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

COOP ID: 042709

Lon: 116°49W

Station: EL CAPITAN DAM, CA

Climate Division: CA 6 NWS Call Sign:

Temperature (°F) Degree Days (1) Mean (1) Mean Number of Days (3) **Extremes** Base Temp 65 Max Max Max Max Min Min Highest Lowest Daily Daily Highest Lowest Month(1) Month(1) Cooling >= >= >= <= <= <= Month Mean Year Day Year Year Day Year Heating Max Min Daily(2) Daily(2) Mean Mean 100 90 50 32 32 0 70.2 41.6 55.9 91 1971 19 60.4 1994 22 1949 4 50.9 1973 289 6 .0 .1 30.9 .0 1.9 0. Jan 71.7 42.8 57.3 96 1963 4 62.4 1995 25 1999 11 52.2 1998 227 10 .0 .2 27.7 .0 .6 .0 Feb Mar 72.1 44.6 58.4 100 1988 27 62.8 1997 29+1971 3 53.3 1973 223 16 @ .4 30.8 0. .2 .0 47.0 8 27 1975 Apr 77.4 62.2 105 1989 68.0 1992 1971 26 54.5 140 56 .1 2.5 29.9 .0 .1 .0 May 80.9 51.0 66.0 107 1984 29 72.0 1997 34 1999 9 60.5 1980 81 111 .3 3.9 31.0 .0 .0 .0 54.1 1994 27 25 67.4 Jun 89.2 71.7 115 +76.2 1981 40 +1999 1982 14 214 2.8 12.1 30.0 .0 .0 .0 Jul 95.9 57.2 76.6 113 1985 2 80.3 1984 40+ 1999 23 71.3 1987 357 4.6 22.7 31.0 0. 0 .0 .0 1974 97.0 59.2 78.1 115 +1998 31 81.7 1994 38 1999 2 73.3 0 405 6.3 24.0 31.0 .0 .0 .0 Aug 4 Sep 93.7 57.5 75.6 115 1971 13 80.9 1984 42+ 1998 19 70.0 1986 322 5.8 17.9 30.0 .0 .0 .0 1975 Oct 86.6 52.6 69.6 110 +1992 1 75.6 1999 30 1996 29 66.1 28 171 1.6 8.7 31.0 .0 @ .0 77.8 45.4 103 1997 2 65.3 1991 29 1976 28 57.7 1994 137 35 @ 1.8 30.0 .0 .3 .0 Nov 61.6 Dec 71.4 41.5 56.5 95 1979 5 60.8 1977 25+1998 11 50.2 1971 276 9 .0 .1 31.0 .0 1.5 .0 Aug Aug Jan Dec 82.0 49.5 65.8 115 +1998 31 81.7 1994 22 1949 4 50.2 1971 1419 1712 21.5 94.4 364.3 0. .0 4.6 Ann

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

Issue Date: February 2004 064-A

(1) From the 1971-2000 Monthly Normals

Elevation: 600 Feet Lat: 32°53N

- (2) Derived from station's available digital record: 1948-2001
- (3) Derived from 1971-2000 serially complete daily data

⁺ Also occurred on an earlier date(s)

[@] Denotes mean number of days greater than 0 but less than .05

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Climate Division: CA 6 NWS Call Sign: Elevation: 600 Feet Lat: 32°53N Lon: 116°49W

										Pı	recipi	tation	(incl	nes)												
			P	recip	itatio	n Total	s			M	ean N	lumbo ays (3	_	Precipitation Probabilities (1) Probability that the monthly/annual precipitation will be equal to or less than the indicated amount												
	Mea Medi					Extremes	i.			D	aily Pre	cipitatio	n	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	3.19	2.20	3.35	1993	7	14.92	1993	.04	1976	7.7	5.3	2.2	.9	.12	.26	.61	1.02	1.51	2.10	2.84	3.81	5.19	7.58	10.00		
Feb	3.35	2.55	2.70	1998	4	12.36	1998	.03	1984	7.2	5.1	2.4	1.0	.23	.44	.86	1.32	1.84	2.43	3.15	4.06	5.33	7.48	9.60		
Mar	3.67	2.92	4.82	1995	6	10.61	1991	.00+	1997	8.4	6.0	2.6	.9	.00	.28	.88	1.45	2.06	2.75	3.56	4.55	5.93	8.22	10.45		
Apr	1.21	.89	1.45	1965	1	3.42	1975	.00	1993	5.2	3.0	.8	.2	.05	.14	.32	.49	.69	.90	1.16	1.49	1.93	2.67	3.40		
May	.44	.20	1.37	1977	9	2.45	1977	.00+	1996	3.3	1.2	.2	@	.00	.00	.04	.09	.15	.24	.35	.51	.74	1.15	1.58		
Jun	.15	.00	.82+	1993	6	1.60	1972	.00+	2000	1.0	.3	.1	.0	.00	.00	.00	.00	.00	.00	.00	.05	.19	.51	.87		
Jul	.08	.00	.86	1991	31	.88	1991	.00+	2000	.8	.2	@	.0	.00	.00	.00	.00	.00	.00	.00	.03	.10	.27	.47		
Aug	.13	.00	1.98	1977	17	2.06	1977	.00+	2000	1.0	.3	@	@	.00	.00	.00	.00	.00	.00	.00	.03	.16	.45	.78		
Sep	.35	.09	1.96	1976	11	3.21	1976	.00+	1996	2.0	.8	.2	.1	.00	.00	.00	.00	.01	.09	.21	.37	.62	1.05	1.50		
Oct	.81	.51	2.23	1976	23	2.93	1974	.00+	1999	3.4	1.8	.4	.1	.00	.00	.05	.18	.34	.51	.73	1.00	1.38	2.01	2.67		
Nov	1.49	1.12	3.54	1965	23	6.25	1985	.00	1980	4.5	2.9	1.0	.4	.04	.14	.33	.55	.78	1.06	1.40	1.82	2.41	3.42	4.41		
Dec	2.01	1.69	3.87	1966	6	5.70	1984	.07	2000	5.8	3.9	1.5	.4	.20	.35	.62	.90	1.20	1.54	1.95	2.45	3.13	4.27	5.39		
Ann	16.88	14.51	4.82	Mar 1995	6	14.92	Jan 1993	.00+	Aug 2000	50.3	30.8	11.4	4.0	7.72	9.21	11.27	12.94	14.49	16.05	17.72	19.63	22.03	25.66	28.94		

⁺ Also occurred on an earlier date(s)

Complete documentation available from:

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

[#] 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: 1948-2001

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

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Climate Division: CA 6 NWS Call Sign: Elevation: 600 Feet Lat: 32°53N Lon: 116°49W

										Snov	w (inc	hes)													
						Sn	ow To	tals							Mean Number of Days (1)										
	Mean	s/Medi	ans (1)	1					Extre	mes (2)				ow Fa	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	0	.0	0	0	.0	0	0	0	0	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	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	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0		
Ann	.0	.0	N/A	N/A	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0		

⁺ Also occurred on an earlier date(s) #Denotes trace amounts

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

[@] 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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1971-2000

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Lon: 116°49W

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Elevation: 600 Feet

Station: EL CAPITAN DAM, CA

NWS Call Sign: Climate Division: CA 6

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Freeze Data **Spring Freeze Dates (Month/Day)** Probability of later date in spring (thru Jul 31) than indicated(*) Temp (F) .10 .20 .30 .40 .60 .70 .80 .90 36 4/22 4/04 3/22 3/10 2/28 2/17 2/06 1/24 1/05 32 2/11 3/19 2/26 1/28 1/14 12/29 12/08 0/00 0/00 28 2/16 1/20 12/22 0/00 0/00 0/00 0/00 0/00 0/00 0/00 24 0/00 0/00 0/00 0/00 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 Fall Freeze Dates (Month/Day) Probability of earlier date in fall (beginning Aug 1) than indicated(*) Temp (F) .20 .30 .40 .50 .70 .10 .60 .80 .90 36 10/29 11/10 11/19 11/26 12/03 12/10 12/17 12/26 1/07 32 11/13 11/28 12/10 12/20 12/30 1/11 1/26 0/00 0/00 28 12/19 1/07 1/31 0/00 0/00 0/00 0/00 0/00 0/00 24 0/00 0/00 0/00 0/00 0/00 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 0/00 16 0/00 0/00 0/00 0/00 0/00 0/00 0/00 0/00 Freeze Free Period **Probability of longer than indicated freeze free period (Days)** Temp (F) .10 .20 .30 .40 .50 .60 .70 .80 .90 323 301 286 272 259 245 230 36 >365 208 32 >365 >365 >365 >365 361 331 309 288 263 28 >365 >365 >365 >365 >365 >365 >365 >365 >365 24 >365 >365 >365 >365 >365 >365 >365 >365 >365 20 >365 >365 >365 >365 >365 >365 >365 >365 >365

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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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^{*} Probability of observing a temperature as cold, or colder, later in the spring or earlier in the fall than the indicated date.

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	Degree Days to Selected Base Temperatures (°F)														
Base						Heatin	g Degree l	Days (1)							
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann		
65	289	227	223	140	81	14	0	0	4	28	137	276	1419		
60	156	119	113	63	27	2	0	0	0	5	55	151	691		
57	98	73	66	32	12	0	0	0	0	1	26	97	405		
55	67	47	41	19	6	0	0	0	0	0	14	67	261		
50	16	11	9	4	0	0	0	0	0	0	2	18	60		
32	0	0	0	0	0	0	0	0	0	0	0	0	0		

Base						Coolin	g Degree l	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	740	706	816	905	1053	1189	1380	1428	1308	1166	888	757	12336
55	94	110	144	234	346	499	667	715	618	453	212	110	4202
57	63	79	107	187	290	439	605	653	558	392	164	78	3615
60	28	41	61	129	212	351	512	560	468	303	103	40	2808
65	6	10	16	56	111	214	357	405	322	171	35	9	1712
70	0	0	2	16	43	105	210	254	190	77	7	0	904

										Gro	wing]	Degre	e Uni	ts (2)														
Base		Growing Degree Units (Monthly)														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	483	487	557	651	792	929	1099	1132	1040	876	628	499	483	970	1527	2178	2970	3899	4998	6130	7170	8046	8674	9173				
45	331	345	403	501	637	779	944	977	890	721	478	345	331	676	1079	1580	2217	2996	3940	4917	5807	6528	7006	7351				
50	188	210	254	352	482	629	789	822	740	566	328	206	188	398	652	1004	1486	2115	2904	3726	4466	5032	5360	5566				
55	80	96	127	215	331	479	634	667	590	412	193	88	80	176	303	518	849	1328	1962	2629	3219	3631	3824	3912				
60	25	33	44	106	190	329	479	512	440	263	85	30	25	58	102	208	398	727	1206	1718	2158	2421	2506	2536				
Base	Growing Degree Units for Corn (Monthly)													Gr	owing D	egree Un	its for C	orn (Acc	umulate	d Month	ly)							
50/86	307	302	333	393	486	572	675	696	638	542	394	324	307	609	942	1335	1821	2393	3068	3764	4402	4944	5338	5662				

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

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