

Climatology of the United States

No. 20

1971-2000

Station: PALMDALE (LANCASTER), CA

COOP ID: 046624

Climate Division: CA 7

NWS Call Sign:

Elevation: 2,596 Feet Lat: 34° 35N

Lon: 118° 06W

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	58.8	34.3	46.6	81+	1948	24	51.2	2000	6	1963	13	41.7	1979	573	0	.0	.0	27.2	.0	15.5	.0
Feb	63.2	37.3	50.3	84	1999	28	56.3	1995	15	1979	4	45.4	1979	413	0	.0	.0	26.7	.1	8.5	.0
Mar	67.8	40.5	54.2	91	1997	20	61.7	1972	14	1971	2	47.7	1973	353	16	.0	.1	30.6	.0	4.7	.0
Apr	74.8	45.0	59.9	98+	1996	26	68.5	1989	20	1971	23	52.0	1975	214	62	.0	2.2	29.9	.0	1.3	.0
May	82.5	52.5	67.5	107	1950	31	75.2	1997	28	1988	1	59.6	1998	85	163	.5	7.9	31.0	.0	.1	.0
Jun	91.6	59.8	75.7	112+	1994	28	79.7	1985	35	1967	2	70.0	1998	6	326	5.1	19.1	30.0	.0	.0	.0
Jul	97.5	65.9	81.7	113+	1972	14	85.6	1996	43	1948	5	76.5	1983	0	518	12.4	28.0	31.0	.0	.0	.0
Aug	97.0	65.0	81.0	112+	1997	6	84.9	1986	38+	1954	27	76.1	1976	0	496	11.2	27.5	31.0	.0	.0	.0
Sep	91.1	59.2	75.2	111	1950	2	79.7	1974	34	1978	20	68.5	1986	7	312	3.6	19.2	30.0	.0	.0	.0
Oct	80.4	49.5	65.0	105	1980	5	71.1	1988	23	1971	30	59.8	1981	103	101	.2	5.2	31.0	.0	.5	.0
Nov	67.0	39.3	53.2	93	1970	1	60.7	1995	14	1964	19	47.9	1994	360	4	.0	.0	29.7	.0	7.9	.0
Dec	58.6	33.3	46.0	84	1958	4	52.7	1977	9	1971	15	39.8	1984	590	0	.0	.0	27.3	.1	17.3	.0
Ann	77.5	48.5	63.0	113+	Jul 1972	14	85.6	Jul 1996	6	Jan 1963	13	39.8	Dec 1984	2704	1998	33.0	109.2	355.4	.2	55.8	.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

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1931-2001

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Lon: 118°06W

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	1.56	.96	2.44	1952	18	7.50	1993	.00+	1986	5.0	3.2	1.1	.3	.00	.00	.10	.32	.58	.91	1.32	1.87	2.66	4.01	5.39	
Feb	1.69	1.05	2.43	1944	22	6.42	1980	.00+	1985	4.6	3.0	1.1	.6	.00	.00	.12	.32	.58	.93	1.37	1.97	2.85	4.40	6.01	
Mar	1.39	.90	2.39	1938	3	5.22	1983	.00+	1997	4.8	3.1	1.0	.2	.00	.00	.18	.39	.63	.91	1.26	1.70	2.32	3.40	4.47	
Apr	.33	.09	1.00	1982	1	2.47	1982	.00+	1996	1.8	.8	.2	@	.00	.00	.00	.00	.02	.09	.20	.34	.57	.98	1.41	
May	.16	.00	1.10	1977	8	1.66	1977	.00+	2000	.9	.5	.1	@	.00	.00	.00	.00	.00	.00	.02	.11	.27	.56	.86	
Jun	.06	.00	.60	1987	6	.71	1987	.00+	2000	.4	.2	@	.0	.00	.00	.00	.00	.00	.00	.00	.00	.06	.21	.38	
Jul	.06	.00	.38	1984	31	.57	1999	.00+	2000	.5	.2	.0	.0	.00	.00	.00	.00	.00	.00	.00	.00	.07	.22	.37	
Aug	.13	.00	1.46	1968	7	1.25	1977	.00+	1999	.8	.4	.1	@	.00	.00	.00	.00	.00	.00	.03	.09	.21	.42	.64	
Sep	.22	.00	1.63	1976	10	2.12	1976	.00+	2000	1.1	.5	.1	@	.00	.00	.00	.00	.00	.00	.00	.12	.34	.76	1.20	
Oct	.24	.04	1.63	1934	18	2.05	1987	.00+	1999	1.2	.6	.1	@	.00	.00	.00	.00	.00	.03	.10	.21	.40	.76	1.15	
Nov	.43	.22	1.89	1965	22	2.01	1982	.00+	2000	2.1	1.3	.2	.0	.00	.00	.00	.02	.09	.19	.32	.50	.76	1.22	1.69	
Dec	1.09	.71	3.43	1943	11	5.27	1984	.00+	2000	3.1	2.0	.8	.3	.00	.00	.02	.13	.30	.53	.83	1.25	1.86	2.94	4.08	
Ann	7.36	6.54	3.43	Dec 1943	11	7.50	Jan 1993	.00+	Dec 2000	26.3	15.8	4.8	1.4	1.85	2.54	3.61	4.56	5.50	6.49	7.60	8.91	10.62	13.33	15.88	

+ 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: 1931-2001

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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	.9	.0	0	0	16.0	1974	5	19.0	1974	16	1974	5	1	1974	.1	.1	.1	@	@	@	@	@	@
Feb	.0	.0	#	0	.0	0	0	.0	0	#	1996	25	#	1996	.0	.0	.0	.0	.0	.0	.0	.0	.0
Mar	#	.0	#	0	#	1976	3	#	1976	#	1976	3	#	1976	.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	.9	.0	N/A	N/A	16.0	Jan 1974	5	19.0	Jan 1974	16	Jan 1974	5	1	Jan 1974	.1	.1	.1	@	@	@	@	@	@

+ 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	5/16	5/07	4/30	4/24	4/18	4/13	4/07	3/31	3/21
32	5/02	4/22	4/15	4/09	4/03	3/28	3/22	3/15	3/05
28	4/06	3/24	3/15	3/07	2/27	2/20	2/11	2/02	1/20
24	3/13	2/26	2/16	2/07	1/30	1/21	1/12	1/01	12/14
20	2/18	2/02	1/20	1/07	12/23	11/27	0/00	0/00	0/00
16	1/30	1/09	12/19	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	10/07	10/14	10/18	10/22	10/26	10/30	11/03	11/07	11/14
32	10/22	10/28	11/01	11/05	11/09	11/12	11/16	11/20	11/26
28	11/05	11/11	11/15	11/18	11/22	11/25	11/29	12/03	12/09
24	11/14	11/23	11/30	12/06	12/11	12/17	12/23	12/31	1/15
20	12/02	12/13	12/22	12/30	1/10	0/00	0/00	0/00	0/00
16	12/10	12/24	1/09	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	229	216	206	198	190	182	174	164	151
32	255	242	233	226	219	212	204	195	183
28	309	294	284	275	267	259	250	240	225
24	>365	365	338	323	312	301	290	277	260
20	>365	>365	>365	>365	>365	>365	>365	326	296
16	>365	>365	>365	>365	>365	>365	>365	>365	329

* 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
65	573	413	353	214	85	6	0	0	7	103	360	590	2704
60	418	276	226	128	36	1	0	0	1	42	228	439	1795
57	331	200	165	86	19	0	0	0	0	21	161	353	1336
55	273	153	131	63	12	0	0	0	0	12	123	298	1065
50	151	66	60	25	3	0	0	0	0	2	54	179	540
32	1	0	0	0	0	0	0	0	0	0	0	5	6

Base	Cooling Degree Days (1)												
	Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
32	451	511	685	838	1101	1310	1541	1519	1295	1022	635	438	11346
55	11	20	103	211	400	620	828	806	605	320	68	18	4010
57	6	11	76	174	345	560	766	744	545	267	46	11	3551
60	0	3	44	126	269	471	673	651	456	196	23	4	2916
65	0	0	16	62	163	326	518	496	312	101	4	0	1998
70	0	0	4	25	84	197	364	342	184	42	0	0	1242

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	207	299	433	588	839	1055	1275	1258	1038	754	383	199	207	506	939	1527	2366	3421	4696	5954	6992	7746	8129	8328
45	97	172	281	438	684	905	1120	1103	888	600	246	87	97	269	550	988	1672	2577	3697	4800	5688	6288	6534	6621
50	34	72	156	297	529	755	965	948	738	448	132	28	34	106	262	559	1088	1843	2808	3756	4494	4942	5074	5102
55	0	17	64	175	378	605	810	793	589	306	55	0	0	17	81	256	634	1239	2049	2842	3431	3737	3792	3792
60	0	0	19	85	240	456	655	638	440	174	11	0	0	0	19	104	344	800	1455	2093	2533	2707	2718	2718
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	153	207	287	383	526	656	787	773	650	487	266	153	153	360	647	1030	1556	2212	2999	3772	4422	4909	5175	5328

(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.

- | | |
|---|---|
| <ol style="list-style-type: none">a. Temperature/ Precipitation Tables<ol style="list-style-type: none">1. 1971-2000 Monthly Normals2. Cooperative Summary of the Day3. National Weather Service station records4. 1971-2000 serially complete daily datab. Degree Day Table<ol style="list-style-type: none">1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data | <ol style="list-style-type: none">c. Snow Tables<ol style="list-style-type: none">1. Snow Climatology2. Cooperative Summary of the Dayd. 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