

Climatology of the United States

No. 20

1971-2000

Station: STOUGHTON, WI

COOP ID: 478229

Climate Division: WI 8

NWS Call Sign:

Elevation: 840 Feet

Lat: 42° 37N

Lon: 89° 45W

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	25.8	7.4	16.6	56	1967	25	27.3	1990	-35	1951	30	3.6	1977	1501	0	.0	.0	.4	21.5	30.7	10.6
Feb	31.3	12.1	21.7	66	2000	26	34.3	1998	-30	1959	2	9.9	1979	1212	0	.0	.0	1.4	14.3	27.1	6.4
Mar	42.9	23.5	33.2	82	1986	30	41.3	1973	-16	1962	1	26.9	1984	986	0	.0	.0	8.0	5.0	25.6	.8
Apr	56.6	34.5	45.6	92	1980	23	52.4	1977	2	1982	6	38.5	1982	585	1	.0	@	21.2	.3	12.6	.0
May	69.6	46.2	57.9	95	1949	5	65.3	1977	22	1989	6	51.6	1997	260	39	.0	.4	30.6	.0	1.4	.0
Jun	79.2	55.7	67.5	101	1988	21	71.8	1971	34	1977	9	62.3	1982	43	117	.1	2.6	30.0	.0	.0	.0
Jul	82.7	60.3	71.5	100+	1988	16	75.7	1983	41	1968	3	66.9	1992	9	210	.1	4.8	31.0	.0	.0	.0
Aug	80.3	57.9	69.1	103	1988	2	75.2	1995	38+	1986	28	64.2	1992	38	164	.1	2.5	31.0	.0	.0	.0
Sep	72.4	48.4	60.4	98	1978	9	65.8	1971	19	1989	24	55.5	1993	167	29	.0	.6	30.0	.0	1.1	.0
Oct	60.8	37.2	49.0	89	1982	1	58.9	1971	12	1988	30	41.3	1987	503	6	.0	.0	26.5	.0	10.2	.0
Nov	44.6	26.0	35.3	77	1950	1	42.7	1999	-12+	1950	25	27.8	1991	893	0	.0	.0	9.8	3.8	22.6	.4
Dec	30.8	13.5	22.2	66	2001	6	30.4	1998	-26	1983	24	9.5	1983	1329	0	.0	.0	1.2	15.7	29.5	5.2
Ann	56.4	35.2	45.8	103	Aug 1988	2	75.7	Jul 1983	-35	Jan 1951	30	3.6	Jan 1977	7526	566	.3	10.9	221.1	60.6	160.8	23.4

+ 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: STOUGHTON, WI

COOP ID: 478229

Climate Division: WI 8

NWS Call Sign:

Elevation: 840 Feet Lat: 42°37N

Lon: 89°45W

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	1.34	1.30	1.41	1960	13	3.15	1999	.33	1981	8.0	4.1	.6	.1	.32	.45	.64	.82	.99	1.17	1.37	1.62	1.93	2.43	2.90
Feb	1.27	1.33	1.70	2001	9	2.79	2000	.03+	1995	6.4	3.2	.7	.2	.09	.17	.33	.51	.70	.93	1.20	1.55	2.02	2.83	3.63
Mar	2.02	1.76	2.30	1998	31	5.01	1976	.38	1980	8.4	5.1	1.0	.2	.42	.61	.90	1.18	1.45	1.74	2.07	2.46	2.98	3.81	4.60
Apr	3.40	2.85	2.37	1999	23	7.85	1999	1.30	1997	11.1	6.9	2.3	.8	1.19	1.51	1.98	2.37	2.74	3.13	3.55	4.04	4.67	5.64	6.53
May	3.44	3.63	4.45	1995	31	6.84	1999	.87	1992	11.2	7.2	2.5	.7	.97	1.29	1.79	2.22	2.64	3.08	3.57	4.14	4.89	6.06	7.15
Jun	3.84	4.05	3.06	2000	1	7.56	1993	.62	1992	10.3	6.5	2.6	1.2	1.19	1.55	2.09	2.56	3.01	3.48	3.99	4.59	5.37	6.59	7.71
Jul	3.82	3.50	3.95	1950	19	7.36	1982	1.43	1973	9.5	6.6	2.6	1.1	1.59	1.94	2.43	2.83	3.21	3.59	4.00	4.48	5.08	6.00	6.83
Aug	4.06	3.76	3.92	2001	2	8.50	1981	1.23	1978	9.5	6.7	3.1	1.0	1.62	2.00	2.53	2.97	3.38	3.80	4.26	4.78	5.45	6.47	7.40
Sep	3.40	2.71	5.05	1981	1	8.86	1986	.11	1979	8.7	5.6	2.3	.8	.39	.65	1.13	1.60	2.11	2.67	3.33	4.15	5.26	7.09	8.87
Oct	2.32	1.88	2.33	1991	25	5.91	1984	.35	1975	8.7	5.2	1.6	.5	.49	.70	1.04	1.35	1.66	1.99	2.37	2.82	3.41	4.36	5.25
Nov	2.42	1.79	2.22	1952	17	6.63	1985	.17	1976	8.8	5.4	1.6	.5	.52	.75	1.10	1.42	1.75	2.09	2.48	2.94	3.55	4.53	5.45
Dec	1.60	1.50	1.63	1988	27	3.63	1971	.44	1976	8.2	4.0	.8	.1	.42	.58	.81	1.01	1.21	1.42	1.65	1.93	2.29	2.85	3.38
Ann	32.93	32.80	5.05	Sep 1981	1	8.86	Sep 1986	.03+	Feb 1995	108.8	66.5	21.7	7.2	25.56	27.03	28.90	30.29	31.52	32.70	33.90	35.23	36.82	39.10	41.06

+ 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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Station: **STOUGHTON, WI**

COOP ID: **478229**

Climate Division: **WI 8**

NWS Call Sign:

Elevation: **840 Feet**

Lat: **42°37N**

Lon: **89°45W**

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	9.0	8.6	6	5	11.0	1999	3	19.6	1971	26	1979	28	19	1979	5.4	3.8	1.0	.2	.1	18.2	14.4	10.4	4.8
Feb	7.5	5.3	6	4	8.0	1994	20	35.5	1994	26	1979	22	25	1979	3.7	2.3	.9	.4	.0	16.7	13.1	8.0	2.1
Mar	5.2	4.0	2	1	12.0	1971	19	17.1	1971	22	1979	2	13	1979	2.6	1.5	.5	.2	.1	5.9	3.6	1.9	.6
Apr	1.6	.0	#	0	7.1	1973	10	12.6	1973	10	1973	10	1	1982	.5	.3	.2	.1	.0	1.2	.9	.4	.1
May	.0	.0	#	0	.5	1990	10	.5	1990	2	1994	1	#	1994	@	.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	#	2000	6	#	2000	.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	.2	.0	#	0	2.0	1992	20	2.0+	1997	2	1997	27	#	1997	.1	.1	.0	.0	.0	@	.0	.0	.0
Nov	1.4	.2	#	#	4.5	1977	28	7.2	1971	8	1977	28	1	1985	1.2	.9	.2	.0	.0	1.3	.2	.1	.0
Dec	7.0	5.5	3	2	8.0	2000	19	18.0	1983	27	2000	30	14	2000	4.4	3.1	1.1	.4	.0	14.4	7.9	4.1	1.0
Ann	31.9	23.6	N/A	N/A	12.0	Mar 1971	19	35.5	Feb 1994	27	Dec 2000	30	25	Feb 1979	17.9	12.0	3.9	1.3	.2	57.7	40.1	24.9	8.6

+ 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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Lon: 89° 45W

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	6/03	5/27	5/23	5/19	5/15	5/11	5/07	5/02	4/26
32	5/16	5/11	5/08	5/05	5/02	4/30	4/27	4/24	4/19
28	5/04	4/29	4/26	4/23	4/20	4/17	4/14	4/10	4/05
24	4/24	4/19	4/16	4/13	4/10	4/07	4/04	4/01	3/27
20	4/14	4/10	4/07	4/04	4/02	3/30	3/27	3/24	3/20
16	4/09	4/04	3/30	3/27	3/23	3/20	3/16	3/12	3/06
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	9/12	9/16	9/20	9/23	9/25	9/28	10/01	10/04	10/09
32	9/18	9/23	9/26	9/29	10/02	10/05	10/08	10/12	10/17
28	9/22	9/28	10/02	10/06	10/09	10/12	10/16	10/20	10/26
24	10/06	10/12	10/17	10/21	10/25	10/29	11/02	11/07	11/14
20	10/15	10/22	10/27	10/31	11/04	11/08	11/13	11/18	11/25
16	10/26	11/02	11/07	11/12	11/16	11/20	11/24	11/30	12/07
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	155	147	142	137	133	128	124	118	110
32	175	167	161	157	152	148	143	138	130
28	195	187	181	176	172	167	162	156	149
24	223	214	208	203	197	192	187	181	172
20	240	232	226	221	216	211	206	200	192
16	267	257	249	243	237	231	225	217	207

* 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	1501	1212	986	585	260	43	9	38	167	503	893	1329	7526
60	1346	1072	831	440	158	11	0	9	77	363	743	1174	6224
57	1253	988	738	358	110	4	0	3	42	287	653	1081	5517
55	1191	932	676	307	84	2	0	0	27	242	594	1019	5074
50	1036	792	529	193	37	0	0	0	6	148	452	864	4057
32	515	350	125	8	0	0	0	0	0	7	88	374	1467

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	36	62	162	414	803	1064	1224	1149	852	533	185	68	6552
55	0	0	0	23	174	375	511	437	188	56	2	0	1766
57	0	0	0	14	138	318	449	377	144	39	1	0	1480
60	0	0	0	7	93	234	356	290	88	21	0	0	1089
65	0	0	0	1	39	117	210	164	29	6	0	0	566
70	0	0	0	0	13	40	95	76	5	0	0	0	229

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	3	58	225	570	835	990	913	625	309	66	5	0	3	61	286	856	1691	2681	3594	4219	4528	4594	4599
45	0	0	27	134	418	685	835	758	476	188	27	2	0	0	27	161	579	1264	2099	2857	3333	3521	3548	3550
50	0	0	11	68	279	535	680	603	333	104	10	0	0	0	11	79	358	893	1573	2176	2509	2613	2623	2623
55	0	0	3	34	166	389	525	449	212	47	1	0	0	0	3	37	203	592	1117	1566	1778	1825	1826	1826
60	0	0	0	12	84	248	370	299	114	13	0	0	0	0	0	12	96	344	714	1013	1127	1140	1140	1140
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	3	37	146	348	537	659	597	390	195	41	2	0	3	40	186	534	1071	1730	2327	2717	2912	2953	2955

(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