

# Climatography of the United States

No. 20

1971-2000

Station: SIDNEY, IA

COOP ID: 137669

Climate Division: IA 7

NWS Call Sign:

Elevation: 1,130 Feet Lat: 40°45N Lon: 95°39W

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	31.6	12.4	22.0	69+	1981	24	34.2	1989	-22	1966	29	8.3	1979	1333	0	.0	.0	3.4	14.4	29.5	5.9
Feb	38.4	17.8	28.1	82	1972	29	37.7	1987	-23+	1996	2	14.4	1979	1034	0	.0	.0	7.4	9.7	24.3	2.6
Mar	50.2	28.3	39.3	91	1986	29	45.7	1986	-17	1962	1	31.6	1984	798	0	.0	@	17.1	2.7	18.6	.4
Apr	62.6	39.6	51.1	96	1989	22	58.9	1981	8	1975	3	44.3	1983	424	8	.0	.5	26.4	.2	6.1	.0
May	73.3	52.0	62.7	100	1989	29	68.9	1977	28	1976	3	56.7	1997	150	77	@	1.0	30.8	.0	.2	.0
Jun	83.2	61.4	72.3	105	1980	27	77.7	1971	41	1998	4	67.6	1982	14	233	.6	7.3	30.0	.0	.0	.0
Jul	86.9	66.0	76.5	109	1974	21	82.8	1974	44	1971	30	71.6	1992	2	356	1.5	12.1	31.0	.0	.0	.0
Aug	84.8	63.1	74.0	103+	1988	14	79.5	1983	42	1950	20	68.2	1992	12	290	.7	10.6	31.0	.0	.0	.0
Sep	77.8	54.2	66.0	102+	1975	1	72.4	1998	28	1995	22	59.6	1993	81	111	.2	4.4	29.9	.0	.2	.0
Oct	66.3	42.2	54.3	94+	1956	1	59.0	1971	14+	1997	27	49.4	1976	339	5	.0	.3	29.0	.1	3.9	.0
Nov	48.2	28.7	38.5	83	1999	14	48.6	1999	-9	1964	30	30.2	1991	796	0	.0	.0	15.5	2.9	18.1	.2
Dec	35.2	17.6	26.4	72	1964	23	32.7	1998	-25	1989	23	8.6	1983	1198	0	.0	.0	4.8	11.1	28.7	3.3
Ann	61.5	40.3	50.9	109	Jul 1974	21	82.8	Jul 1974	-25	Dec 1989	23	8.3	Jan 1979	6181	1080	3.0	36.2	256.3	41.1	129.6	12.4

+ 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](http://www.ncdc.noaa.gov/oa/climate/normals/usnormals.html)

Issue Date: February 2004

(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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## No. 20 1971-2000

National Climatic Data Center  
Federal Building  
151 Patton Avenue  
Asheville, North Carolina 28801  
www.ncdc.noaa.gov

**Station: SIDNEY, IA**

**COOP ID: 137669**

**Climate Division: IA 7**

**NWS Call Sign:**

**Elevation: 1,130 Feet Lat: 40°45N**

**Lon: 95°39W**

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	.82	.75	1.24	1971	3	2.26	1973	.00	1986	5.1	2.4	.3	@	.11	.22	.36	.48	.59	.71	.85	1.01	1.23	1.57	1.89
Feb	.95	.97	2.12	1954	19	2.19	1973	.04	1977	5.5	2.8	.5	.1	.12	.20	.33	.47	.61	.76	.94	1.16	1.46	1.95	2.42
Mar	2.44	2.10	1.74	1973	31	7.26	1973	.13	1994	8.4	5.0	1.8	.5	.26	.45	.78	1.12	1.49	1.90	2.38	2.98	3.80	5.15	6.47
Apr	3.36	2.73	2.94	1978	17	8.19	1984	.89	1989	10.1	6.5	2.1	.7	.84	1.16	1.65	2.08	2.51	2.96	3.46	4.06	4.84	6.07	7.22
May	4.51	4.03	4.48	1987	26	13.29	1996	1.12	1989	11.8	8.1	3.0	1.0	1.17	1.60	2.25	2.83	3.40	4.00	4.66	5.45	6.48	8.11	9.63
Jun	4.22	3.91	3.80	1959	30	8.70	1993	1.04	1988	9.5	6.4	2.7	1.2	1.56	1.95	2.52	2.99	3.44	3.91	4.41	4.99	5.74	6.88	7.93
Jul	5.08	4.33	8.75	1965	19	15.98	1993	.22	1974	9.2	6.2	3.3	1.7	.76	1.18	1.91	2.62	3.35	4.15	5.07	6.20	7.72	10.19	12.56
Aug	3.85	2.80	4.32	1977	28	16.63	1977	.46	1984	8.5	5.6	2.3	1.1	.52	.83	1.38	1.92	2.48	3.10	3.82	4.70	5.89	7.85	9.73
Sep	3.61	3.20	4.16	1989	9	8.72	1989	.78	1974	7.9	5.0	2.3	1.0	.81	1.15	1.68	2.16	2.63	3.14	3.71	4.38	5.28	6.70	8.04
Oct	2.63	2.57	3.85	1968	17	5.20	1972	.00	1975	7.2	4.8	1.5	.8	.29	.61	1.05	1.43	1.81	2.22	2.69	3.25	3.99	5.17	6.30
Nov	2.09	1.98	2.10	1952	17	5.01	1971	.00	1976	6.7	4.4	1.4	.6	.11	.30	.62	.93	1.25	1.62	2.04	2.57	3.29	4.48	5.63
Dec	1.10	.83	1.71	1973	4	3.60	1973	.05	1976	6.1	2.9	.7	.1	.13	.21	.36	.52	.68	.86	1.08	1.35	1.71	2.31	2.89
Ann	34.66	33.75	8.75	Jul 1965	19	16.63	Aug 1977	.00+	Jan 1986	96.0	60.1	21.9	8.8	22.01	24.35	27.41	29.77	31.89	33.97	36.13	38.54	41.50	45.83	49.63

+ 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

Complete documentation available from:  
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**Climate Division: IA 7**

**NWS Call Sign:**

**Elevation: 1,130 Feet**

**Lat: 40°45N**

**Lon: 95°39W**

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	7.2	6.2	2	2	8.3	1971	3	18.4	1975	13	1984	1	5	1991	3.8	2.4	.9	.3	.0	13.9	8.5	3.2	.2
Feb	6.5	4.7	2	1	11.5	1971	22	23.3	1978	12	1971	22	6	1978	3.1	2.3	.7	.3	.1	11.0	6.5	2.6	.2
Mar	5.8	3.3	1	#	13.5	1983	26	27.8	1983	15	1978	2	6	1978	2.6	1.7	.7	.2	.1	3.9	1.6	.8	.2
Apr	2.2	.0	#	#	12.0	1992	21	12.0	1992	12	1992	21	1	1997	1.0	.8	.2	.1	@	.5	.2	.1	@
May	#	.0	0	0	#	1994	1	#	1994	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	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Oct	.7	.0	#	0	5.0	1979	22	5.0+	1997	5	1997	26	1	1997	.2	.2	.1	.1	.0	.2	.1	@	.0
Nov	3.3	1.1	#	#	7.1	1972	13	15.3	1971	7	1987	29	1	1991	1.7	1.1	.5	.2	.0	2.0	.7	.2	.0
Dec	7.0	5.7	1	#	10.5	1972	12	20.0	1973	14	1983	28	7	1983	3.8	2.2	.8	.1	@	9.0	4.1	1.7	.4
Ann	32.7	21.0	N/A	N/A	13.5	Mar 1983	26	27.8	Mar 1983	15	Mar 1978	2	7	Dec 1983	16.2	10.7	3.9	1.3	.2	40.5	21.7	8.6	1.0

+ 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	5/10	5/06	5/03	4/30	4/27	4/25	4/22	4/19	4/14
32	5/01	4/26	4/22	4/19	4/16	4/14	4/10	4/07	4/02
28	4/19	4/15	4/12	4/09	4/07	4/04	4/01	3/29	3/25
24	4/12	4/07	4/03	3/31	3/29	3/26	3/23	3/19	3/14
20	4/01	3/27	3/23	3/20	3/17	3/15	3/12	3/08	3/03
16	3/31	3/23	3/18	3/13	3/08	3/04	2/27	2/21	2/13
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	9/19	9/24	9/28	10/01	10/04	10/07	10/10	10/14	10/19
32	9/30	10/05	10/09	10/12	10/14	10/17	10/20	10/24	10/29
28	10/10	10/16	10/21	10/24	10/28	10/31	11/04	11/08	11/14
24	10/23	10/28	11/01	11/05	11/08	11/11	11/14	11/18	11/24
20	10/27	11/02	11/07	11/11	11/15	11/18	11/22	11/27	12/03
16	11/05	11/11	11/16	11/20	11/23	11/27	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	177	171	166	163	159	156	152	147	141
32	198	192	188	184	180	177	173	168	162
28	225	218	212	208	203	199	195	189	182
24	247	239	233	228	224	219	214	208	200
20	266	258	252	246	241	236	231	225	216
16	292	281	273	266	259	253	246	238	226

\* 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/normal/usnormals.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormals.html)

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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	1333	1034	798	424	150	14	2	12	81	339	796	1198	6181
60	1178	894	644	293	75	2	0	2	29	206	646	1043	5012
57	1085	814	558	225	45	0	0	0	13	141	561	950	4392
55	1023	762	500	185	30	0	0	0	7	105	506	888	4006
50	874	632	364	103	9	0	0	0	0	44	373	743	3142
32	394	250	63	2	0	0	0	0	0	0	72	289	1070

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	84	140	288	575	950	1209	1377	1301	1020	690	266	115	8015
55	0	8	12	68	267	519	664	588	337	81	10	0	2554
57	0	5	8	49	220	459	602	526	283	55	5	0	2212
60	0	0	1	27	157	371	509	435	209	28	1	0	1738
65	0	0	0	8	77	233	356	290	111	5	0	0	1080
70	0	0	0	1	29	120	216	166	48	1	0	0	581

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	13	47	162	402	732	999	1151	1088	816	495	130	22	13	60	222	624	1356	2355	3506	4594	5410	5905	6035	6057
45	0	19	98	276	577	849	996	933	667	352	71	6	0	19	117	393	970	1819	2815	3748	4415	4767	4838	4844
50	0	2	48	173	428	699	841	778	520	228	29	0	0	2	50	223	651	1350	2191	2969	3489	3717	3746	3746
55	0	1	22	100	287	549	686	623	380	127	9	0	0	1	23	123	410	959	1645	2268	2648	2775	2784	2784
60	0	0	6	48	169	400	531	469	252	61	3	0	0	0	6	54	223	623	1154	1623	1875	1936	1939	1939
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	7	37	114	249	454	666	785	734	526	303	82	17	7	44	158	407	861	1527	2312	3046	3572	3875	3957	3974

(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](http://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](http://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"><li>a. Temperature/ Precipitation Tables<ol style="list-style-type: none"><li>1. 1971-2000 Monthly Normals</li><li>2. Cooperative Summary of the Day</li><li>3. National Weather Service station records</li><li>4. 1971-2000 serially complete daily data</li></ol></li><li>b. Degree Day Table<ol style="list-style-type: none"><li>1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals</li><li>2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data</li></ol></li></ol> | <ol style="list-style-type: none"><li>c. Snow Tables<ol style="list-style-type: none"><li>1. Snow Climatology</li><li>2. Cooperative Summary of the Day</li></ol></li><li>d. Freeze Data Table<br/>1971-2000 serially complete daily data</li></ol> |
|---|---|

## References

U.S. Climate Normals 1971-2000, [www.ncdc.noaa.gov/normal.html](http://www.ncdc.noaa.gov/normal.html)  
U.S. Climate Normals 1971-2000-Products Clim20, [www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html)  
Snow Climatology Project Description, [www.ncdc.noaa.gov/oa/climate/monitoring/snowclim/mainpage.html](http://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](http://www1.ncdc.noaa.gov/pub/data/special/serialcomplete_jam_0900.pdf)