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: ALKALI LAKE, OR **COOP ID: 350118**

Climate Division: OR 7 **NWS Call Sign:** **Elevation: 4,332 Feet** **Lat: 42˚58N** **Lon: 120˚00W**

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	41.9	18.7	30.3	63+	1989	19	38.4	1986	-38	1962	22	22.5	1979	1076	0	.0	.0	5.5	4.5	26.8	2.3
Feb	45.9	21.7	33.8	72	1986	28	40.0	1995	-26	1989	5	23.9	1989	875	0	.0	.0	9.3	2.4	23.1	1.1
Mar	51.4	23.3	37.4	78+	1966	30	42.9	1986	-11	1971	1	32.4	1971	857	0	.0	.0	17.5	.2	24.6	.3
Apr	59.0	26.6	42.8	88	1977	24	49.7	1987	6+	1968	13	35.8	1975	666	0	.0	.0	24.3	@	21.5	.0
May	68.2	33.0	50.6	97	1986	31	55.9	1992	13	1964	6	45.0	1991	448	1	.0	.5	29.5	.0	11.7	@
Jun	77.6	40.9	59.3	100+	1985	19	65.3	1986	23	1973	18	54.1	1991	204	32	@	3.6	29.9	.0	2.5	.0
Jul	86.9	45.5	66.2	103+	1988	22	70.8	1985	30+	1986	5	57.8	1993	73	111	.9	12.9	31.0	.0	.3	.0
Aug	86.3	44.5	65.4	105+	1990	8	70.2	1971	26	1992	24	59.9	1976	78	89	.8	12.0	31.0	.0	.4	.0
Sep	77.3	35.4	56.4	101	1988	4	60.8	1990	14+	1970	14	49.7	1972	276	17	@	2.8	29.8	.0	6.9	.0
Oct	65.1	27.5	46.3	90+	1987	2	53.6	1988	3	1971	29	42.4	1984	580	0	.0	@	27.7	@	20.8	.0
Nov	49.4	23.2	36.3	75+	1989	11	41.5	1999	-10	1993	25	27.8	1985	860	0	.0	.0	13.6	.9	23.6	.5
Dec	41.9	18.3	30.1	69	1979	15	35.9	1973	-33	1972	9	22.0	1990	1082	0	.0	.0	6.3	3.9	26.9	1.7
Ann	62.6	29.9	46.2	105+	Aug 1990	8	70.8	Jul 1985	-38	Jan 1962	22	22.0	Dec 1990	7075	250	1.7	31.8	255.4	11.9	189.1	5.9

\+ 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: 1961-2001

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

Issue Date: February 2004

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: ALKALI LAKE, OR **COOP ID: 350118**

Climate Division: OR 7 **NWS Call Sign:** **Elevation: 4,332 Feet** **Lat: 42°58N** **Lon: 120°00W**

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	.52	.49	1.16	1964	20	1.37	1997	.00	1992
Feb	.46	.46	.61	1986	18	1.57	1986	.01	1995
Mar	.79	.75	.90	2000	5	2.73	1983	.03	1976
Apr	.89	.73	1.22	1988	17	2.87	1988	.06	1977
May	1.14	.87	1.69	1977	10	3.71	1977	.00	1992
Jun	.85	.81	1.65	1965	17	2.07	1991	.00+	2000
Jul	.61	.36	1.81	1975	10	3.00	1975	.00+	1999
Aug	.66	.34	2.50	1984	31	2.74	1983	.00+	2000
Sep	.53	.33	1.45	2000	2	2.09	1985	.00+	1999
Oct	.69	.47	1.73	1962	10	2.19	2000	.00+	1988
Nov	.67	.52	1.27	1998	4	2.18	1998	.02	1976
Dec	.59	.41	1.04	1981	20	2.21	1995	.00+	2000
Ann	8.40	8.48	2.50	Aug 1984	31	3.71	May 1977	.00+	Dec 2000

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	5.7	2.6	.2	@
Feb	5.5	2.0	.1	@
Mar	7.3	3.0	.2	.0
Apr	6.9	3.0	.3	@
May	7.6	3.7	.4	.1
Jun	5.1	2.6	.2	@
Jul	2.8	1.4	.4	.1
Aug	3.1	1.5	.3	.1
Sep	3.6	1.5	.2	@
Oct	4.9	2.0	.2	.1
Nov	7.1	2.6	.1	@
Dec	6.3	2.4	.2	@
Ann	65.9	28.3	2.8	.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	.05	.11	.20	.27	.35	.43	.52	.64	.79	1.03	1.26
Feb	.05	.08	.14	.21	.28	.36	.45	.56	.72	.99	1.24
Mar	.15	.22	.34	.45	.55	.67	.80	.96	1.17	1.51	1.83
Apr	.10	.17	.30	.42	.55	.70	.87	1.09	1.38	1.86	2.32
May	.07	.19	.36	.53	.71	.91	1.13	1.41	1.79	2.41	3.01
Jun	.00	.17	.35	.48	.61	.74	.90	1.06	1.30	1.66	2.01
Jul	.00	.00	.04	.12	.22	.35	.51	.72	1.03	1.57	2.11
Aug	.00	.00	.03	.13	.25	.39	.57	.80	1.12	1.68	2.25
Sep	.00	.00	.00	.05	.15	.27	.42	.63	.92	1.43	1.95
Oct	.00	.05	.16	.27	.38	.51	.67	.86	1.12	1.56	1.99
Nov	.07	.12	.22	.31	.41	.52	.65	.82	1.04	1.41	1.77
Dec	.00	.03	.12	.20	.30	.42	.55	.72	.96	1.37	1.77
Ann	4.85	5.48	6.32	6.98	7.57	8.16	8.78	9.47	10.33	11.60	12.72

\+ 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: 1961-2001
(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: ALKALI LAKE, OR **COOP ID: 350118**

Climate Division: OR 7 **NWS Call Sign:** **Elevation: 4,332 Feet** **Lat: 42°58N** **Lon: 120°00W**

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	3.5	3.0	1	#	7.0	1981	29	10.0	1988	8	1981	31	3	1985	2.0	1.6	.5	.2	.0	5.7	2.6	.3	.0
Feb	2.9	1.8	#	#	5.1	1976	29	9.0	1985	12	1985	8	5	1985	1.7	1.2	.2	.1	.0	3.1	1.4	1.0	.4
Mar	2.7	1.2	#	0	7.0	1982	18	15.0	1982	8	1982	19	1	1982	1.6	1.1	.2	.1	.0	1.4	.5	.1	.0
Apr	2.0	.2	#	0	5.0	1971	21	10.5	1971	4	1981	1	#+	1988	1.0	.8	.3	.1	.0	.4	.1	.0	.0
May	.7	.0	#	0	3.1	1974	18	3.4	1977	3	1981	6	#+	1986	.6	.3	.1	.0	.0	.2	@	.0	.0
Jun	.1	.0	#	0	2.0	1979	17	2.0	1979	2	1979	17	#	1979	.1	.1	.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	#	1971	30	#	1971	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Oct	.4	.0	#	0	2.0	1971	23	4.0	1971	1+	1984	19	#+	1984	.3	.3	.0	.0	.0	.2	.0	.0	.0
Nov	3.0	1.8	#	#	6.0	1985	29	17.0	1985	12	1985	29	2	1985	1.7	1.3	.4	.1	.0	2.1	.7	.2	.1
Dec	5.7	4.0	1	#	6.0	1983	4	20.3	1983	12	1985	2	4	1984	3.4	2.5	.5	.2	.0	4.7	2.2	.9	.1
Ann	21.0	12.0	N/A	N/A	7.0+	Mar 1982	18	20.3	Dec 1983	12+	Dec 1985	2	5	Feb 1985	12.4	9.2	2.2	.8	.0	17.8	7.5	2.5	.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

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: ALKALI LAKE, OR **COOP ID: 350118**

Climate Division: OR 7 **NWS Call Sign:** **Elevation: 4,332 Feet** **Lat: 42˚58N** **Lon: 120˚00W**

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	7/24	7/17	7/12	7/08	7/04	6/30	6/26	6/21	6/14
32	7/07	6/30	6/26	6/22	6/18	6/14	6/10	6/06	5/30
28	6/11	6/06	6/01	5/29	5/25	5/22	5/18	5/14	5/08
24	5/31	5/25	5/20	5/16	5/12	5/09	5/05	4/30	4/23
20	5/22	5/13	5/07	5/01	4/26	4/21	4/16	4/10	4/01
16	5/09	4/27	4/19	4/12	4/05	3/29	3/22	3/13	3/01

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	8/14	8/19	8/22	8/25	8/28	8/30	9/02	9/06	9/10
32	8/19	8/26	8/31	9/05	9/09	9/13	9/18	9/23	9/30
28	9/03	9/10	9/15	9/19	9/22	9/26	9/30	10/05	10/12
24	9/19	9/25	9/28	10/01	10/04	10/07	10/11	10/14	10/19
20	9/27	10/04	10/08	10/12	10/15	10/19	10/23	10/27	11/03
16	10/13	10/19	10/23	10/27	10/30	11/02	11/06	11/10	11/16

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	79	70	64	59	54	49	44	38	30
32	111	101	94	88	82	77	71	64	54
28	147	137	130	125	119	114	108	101	92
24	167	159	154	149	144	140	135	129	122
20	208	195	186	179	171	164	157	148	135
16	247	234	224	215	207	200	191	181	168

***** 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: ALKALI LAKE, OR **COOP ID: 350118**

Climate Division: OR 7 **NWS Call Sign:** **Elevation: 4,332 Feet** **Lat: 42˚58N** **Lon: 120˚00W**

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	1076	875	857	666	448	204	73	78	276	580	860	1082	7075
60	921	735	702	517	303	108	22	24	163	427	710	927	5559
57	828	651	609	430	224	66	10	10	109	338	620	834	4729
55	766	595	547	374	178	44	5	4	80	281	560	772	4206
50	611	455	394	244	88	13	0	0	30	159	417	617	3028
32	160	84	31	12	0	0	0	0	0	2	60	155	504

Base — Cooling Degree Days (1)

Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	107	133	198	335	576	817	1061	1035	731	445	189	96	5723
55	0	0	0	8	42	171	352	326	121	11	0	0	1031
57	0	0	0	4	26	133	296	269	90	5	0	0	823
60	0	0	0	0	12	85	215	190	54	2	0	0	558
65	0	0	0	0	1	32	111	89	17	0	0	0	250
70	0	0	0	0	0	8	41	28	4	0	0	0	81

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	17	33	73	173	366	595	843	807	518	255	62	19	17	50	123	296	662	1257	2100	2907	3425	3680	3742	3761
45	0	5	25	84	235	449	688	652	373	140	19	0	0	5	30	114	349	798	1486	2138	2511	2651	2670	2670
50	0	0	1	35	129	306	533	498	239	63	1	0	0	0	1	36	165	471	1004	1502	1741	1804	1805	1805
55	0	0	0	12	64	185	381	346	130	17	0	0	0	0	0	12	76	261	642	988	1118	1135	1135	1135
60	0	0	0	0	23	92	244	209	50	1	0	0	0	0	0	0	23	115	359	568	618	619	619	619
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	10	33	71	162	289	407	538	524	404	250	60	11	10	43	114	276	565	972	1510	2034	2438	2688	2748	2759

(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