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: FAIRMONT, NE **COOP ID: 252840**

Climate Division: NE 9 **NWS Call Sign:** **Elevation: 1,640 Feet** **Lat: 40˚39N** **Lon: 97˚36W**

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	33.4	11.4	22.4	75	1990	11	33.1	1992	-25	1974	1	9.3	1979	1320	0	.0	.0	4.0	12.9	30.6	5.9
Feb	39.8	16.5	28.2	80+	1995	26	38.2	1976	-20	1981	11	14.6	1979	1032	0	.0	.0	8.8	9.2	25.5	3.2
Mar	50.4	26.2	38.3	90	1978	31	43.3	1986	-16	1960	4	31.4	1975	828	0	.0	@	17.3	2.7	21.1	.6
Apr	62.5	37.0	49.8	96+	1989	28	58.3	1981	7	1975	3	43.1	1983	460	3	.0	.4	25.9	.1	8.0	.0
May	73.1	49.8	61.5	100	2000	30	67.5	1988	25	1967	2	55.0	1995	171	61	@	1.1	30.9	.0	.2	.0
Jun	83.9	59.5	71.7	105	1974	21	76.3	1988	36	1964	2	66.7	1985	22	222	.5	7.9	30.0	.0	.0	.0
Jul	88.4	64.6	76.5	109+	1954	14	82.1	1974	43+	1971	30	71.1	1992	1	357	1.5	13.8	31.0	.0	.0	.0
Aug	86.2	61.6	73.9	107	1964	3	81.6	1983	34+	1999	25	68.4	1986	18	293	.4	11.3	31.0	.0	.0	.0
Sep	79.2	51.8	65.5	105	2000	3	71.9	1998	26	1984	29	59.5	1993	86	102	.1	4.9	29.8	.0	.3	.0
Oct	67.0	39.3	53.2	93+	2000	2	56.5	1975	10	1997	27	47.4	1987	370	3	.0	.3	28.8	@	5.2	.0
Nov	48.9	25.8	37.4	82	1999	14	46.9	1999	-8	1976	28	26.7	1985	830	0	.0	.0	15.0	3.5	21.6	.3
Dec	36.8	15.8	26.3	75	1964	23	33.1	1979	-26	1989	22	7.9	1983	1200	0	.0	.0	5.4	9.8	29.8	2.6
Ann	62.5	38.3	50.4	109+	Jul 1954	14	82.1	Jul 1974	-26	Dec 1989	22	7.9	Dec 1983	6338	1041	2.5	39.7	257.9	38.2	142.3	12.6

\+ 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/normals/usnormals.html

(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

Issue Date: February 2004

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: FAIRMONT, NE **COOP ID: 252840**

Climate Division: NE 9 **NWS Call Sign:** **Elevation: 1,640 Feet** **Lat: 40˚39N** **Lon: 97˚36W**

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	.66	.59	.97	1994	27	2.02	1993	.00+	2000
Feb	.69	.76	1.53	1994	23	1.81	1994	.00+	1996
Mar	2.39	2.06	2.91	1987	23	9.62	1987	.03	1994
Apr	2.74	2.76	2.68	1969	4	6.80	1984	.13	1989
May	4.39	4.17	4.10	1965	22	10.56	1996	1.31	1992
Jun	3.88	3.92	5.55	1986	30	7.93	1983	.86	1988
Jul	3.61	3.28	6.19	1952	14	10.21	1992	.15	1983
Aug	3.01	2.99	4.99	1954	7	6.96	1977	.09	1976
Sep	2.82	2.60	3.90	1998	19	9.98	1973	.37	1980
Oct	2.09	1.69	2.78	1979	31	5.97	1986	.00	1988
Nov	1.65	1.32	3.82	1996	16	6.48	1983	.00	1989
Dec	.83	.71	1.45	1974	15	2.72	1984	.10	1998
Ann	28.76	27.87	6.19	Jul 1952	14	10.56	May 1996	.00+	Jan 2000

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	4.2	1.9	.3	.0
Feb	4.1	1.9	.2	.1
Mar	7.0	4.8	1.5	.5
Apr	7.7	5.4	1.9	.6
May	10.5	7.8	2.9	1.2
Jun	8.0	5.9	2.5	1.0
Jul	8.2	5.7	2.1	1.0
Aug	7.3	5.3	2.2	.7
Sep	6.5	4.7	1.7	.6
Oct	5.4	3.4	1.1	.6
Nov	5.7	3.0	.8	.5
Dec	4.2	2.1	.4	.1
Ann	78.8	51.9	17.6	6.9

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	.00	.00	.17	.28	.39	.52	.66	.83	1.06	1.44	1.80
Feb	.00	.09	.22	.33	.45	.57	.70	.87	1.09	1.45	1.79
Mar	.15	.29	.59	.91	1.28	1.71	2.23	2.89	3.82	5.40	6.96
Apr	.60	.85	1.26	1.62	1.98	2.37	2.80	3.32	4.01	5.10	6.13
May	1.29	1.71	2.34	2.88	3.41	3.95	4.56	5.27	6.19	7.64	8.98
Jun	.89	1.25	1.82	2.32	2.83	3.37	3.98	4.70	5.65	7.16	8.59
Jul	.55	.86	1.38	1.88	2.40	2.96	3.61	4.41	5.48	7.22	8.89
Aug	.48	.74	1.18	1.59	2.02	2.48	3.02	3.67	4.55	5.96	7.32
Sep	.47	.72	1.13	1.51	1.91	2.34	2.84	3.44	4.24	5.53	6.77
Oct	.08	.25	.55	.85	1.19	1.56	2.01	2.56	3.33	4.61	5.86
Nov	.05	.16	.39	.62	.89	1.19	1.56	2.02	2.66	3.75	4.82
Dec	.12	.18	.30	.42	.54	.67	.82	1.01	1.26	1.68	2.08
Ann	17.47	19.52	22.22	24.32	26.22	28.08	30.03	32.21	34.89	38.84	42.31

+ 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

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

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: FAIRMONT, NE **COOP ID: 252840**

Climate Division: NE 9 **NWS Call Sign:** **Elevation: 1,640 Feet** **Lat: 40°39N** **Lon: 97°36W**

Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	7.8	7.0	2	1
Feb	5.6	5.0	2	1
Mar	6.4	5.0	1	#
Apr	1.6	.0	#	#
May	.0	.0	#	0
Jun	.0	.0	0	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	.1	.0	#	0
Oct	.6	.0	#	0
Nov	3.8	2.3	#	#
Dec	6.4	5.0	1	1
Ann	32.3	24.3	N/A	N/A

Extremes (2)

Month	Highest Daily Snow Fall	Year	Day	Highest Monthly Snow Fall	Year	Highest Daily Snow Depth	Year	Day	Highest Monthly Mean Snow Depth	Year
Jan	11.0	1975	10	27.0	1993	24	1993	21	12	1993
Feb	9.0	1978	13	17.1	1978	16	1978	18	10	1978
Mar	9.0	1975	9	17.0	1998	14	1993	3	5+	1998
Apr	10.0	1977	4	10.0	1977	8	1987	1	1	1997
May	.0	0	0	.0	0	#+	1998	22	#+	1998
Jun	.0	0	0	.0	0	0	0	0	0	0
Jul	.0	0	0	.0	0	0	0	0	0	0
Aug	.0	0	0	.0	0	0	0	0	0	0
Sep	4.0	1985	30	4.0	1985	2	1985	30	#	1985
Oct	12.0	1997	26	12.0	1997	12	1997	28	2	1997
Nov	8.0	1983	28	15.5	1975	12	1975	26	2	1991
Dec	12.0	1974	15	17.1	1983	21	1983	30	12	1983
Ann	12.0+	Oct 1997	26	27.0	Jan 1993	24	Jan 1993	21	12+	Jan 1993

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	3.2	2.6	.9	.2	@
Feb	2.9	2.5	.6	.2	.0
Mar	2.5	2.3	.7	.3	.0
Apr	.6	.6	.2	.1	@
May	.0	.0	.0	.0	.0
Jun	.0	.0	.0	.0	.0
Jul	.0	.0	.0	.0	.0
Aug	.0	.0	.0	.0	.0
Sep	@	@	@	.0	.0
Oct	.2	.2	@	@	@
Nov	1.8	1.6	.4	.1	.0
Dec	2.6	2.2	.6	.2	.1
Ann	13.8	12.0	3.4	1.1	.1

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	13.3	5.9	3.3	1.1
Feb	10.9	7.0	4.4	.8
Mar	5.1	2.8	1.9	.5
Apr	.8	.4	.2	.0
May	.0	.0	.0	.0
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	@	.0	.0	.0
Oct	.3	.2	.2	.1
Nov	3.0	1.3	.6	.2
Dec	9.8	4.0	2.2	.5
Ann	43.2	21.6	12.8	3.2

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

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: FAIRMONT, NE **COOP ID: 252840**

Climate Division: NE 9 **NWS Call Sign:** **Elevation: 1,640 Feet** **Lat: 40˚39N** **Lon: 97˚36W**

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	5/13	5/09	5/06	5/04	5/02	4/29	4/27	4/24	4/20
32	5/08	5/03	4/29	4/26	4/23	4/20	4/17	4/13	4/08
28	4/23	4/19	4/16	4/13	4/11	4/08	4/06	4/03	3/29
24	4/15	4/11	4/07	4/05	4/02	3/31	3/28	3/25	3/20
20	4/09	4/03	3/30	3/26	3/23	3/19	3/16	3/11	3/05
16	4/01	3/26	3/21	3/17	3/14	3/10	3/06	3/02	2/23

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	9/11	9/17	9/21	9/25	9/28	10/02	10/05	10/10	10/16
32	9/27	10/02	10/05	10/08	10/11	10/14	10/17	10/20	10/25
28	10/04	10/09	10/13	10/16	10/19	10/22	10/25	10/29	11/03
24	10/16	10/22	10/26	10/29	11/01	11/05	11/08	11/12	11/18
20	10/20	10/27	11/01	11/05	11/09	11/13	11/17	11/22	11/28
16	10/30	11/07	11/12	11/16	11/20	11/24	11/29	12/04	12/11

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	168	161	157	153	149	145	141	136	130
32	188	182	178	174	170	167	163	159	153
28	210	203	198	194	190	187	183	178	171
24	235	227	222	217	212	208	203	198	190
20	260	250	242	236	230	224	218	211	201
16	281	271	263	257	251	245	238	230	220

***** 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/normals/usnormals.html

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: FAIRMONT, NE **COOP ID: 252840**

Climate Division: NE 9 **NWS Call Sign:** **Elevation: 1,640 Feet** **Lat: 40˚39N** **Lon: 97˚36W**

Degree Days to Selected Base Temperatures (˚F)

Heating Degree Days (1)

Base Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	1320	1032	828	460	171	22	1	18	86	370	830	1200	6338
60	1165	892	673	321	87	5	0	4	30	230	680	1045	5132
57	1072	816	580	246	52	1	0	1	13	160	593	952	4486
55	1011	764	521	201	35	0	0	0	7	120	537	890	4086
50	859	634	379	108	10	0	0	0	0	52	402	742	3186
32	374	259	58	1	0	0	0	0	0	0	82	283	1057

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	77	151	254	533	913	1190	1379	1299	1005	656	242	106	7805
55	0	12	3	44	235	501	666	586	322	63	7	0	2439
57	0	8	1	29	190	442	604	524	268	41	3	0	2110
60	0	0	0	14	131	355	511	435	195	18	0	0	1659
65	0	0	0	3	61	222	357	293	102	3	0	0	1041
70	0	0	0	0	21	117	214	175	43	0	0	0	570

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	8	45	143	362	691	969	1140	1070	791	451	109	15	8	53	196	558	1249	2218	3358	4428	5219	5670	5779	5794
45	0	15	76	239	537	819	985	915	642	309	52	1	0	15	91	330	867	1686	2671	3586	4228	4537	4589	4590
50	0	2	35	140	384	669	830	760	494	195	18	0	0	2	37	177	561	1230	2060	2820	3314	3509	3527	3527
55	0	0	8	75	249	519	675	605	357	102	4	0	0	0	8	83	332	851	1526	2131	2488	2590	2594	2594
60	0	0	2	33	136	373	520	452	229	40	0	0	0	0	2	35	171	544	1064	1516	1745	1785	1785	1785
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	13	46	112	240	423	634	764	715	506	290	81	19	13	59	171	411	834	1468	2232	2947	3453	3743	3824	3843

(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.
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