

# Climatology of the United States

## No. 20

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

Station: PRINEVILLE 4 NW, OR

1971-2000

COOP ID: 356883

Climate Division: OR 7

NWS Call Sign:

Elevation: 2,840 Feet Lat: 44° 20N

Lon: 120° 54W

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	41.9	21.0	31.5	68	1934	31	37.0	1999	-35	1930	21	15.4	1979	1040	0	.0	.0	7.9	4.1	26.7	1.2
Feb	48.1	23.7	35.9	75	1995	23	40.7	1992	-24+	1933	9	25.4	1993	816	0	.0	.0	13.3	1.6	23.5	.7
Mar	54.5	25.3	39.9	81	1966	29	44.9	1986	4+	1955	5	35.9	1975	779	0	.0	.0	23.0	.0	24.5	.0
Apr	60.7	28.0	44.4	90	1987	27	49.7	1987	7+	1966	19	38.5	1975	620	0	.0	@	27.9	.0	20.0	.0
May	68.5	34.1	51.3	99+	1986	30	57.2	1992	13	1954	1	47.3	1977	425	0	.0	1.0	30.9	.0	11.8	.0
Jun	77.0	40.3	58.7	102+	1992	23	63.2	1986	25+	1996	19	54.6	1980	206	15	.1	3.9	30.0	.0	2.8	.0
Jul	85.8	42.8	64.3	104+	1994	21	69.5	1998	28+	1948	2	58.2	1993	93	72	1.2	13.0	31.0	.0	.6	.0
Aug	85.7	41.6	63.7	105	1972	7	67.2	1991	23	1937	29	59.3	1980	95	53	1.4	11.6	31.0	.0	1.0	.0
Sep	77.8	34.7	56.3	107	1998	1	60.8	1990	14	1965	17	50.6	1986	277	14	.2	4.3	30.0	.0	9.8	.0
Oct	65.7	28.6	47.2	93	1980	5	53.5	1988	6	1971	29	43.5	1984	553	0	.0	.4	29.2	.0	20.8	.0
Nov	49.4	25.2	37.3	78	1949	1	44.5	1999	-15	1935	3	26.0	1985	831	0	.0	.0	15.8	.7	21.9	.3
Dec	41.7	20.8	31.3	69	1939	5	37.3	1980	-34	1972	8	22.3	1985	1047	0	.0	.0	7.2	3.6	26.9	1.1
Ann	63.1	30.5	46.8	107	Sep 1998	1	69.5	Jul 1998	-35	Jan 1930	21	15.4	Jan 1979	6782	154	2.9	34.2	277.2	10.0	190.3	3.3

+ 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](http://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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**Climate Division: OR 7**

**NWS Call Sign:**

**Elevation: 2,840 Feet Lat: 44°20N**

**Lon: 120°54W**

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	1.14	.98	1.35	1989	9	2.78	1995	.05	1994	8.7	3.8	.5	.1	.19	.29	.46	.62	.78	.95	1.15	1.40	1.72	2.25	2.75
Feb	1.00	.87	1.80	1996	4	2.96	1996	.01	1990	8.9	3.4	.3	@	.13	.21	.35	.49	.64	.80	.99	1.23	1.54	2.07	2.57
Mar	.95	.90	.96	1940	31	2.00	1989	.22	1992	9.0	3.6	.2	.0	.24	.33	.47	.59	.71	.84	.98	1.15	1.37	1.72	2.05
Apr	.80	.57	1.08	1978	26	2.57	1989	.00	1977	7.8	2.6	.2	@	.07	.17	.30	.42	.54	.67	.81	.99	1.23	1.62	1.99
May	1.06	.92	10.24	1955	17	4.40	1998	.03	1975	7.3	3.3	.4	.1	.12	.20	.35	.50	.65	.83	1.03	1.29	1.64	2.21	2.77
Jun	.84	.63	1.54	1934	3	2.00	1992	.00	2000	5.2	2.3	.3	.1	.02	.07	.18	.29	.43	.59	.78	1.02	1.37	1.95	2.54
Jul	.58	.25	1.62	1995	20	3.96	1987	.00+	1994	3.4	1.4	.3	.1	.00	.00	.04	.11	.20	.31	.47	.67	.98	1.52	2.08
Aug	.45	.18	1.51	1976	7	4.30	1976	.00+	1994	2.8	1.2	.2	@	.00	.00	.00	.03	.10	.19	.32	.50	.78	1.28	1.80
Sep	.41	.27	1.17	1957	27	1.88	1986	.00+	2000	4.3	1.6	@	.0	.00	.00	.01	.07	.14	.22	.34	.48	.69	1.06	1.44
Oct	.76	.71	1.50	1998	30	1.85	1992	.00	1988	5.5	2.5	.3	@	.02	.07	.17	.28	.40	.54	.71	.92	1.22	1.73	2.23
Nov	1.30	1.08	1.87	1996	18	3.21	1996	.25	1976	9.8	4.3	.5	@	.27	.39	.58	.75	.93	1.12	1.33	1.58	1.92	2.46	2.97
Dec	1.20	.94	1.67	1929	18	4.08	1981	.02	1976	8.9	3.7	.5	.1	.08	.16	.31	.47	.66	.87	1.13	1.45	1.90	2.66	3.42
Ann	10.49	10.03	10.24	May 1955	17	4.40	May 1998	.00+	Sep 2000	81.6	33.7	3.7	.5	6.14	6.92	7.95	8.76	9.49	10.21	10.97	11.82	12.87	14.42	15.79

+ 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

(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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**COOP ID: 356883**

**Climate Division: OR 7**

**NWS Call Sign:**

**Elevation: 2,840 Feet**

**Lat: 44° 20N**

**Lon: 120° 54W**

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	2.1	1.2	#	0	4.6	1973	9	9.1	1973	6	1979	15	3	1979	1.5	.9	.2	.0	.0	2.2	.1	.1	.0
Feb	.8	.4	#	0	4.0	1994	6	4.0	1994	3	1979	4	#+	1999	1.5	.8	.2	.0	.0	.2	.1	.0	.0
Mar	.5	.0	#	0	4.5	1972	1	4.5	1972	4	1972	1	#+	1999	.3	.2	@	.0	.0	.1	.1	.0	.0
Apr	.2	.0	0	0	3.0	1978	6	3.0	1978	0	0	0	0	0	.1	.1	@	.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	.1	.0	#	0	1.8	1971	30	2.8	1971	1	1971	30	#	1971	.1	.1	.0	.0	.0	.1	.0	.0	.0
Nov	1.5	.0	#	0	13.0	1973	5	17.1	1973	5	1978	22	1+	1985	.8	.6	.1	@	@	.4	.3	.2	.0
Dec	2.2	.5	#	0	6.0	1981	26	11.2	1972	6	1972	12	1	1972	1.7	.9	.3	.1	.0	1.1	.7	.3	.0
Ann	7.4	2.1	N/A	N/A	13.0	Nov 1973	5	17.1	Nov 1973	6+	Jan 1979	15	3	Jan 1979	6.0	3.6	.8	.1	@	4.1	1.3	.6	.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

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**Elevation: 2,840 Feet**

**Lat: 44° 20N**

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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	7/27	7/23	7/19	7/17	7/14	7/11	7/09	7/05	7/01
32	7/18	7/11	7/05	7/01	6/27	6/22	6/18	6/12	6/05
28	6/15	6/09	6/05	6/01	5/29	5/26	5/22	5/18	5/13
24	5/20	5/15	5/11	5/08	5/05	5/02	4/29	4/25	4/20
20	5/10	5/03	4/28	4/24	4/21	4/17	4/13	4/08	4/02
16	4/30	4/20	4/13	4/07	4/02	3/27	3/22	3/15	3/05
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	7/31	8/05	8/08	8/11	8/14	8/17	8/19	8/23	8/27
32	8/17	8/22	8/25	8/28	8/31	9/03	9/05	9/09	9/14
28	9/01	9/06	9/10	9/13	9/16	9/19	9/22	9/25	9/30
24	9/17	9/22	9/26	9/29	10/02	10/05	10/08	10/11	10/16
20	10/01	10/05	10/09	10/12	10/15	10/17	10/20	10/24	10/28
16	10/10	10/17	10/22	10/27	10/31	11/04	11/09	11/14	11/21
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	48	42	38	34	30	26	23	18	12
32	91	82	75	70	64	59	54	47	38
28	133	125	119	114	109	104	99	93	85
24	170	163	157	153	149	144	140	135	127
20	197	190	185	180	176	172	168	163	156
16	245	233	225	218	211	205	198	189	178

\* 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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**Elevation: 2,840 Feet Lat: 44° 20N**

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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	1040	816	779	620	425	206	93	95	277	553	831	1047	6782
60	885	676	624	470	278	98	29	29	161	399	681	892	5222
57	792	592	531	383	197	54	12	11	106	308	591	799	4376
55	730	536	469	327	151	32	6	5	76	249	533	737	3851
50	586	400	315	199	65	6	0	0	26	125	394	584	2700
32	170	54	7	4	0	0	0	0	0	1	61	151	448

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	152	162	251	374	598	799	1002	981	726	471	220	127	5863
55	0	0	0	7	36	141	295	273	113	6	2	0	873
57	0	0	0	4	20	103	239	217	83	3	0	0	669
60	0	0	0	0	8	57	163	142	47	1	0	0	418
65	0	0	0	0	0	15	72	53	14	0	0	0	154
70	0	0	0	0	0	2	19	11	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	24	49	89	191	391	583	786	764	521	271	75	29	24	73	162	353	744	1327	2113	2877	3398	3669	3744	3773
45	1	10	30	94	249	433	631	609	373	152	24	2	1	11	41	135	384	817	1448	2057	2430	2582	2606	2608
50	0	0	2	36	134	286	476	455	237	64	1	0	0	0	2	38	172	458	934	1389	1626	1690	1691	1691
55	0	0	0	6	62	161	325	305	126	18	0	0	0	0	0	6	68	229	554	859	985	1003	1003	1003
60	0	0	0	0	24	70	187	167	49	4	0	0	0	0	0	0	24	94	281	448	497	501	501	501
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	19	46	103	186	308	411	521	521	415	265	62	18	19	65	168	354	662	1073	1594	2115	2530	2795	2857	2875

(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](http://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](http://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"><li>a. Temperature/ Precipitation Tables<ol style="list-style-type: none"><li>1. 1971-2000 Monthly Normals</li><li>2. Cooperative Summary of the Day</li><li>3. National Weather Service station records</li><li>4. 1971-2000 serially complete daily data</li></ol></li><li>b. Degree Day Table<ol style="list-style-type: none"><li>1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals</li><li>2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data</li></ol></li></ol> | <ol style="list-style-type: none"><li>c. Snow Tables<ol style="list-style-type: none"><li>1. Snow Climatology</li><li>2. Cooperative Summary of the Day</li></ol></li><li>d. Freeze Data Table<br/>1971-2000 serially complete daily data</li></ol> |
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## References

U.S. Climate Normals 1971-2000, [www.ncdc.noaa.gov/normal.html](http://www.ncdc.noaa.gov/normal.html)  
U.S. Climate Normals 1971-2000-Products Clim20, [www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html)  
Snow Climatology Project Description, [www.ncdc.noaa.gov/oa/climate/monitoring/snowclim/mainpage.html](http://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](http://www1.ncdc.noaa.gov/pub/data/special/serialcomplete_jam_0900.pdf)