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: FLORA 5 NW, IL **COOP ID: 113109**

Climate Division: IL 7 **NWS Call Sign:** **Elevation: 500 Feet** **Lat: 38˚43N** **Lon: 88˚35W**

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	38.1	20.7	29.4	75	1943	24	41.1	1990	-25	1904	27	13.7	1977	1103	0	.0	.0	5.8	10.2	25.6	2.5
Feb	44.2	25.1	34.7	79	1972	29	43.2	2000	-25	1982	10	19.6	1978	850	0	.0	.0	9.9	5.8	20.1	1.5
Mar	55.4	34.3	44.9	89	1929	24	51.4	1973	-14	1978	5	36.9	1978	626	0	.0	.0	21.2	.9	14.5	.1
Apr	66.8	43.3	55.1	97	1989	26	61.0	1981	18	1990	7	49.4	1982	309	10	.0	.1	28.4	.0	4.4	.0
May	76.4	52.8	64.6	96+	1914	27	71.4	1987	29+	1976	4	59.8	1976	121	108	.0	1.1	31.0	.0	.4	.0
Jun	85.0	61.5	73.3	105+	1954	26	77.1	1971	38	1992	22	68.5	1982	8	256	.2	8.3	30.0	.0	.0	.0
Jul	88.6	65.4	77.0	111+	1936	15	81.3	1980	44	1988	2	73.6	1971	0	372	.7	14.5	31.0	.0	.0	.0
Aug	86.9	63.2	75.1	109	1930	9	80.8	1983	39+	1986	30	71.1	1992	5	317	.5	10.8	31.0	.0	.0	.0
Sep	80.3	55.6	68.0	108	1953	1	73.1	1998	27	1942	28	62.9	1974	48	137	.1	4.3	30.0	.0	.2	.0
Oct	69.3	44.8	57.1	97	1910	2	63.4	1971	6	1946	19	50.7	1988	272	24	.0	.1	30.3	.0	4.6	.0
Nov	54.7	35.3	45.0	86	1950	1	51.4	1999	-2	1929	30	36.5	1976	600	0	.0	.0	19.1	.4	12.6	.0
Dec	42.5	25.4	34.0	73+	1998	6	41.5	1982	-21	1989	22	21.1	1989	964	0	.0	.0	8.7	5.6	22.6	1.4
Ann	65.7	44.0	54.9	111+	Jul 1936	15	81.3	Jul 1980	-25+	Feb 1982	10	13.7	Jan 1977	4906	1224	1.5	39.2	276.4	22.9	105.0	5.5

\+ 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: 1901-2001

(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	2.74	2.15	3.12	1917	5	9.15	1999	.00	1986
Feb	2.49	2.22	2.45	1945	26	4.82	1971	.41	1996
Mar	4.02	3.79	11.00	1931	7	9.19	1973	1.08	1994
Apr	4.14	3.75	4.51	1944	22	9.86	1994	1.01	1976
May	4.31	3.78	5.30	1961	7	12.03	1995	.93	1994
Jun	4.34	4.51	5.10	1964	18	8.84	2000	1.08	1992
Jul	3.88	3.17	5.33	1912	4	11.99	1979	.31	1983
Aug	3.34	2.35	4.12	1915	20	9.92	1985	.32	1971
Sep	3.20	2.81	3.55	1931	1	8.90	1993	.39	1995
Oct	3.03	2.51	3.80	1919	26	9.93	1983	.75	1971
Nov	4.09	3.85	4.94	1993	14	13.07	1985	.24	1999
Dec	3.36	2.53	3.46	1982	3	9.03	1982	.53	1976
Ann	42.94	41.01	11.00	Mar 1931	7	13.07	Nov 1985	.00	Jan 1986

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	8.1	5.3	2.0	.5
Feb	6.5	4.9	1.8	.6
Mar	9.2	7.7	2.9	.9
Apr	10.3	8.1	3.0	.9
May	9.8	7.6	3.0	1.1
Jun	9.2	7.1	2.9	1.2
Jul	7.4	6.0	2.8	1.0
Aug	7.1	5.3	2.4	1.1
Sep	6.9	5.3	2.1	.9
Oct	7.6	5.3	2.1	.8
Nov	8.9	6.5	2.9	1.3
Dec	8.3	6.3	2.6	.8
Ann	99.3	75.4	30.5	11.1

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	.34	.68	1.14	1.53	1.93	2.35	2.82	3.38	4.12	5.31	6.43
Feb	.69	.92	1.28	1.60	1.90	2.22	2.58	3.00	3.55	4.41	5.21
Mar	1.37	1.75	2.31	2.78	3.23	3.69	4.20	4.79	5.55	6.72	7.80
Apr	1.23	1.62	2.21	2.72	3.22	3.74	4.30	4.97	5.84	7.19	8.45
May	1.06	1.46	2.09	2.65	3.21	3.79	4.44	5.22	6.24	7.85	9.35
Jun	1.04	1.44	2.08	2.64	3.20	3.80	4.46	5.26	6.29	7.94	9.49
Jul	.73	1.07	1.64	2.17	2.71	3.28	3.94	4.73	5.79	7.48	9.09
Aug	.67	.97	1.46	1.91	2.37	2.85	3.40	4.07	4.95	6.36	7.69
Sep	.55	.83	1.30	1.74	2.19	2.67	3.23	3.90	4.80	6.24	7.63
Oct	.92	1.21	1.64	2.01	2.37	2.74	3.15	3.63	4.25	5.22	6.12
Nov	.85	1.22	1.82	2.37	2.92	3.51	4.17	4.97	6.03	7.72	9.32
Dec	.77	1.08	1.58	2.02	2.46	2.93	3.45	4.08	4.90	6.21	7.44
Ann	29.69	32.23	35.50	37.99	40.21	42.36	44.59	47.06	50.07	54.44	58.23

\+ 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: 1901-2001
(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	3.2	1.2	1	#
Feb	2.3	.9	1	#
Mar	1.5	.3	#	#
Apr	.3	.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	.0	.0	0	0
Nov	.8	.0	#	0
Dec	1.9	.0	1	#
Ann	10.0	2.4	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	6.0	1978	16	13.7	1978	10	1978	22	6	1977
Feb	6.3	1993	25	12.4	1993	18	1982	10	8	1982
Mar	7.0	2000	11	7.2	1975	8	1978	4	2	1978
Apr	6.0	1971	6	6.0	1971	4	1971	6	#+	1997
May	#	1989	6	#	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	.2	1993	31	.2	1993	0	0	0	0	0
Nov	4.2	1984	18	4.2	1984	6	1980	27	#+	1997
Dec	6.1	1990	27	9.4	1996	12	1973	21	5	2000
Ann	7.0	Mar 2000	11	13.7	Jan 1978	18	Feb 1982	10	8	Feb 1982

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	1.8	.9	.3	@	.0
Feb	1.0	.6	.3	.1	.0
Mar	.7	.3	.2	.1	.0
Apr	.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	@	.0	.0	.0	.0
Nov	.4	.3	.1	.0	.0
Dec	1.0	.5	.2	.2	.0
Ann	5.0	2.6	1.1	.4	.0

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	4.9	2.4	1.5	.2
Feb	2.4	1.7	.4	.0
Mar	.3	.2	.1	.0
Apr	@	@	.0	.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	.2	.1	.0	.0
Dec	1.0	.4	.2	.1
Ann	8.8	4.8	2.2	.3

+ 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	5/17	5/12	5/09	5/06	5/03	5/01	4/28	4/24	4/19
32	5/08	5/02	4/28	4/24	4/21	4/17	4/13	4/09	4/03
28	4/19	4/15	4/12	4/10	4/07	4/05	4/02	3/31	3/26
24	4/12	4/07	4/03	3/31	3/28	3/25	3/22	3/19	3/14
20	3/31	3/26	3/22	3/19	3/16	3/13	3/10	3/06	3/01
16	3/20	3/13	3/07	3/03	2/27	2/23	2/18	2/13	2/05

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	9/23	9/27	9/30	10/02	10/04	10/07	10/09	10/12	10/16
32	9/25	9/30	10/04	10/07	10/10	10/13	10/16	10/20	10/25
28	10/08	10/14	10/17	10/20	10/23	10/26	10/29	11/02	11/07
24	10/21	10/27	10/31	11/03	11/07	11/10	11/14	11/18	11/24
20	11/01	11/07	11/11	11/15	11/19	11/22	11/26	12/01	12/07
16	11/08	11/15	11/21	11/25	11/29	12/04	12/08	12/14	12/21

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	170	164	160	157	153	150	147	143	137
32	192	185	180	175	171	167	163	158	151
28	215	209	205	201	198	195	191	187	181
24	245	237	232	227	223	219	214	208	201
20	270	262	256	252	247	243	238	233	225
16	302	293	286	280	275	270	264	257	248

***** 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	1103	850	626	309	121	8	0	5	48	272	600	964	4906
60	948	715	478	186	56	1	0	0	13	160	454	809	3820
57	858	637	393	127	31	0	0	0	5	108	372	722	3253
55	803	585	338	94	20	0	0	0	2	80	319	665	2906
50	657	459	222	36	5	0	0	0	0	32	205	522	2138
32	241	136	19	0	0	0	0	0	0	0	13	150	559

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	161	210	417	692	1009	1238	1395	1335	1079	776	403	209	8924
55	10	14	23	95	316	548	682	622	391	143	20	11	2875
57	2	11	15	68	265	489	620	560	334	109	13	6	2492
60	0	5	8	38	197	400	527	467	252	68	4	0	1966
65	0	0	0	10	108	256	372	317	137	24	0	0	1224
70	0	0	0	2	47	133	221	183	58	6	0	0	650

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	40	86	233	471	778	1010	1161	1104	857	545	221	66	40	126	359	830	1608	2618	3779	4883	5740	6285	6506	6572
45	15	40	142	338	624	860	1006	949	707	398	138	32	15	55	197	535	1159	2019	3025	3974	4681	5079	5217	5249
50	4	15	80	216	471	710	851	794	557	266	77	11	4	19	99	315	786	1496	2347	3141	3698	3964	4041	4052
55	0	4	37	126	322	560	696	639	409	161	34	3	0	4	41	167	489	1049	1745	2384	2793	2954	2988	2991
60	0	0	15	65	194	411	541	484	277	82	11	0	0	0	15	80	274	685	1226	1710	1987	2069	2080	2080
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	24	54	146	296	501	684	792	747	564	349	131	36	24	78	224	520	1021	1705	2497	3244	3808	4157	4288	4324

(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