

Climatology of the United States

No. 20

1971-2000

Station: VACAVILLE, CA

COOP ID: 049200

Climate Division: CA 2

NWS Call Sign:

Elevation: 110 Feet

Lat: 38° 24N

Lon: 121° 58W

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	55.6	38.8	47.2	81	1962	8	51.4	1995	18	1949	5	41.8	1972	553	0	.0	.0	25.1	.0	8.4	.0
Feb	62.1	42.1	52.1	82	1968	26	56.5	1991	16	1989	5	48.4	1990	362	0	.0	.0	27.5	.1	3.8	.0
Mar	66.9	44.9	55.9	90	1988	26	60.0	1986	26	1971	5	51.0	1991	287	5	.0	@	30.9	.0	.9	.0
Apr	74.1	47.4	60.8	99	1949	21	65.2	1987	29	1976	1	54.6	1975	163	36	.0	.8	30.0	.0	.3	.0
May	82.3	51.9	67.1	105	2001	31	72.9	1992	32	1974	18	59.8	1998	66	133	.3	6.6	31.0	.0	@	.0
Jun	90.5	56.4	73.5	115	1961	15	79.1	1981	36	1952	12	68.8	1980	5	258	4.0	14.4	30.0	.0	.0	.0
Jul	95.8	58.8	77.3	113	1961	11	83.5	1988	40	1978	21	73.5	1987	0	380	7.4	23.8	31.0	.0	.0	.0
Aug	94.8	57.8	76.3	114	1950	20	79.4	1996	39	1955	22	73.5	1976	0	350	6.6	21.5	31.0	.0	.0	.0
Sep	90.4	55.5	73.0	112+	1955	3	76.3	1984	39	1948	27	67.2	1986	6	244	2.6	15.8	30.0	.0	.0	.0
Oct	80.5	50.3	65.4	105	2001	1	70.0	1991	31	1955	31	60.9	1971	75	88	.3	4.2	31.0	.0	@	.0
Nov	65.3	42.8	54.1	91	1955	9	60.2	1995	22	1948	28	49.4	1994	333	4	.0	.0	29.6	.0	2.0	.0
Dec	56.2	37.7	47.0	78	1958	12	51.5	1995	17	1990	20	43.0+	1990	560	0	.0	.0	24.9	.0	8.1	.0
Ann	76.2	48.7	62.5	115	Jun 1961	15	83.5	Jul 1988	16	Feb 1989	5	41.8	Jan 1972	2410	1498	21.2	87.1	352.0	.1	23.5	.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

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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No. 20 1971-2000

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

Station: VACAVILLE, CA

COOP ID: 049200

Climate Division: CA 2

NWS Call Sign:

Elevation: 110 Feet

Lat: 38°24N

Lon: 121°58W

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	5.47	4.97	5.45	1967	21	16.69	1995	.09	1991	11.1	7.3	3.5	1.8	.31	.63	1.29	2.03	2.87	3.86	5.06	6.60	8.76	12.44	16.10	
Feb	5.03	3.94	4.40	1986	17	15.14	1998	.06	1971	9.5	6.7	3.5	1.7	.21	.45	1.01	1.67	2.44	3.37	4.52	6.02	8.15	11.83	15.53	
Mar	3.74	3.25	2.74	1982	31	10.67	1991	.02	1972	8.8	6.6	2.6	.8	.21	.43	.88	1.39	1.97	2.64	3.47	4.52	6.00	8.52	11.03	
Apr	1.13	.87	2.72	1958	2	5.83	1982	.04	1973	4.0	2.2	.5	.2	.05	.11	.23	.38	.56	.77	1.02	1.35	1.83	2.64	3.45	
May	.60	.16	1.51	1996	16	3.38	1998	.00+	1992	2.8	1.4	.3	.1	.00	.00	.00	.02	.08	.19	.36	.61	1.01	1.76	2.56	
Jun	.09	.00	.93	1967	2	.92	1993	.00+	1996	.6	.3	@	.0	.00	.00	.00	.00	.00	.00	.00	.02	.10	.29	.50	
Jul	.05	.00	1.22	1974	8	1.22	1974	.00+	2000	.1	.1	@	@	**	**	**	**	**	**	**	**	**	**	**	
Aug	.03	.00	.28	1976	18	.55	1976	.00+	2000	.3	.1	.0	.0	**	**	**	**	**	**	**	**	**	**	**	
Sep	.29	.08	3.73	1959	18	1.64	1989	.00+	1997	1.5	.9	.2	.0	.00	.00	.00	.00	.00	.08	.18	.32	.53	.88	1.25	
Oct	1.19	.84	4.05	1962	13	3.46	1975	.00+	1995	3.3	2.2	.9	.3	.00	.00	.16	.33	.54	.78	1.07	1.45	1.98	2.89	3.80	
Nov	3.27	2.54	2.77	1950	15	8.93	1973	.00	1986	7.0	4.7	2.3	1.0	.02	.12	.43	.82	1.33	1.96	2.76	3.84	5.40	8.16	10.97	
Dec	3.66	2.85	5.85	1955	19	12.32	1996	.01	1989	8.3	5.4	2.5	.9	.18	.37	.80	1.28	1.84	2.51	3.34	4.40	5.90	8.47	11.05	
Ann	24.55	22.66	5.85	Dec 1955	19	16.69	Jan 1995	.00+	Aug 2000	57.3	37.9	16.3	6.8	9.99	12.24	15.42	18.04	20.51	23.01	25.71	28.83	32.78	38.81	44.30	

+ 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:
www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

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Station: VACAVILLE, CA

COOP ID: 049200

Climate Division: CA 2

NWS Call Sign:

Elevation: 110 Feet

Lat: 38°24N

Lon: 121°58W

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	.1	.0	0	0	2.0	1973	8	2.0	1973	0	0	0	0	0	@	@	.0	.0	.0	.0	.0	.0	.0
Feb	.0	.0	0	0	.8	1976	5	.8	1976	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	.1	.0	#	0	2.0	1988	27	2.0	1988	#+	1998	20	#+	1998	.1	@	.0	.0	.0	.0	.0	.0	.0
Ann	.2	.0	N/A	N/A	2.0+	Dec 1988	27	2.0+	Dec 1988	#+	Dec 1998	20	#+	Dec 1998	.1	@	.0	.0	.0	.0	.0	.0	.0

+ 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

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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	5/06	4/24	4/16	4/09	4/02	3/26	3/19	3/10	2/26
32	4/15	3/31	3/20	3/11	3/02	2/21	2/12	2/01	1/17
28	2/18	2/06	1/29	1/21	1/14	1/06	12/27	12/09	0/00
24	1/21	1/11	1/02	12/22	0/00	0/00	0/00	0/00	0/00
20	1/03	12/11	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	10/27	11/02	11/06	11/10	11/14	11/17	11/21	11/25	12/01
32	11/06	11/13	11/18	11/22	11/26	11/29	12/04	12/08	12/15
28	11/24	12/03	12/09	12/14	12/20	12/26	1/03	0/00	0/00
24	12/19	12/30	1/09	1/22	0/00	0/00	0/00	0/00	0/00
20	12/27	1/18	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	270	255	243	234	225	216	206	195	180
32	317	300	288	277	268	258	248	236	219
28	>365	>365	>365	362	340	328	317	306	292
24	>365	>365	>365	>365	>365	>365	>365	>365	350
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	553	362	287	163	66	5	0	0	6	75	333	560	2410
60	398	226	155	76	21	0	0	0	0	24	202	405	1507
57	308	153	96	39	9	0	0	0	0	9	136	317	1067
55	251	111	64	23	5	0	0	0	0	4	100	260	818
50	128	37	15	5	0	0	0	0	0	0	38	137	360
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	470	562	741	863	1089	1244	1403	1373	1229	1035	661	463	11133
55	8	29	92	196	381	554	690	660	539	326	71	10	3556
57	3	15	61	152	324	494	628	598	479	269	47	5	3075
60	0	4	28	98	243	404	535	505	389	191	23	0	2420
65	0	0	5	36	133	258	380	350	244	88	4	0	1498
70	0	0	0	9	57	132	232	198	121	28	0	0	777

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	206	327	460	582	798	964	1113	1085	961	767	405	212	206	533	993	1575	2373	3337	4450	5535	6496	7263	7668	7880
45	89	186	306	433	643	814	958	930	811	612	257	92	89	275	581	1014	1657	2471	3429	4359	5170	5782	6039	6131
50	27	76	164	285	488	664	803	775	661	457	133	29	27	103	267	552	1040	1704	2507	3282	3943	4400	4533	4562
55	1	18	57	157	335	514	648	620	511	305	49	0	1	19	76	233	568	1082	1730	2350	2861	3166	3215	3215
60	0	0	10	61	198	364	493	465	361	165	8	0	0	0	10	71	269	633	1126	1591	1952	2117	2125	2125
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	101	179	267	364	494	587	669	652	591	476	232	107	101	280	547	911	1405	1992	2661	3313	3904	4380	4612	4719

(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