

Climatology of the United States

No. 20

1971-2000

Station: LAKE ARROWHEAD, CA

COOP ID: 044671

Climate Division: CA 7

NWS Call Sign:

Elevation: 5,205 Feet Lat: 34° 15N

Lon: 117° 11W

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	44.5	29.3	36.9	69	1951	25	42.4	1986	10+	1979	29	31.4	1973	871	0	.0	.0	9.5	1.3	21.7	.0
Feb	47.2	30.3	38.8	72	1951	9	44.6	1995	5	1949	14	34.9	1990	735	0	.0	.0	11.8	.7	19.4	.0
Mar	52.7	31.8	42.3	77+	1997	20	50.6	1972	11	1951	3	36.3	1973	705	0	.0	.0	19.7	.2	17.5	.0
Apr	60.2	35.3	47.8	94	1980	9	56.8	1989	17	1982	2	38.3	1975	525	6	.0	@	25.0	.2	9.9	.0
May	67.2	41.1	54.2	93	2000	23	62.4	2000	25+	1975	5	45.4	1977	363	27	.0	.1	28.9	.0	3.0	.0
Jun	76.1	48.7	62.4	106	1985	13	68.1	1994	30+	1995	17	58.1	1982	138	60	.1	1.0	29.8	.0	.3	.0
Jul	81.3	55.4	68.4	100	1972	14	72.8	2000	40+	1982	1	64.6+	1993	35	139	@	2.9	31.0	.0	.0	.0
Aug	81.1	55.5	68.3	97	1950	19	74.5	1998	37+	1973	27	62.1	1976	50	153	.0	2.6	31.0	.0	.0	.0
Sep	76.0	50.3	63.2	98	1950	1	66.7	1999	30	1948	26	55.8	1986	123	67	.0	.5	29.8	.0	.0	.0
Oct	64.5	41.5	53.0	93	1985	2	60.0	1988	18	1971	29	47.7	1972	381	10	.0	@	29.1	.0	2.6	.0
Nov	52.1	33.6	42.9	78	1949	5	51.0	1995	10	1980	24	36.9	1994	664	0	.0	.0	19.1	.1	12.6	.0
Dec	45.1	29.4	37.3	72	1950	10	43.7	2000	6	1990	23	29.9	1971	860	0	.0	.0	10.9	1.7	21.0	.0
Ann	62.3	40.2	51.3	106	Jun 1985	13	74.5	Aug 1998	5	Feb 1949	14	29.9	Dec 1971	5450	462	.1	7.1	275.6	4.2	108.0	.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

(2) Derived from station's available digital record: 1948-2001

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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	8.39	5.56	14.24	1969	25	36.93	1993	.00+	1976	7.0	6.1	4.0	2.8	.00	.46	1.68	2.94	4.34	5.95	7.89	10.31	13.70	19.43	25.10	
Feb	8.99	8.22	9.75	1969	25	25.68	1993	.17	1972	6.2	5.6	3.8	2.8	.28	.65	1.57	2.70	4.07	5.75	7.86	10.65	14.66	21.65	28.75	
Mar	8.03	5.74	7.38	1982	17	27.61	1978	.00+	1997	7.1	6.2	4.0	2.6	.00	.84	2.27	3.54	4.86	6.31	7.99	10.00	12.77	17.32	21.72	
Apr	2.53	1.59	3.94	1988	20	8.01	1983	.00+	1993	4.5	3.5	1.7	.8	.00	.00	.18	.48	.88	1.39	2.05	2.95	4.26	6.59	8.98	
May	1.32	.60	5.12	1998	5	11.63	1998	.00+	2000	2.8	1.9	.8	.4	.00	.00	.00	.09	.27	.54	.92	1.45	2.25	3.72	5.26	
Jun	.28	.00	3.58	1993	5	4.21	1993	.00+	2000	.7	.3	.1	.1	.00	.00	.00	.00	.00	.00	.00	.04	.24	.88	1.47	
Jul	.10	.02	1.92	1968	28	.70	1992	.00+	2000	1.1	.4	.0	.0	.00	.00	.00	.00	.00	.01	.06	.11	.19	.32	.45	
Aug	.33	.05	2.23	1977	17	3.47	1983	.00+	1997	1.4	.7	.1	@	.00	.00	.00	.00	.00	.03	.11	.26	.53	1.06	1.64	
Sep	1.07	.30	5.58	1976	11	9.27	1976	.00+	1996	1.7	1.0	.6	.3	.00	.00	.00	.00	.02	.18	.49	.98	1.78	3.31	4.95	
Oct	2.01	1.29	4.33	1979	20	9.97	1987	.00+	1999	2.9	2.3	1.1	.7	.00	.00	.08	.36	.72	1.16	1.71	2.43	3.45	5.20	7.02	
Nov	3.45	2.70	7.09	1965	23	12.67	1985	.00	1992	3.8	3.2	1.9	1.3	.04	.20	.58	1.04	1.58	2.24	3.06	4.13	5.67	8.31	10.99	
Dec	5.16	3.34	11.14	1966	6	20.18	1971	.03	2000	5.3	4.4	2.6	1.6	.06	.19	.57	1.13	1.86	2.83	4.11	5.88	8.50	13.24	18.17	
Ann	41.66	36.92	14.24	Jan 1969	25	36.93	Jan 1993	.00+	Jul 2000	44.5	35.6	20.7	13.4	15.85	19.73	25.28	29.91	34.29	38.76	43.61	49.22	56.37	67.36	77.40	

+ 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: 1948-2001

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Lat: 34° 15N

Lon: 117° 11W

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	8.4	4.5	3	#	30.0	1982	21	55.0	1974	54	1974	7	26	1974	1.2	1.1	.8	.5	.2	5.2	4.2	4.0	3.4
Feb	6.2	3.5	2	#	14.0	1975	3	26.5	1983	18	1975	3	11	1990	.9	.9	.6	.4	.2	3.6	2.5	1.5	.5
Mar	7.6	2.5	1	0	36.0	1991	27	74.0	1991	36	1982	19	15	1974	1.9	1.6	1.0	.7	.2	3.5	2.4	1.7	.4
Apr	2.0	.0	#	0	8.0	1995	16	17.5	1975	24	1991	1	3	1982	.8	.6	.2	.2	.0	1.4	1.0	.7	.2
May	.5	.0	#	0	8.0	1977	9	8.0	1977	8	1977	9	#+	1977	.1	.1	.1	.1	.0	.1	.1	.1	.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	.4	.0	#	0	4.0	1971	28	9.5	1971	4	1971	28	#+	1996	.2	.2	@	.0	.0	.4	.1	.0	.0
Nov	1.7	.0	#	0	13.0	1978	11	15.0	1978	14+	1982	10	4	1982	.5	.5	.1	.1	@	1.1	.9	.8	.3
Dec	4.3	.0	1	0	16.0	1978	19	20.5	1978	24	1971	28	4	1978	1.0	1.0	.7	.4	@	2.4	1.6	1.2	.7
Ann	31.1	10.5	N/A	N/A	36.0	Mar 1991	27	74.0	Mar 1991	54	Jan 1974	7	26	Jan 1974	6.6	6.0	3.5	2.4	.6	17.7	12.8	10.0	5.5

+ 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	6/24	6/17	6/12	6/08	6/04	5/31	5/26	5/21	5/15
32	6/08	5/30	5/24	5/18	5/13	5/08	5/03	4/26	4/17
28	5/14	5/04	4/27	4/21	4/15	4/09	4/03	3/27	3/17
24	4/19	4/09	4/01	3/26	3/20	3/14	3/08	3/01	2/19
20	4/14	3/26	3/12	2/28	2/17	2/05	1/24	1/09	12/16
16	3/10	2/20	2/06	1/24	1/11	12/26	11/27	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	9/19	9/26	10/02	10/06	10/11	10/15	10/20	10/25	11/02
32	10/09	10/14	10/19	10/22	10/25	10/29	11/01	11/05	11/11
28	10/24	10/30	11/03	11/07	11/10	11/14	11/17	11/21	11/27
24	11/07	11/14	11/19	11/23	11/28	12/02	12/06	12/11	12/19
20	11/10	11/23	12/03	12/11	12/19	12/27	1/05	1/16	2/07
16	11/18	12/04	12/17	12/30	1/12	1/29	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	152	144	138	133	128	124	119	113	105
32	198	186	178	171	164	158	151	143	131
28	243	231	223	215	209	202	194	186	174
24	292	278	268	260	252	244	235	225	211
20	>365	>365	332	314	300	288	275	262	243
16	>365	>365	>365	>365	>365	>365	337	312	287

* 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	871	735	705	525	363	138	35	50	123	381	664	860	5450
60	716	595	553	388	245	65	7	14	52	250	514	705	4104
57	623	511	465	313	188	36	1	6	26	184	427	612	3392
55	561	455	408	267	155	23	0	2	16	145	370	550	2952
50	407	317	275	172	84	6	0	0	3	71	239	403	1977
32	33	12	20	10	1	0	0	0	0	0	10	46	132

Base	Cooling Degree Days (1)												
	Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
32	185	200	338	482	688	911	1127	1126	934	651	336	209	7187
55	0	0	13	48	129	244	414	415	260	84	6	0	1613
57	0	0	8	34	100	197	353	356	210	60	3	0	1321
60	0	0	3	20	64	136	266	272	146	33	1	0	941
65	0	0	0	6	27	60	139	153	67	10	0	0	462
70	0	0	0	0	10	18	55	71	21	2	0	0	177

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	38	60	136	266	457	697	910	901	713	426	147	48	38	98	234	500	957	1654	2564	3465	4178	4604	4751	4799
45	1	17	57	152	315	547	755	746	563	281	65	10	1	18	75	227	542	1089	1844	2590	3153	3434	3499	3509
50	0	0	17	67	191	402	600	591	416	156	16	0	0	0	17	84	275	677	1277	1868	2284	2440	2456	2456
55	0	0	0	24	89	262	445	437	274	70	1	0	0	0	0	24	113	375	820	1257	1531	1601	1602	1602
60	0	0	0	0	28	148	292	286	151	21	0	0	0	0	0	0	28	176	468	754	905	926	926	926
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	27	39	93	185	289	440	595	587	440	244	80	26	27	66	159	344	633	1073	1668	2255	2695	2939	3019	3045

(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