

# Climatology of the United States

## No. 20

### 1971-2000

**Station: HAPPY CAMP RANGER STN, CA**

**COOP ID: 043761**

**Climate Division: CA 1**

**NWS Call Sign:**

**Elevation: 1,120 Feet Lat: 41° 48N**

**Lon: 123° 23W**

### 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	50.2	31.2	40.7	65+	1975	27	45.2	1981	6+	1937	21	36.7	1979	754	0	.0	.0	12.6	.7	21.2	.0
Feb	54.9	32.9	43.9	80	1992	26	49.0	1991	6	1950	1	38.0	1979	590	0	.0	.0	19.7	.3	16.4	.0
Mar	61.2	34.5	47.9	87+	1934	18	52.9	1978	21+	1988	25	43.3	1971	532	0	.0	.0	27.9	.0	13.4	.0
Apr	67.8	36.5	52.2	95+	1947	15	58.1	1989	22	1984	10	44.0	1975	391	4	.0	.3	29.1	.0	9.3	.0
May	76.2	41.3	58.8	108	1936	25	67.1	1992	22	1984	5	51.4	1977	222	28	.2	3.4	30.9	.0	2.2	.0
Jun	84.1	47.3	65.7	111	1961	16	70.9	1977	27+	1988	30	62.3	1980	71	92	1.6	10.7	30.0	.0	.1	.0
Jul	92.4	51.5	72.0	115	1946	20	75.6	1996	28	1988	5	66.0	1983	14	230	8.1	21.9	31.0	.0	.1	.0
Aug	92.4	51.1	71.8	115+	1978	9	75.4	1986	30	1939	21	66.8	1976	8	217	7.4	22.4	31.0	.0	.0	.0
Sep	86.0	45.5	65.8	110	1955	3	69.8	1991	24+	1988	28	60.5	1985	67	90	2.1	12.7	30.0	.0	.4	.0
Oct	73.5	39.3	56.4	100+	1988	1	63.0	1988	18	1974	26	52.6	1984	277	10	.1	1.8	30.9	.0	5.1	.0
Nov	57.0	35.7	46.4	82	1981	5	52.1	1995	10	1993	24	38.5	1994	559	0	.0	.0	22.4	.0	12.1	.0
Dec	49.1	31.3	40.2	69+	1989	5	45.7	1973	-2	1972	10	33.2	1990	770	0	.0	.0	11.9	.8	20.7	.1
Ann	70.4	39.8	55.2	115+	Aug 1978	9	75.6	Jul 1996	-2	Dec 1972	10	33.2	Dec 1990	4255	671	19.5	73.2	307.4	1.8	101.0	.1

+ 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](http://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: 1931-2001

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

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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	Median	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	9.16	9.47	6.30	1997	2	20.76	1995	.90	1985	11.1	8.9	4.9	2.7	2.03	2.88	4.22	5.43	6.64	7.93	9.38	11.12	13.41	17.05	20.48
Feb	8.28	8.36	4.32	1956	21	19.85	1986	.18	1988	11.4	8.7	4.6	2.3	1.44	2.17	3.38	4.51	5.67	6.93	8.36	10.11	12.43	16.17	19.75
Mar	6.90	5.55	3.46	1975	18	15.65	1983	.87	1994	12.5	9.5	3.9	1.6	1.39	2.01	3.02	3.95	4.89	5.89	7.03	8.40	10.21	13.11	15.85
Apr	3.04	2.58	2.25	1974	1	9.10	1982	.28	1987	8.8	5.2	1.7	.4	.37	.61	1.04	1.46	1.91	2.41	2.99	3.71	4.69	6.30	7.86
May	1.55	1.00	2.52	1942	25	7.19	1990	.00	1982	5.9	3.4	.8	.2	.05	.17	.38	.61	.85	1.14	1.48	1.90	2.49	3.48	4.46
Jun	.66	.40	1.37	2001	27	2.56	1988	.00+	1999	3.9	2.0	.3	.0	.00	.03	.12	.21	.32	.45	.60	.80	1.08	1.56	2.03
Jul	.31	.12	1.68	1947	26	1.42	1991	.00+	1999	1.8	.9	.1	.0	.00	.00	.00	.02	.06	.13	.22	.34	.53	.87	1.21
Aug	.54	.11	2.13	1983	30	4.33	1983	.00+	1998	2.2	1.3	.3	.1	.00	.00	.00	.00	.02	.09	.24	.48	.88	1.65	2.50
Sep	1.24	.61	2.90	1977	28	6.01	1977	.00+	1999	3.8	2.2	.9	.3	.00	.00	.03	.17	.38	.64	.98	1.45	2.12	3.30	4.54
Oct	3.11	2.30	5.35	1950	29	8.90	1975	.00	1978	6.2	4.0	2.0	1.1	.04	.19	.55	.96	1.45	2.05	2.78	3.73	5.09	7.43	9.78
Nov	7.86	5.74	4.10	2001	26	24.05	1984	1.40	1976	10.7	7.5	3.9	2.0	1.07	1.71	2.84	3.93	5.08	6.34	7.81	9.61	12.04	16.01	19.85
Dec	8.79	6.16	5.25+	1964	22	28.56	1996	.48	1976	11.3	9.1	4.9	2.5	1.06	1.74	2.98	4.21	5.51	6.96	8.65	10.73	13.57	18.24	22.77
Ann	51.44	50.68	6.30	Jan 1997	2	28.56	Dec 1996	.00+	Sep 1999	89.6	62.7	28.3	13.2	27.76	31.87	37.39	41.75	45.74	49.70	53.88	58.60	64.47	73.22	81.00

+ 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: 1931-2001

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

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Climate Division: CA 1

NWS Call Sign:

Elevation: 1,120 Feet

Lat: 41°48N

Lon: 123°23W

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	5.9	.8	#	0	8.0	1971	14	20.0	1971	17	1971	14	6	1982	1.3	1.1	.6	.5	.0	.9	.4	.2	.1
Feb	2.0	.0	#	0	7.0	1975	4	14.0	1971	3	1979	16	#+	1979	.5	.5	.3	.1	.0	@	.0	.0	.0
Mar	2.1	.0	#	0	8.0	1985	27	14.0	1985	3	1973	21	#+	1974	.8	.8	.2	.1	.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	#	1971	30	#	1971	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.7	.0	#	0	3.0	1973	14	6.0	1973	1	1973	21	#	1973	.4	.4	.1	.0	.0	.2	.0	.0	.0
Dec	2.7	.0	#	0	15.0	1972	6	28.0	1972	17	1972	8	3	1972	.8	.8	.2	.1	.1	.4	.3	.3	.1
Ann	13.4	.8	N/A	N/A	15.0	Dec 1972	6	28.0	Dec 1972	17+	Dec 1972	8	6	Jan 1982	3.8	3.6	1.4	.8	.1	1.5	.7	.5	.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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<b>Freeze Data</b>									
<b>Spring Freeze Dates (Month/Day)</b>									
<b>Temp (F)</b>	<b>Probability of later date in spring (thru Jul 31) than indicated(*)</b>								
	<b>.10</b>	<b>.20</b>	<b>.30</b>	<b>.40</b>	<b>.50</b>	<b>.60</b>	<b>.70</b>	<b>.80</b>	<b>.90</b>
<b>36</b>	6/20	6/12	6/06	6/01	5/27	5/23	5/17	5/12	5/03
<b>32</b>	6/02	5/24	5/18	5/13	5/08	5/03	4/28	4/22	4/14
<b>28</b>	5/10	4/29	4/21	4/14	4/08	4/01	3/25	3/17	3/06
<b>24</b>	4/06	3/24	3/15	3/07	2/28	2/21	2/13	2/04	1/22
<b>20</b>	2/22	2/10	2/02	1/26	1/19	1/12	1/04	12/26	12/12
<b>16</b>	2/17	2/04	1/25	1/16	1/07	12/28	12/13	0/00	0/00
<b>Fall Freeze Dates (Month/Day)</b>									
<b>Temp (F)</b>	<b>Probability of earlier date in fall (beginning Aug 1) than indicated(*)</b>								
	<b>.10</b>	<b>.20</b>	<b>.30</b>	<b>.40</b>	<b>.50</b>	<b>.60</b>	<b>.70</b>	<b>.80</b>	<b>.90</b>
<b>36</b>	9/07	9/15	9/21	9/26	10/01	10/05	10/11	10/16	10/25
<b>32</b>	9/29	10/05	10/09	10/13	10/16	10/20	10/24	10/28	11/03
<b>28</b>	10/07	10/17	10/25	10/31	11/06	11/11	11/18	11/25	12/05
<b>24</b>	10/26	11/05	11/12	11/18	11/23	11/29	12/05	12/12	12/22
<b>20</b>	11/11	11/20	11/27	12/03	12/08	12/14	12/20	12/27	1/07
<b>16</b>	11/23	12/08	12/19	12/30	1/10	1/23	2/15	0/00	0/00
<b>Freeze Free Period</b>									
<b>Temp (F)</b>	<b>Probability of longer than indicated freeze free period (Days)</b>								
	<b>.10</b>	<b>.20</b>	<b>.30</b>	<b>.40</b>	<b>.50</b>	<b>.60</b>	<b>.70</b>	<b>.80</b>	<b>.90</b>
<b>36</b>	163	151	141	133	126	118	110	101	88
<b>32</b>	194	182	174	167	161	154	147	139	127
<b>28</b>	261	244	232	221	211	201	191	179	162
<b>24</b>	318	301	288	278	268	258	247	235	217
<b>20</b>	>365	>365	349	334	323	313	303	292	277
<b>16</b>	>365	>365	>365	>365	>365	>365	339	320	301

\* 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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**NWS Call Sign:**

**Elevation: 1,120 Feet Lat: 41° 48N**

**Lon: 123° 23W**

### 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
65	754	590	532	391	222	71	14	8	67	277	559	770	4255
60	599	450	378	256	121	21	2	0	19	154	412	615	3027
57	506	366	292	186	76	8	0	0	7	97	328	522	2388
55	444	313	236	146	52	4	0	0	3	68	275	460	2001
50	295	188	122	69	16	0	0	0	0	22	161	313	1186
32	7	2	0	0	0	0	0	0	0	0	3	13	25

### Cooling Degree Days (1)

Base	Cooling Degree Days (1)												
	Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
32	276	337	491	603	829	1011	1239	1232	1013	756	434	267	8488
55	0	4	14	60	168	324	526	519	326	111	16	1	2069
57	0	0	8	39	130	269	464	457	269	78	9	0	1723
60	0	0	1	19	82	192	372	364	192	42	3	0	1267
65	0	0	0	4	28	92	230	217	90	10	0	0	671
70	0	0	0	0	7	30	116	98	29	1	0	0	281

### 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	55	126	241	367	591	785	1012	998	776	500	173	55	55	181	422	789	1380	2165	3177	4175	4951	5451	5624	5679
45	7	43	113	225	438	635	857	843	626	348	71	10	7	50	163	388	826	1461	2318	3161	3787	4135	4206	4216
50	0	5	38	114	290	486	702	688	476	210	18	0	0	5	43	157	447	933	1635	2323	2799	3009	3027	3027
55	0	0	5	41	166	338	547	533	330	100	1	0	0	0	5	46	212	550	1097	1630	1960	2060	2061	2061
60	0	0	0	8	78	206	392	379	198	33	0	0	0	0	0	8	86	292	684	1063	1261	1294	1294	1294
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	31	91	182	279	404	492	594	583	490	361	104	27	31	122	304	583	987	1479	2073	2656	3146	3507	3611	3638

(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:

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

- 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/normal.html](http://www.ncdc.noaa.gov/normal.html)  
U.S. Climate Normals 1971-2000-Products Clim20, [www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html)  
Snow Climatology Project Description, [www.ncdc.noaa.gov/oa/climate/monitoring/snowclim/mainpage.html](http://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](http://www1.ncdc.noaa.gov/pub/data/special/serialcomplete_jam_0900.pdf)