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: 476398

Lon: 90°27W

Station: PARK FALLS DNR HQ, WI

Climate Division: WI 2 NWS Call Sign:

									,	Гетр	eratui	re (°F)									
	Mea	n (1)						Extr	emes						Days (1) emp 65		Mean	Numb	er of I	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	19.5	.0	9.8	53	1973	25	20.9	1990	-39+	1972	15	3	1977	1715	0	.0	.0	.1	27.5	31.0	15.4
Feb	26.2	6.0	16.1	59	1976	24	29.9	1998	-40	1996	2	6.2	1989	1368	0	.0	.0	.6	19.7	27.7	9.6
Mar	37.2	17.8	27.5	76	1986	31	36.7	1973	-30	1962	1	21.4	1996	1163	0	.0	.0	4.3	10.1	27.9	3.8
Apr	51.7	30.6	41.2	90+	1980	22	47.4	1977	-3	1954	3	35.1	1995	716	0	.0	@	16.8	1.5	18.6	.1
May	66.1	43.7	54.9	90	1959	2	64.1	1977	18	1966	9	47.0	1997	346	32	.0	.0	29.1	.0	4.2	.0
Jun	73.3	52.3	62.8	95+	1986	3	67.3	1995	31	1994	2	57.1	1982	121	54	.0	.4	30.0	.0	.2	.0
Jul	77.2	57.3	67.3	103	1995	14	71.8	1983	37	1948	1	61.1	1992	44	113	@	.9	31.0	.0	.0	.0
Aug	75.0	55.4	65.2	95	1964	2	69.9	1983	29	1950	20	61.0	1977	83	89	.0	.4	31.0	.0	.0	.0
Sep	65.8	46.1	56.0	94	1976	7	61.5	1998	25+	1984	29	49.9	1993	281	9	.0	@	28.8	.0	2.1	.0
Oct	53.8	35.5	44.7	86	1953	2	51.9	1973	10+	1988	30	39.6	1987	630	0	.0	.0	20.0	.5	13.0	.0
Nov	36.8	21.7	29.3	71	1975	5	35.8	1999	-17+	1976	30	20.0	1995	1072	0	.0	.0	4.0	11.5	26.3	1.3
Dec	23.5	7.3	15.4	57+	1998	4	23.7	1997	-34	1983	19	4.1	1989	1539	0	.0	.0	.3	25.0	30.8	9.8
					Jul			Jul		Feb			Jan								
Ann	50.5	31.1	40.9	103	1995	14	71.8	1983	-40	1996	2	3	1977	9078	297	@	1.7	196.0	95.8	181.8	40.0

⁺ Also occurred on an earlier date(s)

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

Issue Date: February 2004 084-A

(1) From the 1971-2000 Monthly Normals

Elevation: 1,525 Feet Lat: 45°56N

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

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

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Climate Division: WI 2 NWS Call Sign: Elevation: 1,525 Feet Lat: 45°56N Lon: 90°27W

										Pı	recipi	tation	(incl	nes)										
	Me	ans/	P	recipi	itatio	on Total					ean N of D	ays (3)	Proba	ability th		nonthly/	annual j	precipita ated an	babilit ation wi nount vs Proba	ll be equ		less tha	in the
	Medi	ians(1)				Extremes	,				any 116	стриацо	Ц		Th	ese value	s were det	termined	from the	incomplet	e gamma	distribut	ion	
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	1.17	1.06	1.63	1997	5	2.59	1997	.17	1981	10.7	3.8	.2	.1	.28	.39	.56	.71	.87	1.02	1.20	1.41	1.69	2.13	2.54
Feb	.83	.80	1.06	1951	26	2.17	1971	.01	1993	7.4	2.9	.3	.0	.12	.19	.31	.43	.55	.68	.83	1.01	1.26	1.66	2.04
Mar	1.79	1.72	1.81	1998	28	3.83	1979	.17	1978	9.5	4.5	.9	.2	.35	.51	.77	1.02	1.26	1.52	1.82	2.18	2.66	3.42	4.15
Apr	2.34	2.09	2.75	1954	26	5.74	1982	.36	1987	10.3	6.0	1.5	.3	.79	1.01	1.33	1.61	1.87	2.14	2.44	2.78	3.23	3.91	4.54
May	3.17	2.78	3.47	1970	30	6.35	1973	.99	1976	10.7	6.7	2.0	.6	1.24	1.54	1.95	2.30	2.62	2.96	3.32	3.73	4.26	5.07	5.81
Jun	4.14	4.03	3.13	1949	30	7.12	2000	2.24	1988	12.4	8.3	2.7	.9	2.29	2.62	3.05	3.39	3.70	4.01	4.33	4.69	5.15	5.82	6.42
Jul	3.96	3.82	5.82	1969	15	9.46	1999	.78	1989	11.1	7.6	2.9	.7	1.43	1.80	2.34	2.79	3.22	3.66	4.14	4.70	5.41	6.51	7.52
Aug	4.50	3.93	4.62	1972	16	10.41	1972	1.53	1998	11.4	7.2	2.6	1.0	1.57	2.00	2.61	3.13	3.63	4.14	4.70	5.35	6.18	7.46	8.64
Sep	3.98	3.59	3.95	1959	6	8.88	1985	1.02	1976	12.3	7.4	2.5	1.0	1.19	1.57	2.13	2.62	3.09	3.59	4.13	4.77	5.60	6.89	8.09
Oct	2.88	2.94	2.39	1966	14	5.02	1996	.43	1976	11.0	6.6	1.7	.6	1.05	1.32	1.71	2.03	2.34	2.66	3.01	3.41	3.92	4.71	5.43
Nov	2.15	1.87	3.18	1991	1	5.44	1975	.30	1981	10.3	5.4	1.2	.3	.51	.71	1.03	1.31	1.59	1.88	2.21	2.61	3.12	3.94	4.71
Dec	1.18	1.11	1.04	1965	12	3.39	1984	.24	1997	10.4	3.5	.3	@	.24	.35	.52	.68	.84	1.01	1.21	1.44	1.75	2.24	2.71
Ann	32.09	32.55	5.82	Jul 1969	15	10.41	Aug 1972	.01	Feb 1993	127.5	69.9	18.8	5.7	23.33	25.04	27.22	28.87	30.33	31.74	33.19	34.79	36.73	39.53	41.95

⁺ 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: 476398

Lon: 90°27W

Station: PARK FALLS DNR HQ, WI

Climate Division: WI 2 NWS Call Sign: Elevation: 1,525 Feet

										Snov	v (incl	hes)											
						Sno	ow To	tals									Mea	n Nu	mber	of Day	ys (1)		
	Mean	s/Medi	ans (1))					Extre	mes (2)							ow Fa					Depth esholo	
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	4.8	-99.9	12	11	8.0	1972	24	24.0	1971	36	1982	31	23	1986	6.5	5.1	1.6	.4	.0	-9.9	-9.9	-9.9	-9.9
Feb	8.8	7.5	14	12	6.5	2000	16	18.0	1971	37	1982	3	31	1971	4.5	3.5	1.0	.5	.0	-9.9	-9.9	-9.9	-9.9
Mar	8.2	5.9	7	4	24.0	1996	25	24.0	1996	29+	1979	6	24	1971	2.8	2.2	1.1	.5	.1	-9.9	-9.9	-9.9	-9.9
Apr	2.6	1.0	1	#	13.0	1974	3	13.0+	1974	21	1971	4	6	1971	1.0	.8	.3	.2	.1	.3	.2	.0	.0
May	.0	.0	#	0	.5	1996	1	.5	1996	#	1973	3	#	1973	.1	.0	.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	#	1974	30	#	1974	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Oct	.2	.0	#	0	1.0	1978	15	1.7	1990	5	1982	22	1	1982	.1	.1	.0	.0	.0	.0	.0	.0	.0
Nov	1.4	-99.9	1	#	7.0	1993	5	7.0	1993	17	1985	30	4	1991	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9
Dec	4.0	-99.9	6	5	7.0	1972	29	12.0	1971	29	1985	28	27	1985	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9
Ann	30.0	-9.9	N/A	N/A	24.0	Mar 1996	25	24.0+	Mar 1996	37	Feb 1982	3	31	Feb 1971	-9.9	-9.9	-9.9	-9.9	-9.9	-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

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^{-9/-9.9} represents missing values Annual statistics for Mean/Median snow depths are not appropriate

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NWS Call Sign: Elevation: 1,525 Feet Lat: 45°56N Lon: 90°27W

				Freez	e Data								
			Spri	ng Freeze D	ates (Month	/Day)							
Propest Prop													
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90				
36	6/20	6/14	6/09	6/06	6/02	5/30	5/26	5/22	5/15				
32	6/03	5/29	5/25	5/21	5/18	5/15	5/11	5/07	5/02				
28	5/17	5/12	5/09	5/06	5/03	4/30	4/27	4/24	4/19				
24	5/03	4/29	4/26	4/23	4/20	4/18	4/15	4/12	4/07				
20	4/23	4/18	4/15	4/12	4/10	4/07	4/05	4/01	3/28				
16	4/14	4/10	4/07	4/05	4/03	4/01	3/29	3/26	3/23				
			Fal	l Freeze Da	tes (Month/D	Day)	•	•					
Town (F)		Pro	bability of ea	arlier date i	n fall (beginn	ning Aug 1) t	han indicate	d(*)					
temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90				
36	9/03	9/07	9/10	9/12	9/14	9/17	9/19	9/22	9/26				
32	9/12	9/16	9/18	9/21	9/23	9/25	9/27	9/30	10/04				
28	9/23	9/27	9/30	10/02	10/04	10/06	10/08	10/11	10/14				
24	10/06	10/11	10/15	10/18	10/22	10/25	10/28	11/01	11/06				
20	10/19	10/23	10/26	10/29	10/31	11/03	11/05	11/08	11/12				
16	10/26	10/31	11/03	11/06	11/08	11/11	11/14	11/17	11/21				
				Freeze F	ree Period		•	•					
Tomas (E)			Probability	of longer th	an indicated	freeze free p	eriod (Days)	1					
remp (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90				
36	123	116	111	107	104	100	96	91	84				
32	148	141	136	131	127	123	119	113	106				
28	169	163	160	156	153	150	147	143	137				
24	203	196	191	187	183	180	175	171	164				
20	223	216	211	207	204	200	196	191	184				
16	236	230	226	222	219	215	212	208	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.

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				Deg	ree Days t	o Selected	Base Tem	peratures	(°F)				
Base						Heatin	g Degree l	Days (1)					
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	1715	1368	1163	716	346	121	44	83	281	630	1072	1539	9078
60	1560	1228	1008	569	233	50	8	26	160	479	922	1384	7627
57	1467	1144	915	483	177	25	1	11	104	392	832	1291	6842
55	1405	1088	853	427	144	15	0	5	74	337	772	1229	6349
50	1250	948	698	299	78	3	0	0	25	216	623	1074	5214
32	703	469	215	28	1	0	0	0	0	12	181	542	2151

Base						Coolin	g Degree l	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	11	25	76	302	710	923	1092	1029	718	405	99	26	5416
55	0	0	0	12	140	248	379	321	101	17	0	0	1218
57	0	0	0	7	111	198	318	265	71	10	0	0	980
60	0	0	0	3	74	133	233	187	38	4	0	0	672
65	0	0	0	0	32	54	113	89	9	0	0	0	297
70	0	0	0	0	12	13	38	29	1	0	0	0	93

										Gro	wing	Degre	e Uni	ts (2)										
Base					Growin	g Degree	Units (N	(Ionthly)								Growi	ng Degre	e Units (Accumu	lated Mo	onthly)			
	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	22	139	463	686	847	777	483	191	24	0	0	0	22	161	624	1310	2157	2934	3417	3608	3632	3632
45	0	0	7	73	322	536	692	622	339	103	9	0	0	0	7	80	402	938	1630	2252	2591	2694	2703	2703
50	0	0	1	36	205	388	537	467	212	46	1	0	0	0	1	37	242	630	1167	1634	1846	1892	1893	1893
55	0	0	0	15	115	248	385	316	117	18	0	0	0	0	0	15	130	378	763	1079	1196	1214	1214	1214
60	0	0	0	4	54	138	238	178	54	3	0	0	0	0	0	4	58	196	434	612	666	669	669	669
Base	Base Growing Degree Units for Corn (Monthly)													•	Gr	owing D	egree Ur	its for C	orn (Acc	umulate	d Month	ly)	•	
50/86	50/86 0 0 15 98 283 419 540 482 275 109 11											0	0	0	15	113	396	815	1355	1837	2112	2221	2232	2232

(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