U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

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: TIFFIN, OH **COOP ID: 338313**

Climate Division: OH 2 **NWS Call Sign:** **Elevation: 740 Feet** **Lat: 41˚07N** **Lon: 83˚10W**

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	31.9	16.7	24.3	73	1950	25	34.4	1990	-21+	1994	20	10.4	1977	1261	0	.0	.0	2.3	15.1	27.8	3.4
Feb	35.8	19.1	27.5	74	2000	27	37.1	1998	-15	1985	3	12.9	1978	1051	0	.0	.0	3.9	11.4	24.0	1.9
Mar	46.9	27.9	37.4	83+	1945	25	44.7	1973	-12	1948	12	27.7	1984	856	0	.0	.0	12.5	3.5	20.1	.1
Apr	59.3	37.7	48.5	90	1942	30	55.0	1985	6	1964	1	41.9	1975	497	2	.0	.0	23.9	.1	7.9	.0
May	71.3	49.1	60.2	93+	1987	31	67.9	1991	27	1966	10	54.4	1997	213	62	.0	.6	30.8	.0	.4	.0
Jun	80.3	58.5	69.4	105	1988	26	72.8	1991	37	1945	5	64.5	1992	30	161	.1	3.1	30.0	.0	.0	.0
Jul	84.3	62.6	73.5	106	1936	14	77.2	1999	43	1945	11	70.1	1984	1	264	.1	5.9	31.0	.0	.0	.0
Aug	82.1	60.1	71.1	104	1936	22	76.8	1995	38	1946	30	67.4	1992	14	203	.0	3.2	31.0	.0	.0	.0
Sep	75.7	52.8	64.3	100+	1953	2	69.0	1978	30+	1947	27	60.0	1975	84	61	.0	.9	30.0	.0	.2	.0
Oct	63.4	41.3	52.4	91+	1953	3	60.1	1971	19	1988	31	46.3	1988	401	8	.0	.0	28.1	.0	4.2	.0
Nov	49.3	32.6	41.0	82	1950	1	46.9	1975	0	1958	30	33.5	1976	722	0	.0	.0	14.2	1.4	15.0	.0
Dec	37.1	22.8	30.0	72	1982	4	37.1	1982	-18	1989	22	17.0	1989	1087	0	.0	.0	4.5	9.5	24.9	1.1
Ann	59.8	40.1	50.0	106	Jul 1936	14	77.2	Jul 1999	-21+	Jan 1994	20	10.4	Jan 1977	6217	761	.2	13.7	242.2	41.0	124.5	6.5

\+ 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: 1936-2001

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

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Precipitation (inches)

Precipitation Totals

Month	Means/ Medians(1) Mean	Means/ Medians(1) Median	Extremes Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year
Jan	2.28	2.01	1.74	1959	22	4.21	1978	.77	1983
Feb	2.00	1.88	2.54	1959	10	4.79	1990	.08	1987
Mar	2.69	2.54	2.13	1952	11	4.89	1977	.90	1981
Apr	3.39	3.46	2.03	1964	21	5.20	1995	1.05	1971
May	3.77	4.17	3.24	1982	28	6.79	1997	.59	1988
Jun	4.18	3.81	2.77	1981	9	10.36	1981	.41	1988
Jul	3.36	3.13	3.12	2000	30	7.79	1992	.97	1974
Aug	3.91	3.85	3.55	1998	26	8.87	1998	.17	1996
Sep	3.20	2.62	3.67	1990	9	8.18	1981	1.12	1995
Oct	2.38	2.12	2.32	1995	6	5.00	1983	.45	1982
Nov	2.97	2.49	2.51	1958	17	6.72	1982	.47	1976
Dec	2.95	2.83	2.01	1990	30	7.35	1990	1.09	1976
Ann	37.08	37.59	3.67	Sep 1990	9	10.36	Jun 1981	.08	Feb 1987

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	12.4	5.9	1.1	.3
Feb	10.3	5.2	.9	.2
Mar	11.9	7.2	1.4	.2
Apr	12.6	8.3	2.1	.6
May	12.0	7.7	2.4	.7
Jun	10.6	7.6	3.2	.9
Jul	9.8	6.8	2.4	.6
Aug	9.7	6.2	2.5	.9
Sep	9.7	6.1	2.0	.8
Oct	9.7	6.0	1.5	.3
Nov	11.6	6.9	1.9	.4
Dec	13.3	7.2	1.8	.3
Ann	133.6	81.1	23.2	6.2

Precipitation Probabilities (1)

Probability that the monthly/annual precipitation will be equal to or less than the indicated amount

Monthly/Annual Precipitation vs Probability Levels
These values were determined from the incomplete gamma distribution

Month	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	.81	1.02	1.33	1.60	1.85	2.10	2.38	2.71	3.13	3.77	4.36
Feb	.45	.64	.93	1.20	1.46	1.74	2.05	2.42	2.92	3.70	4.44
Mar	1.15	1.39	1.73	2.01	2.27	2.53	2.82	3.14	3.56	4.18	4.75
Apr	1.41	1.72	2.15	2.51	2.85	3.19	3.55	3.97	4.51	5.32	6.06
May	1.27	1.63	2.15	2.59	3.02	3.45	3.93	4.49	5.21	6.32	7.34
Jun	1.25	1.65	2.25	2.76	3.26	3.78	4.35	5.02	5.89	7.25	8.51
Jul	1.25	1.57	2.02	2.39	2.75	3.12	3.51	3.97	4.56	5.46	6.29
Aug	.88	1.24	1.82	2.33	2.85	3.40	4.01	4.74	5.71	7.25	8.70
Sep	.83	1.13	1.60	2.01	2.41	2.83	3.30	3.86	4.59	5.74	6.82
Oct	.73	.96	1.30	1.59	1.87	2.16	2.48	2.86	3.34	4.10	4.81
Nov	.80	1.08	1.51	1.88	2.25	2.64	3.07	3.58	4.25	5.29	6.26
Dec	1.26	1.53	1.90	2.21	2.49	2.78	3.09	3.45	3.90	4.59	5.21
Ann	28.00	29.80	32.08	33.80	35.31	36.77	38.27	39.91	41.89	44.75	47.20

\+ 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: 1936-2001
(3) Derived from 1971-2000 serially complete daily data

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Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	8.5	8.4	3	2
Feb	6.4	6.8	2	1
Mar	3.8	3.0	1	#
Apr	.7	.0	#	#
May	.0	.0	#	0
Jun	.0	.0	0	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	.0	.0	0	0
Oct	.0	.0	0	0
Nov	1.2	.4	#	#
Dec	7.0	5.1	1	1
Ann	27.6	23.7	N/A	N/A

Extremes (2)

Month	Highest Daily Snow Fall	Year	Day	Highest Monthly Snow Fall	Year	Highest Daily Snow Depth	Year	Day	Highest Monthly Mean Snow Depth	Year
Jan	7.3	1992	14	29.8	1978	21	1978	28	8	1978
Feb	8.0	1976	6	14.7	1979	20	1978	1	16	1978
Mar	6.1	1987	31	12.0	1993	16	1978	9	8	1978
Apr	6.0	1982	6	6.0	1982	6	1982	7	1	1982
May	.7	1989	7	.7	1989	1	1989	7	#	1989
Jun	.0	0	0	.0	0	0	0	0	0	0
Jul	.0	0	0	.0	0	0	0	0	0	0
Aug	.0	0	0	.0	0	0	0	0	0	0
Sep	.0	0	0	.0	0	0	0	0	0	0
Oct	.5	1992	21	.5	1992	0	0	0	0	0
Nov	3.2	1997	14	3.8	1977	3	1997	16	1	1997
Dec	12.0	1974	2	22.9	1974	16	1974	3	5	1977
Ann	12.0	Dec 1974	2	29.8	Jan 1978	21	Jan 1978	28	16	Feb 1978

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	6.6	3.4	.9	.2	.0
Feb	4.7	2.4	.6	.1	.0
Mar	2.5	1.5	.4	.1	.0
Apr	.7	.3	.2	.1	.0
May	@	.0	.0	.0	.0
Jun	.0	.0	.0	.0	.0
Jul	.0	.0	.0	.0	.0
Aug	.0	.0	.0	.0	.0
Sep	.0	.0	.0	.0	.0
Oct	@	.0	.0	.0	.0
Nov	1.3	.5	.1	.0	.0
Dec	5.3	2.3	.7	.4	@
Ann	21.1	10.4	2.9	.9	@

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	14.4	9.4	5.5	.4
Feb	13.2	7.1	4.1	1.7
Mar	3.6	1.5	.9	.5
Apr	.4	.2	.1	.0
May	@	.0	.0	.0
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.0	.0	.0	.0
Oct	.0	.0	.0	.0
Nov	1.0	.1	.0	.0
Dec	8.6	4.7	2.3	.4
Ann	41.2	23.0	12.9	3.0

+ 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	5/17	5/13	5/11	5/08	5/06	5/04	5/01	4/29	4/25
32	5/08	5/04	5/01	4/29	4/26	4/24	4/22	4/19	4/15
28	4/26	4/22	4/19	4/16	4/14	4/11	4/09	4/06	4/02
24	4/15	4/10	4/07	4/04	4/01	3/30	3/27	3/23	3/19
20	4/09	4/03	3/30	3/27	3/24	3/21	3/18	3/14	3/08
16	3/31	3/24	3/19	3/15	3/11	3/07	3/03	2/26	2/19

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	9/22	9/26	9/29	10/02	10/04	10/06	10/09	10/12	10/16
32	9/30	10/05	10/09	10/12	10/15	10/18	10/22	10/26	10/31
28	10/15	10/19	10/23	10/26	10/29	11/01	11/04	11/07	11/12
24	10/25	10/31	11/05	11/09	11/12	11/16	11/19	11/24	11/30
20	11/05	11/11	11/16	11/19	11/23	11/27	11/30	12/05	12/11
16	11/19	11/25	11/29	12/03	12/06	12/09	12/13	12/17	12/23

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	165	160	156	153	150	147	144	140	135
32	190	184	179	175	171	167	163	159	152
28	216	210	205	201	197	194	190	185	179
24	247	239	233	229	224	219	215	209	201
20	269	260	254	248	243	238	233	226	217
16	296	287	280	275	269	264	259	252	243

***** 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

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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	1261	1051	856	497	213	30	1	14	84	401	722	1087	6217
60	1106	911	701	354	123	7	0	1	27	268	572	932	5002
57	1013	827	611	275	82	3	0	0	11	199	484	839	4344
55	951	771	554	227	60	1	0	0	6	160	426	777	3933
50	797	637	412	126	23	0	0	0	1	82	292	634	3004
32	317	227	79	2	0	0	0	0	0	0	25	207	857

Base — Cooling Degree Days (1)

Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	79	100	246	497	873	1122	1286	1213	967	630	293	143	7449
55	0	0	8	32	220	433	573	500	283	76	4	0	2129
57	0	0	3	20	180	375	511	438	229	54	2	0	1812
60	0	0	0	9	128	289	418	346	155	29	0	0	1374
65	0	0	0	2	62	161	264	203	61	8	0	0	761
70	0	0	0	0	24	67	125	94	14	1	0	0	325

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	14	27	120	311	644	895	1049	978	743	409	146	33	14	41	161	472	1116	2011	3060	4038	4781	5190	5336	5369
45	3	8	69	198	489	745	894	823	593	274	80	13	3	11	80	278	767	1512	2406	3229	3822	4096	4176	4189
50	0	2	36	112	345	595	739	668	447	163	41	4	0	2	38	150	495	1090	1829	2497	2944	3107	3148	3152
55	0	0	13	61	220	447	584	513	305	83	15	0	0	0	13	74	294	741	1325	1838	2143	2226	2241	2241
60	0	0	5	29	123	307	430	360	182	37	3	0	0	0	5	34	157	464	894	1254	1436	1473	1476	1476
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	2	12	75	189	394	592	714	658	472	242	74	16	2	14	89	278	672	1264	1978	2636	3108	3350	3424	3440

(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:
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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

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/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