

Climatology of the United States

No. 20

Station: LAVA BEDS NAT MONUMENT, CA

1971-2000

COOP ID: 044838

Climate Division: CA 1

NWS Call Sign:

Elevation: 4,770 Feet Lat: 41°44N

Lon: 121°30W

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	41.6	22.4	32.0	62+	1963	26	39.4	1986	-13	1962	21	26.5	1993	1023	0	.0	.0	4.2	4.4	28.6	.4
Feb	45.4	25.2	35.3	68+	1995	24	43.6	1995	-13	1989	5	26.6	1989	832	0	.0	.0	7.6	2.2	23.6	.3
Mar	50.1	27.9	39.0	74	1966	30	44.8	1978	3+	1974	9	34.0	1975	806	0	.0	.0	15.2	.5	23.4	.0
Apr	57.3	31.8	44.6	88	1985	14	51.2	1987	11	1963	16	35.8	1975	614	0	.0	.0	21.3	.1	16.6	.0
May	66.4	38.0	52.2	93	1986	30	61.1	1992	19+	1970	12	44.7	1977	404	8	.0	.2	28.4	.0	7.9	.0
Jun	75.8	44.5	60.2	98+	1985	22	65.5	1986	24	1965	27	54.9	1991	188	42	.0	1.2	29.7	.0	1.5	.0
Jul	84.8	51.0	67.9	101	1960	19	72.5	1994	29	1974	3	61.6	1993	47	136	.1	7.0	31.0	.0	.1	.0
Aug	85.0	50.6	67.8	102	1972	8	72.8	1986	30+	1999	31	61.3	1976	53	139	.2	7.4	31.0	.0	.1	.0
Sep	77.2	44.4	60.8	99+	1998	4	66.5	1991	21	1965	18	53.7	1985	180	54	.0	1.2	29.8	.0	1.7	.0
Oct	65.9	36.5	51.2	89	1996	9	58.7	1987	9	1971	29	45.1	1984	436	8	.0	.0	27.5	@	9.4	.0
Nov	49.5	27.8	38.7	74+	1999	15	46.4	1976	2	1993	24	30.3	1994	790	0	.0	.0	13.1	.9	22.7	.0
Dec	41.6	22.5	32.1	63	1967	28	37.3	1989	-18	1990	21	25.3	1990	1022	0	.0	.0	4.0	4.5	28.3	.5
Ann	61.7	35.2	48.5	102	Aug 1972	8	72.8	Aug 1986	-18	Dec 1990	21	25.3	Dec 1990	6395	387	.3	17.0	242.8	12.6	163.9	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: 1959-2001

(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: LAVA BEDS NAT MONUMENT, CA

COOP ID: 044838

Climate Division: CA 1

NWS Call Sign:

Elevation: 4,770 Feet Lat: 41°44N

Lon: 121°30W

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	1.75	1.28	3.37	1983	27	6.71	1995	.07	1985	9.0	4.4	.8	.2	.15	.27	.51	.75	1.02	1.32	1.68	2.13	2.76	3.80	4.82
Feb	1.81	1.57	1.40	1986	15	6.20	1983	.11	1988	8.9	4.6	.9	.2	.19	.33	.58	.83	1.10	1.40	1.76	2.20	2.81	3.82	4.80
Mar	2.02	1.47	2.08	1970	1	8.67	1995	.46	1997	11.1	5.3	1.1	.3	.42	.61	.90	1.17	1.44	1.73	2.06	2.45	2.97	3.80	4.59
Apr	1.12	1.05	.80+	1971	10	3.36	1978	.02	1985	7.8	3.6	.4	.0	.15	.24	.40	.55	.72	.90	1.11	1.37	1.72	2.30	2.86
May	1.25	1.07	1.06	1981	20	4.18	1998	.06	1976	7.7	3.5	.5	@	.12	.20	.37	.55	.74	.95	1.21	1.53	1.97	2.70	3.42
Jun	.94	.73	1.84	1992	25	3.72	1998	.00	1973	5.1	2.4	.3	.1	.02	.08	.20	.33	.48	.65	.87	1.14	1.52	2.18	2.83
Jul	.62	.39	1.77	1987	2	4.70	1987	.00+	1994	3.0	1.5	.3	.1	.00	.00	.04	.13	.24	.37	.53	.74	1.05	1.59	2.13
Aug	.51	.21	1.52	1987	24	3.16	1976	.00+	2000	2.6	1.2	.4	.1	.00	.00	.00	.02	.10	.21	.37	.58	.89	1.44	2.01
Sep	.60	.50	1.50	1985	8	1.88	1985	.00	1974	3.8	1.9	.2	@	.02	.07	.15	.24	.33	.44	.57	.74	.96	1.34	1.72
Oct	1.14	.77	2.83	1962	12	3.64	1981	.06	1978	6.1	2.8	.6	.2	.09	.16	.31	.47	.64	.84	1.08	1.39	1.81	2.51	3.21
Nov	1.39	1.03	2.80	1961	25	5.24	1981	.37+	1980	9.9	4.6	.6	.1	.24	.37	.57	.76	.95	1.16	1.40	1.69	2.08	2.70	3.30
Dec	1.66	1.25	3.02	1979	31	5.13	1995	.14	2000	9.6	4.4	1.0	.3	.15	.26	.49	.72	.97	1.25	1.59	2.02	2.61	3.58	4.54
Ann	14.81	14.13	3.37	Jan 1983	27	8.67	Mar 1995	.00+	Aug 2000	84.6	40.2	7.1	1.6	7.75	8.96	10.59	11.89	13.08	14.26	15.52	16.94	18.70	21.35	23.70

+ 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: 1959-2001

(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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COOP ID: 044838

Climate Division: CA 1

NWS Call Sign:

Elevation: 4,770 Feet

Lat: 41°44N

Lon: 121°30W

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	6.8	5.7	2	2	9.0	1993	7	14.9	1973	26	1993	10	20	1993	5.1	2.4	.9	.4	.0	9.2	5.2	1.9	.0
Feb	9.8	7.4	2	1	20.3	1999	9	56.5	1975	24	1975	4	14	1993	4.4	2.2	1.1	.4	.2	8.9	5.4	3.5	.9
Mar	7.5	5.7	1	1	11.0	1995	23	30.7	1995	20	1989	16	3	1995	4.0	2.3	.7	.4	.2	5.0	2.5	1.4	.3
Apr	3.0	.6	#	#	9.0	1978	4	15.3	1999	8	1982	4	2	1978	2.1	.8	.2	.1	.0	1.5	.3	.1	.0
May	1.0	.0	#	#	6.0	1988	5	6.0	1988	6	1988	5	#+	2000	.7	.3	.1	@	.0	.5	.1	@	.0
Jun	.3	.0	#	0	3.0	1976	3	3.0	1976	1	1995	7	#	1995	.2	.1	@	.0	.0	.1	.0	.0	.0
Jul	.0	.0	0	0	.5	1987	17	.5	1987	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	.2	1971	26	.2	1971	#	1971	26	#	1971	@	.0	.0	.0	.0	.0	.0	.0	.0
Oct	.3	.0	#	0	1.5	1971	31	3.5	1971	1+	1996	20	#+	1996	.4	.1	.0	.0	.0	.2	.0	.0	.0
Nov	2.9	2.1	#	#	5.0	1983	13	13.7	1985	7	1985	24	3	1985	2.6	1.0	.2	.1	.0	3.8	1.7	.5	.0
Dec	7.0	5.4	2	1	14.0	1998	3	26.3	1971	20	1992	30	10	1982	5.0	2.3	.6	.1	@	7.9	2.9	.7	.1
Ann	38.6	26.9	N/A	N/A	20.3	Feb 1999	9	56.5	Feb 1975	26	Jan 1993	10	20	Jan 1993	24.5	11.5	3.8	1.5	.4	37.1	18.1	8.1	1.3

+ 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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NWS Call Sign:

Elevation: 4,770 Feet

Lat: 41° 44N

Lon: 121° 30W

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	7/15	7/09	7/04	6/30	6/27	6/23	6/19	6/15	6/09
32	6/26	6/20	6/16	6/13	6/09	6/06	6/03	5/30	5/24
28	6/09	6/01	5/26	5/21	5/16	5/12	5/07	5/01	4/23
24	5/17	5/10	5/05	4/30	4/26	4/22	4/17	4/12	4/05
20	4/25	4/15	4/08	4/01	3/27	3/21	3/15	3/08	2/26
16	4/07	3/27	3/19	3/13	3/07	3/01	2/22	2/15	2/04
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	8/13	8/21	8/28	9/02	9/07	9/12	9/17	9/23	10/02
32	9/03	9/10	9/15	9/19	9/23	9/27	10/01	10/06	10/13
28	9/27	10/04	10/09	10/13	10/17	10/21	10/25	10/30	11/05
24	10/13	10/19	10/23	10/27	10/31	11/03	11/07	11/11	11/18
20	10/25	10/31	11/05	11/09	11/12	11/16	11/20	11/24	12/01
16	11/02	11/09	11/15	11/20	11/24	11/29	12/03	12/09	12/16
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	105	93	85	78	71	65	58	49	38
32	130	121	115	110	105	100	94	88	79
28	186	174	166	159	153	146	139	131	120
24	212	204	197	192	187	182	177	170	162
20	266	253	245	237	230	223	215	206	194
16	306	291	280	270	262	253	243	232	217

* 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	1023	832	806	614	404	188	47	53	180	436	790	1022	6395
60	868	692	651	469	269	99	12	15	96	300	640	867	4978
57	775	608	558	386	200	61	4	5	59	230	552	774	4212
55	713	552	498	332	161	41	1	2	40	188	493	712	3733
50	558	418	353	214	83	12	0	0	13	102	354	557	2664
32	117	67	30	11	0	0	0	0	0	1	38	116	380

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	117	160	247	387	627	844	1113	1110	864	597	238	117	6421
55	0	0	1	18	75	195	401	399	214	70	3	0	1376
57	0	0	0	12	52	155	342	340	173	50	1	0	1125
60	0	0	0	5	28	104	257	256	120	28	0	0	798
65	0	0	0	0	8	42	136	139	54	8	0	0	387
70	0	0	0	0	1	13	56	59	18	1	0	0	148

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	38	77	182	372	582	848	849	608	339	65	7	8	46	123	305	677	1259	2107	2956	3564	3903	3968	3975
45	0	10	27	96	243	433	694	694	461	212	21	0	0	10	37	133	376	809	1503	2197	2658	2870	2891	2891
50	0	0	2	40	140	297	539	540	326	114	4	0	0	0	2	42	182	479	1018	1558	1884	1998	2002	2002
55	0	0	0	10	67	178	388	389	206	44	0	0	0	0	0	10	77	255	643	1032	1238	1282	1282	1282
60	0	0	0	0	30	87	248	243	102	13	0	0	0	0	0	0	30	117	365	608	710	723	723	723
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	2	29	56	127	246	375	542	539	400	235	48	1	2	31	87	214	460	835	1377	1916	2316	2551	2599	2600

(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