

# Climatology of the United States

## No. 20

### 1971-2000

**Station: PASO ROBLES, CA**

**COOP ID: 046730**

**Climate Division: CA 4**

**NWS Call Sign:**

**Elevation: 700 Feet Lat: 35° 37N**

**Lon: 120° 41W**

### 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	61.4	33.1	47.3	82+	1976	17	51.7	1986	10	1949	10	43.1	1972	550	0	.0	.0	30.5	.0	15.1	.0
Feb	64.5	36.6	50.6	85+	1991	25	54.8	1991	17+	1990	15	46.2	1990	404	0	.0	.0	27.7	.1	7.9	.0
Mar	67.4	39.3	53.4	91	1972	16	57.9	1972	20	1971	2	48.2	1973	364	3	.0	@	31.0	.0	3.8	.0
Apr	73.0	40.1	56.6	100	1931	21	62.3	1992	24	1976	2	50.9	1975	265	12	.0	1.2	30.0	.0	2.0	.0
May	79.8	44.8	62.3	103+	2001	31	68.7	1997	30+	1968	6	56.6	1998	135	52	.5	6.4	31.0	.0	.2	.0
Jun	86.5	48.7	67.6	111	1957	24	72.9	1981	31	1973	15	63.2	1982	36	114	2.9	13.1	30.0	.0	@	.0
Jul	91.3	51.8	71.6	113+	1960	20	76.1	1985	37	1956	15	66.9	1993	12	215	6.2	18.7	31.0	.0	.0	.0
Aug	92.0	51.6	71.8	117	1933	13	74.8	1992	37+	1968	26	67.6	1987	4	214	6.1	20.7	31.0	.0	.0	.0
Sep	88.0	48.4	68.2	112	1944	9	73.2	1984	28	1948	26	61.6	1986	40	136	3.5	14.8	30.0	.0	.0	.0
Oct	80.7	42.3	61.5	108	1980	1	66.4	1991	19	1971	30	57.2	1971	148	39	.8	6.3	31.0	.0	1.9	.0
Nov	68.2	35.6	51.9	95	1966	1	57.2	1995	14	1958	17	46.2	1994	394	0	.0	.1	30.0	.0	10.4	.0
Dec	61.7	30.9	46.3	87+	1980	28	52.7	1977	7+	1990	24	40.2	1990	580	0	.0	.0	30.1	.0	19.5	.0
Ann	76.2	41.9	59.1	117	Aug 1933	13	76.1	Jul 1985	7+	Dec 1990	24	40.2	Dec 1990	2932	785	20.0	81.3	363.3	.1	60.8	.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](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: 1901-2001

(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	3.23	2.03	4.15	1969	19	11.51	1995	.00	1976	8.6	5.7	2.4	.9	.06	.24	.63	1.07	1.58	2.19	2.94	3.90	5.26	7.58	9.90
Feb	3.29	2.36	3.42	1938	11	9.06	1998	.00	1997	8.4	5.6	2.3	.9	.03	.17	.51	.94	1.45	2.09	2.88	3.92	5.41	8.00	10.63
Mar	2.88	2.45	4.70	1995	10	12.31	1995	.00+	1997	7.9	5.4	1.7	.7	.00	.21	.67	1.12	1.60	2.14	2.78	3.56	4.65	6.47	8.25
Apr	.80	.51	1.73	1958	1	3.35	1983	.00+	1997	4.0	2.0	.4	.1	.00	.00	.06	.16	.29	.45	.66	.94	1.34	2.04	2.77
May	.24	.02	1.84	1931	25	1.87	1998	.00+	1999	1.4	.6	.2	.0	.00	.00	.00	.00	.00	.00	.06	.17	.38	.79	1.24
Jun	.03	.00	.52	1934	4	.20	1991	.00+	1999	.5	.2	.0	.0	.00	.00	.00	.00	.00	.00	.00	.02	.06	.12	.17
Jul	.02	.00	.68	1950	10	.35	1980	.00+	2000	.3	.1	.0	.0	**	**	**	**	**	**	**	**	**	**	**
Aug	.06	.00	.95	1976	19	1.02	1976	.00+	2000	.2	.1	.1	.0	**	**	**	**	**	**	**	**	**	**	**
Sep	.34	.04	1.58	1976	29	2.90	1976	.00+	1996	1.4	.8	.2	.1	.00	.00	.00	.00	.00	.03	.11	.27	.53	1.07	1.66
Oct	.59	.54	1.65	1996	30	1.78	1996	.00+	1999	2.9	1.3	.3	@	.00	.00	.00	.14	.26	.40	.55	.75	1.01	1.46	1.89
Nov	1.29	.87	2.36	1963	20	4.14	1972	.00	1992	5.2	3.2	.8	.1	.01	.05	.16	.32	.51	.76	1.08	1.51	2.14	3.25	4.38
Dec	1.94	1.71	5.25	1966	6	5.83	1996	.00	1989	6.4	3.7	1.4	.6	.06	.21	.48	.75	1.06	1.42	1.84	2.38	3.12	4.36	5.59
Ann	14.71	14.25	5.25	Dec 1966	6	12.31	Mar 1995	.00+	Aug 2000	47.2	28.7	9.8	3.4	5.97	7.32	9.23	10.80	12.28	13.78	15.40	17.27	19.64	23.26	26.55

+ 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: 1901-2001

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

Complete documentation available from:  
[www.ncdc.noaa.gov/oa/climate/normals/usnormals.html](http://www.ncdc.noaa.gov/oa/climate/normals/usnormals.html)

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Climate Division: CA 4

NWS Call Sign:

Elevation: 700 Feet

Lat: 35° 37N

Lon: 120° 41W

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	#	1974	3	#	1974	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Feb	#	.0	0	0	#	1989	8	#	1989	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Mar	#	.0	0	0	#	1982	19	#	1982	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	.1	.0	#	0	4.0	1988	15	4.0	1988	#	1990	21	#	1990	@	@	@	.0	.0	.0	.0	.0	.0
Ann	.1	.0	N/A	N/A	4.0	Dec 1988	15	4.0	Dec 1988	#	Dec 1990	21	#	Dec 1990	@	@	@	.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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<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>	6/08	5/28	5/20	5/13	5/07	4/30	4/24	4/16	4/05
<b>32</b>	5/14	4/30	4/21	4/13	4/05	3/29	3/20	3/11	2/26
<b>28</b>	4/06	3/21	3/09	2/27	2/18	2/09	1/30	1/18	1/02
<b>24</b>	3/01	2/16	2/06	1/29	1/20	1/12	1/03	12/22	11/30
<b>20</b>	1/31	1/17	1/06	12/26	12/13	11/21	0/00	0/00	0/00
<b>16</b>	1/07	12/23	0/00	0/00	0/00	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>	9/27	10/03	10/08	10/12	10/16	10/20	10/24	10/29	11/04
<b>32</b>	10/11	10/17	10/22	10/26	10/29	11/02	11/06	11/10	11/16
<b>28</b>	10/29	11/05	11/10	11/15	11/19	11/24	11/28	12/03	12/11
<b>24</b>	11/01	11/13	11/21	11/29	12/06	12/13	12/21	12/31	1/19
<b>20</b>	11/19	12/01	12/11	12/20	1/01	0/00	0/00	0/00	0/00
<b>16</b>	12/18	12/30	0/00	0/00	0/00	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>	205	190	179	170	161	153	144	133	118
<b>32</b>	252	237	225	215	206	197	188	176	160
<b>28</b>	331	309	294	282	271	261	249	236	217
<b>24</b>	>365	>365	347	327	314	303	291	279	263
<b>20</b>	>365	>365	>365	>365	>365	>365	346	319	294
<b>16</b>	>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

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**Elevation: 700 Feet**

**Lat: 35° 37N**

**Lon: 120° 41W**

### 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	550	404	364	265	135	36	12	4	40	148	394	580	2932
60	395	266	223	147	57	6	1	0	9	60	250	425	1839
57	307	188	152	96	28	1	0	0	3	29	174	337	1315
55	249	140	114	67	16	0	0	0	1	16	130	279	1012
50	126	53	41	20	3	0	0	0	0	2	51	154	450
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	473	520	662	737	940	1068	1226	1233	1086	914	596	443	9898
55	8	16	63	114	244	378	513	520	397	217	37	10	2517
57	4	7	39	83	193	319	451	458	339	168	21	5	2087
60	0	1	17	45	129	235	359	365	255	106	7	0	1519
65	0	0	3	12	52	114	215	214	136	39	0	0	785
70	0	0	0	1	13	38	103	88	55	9	0	0	307

### 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	259	334	435	532	705	841	992	995	866	685	376	225	259	593	1028	1560	2265	3106	4098	5093	5959	6644	7020	7245
45	125	195	281	382	550	691	837	840	716	530	236	96	125	320	601	983	1533	2224	3061	3901	4617	5147	5383	5479
50	37	84	147	236	395	541	682	685	566	376	112	31	37	121	268	504	899	1440	2122	2807	3373	3749	3861	3892
55	2	20	55	113	248	392	527	530	416	232	39	0	2	22	77	190	438	830	1357	1887	2303	2535	2574	2574
60	0	0	4	39	126	250	373	375	269	113	4	0	0	0	4	43	169	419	792	1167	1436	1549	1553	1553
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	195	228	285	365	459	511	589	588	529	464	288	195	195	423	708	1073	1532	2043	2632	3220	3749	4213	4501	4696

(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)