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

COOP ID: 472314

Lon: 89°15W

Station: EAGLE RIVER, WI

Climate Division: WI 2

NWS Call Sign:

Temperature (°F) Degree Days (1) Mean (1) Mean Number of Days (3) **Extremes** Base Temp 65 Max Max Max Max Min Min Highest Lowest Daily Daily Highest Lowest Month(1) Month(1) Cooling >= >= >= <= <= <= Month Mean Year Day Year Year Day Year Heating Max Min Daily(2) Daily(2) Mean Mean 100 90 50 32 32 0 20.7 .0 10.4 42 1996 18 21.1 1990 -33 1994 19 -.9 1977 1693 0 .0 .0 .1 27.3 31.0 15.7 Jan 25.9 5.3 15.6 53+ 2000 27 27.8 1998 -36 1996 2 5.7 1979 1383 0 .0 .0 .4 20.0 28.1 12.6 Feb Mar 36.3 14.5 25.4 71 2000 9 33.7 1973 -21 1996 19.1 1996 1228 0 .0 .0 3.5 11.3 29.1 5.7 28.8 8 1975 22.3 .2 Apr 50.5 39.7 80 1991 46.0 1987 0 +1995 4 33.6 759 0 .0 .0 14.3 2.0 May 65.8 40.6 53.2 86 1999 30 61.7 1977 23 +1997 16 44.9 1997 386 21 .0 .0 27.6 @ 9.8 .0 51.2 28 5 58.0 Jun 74.7 63.0 93 1995 19 67.3 1995 1998 1982 114 53 .0 .2 29.8 .0 .5 .0 Jul 78.1 55.1 97 1999 31 71.4 1983 37+ 2000 19 61.0 1992 52 .0 .9 31.0 66.6 101 .0 .0 .0 1997 75.1 54.2 64.7 93 2001 1 69.3 1983 39 +2000 19 60.3 86 75 .0 .2 31.0 .0 .0 .0 Aug 3 Sep 65.1 43.9 54.5 90 1998 12 59.8 1994 26 +1999 21 49.1 1974 318 .0 @ 29.4 .0 2.9 .0 52.5 31 37.9 1987 Oct 33.9 43.2 80 1992 3 50.6 1971 13 1996 675 0 .0 .0 18.9 .4 16.2 .0 21.2 29.0 69 1990 34.9 1999 -9 1997 24 20.8 1995 1081 0 .0 .0 3.7 10.5 27.6 1.2 Nov 36.7 1 Dec 24.6 7.9 16.3 57 2001 6 24.2 1994 -22+1996 27 5.9 1989 1511 0 .0 .0 .1 23.9 30.9 10.2 Jul Feb Jul Jan 50.5 29.7 40.1 97 1999 31 71.4 1983 -36 1996 2 -.9 1977 9286 253 .0 1.3 189.8 95.4 198.4 45.6 Ann

Complete documentation available from: www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

Issue Date: February 2004 029-A

(1) From the 1971-2000 Monthly Normals

Elevation: 1,645 Feet Lat: 45°55N

- (2) Derived from station's available digital record: 1948-2001
- (3) Derived from 1971-2000 serially complete daily data

⁺ Also occurred on an earlier date(s)

[@] Denotes mean number of days greater than 0 but less than .05

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COOP ID: 472314

Station: EAGLE RIVER, WI

Climate Division: WI 2 NWS Call Sign: Elevation: 1,645 Feet Lat: 45°55N Lon: 89°15W

										Pı	recipi	tation	(incl	nes)										
	Mea	Precipitation Totals Means/ Extremes										ays (3)	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										
	Medi	ans(1)				Extremes	•			Daily Precipitation				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	1.29	1.04	1.41	1967	25	3.29	1997	.15	1974	10.3	4.4	.4	.0	.24	.35	.54	.72	.89	1.09	1.31	1.57	1.93	2.50	3.04
Feb	.80	.75	1.24	1951	26	2.41	1971	.00	1987	6.7	2.6	.3	@	.05	.13	.26	.38	.50	.63	.79	.98	1.24	1.66	2.07
Mar	1.67	1.43	1.30	1973	7	3.85	1973	.06	1974	8.3	4.4	1.1	.2	.29	.43	.68	.91	1.14	1.40	1.69	2.04	2.52	3.28	4.01
Apr	2.10	2.01	2.20	1981	4	4.95	1991	.46	1979	9.0	5.4	1.2	.1	.56	.76	1.06	1.33	1.59	1.86	2.17	2.53	3.00	3.73	4.42
May	3.17	3.08	3.23	1951	16	7.31	1999	.26	1986	10.2	6.5	2.1	.9	.88	1.18	1.64	2.04	2.43	2.84	3.29	3.82	4.52	5.60	6.62
Jun	3.52	3.30	5.35	1981	14	10.40	1981	1.50	1995	11.5	7.2	2.3	.5	1.36	1.69	2.15	2.54	2.91	3.28	3.68	4.15	4.74	5.66	6.49
Jul	3.62	3.44	2.96	1949	27	8.18	2000	.76	1975	11.4	7.6	2.6	.5	1.18	1.52	2.03	2.46	2.88	3.31	3.78	4.33	5.04	6.14	7.15
Aug	3.92	3.28	3.80	1957	23	9.57	1980	1.17	1987	10.4	7.2	2.9	1.1	1.26	1.63	2.18	2.65	3.11	3.57	4.09	4.69	5.46	6.67	7.78
Sep	3.78	3.99	4.15	1983	20	7.02	1980	.77	1976	12.2	7.7	2.7	.8	1.04	1.40	1.94	2.42	2.89	3.37	3.91	4.55	5.38	6.68	7.90
Oct	2.41	2.40	2.82	1966	15	5.73	1979	.41	1976	11.1	6.2	1.4	.4	.61	.84	1.19	1.50	1.81	2.13	2.49	2.92	3.48	4.36	5.19
Nov	2.06	1.94	2.88	1950	16	4.52	1991	.36	1981	10.3	5.5	1.1	.4	.58	.78	1.07	1.33	1.58	1.84	2.13	2.47	2.92	3.61	4.26
Dec	1.25	1.11	.93	1953	3	3.08	1996	.24	1994	10.0	4.4	.3	.0	.33	.44	.62	.78	.94	1.11	1.29	1.51	1.80	2.25	2.67
Ann	29.59	29.36	5.35	Jun 1981	14	10.40	Jun 1981	.00	Feb 1987	121.4	69.1	18.4	4.9	20.70	22.41	24.61	26.28	27.77	29.21	30.70	32.35	34.36	37.27	39.80

⁺ Also occurred on an earlier date(s)

Complete documentation available from:

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

[#] 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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COOP ID: 472314

Station: EAGLE RIVER, WI

Climate Division: WI 2 NWS Call Sign: Elevation: 1,645 Feet Lat: 45°55N Lon: 89°15W

										Snov	w (incl	hes)													
						Sno	ow To	tals							Mean Number of Days (1)										
	Mean	s/Medi	ans (1)	ı		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	19.8	17.7	13	12	7.0	1972	25	34.7	1971	41	1971	31	26+	1997	8.2	5.5	2.0	.7	.0	-9.9	-9.9	-9.9	-9.9		
Feb	10.2	9.5	15	12	9.0	1971	5	25.6	1971	53	1971	7	46	1971	5.1	3.7	.9	.3	.0	-9.9	-9.9	-9.9	-9.9		
Mar	11.2	8.2	9	5	12.0	1996	25	24.0	1979	41	1971	2	33	1971	3.6	2.4	1.0	.3	.1	-9.9	-9.9	-9.9	-9.9		
Apr	2.5	.0	1	#	8.0	1996	30	16.0	1996	26	1971	4	10	1971	.9	.8	.2	.2	.0	1.8	1.0	.9	.6		
May	.4	.0	#	0	6.0	1979	6	6.0	1979	2	1976	2	#+	1976	.1	.1	@	@	.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	#	1995	22	#	1995	.0	.0	.0	.0	.0	.0	.0	.0	.0		
Oct	.5	.0	#	0	5.0	1979	23	5.0	1979	5	1979	23	#+	2000	.3	.2	@	@	.0	.2	.1	@	.0		
Nov	6.4	6.3	1	1	6.5	1993	26	15.3	2000	11	1991	25	4	1985	3.1	2.2	.5	.3	.0	-9.9	-9.9	-9.9	-9.9		
Dec	6.9	-99.9	6	6	7.0	1980	30	34.5	1996	24	1996	31	13	1985	6.9	4.9	1.3	.2	.0	-9.9	-9.9	-9.9	-9.9		
Ann	57.9	-9.9	N/A	N/A	12.0	Mar 1996	25	34.7	Jan 1971	53	Feb 1971	7	46	Feb 1971	28.2	19.8	5.9	2.0	.1	-9.9	-9.9	-9.9	-9.9		

⁺ Also occurred on an earlier date(s) #Denotes trace amounts

- (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

[@] 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

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Climate Division: WI 2

NWS Call Sign:

Elevation: 1,645 Feet Lat: 45°55N

			Freez	e Data										
		Spri	ng Freeze D	ates (Month/	Day)									
	P	robability of	later date i	n spring (thr	u Jul 31) tha	n indicated	(*)							
.10	.20	.30	.40	.50	.60	.70	.80	.90						
6/24	6/19	6/16	6/13	6/10	6/07	6/04	5/31	5/26						
6/11	6/07	6/04	6/01	5/29	5/27	5/24	5/21	5/16						
5/31	5/27	5/23	5/20	5/18	5/15	5/12	5/08	5/04						
5/19	5/14	5/11	5/07	5/05	5/02	4/28	4/25	4/20						
5/05	4/30	4/26	4/23	4/20	4/17	4/13	4/09	4/04						
4/23	4/19	4/16	4/13	4/11	4/08	4/05	4/02	3/29						
	1	Fal	l Freeze Da	tes (Month/D	ay)		•	•						
Probability of earlier date in fall (beginning Aug 1) than indicated(*)														
.10	.20	.30	.40	.50	.60	.70	.80	.90						
8/25	8/30	9/02	9/05	9/07	9/10	9/12	9/15	9/20						
9/10	9/14	9/16	9/19	9/21	9/23	9/25	9/28	10/02						
9/21	9/25	9/28	9/30	10/02	10/04	10/06	10/09	10/13						
9/28	10/05	10/09	10/13	10/17	10/20	10/24	10/29	11/04						
10/14	10/19	10/23	10/26	10/29	11/01	11/04	11/08	11/13						
10/28	11/01	11/04	11/06	11/09	11/11	11/14	11/17	11/21						
		-	Freeze F	ree Period										
		Probability	of longer th	an indicated	freeze free p	eriod (Days))							
.10	.20	.30	.40	.50	.60	.70	.80	.90						
108	101	96	92	89	85	81	76	69						
130	125	121	117	114	110	107	103	97						
155	149	144	140	137	133	129	125	118						
189	180	174	169	165	160	155	149	140						
214	207	201	196	192	187	182	177	169						
214	207	201	196	192	187	182	177							
	6/24 6/11 5/31 5/19 5/05 4/23 .10 8/25 9/10 9/21 9/28 10/14 10/28 .10 108 130 155 189	.10 .20 6/24 6/19 6/11 6/07 5/31 5/27 5/19 5/14 5/05 4/30 4/23 4/19 Pro .10 .20 8/25 8/30 9/10 9/14 9/21 9/25 9/28 10/05 10/14 10/19 10/28 11/01 .10 .20 108 101 130 125 155 149 189 180	Probability of .10	Spring Freeze D Probability of later date i	Probability of later date in spring (thr 10	Spring Freeze Dates (Month/Day) Probability of later date in spring (thru Jul 31) that	Spring Freeze Dates (Month/Day) Probability of later date in spring (thru Jul 31) than indicated 1.0	Probability of later date in spring (thru Jul 31) than indicated						

^{*} Probability of observing a temperature as cold, or colder, later in the spring or earlier in the fall than the indicated date.

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0/00 Indicates that the probability of occurrence of threshold temperature is less than the indicated probability.

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Complete documentation available from:

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Climate Division: WI 2 NWS Call Sign: Elevation: 1,645 Feet Lat: 45°55N Lon: 89°15W

	Degree Days to Selected Base Temperatures (°F)														
Base						Heatin	g Degree l	Days (1)							
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann		
65	1693	1383	1228	759	386	114	52	86	318	675	1081	1511	9286		
60	1538	1243	1073	611	264	45	11	26	187	521	931	1356	7806		
57	1445	1159	980	524	202	22	4	10	122	431	841	1263	7003		
55	1383	1103	918	467	166	12	0	4	87	373	781	1201	6495		
50	1228	963	763	333	93	3	0	0	31	242	632	1046	5334		
32	681	474	260	37	2	0	0	0	0	13	170	513	2150		

Base						Coolin	g Degree l	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	11	15	55	268	660	928	1072	1012	675	361	79	25	5161
55	0	0	0	7	111	251	359	303	72	8	0	0	1111
57	0	0	0	4	85	200	301	247	47	4	0	0	888
60	0	0	0	2	53	133	215	170	22	1	0	0	596
65	0	0	0	0	21	53	101	75	3	0	0	0	253
70	0	0	0	0	7	12	31	21	0	0	0	0	71

										Gro	wing l	Degre	e Uni	ts (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	13	95	352	603	814	744	451	160	18	0	0	0	13	108	460	1063	1877	2621	3072	3232	3250	3250
45	0	0	2	50	227	454	659	589	307	82	5	0	0	0	2	52	279	733	1392	1981	2288	2370	2375	2375
50	0	0	0	18	133	312	504	434	176	32	1	0	0	0	0	18	151	463	967	1401	1577	1609	1610	1610
55	0	0	0	9	66	190	351	287	87	9	0	0	0	0	0	9	75	265	616	903	990	999	999	999
60	0	0	0	1	25	95	199	157	30	0	0	0	0	0	0	1	26	121	320	477	507	507	507	507
Base				Gro	wing Deg	gree Unit	s for Co	rn (Mont	hly)				Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	0	11	76	233	356	505	459	265	99	11	0	0	0	11	87	320	676	1181	1640	1905	2004	2015	2015

(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

- c. Snow Tables
 - 1. Snow Climatology
 - 2. Cooperative Summary of the Day
- d. Freeze Data Table

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

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