

Climatology of the United States

No. 20

1971-2000

Station: LA MOURE, ND

COOP ID: 324937

Climate Division: ND 9

NWS Call Sign:

Elevation: 1,360 Feet Lat: 46° 22N

Lon: 98° 17W

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	18.0	-3.8	7.1	60	1987	13	22.5	1990	-39+	1994	30	-6.7	1982	1795	0	.0	.0	.2	24.7	31.0	17.9
Feb	25.7	3.4	14.6	63	1973	3	28.2	1987	-39	1994	9	-4.6	1979	1413	0	.0	.0	1.4	18.0	28.0	11.9
Mar	37.6	16.5	27.1	80+	1986	30	35.9	2000	-22+	1995	8	17.6	1996	1177	0	.0	.0	5.1	9.8	29.0	4.3
Apr	54.8	30.0	42.4	91	1990	23	50.7	1987	-10	1975	3	32.4	1975	680	2	.0	.1	19.5	1.5	18.2	.2
May	69.2	42.3	55.8	100	1969	27	62.9	1988	18	1967	2	46.8	1979	316	29	.0	.5	29.5	.0	4.7	.0
Jun	77.3	52.2	64.8	101	1988	22	73.9	1988	28+	1969	20	58.4	1982	103	96	@	2.3	30.0	.0	.1	.0
Jul	83.1	56.6	69.9	108	1973	12	74.5	1988	38+	1971	30	62.8	1992	34	183	.5	6.1	31.0	.0	.0	.0
Aug	81.8	53.4	67.6	105	1965	13	71.6	1973	25	1982	28	60.1	1977	58	140	.4	5.3	31.0	.0	.1	.0
Sep	71.2	42.3	56.8	101	1983	3	63.6	1998	18+	1984	26	50.7	1984	266	19	.1	1.2	29.2	.0	3.8	.0
Oct	57.8	30.3	44.1	94	1992	2	48.9	1973	2	1972	19	38.0	1976	650	0	.0	.1	23.3	.4	17.8	.0
Nov	37.0	16.1	26.6	76+	1990	2	37.2	1999	-24+	1977	26	15.6	1985	1155	0	.0	.0	5.9	11.3	28.2	2.9
Dec	23.6	2.7	13.2	66	1969	1	24.3	1999	-38	1967	31	-2.1	1983	1608	0	.0	.0	.8	21.8	31.0	13.0
Ann	53.1	28.5	40.8	108	Jul 1973	12	74.5	Jul 1988	-39+	Feb 1994	9	-6.7	Jan 1982	9255	469	1.0	15.6	206.9	87.5	191.9	50.2

+ 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/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

049-A

Climatography of the United States

No. 20 1971-2000

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

Station: LA MOURE, ND

COOP ID: 324937

Climate Division: ND 9

NWS Call Sign:

Elevation: 1,360 Feet Lat: 46°22N

Lon: 98°17W

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	.78	.73	1.40	1996	18	2.74	1997	.00	1973	5.1	2.3	.3	.1	.03	.09	.20	.32	.44	.58	.75	.96	1.24	1.72	2.19
Feb	.64	.50	1.08	1969	27	1.74	1998	.00	1982	4.9	2.2	.2	@	.05	.12	.22	.31	.41	.52	.64	.79	.99	1.32	1.64
Mar	1.36	1.19	1.42+	1977	12	3.29	1989	.09	1986	6.0	3.5	.8	.2	.21	.33	.53	.71	.91	1.12	1.36	1.66	2.05	2.70	3.31
Apr	1.85	1.63	2.50	1998	26	8.10	1986	.02	1988	7.1	4.2	1.2	.3	.10	.21	.43	.68	.96	1.30	1.71	2.23	2.96	4.21	5.46
May	2.67	2.73	3.60	1991	15	7.54	1991	.38	1990	8.8	5.5	1.9	.5	.75	1.01	1.39	1.72	2.05	2.39	2.77	3.21	3.79	4.70	5.54
Jun	3.69	3.28	4.60	1975	29	11.57	1975	.64	1974	9.8	7.4	2.1	.9	.80	1.14	1.69	2.18	2.67	3.19	3.78	4.49	5.42	6.90	8.30
Jul	3.42	3.09	5.09	1981	14	8.24	1994	.28	1976	8.7	5.6	2.1	.9	.89	1.21	1.71	2.15	2.58	3.03	3.53	4.13	4.91	6.14	7.29
Aug	2.30	2.45	2.93	1966	1	5.56	1980	.60	1984	7.2	4.8	1.4	.5	.77	.99	1.31	1.58	1.84	2.11	2.40	2.74	3.18	3.86	4.48
Sep	1.90	1.35	4.46	1970	7	5.20	1978	.18	1974	6.6	3.8	1.2	.4	.27	.43	.70	.97	1.24	1.54	1.89	2.32	2.89	3.82	4.72
Oct	1.78	1.50	2.13	1998	5	6.03	1998	.05	1976	5.9	3.4	1.3	.4	.11	.21	.43	.67	.94	1.26	1.66	2.16	2.86	4.05	5.24
Nov	.91	.47	1.90	1993	25	3.60	1993	.00	1999	4.9	2.8	.3	@	.02	.09	.21	.34	.48	.65	.85	1.11	1.47	2.07	2.68
Dec	.45	.42	1.00	1971	27	1.23	1996	.00	1986	4.5	1.8	.1	@	.01	.04	.10	.17	.24	.32	.42	.55	.73	1.03	1.33
Ann	21.75	20.45	5.09	Jul 1981	14	11.57	Jun 1975	.00+	Nov 1999	79.5	47.3	12.9	4.2	13.67	15.16	17.11	18.62	19.97	21.30	22.68	24.23	26.13	28.91	31.36

+ 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

Climatography of the United States

No. 20

1971-2000

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

Station: LA MOURE, ND

COOP ID: 324937

Climate Division: ND 9

NWS Call Sign:

Elevation: 1,360 Feet

Lat: 46° 22N

Lon: 98° 17W

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	8.0	8.4	8	5	9.0	1996	18	19.0	1994	42	1997	25	38	1997	4.1	2.7	1.0	.4	.0	21.3	18.6	13.4	7.4
Feb	6.4	6.1	8	5	10.0	1977	24	13.5	1987	42	1997	17	40	1997	4.1	2.7	.8	.2	@	19.2	15.9	12.3	6.6
Mar	5.5	5.2	5	2	10.0	1997	14	20.0	1995	47	1997	15	33	1997	3.8	2.7	1.0	.4	@	12.1	8.6	6.7	3.2
Apr	3.0	1.0	1	#	9.0	1986	14	15.3	1990	20	1975	1	5	1997	1.3	1.0	.5	.2	.0	2.1	1.3	1.0	.6
May	.1	.0	#	0	1.5	1990	2	1.5	1990	#	1990	1	#	1990	@	@	.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	1.0	1985	24	1.0	1985	0	0	0	0	0	@	@	.0	.0	.0	.0	.0	.0	.0
Oct	.6	.0	#	0	3.0	1990	18	3.5	1992	3	1992	16	#+	1997	.4	.2	.1	.0	.0	.3	.1	.0	.0
Nov	7.5	5.5	2	1	16.0	1993	25	32.0	1993	28	1993	27	7	1993	3.3	2.4	1.0	.3	@	9.8	5.7	3.7	1.3
Dec	5.1	4.2	4	2	9.0	1971	27	15.5	1993	24	1996	31	19	1996	3.9	2.6	.4	.1	.0	19.4	9.7	7.7	5.8
Ann	36.2	30.4	N/A	N/A	16.0	Nov 1993	25	32.0	Nov 1993	47	Mar 1997	15	40	Feb 1997	20.9	14.3	4.8	1.6	@	84.2	59.9	44.8	24.9

+ 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:

www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

Climatography of the United States

No. 20 1971-2000

Station: LA MOURE, ND

COOP ID: 324937

Climate Division: ND 9

NWS Call Sign:

Elevation: 1,360 Feet

Lat: 46°22N

Lon: 98°17W

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	6/10	6/05	6/01	5/28	5/25	5/22	5/18	5/14	5/09
32	5/31	5/25	5/21	5/18	5/15	5/12	5/09	5/05	4/30
28	5/19	5/14	5/11	5/08	5/05	5/03	4/30	4/27	4/22
24	5/12	5/06	5/03	4/29	4/26	4/23	4/20	4/16	4/11
20	4/25	4/20	4/16	4/13	4/10	4/07	4/04	3/31	3/26
16	4/16	4/10	4/07	4/03	3/31	3/28	3/25	3/21	3/16
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	8/26	8/31	9/04	9/07	9/10	9/13	9/16	9/20	9/25
32	9/05	9/10	9/14	9/17	9/20	9/23	9/26	9/29	10/04
28	9/11	9/16	9/19	9/22	9/25	9/28	10/01	10/04	10/09
24	9/21	9/26	9/30	10/03	10/06	10/09	10/13	10/16	10/22
20	10/01	10/07	10/10	10/14	10/17	10/20	10/23	10/27	11/01
16	10/08	10/14	10/19	10/23	10/26	10/30	11/03	11/07	11/14
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	123	117	112	107	103	97	92	83
32	151	143	137	132	127	122	117	111	102
28	162	155	150	146	142	138	133	128	121
24	184	176	171	166	162	158	153	148	141
20	213	205	199	194	189	184	179	173	165
16	233	225	218	213	208	203	198	192	183

* 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

**Climatography
of the United States
No. 20
1971-2000**

Station: LA MOURE, ND

COOP ID: 324937

Climate Division: ND 9 NWS Call Sign: Elevation: 1,360 Feet Lat: 46° 22N Lon: 98° 17W

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	1795	1413	1177	680	316	103	34	58	266	650	1155	1608	9255
60	1640	1273	1022	536	204	42	9	18	153	495	1005	1453	7850
57	1547	1189	929	453	150	22	2	7	100	404	915	1360	7078
55	1485	1133	867	401	119	13	0	3	71	344	855	1298	6589
50	1330	998	718	282	59	3	0	0	24	210	707	1143	5474
32	804	546	266	36	0	0	0	0	0	9	262	624	2547

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	32	56	112	348	736	983	1172	1104	743	382	97	39	5804
55	0	0	0	23	142	306	459	395	124	4	0	0	1453
57	0	0	0	15	111	254	399	336	93	2	0	0	1210
60	0	0	0	8	72	185	313	254	56	0	0	0	888
65	0	0	0	2	29	96	183	140	19	0	0	0	469
70	0	0	0	0	9	37	92	61	5	0	0	0	204

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	17	172	504	755	938	866	525	206	22	0	0	0	17	189	693	1448	2386	3252	3777	3983	4005	4005
45	0	0	4	97	361	605	783	711	382	113	5	0	0	0	4	101	462	1067	1850	2561	2943	3056	3061	3061
50	0	0	0	51	232	457	628	556	253	53	0	0	0	0	0	51	283	740	1368	1924	2177	2230	2230	2230
55	0	0	0	21	133	316	474	403	146	20	0	0	0	0	0	21	154	470	944	1347	1493	1513	1513	1513
60	0	0	0	10	62	186	324	262	72	4	0	0	0	0	0	10	72	258	582	844	916	920	920	920
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	0	18	132	323	476	606	560	343	156	26	0	0	0	18	150	473	949	1555	2115	2458	2614	2640	2640

(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