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: EUGENE MAHLON SWEET AP, OR **COOP ID: 352709**

Climate Division: OR 2 **NWS Call Sign: EUG** **Elevation: 353 Feet** **Lat: 44˚08N** **Lon: 123˚13W**

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	46.5	33.0	39.8	67	1975	17	45.0	1975	-4	1957	27	31.2	1979	769	0	.0	.0	12.2	1.3	13.7	.0
Feb	50.7	34.9	42.8	72	1995	19	48.4	1991	-3	1950	3	35.5	1989	615	0	.0	.0	17.3	.5	9.3	.0
Mar	55.9	36.7	46.3	77+	1995	30	50.1	1986	20	1956	6	41.3	1971	564	0	.0	.0	26.9	.0	5.9	.0
Apr	60.6	38.9	49.8	86+	1957	29	55.2	1989	27+	1983	13	44.7	1972	443	0	.0	.0	29.1	.0	2.5	.0
May	66.8	42.7	54.8	93	1987	8	59.7	1992	28	1954	1	50.9	1977	308	5	.0	.2	31.0	.0	.5	.0
Jun	73.3	47.0	60.2	102	1992	22	64.7	1992	32	1976	13	55.8	1971	152	21	@	1.0	30.0	.0	@	.0
Jul	81.5	50.8	66.2	105+	1998	27	69.9	1990	39+	1986	5	62.1	1993	45	95	.4	5.9	31.0	.0	.0	.0
Aug	81.9	50.8	66.4	108	1981	9	69.3	1986	38+	1969	29	62.2	1973	31	88	.6	5.7	31.0	.0	.0	.0
Sep	76.6	46.7	61.7	103	1988	2	66.6	1974	31+	2000	23	57.4	1972	115	32	@	2.5	30.0	.0	.2	.0
Oct	64.6	40.5	52.6	94	1980	2	56.8	1988	19	1971	28	47.9	1971	370	1	.0	.1	30.3	.0	2.3	.0
Nov	52.1	37.2	44.7	76	1975	3	50.3	1995	12	1978	13	37.2	1985	594	0	.0	.0	20.5	.2	7.4	.0
Dec	45.7	33.3	39.5	68	1979	17	44.9	1974	-12	1972	8	32.6	1972	780	0	.0	.0	10.5	1.4	12.5	.1
Ann	63.0	41.0	52.1	108	Aug 1981	9	69.9	Jul 1990	-12	Dec 1972	8	31.2	Jan 1979	4786	242	1.0	15.4	299.8	3.4	54.3	.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: 1939-2001

(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	7.65	7.21	4.74	1974	15	15.36	1995	.31	1985
Feb	6.35	5.37	3.87	1961	10	16.89	1996	1.59	1988
Mar	5.80	5.16	2.21	1963	29	12.46	1974	1.68	1978
Apr	3.66	3.10	2.05	1982	13	7.85	1993	.49	1985
May	2.66	2.63	1.94	1972	16	6.92	1993	.14	1992
Jun	1.53	1.25	1.56	1952	28	3.88	1984	.07	1987
Jul	.64	.42	2.41	1987	18	3.00	1987	.00+	1998
Aug	.99	.76	1.88	1979	21	3.46	1979	.00+	2000
Sep	1.54	1.12	1.34	1981	26	4.65	1986	.00+	1999
Oct	3.35	2.91	3.70	1994	31	8.12	1979	.11	1988
Nov	8.44	8.25	4.18	1960	24	20.48	1973	1.33	1976
Dec	8.29	7.43	4.89	1981	5	17.63	1981	1.24	1976
Ann	50.90	51.31	4.89	Dec 1981	5	20.48	Nov 1973	.00+	Aug 2000

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	17.1	11.9	5.3	2.1
Feb	15.8	11.2	4.3	1.4
Mar	17.3	12.0	4.1	1.2
Apr	14.2	8.9	2.1	.6
May	10.8	7.1	1.4	.3
Jun	7.4	4.1	.8	.2
Jul	3.2	1.5	.3	@
Aug	4.1	2.1	.6	.2
Sep	5.9	3.7	1.0	.2
Oct	10.9	7.0	2.0	.6
Nov	17.7	13.2	6.2	2.5
Dec	17.3	12.6	5.7	2.3
Ann	141.7	95.3	33.8	11.6

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	1.53	2.22	3.35	4.37	5.41	6.53	7.79	9.31	11.31	14.53	17.58
Feb	1.83	2.43	3.34	4.13	4.90	5.70	6.59	7.63	8.99	11.11	13.09
Mar	2.02	2.57	3.37	4.04	4.68	5.34	6.06	6.90	7.97	9.63	11.15
Apr	.88	1.22	1.76	2.23	2.71	3.21	3.77	4.44	5.31	6.70	8.00
May	.52	.75	1.15	1.51	1.87	2.26	2.71	3.24	3.96	5.10	6.18
Jun	.20	.32	.53	.75	.97	1.22	1.51	1.87	2.35	3.14	3.91
Jul	.00	.00	.08	.17	.28	.41	.57	.77	1.07	1.57	2.07
Aug	.00	.00	.04	.14	.29	.49	.76	1.13	1.69	2.67	3.70
Sep	.00	.00	.28	.53	.80	1.11	1.47	1.92	2.53	3.57	4.60
Oct	.42	.68	1.16	1.63	2.12	2.67	3.31	4.09	5.16	6.92	8.62
Nov	2.25	3.05	4.27	5.34	6.39	7.50	8.72	10.17	12.07	15.04	17.82
Dec	1.87	2.64	3.86	4.95	6.04	7.20	8.50	10.06	12.10	15.36	18.42
Ann	35.12	38.14	42.03	44.99	47.63	50.19	52.85	55.78	59.36	64.56	69.07

\+ 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: 1939-2001
(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	1.5	.0	#	0	7.3	1971	13	18.9	1971	11	1971	14	1+	1993	.8	.4	.2	.1	.0	1.0	.4	.1	@
Feb	1.4	.0	#	0	5.7	1993	19	8.8	1990	5	1993	20	1	1989	.9	.4	.2	@	.0	.8	.3	@	.0
Mar	.1	#	#	0	1.0	1976	19	1.3	1976	1	1971	1	#	1971	.2	.0	.0	.0	.0	@	.0	.0	.0
Apr	#	#	0	0	#	1995	14	#+	1995	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
May	#	.0	#	0	#	1984	5	#+	1984	0	0	0	#	1993	.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	27	#	1971	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.2	.0	0	0	1.9	1985	30	2.3	1985	#+	1985	30	0	0	.2	.1	.0	.0	.0	.0	.0	.0	.0
Dec	1.8	.0	#	0	7.2	1985	2	11.9	1985	7	1972	7	2	1972	1.0	.6	.2	@	.0	1.4	.7	.3	.0
Ann	5.0	#	N/A	N/A	7.3	Jan 1971	13	18.9	Jan 1971	11	Jan 1971	14	2	Dec 1972	3.1	1.5	.6	.1	.0	3.2	1.4	.4	.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	6/11	6/04	5/30	5/26	5/22	5/17	5/13	5/08	5/01
32	5/24	5/13	5/05	4/28	4/22	4/16	4/09	4/01	3/22
28	4/06	3/28	3/21	3/16	3/10	3/05	2/27	2/21	2/11
24	2/25	2/15	2/07	1/31	1/24	1/18	1/10	1/01	12/14
20	2/11	2/01	1/25	1/18	1/11	1/01	0/00	0/00	0/00
16	1/25	1/11	12/29	12/13	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	9/20	9/25	9/29	10/03	10/06	10/09	10/12	10/16	10/21
32	9/30	10/07	10/11	10/16	10/19	10/23	10/27	11/01	11/08
28	10/19	10/31	11/09	11/16	11/23	11/29	12/07	12/15	12/27
24	11/05	11/18	11/27	12/05	12/13	12/21	12/30	1/10	1/31
20	11/21	12/06	12/19	12/30	1/11	1/27	0/00	0/00	0/00
16	12/07	12/23	1/05	1/23	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	158	151	145	141	136	132	127	122	114
32	215	203	194	187	179	172	165	156	144
28	302	286	275	265	257	248	238	227	211
24	>365	>365	355	336	323	312	301	289	273
20	>365	>365	>365	>365	>365	>365	345	322	301
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	769	615	564	443	308	152	45	31	115	370	594	780	4786
60	627	482	425	310	181	68	13	5	59	238	461	636	3505
57	534	398	334	228	114	31	4	1	29	160	377	543	2753
55	475	342	276	178	79	16	1	0	16	115	322	481	2301
50	331	212	145	83	21	2	0	0	2	40	199	336	1371
32	26	3	0	0	0	0	0	0	0	0	7	22	58

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	271	321	457	548	720	860	1076	1084	907	654	395	265	7558
55	1	1	3	16	73	178	364	371	222	43	5	1	1278
57	0	1	1	8	48	128	302	309	170	25	2	0	994
60	0	0	0	2	24	71	214	218	103	10	0	0	642
65	0	0	0	0	5	21	95	88	32	1	0	0	242
70	0	0	0	0	1	4	29	27	5	0	0	0	66

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	98	135	222	316	485	629	840	845	678	415	186	91	98	233	455	771	1256	1885	2725	3570	4248	4663	4849	4940
45	37	54	96	174	330	479	685	690	528	264	80	34	37	91	187	361	691	1170	1855	2545	3073	3337	3417	3451
50	6	12	29	72	184	329	530	535	378	134	28	3	6	18	47	119	303	632	1162	1697	2075	2209	2237	2240
55	0	0	1	16	80	184	375	380	232	47	2	0	0	0	1	17	97	281	656	1036	1268	1315	1317	1317
60	0	0	0	1	27	77	224	228	110	10	0	0	0	0	0	1	28	105	329	557	667	677	677	677
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	30	53	110	173	279	371	516	525	419	244	68	29	30	83	193	366	645	1016	1532	2057	2476	2720	2788	2817

(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