

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: PRIEST RAPIDS DAM, WA

1971-2000

COOP ID: 456747

Climate Division: WA 8

NWS Call Sign:

Elevation: 460 Feet

Lat: 46° 39N

Lon: 119° 55W

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	40.3	25.7	33.0	71	1971	31	40.0	1983	-12	1996	31	17.2	1979	993	0	.0	.0	6.9	7.2	23.4	.6
Feb	47.1	29.6	38.4	72	1986	24	45.2	1991	-10	1996	2	28.1	1989	746	0	.0	.0	13.1	2.2	15.2	.4
Mar	57.5	35.8	46.7	82	1960	25	52.3	1992	11+	1993	2	41.1	1971	568	0	.0	.0	27.2	.1	7.5	.0
Apr	66.4	42.3	54.4	94	1977	24	59.5	1990	25	1964	4	49.1	1975	325	6	.0	.1	29.9	.0	1.6	.0
May	75.4	50.4	62.9	105	1986	30	68.0	1992	30	1989	11	58.2	1984	119	54	.1	2.1	31.0	.0	@	.0
Jun	82.8	57.2	70.0	110	1961	17	77.1	1992	35	1973	16	64.8	1991	36	185	.7	7.0	30.0	.0	.0	.0
Jul	90.9	63.3	77.1	112+	1998	27	83.1	1998	47+	1996	18	70.8	1993	3	378	5.1	17.6	31.0	.0	.0	.0
Aug	90.3	63.3	76.8	110+	1972	8	81.8	1971	42	1999	31	71.3	1980	5	370	4.5	16.6	31.0	.0	.0	.0
Sep	80.2	54.5	67.4	105	1998	2	73.7	1990	33	1996	25	60.8	1985	76	147	.1	3.9	30.0	.0	.2	.0
Oct	66.0	42.7	54.4	87	1993	1	59.1	1988	18+	1995	31	50.5	1984	332	2	.0	.0	30.3	.0	7.2	.0
Nov	49.7	33.5	41.6	76+	1999	13	48.5	1998	-7	1985	23	27.6	1985	701	0	.0	.0	16.2	1.0	13.7	.1
Dec	40.5	26.6	33.6	71	1980	26	40.4	1973	-7	1968	30	22.5	1985	976	0	.0	.0	6.1	6.0	23.5	.3
Ann	65.6	43.7	54.7	112+	Jul 1998	27	83.1	Jul 1998	-12	Jan 1996	31	17.2	Jan 1979	4880	1142	10.5	47.3	282.7	16.5	92.3	1.4

+ 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: 1956-2001

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

076-A

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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	.82	.71	.75	1999	22	1.88	1995	.00	1991	6.7	2.8	.2	.0	.02	.06	.17	.28	.41	.56	.75	.99	1.33	1.90	2.47
Feb	.66	.50	1.00	2000	29	1.52	1983	.00	1988	6.6	2.4	@	.0	.04	.10	.20	.29	.40	.51	.64	.81	1.03	1.40	1.76
Mar	.66	.59	1.02	1967	23	1.64	1983	.04	1994	6.2	2.3	.1	.0	.08	.13	.23	.32	.42	.53	.65	.81	1.02	1.37	1.71
Apr	.43	.27	1.07	1995	28	2.03	1995	.00+	2000	3.8	1.4	.1	@	.00	.00	.03	.10	.18	.28	.39	.54	.74	1.07	1.42
May	.42	.45	.88	1970	12	1.33	1972	.01	1992	4.5	1.4	@	.0	.04	.07	.13	.19	.25	.32	.41	.51	.66	.90	1.13
Jun	.40	.31	1.00	1991	20	2.46	1991	.00+	1996	3.3	1.2	.2	@	.00	.00	.03	.08	.14	.22	.33	.47	.67	1.04	1.42
Jul	.19	.09	.98	1987	18	1.19	1993	.00+	2000	2.0	.4	.1	.0	.00	.00	.00	.00	.03	.07	.13	.21	.34	.55	.77
Aug	.27	.11	.88	1977	30	1.22	1977	.00+	2000	1.7	.7	.1	.0	.00	.00	.00	.00	.04	.10	.18	.30	.47	.78	1.09
Sep	.34	.20	.68	1980	13	1.30	1977	.00+	1999	2.8	1.1	.1	.0	.00	.00	.00	.02	.10	.18	.28	.42	.60	.92	1.24
Oct	.46	.35	.97	1957	2	1.58	1982	.00+	1988	4.4	1.9	.1	.0	.00	.00	.08	.16	.25	.34	.45	.59	.77	1.07	1.36
Nov	1.02	.84	1.35	1996	19	2.87	1983	.00	1976	8.4	3.4	.3	@	.05	.15	.30	.45	.61	.79	1.00	1.26	1.61	2.20	2.77
Dec	1.17	1.01	1.50	1987	9	3.76	1996	.05	1976	7.4	3.7	.4	.1	.11	.19	.35	.51	.69	.89	1.13	1.42	1.83	2.51	3.18
Ann	6.84	6.67	1.50	Dec 1987	9	3.76	Dec 1996	.00+	Aug 2000	57.8	22.7	1.7	.1	3.73	4.27	5.00	5.57	6.10	6.62	7.16	7.78	8.55	9.69	10.71

+ 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: 1956-2001

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Climate Division: WA 8

NWS Call Sign:

Elevation: 460 Feet

Lat: 46°39N

Lon: 119°55W

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	2.6	1.1	#	0	6.0	1979	10	10.0	1998	8	1993	4	2	1996	1.9	1.1	.2	.1	.0	.4	.1	.0	.0
Feb	.9	.0	#	0	4.0	1975	4	6.9	1975	5	1989	18	1	1989	.5	.3	.1	.0	.0	.6	.4	.0	.0
Mar	.1	.0	0	0	.5	1989	1	1.0	1989	5	1993	4	1	1993	.1	.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	1.1	.0	#	0	4.0	1985	17	10.5	1985	4	1996	20	#+	1996	.6	.4	.1	.0	.0	.1	.1	.0	.0
Dec	1.3	.0	#	0	3.0	1977	29	5.5	1987	10	1992	31	2	1992	.6	.5	.1	.0	.0	.5	.1	.0	.0
Ann	6.0	1.1	N/A	N/A	6.0	Jan 1979	10	10.5	Nov 1985	10	Dec 1992	31	2+	Jan 1996	3.7	2.3	.5	.1	.0	1.6	.7	.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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NWS Call Sign:

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Lon: 119° 55W

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	5/12	5/06	5/01	4/27	4/23	4/19	4/15	4/11	4/04
32	4/29	4/22	4/16	4/12	4/08	4/04	3/30	3/25	3/18
28	4/05	3/28	3/22	3/18	3/13	3/09	3/04	2/27	2/19
24	3/21	3/11	3/04	2/26	2/20	2/14	2/08	2/01	1/22
20	3/09	2/28	2/21	2/16	2/10	2/05	1/30	1/23	1/12
16	2/25	2/15	2/09	2/03	1/29	1/23	1/17	1/10	12/30
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	9/27	10/01	10/05	10/08	10/10	10/13	10/16	10/19	10/23
32	10/02	10/08	10/13	10/17	10/20	10/24	10/28	11/02	11/08
28	10/04	10/13	10/19	10/24	10/29	11/03	11/09	11/15	11/24
24	10/10	10/21	10/28	11/04	11/10	11/16	11/22	11/30	12/10
20	10/19	10/29	11/06	11/13	11/19	11/25	12/02	12/10	12/23
16	11/14	11/26	12/04	12/11	12/17	12/24	12/31	1/09	1/23
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	192	184	179	174	169	165	160	154	146
32	227	216	208	201	195	189	182	174	163
28	267	254	245	237	229	222	214	205	192
24	305	290	279	270	262	253	244	234	219
20	339	314	301	290	281	272	263	252	237
16	>365	360	343	331	322	312	303	292	278

* 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	Ann
65	993	746	568	325	119	36	3	5	76	332	701	976	4880
60	838	606	414	197	45	9	0	1	28	190	555	821	3704
57	745	522	325	135	20	3	0	0	13	120	471	728	3082
55	689	472	270	100	11	0	0	0	7	83	416	667	2715
50	545	342	149	38	1	0	0	0	0	27	291	522	1915
32	153	49	2	0	0	0	0	0	0	0	38	122	364

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	184	228	457	671	958	1140	1398	1388	1061	694	327	169	8675
55	6	6	11	81	256	450	685	675	378	64	15	1	2628
57	1	0	5	56	203	393	623	613	324	39	10	0	2267
60	0	0	1	28	135	309	530	520	249	16	4	0	1792
65	0	0	0	6	54	185	378	370	147	2	0	0	1142
70	0	0	0	0	14	95	238	232	76	0	0	0	655

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	37	76	237	455	732	914	1162	1150	822	420	127	38	37	113	350	805	1537	2451	3613	4763	5585	6005	6132	6170
45	8	22	112	307	577	764	1007	995	672	276	54	7	8	30	142	449	1026	1790	2797	3792	4464	4740	4794	4801
50	0	1	32	170	422	614	852	840	522	160	16	0	0	1	33	203	625	1239	2091	2931	3453	3613	3629	3629
55	0	0	3	75	272	464	697	685	373	76	2	0	0	0	3	78	350	814	1511	2196	2569	2645	2647	2647
60	0	0	0	22	149	317	542	530	235	24	0	0	0	0	0	22	171	488	1030	1560	1795	1819	1819	1819
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	19	40	131	263	441	589	754	755	525	270	59	18	19	59	190	453	894	1483	2237	2992	3517	3787	3846	3864

(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