

Climatology of the United States

No. 20

1971-2000

Station: STOCKTON AP, CA

COOP ID: 048558

Climate Division: CA 5

NWS Call Sign: SCK

Elevation: 22 Feet

Lat: 37° 54N

Lon: 121° 14W

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	53.8	38.1	46.0	93	1951	8	52.8	1995	16	1949	11	40.3	1972	592	0	.0	.0	23.0	.0	6.7	.0
Feb	61.2	41.0	51.1	78	1977	18	54.8	1992	22+	1989	7	47.4	1990	391	0	.0	.0	27.2	@	2.2	.0
Mar	66.1	43.6	54.9	87+	1988	26	59.5	1972	27	1971	2	49.7	1985	313	0	.0	.0	30.9	.0	.4	.0
Apr	73.3	46.7	60.0	100	1981	30	64.9	1977	32+	2001	8	53.3	1975	169	18	@	.7	30.0	.0	@	.0
May	81.3	52.1	66.7	107+	2001	31	72.3	1992	38+	1964	4	59.4	1998	54	111	.6	6.6	31.0	.0	.0	.0
Jun	88.9	57.5	73.2	111+	1961	21	80.5	1981	45+	1999	7	68.4	1998	6	254	4.1	14.2	30.0	.0	.0	.0
Jul	93.8	60.8	77.3	114	1972	14	81.8	1984	49+	1999	4	72.8	1987	0	390	7.1	22.2	31.0	.0	.0	.0
Aug	92.6	60.3	76.5	109+	1998	4	79.9	1996	47	1955	26	73.3	1976	0	363	5.5	20.3	31.0	.0	.0	.0
Sep	88.2	57.4	72.8	108+	1979	12	77.0	1979	42	1950	30	67.1	1986	5	247	1.9	13.9	30.0	.0	.0	.0
Oct	78.6	50.5	64.6	101+	1980	4	69.6	1991	33	1972	31	60.5	1998	76	73	.1	3.4	31.0	.0	.0	.0
Nov	64.0	42.1	53.1	85	1949	1	60.2	1995	25	1985	19	48.5	2000	348	0	.0	.0	29.3	.0	1.6	.0
Dec	53.8	36.7	45.3	73	1958	4	50.5	1995	17	1990	22	40.9	1990	609	0	.0	.0	23.4	.0	8.7	.0
Ann	74.6	48.9	61.8	114	Jul 1972	14	81.8	Jul 1984	16	Jan 1949	11	40.3	Jan 1972	2563	1456	19.3	81.3	347.8	@	19.6	.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

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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	2.71	2.13	3.01	1967	21	6.88	1995	.14	1976	9.5	6.2	1.8	.3	.22	.41	.76	1.14	1.55	2.03	2.59	3.30	4.29	5.93	7.55	
Feb	2.46	2.24	1.62	1986	17	8.22	1998	.29	1997	8.9	5.6	1.5	.3	.27	.45	.79	1.14	1.50	1.92	2.40	3.00	3.82	5.18	6.50	
Mar	2.28	2.13	1.54	1978	21	6.48	1982	.07	1972	9.3	5.9	1.3	.3	.15	.29	.58	.89	1.24	1.65	2.14	2.77	3.64	5.11	6.57	
Apr	.96	.92	1.50	1954	27	2.79	1974	.07	1989	4.8	2.8	.4	.1	.11	.18	.32	.45	.59	.75	.94	1.17	1.49	2.01	2.52	
May	.50	.14	1.66	1990	27	3.73	1998	.00+	1992	2.3	1.4	.3	.1	.00	.00	.00	.02	.08	.17	.31	.51	.83	1.44	2.09	
Jun	.09	.03	.34+	1964	8	.42	1993	.00+	1999	1.0	.4	.0	.0	.00	.00	.00	.00	.00	.04	.07	.11	.17	.25	.34	
Jul	.05	.00	.50	1980	2	.61	1974	.00+	2000	.4	.1	@	.0	.00	.00	.00	.00	.00	.00	.00	.00	.03	.15	.31	
Aug	.05	.00	.81	1975	18	.81	1975	.00+	2000	.4	.1	@	.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.06	.28	
Sep	.33	.04	2.64	1959	18	2.47	1982	.00+	1998	1.2	.6	.2	.1	.00	.00	.00	.00	.00	.02	.10	.26	.53	1.07	1.67	
Oct	.82	.63	1.44	1991	26	2.68	2000	.00+	1995	3.3	1.9	.5	.2	.00	.01	.09	.19	.32	.48	.69	.96	1.36	2.07	2.79	
Nov	1.77	1.34	2.18	1950	18	6.22	1972	.00	1995	6.7	4.1	1.1	.2	.03	.11	.32	.56	.84	1.18	1.59	2.13	2.90	4.22	5.55	
Dec	1.82	1.72	2.38	1955	22	4.54	1996	.03	1989	7.5	4.5	1.1	.2	.15	.28	.52	.77	1.05	1.37	1.74	2.22	2.87	3.97	5.04	
Ann	13.84	12.50	3.01	Jan 1967	21	8.22	Feb 1998	.00+	Aug 2000	55.3	33.6	8.2	1.8	6.19	7.42	9.13	10.52	11.82	13.12	14.52	16.12	18.14	21.21	23.97	

+ 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

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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	.0	.0	.0	.0	.0	.0	.0	.0	.0
Feb	.0	.0	0	0	.3	1976	5	.3	1976	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Mar	#	.0	0	0	#	1991	20	#+	1991	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	#	1994	18	#	1994	.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	#	.0	0	0	#	1988	27	#+	1988	#+	1988	27	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Ann	#	.0	N/A	N/A	.3	Feb 1976	5	.3	Feb 1976	#+	May 1994	18	#	May 1994	.0	.0	.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	4/16	4/06	3/29	3/23	3/16	3/10	3/04	2/24	2/14
32	3/14	3/04	2/25	2/19	2/13	2/07	2/01	1/24	1/12
28	2/14	2/03	1/26	1/18	1/11	1/04	12/26	12/12	0/00
24	1/20	1/04	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	11/02	11/07	11/10	11/13	11/16	11/18	11/21	11/25	11/29
32	11/14	11/20	11/23	11/27	11/30	12/03	12/07	12/11	12/17
28	11/25	12/04	12/10	12/16	12/21	12/27	1/03	1/13	0/00
24	12/20	1/06	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	278	266	258	250	244	237	229	221	209
32	333	314	304	295	288	281	274	265	254
28	>365	>365	>365	>365	344	331	320	308	293
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.

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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
65	592	391	313	169	54	6	0	0	5	76	348	609	2563
60	437	251	189	90	24	1	0	0	1	38	227	457	1715
57	351	176	127	51	10	0	0	0	0	17	159	369	1260
55	294	131	93	32	5	0	0	0	0	9	120	311	995
50	172	50	31	8	0	0	0	0	0	1	49	181	492
32	3	0	0	0	0	0	0	0	0	0	0	2	5

Cooling Degree Days (1)

Base	Cooling Degree Days (1)												
	Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
32	435	537	710	840	1079	1239	1409	1384	1231	1016	638	416	10934
55	5	17	60	168	367	549	696	671	541	306	45	3	3428
57	2	7	34	122	307	489	634	609	481	249	26	1	2961
60	1	1	10	68	223	400	541	516	392	170	9	0	2331
65	0	0	0	18	111	254	390	363	247	73	0	0	1456
70	0	0	0	3	46	133	236	211	120	21	0	0	770

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	335	470	609	844	1009	1166	1146	1000	776	406	192	206	541	1011	1620	2464	3473	4639	5785	6785	7561	7967	8159
45	93	196	317	459	689	859	1011	991	850	621	259	81	93	289	606	1065	1754	2613	3624	4615	5465	6086	6345	6426
50	33	83	171	311	534	709	856	836	700	466	134	24	33	116	287	598	1132	1841	2697	3533	4233	4699	4833	4857
55	2	19	65	176	379	559	701	681	550	316	49	1	2	21	86	262	641	1200	1901	2582	3132	3448	3497	3498
60	0	0	10	74	232	409	546	526	400	177	7	0	0	0	10	84	316	725	1271	1797	2197	2374	2381	2381
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	89	176	264	367	513	631	731	724	639	483	225	90	89	265	529	896	1409	2040	2771	3495	4134	4617	4842	4932

(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.
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 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/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