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: ROCHESTER, IN **COOP ID: 127482**

Climate Division: IN 2 **NWS Call Sign:** **Elevation: 770 Feet** **Lat: 41˚04N** **Lon: 86˚13W**

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	30.3	14.8	22.6	69	1950	25	33.8	1990	-25	1985	21	7.4	1977	1317	0	.0	.0	1.8	17.1	29.1	5.4
Feb	35.2	18.1	26.7	73	2000	26	37.0	1998	-16+	1951	1	13.0	1978	1073	0	.0	.0	3.6	12.1	25.1	3.7
Mar	46.6	27.8	37.2	80	1986	31	44.8	1973	-7	1980	2	28.0	1984	863	0	.0	.0	11.5	3.9	22.3	.3
Apr	59.1	37.7	48.4	89	1986	27	55.3	1977	8+	1982	7	43.7	1975	500	2	.0	.0	23.3	.1	9.3	.0
May	71.0	48.9	60.0	93+	1962	18	68.2	1977	24	1966	10	53.8	1997	223	65	.0	.6	30.4	.0	.6	.0
Jun	80.0	58.6	69.3	102	1988	26	73.7	1971	35	1956	2	64.5	1992	31	160	@	3.3	30.0	.0	.0	.0
Jul	83.7	62.5	73.1	103+	1954	15	76.7	1999	42	1979	6	69.5	1984	4	255	.1	6.4	31.0	.0	.0	.0
Aug	81.6	60.2	70.9	101	1988	18	77.4	1995	35	1965	29	66.4	1992	24	206	.1	3.2	31.0	.0	.0	.0
Sep	75.2	52.2	63.7	101	1953	2	71.2	1978	28+	1951	28	59.0	1993	108	68	.0	1.1	30.0	.0	.3	.0
Oct	62.9	40.7	51.8	90+	1951	4	60.0	1971	16	1981	25	45.8	1988	416	7	.0	@	27.9	@	6.2	.0
Nov	48.4	31.7	40.1	81	1950	1	45.8	1975	-4+	1950	23	32.5	1976	748	0	.0	.0	13.2	2.0	17.5	.0
Dec	35.6	20.9	28.3	70	1982	3	37.4	1982	-22	1983	24	15.5	2000	1139	0	.0	.0	3.6	10.6	27.0	2.4
Ann	59.1	39.5	49.3	103+	Jul 1954	15	77.4	Aug 1995	-25	Jan 1985	21	7.4	Jan 1977	6446	763	.2	14.6	237.3	45.8	137.4	11.8

+ 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/normals/usnormals.html

(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

Issue Date: February 2004

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: ROCHESTER, IN **COOP ID: 127482**

Climate Division: IN 2 **NWS Call Sign:** **Elevation: 770 Feet** **Lat: 41˚04N** **Lon: 86˚13W**

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	2.03	1.84	2.32	1949	19	5.21	1993	.37	1986
Feb	1.74	1.44	2.30	1997	21	6.02	1990	.02	1987
Mar	2.70	2.73	1.50+	1954	25	5.48	1998	.42	1981
Apr	3.81	3.55	4.72	1956	29	8.24	1981	1.05	1971
May	4.16	4.36	3.15	1975	22	7.32	1981	1.72	1988
Jun	4.12	3.60	3.80	1958	9	9.63	1975	1.34	1988
Jul	3.81	3.42	4.70	2001	7	9.54	1998	.75	1975
Aug	3.73	3.22	6.25	1990	18	12.39	1990	.63	1974
Sep	3.36	2.65	4.30	1966	15	8.24	1972	.04	1979
Oct	2.89	2.31	2.23	1991	26	8.41	1991	.87	1989
Nov	3.42	3.17	4.60	1982	2	9.04	1982	.97	1999
Dec	2.74	2.83	3.10	1965	25	6.11	1990	.60	1976
Ann	38.51	36.87	6.25	Aug 1990	18	12.39	Aug 1990	.02	Feb 1987

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	8.7	5.3	1.2	.2
Feb	7.8	4.9	.8	.3
Mar	9.9	6.3	2.0	.2
Apr	10.8	7.6	2.6	.9
May	11.2	7.8	2.7	1.1
Jun	10.0	7.2	3.3	.9
Jul	8.7	6.7	2.5	.8
Aug	8.1	6.3	2.5	.9
Sep	8.3	6.0	2.5	.8
Oct	9.4	5.9	1.8	.5
Nov	10.1	7.1	2.3	.7
Dec	10.9	6.7	1.7	.3
Ann	113.9	77.8	25.9	7.6

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	.45	.64	.94	1.20	1.47	1.76	2.08	2.46	2.97	3.77	4.53
Feb	.18	.31	.55	.80	1.06	1.35	1.70	2.13	2.71	3.68	4.63
Mar	.97	1.22	1.59	1.90	2.19	2.50	2.82	3.21	3.69	4.45	5.14
Apr	1.37	1.73	2.25	2.68	3.09	3.52	3.98	4.51	5.20	6.26	7.22
May	1.64	2.02	2.57	3.02	3.45	3.89	4.36	4.90	5.60	6.66	7.63
Jun	1.59	1.98	2.52	2.97	3.40	3.84	4.31	4.86	5.56	6.63	7.60
Jul	.95	1.30	1.86	2.35	2.84	3.35	3.93	4.61	5.50	6.91	8.24
Aug	.81	1.15	1.70	2.20	2.70	3.22	3.82	4.54	5.48	6.98	8.40
Sep	.48	.76	1.24	1.71	2.19	2.73	3.35	4.10	5.12	6.78	8.38
Oct	.94	1.22	1.62	1.97	2.30	2.64	3.02	3.46	4.02	4.90	5.71
Nov	1.11	1.44	1.92	2.32	2.71	3.12	3.56	4.08	4.75	5.79	6.75
Dec	1.01	1.27	1.64	1.95	2.24	2.54	2.87	3.25	3.73	4.48	5.16
Ann	27.94	30.00	32.64	34.64	36.40	38.11	39.87	41.81	44.16	47.57	50.50

\+ 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

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

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Services

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: ROCHESTER, IN **COOP ID: 127482**

Climate Division: IN 2 **NWS Call Sign:** **Elevation: 770 Feet** **Lat: 41°04N** **Lon: 86°13W**

Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	8.8	5.5	#	#
Feb	7.3	7.0	1	#
Mar	3.4	3.0	#	0
Apr	1.3	.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	.3	.0	#	0
Nov	2.6	.0	#	0
Dec	8.3	7.0	1	0
Ann	32.0	22.5	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	14.0	1987	20	28.0	1999	5	1992	14	2	1992
Feb	9.0	1985	12	20.5	1980	8	1993	17	1	1993
Mar	7.0	1977	22	10.0	1982	7	1991	14	1	1991
Apr	9.0	1982	6	13.0	1982	#+	1975	2	#+	1975
May	.0	0	0	.0	0	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	6.0	1989	20	9.0	1989	#	1989	19	#	1989
Nov	9.0	1977	26	17.0	1977	3+	1978	27	#+	1991
Dec	10.0	1977	6	30.0	2000	14	1973	23	4	1989
Ann	14.0	Jan 1987	20	30.0	Dec 2000	14	Dec 1973	23	4	Dec 1989

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	3.8	3.7	1.5	.5	.1
Feb	3.2	3.1	1.1	.2	.0
Mar	1.3	1.3	.5	.2	.0
Apr	.3	.3	.2	.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	.1	.1	@	.0
Nov	1.0	.9	.4	.1	.0
Dec	3.0	2.8	1.1	.4	@
Ann	12.7	12.2	4.9	1.5	.1

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	-9.9	-9.9	-9.9	-9.9
Feb	-9.9	-9.9	-9.9	-9.9
Mar	1.1	.7	.6	.0
Apr	.0	.0	.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	.4	.1	.0	.0
Dec	-9.9	-9.9	-9.9	-9.9
Ann	-9.9	-9.9	-9.9	-9.9

+ 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

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

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: ROCHESTER, IN **COOP ID: 127482**

Climate Division: IN 2 **NWS Call Sign:** **Elevation: 770 Feet** **Lat: 41˚04N** **Lon: 86˚13W**

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	5/25	5/19	5/15	5/11	5/08	5/05	5/01	4/27	4/21
32	5/10	5/06	5/02	4/29	4/26	4/23	4/20	4/17	4/12
28	4/28	4/23	4/20	4/17	4/14	4/12	4/09	4/05	4/01
24	4/18	4/14	4/11	4/08	4/06	4/04	4/02	3/30	3/26
20	4/11	4/05	4/01	3/28	3/24	3/21	3/17	3/12	3/06
16	3/29	3/24	3/19	3/16	3/13	3/09	3/06	3/02	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	9/28	9/30	10/03	10/05	10/07	10/10	10/14
32	9/25	10/01	10/05	10/09	10/12	10/15	10/19	10/23	10/29
28	10/11	10/16	10/19	10/23	10/25	10/28	10/31	11/04	11/09
24	10/22	10/28	11/01	11/05	11/08	11/12	11/15	11/20	11/26
20	10/30	11/06	11/11	11/15	11/20	11/24	11/28	12/03	12/10
16	11/10	11/17	11/23	11/27	12/01	12/06	12/10	12/15	12/23

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	161	156	151	147	142	138	132	125
32	192	183	178	173	168	163	158	153	145
28	216	208	203	198	193	189	184	178	170
24	237	230	224	220	216	211	207	201	194
20	266	257	251	245	240	234	229	222	213
16	287	278	273	268	263	258	253	248	240

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

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: ROCHESTER, IN **COOP ID: 127482**

Climate Division: IN 2 **NWS Call Sign:** **Elevation: 770 Feet** **Lat: 41˚04N** **Lon: 86˚13W**

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	1317	1073	863	500	223	31	4	24	108	416	748	1139	6446
60	1162	933	708	358	133	8	0	5	42	280	598	984	5211
57	1069	849	615	280	91	3	0	1	21	209	510	891	4539
55	1007	793	556	232	68	1	0	0	11	168	452	829	4117
50	853	658	414	131	28	0	0	0	2	87	317	687	3177
32	366	243	74	2	0	0	0	0	0	0	35	253	973

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	72	93	235	493	865	1119	1274	1205	951	614	277	138	7336
55	0	0	4	33	220	430	561	492	272	68	3	0	2083
57	0	0	1	22	181	372	499	431	221	48	1	0	1776
60	0	0	0	10	130	286	406	342	153	25	0	0	1352
65	0	0	0	2	65	160	255	206	68	7	0	0	763
70	0	0	0	0	26	67	124	104	21	1	0	0	343

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	20	98	283	617	884	1030	961	713	379	123	24	7	27	125	408	1025	1909	2939	3900	4613	4992	5115	5139
45	2	6	55	174	466	734	875	806	564	250	65	10	2	8	63	237	703	1437	2312	3118	3682	3932	3997	4007
50	0	1	28	99	327	585	720	651	420	147	30	3	0	1	29	128	455	1040	1760	2411	2831	2978	3008	3011
55	0	0	9	51	205	436	565	496	281	77	11	0	0	0	9	60	265	701	1266	1762	2043	2120	2131	2131
60	0	0	2	22	114	296	411	342	170	32	1	0	0	0	2	24	138	434	845	1187	1357	1389	1390	1390
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	0	12	64	174	376	580	699	645	452	228	70	10	0	12	76	250	626	1206	1905	2550	3002	3230	3300	3310

(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.
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