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: MC KENZIE BRIDGE R S, OR **COOP ID: 355362**

Climate Division: OR 4 **NWS Call Sign:** **Elevation: 1,478 Feet** **Lat: 44˚11N** **Lon: 122˚07W**

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	43.9	29.7	36.8	66+	1981	22	41.8	1981	-7	1950	31	30.9	1979	875	0	.0	.0	3.8	.8	23.9	.0
Feb	49.3	30.9	40.1	76	1968	28	46.1	1991	3	1989	5	31.8	1989	697	0	.0	.0	12.6	.4	19.3	.0
Mar	56.1	33.2	44.7	83	1960	21	49.1+	1986	13	1971	1	38.6	1971	631	0	.0	.0	24.2	.0	17.1	.0
Apr	63.2	36.3	49.8	94	1987	26	56.0	1987	21	1968	13	44.0	1975	457	0	.0	.2	27.3	.0	9.8	.0
May	71.5	40.8	56.2	106+	1983	29	61.4	1992	22	1954	1	50.9	1977	283	7	.2	1.9	30.6	.0	2.9	.0
Jun	78.7	46.0	62.4	108	1961	15	67.0+	1992	23	1980	2	57.9	1980	122	42	.3	4.5	30.0	.0	.4	.0
Jul	86.4	49.7	68.1	107	1956	19	72.4	1998	31	1954	28	63.2	1993	30	125	1.5	11.1	31.0	.0	.0	.0
Aug	86.2	48.8	67.5	111	1972	7	72.1	1986	28	1957	28	63.3	1980	40	118	1.9	11.2	31.0	.0	.1	.0
Sep	78.2	43.8	61.0	108+	1988	2	65.4	1974	25	1965	18	55.1	1985	160	41	.3	3.8	29.9	.0	1.2	.0
Oct	63.7	37.7	50.7	98	1952	6	55.9	1979	18	1971	29	48.1	1971	443	0	.0	.1	29.6	.0	6.7	.0
Nov	49.6	33.8	41.7	79	1962	1	46.9	1995	3	1955	15	34.5	1985	698	0	.0	.0	14.3	.4	15.6	.0
Dec	42.4	29.9	36.2	66	1962	6	40.6	1981	-8	1972	8	29.7	1990	894	0	.0	.0	2.9	1.2	23.2	.1
Ann	64.1	38.4	51.3	111	Aug 1972	7	72.4	Jul 1998	-8	Dec 1972	8	29.7	Dec 1990	5330	333	4.2	32.8	267.2	2.8	120.2	.1

\+ 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	9.24	9.43	6.58	1999	21	16.45	1972	.86	1985
Feb	7.99	7.41	5.28	1984	13	15.08	1999	1.91	1973
Mar	7.11	6.54	3.07	2000	20	12.37	1989	1.75	1992
Apr	5.75	5.55	3.38	1990	27	11.32	1996	2.29	1987
May	4.13	3.60	4.44	1999	12	7.92	1977	.40	1992
Jun	2.85	2.91	2.20	1981	8	6.76	1984	.55	1977
Jul	1.00	.73	2.69	1987	18	4.37	1987	.01	1972
Aug	1.42	.74	1.65	1999	7	5.03	1976	.00	1988
Sep	2.71	2.40	2.81	1963	16	8.58	1986	.00+	1993
Oct	4.97	4.71	3.30	2000	23	10.08	1996	.14	1987
Nov	10.89	10.39	4.80	1961	22	21.06	1988	2.91	1976
Dec	10.68	10.31	5.56	1995	31	26.55	1996	1.52	1985
Ann	68.74	68.21	6.58	Jan 1999	21	26.55	Dec 1996	.00+	Sep 1993

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	13.9	11.0	4.9	2.4
Feb	13.0	10.8	4.1	1.8
Mar	15.4	11.9	3.7	1.1
Apr	13.0	9.9	3.5	1.1
May	9.8	6.7	2.3	.6
Jun	7.5	5.4	1.8	.5
Jul	4.0	2.2	.4	.1
Aug	4.6	3.0	1.0	.3
Sep	6.1	4.5	1.7	.5
Oct	7.3	5.7	2.8	1.0
Nov	13.7	11.6	5.1	1.8
Dec	14.7	12.4	5.9	3.0
Ann	123.0	95.1	37.2	14.2

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	2.57	3.45	4.78	5.94	7.07	8.26	9.57	11.13	13.14	16.31	19.26
Feb	2.75	3.51	4.61	5.54	6.42	7.34	8.34	9.50	11.00	13.30	15.43
Mar	2.72	3.38	4.33	5.11	5.86	6.62	7.44	8.39	9.60	11.46	13.16
Apr	2.36	2.89	3.63	4.24	4.82	5.40	6.03	6.75	7.67	9.07	10.34
May	1.12	1.51	2.11	2.63	3.15	3.68	4.28	4.98	5.90	7.34	8.69
Jun	.77	1.04	1.45	1.81	2.17	2.54	2.95	3.43	4.07	5.06	5.99
Jul	.04	.09	.19	.32	.48	.66	.89	1.20	1.62	2.37	3.12
Aug	.00	.03	.13	.28	.48	.75	1.11	1.61	2.36	3.71	5.11
Sep	.00	.00	.45	.89	1.36	1.90	2.54	3.36	4.48	6.38	8.26
Oct	.68	1.08	1.79	2.48	3.21	4.01	4.94	6.07	7.61	10.13	12.55
Nov	3.58	4.61	6.13	7.42	8.66	9.95	11.35	13.00	15.11	18.39	21.42
Dec	2.68	3.68	5.24	6.62	7.98	9.41	11.01	12.91	15.40	19.33	23.01
Ann	46.87	51.03	56.41	60.51	64.18	67.74	71.42	75.51	80.49	87.74	94.05

\+ 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

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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	6.7	.0	1	0
Feb	2.4	.0	1	0
Mar	1.9	.0	1	0
Apr	.7	.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	.1	.0	#	0
Nov	.6	.0	#	0
Dec	4.2	.7	1	0
Ann	16.6	.7	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	15.0	1971	14	35.5	1971	24	1971	14	15	1993
Feb	18.0	1971	25	18.0	1971	25	1989	2	12	1989
Mar	7.5	1972	1	14.0	1971	23	1971	1	10	1971
Apr	13.1	1980	7	13.1	1980	1	1980	7	#+	1982
May	.5	2000	11	.5	2000	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	2.0	1971	30	2.0	1971	1	1971	30	#	1971
Nov	9.0	1973	6	9.0	1973	7+	1994	21	5	1994
Dec	9.0	1974	22	31.5	1971	11	1971	15	5	1971
Ann	18.0	Feb 1971	25	35.5	Jan 1971	25	Feb 1989	2	15	Jan 1993

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	1.6	1.4	.7	.6	.2
Feb	1.5	1.4	.7	.6	.1
Mar	.6	.5	.3	.2	.0
Apr	.2	.1	@	@	@
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	@	@	.0	.0	.0
Nov	.1	.1	.1	.1	.0
Dec	1.9	1.3	.6	.2	.0
Ann	5.9	4.8	2.4	1.7	.3

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	5.1	3.3	2.1	.3
Feb	1.6	.9	.4	.1
Mar	1.2	1.1	.9	.6
Apr	.1	.0	.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	.1	.0	.0	.0
Nov	.2	.2	.1	.0
Dec	.4	.4	.2	.0
Ann	8.7	5.9	3.7	1.0

+ 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	7/04	6/25	6/19	6/13	6/08	6/03	5/29	5/23	5/14
32	6/10	6/02	5/28	5/23	5/19	5/15	5/10	5/05	4/27
28	5/14	5/07	5/02	4/27	4/23	4/19	4/14	4/09	4/02
24	4/25	4/12	4/02	3/24	3/16	3/07	2/26	2/14	1/23
20	3/07	2/22	2/13	2/05	1/28	1/19	1/09	12/25	0/00
16	2/17	2/05	1/28	1/20	1/11	1/01	12/14	0/00	0/00

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	8/23	8/30	9/04	9/08	9/12	9/16	9/20	9/25	10/02
32	9/06	9/14	9/20	9/25	9/30	10/05	10/10	10/16	10/24
28	9/27	10/06	10/13	10/19	10/25	10/31	11/06	11/13	11/22
24	10/18	10/31	11/10	11/18	11/26	12/04	12/13	12/26	0/00
20	11/10	11/23	12/03	12/12	12/20	12/30	1/10	2/01	0/00
16	11/29	12/13	12/23	1/02	1/13	1/27	0/00	0/00	0/00

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	132	119	110	102	95	87	79	70	57
32	170	157	148	141	133	126	118	109	97
28	220	208	199	192	185	177	170	161	149
24	>365	301	281	266	253	241	228	213	193
20	>365	>365	>365	333	317	304	293	280	264
16	>365	>365	>365	>365	>365	>365	334	317	299

***** 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)

Heating Degree Days (1)

Base Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	875	697	631	457	283	122	30	40	160	443	698	894	5330
60	720	557	476	315	155	46	5	8	73	291	548	739	3933
57	627	473	384	236	97	20	1	2	39	205	458	646	3188
55	565	417	324	188	67	10	0	1	23	155	401	584	2735
50	412	285	188	96	19	1	0	0	4	58	263	430	1756
32	34	15	1	0	0	0	0	0	0	0	12	38	100

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	182	242	393	533	747	911	1118	1101	870	580	303	167	7147
55	0	0	3	31	101	231	405	389	203	22	2	0	1387
57	0	0	1	19	70	180	344	328	159	11	0	0	1112
60	0	0	0	8	34	116	255	241	103	3	0	0	760
65	0	0	0	0	7	42	125	118	41	0	0	0	333
70	0	0	0	0	0	9	43	39	11	0	0	0	102

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	28	66	159	294	499	670	859	857	631	336	82	24	28	94	253	547	1046	1716	2575	3432	4063	4399	4481	4505
45	4	12	59	169	345	520	704	702	481	191	20	0	4	16	75	244	589	1109	1813	2515	2996	3187	3207	3207
50	0	0	15	78	203	370	549	547	333	81	0	0	0	0	15	93	296	666	1215	1762	2095	2176	2176	2176
55	0	0	0	29	98	226	395	392	197	21	0	0	0	0	0	29	127	353	748	1140	1337	1358	1358	1358
60	0	0	0	4	38	108	246	238	88	4	0	0	0	0	0	4	42	150	396	634	722	726	726	726
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	3	43	122	210	335	425	540	536	418	221	37	0	3	46	168	378	713	1138	1678	2214	2632	2853	2890	2890

(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

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