

# Climatography of the United States

No. 20

1971-2000

Station: DE KALB, IL

COOP ID: 112223

Climate Division: IL 2

NWS Call Sign:

Elevation: 873 Feet

Lat: 41° 56N

Lon: 88° 47W

## 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	26.7	10.3	18.5	63	1967	24	29.9	1990	-27	1985	20	5.7	1977	1441	0	.0	.0	.7	20.0	30.1	7.3
Feb	32.3	15.5	23.9	69	2000	26	36.6	1998	-23	1996	3	12.5	1979	1152	0	.0	.0	2.5	13.2	25.5	3.9
Mar	44.5	26.2	35.4	84	1986	30	43.1	2000	-6	1978	5	28.4	1984	919	0	.0	.0	10.6	4.3	22.6	.2
Apr	58.1	36.8	47.5	92	1986	26	54.5	1977	8	1982	7	42.4	1975	528	2	.0	.1	23.4	.2	8.9	.0
May	70.4	48.1	59.3	95	1985	26	66.7	1977	24	1989	7	53.3	1997	230	52	.0	.7	30.5	.0	.9	.0
Jun	80.3	58.4	69.4	101	1988	26	73.3	1971	34	1993	1	64.4	1982	29	159	.1	3.8	30.0	.0	.0	.0
Jul	83.6	62.6	73.1	102	1995	14	77.1	1983	43	1967	6	69.2	1992	5	256	.1	5.9	31.0	.0	.0	.0
Aug	81.3	60.5	70.9	103	1988	17	77.8	1995	39	1986	28	65.3	1992	29	212	.1	3.8	31.0	.0	.0	.0
Sep	74.3	51.4	62.9	94+	1990	6	68.7	1978	27	1991	27	58.0	1993	116	51	.0	1.3	30.0	.0	.5	.0
Oct	62.5	39.9	51.2	89	1976	2	57.4	1971	13	1988	30	44.4	1987	432	4	.0	.0	27.7	.0	6.3	.0
Nov	45.4	28.2	36.8	76+	2000	2	44.4	1999	-8	1976	29	28.7	1976	845	0	.0	.0	11.8	3.2	18.7	.1
Dec	32.3	16.9	24.6	66	1970	3	34.0	1982	-22	1983	24	12.8	2000	1253	0	.0	.0	2.1	13.3	28.6	3.8
Ann	57.6	37.9	47.8	103	Aug 1988	17	77.8	Aug 1995	-27	Jan 1985	20	5.7	Jan 1977	6979	736	.3	15.6	231.3	54.2	142.1	15.3

+ 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: 1966-2001

(3) Derived from 1971-2000 serially complete daily data

022-A

# 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: DE KALB, IL**

**COOP ID: 112223**

**Climate Division: IL 2**

**NWS Call Sign:**

**Elevation: 873 Feet**

**Lat: 41°56N**

**Lon: 88°47W**

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	1.54	1.28	1.47	1979	13	4.08	1974	.08	1981	9.9	4.4	.6	.2	.30	.44	.67	.87	1.08	1.31	1.56	1.87	2.28	2.93	3.55
Feb	1.40	1.42	2.60	1997	21	4.90	1997	.06	1987	7.7	3.4	.8	.1	.25	.38	.58	.77	.97	1.18	1.41	1.70	2.09	2.71	3.30
Mar	2.46	2.07	1.58+	1992	7	6.37	1976	.61	1981	10.6	5.9	1.4	.4	.70	.93	1.28	1.59	1.89	2.20	2.55	2.96	3.49	4.32	5.10
Apr	3.52	3.57	2.08	1988	6	6.50	1973	.88	1989	11.7	7.3	2.3	.7	1.32	1.65	2.12	2.51	2.89	3.27	3.68	4.16	4.77	5.71	6.57
May	4.21	4.08	2.59+	1996	29	9.47	1996	.86	1992	11.5	7.7	2.8	1.1	1.38	1.78	2.37	2.87	3.35	3.85	4.39	5.03	5.84	7.11	8.28
Jun	4.49	4.27	3.06	1970	2	9.87	1993	.33	1988	10.3	7.4	3.3	1.1	.97	1.38	2.04	2.64	3.24	3.88	4.59	5.46	6.59	8.40	10.12
Jul	4.22	3.48	8.09	1996	18	11.40	1996	1.10	1976	9.9	6.0	2.1	1.3	.99	1.38	2.00	2.55	3.10	3.69	4.34	5.11	6.13	7.75	9.28
Aug	4.48	3.68	5.71	1987	14	14.23	1987	1.25	1984	10.1	6.6	2.8	1.2	1.15	1.57	2.22	2.80	3.36	3.96	4.63	5.41	6.44	8.07	9.59
Sep	3.51	3.06	3.47	1999	28	9.33	1978	.04	1979	9.1	5.8	2.4	.9	.51	.80	1.30	1.79	2.30	2.86	3.50	4.29	5.36	7.09	8.76
Oct	2.60	2.25	2.98	1969	11	5.93	1985	.61	1992	9.4	5.6	1.7	.4	.66	.91	1.29	1.62	1.95	2.29	2.68	3.14	3.73	4.68	5.56
Nov	2.82	2.68	2.20	1995	11	7.02	1985	.34	1999	9.9	5.7	2.0	.5	.64	.90	1.32	1.69	2.06	2.45	2.90	3.42	4.12	5.22	6.26
Dec	2.13	1.99	1.88	1982	2	4.97	1982	.35	1976	10.1	5.1	1.2	.4	.52	.72	1.03	1.30	1.58	1.87	2.19	2.57	3.08	3.88	4.62
Ann	37.38	36.81	8.09	Jul 1996	18	14.23	Aug 1987	.04	Sep 1979	120.2	70.9	23.4	8.3	27.77	29.66	32.07	33.88	35.49	37.03	38.62	40.37	42.48	45.53	48.15

+ 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: 1966-2001

(3) Derived from 1971-2000 serially complete daily data

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**Climate Division: IL 2**

**NWS Call Sign:**

**Elevation: 873 Feet**

**Lat: 41°56N**

**Lon: 88°47W**

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	10.6	10.3	4	3	15.6	1979	13	29.6	1979	29	1979	24	23	1979	7.6	3.6	.7	.3	@	21.1	14.9	8.5	1.3
Feb	7.1	6.6	4	3	8.0	2000	19	26.4	1994	27	1979	15	22	1979	4.6	2.5	.9	.2	.0	13.8	9.8	6.1	1.6
Mar	4.8	3.2	1	#	8.0	1972	29	23.5	1972	15	1979	1	5	1979	3.1	1.5	.5	.2	.0	4.2	1.9	.6	@
Apr	1.2	.0	#	0	5.9	1975	2	8.8	1975	11	1975	3	1	1982	.6	.4	.1	.1	.0	.6	.3	.1	.0
May	#	.0	0	0	#	1997	16	#+	1997	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	.1	.0	#	0	1.8	1989	20	1.8	1989	1	1989	20	#+	1997	.1	.1	.0	.0	.0	@	.0	.0	.0
Nov	2.2	1.4	#	#	4.0	1975	27	6.8	1997	5	1997	16	1	1997	2.1	.8	.2	.0	.0	2.1	.5	.1	.0
Dec	9.6	8.3	2	1	10.6	1987	15	34.5	1978	17	2000	31	10	2000	5.9	2.8	1.0	.4	@	12.7	7.3	4.1	1.0
Ann	35.6	29.8	N/A	N/A	15.6	Jan 1979	13	34.5	Dec 1978	29	Jan 1979	24	23	Jan 1979	24.0	11.7	3.4	1.2	@	54.5	34.7	19.5	3.9

+ 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

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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	5/27	5/21	5/17	5/14	5/11	5/08	5/05	5/01	4/25
32	5/15	5/09	5/05	5/02	4/28	4/25	4/21	4/17	4/11
28	5/01	4/26	4/22	4/19	4/16	4/13	4/10	4/07	4/02
24	4/21	4/16	4/13	4/10	4/07	4/04	4/01	3/28	3/24
20	4/08	4/03	3/30	3/27	3/24	3/21	3/18	3/15	3/09
16	4/01	3/26	3/22	3/18	3/15	3/12	3/08	3/04	2/26
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	9/18	9/22	9/25	9/28	9/30	10/03	10/06	10/09	10/13
32	9/25	9/29	10/03	10/06	10/08	10/11	10/14	10/17	10/22
28	10/02	10/09	10/14	10/18	10/21	10/25	10/29	11/03	11/10
24	10/18	10/24	10/27	10/31	11/03	11/06	11/09	11/12	11/18
20	10/27	11/01	11/04	11/07	11/10	11/13	11/16	11/20	11/25
16	11/04	11/10	11/15	11/18	11/22	11/25	11/29	12/03	12/10
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	165	157	151	146	142	137	132	126	118
32	187	178	172	167	162	158	152	146	138
28	214	205	198	193	187	182	177	170	161
24	231	223	218	213	209	205	200	195	187
20	254	246	240	235	230	226	221	215	207
16	276	267	261	256	251	246	241	235	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:  
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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	1441	1152	919	528	230	29	5	29	116	432	845	1253	6979
60	1286	1012	764	385	135	7	0	7	43	292	695	1098	5724
57	1193	928	671	306	92	2	0	2	20	219	606	1005	5044
55	1131	872	609	257	69	1	0	0	10	176	548	943	4616
50	976	734	463	152	28	0	0	0	1	92	410	794	3650
32	463	301	90	3	0	0	0	0	0	1	74	324	1256

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	45	73	194	467	845	1120	1274	1206	926	596	219	94	7059
55	0	0	1	31	201	431	561	493	245	58	3	0	2024
57	0	0	0	20	163	372	499	433	195	39	1	0	1722
60	0	0	0	9	113	287	406	345	129	19	0	0	1308
65	0	0	0	2	52	159	256	212	51	4	0	0	736
70	0	0	0	0	19	66	125	112	13	0	0	0	335

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	14	86	289	633	899	1049	981	722	391	99	13	0	14	100	389	1022	1921	2970	3951	4673	5064	5163	5176
45	0	1	45	180	481	749	894	826	573	263	50	5	0	1	46	226	707	1456	2350	3176	3749	4012	4062	4067
50	0	0	25	101	336	599	739	671	428	156	19	0	0	0	25	126	462	1061	1800	2471	2899	3055	3074	3074
55	0	0	7	51	212	450	584	516	292	82	5	0	0	0	7	58	270	720	1304	1820	2112	2194	2199	2199
60	0	0	1	21	118	308	429	363	173	33	0	0	0	0	1	22	140	448	877	1240	1413	1446	1446	1446
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	5	56	180	388	593	716	656	456	234	55	5	0	5	61	241	629	1222	1938	2594	3050	3284	3339	3344

(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 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/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)