

Climatology of the United States

No. 20

1971-2000

Station: MT WILSON NO 2, CA

COOP ID: 046006

Climate Division: CA 6

NWS Call Sign: MWS

Elevation: 5,709 Feet Lat: 34° 14N

Lon: 118° 04W

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	52.9	35.9	44.4	74+	1975	14	51.6	1986	9	1969	29	36.0	1979	640	0	.0	.0	20.6	.6	8.6	.0
Feb	53.4	35.9	44.7	80	1985	14	52.0	1991	11	1962	27	38.0	1998	570	0	.0	.0	18.4	.4	8.5	.0
Mar	55.0	36.3	45.7	79	1997	19	55.8	1972	14+	1976	3	36.8	1973	594	12	.0	.0	21.6	.3	9.9	.0
Apr	60.7	40.6	50.7	86	1989	6	59.7	1989	18	1963	21	38.3	1975	452	23	.0	.0	24.7	.2	6.0	.0
May	67.9	47.3	57.6	92+	2001	31	68.6	1997	22	1964	5	47.2	1977	304	74	.0	.1	28.5	.0	2.1	.0
Jun	77.0	56.7	66.9	97	1994	29	72.6	1994	29	1950	7	59.9	1998	79	133	.0	.7	29.8	.0	.1	.0
Jul	82.1	63.2	72.7	99	1972	14	76.7	1996	38+	1987	18	67.8	1987	7	244	.0	2.7	31.0	.0	.0	.0
Aug	81.6	63.0	72.3	97+	1998	5	76.9+	1998	37	1959	20	65.2	1976	14	240	.0	2.5	31.0	.0	.0	.0
Sep	77.0	58.4	67.7	98	1950	2	73.4	1979	34+	1952	11	59.0	1985	76	157	.0	1.1	29.8	.0	.0	.0
Oct	68.5	50.6	59.6	93	1980	2	68.4	1978	18	1971	29	49.7	1972	241	72	.0	.1	29.7	.0	1.0	.0
Nov	59.5	41.4	50.5	82	1985	1	59.7	1995	15	1975	29	42.4	1994	445	10	.0	.0	25.0	@	4.1	.0
Dec	53.8	36.7	45.3	78	1958	3	51.9	1980	10+	1990	22	35.6	1971	617	4	.0	.0	21.0	.6	8.2	.0
Ann	65.8	47.2	56.5	99	Jul 1972	14	76.9+	Aug 1998	9	Jan 1969	29	35.6	Dec 1971	4039	969	.0	7.2	311.1	2.1	48.5	.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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Lon: 118°04W

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	7.96	4.91	11.96	1969	25	28.22	1995	.00+	1976	7.3	6.2	3.9	2.4	.00	.36	1.42	2.58	3.91	5.45	7.33	9.71	13.07	18.78	24.47	
Feb	9.53	6.54	9.79	1973	11	30.71	1980	.04	1972	7.3	5.9	4.1	2.9	.20	.52	1.37	2.50	3.92	5.72	8.02	11.12	15.64	23.64	31.85	
Mar	8.38	6.30	8.86	1983	2	25.15	1983	.01	1997	7.7	6.1	3.9	2.6	.23	.56	1.38	2.41	3.68	5.26	7.24	9.88	13.70	20.38	27.19	
Apr	2.34	1.53	4.15	1988	20	9.84	1983	.00+	1979	4.6	3.3	1.5	.7	.00	.01	.15	.38	.71	1.16	1.77	2.62	3.90	6.24	8.69	
May	.97	.30	3.52	1998	5	10.84	1998	.00+	1997	2.6	1.7	.4	.3	.00	.00	.00	.05	.16	.33	.60	.99	1.61	2.80	4.07	
Jun	.26	.00	1.78	1993	5	1.81	1993	.00+	1996	1.0	.5	.1	.1	.00	.00	.00	.00	.00	.00	.05	.19	.42	.86	1.32	
Jul	.08	.00	1.11	1992	12	1.71	1992	.00+	2000	.5	.1	@	@	.00	.00	.00	.00	.00	.00	.00	.00	.01	.18	.44	
Aug	.29	.00	1.85	1977	17	3.44	1983	.00+	1999	.8	.5	.2	.1	.00	.00	.00	.00	.00	.00	.00	.05	.28	.92	1.58	
Sep	1.01	.12	5.40	1976	11	11.17	1976	.00+	1999	1.6	.9	.5	.3	.00	.00	.00	.00	.00	.09	.31	.75	1.55	3.03	4.86	
Oct	1.54	.76	5.33	1992	30	9.19	1987	.00+	1999	2.8	1.8	.8	.5	.00	.00	.00	.22	.51	.85	1.29	1.86	2.67	4.09	5.50	
Nov	3.23	1.69	7.37	1970	29	12.67	1982	.00+	1992	4.0	3.0	1.8	1.2	.00	.07	.38	.79	1.31	1.95	2.76	3.83	5.38	8.09	10.85	
Dec	4.78	2.79	6.82	1966	6	15.84	1984	.01	2000	5.4	4.1	2.3	1.6	.09	.23	.64	1.19	1.90	2.80	3.96	5.54	7.86	11.98	16.23	
Ann	40.37	38.29	11.96	Jan 1969	25	30.71	Feb 1980	.00+	Jul 2000	45.6	34.1	19.5	12.7	14.27	18.07	23.59	28.23	32.66	37.22	42.18	47.95	55.34	66.75	77.23	

+ 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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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	3.8	#	3	1	13.5	1977	6	26.5	1977	80	1974	7	28	1974	-9.9	-9.9	-9.9	-9.9	-9.9	2.4	2.1	1.9	1.1
Feb	2.8	#	1	1	7.0	1979	2	18.0	1979	31	1979	2	11	1979	.8	.5	.2	.2	.0	.0	.0	.0	.0
Mar	11.0	9.0	2	1	11.0	1982	17	25.0	1979	32	1991	28	9	1991	-9.9	-9.9	-9.9	-9.9	-9.9	2.5	1.9	1.5	.6
Apr	.3	.0	1	#	3.0	1982	1	3.0	1982	21	1991	1	5	1999	.1	.1	.1	.0	.0	.0	.0	.0	.0
May	.5	.0	#	0	3.0	1977	8	7.0	1977	6	1998	13	1	1998	.2	.2	.1	.0	.0	.1	.1	.0	.0
Jun	.0	.0	#	0	.0	0	0	.0	0	1	1995	16	#	1995	.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	.1	.0	0	0	1.0	1971	17	1.0	1971	0	0	0	0	0	.1	.1	.0	.0	.0	.0	.0	.0	.0
Nov	2.0	.0	#	0	15.0	1981	28	15.2	1981	13	1981	29	1	1982	.3	.1	.1	.1	.1	.2	.2	.0	.0
Dec	2.4	.0	#	#	16.0	1974	29	23.0	1974	19	1971	28	2	1984	.4	.3	.3	.1	.1	.2	.2	.2	.1
Ann	22.9	9.0	N/A	N/A	16.0	Dec 1974	29	26.5	Jan 1977	80	Jan 1974	7	28	Jan 1974	-9.9	-9.9	-9.9	-9.9	-9.9	5.4	4.5	3.6	1.8

+ 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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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	6/13	6/05	5/30	5/25	5/20	5/16	5/10	5/05	4/26
32	6/06	5/27	5/20	5/15	5/09	5/04	4/28	4/21	4/11
28	5/15	5/06	4/29	4/23	4/18	4/12	4/06	3/30	3/18
24	5/01	4/14	4/02	3/22	3/13	3/02	2/19	2/04	1/08
20	3/12	2/17	1/29	1/10	12/14	0/00	0/00	0/00	0/00
16	2/02	1/04	0/00	0/00	0/00	0/00	0/00	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	10/01	10/10	10/17	10/23	10/28	11/02	11/08	11/15	11/24
32	9/26	10/14	10/27	11/07	11/17	11/28	12/09	12/22	1/09
28	10/27	11/06	11/13	11/19	11/25	12/01	12/08	12/16	12/28
24	11/13	11/25	12/03	12/10	12/17	12/24	1/01	1/11	1/30
20	11/26	12/14	12/29	1/14	2/09	0/00	0/00	0/00	0/00
16	12/17	1/15	0/00	0/00	0/00	0/00	0/00	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	198	185	176	168	160	152	144	135	122
32	231	214	203	195	187	179	170	160	146
28	273	251	239	230	222	214	205	196	182
24	>365	348	314	295	281	267	253	237	216
20	>365	>365	>365	>365	>365	>365	>365	322	282
16	>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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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	640	570	594	452	304	79	7	14	76	241	445	617	4039
60	489	433	471	329	210	33	0	2	30	151	312	473	2933
57	403	355	392	265	163	17	0	0	16	107	243	390	2351
55	347	305	344	228	134	11	0	0	10	82	202	339	2002
50	223	192	241	148	75	3	0	0	2	37	119	228	1268
32	12	9	28	11	3	0	0	0	0	0	2	20	85

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	395	363	452	572	796	1045	1260	1249	1071	854	557	429	9043
55	17	15	55	98	214	366	547	536	391	222	67	36	2564
57	11	9	41	76	180	312	485	474	337	185	47	25	2182
60	4	3	26	49	135	237	392	383	262	136	27	15	1669
65	0	0	12	23	74	133	244	240	157	72	10	4	969
70	0	0	2	10	36	59	120	124	80	31	1	0	463

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	218	203	253	368	567	816	1017	1002	846	625	357	235	218	421	674	1042	1609	2425	3442	4444	5290	5915	6272	6507
45	123	115	152	253	425	667	862	847	696	479	236	132	123	238	390	643	1068	1735	2597	3444	4140	4619	4855	4987
50	52	51	78	151	292	522	707	692	548	341	138	62	52	103	181	332	624	1146	1853	2545	3093	3434	3572	3634
55	15	21	32	76	177	379	553	537	406	216	66	18	15	36	68	144	321	700	1253	1790	2196	2412	2478	2496
60	0	0	4	27	94	247	398	385	268	123	24	0	0	0	4	31	125	372	770	1155	1423	1546	1570	1570
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	105	96	129	200	334	530	697	684	549	369	180	107	105	201	330	530	864	1394	2091	2775	3324	3693	3873	3980

(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/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
- 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/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