

Climatography of the United States No. 20

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

Station: PROSSER, WA

1971-2000

COOP ID: 456768

Climate Division: WA 8

NWS Call Sign:

Elevation: 830 Feet

Lat: 46° 12N

Lon: 119° 45W

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	41.0	25.1	33.1	69	1971	31	40.2	1983	-18+	1957	28	17.1	1979	991	0	.0	.0	5.7	8.3	25.4	.9
Feb	48.1	29.0	38.6	69+	1988	21	44.1	1991	-20	1950	3	27.0	1989	741	0	.0	.0	12.4	3.3	20.0	.4
Mar	58.1	33.8	46.0	81	1960	26	49.6	1986	6	1955	5	41.0	1971	589	0	.0	.0	27.1	.2	14.4	.0
Apr	66.3	38.8	52.6	91	1977	25	56.9	1987	14	1935	2	47.2	1975	375	2	.0	@	29.7	.0	6.4	.0
May	74.5	45.4	60.0	100+	2001	24	64.8	1993	26+	1954	1	55.3	1996	181	25	@	1.3	31.0	.0	.9	.0
Jun	81.8	51.1	66.5	105	1992	24	71.2	1986	32	1934	24	61.4	1971	66	109	.3	4.4	30.0	.0	.0	.0
Jul	89.3	54.9	72.1	110	1939	27	79.4	1998	37	1971	7	66.2	1993	16	236	1.5	12.7	31.0	.0	.0	.0
Aug	89.5	54.3	71.9	106	1998	5	76.5	1986	36	2000	20	67.3	1975	15	229	1.3	12.6	31.0	.0	.0	.0
Sep	80.4	47.2	63.8	99+	1987	1	69.2	1990	21	2000	24	58.1	1971	114	78	.0	2.3	30.0	.0	.7	.0
Oct	67.8	38.4	53.1	90	1932	2	59.5	1988	11	1935	30	49.9	1984	369	1	.0	.0	30.3	.0	7.3	.0
Nov	51.3	31.7	41.5	76+	1999	13	47.4	1983	-7	1985	24	29.0	1985	705	0	.0	.0	15.5	1.7	17.9	.1
Dec	41.4	25.9	33.7	66	1987	6	40.1	1973	-14	1983	24	23.7	1985	973	0	.0	.0	5.8	8.3	25.9	.7
Ann	65.8	39.6	52.7	110	Jul 1939	27	79.4	Jul 1998	-20	Feb 1950	3	17.1	Jan 1979	5135	680	3.1	33.3	279.5	21.8	118.9	2.1

+ 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/normals/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

077-A

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COOP ID: 456768

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NWS Call Sign:

Elevation: 830 Feet Lat: 46°12N

Lon: 119°45W

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	.96	.91	1.24	1948	7	2.25	1978	.11+	1984	7.8	3.3	.2	.0	.17	.26	.40	.53	.66	.80	.97	1.16	1.43	1.85	2.26
Feb	.70	.63	1.01	1961	2	1.64	1999	.00	1988	6.6	2.6	@	.0	.07	.16	.27	.37	.48	.59	.71	.86	1.06	1.38	1.68
Mar	.67	.58	.64	1971	26	1.78	1989	.06	1992	6.6	2.4	.1	.0	.11	.17	.27	.36	.46	.56	.68	.82	1.01	1.33	1.62
Apr	.64	.60	.89	1974	24	2.19	1992	.00	1999	5.9	1.8	.2	.0	.02	.06	.15	.24	.34	.46	.60	.78	1.02	1.44	1.86
May	.65	.54	.89	1972	21	2.29	1972	.02	1992	6.1	2.2	.1	.0	.10	.16	.25	.34	.44	.54	.66	.80	.99	1.30	1.60
Jun	.56	.55	1.70	1957	6	1.52	1972	.00	1979	4.5	1.6	.2	.0	.02	.06	.13	.21	.30	.41	.53	.69	.91	1.28	1.64
Jul	.24	.18	.69	1978	3	.75	1974	.00+	2000	2.5	.9	@	.0	.00	.00	.03	.07	.11	.16	.22	.30	.41	.58	.75
Aug	.35	.17	.91	1947	30	1.53	1977	.00+	2000	2.6	1.1	.1	.0	.00	.00	.02	.06	.11	.19	.28	.41	.60	.93	1.27
Sep	.48	.32	.98	1986	24	1.81	1986	.00+	1999	3.7	1.3	.2	.0	.00	.00	.05	.13	.21	.31	.43	.59	.81	1.18	1.55
Oct	.65	.62	1.67	1957	2	2.05	1982	.00+	1987	4.8	2.2	.1	@	.00	.04	.14	.24	.35	.47	.62	.80	1.06	1.49	1.91
Nov	1.03	.79	.79	1944	4	2.74	1973	.00	1976	7.8	3.2	.2	.0	.13	.26	.43	.58	.73	.88	1.06	1.27	1.55	1.99	2.41
Dec	1.18	1.19	.77	1964	21	2.75	1973	.17	1976	8.3	4.3	.3	@	.26	.37	.54	.70	.85	1.02	1.21	1.43	1.73	2.20	2.64
Ann	8.11	7.98	1.70	Jun 1957	6	2.75	Dec 1973	.00+	Aug 2000	67.2	26.9	1.7	.0	5.16	5.71	6.42	6.97	7.47	7.95	8.45	9.01	9.70	10.71	11.60

+ 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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Climate Division: WA 8

NWS Call Sign:

Elevation: 830 Feet

Lat: 46° 12N

Lon: 119° 45W

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	3.0	1.6	1	#	9.5	1980	9	15.5	1980	12	1980	11	4	1980	1.5	.9	.2	.1	.0	4.2	2.3	1.5	.1
Feb	.9	.0	#	0	3.0	1975	5	8.8	1975	6	1979	4	1	1979	.7	.4	.1	.0	.0	.9	.4	.2	.0
Mar	.1	.0	#	0	1.3	1971	5	1.3	1971	1	1971	5	#+	1980	.1	.1	.0	.0	.0	@	.0	.0	.0
Apr	#	.0	#	0	#	1976	1	#	1976	#	1976	1	#	1976	.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	1.1	.0	#	0	4.0	1979	23	6.0	1979	5+	1985	22	1+	1985	.5	.4	.1	.0	.0	.7	.5	.1	.0
Dec	4.1	3.9	#	#	4.5	1985	2	17.5	1983	8	1985	4	5	1985	2.1	1.5	.4	.0	.0	3.7	2.4	1.9	.0
Ann	9.2	5.5	N/A	N/A	9.5	Jan 1980	9	17.5	Dec 1983	12	Jan 1980	11	5	Dec 1985	4.9	3.3	.8	.1	.0	9.5	5.6	3.7	.1

+ 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:

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

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NWS Call Sign:

Elevation: 830 Feet

Lat: 46° 12N

Lon: 119° 45W

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	6/02	5/28	5/25	5/22	5/19	5/17	5/14	5/10	5/05
32	5/16	5/10	5/05	5/02	4/28	4/24	4/21	4/16	4/10
28	5/01	4/22	4/15	4/09	4/04	3/30	3/24	3/17	3/08
24	4/11	4/01	3/24	3/17	3/11	3/05	2/26	2/19	2/08
20	3/14	3/03	2/24	2/17	2/11	2/05	1/30	1/22	1/12
16	2/25	2/16	2/09	2/03	1/29	1/24	1/18	1/12	1/03
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	9/11	9/16	9/20	9/23	9/26	9/29	10/02	10/06	10/11
32	9/23	9/28	10/02	10/06	10/09	10/12	10/16	10/20	10/25
28	10/06	10/13	10/17	10/21	10/25	10/29	11/02	11/06	11/13
24	10/10	10/19	10/26	11/01	11/06	11/11	11/17	11/23	12/03
20	11/01	11/09	11/14	11/18	11/22	11/27	12/01	12/06	12/14
16	11/13	11/23	11/30	12/06	12/12	12/18	12/24	12/31	1/11
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	149	142	137	133	129	125	121	116	109
32	191	181	174	169	163	158	152	145	136
28	236	225	217	210	203	197	190	182	171
24	282	268	257	248	239	230	221	210	196
20	319	307	298	291	284	276	269	260	248
16	>365	340	329	320	313	306	299	290	279

* 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	991	741	589	375	181	66	16	15	114	369	705	973	5135
60	836	601	434	236	83	19	2	2	46	224	558	818	3859
57	747	517	342	163	43	8	0	0	22	150	474	725	3191
55	689	464	283	122	25	3	0	0	12	108	419	663	2788
50	545	334	151	47	4	0	0	0	2	40	291	516	1930
32	159	43	1	0	0	0	0	0	0	0	34	112	349

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	191	226	434	617	867	1033	1243	1237	954	655	319	162	7938
55	8	3	4	49	179	346	530	524	277	50	13	0	1983
57	4	0	1	30	135	290	468	462	226	29	8	0	1653
60	0	0	0	12	82	212	377	371	160	11	3	0	1228
65	0	0	0	2	25	109	236	229	78	1	0	0	680
70	0	0	0	0	4	42	123	115	29	0	0	0	313

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	28	59	180	353	590	770	959	947	671	362	93	33	28	87	267	620	1210	1980	2939	3886	4557	4919	5012	5045
45	2	18	71	213	435	620	804	792	522	218	33	4	2	20	91	304	739	1359	2163	2955	3477	3695	3728	3732
50	0	2	18	104	285	470	649	637	375	105	8	0	0	2	20	124	409	879	1528	2165	2540	2645	2653	2653
55	0	0	1	44	157	322	495	482	236	40	0	0	0	0	1	45	202	524	1019	1501	1737	1777	1777	1777
60	0	0	0	12	73	193	344	332	122	10	0	0	0	0	0	12	85	278	622	954	1076	1086	1086	1086
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	11	39	119	231	369	485	603	590	428	245	51	9	11	50	169	400	769	1254	1857	2447	2875	3120	3171	3180

(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