## 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: CHICAGO MIDWAY AP 3 SW, IL

**COOP ID: 111577** 

Climate Division: IL 2 NWS Call Sign: Elevation: 620 Feet Lat: 41°44N Lon: 87°47W

									ŗ	Гетр	eratui	re (°F)										
	Mea	<b>n</b> (1)						Extr	emes					U	Days (1) emp 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	30.7	16.2	23.5	67+	1989	31	34.7	1990	-25	1985	20	10.3	1977	1288	0	.0	.0	1.3	16.3	28.1	4.6	
Feb	36.1	21.3	28.7	75	1976	27	39.7	1998	-20	1933	9	17.0	1979	1017	0	.0	.0	3.5	10.9	23.0	1.9	
Mar	47.4	30.6	39.0	86	1986	29	46.0	2000	-7	1943	8	30.9	1984	805	0	.0	.0	11.2	3.4	18.5	@	
Apr	59.2	40.2	49.7	92	1942	30	55.1	1977	10	1982	7	44.0	1975	462	4	.0	.1	23.1	.1	5.5	.0	
May	71.3	50.9	61.1	102	1934	31	69.7	1977	28	1981	12	55.3	1997	203	82	.0	1.3	30.5	.0	.4	.0	
Jun	80.8	60.7	70.8	107	1934	1	75.9	1971	35	1945	4	64.4	1982	28	199	.2	4.6	30.0	.0	.0	.0	
Jul	84.7	66.3	75.5	106	1995	13	81.3	1999	46	1972	5	71.4	1992	4	330	.4	8.4	31.0	.0	.0	.0	
Aug	82.3	65.0	73.7	102	1991	2	80.9	1995	43	1965	29	69.7	1992	11	279	.2	5.0	31.0	.0	.0	.0	
Sep	75.1	56.7	65.9	101+	1953	2	70.4	1998	34+	1984	30	60.9	1993	67	95	.0	1.9	30.0	.0	.0	.0	
Oct	63.2	44.9	54.1	94	1963	6	61.7	1971	20+	1981	24	48.0	1987	352	12	.0	.1	28.5	.0	2.0	.0	
Nov	48.0	33.6	40.8	81	1950	1	47.7	1999	-3	1930	28	32.9	1976	726	0	.0	.0	12.8	1.8	13.9	@	
Dec	35.6	22.2	28.9	71	1970	3	37.1	1982	-20	1983	24	16.5	1983	1120	0	.0	.0	3.3	10.0	25.3	1.8	
Ann	59.5	42.4	51.0	107	Jun 1934	1	81.3	Jul 1999	-25	Jan 1985	20	10.3	Jan 1977	6083	1001	.8	21.4	236.2	42.5	116.7	8.3	

<sup>+</sup> Also occurred on an earlier date(s)

Complete documentation available from: www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

Issue Date: February 2004 019-A

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>(1)</sup> From the 1971-2000 Monthly Normals

<sup>(2)</sup> Derived from station's available digital record: 1928-2001

<sup>(3)</sup> Derived from 1971-2000 serially complete daily data

# 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

**COOP ID: 111577** 

Station: CHICAGO MIDWAY AP 3 SW, IL

Climate Division: IL 2 NWS Call Sign: Elevation: 620 Feet Lat: 41°44N Lon: 87°47W

										Pı	recipi	tation	(incl	nes)												
	Mea	ans/	P	recipi	itatio	on Total					lean N of D	ays (3	)	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												
	Medi	ans(1)				Extremes	,			"	any Fie	стрпано	11	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	1.95	1.62	2.76	1960	12	4.19	1993	.13	1981	11.2	5.0	.9	.3	.40	.58	.86	1.12	1.39	1.67	1.99	2.37	2.87	3.68	4.45		
Feb	1.78	1.35	3.25	1997	21	6.76	1997	.56	1996	9.0	4.6	.9	.1	.48	.65	.91	1.13	1.35	1.58	1.84	2.14	2.53	3.15	3.73		
Mar	2.83	2.85	2.50+	1948	19	5.37	1976	.61	1981	11.7	6.6	1.8	.4	.73	.99	1.40	1.77	2.12	2.50	2.92	3.41	4.06	5.09	6.04		
Apr	3.82	3.68	3.83	1975	18	7.84	1975	.45	1971	11.8	7.4	2.4	.9	1.22	1.58	2.12	2.57	3.02	3.47	3.97	4.56	5.32	6.50	7.59		
May	3.86	3.97	3.30	1966	11	6.99	1980	.25	1992	11.0	7.2	2.5	.8	.99	1.35	1.91	2.41	2.90	3.41	3.99	4.67	5.56	6.96	8.28		
Jun	4.16	3.78	4.64	1976	13	13.03	1993	1.09	1988	10.3	6.4	2.9	1.2	1.38	1.77	2.35	2.84	3.31	3.80	4.33	4.96	5.76	7.01	8.15		
Jul	3.82	3.88	6.16	1957	12	10.29	1996	1.36	1991	9.5	6.1	2.4	1.0	1.28	1.64	2.17	2.62	3.05	3.50	3.99	4.56	5.29	6.42	7.46		
Aug	3.91	3.38	3.90	1987	26	9.95	1987	.76	1996	9.6	6.3	2.7	1.2	.72	1.06	1.64	2.17	2.71	3.29	3.96	4.76	5.83	7.55	9.18		
Sep	3.45	2.91	4.16	2000	11	9.44	1977	.01	1979	8.9	5.5	2.1	.8	.35	.60	1.08	1.56	2.08	2.66	3.35	4.21	5.38	7.33	9.23		
Oct	2.79	2.47	3.95	1954	3	9.04	1991	.73	1992	9.7	5.6	1.8	.6	.78	1.04	1.44	1.79	2.13	2.49	2.89	3.35	3.96	4.91	5.80		
Nov	3.22	2.77	3.49	1995	10	7.63	1985	.55	1976	11.5	6.6	1.9	.6	.78	1.08	1.55	1.97	2.39	2.82	3.31	3.90	4.66	5.87	7.01		
Dec	2.76	2.52	2.78	1982	2	7.21	1982	.50	1989	11.3	5.3	1.7	.5	.68	.94	1.34	1.70	2.05	2.42	2.84	3.33	3.98	5.01	5.97		
Ann	38.35	38.02	6.16	Jul 1957	12	13.03	Jun 1993	.01	Sep 1979	125.5	72.6	24.0	8.4	29.59	31.34	33.54	35.20	36.65	38.05	39.48	41.05	42.94	45.66	47.99		

<sup>+</sup> Also occurred on an earlier date(s)

Complete documentation available from:

www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

<sup>#</sup> Denotes amounts of a trace

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>\*\*</sup> Statistics not computed because less than six years out of thirty had measurable precipitation

<sup>(1)</sup> From the 1971-2000 Monthly Normals

<sup>(2)</sup> Derived from station's available digital record: 1928-2001

<sup>(3)</sup> Derived from 1971-2000 serially complete daily data

## 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

**COOP ID: 111577** 

Station: CHICAGO MIDWAY AP 3 SW, IL

Climate Division: IL 2 NWS Call Sign: Elevation: 620 Feet Lat: 41°44N Lon: 87°47W

										Snov	w (incl	hes)														
						Sno	ow To	tals							Mean Number of Days (1)											
	Mean	s/Medi	ians (1)	)					Extre	mes (2)							ow Fa		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	12.9	11.8	3	2	17.6	1999	2	40.4	1979	29	1979	14	19	1979	8.8	4.0	1.0	.4	.1	19.0	12.1	6.8	1.7			
Feb	9.9	8.9	3	2	9.3	1978	6	26.2	1994	26+	1979	3	20	1979	6.3	2.9	1.0	.4	.0	13.9	9.5	6.8	2.1			
Mar	6.0	4.6	1	1	10.9	1998	9	17.1	1999	13	1999	9	2+	1999	4.5	1.9	.6	.2	@	4.9	2.8	1.7	.2			
Apr	1.4	.3	#	0	9.8	1982	5	12.2	1982	10+	1982	5	1+	1982	1.0	.3	.1	.1	.0	.6	.3	.3	.1			
May	.0	.0	#	0	.3	1989	6	.3	1989	0	0	0	#	2000	.1	.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	19	2.6	1989	2	1989	19	#	1989	.2	.0	.0	.0	.0	@	.0	.0	.0			
Nov	2.3	1.3	#	0	7.5	1975	26	10.8	1975	8	1975	27	1+	1977	2.7	.8	.1	@	.0	1.3	.4	.1	.0			
Dec	9.2	6.7	1	1	14.5	2000	11	41.3	2000	20	2000	30	10	2000	7.1	2.6	1.0	.4	@	10.5	5.1	2.5	.7			
Ann	41.8	33.6	N/A	N/A	17.6	Jan 1999	2	41.3	Dec 2000	29	Jan 1979	14	20	Feb 1979	30.7	12.5	3.8	1.5	.1	50.2	30.2	18.2	4.8			

<sup>+</sup> Also occurred on an earlier date(s) #Denotes trace amounts

Complete documentation available from: www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>-9/-9.9</sup> represents missing values Annual statistics for Mean/Median snow depths are not appropriate

<sup>(1)</sup> Derived from Snow Climatology and 1971-2000 daily data

<sup>(2)</sup> Derived from 1971-2000 daily data

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

**COOP ID: 111577** 

Lon: 87°47W

Lat: 41°44N

Elevation: 620 Feet

Station: CHICAGO MIDWAY AP 3 SW, IL

Climate Division: IL 2 NWS Call Sign:

Freeze Data Spring Freeze Dates (Month/Day) Probability of later date in spring (thru Jul 31) than indicated(\*) Temp (F) .10 .20 .30 .40 .70 .80 .90 36 5/15 5/09 5/05 5/02 4/29 4/25 4/22 4/18 4/12 32 4/23 5/06 5/01 4/27 4/20 4/16 4/13 4/09 4/03 28 4/21 4/16 4/12 4/09 4/07 4/04 4/01 3/28 3/24 4/04 3/12 24 4/09 4/01 3/29 3/26 3/23 3/20 3/17 20 4/02 3/27 3/22 3/19 3/15 3/12 3/08 3/03 2/25 3/21 3/01 16 3/29 3/15 3/10 3/06 2/24 2/19 2/11 Fall Freeze Dates (Month/Day) Probability of earlier date in fall (beginning Aug 1) than indicated(\*) Temp (F) .20 .30 .40 .50 .70 .10 .60 .80 .90 10/07 36 9/29 10/03 10/10 10/12 10/15 10/18 10/21 10/26 32 10/06 10/12 10/17 10/20 10/24 10/27 10/31 11/04 11/10 28 10/20 10/25 10/29 11/01 11/04 11/08 11/11 11/15 11/20 24 10/30 11/04 11/09 11/12 11/16 11/19 11/22 11/27 12/02 20 11/04 11/11 11/15 11/19 11/22 11/26 11/30 12/04 12/10 11/17 11/22 11/26 11/30 12/03 12/13 16 12/06 12/09 12/18 Freeze Free Period **Probability of longer than indicated freeze free period (Days)** Temp (F) .10 .20 .30 .40 .50 .60 .70 .80 .90 175 170 162 157 151 144 36 188 181 166 32 214 204 198 192 187 181 175 169 159 28 235 227 221 216 211 201 187 206 195 24 257 249 243 238 234 229 224 219 211 252 247 235 227 20 276 268 262 256 241 271 16 301 290 283 277 265 259 252 241

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:

<sup>\*</sup> Probability of observing a temperature as cold, or colder, later in the spring or earlier in the fall than the indicated date.

# 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

**COOP ID: 111577** 

Station: CHICAGO MIDWAY AP 3 SW, IL

Climate Division: IL 2 NWS Call Sign: Elevation: 620 Feet Lat: 41°44N Lon: 87°47W

	Degree Days to Selected Base Temperatures (°F)														
Base						Heatin	g Degree l	Days (1)							
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann		
65	1288	1017	805	462	203	28	4	11	67	352	726	1120	6083		
60	1133	877	650	323	119	7	0	0	21	227	577	965	4899		
57	1040	793	559	248	80	3	0	0	8	164	490	872	4257		
55	978	737	502	203	60	1	0	0	4	129	435	812	3861		
50	826	607	361	110	25	0	0	0	0	63	304	668	2964		
32	348	213	52	1	0	0	0	0	0	0	36	239	889		

Base	Cooling Degree Days (1)														
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann		
32	83	121	270	532	901	1162	1349	1291	1018	683	300	143	7853		
55	0	0	7	45	248	473	636	578	332	98	9	3	2429		
57	0	0	1	30	207	414	574	516	276	72	4	0	2094		
60	0	0	0	15	153	329	481	424	199	41	1	0	1643		
65	0	0	0	4	82	199	330	279	95	12	0	0	1001		
70	0	0	0	0	36	99	190	155	33	2	0	0	515		

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	7	28	117	315	658	928	1108	1056	791	455	138	25	7	35	152	467	1125	2053	3161	4217	5008	5463	5601	5626				
45	0	10	67	200	506	778	953	901	641	309	73	7	0	10	77	277	783	1561	2514	3415	4056	4365	4438	4445				
50	0	2	34	113	359	628	798	746	492	190	36	4	0	2	36	149	508	1136	1934	2680	3172	3362	3398	3402				
55	0	0	18	58	235	478	643	591	350	103	12	0	0	0	18	76	311	789	1432	2023	2373	2476	2488	2488				
60	0	0	5	27	138	336	488	437	223	47	3	0	0	0	5	32	170	506	994	1431	1654	1701	1704	1704				
Base		Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)														
50/86	1	16	69	177	394	614	765	725	497	248	65	7	1	17	86	263	657	1271	2036	2761	3258	3506	3571	3578				

(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

#### 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

- c. Snow Tables
  - 1. Snow Climatology
  - 2. Cooperative Summary of the Day
- d. Freeze Data Table

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

### 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