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: 354506

Station: KLAMATH FALLS 2 SSW, OR

Climate Division: OR 7 NWS Call Sign: Elevation: 4,098 Feet Lat: 42°12N Lon: 121°47W

									ŗ	Temp	eratui	re (°F)									
	Mea	n (1)						Extr	emes					U	Days (1) emp 65		Mean	Numb	er of I	Days (3)	
Month	Daily Max	Daily Min	Mean	Vear Day Month(1) Vear				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	39.9	21.9	30.9	59+	1961	17	38.6	1986	-14	1962	23	21.9	1977	1057	0	.0	.0	2.5	4.7	27.1	.7
Feb	45.7	25.6	35.7	69	1995	24	42.7	1995	-10+	1989	6	25.9	1989	823	0	.0	.0	8.9	1.2	22.9	.3
Mar	51.8	28.8	40.3	77	1934	12	46.1	1992	4	1974	8	34.8	1971	766	0	.0	.0	18.1	.1	22.1	.0
Apr	59.3	32.3	45.8	87	1987	27	51.9	1987	10	1963	16	39.0	1975	576	0	.0	.0	24.4	.0	16.1	.0
May	68.2	39.1	53.7	98	1986	30	64.1	1992	17	1968	6	46.2	1977	366	13	.0	.6	30.0	.0	6.5	.0
Jun	77.1	45.8	61.5	100+	1992	23	66.3+	1987	24+	1999	10	55.9	1980	158	51	.1	2.6	29.9	.0	.9	.0
Jul	85.7	51.9	68.8	102+	1988	21	74.4	1994	23	2000	31	61.3	1993	49	167	.3	10.7	31.0	.0	.1	.0
Aug	85.2	50.4	67.8	104	1972	7	72.7	1986	30	1960	27	62.2	1976	46	131	.4	10.3	31.0	.0	.1	.0
Sep	77.0	43.6	60.3	100	1988	3	66.2	1991	20	1973	24	53.3	1986	190	49	@	2.1	29.8	.0	2.3	.0
Oct	64.6	34.9	49.8	88+	1987	1	55.8	1988	11	1971	29	44.0	1984	474	2	.0	.0	28.2	.0	12.5	.0
Nov	47.4	27.7	37.6	74	1965	1	45.4	1995	1	1993	25	29.8	1985	824	0	.0	.0	11.3	.9	22.6	.0
Dec	39.5	22.1	30.8	62+	1958	11	36.2	1981	-17	1972	9	23.7	1990	1059	0	.0	.0	2.0	4.5	27.6	.8
Ann	61.8	35.3	48.6	104	Aug 1972	7	74.4	Jul 1994	-17	Dec 1972	9	21.9	Jan 1977	6388	413	.8	26.3	247.1	11.4	160.8	1.8

⁺ Also occurred on an earlier date(s)

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

Issue Date: February 2004 066-A

[@] 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: 1928-2001

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

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										Pı	ecipi	tation	(incl	nes)										
	Mea	ans/	P	recipi	itatio	n Total					ean N of D	ays (3)	Proba	bility th	nat the n	nonthly/	indic	precipita ated am	ntion wil			less tha	n the
	Medi	ans(1)				Latt cine	,				uny 110	cipitatio			Th	ese value	s were det	ermined i	from the i	ncomplet	e gamma	distributi	on	
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	2.03	1.71	1.82	1964	20	4.91	1996	.14	1985	11.8	5.8	.9	.2	.32	.50	.79	1.07	1.36	1.67	2.03	2.47	3.06	4.02	4.94
Feb	1.42	1.25	1.03	1999	9	4.66	1986	.13	1988	10.7	4.5	.5	@	.23	.35	.55	.75	.95	1.17	1.42	1.73	2.14	2.80	3.44
Mar	1.53	1.26	1.22	1928	26	3.05	1995	.26	1994	10.9	4.7	.7	@	.34	.49	.71	.91	1.12	1.33	1.57	1.86	2.24	2.85	3.42
Apr	.93	.89	1.15	2000	18	2.62	1995	.09	1977	7.9	2.9	.3	@	.12	.20	.33	.46	.60	.75	.92	1.14	1.43	1.90	2.36
May	1.10	.74	1.05	1945	30	4.83	1998	.13+	1992	6.7	3.4	.5	.0	.07	.14	.28	.43	.60	.79	1.03	1.33	1.75	2.46	3.16
Jun	.69	.65	1.08	1937	9	1.86	1995	.01	1973	4.9	2.3	.2	.0	.06	.11	.20	.29	.40	.52	.66	.84	1.08	1.49	1.89
Jul	.36	.19	1.37	1948	5	2.41	1987	.00+	1999	2.2	.8	.2	@	.00	.00	.01	.05	.10	.18	.28	.41	.61	.98	1.35
Aug	.50	.22	2.01	1941	18	2.73	1976	.00+	2000	3.2	1.4	.4	.1	.00	.00	.00	.01	.09	.20	.35	.56	.87	1.44	2.01
Sep	.58	.42	2.34	1957	27	2.45	1986	.00+	1999	3.7	1.8	.3	.0	.00	.00	.07	.20	.31	.44	.58	.74	.97	1.33	1.71
Oct	.85	.71	1.69	1962	10	2.94	1979	.00+	1998	5.6	2.8	.2	.0	.00	.00	.15	.29	.44	.61	.81	1.06	1.40	1.98	2.55
Nov	1.95	1.61	1.68	1957	13	5.79	1998	.22	1976	10.8	5.9	.7	.1	.29	.45	.74	1.01	1.29	1.59	1.95	2.38	2.97	3.92	4.83
Dec	2.01	1.30	2.58	1964	22	5.87	1981	.22	1976	11.7	6.0	1.0	.1	.26	.42	.71	.99	1.28	1.61	1.99	2.46	3.10	4.14	5.15
Ann	13.95	14.06	2.58	Dec 1964	22	5.87	Dec 1981	.00+	Aug 2000	90.1	42.3	5.9	.5	8.66	9.63	10.90	11.89	12.78	13.65	14.55	15.57	16.82	18.65	20.26

⁺ 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: 1928-2001

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Climate Division: OR 7 NWS Call Sign: Elevation: 4,098 Feet Lat: 42°12N Lon: 121°47W

										Snov	w (inc	hes)											
						Sno	ow To	tals									Mea	n Nu	mber	of Day	ys (1)		
	Mean	s/Medi	ians (1))					Extre	mes (2)							ow Fa					Depth esholo	
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	7.3	5.9	2	1	8.5	1999	22	23.1	1988	22+	1996	27	18	1993	4.3	3.0	1.0	.4	.0	8.6	5.1	4.0	.3
Feb	4.9	3.5	1	#	6.5	1999	9	18.3	1975	18	1996	1	13	1993	2.9	2.0	.7	.1	.0	3.8	2.3	1.6	1.1
Mar	2.6	1.5	#	#	7.5	1971	12	12.3	1982	11	1993	1	2	1993	1.7	1.1	.2	.1	.0	1.2	.7	.4	.1
Apr	.6	.0	#	0	5.0	1978	6	5.0	1978	2+	1999	5	#+	1999	.4	.3	.1	@	.0	@	.0	.0	.0
May	.1	.0	#	0	2.0	1991	18	2.0	1991	#+	1999	14	#+	1999	@	@	.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	.4	.0	#	0	3.0	1979	30	5.0	1984	3	1984	18	#+	1996	.2	.1	.1	.0	.0	.1	@	.0	.0
Nov	4.1	1.9	#	#	13.0	1979	25	17.3	1985	13	1979	25	4	1994	2.2	1.3	.5	.2	.1	2.5	1.4	.8	.1
Dec	8.8	6.6	1	1	10.0	1971	12	36.9	1983	14	1992	29	7	1992	4.3	3.1	1.0	.5	@	8.1	5.4	3.3	.6
Ann	28.8	19.4	N/A	N/A	13.0	Nov 1979	25	36.9	Dec 1983	22+	Jan 1996	27	18	Jan 1993	16.0	10.9	3.6	1.3	.1	24.3	14.9	10.1	2.2

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

- (1) Derived from Snow Climatology and 1971-2000 daily data
- (2) Derived from 1971-2000 daily data

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

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^{-9/-9.9} represents missing values Annual statistics for Mean/Median snow depths are not appropriate

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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 (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	7/18	7/11	7/07	7/03	6/29	6/26	6/22	6/17	6/11
32	7/01	6/23	6/17	6/12	6/07	6/02	5/28	5/22	5/14
28	6/12	6/03	5/28	5/23	5/18	5/12	5/07	5/01	4/22
24	5/29	5/17	5/09	5/02	4/25	4/18	4/11	4/03	3/22
20	4/28	4/17	4/09	4/03	3/28	3/21	3/15	3/07	2/25
16	4/02	3/21	3/13	3/05	2/27	2/20	2/12	2/04	1/23
			Fal	l Freeze Da	tes (Month/D	ay)			
Temp (F)		Pro	bability of ea	arlier date ii	n fall (beginn	ing Aug 1) t	han indicate	d(*)	
remp (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	8/16	8/23	8/29	9/03	9/07	9/11	9/16	9/22	9/29
32	8/25	9/03	9/08	9/14	9/18	9/23	9/28	10/04	10/12
28	9/22	9/28	10/02	10/06	10/10	10/13	10/17	10/21	10/27
24	10/09	10/15	10/19	10/23	10/26	10/30	11/03	11/07	11/13
20	10/17	10/24	10/30	11/03	11/08	11/12	11/16	11/22	11/29
16	10/31	11/08	11/14	11/19	11/24	11/28	12/03	12/09	12/17
		•		Freeze F	ree Period			•	
Tomp (F)			Probability	of longer th	an indicated	freeze free p	eriod (Days)	1	
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	104	92	83	76	69	62	55	46	34
32	141	128	119	110	103	95	87	77	64
28	176	165	157	151	144	138	131	123	112
24	222	209	199	191	184	176	168	159	146
20	262	249	240	232	224	217	209	199	186
16	315	299	288	278	269	260	251	239	224

^{*} 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.

Complete documentation available from:

Derived from 1971-2000 serially complete daily data

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				Deg	ree Days to	o Selected	Base Tem	peratures	(°F)				
Base						Heatin	g Degree l	Days (1)					
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	1057	823	766	576	366	158	49	46	190	474	824	1059	6388
60	902	683	611	430	238	76	15	11	102	328	674	904	4974
57	809	599	518	346	175	43	6	3	64	249	584	811	4207
55	747	543	457	293	139	27	2	1	44	202	525	749	3729
50	597	407	314	178	68	7	0	0	14	104	382	594	2665
32	161	57	19	4	0	0	0	0	0	1	46	136	424

Base						Coolin	g Degree l	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	127	158	277	418	671	883	1141	1108	849	552	212	99	6495
55	0	0	2	18	97	220	430	397	203	40	1	0	1408
57	0	0	0	11	71	176	372	337	163	25	0	0	1155
60	0	0	0	4	40	120	287	252	111	11	0	0	825
65	0	0	0	0	13	51	167	131	49	2	0	0	413
70	0	0	0	0	2	15	82	51	16	0	0	0	166

										Gro	wing 1	Degre	e Uni	ts (2)										
Base					Growin	g Degree	Units (M	Ionthly)								Growi	ng Degre	ee Units (Accumu	lated Mo	nthly)			
	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov De													Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
40													7	38	127	333	764	1412	2298	3159	3771	4090	4144	4148
45												0	0	5	33	139	428	926	1657	2363	2826	3015	3027	3027
50												0	0	0	0	43	215	570	1146	1697	2016	2109	2110	2110
55	0	0	0	8	88	229	422	399	197	35	0	0	0	0	0	8	96	325	747	1146	1343	1378	1378	1378
60	0	0	0	1	40	123	282	257	96	11	0	0	0	0	0	1	41	164	446	703	799	810	810	810
Base	e Growing Degree Units for Corn (Monthly)														Gr	owing D	egree Un	its for C	orn (Acc	umulate	d Month	ly)		
50/86	50/86 1 25 74 162 295 421 572 551 411 242 40 (0	1	26	100	262	557	978	1550	2101	2512	2754	2794	2794

(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