

Climatology of the United States

No. 20

1971-2000

Station: SAN DIEGO LINDBERGH AP, CA

COOP ID: 047740

Climate Division: CA 6

NWS Call Sign: SAN

Elevation: 13 Feet

Lat: 32°44N

Lon: 117°10W

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	65.8	49.7	57.8	88	1953	10	61.3	1981	29	1949	4	54.3	1971	227	2	.0	.0	31.0	.0	.0	.0
Feb	66.3	51.5	58.9	90	1995	19	63.5	1980	36+	1949	15	55.2	1990	176	4	.0	@	28.1	.0	.0	.0
Mar	66.3	53.6	60.0	93+	1988	26	64.3	1978	39	1971	2	56.5	1991	160	5	.0	.1	31.0	.0	.0	.0
Apr	68.7	56.4	62.6	98	1989	6	67.0	1992	41+	1945	3	58.7	1975	90	17	.0	.2	30.0	.0	.0	.0
May	69.3	59.8	64.6	96	1953	5	68.7	1997	47+	1932	1	60.5	1999	47	32	.0	@	31.0	.0	.0	.0
Jun	72.2	62.6	67.4	101	1979	10	72.9	1981	50	1943	14	62.8	1999	10	81	@	.5	30.0	.0	.0	.0
Jul	75.8	65.9	70.9	100	1930	30	77.2	1984	55	1948	5	67.1	1987	0	183	.0	.2	31.0	.0	.0	.0
Aug	77.5	67.4	72.5	98	1955	31	77.4	1983	57	1944	7	68.0	1999	0	230	.0	.3	31.0	.0	.0	.0
Sep	77.0	66.1	71.6	111	1963	26	78.9	1984	38	1934	19	66.9	1986	1	199	.2	1.3	30.0	.0	.0	.0
Oct	74.0	61.2	67.6	107	1961	14	72.2	1983	43	1971	30	64.3	1996	12	97	@	.7	31.0	.0	.0	.0
Nov	69.9	53.6	61.8	97+	1976	4	66.8	1976	38+	1964	20	56.4	1994	109	15	.0	.2	30.0	.0	.0	.0
Dec	66.3	48.9	57.6	88	1963	29	63.3	1977	34+	1987	25	53.9	1987	231	1	.0	.0	31.0	.0	.0	.0
Ann	70.8	58.1	64.4	111	Sep 1963	26	78.9	Sep 1984	29	Jan 1949	4	53.9	Dec 1987	1063	866	.2	3.5	365.1	.0	.0	.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

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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	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	2.28	1.61	2.57	1979	31	9.09	1993	.00	1976	7.2	4.3	1.5	.5	.04	.17	.45	.76	1.13	1.56	2.08	2.76	3.71	5.34	6.98	
Feb	2.04	1.45	2.71	1937	6	7.65	1998	.04	1974	6.6	4.1	1.5	.6	.09	.19	.41	.68	.99	1.37	1.83	2.44	3.29	4.77	6.26	
Mar	2.26	1.46	2.11	1952	7	6.96	1991	.00+	1997	7.2	4.4	1.8	.4	.00	.11	.43	.76	1.14	1.57	2.10	2.77	3.70	5.29	6.86	
Apr	.75	.62	1.42	1988	20	3.71	1988	.00	1993	4.1	1.8	.4	.1	.00	.02	.09	.17	.29	.43	.62	.87	1.24	1.90	2.58	
May	.20	.04	1.49	1977	8	1.79	1977	.00+	2000	2.0	.4	.1	@	.00	.00	.00	.00	.02	.06	.11	.19	.33	.58	.88	
Jun	.09	.01	.49	1990	10	.87	1990	.00+	2000	1.1	.2	.0	.0	.00	.00	.00	.00	.00	.00	.02	.06	.13	.27	.43	
Jul	.03	.00	.23	1991	31	.24	1991	.00+	2000	.6	.1	.0	.0	.00	.00	.00	.00	.00	.00	.01	.03	.06	.11	.17	
Aug	.09	.00	1.44	1977	16	2.13	1977	.00+	1999	.6	.1	.1	@	.00	.00	.00	.00	.00	.00	.00	.01	.07	.27	.57	
Sep	.21	.02	.90	1986	25	1.04	1986	.00+	2000	1.5	.5	.1	.0	.00	.00	.00	.00	.00	.01	.07	.18	.35	.67	1.00	
Oct	.44	.26	1.01	1927	31	1.74	1987	.00+	1999	2.8	1.3	.3	.0	.00	.00	.02	.06	.13	.22	.34	.50	.75	1.18	1.63	
Nov	1.07	.72	2.04	1985	25	4.92	1985	.00	1980	4.0	2.4	.7	.2	.01	.04	.13	.26	.43	.63	.89	1.25	1.76	2.67	3.61	
Dec	1.31	1.04	2.60	1945	22	4.55	1984	.01	2000	5.2	3.1	.7	.2	.08	.16	.32	.50	.70	.93	1.22	1.58	2.09	2.95	3.81	
Ann	10.77	9.84	2.71	Feb 1937	6	9.09	Jan 1993	.00+	Sep 2000	42.9	22.7	7.2	2.0	4.94	5.89	7.20	8.26	9.24	10.23	11.29	12.49	14.01	16.31	18.39	

+ 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	.0	.0	0	0	.0	0	0	.0	0	#	1979	31	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	#	1979	.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	#	Jan 1979	31	#	May 1979	.0	.0	.0	.0	.0	.0	.0	.0	.0

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

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-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	12/28	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
32	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
28	0/00	0/00	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	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)									
Temp (F)	Probability of earlier date in fall (beginning Aug 1) than indicated(*)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	12/29	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
32	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
28	0/00	0/00	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	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 Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	>365	>365	>365	>365	>365	>365	>365	>365	>365
32	>365	>365	>365	>365	>365	>365	>365	>365	>365
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
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	227	176	160	90	47	10	0	0	1	12	109	231	1063
60	107	75	60	25	20	7	0	0	0	3	43	113	453
57	57	34	22	7	7	1	0	0	0	0	17	62	207
55	31	17	10	3	3	0	0	0	0	0	8	36	108
50	5	1	0	0	0	0	0	0	0	0	0	6	12
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	798	754	866	917	1008	1062	1204	1253	1187	1104	892	794	11839
55	103	117	156	227	295	372	491	540	497	392	204	100	3494
57	62	74	102	169	233	312	429	478	437	330	147	59	2832
60	23	29	40	90	142	222	336	385	347	238	76	19	1947
65	2	4	5	17	32	81	183	230	199	97	15	1	866
70	0	0	1	3	3	16	52	85	73	20	2	0	255

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	558	559	631	687	772	828	963	1016	956	866	661	551	558	1117	1748	2435	3207	4035	4998	6014	6970	7836	8497	9048
45	403	414	476	537	617	678	808	861	806	711	511	396	403	817	1293	1830	2447	3125	3933	4794	5600	6311	6822	7218
50	249	269	321	387	462	528	653	706	656	556	361	244	249	518	839	1226	1688	2216	2869	3575	4231	4787	5148	5392
55	109	129	168	238	307	378	498	551	506	401	214	106	109	238	406	644	951	1329	1827	2378	2884	3285	3499	3605
60	29	35	45	98	153	228	343	396	356	246	82	24	29	64	109	207	360	588	931	1327	1683	1929	2011	2035
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	285	282	325	386	462	528	653	705	652	552	375	286	285	567	892	1278	1740	2268	2921	3626	4278	4830	5205	5491

(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/normal/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.
Complete documentation for the 1971-2000 Normals is available on the internet from:
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
U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normal/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