

Climatology of the United States

No. 20

1971-2000

Station: EUREKA WFO WOODLEY IS, CA

COOP ID: 042910

Climate Division: CA 1

NWS Call Sign: EKA

Elevation: 20 Feet

Lat: 40° 49N

Lon: 124° 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	55.0	40.8	47.9	78	1986	12	53.2	1986	26	1950	3	43.8	1982	530	0	.0	.0	27.2	.0	1.5	.0
Feb	55.9	41.8	48.9	80	1987	7	53.2	1980	27+	1990	14	43.3	1990	451	0	.0	.0	25.6	.1	1.0	.0
Mar	56.1	42.2	49.2	76	1987	31	53.2	1978	30	1951	10	45.4	1976	475	0	.0	.0	29.5	.0	.2	.0
Apr	57.4	44.0	50.7	80	1989	9	55.2	1992	32+	2001	4	46.7	1975	430	0	.0	.0	29.5	.0	@	.0
May	59.6	47.6	53.6	82	1987	7	57.8	1997	36	1954	1	50.8	1991	354	0	.0	.0	31.0	.0	.0	.0
Jun	61.8	50.7	56.3	81	1982	25	58.9	1986	40	1999	8	52.7	1991	263	0	.0	.0	30.0	.0	.0	.0
Jul	63.3	52.8	58.1	76+	1992	3	60.4	1983	46+	1996	5	56.1	1971	216	0	.0	.0	31.0	.0	.0	.0
Aug	63.9	53.4	58.7	82+	1991	7	61.6	1983	45	1999	31	55.6	1973	198	2	.0	.0	31.0	.0	.0	.0
Sep	63.6	51.2	57.4	86	1983	20	62.6	1979	42+	1999	28	54.5	1988	232	5	.0	.0	30.0	.0	.0	.0
Oct	61.3	47.7	54.5	87	1993	26	57.4	1979	32	1971	29	50.6	1971	326	0	.0	.0	31.0	.0	@	.0
Nov	58.0	43.9	51.0	78	1987	19	54.7	1999	29	1994	19	44.6	1994	423	0	.0	.0	29.3	.0	.6	.0
Dec	55.1	40.6	47.9	77	1963	30	52.3	1981	21	1972	9	40.9	1990	532	0	.0	.0	26.9	.0	2.0	.0
Ann	59.3	46.4	52.9	87	Oct 1993	26	62.6	Sep 1979	21	Dec 1972	9	40.9	Dec 1990	4430	7	.0	.0	352.0	.1	5.3	.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	5.97	5.72	3.70	1953	17	13.42	1998	.66	1985	15.5	10.6	4.3	1.4	1.33	1.88	2.76	3.55	4.34	5.17	6.12	7.25	8.73	11.09	13.32
Feb	5.51	5.47	4.84	1959	14	13.95	1998	.54	1988	15.2	10.7	4.1	1.1	1.45	1.97	2.77	3.47	4.16	4.89	5.70	6.65	7.90	9.86	11.69
Mar	5.55	4.90	2.93	1975	17	11.18	1995	1.18	1988	16.9	11.2	3.9	1.0	1.73	2.26	3.04	3.71	4.36	5.03	5.77	6.64	7.75	9.50	11.11
Apr	2.91	2.64	2.32	1963	12	7.47	1995	.35	1973	12.5	6.9	1.9	.4	.63	.89	1.32	1.71	2.09	2.51	2.97	3.53	4.27	5.44	6.55
May	1.62	1.45	1.46	1993	30	4.44	1993	.06	1992	8.7	4.3	.9	@	.22	.35	.58	.81	1.04	1.31	1.61	1.98	2.49	3.32	4.12
Jun	.65	.48	1.17	1954	15	2.22	1988	.05+	1996	5.7	1.9	.3	.1	.05	.10	.18	.27	.37	.48	.62	.79	1.02	1.41	1.80
Jul	.16	.08	.89	1983	1	1.13	1991	.00+	1997	2.3	.4	.1	.0	.00	.00	.00	.03	.05	.09	.13	.19	.28	.42	.58
Aug	.38	.13	1.57	1983	30	3.42	1983	.00+	2000	3.2	.9	.1	.1	.00	.00	.00	.03	.08	.15	.26	.41	.65	1.08	1.55
Sep	.86	.59	1.45	1977	18	3.35	1977	.00+	1991	4.5	2.0	.5	.1	.00	.01	.06	.15	.27	.44	.66	.97	1.44	2.29	3.17
Oct	2.36	1.92	5.04	1950	29	6.77	1975	.04	1978	8.3	5.1	1.6	.4	.23	.40	.73	1.06	1.41	1.81	2.29	2.88	3.70	5.05	6.37
Nov	5.78	4.62	4.37	1998	21	16.58	1973	1.35	1993	15.0	10.0	4.2	1.5	1.09	1.60	2.45	3.23	4.03	4.89	5.86	7.04	8.60	11.11	13.51
Dec	6.35	6.18	4.86	1996	8	21.26	1996	.52	1976	15.5	11.2	3.8	1.6	1.03	1.58	2.50	3.37	4.28	5.26	6.38	7.76	9.59	12.56	15.41
Ann	38.10	36.37	5.04	Oct 1950	29	21.26	Dec 1996	.00+	Aug 2000	123.3	75.2	25.7	7.7	21.29	24.25	28.20	31.31	34.14	36.94	39.89	43.21	47.32	53.44	58.86

+ 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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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	.1	.0	#	0	.9	1972	26	1.6	1972	8	1995	25	#	1995	.1	.0	.0	.0	.0	@	@	@	.0
Feb	.2	.0	#	0	2.0	1989	4	3.5	1989	8	1995	25	#	1995	.1	.1	.0	.0	.0	.1	@	@	.0
Mar	.0	.0	#	0	.6	1999	31	.6	1999	6	1999	31	#	1999	.1	.0	.0	.0	.0	@	@	@	.0
Apr	#	.0	0	0	#	1999	3	#+	1999	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	#	1994	.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	.1	1977	19	.1	1977	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Dec	.1	.0	0	0	1.9	1972	7	1.9	1972	#+	1992	29	0	0	.1	.1	.0	.0	.0	.0	.0	.0	.0
Ann	.4	.0	N/A	N/A	2.0	Feb 1989	4	3.5	Feb 1989	8+	Feb 1995	25	#+	Mar 1999	.4	.2	.0	.0	.0	.1	.0	.0	.0

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

@ 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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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	4/19	4/08	3/31	3/24	3/18	3/11	3/05	2/25	2/14
32	3/12	2/25	2/14	2/05	1/27	1/18	1/08	12/27	12/09
28	1/18	12/17	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	11/02	11/10	11/16	11/21	11/25	11/30	12/05	12/10	12/18
32	11/13	11/24	12/02	12/09	12/16	12/22	12/29	1/07	1/21
28	12/30	2/03	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	294	280	269	260	252	243	234	224	209
32	>365	>365	350	334	323	312	302	290	274
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
65	530	451	475	430	354	263	216	198	232	326	423	532	4430
60	375	311	336	280	202	119	77	72	109	175	277	380	2713
57	289	235	249	194	121	53	26	27	59	97	195	293	1838
55	232	185	194	140	79	25	8	11	33	59	147	239	1352
50	118	89	87	44	15	1	0	0	5	8	61	127	555
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
32	493	473	532	560	669	727	808	827	762	697	567	491	7606
55	12	14	13	10	35	61	103	125	105	43	24	17	562
57	7	7	6	4	15	30	59	79	71	19	13	10	320
60	0	0	0	0	3	6	16	31	31	4	4	3	98
65	0	0	0	0	0	0	0	2	5	0	0	0	7
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	274	294	318	348	435	486	562	585	539	470	347	271	274	568	886	1234	1669	2155	2717	3302	3841	4311	4658	4929
45	138	158	167	199	280	336	407	430	389	315	201	134	138	296	463	662	942	1278	1685	2115	2504	2819	3020	3154
50	45	57	59	68	127	186	252	275	239	164	86	42	45	102	161	229	356	542	794	1069	1308	1472	1558	1600
55	7	11	5	10	31	60	99	126	95	52	16	5	7	18	23	33	64	124	223	349	444	496	512	517
60	0	0	0	0	0	0	4	23	19	5	0	0	0	0	0	0	0	0	4	27	46	51	51	51
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	96	107	113	120	165	202	253	278	247	204	139	102	96	203	316	436	601	803	1056	1334	1581	1785	1924	2026

(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