

Climatology of the United States

No. 20

1971-2000

Station: CLARKSON, NE

COOP ID: 251660

Climate Division: NE 6

NWS Call Sign:

Elevation: 1,550 Feet Lat: 41°43N

Lon: 97°08W

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	29.5	8.5	19.0	75	1981	24	30.4	1990	-31	1974	12	4.5	1979	1426	0	.0	.0	2.4	16.0	30.7	7.8
Feb	36.0	14.4	25.2	76	1972	28	34.2	1998	-25	1962	28	10.0	1979	1114	0	.0	.0	6.2	10.7	26.5	3.8
Mar	47.3	24.6	36.0	90	1986	29	41.4	2000	-20	1960	4	28.2	1984	901	0	.0	@	14.4	3.8	23.0	.7
Apr	61.0	36.4	48.7	97	1989	23	57.3	1981	7	1975	3	41.6	1983	494	4	.0	.7	24.7	.2	9.5	.0
May	72.0	48.7	60.4	101+	1967	25	66.5	1988	22	1976	3	54.2	1995	198	54	.0	1.0	30.7	.0	1.1	.0
Jun	82.2	58.6	70.4	106	1988	22	76.5	1988	33	1969	15	65.7	1982	26	189	.4	7.1	30.0	.0	.0	.0
Jul	86.1	63.6	74.9	111	1954	11	80.7	1974	40	1972	5	68.7	1992	5	309	1.0	11.8	31.0	.0	.0	.0
Aug	83.3	61.1	72.2	106	1983	16	79.1	1983	36	1950	20	67.0	1992	19	242	.3	7.9	31.0	.0	.0	.0
Sep	75.4	50.6	63.0	100	1956	2	69.2	1998	21	1984	29	57.2	1993	123	63	.0	3.0	29.7	.0	1.0	.0
Oct	62.9	37.4	50.2	93+	1963	5	53.9	1973	8	1972	19	44.7	1976	462	1	.0	.1	27.5	.2	8.1	.0
Nov	44.7	24.1	34.4	79+	1999	14	43.6	1999	-15	1964	30	24.6	1985	918	0	.0	.0	11.7	4.3	23.5	.5
Dec	32.4	12.9	22.7	68	1979	18	29.5	1979	-27+	1989	23	5.4	1983	1314	0	.0	.0	3.2	13.0	30.2	4.4
Ann	59.4	36.7	48.1	111	Jul 1954	11	80.7	Jul 1974	-31	Jan 1974	12	4.5	Jan 1979	7000	862	1.7	31.6	242.5	48.2	153.6	17.2

+ 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

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: CLARKSON, NE

COOP ID: 251660

Climate Division: NE 6

NWS Call Sign:

Elevation: 1,550 Feet Lat: 41°43N

Lon: 97°08W

Precipitation (inches)

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	.65	.60	1.41	1949	3	2.04	1975	.00	1986	4.3	1.9	.2	@	.03	.08	.17	.27	.37	.49	.62	.80	1.03	1.43	1.82
Feb	.76	.54	1.78	1971	18	3.48	1971	.00	1997	4.1	2.2	.3	.1	.04	.12	.23	.35	.47	.60	.75	.94	1.20	1.63	2.04
Mar	2.14	1.91	2.47	1979	22	6.61	1987	.06	1994	6.7	4.5	1.6	.4	.21	.36	.66	.95	1.28	1.64	2.07	2.60	3.34	4.56	5.76
Apr	2.79	2.21	2.63	1985	26	8.08	1984	.21	1992	8.0	5.3	1.9	.7	.30	.51	.90	1.29	1.70	2.17	2.72	3.40	4.34	5.88	7.38
May	4.58	4.40	3.05	1984	18	11.09	1977	1.00	1994	9.6	7.2	3.1	1.4	1.47	1.90	2.55	3.10	3.63	4.17	4.77	5.48	6.39	7.80	9.10
Jun	4.25	3.87	4.53	1990	13	12.61	1990	.77	1972	8.3	6.0	2.6	1.5	.97	1.36	1.99	2.55	3.11	3.70	4.37	5.16	6.21	7.87	9.44
Jul	3.43	3.11	3.65	1966	14	8.56	1993	.16	1974	7.8	5.3	2.5	1.0	.73	1.04	1.54	2.00	2.46	2.95	3.50	4.16	5.04	6.43	7.75
Aug	3.15	3.07	4.92	1995	22	6.26+	1996	.52	1991	7.9	5.2	2.0	.9	.61	.90	1.36	1.78	2.21	2.68	3.20	3.83	4.67	6.01	7.29
Sep	2.54	2.15	4.28	1989	4	9.17	1989	.39	2000	6.6	4.3	1.7	.6	.33	.54	.90	1.25	1.62	2.04	2.51	3.10	3.90	5.21	6.47
Oct	2.13	1.91	3.34	1979	30	5.16	1982	.03	1988	6.3	3.9	1.2	.5	.14	.26	.53	.82	1.15	1.53	1.99	2.58	3.40	4.80	6.18
Nov	1.56	1.29	2.04	1982	11	4.36	1983	.04	1989	5.3	3.3	1.1	.4	.13	.24	.45	.66	.90	1.17	1.49	1.89	2.45	3.38	4.30
Dec	.82	.70	1.46	1970	10	2.40	1982	.15	1975	4.9	2.4	.3	.1	.18	.25	.37	.48	.59	.70	.84	.99	1.20	1.53	1.84
Ann	28.80	28.99	4.92	Aug 1995	22	12.61	Jun 1990	.00+	Feb 1997	79.8	51.5	18.5	7.6	19.35	21.14	23.45	25.22	26.80	28.34	29.93	31.71	33.86	37.02	39.76

+ 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

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

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Station: CLARKSON, NE

COOP ID: 251660

Climate Division: NE 6

NWS Call Sign:

Elevation: 1,550 Feet

Lat: 41°43N

Lon: 97°08W

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	5.9	3.5	2	1	9.0	1982	22	23.0	1975	17	1975	19	8	1979	2.6	2.0	.6	.3	.0	14.1	8.5	5.1	1.3
Feb	4.6	4.0	2	#	16.0	1984	18	16.0	1984	20	1978	28	12	1978	1.8	1.5	.5	.1	@	9.7	6.9	5.2	2.5
Mar	4.6	3.0	1	0	10.0	1983	26	17.5+	1984	14	1979	4	4	1979	1.7	1.5	.6	.5	@	3.6	2.0	1.5	.4
Apr	1.8	.0	#	0	7.0	1992	21	8.0	1975	8	1975	2	1	1975	.7	.6	.3	.2	.0	.6	.2	.1	.0
May	.0	.0	0	0	.0	0	0	.0	0	0	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	.1	.0	0	0	4.0	1985	29	4.0	1985	0	0	0	0	0	@	@	@	.0	.0	.0	.0	.0	.0
Oct	.8	.0	#	0	9.0	1980	27	9.0	1980	9	1980	27	1	1980	.2	.2	.1	@	.0	.2	.1	.1	.0
Nov	4.4	3.3	#	#	8.0	1975	20	15.0	1983	14	1975	28	4	1975	1.9	1.3	.5	.2	.0	3.6	1.4	.7	.3
Dec	6.6	6.3	2	1	8.0	1972	12	16.7	1983	20	1983	30	14	1983	2.7	2.0	.7	.3	.0	11.5	7.3	5.4	1.6
Ann	28.8	20.1	N/A	N/A	16.0	Feb 1984	18	23.0	Jan 1975	20+	Dec 1983	30	14	Dec 1983	11.6	9.1	3.3	1.6	@	43.3	26.4	18.1	6.1

+ 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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Station: CLARKSON, NE

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Climate Division: NE 6

NWS Call Sign:

Elevation: 1,550 Feet

Lat: 41° 43N

Lon: 97° 08W

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	5/20	5/15	5/12	5/09	5/06	5/04	5/01	4/28	4/23
32	5/14	5/09	5/06	5/03	4/30	4/27	4/24	4/20	4/15
28	5/07	5/02	4/29	4/26	4/23	4/20	4/17	4/13	4/09
24	4/24	4/20	4/16	4/13	4/11	4/08	4/05	4/02	3/28
20	4/13	4/08	4/04	4/01	3/30	3/27	3/24	3/20	3/15
16	4/05	3/31	3/27	3/24	3/21	3/17	3/14	3/10	3/05
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	9/12	9/16	9/19	9/21	9/24	9/26	9/28	10/01	10/05
32	9/14	9/19	9/23	9/26	9/29	10/02	10/05	10/09	10/14
28	9/24	9/29	10/03	10/06	10/09	10/12	10/15	10/19	10/25
24	10/07	10/13	10/16	10/19	10/22	10/25	10/28	11/01	11/06
20	10/13	10/20	10/24	10/28	11/01	11/05	11/09	11/13	11/20
16	10/24	10/31	11/04	11/09	11/12	11/16	11/21	11/25	12/02
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	157	151	147	143	139	136	132	128	121
32	173	166	160	156	151	147	142	137	130
28	187	181	176	172	169	165	161	157	150
24	215	208	203	198	194	190	186	181	174
20	242	233	226	221	216	211	205	199	190
16	265	255	248	242	236	231	224	217	208

* 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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Climate Division: NE 6 NWS Call Sign: Elevation: 1,550 Feet Lat: 41°43N Lon: 97°08W

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	1426	1114	901	494	198	26	5	19	123	462	918	1314	7000
60	1271	974	746	356	109	6	0	3	50	313	768	1159	5755
57	1178	890	653	281	70	2	0	1	25	234	678	1066	5078
55	1116	837	592	235	50	1	0	0	14	186	619	1004	4654
50	963	708	449	139	18	0	0	0	2	93	479	849	3700
32	463	300	90	4	0	0	0	0	0	1	110	360	1328

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	60	110	213	504	879	1153	1327	1246	930	563	182	69	7236
55	0	3	2	45	216	464	614	533	254	35	1	0	2167
57	0	0	0	31	174	405	552	472	205	21	0	0	1860
60	0	0	0	16	120	319	459	381	141	8	0	0	1444
65	0	0	0	4	54	189	309	242	63	1	0	0	862
70	0	0	0	0	18	91	174	130	21	0	0	0	434

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	2	21	105	321	661	939	1099	1029	720	373	72	5	2	23	128	449	1110	2049	3148	4177	4897	5270	5342	5347
45	0	4	52	209	507	789	944	874	572	244	31	1	0	4	56	265	772	1561	2505	3379	3951	4195	4226	4227
50	0	0	24	121	359	639	789	719	428	141	13	0	0	0	24	145	504	1143	1932	2651	3079	3220	3233	3233
55	0	0	6	63	232	489	634	564	296	67	3	0	0	0	6	69	301	790	1424	1988	2284	2351	2354	2354
60	0	0	1	30	125	345	479	411	180	23	0	0	0	0	1	31	156	501	980	1391	1571	1594	1594	1594
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	4	23	85	214	406	615	739	687	462	244	56	5	4	27	112	326	732	1347	2086	2773	3235	3479	3535	3540

(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