U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

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: NORTH PLATTE EXP FARM, NE **COOP ID: 256075**

Climate Division: NE 7 **NWS Call Sign:** **Elevation: 3,025 Feet** **Lat: 41˚03N** **Lon: 100˚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	34.9	11.0	23.0	71	1997	3	31.4	1990	-21+	1984	20	6.9	1979	1305	0	.0	.0	4.2	12.4	30.8	6.6
Feb	41.8	15.7	28.8	77+	1972	29	38.2	1999	-20+	1989	3	15.1	1978	1016	0	.0	.0	9.2	8.6	27.3	3.6
Mar	50.7	23.9	37.3	85	1968	31	43.5	1986	-14+	1998	11	30.1	1996	859	0	.0	.0	15.9	4.1	25.0	.7
Apr	61.7	33.8	47.8	93	1989	23	55.5	1981	8	1975	2	41.9	1983	519	1	.0	.1	23.7	.4	13.4	.0
May	71.1	44.6	57.9	98	1962	12	63.8	1987	13	1989	1	50.7	1995	246	25	.0	.6	30.1	.0	1.5	.0
Jun	81.9	54.6	68.3	106	1963	29	75.7	1988	34	1951	1	62.7	1982	51	149	.5	5.3	29.9	.0	.0	.0
Jul	88.5	60.1	74.3	108+	1990	3	79.7	1974	44+	1997	4	68.6	1992	6	295	2.3	13.6	31.0	.0	.0	.0
Aug	86.7	58.3	72.5	107	1963	2	79.0	1983	37	1988	28	66.9	1992	17	250	.9	11.8	31.0	.0	.0	.0
Sep	77.9	47.8	62.9	102+	1998	7	70.0	1998	20	1984	29	57.4	1993	137	73	.3	4.6	29.3	.0	1.5	.0
Oct	65.2	35.6	50.4	92+	1997	3	53.4	1979	9	1991	31	45.6	1976	452	0	.0	.2	27.1	.3	9.8	.0
Nov	47.9	22.8	35.4	83	1981	18	44.7	1999	-8+	1986	13	23.6	1985	890	0	.0	.0	13.9	5.1	24.8	.7
Dec	38.3	14.0	26.2	73	1962	17	33.6	1999	-36	1989	22	7.9	1983	1205	0	.0	.0	6.8	10.4	30.4	3.6
Ann	62.2	35.2	48.7	108+	Jul 1990	3	79.7	Jul 1974	-36	Dec 1989	22	6.9	Jan 1979	6703	793	4.0	36.2	252.1	41.3	164.5	15.2

\+ 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

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1949-2001

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

Issue Date: February 2004

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Precipitation (inches)

Precipitation Totals

Month	Means/ Medians(1) Mean	Means/ Medians(1) Median	Extremes Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year
Jan	.36	.33	.72	1965	23	.99	1976	.00	1986
Feb	.51	.28	1.30	1971	19	1.64	1993	.00+	1996
Mar	1.17	1.00	1.25	1992	5	3.21	1992	.04	1994
Apr	1.93	1.78	2.46	1974	12	4.61	1984	.06	1989
May	3.47	3.31	2.78	1957	8	6.70	1995	.95	1994
Jun	3.26	3.50	3.22	1993	18	6.74	1975	.98	1985
Jul	2.92	2.74	2.30	1979	28	6.85	1979	.58	1980
Aug	2.23	1.63	2.59	1988	13	6.26	1999	.49	1991
Sep	1.52	1.15	3.11	1963	16	7.20	1996	.02	1992
Oct	1.38	1.18	2.71	2000	29	3.73	2000	.04	1988
Nov	.77	.73	1.07	1998	3	2.10	1979	.00	1989
Dec	.37	.26	.80	1984	14	1.51	1982	.00	1980
Ann	19.89	19.74	3.22	Jun 1993	18	7.20	Sep 1996	.00+	Feb 1996

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	4.0	1.2	.1	.0
Feb	3.8	1.5	.3	@
Mar	6.6	3.0	.7	.1
Apr	7.6	4.5	1.2	.3
May	11.1	6.9	2.2	.9
Jun	9.2	5.7	2.0	.8
Jul	8.6	5.5	2.0	.7
Aug	7.4	4.2	1.5	.4
Sep	6.6	3.5	.7	.4
Oct	5.4	2.9	1.0	.2
Nov	4.8	2.1	.4	@
Dec	3.5	1.0	.1	.0
Ann	78.6	42.0	12.2	3.8

Precipitation Probabilities (1)

Probability that the monthly/annual precipitation will be equal to or less than the indicated amount

Monthly/Annual Precipitation vs Probability Levels
These values were determined from the incomplete gamma distribution

Month	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	.02	.06	.11	.17	.22	.28	.36	.44	.57	.76	.96
Feb	.00	.02	.09	.17	.25	.35	.47	.62	.84	1.20	1.56
Mar	.11	.20	.36	.52	.70	.90	1.13	1.43	1.83	2.50	3.15
Apr	.28	.45	.72	.99	1.27	1.58	1.93	2.36	2.94	3.88	4.78
May	1.25	1.57	2.05	2.44	2.82	3.20	3.63	4.11	4.74	5.70	6.59
Jun	1.06	1.37	1.82	2.21	2.59	2.97	3.39	3.89	4.52	5.51	6.42
Jul	.76	1.04	1.46	1.84	2.20	2.59	3.02	3.53	4.20	5.25	6.23
Aug	.34	.53	.86	1.16	1.48	1.83	2.23	2.72	3.37	4.44	5.46
Sep	.09	.18	.37	.57	.81	1.08	1.41	1.83	2.43	3.44	4.44
Oct	.12	.22	.41	.60	.81	1.04	1.33	1.68	2.16	2.97	3.77
Nov	.02	.08	.19	.30	.42	.56	.73	.95	1.24	1.74	2.23
Dec	.00	.02	.06	.10	.16	.23	.32	.44	.61	.90	1.19
Ann	14.24	15.33	16.74	17.80	18.74	19.65	20.60	21.64	22.90	24.72	26.30

\+ 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: 1949-2001
(3) Derived from 1971-2000 serially complete daily data

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Snow (inches)

Snow Totals

Means/Medians (1)

Extremes (2)

Mean Number of Days (1)

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	5.8	5.1	#	0	15.5	1988	20	17.0	1976	#+	1998	13	#+	1998	3.6	2.1	.6	.2	.1	-9.9	-9.9	-9.9	-9.9
Feb	4.6	3.2	#	0	10.0	1978	13	18.5	1978	2	1981	10	#+	1999	3.0	1.8	.4	.2	@	-9.9	-9.9	-9.9	-9.9
Mar	6.0	5.1	#	0	12.0	1980	28	20.5	1980	#+	2000	22	#+	2000	3.6	2.5	.6	.2	@	-9.9	-9.9	-9.9	-9.9
Apr	3.4	1.5	#	0	8.0	1977	3	14.0	1994	#+	2000	20	#+	2000	1.3	1.0	.5	.2	.0	.0	.0	.0	.0
May	.0	.0	0	0	.1	1984	7	.1	1984	0	0	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	.3	.0	#	0	6.0	1985	29	7.0	1985	#	1995	21	#	1995	.1	.1	@	@	.0	.0	.0	.0	.0
Oct	1.1	.0	#	0	6.0	1995	23	6.0	1995	#+	1997	26	#+	1997	.5	.4	.2	.1	.0	.0	.0	.0	.0
Nov	5.4	4.2	#	0	8.0	1990	3	16.5	1990	2	1999	23	#+	1999	2.7	1.9	.7	.4	.0	-9.9	-9.9	-9.9	-9.9
Dec	4.7	3.0	#	0	9.0	1987	27	15.3	1973	11	1982	31	2	1982	2.9	1.5	.6	.2	.0	-9.9	-9.9	-9.9	-9.9
Ann	31.3	22.1	N/A	N/A	15.5	Jan 1988	20	20.5	Mar 1980	11	Dec 1982	31	2	Dec 1982	17.7	11.3	3.6	1.5	.1	-9.9	-9.9	-9.9	-9.9

+ Also occurred on an earlier date(s) #Denotes trace amounts

(1) Derived from Snow Climatology and 1971-2000 daily data

@ Denotes mean number of days greater than 0 but less than .05

(2) Derived from 1971-2000 daily data

-9/-9.9 represents missing values

Annual statistics for Mean/Median snow depths are not appropriate

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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	5/24	5/20	5/17	5/15	5/13	5/10	5/08	5/05	5/02
32	5/17	5/13	5/10	5/08	5/05	5/03	4/30	4/28	4/23
28	5/07	5/02	4/29	4/27	4/24	4/22	4/19	4/16	4/12
24	4/26	4/21	4/18	4/15	4/12	4/09	4/06	4/03	3/29
20	4/19	4/14	4/10	4/06	4/03	3/31	3/27	3/23	3/18
16	4/11	4/05	4/01	3/28	3/25	3/22	3/18	3/14	3/08

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	9/14	9/17	9/20	9/23	9/25	9/27	9/29	10/02	10/06
32	9/16	9/21	9/25	9/28	10/01	10/04	10/08	10/12	10/17
28	9/24	9/30	10/04	10/08	10/11	10/14	10/18	10/22	10/27
24	10/03	10/09	10/14	10/18	10/21	10/25	10/28	11/02	11/08
20	10/15	10/21	10/25	10/29	11/02	11/05	11/09	11/13	11/19
16	10/23	10/28	11/01	11/05	11/08	11/11	11/15	11/19	11/24

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	151	145	141	138	134	131	128	124	118
32	166	160	155	152	148	145	141	137	131
28	188	182	177	173	169	165	161	156	149
24	214	206	200	196	191	187	182	177	169
20	238	229	222	217	212	207	201	195	186
16	250	242	237	232	227	223	218	212	204

***** 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

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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	1305	1016	859	519	246	51	6	17	137	452	890	1205	6703
60	1150	876	704	375	137	15	0	3	62	301	740	1050	5413
57	1057	798	611	294	88	6	0	1	33	218	650	957	4713
55	995	746	549	245	63	3	0	0	20	169	596	895	4281
50	844	616	403	140	21	0	0	0	4	74	456	749	3307
32	363	240	56	2	0	0	0	0	0	0	107	293	1061

Base — Cooling Degree Days (1)

Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	82	148	221	473	802	1088	1312	1256	926	572	207	111	7198
55	0	10	1	27	151	401	599	543	256	27	6	0	2021
57	0	6	0	16	115	344	537	482	209	14	0	0	1723
60	0	0	0	7	71	263	444	391	148	4	0	0	1328
65	0	0	0	1	25	149	295	250	73	0	0	0	793
70	0	0	0	0	5	68	163	134	28	0	0	0	398

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	4	35	102	274	556	853	1069	1016	696	361	85	18	4	39	141	415	971	1824	2893	3909	4605	4966	5051	5069
45	0	8	50	169	409	703	914	861	551	235	37	0	0	8	58	227	636	1339	2253	3114	3665	3900	3937	3937
50	0	1	19	94	274	554	759	706	410	131	10	0	0	1	20	114	388	942	1701	2407	2817	2948	2958	2958
55	0	0	1	43	156	406	604	552	280	62	0	0	0	0	1	44	200	606	1210	1762	2042	2104	2104	2104
60	0	0	0	16	73	269	449	401	170	18	0	0	0	0	0	16	89	358	807	1208	1378	1396	1396	1396
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	11	45	99	197	339	537	694	654	441	252	74	26	11	56	155	352	691	1228	1922	2576	3017	3269	3343	3369

(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.
Compete documentation for the 1971-2000 Normals is available on the internet from:
www.ncdc.noaa.gov/oa/climate/normals/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 are 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/normals.html
U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normals/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