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: PALM SPRINGS, CA **COOP ID: 046635**

Climate Division: CA 7 **NWS Call Sign:** **Elevation: 425 Feet** **Lat: 33˚50N** **Lon: 116˚31W**

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	70.4	44.2	57.3	95	1971	18	63.3	1986	19	1937	22	50.1	1979	257	18	.0	.1	30.9	.0	1.2	.0
Feb	74.8	47.2	61.0	99+	1986	27	66.8	1991	24+	1953	21	57.0	1998	140	29	.0	1.1	28.0	.0	.4	.0
Mar	79.7	50.7	65.2	104	1966	31	72.9	1972	29+	1956	13	58.9	1973	111	117	.1	4.0	31.0	.0	@	.0
Apr	87.5	56.0	71.8	112	1989	7	78.9	1989	34	1968	19	63.6	1975	42	243	2.1	13.2	30.0	.0	.1	.0
May	94.6	62.8	78.7	116+	2001	23	86.0	1997	36	1964	7	71.7	1977	8	433	9.2	23.0	31.0	.0	.0	.0
Jun	104.0	69.6	86.8	121+	1994	29	92.0	1981	44	1976	10	81.1	1982	0	653	22.4	28.5	30.0	.0	.0	.0
Jul	108.2	76.0	92.1	123+	1995	29	95.6	1996	54+	1979	2	87.8	1987	0	840	29.6	31.0	31.0	.0	.0	.0
Aug	106.9	76.0	91.5	123	1993	1	96.2	1998	52+	1976	2	85.9	1976	0	819	28.1	30.8	31.0	.0	.0	.0
Sep	101.3	70.5	85.9	121	1950	1	89.7	1995	46	1930	30	79.7	1986	0	626	19.2	28.1	30.0	.0	.0	.0
Oct	90.9	61.1	76.0	116	1980	2	81.2	1991	30	1951	24	70.1	1972	8	349	5.2	18.0	31.0	.0	.0	.0
Nov	78.2	49.7	64.0	102	1962	1	70.1	1995	23	1964	17	57.1	1994	112	81	@	2.1	30.0	.0	@	.0
Dec	70.0	43.4	56.7	93+	1958	3	63.4	1980	23	1953	25	51.0	1978	273	16	.0	.1	30.9	.0	1.3	.0
Ann	88.9	58.9	73.9	123+	Jul 1995	29	96.2	Aug 1998	19	Jan 1937	22	50.1	Jan 1979	951	4224	115.9	180.0	364.8	.0	3.0	.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: 1927-2001

(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	1.27	.57	4.57	1943	23	8.04	1993	.00+	2000
Feb	1.15	.72	2.30	1932	8	5.41	1980	.00+	1997
Mar	.63	.43	1.93	1991	1	3.46	1991	.00+	1999
Apr	.08	.00	1.25	1942	22	.69	1975	.00+	1998
May	.06	.00	1.11	1976	7	1.11	1976	.00+	2000
Jun	.05	.00	2.80	1948	23	.80	1980	.00+	2000
Jul	.19	.00	2.80	1948	23	2.55	1979	.00+	2000
Aug	.40	.02	2.03	1930	1	4.32	1983	.00+	1999
Sep	.39	.02	2.76	1976	10	4.17	1976	.00+	1999
Oct	.11	.00	1.63	1931	1	1.25	1987	.00+	1999
Nov	.29	.00	2.75	1965	23	1.58	1985	.00+	2000
Dec	.61	.39	3.80	1943	10	2.64	1984	.00+	2000
Ann	5.23	4.70	4.57	Jan 1943	23	8.04	Jan 1993	.00+	Dec 2000

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	3.8	2.3	.9	.4
Feb	3.5	2.4	.9	.2
Mar	2.4	1.5	.3	.1
Apr	.7	.3	@	.0
May	.4	.1	@	@
Jun	.2	.1	.1	.0
Jul	.7	.3	.1	@
Aug	1.1	.8	.2	.1
Sep	1.0	.6	.2	.1
Oct	.8	.4	.0	.0
Nov	1.0	.7	.2	.0
Dec	2.6	1.5	.4	@
Ann	18.2	11.0	3.3	.9

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	.00	.00	.00	.11	.31	.58	.94	1.44	2.18	3.52	4.89
Feb	.00	.00	.06	.24	.46	.71	1.02	1.42	1.98	2.92	3.90
Mar	.00	.00	.00	.00	.16	.32	.52	.78	1.12	1.71	2.29
Apr	.00	.00	.00	.00	.00	.00	.00	.06	.13	.26	.39
May	.00	.00	.00	.00	.00	.00	.00	.01	.07	.21	.38
Jun	**	**	**	**	**	**	**	**	**	**	**
Jul	.00	.00	.00	.00	.00	.00	.00	.06	.23	.62	1.07
Aug	.00	.00	.00	.00	.00	.00	.09	.29	.63	1.30	2.03
Sep	.00	.00	.00	.00	.00	.00	.06	.22	.55	1.20	2.01
Oct	.00	.00	.00	.00	.00	.00	.01	.08	.18	.37	.57
Nov	.00	.00	.00	.00	.00	.00	.07	.27	.53	.96	1.38
Dec	.00	.00	.00	.08	.19	.32	.50	.73	1.06	1.64	2.23
Ann	.86	1.32	2.08	2.79	3.53	4.33	5.25	6.37	7.86	10.27	12.59

\+ 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: 1927-2001
(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	.1	.0	0	0
Feb	.0	.0	0	0
Mar	.0	.0	0	0
Apr	.0	.0	0	0
May	.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	.1	.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	1.5	1979	31	1.5	1979	#	1974	4	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	#	1974
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	#+	1997	27	0	0
Dec	.0	0	0	.0	0	0	0	0	0	0
Ann	1.5	Jan 1979	31	1.5	Jan 1979	#+	Nov 1997	27	#	May 1974

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	3/23	3/08	2/25	2/16	2/07	1/29	1/20	1/09	12/25
32	3/07	2/17	2/03	1/20	1/04	12/07	0/00	0/00	0/00
28	1/13	12/31	12/16	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	11/15	11/25	12/03	12/09	12/15	12/21	12/28	1/05	1/18
32	11/29	12/17	12/31	1/15	2/01	0/00	0/00	0/00	0/00
28	12/17	1/02	1/23	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	>365	350	333	322	311	301	291	279	262
32	>365	>365	>365	>365	>365	>365	355	329	309
28	>365	>365	>365	>365	>365	>365	>365	>365	359
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	257	140	111	42	8	0	0	0	0	8	112	273	951
60	144	60	47	15	1	0	0	0	0	1	48	156	472
57	94	28	24	7	0	0	0	0	0	0	24	104	281
55	66	15	15	4	0	0	0	0	0	0	14	75	189
50	21	2	3	0	0	0	0	0	0	0	3	24	53
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	784	812	1028	1192	1448	1643	1863	1842	1616	1364	959	766	15317
55	137	184	331	505	735	953	1150	1129	926	651	283	128	7112
57	104	141	277	449	673	893	1088	1067	866	589	233	95	6475
60	60	89	207	367	581	803	995	974	776	497	166	54	5569
65	18	29	117	243	433	653	840	819	626	349	81	16	4224
70	4	6	52	148	296	503	685	664	476	218	30	2	3084

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	547	616	789	956	1207	1401	1622	1602	1374	1123	727	525	547	1163	1952	2908	4115	5516	7138	8740	10114	11237	11964	12489
45	393	474	634	806	1052	1251	1467	1447	1224	968	577	372	393	867	1501	2307	3359	4610	6077	7524	8748	9716	10293	10665
50	245	333	479	656	897	1101	1312	1292	1074	813	428	227	245	578	1057	1713	2610	3711	5023	6315	7389	8202	8630	8857
55	122	195	327	506	742	951	1157	1137	924	658	282	103	122	317	644	1150	1892	2843	4000	5137	6061	6719	7001	7104
60	47	91	192	359	587	801	1002	982	774	505	158	33	47	138	330	689	1276	2077	3079	4061	4835	5340	5498	5531
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	334	382	497	603	754	829	969	965	847	718	458	324	334	716	1213	1816	2570	3399	4368	5333	6180	6898	7356	7680

(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