

Climatography of the United States

No. 20

1971-2000

Station: ANACORTES, WA

COOP ID: 450176

Climate Division: WA 2

NWS Call Sign:

Elevation: 20 Feet

Lat: 48° 31N

Lon: 122° 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	45.7	34.8	40.3	65	1935	31	45.2	1986	6+	1943	22	34.0	1979	767	0	.0	.0	8.5	1.0	10.6	.0
Feb	48.6	36.2	42.4	69	1986	28	47.2+	1998	9+	1989	3	33.5	1989	632	0	.0	.0	12.7	.4	7.1	.0
Mar	52.4	38.6	45.5	71	1941	28	48.7	1992	18	1971	2	40.3	1971	604	0	.0	.0	22.6	@	3.8	.0
Apr	57.4	42.1	49.8	78	1934	19	52.4	1987	30+	1976	1	45.6	1975	457	0	.0	.0	28.7	.0	.2	.0
May	63.0	46.8	54.9	88	1963	22	59.3	1993	33+	1965	6	51.6	1974	313	0	.0	.0	30.9	.0	.0	.0
Jun	67.4	50.5	59.0	91	1932	9	62.4	1992	38+	1976	3	55.3	1971	187	5	.0	@	30.0	.0	.0	.0
Jul	71.6	52.9	62.3	93	1970	15	65.0	1990	41+	1971	2	59.4	1986	102	17	.0	.0	31.0	.0	.0	.0
Aug	72.1	53.2	62.7	95	1931	10	65.7	1997	37	1970	18	59.2	1973	97	25	.0	.0	31.0	.0	.0	.0
Sep	67.4	50.1	58.8	88	1944	5	61.9	1995	34+	1972	30	55.2	1972	194	7	.0	.0	30.0	.0	.0	.0
Oct	58.8	44.2	51.5	77+	1987	3	54.9	1987	26	1935	31	49.1	1972	417	0	.0	.0	30.1	.0	.5	.0
Nov	50.3	39.0	44.7	68	1934	4	48.7+	1997	10+	1985	28	34.1	1985	610	0	.0	.0	17.6	.5	4.9	.0
Dec	45.7	35.3	40.5	68	1931	20	44.6	1979	4	1964	17	34.9	1990	758	0	.0	.0	8.7	1.3	9.9	.0
Ann	58.4	43.6	51.0	95	Aug 1931	10	65.7	Aug 1997	4	Dec 1964	17	33.5	Feb 1989	5138	54	.0	@	281.8	3.2	37.0	.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: 1931-2001

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

003-A

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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: ANACORTES, WA

COOP ID: 450176

Climate Division: WA 2

NWS Call Sign:

Elevation: 20 Feet

Lat: 48°31N

Lon: 122°37W

Precipitation (inches)

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	3.69	3.74	1.74	1974	24	8.14	1971	.60	1985	17.1	9.4	1.8	.4	1.19	1.54	2.05	2.49	2.92	3.36	3.84	4.40	5.13	6.26	7.30
Feb	2.49	2.54	3.00	1949	16	5.80	1982	.60	1993	15.0	7.9	.9	.2	.89	1.13	1.47	1.75	2.02	2.30	2.60	2.95	3.40	4.10	4.74
Mar	2.21	2.02	1.09	1984	21	3.93	1999	.94	1992	15.1	8.1	.6	@	.97	1.17	1.44	1.67	1.88	2.09	2.31	2.58	2.90	3.40	3.85
Apr	1.86	1.82	1.04	2000	14	3.10	1996	.77	1973	13.5	6.4	.6	@	.98	1.13	1.33	1.49	1.64	1.79	1.95	2.12	2.34	2.67	2.96
May	1.63	1.55	1.72	1948	28	3.01	1986	.45	1992	11.1	5.0	.5	.1	.58	.74	.96	1.15	1.33	1.51	1.71	1.94	2.24	2.69	3.11
Jun	1.51	1.36	2.27	1946	14	3.62	1997	.32+	1996	9.6	4.4	.7	.0	.37	.51	.73	.93	1.12	1.33	1.56	1.83	2.19	2.76	3.29
Jul	1.06	.99	1.70	1932	9	2.83	1982	.00	1985	6.1	3.1	.4	.1	.09	.21	.38	.54	.70	.87	1.07	1.31	1.63	2.15	2.65
Aug	1.04	.83	1.60	1990	18	4.31	1990	.00	1986	5.4	2.5	.6	.2	.03	.10	.24	.39	.56	.75	.98	1.27	1.67	2.35	3.03
Sep	1.36	1.42	1.59	1992	24	3.55	1983	.11	1991	7.5	4.1	.6	.1	.14	.24	.43	.62	.83	1.06	1.33	1.66	2.12	2.88	3.63
Oct	2.25	1.88	2.50	1945	25	5.01	1985	.11	1987	13.0	6.8	.9	@	.52	.73	1.06	1.36	1.65	1.96	2.31	2.72	3.27	4.13	4.95
Nov	4.14	3.79	2.25	1990	10	10.67	1990	1.11	1976	18.4	11.3	1.9	.5	1.22	1.62	2.21	2.71	3.21	3.73	4.30	4.96	5.83	7.19	8.45
Dec	3.81	3.56	2.35	1956	9	7.45	1979	.59	1985	18.0	10.6	2.2	.2	1.54	1.89	2.39	2.80	3.18	3.57	3.99	4.48	5.10	6.05	6.91
Ann	27.05	27.12	3.00	Feb 1949	16	10.67	Nov 1990	.00+	Aug 1986	149.8	79.6	11.7	1.8	18.98	20.53	22.52	24.04	25.39	26.69	28.04	29.54	31.35	33.99	36.27

+ 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: 1931-2001

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

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Station: ANACORTES, WA

COOP ID: 450176

Climate Division: WA 2

NWS Call Sign:

Elevation: 20 Feet

Lat: 48°31N

Lon: 122°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	.4	.0	#	0	5.5	1982	5	5.5	1982	6	1972	26	#+	1978	.3	.3	.1	.1	.0	.1	.1	.0	.0
Feb	.4	.0	0	0	3.0	1989	17	3.0	1989	0	0	0	0	0	.3	.3	@	.0	.0	.0	.0	.0	.0
Mar	.0	.0	#	0	.0	0	0	.0	0	1	1989	1	#	1989	.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	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	.2	.0	#	0	3.5	1985	26	3.5	1985	14	1985	30	3	1985	.2	.1	@	.0	.0	.1	.0	.0	.0
Dec	.6	.0	#	0	3.0	1980	6	4.0	1980	14	1985	2	1	1985	.6	.4	.1	.0	.0	.0	.0	.0	.0
Ann	1.6	.0	N/A	N/A	5.5	Jan 1982	5	5.5	Jan 1982	14+	Dec 1985	2	3	Nov 1985	1.4	1.1	.2	.1	.0	.2	.1	.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

Complete documentation available from:

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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	5/01	4/25	4/21	4/17	4/14	4/10	4/07	4/03	3/28
32	4/07	3/30	3/24	3/19	3/14	3/09	3/04	2/26	2/18
28	3/12	3/03	2/23	2/17	2/12	2/06	1/31	1/24	1/14
24	2/28	2/18	2/10	2/04	1/29	1/23	1/16	1/07	12/22
20	2/10	1/27	1/16	1/06	12/25	12/09	0/00	0/00	0/00
16	1/20	1/05	12/22	11/30	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	10/06	10/12	10/17	10/21	10/25	10/29	11/02	11/07	11/13
32	10/23	10/31	11/06	11/11	11/15	11/20	11/25	11/30	12/08
28	10/31	11/11	11/19	11/26	12/02	12/08	12/15	12/23	1/03
24	11/21	12/02	12/10	12/17	12/24	12/31	1/07	1/17	2/04
20	12/02	12/15	12/26	1/05	1/17	2/07	0/00	0/00	0/00
16	12/09	12/24	1/07	1/29	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	224	213	206	199	193	187	181	174	163
32	283	270	261	253	245	238	230	221	208
28	334	320	310	301	293	284	275	265	251
24	>365	>365	347	336	327	319	311	302	290
20	>365	>365	>365	>365	>365	>365	>365	329	311
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	767	632	604	457	313	187	102	97	194	417	610	758	5138
60	612	492	449	307	168	73	21	22	80	263	460	603	3550
57	519	408	356	220	98	31	5	6	36	174	375	510	2738
55	458	352	297	166	62	14	1	2	17	121	320	449	2259
50	315	225	159	63	11	1	0	0	1	35	195	304	1309
32	18	6	0	0	0	0	0	0	0	0	6	13	43

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	273	298	419	533	711	808	938	950	803	606	386	278	7003
55	1	0	3	9	60	132	225	239	130	14	10	1	824
57	0	0	0	3	33	89	167	181	88	5	6	0	572
60	0	0	0	0	10	41	91	105	43	0	0	0	290
65	0	0	0	0	0	5	17	25	7	0	0	0	54
70	0	0	0	0	0	0	0	2	0	0	0	0	2

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	91	115	186	300	471	573	700	711	569	370	171	92	91	206	392	692	1163	1736	2436	3147	3716	4086	4257	4349
45	28	36	65	155	316	423	545	556	419	220	69	28	28	64	129	284	600	1023	1568	2124	2543	2763	2832	2860
50	0	1	7	51	166	273	390	401	270	88	16	0	0	1	8	59	225	498	888	1289	1559	1647	1663	1663
55	0	0	0	6	56	129	235	247	131	15	0	0	0	0	0	6	62	191	426	673	804	819	819	819
60	0	0	0	0	9	32	96	103	35	0	0	0	0	0	0	0	9	41	137	240	275	275	275	275
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	14	31	56	122	214	293	392	407	295	152	42	8	14	45	101	223	437	730	1122	1529	1824	1976	2018	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/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