

Climatography of the United States

No. 20

1971-2000

Station: COLUMBUS, IN

COOP ID: 121747

Climate Division: IN 5

NWS Call Sign:

Elevation: 621 Feet

Lat: 39°12N

Lon: 85°55W

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	36.6	19.1	27.9	77	1952	27	37.9	1990	-27	1912	13	11.7	1977	1153	0	.0	.0	4.7	11.5	27.1	3.2
Feb	41.8	22.3	32.1	78	1932	10	39.8	1976	-17	1912	4	16.6	1978	923	0	.0	.0	7.9	7.1	22.8	2.0
Mar	52.6	31.2	41.9	89	1910	24	48.9	1976	-7	1960	6	34.3	1984	716	0	.0	.0	17.6	1.4	18.2	.2
Apr	64.0	41.0	52.5	93	1925	24	57.6	1985	16	1923	1	48.0	1982	378	3	.0	.0	26.4	.0	5.7	.0
May	74.2	51.8	63.0	98+	1916	25	69.9	1991	27+	1926	4	58.0	1997	152	90	.0	.4	30.9	.0	.2	.0
Jun	82.6	61.3	72.0	108	1933	24	76.3	1984	35	1910	3	67.3	1972	14	223	@	3.8	30.0	.0	.0	.0
Jul	86.4	65.3	75.9	111+	1901	22	79.7	1983	42	1947	24	73.2	1984	0	335	.2	8.1	31.0	.0	.0	.0
Aug	84.8	62.8	73.8	106	1936	21	79.8	1983	40+	1915	31	69.3	1992	7	280	.2	5.6	31.0	.0	.0	.0
Sep	78.6	54.8	66.7	103+	1922	2	70.4	1998	25	1928	26	61.3	1974	60	110	.0	1.8	30.0	.0	.0	.0
Oct	67.0	42.4	54.7	97	1916	8	62.4	1971	13	1925	29	47.9	1987	338	18	.0	@	29.5	.0	5.1	.0
Nov	53.6	34.1	43.9	86	1950	1	49.6	1999	-2	1950	25	34.3	1976	635	0	.0	.0	18.2	.8	14.8	.0
Dec	41.6	24.6	33.1	73+	1982	3	42.5	1982	-20+	1917	11	19.1	1989	991	0	.0	.0	7.5	6.7	24.1	1.4
Ann	63.7	42.6	53.1	111+	Jul 1901	22	79.8	Aug 1983	-27	Jan 1912	13	11.7	Jan 1977	5367	1059	.4	19.7	264.7	27.5	118.0	6.8

+ 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/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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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: COLUMBUS, IN

COOP ID: 121747

Climate Division: IN 5

NWS Call Sign:

Elevation: 621 Feet Lat: 39°12N

Lon: 85°55W

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	2.66	2.37	5.09	1949	5	7.10	1982	.32	1981	10.5	5.7	1.7	.4	.62	.87	1.26	1.61	1.96	2.32	2.73	3.22	3.87	4.89	5.85
Feb	2.63	2.38	3.10	1908	15	5.87	1971	.26	1978	8.9	5.3	1.9	.5	.55	.79	1.18	1.53	1.88	2.26	2.69	3.20	3.87	4.95	5.97
Mar	3.66	3.13	7.00	1913	25	8.62	1989	1.49	1994	11.7	7.7	2.6	.7	1.27	1.61	2.12	2.54	2.95	3.37	3.83	4.36	5.04	6.10	7.07
Apr	4.36	3.73	3.99	1998	16	10.04	1996	1.24	1971	12.6	8.1	2.7	.9	1.31	1.72	2.34	2.87	3.39	3.93	4.53	5.23	6.13	7.54	8.85
May	4.63	4.57	4.53	1952	24	8.45	1983	1.88	1987	12.0	8.1	3.2	1.1	1.83	2.26	2.87	3.37	3.85	4.33	4.85	5.45	6.22	7.39	8.46
Jun	3.46	3.06	3.97	1960	23	9.54	1998	.42	1988	10.2	6.5	2.4	.7	.91	1.24	1.74	2.18	2.61	3.07	3.57	4.17	4.95	6.18	7.33
Jul	4.02	3.24	6.37	1998	20	9.46	1979	1.21	1975	9.4	6.4	2.5	1.1	1.17	1.55	2.13	2.62	3.11	3.62	4.17	4.83	5.69	7.02	8.27
Aug	3.75	3.47	4.11	1995	6	7.23	1978	.48	1987	8.3	5.9	2.4	1.2	1.11	1.47	2.00	2.46	2.91	3.38	3.89	4.50	5.28	6.51	7.65
Sep	3.06	2.61	5.45	1911	16	8.19	1996	.35	1998	8.1	5.3	2.2	.8	.58	.86	1.30	1.72	2.14	2.59	3.10	3.72	4.54	5.86	7.12
Oct	2.78	2.30	4.12	1910	5	7.92	1983	.65	1982	8.4	5.2	1.8	.6	.82	1.08	1.48	1.82	2.16	2.50	2.89	3.34	3.93	4.85	5.70
Nov	3.77	3.02	2.30+	1936	3	9.23	1985	1.03	1976	10.4	6.6	2.8	1.0	1.25	1.61	2.13	2.58	3.00	3.44	3.93	4.49	5.22	6.34	7.38
Dec	3.16	3.07	2.58	1932	30	8.33	1990	.38	1976	10.7	6.0	2.5	.6	.94	1.25	1.70	2.08	2.46	2.85	3.29	3.80	4.45	5.48	6.44
Ann	41.94	43.13	7.00	Mar 1913	25	10.04	Apr 1996	.26	Feb 1978	121.2	76.8	28.7	9.6	31.06	33.20	35.92	37.98	39.79	41.54	43.34	45.32	47.72	51.18	54.16

+ 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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Station: COLUMBUS, IN

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Climate Division: IN 5

NWS Call Sign:

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Lat: 39°12N

Lon: 85°55W

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	6.6	6.0	1	#	13.5	1978	17	20.6	1996	16	1996	7	5	1996	2.7	1.6	.4	.1	@	5.2	2.3	1.7	.4
Feb	3.2	.8	#	#	6.5	1979	26	14.3	1993	7	1998	6	2	1993	2.1	1.2	.5	.1	.0	2.8	1.5	.6	.0
Mar	1.4	1.0	#	#	7.5	1996	20	7.5	1996	10	1996	21	1+	2000	1.0	.8	.2	@	.0	1.1	.4	.2	.1
Apr	.1	#	#	0	1.0	1992	2	1.0+	1992	1	1992	2	#+	1993	@	@	.0	.0	.0	.1	.0	.0	.0
May	#	.0	0	0	#	1989	7	#	1989	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	1.0	1989	19	1.0+	1993	1+	1993	30	#+	1993	.1	.1	.0	.0	.0	.1	.0	.0	.0
Nov	.5	#	#	0	5.0	1971	7	5.0	1971	2	1980	18	#+	2000	.2	.2	.1	@	.0	.1	.0	.0	.0
Dec	2.5	.9	#	#	6.0	1981	17	9.5	2000	6	2000	30	3	1989	1.5	.8	.3	.1	.0	3.2	1.7	.3	.0
Ann	14.4	8.7	N/A	N/A	13.5	Jan 1978	17	20.6	Jan 1996	16	Jan 1996	7	5	Jan 1996	7.6	4.7	1.5	.3	@	12.6	5.9	2.8	.5

+ 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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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	5/11	5/06	5/02	4/29	4/26	4/24	4/21	4/17	4/12
32	5/02	4/27	4/24	4/21	4/18	4/15	4/13	4/09	4/05
28	4/18	4/14	4/11	4/08	4/06	4/03	3/31	3/28	3/24
24	4/10	4/04	3/31	3/28	3/25	3/21	3/18	3/14	3/09
20	3/30	3/24	3/20	3/16	3/13	3/09	3/06	3/01	2/23
16	3/17	3/10	3/06	3/02	2/27	2/23	2/19	2/15	2/09
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	9/24	9/28	10/02	10/04	10/06	10/09	10/11	10/14	10/19
32	10/06	10/10	10/13	10/16	10/19	10/21	10/24	10/27	11/01
28	10/15	10/20	10/25	10/28	10/31	11/03	11/07	11/11	11/16
24	10/25	10/31	11/05	11/09	11/12	11/16	11/20	11/25	12/01
20	11/07	11/14	11/19	11/23	11/27	12/01	12/05	12/10	12/17
16	11/18	11/25	11/30	12/05	12/09	12/13	12/18	12/23	12/30
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	180	174	170	166	162	159	155	151	144
32	203	196	191	187	183	179	175	170	163
28	229	222	216	212	208	204	199	194	187
24	257	249	242	237	232	227	222	216	207
20	283	275	269	263	259	254	248	242	234
16	307	299	294	289	285	280	275	270	262

* 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	1153	923	716	378	152	14	0	7	60	338	635	991	5367
60	998	783	561	241	77	3	0	0	19	218	487	836	4223
57	905	701	477	169	46	1	0	0	7	158	403	748	3615
55	843	649	420	128	30	0	0	0	4	125	348	690	3237
50	700	519	289	53	9	0	0	0	1	61	226	547	2405
32	258	162	35	0	0	0	0	0	0	0	14	164	633

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	128	163	342	615	962	1199	1358	1296	1041	703	369	197	8373
55	0	6	14	53	279	509	645	583	355	115	14	10	2583
57	0	2	9	34	232	450	583	521	298	86	8	5	2228
60	0	0	0	16	171	362	490	428	219	53	2	0	1741
65	0	0	0	3	90	223	335	280	110	18	0	0	1059
70	0	0	0	0	38	110	187	153	41	5	0	0	534

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	25	57	167	384	709	954	1110	1047	800	456	187	54	25	82	249	633	1342	2296	3406	4453	5253	5709	5896	5950
45	8	22	94	260	555	804	955	892	650	315	108	23	8	30	124	384	939	1743	2698	3590	4240	4555	4663	4686
50	2	7	50	156	405	654	800	737	500	197	59	8	2	9	59	215	620	1274	2074	2811	3311	3508	3567	3575
55	0	0	25	83	266	505	645	582	356	108	23	2	0	0	25	108	374	879	1524	2106	2462	2570	2593	2595
60	0	0	5	34	156	358	490	427	227	50	6	0	0	0	5	39	195	553	1043	1470	1697	1747	1753	1753
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	17	39	110	232	441	642	766	714	517	288	109	35	17	56	166	398	839	1481	2247	2961	3478	3766	3875	3910

(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