U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

Climatography of the United States No. 20 1971-2000

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

Station: STOCKTON FIRE STN # 4, CA **COOP ID: 048560**

Climate Division: CA 5 **NWS Call Sign:** **Elevation: 12 Feet** **Lat: 38˚00N** **Lon: 121˚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	54.9	36.4	45.7	72+	1998	18	51.6	1995	17	1988	24	40.9	1985	600	0	.0	.0	24.6	.0	9.6	.0
Feb	62.3	39.8	51.1	78+	1992	28	54.7	1995	13	1989	7	46.6	1990	391	0	.0	.0	27.1	@	3.3	.0
Mar	67.0	42.7	54.9	87	1988	27	60.0	1997	25	1971	2	50.1	1991	322	7	.0	.0	31.0	.0	1.3	.0
Apr	73.6	45.4	59.5	95	1985	14	63.7	1987	27	2001	5	53.4	1975	186	20	.0	.7	30.0	.0	.2	.0
May	81.0	50.4	65.7	103+	2001	22	72.2	1997	34+	1989	21	60.4	1977	87	108	.5	5.5	31.0	.0	.0	.0
Jun	88.0	54.7	71.4	111	1961	16	77.5	1981	31	1990	8	67.2	1982	12	203	2.6	11.7	30.0	.0	@	.0
Jul	92.3	57.2	74.8	112	1972	15	79.6	1996	40+	1989	1	68.9	1987	2	304	4.3	20.7	31.0	.0	.0	.0
Aug	91.8	56.8	74.3	110	1998	5	78.4	1996	37	1990	26	71.0	1976	1	290	4.4	19.2	31.0	.0	.0	.0
Sep	88.4	54.1	71.3	107	1950	3	75.8	1984	29	1989	24	61.7	1986	19	206	1.9	13.7	30.0	.0	.1	.0
Oct	79.7	48.0	63.9	102+	2001	3	66.8	1991	30+	1989	27	59.9	1984	98	62	.2	4.1	31.0	.0	.2	.0
Nov	65.3	40.6	53.0	88	1950	5	60.0	1995	23+	1993	25	48.9	1985	364	3	.0	.0	29.6	.0	2.9	.0
Dec	55.7	35.3	45.5	73	1995	1	51.1	1995	15+	1990	26	39.9	1990	604	0	.0	.0	25.7	.0	10.1	.0
Ann	75.0	46.8	60.9	112	Jul 1972	15	79.6	Jul 1996	13	Feb 1989	7	39.9	Dec 1990	2686	1203	13.9	75.6	352.0	@	27.7	.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/normals/usnormals.html

(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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Precipitation (inches)

Precipitation Totals

Month	Means/ Medians(1) Mean	Means/ Medians(1) Median	Extremes Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year
Jan	3.34	2.60	2.76	1982	5	8.44	1995	.20	1976
Feb	3.12	2.87	3.20	1963	1	9.93	1998	.35	1988
Mar	2.66	2.36	1.46	1995	10	7.00	1982	.03	1972
Apr	1.17	1.10	2.24	1958	3	3.45	1982	.00	1992
May	.53	.22	1.62+	1996	16	3.23	1998	.00+	1992
Jun	.10	.02	.64	1964	9	.69	1993	.00+	1996
Jul	.05	.00	.45	1974	9	.56	1980	.00+	2000
Aug	.05	.00	.35	1976	15	.65	1976	.00+	1999
Sep	.34	.04	1.83	1959	19	2.51	1989	.00+	1997
Oct	.97	.79	2.90	1991	26	3.47	1991	.00+	1995
Nov	2.01	1.79	2.14	1983	11	6.06	1983	.00	1995
Dec	2.26	2.08	2.02	1955	23	6.49	1996	.00	1989
Ann	16.60	15.44	3.20	Feb 1963	1	9.93	Feb 1998	.00+	Jul 2000

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	9.9	6.8	2.4	.6
Feb	8.9	6.3	2.4	.6
Mar	9.1	6.3	2.0	.5
Apr	4.8	3.1	.6	.2
May	2.3	1.2	.2	.1
Jun	.8	.4	.0	.0
Jul	.3	.2	.0	.0
Aug	.4	.2	.0	.0
Sep	1.4	.8	.3	.1
Oct	3.2	2.3	.7	.1
Nov	6.2	4.0	1.5	.3
Dec	7.7	5.0	1.6	.3
Ann	55.0	36.6	11.7	2.8

Precipitation Probabilities (1)

Probability that the monthly/annual precipitation will be equal to or less than the indicated amount

Monthly/Annual Precipitation vs Probability Levels
These values were determined from the incomplete gamma distribution

Month	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	.24	.45	.87	1.33	1.84	2.44	3.15	4.05	5.31	7.43	9.53
Feb	.30	.53	.95	1.38	1.86	2.39	3.02	3.80	4.88	6.68	8.44
Mar	.15	.30	.63	.98	1.39	1.88	2.46	3.21	4.27	6.06	7.85
Apr	.05	.16	.33	.50	.69	.90	1.14	1.44	1.86	2.54	3.22
May	.00	.00	.00	.01	.09	.20	.36	.58	.92	1.52	2.14
Jun	.00	.00	.00	.00	.00	.01	.05	.11	.19	.32	.46
Jul	.00	.00	.00	.00	.00	.00	.00	.00	.00	.13	.31
Aug	.00	.00	.00	.00	.00	.00	.00	.00	.00	.13	.34
Sep	.00	.00	.00	.00	.00	.02	.10	.26	.54	1.10	1.71
Oct	.00	.03	.15	.28	.44	.63	.87	1.17	1.60	2.35	3.10
Nov	.03	.13	.37	.64	.96	1.34	1.81	2.42	3.28	4.76	6.25
Dec	.12	.33	.68	1.01	1.37	1.76	2.22	2.79	3.56	4.84	6.08
Ann	7.47	8.94	10.98	12.64	14.19	15.74	17.41	19.32	21.73	25.37	28.66

\+ 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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Climate Division: CA 5 **NWS Call Sign:** **Elevation: 12 Feet** **Lat: 38°00N** **Lon: 121°19W**

Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	.0	.0	0	0
Feb	.0	.0	0	0
Mar	.0	.0	0	0
Apr	.0	.0	0	0
May	.0	.0	0	0
Jun	.0	.0	0	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	.0	.0	0	0
Oct	.0	.0	0	0
Nov	.0	.0	0	0
Dec	.0	.0	0	0
Ann	.0	.0	N/A	N/A

Extremes (2)

Month	Highest Daily Snow Fall	Year	Day	Highest Monthly Snow Fall	Year	Highest Daily Snow Depth	Year	Day	Highest Monthly Mean Snow Depth	Year
Jan	.0	0	0	.0	0	0	0	0	0	0
Feb	.4	1976	6	.4	1976	0	0	0	0	0
Mar	.0	0	0	.0	0	0	0	0	0	0
Apr	.0	0	0	.0	0	0	0	0	0	0
May	.0	0	0	.0	0	0	0	0	0	0
Jun	.0	0	0	.0	0	0	0	0	0	0
Jul	.0	0	0	.0	0	0	0	0	0	0
Aug	.0	0	0	.0	0	0	0	0	0	0
Sep	.0	0	0	.0	0	0	0	0	0	0
Oct	.0	0	0	.0	0	0	0	0	0	0
Nov	.0	0	0	.0	0	0	0	0	0	0
Dec	.0	0	0	.0	0	0	0	0	0	0
Ann	.4	Feb 1976	6	.4	Feb 1976	0	0	0	0	0

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	.0	.0	.0	.0	.0
Feb	@	.0	.0	.0	.0
Mar	.0	.0	.0	.0	.0
Apr	.0	.0	.0	.0	.0
May	.0	.0	.0	.0	.0
Jun	.0	.0	.0	.0	.0
Jul	.0	.0	.0	.0	.0
Aug	.0	.0	.0	.0	.0
Sep	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0
Nov	.0	.0	.0	.0	.0
Dec	.0	.0	.0	.0	.0
Ann	@	.0	.0	.0	.0

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	.0	.0	.0	.0
Feb	.0	.0	.0	.0
Mar	.0	.0	.0	.0
Apr	.0	.0	.0	.0
May	.0	.0	.0	.0
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.0	.0	.0	.0
Oct	.0	.0	.0	.0
Nov	.0	.0	.0	.0
Dec	.0	.0	.0	.0
Ann	.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	5/23	5/09	4/29	4/20	4/12	4/04	3/26	3/16	3/02
32	4/10	3/27	3/16	3/07	2/27	2/18	2/09	1/30	1/15
28	3/03	2/18	2/08	1/30	1/21	1/12	1/02	12/16	0/00
24	2/05	1/23	1/13	1/03	12/21	0/00	0/00	0/00	0/00
20	12/25	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	10/04	10/14	10/21	10/27	11/01	11/07	11/13	11/20	11/29
32	10/27	11/04	11/10	11/15	11/20	11/25	11/30	12/06	12/15
28	11/15	11/24	12/01	12/07	12/13	12/19	12/27	1/11	0/00
24	12/08	12/16	12/22	12/29	1/07	0/00	0/00	0/00	0/00
20	1/18	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	262	242	227	214	202	190	178	163	142
32	318	300	287	276	266	255	244	231	213
28	>365	>365	>365	341	326	314	303	291	275
24	>365	>365	>365	>365	>365	>365	362	337	319
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	600	391	322	186	87	12	2	1	19	98	364	604	2686
60	445	253	189	87	30	1	0	0	3	33	228	449	1718
57	358	177	128	46	14	0	0	0	0	13	159	358	1253
55	300	132	94	27	7	0	0	0	0	6	120	302	988
50	173	50	32	5	0	0	0	0	0	1	50	171	482
32	2	0	0	0	0	0	0	0	0	0	0	1	3

Base — Cooling Degree Days (1)

Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	425	534	709	824	1044	1181	1325	1311	1178	987	629	420	10567
55	10	21	90	161	339	491	612	598	488	280	59	8	3157
57	5	11	61	120	283	431	550	536	428	225	38	2	2690
60	0	3	30	71	206	342	457	443	341	152	17	0	2062
65	0	0	7	20	108	203	304	290	206	62	3	0	1203
70	0	0	0	3	42	94	165	150	104	17	0	0	575

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	190	331	468	589	798	949	1081	1057	935	741	399	195	190	521	989	1578	2376	3325	4406	5463	6398	7139	7538	7733
45	84	193	315	439	643	799	926	902	785	586	252	79	84	277	592	1031	1674	2473	3399	4301	5086	5672	5924	6003
50	29	78	172	294	488	649	771	747	635	432	129	18	29	107	279	573	1061	1710	2481	3228	3863	4295	4424	4442
55	1	19	65	160	336	499	616	592	485	281	46	0	1	20	85	245	581	1080	1696	2288	2773	3054	3100	3100
60	0	0	18	65	199	349	461	437	336	153	8	0	0	0	18	83	282	631	1092	1529	1865	2018	2026	2026
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	100	190	274	364	501	595	665	652	586	470	235	113	100	290	564	928	1429	2024	2689	3341	3927	4397	4632	4745

(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:
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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.
Compete documentation for the 1971-2000 Normals is available on the internet from:
www.ncdc.noaa.gov/oa/climate/normals/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/normals.html
U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normals/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