

Climatography of the United States

No. 20

1971-2000

Station: BOARDMAN, OR

COOP ID: 350858

Climate Division: OR 6

NWS Call Sign:

Elevation: 300 Feet

Lat: 45° 50N

Lon: 119° 42W

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	40.7	25.5	33.1	70	1990	10	40.0	1990	-12	1996	31	15.7	1979	988	0	.0	.0	7.0	6.1	22.2	.6
Feb	47.5	28.0	37.8	74	1986	25	43.1	1991	-13	1989	4	26.4	1989	764	0	.0	.0	14.0	2.3	17.2	.6
Mar	57.3	32.5	44.9	80	1994	27	49.2	1983	10	1993	2	40.0	1971	623	0	.0	.0	28.1	.2	11.4	.0
Apr	65.7	38.1	51.9	92	1977	25	56.8	1994	22	1972	3	45.9	1975	394	2	.0	.1	29.9	.0	3.5	.0
May	74.2	45.2	59.7	102+	1986	31	64.3	1993	30	1986	1	55.6	1977	183	19	.1	1.7	31.0	.0	.1	.0
Jun	81.3	52.1	66.7	104+	1992	25	72.1	1986	35	1984	1	62.3	1976	55	106	.3	5.4	30.0	.0	.0	.0
Jul	89.4	57.0	73.2	106+	1998	28	78.9	1998	39	1981	7	67.5	1993	9	263	2.7	15.2	31.0	.0	.0	.0
Aug	88.4	56.4	72.4	107	1997	7	75.8	1971	39	1993	27	67.7	1976	9	238	2.1	13.9	31.0	.0	.0	.0
Sep	78.9	47.8	63.4	99	1987	2	68.1	1990	25	1983	29	59.1	1971	115	65	.0	2.3	30.0	.0	.3	.0
Oct	66.0	37.9	52.0	88+	1991	2	57.8	1988	14	1971	29	49.8	1984	406	0	.0	.0	30.6	.0	6.1	.0
Nov	50.7	32.9	41.8	76	1999	14	48.3	1990	-9	1985	24	30.5	1985	696	0	.0	.0	18.7	.9	11.9	.1
Dec	41.5	27.2	34.4	68+	1993	11	39.8	1999	-15	1983	23	22.4	1983	950	0	.0	.0	7.4	4.8	20.9	.8
Ann	65.1	40.1	52.6	107	Aug 1997	7	78.9	Jul 1998	-15	Dec 1983	23	15.7	Jan 1979	5192	693	5.2	38.6	288.7	14.3	93.6	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/normal/usnormals.html

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1971-2001

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

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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: BOARDMAN, OR

COOP ID: 350858

Climate Division: OR 6

NWS Call Sign:

Elevation: 300 Feet Lat: 45°50N

Lon: 119°42W

Precipitation (inches)																								
	Precipitation Totals									Mean Number of Days (3)				Precipitation Probabilities (1) Probability that the monthly/annual precipitation will be equal to or less than the indicated amount										
	Means/ Medians(1)		Extremes							Daily Precipitation				Monthly/Annual Precipitation vs Probability Levels These values were determined from the incomplete gamma distribution										
Month	Mean	Med-ian	Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year	>= 0.01	>= 0.10	>= 0.50	>= 1.00	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	1.19	1.21	.90	1980	9	2.87	1980	.10	1977	9.1	4.2	.3	.0	.25	.36	.53	.69	.85	1.02	1.21	1.44	1.75	2.24	2.70
Feb	.91	.77	1.25	1998	20	3.42	1998	.01	1988	7.7	3.2	.2	@	.14	.22	.35	.48	.61	.75	.91	1.11	1.38	1.82	2.24
Mar	.73	.67	.66	1987	15	1.58	1989	.10	1999	7.1	2.7	.1	.0	.18	.25	.35	.45	.54	.64	.75	.88	1.05	1.32	1.57
Apr	.70	.63	1.09	1988	21	2.86	1988	.02+	2000	5.3	2.3	.2	@	.03	.06	.14	.23	.34	.47	.63	.84	1.14	1.65	2.16
May	.63	.56	1.11	1972	8	1.99	1972	.08	1992	4.8	2.3	.1	@	.10	.16	.25	.33	.42	.52	.63	.77	.95	1.24	1.52
Jun	.45	.35	.79	1972	10	1.79	1972	.02	1979	3.9	1.6	.1	.0	.02	.04	.10	.16	.23	.31	.41	.54	.73	1.05	1.37
Jul	.28	.14	.61	1998	31	1.14	1983	.00+	2000	1.7	.8	.1	.0	.00	.00	.00	.04	.10	.16	.24	.34	.49	.73	.97
Aug	.31	.15	.59	1977	30	1.07	1978	.00+	2000	2.2	1.2	.1	.0	.00	.00	.00	.01	.06	.12	.21	.33	.53	.87	1.24
Sep	.42	.27	.70	1982	13	2.35	1982	.00+	1999	3.3	1.3	.1	.0	.00	.00	.01	.05	.12	.21	.33	.48	.72	1.14	1.57
Oct	.58	.47	.96	1982	29	1.83	1997	.00+	1993	4.4	1.8	.2	.0	.00	.04	.13	.22	.32	.43	.56	.72	.94	1.31	1.67
Nov	1.22	1.10	.88	1973	1	3.43	1973	.23	1993	9.2	4.6	.4	.0	.29	.40	.58	.74	.90	1.06	1.25	1.47	1.76	2.23	2.66
Dec	1.19	1.13	.75	1981	15	2.76	1973	.15+	1988	9.0	4.2	.3	.0	.20	.30	.47	.64	.81	.99	1.20	1.45	1.79	2.35	2.88
Ann	8.61	8.45	1.25	Feb 1998	20	3.43	Nov 1973	.00+	Aug 2000	67.7	30.2	2.2	@	5.42	6.00	6.77	7.36	7.90	8.42	8.97	9.57	10.32	11.42	12.38

+ 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: 1971-2001

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

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

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COOP ID: 350858

Climate Division: OR 6

NWS Call Sign:

Elevation: 300 Feet

Lat: 45° 50N

Lon: 119° 42W

Snow (inches)																							
Snow Totals															Mean Number of Days (1)								
Means/Medians (1)					Extremes (2)										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	2.2	.5	1	#	8.0	1980	9	14.0	1980	14	1980	11	7	1979	1.7	.7	.2	.1	.0	4.1	1.9	1.5	.3
Feb	2.1	.4	#	0	6.0	1985	8	13.0	1993	10+	1993	24	3	1993	1.1	.7	.3	.1	.0	1.2	.9	.7	@
Mar	.2	.0	#	0	1.5	1993	3	2.0	1993	9	1993	3	1	1993	.2	.1	.0	.0	.0	.1	.0	.0	.0
Apr	#	.0	0	0	#	1987	18	#	1987	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
May	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.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	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.8	.0	#	0	3.0	1977	22	6.2	1985	6	1985	30	2	1985	.6	.4	.1	.0	.0	1.1	.7	.5	.0
Dec	1.9	1.1	#	#	5.0	1996	25	9.8	1971	10	1985	3	4	1985	2.1	1.0	.2	@	.0	3.5	2.1	.5	.1
Ann	7.2	2.0	N/A	N/A	8.0	Jan 1980	9	14.0	Jan 1980	14	Jan 1980	11	7	Jan 1979	5.7	2.9	.8	.2	.0	10.0	5.6	3.2	.4

+ 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	5/17	5/12	5/08	5/05	5/02	4/29	4/26	4/22	4/17
32	4/30	4/25	4/21	4/17	4/14	4/11	4/08	4/04	3/29
28	4/19	4/13	4/08	4/05	4/01	3/29	3/25	3/20	3/14
24	4/08	3/30	3/24	3/18	3/13	3/08	3/02	2/24	2/15
20	3/11	3/01	2/22	2/15	2/09	2/03	1/28	1/20	1/08
16	2/24	2/14	2/07	2/01	1/26	1/19	1/11	12/30	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	9/17	9/22	9/25	9/28	10/01	10/04	10/07	10/11	10/16
32	9/29	10/04	10/07	10/10	10/12	10/15	10/18	10/21	10/25
28	10/09	10/14	10/18	10/21	10/25	10/28	10/31	11/04	11/09
24	10/24	11/03	11/10	11/16	11/22	11/28	12/04	12/11	12/21
20	11/02	11/13	11/21	11/28	12/04	12/11	12/18	12/26	1/09
16	11/17	11/30	12/09	12/18	12/26	1/04	1/16	2/05	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	176	167	161	156	152	147	142	136	128
32	202	195	189	185	180	176	171	166	158
28	232	223	217	211	206	201	195	188	179
24	291	278	269	261	253	246	238	229	216
20	357	332	319	308	299	290	280	269	253
16	>365	>365	>365	344	331	321	311	301	287

* 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)													
Base	Heating Degree Days (1)												
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	988	764	623	394	183	55	9	9	115	406	696	950	5192
60	833	624	468	255	81	13	0	1	44	254	549	795	3917
57	747	540	376	182	42	4	0	0	20	171	465	702	3249
55	689	485	316	140	24	1	0	0	10	123	410	642	2840
50	545	355	181	61	4	0	0	0	1	42	283	498	1970
32	164	48	1	0	0	0	0	0	0	0	32	114	359

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	198	208	401	597	859	1041	1277	1252	940	618	326	187	7904
55	11	1	3	48	171	352	564	539	260	27	14	2	1992
57	6	0	1	30	126	295	502	477	210	14	9	0	1670
60	0	0	0	13	72	214	409	384	144	3	3	0	1242
65	0	0	0	2	19	106	263	238	65	0	0	0	693
70	0	0	0	0	2	38	138	116	21	0	0	0	315

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	37	75	207	398	653	835	1049	1036	721	391	139	47	37	112	319	717	1370	2205	3254	4290	5011	5402	5541	5588
45	7	24	89	250	498	685	894	881	571	243	53	8	7	31	120	370	868	1553	2447	3328	3899	4142	4195	4203
50	0	2	24	127	343	535	739	726	423	125	12	0	0	2	26	153	496	1031	1770	2496	2919	3044	3056	3056
55	0	0	2	47	200	385	584	571	280	42	0	0	0	0	2	49	249	634	1218	1789	2069	2111	2111	2111
60	0	0	0	15	97	244	429	416	154	12	0	0	0	0	0	15	112	356	785	1201	1355	1367	1367	1367
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	18	43	135	251	397	521	660	658	463	259	69	21	18	61	196	447	844	1365	2025	2683	3146	3405	3474	3495

(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.
Complete documentation for the 1971-2000 Normals is available on the internet from:
www.ncdc.noaa.gov/oa/climate/normal/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 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.

- | | |
|---|---|
| <ol style="list-style-type: none">a. Temperature/ Precipitation Tables<ol style="list-style-type: none">1. 1971-2000 Monthly Normals2. Cooperative Summary of the Day3. National Weather Service station records4. 1971-2000 serially complete daily datab. Degree Day Table<ol style="list-style-type: none">1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data | <ol style="list-style-type: none">c. Snow Tables<ol style="list-style-type: none">1. Snow Climatology2. Cooperative Summary of the Dayd. Freeze Data Table
1971-2000 serially complete daily data |
|---|---|

References

U.S. Climate Normals 1971-2000, www.ncdc.noaa.gov/normal.html
U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normal/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