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: DOYLE 4 SSE, CA **COOP ID: 042506**

Climate Division: CA 3 **NWS Call Sign:** **Elevation: 4,390 Feet** **Lat: 39˚58N** **Lon: 120˚05W**

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	42.3	22.7	32.5	66	1981	22	39.9	1986	-9	1971	3	25.5	1993	1007	0	.0	.0	6.6	4.1	26.5	.7
Feb	48.0	26.6	37.3	70+	1986	28	43.0	1991	-17	1989	6	27.9	1989	777	0	.0	.0	12.1	2.1	21.6	.3
Mar	54.4	30.1	42.3	77	1986	29	48.6	1993	5	1971	1	35.8	1977	705	0	.0	.0	22.3	.1	20.5	.0
Apr	61.1	32.9	47.0	85	1981	29	52.6	1987	16	1972	13	38.8	1975	540	0	.0	.0	26.5	.0	15.1	.0
May	69.6	38.8	54.2	95	1984	28	60.3	1992	20	1964	6	47.0	1977	345	10	.0	.5	30.5	.0	5.8	.0
Jun	78.7	44.4	61.6	101+	1985	18	66.4	1974	27	1985	1	56.5	1980	150	48	.1	4.5	30.0	.0	1.0	.0
Jul	86.6	49.2	67.9	104+	1960	19	71.4	1994	30	1987	22	61.3	1983	42	132	.8	15.0	31.0	.0	.1	.0
Aug	85.6	47.9	66.8	105	1979	1	69.5	1988	32	1968	21	61.8	1976	40	94	.6	12.4	31.0	.0	.1	.0
Sep	78.0	42.3	60.2	99+	1976	2	64.0	1974	22	1978	19	53.8	1986	175	29	.0	3.6	29.9	.0	2.5	.0
Oct	66.5	34.4	50.5	89+	1988	1	56.0	1988	14+	1971	29	45.9	1984	452	1	.0	.0	29.6	.0	12.6	.0
Nov	51.4	27.4	39.4	75	1999	6	47.0	1995	-2	1994	19	31.7	1985	767	0	.0	.0	17.4	.5	21.5	.1
Dec	42.6	22.0	32.3	69	1979	3	39.4	1981	-25	1990	22	20.7	1990	1013	0	.0	.0	6.9	3.8	26.7	1.1
Ann	63.7	34.9	49.3	105	Aug 1979	1	71.4	Jul 1994	-25	Dec 1990	22	20.7	Dec 1990	6013	314	1.5	36.0	273.8	10.6	154.0	2.2

\+ 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: 1956-2001

(3) Derived from 1971-2000 serially complete daily data

Issue Date: February 2004

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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	2.50	1.50	4.00	1969	20	7.85	1980	.04	1991
Feb	2.57	1.76	4.48	1986	17	15.11	1986	.10	1988
Mar	2.22	1.42	4.13	1991	4	9.49	1995	.11	1997
Apr	.88	.79	1.52	1963	6	3.08	1995	.01	1985
May	1.15	1.03	1.94	1957	19	5.25	1971	.00+	1985
Jun	.73	.56	1.73	1983	7	2.79	1983	.00	1990
Jul	.48	.25	2.15	1990	13	5.21	1990	.00+	2000
Aug	.40	.29	.95	1992	16	1.64	1976	.00+	1997
Sep	.76	.55	1.16	1959	19	3.28	1998	.00+	1995
Oct	1.07	1.01	3.50	1962	14	3.05	1981	.00+	1995
Nov	2.34	1.37	3.63	1988	23	12.18	1981	.09	1992
Dec	2.20	1.35	4.06	1995	12	8.25	1996	.00	1989
Ann	17.30	14.91	4.48	Feb 1986	17	15.11	Feb 1986	.00+	Jul 2000

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	7.0	4.4	1.3	.7
Feb	7.1	3.9	1.5	.7
Mar	7.4	4.1	1.2	.5
Apr	5.3	2.5	.4	.1
May	5.6	3.2	.6	.1
Jun	3.4	2.0	.3	@
Jul	2.1	1.0	.3	.1
Aug	2.4	1.2	.2	.0
Sep	3.5	2.1	.5	.1
Oct	4.1	2.5	.6	.2
Nov	6.2	4.0	1.4	.7
Dec	6.5	3.9	1.4	.6
Ann	60.6	34.8	9.7	3.8

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	.08	.18	.43	.74	1.12	1.59	2.18	2.95	4.07	6.03	8.01
Feb	.20	.37	.70	1.06	1.45	1.90	2.44	3.13	4.07	5.66	7.23
Mar	.14	.28	.55	.86	1.20	1.60	2.08	2.69	3.54	4.99	6.43
Apr	.06	.12	.23	.35	.48	.64	.83	1.07	1.41	1.97	2.53
May	.00	.07	.24	.42	.61	.83	1.09	1.42	1.88	2.65	3.41
Jun	.01	.04	.12	.21	.33	.47	.64	.87	1.19	1.75	2.32
Jul	.00	.00	.00	.05	.13	.23	.37	.55	.82	1.31	1.81
Aug	.00	.00	.01	.07	.14	.22	.33	.47	.68	1.03	1.40
Sep	.00	.00	.05	.15	.28	.44	.64	.90	1.29	1.96	2.64
Oct	.00	.00	.26	.44	.63	.83	1.06	1.35	1.73	2.36	2.97
Nov	.12	.24	.51	.82	1.18	1.61	2.13	2.81	3.76	5.40	7.03
Dec	.03	.14	.39	.68	1.03	1.45	1.97	2.65	3.61	5.27	6.93
Ann	7.91	9.43	11.54	13.25	14.83	16.43	18.14	20.09	22.55	26.26	29.61

\+ 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: 1956-2001
(3) Derived from 1971-2000 serially complete daily data

Complete documentation available from:
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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	6.8	5.0	1	#
Feb	4.2	2.0	1	#
Mar	3.8	1.5	#	#
Apr	1.8	.3	#	0
May	.9	.0	#	0
Jun	.0	.0	0	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	.1	.0	#	0
Oct	.3	.0	#	0
Nov	2.6	.0	#	0
Dec	5.8	3.0	1	#
Ann	26.3	11.8	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	12.0	1993	1	21.7	1971	17	1993	17	8	1993
Feb	12.0	1993	16	29.6	1975	12	1990	17	4	1989
Mar	9.0	1998	6	17.1	1975	6	1995	23	1	1985
Apr	6.2	1972	13	6.4	1972	6	1997	9	#+	1997
May	10.6	1971	21	15.0	1971	6	1971	21	#	1971
Jun	1.2	1971	1	1.2	1971	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	4.0	1986	26	4.0	1986	4	1986	26	#	1986
Oct	3.4	1971	16	5.3	1971	2	1971	16	#+	1984
Nov	12.2	1985	10	20.7	1985	12	1985	10	3	1985
Dec	14.2	1971	25	26.5	1971	13+	1996	22	4	1972
Ann	14.2	Dec 1971	25	29.6	Feb 1975	17	Jan 1993	17	8	Jan 1993

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	3.0	2.5	1.1	.5	@
Feb	2.0	1.4	.6	.2	.1
Mar	1.8	1.3	.5	.2	.0
Apr	1.0	.6	.2	.1	.0
May	.4	.3	.1	@	@
Jun	@	@	.0	.0	.0
Jul	.0	.0	.0	.0	.0
Aug	.0	.0	.0	.0	.0
Sep	.1	@	@	.0	.0
Oct	.2	.1	.1	.0	.0
Nov	1.2	1.0	.3	.1	@
Dec	2.1	1.4	.8	.6	@
Ann	11.8	8.6	3.7	1.7	.1

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	6.4	3.5	1.6	@
Feb	3.0	1.6	.6	.1
Mar	1.0	.5	.1	.0
Apr	@	@	@	.0
May	@	@	@	.0
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	@	@	.0	.0
Oct	@	.0	.0	.0
Nov	1.7	1.0	.5	@
Dec	4.5	2.8	1.4	.3
Ann	16.6	9.4	4.2	.4

+ 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	7/14	7/06	6/30	6/26	6/21	6/17	6/12	6/06	5/29
32	6/30	6/21	6/15	6/10	6/05	5/31	5/25	5/19	5/11
28	6/05	5/28	5/22	5/17	5/12	5/07	5/02	4/26	4/17
24	5/07	5/01	4/27	4/23	4/19	4/16	4/12	4/07	4/01
20	4/19	4/09	4/02	3/27	3/21	3/15	3/09	3/02	2/20
16	3/27	3/17	3/09	3/02	2/24	2/18	2/11	2/04	1/24

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	8/15	8/21	8/26	8/29	9/02	9/06	9/10	9/14	9/20
32	9/04	9/10	9/14	9/18	9/22	9/26	9/30	10/04	10/10
28	9/16	9/22	9/27	10/01	10/05	10/08	10/12	10/17	10/23
24	10/01	10/08	10/12	10/17	10/20	10/24	10/28	11/02	11/09
20	10/12	10/19	10/25	10/30	11/03	11/07	11/12	11/18	11/25
16	10/31	11/08	11/14	11/19	11/23	11/28	12/02	12/08	12/16

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	102	92	85	78	72	66	60	52	42
32	140	129	121	115	109	102	96	88	78
28	174	164	157	151	145	139	133	126	116
24	209	200	194	188	183	178	173	167	158
20	261	249	240	233	226	220	212	204	192
16	311	297	287	279	271	263	255	245	231

***** 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)

Heating Degree Days (1)

Base Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	1007	777	705	540	345	150	42	40	175	452	767	1013	6013
60	852	637	550	396	215	70	10	7	83	304	617	858	4599
57	759	553	460	314	153	37	3	1	46	224	527	765	3842
55	697	497	403	263	118	23	1	0	28	177	469	703	3379
50	548	364	265	157	51	5	0	0	6	83	332	557	2368
32	125	42	14	3	0	0	0	0	0	0	35	142	361

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	142	190	332	454	688	887	1113	1077	844	571	258	152	6708
55	0	0	8	24	93	220	401	365	182	35	2	0	1330
57	0	0	3	15	66	175	341	304	139	21	0	0	1064
60	0	0	0	7	35	117	255	216	86	8	0	0	724
65	0	0	0	0	10	48	132	94	29	1	0	0	314
70	0	0	0	0	1	13	51	24	6	0	0	0	95

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	25	54	129	239	464	676	898	866	632	352	91	30	25	79	208	447	911	1587	2485	3351	3983	4335	4426	4456
45	3	8	50	131	315	527	743	711	482	215	37	5	3	11	61	192	507	1034	1777	2488	2970	3185	3222	3227
50	0	0	13	55	189	379	588	556	338	110	6	0	0	0	13	68	257	636	1224	1780	2118	2228	2234	2234
55	0	0	0	11	89	240	433	402	204	40	0	0	0	0	0	11	100	340	773	1175	1379	1419	1419	1419
60	0	0	0	0	33	128	281	251	98	8	0	0	0	0	0	0	33	161	442	693	791	799	799	799
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	14	43	106	192	329	453	570	559	442	278	78	16	14	57	163	355	684	1137	1707	2266	2708	2986	3064	3080

(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:
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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