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: HEALDSBURG, CA 1971-2000 COOP ID: 043875

Climate Division: CA 1 NWS Call Sign: Elevation: 108 Feet Lat: 38°37N Lon: 122°52W

									r	Гетр	eratur	re (°F)											
	Mea	n (1)						Extr	emes					Degree Base To	Days (1) emp 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	57.3	39.3	48.3	85	1962	8	52.3	1995	18	1937	8	44.6	1972	517	0	.0	.0	28.7	.0	4.6	.0		
Feb	62.2	42.1	52.2	85	1932	27	56.1	1991	21+	1989	7	47.8	1989	359	0	.0	.0	27.6	.1	1.6	.0		
Mar	65.9	43.8	54.9	90+	1972	16	58.7	1988	27+	1945	5	51.0	1999	318	4	.0	@	30.9	.0	.2	.0		
Apr	72.5	45.9	59.2	96+	1996	30	63.0	1985	28	1936	1	53.4	1975	193	18	.0	.5	30.0	.0	.0	.0		
May	79.8	49.7	64.8	107	1950	29	69.3	1997	33	1950	3	59.6	1998	87	79	.6	4.2	31.0	.0	.0	.0		
Jun	86.6	53.2	69.9	113+	2000	14	76.4	1981	37	1952	12	65.9	1982	16	163	2.4	9.3	30.0	.0	.0	.0		
Jul	90.1	54.3	72.2	116	1972	13	75.4	1984	40+	1954	6	69.9	1987	0	224	2.7	14.0	31.0	.0	.0	.0		
Aug	88.4	54.0	71.2	109+	1993	1	73.6	1984	38	1999	24	68.2	1973	2	194	2.6	12.9	31.0	.0	.0	.0		
Sep	84.1	53.0	68.6	114	1971	13	74.7	1984	38	1952	10	63.2	1986	27	134	1.8	8.6	30.0	.0	.0	.0		
Oct	76.4	48.8	62.6	108	1980	3	65.9	1991	26	1946	29	59.6	1971	110	35	.4	3.3	31.0	.0	@	.0		
Nov	64.1	43.2	53.7	96	1967	2	57.8	1995	25	1931	30	47.7	1994	342	2	.0	.0	29.9	.0	1.0	.0		
Dec	57.3	38.6	48.0	83	1967	26	51.9+	1996	14	1990	22	42.7	1972	530	0	.0	.0	28.1	.0	6.1	.0		
Ann	73.7	47.2	60.5	116	Jul 1972	13	76.4	Jun 1981	14	Dec 1990	22	42.7	Dec 1972	2501	853	10.5	52.8	359.2	.1	13.5	.0		

⁺ Also occurred on an earlier date(s)

Complete documentation available from: www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

Issue Date: February 2004 091-A

[@] Denotes mean number of days greater than 0 but less than .05

⁽¹⁾ From the 1971-2000 Monthly Normals

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

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

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COOP ID: 043875

Station: HEALDSBURG, CA

Climate Division: CA 1 NWS Call Sign: Elevation: 108 Feet Lat: 38°37N Lon: 122°52W

										Pı	recipit	tation	(incl	nes)												
	Medi	ans/	P	recipi	itatio	on Total					ean N of D	ays (3	5)	Precipitation Probabilities (1) Probability that the monthly/annual precipitation will be equal to or less than the indicated amount 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	8.65	8.93	6.10	1995	8	29.90	1995	.41	1976	11.8	8.9	5.0	2.9	.73	1.32	2.47	3.67	4.99	6.49	8.28	10.53	13.64	18.84	23.95		
Feb	8.08	6.49	5.73	1996	4	25.41	1998	.16	1971	11.1	8.4	5.1	3.0	.44	.89	1.86	2.94	4.19	5.66	7.45	9.74	12.98	18.49	24.00		
Mar	6.54	4.62	6.26	1995	9	20.34	1983	.07	1988	11.0	8.1	4.2	2.2	.47	.88	1.72	2.62	3.62	4.78	6.17	7.93	10.38	14.51	18.60		
Apr	2.24	2.19	3.25	1953	27	7.20	1982	.15	1973	6.5	4.3	1.6	.6	.19	.35	.65	.96	1.30	1.69	2.15	2.73	3.53	4.87	6.18		
May	1.06	.32	3.95	1990	27	7.52	1998	.00+	1992	3.6	1.9	.7	.2	.00	.00	.01	.09	.24	.45	.74	1.16	1.80	2.96	4.20		
Jun	.17	.01	2.07	1967	2	.97	1993	.00+	1996	.9	.5	.1	.0	.00	.00	.00	.00	.00	.00	.05	.15	.29	.55	.81		
Jul	.07	.00	1.59	1974	8	1.71	1974	.00+	2000	.3	.1	@	@	.00	.00	.00	.00	.00	.00	.00	.00	.00	.11	.43		
Aug	.13	.00	2.03	1954	28	1.52	1983	.00+	2000	.6	.3	.1	.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.26	.74		
Sep	.55	.12	4.52	1959	18	2.98	1989	.00+	1995	2.2	1.2	.3	.1	.00	.00	.00	.00	.04	.15	.33	.58	.96	1.65	2.38		
Oct	2.12	1.32	4.89	1962	12	5.62	1975	.00	1978	5.0	3.5	1.6	.6	.07	.23	.53	.83	1.17	1.56	2.02	2.60	3.40	4.75	6.08		
Nov	6.04	4.80	6.56	1977	21	21.20	1973	.15	1986	9.1	6.7	3.7	2.2	.24	.53	1.20	1.98	2.91	4.03	5.41	7.22	9.79	14.23	18.69		
Dec	6.50	5.34	8.18	1980	3	17.37	1983	.00	1989	10.5	7.5	4.0	2.1	.33	.92	1.91	2.86	3.88	5.02	6.35	8.00	10.26	13.98	17.62		
Ann	42.15	39.71	8.18	Dec 1980	3	29.90	Jan 1995	.00+	Aug 2000	72.6	51.4	26.4	13.9	18.43	22.21	27.48	31.78	35.80	39.85	44.20	49.19	55.49	65.06	73.72		

⁺ Also occurred on an earlier date(s)

Complete documentation available from:

www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

[#] 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

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

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COOP ID: 043875

Station: HEALDSBURG, CA

Climate Division: CA 1 NWS Call Sign: Elevation: 108 Feet Lat: 38°37N Lon: 122°52W

										Snov	w (incl	hes)														
						Sno	ow To	tals							Mean Number of Days (1)											
	Mean	s/Medi	ians (1)	1					Extre	mes (2)							ow Fa		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	.1	1971	12	.2	1971	#	1971	13	#	1971	.1	.0	.0	.0	.0	.0	.0	.0	.0			
Feb	#	.0	0	0	#	1990	13	#	1990	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0			
Mar	.0	.0	#	0	.8	1976	2	.8	1976	1+	1987	22	#+	1987	@	.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	#	1972	12	#	1972	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0			
Ann	#	.0	N/A	N/A	.8	Mar 1976	2	.8	Mar 1976	1+	Mar 1987	22	#+	Mar 1987	.1	.0	.0	.0	.0	@	.0	.0	.0			

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

Complete documentation available from: www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

[@] 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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Elevation: 108 Feet

National Climatic Data Center Federal Building 151 Patton Avenue Asheville, North Carolina 28801 www.ncdc.noaa.gov

COOP ID: 043875

Lon: 122°52W

Lat: 38°37N

Station: HEALDSBURG, CA

Climate Division: CA 1 NWS Call Sign:

Freeze Data **Spring Freeze Dates (Month/Day)** Probability of later date in spring (thru Jul 31) than indicated(*) Temp (F) .10 .20 .30 .40 .60 .70 .80 .90 36 4/15 4/06 3/31 3/25 3/21 3/16 3/10 3/04 2/24 32 3/04 2/22 2/14 2/02 1/27 2/08 1/21 1/13 1/03 28 1/30 1/21 1/14 1/08 1/01 12/24 12/09 0/00 0/00 0/00 0/00 24 12/28 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 0/00 16 0/00 0/00 0/00 0/00 0/00 0/00 0/00 0/00 Fall Freeze Dates (Month/Day) Probability of earlier date in fall (beginning Aug 1) than indicated(*) Temp (F) .20 .30 .40 .50 .70 .10 .60 .80 .90 36 11/02 11/07 11/11 11/14 11/17 11/20 11/24 11/27 12/03 32 11/08 11/18 11/25 12/01 12/07 12/13 12/19 12/27 1/06 28 12/03 12/13 12/20 12/27 1/03 1/13 0/00 0/00 0/00 24 1/04 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 0/00 16 0/00 0/00 0/00 0/00 0/00 0/00 0/00 0/00 Freeze Free Period **Probability of longer than indicated freeze free period (Days)** Temp (F) .10 .20 .30 .40 .50 .60 .70 .80 .90 272 254 247 241 235 228 221 36 261 210 32 357 334 323 313 305 297 288 279 265

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0/00 Indicates that the probability of occurrence of threshold temperature is less than the indicated probability.

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Derived from 1971-2000 serially complete daily data

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Complete documentation available from:

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^{*} Probability of observing a temperature as cold, or colder, later in the spring or earlier in the fall than the indicated date.

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	Degree Days to Selected Base Temperatures (°F)														
Base						Heatin	g Degree 1	Days (1)							
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann		
65	517	359	318	193	87	16	0	2	27	110	342	530	2501		
60	362	224	181	92	27	2	0	0	4	34	206	376	1508		
57	273	151	117	49	11	0	0	0	0	12	138	288	1039		
55	216	109	83	29	5	0	0	0	0	5	100	231	778		
50	99	36	24	6	0	0	0	0	0	0	36	114	315		
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	506	565	709	815	1015	1137	1246	1214	1096	948	649	493	10393		
55	8	30	79	154	307	447	533	501	406	240	60	11	2776		
57	3	15	51	114	251	387	471	439	346	185	37	6	2305		
60	0	5	22	66	174	299	378	346	261	113	15	1	1680		
65	0	0	4	18	79	163	224	194	134	35	2	0	853		
70	0	0	0	2	23	64	85	67	50	5	0	0	296		

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 J												Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec					
40	277	372	478	581	762	887	990	966	875	731	437	274	277	649	1127	1708	2470	3357	4347	5313	6188	6919	7356	7630					
45	141	229	323	431	607	737	835	811	725	576	288	138	141	370	693	1124	1731	2468	3303	4114	4839	5415	5703	5841					
50	48	105	175	282	452	587	680	656	575	421	152	43	48	153	328	610	1062	1649	2329	2985	3560	3981	4133	4176					
55	5	27	71	151	299	437	525	501	425	267	61	4	5	32	103	254	553	990	1515	2016	2441	2708	2769	2773					
60	0	0	12	55	159	288	370	346	276	129	12	0	0	0	12	67	226	514	884	1230	1506	1635	1647	1647					
Base	Growing Degree Units for Corn (Monthly)														Gr	owing D	egree Un	its for C	orn (Acc	umulate	d Month	ly)							
50/86	136	198	268	349	464	542	612	597	534	443	244	141	136	334	602	951	1415	1957	2569	3166	3700	4143	4387	4528					

(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

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.

Compete documentation for the 1971-2000 Normals is available on the internet from:

www.ncdc.noaa.gov/oa/climate/normals/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

- c. Snow Tables
 - 1. Snow Climatology
 - 2. Cooperative Summary of the Day
- d. Freeze Data Table

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

References

U.S. Climate Normals 1971-2000, www.ncdc.noaa.gov/normals.html

U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normals/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