

# 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: STAYTON, OR

1971-2000

COOP ID: 358095

Climate Division: OR 2

NWS Call Sign:

Elevation: 425 Feet

Lat: 44°47N

Lon: 122°49W

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	46.8	32.8	39.8	67	1960	29	44.7	1998	2	1957	27	31.7	1979	781	0	.0	.0	11.3	.8	14.4	.0
Feb	50.8	35.2	43.0	72	1963	9	47.7	1991	7	1989	4	35.4	1989	616	0	.0	.0	16.9	.3	9.8	.0
Mar	55.7	38.0	46.9	74+	1972	17	51.4	1986	18	1955	5	43.1	1971	564	0	.0	.0	26.2	.0	5.5	.0
Apr	60.5	40.5	50.5	86	1957	29	54.6	1992	25	1975	5	45.6	1975	435	0	.0	.0	28.8	.0	1.8	.0
May	67.0	44.9	56.0	98	1983	29	61.3	1997	31+	1985	11	51.5	1977	285	5	.0	.3	30.9	.0	.2	.0
Jun	73.1	49.3	61.2	100	1992	23	65.7	1992	33	1973	1	57.4	1976	140	26	@	.8	30.0	.0	.0	.0
Jul	79.9	52.5	66.2	105+	1958	27	70.2	1996	34	1965	28	62.7	1993	51	89	.2	4.1	31.0	.0	.0	.0
Aug	80.5	52.4	66.5	106	1978	10	70.1	1997	34	1965	5	62.4	1973	44	88	.6	3.7	31.0	.0	.0	.0
Sep	75.5	48.3	61.9	102	1955	4	66.2	1974	30	1954	30	57.9	1972	132	38	@	1.7	30.0	.0	@	.0
Oct	64.2	42.6	53.4	91	1980	3	57.0	1987	23	1971	28	50.1	1984	360	1	.0	@	30.2	.0	1.2	.0
Nov	52.4	38.2	45.3	76	1970	2	50.6	1995	9	1955	15	37.6	1985	592	0	.0	.0	20.5	.2	6.5	.0
Dec	46.2	33.6	39.9	66+	1993	10	44.1	1979	-7	1972	8	33.5	1990	778	0	.0	.0	10.2	1.3	13.1	.1
Ann	62.7	42.4	52.6	106	Aug 1978	10	70.2	Jul 1996	-7	Dec 1972	8	31.7	Jan 1979	4778	247	.8	10.6	297.0	2.6	52.5	.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](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: 1951-2001

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

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**NWS Call Sign:**

**Elevation: 425 Feet Lat: 44° 47'N**

**Lon: 122° 49'W**

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	7.17	7.88	3.50	1974	15	12.97	1996	.48	1985	20.4	13.9	4.9	1.5	2.07	2.75	3.77	4.66	5.53	6.44	7.44	8.62	10.15	12.55	14.78
Feb	6.46	5.86	3.24	1996	7	14.19	1996	2.18	1973	18.4	13.0	4.5	1.2	2.52	3.12	3.97	4.68	5.35	6.03	6.76	7.62	8.70	10.36	11.88
Mar	5.37	4.99	2.10	1966	9	9.40	1974	2.06	1978	18.8	13.7	3.3	.6	2.61	3.07	3.70	4.20	4.67	5.14	5.64	6.20	6.91	7.98	8.94
Apr	4.26	4.01	1.99	1971	9	10.48	1993	1.70	1973	16.6	11.3	2.7	.3	1.62	2.01	2.58	3.05	3.50	3.96	4.46	5.03	5.76	6.89	7.92
May	3.31	3.07	1.85	1991	17	6.80	1998	.13	1992	13.9	8.6	1.8	.3	.84	1.15	1.63	2.06	2.48	2.92	3.42	4.00	4.77	5.99	7.12
Jun	2.42	2.02	2.10	1969	23	5.46	1984	.94	1972	9.5	6.0	1.5	.2	.79	1.02	1.36	1.64	1.92	2.21	2.52	2.89	3.36	4.09	4.76
Jul	.87	.47	1.74	1987	18	3.62	1983	.00	1973	4.7	2.5	.3	.1	.02	.07	.17	.29	.43	.59	.79	1.05	1.41	2.02	2.63
Aug	1.15	.94	1.68	1995	11	4.09	1978	.00+	1994	5.2	2.6	.7	.2	.00	.04	.19	.35	.54	.77	1.04	1.40	1.90	2.75	3.60
Sep	2.18	1.90	1.91	1996	15	6.07	1977	.03+	1999	7.9	4.8	1.5	.4	.07	.16	.38	.66	.99	1.40	1.91	2.58	3.55	5.24	6.95
Oct	4.03	3.89	4.47	1955	9	8.26	1979	.13	1987	13.0	8.6	2.7	.7	.58	.92	1.50	2.06	2.64	3.28	4.01	4.92	6.13	8.11	10.02
Nov	8.16	8.18	4.05	1994	1	17.62	1973	1.68	1993	20.7	14.9	6.1	1.9	2.94	3.71	4.81	5.74	6.63	7.54	8.53	9.68	11.15	13.41	15.49
Dec	8.00	8.00	3.50	1987	3	17.83	1996	2.46	1976	21.4	14.3	5.6	1.9	2.76	3.52	4.62	5.55	6.44	7.35	8.35	9.52	11.01	13.32	15.44
Ann	53.38	52.99	4.47	Oct 1955	9	17.83	Dec 1996	.00+	Aug 1994	170.5	114.2	35.6	9.3	37.57	40.62	44.53	47.50	50.14	52.70	55.34	58.27	61.82	66.97	71.43

+ 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: 1951-2001

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

Complete documentation available from:  
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**Climate Division: OR 2**

**NWS Call Sign:**

**Elevation: 425 Feet**

**Lat: 44° 47N**

**Lon: 122° 49W**

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	.6	.0	#	0	5.0	1971	11	5.0	1971	3	1982	6	1	1982	1.4	.9	.1	.1	.0	.4	.1	.0	.0
Feb	.7	.0	#	0	4.0	1971	27	5.0	1971	1+	1986	12	#+	1986	.5	.4	.1	.0	.0	.1	.0	.0	.0
Mar	#	.0	#	0	#	1980	15	#+	1980	#	1980	15	#	1980	.0	.0	.0	.0	.0	.0	.0	.0	.0
Apr	.0	.0	0	0	.1	1983	3	.1	1983	0	0	0	0	0	.1	.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	#	.0	#	0	#	1983	30	#	1983	1	1985	30	#	1985	.0	.0	.0	.0	.0	.0	.0	.0	.0
Dec	1.0	.0	#	0	4.0	1972	12	7.0	1972	1	1980	4	#+	1990	.4	.3	.2	.0	.0	.1	.0	.0	.0
Ann	2.3	.0	N/A	N/A	5.0	Jan 1971	11	7.0	Dec 1972	3	Jan 1982	6	1	Jan 1982	2.4	1.6	.4	.1	.0	.6	.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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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	5/30	5/22	5/16	5/11	5/06	5/01	4/26	4/20	4/11
32	5/04	4/25	4/18	4/12	4/07	4/01	3/27	3/20	3/11
28	4/10	3/29	3/20	3/12	3/05	2/26	2/18	2/09	1/28
24	2/26	2/16	2/08	2/01	1/26	1/19	1/11	12/29	0/00
20	2/15	2/07	1/31	1/26	1/20	1/13	1/03	0/00	0/00
16	2/03	1/22	1/12	1/01	12/14	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	9/23	9/29	10/04	10/08	10/11	10/15	10/19	10/23	10/30
32	10/07	10/15	10/21	10/26	10/31	11/05	11/10	11/16	11/24
28	10/29	11/07	11/13	11/19	11/24	11/29	12/05	12/11	12/20
24	11/06	11/18	11/27	12/06	12/13	12/22	1/01	1/16	0/00
20	12/02	12/15	12/26	1/04	1/14	1/26	2/16	0/00	0/00
16	12/15	12/28	1/08	1/20	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	192	180	172	164	158	151	144	135	124
32	248	234	224	215	207	198	189	179	165
28	313	296	284	273	263	254	243	231	214
24	>365	>365	>365	354	327	312	299	285	268
20	>365	>365	>365	>365	>365	356	337	323	307
16	>365	>365	>365	>365	>365	>365	>365	>365	343

\* 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	781	616	564	435	285	140	51	44	132	360	592	778	4778
60	626	476	409	288	154	54	10	7	51	212	443	623	3353
57	533	392	317	206	94	23	2	1	22	136	358	530	2614
55	471	337	260	157	63	12	0	0	12	94	304	469	2179
50	327	210	132	65	15	1	0	0	1	28	183	323	1285
32	20	4	0	0	0	0	0	0	0	0	5	17	46

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	263	311	460	555	742	877	1061	1067	896	664	403	261	7560
55	0	1	6	21	92	198	348	354	218	44	12	1	1295
57	0	0	2	11	61	150	288	293	169	24	7	0	1005
60	0	0	0	3	28	90	202	206	107	7	1	0	644
65	0	0	0	0	5	26	89	88	38	1	0	0	247
70	0	0	0	0	0	4	23	21	8	0	0	0	56

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	94	135	225	321	498	640	815	825	660	425	192	94	94	229	454	775	1273	1913	2728	3553	4213	4638	4830	4924
45	33	48	100	180	344	490	660	670	510	276	84	33	33	81	181	361	705	1195	1855	2525	3035	3311	3395	3428
50	2	7	31	77	199	340	505	515	361	139	23	1	2	9	40	117	316	656	1161	1676	2037	2176	2199	2200
55	0	0	0	23	94	195	350	360	220	53	1	0	0	0	0	23	117	312	662	1022	1242	1295	1296	1296
60	0	0	0	3	33	87	201	210	99	12	0	0	0	0	0	3	36	123	324	534	633	645	645	645
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	31	50	105	166	273	365	500	507	401	234	65	28	31	81	186	352	625	990	1490	1997	2398	2632	2697	2725

(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)