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: 357736

Lon: 117°02W

Station: SHEAVILLE 1 SE, OR

Climate Division: OR 9 NWS Call Sign:

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 37.2 18.1 27.7 59 1971 19 35.7 1998 -25+ 1962 21 16.2 1979 1157 0 .0 .0 2.1 8.5 28.6 2.6 Jan 23.2 42.9 22.2 32.6 68+ 1986 24 38.5 1992 -23 1956 1989 909 0 .0 .0 5.8 3.0 25.6 1.0 Feb 1 Mar 49.8 26.8 38.3 75+ 1978 29 44.5 1986 -10 1955 5 28.9 1976 829 0 .0 .0 15.4 .6 25.6 .2 27 9 1975 Apr 57.9 31.4 44.7 86 1987 50.4 1990 1968 13 38.6 610 0 .0 .0 23.7 .1 18.5 .0 May 66.5 38.2 52.4 92+ 1966 26 59.3 1992 15+ 1965 46.8 1991 396 4 .0 .1 29.3 .0 8.6 .0 45.1 23 22 3.2 1.8 .0 77.3 61.2 99+ 1988 67.1 1977 24 +1987 55.2 1991 168 53 .0 30.0 .0 Jun Jul 87.3 51.6 69.5 104 19 74.4 1985 24 5 59.5 1993 41 178 .5 12.7 31.0 .3 .0 1960 1986 .0 1978 86.4 50.3 68.4 102 +2000 1 73.0 1986 24 1964 29 63.2 53 157 .4 12.0 31.0 .0 .2 .0 Aug 5 Sep 76.9 41.1 59.0 99 1955 64.8 1990 15 1970 14 51.7 1985 219 39 .0 2.5 29.8 .0 4.9 .0 5 29 43.3 1984 Oct 64.3 32.6 48.5 90+ 1987 56.9 1988 0 1971 515 1 .0 .1 27.3 (a) 17.9 @ 47.2 24.4 35.8 77 1980 5 43.6+ 1999 -13 1955 15 27.4 2000 877 0 .0 .0 11.8 2.3 25.4 .5 Nov Dec 38.5 17.9 28.2 61 1979 17 34.7 1980 -31 1990 22 19.4 1990 1142 0 .0 .0 3.2 7.7 29.2 2.3 Jul Jul Dec Jan 33.3 47.2 104 1960 19 74.4 1985 -31 1990 22 16.2 1979 6916 432 .9 30.6 240.4 22.2 186.6 61.0 6.6 Ann

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

Issue Date: February 2004 127-A

(1) From the 1971-2000 Monthly Normals

Elevation: 4,620 Feet Lat: 43°07N

- (2) Derived from station's available digital record: 1952-2001
- (3) Derived from 1971-2000 serially complete daily data

⁺ Also occurred on an earlier date(s)

[@] Denotes mean number of days greater than 0 but less than .05

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										Pı	recipi	tation	(incl	nes)										
	Mea	ans/	P	recip	itatio	on Total						ays (3)	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)				Extremes	3			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	1.83	1.48	3.50	2000	10	5.37	2000	.12	1985	8.9	5.1	.6	.1	.32	.48	.75	1.00	1.25	1.53	1.85	2.24	2.75	3.58	4.37
Feb	1.71	1.48	1.73	1986	19	6.00	1983	.17	1988	7.9	5.1	.4	@	.26	.40	.65	.89	1.14	1.41	1.72	2.09	2.60	3.43	4.22
Mar	1.81	1.69	1.17	1989	2	4.34	1983	.31	1994	9.0	5.3	.7	.1	.49	.67	.93	1.16	1.38	1.61	1.87	2.18	2.58	3.21	3.79
Apr	1.59	1.75	1.54	1973	14	4.42	1978	.34	1980	6.9	4.8	.4	.1	.39	.54	.77	.97	1.18	1.39	1.63	1.92	2.30	2.89	3.45
May	1.58	1.10	1.47	1998	13	6.59	1998	.06	1974	6.8	4.6	.7	.1	.13	.24	.45	.67	.91	1.19	1.52	1.93	2.50	3.45	4.39
Jun	1.33	1.07	1.57	1972	6	4.47	1982	.00	1989	4.8	2.9	.7	.1	.07	.19	.40	.59	.80	1.03	1.30	1.64	2.10	2.85	3.58
Jul	.54	.28	1.02	1985	31	2.13	1982	.00+	2000	2.2	1.4	.4	@	.00	.00	.00	.00	.16	.31	.48	.69	.96	1.43	1.87
Aug	.50	.22	1.19	1968	18	3.84	1983	.00+	1998	2.4	1.5	.2	.0	.00	.00	.00	.04	.13	.25	.39	.59	.87	1.36	1.85
Sep	.70	.43	.94	1959	14	2.01	1986	.00+	1999	3.0	2.0	.2	.0	.00	.00	.05	.17	.31	.46	.65	.88	1.20	1.74	2.29
Oct	1.11	.90	1.30	1975	7	4.08	1975	.00+	1988	4.5	3.1	.4	.1	.00	.08	.26	.43	.62	.83	1.07	1.38	1.80	2.49	3.18
Nov	1.72	1.53	1.02	1981	23	4.81	1988	.28	1993	7.6	5.0	.4	@	.41	.57	.82	1.04	1.27	1.50	1.77	2.09	2.50	3.16	3.78
Dec	1.79	1.40	2.16	1982	14	5.82	1996	.00	1989	8.0	5.0	.7	.1	.13	.31	.60	.86	1.13	1.43	1.78	2.21	2.78	3.72	4.63
Ann	16.21	14.91	3.50	Jan 2000	10	6.59	May 1998	.00+	Jul 2000	72.0	45.8	5.8	.7	8.60	9.91	11.68	13.08	14.37	15.64	16.99	18.52	20.42	23.25	25.78

⁺ Also occurred on an earlier date(s)

Complete documentation available from:

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

[#] 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: 1952-2001

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

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										Snov	w (incl	nes)													
						Sno	ow To	tals									Mea	n Nu	mber	of Day	ys (1)				
	Mean	s/Medi	ans (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	8.4	7.5	4	3	7.0	1983	19	19.0	1990	20	1993	13	17	1989	4.4	4.1	1.2	.2	.0	12.5	9.5	5.8	1.7		
Feb	5.0	2.5	3	1	6.0	1976	16	14.0	1979	20	1996	4	16	1993	3.2	3.1	1.1	.3	.0	6.5	3.9	2.1	1.4		
Mar	5.2	3.5	1	#	10.0	1974	2	13.0	1974	18	1993	5	6	1993	2.1	1.9	.6	.2	@	2.4	1.3	.6	@		
Apr	1.9	.0	#	#	6.5	1998	14	12.0	1982	3	1977	1	#+	1995	.9	.8	.2	.1	.0	.2	@	.0	.0		
May	.5	.0	#	0	3.0	1977	6	4.0	1977	3	1977	6	#+	1980	.3	.3	@	.0	.0	.1	.1	.0	.0		
Jun	.0	.0	#	0	.0	0	0	.0	0	#	1991	24	#	1991	.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	5	1971	28	#	1971	.0	.0	.0	.0	.0	.0	.0	.0	.0		
Oct	.5	.0	#	0	5.0	1971	31	6.0+	1991	5	1971	31	#+	1991	.2	.2	.1	@	.0	.1	@	@	.0		
Nov	2.5	1.5	1	#	8.0	1982	21	8.0	1979	15	1985	30	4	1985	2.0	2.0	.6	.2	.0	2.8	1.6	.8	.1		
Dec	5.8	4.5	2	2	10.0	1992	29	16.0	1982	16+	1992	31	11	1983	3.7	3.5	1.0	.3	@	8.1	3.6	2.3	.4		
Ann	29.8	19.5	N/A	N/A	10.0+	Dec 1992	29	19.0	Jan 1990	20+	Feb 1996	4	17	Jan 1989	16.8	15.9	4.8	1.3	@	32.7	20.0	11.6	3.6		

⁺ Also occurred on an earlier date(s) #Denotes trace amounts

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[@] 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

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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	u Jul 31) tha	n indicated(*)				
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90			
36	7/15	7/09	7/04	6/30	6/27	6/23	6/19	6/14	6/08			
32	7/08	6/30	6/25	6/20	6/16	6/12	6/07	6/02	5/25			
28	6/24	6/15	6/08	6/03	5/28	5/23	5/18	5/11	5/02			
24	6/03	5/25	5/18	5/12	5/07	5/01	4/26	4/19	4/10			
20	5/06	4/27	4/20	4/15	4/10	4/04	3/30	3/23	3/14			
16	4/15	4/05	3/29	3/23	3/17	3/11	3/05	2/26	2/16			
•			Fal	l Freeze Dat	tes (Month/D	ay)	•		•			
Tomp (F)	Probability of earlier date in fall (beginning Aug 1) than indicated(*)											
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90			
36	8/17	8/23	8/27	8/31	9/03	9/06	9/10	9/14	9/20			
32	8/24	8/31	9/05	9/09	9/13	9/16	9/20	9/25	10/02			
28	9/12	9/17	9/21	9/24	9/27	9/30	10/03	10/07	10/12			
24	9/21	9/27	10/02	10/06	10/10	10/13	10/17	10/22	10/28			
20	10/04	10/10	10/13	10/17	10/20	10/23	10/26	10/30	11/05			
16	10/22	10/28	11/01	11/05	11/09	11/12	11/16	11/20	11/26			
		•	•	Freeze F	ree Period		•	•	•			
Tomm (F)			Probability	of longer tha	an indicated	freeze free p	eriod (Days)					
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90			
36	94	85	78	73	68	63	57	51	42			
32	117	107	100	93	88	82	76	69	59			
28	153	142	134	127	121	114	108	100	89			
24	190	178	169	162	155	148	141	132	120			
20	226	215	206	199	193	186	179	171	159			
16	274	261	251	243	236	228	220	211	198			

^{*} 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	1157	909	829	610	396	168	41	53	219	515	877	1142	6916		
60	1002	769	674	463	258	84	12	16	123	366	727	987	5481		
57	909	685	581	378	187	49	4	7	79	285	639	894	4697		
55	847	629	520	324	146	32	1	3	56	234	582	832	4206		
50	692	490	374	204	68	9	0	0	19	130	444	677	3107		
32	225	106	37	8	0	0	0	0	0	3	93	199	671		

Base						Coolin	g Degree I	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	91	121	232	388	631	875	1161	1126	810	511	206	81	6233
55	0	0	1	14	64	217	449	417	176	30	5	0	1373
57	0	0	0	8	43	175	389	358	140	18	2	0	1133
60	0	0	0	3	21	120	304	275	93	7	0	0	823
65	0	0	0	0	4	53	178	157	39	1	0	0	432
70	0	0	0	0	0	17	89	73	12	0	0	0	191

	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	2	18	65	170	381	618	888	858	560	266	51	6	2	20	85	255	636	1254	2142	3000	3560	3826	3877	3883
45	0	1	19	86	242	469	733	703	418	150	16	0	0	1	20	106	348	817	1550	2253	2671	2821	2837	2837
50	0	0	0	36	134	325	578	549	281	67	1	0	0	0	0	36	170	495	1073	1622	1903	1970	1971	1971
55	0	0	0	13	61	200	424	397	160	17	0	0	0	0	0	13	74	274	698	1095	1255	1272	1272	1272
60	0	0	0	0	24	101	280	257	75	1	0	0	0	0	0	0	24	125	405	662	737	738	738	738
Base				Gro	wing De	gree Unit	s for Co	rn (Mont	hly)						Gr	owing D	egree Un	its for C	orn (Acc	umulate	d Month	ly)		
50/86	0	15	61	139	264	413	569	551	408	232	47	1	0	15	76	215	479	892	1461	2012	2420	2652	2699	2700

(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

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