### 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

**COOP ID: 333874** 

Lon: 83°46W

**Station: HOYTVILLE 2 NE, OH** 

**Climate Division: OH 1** 

**NWS Call Sign:** 

Elevation: 700 Feet Lat: 41°13N

	Temperature (°F)  Mean (1)  Extremes  Degree Days (1) Base Temp 65  Mean Number of Days (3)																				
	Mea	<b>n</b> (1)						Extr	emes					_	•		Mean	Numb	er of I	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	31.7	14.2	23.0	65+	1997	5	33.6	1990	-22	1985	21	7.9	1977	1304	0	.0	.0	2.1	16.1	28.9	5.0
Feb	35.2	16.7	26.0	79	1959	14	35.5	1998	-18	1963	26	9.6	1978	1092	0	.0	.0	3.2	12.2	25.5	3.5
Mar	46.7	25.6	36.2	82	1998	31	43.0	1973	-9	1978	2	26.3	1984	895	0	.0	.0	11.3	4.0	22.7	.5
Apr	59.2	34.9	47.1	89	1962	30	53.5	1985	1	1982	7	40.4	1975	538	0	.0	.0	23.1	.2	11.2	.0
May	71.4	46.0	58.7	94+	1962	18	66.1	1991	25	1974	7	52.9	1997	245	51	.0	.8	30.6	.0	.9	.0
Jun	80.7	55.7	68.2	105	1988	26	72.1	1984	36	1998	6	62.8	1972	38	134	.1	3.7	30.0	.0	.0	.0
Jul	84.6	59.0	71.8	101	1988	8	76.1	1999	38	1971	5	68.3	1971	6	216	.1	5.2	31.0	.0	.0	.0
Aug	82.3	56.0	69.2	99+	1964	3	75.2	1995	37	1986	29	64.9	1992	34	163	.0	2.7	31.0	.0	.0	.0
Sep	76.4	48.5	62.5	99	1953	3	66.9	1978	27	1974	23	57.3	1975	119	42	.0	1.2	30.0	.0	.5	.0
Oct	64.1	37.9	51.0	90	1953	4	57.9	1971	17+	1974	21	44.9	1976	440	5	.0	.0	27.9	@	7.0	.0
Nov	49.6	30.2	39.9	78+	1974	1	45.6	1975	-1	1958	30	32.3	1976	753	0	.0	.0	13.5	1.3	18.0	.0
Dec	37.0	20.3	28.7	69+	2001	6	37.8	1982	-19	1989	22	15.1	1989	1128	0	.0	.0	3.7	10.3	27.1	1.7
Ann	59.9	37.1	48.5	105	Jun 1988	26	76.1	Jul 1999	-22	Jan 1985	21	7.9	Jan 1977	6592	611	.2	13.6	237.4	44.1	141.8	10.7

<sup>+</sup> Also occurred on an earlier date(s)

Complete documentation available from: www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

Issue Date: February 2004 042-A

- (1) From the 1971-2000 Monthly Normals
- (2) Derived from station's available digital record: 1952-2001
- (3) Derived from 1971-2000 serially complete daily data

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

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COOP ID: 333874

Climate Division: OH 1 NWS Call Sign: Elevation: 700 Feet Lat: 41°13N Lon: 83°46W

										Pı	recipi	tation	(incl	nes)										
	Me		P	recipi	tatio	on Total					of D	Number (3)	)	Proba		M	nonthly/ onthly/Ar	annual j indic	precipita ated am	ount vs Probal	ll be equ	els	· less tha	ın the
	Medi			ı		1	<b>1</b>	-	1			-	1		Th	ese value	s were det	ermined	from the	incomplet	e gamma	distributi	on	
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	1.64	1.92	1959	21	3.72	1974	.36	1981	11.1	5.0	.9	.1	.48	.65	.91	1.14	1.36	1.59	1.85	2.16	2.56	3.18	3.77
Feb	1.74	1.58	2.14	1997	27	5.41	1990	.40	1987	9.1	4.3	.9	.2	.41	.58	.83	1.06	1.28	1.52	1.79	2.11	2.52	3.18	3.81
Mar	2.50	2.08	1.70	1985	29	5.57	1985	.67	1981	11.0	6.4	1.6	.3	.92	1.16	1.49	1.77	2.04	2.32	2.62	2.96	3.40	4.09	4.71
Apr	3.15	3.36	2.10	1979	14	5.71	1984	.95	1971	12.8	7.8	1.7	.5	1.14	1.43	1.86	2.22	2.56	2.91	3.29	3.73	4.30	5.17	5.97
May	3.47	3.46	1.70	1953	22	5.64	1989	.60	1988	11.6	7.4	2.4	.8	1.30	1.62	2.09	2.47	2.84	3.22	3.63	4.10	4.71	5.63	6.48
Jun	3.66	3.55	3.60	1981	9	10.75	1981	.45	1988	10.8	6.9	2.5	.9	1.06	1.41	1.93	2.39	2.83	3.29	3.80	4.39	5.17	6.38	7.51
Jul	3.76	3.45	3.18	1972	16	9.17	1992	.30	1974	9.7	6.6	2.4	.8	.97	1.32	1.87	2.35	2.83	3.32	3.88	4.54	5.40	6.76	8.03
Aug	3.63	3.06	3.51	1998	25	12.46	1998	.72	1996	9.5	6.1	2.4	1.0	.67	.99	1.52	2.02	2.52	3.06	3.68	4.42	5.41	7.01	8.53
Sep	2.62	2.37	4.85	1959	1	6.08	1972	.51	1998	9.0	5.2	1.7	.4	.67	.91	1.29	1.63	1.96	2.31	2.70	3.16	3.76	4.72	5.61
Oct	2.40	2.04	2.50	1991	26	5.38	1991	.19	1982	9.5	5.3	1.4	.4	.64	.86	1.21	1.52	1.82	2.13	2.48	2.90	3.44	4.29	5.09
Nov	2.75	2.41	2.85	1966	9	6.71	1983	.21	1976	11.9	7.0	1.7	.4	.70	.96	1.36	1.71	2.06	2.43	2.84	3.33	3.96	4.97	5.91
Dec	2.43	2.39	2.19	1990	30	6.92	1990	.46	1976	11.8	6.0	1.4	.3	.76	.99	1.33	1.63	1.91	2.21	2.53	2.91	3.40	4.16	4.87
Ann	33.90	33.29	4.85	Sep 1959	1	12.46	Aug 1998	.19	Oct 1982	127.8	74.0	21.0	6.1	24.12	26.01	28.44	30.28	31.91	33.49	35.13	36.93	39.12	42.29	45.04

<sup>+</sup> Also occurred on an earlier date(s)

Complete documentation available from:

www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

<sup>#</sup> Denotes amounts of a trace

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>\*\*</sup> Statistics not computed because less than six years out of thirty had measurable precipitation

<sup>(1)</sup> From the 1971-2000 Monthly Normals

<sup>(2)</sup> Derived from station's available digital record: 1952-2001

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**COOP ID: 333874** 

**Station: HOYTVILLE 2 NE, OH** 

Climate Division: OH 1 NWS Call Sign: Elevation: 700 Feet Lat: 41°13N Lon: 83°46W

		Snow Fall Median         Snow Depth Median         Snow Fall Median         Highest Daily Snow Fall         Highest Monthly Snow Fall         Year Fall Monthly Snow Fall         Year Fall Monthly Snow Depth         Year Snow Depth         Highest Monthly Mean Snow Depth         Year Snow Depth         Highest Monthly Mean Snow Depth         Year Snow Depth         <																					
		Snow Totals   Extremes (2)															Mea	n Nui	mber	of Day	<b>VS</b> (1)		
	Snow Fall   Snow Fall   Mean   Median   Median																ow Fa					Depth esholo	
Month	Fall	Fall	Depth	Depth	Daily Snow	Year	Day	Monthly Snow	Year	Daily Snow	Year	Day	Monthly Mean Snow	Year	0.1	1.0	3.0	5.0	10.0	1	3	5	10
Jan	6.8	5.8	2	2	10.0	1996	3	15.0	1994	19	1999	15	8	1999	6.1	2.9	.7	.2	@	12.0	6.5	2.7	.6
Feb	5.5	4.2	2	1	6.0	1982	4	15.9	1982	18	1982	14	14	1978	4.3	2.0	.5	.1	.0	8.0	3.3	1.4	.5
Mar	3.5	2.4	1	#	6.0	1993	5	11.1	1993	10	1978	9	5	1978	2.8	1.4	.3	@	.0	3.2	1.2	.3	.0
Apr	1.0	.0	#	#	7.0	1994	7	9.0	1994	6	1982	9	1	1982	.7	.4	.1	.1	.0	.5	.2	.1	.0
May	.0	.0	#	0	1.0	1989	7	1.0	1989	1	1989	7	#	1989	@	@	.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	.3	1992	20	.3	1992	#	1992	20	#	1992	.1	.0	.0	.0	.0	.0	.0	.0	.0
Nov	1.2	.9	#	#	3.0	1977	28	5.9	1977	3	1997	16	1	1997	1.7	.5	.1	.0	.0	.9	.1	.0	.0
Dec	5.8	4.6	1	#	7.0	1973	31	18.6	1973	11	1977	11	4	1977	5.0	2.0	.5	.1	.0	7.3	3.1	1.4	.2
Ann	23.8	17.9	N/A	N/A	10.0	Jan 1996	3	18.6	Dec 1973	19	Jan 1999	15	14	Feb 1978	20.7	9.2	2.2	.5	@	31.9	14.4	5.9	1.3

<sup>+</sup> Also occurred on an earlier date(s) #Denotes trace amounts

Complete documentation available from: www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>-9/-9.9</sup> represents missing values Annual statistics for Mean/Median snow depths are not appropriate

<sup>(1)</sup> Derived from Snow Climatology and 1971-2000 daily data

<sup>(2)</sup> Derived from 1971-2000 daily data

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Climate Division: OH 1 NWS Call Sign:

Elevation: 700 Feet Lat: 41°13N Lon: 83°46W

				Freez	e Data				
			Spri	ng Freeze D	ates (Month/	Day)			
Temp (F)		P	robability of	later date i	n spring (thr	u Jul 31) tha	n indicated(	*)	
Temp (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	5/27	5/22	5/19	5/16	5/13	5/11	5/08	5/04	4/29
32	5/13	5/09	5/06	5/04	5/02	4/29	4/27	4/24	4/20
28	5/02	4/28	4/25	4/22	4/20	4/17	4/15	4/11	4/07
24	4/20	4/16	4/12	4/09	4/07	4/04	4/01	3/29	3/24
20	4/12	4/07	4/03	4/01	3/29	3/26	3/23	3/20	3/15
16	4/02	3/28	3/25	3/22	3/19	3/17	3/14	3/10	3/06
		•	Fal	l Freeze Da	tes (Month/D	ay)			
Temp (F)		Pro	bability of ea	arlier date ii	n fall (beginn	ing Aug 1) t	han indicate	d(*)	
Temp (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	9/15	9/19	9/22	9/25	9/27	9/30	10/02	10/05	10/09
32	9/26	9/30	10/03	10/05	10/08	10/10	10/13	10/16	10/20
28	10/02	10/08	10/13	10/17	10/20	10/24	10/28	11/01	11/08
24	10/19	10/25	10/29	11/02	11/06	11/10	11/13	11/18	11/24
20	11/02	11/09	11/13	11/17	11/21	11/24	11/28	12/03	12/09
16	11/14	11/20	11/24	11/28	12/02	12/05	12/09	12/14	12/20
		•		Freeze F	ree Period				
Tomp (F)			Probability	of longer th	an indicated	freeze free p	eriod (Days)		
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	153	147	143	139	136	133	129	125	120
32	175	170	165	162	159	155	152	147	142
28	207	199	193	188	183	178	173	167	158
24	239	230	224	218	213	207	202	195	186
20	259	251	246	241	236	232	227	221	213
16	280	272	266	261	257	252	247	241	233

<sup>\*</sup> 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.

Complete documentation available from:

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COOP ID: 333874

Climate Division: OH 1 NWS Call Sign: Elevation: 700 Feet Lat: 41°13N Lon: 83°46W

	Degree Days to Selected Base Temperatures (°F)														
Base						Heatin	g Degree 1	Days (1)							
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann		
65	1304	1092	895	538	245	38	6	34	119	440	753	1128	6592		
60	1149	952	740	391	148	10	0	8	45	302	603	973	5321		
57	1056	868	647	307	102	4	0	2	21	229	514	880	4630		
55	994	812	590	255	77	2	0	0	11	186	456	818	4201		
50	839	677	446	141	32	0	0	0	2	100	319	673	3229		
32	350	258	93	1	0	0	0	0	0	1	31	233	967		

Base						Coolin	g Degree l	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	69	89	221	454	829	1086	1233	1153	913	589	268	128	7032
55	0	0	5	17	192	398	520	440	234	61	3	0	1870
57	0	0	0	9	156	340	458	379	185	42	1	0	1570
60	0	0	0	3	108	256	365	292	118	22	0	0	1164
65	0	0	0	0	51	134	216	163	42	5	0	0	611
70	0	0	0	0	19	50	95	74	8	0	0	0	246

	Base 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																							
Base					Growing	g Degree	Units (N	(Ionthly)								Growi	ng Degre	ee Units (	Accumu	lated Mo	nthly)			
	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec													Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
40	7	17	95	269	606	873	1013	935	700	369	131	28	7	24	119	388	994	1867	2880	3815	4515	4884	5015	5043
45													0	4	55	219	672	1395	2253	3033	3583	3822	3890	3903
50	0 0 23 90 310 575 703 625 402 145 29												0	0	23	113	423	998	1701	2326	2728	2873	2902	2906
55	0	0	7	48	195	425	548	470	269	70	13	0	0	0	7	55	250	675	1223	1693	1962	2032	2045	2045
60	0	0	3	21	109	285	393	316	156	30	1	0	0	0	3	24	133	418	811	1127	1283	1313	1314	1314
Base	e Growing Degree Units for Corn (Monthly)													Gr	owing D	egree Un	its for C	orn (Acc	umulate	d Month	ly)	•		
50/86	<b>50/86</b> 1 10 62 171 372 564 682 619 443 228 72 12												1	11	73	244	616	1180	1862	2481	2924	3152	3224	3236

(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

#### 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.

Compete documentation for the 1971-2000 Normals is available on the internet from:

www.ncdc.noaa.gov/oa/climate/normals/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 are 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

- c. Snow Tables
  - 1. Snow Climatology
  - 2. Cooperative Summary of the Day
- d. Freeze Data Table

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

### References

U.S. Climate Normals 1971-2000, www.ncdc.noaa.gov/normals.html

U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normals/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