

# Climatology of the United States

No. 20

1971-2000

Station: CRANE NAVAL DEPOT, IN

COOP ID: 121869

Climate Division: IN 7

NWS Call Sign:

Elevation: 730 Feet Lat: 38° 52N Lon: 86° 50W

## 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	38.8	21.3	30.1	72+	1950	25	41.4	1990	-23	1994	19	15.1	1977	1083	0	.0	.0	6.3	9.4	25.5	2.1
Feb	45.1	25.5	35.3	76	1972	29	43.2	1998	-14	1951	2	21.8	1978	832	0	.0	.0	10.2	5.2	19.9	1.1
Mar	56.1	34.1	45.1	83+	1981	31	52.5	1973	-2+	1960	5	35.4	1980	618	0	.0	.0	21.6	.9	13.7	.1
Apr	67.2	43.5	55.4	88+	1977	17	61.4	1981	17	1982	7	49.9	1983	301	11	.0	.0	28.1	.0	4.1	.0
May	76.4	53.0	64.7	99	1967	25	72.3	1991	30	1966	10	59.5	1989	131	122	.0	.7	31.0	.0	.1	.0
Jun	83.9	61.8	72.9	102	1954	26	77.2	1991	35	1992	22	68.6	1974	12	248	@	4.8	30.0	.0	.0	.0
Jul	87.7	66.3	77.0	104+	1954	14	81.1	1983	42	1964	5	73.7	1971	0	371	.3	11.2	31.0	.0	.0	.0
Aug	86.3	64.4	75.4	101	1983	20	81.3	1983	41	1966	31	70.9	1992	3	323	.1	8.2	31.0	.0	.0	.0
Sep	80.2	57.4	68.8	102	1953	2	74.8	1998	32	1983	22	63.3	1974	44	158	.0	2.8	30.0	.0	@	.0
Oct	69.4	46.2	57.8	96	1953	1	65.1	1971	20+	1952	29	48.8	1988	265	41	.0	.1	30.4	.0	2.1	.0
Nov	55.9	36.6	46.3	82	1950	1	51.5+	1994	-5	1950	25	37.9	1976	565	1	.0	.0	20.1	.4	11.6	.0
Dec	43.9	26.4	35.2	74	1982	2	43.8	1982	-20+	1989	22	22.1	2000	925	0	.0	.0	9.0	4.8	22.1	.9
Ann	65.9	44.7	55.3	104+	Jul 1954	14	81.3	Aug 1983	-23	Jan 1994	19	15.1	Jan 1977	4779	1275	.4	27.8	278.7	20.7	99.1	4.2

+ 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/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

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# 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: CRANE NAVAL DEPOT, IN**

**COOP ID: 121869**

**Climate Division: IN 7**

**NWS Call Sign:**

**Elevation: 730 Feet Lat: 38°52N**

**Lon: 86°50W**

### Precipitation (inches)

Precipitation (inches)																								
	Precipitation Totals									Mean Number of Days <sup>(3)</sup>				Precipitation Probabilities <sup>(1)</sup> Probability that the monthly/annual precipitation will be equal to or less than the indicated amount										
	Means/ Medians <sup>(1)</sup>		Extremes							Daily Precipitation				Monthly/Annual Precipitation vs Probability Levels These values were determined from the incomplete gamma distribution										
Month	Mean	Med-ian	Highest Daily <sup>(2)</sup>	Year	Day	Highest Monthly <sup>(1)</sup>	Year	Lowest Monthly <sup>(1)</sup>	Year	>= 0.01	>= 0.10	>= 0.50	>= 1.00	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	3.03	2.55	4.00	1950	4	8.29	1982	.34	1981	8.5	6.2	2.1	.8	.67	.95	1.39	1.79	2.19	2.62	3.10	3.68	4.44	5.64	6.78
Feb	3.01	2.97	2.95	1995	16	6.04	1990	.70	1982	7.2	4.8	2.0	.8	.84	1.12	1.55	1.93	2.30	2.69	3.11	3.62	4.28	5.31	6.27
Mar	4.11	3.93	3.68	1964	9	9.29	1989	1.51	1994	9.6	7.3	3.1	.9	1.58	1.97	2.51	2.96	3.39	3.83	4.30	4.84	5.54	6.61	7.58
Apr	4.85	4.06	4.40	1998	16	11.67	1998	.87	1985	10.4	7.9	3.4	1.3	1.31	1.77	2.47	3.09	3.69	4.32	5.02	5.85	6.92	8.61	10.19
May	5.55	5.17	4.80	1995	18	13.30	1995	2.08	1991	9.7	8.2	4.1	1.7	2.08	2.60	3.35	3.97	4.55	5.15	5.81	6.56	7.53	9.01	10.36
Jun	4.01	3.51	3.69	2000	16	11.34	1998	.41	1991	7.8	6.2	2.9	1.3	.95	1.33	1.91	2.44	2.96	3.50	4.12	4.85	5.81	7.33	8.76
Jul	5.10	4.83	4.80	1984	4	13.12	1979	.88	1997	7.7	6.3	3.4	2.1	1.27	1.75	2.50	3.15	3.81	4.49	5.26	6.17	7.36	9.25	11.01
Aug	4.09	3.89	6.02	1949	15	9.13	1978	.40	1987	6.6	5.1	2.8	1.4	.97	1.36	1.95	2.49	3.02	3.58	4.21	4.96	5.94	7.50	8.96
Sep	3.41	3.39	4.00	1982	1	8.40	1974	.27	1997	6.1	4.8	2.1	1.0	.47	.75	1.24	1.71	2.21	2.75	3.39	4.16	5.21	6.92	8.57
Oct	3.47	2.69	4.70	1983	20	9.61	1983	1.21	1994	6.7	5.2	2.3	.8	1.16	1.49	1.97	2.38	2.78	3.18	3.62	4.14	4.81	5.84	6.79
Nov	4.24	3.87	3.31	1996	7	9.46	1985	.84	1999	8.4	6.6	3.0	1.3	1.37	1.77	2.36	2.87	3.36	3.86	4.42	5.06	5.90	7.19	8.39
Dec	3.38	3.37	2.71	1967	2	8.10	1982	.52	1992	7.4	5.2	2.2	.6	.97	1.29	1.77	2.20	2.61	3.03	3.51	4.07	4.79	5.93	6.98
Ann	48.25	49.75	6.02	Aug 1949	15	13.30	May 1995	.27	Sep 1997	96.1	73.8	33.4	14.0	34.98	37.56	40.87	43.37	45.59	47.72	49.93	52.36	55.31	59.57	63.25

+ 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:**

**Elevation: 730 Feet**

**Lat: 38°52N**

**Lon: 86°50W**

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	5.9	-99.9	1	0	10.0	1978	17	29.5	1978	25	1978	31	13	1977	1.3	1.2	.8	.3	.1	-9.9	-9.9	-9.9	-9.9
Feb	1.6	1.7	#	0	4.0	1974	24	4.0	1974	9	1977	3	5	1979	.9	.7	.1	.0	.0	-9.9	-9.9	-9.9	-9.9
Mar	1.9	.5	#	0	13.5	1996	19	13.7	1996	4	1999	14	#+	2000	.5	.4	.1	.1	.1	.2	.0	.0	.0
Apr	.0	.0	#	0	.5	1973	10	.5	1973	1	1973	10	#	1973	.1	.0	.0	.0	.0	.1	.0	.0	.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	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	#	.0	#	0	#	1972	26	#	1972	3	1975	27	#+	1975	.0	.0	.0	.0	.0	.0	.0	.0	.0
Dec	3.9	2.5	#	0	7.0	1973	20	7.8+	1981	7+	1974	1	1	1973	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9
Ann	13.3	-9.9	N/A	N/A	13.5	Mar 1996	19	29.5	Jan 1978	25	Jan 1978	31	13	Jan 1977	-9.9	-9.9	-9.9	-9.9	-9.9	-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

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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	5/18	5/12	5/07	5/03	4/29	4/25	4/21	4/16	4/09
32	4/28	4/23	4/20	4/17	4/14	4/11	4/08	4/05	3/31
28	4/17	4/12	4/10	4/07	4/05	4/02	3/31	3/28	3/24
24	4/07	4/02	3/30	3/27	3/24	3/21	3/18	3/15	3/10
20	3/30	3/25	3/21	3/18	3/15	3/12	3/09	3/05	2/28
16	3/17	3/10	3/05	3/01	2/25	2/21	2/17	2/12	2/05
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	9/28	10/02	10/05	10/08	10/10	10/13	10/16	10/19	10/23
32	10/05	10/11	10/16	10/20	10/23	10/27	10/31	11/04	11/11
28	10/21	10/26	10/29	11/01	11/04	11/07	11/10	11/13	11/18
24	10/29	11/04	11/08	11/12	11/15	11/19	11/22	11/26	12/02
20	11/06	11/12	11/17	11/21	11/25	11/28	12/02	12/07	12/13
16	11/18	11/25	11/30	12/04	12/08	12/11	12/16	12/20	12/27
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	179	173	169	164	159	155	149	141
32	214	206	201	196	192	187	182	177	169
28	231	225	220	216	213	209	205	200	194
24	257	249	244	240	235	231	227	221	214
20	276	268	263	258	254	249	245	239	232
16	307	299	294	289	285	281	276	271	263

\* 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	1083	832	618	301	131	12	0	3	44	265	565	925	4779
60	928	693	476	180	64	2	0	0	13	162	421	770	3709
57	835	615	393	122	38	1	0	0	5	114	341	686	3150
55	782	563	341	90	25	0	0	0	3	87	291	627	2809
50	636	436	229	34	8	0	0	0	0	38	183	487	2051
32	223	114	23	0	0	0	0	0	0	0	9	130	499

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	163	206	428	700	1014	1226	1394	1342	1104	799	436	228	9040
55	9	11	33	101	327	536	681	629	417	173	27	12	2956
57	0	7	23	72	277	477	619	567	359	138	18	8	2565
60	0	2	13	40	211	388	526	474	277	93	8	0	2032
65	0	0	0	11	122	248	371	323	158	41	1	0	1275
70	0	0	0	2	59	129	221	185	72	14	0	0	682

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	39	91	241	482	781	1001	1156	1108	875	559	242	70	39	130	371	853	1634	2635	3791	4899	5774	6333	6575	6645
45	18	46	150	344	626	851	1001	953	725	413	149	30	18	64	214	558	1184	2035	3036	3989	4714	5127	5276	5306
50	5	17	87	224	472	701	846	798	575	277	85	12	5	22	109	333	805	1506	2352	3150	3725	4002	4087	4099
55	0	4	45	129	326	551	691	643	427	163	39	3	0	4	49	178	504	1055	1746	2389	2816	2979	3018	3021
60	0	1	14	65	198	401	536	488	293	82	11	0	0	1	15	80	278	679	1215	1703	1996	2078	2089	2089
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	25	50	152	296	501	680	805	764	579	346	136	37	25	75	227	523	1024	1704	2509	3273	3852	4198	4334	4371

(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.

- 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/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)