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: DOBBINS 1 S, CA **COOP ID: 042456**

Climate Division: CA 2 **NWS Call Sign:** **Elevation: 1,640 Feet** **Lat: 39˚22N** **Lon: 121˚12W**

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	56.7	33.5	45.1	78	1975	14	49.3	1986	18+	1979	29	42.0	1972	617	0	.0	.0	23.4	.0	16.3	.0
Feb	59.9	35.5	47.7	82+	1996	14	52.3	1991	15	1989	8	42.5	1999	485	0	.0	.0	23.6	.2	10.5	.0
Mar	62.3	37.7	50.0	83	1986	30	55.0	1972	21+	1976	10	45.1	1991	466	0	.0	.0	28.5	.0	5.5	.0
Apr	68.5	40.2	54.4	88+	1988	11	59.4	1990	24	1974	28	47.9	1975	326	6	.0	.0	29.6	.0	3.6	.0
May	76.4	45.9	61.2	102	1984	28	67.5	1992	30	1988	2	53.4	1998	176	56	@	1.8	31.0	.0	.4	.0
Jun	86.1	51.5	68.8	104	1972	30	73.3	1977	34	1975	25	64.0	1998	38	151	.6	7.2	30.0	.0	.0	.0
Jul	93.4	55.7	74.6	111	1972	14	78.1	1984	42+	1999	24	70.2	1987	2	298	2.6	21.1	31.0	.0	.0	.0
Aug	92.9	54.1	73.5	110	1998	4	76.7	1971	41+	1994	30	69.6	1976	1	265	3.5	20.0	31.0	.0	.0	.0
Sep	87.4	50.5	69.0	106+	1988	5	73.1	1975	35	1972	24	62.1	1986	33	152	.9	11.6	30.0	.0	.0	.0
Oct	77.0	43.8	60.4	102	2001	1	64.8	1978	22	1971	29	54.9	1971	182	41	.0	2.2	31.0	.0	.5	.0
Nov	62.7	36.5	49.6	83+	1997	4	55.7	1995	19	1977	19	44.0	1994	462	0	.0	.0	28.6	.0	7.0	.0
Dec	56.8	32.5	44.7	84	1998	16	48.4	1977	6	1972	9	39.3	1972	630	0	.0	.0	25.3	.0	17.8	.0
Ann	73.3	43.1	58.3	111	Jul 1972	14	78.1	Jul 1984	6	Dec 1972	9	39.3	Dec 1972	3418	969	7.6	63.9	343.0	.2	61.6	.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: 1970-2001

(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	9.23	8.91	5.61	1997	1	21.74	1998	.50	1984
Feb	8.29	7.42	4.35	1982	15	25.00	1986	.59	1988
Mar	8.05	6.44	4.50	1989	10	23.45	1995	.69	1976
Apr	3.43	2.71	3.22	1996	1	10.47	1982	.40	1973
May	1.96	1.07	3.21	1996	16	7.53	1990	.00+	1992
Jun	.50	.31	1.20	1993	5	2.40	1993	.00+	1990
Jul	.15	.00	2.77	1974	8	3.15	1974	.00+	2000
Aug	.17	.00	.98	1976	15	1.59	1976	.00+	2000
Sep	1.02	.50	1.78	1983	30	5.23	1986	.00+	1999
Oct	2.75	2.43	3.71	1979	25	7.21	1981	.00+	1995
Nov	7.21	5.22	5.54	1988	23	21.16	1973	.43	1995
Dec	7.34	5.38	4.96	1982	21	21.13	1996	.00	1989
Ann	50.10	44.29	5.61	Jan 1997	1	25.00	Feb 1986	.00+	Aug 2000

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	11.7	9.0	5.7	3.0
Feb	10.9	8.4	5.0	2.9
Mar	11.3	9.1	5.3	2.4
Apr	7.1	4.9	2.2	.9
May	5.1	3.3	1.3	.4
Jun	2.0	1.2	.5	.1
Jul	.4	.2	@	@
Aug	1.0	.4	.1	.0
Sep	2.5	1.7	.7	.3
Oct	4.8	3.2	1.7	1.0
Nov	9.6	7.2	4.5	2.4
Dec	10.1	7.9	4.6	2.5
Ann	76.5	56.5	31.6	15.9

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	1.12	1.84	3.14	4.43	5.79	7.31	9.09	11.28	14.26	19.15	23.91
Feb	1.01	1.66	2.83	3.99	5.21	6.58	8.16	10.13	12.80	17.18	21.43
Mar	1.06	1.71	2.85	3.98	5.16	6.46	7.98	9.84	12.36	16.49	20.49
Apr	.50	.79	1.29	1.76	2.26	2.80	3.43	4.19	5.22	6.90	8.52
May	.00	.00	.27	.57	.90	1.30	1.78	2.40	3.26	4.74	6.22
Jun	.00	.00	.00	.11	.21	.32	.46	.63	.87	1.28	1.67
Jul	.00	.00	.00	.00	.00	.00	.00	.02	.13	.46	.78
Aug	.00	.00	.00	.00	.00	.00	.03	.12	.28	.56	.85
Sep	.00	.00	.00	.08	.26	.49	.79	1.19	1.77	2.79	3.82
Oct	.00	.12	.48	.89	1.34	1.88	2.53	3.35	4.52	6.50	8.48
Nov	.66	1.17	2.14	3.14	4.23	5.47	6.94	8.79	11.32	15.54	19.68
Dec	.56	1.34	2.53	3.61	4.73	5.95	7.35	9.07	11.38	15.14	18.75
Ann	25.46	29.63	35.30	39.82	43.99	48.13	52.53	57.53	63.76	73.11	81.47

+ 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: 1970-2001
(3) Derived from 1971-2000 serially complete daily data

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Snow (inches)

Snow Totals

Means/Medians (1)

Extremes (2)

Mean Number of Days (1)

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	1.0	.0	#	0	6.0	1972	27	6.2	1974	6+	1974	6	1	1974	.6	.4	.1	.1	.0	.6	.2	.1	.0
Feb	1.8	.0	#	0	16.0	1990	16	28.0	1990	20	1990	18	4	1990	.4	.4	.1	.1	.1	.6	.4	.3	.3
Mar	.8	.0	#	0	4.0	1985	6	6.1	1985	2+	1979	1	#+	1991	.5	.3	.1	.0	.0	@	.0	.0	.0
Apr	.2	.0	0	0	1.8	1982	1	2.3	1975	0	0	0	0	0	.1	.1	.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	.1	.0	0	0	1.0	1978	11	1.0	1978	0	0	0	0	0	.1	.1	.0	.0	.0	.0	.0	.0	.0
Dec	.4	.0	#	0	6.0	1972	6	9.1	1972	9	1972	7	2	1972	.1	.1	.1	@	.0	.4	.4	.3	.0
Ann	4.3	.0	N/A	N/A	16.0	Feb 1990	16	28.0	Feb 1990	20	Feb 1990	18	4	Feb 1990	1.8	1.4	.4	.2	.1	1.6	1.0	.7	.3

+ 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	6/01	5/24	5/18	5/13	5/08	5/03	4/28	4/23	4/15
32	5/11	5/04	4/29	4/24	4/20	4/15	4/11	4/05	3/29
28	4/17	4/01	3/21	3/12	3/03	2/22	2/12	2/01	1/17
24	3/17	2/28	2/15	2/04	1/25	1/14	1/02	12/15	0/00
20	1/26	1/10	12/25	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	10/06	10/12	10/16	10/19	10/22	10/26	10/29	11/02	11/07
32	10/20	10/27	11/02	11/06	11/11	11/15	11/20	11/25	12/03
28	11/03	11/13	11/20	11/25	12/01	12/06	12/12	12/19	12/28
24	11/12	11/26	12/07	12/15	12/24	1/02	1/12	1/26	0/00
20	12/09	12/27	1/15	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	197	187	179	173	167	161	154	146	136
32	235	225	217	210	204	198	192	184	174
28	318	300	287	277	268	259	249	238	223
24	>365	>365	>365	348	329	315	301	286	267
20	>365	>365	>365	>365	>365	>365	>365	>365	355
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	617	485	466	326	176	38	2	1	33	182	462	630	3418
60	462	345	317	197	91	9	0	0	7	89	316	475	2308
57	369	265	234	135	54	3	0	0	2	51	234	383	1730
55	308	214	183	100	35	1	0	0	1	32	185	325	1384
50	167	105	89	37	10	0	0	0	0	7	86	189	690
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	406	439	557	670	904	1103	1319	1287	1109	882	528	393	9597
55	1	8	28	80	226	414	606	574	420	201	23	5	2586
57	0	4	16	55	182	356	544	512	361	157	12	1	2200
60	0	0	6	27	126	272	451	419	276	102	4	0	1683
65	0	0	0	6	56	151	298	265	152	41	0	0	969
70	0	0	0	0	19	65	160	125	64	11	0	0	444

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	146	202	296	409	642	841	1047	1024	850	624	282	152	146	348	644	1053	1695	2536	3583	4607	5457	6081	6363	6515
45	53	91	160	263	487	691	892	869	700	469	145	53	53	144	304	567	1054	1745	2637	3506	4206	4675	4820	4873
50	6	28	59	137	335	541	737	714	550	324	50	6	6	34	93	230	565	1106	1843	2557	3107	3431	3481	3487
55	0	2	11	51	199	393	582	559	402	185	8	0	0	2	13	64	263	656	1238	1797	2199	2384	2392	2392
60	0	0	0	7	97	249	428	404	256	79	0	0	0	0	0	7	104	353	781	1185	1441	1520	1520	1520
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	98	125	184	259	401	532	648	622	525	409	188	109	98	223	407	666	1067	1599	2247	2869	3394	3803	3991	4100

(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