# Climatography of the United States No. 20 1971-2000

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

COOP ID: 356294

Lon: 116°58W

**Station: ONTARIO KSRV, OR** 

Climate Division: OR 9 NWS Call Sign: ONO

Temperature (°F) Degree Days (1) Mean (1) Mean Number of Days (3) **Extremes** Base Temp 65 Max Max Max Max Min Min Highest Lowest Daily Daily Highest Lowest Month(1) Month(1) Cooling >= >= >= <= <= <= Month Mean Year Day Year Year Day Year Heating Max Min Daily(2) Daily(2) Mean Mean 100 90 50 32 32 0 34.2 18.4 26.3 64 1953 9 33.9 1978 -25+ 1962 22 13.0 1979 1199 0 .0 .0 1.4 10.7 28.5 2.3 Jan 43.0 24.1 33.6 1995 23 40.0 2000 -24 1989 4 18.1 1989 881 0 .0 .0 8.6 3.3 23.6 .9 Feb 66+ Mar 55.5 30.9 43.2 85 1966 30 48.1 1992 10 1989 3 37.6 1976 677 0 .0 .0 25.1 .2 18.7 0. 1975 2 Apr 64.8 36.6 50.7 94 1977 24 56.8 1987 17 1956 6 44.8 431 .0 .2 29.4 .0 8.4 0. May 74.4 44.5 59.5 103 1986 29 64.9 1992 25 1975 25 55.3 1977 194 23 .1 2.6 31.0 .0 1.5 .0 23 73.3 10.0 83.7 51.3 67.5 108 +1970 1977 31+ 1976 26 61.6 1993 64 139 1.7 30.0 .0 .1 0. Jun Jul 93.1 57.4 75.3 113 12 80.9 1985 34 1986 5 66.9 1993 9 327 8.1 23.7 31.0 1967 .0 .0 .0 91.5 54.3 72.9 113 1961 4 77.6 1971 33 1960 28 66.7 1976 18 262 6.0 21.6 31.0 .0 .0 .0 Aug Sep 80.6 44.5 62.6 104 1967 1 69.6 1990 24 +1985 30 56.6 1985 143 70 .1 7.0 30.0 .0 1.4 0. 34.2 57.0 46.4 1985 Oct 66.3 50.3 94 1997 2 1988 15 1996 21 457 0 .0 .1 30.4 .0 12.6 .0 47.1 26.5 72 1965 4 42.9 1999 1993 25 26.9 1985 845 0 .0 .0 13.6 1.5 22.2 .2 Nov 36.8 -6 Dec 35.7 19.5 27.6 66 1955 22 35.2 1977 -23 1972 10 11.1 1985 1160 0 .0 .0 1.8 8.1 28.4 2.0 Jul Jul Jan Dec 64.2 36.9 50.5 113 +1967 12 80.9 1985 -25+ 1962 22 11.1 1985 6078 823 16.0 65.2 263.3 23.8 145.4 5.4 Ann

Complete documentation available from: www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

Issue Date: February 2004 095-A

(1) From the 1971-2000 Monthly Normals

Elevation: 2,145 Feet Lat: 44°03N

- (2) Derived from station's available digital record: 1948-2001
- (3) Derived from 1971-2000 serially complete daily data

<sup>+</sup> Also occurred on an earlier date(s)

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

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Climate Division: OR 9 NWS Call Sign: ONO Elevation: 2,145 Feet Lat: 44°03N Lon: 116°58W

										Pı	recipi	tation	(incl	nes)										
	Mea	Precipitation Totals  Means/ Medians(1)  Extremes										ays (3	5)	Precipitation Probabilities (1) Probability that the monthly/annual precipitation will be equal to or less than the indicated amount  Monthly/Annual Precipitation vs Probability Levels										
	Medi	ans(1)				Latremes	,			Daily Precipitation				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	1.29	1.24	1.35	1993	9	2.40	1993	.15	1985	7.8	4.1	.4	.1	.47	.59	.76	.91	1.05	1.19	1.35	1.53	1.76	2.11	2.44
Feb	.87	.66	.68	1982	14	2.10	1999	.00	1995	7.1	3.2	.2	.0	.07	.16	.30	.43	.56	.71	.88	1.08	1.35	1.80	2.23
Mar	.86	.80	11.10	1950	14	3.29	1983	.07	1994	7.6	3.1	.2	@	.09	.16	.28	.40	.53	.67	.84	1.05	1.34	1.82	2.29
Apr	.68	.54	.86	1990	27	2.69	1978	.03	1977	5.8	2.5	.1	.0	.08	.14	.23	.33	.43	.54	.67	.83	1.05	1.41	1.76
May	.93	.85	1.56	1998	22	5.00	1998	.09	1972	6.0	3.2	.3	@	.05	.10	.22	.34	.48	.65	.86	1.12	1.49	2.11	2.74
Jun	.62	.51	.87	1992	13	1.55	1993	.01+	1994	4.1	2.1	.1	.0	.04	.08	.16	.25	.34	.45	.59	.76	.99	1.39	1.79
Jul	.30	.18	.68	1997	10	1.23	1997	.00+	2000	2.1	1.1	.1	.0	.00	.00	.00	.04	.11	.18	.26	.37	.52	.78	1.03
Aug	.28	.07	1.18	1979	14	1.60	1979	.00+	2000	2.3	.8	.1	@	.00	.00	.00	.00	.04	.10	.19	.31	.49	.81	1.15
Sep	.47	.29	1.59	1959	14	1.91	1980	.00+	1999	3.2	1.5	.2	.0	.00	.00	.01	.07	.15	.25	.38	.56	.80	1.24	1.69
Oct	.55	.39	1.03	1982	30	2.08	1982	.00+	1999	4.1	1.9	.2	@	.00	.00	.06	.15	.25	.37	.51	.68	.93	1.34	1.75
Nov	1.19	.98	.82	1997	25	2.72	1981	.06	1976	8.8	4.4	.3	.0	.21	.32	.49	.66	.82	1.00	1.20	1.45	1.78	2.31	2.81
Dec	1.41	1.26	1.40	1968	24	4.34	1983	.00	1986	8.4	4.3	.5	@	.06	.18	.39	.60	.82	1.07	1.37	1.73	2.23	3.07	3.89
Ann	9.45	8.42	11.10	Mar 1950	14	5.00	May 1998	.00+	Aug 2000	67.3	32.2	2.7	.1	5.56	6.26	7.18	7.90	8.56	9.20	9.88	10.64	11.58	12.96	14.19

<sup>+</sup> Also occurred on an earlier date(s)

Complete documentation available from:

www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

<sup>#</sup> Denotes amounts of a trace

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>\*\*</sup> Statistics not computed because less than six years out of thirty had measurable precipitation

<sup>(1)</sup> From the 1971-2000 Monthly Normals

<sup>(2)</sup> Derived from station's available digital record: 1948-2001

<sup>(3)</sup> Derived from 1971-2000 serially complete daily data

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Climate Division: OR 9 NWS Call Sign: ONO Elevation: 2,145 Feet Lat: 44°03N Lon: 116°58W

										Snov	w (incl	hes)													
						Sn	ow To	tals							Mean Number of Days (1)										
	Mean	s/Medi	ians (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	6.4	4.5	3	1	10.0	1993	9	23.5	1993	20	1979	14	13	1989	3.2	2.4	.6	.2	@	9.1	6.8	4.4	.0		
Feb	2.1	1.0	2	#	6.0	1989	16	14.0	1993	18	1989	16	15	1989	1.6	1.0	.2	.1	.0	4.7	2.2	.0	.0		
Mar	.4	.0	#	0	1.5	1977	3	2.5	1993	4	1993	10	#+	1993	.5	.1	.0	.0	.0	.2	.0	.0	.0		
Apr	#	.0	0	0	#	1990	27	#+	1990	0	0	0	0	0	.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	.5	1971	27	.5	1971	0	0	0	0	0	@	.0	.0	.0	.0	.0	.0	.0	.0		
Nov	2.5	.3	#	0	7.0	1994	17	15.1	1985	8	1975	30	3	1985	1.3	.9	.4	.1	.0	1.4	1.0	.4	.0		
Dec	4.9	3.6	1	#	8.5	1988	24	13.0	1972	12	1981	31	4	1983	3.2	2.3	.9	.3	.0	7.9	3.1	1.2	.1		
Ann	16.3	9.4	N/A	N/A	10.0	Jan 1993	9	23.5	Jan 1993	20	Jan 1979	14	15	Feb 1989	9.8	6.7	2.1	.7	@	23.3	13.1	6.0	.1		

<sup>+</sup> Also occurred on an earlier date(s) #Denotes trace amounts

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<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>-9/-9.9</sup> represents missing values Annual statistics for Mean/Median snow depths are not appropriate

<sup>(1)</sup> Derived from Snow Climatology and 1971-2000 daily data

<sup>(2)</sup> Derived from 1971-2000 daily data

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				Freez	e Data											
			Spri	ng Freeze D	ates (Month	/Day)										
Temp (F)		P	robability of	later date i	n spring (thr	ru Jul 31) tha	n indicated(	(*)								
Temp (I')	.10	.20	.30	.40	.50	.60	.70	.80	.90							
36	6/17	6/09	6/04	5/30	5/26	5/21	5/17	5/11	5/04							
32	5/31	5/23	5/17	5/13	5/08	5/04	4/29	4/24	4/16							
28	5/09	5/02	4/27	4/23	4/19	4/15	4/11	4/06	3/30							
24	4/18	4/11	4/06	4/02	3/29	3/24	3/20	3/15	3/08							
20	4/07	3/27	3/20	3/13	3/07	3/01	2/22	2/14	2/03							
16	3/09	2/26	2/19	2/12	2/06	1/31	1/25	1/17	1/07							
			Fal	ll Freeze Da	tes (Month/I	Oay)										
Temp (F)		Probability of earlier date in fall (beginning Aug 1) than indicated(*)														
remb (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90							
36	9/03	9/07	9/11	9/13	9/16	9/19	9/22	9/25	9/29							
32	9/15	9/20	9/24	9/27	9/29	10/02	10/05	10/09	10/14							
28	9/23	9/28	10/02	10/05	10/08	10/11	10/14	10/18	10/23							
24	10/07	10/12	10/16	10/19	10/22	10/25	10/29	11/01	11/07							
20	10/14	10/22	10/27	11/01	11/05	11/09	11/14	11/19	11/27							
16	11/02	11/09	11/14	11/18	11/22	11/26	11/30	12/05	12/11							
			•	Freeze F	ree Period											
Tomp (E)			Probability	of longer th	an indicated	freeze free p	eriod (Days)	)								
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90							
36	140	131	124	118	113	107	101	95	85							
32	173	163	155	149	143	138	131	124	114							
28	195	187	181	176	171	166	161	155	147							
24	232	223	217	212	207	202	197	191	183							
20	284	270	259	251	243	234	226	215	201							
16	323	309	300	293	286	279	272	264	252							

<sup>\*</sup> 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.

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	Degree Days to Selected Base Temperatures (°F)														
Base						Heatin	g Degree l	Days (1)							
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann		
65	1199	881	677	431	194	64	9	18	143	457	845	1160	6078		
60	1044	741	522	290	92	20	1	4	66	307	695	1005	4787		
57	951	657	429	215	51	9	0	1	36	223	605	912	4089		
55	890	607	369	170	31	4	0	0	22	173	545	850	3661		
50	745	476	230	83	6	0	0	0	5	75	406	703	2729		
32	289	130	8	0	0	0	0	0	0	0	69	247	743		

Base						Coolin	g Degree l	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	113	173	354	561	852	1065	1341	1267	917	566	214	110	7533
55	1	6	2	41	170	379	628	554	249	26	0	0	2056
57	0	0	0	25	127	324	566	493	203	14	0	0	1752
60	0	0	0	11	76	245	474	403	143	5	0	0	1357
65	0	0	0	2	23	139	327	262	70	0	0	0	823
70	0	0	0	0	4	64	196	146	27	0	0	0	437

										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	0	31	156	350	627	850	1118	1052	698	347	62	5	0	31	187	537	1164	2014	3132	4184	4882	5229	5291	5296
45	0	6	63	212	472	700	963	897	549	211	17	0	0	6	69	281	753	1453	2416	3313	3862	4073	4090	4090
50	0	0	15	104	325	550	808	742	403	103	1	0	0	0	15	119	444	994	1802	2544	2947	3050	3051	3051
55	0	0	0	45	193	405	653	588	264	35	0	0	0	0	0	45	238	643	1296	1884	2148	2183	2183	2183
60	0 0 0 15 98 266 498 434 148 10 0 0										0	0	0	0	15	113	379	877	1311	1459	1469	1469	1469	
Base				Gro	wing Deg	gree Unit	s for Co	rn (Mont	thly)						Gr	owing D	egree Un	its for C	orn (Acc	umulate	d Month	ly)		
50/86	0	25	120	250	407	529	678	635	471	274	41	3	0	25	145	395	802	1331	2009	2644	3115	3389	3430	3433

(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.

Compete documentation for the 1971-2000 Normals is available on the internet from:

www.ncdc.noaa.gov/oa/climate/normals/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 are 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

- c. Snow Tables
  - 1. Snow Climatology
  - 2. Cooperative Summary of the Day
- d. Freeze Data Table

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

#### References

U.S. Climate Normals 1971-2000, www.ncdc.noaa.gov/normals.html

U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normals/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