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: 358481

Lon: 123°56W

Station: TIDEWATER 2 SW, OR

Climate Division: OR 1 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 50.0 35.2 42.6 68+ 1993 29 47.6 1995 8 1950 31 37.0 1979 694 0 .0 .0 19.9 .0 9.6 Jan 54.4 36.8 45.6 80 1968 28 51.0 1995 10 +1989 5 38.6 1989 543 0 .0 .0 23.3 .2 5.8 0. Feb Mar 57.7 38.4 48.1 81 +1987 31 53.6 1986 23 1952 31 42.9 1971 525 0 .0 .0 27.8 .0 3.5 0. 1975 Apr 60.3 39.7 50.0 89 1987 26 55.1 1989 26 +1982 2 45.1 450 0 .0 .0 29.2 .0 1.4 0. May 65.0 44.0 54.5 95+ 1983 27 59.8 1993 30 1985 12 49.8 1991 330 4 .0 .2 31.0 .0 .1 .0 48.1 1992 35 3 30.0 Jun 69.4 58.8 99+ 1995 29 62.4 1976 55.1 1976 193 6 .0 .7 .0 .0 .0 Jul 73.9 51.8 62.9 11 65.6+ 38 1984 10 60.9 1971 86 20 **(**a) 31.0 0. 106 1961 1996 .6 .0 .0 1973 75.6 52.5 64.1 104 1981 9 66.8 1997 40 +1980 29 60.4 66 36 .1 .9 31.0 .0 .0 .0 Aug Sep 74.4 49.5 62.0 100 1958 6 65.4 1994 29 1983 30 58.0 1972 114 23 .0 1.4 30.0 .0 @ .0 55.9 2 25 1971 Oct 66.7 45.0 93 1980 58.6 1978 1949 19 53.1 285 1 .0 (a) 31.0 .0 .3 .0 55.1 39.8 47.5 80 1962 51.9 1995 17 1952 28 41.3 1985 527 0 .0 .0 26.7 .0 3.3 .0 Nov 1 Dec 49.7 35.7 42.7 67 1980 26 46.7 1973 5 1972 8 35.4 1990 692 0 .0 .0 18.9 .4 8.1 .0 Jul Aug Dec Dec 62.7 43.0 52.9 106 1961 11 66.8 1997 5 1972 8 35.4 1990 4505 90 3.8 329.8 32.1 .0 .1 .6 Ann

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

Issue Date: February 2004 139-A

Elevation: 35 Feet Lat: 44°24N

⁺ Also occurred on an earlier date(s)

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

⁽¹⁾ From the 1971-2000 Monthly Normals

⁽²⁾ Derived from station's available digital record: 1948-2000

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

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Station: TIDEWATER 2 SW, OR COOP ID: 358481

Climate Division: OR 1 NWS Call Sign: Elevation: 35 Feet Lat: 44°24N Lon: 123°56W

										Pı	recipi	tation	(incl	nes)												
	Mea Medi		P	recipi	itatio	on Total					ean N of D	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 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	14.22	14.57	5.76	1972	11	23.73	1974	1.23	1985	20.3	17.0	9.7	4.8	4.04	5.39	7.43	9.21	10.94	12.74	14.74	17.10	20.16	24.96	29.42		
Feb	11.93	10.82	4.16	1949	17	25.22	1999	3.48	1993	18.4	15.5	8.7	3.7	4.22	5.35	6.98	8.35	9.66	11.00	12.47	14.17	16.35	19.72	22.82		
Mar	10.88	11.01	3.43	1966	9	18.86	1983	2.18	1992	19.9	16.3	8.9	3.0	4.07	5.09	6.55	7.76	8.92	10.10	11.38	12.87	14.77	17.68	20.35		
Apr	7.00	7.04	3.20+	1971	9	12.55	1993	1.45	1977	16.6	13.5	5.2	1.6	2.75	3.40	4.32	5.08	5.80	6.53	7.33	8.24	9.40	11.19	12.81		
May	4.66	4.23	3.08	1949	1	8.46	1984	.35	1992	14.1	9.6	3.4	.5	1.32	1.76	2.43	3.02	3.58	4.18	4.83	5.61	6.61	8.19	9.65		
Jun	2.77	2.62	2.40	1985	6	6.75	1984	.39	1987	10.0	6.6	1.3	.4	.57	.82	1.23	1.60	1.97	2.37	2.82	3.37	4.09	5.23	6.32		
Jul	.87	.58	1.72	1993	22	3.16	1987	.00	1973	4.7	2.4	.4	.2	.04	.12	.25	.38	.51	.67	.85	1.07	1.37	1.87	2.36		
Aug	1.16	.85	1.50	1968	23	3.72	1977	.00	1981	4.6	2.8	.6	.2	.02	.08	.22	.38	.57	.79	1.06	1.40	1.89	2.73	3.57		
Sep	2.72	2.76	2.27	1959	26	6.49	1971	.00+	1975	7.7	5.3	2.1	.5	.00	.11	.46	.85	1.30	1.83	2.48	3.31	4.48	6.48	8.49		
Oct	5.92	5.53	3.10	1951	23	11.94	1984	.52	1987	13.1	10.1	4.0	1.6	1.15	1.69	2.56	3.36	4.17	5.04	6.02	7.21	8.79	11.32	13.72		
Nov	14.07	13.72	4.65	1973	15	31.09	1973	2.55	1976	20.5	17.0	9.8	4.3	4.77	6.10	8.05	9.70	11.28	12.91	14.68	16.76	19.42	23.55	27.35		
Dec	15.42	15.84	9.00	1998	19	31.46	1998	3.93	1976	20.8	17.1	10.0	5.0	5.53	6.98	9.07	10.84	12.52	14.24	16.12	18.30	21.09	25.39	29.34		
Ann	91.62	88.55	9.00	Dec 1998	19	31.46	Dec 1998	.00+	Aug 1981	170.7	133.2	64.1	25.8	62.47	68.02	75.19	80.66	85.54	90.28	95.19	100.64	107.27	116.93	125.33		

⁺ 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: 1948-2000

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COOP ID: 358481

Station: TIDEWATER 2 SW, OR

Climate Division: OR 1 NWS Call Sign: Elevation: 35 Feet Lat: 44°24N Lon: 123°56W

										Snov	w (incl	hes)											
						Sno	ow To	tals									Mea	n Nui	mber	of Day	ys (1)		
	Mean	s/Medi	ians (1)	1					Extre	mes (2)			ow Fa		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	.3	.0	#	0	4.0	1975	9	4.0	1975	5	1971	12	#+	1975	.1	.1	.1	.0	.0	@	@	.0	.0
Feb	.4	.0	#	0	7.5	1989	2	7.5	1989	2	1999	9	#	1999	.2	.2	.1	.1	.0	.0	.0	.0	.0
Mar	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Apr	#	.0	0	0	#	1976	15	#	1976	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	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Dec	.8	.0	#	0	6.0	1972	5	13.0	1972	#	1978	31	#	1978	.3	.2	.2	.1	.0	.0	.0	.0	.0
Ann	1.5	.0	N/A	N/A	7.5	Feb 1989	2	13.0	Dec 1972	5	Jan 1971	12	#+	Feb 1999	.6	.5	.4	.2	.0	@	@	.0	.0

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

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

[@] 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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Station: TIDEWATER 2 SW, OR

Climate Division: OR 1 NWS Call Sign:

Freeze Data **Spring Freeze Dates (Month/Day)** Probability of later date in spring (thru Jul 31) than indicated(*) Temp (F) .10 .20 .30 .40 .60 .70 .80 .90 36 5/23 5/15 5/10 5/06 5/01 4/27 4/23 4/17 4/10 32 4/23 4/15 5/03 4/08 4/02 3/27 3/21 3/13 3/02 28 3/06 2/23 2/14 2/08 2/01 1/25 1/18 1/08 12/21 1/29 0/00 24 2/09 1/21 1/13 1/05 12/26 0/00 0/00 20 1/26 1/08 12/23 11/28 0/00 0/00 0/00 0/00 0/00 12/23 16 1/11 0/00 0/00 0/00 0/00 0/00 0/00 0/00 Fall Freeze Dates (Month/Day) Probability of earlier date in fall (beginning Aug 1) than indicated(*) Temp (F) .20 .30 .40 .50 .70 .10 .60 .80 .90 36 10/02 10/09 10/14 10/19 10/23 10/28 11/01 11/07 11/14 32 10/19 10/27 11/03 11/08 11/13 11/18 11/23 11/30 12/08 28 11/07 11/19 11/28 12/05 12/12 12/19 12/27 1/06 1/26 24 11/29 12/12 12/23 1/02 1/13 1/29 0/00 0/00 0/00 20 12/08 12/24 1/08 2/01 0/00 0/00 0/00 0/00 0/00 1/15 0/00 0/00 0/00 0/00 16 12/26 0/00 0/00 0/00 Freeze Free Period **Probability of longer than indicated freeze free period (Days)** Temp (F) .10 .20 .30 .40 .50 .60 .70 .80 .90 205 194 187 180 174 168 162 154 144 36 32 268 253 242 233 224 215 206 195 180 28 338 322 310 299 288 276 259 >365 >365 24 >365 >365 >365 >365 >365 >365 346 329 312 20 >365 >365 >365 >365 >365 >365 >365 >365 333

>365

0/00 Indicates that the probability of occurrence of threshold temperature is less than the indicated probability.

>365

Derived from 1971-2000 serially complete daily data

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Complete documentation available from:

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^{*} Probability of observing a temperature as cold, or colder, later in the spring or earlier in the fall than the indicated date.

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	Degree Days to Selected Base Temperatures (°F)														
Base						Heatin	g Degree 1	Days (1)							
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann		
65	694	543	525	450	330	193	86	66	114	285	527	692	4505		
60	539	403	375	306	193	79	15	9	33	143	377	537	3009		
57	446	324	288	224	128	36	2	1	10	77	292	444	2272		
55	387	272	234	175	94	19	0	0	4	45	237	384	1851		
50	246	157	126	83	31	2	0	0	0	8	124	243	1020		
32	7	1	0	0	0	0	0	0	0	0	0	6	14		

Base						Coolin	g Degree l	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	336	382	498	540	698	803	957	994	899	738	463	338	7646
55	3	9	19	25	78	131	244	281	213	71	11	2	1087
57	0	5	11	14	51	89	184	220	159	40	5	0	778
60	0	0	5	6	23	42	104	134	92	13	0	0	419
65	0	0	0	0	4	6	20	36	23	1	0	0	90
70	0	0	0	0	0	0	0	3	2	0	0	0	5

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													Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec					
40	157	214	283	342	484	591	740	769	691	515	266	151	157	371	654	996	1480	2071	2811	3580	4271	4786	5052	5203					
45	60	98	141	194	331	441	585	614	541	360	135	57	60	158	299	493	824	1265	1850	2464	3005	3365	3500	3557					
50	9	30	49	85	182	291	430	459	391	211	46	10	9	39	88	173	355	646	1076	1535	1926	2137	2183	2193					
55	0	3	0	25	74	149	275	304	242	89	4	0	0	3	3	28	102	251	526	830	1072	1161	1165	1165					
60	0	0	0	2	24	49	125	153	106	21	0	0	0	0	0	2	26	75	200	353	459	480	480	480					
Base	Growing Degree Units for Corn (Monthly)													Gr	owing D	egree Un	its for C	orn (Acc	umulate	d Month	ly)		•						
50/86	5 54 98 140 185 262 326 439 462 415 287 106 42												54	152	292	477	739	1065	1504	1966	2381	2668	2774	2816					

(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