U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

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: KENT, OR **COOP ID: 354411**

Climate Division: OR 6 **NWS Call Sign:** **Elevation: 2,710 Feet** **Lat: 45˚12N** **Lon: 120˚42W**

Temperature (˚F)

Mean (1)				Extremes										Degree Days (1) Base Temp 65		Mean Number of 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	38.8	24.1	31.5	63+	1999	11	39.4	1994	-17	1950	31	16.2	1979	1040	0	.0	.0	4.7	8.2	25.6	1.3
Feb	43.8	26.9	35.4	69	1995	21	43.0	1991	-19	1950	3	23.0	1989	831	0	.0	.0	7.6	4.0	22.4	.6
Mar	51.9	31.0	41.5	77	1960	23	46.5	1986	5	1955	5	36.2	1975	729	0	.0	.0	19.0	.2	19.6	.0
Apr	58.8	34.3	46.6	86	1977	25	51.9	1987	14	1999	29	41.3	1975	553	0	.0	.0	25.4	.0	13.6	.0
May	67.4	39.4	53.4	97	2001	24	58.8	1992	24+	1996	8	49.1	1996	365	5	.0	.2	30.5	.0	6.1	.0
Jun	75.6	45.5	60.6	103	1992	24	67.7	1986	28	1976	2	55.5	1980	178	45	.1	2.2	30.0	.0	.6	.0
Jul	85.1	51.4	68.3	107	1998	27	74.2	1985	32	1971	8	60.0	1993	56	156	1.0	9.5	31.0	.0	@	.0
Aug	85.3	51.8	68.6	108	1998	5	73.1	1986	36	2000	19	63.7	1976	41	152	.8	9.5	31.0	.0	@	.0
Sep	76.3	45.6	61.0	102	1998	2	66.5	1998	24	1970	13	55.1	1985	179	57	@	2.3	30.0	.0	.7	.0
Oct	64.2	37.3	50.8	92	1991	1	58.8	1988	10	1991	30	46.4	1984	444	2	.0	.1	28.4	.1	7.8	.0
Nov	47.6	29.7	38.7	77	1988	1	44.7	1999	-10+	1985	25	26.6	1985	790	0	.0	.0	11.9	2.2	19.4	.2
Dec	39.0	23.8	31.4	64+	1989	5	36.7+	1980	-18+	1972	9	19.3	1985	1041	0	.0	.0	4.5	8.1	26.6	1.2
Ann	61.2	36.7	49.0	108	Aug 1998	5	74.2	Jul 1985	-19	Feb 1950	3	16.2	Jan 1979	6247	417	1.9	23.8	254.0	22.8	142.4	3.3

\+ Also occurred on an earlier date(s)

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

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

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1948-2001

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

Issue Date: February 2004

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Precipitation (inches)

Precipitation Totals

Month	Means/ Medians(1) Mean	Means/ Medians(1) Median	Extremes Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year
Jan	1.46	1.42	1.61	1956	15	3.85	1995	.26	1984
Feb	1.23	1.15	1.53	1986	12	3.10	1986	.18	1988
Mar	1.18	1.00	.65	1989	6	2.42	1983	.22	1977
Apr	1.09	1.04	1.45	1988	21	2.53	1978	.07	1977
May	1.14	.81	1.28	1998	30	4.63	1998	.10	1975
Jun	.85	.75	1.11	1958	3	1.94	1984	.07	1974
Jul	.49	.23	.99	1987	18	2.90	1978	.00+	1988
Aug	.47	.24	.79	1975	18	2.60	1976	.00+	2000
Sep	.56	.50	.83	1996	15	1.82	1986	.00+	1999
Oct	.89	.78	1.12	1994	28	2.63	1982	.00+	1988
Nov	1.66	1.57	2.08	1996	19	3.53	1996	.40	1993
Dec	1.52	1.03	1.55	1964	23	5.69	1981	.08	1976
Ann	12.54	12.02	2.08	Nov 1996	19	5.69	Dec 1981	.00+	Aug 2000

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	8.3	4.2	.5	.0
Feb	8.4	3.9	.3	@
Mar	9.6	4.3	.2	.0
Apr	9.0	3.4	.4	@
May	7.9	3.3	.4	.1
Jun	5.9	2.5	.4	@
Jul	3.2	1.3	.1	.0
Aug	3.3	1.4	.1	.0
Sep	4.4	1.7	.2	.0
Oct	6.4	2.6	.2	@
Nov	11.2	5.5	.5	.1
Dec	8.6	4.6	.8	.0
Ann	86.2	38.7	4.1	.2

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	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	.40	.54	.75	.94	1.12	1.31	1.51	1.76	2.08	2.58	3.05
Feb	.29	.41	.59	.75	.91	1.08	1.26	1.49	1.78	2.25	2.69
Mar	.34	.46	.62	.77	.91	1.06	1.22	1.42	1.66	2.05	2.42
Apr	.19	.29	.45	.60	.75	.91	1.10	1.32	1.63	2.11	2.58
May	.16	.26	.42	.58	.75	.93	1.14	1.39	1.74	2.31	2.85
Jun	.09	.16	.28	.39	.52	.66	.83	1.04	1.32	1.78	2.24
Jul	.00	.00	.03	.10	.19	.29	.42	.59	.84	1.26	1.69
Aug	.00	.00	.00	.03	.11	.22	.36	.54	.81	1.29	1.78
Sep	.00	.00	.06	.17	.29	.41	.55	.72	.95	1.32	1.71
Oct	.00	.11	.28	.42	.56	.72	.90	1.11	1.40	1.87	2.32
Nov	.47	.63	.86	1.07	1.28	1.49	1.72	2.00	2.36	2.92	3.44
Dec	.17	.28	.50	.71	.94	1.19	1.49	1.86	2.36	3.20	4.01
Ann	7.84	8.71	9.84	10.71	11.50	12.27	13.08	13.98	15.08	16.70	18.12

\+ Also occurred on an earlier date(s)
\# 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: 1948-2001
(3) Derived from 1971-2000 serially complete daily data

Complete documentation available from:
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Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	5.4	3.0	2	1
Feb	3.7	2.1	1	#
Mar	1.6	.5	#	#
Apr	.6	.0	#	0
May	.0	.0	0	0
Jun	.0	.0	0	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	.0	.0	0	0
Oct	.3	.0	#	0
Nov	2.9	1.0	#	#
Dec	2.8	2.2	1	#
Ann	17.3	8.8	N/A	N/A

Extremes (2)

Month	Highest Daily Snow Fall	Year	Day	Highest Monthly Snow Fall	Year	Highest Daily Snow Depth	Year	Day	Highest Monthly Mean Snow Depth	Year
Jan	11.0	1998	11	18.0	1979	16	1993	19	9	1979
Feb	14.0	1986	12	14.5+	1993	14	1986	12	3	1993
Mar	6.0	1996	5	7.5	1996	8	1993	1	1	1993
Apr	4.0	1975	4	8.0	1975	4	1975	16	#+	1999
May	.0	0	0	.0	0	0	0	0	0	0
Jun	.0	0	0	.0	0	0	0	0	0	0
Jul	.0	0	0	.0	0	0	0	0	0	0
Aug	.0	0	0	.0	0	0	0	0	0	0
Sep	.0	0	0	.0	0	0	0	0	0	0
Oct	7.0	1991	29	7.0	1991	7	1991	29	1	1991
Nov	10.0	1996	19	13.3	1977	12	1977	23	2	1985
Dec	5.5	1992	2	10.8	1996	10	1985	2	7	1985
Ann	14.0	Feb 1986	12	18.0	Jan 1979	16	Jan 1993	19	9	Jan 1979

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	2.8	2.3	.7	.2	.1
Feb	2.1	1.5	.3	.1	@
Mar	1.1	.8	.1	.1	.0
Apr	.3	.3	.1	.0	.0
May	.0	.0	.0	.0	.0
Jun	.0	.0	.0	.0	.0
Jul	.0	.0	.0	.0	.0
Aug	.0	.0	.0	.0	.0
Sep	.0	.0	.0	.0	.0
Oct	.1	.1	@	@	.0
Nov	1.3	1.0	.3	.2	@
Dec	2.6	2.0	.3	.1	.0
Ann	10.3	8.0	1.8	.7	.1

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	6.9	4.1	2.7	1.1
Feb	3.6	1.6	.8	.4
Mar	1.2	.3	.2	.0
Apr	.3	.1	.0	.0
May	.0	.0	.0	.0
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.0	.0	.0	.0
Oct	.2	.1	.1	.0
Nov	2.3	1.2	.7	.1
Dec	4.4	1.2	.4	.0
Ann	18.9	8.6	4.9	1.6

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

@ 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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Freeze Data

Spring Freeze Dates (Month/Day)

Temp (F)	Probability of later date in spring (thru Jul 31) than indicated(*)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	7/06	6/29	6/25	6/21	6/17	6/13	6/09	6/04	5/29
32	6/17	6/10	6/05	6/01	5/28	5/24	5/20	5/15	5/09
28	5/25	5/19	5/15	5/12	5/08	5/05	5/01	4/27	4/21
24	5/08	4/25	4/15	4/07	3/30	3/23	3/15	3/05	2/20
20	4/06	3/24	3/15	3/07	2/27	2/20	2/12	2/03	1/21
16	3/19	3/05	2/23	2/15	2/06	1/29	1/20	1/09	12/23

Fall Freeze Dates (Month/Day)

Temp (F)	Probability of earlier date in fall (beginning Aug 1) than indicated(*)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	9/02	9/07	9/11	9/15	9/18	9/21	9/25	9/29	10/05
32	9/16	9/22	9/26	9/30	10/04	10/07	10/11	10/15	10/22
28	10/04	10/09	10/13	10/17	10/20	10/23	10/27	10/31	11/06
24	10/17	10/25	10/30	11/04	11/08	11/12	11/17	11/22	11/30
20	10/28	11/05	11/11	11/16	11/20	11/25	11/30	12/06	12/14
16	11/10	11/19	11/25	11/30	12/05	12/10	12/15	12/22	1/01

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	117	109	102	97	92	88	82	76	68
32	153	144	138	133	128	123	117	111	102
28	188	180	174	169	164	159	154	148	140
24	270	254	242	231	222	212	202	190	173
20	310	295	284	274	265	256	247	235	220
16	>365	335	321	311	302	293	284	274	260

***** 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

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Degree Days to Selected Base Temperatures (˚F)

Base	Heating Degree Days (1)												
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	1040	831	729	553	365	178	56	41	179	444	790	1041	6247
60	885	691	574	406	229	91	18	11	94	297	640	886	4822
57	792	607	481	321	161	53	8	3	58	219	552	793	4048
55	732	551	420	267	123	35	4	1	39	173	496	731	3572
50	588	420	273	152	51	9	0	0	12	82	360	583	2530
32	177	78	7	0	0	0	0	0	0	0	53	155	470

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	160	172	300	437	663	857	1123	1134	868	581	253	137	6685
55	2	0	0	14	72	201	413	422	217	41	6	0	1388
57	0	0	0	8	48	160	355	362	175	25	2	0	1135
60	0	0	0	3	23	108	272	276	122	10	0	0	814
65	0	0	0	0	5	45	156	152	57	2	0	0	417
70	0	0	0	0	0	14	74	66	20	0	0	0	174

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	26	42	97	203	409	610	869	875	619	336	74	23	26	68	165	368	777	1387	2256	3131	3750	4086	4160	4183
45	2	12	37	105	266	460	714	720	471	202	27	1	2	14	51	156	422	882	1596	2316	2787	2989	3016	3017
50	0	0	2	50	152	315	559	565	331	103	6	0	0	0	2	52	204	519	1078	1643	1974	2077	2083	2083
55	0	0	0	15	77	193	406	411	204	47	0	0	0	0	0	15	92	285	691	1102	1306	1353	1353	1353
60	0	0	0	2	32	99	265	270	110	16	0	0	0	0	0	2	34	133	398	668	778	794	794	794
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	7	20	63	137	271	383	544	551	393	222	39	6	7	27	90	227	498	881	1425	1976	2369	2591	2630	2636

(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

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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

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

c. Snow Tables
   1. Snow Climatology
   2. Cooperative Summary of the Day

d. Freeze Data Table
   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