

Climatography of the United States

No. 20

1971-2000

Station: MANISTIQUE, MI

COOP ID: 205073

Climate Division: MI 2

NWS Call Sign:

Elevation: 620 Feet Lat: 45° 57N Lon: 86° 15W

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	24.5	6.7	15.6	46+	1967	21	25.4	1990	-25	1994	20	5.8	1994	1532	0	.0	.0	.0	23.9	30.9	9.7
Feb	26.9	8.7	17.8	49	1954	15	29.6	1998	-33	1970	4	8.5	1994	1322	0	.0	.0	.1	19.4	27.8	7.3
Mar	34.9	17.8	26.4	67	1998	28	33.7	1973	-31	1972	3	19.6	1989	1199	0	.0	.0	1.2	10.4	28.7	2.5
Apr	46.3	29.4	37.9	84	1990	26	42.5	1986	-7	1972	5	29.8	1975	816	0	.0	.0	11.0	1.4	19.0	.1
May	58.4	40.3	49.4	87	1986	28	56.1	1998	19+	1956	8	44.5	1997	487	1	.0	.0	27.1	.0	4.6	.0
Jun	67.6	49.0	58.3	96+	1956	12	63.0	1987	27	1956	2	53.2	1982	220	19	.0	.1	29.9	.0	.2	.0
Jul	73.3	55.2	64.3	97	1966	12	69.5	1983	35+	1960	1	57.9	1992	89	66	.0	.2	31.0	.0	.0	.0
Aug	73.0	54.8	63.9	101	1955	19	69.4	1995	31	1971	24	60.0	1971	101	66	.0	.2	31.0	.0	.1	.0
Sep	64.5	47.0	55.8	92	1953	1	60.8	1998	19	1986	15	50.3	1974	283	6	.0	.0	29.6	.0	1.5	.0
Oct	53.1	37.1	45.1	79	1971	1	50.9	1973	17	1966	30	40.8	1988	616	0	.0	.0	22.3	.0	8.9	.0
Nov	40.5	26.3	33.4	69	1963	5	39.6	1999	-6	1976	29	26.8	1995	949	0	.0	.0	4.6	5.1	22.5	.1
Dec	29.6	14.5	22.1	59	1998	1	30.6	1994	-25	1976	30	11.1	1989	1331	0	.0	.0	.2	17.2	29.4	4.5
Ann	49.4	32.2	40.8	101	Aug 1955	19	69.5	Jul 1983	-33	Feb 1970	4	5.8	Jan 1994	8945	158	.0	.5	188.0	77.4	173.6	24.2

+ 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: 1948-2001

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

067-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: MANISTIQUE, MI

COOP ID: 205073

Climate Division: MI 2

NWS Call Sign:

Elevation: 620 Feet Lat: 45°57N

Lon: 86°15W

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	1.51	1.50	2.48	1979	24	5.40	1979	.13	1995	11.8	4.1	.5	.1	.17	.29	.50	.71	.94	1.19	1.48	1.85	2.34	3.16	3.96
Feb	.94	.68	1.26	1977	24	3.30	1972	.00+	1993	8.4	3.7	.3	@	.00	.00	.31	.48	.63	.79	.98	1.20	1.47	1.93	2.36
Mar	1.82	1.65	1.50	1977	29	5.52	1977	.00	1999	8.0	4.2	1.3	.4	.10	.28	.56	.83	1.11	1.43	1.80	2.25	2.87	3.88	4.86
Apr	2.23	2.28	1.81	1953	10	4.18	1973	.51	1997	8.6	5.4	1.4	.4	.79	1.00	1.30	1.56	1.80	2.05	2.32	2.64	3.05	3.67	4.24
May	2.43	2.44	2.26	1960	6	5.70	1973	.34	1977	10.0	6.0	1.5	.5	.60	.82	1.18	1.49	1.80	2.13	2.50	2.93	3.51	4.41	5.26
Jun	3.05	2.88	2.51	1977	28	5.64	1980	.86	1988	10.6	6.4	2.0	.6	.99	1.28	1.71	2.07	2.42	2.78	3.18	3.64	4.24	5.16	6.01
Jul	3.13	2.58	3.70	1991	28	7.58	1991	.41	1989	10.6	6.3	1.5	.6	.72	1.01	1.47	1.88	2.29	2.72	3.21	3.79	4.56	5.78	6.92
Aug	3.19	2.96	2.55	1978	23	6.34	1978	1.17	1996	11.1	7.3	2.1	.6	1.16	1.46	1.90	2.26	2.60	2.95	3.34	3.78	4.35	5.23	6.03
Sep	3.34	3.17	3.85	1985	7	6.27	1985	.92	1989	12.5	7.6	2.1	.5	1.27	1.58	2.03	2.40	2.75	3.11	3.50	3.95	4.52	5.40	6.21
Oct	2.87	2.43	2.58	1967	8	5.27+	1995	1.05	1975	12.6	6.8	1.7	.3	1.13	1.39	1.77	2.09	2.38	2.68	3.01	3.39	3.86	4.60	5.27
Nov	2.56	2.43	2.26	1992	21	6.46	1977	.53	1986	10.4	6.0	1.6	.4	.63	.88	1.25	1.58	1.91	2.26	2.64	3.10	3.70	4.65	5.55
Dec	1.66	1.56	1.50	1983	21	4.01	1971	.00	1997	9.9	5.1	.8	.1	.27	.49	.77	1.00	1.23	1.46	1.73	2.04	2.44	3.08	3.68
Ann	28.73	30.18	3.85	Sep 1985	7	7.58	Jul 1991	.00+	Mar 1999	124.5	68.9	16.8	4.5	20.01	21.69	23.84	25.48	26.94	28.35	29.81	31.43	33.40	36.26	38.74

+ 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

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

Station: MANISTIQUE, MI

COOP ID: 205073

Climate Division: MI 2

NWS Call Sign:

Elevation: 620 Feet

Lat: 45° 57N

Lon: 86° 15W

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	20.5	20.0	15	12	12.0	1979	24	42.8	1979	55	1997	30	40	1997	6.5	4.5	1.5	.5	.1	-9.9	-9.9	-9.9	-9.9
Feb	10.9	7.0	17	15	6.0	1985	12	30.1	1985	61	1997	5	36	1997	4.2	3.0	.6	.2	.0	-9.9	-9.9	-9.9	-9.9
Mar	7.8	7.8	10	6	10.0	1975	24	17.0	1985	36	1997	17	28	1982	2.3	1.4	.6	.3	.1	-9.9	-9.9	-9.9	-9.9
Apr	1.2	.0	1	#	10.0	1977	5	10.0	1977	23	1975	2	9	1975	.6	.4	.1	@	@	.6	.4	.3	.2
May	.0	.0	#	0	1.0	1979	6	1.0	1979	1	1990	10	#	1990	@	@	.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	.3	.0	#	0	3.0	1989	19	3.5	1976	2	1976	22	#+	1993	.2	.1	@	.0	.0	.1	.0	.0	.0
Nov	2.9	1.7	1	#	6.0	1977	27	9.3	1977	9	2000	22	2	1995	1.8	1.1	.2	.1	.0	2.2	.7	.1	.0
Dec	6.3	-99.9	6	4	9.0	1977	9	31.4	1977	42	1989	31	27	1985	4.9	3.2	.9	.2	.0	-9.9	-9.9	-9.9	-9.9
Ann	49.9	-9.9	N/A	N/A	12.0	Jan 1979	24	42.8	Jan 1979	61	Feb 1997	5	40	Jan 1997	20.5	13.7	3.9	1.3	.2	-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

Climatography of the United States

No. 20 1971-2000

Station: MANISTIQUE, MI

COOP ID: 205073

Climate Division: MI 2

NWS Call Sign:

Elevation: 620 Feet

Lat: 45° 57N

Lon: 86° 15W

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	6/17	6/11	6/06	6/02	5/30	5/26	5/23	5/18	5/12
32	6/04	5/29	5/24	5/20	5/17	5/13	5/10	5/05	4/29
28	5/23	5/17	5/12	5/08	5/04	4/30	4/26	4/21	4/15
24	5/04	4/29	4/26	4/22	4/19	4/17	4/13	4/10	4/05
20	4/24	4/19	4/15	4/12	4/09	4/06	4/02	3/30	3/24
16	4/14	4/10	4/07	4/04	4/02	3/30	3/28	3/25	3/20
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	8/29	9/05	9/10	9/14	9/18	9/22	9/26	10/01	10/08
32	9/04	9/12	9/18	9/23	9/27	10/02	10/07	10/12	10/20
28	9/25	10/02	10/07	10/11	10/15	10/18	10/23	10/27	11/03
24	10/13	10/20	10/25	10/29	11/02	11/05	11/10	11/14	11/21
20	10/22	10/29	11/02	11/06	11/10	11/14	11/18	11/22	11/29
16	11/05	11/11	11/15	11/18	11/21	11/24	11/28	12/02	12/07
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	140	130	122	116	110	104	98	91	80
32	165	154	146	139	133	126	119	111	100
28	191	181	174	169	163	157	152	145	135
24	223	214	207	201	195	190	184	177	167
20	240	231	225	220	215	209	204	198	189
16	257	248	242	237	233	228	223	217	209

* 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

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

Station: MANISTIQUE, MI

COOP ID: 205073

Climate Division: MI 2 NWS Call Sign: Elevation: 620 Feet Lat: 45° 57N Lon: 86° 15W

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	1532	1322	1199	816	487	220	89	101	283	616	949	1331	8945
60	1377	1182	1044	666	341	116	26	33	159	463	799	1176	7382
57	1284	1098	951	576	261	70	10	14	101	375	709	1083	6532
55	1222	1042	889	517	213	47	4	7	71	318	649	1021	6000
50	1067	902	734	375	115	13	0	0	23	194	499	866	4788
32	523	419	231	44	1	0	0	0	0	5	85	362	1670

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	13	21	56	219	539	789	1000	989	713	412	126	54	4931
55	0	0	0	2	37	146	291	283	94	13	0	0	866
57	0	0	0	1	23	109	234	227	64	7	0	0	665
60	0	0	0	0	10	64	158	154	32	2	0	0	420
65	0	0	0	0	1	19	66	66	6	0	0	0	158
70	0	0	0	0	0	3	16	17	0	0	0	0	36

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	4	66	309	571	766	755	490	202	29	0	0	0	4	70	379	950	1716	2471	2961	3163	3192	3192
45	0	0	0	17	179	421	611	600	343	98	6	0	0	0	0	17	196	617	1228	1828	2171	2269	2275	2275
50	0	0	0	5	83	273	456	445	209	37	0	0	0	0	0	5	88	361	817	1262	1471	1508	1508	1508
55	0	0	0	4	26	144	302	292	104	8	0	0	0	0	0	4	30	174	476	768	872	880	880	880
60	0	0	0	0	3	62	158	155	34	0	0	0	0	0	0	0	3	65	223	378	412	412	412	412
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	0	2	36	159	317	465	459	266	88	6	0	0	0	2	38	197	514	979	1438	1704	1792	1798	1798

(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