

Climatology of the United States

No. 20

1971-2000

Station: PLAIN, WA

COOP ID: 456534

Climate Division: WA 6

NWS Call Sign:

Elevation: 1,940 Feet Lat: 47° 47N

Lon: 120° 39W

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	32.8	20.0	26.4	59	1983	11	34.6	1994	-30	1950	30	14.2	1979	1197	0	.0	.0	.7	11.6	29.8	2.5
Feb	38.9	22.9	30.9	64	1962	3	36.7	1991	-31	1950	1	22.4	1989	955	0	.0	.0	2.5	4.1	27.1	1.3
Mar	47.9	26.9	37.4	74	1992	31	44.3	1992	-14	1955	5	31.7	1971	855	0	.0	.0	14.4	.4	26.7	@
Apr	57.0	31.3	44.2	88	1977	24	48.3	1994	17	1975	1	38.9	1972	626	0	.0	.0	25.9	.0	18.9	.0
May	65.4	37.9	51.7	98	1986	31	57.7	1993	18	1954	1	47.5	1984	415	1	.0	.4	30.7	.0	6.4	.0
Jun	71.8	43.9	57.9	98	1992	22	64.3	1992	26+	1976	3	53.4	1976	226	13	.0	1.4	30.0	.0	.7	.0
Jul	79.4	47.9	63.7	102+	1960	17	69.5	1998	29	1971	7	58.6	1993	106	64	.2	6.7	31.0	.0	.1	.0
Aug	79.9	47.9	63.9	101	1965	1	68.0	1981	30+	1980	29	59.0	1995	97	62	.1	6.0	31.0	.0	.1	.0
Sep	72.1	40.2	56.2	98	1988	4	62.2	1998	21+	1985	29	50.9	1971	280	15	.0	.9	29.9	.0	4.4	.0
Oct	58.3	32.5	45.4	86+	1980	6	50.8	1988	13	1991	29	42.0	1990	607	0	.0	.0	26.6	.2	16.3	.0
Nov	39.8	27.7	33.8	67	1959	2	38.4	1999	-7+	1985	24	23.7	1985	937	0	.0	.0	4.2	2.8	23.8	.2
Dec	31.5	21.0	26.3	55	1978	3	32.2	1991	-28	1968	30	18.0	1983	1201	0	.0	.0	.3	13.5	30.3	1.1
Ann	56.2	33.3	44.8	102+	Jul 1960	17	69.5	Jul 1998	-31	Feb 1950	1	14.2	Jan 1979	7502	155	.3	15.4	227.2	32.6	184.6	5.1

+ 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/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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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: PLAIN, WA

COOP ID: 456534

Climate Division: WA 6

NWS Call Sign:

Elevation: 1,940 Feet Lat: 47° 47N

Lon: 120° 39W

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	4.86	4.15	2.60	1972	11	10.94	1972	.50	1985	15.7	11.1	3.0	.8	1.13	1.58	2.29	2.93	3.56	4.24	4.99	5.89	7.08	8.96	10.73
Feb	3.62	2.97	2.28	1972	27	8.99	1972	.45	1993	13.8	8.6	1.9	.7	.95	1.29	1.82	2.28	2.73	3.21	3.74	4.37	5.19	6.48	7.69
Mar	2.21	1.97	2.76	1972	5	5.75	1972	.54	1981	11.4	6.8	.8	.1	.71	.92	1.23	1.49	1.75	2.01	2.30	2.64	3.07	3.75	4.37
Apr	1.31	1.38	1.26	1962	6	3.06	1996	.10	1999	8.1	4.5	.4	@	.28	.40	.59	.77	.94	1.13	1.34	1.59	1.92	2.45	2.95
May	1.08	.99	1.07	1989	27	3.52	1998	.01	1992	7.2	3.4	.4	@	.16	.24	.40	.55	.70	.88	1.07	1.32	1.64	2.17	2.68
Jun	.99	.72	1.36	1992	12	2.85	1992	.15	1976	6.0	2.4	.4	.2	.15	.24	.38	.52	.66	.82	.99	1.21	1.51	1.98	2.44
Jul	.48	.40	1.15	1974	9	1.57	1993	.00+	1994	3.4	1.5	.2	.1	.00	.03	.11	.18	.26	.36	.46	.60	.79	1.10	1.41
Aug	.66	.58	2.00	2001	22	2.25	1990	.00+	1996	4.3	1.9	.3	.1	.00	.01	.08	.16	.27	.40	.56	.78	1.10	1.66	2.22
Sep	.78	.89	.92	1948	26	1.78	1977	.00+	1998	5.1	2.6	.2	.0	.00	.06	.18	.30	.43	.58	.75	.96	1.26	1.75	2.23
Oct	1.95	1.69	2.15	1994	31	5.82	1994	.03	1987	8.7	5.2	1.1	.3	.13	.25	.50	.76	1.06	1.41	1.83	2.36	3.11	4.36	5.61
Nov	4.68	4.37	2.48	1962	19	12.24	1995	.76	1976	16.7	11.7	2.4	.9	1.04	1.48	2.16	2.78	3.40	4.06	4.80	5.68	6.85	8.71	10.46
Dec	5.40	5.35	3.33	1996	29	10.89	1977	1.38	1985	16.5	11.5	3.4	1.1	1.86	2.37	3.11	3.74	4.34	4.96	5.63	6.42	7.43	8.99	10.42
Ann	28.02	27.41	3.33	Dec 1996	29	12.24	Nov 1995	.00+	Sep 1998	116.9	71.2	14.5	4.3	17.42	19.36	21.91	23.89	25.67	27.41	29.23	31.27	33.76	37.44	40.66

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

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Station: PLAIN, WA

COOP ID: 456534

Climate Division: WA 6

NWS Call Sign:

Elevation: 1,940 Feet

Lat: 47° 47N

Lon: 120° 39W

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	35.7	31.5	25	27	24.0	1982	23	95.0	1972	70	1997	1	45	1972	10.8	9.6	5.1	2.7	.6	-9.9	-9.9	-9.9	-9.9
Feb	23.8	20.3	24	24	24.5	1979	6	60.5	1979	54	1972	14	49	1972	7.6	6.7	3.1	1.5	.4	-9.9	-9.9	-9.9	-9.9
Mar	10.2	7.0	12	8	13.0	1972	5	41.0	1971	62	1972	5	48	1972	4.4	3.8	1.2	.6	.1	-9.9	-9.9	-9.9	-9.9
Apr	1.3	.5	#	0	4.0	1985	23	6.0+	1981	18	1999	2	5	1999	1.0	.6	.1	.0	.0	.1	.0	.0	.0
May	.1	.0	#	0	1.5	1986	13	1.5	1986	#	1999	4	#	1999	.1	.1	.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	1.3	.0	#	0	6.0	1994	31	6.5	1994	7	1996	18	1	1996	.7	.5	.3	@	.0	.3	.2	.0	.0
Nov	20.4	17.5	3	2	20.0	1975	30	55.5	1973	30	1975	30	18	1994	6.8	5.8	2.5	1.2	.2	4.0	2.9	1.5	.2
Dec	41.7	44.3	16	18	27.5	1996	29	95.0	1971	75	1996	30	32+	1996	11.4	9.9	5.9	3.1	.6	-9.9	-9.9	-9.9	-9.9
Ann	134.5	121.1	N/A	N/A	27.5	Dec 1996	29	95.0+	Jan 1972	75	Dec 1996	30	49	Feb 1972	42.8	37.0	18.2	9.1	1.9	-9.9	-9.9	-9.9	-9.9

+ 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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Lat: 47° 47N

Lon: 120° 39W

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	7/11	7/05	7/01	6/27	6/23	6/19	6/15	6/11	6/05
32	6/18	6/11	6/06	6/02	5/29	5/25	5/21	5/16	5/10
28	5/26	5/20	5/16	5/13	5/10	5/07	5/03	4/30	4/24
24	4/30	4/23	4/19	4/15	4/12	4/08	4/05	3/31	3/25
20	4/06	3/29	3/24	3/19	3/14	3/09	3/04	2/27	2/19
16	3/20	3/12	3/06	3/01	2/24	2/19	2/14	2/08	1/31
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	8/22	8/26	8/29	8/31	9/03	9/05	9/08	9/10	9/15
32	9/01	9/05	9/09	9/12	9/15	9/18	9/21	9/24	9/29
28	9/16	9/20	9/23	9/25	9/28	9/30	10/02	10/05	10/09
24	10/03	10/08	10/12	10/15	10/19	10/22	10/25	10/29	11/03
20	10/18	10/27	11/02	11/07	11/13	11/18	11/23	11/29	12/08
16	11/02	11/11	11/17	11/23	11/28	12/03	12/08	12/14	12/23
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	92	85	80	75	71	67	62	57	50
32	133	125	118	113	108	103	97	91	82
28	161	154	149	144	140	136	131	126	119
24	214	206	199	194	189	184	179	172	163
20	277	265	257	249	243	236	229	221	209
16	310	298	290	283	276	269	262	254	242

* 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	1197	955	855	626	415	226	106	97	280	607	937	1201	7502
60	1042	815	700	476	270	115	36	31	164	452	787	1046	5934
57	949	731	607	386	192	67	15	13	109	361	697	953	5080
55	887	675	545	328	148	43	8	6	79	301	637	891	4548
50	732	535	392	194	64	10	0	0	28	167	487	736	3345
32	244	107	27	1	0	0	0	0	0	1	82	231	693

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	70	76	195	366	609	777	981	989	725	417	135	53	5393
55	0	0	0	3	44	129	277	282	114	4	0	0	853
57	0	0	0	1	26	94	222	226	84	2	0	0	655
60	0	0	0	0	11	51	150	152	49	0	0	0	413
65	0	0	0	0	1	13	64	62	15	0	0	0	155
70	0	0	0	0	0	1	16	15	3	0	0	0	35

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	0	0	38	168	394	570	767	772	514	213	19	0	0	0	38	206	600	1170	1937	2709	3223	3436	3455	3455
45	0	0	5	70	246	420	612	617	366	103	3	0	0	0	5	75	321	741	1353	1970	2336	2439	2442	2442
50	0	0	0	22	125	273	457	462	229	37	0	0	0	0	0	22	147	420	877	1339	1568	1605	1605	1605
55	0	0	0	3	48	145	304	310	116	8	0	0	0	0	0	3	51	196	500	810	926	934	934	934
60	0	0	0	0	10	61	170	173	41	0	0	0	0	0	0	0	10	71	241	414	455	455	455	455
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	3	45	141	268	362	484	492	359	167	6	0	0	3	48	189	457	819	1303	1795	2154	2321	2327	2327

(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