

# Climatography of the United States

## No. 20

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

Station: BRITT, IA

1971-2000

COOP ID: 130923

Climate Division: IA 2

NWS Call Sign:

Elevation: 1,210 Feet Lat: 43°06N

Lon: 93°48W

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	21.6	3.4	12.5	62	1981	24	24.9	1990	-31	1970	21	-1.3	1979	1628	0	.0	.0	.3	22.8	30.9	11.7
Feb	27.6	10.0	18.8	63	1981	18	30.7	1987	-30	1996	3	5.1	1979	1293	0	.0	.0	1.6	15.6	27.0	6.5
Mar	40.6	22.8	31.7	83	1968	30	40.1	2000	-25	1962	1	22.6	1975	1034	0	.0	.0	8.7	7.0	24.6	1.6
Apr	56.1	34.5	45.3	94	1980	22	53.9	1977	5	1975	3	38.5	1975	594	2	.0	.2	22.1	.5	10.8	.0
May	69.9	47.7	58.8	99	1967	25	68.5	1977	22	1967	3	51.5	1997	246	55	.0	.9	30.5	.0	1.1	.0
Jun	79.7	58.2	69.0	104	1985	9	73.6	1971	35+	1969	3	64.7	1993	35	153	.1	3.5	30.0	.0	.0	.0
Jul	81.9	61.4	71.7	106	1948	6	75.6	1974	41	1950	13	65.0	1992	15	222	.1	5.6	31.0	.0	.0	.0
Aug	79.0	59.1	69.1	101+	1955	21	74.4	1983	30	1950	20	63.9	1992	37	162	.1	3.0	31.0	.0	.0	.0
Sep	71.7	49.2	60.5	100	1960	1	66.3	1998	22	1984	29	54.2	1993	168	31	.0	1.4	29.8	.0	.6	.0
Oct	59.2	37.5	48.4	93+	1963	5	55.4	1973	11	1949	31	42.2	1988	517	1	.0	.1	26.6	.2	8.8	.0
Nov	40.2	23.5	31.9	78+	1950	1	41.3	1999	-16+	1964	21	23.0	1991	994	0	.0	.0	8.8	7.0	22.8	.9
Dec	25.8	9.4	17.6	67	1998	2	25.3+	1998	-27	1990	23	1.6	1983	1469	0	.0	.0	.8	19.8	30.4	7.2
Ann	54.4	34.7	44.6	106	Jul 1948	6	75.6	Jul 1974	-31	Jan 1970	21	-1.3	Jan 1979	8030	626	.3	14.7	221.2	72.9	157.0	27.9

+ 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](http://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

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**Lon: 93°48W**

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	.93	.69	2.32	1975	11	4.56	1975	.04	1981	6.4	3.0	.2	.1	.07	.13	.25	.38	.52	.69	.88	1.13	1.48	2.06	2.63
Feb	.91	.77	1.60	1961	18	2.62	1971	.00	1987	5.5	3.0	.4	@	.04	.13	.26	.39	.54	.70	.88	1.12	1.43	1.96	2.47
Mar	1.94	1.87	2.00+	1953	14	4.15	1995	.10	1994	8.5	5.0	1.0	.3	.38	.55	.84	1.10	1.37	1.65	1.97	2.36	2.88	3.71	4.50
Apr	3.18	2.78	3.86	1975	28	7.43	1999	.80	1996	10.1	7.0	2.0	.4	1.00	1.30	1.75	2.14	2.51	2.89	3.31	3.81	4.44	5.44	6.36
May	3.76	3.14	7.46	1959	21	11.70	1982	1.10	1989	11.2	7.7	2.3	.7	1.13	1.49	2.02	2.48	2.93	3.40	3.91	4.51	5.29	6.51	7.64
Jun	4.71	3.94	8.60	1954	18	13.53	1983	.59	1980	10.2	7.1	3.3	1.3	1.34	1.78	2.46	3.05	3.62	4.22	4.88	5.67	6.68	8.27	9.76
Jul	4.27	3.61	2.90	1976	28	9.28	1999	.51	1975	9.7	6.6	3.1	1.2	1.19	1.59	2.20	2.74	3.27	3.81	4.42	5.14	6.07	7.54	8.91
Aug	3.87	3.55	4.29	1979	21	11.73	1979	.55	1976	8.9	6.3	2.2	1.1	.74	1.09	1.66	2.18	2.71	3.28	3.93	4.71	5.74	7.41	8.99
Sep	2.98	2.52	5.30	1964	8	8.29	1973	.85	1984	7.8	5.3	1.7	.6	.69	.97	1.40	1.79	2.18	2.59	3.06	3.61	4.33	5.48	6.56
Oct	2.10	1.94	2.45	1979	22	4.47	1998	.18	1975	6.4	4.2	1.5	.4	.49	.68	.99	1.26	1.54	1.83	2.15	2.54	3.05	3.86	4.63
Nov	1.85	1.32	1.80	1971	16	4.92	1991	.00	1976	6.9	4.0	1.1	.4	.14	.33	.63	.90	1.18	1.49	1.85	2.29	2.88	3.84	4.76
Dec	1.04	1.03	1.52	1982	28	2.77	1982	.17	1989	6.5	3.2	.6	.1	.19	.28	.43	.58	.72	.87	1.05	1.26	1.54	2.00	2.43
Ann	31.54	30.74	8.60	Jun 1954	18	13.53	Jun 1983	.00+	Feb 1987	98.1	62.4	19.4	6.6	21.17	23.13	25.67	27.61	29.35	31.03	32.78	34.73	37.10	40.56	43.57

+ 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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**Climate Division: IA 2**

**NWS Call Sign:**

**Elevation: 1,210 Feet**

**Lat: 43°06N**

**Lon: 93°48W**

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	7.7	7.3	5	4	7.0	1973	3	23.5	1975	18	1999	10	13+	1999	4.6	3.5	1.2	.6	.0	-9.9	-9.9	-9.9	-9.9
Feb	6.5	5.7	5	4	11.0	1993	21	14.5	1978	22	1993	22	13	1993	3.7	2.8	.6	.2	.1	-9.9	-9.9	-9.9	-9.9
Mar	6.4	6.9	2	1	8.0	1999	9	11.0+	1999	16	1993	22	13	1993	2.6	1.9	.6	.4	.0	4.5	2.0	1.1	.0
Apr	1.9	.0	#	0	6.0	1973	9	10.5	1975	9	1973	9	1	1975	.8	.6	.2	.1	.0	.8	.3	.2	.0
May	#	.0	#	0	#	1997	1	#	1997	#	1997	1	#	1997	.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	.3	.0	#	0	2.2	1989	31	2.2	1989	2	1991	31	#+	2000	.3	.1	.0	.0	.0	.1	.0	.0	.0
Nov	3.9	3.0	1	#	6.0	1986	18	13.5	1985	9	1986	21	4	1985	2.3	1.4	.5	.2	.0	3.8	2.4	1.4	.0
Dec	8.2	6.6	3	2	8.0	1985	1	22.2	1990	40	2000	31	17	1985	4.6	3.1	1.0	.5	.0	14.6	7.2	3.9	.6
Ann	34.9	29.5	N/A	N/A	11.0	Feb 1993	21	23.5	Jan 1975	40	Dec 2000	31	17	Dec 1985	18.9	13.4	4.1	2.0	.1	-9.9	-9.9	-9.9	-9.9

+ 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

Complete documentation available from:

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**Elevation: 1,210 Feet**

**Lat: 43°06N**

**Lon: 93°48W**

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	5/22	5/17	5/14	5/11	5/08	5/05	5/02	4/29	4/24
32	5/13	5/09	5/06	5/03	5/01	4/28	4/26	4/22	4/18
28	5/01	4/26	4/22	4/18	4/15	4/12	4/08	4/04	3/30
24	4/17	4/13	4/10	4/08	4/05	4/03	4/01	3/29	3/25
20	4/14	4/09	4/06	4/03	4/01	3/29	3/27	3/23	3/19
16	4/06	4/01	3/28	3/25	3/22	3/19	3/16	3/12	3/07
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	9/15	9/18	9/20	9/23	9/25	9/27	9/30	10/04
32	9/23	9/27	9/29	10/01	10/03	10/05	10/07	10/09	10/13
28	9/26	10/02	10/06	10/10	10/13	10/16	10/20	10/24	10/29
24	10/09	10/14	10/18	10/21	10/24	10/27	10/30	11/02	11/07
20	10/14	10/20	10/24	10/27	10/31	11/03	11/06	11/10	11/16
16	10/30	11/04	11/08	11/11	11/14	11/17	11/20	11/23	11/28
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	154	148	144	140	137	134	130	126	120
32	170	165	161	158	155	152	148	144	139
28	205	197	190	185	180	175	170	163	155
24	218	212	208	204	201	197	193	189	183
20	235	227	221	217	212	207	203	197	189
16	258	250	245	240	236	232	227	222	215

\* 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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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	1628	1293	1034	594	246	35	15	37	168	517	994	1469	8030
60	1473	1153	879	451	150	8	1	9	77	370	844	1314	6729
57	1380	1069	786	370	106	3	0	2	42	290	754	1221	6023
55	1318	1013	725	319	81	1	0	0	25	241	695	1159	5577
50	1163	875	581	208	37	0	0	0	5	140	554	1004	4567
32	638	426	171	13	0	0	0	0	0	5	160	496	1909

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	33	57	161	411	832	1108	1230	1148	853	512	156	50	6551
55	0	0	1	27	200	419	517	435	188	35	2	0	1824
57	0	0	0	18	163	361	455	375	144	22	0	0	1538
60	0	0	0	9	114	276	363	289	90	9	0	0	1150
65	0	0	0	2	55	153	222	162	31	1	0	0	626
70	0	0	0	0	21	66	112	74	6	0	0	0	279

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	0	5	63	262	624	900	1009	942	678	344	62	2	0	5	68	330	954	1854	2863	3805	4483	4827	4889	4891
45	0	0	27	159	473	750	854	787	529	217	28	1	0	0	27	186	659	1409	2263	3050	3579	3796	3824	3825
50	0	0	8	88	331	600	699	632	383	126	10	0	0	0	8	96	427	1027	1726	2358	2741	2867	2877	2877
55	0	0	3	46	209	452	544	477	254	61	2	0	0	0	3	49	258	710	1254	1731	1985	2046	2048	2048
60	0	0	1	20	111	308	391	325	150	24	0	0	0	0	1	21	132	440	831	1156	1306	1330	1330	1330
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	1	40	164	381	588	684	624	422	207	32	1	0	1	41	205	586	1174	1858	2482	2904	3111	3143	3144

(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/normal/usnormals.html](http://www.ncdc.noaa.gov/oa/climate/normal/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> |
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## 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)