

Climatography of the United States No. 20

Station: PENDLETON MUNICIPAL AP, OR

1971-2000

COOP ID: 356546

Climate Division: OR 6

NWS Call Sign: PDT

Elevation: 1,482 Feet Lat: 45°42N

Lon: 118°50W

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	40.1	27.4	33.8	71	1935	24	41.2	1994	-26+	1930	22	15.5	1979	971	0	.0	.0	7.4	8.1	20.2	1.1
Feb	46.5	30.9	38.7	75	1996	8	45.1	1991	-21+	1933	13	25.4	1989	747	0	.0	.0	11.8	3.8	15.2	.6
Mar	54.8	35.4	45.1	80+	1934	19	49.2	1986	1	1993	1	40.1	1971	623	0	.0	.0	23.9	.2	9.1	.0
Apr	62.2	39.7	51.0	95	1934	22	55.8	1977	18	1936	1	47.0	1975	433	2	.0	@	29.1	.0	2.9	.0
May	70.2	45.9	58.1	102+	1931	30	62.9	1992	25	1954	1	54.1	1999	247	23	@	.7	31.0	.0	.2	.0
Jun	78.7	52.0	65.4	108	1961	17	70.9	1992	35	1991	4	60.1	1991	83	86	.3	4.0	30.0	.0	.0	.0
Jul	87.7	57.5	72.6	114	1928	25	77.9	1985	38	1932	5	65.9	1993	14	243	2.9	13.8	31.0	.0	.0	.0
Aug	86.6	57.3	72.0	113	1961	4	76.4	1986	40+	1980	29	67.0	1976	15	224	1.6	11.2	31.0	.0	.0	.0
Sep	77.1	49.7	63.4	104	1930	3	68.8	1990	29	1931	23	57.6	1985	115	63	.1	2.6	30.0	.0	.1	.0
Oct	63.8	40.7	52.3	93	1931	1	58.8	1988	11	1935	30	49.6	1984	400	3	.0	.1	29.4	@	3.4	.0
Nov	48.5	33.8	41.2	80	1999	12	46.4	1995	-12	1985	23	26.8	1985	711	0	.0	.0	15.1	2.2	11.6	.1
Dec	40.0	27.7	33.9	68+	1933	22	40.8	1973	-19	1983	23	19.7	1985	962	0	.0	.0	7.4	8.9	21.1	1.0
Ann	63.0	41.5	52.3	114	Jul 1928	25	77.9	Jul 1985	-26+	Jan 1930	22	15.5	Jan 1979	5321	644	4.9	32.4	277.1	23.2	83.8	2.8

+ 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: 1928-2001

(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

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Elevation: 1,482 Feet Lat: 45°42N

Lon: 118°50W

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	1.45	1.51	1.26	1930	19	3.53	1975	.41	1992	11.7	5.0	.4	@	.40	.54	.74	.93	1.11	1.29	1.50	1.75	2.07	2.57	3.04
Feb	1.22	1.21	1.12	1994	24	2.98	2000	.12	1988	10.5	4.1	.3	@	.33	.44	.62	.77	.93	1.09	1.26	1.47	1.74	2.17	2.57
Mar	1.26	1.15	1.00	1983	4	2.82	1983	.26	1992	11.0	4.6	.2	@	.47	.59	.76	.90	1.03	1.17	1.32	1.49	1.71	2.05	2.35
Apr	1.13	1.09	1.24	1990	27	2.78	1978	.18	1977	8.6	3.7	.3	.1	.25	.36	.52	.67	.82	.98	1.16	1.37	1.65	2.10	2.52
May	1.22	1.23	1.27	1994	19	3.18	1991	.07	1992	8.1	3.6	.4	.1	.20	.31	.48	.65	.82	1.01	1.23	1.49	1.84	2.40	2.94
Jun	.78	.70	1.17	1942	26	2.31	1995	.03	1986	6.0	2.5	.2	@	.11	.17	.29	.39	.51	.63	.77	.95	1.19	1.57	1.95
Jul	.41	.34	1.18	1948	5	1.45	1993	.00	1999	3.2	1.0	.2	@	.01	.03	.08	.14	.20	.28	.37	.50	.67	.97	1.27
Aug	.56	.28	2.19	1993	16	2.58	1977	.00+	2000	3.0	1.3	.3	.1	.00	.00	.01	.06	.14	.26	.41	.63	.95	1.53	2.14
Sep	.63	.44	1.10	1985	9	2.10	1985	.00+	1993	4.4	2.0	.2	@	.00	.00	.04	.14	.26	.40	.57	.78	1.08	1.58	2.10
Oct	.99	.88	1.40	1982	28	2.67	1982	.00+	1987	6.0	3.1	.4	@	.00	.21	.42	.57	.72	.87	1.04	1.23	1.49	1.90	2.28
Nov	1.63	1.75	1.35	1971	26	3.76	1973	.19	1976	12.2	4.9	.6	.1	.45	.61	.84	1.05	1.25	1.46	1.69	1.96	2.32	2.88	3.40
Dec	1.48	1.22	1.25	1978	4	4.68	1973	.21	1989	11.3	5.1	.3	@	.31	.44	.66	.86	1.06	1.27	1.51	1.80	2.19	2.80	3.38
Ann	12.76	12.83	2.19	Aug 1993	16	4.68	Dec 1973	.00+	Aug 2000	96.0	40.9	3.8	.4	8.72	9.49	10.48	11.24	11.92	12.57	13.25	14.01	14.93	16.27	17.43

+ 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: 1928-2001

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Complete documentation available from:
www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

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Climate Division: OR 6

NWS Call Sign: PDT

Elevation: 1,482 Feet

Lat: 45° 42N

Lon: 118° 50W

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	4.1	2.9	1	0	9.5	1980	8	16.6+	1980	12	1993	15	6	1979	3.4	1.6	.3	.1	.0	7.3	3.5	1.8	.4
Feb	3.5	1.4	#	0	16.1	1994	24	16.8	1994	12	1994	25	2+	1993	2.4	.9	.4	.1	@	3.4	1.5	1.1	.2
Mar	1.0	.1	#	0	3.8	1980	5	4.9	1971	6	1993	1	1	1993	1.0	.4	.1	.0	.0	.7	.3	.1	.0
Apr	.1	.0	0	0	2.2	1975	14	2.2	1975	#	1973	19	0	0	.1	.1	.0	.0	.0	.0	.0	.0	.0
May	#	.0	#	0	#	2000	9	#+	2000	0	0	0	#	2000	.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	#	1997	.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	.3	.0	#	0	3.2	1973	31	3.2	1973	1+	1991	30	#	1991	.3	.1	@	.0	.0	.1	.0	.0	.0
Nov	2.2	.3	#	0	8.0	1977	22	14.9	1985	8+	1978	21	2	1978	1.8	.6	.3	.1	.0	2.0	1.3	.7	.0
Dec	5.0	3.4	1	0	5.8	1977	29	27.4	1983	11	1985	3	5	1985	3.7	1.9	.5	.1	.0	5.7	3.1	1.9	.1
Ann	16.2	8.1	N/A	N/A	16.1	Feb 1994	24	27.4	Dec 1983	12+	Feb 1994	25	6	Jan 1979	12.7	5.6	1.6	.4	@	19.2	9.7	5.6	.7

+ 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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Elevation: 1,482 Feet

Lat: 45° 42N

Lon: 118° 50W

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	5/22	5/16	5/12	5/08	5/05	5/02	4/28	4/24	4/18
32	5/02	4/25	4/21	4/17	4/13	4/09	4/06	4/01	3/25
28	4/11	4/02	3/26	3/21	3/15	3/10	3/05	2/26	2/17
24	3/23	3/12	3/05	2/27	2/21	2/15	2/09	2/01	1/22
20	3/09	2/25	2/16	2/08	1/31	1/24	1/16	1/06	12/22
16	2/20	2/11	2/05	1/31	1/26	1/20	1/14	1/05	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	9/24	9/28	10/01	10/04	10/07	10/09	10/12	10/15	10/20
32	10/03	10/08	10/12	10/15	10/18	10/21	10/24	10/27	11/01
28	10/14	10/21	10/27	10/31	11/05	11/09	11/14	11/19	11/27
24	11/02	11/10	11/15	11/20	11/25	11/29	12/04	12/10	12/17
20	11/08	11/17	11/23	11/29	12/04	12/09	12/15	12/22	1/02
16	11/14	11/26	12/04	12/12	12/19	12/27	1/06	1/20	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	173	167	162	158	154	150	146	141	134
32	212	203	197	192	187	182	176	170	161
28	269	257	248	241	234	227	219	211	198
24	315	302	292	284	276	268	260	250	237
20	>365	334	321	312	303	295	287	277	264
16	>365	>365	354	338	327	317	308	298	285

* 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	971	747	623	433	247	83	14	15	115	400	711	962	5321
60	816	596	463	278	114	30	3	3	58	248	571	810	3990
57	731	515	370	200	65	13	0	1	30	170	487	718	3300
55	672	462	309	154	41	7	0	0	18	125	432	662	2882
50	532	334	170	67	9	0	0	0	4	47	306	518	1987
32	164	47	1	0	0	0	0	0	0	0	44	136	392

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	170	230	402	562	800	994	1251	1231	936	624	301	162	7663
55	0	1	2	29	132	307	538	518	259	49	3	1	1839
57	0	1	1	18	99	252	477	456	208	32	2	0	1546
60	0	0	0	7	60	178	385	365	142	15	1	0	1153
65	0	0	0	2	23	86	243	224	63	3	0	0	644
70	0	0	0	0	6	33	128	113	17	0	0	0	297

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	52	86	182	331	561	761	1010	990	705	389	122	55	52	138	320	651	1212	1973	2983	3973	4678	5067	5189	5244
45	17	32	69	193	407	611	855	835	555	247	51	19	17	49	118	311	718	1329	2184	3019	3574	3821	3872	3891
50	2	6	22	90	259	462	700	680	407	127	15	2	2	8	30	120	379	841	1541	2221	2628	2755	2770	2772
55	0	0	0	32	137	314	545	525	268	53	2	0	0	0	0	32	169	483	1028	1553	1821	1874	1876	1876
60	0	0	0	5	67	188	392	373	148	13	0	0	0	0	0	5	72	260	652	1025	1173	1186	1186	1186
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	22	38	93	188	325	467	636	629	435	226	52	20	22	60	153	341	666	1133	1769	2398	2833	3059	3111	3131

(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.

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| <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 |
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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