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: CRATER LAKE NATL PARK HQ, OR **COOP ID: 351946**

Climate Division: OR 5 **NWS Call Sign:** **Elevation: 6,475 Feet** **Lat: 42˚54N** **Lon: 122˚08W**

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	34.4	17.7	26.1	58+	1968	23	32.4	1981	-21	1962	21	20.9	1974	1207	0	.0	.0	1.9	13.9	30.7	1.0
Feb	34.7	18.4	26.6	66	1954	6	34.4	1995	-18	1933	9	18.9	1989	1077	0	.0	.0	2.3	12.7	27.9	.9
Mar	37.0	19.0	28.0	80	1951	27	35.1	1992	-7+	1974	8	22.9	1971	1132	0	.0	.0	2.7	9.8	30.7	.2
Apr	41.8	22.0	31.9	70	1947	14	38.7	1990	0+	1982	1	24.7	1975	993	0	.0	.0	7.4	6.1	28.1	@
May	49.0	27.5	38.3	80	1931	29	48.4	1992	0	1953	24	31.7	1977	829	0	.0	.0	14.9	1.2	23.3	.0
Jun	57.6	33.2	45.4	84	1931	11	51.7	1992	10	1954	18	40.2	1980	588	0	.0	.0	23.2	@	13.2	.0
Jul	67.5	39.7	53.6	90+	1956	19	59.4	1994	18	1935	8	44.9	1983	362	9	.0	.0	29.7	.0	3.6	.0
Aug	68.7	40.3	54.5	90+	1981	9	59.4	1986	10	1949	12	47.8	1976	332	7	.0	.1	29.7	.0	3.2	.0
Sep	62.3	35.9	49.1	87+	1988	4	55.5	1974	11	1984	21	42.0	1986	481	5	.0	.0	25.1	@	9.0	.0
Oct	52.5	30.1	41.3	80	1958	4	50.2+	1988	8	1991	30	34.4	1984	735	0	.0	.0	18.8	1.5	19.5	.0
Nov	38.0	22.0	30.0	75	1931	13	39.6	1976	-7	1955	15	22.0	1994	1050	0	.0	.0	4.2	9.6	27.5	.2
Dec	34.6	18.3	26.5	64	1983	7	33.7	1989	-13+	1990	22	19.9	1971	1194	0	.0	.0	2.3	13.4	30.8	.7
Ann	48.2	27.0	37.6	90+	Aug 1981	9	59.4+	Jul 1994	-21	Jan 1962	21	18.9	Feb 1989	9980	21	.0	.1	162.2	68.2	247.5	3.0

\+ 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: 1931-2001

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

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: CRATER LAKE NATL PARK HQ, OR **COOP ID: 351946**

Climate Division: OR 5 **NWS Call Sign:** **Elevation: 6,475 Feet** **Lat: 42°54N** **Lon: 122°08W**

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	9.81	10.14	5.41	1952	15	17.36	1998	.63	1985
Feb	8.47	8.04	11.80	1957	24	17.47	1986	2.00	1988
Mar	7.79	7.09	3.65	1972	2	15.09	1989	.85	1992
Apr	5.34	4.83	4.19	1937	13	10.59	1993	1.29	1977
May	3.50	3.34	2.50	1953	24	7.41	1993	.17	1982
Jun	2.03	1.63	7.30	1950	12	4.68	1995	.70	1986
Jul	.95	.72	1.73	1987	18	4.78	1995	.00+	1988
Aug	1.07	.70	2.00	1983	23	4.50	1976	.00+	1994
Sep	2.21	1.60	2.64	1957	27	8.75	1986	.00+	1999
Oct	4.49	4.27	5.17	1950	28	10.32	1979	.02	1987
Nov	10.53	8.76	4.24	1996	19	24.16	1973	1.86	1976
Dec	10.50	8.70	7.13	1964	23	23.66	1981	.90	1976
Ann	66.69	65.72	11.80	Feb 1957	24	24.16	Nov 1973	.00+	Sep 1999

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	16.8	14.1	7.6	2.9
Feb	16.8	14.1	7.2	1.9
Mar	18.5	14.9	5.9	1.6
Apr	14.7	11.3	4.1	.7
May	10.7	7.9	2.6	.4
Jun	7.4	4.9	1.3	.2
Jul	4.2	2.3	.6	.2
Aug	4.3	2.9	.6	@
Sep	5.8	4.4	1.3	.6
Oct	9.3	7.3	3.6	1.2
Nov	17.6	14.9	8.0	3.3
Dec	17.2	15.1	7.8	3.5
Ann	143.3	114.1	50.6	16.5

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	2.92	3.85	5.25	6.46	7.63	8.85	10.19	11.78	13.82	17.02	19.99
Feb	3.38	4.16	5.26	6.18	7.04	7.92	8.87	9.97	11.36	13.49	15.43
Mar	2.77	3.50	4.56	5.46	6.31	7.18	8.13	9.24	10.66	12.85	14.86
Apr	2.07	2.57	3.27	3.86	4.41	4.98	5.59	6.30	7.20	8.58	9.84
May	.71	1.03	1.54	2.01	2.49	3.00	3.57	4.26	5.18	6.64	8.03
Jun	.66	.85	1.14	1.38	1.61	1.85	2.12	2.43	2.82	3.44	4.01
Jul	.00	.01	.10	.21	.36	.55	.79	1.11	1.58	2.42	3.27
Aug	.00	.00	.06	.19	.36	.58	.87	1.25	1.81	2.79	3.79
Sep	.00	.00	.32	.66	1.04	1.49	2.03	2.72	3.68	5.32	6.96
Oct	.53	.88	1.51	2.14	2.80	3.55	4.41	5.49	6.95	9.35	11.69
Nov	3.10	4.10	5.61	6.90	8.17	9.48	10.93	12.64	14.86	18.32	21.53
Dec	2.19	3.15	4.69	6.09	7.51	9.01	10.72	12.77	15.47	19.79	23.87
Ann	46.42	50.32	55.32	59.13	62.52	65.81	69.21	72.97	77.55	84.20	89.96

\+ 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: 1931-2001
(3) Derived from 1971-2000 serially complete daily data

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

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

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: CRATER LAKE NATL PARK HQ, OR **COOP ID: 351946**

Climate Division: OR 5 **NWS Call Sign:** **Elevation: 6,475 Feet** **Lat: 42°54N** **Lon: 122°08W**

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	83.4	81.0	78	82	24.5	1996	24	187.0	1996	156	1972	28	135	1982	15.0	13.9	10.1	7.1	2.7	29.5	29.5	29.4	29.4
Feb	80.4	79.5	100	108	37.0	1971	28	163.0	1999	189	1999	28	153	1974	15.3	14.2	10.1	7.1	2.5	27.1	27.1	27.1	27.0
Mar	78.0	76.0	117	120	25.0	1971	5	148.5	1971	239	1983	31	181	1974	15.9	14.9	9.6	6.1	2.0	-9.9	-9.9	-9.9	-9.9
Apr	44.7	47.2	114	112	21.0	1989	25	86.5	1993	252	1983	3	206	1983	11.4	10.3	6.0	3.7	.7	-9.9	-9.9	-9.9	-9.9
May	17.9	18.0	81	80	11.0	1983	9	50.0	1977	186	1983	9	160	1983	6.4	5.5	2.7	1.2	.2	26.9	26.1	25.8	25.3
Jun	4.3	2.7	30	24	7.0	1973	17	20.5	1995	132	1974	1	89	1974	2.1	1.8	.6	.2	.0	16.3	15.5	15.1	13.8
Jul	.4	.0	2	0	2.0	1976	1	2.0+	1982	46	1983	1	15	1983	.3	.2	.0	.0	.0	2.5	2.2	2.1	1.6
Aug	.2	.0	#	0	3.5	1976	16	4.5	1976	#	1989	23	#	1989	.2	.1	@	.0	.0	.0	.0	.0	.0
Sep	4.3	.0	#	0	15.0	1986	26	56.0	1986	36	1986	27	9	1986	.9	.8	.4	.3	.1	1.0	.6	.5	.2
Oct	20.5	17.8	3	1	21.0	1996	25	56.0	1975	30	1996	27	9	1996	4.8	4.1	2.7	1.6	.3	7.5	6.0	4.5	2.7
Nov	67.8	59.7	20	16	34.0	1994	17	162.0	1973	99	1984	30	61	1984	13.4	12.5	9.2	6.2	1.8	24.0	22.7	21.6	17.5
Dec	76.6	69.8	51	46	27.0	1993	8	148.5	1992	120	1981	30	99	1984	15.1	14.1	9.7	6.2	2.2	29.6	29.5	28.9	28.4
Ann	478.5	451.7	N/A	N/A	37.0	Feb 1971	28	187.0	Jan 1996	252	Apr 1983	3	206	Apr 1983	100.8	92.4	61.1	39.7	12.5	-9.9	-9.9	-9.9	-9.9

+ 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

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

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: CRATER LAKE NATL PARK HQ, OR **COOP ID: 351946**

Climate Division: OR 5 **NWS Call Sign:** **Elevation: 6,475 Feet** **Lat: 42˚54N** **Lon: 122˚08W**

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	7/31	7/28	7/25	7/23	7/21	7/19	7/17	7/14	7/11
32	7/25	7/20	7/17	7/14	7/11	7/08	7/05	7/02	6/27
28	7/16	7/09	7/05	7/01	6/27	6/23	6/19	6/15	6/08
24	6/26	6/20	6/16	6/12	6/09	6/05	6/02	5/28	5/23
20	6/13	6/06	6/01	5/28	5/24	5/20	5/16	5/11	5/04
16	5/26	5/19	5/14	5/09	5/05	5/01	4/26	4/21	4/14

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	7/31	8/03	8/06	8/08	8/11	8/13	8/16	8/19	8/23
32	7/31	8/06	8/11	8/15	8/19	8/23	8/27	9/01	9/07
28	8/22	8/30	9/04	9/09	9/13	9/18	9/22	9/28	10/06
24	9/09	9/16	9/21	9/26	9/30	10/04	10/08	10/13	10/20
20	10/02	10/09	10/15	10/19	10/23	10/27	10/31	11/05	11/12
16	10/15	10/23	10/28	11/01	11/05	11/09	11/14	11/19	11/26

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	38	32	27	24	20	17	13	9	2
32	64	55	49	43	38	33	27	21	12
28	106	97	89	83	78	72	66	59	49
24	138	129	123	117	112	107	101	95	86
20	182	171	164	157	151	145	139	131	121
16	213	202	195	189	183	177	171	164	154

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

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: CRATER LAKE NATL PARK HQ, OR **COOP ID: 351946**

Climate Division: OR 5 **NWS Call Sign:** **Elevation: 6,475 Feet** **Lat: 42˚54N** **Lon: 122˚08W**

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	1207	1077	1132	993	829	588	362	332	481	735	1050	1194	9980
60	1052	937	992	843	674	440	229	199	344	583	900	1039	8232
57	959	853	899	753	581	355	164	136	269	494	810	946	7219
55	897	797	837	693	519	301	128	103	225	437	750	884	6571
50	742	657	682	543	372	181	57	38	135	304	601	729	5041
32	215	188	177	115	32	3	0	0	4	30	151	226	1141

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	31	35	53	111	226	405	670	698	518	319	91	55	3212
55	0	0	0	0	0	13	85	88	49	12	0	0	247
57	0	0	0	0	0	7	59	60	33	8	0	0	167
60	0	0	0	0	0	2	30	29	18	3	0	0	82
65	0	0	0	0	0	0	9	7	5	0	0	0	21
70	0	0	0	0	0	0	0	0	0	0	0	0	0

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	0	0	0	30	82	202	433	462	306	140	13	0	0	0	0	30	112	314	747	1209	1515	1655	1668	1668
45	0	0	0	1	32	104	287	316	190	71	1	0	0	0	0	1	33	137	424	740	930	1001	1002	1002
50	0	0	0	0	4	42	164	185	93	24	0	0	0	0	0	0	4	46	210	395	488	512	512	512
55	0	0	0	0	0	10	75	87	38	2	0	0	0	0	0	0	0	10	85	172	210	212	212	212
60	0	0	0	0	0	0	21	30	5	0	0	0	0	0	0	0	0	0	21	51	56	56	56	56
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	0	0	0	28	65	145	287	303	210	104	9	0	0	0	0	28	93	238	525	828	1038	1142	1151	1151

(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