

Climatology of the United States

No. 20

1971-2000

Station: CUYAMACA, CA

COOP ID: 042239

Climate Division: CA 6

NWS Call Sign:

Elevation: 4,640 Feet Lat: 32° 59N

Lon: 116° 35W

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	51.1	28.7	39.9	74	1975	16	45.2	1986	-4	1949	25	34.4	1979	779	0	.0	.0	17.8	.6	19.7	.0
Feb	52.9	29.9	41.4	75+	1963	8	45.7	1995	4	1990	19	35.6	1979	660	0	.0	.0	17.9	.5	16.8	.0
Mar	55.0	32.0	43.5	80+	1997	22	50.6	1972	10+	1999	7	35.4	1973	652	0	.0	.0	21.4	.1	13.8	.0
Apr	60.4	35.2	47.8	85	1989	8	55.5	1989	20	1999	2	38.1	1975	518	2	.0	.0	24.3	.1	7.8	.0
May	67.0	40.4	53.7	90+	2001	23	63.3	1997	22	1990	20	46.1	1977	369	18	.0	.1	28.4	.0	1.7	.0
Jun	76.6	48.0	62.3	98+	1994	30	69.5	1981	27	1965	17	55.8	1982	140	58	.0	1.3	29.8	.0	.3	.0
Jul	83.4	54.6	69.0	102	1961	11	73.8	1996	34	1948	12	63.9	1993	23	147	.1	4.3	31.0	.0	.0	.0
Aug	83.6	53.7	68.7	110	1969	22	73.3	1995	33	1948	12	63.3	1976	38	152	.0	5.2	31.0	.0	.0	.0
Sep	78.9	47.7	63.3	99	1948	2	68.0	1997	23	1948	25	56.6	1985	121	70	.0	1.7	30.0	.0	.2	.0
Oct	69.0	38.5	53.8	93	1965	7	60.5	1988	15+	1961	29	47.4	1971	358	10	.0	.1	29.8	.0	3.7	.0
Nov	58.7	31.9	45.3	85	1963	10	51.5	1995	10	1964	19	38.7	1994	591	0	.0	.0	24.4	.1	13.0	.0
Dec	52.2	27.6	39.9	75+	1989	6	45.2	1977	-1	1960	9	33.3	1971	778	0	.0	.0	19.4	.5	21.0	.0
Ann	65.7	39.0	52.4	110	Aug 1969	22	73.8	Jul 1996	-4	Jan 1949	25	33.3	Dec 1971	5027	457	.1	12.7	305.2	1.9	98.0	.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

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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	6.34	4.62	6.32	1993	8	28.47	1993	.08	1976	8.3	6.7	3.7	1.9	.24	.54	1.23	2.05	3.02	4.19	5.65	7.56	10.28	14.98	19.72
Feb	6.62	5.57	5.35	1980	21	24.34	1980	.13	1984	8.4	6.2	4.0	2.4	.53	.97	1.83	2.75	3.76	4.92	6.30	8.05	10.47	14.52	18.52
Mar	7.02	5.34	7.37	1995	6	20.68	1983	.00	1972	9.1	7.2	4.6	2.6	.31	.90	1.94	2.96	4.07	5.32	6.79	8.63	11.15	15.33	19.42
Apr	2.58	2.15	3.28	1958	4	7.18	1983	.00	1993	6.4	4.5	1.8	.7	.11	.32	.70	1.07	1.48	1.94	2.49	3.17	4.11	5.67	7.20
May	1.12	.61	2.54	1977	9	5.04	1977	.00	1984	4.7	2.4	.7	.2	.01	.04	.14	.27	.44	.66	.93	1.31	1.86	2.82	3.82
Jun	.27	.04	1.56	1993	6	1.58	1993	.00+	1996	1.3	.6	.2	@	.00	.00	.00	.00	.00	.01	.10	.23	.45	.86	1.29
Jul	.43	.09	2.32	1948	23	3.29	1984	.00+	2000	1.8	.9	.3	.1	.00	.00	.00	.00	.02	.09	.21	.41	.73	1.33	1.98
Aug	.93	.32	2.61	1977	17	4.10	1977	.00+	1985	2.8	1.7	.7	.2	.00	.00	.03	.13	.26	.45	.70	1.05	1.57	2.51	3.48
Sep	1.04	.48	4.86	1976	11	7.12	1976	.00+	1993	3.1	1.5	.5	.3	.00	.00	.06	.18	.35	.57	.85	1.22	1.77	2.73	3.70
Oct	1.64	1.18	4.07	1974	29	5.65	1974	.00+	1999	4.5	2.5	1.1	.5	.00	.00	.28	.55	.83	1.16	1.55	2.04	2.70	3.83	4.95
Nov	3.45	2.85	9.60	1965	23	11.99	1985	.01	1980	5.2	3.7	2.1	1.2	.08	.20	.51	.93	1.44	2.09	2.92	4.04	5.66	8.53	11.46
Dec	4.39	3.08	6.04	1966	7	14.55	1982	.15	2000	6.4	4.8	2.6	1.5	.40	.71	1.30	1.91	2.57	3.33	4.23	5.35	6.90	9.48	12.02
Ann	35.83	30.87	9.60	Nov 1965	23	28.47	Jan 1993	.00+	Jul 2000	62.0	42.7	22.3	11.6	15.55	18.78	23.27	26.94	30.38	33.84	37.57	41.84	47.23	55.43	62.85

+ 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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Lon: 116° 35W

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	6.1	2.6	1	#	14.5	1974	5	25.1	1982	18	1974	6	3	1982	1.9	1.5	.7	.5	@	3.7	2.5	1.5	.3
Feb	4.2	1.6	1	0	16.0	1987	25	20.5	1985	28	1987	26	9	1979	1.8	1.1	.6	.3	.1	2.4	1.6	1.3	.8
Mar	10.9	4.5	1	#	14.0	1991	27	53.3	1991	24	1991	28	6	1987	2.7	2.1	1.2	.8	.2	4.3	2.7	1.6	.4
Apr	2.8	.2	#	0	12.0	1980	23	18.0	1975	12	1980	23	2	1975	1.2	.8	.3	.2	@	.8	.6	.4	.2
May	.1	.0	0	0	2.0	1995	7	2.8	1995	0	0	0	0	0	.2	@	.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	.2	.0	#	0	3.3	1971	17	4.9	1971	3	1971	18	#+	1996	.1	.1	@	.0	.0	.1	.1	.0	.0
Nov	1.5	.0	#	0	8.0	1984	23	10.0+	1984	10	1975	29	1	1975	.6	.4	.2	.1	.0	.4	.3	.1	.1
Dec	3.2	.5	1	0	8.5	1972	9	16.0	1990	16	1990	23	5	1990	1.5	1.0	.3	.2	.0	1.9	1.1	.9	.1
Ann	29.0	9.4	N/A	N/A	16.0	Feb 1987	25	53.3	Mar 1991	28	Feb 1987	26	9	Feb 1979	10.0	7.0	3.3	2.1	.3	13.6	8.9	5.8	1.9

+ Also occurred on an earlier date(s) #Denotes trace amounts

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-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	6/18	6/11	6/06	6/02	5/29	5/25	5/20	5/15	5/08
32	6/03	5/26	5/20	5/16	5/11	5/07	5/02	4/26	4/18
28	5/11	4/30	4/21	4/14	4/08	4/01	3/25	3/17	3/05
24	4/11	3/30	3/21	3/13	3/06	2/26	2/18	2/09	1/25
20	3/20	3/04	2/20	2/09	1/30	1/20	1/07	12/18	0/00
16	2/25	2/10	1/30	1/21	1/11	12/31	12/16	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	9/11	9/18	9/24	9/29	10/03	10/07	10/12	10/18	10/25
32	9/28	10/05	10/11	10/15	10/19	10/24	10/28	11/03	11/10
28	10/13	10/21	10/26	10/31	11/04	11/08	11/13	11/18	11/26
24	10/26	11/04	11/11	11/18	11/23	11/29	12/05	12/13	12/25
20	11/13	11/23	12/01	12/07	12/14	12/21	12/30	1/15	0/00
16	11/28	12/11	12/20	12/29	1/07	1/17	2/01	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	156	146	139	132	126	120	114	107	96
32	189	180	172	166	161	155	149	142	132
28	251	237	227	218	210	202	193	182	168
24	332	303	287	275	264	253	242	229	211
20	>365	>365	>365	331	309	296	285	274	260
16	>365	>365	>365	>365	>365	349	329	313	293

* 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)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
Below 65	779	660	652	518	369	140	23	38	121	358	591	778	5027
60	624	520	516	379	244	66	3	9	51	229	443	623	3707
57	531	436	429	301	184	37	0	3	26	165	357	530	2999
55	469	380	372	253	149	24	0	1	16	128	303	469	2564
50	321	246	244	155	77	6	0	0	3	59	181	324	1616
32	13	4	15	5	0	0	0	0	0	0	3	19	59

Cooling Degree Days (1)

Base	Cooling Degree Days (1)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
Above 32	258	268	371	480	671	908	1147	1136	939	675	402	263	7518
55	0	0	16	38	107	241	434	424	265	90	12	0	1627
57	0	0	10	25	80	195	373	364	215	64	6	0	1332
60	0	0	4	14	48	134	282	278	150	36	2	0	948
65	0	0	0	2	18	58	147	152	70	10	0	0	457
70	0	0	0	0	5	17	56	66	22	2	0	0	168

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	96	117	178	278	452	694	914	914	731	464	214	104	96	213	391	669	1121	1815	2729	3643	4374	4838	5052	5156
45	32	48	86	164	312	544	759	759	581	315	105	35	32	80	166	330	642	1186	1945	2704	3285	3600	3705	3740
50	1	10	32	76	184	397	604	604	433	184	39	3	1	11	43	119	303	700	1304	1908	2341	2525	2564	2567
55	0	0	1	26	89	263	449	449	289	82	6	0	0	0	1	27	116	379	828	1277	1566	1648	1654	1654
60	0	0	0	1	31	147	298	300	163	26	0	0	0	0	0	1	32	179	477	777	940	966	966	966
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	69	86	125	185	284	439	599	599	469	309	153	82	69	155	280	465	749	1188	1787	2386	2855	3164	3317	3399

(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 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.

- | | |
|---|---|
| <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