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: PORT HURON, MI **COOP ID: 206680**

Climate Division: MI10 **NWS Call Sign:** **Elevation: 590 Feet** **Lat: 42˚59N** **Lon: 82˚25W**

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	30.4	15.1	22.8	64+	1950	25	30.5	1990	-19	1994	19	12.2	1977	1311	0	.0	.0	1.3	17.1	29.4	2.6
Feb	32.6	16.8	24.7	69	2000	26	34.7	1998	-11	1976	2	15.9	1979	1129	0	.0	.0	1.5	13.4	26.1	1.7
Mar	42.3	24.7	33.5	80	1986	30	42.5	2000	-2+	1962	1	26.1	1996	976	0	.0	.0	7.4	5.4	24.6	@
Apr	54.1	35.3	44.7	87+	1960	24	49.9	1985	8	1954	3	39.4	1975	608	0	.0	.0	18.8	.4	10.3	.0
May	66.7	46.7	56.7	95+	1987	30	63.6	1998	27	1966	10	49.5	1997	285	28	.0	.6	29.6	.0	.4	.0
Jun	76.7	56.3	66.5	102	1988	25	69.9	1987	33+	1949	8	60.5	1972	64	109	.1	2.4	30.0	.0	.0	.0
Jul	81.9	62.5	72.2	102	1975	31	76.3	1999	42	1950	14	67.7	1992	6	229	.2	4.4	31.0	.0	.0	.0
Aug	80.4	61.3	70.9	102+	1955	21	75.7	1995	40+	1950	21	67.1	1992	19	200	@	2.3	31.0	.0	.0	.0
Sep	72.9	53.6	63.3	101	1953	2	67.9	1998	30	1951	29	58.7	1975	105	53	.0	.7	30.0	.0	.1	.0
Oct	60.4	41.6	51.0	90+	1951	5	57.4	1971	20+	1976	27	44.4	1976	441	7	.0	.0	27.2	.0	3.4	.0
Nov	46.9	32.1	39.5	81	1950	1	45.9	1975	2	1950	24	32.3	1976	766	0	.0	.0	11.5	1.5	16.2	.0
Dec	35.4	21.4	28.4	66+	1998	3	35.7	1982	-7+	1983	24	15.9	1989	1135	0	.0	.0	2.5	10.8	27.6	1.0
Ann	56.7	39.0	47.9	102+	Jun 1988	25	76.3	Jul 1999	-19	Jan 1994	19	12.2	Jan 1977	6845	626	.3	10.4	221.8	48.6	138.1	5.3

\+ 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: 1948-2001

(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	1.83	1.65	2.30	1960	27	4.34	1978	.43	1971
Feb	1.60	1.33	1.61	1951	1	4.43	1981	.34	1978
Mar	2.23	2.03	1.80	1974	4	5.10	1973	.96	2000
Apr	2.98	3.06	1.95	2000	20	5.13	1979	1.27	1971
May	2.72	2.82	2.46	1948	7	4.86	1997	.58	1977
Jun	3.29	3.03	2.98	1951	2	7.40	1996	.79	1988
Jul	2.80	2.59	3.72	1994	22	5.74	1994	1.16	1982
Aug	3.04	3.00	2.93	1956	30	7.13	1984	.74	1978
Sep	3.45	2.69	3.97	1996	7	10.03	1996	.64	1991
Oct	2.49	2.26	2.87	1995	5	5.32	1991	.55	1982
Nov	2.81	2.85	3.06	1950	25	5.24	1988	.56	1980
Dec	2.15	2.05	2.00	1965	25	4.43	2000	.89	1993
Ann	31.39	30.43	3.97	Sep 1996	7	10.03	Sep 1996	.34	Feb 1978

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	11.9	5.3	.8	.2
Feb	9.4	4.3	.9	.1
Mar	10.8	5.6	1.0	.3
Apr	12.5	7.4	1.6	.4
May	10.7	6.6	1.6	.4
Jun	10.1	6.9	2.1	.6
Jul	9.9	6.6	1.7	.4
Aug	10.2	6.0	1.9	.6
Sep	10.5	7.0	2.3	.7
Oct	10.9	5.9	1.5	.3
Nov	12.1	6.9	1.6	.4
Dec	12.9	6.2	1.0	.1
Ann	131.9	74.7	18.0	4.5

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	.47	.65	.91	1.15	1.38	1.62	1.89	2.22	2.64	3.30	3.92
Feb	.36	.51	.74	.96	1.17	1.39	1.65	1.95	2.34	2.98	3.57
Mar	.92	1.12	1.41	1.64	1.87	2.09	2.34	2.62	2.97	3.52	4.01
Apr	1.39	1.65	2.01	2.30	2.57	2.84	3.13	3.46	3.87	4.50	5.06
May	.93	1.19	1.56	1.88	2.18	2.50	2.84	3.24	3.76	4.55	5.28
Jun	1.22	1.53	1.97	2.34	2.70	3.06	3.45	3.90	4.48	5.37	6.18
Jul	1.11	1.37	1.74	2.04	2.33	2.62	2.93	3.29	3.75	4.46	5.10
Aug	.81	1.09	1.54	1.92	2.30	2.70	3.15	3.67	4.36	5.43	6.44
Sep	.71	1.02	1.53	1.99	2.45	2.95	3.51	4.19	5.08	6.51	7.87
Oct	.82	1.06	1.40	1.70	1.98	2.28	2.60	2.98	3.46	4.21	4.91
Nov	.81	1.08	1.48	1.83	2.17	2.52	2.91	3.37	3.97	4.91	5.78
Dec	.91	1.11	1.38	1.60	1.81	2.03	2.26	2.52	2.85	3.36	3.82
Ann	24.18	25.62	27.45	28.81	30.02	31.17	32.36	33.66	35.22	37.47	39.40

\+ 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: 1948-2001
(3) Derived from 1971-2000 serially complete daily data

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Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	9.8	9.6	3	3
Feb	8.9	8.5	3	2
Mar	3.6	3.2	1	#
Apr	1.0	.0	#	#
May	#	.0	0	0
Jun	.0	.0	0	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	.0	.0	0	0
Oct	.5	.0	#	0
Nov	1.4	.3	#	#
Dec	9.6	10.2	1	1
Ann	34.8	31.8	N/A	N/A

Extremes (2)

Month	Highest Daily Snow Fall	Year	Day	Highest Monthly Snow Fall	Year	Highest Daily Snow Depth	Year	Day	Highest Monthly Mean Snow Depth	Year
Jan	9.5	1992	14	21.7	1992	14+	1982	31	8	1976
Feb	7.5	1985	12	23.2	1985	18	1982	6	10	1982
Mar	10.0	1996	20	14.0	1971	11+	1996	21	4	1978
Apr	10.0	1975	3	16.0	1975	8	1982	6	1	1982
May	#	1974	6	#	1974	0	0	0	0	0
Jun	.0	0	0	.0	0	0	0	0	0	0
Jul	.0	0	0	.0	0	0	0	0	0	0
Aug	.0	0	0	.0	0	0	0	0	0	0
Sep	.0	0	0	.0	0	0	0	0	0	0
Oct	6.0	1974	20	6.0	1974	6	1974	20	#+	1976
Nov	4.0	1974	26	6.5	1974	6	1997	15	1	1997
Dec	12.0	2000	11	18.3	1977	19	2000	15	8	2000
Ann	12.0	Dec 2000	11	23.2	Feb 1985	19	Dec 2000	15	10	Feb 1982

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	7.2	4.0	1.2	.3	.0
Feb	5.1	2.7	1.0	.3	.0
Mar	2.5	1.5	.4	.1	@
Apr	.4	.3	.2	.1	@
May	.0	.0	.0	.0	.0
Jun	.0	.0	.0	.0	.0
Jul	.0	.0	.0	.0	.0
Aug	.0	.0	.0	.0	.0
Sep	.0	.0	.0	.0	.0
Oct	.2	.1	.1	@	.0
Nov	1.0	.6	.2	.0	.0
Dec	5.2	3.2	1.0	.4	@
Ann	21.6	12.4	4.1	1.2	@

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	15.4	10.8	6.1	.4
Feb	13.9	9.1	5.4	1.0
Mar	3.6	1.6	.7	.0
Apr	.3	.2	.1	.0
May	.0	.0	.0	.0
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.0	.0	.0	.0
Oct	.1	@	@	.0
Nov	.5	.1	.0	.0
Dec	9.0	4.3	2.0	.3
Ann	42.8	26.1	14.3	1.7

+ 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	5/26	5/21	5/17	5/14	5/11	5/08	5/04	5/01	4/25
32	5/10	5/05	5/02	4/29	4/26	4/23	4/21	4/17	4/13
28	4/28	4/24	4/21	4/19	4/17	4/15	4/13	4/10	4/06
24	4/20	4/15	4/12	4/09	4/06	4/03	3/31	3/28	3/23
20	4/12	4/06	4/02	3/30	3/26	3/23	3/20	3/15	3/10
16	4/04	3/29	3/24	3/20	3/17	3/13	3/09	3/05	2/26

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	9/19	9/24	9/27	9/30	10/03	10/06	10/09	10/12	10/17
32	10/04	10/10	10/14	10/18	10/21	10/25	10/28	11/02	11/08
28	10/15	10/21	10/25	10/28	10/31	11/03	11/07	11/11	11/16
24	10/29	11/04	11/08	11/12	11/15	11/18	11/21	11/25	12/01
20	11/07	11/13	11/17	11/21	11/25	11/28	12/02	12/07	12/13
16	11/20	11/26	11/30	12/03	12/06	12/10	12/13	12/17	12/23

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	165	158	153	149	144	140	136	131	123
32	204	195	188	183	177	172	167	160	151
28	215	209	204	200	196	193	189	184	178
24	244	236	231	226	222	218	213	207	200
20	270	261	254	248	243	238	232	225	216
16	289	281	274	269	264	259	253	247	238

***** 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	1311	1129	976	608	285	64	6	19	105	441	766	1135	6845
60	1156	989	821	460	174	21	0	3	39	304	616	980	5563
57	1063	905	728	374	121	9	0	0	18	232	527	887	4864
55	1001	849	666	319	91	5	0	0	10	190	468	825	4424
50	846	709	518	196	39	1	0	0	2	104	328	675	3418
32	333	253	115	5	0	0	0	0	0	1	29	223	959

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	45	48	161	387	766	1035	1246	1204	938	590	254	111	6785
55	0	0	0	10	144	350	533	491	258	65	2	0	1853
57	0	0	0	5	112	294	471	429	206	46	1	0	1564
60	0	0	0	2	72	216	378	339	137	24	0	0	1168
65	0	0	0	0	28	109	229	200	53	7	0	0	626
70	0	0	0	0	8	40	105	96	13	0	0	0	262

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	2	8	59	200	526	799	1003	962	702	367	104	17	2	10	69	269	795	1594	2597	3559	4261	4628	4732	4749
45	0	1	27	111	376	649	848	807	553	232	47	3	0	1	28	139	515	1164	2012	2819	3372	3604	3651	3654
50	0	0	13	55	239	501	693	652	407	129	18	1	0	0	13	68	307	808	1501	2153	2560	2689	2707	2708
55	0	0	3	27	139	355	538	497	267	59	5	0	0	0	3	30	169	524	1062	1559	1826	1885	1890	1890
60	0	0	0	10	67	223	383	343	153	19	0	0	0	0	0	10	77	300	683	1026	1179	1198	1198	1198
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	1	36	117	295	503	675	643	423	193	46	5	0	1	37	154	449	952	1627	2270	2693	2886	2932	2937

(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