### Climatography of the United States No. 20 1971-2000

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

Station: WASCO, CA 1971-2000 COOP ID: 049452

Climate Division: CA 5 NWS Call Sign: Elevation: 345 Feet Lat: 35°36N Lon: 119°21W

				Temperature (°F Extremes							re (°F)										
	Mea	<b>n</b> (1)						Extr	emes					Degree Base To	-		Mean	Numb	er of I	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	56.6	36.5	46.6	81	1984	31	52.3	1986	19	1963	13	39.9	1972	571	0	.0	.0	25.5	.0	8.5	.0
Feb	64.5	40.0	52.3	83	1989	22	56.3	1991	22	1953	21	47.7	1971	357	0	.0	.0	27.6	.0	2.7	.0
Mar	70.2	43.5	56.9	92	1969	30	62.5	1997	26	1956	7	52.6	1973	265	14	.0	.1	31.0	.0	.4	.0
Apr	78.4	46.7	62.6	101	1981	30	69.0	1987	31	1999	11	56.2	1975	143	69	@	2.8	30.0	.0	@	.0
May	86.6	52.9	69.8	109	2001	31	76.6	1992	39+	2000	11	62.4	1998	47	194	1.9	11.3	31.0	.0	.0	.0
Jun	94.3	58.7	76.5	113	1961	16	81.0	1981	43+	1971	2	71.1	1998	2	347	7.6	21.9	30.0	.0	.0	.0
Jul	99.0	63.2	81.1	114	1972	16	85.2	1988	49	1956	2	76.1	1987	0	500	15.0	29.1	31.0	.0	.0	.0
Aug	97.6	61.8	79.7	113	1990	7	82.7	1992	46	1998	20	74.8	1976	0	455	11.9	27.6	31.0	.0	.0	.0
Sep	92.2	57.7	75.0	111+	1998	3	79.7	1991	41	1948	26	69.0	1986	4	302	4.2	19.3	30.0	.0	.0	.0
Oct	82.2	49.1	65.7	105	1990	4	70.5	1991	29+	1971	30	60.9	1971	86	106	.5	5.7	31.0	.0	.1	.0
Nov	66.9	39.7	53.3	92+	1949	7	59.1	1995	23	1994	23	47.5	1994	354	3	.0	.0	29.8	.0	3.8	.0
Dec	56.6	34.4	45.5	78+	1981	19	52.4	1977	14	1990	23	40.4	1990	605	0	.0	.0	25.6	.0	12.2	.0
Ann	78.8	48.7	63.8	114	Jul 1972	16	85.2	Jul 1988	14	Dec 1990	23	39.9	Jan 1972	2434	1990	41.1	117.8	353.5	.0	27.7	.0

<sup>+</sup> Also occurred on an earlier date(s)

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

Issue Date: February 2004 246-A

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>(1)</sup> From the 1971-2000 Monthly Normals

<sup>(2)</sup> Derived from station's available digital record: 1948-2001

<sup>(3)</sup> Derived from 1971-2000 serially complete daily data

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**COOP ID: 049452** 

Station: WASCO, CA

Climate Division: CA 5 NWS Call Sign: Elevation: 345 Feet Lat: 35°36N Lon: 119°21W

										Pı	recipi	tation	(incl	hes)										
	Mea	ans/	P	recip	itatio	on Total					ean N of D	ays (3	3)	Proba	ability th		nonthly/	annual j	precipita ated am	babilit ation will nount vs Probal	ll be equ		less tha	in the
	Medi	ans(1)				Extremes	•			"	any Fie	стриацо	11		Th	ese value	s were de	termined	from the i	incomplet	e gamma	distribut	ion	
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	1.34	1.11	1.86	1999	25	3.86	1999	.03	1972	7.4	3.8	.6	@	.10	.18	.36	.54	.75	.98	1.27	1.63	2.13	2.97	3.80
Feb	1.37	1.03	2.53	1978	10	5.78	1998	.01	1977	6.4	3.9	.7	.1	.06	.12	.27	.45	.66	.91	1.23	1.63	2.22	3.22	4.23
Mar	1.60	1.23	2.89	1982	31	5.78	1982	.00	1972	7.1	4.2	.8	.1	.05	.18	.40	.63	.89	1.18	1.52	1.96	2.56	3.57	4.56
Apr	.58	.44	1.20	1980	28	2.66	1988	.00+	1997	3.4	1.6	.3	.1	.00	.00	.01	.08	.18	.30	.46	.68	.99	1.54	2.12
May	.24	.01	1.52	1971	27	2.15	1971	.00+	2000	1.4	.6	.1	@	.00	.00	.00	.00	.00	.00	.03	.12	.32	.66	1.17
Jun	.13	.00	1.98	1998	12	2.00	1998	.00+	1999	.5	.2	.1	@	.00	.00	.00	.00	.00	.00	.00	.01	.13	.43	.79
Jul	.01	.00	.20	1969	13	.10	1986	.00+	2000	.1	@	.0	.0	**	**	**	**	**	**	**	**	**	**	**
Aug	.03	.00	.46	1983	19	.47	1983	.00+	1999	.3	.1	.0	.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.11	.24
Sep	.18	.00	1.24	1978	5	1.57	1978	.00+	2000	1.0	.5	.1	@	.00	.00	.00	.00	.00	.00	.02	.11	.28	.61	.98
Oct	.34	.26	1.14	1974	3	1.76	1974	.00+	1999	1.8	.9	.2	@	.00	.00	.00	.04	.11	.19	.29	.42	.60	.91	1.21
Nov	.64	.51	1.05	1960	6	1.95	1987	.00+	2000	3.9	1.9	.2	@	.00	.00	.07	.17	.28	.42	.58	.79	1.08	1.56	2.05
Dec	.88	.84	1.21	1977	28	2.81	1996	.00+	2000	4.8	2.5	.4	@	.00	.09	.24	.38	.53	.69	.88	1.10	1.41	1.91	2.40
Ann	7.34	6.83	2.89	Mar 1982	31	5.78+	Feb 1998	.00+	Dec 2000	38.1	20.2	3.5	.3	3.14	3.80	4.73	5.49	6.20	6.92	7.70	8.59	9.71	11.42	12.97

<sup>+</sup> Also occurred on an earlier date(s)

Complete documentation available from:

www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

<sup>#</sup> Denotes amounts of a trace

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>\*\*</sup> Statistics not computed because less than six years out of thirty had measurable precipitation

<sup>(1)</sup> From the 1971-2000 Monthly Normals

<sup>(2)</sup> Derived from station's available digital record: 1948-2001

<sup>(3)</sup> Derived from 1971-2000 serially complete daily data

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**COOP ID: 049452** 

Station: WASCO, CA

Climate Division: CA 5 NWS Call Sign: Elevation: 345 Feet Lat: 35°36N Lon: 119°21W

										Snov	w (incl	hes)											
						Sno	ow To	tals									Mea	n Nui	mber (	of Day	<b>VS</b> (1)		
	Mean	s/Medi	ians (1)	ı					Extre	mes (2)							ow Fa				Snow = Thr	_	
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	.1	.0	0	0	3.0	1999	25	3.0	1999	0	0	0	0	0	@	@	@	.0	.0	.0	.0	.0	.0
Feb	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Mar	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Apr	.0	.0	#	0	.0	0	0	.0	0	2	1988	21	#	1988	.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	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Ann	.1	.0	N/A	N/A	3.0	Jan 1999	25	3.0	Jan 1999	2	Apr 1988	21	#	Apr 1988	@	@	@	.0	.0	.0	.0	.0	.0

<sup>+</sup> Also occurred on an earlier date(s) #Denotes trace amounts

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

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>-9/-9.9</sup> represents missing values Annual statistics for Mean/Median snow depths are not appropriate

<sup>(1)</sup> Derived from Snow Climatology and 1971-2000 daily data

<sup>(2)</sup> Derived from 1971-2000 daily data

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**COOP ID: 049452** 

Station: WASCO, CA

Climate Division: CA 5 NWS Call Sign:

Elevation: 345 Feet Lat: 35°36N Lon: 119°21W

				Freez	e Data								
			Spri	ng Freeze D	ates (Month/	/Day)							
Probability of later date in spring (thru Jul 31) than indicated(*)   10   20   30   40   50   60   70   80   90   148													
temp (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90				
36	4/13	4/03	3/28	3/22	3/17	3/12	3/06	2/27	2/18				
32	3/21	3/10	3/03	2/24	2/18	2/12	2/05	1/29	1/18				
28	2/11	2/01	1/25	1/18	1/12	1/07	12/31	12/23	12/11				
24	1/17	1/07	12/29	12/19	12/03	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				
			Fa	ll Freeze Dat	tes (Month/D	Day)		•					
Tomn (F)		Pro	bability of e	arlier date ii	n fall (beginn	ning Aug 1) t	han indicate	ed(*)					
remp (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90				
36	10/27	11/01	11/04	11/07	11/10	11/13	11/16	11/19	11/24				
32	11/07	11/12	11/16	11/19	11/22	11/25	11/28	12/02	12/07				
28	11/19	11/26	12/02	12/06	12/11	12/15	12/20	12/25	1/03				
24	12/04	12/14	12/23	12/31	1/12	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 F	ree Period	1	•						
Tomp (E)			Probability	of longer tha	an indicated	freeze free p	eriod (Days)						
remp (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90				
36	269	258	250	244	237	231	224	217	206				
32	309	297	289	282	276	270	263	255	243				
28	>365	>365	345	334	327	320	313	305	294				
24	>365	>365	>365	>365	>365	>365	>365	353	331				
20	>365	>365	>365	>365	>365	>365	>365	>365	>365				
16	>365	>365	>365	>365	>365	>365	>365	>365	>365				

<sup>\*</sup> 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.

Complete documentation available from:

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COOP ID: 049452

Lon: 119°21W

Station: WASCO, CA

**Climate Division: CA 5** 

Elevation: 345 Feet Lat: 35°36N

				Deg	ree Days t	o Selected	Base Tem	peratures (	( <b>°F</b> )				
Base						Heatin	g Degree l	Days (1)					
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	571	357	265	143	47	2	0	0	4	86	354	605	2434
60	420	221	146	68	15	0	0	0	0	32	218	450	1570
57	333	147	93	37	7	0	0	0	0	14	149	362	1142
55	278	105	63	23	3	0	0	0	0	8	110	303	893
50	161	34	17	6	0	0	0	0	0	1	41	175	435
22	2	0	0	0	0	0	0	0	0	0	0	2	-

Base						Coolin	g Degree I	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	455	567	772	916	1170	1335	1523	1478	1288	1042	639	420	11605
55	17	28	122	249	460	645	810	765	598	337	59	9	4099
57	10	14	89	203	401	585	748	703	538	282	38	5	3616
60	4	4	49	144	317	495	655	610	448	206	17	0	2949
65	0	0	14	69	194	347	500	455	302	106	3	0	1990
70	0	0	3	24	102	210	345	300	169	43	0	0	1196

										Gro	wing ]	Degre	e Uni	ts (2)										
Base					Growin	g Degree	Units (M	Ionthly)					Growing Degree Units (Accumulated Monthly)											
	Jan   Feb   Mar   Apr   May   Jun   Jul   Aug   Sep   Oct   Nov   Dec													Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
40	220	369	540	693	947	1121	1306	1263	1069	812	416	198	220	589	1129	1822	2769	3890	5196	6459	7528	8340	8756	8954
45												82	110	337	722	1265	2057	3028	4179	5287	6206	6863	7130	7212
50	38 109 236 394 637 821 996 953 769 502 142											27	38	147	383	777	1414	2235	3231	4184	4953	5455	5597	5624
55	6	38	111	253	482	671	841	798	619	352	59	0	6	44	155	408	890	1561	2402	3200	3819	4171	4230	4230
60	0	2	34	133	332	521	686	643	469	215	12	0	0	2	36	169	501	1022	1708	2351	2820	3035	3047	3047
Base	Growing Degree Units for Corn (Monthly)													Gr	owing D	egree Un	its for C	orn (Acc	umulate	d Month	ly)			
50/86	<b>/86</b> 122 217 321 433 596 693 799 772 668 516 262 12											120	122	339	660	1093	1689	2382	3181	3953	4621	5137	5399	5519

(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

**NWS Call Sign:** 

#### 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.

Compete documentation for the 1971-2000 Normals is available on the internet from:

www.ncdc.noaa.gov/oa/climate/normals/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

- c. Snow Tables
  - 1. Snow Climatology
  - 2. Cooperative Summary of the Day
- d. Freeze Data Table

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

### References

U.S. Climate Normals 1971-2000, www.ncdc.noaa.gov/normals.html

U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normals/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