

Climatology of the United States

No. 20

1971-2000

Station: BODIE, CA

COOP ID: 040943

Climate Division: CA 3

NWS Call Sign:

Elevation: 8,370 Feet Lat: 38° 13N

Lon: 119° 01W

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	40.0	5.8	22.9	60+	2001	4	29.4	1986	-27+	1982	7	17.6	1982	1305	0	.0	.0	5.0	6.5	30.9	9.6
Feb	41.6	7.5	24.6	63	1978	21	30.8	1991	-33	1989	6	19.9	1993	1132	0	.0	.0	6.1	5.1	28.2	7.1
Mar	44.3	12.2	28.3	66	1966	31	36.5	1972	-22	1969	8	21.4	1980	1124	0	.0	.0	9.3	3.5	30.8	3.9
Apr	50.8	18.0	34.4	75	1989	6	42.2	1992	-16	1970	13	25.5	1975	919	0	.0	.0	16.4	1.2	29.6	.4
May	60.0	24.9	42.5	81	1984	28	48.1	1992	-13	1970	10	34.2	1998	700	0	.0	.0	26.0	.1	27.0	@
Jun	69.6	30.7	50.2	90	1981	24	55.2	1985	6	1988	6	46.3	1980	445	0	.0	@	29.4	.0	18.8	.0
Jul	76.9	34.8	55.9	91	1988	21	59.8	1994	12+	1997	1	52.3	1983	287	3	.0	@	31.0	.0	11.5	.0
Aug	76.3	33.5	54.9	88+	1981	6	58.7	1971	12	2000	24	49.8	1976	315	1	.0	.0	31.0	.0	14.1	.0
Sep	69.8	27.0	48.4	88	1981	20	53.2	1981	1	1971	29	42.6	1986	499	0	.0	.0	29.3	.0	23.8	.0
Oct	59.7	19.5	39.6	83	1981	9	44.6	1988	-10	1970	27	35.3	1984	788	0	.0	.0	26.3	.5	29.5	.3
Nov	48.1	12.3	30.2	71	1976	4	38.1	1995	-25	1964	18	22.9	1994	1043	0	.0	.0	14.1	2.1	29.6	3.4
Dec	41.1	6.0	23.6	62	1979	7	31.0	1981	-31	1990	22	16.4	1978	1285	0	.0	.0	6.5	6.2	30.9	8.6
Ann	56.5	19.4	38.0	91	Jul 1988	21	59.8	Jul 1994	-33	Feb 1989	6	16.4	Dec 1978	9842	4	.0	.0	230.4	25.2	304.7	33.3

+ 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: 1964-2001

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

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

Station: BODIE, CA

COOP ID: 040943

Climate Division: CA 3

NWS Call Sign:

Elevation: 8,370 Feet Lat: 38°13N

Lon: 119°01W

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	1.69	1.56	2.80	1992	5	4.52	1997	.10	1976	7.5	4.3	1.0	.1	.20	.33	.56	.80	1.05	1.33	1.66	2.07	2.62	3.53	4.42	
Feb	1.89	1.59	2.13	1969	24	5.92	1998	.08	1974	7.1	4.3	1.2	.1	.18	.31	.57	.83	1.12	1.44	1.82	2.30	2.96	4.06	5.13	
Mar	1.69	1.31	2.41	1983	1	4.82	1983	.00	1997	7.5	4.6	.9	.2	.05	.16	.39	.63	.90	1.22	1.59	2.06	2.72	3.84	4.94	
Apr	.89	.81	1.05	1982	11	3.69	1999	.00	1977	5.3	3.0	.2	.1	.04	.12	.25	.38	.52	.68	.86	1.09	1.41	1.93	2.44	
May	.80	.63	1.42	1995	22	3.38	1995	.00+	1985	5.0	2.3	.4	.1	.00	.02	.10	.20	.33	.49	.69	.95	1.33	2.00	2.67	
Jun	.80	.54	1.49	1997	14	2.78	1997	.00+	1994	4.4	2.1	.5	.1	.00	.00	.11	.23	.37	.53	.73	.98	1.33	1.94	2.54	
Jul	.87	.60	2.10	1984	27	3.83	1976	.00+	2000	4.1	2.1	.5	.1	.00	.00	.07	.20	.35	.54	.76	1.05	1.47	2.17	2.88	
Aug	.53	.42	.82	1988	25	1.56	1983	.00+	1994	3.8	1.7	.2	.0	.00	.00	.07	.15	.25	.35	.48	.65	.89	1.29	1.69	
Sep	.61	.43	1.23	1989	19	2.36	1976	.00+	1996	3.7	2.0	.2	.1	.00	.00	.07	.16	.28	.40	.56	.75	1.03	1.48	1.94	
Oct	.67	.52	1.55	1991	26	2.76	1972	.00+	1995	3.4	1.8	.3	.1	.00	.00	.09	.19	.30	.44	.60	.82	1.12	1.64	2.16	
Nov	1.19	.92	1.95	1983	24	3.66	1983	.00	1976	5.2	2.9	.7	.1	.02	.08	.23	.39	.58	.80	1.08	1.44	1.94	2.80	3.67	
Dec	1.30	1.15	2.22	1977	17	4.41	1977	.00+	1989	6.5	3.4	.6	.1	.00	.07	.26	.46	.67	.92	1.22	1.59	2.12	3.00	3.87	
Ann	12.93	11.90	2.80	Jan 1992	5	5.92	Feb 1998	.00+	Jul 2000	63.5	34.5	6.7	1.2	7.71	8.65	9.89	10.86	11.74	12.60	13.50	14.52	15.76	17.61	19.23	

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

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Climatography of the United States

No. 20 1971-2000

Station: BODIE, CA

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Climate Division: CA 3

NWS Call Sign:

Elevation: 8,370 Feet

Lat: 38° 13N

Lon: 119° 01W

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	15.6	10.1	13	11	12.0	1978	16	45.4	1995	38	1997	26	31	1993	5.9	4.0	1.9	1.0	.2	-9.9	-9.9	-9.9	-9.9
Feb	21.8	18.0	19	16	30.0	1978	9	56.5	1978	78	1983	28	65	1983	4.8	3.7	2.0	1.1	.4	-9.9	-9.9	-9.9	-9.9
Mar	15.5	13.5	17	15	30.0	1995	9	64.0	1995	63	1995	10	46	1986	5.8	4.3	1.7	1.0	.3	-9.9	-9.9	-9.9	-9.9
Apr	5.4	6.3	9	2	6.0	1998	1	16.6	1995	46	1995	2	38	1995	3.1	2.1	.5	@	.0	8.1	7.4	6.8	5.2
May	3.6	.5	1	#	15.0	1994	18	30.5	1994	24	1975	1	9	1995	2.3	1.2	.4	.2	.1	1.7	.9	.6	.5
Jun	.5	.0	#	0	2.5	1995	7	6.0	1995	2	1995	6	#+	2000	.4	.3	.0	.0	.0	.1	.0	.0	.0
Jul	#	.0	#	0	#	1989	23	#+	1989	#	1974	10	#	1974	.0	.0	.0	.0	.0	.0	.0	.0	.0
Aug	.1	.0	#	0	1.0	1975	21	1.0	1975	1	1992	30	#+	1992	.1	@	.0	.0	.0	.0	.0	.0	.0
Sep	.5	.0	#	0	8.0	1989	19	9.0	1989	8	1985	11	#+	1998	.2	.2	@	@	.0	.1	.0	.0	.0
Oct	2.5	1.1	#	#	12.0	1991	26	12.0	1991	18	1996	31	2	1998	1.2	1.0	.5	.2	@	.9	.4	.3	.1
Nov	11.1	7.3	2	1	19.0	1983	24	33.7	1994	19	1983	24	7	1996	3.0	2.2	1.2	.5	.1	7.4	6.0	4.2	.9
Dec	13.7	9.9	6	5	20.0	1977	17	52.3	1996	42	1996	22	20	1996	4.9	3.1	1.2	.6	.4	15.7	12.7	9.2	3.7
Ann	90.3	66.7	N/A	N/A	30.0+	Mar 1995	9	64.0	Mar 1995	78	Feb 1983	28	65	Feb 1983	31.7	22.1	9.4	4.6	1.5	-9.9	-9.9	-9.9	-9.9

+ 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	8/03	8/01	7/31	7/30	7/29	7/28	7/27	7/26	7/24
32	8/02	7/31	7/29	7/28	7/27	7/25	7/24	7/22	7/20
28	8/04	7/29	7/26	7/22	7/19	7/16	7/13	7/09	7/03
24	7/29	7/22	7/17	7/13	7/09	7/05	7/01	6/26	6/20
20	7/15	7/07	7/01	6/26	6/22	6/17	6/12	6/06	5/29
16	6/27	6/19	6/13	6/08	6/03	5/29	5/24	5/18	5/10
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	7/31	7/31	8/01	8/02	8/03	8/04	8/04	8/05	8/07
32	7/30	8/01	8/03	8/04	8/06	8/08	8/09	8/11	8/14
28	7/31	8/04	8/06	8/09	8/11	8/14	8/16	8/19	8/23
24	8/03	8/08	8/12	8/15	8/18	8/21	8/24	8/28	9/02
20	8/13	8/20	8/26	8/31	9/04	9/08	9/13	9/18	9/26
16	8/25	9/03	9/09	9/14	9/19	9/24	9/29	10/05	10/13
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	10	8	7	5	4	3	2	0	0
32	20	17	14	12	10	7	5	2	0
28	42	35	30	26	22	18	14	9	3
24	65	56	50	44	39	34	29	22	13
20	109	97	88	81	73	66	59	50	37
16	139	128	120	113	107	101	94	86	75

* 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	1305	1132	1124	919	700	445	287	315	499	788	1043	1285	9842
60	1150	992	985	769	545	297	150	174	350	633	893	1130	8068
57	1057	908	892	679	455	214	89	107	265	540	803	1037	7046
55	995	852	830	619	398	163	58	72	212	478	743	975	6395
50	840	712	676	477	261	69	11	17	105	329	593	820	4910
32	292	220	204	96	16	0	0	0	0	17	126	290	1261

Base	Cooling Degree Days (1)												
	Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
32	10	12	87	167	340	545	739	709	492	253	73	27	3454
55	0	0	0	0	8	18	84	68	14	0	0	0	192
57	0	0	0	0	3	9	53	41	7	0	0	0	113
60	0	0	0	0	0	2	21	15	1	0	0	0	39
65	0	0	0	0	0	0	3	1	0	0	0	0	4
70	0	0	0	0	0	0	0	0	0	0	0	0	0

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	0	0	0	26	138	313	496	467	269	81	9	0	0	0	0	26	164	477	973	1440	1709	1790	1799	1799
45	0	0	0	2	52	180	342	313	142	22	0	0	0	0	0	2	54	234	576	889	1031	1053	1053	1053
50	0	0	0	0	10	74	194	172	51	1	0	0	0	0	0	0	10	84	278	450	501	502	502	502
55	0	0	0	0	0	22	81	65	10	0	0	0	0	0	0	0	0	22	103	168	178	178	178	178
60	0	0	0	0	0	0	20	12	0	0	0	0	0	0	0	0	0	0	20	32	32	32	32	32
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	4	13	22	70	169	297	420	412	304	174	52	13	4	17	39	109	278	575	995	1407	1711	1885	1937	1950

(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