

Climatography of the United States

No. 20

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

Station: SOLON SPRINGS, WI

1971-2000

COOP ID: 477892

Climate Division: WI 1

NWS Call Sign:

Elevation: 1,080 Feet Lat: 46° 21N

Lon: 91° 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	19.4	-4.9	7.3	53+	1981	25	17.5	1990	-47	1972	15	-3.4	1982	1792	0	.0	.0	.1	26.8	30.9	18.2
Feb	27.2	1.1	14.2	61	1976	24	29.6	1998	-46	1996	2	1.8	1989	1424	0	.0	.0	.9	18.2	27.9	12.3
Mar	38.4	14.4	26.4	76	1987	8	34.8	1973	-39	1962	1	18.1	1996	1198	0	.0	.0	4.9	8.6	28.9	5.3
Apr	54.0	27.1	40.6	92	1980	21	46.5	1977	-11	1954	3	34.7	1996	734	0	.0	@	18.8	1.0	21.7	.1
May	68.8	38.7	53.8	94+	1986	31	62.4	1977	13	1966	9	46.9	1997	370	21	.0	.5	29.6	@	8.0	.0
Jun	77.2	48.4	62.8	98	1956	10	67.1	1995	29+	1994	2	57.7	1985	115	48	.0	2.0	29.8	.0	.6	.0
Jul	81.3	54.2	67.8	102	1988	28	71.9	1974	34+	1972	4	61.4	1992	44	130	.2	3.8	31.0	.0	.0	.0
Aug	78.9	52.2	65.6	100	1988	17	69.4	1984	32	1950	18	60.9	1977	79	95	@	2.2	31.0	.0	.0	.0
Sep	68.7	42.5	55.6	99	1976	7	61.1	1998	22	1965	26	49.5	1993	291	7	.0	.2	29.4	.0	4.3	.0
Oct	56.1	32.0	44.1	90	1992	3	49.6+	1973	6	1976	27	38.6	1976	650	0	.0	@	22.2	.2	16.6	.0
Nov	37.5	18.8	28.2	73	1978	3	36.6	1999	-26	1985	29	19.3	1995	1106	0	.0	.0	4.9	10.5	27.1	2.4
Dec	23.6	2.9	13.3	58	1982	3	23.5	1997	-41+	1983	20	.4	1983	1605	0	.0	.0	.3	23.8	30.8	12.2
Ann	52.6	27.3	40.0	102	Jul 1988	28	71.9	Jul 1974	-47	Jan 1972	15	-3.4	Jan 1982	9408	301	.2	8.7	202.9	89.1	196.8	50.5

+ 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: 1920-2001

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

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Lon: 91°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	1.06	.98	1.73	1982	23	2.89	1975	.04	1981	7.0	3.2	.3	@	.19	.28	.44	.58	.73	.89	1.07	1.29	1.58	2.06	2.51
Feb	.81	.62	1.14	1971	27	2.87	1981	.11	1987	5.7	2.5	.3	.1	.10	.16	.27	.39	.51	.64	.79	.98	1.24	1.67	2.08
Mar	1.67	1.56	1.76	1977	12	3.55	1977	.21	1987	6.9	4.2	.9	.2	.38	.54	.78	1.00	1.22	1.45	1.71	2.02	2.43	3.08	3.69
Apr	2.17	2.05	2.94	2001	23	4.12	1981	.37	1987	7.6	5.2	1.2	.3	.64	.85	1.16	1.43	1.68	1.95	2.25	2.60	3.05	3.76	4.42
May	3.22	3.28	3.12	1962	15	5.56	1991	.71	1976	9.5	6.2	2.1	.6	1.03	1.34	1.79	2.17	2.54	2.93	3.35	3.84	4.48	5.47	6.38
Jun	3.95	3.68	3.00	1951	19	7.77	1999	1.59	1987	10.5	6.9	2.5	.8	1.58	1.94	2.46	2.88	3.29	3.70	4.14	4.65	5.30	6.29	7.19
Jul	4.86	4.47	5.60	1999	26	14.95	1999	1.52	1998	9.9	7.4	3.0	1.3	1.67	2.13	2.80	3.36	3.90	4.46	5.07	5.79	6.70	8.11	9.41
Aug	4.24	3.83	5.70	1978	23	9.02	1977	1.11	1982	9.4	6.9	2.4	1.0	1.33	1.74	2.33	2.85	3.34	3.85	4.42	5.07	5.92	7.25	8.47
Sep	3.56	3.11	5.10	1990	5	7.81	1990	.80	1976	10.1	6.4	2.1	.7	.81	1.14	1.66	2.13	2.59	3.09	3.65	4.32	5.20	6.59	7.91
Oct	2.55	1.97	3.95	1950	2	7.73	1971	.59	1976	9.1	5.5	1.6	.4	.68	.92	1.29	1.61	1.93	2.27	2.64	3.08	3.65	4.56	5.41
Nov	2.11	1.81	1.90	1948	25	6.06	1975	.35	1981	8.0	4.6	1.3	.5	.35	.53	.84	1.13	1.43	1.75	2.12	2.57	3.18	4.16	5.09
Dec	.95	.90	1.20	1959	28	2.16	1972	.23	1979	6.9	3.3	.2	@	.25	.34	.48	.60	.72	.85	.98	1.15	1.36	1.70	2.01
Ann	31.15	31.38	5.70	Aug 1978	23	14.95	Jul 1999	.04	Jan 1981	100.6	62.3	17.9	5.9	21.07	22.98	25.45	27.34	29.02	30.66	32.36	34.24	36.54	39.89	42.80

+ 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: 1920-2001

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

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Station: SOLON SPRINGS, WI

COOP ID: 477892

Climate Division: WI 1

NWS Call Sign:

Elevation: 1,080 Feet

Lat: 46°21N

Lon: 91°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	13.1	12.0	13	13	15.0	1982	23	25.9	1975	29	1982	23	25	1997	6.0	4.3	1.3	.4	.1	29.4	28.1	26.5	21.7
Feb	8.5	7.3	15	15	10.0	1990	16	23.0	1971	33	1971	6	27	1971	5.1	3.2	.8	.2	@	27.1	27.1	26.4	22.0
Mar	8.4	6.5	11	7	10.0	1975	24	22.3	1975	32+	1979	11	24+	1979	4.1	2.9	.9	.5	.1	22.1	19.4	17.8	14.0
Apr	3.0	2.4	2	#	12.0	1983	15	12.0	1983	24	1975	1	12	1975	1.7	1.2	.5	.1	@	5.1	3.7	3.2	2.0
May	.2	.0	#	0	2.0	1979	5	2.6	1984	6	1984	1	#+	1996	.1	.1	.0	.0	.0	.1	.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	.5	.0	#	0	2.0	1977	11	3.5	1987	2+	1992	16	#+	1997	.4	.3	.0	.0	.0	.3	.0	.0	.0
Nov	5.3	3.8	2	1	14.0	1991	29	16.0	1982	26	1991	3	13	1991	3.3	2.2	.9	.3	@	8.2	3.3	1.7	.1
Dec	10.2	9.9	6	5	13.0	1982	28	22.0	1982	22+	1996	31	17	1983	5.5	4.0	.9	.2	.1	26.0	19.8	13.3	5.0
Ann	49.2	41.9	N/A	N/A	15.0	Jan 1982	23	25.9	Jan 1975	33	Feb 1971	6	27	Feb 1971	26.2	18.2	5.3	1.7	.3	118.3	101.4	88.9	64.8

+ 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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NWS Call Sign:

Elevation: 1,080 Feet

Lat: 46°21N

Lon: 91°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	6/24	6/19	6/15	6/12	6/09	6/06	6/03	5/30	5/25
32	6/13	6/07	6/04	5/31	5/28	5/25	5/22	5/18	5/13
28	5/25	5/21	5/18	5/15	5/13	5/11	5/08	5/05	5/01
24	5/14	5/10	5/07	5/05	5/03	4/30	4/28	4/25	4/21
20	4/30	4/26	4/22	4/20	4/17	4/15	4/12	4/09	4/05
16	4/20	4/17	4/14	4/11	4/09	4/07	4/04	4/02	3/29
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	8/29	9/02	9/05	9/07	9/10	9/12	9/15	9/18	9/22
32	9/08	9/12	9/14	9/16	9/18	9/20	9/22	9/24	9/28
28	9/20	9/23	9/26	9/28	9/30	10/03	10/05	10/08	10/11
24	9/28	10/02	10/06	10/09	10/12	10/14	10/17	10/21	10/25
20	10/08	10/13	10/17	10/20	10/23	10/26	10/30	11/02	11/08
16	10/23	10/27	10/30	11/02	11/05	11/07	11/10	11/13	11/17
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	112	105	100	96	92	88	84	79	72
32	131	124	120	116	112	108	104	100	93
28	157	151	147	143	140	136	132	128	122
24	178	172	168	164	161	158	154	150	145
20	211	203	197	193	188	184	179	173	166
16	229	222	217	213	209	205	200	195	188

* 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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Station: SOLON SPRINGS, WI

COOP ID: 477892

Climate Division: WI 1 NWS Call Sign: Elevation: 1,080 Feet Lat: 46° 21N Lon: 91° 49W

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	1792	1424	1198	734	370	115	44	79	291	650	1106	1605	9408
60	1637	1284	1043	585	249	44	10	24	167	496	956	1450	7945
57	1544	1200	950	498	188	21	4	10	108	407	866	1357	7153
55	1482	1144	888	441	153	12	0	4	77	350	806	1295	6652
50	1327	1004	733	308	82	2	0	0	26	223	658	1140	5503
32	779	529	254	29	1	0	0	0	0	12	212	607	2423

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	10	29	79	285	675	923	1109	1040	707	386	95	26	5364
55	0	0	0	8	114	245	396	331	94	11	0	0	1199
57	0	0	0	4	87	194	337	275	65	6	0	0	968
60	0	0	0	2	54	128	250	196	34	2	0	0	666
65	0	0	0	0	21	48	130	95	7	0	0	0	301
70	0	0	0	0	6	11	51	33	1	0	0	0	102

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	15	133	452	692	876	808	494	191	20	0	0	0	15	148	600	1292	2168	2976	3470	3661	3681	3681
45	0	0	4	68	313	542	721	653	352	101	8	0	0	0	4	72	385	927	1648	2301	2653	2754	2762	2762
50	0	0	0	30	195	397	566	498	221	44	0	0	0	0	0	30	225	622	1188	1686	1907	1951	1951	1951
55	0	0	0	12	107	263	411	347	118	15	0	0	0	0	0	12	119	382	793	1140	1258	1273	1273	1273
60	0	0	0	2	50	140	262	205	54	1	0	0	0	0	0	2	52	192	454	659	713	714	714	714
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	0	14	123	320	444	562	516	315	134	15	0	0	0	14	137	457	901	1463	1979	2294	2428	2443	2443

(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.

- 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/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