

Climatography of the United States

No. 20

1971-2000

Station: SPARTA, WI

COOP ID: 477997

Climate Division: WI 4

NWS Call Sign:

Elevation: 782 Feet Lat: 43° 56N Lon: 90° 49W

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	23.6	3.0	13.3	57	1981	26	25.3	1990	-48	1951	30	-1.7	1977	1603	0	.0	.0	.3	22.6	30.7	13.2
Feb	30.2	9.4	19.8	62+	2000	24	32.7	1998	-41	1996	3	8.1	1979	1265	0	.0	.0	1.5	15.0	27.3	8.5
Mar	42.0	22.3	32.2	84	1986	30	40.4	2000	-30	1962	1	23.4	1975	1020	0	.0	.0	8.2	5.9	25.8	2.3
Apr	56.9	34.1	45.5	92+	1980	23	52.3	1977	-1	1982	6	40.3	1975	585	1	.0	.1	21.5	.3	13.8	.1
May	69.8	45.3	57.6	92+	1972	21	65.4	1977	21	1966	10	52.3	1997	270	38	.0	.6	30.5	.0	3.0	.0
Jun	78.9	54.5	66.7	100+	1988	22	71.9	1991	32	1964	1	60.5	1982	62	113	.1	2.9	30.0	.0	.0	.0
Jul	82.9	59.3	71.1	105	1995	14	75.4	1999	40+	1984	7	65.7	1992	15	205	.2	5.2	31.0	.0	.0	.0
Aug	80.5	57.1	68.8	102+	1988	18	75.3	1995	32	1982	12	64.0	1977	40	157	.2	3.0	31.0	.0	@	.0
Sep	71.5	47.9	59.7	96+	1978	9	64.8	1998	19	1967	29	54.1	1993	185	26	.0	.7	29.8	.0	2.0	.0
Oct	59.7	36.6	48.2	90+	1976	2	55.9	1971	10+	1976	27	42.5	1988	523	1	.0	@	26.0	.0	11.9	.0
Nov	42.2	24.7	33.5	76	1999	9	40.7	1999	-18	1977	27	25.5	1976	947	0	.0	.0	8.2	5.6	23.5	.8
Dec	28.4	10.3	19.4	65+	2001	6	27.3	1997	-35	1950	27	7.2	1985	1416	0	.0	.0	1.1	18.3	30.2	7.4
Ann	55.6	33.7	44.7	105	Jul 1995	14	75.4	Jul 1999	-48	Jan 1951	30	-1.7	Jan 1977	7931	541	.5	12.5	219.1	67.7	168.2	32.3

+ 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: 1948-2001

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

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No. 20 1971-2000

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

Station: SPARTA, WI

COOP ID: 477997

Climate Division: WI 4

NWS Call Sign:

Elevation: 782 Feet Lat: 43°56N

Lon: 90°49W

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	.81	.72	1.23	1967	25	2.17	1996	.00+	1988	7.7	3.7	.3	@	.00	.12	.28	.41	.54	.67	.83	1.01	1.26	1.67	2.05
Feb	.80	.58	1.50	1984	19	2.80	1971	.00+	1993	6.3	2.8	.4	@	.00	.00	.09	.21	.36	.53	.73	.98	1.34	1.95	2.55
Mar	1.78	1.57	1.86	1966	23	4.19	1977	.00	1999	7.6	4.9	1.3	.3	.27	.50	.80	1.05	1.30	1.56	1.85	2.19	2.64	3.35	4.02
Apr	3.17	2.93	3.80	1994	25	6.99	1994	.65	1997	11.4	6.8	1.9	.4	1.08	1.38	1.82	2.19	2.55	2.91	3.31	3.78	4.37	5.30	6.15
May	4.04	4.19	3.16	2000	18	6.97	1973	1.48	1981	11.4	7.4	2.7	1.1	1.64	2.01	2.54	2.97	3.38	3.79	4.24	4.75	5.40	6.40	7.30
Jun	4.15	3.51	3.20	1984	17	10.42	1998	1.49	1983	10.8	7.7	2.7	1.3	1.20	1.59	2.19	2.70	3.20	3.73	4.31	4.99	5.87	7.25	8.54
Jul	4.31	3.85	4.55	1978	1	9.48	1978	.68	1974	10.5	7.5	3.1	1.1	1.18	1.59	2.21	2.76	3.29	3.85	4.46	5.20	6.15	7.64	9.04
Aug	4.47	3.86	3.45	1973	23	12.43	1980	.86	1976	10.9	7.3	3.0	1.3	1.38	1.80	2.43	2.98	3.50	4.05	4.65	5.35	6.26	7.68	9.00
Sep	3.84	3.64	5.42	1994	14	9.01	1992	.33	1979	10.1	6.6	2.3	.9	.60	.93	1.49	2.02	2.56	3.16	3.85	4.69	5.82	7.64	9.40
Oct	2.26	2.36	2.35	1954	3	4.41	1995	.33	1992	9.4	5.2	1.6	.4	.61	.82	1.15	1.44	1.72	2.01	2.34	2.73	3.24	4.03	4.78
Nov	2.24	2.04	2.13	1984	1	4.84	1982	.03	1976	8.6	5.1	1.5	.5	.29	.47	.79	1.10	1.43	1.79	2.21	2.73	3.44	4.60	5.72
Dec	1.13	1.03	1.60	1975	14	2.96	1982	.00	1989	8.1	3.8	.5	.2	.13	.27	.46	.62	.78	.96	1.16	1.40	1.71	2.22	2.70
Ann	33.00	34.41	5.42	Sep 1994	14	12.43	Aug 1980	.00+	Mar 1999	112.8	68.8	21.3	7.5	24.49	26.17	28.30	29.91	31.33	32.70	34.11	35.66	37.54	40.24	42.57

+ 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

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Station: SPARTA, WI

COOP ID: 477997

Climate Division: WI 4

NWS Call Sign:

Elevation: 782 Feet

Lat: 43° 56N

Lon: 90° 49W

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	12.8	13.1	7	6	18.0	1971	4	30.5	1971	25+	1996	31	20	1971	6.1	2.9	.9	.4	.1	24.8	21.0	15.1	5.8
Feb	6.7	5.9	7	6	7.0	1971	5	16.2	1974	28	1971	12	26	1971	3.5	1.6	.5	@	.0	21.4	17.2	13.7	9.4
Mar	5.9	5.1	3	1	8.0	1995	7	14.1	1975	23	1971	1	15	1971	2.7	1.6	.4	.2	.0	8.6	6.6	5.1	3.3
Apr	2.0	.9	#	#	7.0	1973	9	14.2	1973	12	1973	10	2	1973	1.2	.6	.2	.1	.0	1.2	.6	.2	@
May	#	.0	#	0	#	1997	1	#+	1997	#	1997	1	#	1997	.0	.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	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Oct	.1	.0	#	0	1.0	1991	19	1.0	1991	3	1992	20	#+	2000	.2	@	.0	.0	.0	.0	.0	.0	.0
Nov	2.6	.9	1	#	4.5	1992	26	10.7	1977	16	1991	29	6	1991	1.4	.6	.2	.0	.0	1.6	1.0	.3	.0
Dec	9.5	8.8	3	2	8.0	1971	30	20.2	1977	27	1985	2	13	1985	4.1	2.1	.5	.1	.0	16.3	10.7	6.6	.6
Ann	39.6	34.7	N/A	N/A	18.0	Jan 1971	4	30.5	Jan 1971	28	Feb 1971	12	26	Feb 1971	19.2	9.4	2.7	.8	.1	73.9	57.1	41.0	19.1

+ 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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Climate Division: WI 4

NWS Call Sign:

Elevation: 782 Feet

Lat: 43° 56N

Lon: 90° 49W

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	6/11	6/05	6/01	5/29	5/25	5/22	5/19	5/14	5/09
32	5/26	5/21	5/18	5/15	5/13	5/10	5/07	5/04	4/29
28	5/17	5/10	5/06	5/02	4/28	4/24	4/20	4/16	4/09
24	5/01	4/26	4/22	4/19	4/16	4/13	4/10	4/07	4/02
20	4/17	4/13	4/10	4/07	4/05	4/03	3/31	3/28	3/24
16	4/14	4/10	4/07	4/04	4/01	3/30	3/27	3/24	3/19
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	9/01	9/06	9/10	9/13	9/16	9/19	9/22	9/26	10/01
32	9/06	9/12	9/17	9/20	9/24	9/27	10/01	10/05	10/11
28	9/20	9/25	9/28	10/01	10/04	10/06	10/09	10/13	10/18
24	10/02	10/08	10/13	10/16	10/19	10/23	10/26	10/31	11/05
20	10/15	10/20	10/24	10/27	10/30	11/02	11/05	11/09	11/14
16	10/22	10/28	11/02	11/06	11/10	11/14	11/18	11/22	11/29
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	131	125	121	117	113	109	106	101	95
32	152	145	141	137	133	130	126	121	115
28	178	171	166	162	158	154	150	145	139
24	209	201	195	190	185	181	176	170	162
20	226	220	215	211	207	204	200	195	189
16	248	239	233	227	222	217	211	205	196

* 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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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	1603	1265	1020	585	270	62	15	40	185	523	947	1416	7931
60	1448	1125	865	440	166	20	1	10	89	376	797	1261	6598
57	1355	1041	772	358	117	8	0	3	50	295	707	1168	5874
55	1293	985	710	307	90	4	0	1	32	246	647	1106	5421
50	1138	845	564	194	40	0	0	0	7	143	503	951	4385
32	615	400	154	8	0	0	0	0	0	4	117	449	1747

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	34	59	157	414	792	1041	1213	1141	831	505	160	56	6403
55	0	0	0	23	168	355	500	428	173	34	1	0	1682
57	0	0	0	14	134	299	438	368	131	21	0	0	1405
60	0	0	0	6	90	221	345	282	80	9	0	0	1033
65	0	0	0	1	38	113	205	157	26	1	0	0	541
70	0	0	0	0	13	43	99	71	5	0	0	0	231

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	2	51	224	556	810	971	904	592	280	52	3	0	2	53	277	833	1643	2614	3518	4110	4390	4442	4445
45	0	0	23	133	408	660	816	749	444	170	20	1	0	0	23	156	564	1224	2040	2789	3233	3403	3423	3424
50	0	0	10	72	273	510	661	594	305	93	5	0	0	0	10	82	355	865	1526	2120	2425	2518	2523	2523
55	0	0	3	34	163	365	506	439	189	44	1	0	0	0	3	37	200	565	1071	1510	1699	1743	1744	1744
60	0	0	0	14	83	233	356	290	103	16	0	0	0	0	0	14	97	330	686	976	1079	1095	1095	1095
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	0	37	152	347	524	649	590	373	183	32	1	0	0	37	189	536	1060	1709	2299	2672	2855	2887	2888

(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