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: DALTON, WI **COOP ID: 471970**

Climate Division: WI 5 **NWS Call Sign:** **Elevation: 860 Feet** **Lat: 43˚39N** **Lon: 89˚12W**

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	26.6	8.0	17.3	56	1973	26	28.8	1990	-39	1951	30	4.8	1977	1478	0	.0	.0	.3	21.0	30.6	9.9
Feb	32.6	13.2	22.9	63	1984	22	33.7	1998	-34	1996	3	12.0	1979	1178	0	.0	.0	1.4	13.9	26.8	6.0
Mar	44.1	23.5	33.8	83	1986	29	41.4	2000	-27	1962	1	27.0	1975	969	0	.0	.0	8.4	5.2	25.3	1.3
Apr	58.8	34.5	46.7	91	1980	22	53.3	1977	4	1982	7	40.6	1975	553	2	.0	@	22.3	.3	13.3	.0
May	71.8	45.8	58.8	92+	1991	28	66.2	1977	22+	1989	7	53.3	1997	238	45	.0	.2	30.7	.0	2.8	.0
Jun	80.5	54.9	67.7	102	1988	20	72.0	1988	30	1963	21	61.8	1982	44	125	.1	2.6	30.0	.0	.0	.0
Jul	83.9	59.7	71.8	103	1995	13	75.9	1983	40	1965	6	67.1	1992	9	219	.1	4.5	31.0	.0	.0	.0
Aug	81.5	58.0	69.8	103+	1988	17	75.4	1995	33	1986	28	65.8	1986	27	174	.1	2.1	31.0	.0	.0	.0
Sep	73.1	49.7	61.4	99	1955	9	66.7	1998	20	1949	29	55.8	1993	145	38	.0	.5	30.0	.0	1.1	.0
Oct	61.2	39.0	50.1	91	1963	6	57.4	1971	11	1988	30	44.1	1987	466	3	.0	.0	26.4	.0	8.3	.0
Nov	44.2	26.9	35.6	76+	1999	9	43.4	1999	-14	1950	25	27.7	1995	884	0	.0	.0	8.7	4.1	21.3	.4
Dec	31.1	14.1	22.6	65	1962	2	30.7	1982	-28	1983	19	11.5	2000	1315	0	.0	.0	1.2	16.6	29.7	5.6
Ann	57.5	35.6	46.5	103+	Jul 1995	13	75.9	Jul 1983	-39	Jan 1951	30	4.8	Jan 1977	7306	606	.3	9.9	221.4	61.1	159.2	23.2

\+ 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/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

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: DALTON, WI **COOP ID: 471970**

Climate Division: WI 5 **NWS Call Sign:** **Elevation: 860 Feet** **Lat: 43˚39N** **Lon: 89˚12W**

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	1.26	1.20	1.13	1967	24	3.05	1999	.08	1981
Feb	1.13	1.11	1.74	1981	22	3.13	1971	.03	1987
Mar	2.26	2.37	2.64	1998	31	5.49	1998	.22	1978
Apr	3.11	3.14	2.79	1955	24	7.12	1973	.81	1997
May	3.57	3.36	4.69	1989	30	6.96	1973	.26	1981
Jun	4.08	3.52	2.81	2001	12	9.99	1990	.92	1988
Jul	4.19	3.32	4.68	1991	21	13.77	1999	1.04	1975
Aug	3.87	3.45	3.10	1979	10	11.31	1980	.93	1996
Sep	3.60	3.24	4.18	1988	22	10.17	1986	.52	1979
Oct	2.40	2.00	3.00	1954	3	5.47	1984	.65	1975
Nov	2.41	2.05	2.68	1956	15	6.36	1985	.00	1976
Dec	1.42	1.42	1.19	1968	19	2.82	1971	.10	1998
Ann	33.30	33.32	4.69	May 1989	30	13.77	Jul 1999	.00	Nov 1976

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	8.9	4.0	.4	@
Feb	6.6	3.0	.5	.1
Mar	9.0	5.0	1.3	.4
Apr	10.7	6.6	2.1	.5
May	11.0	6.6	2.3	.7
Jun	10.4	7.0	2.8	1.2
Jul	9.9	6.8	2.8	1.1
Aug	9.7	6.7	2.8	.9
Sep	10.0	6.1	2.5	.9
Oct	9.5	5.6	1.2	.3
Nov	9.2	5.4	1.3	.3
Dec	8.7	3.7	.6	.2
Ann	113.6	66.5	20.6	6.6

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	.25	.36	.55	.72	.89	1.08	1.29	1.54	1.87	2.41	2.91
Feb	.09	.16	.31	.47	.64	.84	1.08	1.38	1.79	2.49	3.18
Mar	.42	.62	.95	1.25	1.57	1.91	2.29	2.75	3.37	4.36	5.31
Apr	1.23	1.52	1.93	2.27	2.59	2.91	3.26	3.67	4.18	4.97	5.69
May	.88	1.22	1.74	2.20	2.66	3.14	3.68	4.32	5.16	6.49	7.73
Jun	1.05	1.44	2.03	2.55	3.07	3.61	4.22	4.93	5.87	7.35	8.73
Jul	1.29	1.69	2.28	2.79	3.28	3.80	4.36	5.02	5.88	7.21	8.45
Aug	1.11	1.47	2.03	2.51	2.98	3.47	4.01	4.65	5.48	6.78	7.98
Sep	.58	.89	1.41	1.91	2.42	2.98	3.61	4.39	5.43	7.12	8.73
Oct	.75	.98	1.32	1.61	1.89	2.18	2.50	2.88	3.36	4.11	4.81
Nov	.41	.74	1.15	1.48	1.80	2.14	2.51	2.95	3.53	4.43	5.28
Dec	.26	.38	.59	.78	.98	1.19	1.44	1.73	2.12	2.75	3.35
Ann	26.04	27.50	29.34	30.72	31.93	33.09	34.28	35.58	37.15	39.39	41.31

\+ 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

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Services

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: DALTON, WI **COOP ID: 471970**

Climate Division: WI 5 **NWS Call Sign:** **Elevation: 860 Feet** **Lat: 43°39N** **Lon: 89°12W**

Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	11.7	11.3	6	5
Feb	7.7	7.4	6	5
Mar	8.7	8.7	3	2
Apr	3.0	2.0	#	#
May	.1	.0	#	0
Jun	.0	.0	0	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	#	.0	0	0
Oct	.5	.0	#	0
Nov	4.8	3.0	1	#
Dec	10.0	9.0	3	2
Ann	46.5	41.4	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	21.0	1999	2	25.5	1994	26	1979	24	19	1979
Feb	7.5	1994	23	20.0	1997	25	1979	21	23	1979
Mar	11.0	1972	29	18.2	1989	18	1979	1	11	1979
Apr	10.0	1973	9	13.8	1993	12	1973	10	2	1973
May	4.0	1990	10	4.0	1990	#	1990	10	#	1990
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	#	1983	22	#	1983	0	0	0	0	0
Oct	4.5	1997	26	4.5	1997	4	1997	26	#+	1997
Nov	14.0	1985	9	22.3	1985	12	1985	9	2	1995
Dec	13.0	1990	3	25.4	1977	19	2000	29	16	1985
Ann	21.0	Jan 1999	2	25.5	Jan 1994	26	Jan 1979	24	23	Feb 1979

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	7.1	4.1	1.4	.4	.1
Feb	5.0	2.6	1.0	.3	.0
Mar	4.1	2.5	.9	.5	.1
Apr	1.4	.9	.3	.2	@
May	.1	@	@	.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	.3	.2	.1	.0	.0
Nov	2.7	1.8	.6	.1	@
Dec	6.2	3.5	1.3	.4	.1
Ann	26.9	15.6	5.6	1.9	.3

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	24.2	18.3	13.8	7.8
Feb	22.1	17.6	12.2	6.6
Mar	10.5	8.1	5.3	2.6
Apr	1.4	.9	.4	.1
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	.0
Nov	3.6	1.6	.8	.1
Dec	17.6	11.5	7.0	2.7
Ann	79.5	58.0	39.5	19.9

+ 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

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: DALTON, WI **COOP ID: 471970**

Climate Division: WI 5 **NWS Call Sign:** **Elevation: 860 Feet** **Lat: 43˚39N** **Lon: 89˚12W**

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	6/13	6/06	6/02	5/29	5/26	5/22	5/18	5/14	5/08
32	5/27	5/22	5/18	5/15	5/12	5/10	5/07	5/03	4/28
28	5/13	5/08	5/04	4/30	4/27	4/24	4/21	4/17	4/11
24	4/29	4/25	4/21	4/18	4/15	4/12	4/09	4/06	4/01
20	4/17	4/13	4/10	4/08	4/06	4/04	4/01	3/30	3/26
16	4/12	4/07	4/04	4/01	3/29	3/26	3/23	3/19	3/14

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	9/09	9/13	9/15	9/17	9/20	9/22	9/24	9/26	9/30
32	9/17	9/21	9/23	9/26	9/28	9/30	10/02	10/04	10/08
28	9/24	9/29	10/02	10/05	10/08	10/11	10/14	10/18	10/23
24	10/05	10/11	10/15	10/19	10/22	10/25	10/29	11/02	11/08
20	10/20	10/24	10/27	10/30	11/01	11/04	11/06	11/10	11/14
16	10/28	11/03	11/07	11/10	11/14	11/17	11/20	11/24	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	136	129	124	120	116	112	108	103	97
32	153	148	144	141	137	134	131	127	122
28	185	178	172	168	163	159	155	149	142
24	214	206	199	194	189	184	179	172	164
20	223	218	215	212	209	206	203	199	195
16	256	246	240	234	229	224	218	211	202

***** 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/normals/usnormals.html

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: DALTON, WI **COOP ID: 471970**

Climate Division: WI 5 **NWS Call Sign:** **Elevation: 860 Feet** **Lat: 43˚39N** **Lon: 89˚12W**

Degree Days to Selected Base Temperatures (˚F)

Heating Degree Days (1)

Base Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	1478	1178	969	553	238	44	9	27	145	466	884	1315	7306
60	1323	1038	814	409	140	11	0	5	62	323	734	1160	6019
57	1230	954	721	329	95	4	0	1	32	247	644	1067	5324
55	1168	898	659	279	71	2	0	0	18	202	585	1005	4887
50	1013	758	513	171	29	0	0	0	3	110	443	850	3890
32	494	315	119	6	0	0	0	0	0	2	86	363	1385

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	38	61	174	444	831	1071	1234	1170	883	562	192	71	6731
55	0	0	1	27	188	383	521	457	211	49	1	0	1838
57	0	0	0	17	151	325	459	396	165	32	0	0	1545
60	0	0	0	8	103	242	366	307	105	15	0	0	1146
65	0	0	0	2	45	125	219	174	38	3	0	0	606
70	0	0	0	0	15	47	102	79	8	0	0	0	251

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	6	63	242	580	826	983	921	641	329	66	4	0	6	69	311	891	1717	2700	3621	4262	4591	4657	4661
45	0	1	28	140	427	676	828	766	496	208	29	2	0	1	29	169	596	1272	2100	2866	3362	3570	3599	3601
50	0	0	12	77	287	526	673	611	352	118	8	0	0	0	12	89	376	902	1575	2186	2538	2656	2664	2664
55	0	0	7	34	175	377	518	456	223	56	1	0	0	0	7	41	216	593	1111	1567	1790	1846	1847	1847
60	0	0	0	15	88	242	365	305	127	21	0	0	0	0	0	15	103	345	710	1015	1142	1163	1163	1163
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	0	1	41	157	367	539	661	609	401	193	33	2	0	1	42	199	566	1105	1766	2375	2776	2969	3002	3004

(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.
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