

Climatology of the United States

No. 20

1971-2000

Station: EL CENTRO 2 SSW, CA

COOP ID: 042713

Climate Division: CA 7

NWS Call Sign:

Elevation: -30 Feet

Lat: 32°46N

Lon: 115°34W

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	70.2	41.3	55.8	90+	1971	19	61.5	1986	18	1949	4	51.3	1973	293	6	.0	.1	31.0	.0	2.6	.0
Feb	74.5	44.9	59.7	93+	1986	27	64.8+	1995	24	1965	12	56.1	1975	165	16	.0	.3	28.1	.0	.5	.0
Mar	79.3	48.7	64.0	100	1966	31	69.6	1972	29+	1971	3	58.0	1977	120	88	.0	2.7	31.0	.0	.1	.0
Apr	86.1	53.5	69.8	109	1949	23	75.8	1989	34	1951	30	60.8	1975	47	191	1.0	11.2	30.0	.0	.0	.0
May	94.0	60.6	77.3	116+	1973	29	84.2	1997	36	1959	2	69.6	1977	7	388	7.3	23.4	31.0	.0	.0	.0
Jun	103.4	68.4	85.9	121	1950	30	89.8	1994	47+	1952	1	82.0	1991	0	626	22.0	28.4	30.0	.0	.0	.0
Jul	107.0	75.8	91.4	122+	1995	29	94.2	1996	52	1952	1	89.1	1976	0	817	29.8	31.0	31.0	.0	.0	.0
Aug	105.7	76.6	91.2	120+	1972	1	94.6	1994	54	1957	31	87.6	1979	0	810	28.4	30.9	31.0	.0	.0	.0
Sep	101.1	70.6	85.9	120	1950	1	90.1	1995	48	1978	19	80.4	1985	0	625	19.6	28.4	30.0	.0	.0	.0
Oct	90.9	59.2	75.1	112+	1980	3	79.7	1999	33	1961	30	69.2	1971	10	323	4.6	18.7	31.0	.0	.0	.0
Nov	78.1	47.3	62.7	98	1980	4	69.5	1995	24	1956	21	57.8	1994	127	58	.0	1.5	30.0	.0	.2	.0
Dec	69.7	40.5	55.1	95	1966	6	59.0	1980	22+	1990	22	50.6	1978	311	4	.0	.0	31.0	.0	2.4	.0
Ann	88.3	57.3	72.8	122+	1995	29	94.6	1994	18	1949	4	50.6	1978	1080	3952	112.7	176.6	365.1	.0	5.8	.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	Median	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	.51	.16	1.30	1988	17	3.45	1993	.00+	2000	2.2	1.1	.4	@	.00	.00	.00	.03	.11	.22	.37	.58	.88	1.44	2.01
Feb	.36	.18	1.17	1983	2	1.64	1983	.00+	1999	2.1	1.1	.1	@	.00	.00	.00	.02	.10	.19	.30	.44	.64	.98	1.32
Mar	.31	.10	1.08	1992	26	1.96	1992	.00+	1999	1.7	.9	.1	@	.00	.00	.00	.00	.00	.08	.21	.36	.57	.93	1.28
Apr	.05	.00	.60	1965	3	.40	1975	.00+	2000	.6	.2	.0	.0	.00	.00	.00	.00	.00	.00	.00	.02	.07	.17	.28
May	.03	.00	.21+	1981	26	.21+	1981	.00+	1999	.3	.1	.0	.0	.00	.00	.00	.00	.00	.00	.00	.00	.04	.13	.19
Jun	.01	.00	.10	1972	7	.10	1972	.00+	2000	.1	@	.0	.0	**	**	**	**	**	**	**	**	**	**	**
Jul	.06	.00	.54	1950	24	.43	1979	.00+	2000	.6	.3	.1	.0	.00	.00	.00	.00	.00	.00	.00	.02	.09	.21	.32
Aug	.32	.03	1.44+	1977	17	2.98	1977	.00+	1994	1.0	.5	.2	.1	.00	.00	.00	.00	.00	.03	.11	.26	.51	1.01	1.58
Sep	.36	.00	2.31	1976	10	2.44	1997	.00+	2000	.8	.5	.3	.1	.00	.00	.00	.00	.00	.00	.05	.24	.57	1.20	1.89
Oct	.35	.00	2.06	1986	9	2.41	1986	.00+	1999	.9	.6	.1	.1	.00	.00	.00	.00	.00	.00	.01	.12	.42	1.15	1.98
Nov	.17	.00	1.53	1967	26	1.20	1978	.00+	2000	.9	.4	.1	@	.00	.00	.00	.00	.00	.00	.04	.16	.32	.58	.84
Dec	.43	.05	2.30	1982	9	2.72	1982	.00+	2000	1.6	1.0	.2	@	.00	.00	.00	.00	.00	.07	.23	.44	.76	1.32	1.89
Ann	2.96	2.47	2.31	Sep 1976	10	3.45	Jan 1993	.00+	Dec 2000	12.8	6.7	1.6	.3	.51	.76	1.19	1.60	2.01	2.47	2.98	3.61	4.44	5.79	7.08

+ 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	.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	4/01	3/16	3/05	2/23	2/14	2/05	1/26	1/15	12/30
32	2/16	2/03	1/24	1/14	1/05	12/24	12/03	0/00	0/00
28	1/23	1/13	1/03	0/00	0/00	0/00	0/00	0/00	0/00
24	12/29	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	11/14	11/22	11/27	12/02	12/07	12/11	12/16	12/22	1/01
32	11/27	12/08	12/17	12/24	1/02	1/13	0/00	0/00	0/00
28	12/10	12/24	1/09	0/00	0/00	0/00	0/00	0/00	0/00
24	12/27	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	361	332	316	303	292	281	270	257	238
32	>365	>365	>365	>365	>365	343	327	314	300
28	>365	>365	>365	>365	>365	>365	>365	354	333
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	Ann
65	293	165	120	47	7	0	0	0	0	10	127	311	1080
60	162	73	50	15	1	0	0	0	0	2	53	175	531
57	103	35	25	7	0	0	0	0	0	0	26	112	308
55	72	19	15	3	0	0	0	0	0	0	15	79	203
50	19	2	3	0	0	0	0	0	0	0	2	22	48
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	736	776	991	1134	1404	1616	1840	1833	1615	1336	921	716	14918
55	95	151	293	447	691	926	1127	1120	925	623	246	83	6727
57	65	111	241	391	629	866	1065	1058	865	561	197	54	6103
60	30	64	173	309	537	776	972	965	775	469	134	24	5228
65	6	16	88	191	388	626	817	810	625	323	58	4	3952
70	0	2	33	104	253	476	662	655	475	196	18	0	2874

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	494	582	750	903	1164	1367	1605	1593	1386	1094	691	479	494	1076	1826	2729	3893	5260	6865	8458	9844	10938	11629	12108
45	343	437	595	753	1009	1217	1450	1438	1236	939	541	327	343	780	1375	2128	3137	4354	5804	7242	8478	9417	9958	10285
50	194	295	441	603	854	1067	1295	1283	1086	784	391	182	194	489	930	1533	2387	3454	4749	6032	7118	7902	8293	8475
55	81	165	290	453	699	917	1140	1128	936	631	246	66	81	246	536	989	1688	2605	3745	4873	5809	6440	6686	6752
60	17	64	159	310	544	769	985	973	786	477	129	10	17	81	240	550	1094	1863	2848	3821	4607	5084	5213	5223
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	326	372	478	573	721	811	962	976	858	691	448	317	326	698	1176	1749	2470	3281	4243	5219	6077	6768	7216	7533

(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.

- | | |
|---|---|
| <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