

Climatography of the United States

No. 20

1971-2000

Station: LISBON, ND

COOP ID: 325220

Climate Division: ND 9

NWS Call Sign:

Elevation: 1,104 Feet Lat: 46° 27N

Lon: 97° 41W

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	17.0	-3.3	6.9	60	1987	13	22.7	1990	-41	1972	15	-8.0	1982	1805	0	.0	.0	.1	24.9	31.0	17.8
Feb	23.9	3.7	13.8	68+	1958	26	27.7	1987	-39	1982	5	-3.2	1979	1433	0	.0	.0	1.2	17.8	27.7	11.2
Mar	36.1	16.6	26.4	82	1946	28	35.9	2000	-28	1980	1	18.0	1996	1198	0	.0	.0	5.0	9.2	28.0	3.6
Apr	54.7	29.4	42.1	99	1980	21	49.1	1987	-1	1936	7	33.2	1979	689	1	.0	.3	20.5	1.0	17.6	.1
May	69.1	42.7	55.9	107	1934	31	63.6	1977	14	1946	12	47.5	1979	310	28	.0	.7	29.7	.0	3.6	.0
Jun	78.2	52.4	65.3	105	1933	20	73.9	1988	30	1953	6	60.5	1982	85	93	@	3.1	30.0	.0	.0	.0
Jul	83.6	57.4	70.5	113	1936	7	75.4	1983	34+	1985	3	63.8	1992	29	199	.5	6.4	31.0	.0	.0	.0
Aug	82.5	54.7	68.6	110	1965	13	76.0	1983	32+	1987	31	63.0	1977	55	166	.6	5.8	31.0	.0	@	.0
Sep	71.3	42.8	57.1	104+	1983	3	63.9	1998	18+	1965	26	51.9	1975	263	25	.1	1.6	29.4	.0	3.1	.0
Oct	57.7	31.1	44.4	92+	1992	2	49.4	1973	0	1936	26	39.3	1976	638	0	.0	.1	23.8	.4	15.5	.0
Nov	36.7	17.5	27.1	76	1965	2	38.4	1999	-27	1950	27	15.9	1985	1137	0	.0	.0	5.3	10.8	27.9	2.1
Dec	22.9	3.6	13.3	70	1950	6	26.8	1999	-37	1967	31	-2.4	1983	1606	0	.0	.0	.5	22.1	30.8	11.8
Ann	52.8	29.1	41.0	113	Jul 1936	7	76.0	Aug 1983	-41	Jan 1972	15	-8.0	Jan 1982	9248	512	1.2	18.0	207.5	86.2	185.2	46.6

+ 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: 1932-2001

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

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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: LISBON, ND

COOP ID: 325220

Climate Division: ND 9

NWS Call Sign:

Elevation: 1,104 Feet Lat: 46°27N

Lon: 97°41W

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	.63	.54	.70	1996	18	1.71	1994	.02	1990	5.3	2.1	.2	.0	.06	.11	.20	.29	.38	.49	.61	.77	.99	1.34	1.69
Feb	.48	.39	1.16	1958	27	1.78	1979	.02	1983	4.0	1.8	.2	.0	.04	.08	.14	.21	.28	.37	.47	.59	.76	1.04	1.32
Mar	1.09	.99	1.32	1996	24	3.10	1977	.19	1997	5.4	3.4	.7	.1	.24	.34	.49	.64	.78	.94	1.11	1.32	1.60	2.03	2.45
Apr	1.47	1.18	1.69	1935	25	6.64	1986	.00	1988	6.9	3.9	1.0	.2	.08	.21	.44	.66	.89	1.14	1.44	1.82	2.32	3.16	3.97
May	2.59	2.39	2.46	1970	29	6.78	1972	.17	1976	9.0	5.4	1.9	.4	.71	.96	1.33	1.65	1.97	2.31	2.68	3.12	3.69	4.58	5.42
Jun	3.45	2.95	4.31	1975	29	16.14	1975	.48	1987	9.4	5.9	2.0	.8	.54	.84	1.34	1.81	2.30	2.84	3.46	4.21	5.22	6.86	8.43
Jul	2.87	2.75	3.01	1948	21	8.53	1995	.36	1976	8.8	5.4	1.7	.6	.59	.86	1.28	1.66	2.05	2.46	2.93	3.49	4.23	5.41	6.54
Aug	2.27	1.86	4.37	1941	10	5.26	1972	.61	1984	7.5	4.4	1.4	.5	.71	.93	1.25	1.53	1.79	2.07	2.37	2.72	3.18	3.89	4.55
Sep	2.20	1.74	6.00	1978	12	6.77	1978	.18	1974	7.1	4.0	1.0	.5	.25	.42	.72	1.03	1.36	1.73	2.15	2.69	3.41	4.61	5.77
Oct	1.82	1.33	2.97	1961	11	6.84	1998	.08	1991	6.0	3.5	1.2	.4	.11	.21	.43	.68	.96	1.29	1.69	2.20	2.92	4.14	5.35
Nov	.86	.66	1.60	1977	20	3.49	1977	.00	1999	4.9	2.4	.3	.1	.03	.09	.20	.33	.46	.62	.81	1.05	1.37	1.93	2.48
Dec	.45	.32	.75	1975	13	1.68	1972	.00	1986	4.7	1.6	@	.0	.02	.05	.11	.18	.25	.33	.43	.55	.71	.99	1.26
Ann	20.18	19.62	6.00	Sep 1978	12	16.14	Jun 1975	.00+	Nov 1999	79.0	43.8	11.6	3.6	12.67	14.06	15.87	17.27	18.53	19.76	21.05	22.48	24.24	26.83	29.10

+ 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: 1932-2001

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

Complete documentation available from:
www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

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Station: LISBON, ND

COOP ID: 325220

Climate Division: ND 9

NWS Call Sign:

Elevation: 1,104 Feet

Lat: 46° 27N

Lon: 97° 41W

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	10.6	10.2	7	6	8.0	1996	18	18.3+	1996	24	1994	17	20	1994	4.2	3.0	1.1	.3	.0	24.4	22.9	17.4	10.1
Feb	5.1	4.0	8	8	7.0	1971	4	15.0	1979	21	1982	7	18	1986	2.8	2.0	.7	.1	.0	21.7	19.5	11.3	7.4
Mar	6.6	6.9	3	1	9.0	1982	20	17.1	1996	17	1989	9	10	1989	2.5	1.7	.9	.2	.0	10.0	8.0	5.2	1.3
Apr	1.3	.1	#	0	5.0	1992	10	7.0	1992	5	1992	10	1	1992	.6	.5	.1	@	.0	.8	.2	.1	.0
May	.1	.0	0	0	3.0	1976	2	3.0	1976	0	0	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	0	#	1985	25	#	1985	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Oct	.4	.0	#	0	3.0	1972	30	4.5	1992	3+	1992	16	#+	1995	.2	.1	.1	.0	.0	.2	.1	.0	.0
Nov	7.9	6.9	1	#	16.0	1977	20	30.6	1993	23	1993	27	7	1996	3.4	2.2	1.3	.4	@	9.4	4.9	2.1	.8
Dec	5.7	3.5	4	2	8.0	1972	30	20.7	1972	26	1996	23	17	1996	4.2	2.5	.4	.1	.0	18.6	11.5	7.4	2.6
Ann	37.7	31.6	N/A	N/A	16.0	Nov 1977	20	30.6	Nov 1993	26	Dec 1996	23	20	Jan 1994	17.9	12.0	4.6	1.1	@	85.1	67.1	43.5	22.2

+ 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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Climate Division: ND 9

NWS Call Sign:

Elevation: 1,104 Feet

Lat: 46°27N

Lon: 97°41W

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	6/04	5/31	5/28	5/24	5/21	5/18	5/14	5/08
32	5/23	5/19	5/15	5/13	5/10	5/08	5/05	5/02	4/27
28	5/16	5/11	5/08	5/05	5/02	4/30	4/27	4/24	4/19
24	5/02	4/27	4/24	4/21	4/18	4/15	4/12	4/09	4/04
20	4/26	4/20	4/16	4/13	4/09	4/06	4/03	3/29	3/24
16	4/14	4/09	4/06	4/04	4/01	3/30	3/27	3/24	3/20
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	8/31	9/04	9/07	9/10	9/12	9/15	9/17	9/21	9/25
32	9/09	9/14	9/17	9/19	9/22	9/24	9/27	9/30	10/04
28	9/20	9/24	9/27	9/29	10/01	10/03	10/06	10/08	10/12
24	9/25	10/01	10/05	10/09	10/12	10/15	10/19	10/23	10/28
20	10/03	10/10	10/14	10/18	10/21	10/25	10/29	11/02	11/09
16	10/14	10/20	10/24	10/28	10/31	11/03	11/07	11/11	11/16
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	132	124	119	115	110	106	102	96	89
32	153	147	142	138	134	130	126	121	115
28	171	164	159	155	151	147	143	138	131
24	200	192	186	181	176	171	167	161	153
20	221	212	205	200	194	189	183	177	167
16	234	226	221	216	212	208	203	198	191

* 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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NWS Call Sign:

Elevation: 1,104 Feet Lat: 46° 27N Lon: 97° 41W

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	1805	1433	1198	689	310	85	29	55	263	638	1137	1606	9248
60	1650	1293	1043	544	198	30	7	18	154	484	987	1451	7859
57	1557	1209	950	459	144	14	0	7	102	393	897	1358	7090
55	1495	1153	888	405	113	7	0	4	74	334	837	1296	6606
50	1340	1016	735	282	55	1	0	0	27	204	688	1141	5489
32	812	562	274	32	0	0	0	0	0	7	243	631	2561

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	30	54	99	333	741	998	1193	1134	752	392	96	48	5870
55	0	0	0	17	141	316	480	425	136	6	0	0	1521
57	0	0	0	10	110	262	419	367	104	3	0	0	1275
60	0	0	0	5	71	189	332	284	65	1	0	0	947
65	0	0	0	1	28	93	199	166	25	0	0	0	512
70	0	0	0	0	9	33	102	82	7	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	17	186	536	777	955	903	555	226	24	0	0	1	18	204	740	1517	2472	3375	3930	4156	4180	4180
45	0	0	4	105	391	627	800	748	411	128	9	0	0	0	4	109	500	1127	1927	2675	3086	3214	3223	3223
50	0	0	0	55	259	477	645	593	279	67	1	0	0	0	0	55	314	791	1436	2029	2308	2375	2376	2376
55	0	0	0	22	154	334	490	439	170	21	0	0	0	0	0	22	176	510	1000	1439	1609	1630	1630	1630
60	0	0	0	8	77	201	339	291	91	4	0	0	0	0	0	8	85	286	625	916	1007	1011	1011	1011
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	0	15	139	343	495	624	583	356	163	21	0	0	0	15	154	497	992	1616	2199	2555	2718	2739	2739

(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