

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: CORVALLIS WATER BUREAU, OR

1971-2000

COOP ID: 351877

Climate Division: OR 2

NWS Call Sign:

Elevation: 592 Feet

Lat: 44° 31N

Lon: 123° 27W

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	44.5	31.6	38.1	60+	1993	26	42.4	1995	4	1979	1	29.6	1979	835	0	.0	.0	8.4	1.1	16.5	.0
Feb	48.4	33.3	40.9	72	1968	28	46.4	1991	2	1989	4	33.2	1989	677	0	.0	.0	14.0	.4	12.8	.0
Mar	53.2	35.2	44.2	75	1969	28	48.7	1992	20	1971	1	39.2	1971	645	0	.0	.0	23.9	.0	9.3	.0
Apr	58.4	37.7	48.1	83	1998	30	52.6	1989	28+	1972	30	42.7	1972	510	0	.0	.0	28.4	.0	4.6	.0
May	64.8	42.4	53.6	93	1983	29	59.5	1992	30+	1996	4	49.3	1977	356	1	.0	.1	30.9	.0	.3	.0
Jun	70.5	47.0	58.8	100	1992	23	62.4	1992	32	1966	1	54.5	1971	198	11	@	.7	30.0	.0	.0	.0
Jul	77.4	50.2	63.8	100+	1998	28	67.6	1996	39+	1988	6	60.1	1986	91	54	.1	3.4	31.0	.0	.0	.0
Aug	78.0	50.1	64.1	107	1972	8	66.8	1977	35	1973	22	59.2	1973	78	49	.3	2.8	31.0	.0	.0	.0
Sep	72.8	47.0	59.9	98	1972	3	63.3+	1998	32	1972	27	55.6	1971	178	24	.0	1.1	30.0	.0	@	.0
Oct	62.2	40.3	51.3	88+	1980	8	55.6	1988	23	1971	29	47.1	1971	427	0	.0	.0	30.3	.0	1.2	.0
Nov	50.0	35.7	42.9	70	1969	3	48.8	1995	11	1985	24	35.9	1985	665	0	.0	.0	18.2	.2	9.1	.0
Dec	43.8	31.9	37.9	60+	1980	31	41.1	1979	2+	1990	22	31.1	1985	841	0	.0	.0	7.3	1.3	16.0	.0
Ann	60.3	40.2	50.3	107	Aug 1972	8	67.6	Jul 1996	2+	Dec 1990	22	29.6	Jan 1979	5501	139	.4	8.1	283.4	3.0	69.8	.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

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

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Lon: 123°27W

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	11.24	12.22	5.11	1950	6	19.90	1974	.42	1985	19.6	14.7	7.6	3.8	2.36	3.39	5.04	6.54	8.05	9.66	11.48	13.67	16.55	21.16	25.52
Feb	9.65	8.64	5.23	1996	6	24.49	1999	2.25	1993	17.6	13.9	7.0	2.9	2.73	3.64	5.03	6.23	7.41	8.64	10.00	11.61	13.69	16.96	20.00
Mar	7.59	7.38	4.31	1966	9	17.02	1983	1.37	1992	19.0	14.1	5.6	1.8	2.68	3.40	4.43	5.31	6.14	6.99	7.93	9.01	10.40	12.54	14.51
Apr	4.62	4.01	2.49	1971	9	9.99	1993	.98	1977	16.0	10.1	2.7	.9	1.26	1.70	2.36	2.95	3.52	4.12	4.78	5.57	6.59	8.19	9.69
May	2.89	2.71	2.28	1949	1	6.07	1993	.27	1992	12.3	7.4	1.9	.3	.68	.95	1.37	1.75	2.12	2.52	2.97	3.50	4.20	5.31	6.36
Jun	1.53	1.45	2.65	1985	7	4.19	1985	.19	1987	8.4	4.4	.7	.2	.21	.33	.55	.76	.99	1.23	1.52	1.87	2.35	3.13	3.88
Jul	.49	.37	.98	1996	18	1.63	1974	.00+	1998	3.4	1.5	.2	.0	.00	.00	.07	.14	.23	.33	.45	.60	.82	1.18	1.55
Aug	.66	.54	2.00	1953	27	1.80+	1977	.00+	2000	3.7	1.8	.3	@	.00	.00	.00	.08	.26	.43	.62	.85	1.16	1.68	2.18
Sep	1.79	1.39	2.25	1981	27	5.07	1997	.00	1975	6.8	4.0	1.2	.4	.01	.07	.23	.45	.72	1.07	1.51	2.09	2.95	4.46	6.01
Oct	4.15	4.31	2.89	1994	27	12.14	1997	.23	1974	11.7	7.5	2.7	1.0	.44	.75	1.33	1.90	2.53	3.22	4.04	5.06	6.46	8.76	11.01
Nov	10.71	9.30	6.29	1996	19	27.98	1973	1.79	1993	20.1	15.6	7.5	3.5	2.71	3.72	5.28	6.66	8.02	9.45	11.05	12.95	15.43	19.34	23.01
Dec	12.44	12.29	5.51	1998	28	27.63	1996	2.41	1976	20.3	15.6	8.6	4.2	3.69	4.87	6.64	8.18	9.67	11.22	12.92	14.94	17.54	21.61	25.39
Ann	67.76	67.68	6.29	Nov 1996	19	27.98	Nov 1973	.00+	Aug 2000	158.9	110.6	46.0	19.0	42.78	47.39	53.42	58.09	62.28	66.38	70.65	75.43	81.28	89.87	97.40

+ 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

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Lat: 44° 31N

Lon: 123° 27W

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	1.2	.0	#	0	6.5	1993	9	10.4	1993	25	1971	15	3	1971	.7	.4	.2	.1	.0	1.2	.6	.2	.0
Feb	3.7	.0	1	0	16.5	1989	2	31.5	1989	26	1989	3	6	1989	.9	.8	.5	.3	.1	1.3	.9	.8	.2
Mar	.3	.0	#	0	2.5	1994	23	3.5	1994	7	1971	1	1	1971	.4	.2	.0	.0	.0	.1	@	.0	.0
Apr	.0	.0	#	0	.5	1999	9	.5+	1999	1	1999	9	#+	1999	@	.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	.3	.0	#	0	3.0	1973	5	3.0	1973	3	1973	5	#+	1994	.3	.1	@	.0	.0	.2	@	.0	.0
Dec	1.1	.1	#	0	5.5	1985	2	9.5	1985	10	1985	2	2	1990	.9	.5	.2	@	.0	1.0	.2	.1	.0
Ann	6.6	.1	N/A	N/A	16.5	Feb 1989	2	31.5	Feb 1989	26	Feb 1989	3	6	Feb 1989	3.2	2.0	.9	.4	.1	3.8	1.7	1.1	.2

+ 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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NWS Call Sign:

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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	6/01	5/26	5/23	5/19	5/16	5/13	5/10	5/06	5/01
32	5/12	5/06	5/01	4/28	4/24	4/20	4/16	4/12	4/05
28	3/29	3/16	3/07	2/27	2/20	2/12	2/05	1/26	1/14
24	2/25	2/16	2/09	2/03	1/28	1/22	1/15	1/05	0/00
20	2/13	1/31	1/22	1/13	1/04	12/24	12/04	0/00	0/00
16	1/31	1/17	1/05	12/22	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	9/19	9/26	10/01	10/06	10/10	10/15	10/19	10/24	11/01
32	10/13	10/19	10/24	10/28	10/31	11/04	11/08	11/12	11/18
28	10/29	11/06	11/12	11/17	11/22	11/27	12/02	12/08	12/16
24	11/12	11/22	11/30	12/07	12/13	12/19	12/27	1/06	0/00
20	12/01	12/14	12/23	1/02	1/11	1/24	0/00	0/00	0/00
16	12/11	12/25	1/06	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	172	163	157	151	146	141	136	129	120
32	219	209	202	195	190	184	178	170	160
28	323	306	294	284	274	265	255	243	226
24	>365	>365	342	327	317	309	300	291	279
20	>365	>365	>365	>365	>365	361	340	325	310
16	>365	>365	>365	>365	>365	>365	>365	>365	332

* 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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Climate Division: OR 2 NWS Call Sign: Elevation: 592 Feet Lat: 44°31N Lon: 123°27W

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	835	677	645	510	356	198	91	78	178	427	665	841	5501
60	680	537	490	360	214	89	25	17	83	276	515	686	3972
57	587	453	397	275	142	46	9	5	44	193	425	593	3169
55	525	397	336	221	103	26	3	1	26	145	368	531	2682
50	377	263	196	108	35	4	0	0	5	55	234	379	1656
32	29	8	1	0	0	0	0	0	0	0	7	25	70

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	217	255	379	481	669	803	986	994	836	596	333	207	6756
55	0	0	1	11	59	139	276	282	172	28	4	0	972
57	0	0	0	5	36	99	220	224	130	15	0	0	729
60	0	0	0	1	14	53	143	143	79	4	0	0	437
65	0	0	0	0	1	11	54	49	24	0	0	0	139
70	0	0	0	0	0	1	10	7	5	0	0	0	23

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	64	93	164	265	445	586	762	775	625	378	140	65	64	157	321	586	1031	1617	2379	3154	3779	4157	4297	4362
45	15	35	60	135	292	436	607	620	475	229	53	21	15	50	110	245	537	973	1580	2200	2675	2904	2957	2978
50	0	0	11	53	154	287	452	465	327	104	11	0	0	0	11	64	218	505	957	1422	1749	1853	1864	1864
55	0	0	0	14	70	155	299	311	188	34	0	0	0	0	0	14	84	239	538	849	1037	1071	1071	1071
60	0	0	0	1	30	67	159	163	83	8	0	0	0	0	0	1	31	98	257	420	503	511	511	511
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	10	37	80	144	251	338	455	467	371	212	48	11	10	47	127	271	522	860	1315	1782	2153	2365	2413	2424

(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.

- a. Temperature/ Precipitation Tables
 - 1. 1971-2000 Monthly Normals
 - 2. Cooperative Summary of the Day
 - 3. National Weather Service station records
 - 4. 1971-2000 serially complete daily data
- b. Degree Day Table
 - 1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals
 - 2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data
- c. Snow Tables
 - 1. Snow Climatology
 - 2. Cooperative Summary of the Day
- d. Freeze Data Table
1971-2000 serially complete daily data

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