

# Climatology of the United States

No. 20

1971-2000

Station: IRONWOOD, MI

COOP ID: 204104

Climate Division: MI 1

NWS Call Sign:

Elevation: 1,430 Feet Lat: 46° 28N Lon: 90° 11W

## 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	19.3	-.3	9.5	69	1910	15	18.8	1990	-41	1982	17	-1.5	1977	1722	0	.0	.0	.1	26.7	30.9	15.5
Feb	25.6	3.7	14.7	62	1976	25	29.6	1998	-41	1967	12	4.8	1989	1410	0	.0	.0	.5	19.8	28.0	11.4
Mar	35.6	14.3	25.0	79	1946	28	33.8	1973	-34	1984	7	16.1	1996	1243	0	.0	.0	4.2	12.0	28.7	5.6
Apr	49.7	28.2	39.0	88	1970	29	46.2	1987	-12	1982	7	31.4	1996	782	0	.0	.0	14.2	2.2	21.4	.5
May	64.2	40.6	52.4	100	1934	31	62.0	1977	13	1911	2	44.3	1997	414	23	.0	@	27.4	.2	7.6	.0
Jun	72.5	49.8	61.2	99	1931	29	65.4	1971	25	1945	4	55.4	1982	156	40	.0	.3	29.8	.0	.7	.0
Jul	76.5	54.6	65.6	104	1936	13	70.9	1983	31	1907	2	58.6	1992	71	88	.0	1.1	31.0	.0	.0	.0
Aug	74.5	52.5	63.5	101+	1947	4	68.2	1983	30+	1976	15	56.2	1977	117	71	.0	.4	31.0	.0	.2	.0
Sep	65.0	44.3	54.7	99	1906	8	60.5	1998	0	1904	23	48.9	1974	318	6	.0	.1	28.4	.0	2.8	.0
Oct	53.0	34.2	43.6	86+	1922	4	50.8	1971	0	1904	2	38.1	1980	664	0	.0	.0	18.4	.6	14.1	.0
Nov	36.4	21.4	28.9	76	1944	1	37.1	1999	-18	1976	30	19.0	1995	1083	0	.0	.0	4.0	11.4	26.3	1.4
Dec	24.0	7.3	15.7	59	1998	4	23.9	1997	-36	1983	20	5.0	1989	1531	0	.0	.0	.3	23.9	30.8	9.7
Ann	49.7	29.2	39.5	104	Jul 1936	13	70.9	Jul 1983	-41+	Jan 1982	17	-1.5	Jan 1977	9511	228	.0	1.9	189.3	96.8	191.5	44.1

+ 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](http://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: 1901-2001

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

057-A

# 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: IRONWOOD, MI

COOP ID: 204104

Climate Division: MI 1

NWS Call Sign:

Elevation: 1,430 Feet Lat: 46°28N

Lon: 90°11W

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	2.07	1.77	1.46	1996	19	4.31	1997	.63	1984	17.2	6.3	.7	.1	.71	.91	1.19	1.44	1.67	1.90	2.16	2.46	2.85	3.45	4.00
Feb	1.22	1.07	3.40	1922	23	3.21	1971	.18	1998	11.5	4.0	.4	@	.25	.37	.55	.71	.87	1.05	1.25	1.48	1.80	2.30	2.77
Mar	2.08	1.95	2.09	1926	8	4.50	1976	.66	1974	11.7	5.3	1.1	.3	.71	.91	1.19	1.44	1.67	1.91	2.17	2.48	2.87	3.48	4.04
Apr	2.11	2.08	3.05	1960	23	4.01	1985	.48	1988	11.0	5.6	1.1	.1	.74	.94	1.23	1.47	1.70	1.94	2.20	2.51	2.90	3.50	4.05
May	2.97	3.07	2.02	1953	21	4.64	1999	.65	1986	11.3	6.5	1.9	.5	1.11	1.39	1.79	2.12	2.43	2.75	3.10	3.51	4.03	4.82	5.55
Jun	4.16	4.14	3.81	1946	24	7.06	1986	1.46	1982	13.2	8.3	2.7	.9	1.92	2.29	2.79	3.20	3.58	3.96	4.37	4.83	5.42	6.30	7.09
Jul	4.00	3.72	6.72	1909	21	9.18	1982	.99	1976	11.9	7.4	2.7	.7	1.16	1.54	2.11	2.61	3.09	3.60	4.15	4.81	5.66	6.99	8.23
Aug	3.72	3.27	4.34	1972	16	7.09	1972	1.52	1976	12.7	7.4	2.2	.8	1.44	1.78	2.28	2.69	3.07	3.47	3.89	4.39	5.02	5.98	6.86
Sep	3.80	3.37	2.54	1985	3	7.42	1985	1.17	1976	14.0	8.4	2.3	.6	1.37	1.73	2.25	2.68	3.09	3.51	3.97	4.51	5.19	6.24	7.21
Oct	3.38	3.25	2.05+	1937	20	6.73	1995	1.27	1997	14.4	7.7	1.9	.7	1.21	1.53	1.99	2.38	2.75	3.13	3.54	4.02	4.63	5.57	6.44
Nov	3.09	2.52	5.61	1909	1	8.16	1991	.64	1981	14.6	7.4	1.7	.4	.85	1.14	1.59	1.98	2.36	2.76	3.20	3.72	4.40	5.46	6.45
Dec	2.05	2.07	2.09	1920	16	3.83	1996	.36	1994	16.5	6.3	.6	.1	.82	1.01	1.27	1.50	1.70	1.92	2.15	2.41	2.75	3.26	3.73
Ann	34.65	33.08	6.72	Jul 1909	21	9.18	Jul 1982	.18	Feb 1998	160.0	80.6	19.3	5.2	27.49	28.94	30.76	32.12	33.31	34.45	35.62	36.90	38.43	40.63	42.50

+ 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: 1901-2001

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

Complete documentation available from:

www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

# 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](http://www.ncdc.noaa.gov)

Station: IRONWOOD, MI

COOP ID: 204104

Climate Division: MI 1

NWS Call Sign:

Elevation: 1,430 Feet

Lat: 46° 28N

Lon: 90° 11W

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	40.2	38.1	19	18	18.0	1996	19	71.6	1971	47	1997	11	36	1997	17.2	10.8	4.8	2.1	.6	29.9	29.9	29.9	28.6
Feb	23.4	23.3	22	23	16.4	1972	18	53.6	1972	43	1971	12	38	1971	11.7	6.6	2.5	1.0	.2	27.3	27.3	27.3	27.0
Mar	22.9	24.4	17	16	18.0	1996	25	48.2	1976	45	1976	13	33	1971	10.3	5.9	2.6	1.5	.2	26.8	26.0	24.8	20.7
Apr	9.8	8.5	4	2	12.0	1985	1	21.7	1983	30	1971	3	19	1996	5.3	3.1	1.1	.4	@	10.1	8.3	6.5	3.9
May	2.1	.0	#	0	8.5	1996	1	19.1	1997	13	1984	1	1+	1997	.9	.6	.3	.1	.0	.8	.4	.2	@
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	.3	.0	#	0	6.5	1995	22	6.9	1995	6	1995	22	#+	1995	.1	.1	@	@	.0	@	@	@	.0
Oct	5.6	3.2	#	#	16.0	1987	21	22.2	1987	15	1987	21	2	1987	2.7	1.7	.6	.2	.1	2.7	1.5	.7	.2
Nov	23.0	21.8	4	3	20.0	1989	2	56.0	1991	27	1989	3	9	1995	11.4	7.0	3.0	1.7	.4	15.8	11.8	7.6	2.6
Dec	37.3	35.0	11	11	14.5	1996	19	84.5	1996	32	1989	26	20	1985	16.1	10.0	4.7	2.5	.6	28.2	26.9	24.8	14.5
Ann	164.6	154.3	N/A	N/A	20.0	Nov 1989	2	84.5	Dec 1996	47	Jan 1997	11	38	Feb 1971	75.7	45.8	19.6	9.5	2.1	141.6	132.1	121.8	97.5

+ 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/normal/usnormals.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormals.html)

# Climatography of the United States

## No. 20 1971-2000

**Station: IRONWOOD, MI**

**COOP ID: 204104**

**Climate Division: MI 1**

**NWS Call Sign:**

**Elevation: 1,430 Feet**

**Lat: 46°28N**

**Lon: 90°11W**

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	6/30	6/24	6/19	6/15	6/12	6/08	6/04	5/30	5/24
32	6/16	6/10	6/06	6/03	5/31	5/27	5/24	5/20	5/14
28	6/02	5/26	5/21	5/17	5/13	5/10	5/05	5/01	4/24
24	5/17	5/11	5/07	5/04	5/01	4/27	4/24	4/20	4/14
20	5/06	4/30	4/26	4/22	4/19	4/15	4/12	4/08	4/02
16	4/22	4/17	4/14	4/11	4/09	4/06	4/03	3/31	3/26
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	8/20	8/26	8/31	9/04	9/08	9/12	9/16	9/20	9/27
32	8/30	9/05	9/10	9/14	9/17	9/21	9/24	9/29	10/05
28	9/20	9/24	9/27	9/29	10/01	10/03	10/06	10/09	10/12
24	9/26	10/03	10/08	10/12	10/16	10/20	10/24	10/29	11/05
20	10/13	10/19	10/23	10/27	10/30	11/02	11/06	11/10	11/16
16	10/24	10/29	11/01	11/04	11/07	11/10	11/13	11/16	11/21
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	116	106	99	93	88	82	76	69	59
32	135	126	119	114	109	104	98	92	83
28	166	157	151	145	140	135	129	123	114
24	192	184	178	173	168	163	158	152	143
20	221	212	205	199	194	188	182	175	166
16	234	226	221	216	212	207	203	197	190

\* 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/normal/usnormals.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormals.html)

**Climatography  
of the United States  
No. 20  
1971-2000**

**Station: IRONWOOD, MI**

**COOP ID: 204104**

**Climate Division: MI 1      NWS Call Sign:      Elevation: 1,430 Feet    Lat: 46° 28N      Lon: 90° 11W**

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	1722	1410	1243	782	414	156	71	117	318	664	1083	1531	9511
60	1567	1270	1088	634	291	74	18	47	191	512	933	1376	8001
57	1474	1186	995	548	229	41	7	22	129	424	843	1283	7181
55	1412	1130	933	491	192	26	2	13	95	368	783	1221	6666
50	1257	990	778	359	114	7	0	2	37	242	636	1066	5488
32	710	513	288	53	5	0	0	0	0	17	197	535	2318

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	11	27	69	261	637	874	1040	976	678	376	104	27	5080
55	0	0	0	10	111	210	329	276	84	13	0	0	1033
57	0	0	0	6	86	165	272	223	58	8	0	0	818
60	0	0	0	3	55	108	190	155	29	2	0	0	542
65	0	0	0	0	23	40	88	71	6	0	0	0	228
70	0	0	0	0	8	10	25	21	1	0	0	0	65

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	17	117	403	644	799	740	452	184	26	0	0	0	17	134	537	1181	1980	2720	3172	3356	3382	3382
45	0	0	3	64	277	494	644	585	312	100	8	0	0	0	3	67	344	838	1482	2067	2379	2479	2487	2487
50	0	0	0	32	174	353	489	430	194	46	2	0	0	0	0	32	206	559	1048	1478	1672	1718	1720	1720
55	0	0	0	15	99	227	339	284	104	16	0	0	0	0	0	15	114	341	680	964	1068	1084	1084	1084
60	0	0	0	4	49	121	201	158	49	3	0	0	0	0	0	4	53	174	375	533	582	585	585	585
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	0	14	83	257	396	502	460	259	108	13	0	0	0	14	97	354	750	1252	1712	1971	2079	2092	2092

(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/normal/usnormals.html](http://www.ncdc.noaa.gov/oa/climate/normal/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](http://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"><li>a. Temperature/ Precipitation Tables<ol style="list-style-type: none"><li>1. 1971-2000 Monthly Normals</li><li>2. Cooperative Summary of the Day</li><li>3. National Weather Service station records</li><li>4. 1971-2000 serially complete daily data</li></ol></li><li>b. Degree Day Table<ol style="list-style-type: none"><li>1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals</li><li>2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data</li></ol></li></ol> | <ol style="list-style-type: none"><li>c. Snow Tables<ol style="list-style-type: none"><li>1. Snow Climatology</li><li>2. Cooperative Summary of the Day</li></ol></li><li>d. Freeze Data Table<br/>1971-2000 serially complete daily data</li></ol> |
|---|---|

## References

U.S. Climate Normals 1971-2000, [www.ncdc.noaa.gov/normal.html](http://www.ncdc.noaa.gov/normal.html)  
U.S. Climate Normals 1971-2000-Products Clim20, [www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html)  
Snow Climatology Project Description, [www.ncdc.noaa.gov/oa/climate/monitoring/snowclim/mainpage.html](http://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](http://www1.ncdc.noaa.gov/pub/data/special/serialcomplete_jam_0900.pdf)