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: BELLEVILLE SIU RESEARCH, IL **COOP ID: 110510**

Climate Division: IL 8 **NWS Call Sign:** **Elevation: 450 Feet** **Lat: 38˚31N** **Lon: 89˚51W**

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	39.6	22.1	30.9	75	1950	24	41.6	1990	-27	1977	17	15.9	1977	1059	0	.0	.0	7.0	9.2	25.2	1.7
Feb	46.1	26.7	36.4	81+	2000	24	45.3	2000	-21	1982	10	22.3	1978	801	0	.0	.0	11.1	5.4	19.3	1.0
Mar	57.2	35.5	46.4	89	1997	21	52.8	1973	-8	1978	5	38.3	1984	579	0	.0	.0	22.6	.7	13.1	.1
Apr	68.0	44.6	56.3	90+	1989	26	62.4	1981	19	1971	7	50.2	1983	277	16	.0	.1	28.5	.0	4.1	.0
May	77.3	53.9	65.6	97	1953	26	71.3	1987	28	1976	4	60.0	1981	104	121	.0	1.1	31.0	.0	.1	.0
Jun	85.7	62.5	74.1	104	1952	29	78.0	1971	38	1972	1	69.5	1982	6	280	.1	9.1	30.0	.0	.0	.0
Jul	89.6	66.5	78.1	110	1954	14	82.1	1999	43	1972	6	75.2	1971	0	404	.7	16.1	31.0	.0	.0	.0
Aug	87.8	63.7	75.8	104	1964	3	81.9	1995	39	1986	29	71.4	1992	5	338	.3	12.3	31.0	.0	.0	.0
Sep	81.6	56.0	68.8	103	1954	5	73.8	1998	26	1995	23	63.4	1974	39	151	.1	5.1	30.0	.0	.4	.0
Oct	71.0	45.0	58.0	95	1953	2	64.6	1971	20+	1981	24	51.6	1976	246	29	.0	.2	30.5	.0	4.1	.0
Nov	56.0	36.1	46.1	84	1950	1	54.2	1999	2	1991	8	38.4	1976	568	0	.0	.0	19.9	.3	12.2	.0
Dec	43.7	26.5	35.1	76	1970	3	42.8	1971	-19	1989	22	22.3	1989	928	0	.0	.0	9.7	4.9	21.9	1.0
Ann	67.0	44.9	56.0	110	Jul 1954	14	82.1	Jul 1999	-27	Jan 1977	17	15.9	Jan 1977	4612	1339	1.2	44.0	282.3	20.5	100.4	3.8

\+ 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: BELLEVILLE SIU RESEARCH, IL **COOP ID: 110510**

Climate Division: IL 8 **NWS Call Sign:** **Elevation: 450 Feet** **Lat: 38˚31N** **Lon: 89˚51W**

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	2.02	1.62	3.58	1950	3	5.40	1975	.05	1986
Feb	2.20	2.00	4.48	1986	2	7.98	1986	.40	1996
Mar	3.54	3.31	2.51	1977	28	7.35	1973	1.25	1981
Apr	3.91	3.45	4.58	1996	29	11.46	1994	.90	1977
May	4.18	3.64	4.57	1995	17	17.02	1995	1.05	1992
Jun	3.97	3.65	8.15	1957	15	9.41	2000	1.14	1972
Jul	3.51	2.93	3.93	1979	28	8.05	1981	.60	1974
Aug	3.34	3.24	3.51	1961	10	6.95	1974	.28	1971
Sep	2.98	2.64	3.75	1989	14	9.07	1993	.15	1985
Oct	2.87	2.28	3.39	1983	20	7.70	1983	.90	1979
Nov	3.88	3.29	3.80	1972	2	10.92	1972	.19	1976
Dec	2.97	2.15	3.97	1982	3	9.35	1982	.62+	1980
Ann	39.37	40.53	8.15	Jun 1957	15	17.02	May 1995	.05	Jan 1986

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	6.3	4.0	1.2	.4
Feb	5.4	3.7	1.4	.5
Mar	8.3	6.6	2.4	.9
Apr	9.3	6.8	2.6	.9
May	9.7	7.2	3.1	1.0
Jun	8.2	6.6	2.7	1.3
Jul	6.9	5.2	2.2	1.0
Aug	7.0	5.2	2.4	1.0
Sep	6.0	4.3	1.7	.8
Oct	7.2	5.1	2.1	.8
Nov	7.6	6.2	2.6	1.0
Dec	7.0	5.1	1.9	.6
Ann	88.9	66.0	26.3	10.2

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	.26	.42	.71	.99	1.28	1.61	2.00	2.47	3.11	4.15	5.17
Feb	.48	.68	1.01	1.30	1.59	1.90	2.25	2.67	3.23	4.11	4.94
Mar	1.31	1.64	2.12	2.52	2.90	3.28	3.70	4.19	4.81	5.77	6.65
Apr	.95	1.32	1.89	2.40	2.90	3.44	4.03	4.74	5.66	7.13	8.51
May	.95	1.33	1.95	2.50	3.05	3.63	4.28	5.07	6.09	7.73	9.27
Jun	1.05	1.43	2.00	2.51	3.00	3.52	4.10	4.79	5.68	7.08	8.39
Jul	.82	1.14	1.66	2.12	2.58	3.06	3.61	4.26	5.11	6.46	7.74
Aug	.96	1.28	1.76	2.17	2.58	3.00	3.47	4.02	4.73	5.85	6.89
Sep	.38	.61	1.04	1.45	1.89	2.37	2.94	3.64	4.58	6.13	7.63
Oct	.79	1.06	1.48	1.84	2.19	2.56	2.98	3.46	4.09	5.09	6.01
Nov	.60	.93	1.50	2.03	2.59	3.20	3.89	4.74	5.88	7.74	9.51
Dec	.50	.76	1.19	1.60	2.02	2.47	2.99	3.63	4.47	5.84	7.15
Ann	28.34	30.48	33.23	35.31	37.16	38.94	40.78	42.81	45.27	48.83	51.91

\+ 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: BELLEVILLE SIU RESEARCH, IL **COOP ID: 110510**

Climate Division: IL 8 **NWS Call Sign:** **Elevation: 450 Feet** **Lat: 38°31N** **Lon: 89°51W**

Snow (inches)

Snow Totals

Means/Medians (1)

Extremes (2)

Mean Number of Days (1)

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	5.3	3.3	1	#	14.8	1982	31	17.4	1987	15+	1982	31	6	1977	2.9	1.7	.7	.3	@	6.3	3.5	2.3	.4
Feb	2.9	1.5	1	#	11.0	1993	25	19.0	1993	19	1982	12	9	1982	1.1	.7	.4	.2	@	4.2	3.3	1.7	1.1
Mar	1.8	.1	#	0	8.0	1989	6	9.0	1989	8	1989	6	1	1989	.7	.6	.3	.2	.0	1.0	.5	.2	.0
Apr	.8	.0	#	0	7.8	1971	6	13.1	1971	30	1982	8	1	1982	.2	.2	.1	.1	.0	.2	.1	.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	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Oct	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.7	.0	#	0	8.0	1975	26	8.0	1975	8	1975	26	1	1975	.3	.2	.1	.1	.0	.5	.3	.1	.0
Dec	2.4	2.0	1	#	8.5	2000	13	8.5	2000	12	1973	21	5	2000	1.6	1.1	.4	.2	.0	3.9	1.6	.8	.0
Ann	13.9	6.9	N/A	N/A	14.8	Jan 1982	31	19.0	Feb 1993	30	Apr 1982	8	9	Feb 1982	6.8	4.5	2.0	1.1	@	16.1	9.3	5.2	1.5

+ 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: BELLEVILLE SIU RESEARCH, IL **COOP ID: 110510**

Climate Division: IL 8 **NWS Call Sign:** **Elevation: 450 Feet** **Lat: 38˚31N** **Lon: 89˚51W**

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	5/12	5/07	5/04	5/01	4/29	4/26	4/23	4/20	4/16
32	4/28	4/23	4/20	4/17	4/14	4/11	4/08	4/05	3/31
28	4/20	4/15	4/11	4/08	4/05	4/02	3/30	3/26	3/21
24	4/07	4/02	3/29	3/25	3/22	3/19	3/16	3/12	3/07
20	3/28	3/22	3/19	3/16	3/13	3/10	3/06	3/03	2/26
16	3/18	3/10	3/04	2/27	2/22	2/18	2/13	2/07	1/30

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	9/27	9/30	10/02	10/05	10/08	10/11	10/15
32	9/24	9/30	10/05	10/08	10/12	10/16	10/19	10/24	10/30
28	10/02	10/09	10/13	10/17	10/21	10/24	10/28	11/02	11/08
24	10/21	10/26	10/30	11/03	11/06	11/09	11/13	11/17	11/23
20	10/31	11/07	11/13	11/17	11/21	11/25	11/30	12/05	12/12
16	11/12	11/20	11/25	11/29	12/03	12/07	12/12	12/17	12/24

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	176	169	164	160	156	152	147	142	136
32	201	194	189	184	180	176	172	166	159
28	225	216	209	203	198	193	187	181	172
24	253	244	238	233	228	223	218	212	204
20	281	271	264	258	253	247	242	235	225
16	316	305	297	290	283	277	270	262	251

***** 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: BELLEVILLE SIU RESEARCH, IL **COOP ID: 110510**

Climate Division: IL 8 **NWS Call Sign:** **Elevation: 450 Feet** **Lat: 38˚31N** **Lon: 89˚51W**

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	1059	801	579	277	104	6	0	5	39	246	568	928	4612
60	904	669	435	162	45	1	0	0	9	140	424	776	3565
57	814	591	353	108	24	0	0	0	3	93	343	690	3019
55	759	539	302	78	15	0	0	0	1	67	291	632	2684
50	613	418	195	28	4	0	0	0	0	25	182	492	1957
32	208	115	15	0	0	0	0	0	0	0	10	137	485

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	171	239	460	729	1040	1263	1427	1355	1103	806	432	232	9257
55	9	19	33	117	342	573	714	642	414	160	23	14	3060
57	2	14	22	87	289	513	652	580	356	123	15	10	2663
60	0	8	12	50	217	424	559	487	272	78	6	3	2116
65	0	0	0	16	121	280	404	338	151	29	0	0	1339
70	0	0	0	3	55	152	250	202	66	7	0	0	735

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	44	103	260	501	802	1029	1190	1117	868	570	241	74	44	147	407	908	1710	2739	3929	5046	5914	6484	6725	6799
45	16	53	162	359	647	879	1035	962	718	419	150	34	16	69	231	590	1237	2116	3151	4113	4831	5250	5400	5434
50	6	19	93	241	493	729	880	807	570	286	85	14	6	25	118	359	852	1581	2461	3268	3838	4124	4209	4223
55	1	9	45	143	345	579	725	652	424	173	42	3	1	10	55	198	543	1122	1847	2499	2923	3096	3138	3141
60	0	2	20	73	214	430	570	497	289	91	14	0	0	2	22	95	309	739	1309	1806	2095	2186	2200	2200
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	27	68	161	312	524	701	809	758	576	367	142	41	27	95	256	568	1092	1793	2602	3360	3936	4303	4445	4486

(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