

# Climatology of the United States

## No. 20

### 1971-2000

**Station: YOSEMITE PARK HDQTRS, CA**

**COOP ID: 049855**

**Climate Division: CA 5**

**NWS Call Sign:**

**Elevation: 3,966 Feet Lat: 37°45N**

**Lon: 119°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	47.5	27.8	37.7	72	1976	30	44.3	1986	2	1949	25	32.0	1972	849	0	.0	.0	13.7	.3	25.7	.0
Feb	52.8	29.8	41.3	82+	1977	19	48.7	1991	6+	1989	6	36.2	1998	664	0	.0	.0	18.0	.5	21.0	.0
Mar	57.4	33.1	45.3	89	1966	29	52.1	1997	10	1951	3	38.3	1991	612	0	.0	.0	24.5	@	16.6	.0
Apr	64.7	37.4	51.1	89+	1966	1	57.7	1992	15	1975	7	41.8	1975	429	11	.0	.0	27.3	.0	8.0	.0
May	72.1	43.2	57.7	94+	1976	27	65.8	1992	26+	1967	2	48.5	1998	266	37	.0	.3	30.1	.0	1.8	.0
Jun	81.6	49.8	65.7	103	1976	29	70.8	1981	30+	1971	2	58.8	1998	88	110	.1	4.4	30.0	.0	.4	.0
Jul	89.9	55.4	72.7	105+	1977	31	76.8	1981	38	1965	19	66.8	1983	16	254	.8	16.4	31.0	.0	.0	.0
Aug	90.6	54.6	72.6	109	1977	2	76.8	1981	32+	1968	23	65.5	1976	13	249	1.4	17.0	31.0	.0	.0	.0
Sep	84.2	49.4	66.8	108	1976	1	71.7	1991	28	1971	29	59.6	1986	74	128	.4	7.3	30.0	.0	.2	.0
Oct	73.2	41.1	57.2	98	1965	8	63.5	1978	21+	1971	30	50.9	1971	283	39	.0	1.0	30.2	.0	4.0	.0
Nov	57.2	31.8	44.5	86+	1976	6	50.7	1995	13	1975	29	36.8	1994	614	0	.0	.0	22.2	@	17.6	.0
Dec	47.9	27.2	37.6	73	1998	17	44.1	1980	-1+	1972	12	29.0	1971	851	0	.0	.0	14.5	.6	26.4	.1
Ann	68.3	40.1	54.2	109	Aug 1977	2	76.8+	Aug 1981	-1+	Dec 1972	12	29.0	Dec 1971	4759	828	2.7	46.4	302.5	1.4	121.7	.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: 1948-2001

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Lon: 119° 35W

### 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	6.73	6.37	5.77	1963	31	17.57	1997	.08	1984	9.5	7.7	4.5	2.5	.40	.79	1.61	2.52	3.56	4.77	6.25	8.13	10.78	15.28	19.76	
Feb	6.92	5.61	5.20	1986	16	22.57	1986	.80	1988	9.3	7.7	4.5	2.8	.70	1.20	2.15	3.12	4.16	5.33	6.72	8.44	10.80	14.73	18.56	
Mar	5.80	4.64	4.79	1995	10	19.51	1991	.01	1972	10.8	8.2	3.7	2.0	.30	.61	1.29	2.07	2.96	4.02	5.31	6.98	9.33	13.35	17.37	
Apr	2.57	1.92	3.60	1982	10	6.01	1978	.18	1977	7.6	4.9	1.6	.6	.31	.51	.88	1.24	1.61	2.04	2.53	3.14	3.96	5.32	6.64	
May	1.58	1.45	2.20	1996	16	4.54	1998	.00	1985	5.6	3.5	1.1	.2	.09	.24	.48	.71	.96	1.24	1.56	1.95	2.49	3.38	4.24	
Jun	.79	.59	1.86	1982	30	4.00	1982	.00+	1994	2.3	1.6	.5	.1	.00	.00	.00	.18	.37	.56	.77	1.03	1.37	1.93	2.46	
Jul	.51	.10	1.60+	1992	15	4.19	1992	.00+	2000	1.3	.9	.3	.2	.00	.00	.00	.00	.00	.08	.24	.49	.87	1.58	2.32	
Aug	.21	.06	.73	1965	15	1.08	1972	.00+	1998	1.3	.8	@	.0	.00	.00	.00	.00	.00	.04	.11	.21	.37	.65	.94	
Sep	.92	.50	3.20	1959	18	4.06	1978	.00+	1995	3.3	2.2	.6	.2	.00	.00	.09	.21	.36	.55	.79	1.10	1.55	2.33	3.13	
Oct	2.27	1.47	2.80	1989	24	6.76	1982	.00+	1995	4.9	3.3	1.7	.8	.00	.03	.22	.49	.84	1.28	1.86	2.64	3.78	5.80	7.88	
Nov	4.66	3.67	5.63	1950	18	14.21	1983	.09	1992	7.5	5.5	3.0	1.5	.29	.57	1.14	1.78	2.49	3.33	4.34	5.63	7.44	10.50	13.55	
Dec	4.77	3.74	6.92	1955	23	12.58	1983	.00	1989	7.8	6.1	2.9	1.7	.14	.49	1.14	1.82	2.59	3.46	4.51	5.84	7.68	10.78	13.84	
Ann	37.73	35.55	6.92	Dec 1955	23	22.57	Feb 1986	.00+	Jul 2000	71.2	52.4	24.4	12.6	18.80	21.98	26.31	29.78	32.97	36.16	39.55	43.41	48.22	55.45	61.93	

+ 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

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

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NWS Call Sign:

Elevation: 3,966 Feet

Lat: 37°45N

Lon: 119°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	12.0	6.5	3	#	29.5	1982	5	92.5	1982	46	1982	21	22	1982	2.8	2.6	1.8	1.4	.6	7.7	6.4	5.7	3.9
Feb	11.2	4.8	4	#	17.0	1990	17	76.0	1979	33	1979	24	18	1979	1.9	1.6	1.3	.8	.2	5.6	3.7	3.2	1.9
Mar	8.1	3.5	1	0	16.0	1974	3	42.3	1982	24	1991	25	9	1991	1.8	1.2	1.0	.6	.1	2.6	1.6	1.0	.4
Apr	2.2	.0	#	0	13.0	1975	6	31.0	1975	21	1975	6	3	1975	.6	.5	.3	.2	@	.6	.4	.3	.2
May	#	.0	0	0	#	1974	18	#	1974	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	#	1975	31	#+	1975	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	1.7	.0	#	0	20.0	1994	26	20.0	1994	9	1975	29	1	1982	.7	.6	.3	.3	.1	1.1	.3	.2	.0
Dec	5.8	.0	1	0	17.0	1971	11	51.0	1971	23	1972	8	11	1971	1.2	1.0	.6	.5	.2	2.9	2.0	1.6	1.0
Ann	41.0	14.8	N/A	N/A	29.5	Jan 1982	5	92.5	Jan 1982	46	Jan 1982	21	22	Jan 1982	9.0	7.5	5.3	3.8	1.2	20.5	14.4	12.0	7.4

+ 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>	6/18	6/10	6/04	5/30	5/25	5/21	5/15	5/10	5/01
<b>32</b>	6/04	5/24	5/16	5/09	5/02	4/25	4/18	4/10	3/30
<b>28</b>	5/02	4/22	4/15	4/09	4/03	3/28	3/22	3/15	3/05
<b>24</b>	4/16	4/03	3/24	3/16	3/08	3/01	2/21	2/11	1/29
<b>20</b>	3/17	3/01	2/17	2/07	1/29	1/19	1/08	12/25	11/29
<b>16</b>	2/25	2/07	1/24	1/09	12/20	0/00	0/00	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>	9/23	9/30	10/04	10/08	10/12	10/16	10/20	10/25	10/31
<b>32</b>	10/07	10/13	10/18	10/22	10/26	10/29	11/02	11/07	11/14
<b>28</b>	10/20	10/27	11/01	11/05	11/09	11/13	11/18	11/23	11/30
<b>24</b>	11/01	11/10	11/17	11/22	11/28	12/03	12/08	12/15	12/24
<b>20</b>	11/20	12/02	12/10	12/17	12/24	12/31	1/08	1/20	0/00
<b>16</b>	12/03	12/15	12/26	1/06	1/25	0/00	0/00	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>	170	159	152	145	139	133	127	119	109
<b>32</b>	222	206	195	185	176	167	157	146	130
<b>28</b>	256	244	235	227	220	213	205	196	184
<b>24</b>	315	297	285	274	263	253	242	229	211
<b>20</b>	>365	>365	>365	346	326	310	296	281	261
<b>16</b>	>365	>365	>365	>365	>365	>365	>365	345	296

\* 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
65	849	664	612	429	266	88	16	13	74	283	614	851	4759
60	694	524	463	298	163	34	2	1	27	177	466	696	3545
57	601	440	378	230	115	17	0	0	13	126	380	603	2903
55	539	386	324	190	87	9	0	0	8	97	325	541	2506
50	390	257	205	109	37	2	0	0	1	44	202	395	1642
32	34	11	10	1	0	0	0	0	0	0	5	41	102

Base	Cooling Degree Days (1)												
	Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
32	208	271	421	573	795	1012	1261	1259	1044	780	381	213	8218
55	0	2	22	72	169	331	548	546	362	163	11	0	2226
57	0	0	14	51	135	278	486	484	307	130	6	0	1891
60	0	0	6	29	90	206	395	392	232	88	2	0	1440
65	0	0	0	11	37	110	254	249	128	39	0	0	828
70	0	0	0	1	13	45	139	132	56	14	0	0	400

### 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	45	108	203	344	552	746	1002	1004	791	515	163	36	45	153	356	700	1252	1998	3000	4004	4795	5310	5473	5509
45	4	42	98	218	401	596	847	849	641	364	74	0	4	46	144	362	763	1359	2206	3055	3696	4060	4134	4134
50	0	9	37	110	265	449	692	694	491	233	21	0	0	9	46	156	421	870	1562	2256	2747	2980	3001	3001
55	0	0	4	44	150	313	537	539	348	123	4	0	0	0	4	48	198	511	1048	1587	1935	2058	2062	2062
60	0	0	0	7	63	179	384	385	215	53	0	0	0	0	0	7	70	249	633	1018	1233	1286	1286	1286
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	44	100	153	238	359	477	634	629	506	356	129	41	44	144	297	535	894	1371	2005	2634	3140	3496	3625	3666

(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)