11/17	1/10	0/00	0/00	0/00	0/00	0/00	0/00
20	11/12	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
16	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	207	193	183	174	166	158	150	139	125
32	>365	316	289	268	251	234	216	196	168
28	>365	>365	>365	>365	>365	>365	302	264	226
24	>365	>365	>365	>365	>365	>365	>365	>365	>365
20	>365	>365	>365	>365	>365	>365	>365	>365	>365
16	>365	>365	>365	>365	>365	>365	>365	>365	>365

* 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	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0	0

Cooling Degree Days (1)

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0	0	0	0
70	0	0	0	0	0	0	0	0	0	0	0	0	0

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	385	408	464	524	649	739	873	771	639	713	516	344	385	793	1257	1781	2430	3169	4042	4813	5452	6165	6681	7025
45	235	266	310	374	494	589	718	616	490	559	367	199	235	501	811	1185	1679	2268	2986	3602	4092	4651	5018	5217
50	106	133	167	231	339	439	563	461	340	404	222	72	106	239	406	637	976	1415	1978	2439	2779	3183	3405	3477
55	29	47	64	105	189	290	408	307	201	257	105	16	29	76	140	245	434	724	1132	1439	1640	1897	2002	2018
60	0	9	13	37	75	146	253	160	94	119	34	0	0	9	22	59	134	280	533	693	787	906	940	940
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	241	246	280	327	390	450	550	456	486	444	325	254	241	487	767	1094	1484	1934	2484	2940	3426	3870	4195	4449

(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