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: LAKE SPAULDING, CA **COOP ID: 044713**

Climate Division: CA 2 **NWS Call Sign:** **Elevation: 5,155 Feet** **Lat: 39˚19N** **Lon: 120˚38W**

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	44.7	26.1	35.4	69	1976	31	39.8	1976	-5	1949	23	30.8	1993	918	0	.0	.0	10.5	2.0	28.7	.1
Feb	46.5	26.6	36.6	72	1954	23	43.1	1991	-8	1949	12	30.5	1989	807	0	.0	.0	11.4	1.5	25.7	.1
Mar	49.4	28.1	38.8	75	1966	31	43.2	1978	-2	1966	3	33.1	1991	798	0	.0	.0	16.9	.7	27.4	@
Apr	55.3	30.7	43.0	82	1981	30	49.2	1987	6	1975	15	35.4	1975	660	0	.0	.0	22.6	.1	21.5	.0
May	63.7	36.8	50.3	94	1984	28	57.6	1992	13	1975	5	40.6	1998	462	6	.0	.1	27.9	.0	10.1	.0
Jun	73.5	43.4	58.5	100	1977	28	66.3	1977	24+	1982	3	54.2	1980	218	20	@	1.2	29.8	.0	1.6	.0
Jul	80.7	47.6	64.2	98+	1982	29	67.6	1984	31+	1983	8	59.7	1987	88	61	.0	3.7	31.0	.0	.2	.0
Aug	80.6	47.4	64.0	104	1981	10	68.1	1977	30	1973	24	59.7	1989	83	53	.1	3.7	31.0	.0	.1	.0
Sep	74.9	44.0	59.5	97	1988	3	65.7	1975	23	1972	24	51.0	1986	200	34	.0	.9	29.6	.0	1.7	.0
Oct	64.3	37.0	50.7	94+	1980	4	56.5	1988	13	1972	30	44.8	1984	450	5	.0	.1	27.8	.1	9.7	.0
Nov	50.1	29.5	39.8	79	1965	1	46.9	1976	4	1975	29	31.7	1994	756	0	.0	.0	16.0	.4	23.3	.0
Dec	44.1	25.3	34.7	75+	1958	3	40.7	1980	-14	1972	9	28.6	1972	939	0	.0	.0	9.9	2.1	28.3	.3
Ann	60.7	35.2	48.0	104	Aug 1981	10	68.1	Aug 1977	-14	Dec 1972	9	28.6	Dec 1972	6379	179	.1	9.7	264.4	6.9	178.3	.5

\+ 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: 1948-2001

(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	12.96	12.05	8.35	1997	1	34.42	1995	.79	1984
Feb	12.39	10.28	9.57	1986	17	42.88	1986	.95	1988
Mar	11.44	9.59	5.48+	1991	4	34.38	1995	1.84	1988
Apr	5.48	4.72	4.50	1982	11	16.26	1982	.60	1977
May	3.45	2.54	4.98	1996	16	12.57	1996	.00	1976
Jun	1.20	.78	2.24	1991	28	3.72	1992	.00	1986
Jul	.39	.09	3.65	1974	9	6.41	1974	.00+	2000
Aug	.51	.18	2.60	1968	19	3.78	1976	.00+	2000
Sep	1.73	1.23	2.53	1959	18	9.26	1986	.00+	1992
Oct	3.99	3.16	7.67	1962	13	10.22	1975	.03	1988
Nov	9.44	6.45	6.44	1950	18	27.73	1973	1.12	1986
Dec	11.00	8.18	11.55	1964	22	42.86	1996	.00	1989
Ann	73.98	68.65	11.55	Dec 1964	22	42.88	Feb 1986	.00+	Aug 2000

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	11.9	10.4	6.9	4.7
Feb	11.1	9.6	6.6	4.4
Mar	12.6	11.2	6.6	3.9
Apr	9.6	7.8	3.9	1.8
May	6.7	5.1	2.3	1.0
Jun	3.3	2.1	.8	.2
Jul	1.0	.5	.1	.1
Aug	1.4	.9	.3	.1
Sep	3.1	2.3	1.1	.6
Oct	5.6	4.7	2.3	1.2
Nov	10.1	8.6	5.2	3.4
Dec	10.2	8.9	5.7	3.9
Ann	86.6	72.1	41.8	25.3

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	1.27	2.21	3.97	5.77	7.73	9.94	12.55	15.80	20.27	27.69	34.95
Feb	1.77	2.80	4.58	6.30	8.10	10.07	12.35	15.14	18.90	25.04	30.94
Mar	1.90	2.89	4.55	6.13	7.74	9.50	11.51	13.96	17.23	22.52	27.59
Apr	.98	1.46	2.26	3.01	3.78	4.60	5.54	6.68	8.20	10.65	12.99
May	.08	.31	.76	1.25	1.80	2.44	3.21	4.20	5.57	7.91	10.22
Jun	.02	.09	.24	.40	.59	.82	1.09	1.45	1.95	2.80	3.65
Jul	.00	.00	.00	.00	.00	.05	.16	.33	.63	1.22	1.85
Aug	.00	.00	.00	.00	.07	.18	.34	.56	.90	1.50	2.12
Sep	.00	.00	.03	.17	.40	.73	1.20	1.87	2.91	4.82	6.84
Oct	.14	.32	.74	1.25	1.86	2.60	3.53	4.75	6.50	9.53	12.59
Nov	1.02	1.73	3.04	4.36	5.77	7.36	9.21	11.53	14.68	19.89	24.97
Dec	.42	1.30	2.88	4.47	6.22	8.20	10.55	13.51	17.57	24.35	31.01
Ann	37.13	43.34	51.79	58.54	64.77	70.98	77.57	85.06	94.42	108.47	121.04

+ 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: 1948-2001
(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	49.1	44.8	26	22
Feb	50.4	44.0	38	39
Mar	45.2	36.0	39	35
Apr	24.2	22.0	22	12
May	5.2	2.5	4	#
Jun	.3	.0	#	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	.0	.0	#	0
Oct	2.0	.0	#	#
Nov	18.5	8.0	3	2
Dec	37.7	29.5	13	12
Ann	232.6	186.8	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	32.0	1997	22	146.9	1982	109	1971	14	79	1971
Feb	35.0	1990	16	127.0	1975	97	1993	24	67	1983
Mar	29.0	1985	7	194.5	1991	105	1995	23	80	1983
Apr	28.0	1982	1	74.0	1982	109	1982	4	76	1983
May	9.5	1991	17	22.0+	1991	77	1983	1	45	1983
Jun	3.0	1988	7	5.0	1988	#+	1998	8	#+	1998
Jul	.0	0	0	.0	0	0	0	0	0	0
Aug	.0	0	0	.0	0	0	0	0	0	0
Sep	1.0	1986	25	1.0	1986	#+	1986	26	#+	1986
Oct	11.0	1985	21	14.0	1971	6	1985	21	1	1989
Nov	29.0	1985	10	76.0	1994	35	1994	27	16	1994
Dec	35.0	1996	21	126.5	1992	62	1992	31	41	1994
Ann	35.0+	Dec 1996	21	194.5	Mar 1991	109+	Apr 1982	4	80	Mar 1983

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	7.9	7.8	4.8	3.4	1.5
Feb	7.9	7.8	5.3	4.2	1.6
Mar	8.6	8.2	5.2	3.5	1.5
Apr	5.6	5.6	2.9	1.7	.6
May	2.0	1.9	.6	.4	.0
Jun	.2	.1	@	.0	.0
Jul	.0	.0	.0	.0	.0
Aug	.0	.0	.0	.0	.0
Sep	@	@	.0	.0	.0
Oct	.7	.7	.3	.2	@
Nov	4.6	4.4	2.4	1.5	.5
Dec	6.5	6.4	4.0	2.9	1.5
Ann	44.0	42.9	25.5	17.8	7.2

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	26.5	25.9	25.3	23.1
Feb	25.5	25.1	24.8	24.3
Mar	27.9	27.7	27.4	26.6
Apr	15.6	15.1	14.3	12.4
May	1.6	1.3	1.2	.8
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.0	.0	.0	.0
Oct	.5	.2	.1	.0
Nov	9.0	7.4	6.0	3.2
Dec	20.0	17.6	15.1	11.8
Ann	126.6	120.3	114.2	102.2

+ 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	7/15	7/09	7/05	7/01	6/28	6/24	6/20	6/16	6/10
32	7/03	6/25	6/20	6/15	6/11	6/06	6/02	5/27	5/20
28	6/07	5/31	5/26	5/22	5/18	5/14	5/10	5/05	4/28
24	5/18	5/10	5/05	4/30	4/25	4/21	4/16	4/10	4/03
20	5/08	4/27	4/19	4/12	4/05	3/30	3/23	3/15	3/04
16	4/20	4/10	4/03	3/28	3/22	3/16	3/10	3/02	2/18

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	8/14	8/22	8/27	9/01	9/05	9/10	9/14	9/20	9/27
32	9/05	9/14	9/20	9/26	10/01	10/06	10/11	10/17	10/26
28	9/24	10/02	10/08	10/14	10/19	10/23	10/29	11/04	11/12
24	10/15	10/23	10/28	11/02	11/07	11/11	11/16	11/22	11/30
20	11/02	11/09	11/15	11/19	11/23	11/27	12/02	12/07	12/14
16	11/09	11/18	11/25	12/01	12/06	12/12	12/18	12/25	1/05

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	99	89	81	75	69	63	57	49	39
32	143	132	124	117	111	105	98	90	80
28	191	178	168	160	153	145	137	127	114
24	232	219	210	202	195	188	180	171	158
20	271	257	247	239	231	223	215	205	192
16	316	292	279	269	260	251	242	231	216

***** 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	918	807	798	660	462	218	88	83	200	450	756	939	6379
60	763	657	659	511	322	115	25	21	109	309	606	784	4881
57	670	573	566	425	248	71	9	7	67	234	516	691	4077
55	608	517	504	369	204	48	4	2	46	190	458	629	3579
50	453	380	355	239	116	14	0	0	14	100	320	478	2469
32	37	36	20	11	2	0	0	0	0	1	26	77	210

Base — Cooling Degree Days (1)

Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	142	163	229	341	568	792	996	993	824	578	260	161	6047
55	0	0	0	9	58	150	287	282	180	55	2	0	1023
57	0	0	0	5	39	113	231	225	141	37	1	0	792
60	0	0	0	1	21	67	153	145	92	19	0	0	498
65	0	0	0	0	6	20	61	53	34	5	0	0	179
70	0	0	0	0	0	3	13	9	10	0	0	0	35

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	26	35	61	147	345	566	755	739	583	338	77	18	26	61	122	269	614	1180	1935	2674	3257	3595	3672	3690
45	1	2	16	64	215	417	600	584	435	209	26	1	1	3	19	83	298	715	1315	1899	2334	2543	2569	2570
50	0	0	0	21	114	279	445	429	293	106	4	0	0	0	0	21	135	414	859	1288	1581	1687	1691	1691
55	0	0	0	2	49	154	293	279	166	41	0	0	0	0	0	2	51	205	498	777	943	984	984	984
60	0	0	0	0	11	68	155	142	69	11	0	0	0	0	0	0	11	79	234	376	445	456	456	456
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	34	43	72	132	258	380	496	493	401	250	71	30	34	77	149	281	539	919	1415	1908	2309	2559	2630	2660

(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:
www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

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