

Climatology of the United States

No. 20

1971-2000

Station: WINTERS, CA

COOP ID: 049742

Climate Division: CA 2

NWS Call Sign:

Elevation: 135 Feet

Lat: 38° 31N

Lon: 121° 58W

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	54.8	37.6	46.2	79	1962	9	50.3	1995	18	1950	4	41.4	1972	583	0	.0	.0	25.0	.0	7.0	.0
Feb	61.3	41.1	51.2	80+	1991	24	55.7	1991	22+	1989	8	47.1	1989	386	0	.0	.0	27.2	@	1.9	.0
Mar	66.6	44.2	55.4	92	1988	27	60.4	1997	28	1951	10	51.2	1991	307	10	.0	@	30.7	.0	.3	.0
Apr	74.4	47.9	61.2	96+	1990	14	66.2	1987	29	1954	2	54.4	1975	167	50	.0	1.2	29.9	.0	.0	.0
May	82.9	53.4	68.2	107	1984	29	74.4	1997	30	1984	12	60.9	1998	63	161	1.2	8.4	31.0	.0	@	.0
Jun	90.9	58.2	74.6	115	1961	16	80.4	1981	44+	1990	1	69.4	1980	3	291	5.5	18.1	30.0	.0	.0	.0
Jul	95.8	60.0	77.9	115	1972	14	82.6	1988	46	1955	21	73.9	1987	0	399	10.3	26.5	31.0	.0	.0	.0
Aug	94.3	59.1	76.7	113	1978	9	80.3	1992	44	1955	28	72.4	1976	0	363	7.8	24.6	31.0	.0	.0	.0
Sep	89.8	56.8	73.3	112+	1950	4	77.9	1984	42+	1960	4	67.9	1986	7	256	3.2	18.4	30.0	.0	.0	.0
Oct	80.3	50.7	65.5	106+	2001	3	71.3	1991	32	1949	21	61.3	1971	89	103	.6	5.4	31.0	.0	.0	.0
Nov	65.0	42.6	53.8	90	1967	2	60.0	1995	25+	1952	28	48.7	1994	342	7	.0	.0	29.5	.0	1.1	.0
Dec	55.6	37.0	46.3	79	1958	13	50.9	1995	15	1990	23	41.1	1972	580	0	.0	.0	25.6	@	7.5	.0
Ann	76.0	49.1	62.5	115+	Jul 1972	14	82.6	Jul 1988	15	Dec 1990	23	41.1	Dec 1972	2527	1640	28.6	102.6	351.9	.0	17.8	.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: 1948-2001

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

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No. 20 1971-2000

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

Station: WINTERS, CA

COOP ID: 049742

Climate Division: CA 2

NWS Call Sign:

Elevation: 135 Feet Lat: 38°31N

Lon: 121°58W

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	5.10	4.16	3.98	1963	31	17.21	1995	.25	1975	13.2	7.1	3.2	1.7	.29	.58	1.20	1.88	2.67	3.59	4.71	6.16	8.18	11.62	15.05
Feb	4.67	3.89	4.07	1998	3	15.12	1998	.07	1971	10.5	6.5	3.2	1.4	.17	.38	.89	1.48	2.20	3.07	4.15	5.56	7.58	11.08	14.61
Mar	3.60	2.78	3.86	1995	9	11.75	1995	.01	1972	10.2	6.4	2.3	.9	.19	.38	.81	1.29	1.85	2.50	3.31	4.34	5.79	8.28	10.77
Apr	1.03	.74	2.79	1982	11	4.78	1982	.00	1977	5.0	2.7	.4	.1	.02	.07	.19	.33	.49	.68	.92	1.24	1.68	2.44	3.21
May	.64	.24	2.07	1996	16	3.47	1998	.00+	1985	3.5	1.5	.3	.1	.00	.00	.00	.05	.14	.27	.46	.71	1.10	1.80	2.52
Jun	.12	.04	.65	1953	6	.70	1993	.00+	1998	1.1	.5	.0	.0	.00	.00	.00	.00	.00	.03	.07	.13	.21	.36	.51
Jul	.03	.00	.45	1974	8	.50	1974	.00+	2000	.2	.1	.0	.0	**	**	**	**	**	**	**	**	**	**	**
Aug	.05	.00	.31	1997	20	.67	1976	.00+	2000	.5	.2	.0	.0	.00	.00	.00	.00	.00	.00	.00	.00	.03	.16	.33
Sep	.26	.05	1.74	1959	18	2.29	1989	.00+	1996	1.4	.7	.1	@	.00	.00	.00	.00	.00	.04	.12	.25	.45	.81	1.19
Oct	1.00	.72	2.71	1962	12	3.44	1972	.00+	1995	3.6	1.9	.6	.2	.00	.03	.14	.28	.44	.64	.88	1.20	1.66	2.45	3.25
Nov	2.87	2.28	2.91	1970	28	7.50	1984	.05+	1995	8.2	4.9	2.0	.6	.06	.15	.41	.75	1.17	1.71	2.41	3.35	4.71	7.13	9.62
Dec	3.45	3.08	5.43	1995	12	9.67	1995	.00	1989	10.3	5.4	2.3	1.0	.15	.45	.96	1.47	2.01	2.62	3.35	4.25	5.48	7.53	9.53
Ann	22.82	21.33	5.43	Dec 1995	12	17.21	Jan 1995	.00+	Aug 2000	67.7	37.9	14.4	6.0	9.01	11.12	14.12	16.60	18.94	21.32	23.90	26.87	30.65	36.44	41.72

+ 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

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

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Station: WINTERS, CA

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Climate Division: CA 2

NWS Call Sign:

Elevation: 135 Feet

Lat: 38°31N

Lon: 121°58W

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	.0	.0	#	0	1.0	1974	4	1.0	1974	#	1973	8	#	1973	.1	@	.0	.0	.0	.0	.0	.0	.0
Feb	#	.0	0	0	#	1990	15	#+	1990	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Mar	#	.0	0	0	#	1976	3	#	1976	0	0	0	0	0	.0	.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	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Dec	.0	.0	#	0	.5	1988	27	1.0	1988	#+	1998	21	#+	1998	.1	.0	.0	.0	.0	.0	.0	.0	.0
Ann	#	.0	N/A	N/A	1.0	Jan 1974	4	1.0+	Dec 1988	#+	Dec 1998	21	#+	Dec 1998	.2	@	.0	.0	.0	.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	4/19	4/09	4/01	3/26	3/20	3/14	3/08	3/01	2/19
32	3/20	3/06	2/25	2/17	2/09	2/02	1/25	1/15	1/02
28	1/27	1/20	1/14	1/10	1/05	12/31	12/25	12/16	0/00
24	1/04	0/00	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	11/02	11/08	11/12	11/16	11/19	11/22	11/26	11/30	12/05
32	11/09	11/19	11/26	12/02	12/07	12/13	12/19	12/26	1/04
28	11/30	12/08	12/13	12/19	12/23	12/29	1/04	1/17	0/00
24	1/05	0/00	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	282	269	259	251	243	235	227	217	204
32	340	326	316	308	300	292	284	274	260
28	>365	>365	>365	>365	355	345	337	329	318
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:

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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	583	386	307	167	63	3	0	0	7	89	342	580	2527
60	428	249	179	83	22	0	0	0	0	34	213	425	1633
57	339	174	121	47	10	0	0	0	0	16	149	336	1192
55	281	130	88	30	6	0	0	0	0	9	113	279	936
50	155	49	29	8	0	0	0	0	0	1	47	153	442
32	0	0	0	0	0	0	0	0	0	0	0	0	0

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	440	538	726	874	1121	1277	1422	1386	1239	1037	655	443	11158
55	8	24	101	214	413	587	709	673	549	333	78	9	3698
57	4	12	72	171	356	527	647	611	489	278	54	4	3225
60	0	3	38	117	275	437	554	518	399	203	28	0	2572
65	0	0	10	50	161	291	399	363	256	103	7	0	1640
70	0	0	1	16	79	159	248	213	134	40	1	0	891

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	220	352	499	652	890	1054	1194	1163	1027	815	440	230	220	572	1071	1723	2613	3667	4861	6024	7051	7866	8306	8536
45	101	210	346	503	735	904	1039	1008	877	660	294	106	101	311	657	1160	1895	2799	3838	4846	5723	6383	6677	6783
50	27	96	205	357	580	754	884	853	727	505	161	26	27	123	328	685	1265	2019	2903	3756	4483	4988	5149	5175
55	0	26	89	217	425	604	729	698	577	353	65	0	0	26	115	332	757	1361	2090	2788	3365	3718	3783	3783
60	0	1	26	109	280	455	574	543	428	213	18	0	0	1	27	136	416	871	1445	1988	2416	2629	2647	2647
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	106	187	281	399	551	654	721	708	636	506	253	119	106	293	574	973	1524	2178	2899	3607	4243	4749	5002	5121

(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/normal/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