

**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: WEST LAFAYETTE 6 NW, IN

1971-2000

COOP ID: 129430

Climate Division: IN 4

NWS Call Sign:

Elevation: 705 Feet

Lat: 40°28N

Lon: 87°00W

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	15.0	23.3	68	1906	20	35.9	1990	-24+	1985	20	7.7	1977	1295	0	.0	.0	2.4	15.9	28.7	5.6
Feb	36.8	19.0	27.9	73	2000	26	38.9	1998	-23	1963	26	12.4	1978	1039	0	.0	.0	4.6	10.7	24.5	3.5
Mar	48.4	29.1	38.8	87	1910	24	46.5	1973	-12	1960	1	29.6	1984	813	0	.0	.0	13.1	3.3	20.5	.1
Apr	60.9	39.2	50.1	90	1930	11	55.7	1985	7	1982	7	44.6	1982	451	3	.0	.0	24.3	.2	7.8	.0
May	72.5	50.3	61.4	96+	1911	27	68.9	1977	26+	1966	10	56.0	1997	190	79	.0	.4	30.7	.0	.6	.0
Jun	81.4	59.6	70.5	104	1934	1	75.0	1991	35	1992	22	65.8	1972	22	188	@	4.0	30.0	.0	.0	.0
Jul	84.5	63.0	73.8	111	1936	14	77.9	1983	42+	1972	5	70.0	1996	5	275	.1	5.7	31.0	.0	.0	.0
Aug	82.5	60.6	71.6	103+	1918	5	77.7	1995	35	1965	29	66.7	1992	19	222	.0	3.2	31.0	.0	.0	.0
Sep	77.0	52.9	65.0	100+	1933	9	69.4	1978	25	1995	23	59.4	1993	88	86	.0	1.7	30.0	.0	.3	.0
Oct	64.8	41.6	53.2	90+	1922	2	61.3	1971	18	1925	30	47.3	1988	376	10	.0	@	28.6	.0	5.5	.0
Nov	50.0	32.2	41.1	78+	1930	19	46.8	1999	-3	1930	28	32.9	1976	718	0	.0	.0	14.5	1.7	16.6	.0
Dec	37.0	21.1	29.1	71+	1982	3	38.6	1982	-22	1989	22	16.5	2000	1116	0	.0	.0	4.4	10.0	26.7	2.4
Ann	60.6	40.3	50.5	111	Jul 1936	14	77.9	Jul 1983	-24+	Jan 1985	20	7.7	Jan 1977	6132	863	.1	15.0	244.6	41.8	131.2	11.6

+ 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: 1901-2001

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

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Lon: 87°00W

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	1.79	1.43	2.50	1949	18	4.26	1982	.09	1986	9.3	4.5	.9	.2	.30	.46	.72	.96	1.21	1.49	1.80	2.18	2.69	3.51	4.30
Feb	1.57	1.21	2.96	1936	26	6.01	1990	.12	1987	7.9	3.5	.9	.3	.17	.28	.50	.72	.96	1.22	1.53	1.92	2.45	3.33	4.18
Mar	2.84	2.71	3.85	1990	11	5.62	1998	.27	1981	10.2	6.2	1.9	.4	.72	.99	1.40	1.76	2.12	2.50	2.93	3.43	4.08	5.12	6.09
Apr	3.57	3.58	3.73	1994	12	8.49	1994	.70	1971	11.8	7.5	2.5	.5	1.10	1.44	1.94	2.38	2.80	3.23	3.71	4.27	5.00	6.13	7.17
May	4.35	4.06	4.79	2000	28	9.83	2000	.94	1988	11.3	8.1	2.8	1.0	1.21	1.62	2.25	2.80	3.33	3.89	4.51	5.24	6.19	7.68	9.07
Jun	4.24	4.73	4.27	1978	26	8.41	1998	.25	1988	11.1	7.5	2.9	1.2	.85	1.23	1.86	2.43	3.00	3.62	4.32	5.17	6.28	8.07	9.76
Jul	4.00	3.93	4.85	1939	18	11.11	1992	.85	1991	9.8	6.6	2.8	1.1	1.00	1.37	1.95	2.47	2.98	3.52	4.12	4.83	5.77	7.24	8.63
Aug	3.68	3.03	4.11	1926	14	9.44	1977	.54	1996	8.9	5.9	2.6	1.0	.84	1.18	1.72	2.20	2.69	3.20	3.78	4.47	5.37	6.81	8.17
Sep	2.98	2.35	3.85	1965	15	8.15	1972	.00	1979	8.2	5.2	2.0	.9	.45	.84	1.35	1.76	2.17	2.61	3.09	3.66	4.41	5.59	6.70
Oct	2.73	2.39	3.12	1983	22	5.56	1991	1.09	1987	9.3	5.3	1.9	.6	.98	1.24	1.61	1.92	2.22	2.52	2.85	3.24	3.73	4.49	5.18
Nov	3.08	3.09	4.07	1936	3	8.71	1985	.81	1976	10.5	5.8	2.3	.7	.91	1.21	1.65	2.03	2.40	2.78	3.20	3.70	4.35	5.36	6.29
Dec	2.43	2.20	2.16	1924	18	5.56	1971	.18	1976	10.8	5.8	1.5	.4	.56	.78	1.14	1.46	1.78	2.11	2.49	2.95	3.54	4.49	5.38
Ann	37.26	37.73	4.85	Jul 1939	18	11.11	Jul 1992	.00	Sep 1979	119.1	71.9	25.0	8.3	28.63	30.35	32.53	34.16	35.60	36.98	38.40	39.95	41.82	44.51	46.82

+ 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: 1901-2001

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

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Lat: 40°28N

Lon: 87°00W

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	6.7	4.3	2	1	7.0	2000	20	23.2	1978	19	1978	31	7	1978	4.2	2.7	.8	.4	.0	12.8	5.8	3.6	.6
Feb	4.2	3.2	2	1	6.0	1978	14	13.0	1980	20	1978	7	12	1978	3.3	2.0	.5	.1	.0	8.8	5.0	2.9	1.2
Mar	2.4	2.0	#	#	7.0	1999	9	7.3	1999	7+	1999	9	2	1984	1.3	1.1	.3	.1	.0	3.2	1.0	.4	.0
Apr	.6	.0	#	0	5.0	1982	6	9.0	1982	5	1982	9	1	1982	.3	.2	.1	@	.0	.4	.1	.1	.0
May	.0	.0	0	0	.0	0	0	.0	0	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	.2	.0	#	0	5.0	1989	20	5.1	1989	5	1989	20	#	1989	.1	@	@	@	.0	.1	@	@	.0
Nov	.9	.0	#	#	4.0	1980	27	5.0	1980	4	1980	28	#+	2000	.9	.5	.1	.0	.0	.9	.2	.0	.0
Dec	4.8	2.7	1	#	11.0	1973	20	21.5	1973	17	1973	21	5	2000	3.6	2.4	.6	.1	@	6.8	3.2	1.0	.3
Ann	19.8	12.2	N/A	N/A	11.0	Dec 1973	20	23.2	Jan 1978	20	Feb 1978	7	12	Feb 1978	13.7	8.9	2.4	.7	@	33.0	15.3	8.0	2.1

+ 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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NWS Call Sign:

Elevation: 705 Feet

Lat: 40°28N

Lon: 87°00W

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	5/27	5/21	5/17	5/14	5/10	5/07	5/03	4/29	4/23
32	5/15	5/10	5/06	5/03	4/30	4/27	4/24	4/20	4/15
28	4/28	4/24	4/20	4/18	4/15	4/13	4/10	4/07	4/02
24	4/17	4/13	4/09	4/06	4/03	3/31	3/28	3/25	3/20
20	4/05	3/31	3/28	3/25	3/22	3/19	3/16	3/13	3/08
16	4/01	3/25	3/21	3/17	3/13	3/09	3/05	2/28	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	9/19	9/22	9/25	9/27	9/29	10/01	10/03	10/06	10/09
32	9/25	9/30	10/03	10/06	10/09	10/12	10/15	10/19	10/24
28	10/04	10/10	10/14	10/18	10/21	10/25	10/28	11/01	11/07
24	10/21	10/27	10/31	11/03	11/06	11/10	11/13	11/17	11/23
20	11/04	11/09	11/13	11/16	11/20	11/23	11/26	11/30	12/06
16	11/12	11/19	11/24	11/28	12/02	12/05	12/10	12/14	12/21
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	160	154	149	145	141	137	133	128	122
32	181	174	169	165	161	157	153	148	142
28	211	204	198	193	188	184	179	173	165
24	235	229	224	220	216	213	209	204	198
20	263	256	251	246	242	238	233	228	221
16	289	280	274	268	263	258	252	246	237

* 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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Climate Division: IN 4 NWS Call Sign: Elevation: 705 Feet Lat: 40° 28N Lon: 87° 00W

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	1295	1039	813	451	190	22	5	19	88	376	718	1116	6132
60	1140	899	658	311	107	5	0	3	32	246	568	961	4930
57	1047	815	572	236	70	2	0	0	14	181	482	868	4287
55	985	763	513	191	50	1	0	0	8	143	427	811	3892
50	836	633	373	99	19	0	0	0	1	71	296	667	2995
32	359	240	64	1	0	0	0	0	0	0	34	244	942

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	86	124	274	542	912	1155	1294	1225	989	657	306	151	7715
55	0	4	9	43	249	466	581	512	306	87	10	5	2272
57	0	0	6	28	207	407	519	450	253	63	4	0	1937
60	0	0	0	13	151	320	426	361	181	35	1	0	1488
65	0	0	0	3	79	188	275	222	86	10	0	0	863
70	0	0	0	0	33	86	142	114	30	2	0	0	407

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	26	123	325	666	916	1047	978	752	423	148	28	9	35	158	483	1149	2065	3112	4090	4842	5265	5413	5441
45	4	8	72	209	513	766	892	823	602	285	84	15	4	12	84	293	806	1572	2464	3287	3889	4174	4258	4273
50	0	2	36	120	369	616	737	668	455	175	42	4	0	2	38	158	527	1143	1880	2548	3003	3178	3220	3224
55	0	0	13	63	238	467	582	513	317	95	19	0	0	0	13	76	314	781	1363	1876	2193	2288	2307	2307
60	0	0	4	26	136	328	429	362	197	46	4	0	0	0	4	30	166	494	923	1285	1482	1528	1532	1532
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	3	17	80	192	408	605	716	661	484	255	82	16	3	20	100	292	700	1305	2021	2682	3166	3421	3503	3519

(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