

# 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: HUTCHINSON 1 N, MN

1971-2000

COOP ID: 213962

Climate Division: MN 5

NWS Call Sign:

Elevation: 1,095 Feet Lat: 44° 56N

Lon: 94° 22W

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	20.3	-.4	10.0	61	1981	24	23.7	1990	-39	1994	18	-3.7	1977	1708	0	.0	.0	.2	24.4	31.0	15.0
Feb	27.1	7.5	17.3	60+	1990	13	30.5	1987	-36	1996	2	5.4	1979	1336	0	.0	.0	1.0	16.9	27.3	9.0
Mar	38.9	20.7	29.8	83	1968	30	40.5	2000	-32	1962	1	20.2	1975	1090	0	.0	.0	6.2	7.5	26.0	2.4
Apr	55.8	34.6	45.2	95	1980	21	52.4	1977	3	1975	3	37.1	1975	596	3	.0	.1	21.1	.4	12.1	.0
May	69.8	47.7	58.8	99	2001	15	66.1	1977	20	1967	3	52.4	1997	240	47	.0	.7	30.1	.0	1.2	.0
Jun	78.7	57.1	67.9	102	1988	25	73.7	1988	37+	1978	2	63.6	1993	44	132	.1	2.8	30.0	.0	.0	.0
Jul	82.8	61.4	72.1	102	1980	14	76.5	1983	44+	1975	12	64.6	1992	14	235	.1	4.8	31.0	.0	.0	.0
Aug	80.0	58.6	69.3	104	1988	1	75.7	1983	38	1964	14	64.8	1992	31	165	@	3.2	31.0	.0	.0	.0
Sep	71.5	48.6	60.1	98	1978	7	64.9	1998	22	1974	22	54.5	1993	174	26	.0	.9	29.6	.0	1.0	.0
Oct	58.8	36.1	47.5	89+	2001	3	52.8	2000	12	1976	27	42.0	1988	545	0	.0	.0	25.0	.1	10.1	.0
Nov	39.2	22.1	30.7	81	1999	9	40.5	1999	-18	1977	26	22.8	1985	1032	0	.0	.0	6.3	8.7	24.8	1.2
Dec	24.7	6.7	15.7	65	1998	2	25.0	1997	-34	1983	19	-.6	1983	1529	0	.0	.0	.4	21.8	30.8	9.3
Ann	54.0	33.4	43.7	104	Aug 1988	1	76.5	Jul 1983	-39	Jan 1994	18	-3.7	Jan 1977	8339	608	.2	12.5	211.9	79.8	164.3	36.9

+ 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](http://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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Climate Division: MN 5

NWS Call Sign:

Elevation: 1,095 Feet Lat: 44°56N

Lon: 94°22W

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	.77	.56	2.50	1999	7	3.47	1999	.01	1974	6.3	2.5	.1	@	.05	.10	.20	.30	.42	.55	.72	.93	1.22	1.72	2.21
Feb	.53	.44	.85	1967	15	1.59	1971	.01	1987	4.7	1.6	.2	.0	.04	.08	.15	.22	.30	.40	.51	.65	.84	1.17	1.49
Mar	1.63	1.45	3.42	1985	4	4.89	1985	.28	1978	7.6	3.9	.9	.1	.28	.42	.66	.88	1.11	1.36	1.65	1.99	2.45	3.20	3.92
Apr	2.18	1.97	2.77	2001	23	5.60	1986	.15	1987	9.2	5.0	1.3	.3	.43	.62	.94	1.24	1.54	1.86	2.22	2.66	3.24	4.17	5.05
May	3.09	3.03	2.81	1959	5	7.37	1991	.91	1976	10.6	6.8	2.0	.5	1.06	1.35	1.78	2.14	2.48	2.84	3.22	3.68	4.26	5.15	5.98
Jun	4.46	4.13	6.00	1997	29	9.06	1990	.09	1988	10.9	7.8	3.0	1.2	1.13	1.55	2.20	2.78	3.34	3.94	4.60	5.39	6.42	8.04	9.57
Jul	3.81	3.93	3.48	1977	23	9.33	1997	.54	1975	9.3	6.1	2.7	1.2	1.17	1.54	2.07	2.54	2.98	3.45	3.96	4.56	5.33	6.54	7.66
Aug	3.99	3.79	4.50	1967	26	6.93	1981	.65	1990	9.7	6.6	2.7	1.1	1.47	1.84	2.38	2.83	3.26	3.70	4.17	4.72	5.43	6.51	7.51
Sep	2.35	2.08	3.70	1991	8	5.99	1991	.19	2000	8.4	4.8	1.3	.5	.58	.80	1.14	1.45	1.75	2.07	2.42	2.85	3.40	4.28	5.11
Oct	1.91	1.63	2.38	1973	10	4.55	1984	.11	1989	7.1	4.0	1.2	.4	.28	.44	.71	.98	1.25	1.55	1.90	2.33	2.90	3.83	4.73
Nov	1.65	1.13	2.57	1991	1	4.96	1991	.12	1984	6.4	3.6	1.0	.4	.14	.25	.46	.69	.94	1.23	1.58	2.01	2.61	3.61	4.60
Dec	.75	.60	1.33	1959	28	2.21	1982	.04	1986	5.5	1.9	.4	.1	.07	.12	.22	.32	.43	.56	.72	.91	1.18	1.63	2.06
Ann	27.12	27.80	6.00	Jun 1997	29	9.33	Jul 1997	.01+	Feb 1987	95.7	54.6	16.8	5.8	18.45	20.10	22.23	23.86	25.31	26.72	28.18	29.80	31.77	34.65	37.15

+ 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:

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Station: HUTCHINSON 1 N, MN

COOP ID: 213962

Climate Division: MN 5

NWS Call Sign:

Elevation: 1,095 Feet

Lat: 44° 56N

Lon: 94° 22W

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	8.6	6.2	7	6	12.0	1982	20	30.2	1982	33	1982	25	17	1982	5.7	2.8	1.1	.3	@	25.9	21.9	18.4	6.3
Feb	5.6	4.6	7	5	5.0	1980	5	12.8	1991	28	1982	9	23	1979	3.6	2.0	.5	.1	.0	22.3	18.2	12.6	5.7
Mar	7.6	5.5	3	2	15.0	1985	4	25.0	1985	19	1985	5	12	1975	3.7	2.3	.8	.4	@	12.3	8.9	6.5	2.0
Apr	2.0	1.0	#	#	6.0	1994	29	7.8	1972	11	1975	2	4	1975	1.3	.7	.3	.1	.0	.9	.2	@	.0
May	.0	.0	#	0	.4	1971	19	.4	1971	#	1984	1	#	1984	@	.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	#	1974	23	#	1974	.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	#	1995	21	#+	1995	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Oct	.2	.0	#	0	1.7	1976	24	3.6	1976	1	1981	24	#+	1988	.2	.1	.0	.0	.0	.1	.0	.0	.0
Nov	7.7	8.0	1	1	13.0	1983	28	28.9	1991	17	1983	30	6	1991	3.4	2.3	.9	.4	.1	7.1	3.8	1.6	.3
Dec	6.9	6.3	4	3	12.0	1996	15	17.3	2000	22	1983	19	19	1983	4.5	2.3	.8	.2	.1	19.4	12.4	5.9	1.9
Ann	38.6	31.6	N/A	N/A	15.0	Mar 1985	4	30.2	Jan 1982	33	Jan 1982	25	23	Feb 1979	22.4	12.5	4.4	1.5	.2	88.0	65.4	45.0	16.2

+ 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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**COOP ID:** 213962

**Climate Division:** MN 5

**NWS Call Sign:**

**Elevation:** 1,095 Feet

**Lat:** 44° 56N

**Lon:** 94° 22W

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	5/23	5/19	5/16	5/13	5/11	5/08	5/06	5/02	4/28
32	5/15	5/10	5/06	5/03	4/30	4/27	4/24	4/20	4/15
28	5/06	4/30	4/26	4/23	4/20	4/16	4/13	4/09	4/03
24	4/18	4/14	4/11	4/08	4/06	4/04	4/01	3/29	3/25
20	4/14	4/09	4/06	4/03	3/31	3/28	3/25	3/21	3/16
16	4/06	4/01	3/29	3/26	3/23	3/20	3/17	3/14	3/09
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	9/13	9/17	9/19	9/22	9/24	9/26	9/29	10/01	10/05
32	9/17	9/21	9/24	9/27	9/29	10/02	10/04	10/08	10/12
28	9/29	10/03	10/07	10/10	10/12	10/15	10/18	10/21	10/26
24	10/09	10/14	10/18	10/22	10/25	10/28	10/31	11/04	11/10
20	10/15	10/21	10/25	10/29	11/01	11/05	11/08	11/13	11/19
16	10/29	11/02	11/06	11/09	11/11	11/14	11/17	11/20	11/25
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	154	148	143	139	136	132	128	124	117
32	172	165	160	156	151	147	143	138	130
28	197	190	184	179	175	170	166	160	152
24	221	214	209	205	201	197	193	188	181
20	240	231	225	220	215	210	205	199	190
16	254	247	241	237	233	228	224	218	211

\* 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:  
[www.ncdc.noaa.gov/oa/climate/normal/usnormals.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormals.html)

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**1971-2000**

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**NWS Call Sign:**

**Elevation: 1,095 Feet    Lat: 44° 56N    Lon: 94° 22W**

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	1708	1336	1090	596	240	44	14	31	174	545	1032	1529	8339
60	1553	1196	935	455	144	11	0	6	78	395	882	1374	7029
57	1460	1112	842	375	99	4	0	1	42	311	792	1281	6319
55	1398	1056	781	326	75	2	0	0	25	260	732	1219	5874
50	1243	916	636	216	32	0	0	0	5	151	588	1064	4851
32	711	465	207	17	0	0	0	0	0	6	176	546	2128

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	26	52	140	414	829	1078	1243	1157	842	484	135	40	6440
55	0	0	1	32	191	389	530	444	177	25	0	0	1789
57	0	0	0	22	153	332	468	383	134	14	0	0	1506
60	0	0	0	11	105	249	375	295	80	5	0	0	1120
65	0	0	0	3	47	132	235	165	26	0	0	0	608
70	0	0	0	0	16	52	122	74	4	0	0	0	268

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	37	232	603	853	1006	928	629	297	42	1	0	3	40	272	875	1728	2734	3662	4291	4588	4630	4631
45	0	0	14	138	451	703	851	773	480	181	15	0	0	0	14	152	603	1306	2157	2930	3410	3591	3606	3606
50	0	0	4	75	313	555	696	618	340	98	4	0	0	0	4	79	392	947	1643	2261	2601	2699	2703	2703
55	0	0	0	34	194	406	541	463	216	45	0	0	0	0	0	34	228	634	1175	1638	1854	1899	1899	1899
60	0	0	0	11	100	267	386	313	117	12	0	0	0	0	0	11	111	378	764	1077	1194	1206	1206	1206
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	1	27	148	363	554	677	606	386	181	25	0	0	1	28	176	539	1093	1770	2376	2762	2943	2968	2968

(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:  
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## 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](http://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"><li>a. Temperature/ Precipitation Tables<ol style="list-style-type: none"><li>1. 1971-2000 Monthly Normals</li><li>2. Cooperative Summary of the Day</li><li>3. National Weather Service station records</li><li>4. 1971-2000 serially complete daily data</li></ol></li><li>b. Degree Day Table<ol style="list-style-type: none"><li>1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals</li><li>2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data</li></ol></li></ol> | <ol style="list-style-type: none"><li>c. Snow Tables<ol style="list-style-type: none"><li>1. Snow Climatology</li><li>2. Cooperative Summary of the Day</li></ol></li><li>d. Freeze Data Table<br/>1971-2000 serially complete daily data</li></ol> |
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## References

U.S. Climate Normals 1971-2000, [www.ncdc.noaa.gov/normal.html](http://www.ncdc.noaa.gov/normal.html)  
U.S. Climate Normals 1971-2000-Products Clim20, [www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html)  
Snow Climatology Project Description, [www.ncdc.noaa.gov/oa/climate/monitoring/snowclim/mainpage.html](http://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](http://www1.ncdc.noaa.gov/pub/data/special/serialcomplete_jam_0900.pdf)