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

Station: ANTELOPE 1 NW, OR 1971-2000 COOP ID: 350197

Climate Division: OR 6 NWS Call Sign: Elevation: 2,840 Feet Lat: 44°55N Lon: 120°44W

									r	Гетр	eratui	re (°F)									
	Mea	n (1)						Extr	emes					Degree Base To	Days (1) emp 65		Mean	Numb	er of I	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	39.6	23.3	31.5	65	1931	28	38.0	1994	-27	1937	8	18.1	1979	1041	0	.0	.0	4.7	6.7	25.3	1.0
Feb	44.8	26.3	35.6	71	1934	1	42.8	1991	-22	1950	3	24.8	1989	826	0	.0	.0	8.8	3.2	21.0	.6
Mar	51.8	29.9	40.9	78+	1966	29	45.5	1986	5	1955	5	36.3	1975	750	0	.0	.0	18.6	.2	19.5	.0
Apr	58.2	33.0	45.6	87+	1987	28	51.3	1990	11	1936	1	39.7	1975	582	0	.0	.0	25.2	.0	14.2	.0
May	66.1	38.2	52.2	98	1986	31	57.1	1993	18	1964	2	47.1	1977	400	2	.0	.3	30.3	.0	6.4	.0
Jun	74.6	44.1	59.4	103	1961	16	65.4	1986	25	1932	5	54.3	1991	204	34	@	2.0	29.9	.0	1.0	.0
Jul	83.5	48.9	66.2	107+	1939	27	70.9	1985	29	1949	1	57.8	1993	78	116	.5	9.1	31.0	.0	.0	.0
Aug	83.7	49.0	66.4	109	1961	4	71.1	1971	30	1951	30	61.6	1980	72	113	.7	8.8	31.0	.0	@	.0
Sep	74.9	42.8	58.9	101	1955	6	64.3	1990	8	1949	16	52.6	1985	220	35	@	1.6	29.9	.0	1.5	.0
Oct	62.7	35.4	49.1	91	1934	10	57.4	1988	8	1949	19	44.7	1984	495	1	.0	.0	28.2	.1	9.6	.0
Nov	47.2	28.9	38.1	76	1939	4	44.4	1999	-7	1985	23	26.3	1985	809	0	.0	.0	11.5	1.6	18.7	.2
Dec	39.5	23.5	31.5	72	1939	4	36.5	1979	-17	1990	21	21.3	1985	1040	0	.0	.0	5.0	6.5	25.5	.8
Ann	60.6	35.3	48.0	109	Aug 1961	4	71.1	Aug 1971	-27	Jan 1937	8	18.1	Jan 1979	6517	301	1.2	21.8	254.1	18.3	142.7	2.6

⁺ Also occurred on an earlier date(s)

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

Issue Date: February 2004 003-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: 1931-2001

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

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										Pı	recipi	tation	(incl	nes)										
	Mea	ans/	P	recipi	itatio	on Total					ean N of D	ays (3)	Proba	ability th		nonthly/	annual _I indic	precipita ated am	ount			less tha	n the
	Medi	ans(1)				Extremes	•			ս	any Pre	приацо	n		Th	ese value	s were det	ermined t	from the i	ncomplet	e gamma	distributi	on	ļ
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	1.64	1.58	1.28	2000	11	3.48	1995	.26	1985	11.2	5.5	.6	.1	.41	.56	.80	1.01	1.22	1.44	1.69	1.99	2.37	2.98	3.55
Feb	1.27	1.07	1.90	1956	21	3.34	1986	.30+	1990	10.7	4.1	.3	.0	.32	.44	.62	.79	.95	1.12	1.31	1.53	1.83	2.30	2.73
Mar	1.26	1.16	.65	1955	1	3.04	1983	.35	1992	10.7	4.6	.2	.0	.40	.52	.69	.85	.99	1.15	1.31	1.51	1.76	2.16	2.52
Apr	1.11	1.08	1.90	1983	21	2.65	1983	.00	1977	8.6	3.5	.4	.1	.11	.25	.43	.59	.76	.93	1.13	1.37	1.69	2.20	2.69
May	1.37	1.13	1.75	1977	10	5.57	1998	.19	1975	8.4	3.8	.5	.2	.19	.30	.50	.69	.89	1.11	1.36	1.67	2.09	2.78	3.44
Jun	1.04	.77	1.48	1965	17	2.57	1997	.04	1974	6.4	2.8	.5	.1	.10	.17	.32	.46	.62	.80	1.01	1.27	1.63	2.24	2.83
Jul	.43	.31	.66	1978	1	1.47	1978	.00+	2000	3.4	1.5	.1	.0	.00	.00	.07	.15	.23	.32	.42	.55	.72	1.00	1.28
Aug	.61	.38	2.71	1976	7	5.37	1976	.00+	1996	3.6	1.6	.2	@	.00	.00	.02	.09	.18	.31	.47	.70	1.03	1.61	2.22
Sep	.75	.39	1.75	1982	19	4.51	1982	.00+	1999	4.2	2.0	.2	.1	.00	.00	.00	.18	.34	.51	.71	.96	1.29	1.86	2.39
Oct	.95	.85	1.40	1950	29	2.70	1982	.00+	1988	6.5	3.3	.2	.0	.00	.13	.31	.46	.61	.78	.97	1.19	1.49	1.98	2.45
Nov	1.88	1.69	2.37	1996	19	4.66	1984	.29	1993	12.5	5.7	.6	.2	.39	.56	.83	1.09	1.34	1.61	1.91	2.28	2.77	3.54	4.27
Dec	1.62	1.20	2.16	1964	22	5.79	1981	.17	1976	11.3	5.2	.7	@	.23	.37	.60	.83	1.06	1.32	1.62	1.98	2.47	3.26	4.03
Ann	13.93	12.56	2.71	Aug 1976	7	5.79	Dec 1981	.00+	Jul 2000	97.5	43.6	4.5	.8	8.61	9.59	10.86	11.85	12.75	13.62	14.53	15.56	16.81	18.66	20.28

⁺ 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: 1931-2001

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

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COOP ID: 350197

Station: ANTELOPE 1 NW, OR

Climate Division: OR 6 NWS Call Sign: Elevation: 2,840 Feet Lat: 44°55N Lon: 120°44W

			Snow Depth Snow Depth Median Highest Daily Snow Fall Day Snow Depth Highest Snow Depth Snow Depth Snow Depth Highest Snow Depth Snow Depth Snow Depth Snow Depth Highest Monthly Snow Depth Snow Dep																				
		Snow Fall Median Median															Mea	n Nui	mber	of Day	VS (1)		
	Mean	s/Medi	ans (1)	1					Extre	mes (2)							ow Fa					Depth esholo	
Month	Snow Fall Mean	Fall	Depth	Depth	Daily Snow	Year	Day	Monthly Snow	Year	Daily Snow	Year	Day	Monthly Mean Snow	Year	0.1	1.0	3.0	5.0	10.0	1	3	5	10
Jan	3.8	2.4	1	#	8.3	1981	30	19.9	1979	14	1982	5	7	1982	3.0	1.8	.6	.2	.0	7.1	5.1	3.0	1.3
Feb	2.7	2.3	#	#	8.0	1986	12	9.5+	1986	10	1979	2	3	1979	2.6	1.4	.2	@	.0	2.7	1.3	.7	.1
Mar	1.5	.8	#	0	5.0	1974	14	5.0+	1975	2	1982	28	#+	1999	1.2	.6	.1	@	.0	.2	.0	.0	.0
Apr	.9	.0	#	0	7.0	1998	13	7.5	1998	1	1982	6	#+	1999	.5	.2	.1	@	.0	.1	.0	.0	.0
May	.3	.0	#	0	6.0	1977	7	8.0	1977	#	1977	15	#	1977	.1	.1	@	@	.0	.0	.0	.0	.0
Jun	.0	.0	#	0	.0	0	0	.0	0	1	1980	8	#	1980	.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	.3	.0	#	0	4.0	1971	30	4.5	1971	2	1971	30	#+	1984	.2	.1	.1	.0	.0	.1	.0	.0	.0
Nov	2.7	.5	#	0	8.0	1973	5	18.5	1973	9	1973	6	2	1978	1.4	.8	.3	.2	.0	1.0	.8	.5	.0
Dec	4.8	3.0	#	#	8.5	1987	31	16.0	1992	8	1983	6	7	1983	3.2	2.0	.4	.1	.0	3.2	1.2	.9	.0
Ann	17.0	9.0	N/A	N/A	8.5	Dec 1987	31	19.9	Jan 1979	14	Jan 1982	5	7+	Dec 1983	12.2	7.0	1.8	.5	.0	14.4	8.4	5.1	1.4

⁺ 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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COOP ID: 350197

Lon: 120°44W

Lat: 44°55N

Station: ANTELOPE 1 NW, OR

Climate Division: OR 6 NWS Call Sign:

				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	7/13	7/07	7/03	6/29	6/25	6/22	6/18	6/14	6/08						
32	6/16	6/11	6/08	6/05	6/02	5/31	5/28	5/24	5/20						
28	5/31	5/24	5/19	5/15	5/11	5/08	5/04	4/29	4/22						
24	5/10	5/01	4/25	4/20	4/15	4/10	4/05	3/30	3/22						
20	4/23	4/09	3/31	3/23	3/15	3/07	2/27	2/18	2/04						
16	3/13	2/28	2/19	2/12	2/05	1/29	1/21	1/12	12/31						
•			Fal	l Freeze Da	tes (Month/D	ay)	•	1	1						
To (E)	Fall Freeze Dates (Month/Day) Probability of earlier date in fall (beginning Aug 1) than indicated(*) Probability of earlier date in fall (beginning Aug 1) than indicated(*)														
remp (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90						
36	8/21	8/28	9/02	9/06	9/10	9/14	9/19	9/24	10/01						
32	9/07	9/14	9/18	9/22	9/25	9/29	10/03	10/07	10/14						
28	9/24	9/30	10/05	10/09	10/13	10/17	10/21	10/26	11/01						
24	10/11	10/18	10/23	10/27	11/01	11/05	11/09	11/14	11/21						
20	10/21	10/30	11/06	11/11	11/17	11/22	11/27	12/04	12/13						
16	11/04	11/13	11/20	11/25	12/01	12/06	12/12	12/18	12/28						
				Freeze F	ree Period										
Temp (F)			Probability	of longer th	an indicated	freeze free p	eriod (Days)								
remp (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90						
36	105	95	88	82	76	70	64	57	48						
32	139	131	125	119	114	109	104	98	89						
28	181	172	165	159	154	148	142	136	126						
24	231	220	212	205	199	192	185	177	166						
20	293	277	265	255	246	237	227	215	199						
16	344	326	315	305	296	288	278	268	253						

^{*} 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 delivery of the serial data and the indicated producting the first of the serial data.

Elevation: 2,840 Feet

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COOP ID: 350197

Lon: 120°44W

Station: ANTELOPE 1 NW, OR

Climate Division: OR 6

Elevation: 2,840 Feet Lat: 44°55N

				Deg	ree Days t	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	1041	826	750	582	400	204	78	72	220	495	809	1040	6517
60	886	686	595	433	256	109	26	22	123	346	659	885	5026
57	793	602	502	348	180	67	12	10	79	264	571	792	4220
55	731	546	440	293	138	45	6	4	55	214	513	730	3715
50	582	412	291	173	58	13	0	0	18	112	376	575	2610
32	153	65	8	2	0	0	0	0	0	1	56	134	419

Base						Coolin	g Degree I	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	135	163	281	411	625	820	1061	1064	805	530	237	117	6249
55	0	0	0	12	50	175	354	355	170	29	5	0	1150
57	0	0	0	6	30	137	298	299	133	17	2	0	922
60	0	0	0	2	13	89	219	218	88	6	0	0	635
65	0	0	0	0	2	34	116	113	35	1	0	0	301
70	0	0	0	0	0	10	46	42	10	0	0	0	108

										Gro	wing	Degre	e Uni	ts (2)										
Base					Growin	g Degree	Units (M	(Ionthly)					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	27	50	103	205	399	597	843	845	590	314	77	25	27	77	180	385	784	1381	2224	3069	3659	3973	4050	4075
45													3	14	51	157	415	862	1550	2240	2682	2869	2895	2897
50	0 0 7 49 144 305 533 535 303 95 6												0	0	7	56	200	505	1038	1573	1876	1971	1977	1977
55	0	0	0	17	73	186	384	382	181	38	0	0	0	0	0	17	90	276	660	1042	1223	1261	1261	1261
60	0	0	0	1	31	95	246	240	88	12	0	0	0	0	0	1	32	127	373	613	701	713	713	713
Base	Growing Degree Units for Corn (Monthly)													Gr	owing D	egree Un	its for C	orn (Acc	umulate	d Month	ly)			
50/86	0/86 8 26 67 139 265 387 537 538 384 215 37												8	34	101	240	505	892	1429	1967	2351	2566	2603	2606

(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

NWS Call Sign:

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