

Climatology of the United States

No. 20

1971-2000

Station: SAN BERNARDINO F S 226, CA

COOP ID: 047723

Climate Division: CA 6

NWS Call Sign:

Elevation: 1,140 Feet Lat: 34°08N

Lon: 117°15W

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	67.0	41.8	54.4	94	1971	19	58.2	1986	17	1937	22	49.7	1979	331	3	.0	.1	30.6	.0	1.9	.0
Feb	68.8	43.5	56.2	93	1963	6	60.8	1995	21	1942	15	52.1	1989	253	5	.0	.2	27.7	.0	.7	.0
Mar	70.7	45.3	58.0	96+	1971	29	63.6	1997	26	1933	24	51.9	1991	236	19	.0	.5	30.9	.0	.2	.0
Apr	76.6	48.7	62.7	102+	1961	3	66.9	1996	27	1932	22	55.3	1975	129	59	.1	2.5	30.0	.0	@	.0
May	81.3	53.6	67.5	112	1984	29	74.7	1997	35+	1933	7	60.5	1977	72	146	.8	6.0	31.0	.0	.0	.0
Jun	89.5	58.1	73.8	111	1979	27	80.4	1981	40+	1943	14	68.6	1982	10	274	3.9	14.8	30.0	.0	.0	.0
Jul	96.0	63.1	79.6	116	1934	27	84.1	1984	44+	1948	7	73.8	1987	0	451	8.9	25.6	31.0	.0	.0	.0
Aug	96.2	64.0	80.1	116	1933	12	83.9	1971	43+	1933	30	76.0	1989	0	468	9.2	25.9	31.0	.0	.0	.0
Sep	91.4	61.1	76.3	117	1971	13	82.6	1984	36	1934	26	68.3	1986	6	344	5.5	17.3	30.0	.0	.0	.0
Oct	83.0	53.7	68.4	111+	1980	2	72.9	1999	29	1935	31	64.6	1972	38	141	1.1	7.9	31.0	.0	@	.0
Nov	73.4	45.4	59.4	98	1980	4	64.1	1995	24+	1958	17	52.9	1994	191	21	.0	1.1	30.0	.0	.2	.0
Dec	67.7	41.2	54.5	93+	1938	8	60.0	1980	22+	1990	23	48.8	1987	333	6	.0	.0	30.5	.0	1.9	.0
Ann	80.1	51.6	65.9	117	Sep 1971	13	84.1	Jul 1984	17	Jan 1937	22	48.8	Dec 1987	1599	1937	29.5	101.9	363.7	.0	4.9	.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: 1927-2001

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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	3.50	2.00	5.05	1956	26	13.87	1993	.00+	1976	7.1	5.4	2.7	1.1	.00	.23	.76	1.30	1.89	2.55	3.34	4.32	5.69	7.98	10.24
Feb	3.70	2.84	3.89	1991	28	15.03	1998	.05	1972	6.8	4.8	2.3	1.3	.18	.37	.80	1.29	1.86	2.54	3.37	4.44	5.96	8.57	11.17
Mar	3.28	2.62	4.46	1938	2	9.65	1978	.00+	1997	7.8	5.3	2.4	1.0	.00	.44	1.07	1.59	2.12	2.69	3.34	4.10	5.14	6.83	8.45
Apr	.93	.82	2.00	1929	4	3.22	1983	.00+	1997	4.0	2.4	.6	.1	.00	.00	.05	.21	.38	.59	.84	1.15	1.59	2.33	3.09
May	.41	.05	1.55	1998	5	3.96	1998	.00+	1997	2.4	1.0	.2	.1	.00	.00	.00	.01	.06	.13	.24	.41	.69	1.21	1.77
Jun	.09	.01	.43	1995	17	.86	1995	.00+	2000	.9	.3	@	@	.00	.00	.00	.00	.00	.00	.03	.08	.16	.30	.44
Jul	.04	.00	.42	1938	22	.36	1984	.00+	2000	.5	.1	.0	.0	.00	.00	.00	.00	.00	.00	.00	.00	.03	.14	.24
Aug	.22	.00	2.50	1983	17	3.72	1983	.00+	2000	.7	.4	.1	.1	.00	.00	.00	.00	.00	.00	.00	.00	.03	.48	1.42
Sep	.41	.07	2.83	1976	11	5.12	1976	.00+	2000	1.6	.9	.2	.1	.00	.00	.00	.00	.00	.03	.15	.35	.68	1.32	2.00
Oct	.71	.47	2.31	1979	20	3.54	1987	.00+	1999	2.9	1.4	.4	.2	.00	.00	.03	.15	.28	.43	.62	.87	1.21	1.79	2.39
Nov	1.20	.66	2.66	1954	11	4.35	1982	.00+	1998	3.4	2.2	.8	.3	.00	.00	.07	.23	.43	.68	1.00	1.42	2.03	3.09	4.18
Dec	1.94	1.71	4.23	1966	5	5.87	1971	.00+	1990	4.8	3.2	1.2	.6	.00	.05	.26	.52	.84	1.22	1.70	2.32	3.21	4.76	6.32
Ann	16.43	14.99	5.05	Jan 1956	26	15.03	Feb 1998	.00+	Sep 2000	42.9	27.4	10.9	4.9	6.62	8.13	10.26	12.03	13.69	15.38	17.20	19.30	21.97	26.05	29.77

+ 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

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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	.0	0	0	.0	0	0	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	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Ann	.0	.0	N/A	N/A	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0

+ Also occurred on an earlier date(s) #Denotes trace amounts

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-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	4/07	3/25	3/15	3/07	2/27	2/20	2/12	2/02	1/19
32	3/09	2/21	2/10	1/31	1/21	1/11	12/28	12/04	0/00
28	2/01	1/15	12/27	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	11/07	11/15	11/20	11/25	11/29	12/03	12/08	12/13	12/21
32	11/23	12/03	12/11	12/18	12/24	1/01	1/11	0/00	0/00
28	12/18	12/30	1/14	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	321	305	293	283	274	265	255	243	227
32	>365	>365	>365	>365	349	326	307	288	265
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.

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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	331	253	236	129	72	10	0	0	6	38	191	333	1599
60	191	134	127	55	25	2	0	0	0	7	92	198	831
57	124	83	79	26	12	0	0	0	0	2	52	134	512
55	89	55	52	15	7	0	0	0	0	1	33	100	352
50	26	12	14	2	0	0	0	0	0	0	7	34	95
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	694	676	806	920	1098	1254	1474	1491	1328	1126	821	696	12384
55	71	87	145	245	391	564	761	778	638	414	163	82	4339
57	44	59	110	196	335	504	699	716	578	353	123	55	3772
60	18	26	65	134	254	415	606	623	488	266	73	26	2994
65	3	5	19	59	146	274	451	468	344	141	21	6	1937
70	0	0	4	17	69	153	299	315	214	58	3	0	1132

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	448	477	564	688	856	1009	1227	1239	1086	881	585	447	448	925	1489	2177	3033	4042	5269	6508	7594	8475	9060	9507
45	297	334	409	538	701	859	1072	1084	936	726	435	298	297	631	1040	1578	2279	3138	4210	5294	6230	6956	7391	7689
50	158	196	259	390	546	709	917	929	786	571	288	164	158	354	613	1003	1549	2258	3175	4104	4890	5461	5749	5913
55	63	87	132	245	391	559	762	774	636	418	159	60	63	150	282	527	918	1477	2239	3013	3649	4067	4226	4286
60	17	30	50	129	242	409	607	619	486	267	65	10	17	47	97	226	468	877	1484	2103	2589	2856	2921	2931
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	272	279	329	414	526	631	764	778	686	548	357	276	272	551	880	1294	1820	2451	3215	3993	4679	5227	5584	5860

(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/normal/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 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