

Climatology of the United States

No. 20

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801
www.ncdc.noaa.gov

Station: RICHARDSON GR ST PK, CA

1971-2000

COOP ID: 047404

Climate Division: CA 1

NWS Call Sign:

Elevation: 500 Feet Lat: 40°02N Lon: 123°48W

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	50.0	38.2	44.1	66	1981	22	48.3	1978	21+	1963	13	41.1	1982	649	0	.0	.0	17.8	@	7.6	.0
Feb	54.3	39.0	46.7	77	1981	22	50.3	1995	20	1989	5	41.1	1989	513	0	.0	.0	22.2	.1	5.0	.0
Mar	59.2	40.1	49.7	82+	1969	29	54.3	1986	29+	1996	28	44.9	1991	477	0	.0	.0	28.4	.0	2.1	.0
Apr	64.7	41.4	53.1	91	1962	13	57.0	1990	30+	1991	11	48.0	1975	359	0	.0	@	29.2	.0	.3	.0
May	71.1	45.9	58.5	101	1976	13	63.1	1992	32	1984	6	53.1	1977	216	13	.1	1.2	31.0	.0	@	.0
Jun	78.2	50.4	64.3	108	1966	15	67.6	1985	38+	1976	2	60.5	1980	73	52	.3	4.1	30.0	.0	.0	.0
Jul	85.5	53.8	69.7	112	1972	16	72.7	1996	41+	1989	1	65.0	1987	18	163	1.8	10.3	31.0	.0	.0	.0
Aug	86.5	53.8	70.2	112+	1978	10	72.9	1972	42	1967	30	67.0	1976	5	164	1.8	11.0	31.0	.0	.0	.0
Sep	82.8	50.4	66.6	106+	1971	16	71.1	1974	38+	1984	26	61.7	1986	47	95	.7	7.2	30.0	.0	.0	.0
Oct	70.3	45.8	58.1	100	1980	3	63.1	1987	28+	1971	30	54.6	1984	228	13	@	.9	30.9	.0	.1	.0
Nov	55.4	41.6	48.5	79	1966	1	52.3	1981	26+	1993	25	42.1	1994	495	0	.0	.0	25.6	.0	2.8	.0
Dec	49.1	38.1	43.6	74	1980	4	48.9	1981	15	1990	22	36.2	1990	663	0	.0	.0	14.8	.3	8.2	.0
Ann	67.3	44.9	56.1	112+	Aug 1978	10	72.9	Aug 1972	15	Dec 1990	22	36.2	Dec 1990	3743	500	4.7	34.7	321.9	.4	26.1	.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/normal/usnormals.html

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1961-2001

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

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: RICHARDSON GR ST PK, CA

COOP ID: 047404

Climate Division: CA 1

NWS Call Sign:

Elevation: 500 Feet Lat: 40°02N

Lon: 123°48W

Precipitation (inches)																								
	Precipitation Totals									Mean Number of Days (3)				Precipitation Probabilities (1) Probability that the monthly/annual precipitation will be equal to or less than the indicated amount										
	Means/ Medians(1)		Extremes							Daily Precipitation				Monthly/Annual Precipitation vs Probability Levels These values were determined from the incomplete gamma distribution										
Month	Mean	Med-ian	Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year	>= 0.01	>= 0.10	>= 0.50	>= 1.00	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	12.90	12.61	7.90	1974	16	38.65	1995	.82	1985	15.5	11.8	7.0	4.5	1.74	2.78	4.63	6.42	8.31	10.39	12.80	15.76	19.77	26.32	32.65
Feb	11.38	10.70	5.70	1986	17	31.09	1986	.13	1988	14.2	11.2	7.0	4.0	1.50	2.41	4.03	5.62	7.28	9.13	11.27	13.90	17.47	23.30	28.95
Mar	10.30	8.23	6.87	1995	9	28.73	1995	1.10	1988	14.9	11.4	6.3	3.2	1.72	2.61	4.11	5.52	6.98	8.56	10.37	12.57	15.50	20.26	24.80
Apr	4.46	3.69	3.23	1974	1	14.48	1982	.64	1990	10.0	7.0	3.0	1.5	.79	1.18	1.84	2.44	3.07	3.74	4.51	5.44	6.68	8.69	10.60
May	2.05	1.35	3.65	1990	27	12.74	1990	.00	1982	6.1	4.1	1.3	.4	.02	.11	.32	.59	.91	1.30	1.79	2.44	3.36	4.96	6.59
Jun	.65	.32	1.57	1992	30	2.94	1988	.00+	1999	2.3	1.4	.5	.1	.00	.00	.03	.11	.21	.35	.52	.76	1.10	1.71	2.33
Jul	.09	.00	.78	1974	8	1.02	1974	.00+	2000	.4	.2	.1	.0	.00	.00	.00	.00	.00	.00	.00	.00	.07	.30	.57
Aug	.37	.05	2.40	1983	31	4.38	1983	.00+	2000	1.2	.7	.2	.1	.00	.00	.00	.00	.00	.02	.12	.29	.59	1.17	1.80
Sep	1.31	.60	2.56	1986	17	7.80	1986	.00+	1999	2.5	1.9	1.0	.4	.00	.00	.00	.00	.13	.44	.87	1.46	2.32	3.84	5.40
Oct	3.93	2.89	4.63	1962	12	11.22	1975	.00	1978	6.1	4.6	2.4	1.4	.14	.45	1.00	1.57	2.20	2.91	3.76	4.82	6.29	8.75	11.17
Nov	9.78	8.99	5.82	1962	26	31.13	1973	1.15	1990	13.6	10.3	6.0	3.4	1.00	1.72	3.06	4.42	5.90	7.55	9.50	11.94	15.26	20.78	26.17
Dec	11.18	8.76	11.30	1964	22	33.62	1996	.34	1989	14.7	11.2	6.3	3.9	1.03	1.82	3.33	4.89	6.58	8.50	10.78	13.63	17.55	24.08	30.48
Ann	68.40	64.55	11.30	Dec 1964	22	38.65	Jan 1995	.00+	Aug 2000	101.5	75.8	41.1	22.9	34.82	40.51	48.24	54.40	60.07	65.71	71.71	78.51	87.00	99.72	111.10

+ 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: 1961-2001

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

Complete documentation available from:
www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

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: RICHARDSON GR ST PK, CA

COOP ID: 047404

Climate Division: CA 1

NWS Call Sign:

Elevation: 500 Feet

Lat: 40°02N

Lon: 123°48W

Snow (inches)																							
Snow Totals															Mean Number of Days (1)								
Means/Medians (1)					Extremes (2)										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	3.0	1971	13	3.0	1971	3	1971	13	#	1971	.1	.1	.1	.0	.0	@	@	.0	.0
Feb	.0	.0	#	0	.5	1971	25	.5	1971	1	1971	25	#	1971	.1	.0	.0	.0	.0	@	.0	.0	.0
Mar	.0	.0	#	0	.3	1999	31	.3	1999	2	1976	2	#+	1999	.1	.0	.0	.0	.0	.0	.0	.0	.0
Apr	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.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	#	.0	0	0	#	1977	20	#	1977	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Dec	.3	.0	0	0	3.5	1998	20	3.5	1998	0	0	0	0	0	.2	.1	.1	.0	.0	.0	.0	.0	.0
Ann	.4	.0	N/A	N/A	3.5	Dec 1998	20	3.5	Dec 1998	3	Jan 1971	13	#+	Mar 1999	.5	.2	.2	.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

Complete documentation available from:

www.ncdc.noaa.gov/oa/climate/normal/usnormals.html

Climatography of the United States

No. 20 1971-2000

Station: RICHARDSON GR ST PK, CA

COOP ID: 047404

Climate Division: CA 1

NWS Call Sign:

Elevation: 500 Feet

Lat: 40° 02N

Lon: 123° 48W

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	5/08	5/02	4/27	4/23	4/19	4/15	4/11	4/07	3/31
32	4/13	3/31	3/21	3/12	3/04	2/24	2/16	2/06	1/23
28	2/15	2/02	1/23	1/14	1/04	12/24	12/03	0/00	0/00
24	1/22	12/31	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	10/18	10/23	10/27	10/31	11/03	11/06	11/09	11/13	11/19
32	11/04	11/14	11/21	11/27	12/02	12/08	12/13	12/20	12/30
28	11/19	11/30	12/10	12/18	12/27	1/08	0/00	0/00	0/00
24	12/24	1/15	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	218	211	205	201	197	193	188	183	176
32	323	303	290	280	270	260	250	238	222
28	>365	>365	>365	>365	>365	352	329	312	293
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

Complete documentation available from:

www.ncdc.noaa.gov/oa/climate/normal/usnormals.html

**Climatography
of the United States
No. 20
1971-2000**

Station: RICHARDSON GR ST PK, CA

COOP ID: 047404

Climate Division: CA 1 NWS Call Sign: Elevation: 500 Feet Lat: 40°02N Lon: 123°48W

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	649	513	477	359	216	73	18	5	47	228	495	663	3743
60	494	373	326	218	104	17	2	0	10	112	346	508	2510
57	401	292	241	144	58	4	0	0	3	63	261	418	1885
55	339	239	189	104	35	2	0	0	1	39	207	360	1515
50	195	124	90	34	7	0	0	0	0	8	99	224	781
32	0	0	0	0	0	0	0	0	0	0	0	6	6

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	375	411	546	632	821	969	1168	1182	1038	807	495	366	8810
55	0	6	22	46	143	281	455	469	349	134	12	7	1924
57	0	2	12	26	103	224	393	407	291	95	6	3	1562
60	0	0	4	10	57	146	302	314	208	52	1	0	1094
65	0	0	0	0	13	52	163	164	95	13	0	0	500
70	0	0	0	0	1	10	66	52	27	2	0	0	158

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	139	200	300	400	576	728	917	931	793	549	249	126	139	339	639	1039	1615	2343	3260	4191	4984	5533	5782	5908
45	47	86	163	253	421	578	762	776	643	395	119	45	47	133	296	549	970	1548	2310	3086	3729	4124	4243	4288
50	6	21	62	129	270	428	607	621	493	246	35	5	6	27	89	218	488	916	1523	2144	2637	2883	2918	2923
55	0	0	13	47	143	282	452	466	344	122	3	0	0	0	13	60	203	485	937	1403	1747	1869	1872	1872
60	0	0	0	5	58	154	298	311	203	46	0	0	0	0	0	5	63	217	515	826	1029	1075	1075	1075
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	32	78	153	230	337	435	566	569	483	325	101	33	32	110	263	493	830	1265	1831	2400	2883	3208	3309	3342

(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.
Complete documentation for the 1971-2000 Normals is available on the internet from:
www.ncdc.noaa.gov/oa/climate/normal/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 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.

- | | |
|---|---|
| <ol style="list-style-type: none">a. Temperature/ Precipitation Tables<ol style="list-style-type: none">1. 1971-2000 Monthly Normals2. Cooperative Summary of the Day3. National Weather Service station records4. 1971-2000 serially complete daily datab. Degree Day Table<ol style="list-style-type: none">1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data | <ol style="list-style-type: none">c. Snow Tables<ol style="list-style-type: none">1. Snow Climatology2. Cooperative Summary of the Dayd. Freeze Data Table
1971-2000 serially complete daily data |
|---|---|

References

U.S. Climate Normals 1971-2000, www.ncdc.noaa.gov/normal.html
U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normal/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