

Climatography of the United States

No. 20

1971-2000

Station: CHENOA, IL

COOP ID: 111475

Climate Division: IL 4

NWS Call Sign:

Elevation: 710 Feet

Lat: 40°44N

Lon: 88°43W

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	31.5	14.6	23.1	67	1967	24	36.1	1990	-23+	1999	5	8.5	1977	1300	0	.0	.0	1.9	15.7	29.0	5.3
Feb	37.2	19.8	28.5	73	1996	26	39.4	1998	-19	1996	3	14.4	1978	1023	0	.0	.0	4.8	10.0	24.3	3.0
Mar	49.6	30.1	39.9	85+	1986	29	46.4	2000	-5+	1962	1	30.9	1984	781	0	.0	.0	14.3	2.3	19.4	.1
Apr	62.9	39.9	51.4	91+	1986	26	57.5	1977	7	1982	7	45.7	1982	414	6	.0	.1	25.8	@	6.6	.0
May	74.3	50.9	62.6	95+	1991	28	69.7	1991	22	1966	10	57.7	1997	165	90	.0	1.6	30.9	.0	.4	.0
Jun	83.3	60.3	71.8	102+	1988	25	76.9	1971	36	1972	11	66.4	1982	15	219	.1	6.1	30.0	.0	.0	.0
Jul	85.6	63.8	74.7	103	1954	14	79.0	1983	45+	1988	1	71.4	1971	2	303	.2	7.9	31.0	.0	.0	.0
Aug	83.7	61.6	72.7	103	1988	17	79.1	1995	37	1963	18	67.7	1992	16	253	.2	5.3	31.0	.0	.0	.0
Sep	77.8	53.8	65.8	100+	1953	2	71.3	1998	24	1974	23	61.0	1975	77	101	.0	2.3	30.0	.0	.2	.0
Oct	65.6	42.8	54.2	92	1953	2	61.1	1971	17+	1981	24	47.7	1976	349	14	.0	@	28.9	.0	4.6	.0
Nov	49.5	32.0	40.8	79	2000	1	48.0	1999	-4	1955	29	32.1	1976	728	0	.0	.0	14.4	1.8	16.9	@
Dec	36.2	20.8	28.5	70	1982	2	36.2	1982	-26	1989	22	15.7	1983	1132	0	.0	.0	3.7	10.3	27.0	2.4
Ann	61.4	40.9	51.2	103+	Aug 1988	17	79.1	Aug 1995	-26	Dec 1989	22	8.5	Jan 1977	6002	986	.5	23.3	246.7	40.1	128.4	10.8

+ 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

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

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No. 20 1971-2000

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

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Lat: 40°44N

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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	1.52	1.17	2.95	1965	1	3.57	1999	.00	2000	7.7	3.9	.8	.2	.18	.37	.63	.84	1.06	1.30	1.56	1.88	2.29	2.96	3.59
Feb	1.43	1.30	1.70	1968	1	4.70	1997	.34	1973	6.7	3.7	.8	.3	.30	.43	.64	.83	1.02	1.23	1.46	1.74	2.11	2.69	3.25
Mar	3.02	3.08	3.73	1985	28	6.95	1985	.59	1981	9.2	6.3	2.1	.4	.83	1.12	1.55	1.93	2.31	2.69	3.12	3.63	4.29	5.33	6.30
Apr	3.31	3.28	3.33	1950	24	6.37	1995	.31	1971	10.6	6.9	2.5	.6	.79	1.10	1.58	2.01	2.44	2.90	3.40	4.01	4.80	6.05	7.24
May	3.88	3.96	2.45	1995	24	8.11	1995	.20	1992	10.7	7.5	2.8	.9	.89	1.25	1.82	2.33	2.84	3.38	3.98	4.71	5.65	7.16	8.58
Jun	4.10	4.19	3.77	1968	25	8.19	1993	.21	1988	9.6	6.6	2.7	1.1	.85	1.23	1.83	2.38	2.93	3.52	4.18	4.98	6.04	7.72	9.32
Jul	3.33	3.32	8.20	1951	9	8.79	1992	.48	1991	8.2	5.9	2.5	.7	.73	1.04	1.52	1.96	2.41	2.88	3.40	4.04	4.87	6.20	7.46
Aug	3.22	2.91	3.93	1997	17	8.67	1977	.60	1984	7.6	5.3	2.0	.9	.59	.88	1.35	1.79	2.24	2.72	3.27	3.93	4.81	6.23	7.58
Sep	2.91	2.61	2.47	1970	13	6.90	1989	.06	1979	7.3	5.4	2.0	.9	.46	.71	1.13	1.54	1.95	2.40	2.92	3.55	4.40	5.77	7.09
Oct	2.69	2.33	5.66	1986	3	8.04	1986	.82	1979	8.1	5.5	1.7	.5	.68	.93	1.32	1.67	2.01	2.37	2.77	3.25	3.87	4.85	5.77
Nov	2.73	2.38	2.10	1968	28	7.56	1985	.36	1998	8.7	6.0	1.8	.5	.59	.84	1.24	1.60	1.97	2.35	2.79	3.31	4.00	5.11	6.15
Dec	2.47	1.96	5.07	1982	3	8.95	1982	.29	1976	8.6	5.0	1.4	.5	.46	.68	1.05	1.38	1.72	2.09	2.51	3.01	3.68	4.76	5.78
Ann	34.61	32.66	8.20	Jul 1951	9	8.95	Dec 1982	.00	Jan 2000	103.0	68.0	23.1	7.5	24.14	26.15	28.73	30.70	32.45	34.14	35.90	37.84	40.20	43.62	46.59

+ 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

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

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Station: CHENOA, IL

COOP ID: 111475

Climate Division: IL 4

NWS Call Sign:

Elevation: 710 Feet

Lat: 40°44N

Lon: 88°43W

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	6.9	6.2	2	1	7.5	1979	13	24.1	1979	17	1979	31	9	1979	4.9	2.6	.6	.1	.0	12.7	7.2	3.3	1.0
Feb	5.1	4.0	2	2	6.5	1981	10	16.5	1986	16	1979	18	12	1979	3.8	2.1	.5	.2	.0	9.7	6.5	3.5	.8
Mar	2.5	1.3	#	#	6.5	1972	29	8.0	1977	6	1978	8	4	1978	1.9	.8	.3	.1	.0	2.7	1.0	.4	.0
Apr	1.0	.0	#	0	7.7	1997	11	9.7	1982	5	1982	9	1	1982	.5	.3	.1	@	.0	.3	.2	@	.0
May	.0	.0	0	0	.2	1989	7	.2	1989	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	1.2	1980	27	1.2	1980	#+	1980	27	#+	1980	.1	@	.0	.0	.0	.0	.0	.0	.0
Nov	1.6	.4	#	#	5.0	1974	13	7.2	1972	5	1977	28	1	1977	1.3	.6	.2	.1	.0	1.2	.4	.1	.0
Dec	6.1	4.3	1	#	12.0	1973	19	20.3	1973	16	1973	22	8	2000	4.1	1.7	.7	.2	@	6.9	3.8	2.4	.8
Ann	23.3	16.2	N/A	N/A	12.0	Dec 1973	19	24.1	Jan 1979	17	Jan 1979	31	12	Feb 1979	16.6	8.1	2.4	.7	@	33.5	19.1	9.7	2.6

+ 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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Lat: 40° 44N

Lon: 88° 43W

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	5/23	5/17	5/13	5/10	5/07	5/04	4/30	4/26	4/21
32	5/09	5/03	4/29	4/26	4/23	4/20	4/16	4/12	4/07
28	4/24	4/20	4/16	4/14	4/11	4/08	4/05	4/02	3/29
24	4/16	4/12	4/08	4/05	4/02	3/30	3/27	3/24	3/19
20	4/06	3/31	3/28	3/24	3/21	3/18	3/15	3/11	3/05
16	3/28	3/22	3/18	3/15	3/12	3/09	3/05	3/01	2/24
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	9/30	10/02	10/04	10/06	10/09	10/12
32	9/25	9/29	10/03	10/06	10/09	10/12	10/15	10/18	10/23
28	9/30	10/07	10/12	10/16	10/20	10/24	10/28	11/02	11/09
24	10/13	10/20	10/24	10/28	11/01	11/04	11/08	11/13	11/19
20	10/30	11/05	11/09	11/12	11/15	11/19	11/22	11/26	12/02
16	11/08	11/14	11/18	11/21	11/25	11/28	12/01	12/05	12/11
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	166	160	155	151	147	143	139	135	128
32	190	182	177	173	168	164	160	154	147
28	214	207	201	196	192	187	182	177	169
24	236	228	222	217	212	207	202	196	187
20	260	253	247	243	239	234	230	225	217
16	280	272	267	262	257	253	248	242	234

* 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	1300	1023	781	414	165	15	2	16	77	349	728	1132	6002
60	1145	883	626	280	89	3	0	3	27	225	579	977	4837
57	1052	799	536	211	56	1	0	0	11	163	493	884	4206
55	990	747	480	169	39	0	0	0	6	127	438	824	3820
50	840	617	341	87	14	0	0	0	1	62	307	680	2949
32	361	230	49	0	0	0	0	0	0	0	38	246	924

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	84	131	291	583	948	1195	1324	1260	1014	687	300	137	7954
55	0	4	9	62	275	505	611	547	329	102	10	1	2455
57	0	0	3	43	229	445	549	485	275	75	5	0	2109
60	0	0	0	23	169	357	456	394	200	44	1	0	1644
65	0	0	0	6	90	219	303	253	101	14	0	0	986
70	0	0	0	1	39	108	164	138	38	3	0	0	491

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	30	134	364	705	957	1081	1016	777	451	142	25	9	39	173	537	1242	2199	3280	4296	5073	5524	5666	5691
45	0	10	76	240	550	807	926	861	628	312	75	8	0	10	86	326	876	1683	2609	3470	4098	4410	4485	4493
50	0	1	37	141	398	657	771	706	483	196	35	3	0	1	38	179	577	1234	2005	2711	3194	3390	3425	3428
55	0	0	17	70	265	508	616	552	340	108	10	0	0	0	17	87	352	860	1476	2028	2368	2476	2486	2486
60	0	0	4	31	153	360	461	397	216	49	3	0	0	0	4	35	188	548	1009	1406	1622	1671	1674	1674
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	2	17	86	223	440	637	737	688	499	275	79	12	2	19	105	328	768	1405	2142	2830	3329	3604	3683	3695

(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:

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

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
- 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.

- | | |
|---|---|
| <ol style="list-style-type: none">a. Temperature/ Precipitation Tables<ol style="list-style-type: none">1. 1971-2000 Monthly Normals2. Cooperative Summary of the Day3. National Weather Service station records4. 1971-2000 serially complete daily datab. Degree Day Table<ol style="list-style-type: none">1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data | <ol style="list-style-type: none">c. Snow Tables<ol style="list-style-type: none">1. Snow Climatology2. Cooperative Summary of the Dayd. Freeze Data Table
1971-2000 serially complete daily data |
|---|---|

References

U.S. Climate Normals 1971-2000, www.ncdc.noaa.gov/normal.html
U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normal/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