

# Climatology of the United States

No. 20

1971-2000

Station: WINAMAC 2 SSE, IN

COOP ID: 129670

Climate Division: IN 1

NWS Call Sign:

Elevation: 690 Feet

Lat: 41°02N

Lon: 86°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	30.8	13.9	22.4	69	1950	26	34.3	1990	-29	1985	20	8.3	1977	1323	0	.0	.0	1.9	15.9	29.0	5.5
Feb	35.5	17.6	26.6	75	1999	12	37.3	1998	-20	1982	10	12.2	1978	1077	0	.0	.0	3.8	10.5	24.6	3.6
Mar	47.3	28.3	37.8	86	1981	31	45.5	1973	-8	1978	5	28.8	1984	843	0	.0	.0	13.3	2.8	21.6	.1
Apr	59.8	38.4	49.1	92	1986	27	56.0	1977	8	1982	7	44.2	1982	479	2	.0	.1	24.5	.0	8.1	.0
May	71.6	49.8	60.7	94	1964	22	68.7	1977	22	1966	10	54.4	1997	201	67	.0	.6	30.6	.0	.5	.0
Jun	80.2	59.1	69.7	102	1988	26	73.8	1991	32	1972	11	65.0	1982	26	165	@	3.2	30.0	.0	@	.0
Jul	83.9	62.9	73.4	101	1954	14	77.5	1999	41	1963	10	70.0	1996	4	265	@	5.3	31.0	.0	.0	.0
Aug	81.6	60.9	71.3	102	1988	18	77.9	1995	34+	1964	14	66.9	1992	19	214	@	2.3	31.0	.0	.0	.0
Sep	75.3	53.4	64.4	100+	1953	1	69.5	1978	26	1951	29	60.1	1974	88	68	@	.7	30.0	.0	.1	.0
Oct	63.8	41.7	52.8	90+	1949	8	60.4	1971	18+	1952	21	45.9	1988	387	7	.0	.0	28.3	.0	5.0	.0
Nov	49.0	31.1	40.1	82	1950	1	45.6	1999	-10	1950	25	32.9	1976	748	0	.0	.0	14.0	1.8	16.9	.0
Dec	36.0	20.4	28.2	71	1982	2	37.9	1982	-23+	1989	22	14.4	1989	1142	0	.0	.0	3.7	9.8	27.0	2.5
Ann	59.6	39.8	49.7	102+	Aug 1988	18	77.9	Aug 1995	-29	Jan 1985	20	8.3	Jan 1977	6337	788	.0	12.2	242.1	40.8	132.8	11.7

+ 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](http://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

070-A

# Climatology 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: WINAMAC 2 SSE, IN**

**COOP ID: 129670**

**Climate Division: IN 1**

**NWS Call Sign:**

**Elevation: 690 Feet Lat: 41°02N**

**Lon: 86°35W**

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	1.94	1.52	2.10+	1949	18	4.59	1998	.46	1986	9.7	5.0	1.0	.2	.49	.67	.95	1.20	1.45	1.71	2.00	2.34	2.79	3.51	4.17
Feb	1.68	1.32	2.18	2001	25	5.55	1990	.00	1987	8.4	4.6	.9	.2	.19	.40	.68	.92	1.17	1.43	1.72	2.08	2.55	3.30	4.02
Mar	2.74	2.54	1.57	1980	17	6.00	1998	.52	1987	9.9	6.3	1.7	.3	.72	.98	1.38	1.73	2.07	2.43	2.83	3.31	3.92	4.90	5.80
Apr	3.50	3.20	3.12	1970	19	7.54	1999	1.19	1971	10.8	7.6	2.0	.6	1.30	1.63	2.10	2.49	2.86	3.24	3.66	4.14	4.75	5.69	6.55
May	3.80	3.58	2.69	1984	26	7.70	1996	1.06	1988	10.6	7.4	2.8	.8	1.41	1.77	2.28	2.70	3.11	3.53	3.98	4.50	5.17	6.20	7.14
Jun	4.09	3.65	4.35	1958	8	7.16	1975	.36	1991	10.8	7.6	3.2	1.1	1.35	1.74	2.31	2.79	3.26	3.74	4.26	4.88	5.67	6.90	8.03
Jul	3.91	3.72	4.80	1950	2	7.85	1996	.47	1975	9.5	6.5	2.6	1.1	1.27	1.64	2.19	2.65	3.10	3.57	4.07	4.67	5.43	6.62	7.72
Aug	3.87	3.36	3.45	1980	31	8.36	1980	.61	1986	9.1	6.1	2.8	1.1	1.17	1.54	2.09	2.56	3.02	3.50	4.02	4.64	5.44	6.68	7.83
Sep	3.27	2.86	3.60	1989	1	7.99	1972	.01	1979	8.4	5.8	2.0	.8	.41	.67	1.13	1.59	2.07	2.60	3.22	3.99	5.03	6.74	8.39
Oct	2.94	2.38	3.81	1951	23	7.08	1991	1.10	1989	8.8	5.4	1.8	.6	.90	1.18	1.60	1.96	2.30	2.66	3.06	3.52	4.12	5.06	5.92
Nov	3.08	2.77	3.51	1966	9	7.42	1982	.96	1999	10.4	6.7	2.0	.6	.99	1.28	1.71	2.08	2.44	2.81	3.21	3.68	4.29	5.23	6.11
Dec	2.60	2.46	3.15	1967	21	4.91	1990	.61	1976	10.6	6.4	1.6	.4	.82	1.07	1.43	1.75	2.05	2.36	2.71	3.11	3.63	4.45	5.20
Ann	37.42	37.05	4.80	Jul 1950	2	8.36	Aug 1980	.00	Feb 1987	117.0	75.4	24.4	7.8	29.61	31.19	33.17	34.65	35.95	37.19	38.47	39.86	41.53	43.93	45.97

+ 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](http://www.ncdc.noaa.gov/oa/climate/normals/usnormals.html)

# 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](http://www.ncdc.noaa.gov)

**Station: WINAMAC 2 SSE, IN**

**COOP ID: 129670**

**Climate Division: IN 1**

**NWS Call Sign:**

**Elevation: 690 Feet**

**Lat: 41°02N**

**Lon: 86°35W**

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	7.8	7.5	3	2	10.0	1978	26	22.3	1979	16	1999	12	11	1984	5.2	3.1	.9	.4	@	14.3	8.6	5.7	1.9
Feb	5.4	6.0	3	2	5.8	1993	16	15.5	1980	16	1979	13	11	1979	3.7	2.4	.5	.1	.0	10.5	5.7	3.8	1.2
Mar	2.7	2.3	1	#	6.0	1991	13	9.5	1984	11	1984	13	4	1984	1.7	1.0	.2	.2	.0	3.3	1.5	.8	.1
Apr	1.1	.0	#	0	5.0	1982	9	10.0	1982	4	1997	11	1	1982	.5	.4	.2	@	.0	.4	.2	.0	.0
May	#	.0	0	0	#	1976	3	#	1976	0	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	2.5	1989	20	2.5	1989	3	1989	20	#	1989	.1	@	.0	.0	.0	.1	@	.0	.0
Nov	2.2	.3	#	#	4.0	1977	27	7.8	1977	6	1974	14	1	1977	1.5	.9	.2	.0	.0	1.1	.3	.1	.0
Dec	6.2	5.3	1	1	8.0	1973	19	24.0	2000	12+	2000	30	7	2000	4.1	2.8	.5	.2	.0	8.1	3.6	1.9	.7
Ann	25.5	21.4	N/A	N/A	10.0	Jan 1978	26	24.0	Dec 2000	16+	Jan 1999	12	11+	Jan 1984	16.8	10.6	2.5	.9	@	37.8	19.9	12.3	3.9

+ 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](http://www.ncdc.noaa.gov/oa/climate/normals/usnormals.html)

# Climatography of the United States

## No. 20 1971-2000

**Station:** WINAMAC 2 SSE, IN

**COOP ID:** 129670

**Climate Division:** IN 1

**NWS Call Sign:**

**Elevation:** 690 Feet

**Lat:** 41°02N

**Lon:** 86°35W

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	5/31	5/24	5/19	5/15	5/11	5/07	5/03	4/28	4/21
32	5/15	5/09	5/05	5/01	4/28	4/24	4/21	4/17	4/11
28	4/29	4/24	4/20	4/18	4/15	4/12	4/09	4/06	4/01
24	4/17	4/13	4/09	4/07	4/04	4/02	3/30	3/27	3/23
20	4/11	4/05	4/01	3/28	3/25	3/21	3/17	3/13	3/07
16	4/02	3/26	3/21	3/17	3/13	3/10	3/05	3/01	2/22
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	9/20	9/24	9/28	10/01	10/03	10/06	10/09	10/12	10/17
32	9/30	10/04	10/07	10/10	10/13	10/15	10/18	10/21	10/25
28	10/09	10/14	10/18	10/21	10/24	10/27	10/30	11/03	11/08
24	10/24	10/29	11/01	11/04	11/07	11/10	11/13	11/16	11/21
20	11/04	11/10	11/14	11/17	11/21	11/24	11/28	12/02	12/07
16	11/09	11/16	11/21	11/25	11/29	12/03	12/07	12/11	12/18
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	164	158	153	148	145	141	136	132	125
32	187	180	175	171	167	163	159	154	147
28	213	205	200	196	191	187	183	177	170
24	233	227	223	219	216	213	209	205	199
20	265	257	250	245	240	235	230	224	215
16	287	278	271	265	260	254	248	241	232

\* 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/normal/usnormals.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormals.html)

**Climatography  
of the United States**  
**No. 20**  
**1971-2000**

**Station: WINAMAC 2 SSE, IN**

**COOP ID: 129670**

**Climate Division: IN 1**

**NWS Call Sign:**

**Elevation: 690 Feet    Lat: 41°02N    Lon: 86°35W**

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	1323	1077	843	479	201	26	4	19	88	387	748	1142	6337
60	1168	937	688	338	114	6	0	3	30	254	598	987	5123
57	1075	853	595	261	75	2	0	0	12	185	510	894	4462
55	1013	797	537	214	54	1	0	0	6	146	452	835	4055
50	859	665	395	116	21	0	0	0	1	71	317	691	3136
32	373	253	67	1	0	0	0	0	0	0	36	259	989

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	73	100	248	514	890	1129	1283	1217	970	643	277	140	7484
55	0	0	4	37	231	440	570	504	286	75	3	4	2154
57	0	0	1	24	190	381	508	442	232	53	1	0	1832
60	0	0	0	11	136	295	415	353	160	28	0	0	1398
65	0	0	0	2	67	165	265	214	68	7	0	0	788
70	0	0	0	0	26	70	132	108	19	1	0	0	356

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	6	23	119	324	661	900	1038	971	729	408	134	26	6	29	148	472	1133	2033	3071	4042	4771	5179	5313	5339
45	1	8	69	208	507	750	883	816	580	272	69	10	1	9	78	286	793	1543	2426	3242	3822	4094	4163	4173
50	0	0	34	122	364	600	728	661	434	162	33	3	0	0	34	156	520	1120	1848	2509	2943	3105	3138	3141
55	0	0	12	62	230	452	573	506	293	86	12	0	0	0	12	74	304	756	1329	1835	2128	2214	2226	2226
60	0	0	2	28	130	308	418	353	177	39	2	0	0	0	2	30	160	468	886	1239	1416	1455	1457	1457
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	13	78	201	409	596	706	651	459	240	73	11	0	13	91	292	701	1297	2003	2654	3113	3353	3426	3437

(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](http://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](http://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"><li>a. Temperature/ Precipitation Tables<ol style="list-style-type: none"><li>1. 1971-2000 Monthly Normals</li><li>2. Cooperative Summary of the Day</li><li>3. National Weather Service station records</li><li>4. 1971-2000 serially complete daily data</li></ol></li><li>b. Degree Day Table<ol style="list-style-type: none"><li>1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals</li><li>2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data</li></ol></li></ol> | <ol style="list-style-type: none"><li>c. Snow Tables<ol style="list-style-type: none"><li>1. Snow Climatology</li><li>2. Cooperative Summary of the Day</li></ol></li><li>d. Freeze Data Table<br/>1971-2000 serially complete daily data</li></ol> |
|---|---|

## References

U.S. Climate Normals 1971-2000, [www.ncdc.noaa.gov/normal.html](http://www.ncdc.noaa.gov/normal.html)  
U.S. Climate Normals 1971-2000-Products Clim20, [www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html)  
Snow Climatology Project Description, [www.ncdc.noaa.gov/oa/climate/monitoring/snowclim/mainpage.html](http://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](http://www1.ncdc.noaa.gov/pub/data/special/serialcomplete_jam_0900.pdf)