

# Climatography of the United States No. 20

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

Station: EVANSVILLE INTL AP, IN

1971-2000

COOP ID: 122738

Climate Division: IN 7

NWS Call Sign: EVV

Elevation: 381 Feet Lat: 38°03N Lon: 87°32W

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	39.5	22.6	31.0	74	1950	25	41.9	1990	-21	1977	17	14.1	1977	1047	0	.0	.0	6.8	9.0	24.4	1.6
Feb	45.4	26.2	35.8	79	1962	13	43.2	1990	-23	1951	2	20.2	1978	825	0	.0	.0	10.4	5.4	19.0	.9
Mar	56.4	35.2	45.8	84+	1981	31	53.6	1973	-9	1960	6	38.3	1996	591	4	.0	.0	21.7	.7	12.6	.1
Apr	67.2	43.8	55.5	91+	1989	26	60.9	1981	23+	1987	3	50.5	1997	295	23	.0	.1	28.4	.0	3.0	.0
May	77.1	54.0	65.6	95+	1962	17	71.7	1987	28	1963	1	60.3	1997	85	108	.0	1.6	31.0	.0	@	.0
Jun	86.1	63.5	74.8	104	1954	26	79.9	1971	41+	1956	2	70.4	1982	5	304	.2	9.6	30.0	.0	.0	.0
Jul	89.4	67.8	78.6	105+	1952	27	83.1	1993	49	1962	27	75.2	1996	0	425	.4	15.3	31.0	.0	.0	.0
Aug	87.8	65.1	76.5	102+	1964	3	83.4	1995	43	1986	29	72.9	1986	1	356	.4	10.9	31.0	.0	.0	.0
Sep	81.3	57.0	69.1	103	1954	5	73.9	1998	33	1949	30	63.0	1974	45	173	@	4.4	30.0	.0	.0	.0
Oct	70.0	44.6	57.3	94	1953	2	64.2	1971	21+	1952	22	51.2	1987	262	27	.0	.1	30.4	.0	2.4	.0
Nov	55.7	36.0	45.9	83	1961	2	51.4	1994	-3	1950	25	37.9	1976	565	2	.0	.0	19.9	.4	11.5	.0
Dec	44.1	27.0	35.6	77	1982	2	44.4	1982	-15	1989	22	23.0	1989	896	0	.0	.0	9.9	5.0	20.9	.6
Ann	66.7	45.2	56.0	105+	Jul 1952	27	83.4	Aug 1995	-23	Feb 1951	2	14.1	Jan 1977	4617	1422	1.0	42.0	280.5	20.5	93.8	3.2

+ 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](http://www.ncdc.noaa.gov/oa/climate/normals/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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**Climate Division: IN 7**

**NWS Call Sign: EVV**

**Elevation: 381 Feet Lat: 38°03N**

**Lon: 87°32W**

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	2.91	2.85	3.72	1982	22	9.15	1982	.51	1981	10.5	5.4	1.8	.5	.73	1.00	1.43	1.80	2.17	2.57	3.00	3.52	4.20	5.27	6.27
Feb	3.10	2.80	3.38	2000	18	7.26	2000	.74	1983	9.1	5.3	2.0	.9	.84	1.13	1.58	1.97	2.35	2.76	3.20	3.73	4.43	5.51	6.52
Mar	4.29	4.36	4.25	1964	9	7.18	1975	1.65	1971	11.8	7.9	3.2	.9	1.68	2.07	2.64	3.11	3.55	4.00	4.49	5.06	5.77	6.87	7.88
Apr	4.48	3.78	6.04	1996	28	11.83	1996	1.19	1992	12.0	7.7	2.9	1.2	1.31	1.73	2.37	2.93	3.47	4.03	4.65	5.39	6.33	7.82	9.20
May	5.01	3.92	4.92	1995	17	13.51	1995	.94	1994	11.8	7.8	3.6	1.4	1.24	1.71	2.44	3.09	3.73	4.41	5.16	6.06	7.23	9.09	10.83
Jun	4.10	4.12	3.67	1996	9	7.78	1996	.65	1991	10.0	6.9	2.9	1.0	1.16	1.55	2.14	2.65	3.15	3.67	4.25	4.93	5.81	7.20	8.49
Jul	3.75	3.29	4.09	1978	1	8.40	1992	.18	1974	8.3	5.7	2.6	1.1	.76	1.10	1.65	2.15	2.66	3.21	3.82	4.56	5.54	7.11	8.60
Aug	3.14	2.78	3.54	1977	23	8.43	1977	.24	1976	7.3	4.6	2.1	1.1	.53	.80	1.26	1.69	2.13	2.61	3.16	3.83	4.73	6.18	7.56
Sep	2.99	2.61	3.14	1965	11	8.45	1996	.39	1999	7.5	4.9	1.9	.8	.49	.75	1.18	1.60	2.02	2.48	3.01	3.66	4.52	5.91	7.25
Oct	2.78	2.68	2.51	1999	9	5.62	1983	.59	2000	7.8	5.1	2.0	.6	1.04	1.30	1.67	1.98	2.28	2.58	2.91	3.29	3.78	4.52	5.21
Nov	4.18	4.19	3.48	1988	4	7.96	1988	.42	1999	9.9	6.6	3.0	1.3	1.19	1.59	2.19	2.71	3.22	3.75	4.34	5.03	5.93	7.34	8.65
Dec	3.54	3.18	2.30	2001	16	8.23	1982	.56	1976	10.7	6.7	2.5	.9	1.06	1.39	1.90	2.33	2.75	3.19	3.68	4.25	4.98	6.14	7.21
Ann	44.27	45.75	6.04	Apr 1996	28	13.51	May 1995	.18	Jul 1974	116.7	74.6	30.5	11.7	32.89	35.13	37.98	40.13	42.04	43.87	45.75	47.83	50.33	53.95	57.06

+ 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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NWS Call Sign: EVV

Elevation: 381 Feet

Lat: 38°03N

Lon: 87°32W

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	4.6	2.0	1	0	7.8	1978	16	21.3	1977	14	1978	18	6+	1978	4.7	1.3	.4	.1	.0	5.6	2.7	1.6	.5
Feb	3.8	1.6	1	0	10.9	1993	25	18.4	1993	12	1998	6	4	1978	3.3	1.0	.3	.2	@	5.3	3.7	1.3	.1
Mar	2.0	.7	#	0	6.8	1994	9	13.3	1975	10	1996	21	1+	1996	1.9	.7	.2	.1	.0	1.1	.6	.3	@
Apr	.4	.0	#	0	8.6	1971	6	8.6	1971	4	1971	7	#	1982	.2	.1	@	@	.0	.1	.1	.0	.0
May	.0	.0	#	0	.0	0	0	.0	0	0	0	0	#	2000	.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	.2	.0	#	0	3.7	1993	30	4.6	1993	2	1993	30	#	1993	.1	.0	@	.0	.0	@	.0	.0	.0
Nov	.4	.0	#	0	3.8	1977	27	3.9	1977	3	1977	27	#	1991	.5	.2	@	.0	.0	.2	@	.0	.0
Dec	2.7	1.5	#	0	6.6	1984	5	11.5	2000	7	1984	6	1+	2000	2.6	.8	.3	@	.0	2.9	.9	.1	.0
Ann	14.1	5.8	N/A	N/A	10.9	Feb 1993	25	21.3	Jan 1977	14	Jan 1978	18	6+	Jan 1978	13.3	4.1	1.2	.4	@	15.2	8.0	3.3	.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

Complete documentation available from:

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**Lat: 38°03N**

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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	5/05	5/01	4/27	4/24	4/22	4/19	4/16	4/13	4/08
32	4/22	4/18	4/15	4/13	4/10	4/08	4/06	4/03	3/30
28	4/14	4/09	4/06	4/03	3/31	3/28	3/25	3/22	3/17
24	3/31	3/26	3/22	3/18	3/15	3/12	3/08	3/04	2/26
20	3/19	3/12	3/08	3/04	2/28	2/25	2/21	2/16	2/10
16	3/10	3/02	2/24	2/19	2/14	2/09	2/04	1/29	1/19
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	9/29	10/03	10/06	10/08	10/10	10/13	10/15	10/18	10/22
32	10/10	10/15	10/19	10/22	10/25	10/28	10/31	11/04	11/09
28	10/19	10/24	10/28	10/31	11/03	11/06	11/10	11/14	11/19
24	10/27	11/03	11/08	11/13	11/17	11/21	11/26	12/01	12/08
20	11/12	11/19	11/24	11/29	12/03	12/07	12/12	12/17	12/24
16	11/22	11/29	12/03	12/08	12/12	12/15	12/20	12/25	1/02
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	187	182	178	174	171	168	164	160	155
32	216	209	205	201	197	193	189	184	178
28	237	230	225	221	217	213	208	203	196
24	276	266	259	252	246	241	234	227	217
20	304	295	288	282	277	272	266	259	250
16	337	321	313	306	300	294	288	281	271

\* 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	1047	825	591	295	85	5	0	1	45	262	565	896	4617
60	898	681	451	174	45	1	0	0	11	157	429	758	3605
57	815	604	367	116	24	0	0	0	4	106	347	674	3057
55	756	552	315	85	14	0	0	0	2	79	295	615	2713
50	613	426	205	31	3	0	0	0	0	31	183	475	1967
32	220	111	16	0	0	0	0	0	0	0	8	124	479

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	134	203	450	716	1047	1287	1444	1378	1116	791	431	205	9202
55	3	5	39	127	342	597	731	665	429	152	36	7	3133
57	1	3	28	97	287	538	669	603	372	117	24	4	2743
60	0	1	15	61	211	448	576	510	291	74	12	2	2201
65	0	0	4	23	108	304	425	356	173	27	2	0	1422
70	0	0	1	4	43	172	269	208	83	6	0	0	786

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	45	93	255	488	809	1059	1202	1140	885	552	240	83	45	138	393	881	1690	2749	3951	5091	5976	6528	6768	6851
45	21	45	155	350	654	909	1047	985	735	405	147	38	21	66	221	571	1225	2134	3181	4166	4901	5306	5453	5491
50	6	20	87	226	499	759	892	830	585	270	79	18	6	26	113	339	838	1597	2489	3319	3904	4174	4253	4271
55	1	4	41	132	352	609	737	675	437	159	40	6	1	5	46	178	530	1139	1876	2551	2988	3147	3187	3193
60	0	0	19	67	219	460	582	520	298	80	12	0	0	0	19	86	305	765	1347	1867	2165	2245	2257	2257
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	29	59	152	296	511	717	835	780	586	346	135	43	29	88	240	536	1047	1764	2599	3379	3965	4311	4446	4489

(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.  
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)