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: BLAIR, WI **COOP ID: 470882**

Climate Division: WI 4 **NWS Call Sign:** **Elevation: 860 Feet** **Lat: 44˚18N** **Lon: 91˚14W**

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	24.4	.1	12.3	56	1981	26	24.4	1990	-43	1951	30	-1.9	1977	1635	0	.0	.0	.2	23.4	30.9	15.3
Feb	31.4	6.4	18.9	61	1981	19	31.4	1998	-45	1996	3	7.9	1979	1291	0	.0	.0	1.2	15.2	27.8	10.3
Mar	42.9	19.8	31.4	82	1986	30	40.7	1973	-33	1962	1	21.7	1975	1042	0	.0	.0	7.4	6.6	26.9	3.2
Apr	57.8	32.2	45.0	91	1980	23	52.0	1977	-4	1982	6	39.1	1975	601	1	.0	.1	20.9	.4	16.3	.1
May	70.3	43.5	56.9	93	1959	2	65.3	1977	20	1966	10	50.9	1997	285	34	.0	@	30.3	.0	4.2	.0
Jun	78.8	52.9	65.9	100	1988	22	70.7	1971	28	1972	10	60.3	1982	74	100	@	2.1	30.0	.0	.1	.0
Jul	82.7	57.5	70.1	105	1995	14	74.3	1983	36	1972	4	63.9	1992	22	180	.1	3.7	31.0	.0	.0	.0
Aug	80.4	55.5	68.0	105+	1948	24	74.2	1995	33	1950	20	63.4	1992	47	139	@	2.3	31.0	.0	.0	.0
Sep	71.9	45.9	58.9	98	1955	9	63.6	1998	18	1967	29	52.8	1993	207	23	.0	.4	29.7	.0	2.1	.0
Oct	59.9	34.2	47.1	90+	1976	2	55.2	1971	8	1976	27	41.9	1976	556	0	.0	@	25.4	.0	14.9	.0
Nov	42.7	22.5	32.6	78	1949	7	38.5	1987	-18	1964	30	24.7	1991	972	0	.0	.0	7.8	6.0	25.3	1.1
Dec	29.0	7.7	18.4	64	1982	3	25.9	1997	-39	1983	19	5.3	1983	1446	0	.0	.0	.8	19.2	30.4	9.6
Ann	56.0	31.5	43.8	105+	Jul 1995	14	74.3	Jul 1983	-45	Feb 1996	3	-1.9	Jan 1977	8178	477	.1	8.6	215.7	70.8	178.9	39.6

\+ 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	.97	.86	1.01	1967	25	2.84	1996	.02	1981
Feb	.85	.63	2.22	1999	8	3.17	1981	.05	1987
Mar	1.90	1.91	1.74	1966	23	3.68	1985	.28	1978
Apr	3.17	2.66	2.82	1990	24	7.46	1993	.44	1997
May	3.92	3.43	3.48	1954	1	7.45	1991	1.20	1988
Jun	4.07	3.34	3.74	1998	27	10.00	2000	.96	1983
Jul	4.41	4.17	4.17	1978	1	9.93	1999	.76	1974
Aug	4.68	4.15	6.08	1975	23	10.97	1980	.80	1976
Sep	4.13	3.70	5.69	1994	14	10.54	1992	.42	1998
Oct	2.46	2.19	4.50	1982	20	6.74	1982	.34	1976
Nov	2.21	1.95	2.46	1975	10	7.65	1991	.02	1976
Dec	1.13	1.01	1.29	1982	28	3.37	1982	.24	1989
Ann	33.90	34.40	6.08	Aug 1975	23	10.97	Aug 1980	.02+	Jan 1981

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	7.6	3.5	.4	.0
Feb	6.4	2.6	.4	.1
Mar	7.9	4.8	1.1	.3
Apr	10.4	6.8	1.9	.5
May	10.4	7.1	2.7	1.0
Jun	11.3	7.5	2.5	1.0
Jul	10.5	7.3	2.9	1.3
Aug	10.4	7.4	2.8	1.3
Sep	10.3	6.8	2.4	1.0
Oct	8.1	5.0	1.4	.5
Nov	8.6	4.3	1.5	.4
Dec	8.1	3.4	.4	@
Ann	110.0	66.5	20.4	7.4

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	.20	.28	.43	.56	.69	.83	.99	1.18	1.43	1.84	2.22
Feb	.10	.16	.28	.40	.53	.67	.83	1.03	1.31	1.77	2.21
Mar	.50	.68	.95	1.19	1.43	1.68	1.96	2.30	2.73	3.41	4.05
Apr	.91	1.21	1.66	2.06	2.44	2.84	3.29	3.81	4.49	5.56	6.55
May	1.48	1.84	2.37	2.80	3.22	3.64	4.10	4.63	5.30	6.34	7.29
Jun	1.07	1.46	2.05	2.57	3.07	3.61	4.20	4.91	5.82	7.27	8.62
Jul	1.25	1.67	2.31	2.86	3.39	3.95	4.57	5.30	6.25	7.74	9.12
Aug	1.19	1.63	2.31	2.91	3.51	4.13	4.83	5.66	6.74	8.45	10.06
Sep	.66	1.01	1.61	2.18	2.77	3.41	4.14	5.04	6.24	8.19	10.06
Oct	.43	.64	1.00	1.34	1.68	2.06	2.48	3.00	3.69	4.81	5.88
Nov	.27	.44	.75	1.06	1.39	1.75	2.18	2.70	3.41	4.58	5.72
Dec	.25	.35	.51	.66	.81	.97	1.15	1.37	1.65	2.10	2.53
Ann	24.33	26.19	28.57	30.37	31.96	33.51	35.10	36.86	38.99	42.08	44.74

\+ 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

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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	10.6	10.5	8	7
Feb	6.4	5.0	9	8
Mar	7.9	8.0	4	2
Apr	2.0	.0	#	#
May	#	.0	#	0
Jun	.0	.0	0	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	.0	.0	0	0
Oct	.2	.0	#	0
Nov	3.7	1.6	1	#
Dec	9.8	7.5	4	3
Ann	40.6	32.6	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	13.0	1971	4	25.5	1971	25	1979	16	17	1971
Feb	8.0	1971	5	14.3	1975	29	1971	5	21	1971
Mar	9.3	1997	14	22.2	1997	23	1997	15	15	1975
Apr	10.0	1973	9	15.2	1973	14	1973	10	2	1975
May	#	1997	1	#+	1997	#	1997	1	#	1997
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	3.0	1992	20	3.0	1992	3	1992	20	#+	1995
Nov	6.0	1991	23	12.6	1985	11	1991	27	4	1991
Dec	7.7	1990	18	27.7	1990	19	1990	18	14	1985
Ann	13.0	Jan 1971	4	27.7	Dec 1990	29	Feb 1971	5	21	Feb 1971

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	7.1	3.9	1.0	.2	.1
Feb	4.8	2.5	.6	.2	.0
Mar	3.6	2.4	1.0	.4	.0
Apr	.9	.4	.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	.1	.1	@	.0	.0
Nov	2.4	1.3	.7	.1	.0
Dec	6.3	3.3	.9	.2	.0
Ann	25.2	13.9	4.4	1.2	.1

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	30.0	25.6	22.1	9.4
Feb	27.0	25.5	22.1	10.4
Mar	16.0	11.3	8.4	4.2
Apr	1.5	.6	.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	4.7	3.1	1.6	.0
Dec	24.9	17.8	12.4	3.1
Ann	104.2	83.9	67.0	27.2

+ 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	6/17	6/11	6/06	6/03	5/30	5/27	5/23	5/19	5/13
32	6/04	5/29	5/25	5/22	5/18	5/15	5/12	5/08	5/02
28	5/23	5/17	5/13	5/09	5/05	5/02	4/28	4/23	4/17
24	5/06	5/01	4/27	4/24	4/22	4/19	4/16	4/12	4/07
20	4/20	4/16	4/13	4/11	4/09	4/07	4/04	4/02	3/29
16	4/15	4/11	4/08	4/05	4/03	3/31	3/29	3/26	3/22

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	9/03	9/07	9/10	9/12	9/15	9/17	9/20	9/23	9/27
32	9/11	9/15	9/18	9/21	9/24	9/26	9/29	10/02	10/07
28	9/22	9/26	9/28	10/01	10/03	10/05	10/07	10/10	10/13
24	10/02	10/07	10/11	10/14	10/17	10/20	10/23	10/26	10/31
20	10/11	10/16	10/20	10/23	10/26	10/29	11/02	11/06	11/11
16	10/19	10/25	10/30	11/03	11/06	11/09	11/13	11/18	11/24

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	125	119	114	110	107	103	99	95	89
32	150	142	137	132	128	123	119	113	105
28	169	163	158	154	150	146	142	137	130
24	198	191	186	181	177	173	169	164	157
20	216	210	206	203	200	196	193	189	184
16	240	232	226	221	217	212	207	201	193

***** 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)

Heating Degree Days (1)

Base Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	1635	1291	1042	601	285	74	22	47	207	556	972	1446	8178
60	1480	1151	887	455	178	25	4	12	105	406	822	1291	6816
57	1387	1067	794	373	127	11	0	4	62	321	732	1198	6076
55	1325	1011	733	321	98	6	0	1	41	269	672	1136	5613
50	1170	871	587	206	45	1	0	0	10	158	528	981	4557
32	640	416	168	10	0	0	0	0	0	5	132	473	1844

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	27	49	149	401	772	1016	1181	1114	806	471	150	51	6187
55	0	0	0	21	157	332	468	403	156	23	0	0	1560
57	0	0	0	13	124	277	406	343	117	13	0	0	1293
60	0	0	0	6	82	201	318	258	70	5	0	0	940
65	0	0	0	1	34	100	180	139	23	0	0	0	477
70	0	0	0	0	11	35	83	58	4	0	0	0	191

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	41	204	522	770	934	866	563	251	40	2	0	0	41	245	767	1537	2471	3337	3900	4151	4191	4193
45	0	0	19	117	377	620	779	711	417	147	17	0	0	0	19	136	513	1133	1912	2623	3040	3187	3204	3204
50	0	0	5	61	245	474	624	556	281	77	5	0	0	0	5	66	311	785	1409	1965	2246	2323	2328	2328
55	0	0	1	27	138	326	469	402	171	33	0	0	0	0	1	28	166	492	961	1363	1534	1567	1567	1567
60	0	0	0	10	68	206	318	256	90	9	0	0	0	0	0	10	78	284	602	858	948	957	957	957
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	0	0	32	149	330	496	617	561	355	169	28	1	0	0	32	181	511	1007	1624	2185	2540	2709	2737	2738

(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