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: ROSEBURG KQEN, OR **COOP ID: 357331**

Climate Division: OR 3 **NWS Call Sign:** **Elevation: 425 Feet** **Lat: 43˚13N** **Lon: 123˚23W**

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	50.1	34.8	42.5	71	1970	23	46.7	1998	9	1980	29	36.2	1979	699	0	.0	.0	15.5	.4	9.7	.0
Feb	54.9	36.5	45.7	78	1995	20	51.3	1995	3+	1989	6	36.8	1989	540	0	.0	.0	20.9	.3	6.7	.0
Mar	59.6	38.4	49.0	82+	1994	28	53.5	1993	24	1985	3	44.7	1975	496	0	.0	.0	28.1	.0	4.3	.0
Apr	64.6	40.7	52.7	95	1998	30	57.0+	1989	26	1968	13	46.6	1975	373	1	.0	.1	29.3	.0	1.9	.0
May	70.9	45.5	58.2	102	2001	23	64.2	1992	29	1972	2	55.0	1991	222	11	.0	1.0	31.0	.0	.1	.0
Jun	77.7	50.5	64.1	106	1992	23	68.1	1992	36+	1977	5	59.8	1976	85	57	.1	2.7	30.0	.0	.0	.0
Jul	85.6	54.7	70.2	109	1998	28	74.7	1996	41+	1977	5	65.3	1993	19	178	1.3	8.6	31.0	.0	.0	.0
Aug	86.3	54.7	70.5	108+	1978	8	75.1	1977	41	1973	23	66.8	1975	11	181	1.2	9.3	31.0	.0	.0	.0
Sep	80.9	49.9	65.4	105	1998	1	69.0	1974	34+	1970	15	61.1+	1985	72	83	.4	5.1	30.0	.0	.0	.0
Oct	69.1	43.9	56.5	101	1991	1	60.9	1988	23+	1971	30	52.7	1972	269	5	@	.7	30.6	.0	.6	.0
Nov	55.7	39.6	47.7	78	1975	3	52.4	1999	12	1978	10	41.5	1985	520	0	.0	.0	23.3	@	3.5	.0
Dec	48.9	35.1	42.0	73+	1980	26	46.5	1995	3+	1990	22	35.3	1990	712	0	.0	.0	13.9	.9	8.7	.0
Ann	67.0	43.7	55.4	109	Jul 1998	28	75.1	Aug 1977	3+	Dec 1990	22	35.3	Dec 1990	4018	516	3.0	27.5	314.6	1.6	35.5	.0

+ 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: 1965-2001

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

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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	4.97	5.21	2.63	1969	26	9.92	1995	.58	1985
Feb	4.10	3.51	2.51	1984	13	9.75	1986	1.02	1973
Mar	3.81	3.49	1.73	1972	1	6.99	1983	1.25	2000
Apr	2.75	2.68	2.43	2000	13	5.61	1993	.88	1977
May	1.82	1.55	1.24	1996	14	6.33	1998	.27	1982
Jun	.92	.68	1.11	1980	22	2.67	1992	.13	1974
Jul	.44	.17	1.60	1987	21	2.98	1987	.00+	1999
Aug	.67	.24	1.30	1977	24	3.30	1976	.00+	2000
Sep	1.07	.78	1.27	1981	27	3.70	1986	.00+	1999
Oct	2.27	2.10	2.02	1982	23	4.66	1979	.06	1987
Nov	5.42	4.43	4.35	1996	19	15.91	1973	1.09	1976
Dec	5.42	5.03	3.53	1996	8	15.77	1996	.84	1976
Ann	33.66	32.69	4.35	Nov 1996	19	15.91	Nov 1973	.00+	Aug 2000

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	18.0	10.8	3.2	.9
Feb	16.6	9.9	2.3	.4
Mar	17.1	10.2	2.1	.2
Apr	14.5	8.0	1.1	.3
May	10.5	5.7	.7	.1
Jun	6.3	3.0	.4	.1
Jul	2.3	1.2	.2	.1
Aug	3.3	1.9	.4	.1
Sep	5.1	2.9	.6	.1
Oct	10.2	6.1	1.3	.3
Nov	18.7	12.0	3.1	.9
Dec	18.3	11.5	3.3	.9
Ann	140.9	83.2	18.7	4.4

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	1.28	1.74	2.47	3.10	3.73	4.39	5.13	6.00	7.14	8.94	10.62
Feb	1.23	1.62	2.21	2.71	3.20	3.70	4.26	4.92	5.77	7.09	8.32
Mar	1.56	1.91	2.40	2.80	3.18	3.57	3.99	4.47	5.08	6.01	6.85
Apr	.97	1.23	1.60	1.92	2.22	2.53	2.87	3.27	3.77	4.55	5.27
May	.33	.49	.75	1.00	1.25	1.53	1.84	2.21	2.72	3.52	4.29
Jun	.11	.18	.31	.44	.57	.72	.90	1.12	1.42	1.91	2.39
Jul	.00	.00	.00	.05	.12	.22	.34	.51	.76	1.21	1.66
Aug	.00	.00	.00	.04	.12	.25	.44	.71	1.13	1.91	2.74
Sep	.00	.00	.12	.26	.44	.66	.93	1.28	1.78	2.66	3.54
Oct	.24	.41	.73	1.04	1.38	1.76	2.21	2.77	3.54	4.80	6.03
Nov	1.38	1.89	2.68	3.38	4.07	4.79	5.60	6.55	7.81	9.78	11.63
Dec	1.15	1.65	2.45	3.17	3.89	4.67	5.54	6.58	7.96	10.17	12.25
Ann	21.41	23.68	26.64	28.93	30.98	32.99	35.08	37.41	40.27	44.47	48.14

\+ 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: 1965-2001
(3) Derived from 1971-2000 serially complete daily data

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Snow (inches)

Snow Totals

Means/Medians (1)

Extremes (2)

Mean Number of Days (1)

Snow Fall >= Thresholds

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	.6	.0	#	0	5.8	1971	14	11.1	1971	6	1971	14	#	1971	.2	.2	.1	.1	.0	.1	.1	@	.0
Feb	.6	.0	#	0	3.5	1971	28	6.8	1989	6	1989	3	1	1989	.4	.2	.2	.0	.0	.4	.3	@	.0
Mar	.0	.0	#	0	.5	1974	3	.5	1974	1	1974	3	#	1974	.1	.0	.0	.0	.0	@	.0	.0	.0
Apr	#	.0	0	0	#	1972	15	#	1972	#	1979	17	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
May	.0	.0	#	0	.0	0	0	.0	0	0	0	0	#	1989	.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	#	1971	28	#	1971	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.1	.0	0	0	1.0	1985	22	1.0	1985	0	0	0	0	0	.1	.1	.0	.0	.0	.0	.0	.0	.0
Dec	.6	.0	#	0	4.0	1983	24	6.3	1972	1	1975	11	#	1975	.3	.2	.1	.0	.0	@	.0	.0	.0
Ann	1.9	.0	N/A	N/A	5.8	Jan 1971	14	11.1	Jan 1971	6+	Feb 1989	3	1	Feb 1989	1.1	.7	.4	.1	.0	.5	.4	.0	.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	5/24	5/16	5/10	5/05	5/01	4/26	4/21	4/15	4/07
32	5/02	4/22	4/15	4/09	4/03	3/29	3/23	3/16	3/06
28	3/23	3/10	2/28	2/20	2/13	2/05	1/27	1/17	1/01
24	2/20	2/07	1/28	1/18	1/08	12/26	0/00	0/00	0/00
20	2/03	1/20	1/08	12/25	0/00	0/00	0/00	0/00	0/00
16	1/12	12/22	0/00	0/00	0/00	0/00	0/00	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	10/02	10/09	10/14	10/18	10/22	10/25	10/30	11/03	11/10
32	10/11	10/21	10/29	11/05	11/11	11/17	11/24	12/01	12/12
28	11/02	11/17	11/28	12/08	12/17	12/26	1/06	1/19	2/13
24	11/23	12/11	12/26	1/09	1/25	2/16	0/00	0/00	0/00
20	12/12	12/29	1/13	1/30	0/00	0/00	0/00	0/00	0/00
16	12/17	1/14	0/00	0/00	0/00	0/00	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	204	193	186	179	173	167	161	153	143
32	258	246	236	228	221	214	206	196	183
28	>365	361	330	313	299	287	274	260	240
24	>365	>365	>365	>365	>365	>365	>365	328	298
20	>365	>365	>365	>365	>365	>365	>365	>365	>365
16	>365	>365	>365	>365	>365	>365	>365	>365	>365

***** 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	699	540	496	373	222	85	19	11	72	269	520	712	4018
60	544	400	343	233	107	24	2	0	21	141	375	557	2747
57	451	321	258	160	60	8	0	0	7	83	293	464	2105
55	390	269	204	120	37	3	0	0	3	54	242	404	1726
50	248	156	99	46	7	0	0	0	0	13	136	263	968
32	6	1	0	0	0	0	0	0	0	0	2	9	18

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	330	385	527	618	813	962	1182	1194	1001	759	472	320	8563
55	1	9	18	48	136	275	469	481	314	100	21	3	1875
57	0	5	9	28	98	220	407	419	258	67	13	1	1525
60	0	0	2	11	52	146	317	326	181	31	5	0	1071
65	0	0	0	1	11	57	178	181	83	5	0	0	516
70	0	0	0	0	1	13	78	73	26	0	0	0	191

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	123	183	276	373	560	716	919	927	748	501	234	118	123	306	582	955	1515	2231	3150	4077	4825	5326	5560	5678
45	43	78	138	231	406	566	764	772	598	349	117	42	43	121	259	490	896	1462	2226	2998	3596	3945	4062	4104
50	4	25	50	113	254	416	609	617	448	204	43	7	4	29	79	192	446	862	1471	2088	2536	2740	2783	2790
55	0	0	11	43	133	273	454	462	301	95	11	0	0	0	11	54	187	460	914	1376	1677	1772	1783	1783
60	0	0	0	8	58	145	301	309	173	30	0	0	0	0	0	8	66	211	512	821	994	1024	1024	1024
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	42	83	150	219	330	430	574	577	462	291	96	37	42	125	275	494	824	1254	1828	2405	2867	3158	3254	3291

(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:
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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