

Climatology of the United States

No. 20

1971-2000

Station: NEEDLES AP, CA

COOP ID: 046118

Climate Division: CA 7

NWS Call Sign: EED

Elevation: 887 Feet

Lat: 34°46N

Lon: 114°37W

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	65.2	42.8	54.0	85	1971	20	59.2	1986	21	1950	4	47.2	1979	346	5	.0	.0	30.4	.0	1.7	.0
Feb	71.2	46.2	58.7	92	1986	26	63.6	1991	24	1989	6	54.0	1979	192	16	.0	.2	27.9	.0	.4	.0
Mar	77.8	50.4	64.1	97+	1997	21	71.8	1972	30	1962	1	56.3	1973	138	110	.0	2.0	31.0	.0	@	.0
Apr	86.0	56.9	71.5	106	2000	27	78.9	1989	39+	1953	12	63.5	1975	41	235	1.4	10.4	30.0	.0	.0	.0
May	94.6	66.2	80.4	115	1968	28	87.5	1997	44	1964	8	73.4	1977	5	482	7.6	22.7	31.0	.0	.0	.0
Jun	104.8	75.8	90.3	121+	1994	30	94.8	1994	53	1987	7	86.6	1991	0	759	22.9	29.2	30.0	.0	.0	.0
Jul	109.1	83.0	96.1	122	1967	2	99.1	1996	57	1987	18	92.9	1986	0	963	29.7	31.0	31.0	.0	.0	.0
Aug	107.1	81.6	94.4	121	1993	1	98.4	1994	62	1957	31	90.0	1983	0	910	28.0	30.8	31.0	.0	.0	.0
Sep	100.8	74.1	87.5	120	1950	1	91.8	1979	52	1985	27	80.3	1985	0	673	17.4	27.8	30.0	.0	.0	.0
Oct	88.8	61.7	75.3	109	1980	2	81.7	1988	34	1971	30	69.8	1971	14	331	3.4	14.9	31.0	.0	.0	.0
Nov	74.1	49.9	62.0	92	1988	1	67.5	1995	30+	1953	21	56.0	1994	146	56	.0	.2	30.0	.0	.1	.0
Dec	65.0	43.0	54.0	83	1977	15	59.4	1980	13	1980	21	49.1	1978	345	5	.0	.0	30.5	.0	1.7	.0
Ann	87.0	61.0	74.0	122	Jul 1967	2	99.1	Jul 1996	13	Dec 1980	21	47.2	Jan 1979	1227	4545	110.4	169.2	363.8	.0	3.9	.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

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

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No. 20

1971-2000

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

Station: NEEDLES AP, CA

COOP ID: 046118

Climate Division: CA 7

NWS Call Sign: EED

Elevation: 887 Feet Lat: 34°46N

Lon: 114°37W

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	.74	.28	2.10	1949	12	3.64	1993	.00+	2000	3.6	1.8	.3	.1	.00	.00	.00	.06	.17	.32	.53	.82	1.26	2.06	2.89
Feb	.63	.26	1.52	1998	4	3.60	1998	.00+	1989	3.0	1.6	.3	@	.00	.00	.02	.11	.23	.36	.54	.76	1.09	1.64	2.21
Mar	.65	.44	1.15	1965	11	3.19	1992	.00+	1999	3.7	1.8	.3	.0	.00	.00	.00	.06	.18	.33	.52	.78	1.14	1.77	2.40
Apr	.22	.04	1.65	1965	3	2.34	1988	.00+	2000	1.5	.7	@	.0	.00	.00	.00	.00	.01	.04	.10	.20	.36	.67	1.01
May	.11	.02	.64	1958	11	.75	1992	.00+	2000	1.1	.4	.0	.0	.00	.00	.00	.00	.00	.01	.05	.11	.20	.36	.52
Jun	.04	.00	.48	2000	23	.48	2000	.00+	1998	.5	.1	.0	.0	.00	.00	.00	.00	.00	.00	.00	.01	.05	.14	.25
Jul	.32	.08	2.11	1974	19	2.21	1974	.00+	2000	1.7	.8	.2	.1	.00	.00	.00	.01	.04	.09	.18	.32	.53	.94	1.38
Aug	.70	.26	2.55	1951	28	3.37	1982	.00+	1991	2.6	1.5	.4	.1	.00	.00	.01	.09	.20	.34	.54	.81	1.20	1.91	2.64
Sep	.60	.22	2.10	1998	4	4.72	1976	.00+	1994	2.1	1.2	.3	.1	.00	.00	.00	.05	.13	.25	.41	.65	1.01	1.68	2.39
Oct	.31	.12	1.08	1963	18	1.14	1983	.00+	1999	1.9	.8	.1	.0	.00	.00	.00	.05	.12	.19	.27	.38	.54	.80	1.06
Nov	.35	.30	1.42	1987	1	1.53	1987	.00+	2000	1.8	.9	.2	@	.00	.00	.00	.05	.12	.21	.31	.43	.61	.91	1.21
Dec	.44	.15	1.34	1994	25	2.60	1984	.00+	2000	2.3	1.2	.2	.1	.00	.00	.00	.00	.04	.13	.27	.46	.76	1.31	1.88
Ann	5.11	4.79	2.55	Aug 1951	28	4.72	Sep 1976	.00+	Dec 2000	25.8	12.8	2.3	.5	1.93	2.41	3.09	3.66	4.20	4.75	5.35	6.04	6.92	8.28	9.52

+ 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

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

Complete documentation available from:
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Lat: 34° 46N

Lon: 114° 37W

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	#	.0	0	0	#	1974	4	#	1974	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Feb	#	.0	0	0	#	1985	2	#	1985	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Mar	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.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	#	1987	8	#	1987	.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	#	.0	N/A	N/A	#+	Feb 1985	2	#+	Feb 1985	#	Aug 1987	8	#	Aug 1987	.0	.0	.0	.0	.0	.0	.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	3/06	2/25	2/18	2/12	2/07	2/01	1/26	1/19	1/10
32	2/09	1/29	1/21	1/14	1/07	12/30	12/21	12/08	0/00
28	1/18	1/09	12/31	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	11/14	11/21	11/26	12/01	12/05	12/09	12/14	12/19	12/26
32	12/02	12/10	12/16	12/21	12/26	12/31	1/07	1/19	0/00
28	12/19	12/28	1/06	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	334	321	313	306	299	293	286	278	267
32	>365	>365	>365	>365	>365	346	333	321	306
28	>365	>365	>365	>365	>365	>365	>365	>365	357
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

Complete documentation available from:

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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	Ann
65	346	192	138	41	5	0	0	0	0	14	146	345	1227
60	207	94	67	14	0	0	0	0	0	3	67	208	660
57	141	52	38	6	0	0	0	0	0	1	36	142	416
55	105	31	25	3	0	0	0	0	0	0	22	106	292
50	37	7	8	0	0	0	0	0	0	0	5	38	95
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	682	747	995	1184	1500	1749	1986	1933	1663	1340	900	683	15362
55	74	135	307	497	787	1059	1273	1220	973	627	232	76	7260
57	48	100	258	440	725	999	1211	1158	913	566	186	50	6654
60	21	57	194	358	633	909	1118	1065	823	475	127	23	5803
65	5	16	110	235	482	759	963	910	673	331	56	5	4545
70	0	3	49	139	340	609	808	755	523	207	18	0	3451

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	430	545	753	944	1260	1516	1741	1684	1412	1080	650	423	430	975	1728	2672	3932	5448	7189	8873	10285	11365	12015	12438
45	278	401	598	794	1105	1366	1586	1529	1262	925	500	271	278	679	1277	2071	3176	4542	6128	7657	8919	9844	10344	10615
50	145	261	443	644	950	1216	1431	1374	1112	770	352	139	145	406	849	1493	2443	3659	5090	6464	7576	8346	8698	8837
55	55	142	294	496	795	1066	1276	1219	962	615	213	48	55	197	491	987	1782	2848	4124	5343	6305	6920	7133	7181
60	12	57	166	353	640	916	1121	1064	812	465	107	1	12	69	235	588	1228	2144	3265	4329	5141	5606	5713	5714
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	241	324	466	604	809	938	1068	1044	900	699	393	234	241	565	1031	1635	2444	3382	4450	5494	6394	7093	7486	7720

(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/normals/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 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