

# Climatology of the United States

No. 20

1971-2000

Station: SACRAMENTO 5 ESE, CA

COOP ID: 047633

Climate Division: CA 2

NWS Call Sign:

Elevation: 38 Feet

Lat: 38° 33N

Lon: 121° 25W

## 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	55.1	41.3	48.2	75	1994	28	52.6	1986	19+	1888	15	43.2	1972	521	0	.0	.0	25.2	.0	1.4	.0
Feb	62.2	44.7	53.5	80+	1985	27	57.6	1991	21	1884	13	48.1	1989	324	0	.0	.0	27.4	.0	.4	.0
Mar	67.0	47.1	57.1	90+	1988	26	61.1	1997	29	1880	15	52.7	1991	258	11	.0	@	30.9	.0	@	.0
Apr	73.9	49.5	61.7	97	1996	30	65.9	1992	34+	1953	8	56.6	1975	136	37	.0	1.2	30.0	.0	.0	.0
May	81.6	54.1	67.9	107	1984	28	74.5	1997	26	1896	21	61.5	1977	65	154	.8	7.2	31.0	.0	.0	.0
Jun	88.8	58.4	73.6	112	1934	30	79.2	1981	43	1929	1	69.1	1980	6	263	4.2	13.7	30.0	.0	.0	.0
Jul	93.8	60.9	77.4	114	1925	17	81.6	1988	47	1901	3	72.9	1987	0	382	7.4	22.5	31.0	.0	.0	.0
Aug	92.5	60.8	76.7	111+	1998	4	80.7	1998	48+	1921	13	73.4	1980	0	361	6.0	20.4	31.0	.0	.0	.0
Sep	88.6	59.0	73.8	109+	1955	2	77.3	1979	44+	1934	25	67.2	1986	6	270	2.7	14.7	30.0	.0	.0	.0
Oct	79.2	53.6	66.4	102+	2001	2	70.7	1991	34+	1946	28	61.8	1984	66	110	.4	4.1	31.0	.0	.0	.0
Nov	64.2	45.9	55.1	86+	1997	1	61.6	1995	27	1880	28	49.8	1994	308	9	.0	.0	29.4	.0	.2	.0
Dec	55.0	40.4	47.7	72+	1979	5	52.5	1996	17	1932	11	42.6	1985	536	0	.0	.0	24.6	@	2.7	.0
Ann	75.2	51.3	63.3	114	Jul 1925	17	81.6	Jul 1988	17	Dec 1932	11	42.6	Dec 1985	2226	1597	21.5	83.8	351.5	@	4.7	.0

+ 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](http://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: 1877-2001

(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: SACRAMENTO 5 ESE, CA**

**COOP ID: 047633**

**Climate Division: CA 2**

**NWS Call Sign:**

**Elevation: 38 Feet**

**Lat: 38°33N**

**Lon: 121°25W**

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	4.18	3.71	3.14	1943	21	11.75	1995	.23	1984	11.0	6.8	3.0	1.1	.37	.65	1.21	1.79	2.43	3.15	4.01	5.10	6.59	9.07	11.52
Feb	3.77	3.16	3.21	1986	17	10.30	1986	.19	1995	9.4	6.5	2.8	1.0	.31	.57	1.06	1.59	2.16	2.82	3.60	4.59	5.95	8.22	10.47
Mar	3.15	2.61	2.62	1884	9	8.30	1983	.07	1994	9.6	6.7	2.4	.5	.30	.53	.95	1.39	1.87	2.41	3.04	3.84	4.93	6.74	8.51
Apr	1.17	.94	5.28	1880	20	4.36	1983	.11	1985	5.2	2.9	.8	.2	.17	.26	.43	.59	.76	.95	1.16	1.43	1.78	2.36	2.91
May	.60	.25	1.94	1889	5	3.04	1998	.00+	1992	3.1	1.3	.3	.1	.00	.00	.00	.03	.10	.22	.38	.63	1.01	1.72	2.48
Jun	.18	.05	.81	1993	4	.94	1993	.00+	1996	1.2	.5	.1	.0	.00	.00	.00	.00	.02	.07	.13	.21	.32	.51	.69
Jul	.05	.00	.86	1974	8	.90	1974	.00+	2000	.3	.1	@	.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.09	.29
Aug	.05	.00	.67	1953	29	.57	1976	.00+	2000	.5	.2	.0	.0	.00	.00	.00	.00	.00	.00	.00	.00	.02	.14	.28
Sep	.37	.07	3.13	1918	12	3.15	1989	.00+	1999	1.7	.9	.1	@	.00	.00	.00	.00	.00	.05	.18	.37	.65	1.16	1.69
Oct	1.00	.79	3.63	1962	13	2.69	1982	.00+	1995	3.9	2.4	.7	.2	.00	.04	.17	.32	.48	.67	.91	1.21	1.64	2.36	3.08
Nov	2.59	1.88	3.02	1885	17	7.13	1981	.00	1995	7.6	4.9	1.8	.6	.07	.25	.60	.97	1.38	1.86	2.43	3.16	4.18	5.90	7.60
Dec	2.76	2.85	3.34	1890	31	6.65	1983	.00	1989	9.0	5.1	2.2	.4	.14	.39	.81	1.22	1.65	2.13	2.70	3.40	4.36	5.95	7.49
Ann	19.87	18.41	5.28	Apr 1880	20	11.75	Jan 1995	.00+	Aug 2000	62.5	38.3	14.2	4.1	9.41	11.13	13.49	15.40	17.16	18.93	20.82	22.98	25.68	29.76	33.43

+ 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: 1877-2001

(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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**Climate Division: CA 2**

**NWS Call Sign:**

**Elevation: 38 Feet**

**Lat: 38°33N**

**Lon: 121°25W**

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	0	.0	0	0	.0	0	0	0	0	0	0	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9
Feb	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9
Mar	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	-9.9	-9.9	-9.9	-9.9
Apr	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	-9.9	-9.9	-9.9	-9.9
May	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	-9.9	-9.9	-9.9	-9.9
Jun	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	-9.9	-9.9	-9.9	-9.9
Jul	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	-9.9	-9.9	-9.9	-9.9
Aug	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	-9.9	-9.9	-9.9	-9.9
Sep	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	-9.9	-9.9	-9.9	-9.9
Oct	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	-9.9	-9.9	-9.9	-9.9
Nov	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	-9.9	-9.9	-9.9	-9.9
Dec	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	-9.9	-9.9	-9.9	-9.9
Ann	.0	.0	N/A	N/A	.0	0	0	.0	0	0	0	0	0	0	-9.9	-9.9	-9.9	-9.9	-9.9	-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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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	3/14	3/02	2/21	2/14	2/07	1/31	1/24	1/16	1/04
32	2/13	2/01	1/24	1/16	1/07	12/28	12/10	0/00	0/00
28	1/06	12/12	0/00	0/00	0/00	0/00	0/00	0/00	0/00
24	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
20	0/00	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	11/14	11/21	11/25	11/29	12/03	12/07	12/11	12/16	12/22
32	11/26	12/05	12/12	12/18	12/25	1/02	1/16	0/00	0/00
28	12/26	1/20	0/00	0/00	0/00	0/00	0/00	0/00	0/00
24	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
20	0/00	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	340	323	313	304	296	289	280	271	257
32	>365	>365	>365	>365	>365	347	325	311	296
28	>365	>365	>365	>365	>365	>365	>365	>365	>365
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

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	521	324	258	136	65	6	0	0	6	66	308	536	2226
60	368	192	137	55	22	1	0	0	0	21	185	384	1365
57	282	124	85	24	10	0	0	0	0	8	125	298	956
55	227	88	56	13	5	0	0	0	0	4	93	243	729
50	117	26	14	1	0	0	0	0	0	0	36	130	324
32	0	0	0	0	0	0	0	0	0	0	0	0	0

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	502	600	776	891	1112	1248	1405	1384	1254	1066	692	487	11417
55	16	44	119	214	404	558	692	671	564	357	95	17	3751
57	9	25	85	165	347	498	630	609	504	299	67	10	3248
60	2	9	44	106	266	408	537	516	414	219	36	2	2559
65	0	0	11	37	154	263	382	361	270	110	9	0	1597
70	0	0	0	8	75	138	231	211	145	41	1	0	850

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	266	400	537	657	875	1015	1167	1144	1024	826	463	256	266	666	1203	1860	2735	3750	4917	6061	7085	7911	8374	8630
45	132	258	382	507	720	865	1012	989	874	671	314	127	132	390	772	1279	1999	2864	3876	4865	5739	6410	6724	6851
50	45	128	230	357	565	715	857	834	724	516	176	40	45	173	403	760	1325	2040	2897	3731	4455	4971	5147	5187
55	3	42	104	218	410	565	702	679	574	361	77	1	3	45	149	367	777	1342	2044	2723	3297	3658	3735	3736
60	0	2	34	103	259	415	547	524	424	222	20	0	0	2	36	139	398	813	1360	1884	2308	2530	2550	2550
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	103	190	286	385	539	637	724	720	647	510	231	103	103	293	579	964	1503	2140	2864	3584	4231	4741	4972	5075

(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](http://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](http://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"><li>a. Temperature/ Precipitation Tables<ol style="list-style-type: none"><li>1. 1971-2000 Monthly Normals</li><li>2. Cooperative Summary of the Day</li><li>3. National Weather Service station records</li><li>4. 1971-2000 serially complete daily data</li></ol></li><li>b. Degree Day Table<ol style="list-style-type: none"><li>1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals</li><li>2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data</li></ol></li></ol> | <ol style="list-style-type: none"><li>c. Snow Tables<ol style="list-style-type: none"><li>1. Snow Climatology</li><li>2. Cooperative Summary of the Day</li></ol></li><li>d. Freeze Data Table<br/>1971-2000 serially complete daily data</li></ol> |
|---|---|

## References

U.S. Climate Normals 1971-2000, [www.ncdc.noaa.gov/normal.html](http://www.ncdc.noaa.gov/normal.html)  
U.S. Climate Normals 1971-2000-Products Clim20, [www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html)  
Snow Climatology Project Description, [www.ncdc.noaa.gov/oa/climate/monitoring/snowclim/mainpage.html](http://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](http://www1.ncdc.noaa.gov/pub/data/special/serialcomplete_jam_0900.pdf)