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: OROVILLE, CA **COOP ID: 046521**

Climate Division: CA 2 **NWS Call Sign:** **Elevation: 171 Feet** **Lat: 39˚31N** **Lon: 121˚33W**

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	54.2	36.3	45.3	76+	1968	23	49.4	1998	22	1960	2	40.5	1985	612	0	.0	.0	26.4	.0	7.2	.0
Feb	60.4	40.1	50.3	82	1985	28	53.8	1992	22+	1989	5	45.8	1990	414	0	.0	.0	27.4	.1	2.3	.0
Mar	64.6	43.3	54.0	88	1955	28	58.8	1993	26	1956	6	48.1	1991	347	4	.0	.0	30.5	.0	.6	.0
Apr	71.3	46.1	58.7	94+	1989	9	64.9	1987	29+	1991	11	53.3	1975	212	22	.0	.6	30.0	.0	.1	.0
May	80.2	51.9	66.1	104	2001	31	71.9	1973	30	1999	12	60.3	1977	90	124	.4	6.3	31.0	.0	@	.0
Jun	89.0	58.0	73.5	115	1961	16	78.0	1981	35	1995	11	69.1	1980	8	263	3.4	14.1	30.0	.0	.0	.0
Jul	94.7	61.5	78.1	115	1972	15	82.5	1984	49+	2001	31	73.0	1987	0	406	7.6	24.8	31.0	.0	.0	.0
Aug	93.1	59.1	76.1	113	1971	11	80.3	1971	42	1995	31	72.6	1976	0	343	6.2	22.4	31.0	.0	.0	.0
Sep	87.0	54.9	71.0	108+	1955	5	75.0	1974	40+	1988	28	62.8	1986	21	198	1.9	14.3	30.0	.0	.0	.0
Oct	77.6	48.6	63.1	102+	2001	3	67.8	1991	31	1971	29	57.9	1984	121	61	.0	3.4	31.0	.0	.1	.0
Nov	63.0	41.0	52.0	90	1967	2	57.9	1995	25	1985	21	46.2	1994	391	1	.0	.0	29.6	.0	1.6	.0
Dec	54.6	36.6	45.6	76+	1999	21	51.2	1995	12+	1990	23	40.6	1972	602	0	.0	.0	25.6	@	7.2	.0
Ann	74.1	48.1	61.2	115+	Jul 1972	15	82.5	Jul 1984	12+	Dec 1990	23	40.5	Jan 1985	2818	1422	19.5	85.9	353.5	.1	19.1	.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: 1953-2001

(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	5.52	5.48	3.79	1995	10	16.29	1995	.38	1976
Feb	5.20	4.10	3.41	1998	3	14.35	1998	.20	1997
Mar	4.70	3.71	2.62	1970	1	14.58	1991	.23	1988
Apr	1.84	1.66	2.00	1996	2	6.27	1983	.02	1987
May	.99	.56	2.00	1996	16	4.20	1998	.00+	1987
Jun	.31	.19	1.00	1997	4	1.69	1995	.00+	1994
Jul	.07	.00	1.59	1974	8	1.60	1974	.00+	2000
Aug	.16	.00	1.50	1993	16	1.50	1993	.00+	2000
Sep	.46	.17	1.94	1986	24	3.46	1986	.00+	2000
Oct	1.59	1.45	5.06	1962	13	3.94	1975	.00+	1995
Nov	3.74	2.79	2.89	1998	30	10.38	1983	.20	1995
Dec	4.17	3.96	2.80	1955	6	12.44	1983	.00	1989
Ann	28.75	25.63	5.06	Oct 1962	13	16.29	Jan 1995	.00+	Sep 2000

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	11.4	8.1	4.2	1.8
Feb	10.4	7.7	4.0	1.5
Mar	10.7	7.7	3.8	1.3
Apr	6.6	4.3	1.4	.4
May	4.8	2.5	.6	.2
Jun	1.8	.9	.1	@
Jul	.6	.1	@	@
Aug	.9	.4	.2	@
Sep	2.2	1.4	.3	.2
Oct	4.5	3.0	1.3	.5
Nov	8.8	6.3	3.1	1.0
Dec	9.5	7.1	3.0	1.2
Ann	72.2	49.5	22.0	8.1

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	.54	.93	1.68	2.45	3.29	4.23	5.34	6.73	8.63	11.80	14.90
Feb	.46	.82	1.51	2.23	3.02	3.92	4.99	6.34	8.18	11.27	14.31
Mar	.54	.90	1.56	2.21	2.91	3.69	4.61	5.74	7.29	9.83	12.31
Apr	.10	.20	.41	.66	.94	1.28	1.69	2.21	2.96	4.22	5.49
May	.00	.01	.07	.17	.32	.51	.77	1.12	1.65	2.60	3.60
Jun	.00	.00	.00	.03	.09	.17	.26	.38	.54	.83	1.12
Jul	.00	.00	.00	.00	.00	.00	.00	.00	.03	.19	.37
Aug	.00	.00	.00	.00	.00	.00	.00	.05	.19	.52	.89
Sep	.00	.00	.00	.00	.00	.06	.20	.42	.77	1.43	2.13
Oct	.00	.13	.40	.65	.91	1.21	1.55	1.97	2.55	3.52	4.46
Nov	.35	.61	1.12	1.64	2.20	2.84	3.60	4.55	5.86	8.04	10.17
Dec	.33	.78	1.45	2.06	2.70	3.39	4.18	5.15	6.46	8.58	10.62
Ann	12.51	15.09	18.69	21.63	24.37	27.15	30.13	33.54	37.86	44.41	50.34

\+ 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: 1953-2001
(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	#	.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	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	#	1974	8	#+	1974	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	#	Jan 1974	8	#+	Jan 1974	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	5/13	4/27	4/16	4/07	3/29	3/20	3/10	2/27	2/11
32	4/03	3/16	3/03	2/20	2/10	1/31	1/20	1/07	12/21
28	2/14	2/03	1/26	1/19	1/11	1/01	12/16	0/00	0/00
24	1/10	12/19	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	10/27	11/04	11/10	11/15	11/19	11/24	11/29	12/04	12/12
32	11/02	11/13	11/20	11/26	12/02	12/08	12/15	12/22	1/01
28	12/01	12/09	12/16	12/21	12/28	1/05	0/00	0/00	0/00
24	12/21	1/13	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	291	272	258	246	235	224	212	198	178
32	>365	336	318	304	292	279	267	252	231
28	>365	>365	>365	>365	>365	347	333	320	304
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)

Heating Degree Days (1)

Base Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	612	414	347	212	90	8	0	0	21	121	391	602	2818
60	457	275	210	110	35	1	0	0	4	47	251	447	1837
57	364	196	142	66	17	0	0	0	1	22	177	357	1342
55	307	147	106	43	10	0	0	0	0	12	134	300	1059
50	171	55	37	11	2	0	0	0	0	2	56	171	505
32	0	0	0	0	0	0	0	0	0	0	0	0	0

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	411	510	680	800	1057	1244	1429	1366	1167	964	600	421	10649
55	5	13	73	153	354	554	716	653	477	263	44	8	3313
57	0	5	47	116	299	494	654	591	418	211	27	4	2866
60	0	1	22	70	223	405	561	498	331	143	10	0	2264
65	0	0	4	22	124	263	406	343	198	61	1	0	1422
70	0	0	0	5	54	141	258	197	97	18	0	0	770

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	197	307	457	581	837	1003	1198	1135	949	737	394	215	197	504	961	1542	2379	3382	4580	5715	6664	7401	7795	8010
45	73	171	304	431	682	853	1043	980	799	582	246	89	73	244	548	979	1661	2514	3557	4537	5336	5918	6164	6253
50	16	55	161	286	527	703	888	825	649	427	117	18	16	71	232	518	1045	1748	2636	3461	4110	4537	4654	4672
55	0	8	59	158	375	553	733	670	499	277	38	0	0	8	67	225	600	1153	1886	2556	3055	3332	3370	3370
60	0	0	7	67	240	406	578	515	349	145	6	0	0	0	7	74	314	720	1298	1813	2162	2307	2313	2313
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	102	164	251	351	519	631	744	701	592	457	221	110	102	266	517	868	1387	2018	2762	3463	4055	4512	4733	4843

(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