

Climatography of the United States No. 20

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801
www.ncdc.noaa.gov

Station: CALAVERAS BIG TREES, CA

1971-2000

COOP ID: 041277

Climate Division: CA 5

NWS Call Sign:

Elevation: 4,694 Feet Lat: 38° 17N

Lon: 120° 19W

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	44.3	28.0	36.2	71+	1962	8	42.3	1986	4	1950	3	31.4	1979	893	0	.0	.0	8.9	2.0	24.4	.0
Feb	45.9	28.5	37.2	73	1954	23	44.6	1991	3	1962	27	32.0	1990	780	0	.0	.0	9.8	1.6	21.9	.0
Mar	48.7	30.1	39.4	77	1966	31	45.3	1972	8	1951	3	32.9	1991	779	0	.0	.0	14.7	.7	21.3	.0
Apr	55.3	33.3	44.3	85+	1973	27	50.3+	1987	15+	1975	8	36.0	1975	622	0	.0	.0	21.0	.2	14.5	.0
May	64.1	39.5	51.8	93	1984	29	58.4	1992	22	1973	5	42.2	1998	423	14	.0	@	27.3	.0	5.3	.0
Jun	74.1	46.6	60.4	99	1961	22	65.9	1977	28+	1971	1	54.9	1998	176	37	.0	.5	29.5	.0	.5	.0
Jul	81.2	52.1	66.7	100	1972	15	70.4	1984	32	1987	18	61.8	1987	55	105	@	2.8	31.0	.0	@	.0
Aug	80.8	51.7	66.3	98	1981	9	69.7	1981	32	1968	21	60.2	1976	53	93	.0	2.7	31.0	.0	.0	.0
Sep	74.0	47.3	60.7	96	1955	5	65.9	1974	28	1971	27	52.2	1986	178	47	.0	.7	29.5	.0	.4	.0
Oct	63.7	40.2	52.0	88+	1980	3	58.4	1988	20	1971	29	45.9	1984	417	12	.0	.0	27.4	.0	4.6	.0
Nov	50.5	32.1	41.3	80	1955	10	48.7	1995	12	1958	17	32.6	1994	711	0	.0	.0	15.5	.5	16.7	.0
Dec	44.7	28.2	36.5	78+	1958	4	41.8	1989	0+	1972	10	28.4	1971	885	0	.0	.0	9.9	2.5	23.5	.1
Ann	60.6	38.1	49.4	100	Jul 1972	15	70.4	Jul 1984	0+	Dec 1972	10	28.4	Dec 1971	5972	308	@	6.7	255.5	7.5	133.1	.1

+ 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

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Elevation: 4,694 Feet Lat: 38°17N

Lon: 120°19W

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	10.77	8.71	7.85+	1997	2	28.09	1997	.47	1976	10.6	9.4	6.3	4.0	.77	1.45	2.83	4.31	5.96	7.87	10.16	13.07	17.11	23.92	30.66
Feb	9.94	8.97	8.10	1963	1	36.32	1986	.69	1988	11.1	9.1	5.5	3.3	.94	1.65	3.00	4.38	5.88	7.59	9.60	12.12	15.58	21.34	26.98
Mar	9.02	7.28	5.27	1974	2	25.31	1995	.55	1997	12.1	9.9	5.4	3.3	1.10	1.81	3.08	4.34	5.67	7.16	8.88	11.02	13.91	18.68	23.30
Apr	4.14	3.08	4.52	1982	11	12.08	1978	.49	1977	7.9	6.1	2.8	1.5	.59	.93	1.52	2.10	2.70	3.36	4.12	5.05	6.31	8.37	10.34
May	2.18	1.72	4.57	1957	19	8.45	1995	.00	1985	5.6	3.8	1.6	.6	.04	.16	.42	.72	1.07	1.48	1.98	2.63	3.55	5.12	6.69
Jun	.74	.48	1.84	1970	9	3.51	1993	.00+	1994	2.3	1.5	.4	.2	.00	.00	.00	.09	.24	.41	.63	.91	1.30	1.98	2.65
Jul	.28	.00	2.17	1974	10	3.51	1974	.00+	2000	.9	.5	.1	.1	.00	.00	.00	.00	.00	.00	.01	.13	.39	.93	1.54
Aug	.22	.00	2.21	1976	15	3.58	1976	.00+	1998	.8	.3	.1	.1	.00	.00	.00	.00	.00	.00	.00	.04	.20	.68	1.18
Sep	1.07	.32	4.47	1959	19	5.12	1978	.00+	1995	3.0	1.6	.7	.4	.00	.00	.01	.09	.23	.44	.73	1.15	1.80	3.00	4.27
Oct	3.14	2.26	4.96	1969	16	10.90	1982	.00+	1995	4.9	3.6	1.9	1.1	.00	.07	.39	.80	1.31	1.93	2.71	3.73	5.21	7.79	10.41
Nov	6.47	5.34	6.70	1950	18	23.98	1983	.43	1995	8.5	7.0	3.9	2.1	.52	.95	1.80	2.69	3.68	4.81	6.16	7.87	10.22	14.18	18.07
Dec	7.45	6.01	6.32+	1964	23	23.56	1996	.00	1989	9.0	7.7	4.6	2.7	.36	1.02	2.14	3.23	4.40	5.71	7.25	9.17	11.78	16.12	20.35
Ann	55.42	51.74	8.10	Feb 1963	1	36.32	Feb 1986	.00+	Jul 2000	76.7	60.5	33.3	19.4	25.43	30.30	37.03	42.48	47.56	52.65	58.11	64.34	72.18	84.03	94.72

+ 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

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Climate Division: CA 5

NWS Call Sign:

Elevation: 4,694 Feet

Lat: 38° 17N

Lon: 120° 19W

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	25.4	22.5	10	3	19.0	1974	6	89.4	1982	76	1971	14	52	1971	5.4	4.8	2.9	2.1	.8	-9.9	-9.9	-9.9	-9.9
Feb	22.3	20.8	15	8	19.0	1979	23	60.5	1998	63	1979	26	46	1971	5.7	4.9	3.0	1.7	.6	-9.9	-9.9	-9.9	-9.9
Mar	24.8	19.5	9	3	18.0	1975	22	85.0	1991	67	1982	31	41	1973	5.7	4.9	3.0	2.0	.6	-9.9	-9.9	-9.9	-9.9
Apr	12.2	5.2	6	#	21.0	1982	1	58.2	1975	84	1982	2	64	1982	3.0	2.6	1.5	.8	.3	1.4	.9	.5	.2
May	1.8	.0	#	0	6.0	1979	8	13.5	1998	20	1975	4	3	1975	1.0	.6	.3	.1	.0	.4	@	@	.0
Jun	.1	.0	#	0	1.5	1995	16	1.5	1995	#	1995	7	#	1995	@	@	.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	.5	1971	30	.5	1971	1	1971	30	#	1971	@	.0	.0	.0	.0	@	.0	.0	.0
Oct	.8	.0	#	0	6.0	1985	21	8.0	1985	7	1985	22	1	1985	.4	.3	.1	@	.0	.3	.1	.1	.0
Nov	6.5	2.8	1	#	12.0	1994	26	45.0	1994	20	1985	12	6	1985	2.4	1.9	.9	.5	.1	1.0	.4	.1	.0
Dec	15.1	8.8	3	#	27.0	1996	22	55.5	1988	30	1987	30	23	1971	3.9	3.5	2.2	1.4	.3	1.6	1.1	.7	.1
Ann	109.0	79.6	N/A	N/A	27.0	Dec 1996	22	89.4	Jan 1982	84	Apr 1982	2	64	Apr 1982	27.5	23.5	13.9	8.6	2.7	-9.9	-9.9	-9.9	-9.9

+ 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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Climate Division: CA 5

NWS Call Sign:

Elevation: 4,694 Feet

Lat: 38° 17N

Lon: 120° 19W

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	6/28	6/22	6/17	6/13	6/10	6/06	6/02	5/29	5/23
32	6/19	6/11	6/04	5/30	5/25	5/20	5/15	5/09	5/01
28	5/24	5/15	5/09	5/04	4/29	4/23	4/18	4/12	4/03
24	5/04	4/22	4/13	4/05	3/29	3/22	3/14	3/05	2/21
20	4/21	4/05	3/24	3/13	3/03	2/22	2/11	1/29	1/09
16	3/18	2/27	2/13	1/31	1/19	1/05	12/17	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	9/08	9/17	9/23	9/29	10/04	10/09	10/14	10/21	10/30
32	9/25	10/03	10/09	10/14	10/18	10/23	10/27	11/02	11/10
28	10/16	10/23	10/28	11/01	11/05	11/09	11/14	11/19	11/26
24	11/02	11/10	11/16	11/21	11/26	12/01	12/06	12/12	12/20
20	11/10	11/22	12/01	12/08	12/15	12/23	12/30	1/09	1/23
16	11/24	12/09	12/21	1/01	1/12	1/25	2/13	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	143	133	127	121	115	110	104	98	88
32	179	168	159	152	145	138	131	123	111
28	226	214	205	197	190	183	175	166	154
24	290	274	261	251	241	232	221	209	192
20	>365	332	313	298	286	274	261	247	227
16	>365	>365	>365	>365	>365	343	318	297	272

* 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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Climate Division: CA 5

NWS Call Sign:

Elevation: 4,694 Feet Lat: 38°17N Lon: 120°19W

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	893	780	779	622	423	176	55	53	178	417	711	885	5972
60	738	640	640	477	291	88	13	11	94	285	562	730	4569
57	645	556	547	393	225	52	4	3	57	218	475	637	3812
55	583	500	486	340	186	34	1	1	39	178	418	575	3341
50	428	363	341	221	106	10	0	0	12	97	286	426	2290
32	37	31	25	12	2	0	0	0	0	1	22	52	182

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	166	176	253	381	616	851	1073	1062	859	619	301	190	6547
55	0	0	1	19	87	195	362	351	208	83	7	0	1313
57	0	0	0	12	63	153	302	290	166	61	4	0	1051
60	0	0	0	5	37	99	218	206	113	35	1	0	714
65	0	0	0	0	14	37	105	93	47	12	0	0	308
70	0	0	0	0	3	9	34	25	14	3	0	0	88

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	38	48	76	181	386	620	832	822	628	386	113	39	38	86	162	343	729	1349	2181	3003	3631	4017	4130	4169
45	2	12	24	89	253	472	677	667	483	256	45	2	2	14	38	127	380	852	1529	2196	2679	2935	2980	2982
50	0	0	0	34	145	333	524	513	341	142	12	0	0	0	0	34	179	512	1036	1549	1890	2032	2044	2044
55	0	0	0	5	69	205	370	360	212	64	0	0	0	0	0	5	74	279	649	1009	1221	1285	1285	1285
60	0	0	0	0	23	104	228	214	105	23	0	0	0	0	0	0	23	127	355	569	674	697	697	697
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	27	34	54	120	241	389	530	522	385	232	68	26	27	61	115	235	476	865	1395	1917	2302	2534	2602	2628

(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