

# 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: MONUMENT 2, OR

1971-2000

COOP ID: 355711

Climate Division: OR 8

NWS Call Sign:

Elevation: 1,995 Feet Lat: 44°49N

Lon: 119°25W

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	42.7	21.8	32.3	69	1995	31	37.7	1994	-26+	1962	22	17.5	1979	1016	0	.0	.0	6.2	4.5	27.5	1.3
Feb	49.6	25.6	37.6	74+	1995	20	43.9	1991	-21	1985	4	25.5	1989	768	0	.0	.0	14.3	1.3	23.7	.7
Mar	57.4	30.1	43.8	83	1966	30	48.2	1986	10	1966	22	39.7	1971	659	0	.0	.0	25.3	.0	21.1	.0
Apr	64.6	34.1	49.4	95	1977	25	54.8	1987	16	1968	13	43.0	1975	470	1	.0	.2	28.7	.0	12.3	.0
May	71.9	40.2	56.1	101	1986	31	61.7	1997	23	1964	6	51.8	1977	287	9	@	2.0	30.8	.0	3.3	.0
Jun	80.9	45.9	63.4	105	1961	17	69.4	1986	30	1962	4	59.2	1976	109	61	.6	6.6	30.0	.0	.3	.0
Jul	90.6	50.0	70.3	109	1994	22	75.9	1998	35+	1983	3	64.5	1993	21	186	4.4	18.3	31.0	.0	.0	.0
Aug	90.6	48.5	69.6	112	1961	5	74.7	1971	31	1992	24	65.6+	1985	30	172	4.1	18.4	31.0	.0	@	.0
Sep	81.8	40.7	61.3	105+	1998	3	66.9	1990	23+	2000	25	55.2	1985	163	51	.5	7.6	30.0	.0	2.7	.0
Oct	68.7	32.2	50.5	96	1980	7	59.0	1988	10	1971	29	47.1	1984	452	0	.0	.6	30.1	.0	16.7	.0
Nov	51.6	28.3	40.0	78	1999	13	45.7	1999	-15	1985	23	28.0	1985	752	0	.0	.0	17.7	.7	22.6	.2
Dec	43.1	22.5	32.8	67	1981	10	39.3	1973	-25+	1990	22	21.9	1985	999	0	.0	.0	6.9	3.1	27.5	1.3
Ann	66.1	35.0	50.6	112	Aug 1961	5	75.9	Jul 1998	-26+	Jan 1962	22	17.5	Jan 1979	5726	480	9.6	53.7	282.0	9.6	157.7	3.5

+ 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: 1961-2001

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

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**Lon: 119°25W**

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	1.42	1.46	1.61	1989	10	2.96	1998	.23	1992	10.5	5.0	.4	.1	.43	.56	.76	.94	1.11	1.28	1.47	1.70	2.00	2.46	2.88
Feb	1.15	1.13	.87	1986	23	3.01	1986	.18	1990	9.3	4.1	.2	.0	.38	.49	.65	.79	.92	1.05	1.20	1.38	1.60	1.95	2.27
Mar	1.51	1.24	1.16	1983	4	3.73	1983	.64	1985	11.1	5.2	.5	.1	.55	.70	.90	1.07	1.23	1.40	1.58	1.79	2.06	2.47	2.84
Apr	1.37	1.19	1.22	1978	1	2.56	1978	.28	2000	9.5	4.2	.5	.1	.34	.47	.67	.85	1.02	1.21	1.41	1.66	1.98	2.48	2.96
May	1.55	1.49	1.13	1986	21	3.40	1981	.23	1974	9.3	4.7	.5	.1	.37	.51	.74	.94	1.14	1.35	1.59	1.87	2.24	2.83	3.38
Jun	1.20	1.18	1.66	1969	9	2.69	1993	.11	1973	6.5	3.5	.6	.0	.19	.29	.46	.63	.80	.99	1.21	1.47	1.82	2.40	2.95
Jul	.56	.30	1.35	1991	25	2.35	1992	.00+	1999	3.3	1.7	.2	.1	.00	.00	.05	.13	.22	.33	.48	.67	.93	1.41	1.88
Aug	.77	.57	1.30	1996	28	2.83	1976	.00+	2000	3.6	1.9	.3	.1	.00	.00	.06	.15	.27	.43	.63	.90	1.29	1.98	2.69
Sep	.60	.56	.73	1973	7	1.79	1973	.00+	1999	4.4	2.1	.2	.0	.00	.00	.03	.12	.23	.37	.53	.73	1.02	1.52	2.03
Oct	.92	.80	.81	2000	11	2.30	1982	.00+	1988	6.2	3.3	.3	.0	.00	.00	.43	.58	.72	.85	1.00	1.17	1.38	1.71	2.02
Nov	1.58	1.42	1.25	1996	19	3.29	1973	.47+	1976	10.9	5.1	.4	.1	.43	.58	.81	1.01	1.21	1.41	1.64	1.91	2.26	2.81	3.32
Dec	1.39	1.33	1.07	1964	25	3.52	1981	.16	1976	9.6	4.5	.3	.0	.31	.44	.64	.83	1.01	1.21	1.43	1.69	2.04	2.59	3.11
Ann	14.02	13.60	1.66	Jun 1969	9	3.73	Mar 1983	.00+	Aug 2000	94.2	45.3	4.4	.7	9.31	10.20	11.35	12.23	13.02	13.78	14.58	15.47	16.55	18.13	19.51

+ 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: 1961-2001

(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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**Climate Division: OR 8**

**NWS Call Sign:**

**Elevation: 1,995 Feet**

**Lat: 44° 49N**

**Lon: 119° 25W**

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	4.9	3.0	1	1	12.0	1975	10	15.5	1975	8	1998	12	6	1993	2.6	2.0	.3	.1	@	6.2	2.0	.2	.0
Feb	2.3	1.0	#	#	8.0	1979	4	15.3	1979	12	1979	4	3	1985	1.6	1.0	.2	.1	.0	1.6	.6	.3	.0
Mar	1.0	.5	#	0	4.0	1972	2	5.0	1972	5	1978	3	#+	1999	.7	.6	.1	.0	.0	.3	@	.0	.0
Apr	.2	.0	#	0	3.0	1976	1	3.0	1976	1+	1997	4	#+	1997	.1	.1	@	.0	.0	.1	.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	2.0	1971	30	2.5	1971	2	1971	30	#+	1991	.1	.1	.0	.0	.0	.1	.0	.0	.0
Nov	1.7	.4	#	0	8.0	1973	5	14.5	1985	6	1985	30	2	1985	1.1	.8	.2	@	.0	1.1	.6	.4	.0
Dec	4.1	1.0	1	#	7.0	1985	2	19.2	1984	12	1985	2	5	1985	2.7	2.0	.6	.1	.0	5.4	3.5	.9	.1
Ann	14.3	5.9	N/A	N/A	12.0	Jan 1975	10	19.2	Dec 1984	12+	Dec 1985	2	6	Jan 1993	8.9	6.6	1.4	.3	@	14.8	6.7	1.8	.1

+ 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: 1,995 Feet**

**Lat: 44° 49N**

**Lon: 119° 25W**

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	6/28	6/22	6/18	6/14	6/11	6/07	6/04	5/31	5/25
32	6/11	6/04	5/31	5/26	5/23	5/19	5/15	5/10	5/03
28	5/14	5/08	5/04	5/01	4/28	4/24	4/21	4/17	4/11
24	5/02	4/24	4/19	4/15	4/10	4/06	4/01	3/27	3/20
20	4/12	4/02	3/26	3/21	3/15	3/10	3/04	2/25	2/15
16	3/07	2/26	2/20	2/15	2/10	2/05	1/30	1/24	1/15
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	8/27	8/31	9/04	9/07	9/09	9/12	9/15	9/18	9/23
32	9/09	9/13	9/16	9/19	9/21	9/24	9/26	9/30	10/04
28	9/19	9/25	9/29	10/02	10/06	10/09	10/13	10/17	10/22
24	10/02	10/07	10/11	10/14	10/17	10/20	10/23	10/27	11/01
20	10/13	10/21	10/26	10/31	11/04	11/09	11/13	11/19	11/26
16	10/31	11/10	11/16	11/22	11/27	12/02	12/08	12/15	12/24
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	112	104	99	94	90	85	81	75	67
32	144	136	131	126	121	117	112	106	98
28	185	176	170	165	160	155	150	144	136
24	215	206	200	194	189	184	178	172	163
20	272	259	249	241	233	226	217	208	195
16	327	315	305	297	290	282	274	265	252

\* 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)**

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	1016	768	659	470	287	109	21	30	163	452	752	999	5726
60	861	628	504	328	160	41	3	6	79	302	602	844	4358
57	768	544	412	248	103	18	0	2	44	220	516	751	3626
55	707	490	350	200	73	10	0	1	28	171	460	689	3179
50	562	360	207	105	23	1	0	0	7	76	325	543	2209
32	151	53	2	0	0	0	0	0	0	0	40	132	378

**Cooling Degree Days (1)**

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	157	209	366	520	745	942	1188	1165	878	571	278	156	7175
55	0	2	1	30	105	261	475	452	216	29	8	0	1579
57	0	0	0	19	74	210	413	392	172	16	4	0	1300
60	0	0	0	8	38	143	323	303	117	5	0	0	937
65	0	0	0	1	9	61	186	172	51	0	0	0	480
70	0	0	0	0	0	17	85	78	16	0	0	0	196

**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	19	56	146	280	497	704	937	918	635	333	79	21	19	75	221	501	998	1702	2639	3557	4192	4525	4604	4625
45	2	12	55	160	345	554	782	763	485	197	27	2	2	14	69	229	574	1128	1910	2673	3158	3355	3382	3384
50	0	0	16	77	211	405	627	608	342	94	5	0	0	0	16	93	304	709	1336	1944	2286	2380	2385	2385
55	0	0	0	30	108	262	473	453	210	33	0	0	0	0	0	30	138	400	873	1326	1536	1569	1569	1569
60	0	0	0	5	50	142	324	299	111	8	0	0	0	0	0	5	55	197	521	820	931	939	939	939
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	14	57	130	220	335	449	564	555	445	287	66	15	14	71	201	421	756	1205	1769	2324	2769	3056	3122	3137

(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)