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: LACON 1 N, IL **COOP ID: 114805**

Climate Division: IL 4 **NWS Call Sign:** **Elevation: 460 Feet** **Lat: 41˚02N** **Lon: 89˚24W**

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	32.0	15.2	23.6	70	1989	31	34.7	1989	-27	1999	5	9.8	1977	1284	0	.0	.0	1.9	15.0	28.6	5.8
Feb	38.0	20.5	29.3	73	1976	27	39.7	1998	-21	1979	5	16.7	1979	1000	0	.0	.0	5.1	9.6	23.5	2.9
Mar	50.6	30.5	40.6	81+	1985	28	47.4	2000	-8	1962	1	31.9	1984	758	0	.0	.0	15.7	2.2	18.7	.1
Apr	64.1	40.6	52.4	93	1952	29	59.1	1985	11	1982	7	47.0	1982	388	9	.0	.1	26.4	@	6.4	.0
May	75.2	50.9	63.1	95	1952	1	69.9	1977	22	1966	10	58.4	1997	152	90	.0	1.0	31.0	.0	.4	.0
Jun	83.9	60.1	72.0	102	1988	25	76.5	1971	36+	1993	1	67.1	1982	11	221	.1	6.1	30.0	.0	.0	.0
Jul	87.2	64.3	75.8	103+	1983	22	80.6	1983	44	1971	30	70.4	1971	2	334	.6	10.7	31.0	.0	.0	.0
Aug	85.4	62.4	73.9	102+	1988	16	80.2	1995	38	1986	28	68.7	1992	12	287	.4	7.4	31.0	.0	.0	.0
Sep	78.6	54.3	66.5	99	1978	8	72.3	1978	28+	1984	30	62.0	1993	65	107	.0	2.6	30.0	.0	.2	.0
Oct	66.5	43.1	54.8	90+	1976	2	61.2	1971	16	1952	29	48.8	1988	328	12	.0	@	29.4	.0	4.5	.0
Nov	50.3	32.3	41.3	82	1950	1	47.8	1999	-3	1977	26	33.4	1976	711	0	.0	.0	15.3	1.4	16.4	.1
Dec	36.8	20.9	28.9	71	1970	3	37.8	1982	-24	1989	23	16.6+	1989	1120	0	.0	.0	4.0	9.3	26.8	2.7
Ann	62.4	41.3	51.9	103+	Jul 1983	22	80.6	Jul 1983	-27	Jan 1999	5	9.8	Jan 1977	5831	1060	1.1	27.9	250.8	37.5	125.5	11.6

\+ 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: 1950-2001

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

Issue Date: February 2004

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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	1.55	1.24	2.50	2001	29	4.07	1999	.20	1981
Feb	1.61	1.32	3.52	1997	21	6.25	1997	.14	1987
Mar	3.08	2.83	3.12	1985	4	6.68	1985	1.06	1981
Apr	3.84	4.08	2.65	1983	2	7.51	1983	.99	1985
May	4.20	4.23	2.35	1996	27	10.14	1995	.39	1992
Jun	4.14	3.48	4.18	1964	20	10.10	1990	.78	1988
Jul	4.12	3.90	5.47	1977	16	12.47	1992	.32	1988
Aug	3.53	3.05	3.25	1980	31	8.82	1981	.79	1974
Sep	3.49	3.06	4.88	1989	6	9.73	1989	.00	1979
Oct	2.99	2.51	4.65	1986	3	8.81	1991	.50	1992
Nov	3.03	2.62	2.77	1985	18	9.96	1985	.21	1999
Dec	2.32	2.18	2.13	1999	5	6.12	1971	.34	1976
Ann	37.90	38.57	5.47	Jul 1977	16	12.47	Jul 1992	.00	Sep 1979

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	9.1	4.3	.7	.3
Feb	7.6	3.7	.9	.2
Mar	10.8	6.5	1.8	.6
Apr	11.2	7.2	2.4	.9
May	12.2	7.5	2.9	1.2
Jun	9.9	6.7	2.7	1.1
Jul	9.6	6.4	2.3	1.1
Aug	8.9	6.0	2.5	.9
Sep	8.6	5.2	2.4	.9
Oct	9.1	5.6	2.1	.6
Nov	10.3	6.1	2.0	.7
Dec	9.7	5.1	1.3	.5
Ann	117.0	70.3	24.0	9.0

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	.33	.47	.70	.91	1.11	1.33	1.58	1.88	2.27	2.90	3.49
Feb	.29	.44	.67	.89	1.11	1.35	1.63	1.96	2.40	3.11	3.79
Mar	.82	1.11	1.56	1.95	2.33	2.74	3.19	3.72	4.41	5.50	6.52
Apr	1.30	1.67	2.20	2.65	3.08	3.52	4.01	4.57	5.30	6.43	7.46
May	1.02	1.41	2.03	2.57	3.11	3.68	4.32	5.08	6.08	7.65	9.13
Jun	1.13	1.52	2.12	2.64	3.16	3.69	4.29	4.99	5.91	7.35	8.69
Jul	.75	1.12	1.72	2.28	2.85	3.47	4.17	5.02	6.14	7.96	9.69
Aug	.70	1.02	1.54	2.01	2.49	3.01	3.60	4.30	5.23	6.73	8.15
Sep	.64	1.13	1.71	2.19	2.66	3.13	3.66	4.28	5.08	6.34	7.52
Oct	.74	1.02	1.45	1.84	2.22	2.63	3.08	3.62	4.32	5.43	6.47
Nov	.66	.94	1.38	1.78	2.18	2.61	3.10	3.68	4.44	5.66	6.81
Dec	.59	.81	1.14	1.44	1.74	2.05	2.40	2.81	3.35	4.20	5.00
Ann	29.20	30.93	33.13	34.78	36.23	37.62	39.05	40.61	42.50	45.21	47.53

\+ 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: 1950-2001
(3) Derived from 1971-2000 serially complete daily data

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Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	7.6	6.4	2	1
Feb	4.6	3.2	2	1
Mar	2.7	1.2	#	#
Apr	.7	.0	#	0
May	#	.0	0	0
Jun	.0	.0	0	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	.0	.0	0	0
Oct	.1	.0	#	0
Nov	1.8	.8	#	#
Dec	5.9	5.2	1	1
Ann	23.4	16.8	N/A	N/A

Extremes (2)

Month	Highest Daily Snow Fall	Year	Day	Highest Monthly Snow Fall	Year	Highest Daily Snow Depth	Year	Day	Highest Monthly Mean Snow Depth	Year
Jan	12.0	1999	2	21.3	1979	20	1979	31	14	1979
Feb	6.0	1990	23	13.3	1989	20	1979	2	16	1979
Mar	11.0	1991	13	11.3	1991	11	1991	13	2	1978
Apr	8.0	1997	11	9.2	1997	5+	1997	11	1	1982
May	#	1989	7	#	1989	0	0	0	0	0
Jun	.0	0	0	.0	0	0	0	0	0	0
Jul	.0	0	0	.0	0	0	0	0	0	0
Aug	.0	0	0	.0	0	0	0	0	0	0
Sep	.0	0	0	.0	0	0	0	0	0	0
Oct	1.0	1972	18	1.0	1972	#+	1997	26	#+	1997
Nov	6.0	1975	27	12.0	1974	6	1975	27	1	1975
Dec	9.0	1973	19	16.8	1973	14	2000	31	9	2000
Ann	12.0	Jan 1999	2	21.3	Jan 1979	20+	Feb 1979	2	16	Feb 1979

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	5.3	2.6	.7	.2	@
Feb	3.5	1.8	.5	.1	.0
Mar	1.7	.9	.3	.1	@
Apr	.3	.2	.1	.1	.0
May	.0	.0	.0	.0	.0
Jun	.0	.0	.0	.0	.0
Jul	.0	.0	.0	.0	.0
Aug	.0	.0	.0	.0	.0
Sep	.0	.0	.0	.0	.0
Oct	.1	@	.0	.0	.0
Nov	1.2	.6	.2	.1	.0
Dec	4.1	1.9	.9	.2	.0
Ann	16.2	8.0	2.7	.8	@

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	13.3	6.4	1.9	.0
Feb	9.4	5.3	2.4	.0
Mar	2.5	1.1	.4	@
Apr	.4	.2	.1	.0
May	.0	.0	.0	.0
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.0	.0	.0	.0
Oct	.0	.0	.0	.0
Nov	1.1	.4	.1	.0
Dec	7.7	4.3	2.0	.6
Ann	34.4	17.7	6.9	.6

+ 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	5/30	5/23	5/18	5/13	5/09	5/05	4/30	4/25	4/18
32	5/08	5/03	4/29	4/26	4/23	4/20	4/17	4/13	4/08
28	4/27	4/22	4/18	4/15	4/12	4/09	4/06	4/02	3/28
24	4/17	4/11	4/07	4/04	3/31	3/28	3/24	3/20	3/14
20	4/09	4/04	3/30	3/27	3/23	3/20	3/16	3/12	3/06
16	3/28	3/21	3/16	3/12	3/08	3/04	2/28	2/23	2/16

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	9/21	9/25	9/27	9/29	10/01	10/03	10/05	10/08	10/11
32	9/25	10/01	10/05	10/08	10/12	10/15	10/18	10/22	10/28
28	10/03	10/09	10/14	10/17	10/21	10/25	10/29	11/02	11/09
24	10/18	10/23	10/27	10/30	11/02	11/05	11/09	11/13	11/18
20	10/28	11/03	11/07	11/10	11/13	11/17	11/20	11/24	11/30
16	11/08	11/14	11/19	11/22	11/26	11/29	12/03	12/07	12/13

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	169	160	154	149	144	140	134	128	120
32	192	185	180	175	171	167	163	157	150
28	217	208	202	197	192	187	181	175	166
24	239	231	225	220	215	211	206	200	192
20	258	250	244	239	234	229	224	218	210
16	288	279	273	267	262	257	252	245	236

***** 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

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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	1284	1000	758	388	152	11	2	12	65	328	711	1120	5831
60	1129	860	605	260	78	2	0	1	20	204	561	965	4685
57	1036	776	520	194	48	0	0	0	7	143	475	872	4071
55	974	724	462	156	33	0	0	0	4	109	420	814	3696
50	829	594	329	80	11	0	0	0	0	49	290	670	2852
32	353	213	49	0	0	0	0	0	0	0	32	243	890

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	92	137	314	611	961	1200	1355	1298	1032	707	312	146	8165
55	0	5	14	77	281	510	642	585	346	103	10	4	2577
57	0	0	9	55	234	451	580	523	290	74	4	0	2220
60	0	0	2	31	171	362	487	431	212	42	1	0	1739
65	0	0	0	9	90	221	334	287	107	12	0	0	1060
70	0	0	0	2	37	107	193	164	41	2	0	0	546

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	9	36	148	390	722	966	1116	1058	801	470	151	28	9	45	193	583	1305	2271	3387	4445	5246	5716	5867	5895
45	0	12	82	265	567	816	961	903	651	332	82	10	0	12	94	359	926	1742	2703	3606	4257	4589	4671	4681
50	0	4	39	158	416	666	806	748	503	204	38	4	0	4	43	201	617	1283	2089	2837	3340	3544	3582	3586
55	0	0	20	88	278	516	651	593	359	115	14	0	0	0	20	108	386	902	1553	2146	2505	2620	2634	2634
60	0	0	5	37	160	369	496	439	234	51	4	0	0	0	5	42	202	571	1067	1506	1740	1791	1795	1795
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	1	18	94	243	456	647	761	715	517	291	85	9	1	19	113	356	812	1459	2220	2935	3452	3743	3828	3837

(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.
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