

# Climatology of the United States No. 20

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

Station: BROOKPORT DAM 52, IL

1971-2000

COOP ID: 110993

Climate Division: IL 9

NWS Call Sign:

Elevation: 330 Feet

Lat: 37°08N

Lon: 88°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	42.3	25.0	33.7	73	1967	23	43.0	1990	-21	1984	21	20.5	1977	971	0	.0	.0	8.6	6.2	22.9	1.1
Feb	48.3	29.0	38.7	74	1981	25	46.8	1976	-9	1985	3	24.1	1978	737	0	.0	.0	13.7	3.2	16.9	.5
Mar	58.4	37.6	48.0	83	1986	30	55.0	1976	0	1978	5	41.5	1996	529	1	.0	.0	24.7	.3	11.0	@
Apr	68.8	46.6	57.7	89+	1987	21	63.5	1981	21	1982	10	51.0	1983	238	19	.0	.0	29.3	.0	2.5	.0
May	77.5	55.9	66.7	94+	1987	21	72.8	1987	32	1976	4	62.8	1981	79	132	.0	1.2	31.0	.0	@	.0
Jun	85.9	64.2	75.1	100+	1988	24	79.2	1971	42	1972	1	71.0	1974	2	304	.2	8.1	30.0	.0	.0	.0
Jul	89.5	68.4	79.0	105+	1999	30	82.7+	1993	48	1972	6	75.1	1984	0	432	.6	16.4	31.0	.0	.0	.0
Aug	88.4	66.1	77.3	103+	2000	29	81.8	1980	42	1986	29	72.7	1992	1	381	.4	13.2	31.0	.0	.0	.0
Sep	81.7	58.7	70.2	99+	1999	5	76.6	1998	29	1983	22	63.4	1994	37	192	.0	4.7	30.0	.0	.1	.0
Oct	71.1	46.9	59.0	92+	1999	6	65.9	1971	18	1981	24	53.5	1988	227	39	.0	.1	30.6	.0	2.2	.0
Nov	57.7	38.0	47.9	85	2000	1	54.6	1999	9+	1986	14	40.1	1976	515	1	.0	.0	22.3	.1	9.8	.0
Dec	46.5	28.9	37.7	74	1982	2	45.9	1971	-13	1989	22	25.8	1983	847	0	.0	.0	12.0	3.3	19.3	.4
Ann	68.0	47.1	57.6	105+	Jul 1999	30	82.7+	Jul 1993	-21	Jan 1984	21	20.5	Jan 1977	4183	1501	1.2	43.7	294.2	13.1	84.7	2.0

+ 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

010-A

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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	3.51	3.53	5.22	1949	25	6.78	1982	.95	1984	9.6	6.1	2.3	1.0	1.23	1.56	2.04	2.45	2.83	3.23	3.67	4.17	4.82	5.82	6.73
Feb	3.91	3.53	5.32	1989	14	13.21	1989	.97	1978	9.0	6.2	2.5	1.1	1.00	1.37	1.94	2.44	2.93	3.45	4.03	4.72	5.62	7.04	8.37
Mar	4.42	3.88	3.60	1997	2	10.08	1997	1.58	1971	11.6	8.0	2.7	1.2	1.81	2.21	2.78	3.25	3.69	4.14	4.63	5.19	5.90	6.98	7.96
Apr	4.70	4.36	5.20	1983	30	11.75	1983	1.49	1986	10.8	7.4	3.3	1.3	1.48	1.93	2.59	3.16	3.70	4.27	4.89	5.62	6.57	8.03	9.39
May	4.76	4.10	3.66	1983	3	9.86	1983	1.84	1992	10.9	7.8	3.2	1.3	1.48	1.93	2.60	3.18	3.74	4.32	4.96	5.70	6.67	8.17	9.56
Jun	4.03	3.77	4.23	1979	8	9.66	1998	.35	1988	9.5	6.5	2.8	1.1	1.09	1.47	2.05	2.56	3.06	3.59	4.17	4.85	5.75	7.15	8.46
Jul	4.28	4.01	3.76	1958	16	8.96	1972	1.25	1974	8.2	5.7	2.8	1.5	1.58	1.99	2.56	3.04	3.50	3.97	4.48	5.07	5.82	6.98	8.05
Aug	3.00	2.26	2.83	1958	24	7.30	1985	.51	1999	7.0	5.0	2.1	.6	.58	.85	1.29	1.69	2.10	2.55	3.05	3.65	4.45	5.74	6.96
Sep	3.27	3.47	4.30	1965	12	6.82	1996	.04	1998	7.4	5.2	2.4	1.1	.38	.63	1.09	1.54	2.03	2.57	3.20	3.99	5.06	6.82	8.53
Oct	3.23	2.90	3.50	1998	7	7.59	1985	1.01	1982	7.7	5.3	2.3	.8	1.10	1.40	1.85	2.23	2.59	2.97	3.37	3.85	4.46	5.41	6.28
Nov	4.45	4.02	3.40	1996	8	10.53	1973	1.04	1976	9.6	6.7	3.4	1.4	1.23	1.65	2.29	2.85	3.40	3.97	4.60	5.36	6.33	7.86	9.29
Dec	4.37	3.70	3.50	2001	17	10.09	1982	.69	1976	10.0	6.9	3.3	1.2	1.16	1.57	2.20	2.76	3.31	3.88	4.52	5.28	6.27	7.82	9.27
Ann	47.93	46.77	5.32	Feb 1989	14	13.21	Feb 1989	.04	Sep 1998	111.3	76.8	33.1	13.6	34.73	37.30	40.59	43.08	45.28	47.41	49.61	52.03	54.96	59.20	62.87

+ 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

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**Elevation: 330 Feet**

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**Lon: 88°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	2.8	.0	1	#	8.0	1978	17	19.6	1978	15	1978	20	6	1978	1.4	.9	.4	.1	.0	3.6	1.6	.9	.2
Feb	2.3	.0	#	#	5.5	1985	12	13.0	1993	7	1985	12	3	1985	1.2	1.1	.3	.1	.0	4.2	1.9	.6	.0
Mar	.9	.0	#	0	10.0	1994	9	10.0	1994	10	1994	9	1	1994	.3	.2	.1	@	@	.5	.3	.1	@
Apr	#	.0	#	0	#	1983	17	#+	1983	#	1971	6	#	1971	.0	.0	.0	.0	.0	.0	.0	.0	.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	.0	.0	#	0	1.0	1971	24	1.0	1971	#+	1979	28	#+	1979	@	@	.0	.0	.0	.0	.0	.0	.0
Dec	.8	.0	#	#	6.5	1984	6	7.0	1984	7	1984	6	2	2000	.6	.4	@	@	.0	1.1	.2	.1	.0
Ann	6.8	.0	N/A	N/A	10.0	Mar 1994	9	19.6	Jan 1978	15	Jan 1978	20	6	Jan 1978	3.5	2.6	.8	.2	@	9.4	4.0	1.7	.2

+ 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	5/04	4/28	4/24	4/21	4/18	4/15	4/12	4/08	4/02
32	4/23	4/19	4/16	4/13	4/11	4/08	4/06	4/03	3/29
28	4/15	4/10	4/06	4/03	3/30	3/27	3/24	3/20	3/15
24	4/05	3/29	3/25	3/21	3/17	3/13	3/09	3/05	2/26
20	3/17	3/11	3/07	3/03	2/27	2/23	2/20	2/15	2/09
16	3/11	3/03	2/26	2/21	2/17	2/12	2/08	2/02	1/26
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	9/28	10/02	10/05	10/08	10/10	10/12	10/15	10/18	10/22
32	10/03	10/09	10/13	10/17	10/20	10/23	10/27	10/31	11/06
28	10/20	10/26	10/30	11/02	11/05	11/09	11/12	11/16	11/22
24	10/30	11/04	11/08	11/12	11/15	11/18	11/21	11/25	12/01
20	11/07	11/14	11/19	11/24	11/28	12/02	12/06	12/11	12/18
16	11/20	11/28	12/03	12/07	12/11	12/15	12/20	12/25	1/01
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	193	187	182	178	174	171	167	162	156
32	213	205	200	196	192	187	183	178	171
28	239	232	227	223	219	215	211	206	199
24	267	258	252	247	242	237	232	226	218
20	298	289	283	278	273	268	263	257	248
16	326	316	308	302	297	291	285	278	268

\* 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	971	737	529	238	79	2	0	1	37	227	515	847	4183
60	816	602	385	129	29	0	0	0	11	127	375	694	3168
57	732	524	305	80	14	0	0	0	4	82	296	609	2646
55	673	472	257	55	8	0	0	0	2	59	248	551	2325
50	531	351	157	17	1	0	0	0	0	20	148	413	1638
32	158	69	8	0	0	0	0	0	0	0	5	87	327

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	209	256	504	771	1077	1292	1455	1403	1145	836	481	263	9692
55	12	15	40	136	371	602	742	690	457	181	34	14	3294
57	9	11	26	101	315	542	680	628	399	143	22	10	2886
60	0	5	13	60	238	452	587	535	316	94	11	2	2313
65	0	0	1	19	132	304	432	381	192	39	1	0	1501
70	0	0	0	3	59	167	277	235	98	12	0	0	851

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	61	121	291	540	836	1057	1217	1163	913	598	277	99	61	182	473	1013	1849	2906	4123	5286	6199	6797	7074	7173
45	28	61	186	396	681	907	1062	1008	763	444	173	51	28	89	275	671	1352	2259	3321	4329	5092	5536	5709	5760
50	5	26	105	264	526	757	907	853	613	304	95	24	5	31	136	400	926	1683	2590	3443	4056	4360	4455	4479
55	0	4	48	154	374	607	752	698	465	187	49	4	0	4	52	206	580	1187	1939	2637	3102	3289	3338	3342
60	0	0	17	74	237	457	597	543	326	95	16	0	0	0	17	91	328	785	1382	1925	2251	2346	2362	2362
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	31	69	168	330	542	727	839	800	608	375	163	50	31	100	268	598	1140	1867	2706	3506	4114	4489	4652	4702

(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:  
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## 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 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.

- |   |   |
|---|---|
| <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)