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: PISMO BEACH, CA **COOP ID: 046943**

Climate Division: CA 4 **NWS Call Sign:** **Elevation: 39 Feet** **Lat: 35˚10N** **Lon: 120˚41W**

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	64.6	42.6	53.6	85+	1976	20	58.2	1986	24	1950	4	47.2	1990	355	0	.0	.0	30.7	.0	2.4	.0
Feb	65.8	44.1	55.0	90	1995	2	58.3	1992	28+	1996	24	51.1	1990	282	0	.0	@	28.0	.0	.3	.0
Mar	66.6	44.6	55.6	90+	2000	18	61.1	2000	23	1963	23	50.6	1999	280	3	.0	.1	31.0	.0	.4	.0
Apr	69.3	45.9	57.6	101	1989	7	63.3	2000	31+	1999	9	51.2	1975	241	8	@	.4	30.0	.0	.1	.0
May	69.6	47.3	58.5	100	1970	15	65.9	1997	30	1988	17	54.8	1975	219	10	.0	.4	31.0	.0	@	.0
Jun	71.1	50.5	60.8	99	1976	25	65.4	1981	37+	1999	8	56.6	1999	137	11	.0	.8	30.0	.0	.0	.0
Jul	71.2	52.5	61.9	104	1953	10	65.1	1985	38	1949	9	58.9	1975	110	13	@	.6	31.0	.0	.0	.0
Aug	72.3	53.3	62.8	108	1962	28	65.9	1983	39	1963	28	60.2	1989	86	18	@	.3	31.0	.0	.0	.0
Sep	73.0	53.1	63.1	100	1966	28	70.6	1984	35	1988	13	58.4	1986	108	50	.0	.6	30.0	.0	.0	.0
Oct	72.6	50.7	61.7	99	1964	19	65.9	1995	32	1949	20	57.4	1988	133	29	.0	.8	31.0	.0	.0	.0
Nov	68.9	45.9	57.4	91+	1997	3	61.0	1977	29+	1986	26	53.2	1978	233	5	.0	.1	30.0	.0	.1	.0
Dec	65.5	42.4	54.0	92	1958	2	59.8	1977	24+	1990	23	49.2	1987	347	4	.0	@	30.9	.0	4.2	.0
Ann	69.2	47.7	58.5	108	Aug 1962	28	70.6	Sep 1984	23	Mar 1963	23	47.2	Jan 1990	2531	151	@	4.1	364.6	.0	7.5	.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/normals/usnormals.html

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1949-2001

(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	3.59	2.56	5.16	1969	19	11.16	1978	.00	1976
Feb	3.87	3.50	2.16	1960	1	12.42	1998	.00	1974
Mar	3.46	2.68	2.57	1958	15	17.06	1991	.00	1997
Apr	1.13	.63	2.20	1958	1	5.82	1982	.00+	1986
May	.41	.07	2.50	1998	13	3.62	1998	.00+	1999
Jun	.07	.00	.49	1995	16	.75	1995	.00+	1999
Jul	.03	.00	.59	1950	10	.73	1992	.00+	2000
Aug	.02	.00	.27	1983	18	.44	1983	.00+	2000
Sep	.32	.04	1.61	1976	30	4.20	1976	.00+	1999
Oct	.62	.51	1.98	1996	30	2.83	1972	.00+	1999
Nov	1.70	1.51	2.25	1953	14	5.31	1972	.00+	1992
Dec	2.57	1.87	2.21	1955	24	7.67	1996	.00+	1989
Ann	17.79	16.68	5.16	Jan 1969	19	17.06	Mar 1991	.00+	Aug 2000

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	7.9	6.1	2.5	1.0
Feb	8.0	6.0	2.9	1.2
Mar	7.6	5.4	2.2	.9
Apr	3.6	2.3	.6	.3
May	2.0	.8	.2	.1
Jun	.6	.2	.0	.0
Jul	.3	.1	.0	.0
Aug	.3	.1	.0	.0
Sep	1.5	.5	.2	.1
Oct	2.6	1.5	.4	.2
Nov	4.6	3.3	1.2	.5
Dec	5.6	3.9	1.9	.7
Ann	44.6	30.2	12.1	5.0

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	.09	.34	.81	1.32	1.90	2.56	3.36	4.38	5.80	8.20	10.58
Feb	.05	.23	.66	1.17	1.78	2.52	3.43	4.63	6.34	9.29	12.26
Mar	.08	.29	.73	1.21	1.76	2.41	3.19	4.20	5.60	8.00	10.38
Apr	.00	.00	.09	.23	.41	.64	.93	1.32	1.89	2.90	3.93
May	.00	.00	.00	.00	.00	.03	.14	.34	.68	1.32	2.01
Jun	.00	.00	.00	.00	.00	.00	.00	.00	.07	.23	.40
Jul	**	**	**	**	**	**	**	**	**	**	**
Aug	**	**	**	**	**	**	**	**	**	**	**
Sep	.00	.00	.00	.00	.00	.02	.08	.22	.48	.97	1.56
Oct	.00	.00	.02	.10	.21	.34	.51	.74	1.07	1.64	2.23
Nov	.00	.13	.40	.66	.94	1.26	1.64	2.10	2.74	3.81	4.86
Dec	.00	.12	.47	.85	1.28	1.78	2.38	3.14	4.22	6.04	7.86
Ann	6.58	8.24	10.64	12.64	14.54	16.48	18.60	21.05	24.18	28.99	33.40

\+ 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: 1949-2001
(3) Derived from 1971-2000 serially complete daily data

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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	.0	0	0	.0	0	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	.0	0	0	.0	0	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	.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	.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	5/09	4/19	4/05	3/23	3/12	2/28	2/15	1/31	1/07
32	3/29	3/07	2/18	2/03	1/18	12/30	11/25	0/00	0/00
28	1/23	1/07	12/20	0/00	0/00	0/00	0/00	0/00	0/00
24	12/23	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	10/31	11/13	11/22	11/30	12/07	12/15	12/23	1/02	1/17
32	11/28	12/08	12/15	12/22	12/29	1/07	1/23	0/00	0/00
28	12/09	12/24	1/09	0/00	0/00	0/00	0/00	0/00	0/00
24	12/14	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	>365	331	302	283	267	253	237	220	196
32	>365	>365	>365	>365	>365	360	318	291	262
28	>365	>365	>365	>365	>365	>365	>365	>365	354
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	355	282	280	241	219	137	110	86	108	133	233	347	2531
60	214	151	174	133	110	43	25	13	37	47	110	206	1263
57	142	88	117	85	63	14	6	2	15	18	59	137	746
55	105	57	85	58	39	6	1	0	8	9	35	101	504
50	35	10	27	17	9	0	0	0	0	0	5	33	136
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	669	642	732	767	819	864	926	955	932	918	762	680	9666
55	61	56	103	135	145	179	214	242	250	214	106	68	1773
57	36	31	73	102	108	127	157	181	197	161	71	42	1286
60	15	10	37	59	61	67	83	99	129	98	32	18	708
65	0	0	3	8	10	11	13	18	50	29	5	4	151
70	0	0	0	4	1	0	0	1	11	4	0	0	21

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	418	441	496	538	586	634	695	702	703	674	529	411	418	859	1355	1893	2479	3113	3808	4510	5213	5887	6416	6827
45	263	297	341	388	431	484	540	547	553	519	379	264	263	560	901	1289	1720	2204	2744	3291	3844	4363	4742	5006
50	130	158	190	238	276	334	385	392	403	364	232	134	130	288	478	716	992	1326	1711	2103	2506	2870	3102	3236
55	44	49	73	109	130	186	230	237	253	211	102	43	44	93	166	275	405	591	821	1058	1311	1522	1624	1667
60	3	10	23	38	35	60	85	91	109	82	29	6	3	13	36	74	109	169	254	345	454	536	565	571
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	237	246	274	307	324	350	386	395	403	384	303	254	237	483	757	1064	1388	1738	2124	2519	2922	3306	3609	3863

(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

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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