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: NEBRASKA CITY, NE **COOP ID: 255810**

Climate Division: NE 9 **NWS Call Sign:** **Elevation: 1,080 Feet** **Lat: 40˚41N** **Lon: 95˚53W**

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	12.9	23.2	71	1981	25	33.9	1989	-28	1963	26	10.6	1979	1298	0	.0	.0	3.2	15.0	30.2	6.5
Feb	39.7	18.3	29.0	77+	1995	26	38.4	1987	-20+	1996	3	14.0	1979	1009	0	.0	.0	7.0	10.0	25.6	3.3
Mar	51.4	28.3	39.9	89+	1986	31	45.2	1992	-12	1962	1	31.5	1975	781	0	.0	.0	15.7	2.8	20.6	.5
Apr	63.6	39.3	51.5	91+	1996	12	59.0	1981	4+	1975	4	44.9	1983	413	6	.0	.4	25.5	.2	7.2	.0
May	73.8	50.6	62.2	98	1967	25	68.7	1977	27	1976	3	56.8	1995	161	74	.0	.8	30.8	.0	.3	.0
Jun	83.6	60.6	72.1	106	1980	28	77.0	1988	40+	1969	4	67.2	1982	15	228	.3	6.1	30.0	.0	.0	.0
Jul	87.3	65.8	76.6	108	1974	22	81.0	1980	43+	1972	6	72.3	1971	0	358	1.5	11.7	31.0	.0	.0	.0
Aug	85.5	63.5	74.5	106	1983	17	82.1	1983	44+	1986	29	69.6	1992	11	305	.6	9.0	31.0	.0	.0	.0
Sep	78.4	54.1	66.3	102+	2000	3	72.2	1998	28+	1984	30	59.9	1993	75	112	.1	3.9	29.8	.0	.2	.0
Oct	66.6	42.1	54.4	93+	1963	7	59.3	1971	14+	1997	28	49.1	1976	336	5	.0	.2	28.6	.0	5.0	.0
Nov	49.9	29.3	39.6	83+	1999	14	48.5	1999	-6	1964	30	31.6	1991	763	0	.0	.0	15.1	2.9	19.8	.1
Dec	37.0	18.1	27.6	71	1964	24	33.5	1991	-23+	1989	23	10.3	1983	1161	0	.0	.0	4.6	11.0	29.2	3.1
Ann	62.5	40.2	51.4	108	Jul 1974	22	82.1	Aug 1983	-28	Jan 1963	26	10.3	Dec 1983	6023	1088	2.5	32.1	252.3	41.9	138.1	13.5

\+ 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

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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	.87	.67	1.39	1967	25	2.90	1979	.00	1986
Feb	1.01	1.10	3.61	1954	20	2.05	1973	.07	1977
Mar	2.44	2.15	2.25	1979	29	7.87	1979	.09	1988
Apr	3.45	2.67	3.85	1982	16	8.42	1984	.66	1990
May	4.30	3.77	4.16	1950	9	11.51	1982	.99	1980
Jun	3.93	3.44	4.00	2000	24	9.16	2000	1.03	1988
Jul	5.14	3.77	6.75	1993	23	22.70	1993	.40	1974
Aug	3.58	2.88	4.94	1958	6	13.78	1977	.60	1992
Sep	3.38	2.56	3.28	1973	26	10.11	1973	.60	1974
Oct	2.55	2.39	3.46	1968	17	6.14	1997	.07	1975
Nov	1.95	1.93	2.50	1996	17	5.11	1971	.01+	1989
Dec	1.29	.98	1.83	1984	16	3.30	1973	.08	1998
Ann	33.89	31.42	6.75	Jul 1993	23	22.70	Jul 1993	.00	Jan 1986

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	5.5	2.6	.3	@
Feb	5.5	2.9	.5	@
Mar	7.8	5.0	1.8	.6
Apr	9.2	6.2	2.3	.9
May	11.1	7.8	3.0	1.1
Jun	9.0	6.4	2.5	1.0
Jul	8.8	6.5	2.9	1.6
Aug	7.4	5.7	2.0	1.0
Sep	7.4	5.1	2.3	.9
Oct	6.3	4.4	1.6	.7
Nov	6.3	4.1	1.4	.3
Dec	5.9	3.1	.8	.2
Ann	90.2	59.8	21.4	8.3

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	.04	.11	.24	.36	.50	.66	.84	1.07	1.39	1.92	2.44
Feb	.14	.23	.37	.51	.66	.82	1.01	1.23	1.54	2.04	2.52
Mar	.22	.39	.71	1.05	1.42	1.84	2.34	2.97	3.83	5.27	6.68
Apr	.71	1.02	1.53	1.99	2.46	2.96	3.52	4.20	5.10	6.54	7.90
May	1.00	1.40	2.03	2.59	3.16	3.75	4.42	5.21	6.26	7.91	9.47
Jun	1.27	1.64	2.19	2.66	3.11	3.58	4.09	4.69	5.46	6.66	7.77
Jul	.81	1.24	1.99	2.70	3.43	4.23	5.15	6.27	7.78	10.22	12.56
Aug	.53	.83	1.35	1.85	2.36	2.93	3.58	4.38	5.45	7.19	8.87
Sep	.71	1.02	1.52	1.97	2.43	2.91	3.46	4.11	4.98	6.36	7.66
Oct	.29	.48	.84	1.19	1.57	2.00	2.49	3.11	3.95	5.33	6.68
Nov	.13	.25	.49	.76	1.06	1.40	1.82	2.36	3.11	4.37	5.62
Dec	.16	.26	.45	.63	.82	1.03	1.28	1.58	2.00	2.67	3.33
Ann	21.11	23.46	26.54	28.92	31.07	33.17	35.36	37.81	40.82	45.25	49.13

\+ 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:
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Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	8.2	6.8	2	1
Feb	6.5	4.9	2	1
Mar	4.2	3.0	1	#
Apr	1.5	.0	#	0
May	.0	.0	#	0
Jun	.0	.0	0	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	.0	.0	0	0
Oct	.3	.0	#	0
Nov	2.0	.9	#	#
Dec	6.3	4.2	1	#
Ann	29.0	19.8	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	10.0	1991	25	23.1	1991	14	1971	4	7	1979
Feb	9.0	1983	2	15.1	1983	13	1978	22	8	1978
Mar	6.2	1978	2	18.1	1984	13	1978	5	4	1998
Apr	12.0	1997	12	21.0	1997	14	1997	12	2	1997
May	.0	0	0	.0	0	1	1975	25	#	1975
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	.0	0	0	.0	0	0	0	0	0	0
Oct	3.0	1979	23	3.0+	1996	8	1997	26	1	1997
Nov	9.0	1972	14	11.0	1972	7	1987	29	1	1993
Dec	11.0	1981	17	19.5	1981	12+	2000	14	6	2000
Ann	12.0	Apr 1997	12	23.1	Jan 1991	14+	Apr 1997	12	8	Feb 1978

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	4.0	2.2	.8	.4	@
Feb	3.5	2.2	.8	.4	.0
Mar	1.9	1.4	.5	.1	.0
Apr	.6	.5	.1	.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	.0	.0	.0
Oct	.1	.1	.1	.0	.0
Nov	1.0	.6	.2	.1	.0
Dec	3.4	2.0	.6	.2	@
Ann	14.5	9.0	3.1	1.3	@

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	12.5	7.7	3.9	.5
Feb	11.6	7.7	4.4	1.0
Mar	4.2	1.8	.6	.2
Apr	.5	.2	.1	@
May	.0	.0	.0	.0
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.0	.0	.0	.0
Oct	.1	@	.0	.0
Nov	1.4	.4	.2	.0
Dec	6.8	2.5	1.1	.2
Ann	37.1	20.3	10.3	1.9

+ 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

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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	5/13	5/09	5/06	5/03	4/30	4/28	4/25	4/22	4/17
32	5/05	4/30	4/27	4/24	4/22	4/19	4/16	4/13	4/08
28	4/19	4/15	4/12	4/09	4/07	4/04	4/01	3/29	3/25
24	4/14	4/09	4/05	4/02	3/30	3/27	3/24	3/20	3/15
20	3/31	3/27	3/24	3/21	3/19	3/16	3/13	3/10	3/06
16	3/30	3/23	3/18	3/13	3/09	3/05	2/28	2/23	2/16

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	9/15	9/20	9/24	9/28	10/01	10/04	10/08	10/12	10/17
32	9/27	10/03	10/07	10/11	10/14	10/17	10/21	10/25	10/30
28	10/10	10/16	10/20	10/24	10/27	10/31	11/03	11/07	11/13
24	10/21	10/27	11/01	11/05	11/09	11/12	11/16	11/21	11/27
20	10/29	11/04	11/09	11/13	11/17	11/21	11/25	11/30	12/06
16	11/04	11/10	11/15	11/19	11/23	11/26	11/30	12/05	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	174	167	162	157	153	149	144	139	132
32	193	187	182	178	175	171	167	162	156
28	223	216	211	207	203	199	194	189	182
24	248	239	233	228	223	218	212	206	197
20	268	260	253	248	243	238	232	226	217
16	286	277	269	263	258	252	246	239	229

***** 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)

Heating Degree Days (1)

Base Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	1298	1009	781	413	161	15	0	11	75	336	763	1161	6023
60	1143	869	627	280	82	3	0	1	25	203	613	1006	4852
57	1050	791	541	210	50	1	0	0	10	137	528	913	4231
55	989	739	483	170	34	0	0	0	5	102	473	852	3847
50	839	609	348	89	10	0	0	0	0	42	341	706	2984
32	364	236	57	1	0	0	0	0	0	0	56	259	973

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	88	152	299	584	936	1203	1381	1317	1027	692	283	121	8083
55	0	10	12	63	257	513	668	604	342	81	11	1	2562
57	0	6	8	44	211	453	606	542	288	55	5	0	2218
60	0	0	1	23	150	366	513	450	212	27	1	0	1743
65	0	0	0	6	74	228	358	305	112	5	0	0	1088
70	0	0	0	1	28	117	215	178	48	0	0	0	587

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	40	134	356	683	961	1127	1059	776	442	120	17	4	44	178	534	1217	2178	3305	4364	5140	5582	5702	5719
45	0	12	72	239	528	811	972	904	626	307	61	5	0	12	84	323	851	1662	2634	3538	4164	4471	4532	4537
50	0	1	36	140	382	661	817	749	482	187	23	0	0	1	37	177	559	1220	2037	2786	3268	3455	3478	3478
55	0	0	10	76	246	511	662	594	344	97	5	0	0	0	10	86	332	843	1505	2099	2443	2540	2545	2545
60	0	0	3	34	138	364	508	439	222	45	2	0	0	0	3	37	175	539	1047	1486	1708	1753	1755	1755
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	8	36	102	225	420	635	764	708	492	272	81	15	8	44	146	371	791	1426	2190	2898	3390	3662	3743	3758

(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