

Climatology of the United States

No. 20

1971-2000

Station: HIRAM, OH

COOP ID: 333780

Climate Division: OH 3

NWS Call Sign:

Elevation: 1,230 Feet Lat: 41° 18N Lon: 81° 09W

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	31.0	15.6	23.3	71	1950	25	32.1	1990	-25	1994	19	9.4	1977	1293	0	.0	.0	2.3	16.2	28.8	3.2
Feb	34.9	18.1	26.5	72	2000	27	35.3	1998	-22	1934	9	14.6	1978	1077	0	.0	.0	3.8	12.2	24.7	2.0
Mar	45.3	25.8	35.6	81+	1986	30	42.9	1973	-7	1901	6	27.3	1984	914	0	.0	.0	11.8	4.3	22.2	.2
Apr	57.0	36.1	46.6	87+	1990	28	53.2	1985	2	1923	1	40.0	1975	555	0	.0	.0	22.8	.3	10.0	.0
May	67.7	46.8	57.3	93	1911	28	64.6	1991	24	1923	10	50.7	1997	274	33	.0	@	30.2	.0	.6	.0
Jun	75.7	54.9	65.3	100	1988	26	68.5	1971	33	1966	2	59.3	1972	75	85	@	.8	30.0	.0	.0	.0
Jul	80.0	59.6	69.8	101+	1936	14	73.9	1988	41	2001	2	66.7	2000	12	160	.0	2.2	31.0	.0	.0	.0
Aug	78.1	58.1	68.1	102	1918	6	73.0	1995	38	1982	29	64.7	1972	35	131	.0	1.1	31.0	.0	.0	.0
Sep	71.5	51.7	61.6	102	1953	2	65.0	1998	27	1915	29	57.3	1975	128	26	.0	.3	30.0	.0	.1	.0
Oct	60.0	40.2	50.1	88+	1953	3	55.9	1971	20+	1962	27	44.5	1988	465	3	.0	.0	26.8	.0	3.9	.0
Nov	47.5	31.4	39.5	80+	1961	3	44.9	1975	-2	1929	30	30.4	1976	768	0	.0	.0	13.4	1.6	16.5	.0
Dec	36.2	21.6	28.9	73	1982	3	37.1	1982	-15	1989	25	15.8	1989	1119	0	.0	.0	4.3	10.4	27.0	1.0
Ann	57.1	38.3	47.7	102+	Sep 1953	2	73.9	Jul 1988	-25	Jan 1994	19	9.4	Jan 1977	6715	438	@	4.4	237.4	45.0	133.8	6.4

+ 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

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1900-2001

(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: HIRAM, OH

COOP ID: 333780

Climate Division: OH 3

NWS Call Sign:

Elevation: 1,230 Feet Lat: 41°18N

Lon: 81°09W

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	2.67	2.47	2.05	1959	21	5.14	1982	.97	1988	16.3	7.4	1.2	.2	1.09	1.33	1.68	1.96	2.23	2.50	2.80	3.14	3.57	4.22	4.82
Feb	2.33	2.10	2.50	1959	10	5.22	1990	.49	1978	12.9	6.6	1.0	.2	.73	.95	1.28	1.56	1.84	2.12	2.43	2.79	3.26	3.99	4.66
Mar	3.35	3.35	3.10	1913	25	5.23	1985	.70	1990	14.5	8.6	2.2	.2	1.53	1.83	2.23	2.56	2.87	3.18	3.51	3.89	4.36	5.08	5.72
Apr	3.60	3.71	2.04	1969	5	6.62	1998	.98	1971	14.5	8.9	2.2	.5	1.58	1.91	2.35	2.72	3.06	3.41	3.78	4.20	4.74	5.55	6.29
May	3.81	3.84	2.42	1905	26	7.00	1989	1.11	1977	12.9	8.4	2.6	.5	1.39	1.75	2.27	2.70	3.11	3.53	3.99	4.52	5.20	6.24	7.20
Jun	4.13	4.20	3.22	1983	28	6.76	1975	.57	1991	12.3	8.7	2.6	.9	1.37	1.76	2.34	2.82	3.29	3.78	4.31	4.93	5.73	6.97	8.11
Jul	3.84	3.50	3.82	1969	20	9.64	1992	.67	1997	10.2	6.8	2.6	1.1	1.44	1.80	2.31	2.74	3.15	3.56	4.01	4.54	5.20	6.23	7.16
Aug	3.86	3.64	4.24	1971	27	6.58	1979	.72	1993	9.8	6.8	2.6	1.0	1.12	1.49	2.04	2.52	2.99	3.47	4.01	4.64	5.46	6.74	7.93
Sep	4.14	3.80	5.53	1979	14	12.10	1972	.89	1998	10.8	7.6	2.5	.9	1.28	1.67	2.26	2.76	3.25	3.75	4.31	4.96	5.80	7.12	8.34
Oct	3.16	3.07	2.90	1962	26	6.04	1990	1.34	1982	12.3	7.6	1.9	.5	1.45	1.73	2.12	2.43	2.72	3.01	3.32	3.67	4.12	4.80	5.41
Nov	3.59	3.43	2.41	1999	3	9.89	1985	1.15	1976	14.8	8.3	2.3	.2	1.31	1.65	2.13	2.54	2.93	3.32	3.75	4.25	4.89	5.87	6.77
Dec	3.45	3.27	1.84	1992	31	7.36	1990	1.63	1976	16.8	9.0	2.1	.4	1.83	2.11	2.48	2.78	3.06	3.33	3.62	3.94	4.35	4.96	5.50
Ann	41.93	40.83	5.53	Sep 1979	14	12.10	Sep 1972	.49	Feb 1978	158.1	94.7	25.8	6.6	34.00	35.62	37.64	39.15	40.47	41.74	43.02	44.43	46.12	48.52	50.57

+ 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: 1900-2001

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

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Station: HIRAM, OH

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Climate Division: OH 3

NWS Call Sign:

Elevation: 1,230 Feet

Lat: 41°18N

Lon: 81°09W

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	15.4	13.8	4	3	10.0	1987	23	34.2	1976	22	1999	15	10	1977	9.8	6.3	1.7	.5	.1	17.6	8.9	5.9	1.4
Feb	12.0	11.1	4	3	10.2	1971	8	25.5	1984	17	1977	5	12	1978	6.9	4.4	1.3	.4	@	15.1	8.8	6.2	2.0
Mar	9.3	8.0	1	1	11.8	1971	8	32.2	1971	15	1973	18	5	1984	4.3	3.0	1.2	.5	.1	6.9	3.5	2.2	.4
Apr	1.5	.8	#	#	8.0	1987	4	8.0	1987	9	1987	4	1	1987	1.0	.6	.1	.1	.0	1.1	.2	.1	.0
May	#	.0	#	0	#	1989	7	#+	1989	#	1989	7	#	1989	.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	.3	.0	#	0	2.0	1981	23	2.5	1981	2+	1993	31	#+	2000	.2	.2	.0	.0	.0	.2	.0	.0	.0
Nov	6.0	4.0	#	#	11.0	1977	26	23.0	1977	11	1977	26	1	1997	2.7	2.0	.9	.3	@	3.2	1.5	.6	@
Dec	14.5	12.8	2	2	12.0	1987	17	34.4	1981	18	1974	2	7	1989	7.2	4.9	1.7	.7	.1	13.2	7.1	4.1	1.0
Ann	59.0	50.5	N/A	N/A	12.0	Dec 1987	17	34.4	Dec 1981	22	Jan 1999	15	12	Feb 1978	32.1	21.4	6.9	2.5	.3	57.3	30.0	19.1	4.8

+ 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: 41° 18N

Lon: 81° 09W

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	5/16	5/13	5/09	5/05	5/02	4/27	4/21
32	5/10	5/06	5/03	4/30	4/28	4/25	4/23	4/20	4/16
28	5/01	4/27	4/23	4/20	4/18	4/15	4/12	4/09	4/04
24	4/20	4/16	4/13	4/11	4/08	4/06	4/04	4/01	3/28
20	4/12	4/07	4/04	4/01	3/29	3/26	3/23	3/20	3/15
16	4/04	3/30	3/26	3/23	3/21	3/18	3/15	3/11	3/07
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	9/25	9/29	10/02	10/04	10/06	10/09	10/11	10/14	10/17
32	10/03	10/08	10/12	10/16	10/19	10/22	10/25	10/29	11/03
28	10/23	10/26	10/29	10/31	11/02	11/04	11/06	11/09	11/12
24	11/02	11/06	11/09	11/11	11/14	11/16	11/19	11/22	11/26
20	11/08	11/14	11/18	11/22	11/25	11/29	12/02	12/07	12/13
16	11/16	11/22	11/26	11/30	12/03	12/06	12/10	12/14	12/20
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	169	162	158	154	150	146	142	137	130
32	194	187	182	177	173	169	165	160	153
28	213	208	204	201	198	195	191	188	182
24	234	229	225	222	219	216	212	209	203
20	265	256	250	245	241	236	231	225	216
16	280	272	266	261	257	252	247	242	234

* 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	1293	1077	914	555	274	75	12	35	128	465	768	1119	6715
60	1138	937	759	408	167	25	0	6	46	322	618	964	5390
57	1045	853	666	323	117	11	0	1	20	245	528	871	4680
55	983	797	604	271	88	6	0	0	11	200	469	809	4238
50	828	657	459	157	37	1	0	0	2	108	330	661	3240
32	332	224	87	2	0	0	0	0	0	1	31	217	894

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	62	71	196	438	782	999	1171	1119	888	562	253	121	6662
55	0	0	0	17	158	315	458	406	208	47	2	0	1611
57	0	0	0	9	124	260	396	345	158	31	1	0	1324
60	0	0	0	3	82	184	303	258	93	14	0	0	937
65	0	0	0	0	33	85	160	131	26	3	0	0	438
70	0	0	0	0	11	24	59	49	3	0	0	0	146

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	11	26	107	274	583	816	975	923	690	374	131	28	11	37	144	418	1001	1817	2792	3715	4405	4779	4910	4938
45	2	7	56	170	431	666	820	768	540	240	68	12	2	9	65	235	666	1332	2152	2920	3460	3700	3768	3780
50	0	1	32	98	291	517	665	613	394	136	29	3	0	1	33	131	422	939	1604	2217	2611	2747	2776	2779
55	0	0	6	49	179	371	510	458	257	60	11	0	0	0	6	55	234	605	1115	1573	1830	1890	1901	1901
60	0	0	2	19	92	235	356	306	144	18	1	0	0	0	2	21	113	348	704	1010	1154	1172	1173	1173
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	3	11	67	166	345	525	657	614	419	200	70	15	3	14	81	247	592	1117	1774	2388	2807	3007	3077	3092

(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.

- 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
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