

# 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: OREGON CITY, OR

1971-2000

COOP ID: 356334

Climate Division: OR 2

NWS Call Sign:

Elevation: 167 Feet

Lat: 45° 21N

Lon: 122° 36W

## 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	47.9	35.7	41.8	66+	1998	31	45.9	1986	-2	1950	31	32.9	1979	719	0	.0	.0	13.1	.7	10.2	.0
Feb	52.8	37.3	45.1	75	1988	28	50.8	1991	6	1950	3	38.4	1989	559	0	.0	.0	19.0	.4	6.9	.0
Mar	58.0	39.7	48.9	81	1994	27	54.3	1992	22	1971	1	44.6	1971	500	0	.0	.0	27.6	.0	2.8	.0
Apr	63.4	42.6	53.0	92	1998	30	57.9	1989	28	1972	2	47.7	1975	362	1	.0	@	29.2	.0	1.0	.0
May	70.0	47.6	58.8	104	1983	28	65.0	1992	31	1954	1	54.4	1977	212	19	@	1.1	31.0	.0	.0	.0
Jun	75.8	52.1	64.0	102	1992	22	68.1	1992	37+	1976	3	59.8	1971	87	57	.2	1.9	30.0	.0	.0	.0
Jul	82.6	56.0	69.3	107	1956	19	73.8	1985	41	1976	2	64.6	1993	21	154	.6	6.5	31.0	.0	.0	.0
Aug	83.0	56.1	69.6	107+	1981	10	74.0	1986	41	1951	29	65.0	1975	25	163	1.0	5.6	31.0	.0	.0	.0
Sep	77.7	52.1	64.9	105	1988	2	69.0	1974	33	1965	17	61.0	1971	80	78	.2	3.0	30.0	.0	.0	.0
Oct	65.9	45.6	55.8	96	1988	1	59.9	1988	24	1971	28	52.1	1971	290	3	.0	.2	30.5	.0	.3	.0
Nov	53.4	40.2	46.8	73+	1995	14	52.6	1995	9	1955	15	39.0	1985	546	0	.0	.0	22.2	.2	4.2	.0
Dec	47.0	35.9	41.5	68	1993	10	45.4	1979	6+	1990	21	35.2	1990	731	0	.0	.0	10.9	1.1	9.2	.0
Ann	64.8	45.1	55.0	107+	Aug 1981	10	74.0	Aug 1986	-2	Jan 1950	31	32.9	Jan 1979	4132	475	2.0	18.3	305.5	2.4	34.6	.0

+ 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: 1948-2001

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

097-A

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**Elevation: 167 Feet Lat: 45°21N**

**Lon: 122°36W**

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	6.59	7.09	2.86	1974	15	11.38	1980	.46	1985	17.5	12.6	4.7	1.4	1.83	2.45	3.40	4.23	5.04	5.89	6.83	7.94	9.39	11.65	13.77
Feb	5.51	4.72	3.13	1968	19	12.05	1996	1.11	1993	15.6	11.7	3.7	.9	1.92	2.44	3.19	3.83	4.44	5.07	5.76	6.56	7.58	9.16	10.62
Mar	4.70	4.31	2.09	1963	29	8.63	1997	1.12	1992	16.9	12.2	2.9	.4	2.04	2.47	3.05	3.54	3.99	4.44	4.93	5.49	6.20	7.27	8.24
Apr	3.46	3.49	2.20	1969	18	6.15	1993	.77	1977	15.1	9.3	2.0	.2	1.25	1.58	2.04	2.44	2.81	3.20	3.61	4.10	4.72	5.68	6.55
May	2.70	2.39	1.90	1991	17	5.19	1984	.16	1992	12.0	7.3	1.5	.2	.73	.99	1.38	1.72	2.05	2.41	2.80	3.26	3.86	4.80	5.68
Jun	1.83	1.72	1.93	1969	23	4.60	1984	.41	1992	8.3	4.7	1.0	.2	.43	.60	.87	1.11	1.35	1.60	1.88	2.22	2.66	3.36	4.02
Jul	.83	.51	1.06	1983	19	4.24	1983	.00	1984	4.3	2.0	.3	.1	.02	.07	.18	.29	.42	.58	.76	1.00	1.34	1.91	2.47
Aug	1.00	.80	2.43	1956	25	3.31	1975	.00+	1994	4.3	2.5	.7	.1	.00	.01	.09	.21	.36	.56	.81	1.16	1.66	2.56	3.49
Sep	1.93	1.76	1.86	1951	30	4.41	1972	.00+	1993	6.9	4.5	1.1	.3	.00	.20	.55	.86	1.17	1.52	1.92	2.41	3.07	4.16	5.21
Oct	3.48	3.74	3.35	1994	27	7.22	1994	.18	1988	10.7	7.5	2.2	.5	.56	.86	1.37	1.85	2.34	2.88	3.49	4.25	5.25	6.88	8.44
Nov	6.79	6.70	3.35	1960	24	14.21	1973	.93	1976	18.0	13.0	4.7	1.3	1.98	2.62	3.59	4.43	5.25	6.11	7.05	8.16	9.59	11.85	13.94
Dec	7.23	6.70	3.22	1964	22	16.13	1996	1.69	1976	17.7	13.0	5.3	1.7	2.27	2.96	3.97	4.85	5.69	6.56	7.52	8.65	10.10	12.36	14.45
Ann	46.05+	44.76+	3.35+	Oct 1994	27	16.13	Dec 1996	.00+	Aug 1994	147.3	100.3	30.1	7.3	31.21	34.03	37.67	40.45	42.94	45.35	47.85	50.63	54.01	58.94	63.23

+ 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:  
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**NWS Call Sign:**

**Elevation: 167 Feet**

**Lat: 45°21N**

**Lon: 122°36W**

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	.9	.0	#	0	2.5	1982	5	4.0	1971	4	1971	14	#+	1999	1.0	.4	.0	.0	.0	.5	.1	.0	.0
Feb	.7	.0	#	0	10.0	1993	21	10.0	1993	3	1989	2	3	1989	.6	.4	.2	.1	.1	.0	.0	.0	.0
Mar	.0	.0	#	0	.5	1974	6	.5	1974	#+	1980	15	#+	1980	.1	.0	.0	.0	.0	.0	.0	.0	.0
Apr	#	.0	#	0	#	1980	6	#+	1980	#	1975	3	#	1975	.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	.2	.0	#	0	1.3	1978	20	2.0	1978	2	1978	20	#+	1978	.2	.1	.0	.0	.0	.1	.0	.0	.0
Dec	.8	.0	#	0	4.5	1992	31	4.5	1992	4	1990	19	1	1972	.6	.4	.1	.0	.0	.4	@	.0	.0
Ann	2.6	.0	N/A	N/A	10.0	Feb 1993	21	10.0	Feb 1993	4+	Dec 1990	19	3	Feb 1989	2.5	1.3	.3	.1	.1	1.0	.1	.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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**Elevation: 167 Feet**

**Lat: 45° 21N**

**Lon: 122° 36W**

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	5/14	5/06	4/30	4/26	4/21	4/17	4/12	4/07	3/30
32	4/22	4/12	4/04	3/29	3/23	3/17	3/11	3/03	2/21
28	3/15	3/04	2/24	2/17	2/11	2/05	1/29	1/21	1/10
24	2/21	2/12	2/05	1/30	1/25	1/19	1/12	1/03	0/00
20	2/03	1/21	1/10	12/29	0/00	0/00	0/00	0/00	0/00
16	1/28	1/13	12/30	12/08	0/00	0/00	0/00	0/00	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	10/05	10/11	10/15	10/18	10/21	10/25	10/28	11/01	11/07
32	10/21	10/30	11/05	11/10	11/15	11/20	11/25	12/01	12/10
28	11/12	11/21	11/27	12/02	12/07	12/12	12/18	12/24	1/01
24	11/27	12/10	12/20	12/29	1/07	1/16	1/27	2/12	0/00
20	12/15	12/28	1/08	1/20	0/00	0/00	0/00	0/00	0/00
16	12/17	12/31	1/14	2/03	0/00	0/00	0/00	0/00	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	214	203	195	189	182	176	169	161	151
32	276	262	253	244	236	229	220	210	197
28	340	324	314	305	297	290	281	272	259
24	>365	>365	>365	>365	357	339	325	310	292
20	>365	>365	>365	>365	>365	>365	>365	>365	343
16	>365	>365	>365	>365	>365	>365	>365	>365	354

\* 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:

[www.ncdc.noaa.gov/oa/climate/normal/usnormals.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormals.html)

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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	719	559	500	362	212	87	21	25	80	290	546	731	4132
60	564	419	347	223	106	26	2	3	24	155	399	576	2844
57	471	336	261	151	61	9	0	0	9	92	316	483	2189
55	414	284	207	111	38	4	0	0	4	61	263	422	1808
50	272	163	101	40	9	0	0	0	0	16	151	277	1029
32	12	1	0	0	0	0	0	0	0	0	2	8	23

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	316	366	523	629	831	959	1156	1163	987	736	446	300	8412
55	4	5	17	50	156	274	443	450	301	84	16	1	1801
57	0	1	9	30	117	219	381	388	246	53	9	0	1453
60	0	0	2	12	69	145	290	299	171	23	3	0	1014
65	0	0	0	1	19	57	154	163	78	3	0	0	475
70	0	0	0	0	3	12	60	69	24	0	0	0	168

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	118	172	278	393	584	719	909	912	748	491	221	106	118	290	568	961	1545	2264	3173	4085	4833	5324	5545	5651
45	41	72	137	245	429	569	754	757	598	338	104	32	41	113	250	495	924	1493	2247	3004	3602	3940	4044	4076
50	3	18	49	123	279	419	599	602	448	194	29	0	3	21	70	193	472	891	1490	2092	2540	2734	2763	2763
55	0	0	3	51	148	271	444	447	299	84	2	0	0	0	3	54	202	473	917	1364	1663	1747	1749	1749
60	0	0	0	10	68	144	290	294	165	24	0	0	0	0	0	10	78	222	512	806	971	995	995	995
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	33	68	134	206	325	427	568	576	453	261	75	27	33	101	235	441	766	1193	1761	2337	2790	3051	3126	3153

(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> |
|---|---|

## 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)