

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: LONG PRAIRIE, MN

1971-2000

COOP ID: 214861

Climate Division: MN 5

NWS Call Sign:

Elevation: 1,290 Feet Lat: 45° 59N

Lon: 94° 52W

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	19.3	-.4	9.5	56	1981	24	23.0	1990	-40+	1972	15	-2.6	1982	1723	0	.0	.0	.1	25.5	31.0	16.5
Feb	27.1	6.6	16.9	59	1981	17	30.0	1998	-44	1996	2	5.3	1989	1348	0	.0	.0	.4	17.6	27.7	10.4
Mar	38.7	19.2	29.0	74+	1987	7	38.6	2000	-35	1962	1	20.0	1975	1117	0	.0	.0	4.7	8.5	27.5	3.6
Apr	56.2	32.9	44.6	95	1980	21	53.1	1987	-7	1975	4	35.3	1975	617	3	.0	.1	20.9	.6	16.3	.1
May	70.4	45.6	58.0	95+	1969	27	65.7	1977	19+	1976	6	51.4	1979	262	46	.0	.4	30.3	.0	3.3	.0
Jun	78.2	54.8	66.5	100+	1988	25	73.5	1988	30	1964	4	61.2	1982	65	110	.1	2.1	30.0	.0	@	.0
Jul	82.5	59.4	71.0	103	1988	6	76.1	1988	35	1967	4	63.8	1992	21	205	.2	4.7	31.0	.0	.0	.0
Aug	80.4	57.0	68.7	102	1988	1	73.6	1983	33+	1967	31	63.7	1977	38	153	.2	3.1	31.0	.0	.0	.0
Sep	71.0	47.3	59.2	95+	1976	7	64.9	1998	19	1974	22	54.1	1993	200	24	.0	.6	29.6	.0	1.9	.0
Oct	58.2	35.8	47.0	90	1953	2	53.2	1973	3	1951	31	40.8	1976	558	0	.0	.0	24.0	.3	11.9	.0
Nov	37.9	21.3	29.6	76	1999	8	39.5	1999	-23	1964	30	21.3	1985	1062	0	.0	.0	5.3	10.5	26.5	1.6
Dec	23.8	6.5	15.2	59	1962	1	25.6	1997	-39	1983	19	1.4	1983	1545	0	.0	.0	.3	23.2	30.9	11.0
Ann	53.6	32.2	42.9	103	Jul 1988	6	76.1	Jul 1988	-44	Feb 1996	2	-2.6	Jan 1982	8556	541	.5	11.0	207.6	86.2	177.0	43.2

+ 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/normals/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

058-A

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Station: LONG PRAIRIE, MN

COOP ID: 214861

Climate Division: MN 5

NWS Call Sign:

Elevation: 1,290 Feet Lat: 45°59N

Lon: 94°52W

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	1.28	1.20	1.76	1997	5	3.54	1997	.03	1974	8.6	3.9	.5	.1	.15	.25	.42	.60	.80	1.01	1.26	1.57	1.99	2.68	3.36
Feb	.85	.76	1.17	2001	25	1.99	1981	.09	1997	6.6	2.6	.3	@	.13	.21	.33	.45	.57	.70	.86	1.04	1.29	1.70	2.09
Mar	1.96	1.88	1.65	1985	4	4.36	1977	.47	1981	8.5	4.9	1.1	.2	.65	.83	1.10	1.34	1.56	1.79	2.04	2.34	2.71	3.30	3.84
Apr	2.20	2.08	2.50	2001	7	6.16	1986	.09	1980	8.7	5.4	1.4	.3	.32	.50	.82	1.13	1.44	1.79	2.20	2.69	3.36	4.44	5.49
May	3.20	3.00	3.00	1959	31	6.56	1993	.27	1976	10.4	6.5	2.1	.7	1.14	1.44	1.87	2.24	2.59	2.95	3.34	3.80	4.38	5.28	6.11
Jun	4.28	4.21	3.23	1953	19	8.44	1991	1.00	1987	11.5	7.7	2.9	1.1	1.57	1.97	2.55	3.03	3.49	3.97	4.48	5.08	5.84	7.01	8.08
Jul	4.13	3.45	8.90	1972	22	15.55	1972	.88	1989	10.4	7.0	2.6	1.0	1.13	1.52	2.11	2.63	3.14	3.68	4.27	4.97	5.89	7.32	8.66
Aug	3.47	3.13	4.52	1955	26	7.19	1973	.34	1976	9.8	6.2	2.6	.8	1.09	1.42	1.91	2.33	2.73	3.15	3.61	4.15	4.85	5.93	6.93
Sep	2.93	2.89	2.64	1989	4	6.56	1986	.60	1976	9.3	5.4	1.8	.7	.84	1.12	1.54	1.91	2.26	2.63	3.04	3.53	4.15	5.14	6.05
Oct	2.55	1.71	3.46	1995	1	8.38	1971	.19	1978	7.7	4.4	1.5	.8	.20	.36	.69	1.04	1.43	1.88	2.42	3.10	4.04	5.62	7.18
Nov	1.71	1.58	1.61	1977	9	4.00	1977	.11	1999	7.5	3.7	1.1	.2	.22	.35	.59	.83	1.08	1.36	1.69	2.08	2.63	3.52	4.38
Dec	.92	.93	.92	1955	4	2.28	1972	.21	1975	7.9	2.9	.3	.0	.26	.35	.48	.59	.71	.82	.96	1.11	1.31	1.62	1.92
Ann	29.48	29.17	8.90	Jul 1972	22	15.55	Jul 1972	.03	Jan 1974	106.9	60.6	18.2	5.9	19.79	21.63	24.00	25.82	27.45	29.02	30.66	32.48	34.70	37.94	40.77

+ 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: LONG PRAIRIE, MN

COOP ID: 214861

Climate Division: MN 5

NWS Call Sign:

Elevation: 1,290 Feet

Lat: 45° 59N

Lon: 94° 52W

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	12.2	11.0	11	10	16.0	1997	5	29.1	1975	35	1997	30	30	1997	9.0	3.9	1.3	.6	.1	29.0	26.1	25.0	12.8
Feb	7.7	7.0	12	11	9.0	1981	28	21.1	1979	33	1997	4	29	1997	5.9	2.5	.7	.3	.0	26.4	24.2	21.7	15.5
Mar	9.9	8.7	8	8	15.0	1985	4	24.3	1985	29	1997	16	24	1997	4.9	2.9	1.2	.5	.1	20.7	17.4	15.1	10.2
Apr	3.0	1.5	1	#	9.0	1994	29	14.4	1991	17	1975	2	6	1979	1.5	.9	.4	.2	.0	3.6	2.4	1.7	.7
May	#	.0	#	0	#	1997	14	#+	1997	#+	1997	14	#+	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	#	1995	22	#+	1995	#	1995	22	#	1995	.0	.0	.0	.0	.0	.0	.0	.0	.0
Oct	.7	.0	#	0	3.0	1992	16	4.0	1987	3	1992	16	#+	1997	.4	.4	@	.0	.0	.4	.1	.0	.0
Nov	7.6	7.0	2	1	11.0	1993	25	21.5	1988	15	1993	30	7+	1993	4.6	2.6	.9	.4	.1	10.4	6.8	4.7	1.0
Dec	8.4	7.9	6	5	10.0	1985	1	18.8	1985	23	1985	4	17	1985	7.9	3.1	.7	.2	@	24.4	20.0	15.7	4.4
Ann	49.5	43.1	N/A	N/A	16.0	Jan 1997	5	29.1	Jan 1975	35	Jan 1997	30	30	Jan 1997	34.2	16.3	5.2	2.2	.3	114.9	97.0	83.9	44.6

+ 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

Complete documentation available from:

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Climate Division: MN 5

NWS Call Sign:

Elevation: 1,290 Feet

Lat: 45° 59N

Lon: 94° 52W

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	6/05	5/31	5/28	5/25	5/22	5/19	5/16	5/13	5/08
32	5/30	5/24	5/19	5/15	5/12	5/08	5/05	4/30	4/24
28	5/11	5/07	5/04	5/02	4/30	4/28	4/25	4/22	4/18
24	5/05	4/30	4/26	4/22	4/19	4/16	4/12	4/08	4/03
20	4/22	4/18	4/14	4/12	4/09	4/06	4/03	3/31	3/27
16	4/11	4/07	4/04	4/01	3/30	3/27	3/25	3/22	3/17
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	9/23	9/26	10/02
32	9/12	9/16	9/19	9/21	9/23	9/26	9/28	10/01	10/05
28	9/19	9/24	9/28	10/01	10/03	10/06	10/09	10/13	10/18
24	10/01	10/06	10/10	10/13	10/16	10/19	10/22	10/26	10/31
20	10/12	10/17	10/20	10/24	10/27	10/29	11/02	11/05	11/10
16	10/19	10/24	10/28	11/01	11/04	11/07	11/11	11/15	11/21
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	140	132	126	121	116	112	107	101	93
32	155	148	143	138	134	129	125	119	112
28	176	169	164	160	156	152	148	143	136
24	204	195	189	184	179	174	169	162	154
20	221	214	208	204	200	196	191	186	179
16	241	233	228	223	219	214	210	204	197

* 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

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Station: LONG PRAIRIE, MN

COOP ID: 214861

Climate Division: MN 5

NWS Call Sign:

Elevation: 1,290 Feet Lat: 45° 59N Lon: 94° 52W

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	1723	1348	1117	617	262	65	21	38	200	558	1062	1545	8556
60	1568	1208	962	474	163	20	5	9	99	407	912	1390	7217
57	1475	1124	869	395	116	8	0	2	57	321	822	1297	6486
55	1413	1068	808	344	89	4	0	1	37	268	762	1235	6029
50	1258	928	663	233	41	0	0	0	9	156	615	1080	4983
32	723	473	228	22	0	0	0	0	0	5	189	561	2201

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	23	49	134	398	807	1035	1207	1138	814	470	117	39	6231
55	0	0	1	31	183	349	494	426	161	20	0	0	1665
57	0	0	0	21	148	293	432	365	122	11	0	0	1392
60	0	0	0	11	102	215	344	279	73	4	0	0	1028
65	0	0	0	3	46	110	205	153	24	0	0	0	541
70	0	0	0	0	17	41	103	67	5	0	0	0	233

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	1	22	197	554	792	959	888	579	257	27	0	0	1	23	220	774	1566	2525	3413	3992	4249	4276	4276
45	0	0	8	111	405	642	804	733	433	152	12	0	0	0	8	119	524	1166	1970	2703	3136	3288	3300	3300
50	0	0	1	55	273	492	649	578	294	77	1	0	0	0	1	56	329	821	1470	2048	2342	2419	2420	2420
55	0	0	0	23	162	347	494	423	181	34	1	0	0	0	0	23	185	532	1026	1449	1630	1664	1665	1665
60	0	0	0	8	82	217	340	277	95	9	0	0	0	0	0	8	90	307	647	924	1019	1028	1028	1028
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	0	13	137	350	506	631	580	354	158	16	0	0	0	13	150	500	1006	1637	2217	2571	2729	2745	2745

(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