

Climatology of the United States

No. 20 1971-2000

Station: FAIRFIELD, CA

COOP ID: 042934

Climate Division: CA 2

NWS Call Sign:

Elevation: 40 Feet

Lat: 38°16N

Lon: 122°04W

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	54.7	37.5	46.1	76	1968	22	50.9	1995	18	1979	1	39.3	1985	586	0	.0	.0	24.5	.0	6.8	.0
Feb	61.2	40.9	51.1	80+	1968	22	55.2	1991	24+	1989	6	47.2	1989	390	0	.0	.0	27.2	.1	2.0	.0
Mar	65.6	43.9	54.8	89	1966	31	58.7	1978	20	1956	2	49.9	1985	321	4	.0	.0	30.9	.0	.6	.0
Apr	71.4	46.3	58.9	98	1954	17	62.8	1992	30	1986	13	53.7	1975	201	16	.0	.4	30.0	.0	@	.0
May	78.1	50.6	64.4	111	1984	29	70.3	1997	35+	1976	4	58.2	1998	99	78	.3	4.2	31.0	.0	.0	.0
Jun	84.7	54.1	69.4	111	1981	23	74.5	1981	37	1979	30	65.6	1980	18	151	2.4	9.2	30.0	.0	.0	.0
Jul	88.8	56.4	72.6	113	1984	3	76.7	1996	40	1961	30	68.4	1987	1	237	3.5	14.5	31.0	.0	.0	.0
Aug	88.7	56.5	72.6	111	1998	5	76.3	1998	40	1985	19	68.6	1980	2	239	3.4	13.9	31.0	.0	.0	.0
Sep	86.3	54.5	70.4	112	1953	13	74.3	1984	39	1986	20	63.6	1986	14	176	1.6	10.5	30.0	.0	.0	.0
Oct	78.3	49.9	64.1	104	1952	1	68.9	1991	32	1956	31	60.1	1984	95	68	.2	2.9	31.0	.0	.0	.0
Nov	64.8	42.9	53.9	87	1967	2	60.1	1995	21+	1985	21	48.7	1994	340	6	.0	.0	29.4	.0	1.7	.0
Dec	55.6	36.9	46.3	78	1977	1	51.5	1995	17	1990	22	38.8	1985	582	0	.0	.0	25.2	@	7.4	.0
Ann	73.2	47.5	60.4	113	Jul 1984	3	76.7	Jul 1996	17	Dec 1990	22	38.8	Dec 1985	2649	975	11.4	55.6	351.2	.1	18.5	.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: 1950-2001

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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	5.04	4.42	3.65	1979	11	12.47	1995	.30	1984	11.4	8.0	3.2	1.6	.41	.75	1.41	2.11	2.88	3.76	4.81	6.13	7.97	11.04	14.06	
Feb	4.57	3.97	3.81	1998	3	14.71	1998	.14	1995	10.3	6.7	3.2	1.4	.24	.49	1.03	1.64	2.34	3.17	4.19	5.50	7.35	10.50	13.66	
Mar	3.59	2.86	2.83	1983	13	10.89	1983	.14	1994	9.8	7.2	2.5	.8	.32	.57	1.06	1.55	2.10	2.72	3.45	4.37	5.64	7.75	9.83	
Apr	1.12	.94	2.38	1982	11	5.05	1982	.06	1985	5.5	3.0	.5	.1	.07	.14	.28	.43	.60	.80	1.05	1.35	1.79	2.51	3.24	
May	.64	.17	2.17	1996	16	3.29	1998	.00+	1992	3.2	1.6	.3	.1	.00	.00	.01	.05	.13	.25	.42	.67	1.06	1.80	2.58	
Jun	.16	.01	1.63	1995	16	1.83	1995	.00+	1999	.7	.4	.1	@	.00	.00	.00	.00	.00	.00	.03	.10	.23	.51	.84	
Jul	.03	.00	.49	1974	9	.60	1974	.00+	2000	.1	.1	.0	.0	**	**	**	**	**	**	**	**	**	**	**	
Aug	.05	.00	1.01	1968	22	.66	1976	.00+	2000	.3	.2	.0	.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.10	.31	
Sep	.30	.09	2.49	1959	18	1.37	1989	.00+	1997	1.8	1.0	.1	.0	.00	.00	.00	.00	.02	.09	.19	.33	.53	.88	1.24	
Oct	1.24	.76	4.50	1962	13	4.60	1972	.00+	1995	3.4	2.4	1.0	.3	.00	.06	.24	.42	.63	.87	1.15	1.51	2.02	2.88	3.73	
Nov	3.08	2.78	3.95	1977	22	7.20	1973	.08+	1995	7.7	5.3	2.3	.7	.13	.28	.62	1.03	1.50	2.07	2.77	3.68	4.98	7.21	9.46	
Dec	3.64	2.59	4.41	1995	12	11.67	1996	.00	1989	9.0	5.7	2.4	.9	.20	.54	1.09	1.63	2.20	2.83	3.57	4.49	5.74	7.80	9.80	
Ann	23.46	21.52	4.50	Oct 1962	13	14.71	Feb 1998	.00+	Aug 2000	63.2	41.6	15.6	5.9	10.47	12.55	15.45	17.80	20.00	22.21	24.58	27.29	30.71	35.90	40.59	

+ 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: 1950-2001

(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	.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	.2	1988	27	.2	1988	0	0	0	0	0	@	.0	.0	.0	.0	.0	.0	.0	.0
Ann	.0	.0	N/A	N/A	.2	Dec 1988	27	.2	Dec 1988	0	0	0	0	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	4/26	4/12	4/02	3/24	3/16	3/08	2/27	2/17	2/03
32	3/16	3/03	2/22	2/14	2/07	1/30	1/22	1/11	12/21
28	2/02	1/24	1/18	1/11	1/04	12/25	0/00	0/00	0/00
24	1/18	1/03	12/18	0/00	0/00	0/00	0/00	0/00	0/00
20	12/13	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	11/01	11/08	11/12	11/16	11/20	11/24	11/28	12/02	12/09
32	11/14	11/21	11/27	12/02	12/06	12/11	12/16	12/23	1/04
28	11/28	12/09	12/17	12/25	1/03	1/19	0/00	0/00	0/00
24	12/10	12/28	1/16	0/00	0/00	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
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	294	278	267	257	248	239	230	219	203
32	>365	346	327	314	304	293	283	271	255
28	>365	>365	>365	>365	>365	>365	344	325	306
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

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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	586	390	321	201	99	18	1	2	14	95	340	582	2649
60	431	252	184	97	34	2	0	0	1	33	212	428	1674
57	344	175	120	53	15	0	0	0	0	14	148	341	1210
55	286	129	86	32	8	0	0	0	0	7	112	285	945
50	161	46	25	7	0	0	0	0	0	1	47	163	450
32	1	0	0	0	0	0	0	0	0	0	0	0	1

Base	Cooling Degree Days (1)												
	Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
32	437	534	706	806	1003	1122	1259	1259	1152	996	656	441	10371
55	10	19	78	148	298	432	546	546	462	290	78	13	2920
57	6	9	51	109	243	372	484	484	402	235	53	7	2455
60	0	2	22	63	169	285	391	391	314	161	27	1	1826
65	0	0	4	16	78	151	237	239	176	68	6	0	975
70	0	0	0	2	24	56	100	106	75	18	0	0	381

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	208	334	469	575	763	897	1021	1016	924	755	423	217	208	542	1011	1586	2349	3246	4267	5283	6207	6962	7385	7602
45	90	192	314	426	608	747	866	861	774	600	276	98	90	282	596	1022	1630	2377	3243	4104	4878	5478	5754	5852
50	25	81	173	278	453	597	711	706	624	445	145	27	25	106	279	557	1010	1607	2318	3024	3648	4093	4238	4265
55	0	22	67	149	299	447	556	551	474	294	55	0	0	22	89	238	537	984	1540	2091	2565	2859	2914	2914
60	0	0	16	57	161	298	401	396	326	159	9	0	0	0	16	73	234	532	933	1329	1655	1814	1823	1823
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	97	174	255	342	463	553	631	633	576	465	236	113	97	271	526	868	1331	1884	2515	3148	3724	4189	4425	4538

(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