

Climatography of the United States No. 20

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801
www.ncdc.noaa.gov

Station: MONTELLO, WI

1971-2000

COOP ID: 475581

Climate Division: WI 5

NWS Call Sign:

Elevation: 786 Feet

Lat: 43°47N

Lon: 89°19W

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	25.3	4.4	14.9	52+	1998	4	27.5	1990	-35+	1977	9	1.3	1977	1555	0	.0	.0	.3	22.2	30.8	11.5
Feb	31.0	9.6	20.3	65	1984	23	32.5	1998	-33	1996	3	9.1	1979	1251	0	.0	.0	1.4	14.9	27.4	7.3
Mar	42.4	21.8	32.1	84	1986	30	40.1	2000	-30	1962	1	24.6	1984	1020	0	.0	.0	7.5	5.5	25.4	1.5
Apr	56.6	33.6	45.1	92	1980	22	52.0	1977	10+	1979	6	39.5	1975	597	1	.0	@	21.3	.3	13.9	.0
May	69.5	45.4	57.5	93	1967	26	63.2	1977	22	1966	9	51.8	1983	271	37	.0	.3	30.3	.0	2.2	.0
Jun	78.9	54.5	66.7	102+	1988	22	70.8	1988	31+	1992	21	61.9	1982	53	104	.1	2.7	30.0	.0	.1	.0
Jul	82.8	59.3	71.1	104	1995	14	74.4	1999	40+	1968	29	66.4	1992	11	199	.1	4.8	31.0	.0	.0	.0
Aug	79.9	56.8	68.4	103	1988	2	73.9	1995	35+	1965	29	63.9	1977	43	147	.1	2.2	31.0	.0	.0	.0
Sep	71.6	47.9	59.8	97+	1978	8	64.8	1998	25+	1991	28	54.4	1993	182	25	.0	.5	29.9	.0	1.2	.0
Oct	59.9	36.2	48.1	87	1963	6	55.1	1971	11+	1988	30	42.7	1976	527	1	.0	.0	26.1	.0	10.5	.0
Nov	43.5	24.2	33.9	76+	1999	10	42.2	1999	-12	1976	29	25.4	1976	934	0	.0	.0	8.2	4.4	23.1	.5
Dec	30.3	11.4	20.9	65	1998	4	28.6	1998	-34	1983	19	7.4	1983	1370	0	.0	.0	1.2	17.0	29.6	6.5
Ann	56.0	33.8	44.9	104	Jul 1995	14	74.4	Jul 1999	-35+	Jan 1977	9	1.3	Jan 1977	7814	514	.3	10.5	218.2	64.3	164.2	27.3

+ 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/normal/usnormals.html

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1954-2001

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

075-A

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No. 20 1971-2000

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Station: MONTELLO, WI

COOP ID: 475581

Climate Division: WI 5

NWS Call Sign:

Elevation: 786 Feet Lat: 43°47N

Lon: 89°19W

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	1.31	1.35	1.09	1988	20	2.63	1988	.10	1981	6.7	4.2	.6	@	.23	.34	.53	.71	.89	1.09	1.32	1.59	1.96	2.55	3.11
Feb	1.17	1.22	1.00	1998	14	2.78	1981	.04	1987	5.9	3.4	.7	.1	.12	.21	.37	.53	.71	.90	1.14	1.43	1.83	2.49	3.14
Mar	2.21	2.27	2.75	1998	31	4.53	1998	.25	1978	7.4	5.3	1.5	.4	.48	.68	1.01	1.30	1.60	1.91	2.26	2.69	3.24	4.13	4.97
Apr	3.34	3.22	2.37	1955	24	8.05	1973	.83	1989	10.1	7.0	2.4	.6	1.35	1.66	2.09	2.45	2.79	3.13	3.50	3.93	4.47	5.30	6.05
May	3.48	3.35	2.59	1960	6	7.35	1973	.92	1988	9.4	6.9	2.3	.8	1.22	1.55	2.03	2.43	2.81	3.21	3.64	4.14	4.78	5.77	6.68
Jun	4.14	3.46	3.42	1984	17	8.93	1984	.87	1988	9.0	7.1	2.8	1.2	1.09	1.49	2.09	2.61	3.13	3.68	4.28	5.00	5.94	7.41	8.79
Jul	4.14	3.74	4.03	1985	25	10.75	1999	.89	1973	8.7	6.8	3.0	1.1	1.41	1.80	2.37	2.86	3.32	3.80	4.32	4.93	5.71	6.93	8.04
Aug	4.38	4.12	2.98	1979	9	10.70	1980	1.13	1976	9.3	7.4	2.9	1.2	1.24	1.66	2.29	2.83	3.37	3.92	4.54	5.27	6.21	7.69	9.06
Sep	3.81	3.12	4.91	1986	22	14.77	1986	.58	1975	8.3	6.4	2.8	1.1	.51	.82	1.36	1.89	2.45	3.06	3.78	4.66	5.85	7.79	9.67
Oct	2.26	2.06	3.15	1954	3	4.57	1984	.15	1975	7.8	5.4	1.5	.4	.65	.87	1.19	1.47	1.75	2.03	2.35	2.72	3.20	3.96	4.66
Nov	2.41	2.11	2.12	1992	21	5.42	1985	.07	1976	8.0	5.4	1.4	.4	.44	.66	1.01	1.34	1.67	2.03	2.44	2.93	3.59	4.65	5.66
Dec	1.38	1.35	1.73	1959	27	2.95	1977	.22	1993	6.9	4.2	.7	.1	.32	.44	.65	.83	1.01	1.20	1.41	1.67	2.01	2.54	3.05
Ann	34.03	35.39	4.91	Sep 1986	22	14.77	Sep 1986	.04	Feb 1987	97.5	69.5	22.6	7.4	26.68	28.16	30.02	31.42	32.64	33.82	35.02	36.34	37.92	40.19	42.13

+ 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: 1954-2001

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

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1971-2000

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Station: MONTELLO, WI

COOP ID: 475581

Climate Division: WI 5

NWS Call Sign:

Elevation: 786 Feet

Lat: 43°47N

Lon: 89°19W

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	12.7	11.4	7	6	14.0	1996	27	25.0	1994	35	1979	24	23	1979	4.7	3.8	1.3	.7	.1	25.9	21.0	16.4	10.2
Feb	7.5	7.8	7	6	8.0	1976	21	18.0+	1976	31	1979	12	28	1979	3.5	2.9	1.0	.3	.0	25.0	20.5	15.2	7.8
Mar	7.4	7.3	3	2	10.0	1972	29	15.6	1997	21	1979	1	11	1979	2.7	2.3	.9	.5	@	14.5	9.7	7.2	1.8
Apr	2.6	1.0	#	#	10.0	1973	9	14.0	1973	14	1973	10	2	1973	1.1	.9	.3	.1	@	2.0	.8	.3	.1
May	.1	.0	#	0	1.5	1990	10	1.5	1990	2	1990	10	#+	1994	@	@	.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	.2	.0	#	0	3.0	1997	27	3.0	1997	3	1997	27	#+	1997	.1	.1	@	.0	.0	.1	@	.0	.0
Nov	5.2	4.9	1	#	7.0	1985	9	15.0	1985	11	1977	27	2	1985	2.4	2.0	.7	.2	.0	5.2	2.2	1.1	@
Dec	11.0	6.3	4	2	10.0	1977	20	29.1	2000	24	1985	31	18	1985	4.7	3.7	1.0	.5	@	20.7	13.9	9.4	3.7
Ann	46.7	38.7	N/A	N/A	14.0	Jan 1996	27	29.1	Dec 2000	35	Jan 1979	24	28	Feb 1979	19.2	15.7	5.2	2.3	.1	93.4	68.1	49.6	23.6

+ 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:

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No. 20 1971-2000

Station: MONTELLO, WI

COOP ID: 475581

Climate Division: WI 5

NWS Call Sign:

Elevation: 786 Feet

Lat: 43° 47N

Lon: 89° 19W

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	6/09	6/03	5/29	5/26	5/22	5/19	5/15	5/11	5/05
32	5/29	5/23	5/18	5/14	5/11	5/07	5/04	4/29	4/23
28	5/12	5/07	5/03	4/30	4/27	4/24	4/21	4/18	4/13
24	4/22	4/18	4/15	4/13	4/11	4/09	4/07	4/04	4/01
20	4/14	4/11	4/08	4/06	4/04	4/02	3/30	3/28	3/24
16	4/09	4/05	4/02	3/30	3/27	3/25	3/22	3/19	3/15
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	9/10	9/14	9/17	9/19	9/21	9/23	9/26	9/29	10/02
32	9/19	9/23	9/26	9/28	10/01	10/03	10/05	10/08	10/12
28	9/22	9/27	10/01	10/04	10/08	10/11	10/14	10/18	10/23
24	10/07	10/13	10/17	10/20	10/24	10/27	10/30	11/03	11/09
20	10/21	10/25	10/28	10/30	11/02	11/04	11/06	11/09	11/13
16	10/27	11/02	11/06	11/10	11/13	11/17	11/20	11/25	11/30
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	141	134	129	125	121	117	113	108	101
32	163	156	150	146	142	138	134	129	122
28	182	175	170	166	163	159	155	150	144
24	216	209	204	199	195	190	186	180	173
20	226	221	217	214	211	208	205	201	196
16	255	247	240	235	230	225	220	214	205

* 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:

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No. 20
1971-2000**

Station: MONTELLO, WI

COOP ID: 475581

Climate Division: WI 5 NWS Call Sign: Elevation: 786 Feet Lat: 43° 47N Lon: 89° 19W

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	1555	1251	1020	597	271	53	11	43	182	527	934	1370	7814
60	1400	1111	865	452	167	14	0	10	86	380	784	1215	6484
57	1307	1027	772	369	118	5	0	3	48	299	694	1122	5764
55	1245	971	710	317	91	3	0	1	30	250	635	1060	5313
50	1090	831	560	203	41	0	0	0	7	146	491	905	4274
32	566	371	144	9	0	0	0	0	0	5	110	412	1617

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	34	45	147	403	789	1041	1210	1128	833	502	165	66	6363
55	0	0	0	22	166	354	497	415	173	34	1	0	1662
57	0	0	0	13	131	296	435	356	130	21	0	0	1382
60	0	0	0	6	88	215	342	270	78	9	0	0	1008
65	0	0	0	1	37	104	199	147	25	1	0	0	514
70	0	0	0	0	12	33	89	63	4	0	0	0	201

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	1	53	219	571	823	986	906	620	294	55	4	0	1	54	273	844	1667	2653	3559	4179	4473	4528	4532
45	0	0	23	127	423	673	831	751	474	179	26	1	0	0	23	150	573	1246	2077	2828	3302	3481	3507	3508
50	0	0	9	66	284	524	676	596	331	96	7	0	0	0	9	75	359	883	1559	2155	2486	2582	2589	2589
55	0	0	3	39	170	378	521	441	205	43	1	0	0	0	3	42	212	590	1111	1552	1757	1800	1801	1801
60	0	0	1	16	86	241	366	292	112	11	0	0	0	0	1	17	103	344	710	1002	1114	1125	1125	1125
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	0	35	147	350	530	652	593	382	183	33	2	0	0	35	182	532	1062	1714	2307	2689	2872	2905	2907

(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