



U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU  
 IN COOPERATION WITH Michigan Weather Service  
 CLIMATOGRAPHY OF THE UNITED STATES NO. 20 - 20  
**CLIMATOLOGICAL SUMMARY**

LATITUDE 45° 34'  
 LONGITUDE 84° 48'  
 ELEV. (GROUND) 707 Feet

MEANS AND EXTREMES FOR PERIOD 1942 - 1961

Month	Temperature (°F)								** Mean degree days	Precipitation Totals (Inches)						Mean number of days					Month			
	Means				Extremes					Mean	Greatest daily	Year	Snow, Sleet			Precip. .10 inch or more	Temperatures		90° and above	32° and below		32° and below	0° and below	
	Daily maximum	Daily minimum	Monthly	Record highest	Year	Record lowest	Year	Mean					Maximum monthly	Year	Greatest daily		Year	Max.						Min.
	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)					(a)	(a)	(a)		(a)	(a)						(a)
JANUARY	20	20	20	20	1944	-37	1948	1460	1.95	0.92	1950	20	20	20	20	1948	7	0	24	31	9	JANUARY		
FEBRUARY	27.6	6.7	17.2	51	1954	-37	1959	1390	1.63	2.09	1960	15.3	29.6	1953	10.8	1960	5	0	20	28	10	FEBRUARY		
MARCH	35.4	14.1	24.8	80	1945	-34	1948+	1230	2.17	1.49	1943	15.5	36.2	1959	14.8	1959+	6	0	13	29	5	MARCH		
APRIL	50.6	28.5	39.6	84	1942	-5	1954	760	2.55	1.49	1944	4.1	9.8	1957	6.2	1952	6	0	1	21	*	APRIL		
MAY	63.1	37.5	50.3	88	1944	15	1956	450	2.93	1.36	1943	0.4	3.4	1954	2.0	1954+	7	0	0	10	0	MAY		
JUNE	73.9	48.0	61.0	96	1952+	25	1949	160	3.22	2.47	1949	0.0	0.0	0.0	0.0		7	1	0	1	0	JUNE		
JULY	78.4	52.3	65.4	97	1955	27	1949	80	2.74	1.59	1951	0.0	0.0	0.0	0.0		6	2	0	0	0	JULY		
AUGUST	77.4	51.7	64.6	103	1947	30	1956+	90	2.63	2.59	1959	0.0	0.0	0.0	0.0		6	2	0	*	0	AUGUST		
SEPTEMBER	67.6	44.5	56.1	96	1953	21	1955+	290	3.83	2.78	1961	T	0.1	1956	0.1	1956	8	1	0	4	0	SEPTEMBER		
OCTOBER	57.9	35.7	46.8	85	1949+	15	1946	560	2.32	1.73	1954	1.5	13.0	1942	5.0	1943+	6	0	*	13	0	OCTOBER		
NOVEMBER	41.5	27.1	34.3	73	1944	-23	1950	920	3.27	1.52	1957	13.3	30.2	1951	10.0	1958	9	0	5	22	1	NOVEMBER		
DECEMBER	29.9	15.2	22.6	64	1951	-31	1958	1290	2.25	1.28	1942	23.7	57.3	1958	12.0	1945	8	0	19	30	4	DECEMBER		
Year	52.4	30.8	41.6	103	Aug. 1947	-37	Feb. 1959+	8680	31.49	2.78	Sept. 1961	95.1	57.3	Dec. 1958	14.8	Mar. 1959+	81	6	82	189	29	Year		

(a) Average length of record, years.

+ Also on earlier dates, months, or years.

T Trace, an amount too small to measure.

\* Less than one half.

\*\* Base 65°F

CLIMATE OF PELLSTON, MICHIGAN

Pellston is located in the extreme northern part of Lower Michigan about twenty miles south of the straits and about twenty miles east of Lake Michigan. The land is level in the immediate area; in other nearby areas it is rolling and the soil is predominately sand. Most of the area is wooded or cut-over land and not much farming is done.

The climate in Pellston is modified by the nearness of Lake Michigan and Lake Huron but due to the northerly location, winters are still quite severe. Summers are cool and the average growing season is only about three months long. Freezing temperatures have occurred in late June and early August.

Available weather data for the Pellston area show that the highest temperature ever recorded here is 103° on August 6, 1947. The lowest of record is 37° below zero on January 23, 1948, and February 20, 1959. Winters have an average of twenty nine days with temperatures zero or lower. At the other temperature extreme, 100° or higher has been recorded in only one month during the last twenty years. Days with temperatures of 90° or higher average six per summer.

February, 1959 with an average temperature of 8.5° is the coldest month of record and August, 1947 with an average of 71.3° is the warmest of record. The average dates of the last freezing temperature in the spring and the first freezing temperature in the fall are June 3rd and September 4th respectively.

Precipitation is heaviest during the summer months averaging 57% of the annual total during the six months period April through September. The heaviest average monthly precipitation is 3.83 inches in September and the lightest average monthly precipitation is 1.63 inches in February. The greatest single month precipitation of record is 7.44 inches in September, 1961 and the driest month of record is February, 1958 with a total of only 0.40 inch. Hourly precipitation of 1.0 inch or more occurs once in about two years, and two hourly precipitation of 1.2 inches or more occurs once in about two years.

Hourly precipitation of 1.7 inches or more will occur once in about twenty five years. Twenty four hourly totals of 2.1 inches or more will occur once in about two years, and twenty four hour totals of 3.4 inches or more will occur once in about twenty five years.

Snowfall averages 95.1 inches per calendar year. The amount is increased in this area due to the warmth and moisture picked up by cold outbreaks of air crossing Lake Michigan with instability and snow showers resulting during the late fall and early winter months. Nine months of the year have had measurable amounts but usually six to seven months record measurable amounts. Seasonal totals vary greatly. During the 1958-59 winter season the total snowfall was 159.9 inches while during the 1953-54 season only 54.5 inches was recorded.

Cloudiness is greatest in late fall and early winter, and least in spring and summer. Cloudiness is accentuated, in the late fall and early winter, by the proximity of lakes Michigan and Huron. All of Michigan is affected to some degree by this action during this period of the year. This same action also produces warmer average wintertime temperatures than would normally occur at this latitude.

Degree day data is provided as an index of heating requirements for buildings. For example; November averages 920 degree days and May, 450 degree days, which means that during an average November fuel necessary for heating will be over twice that required for May. Degree days for a single day are obtained by subtracting the mean temperature from 65. The need for the heating of buildings is considered none or slight if a day has an average temperature of 65° or higher.

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11/82.2/73  
 4587el  
 20-20  
 mich, Pellston

Total Precipitation (Inches)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1942	2.69	1.38	3.12	1.04	3.66	1.94	1.58	1.60	6.21	3.54	1.76	3.92	31.63
1943	2.00	2.43	4.66	2.39	3.91	6.66	1.80	2.22	1.08	1.73	4.98	1.33	35.19
1944	1.09	1.27	2.25	2.28	1.61	3.14	3.71	1.76	6.64	1.87	1.92	1.39	28.94
1945	1.79	1.69	1.25	3.49	2.62	2.05	6.64	1.58	4.68	3.49	3.45	2.58	29.31
1946	2.39	1.88	1.51	1.05	4.05	5.44	2.85	3.40	3.53	.90	2.88	3.07	32.95
1947	2.05	1.36	1.73	2.69	5.19	2.41	.95	.92	5.75	.85	2.86	1.07	27.85
1948	2.49	2.04	2.63	3.63	1.82	2.57	3.17	1.37	1.03	2.28	5.74	1.91	30.68
1949	2.91	2.42	1.88	1.40	2.05	4.85	1.91	.75	2.66	1.69	2.57	1.53	26.62
1950	3.35	1.32	3.01	2.94	1.67	2.41	2.52	5.09	3.74	1.63	3.12	2.15	32.95
1951	1.43	1.94	2.98	2.94	2.82	1.15	5.78	3.12	3.97	6.67	4.32	3.39	40.56
1952	2.58	1.07	2.88	2.09	2.31	3.23	4.73	2.95	2.63	.55	3.98	1.99	30.79
1953	2.56	3.95	2.16	3.85	2.37	2.44	2.97	2.37	3.93	.61	1.51	2.64	31.36
1954	1.00	1.94	1.11	4.87	2.38	5.55	1.55	1.42	4.55	3.19	.87	1.01	28.54
1955	2.42	.95	1.59	1.90	1.88	1.53	1.90	1.82	1.32	3.18	3.54	3.74	25.57
1956	1.10	.71	3.17	1.64	2.11	2.36	4.39	4.15	1.68	.52	3.83	1.72	27.38
1957	1.91	1.32	1.20	2.36	4.70	3.87	2.38	2.04	4.51	1.68	5.34	2.31	33.62
1958	.90	.40	.54	1.47	1.89	2.33	2.28	4.44	3.47	3.49	4.49	3.46	29.16
1959	1.29	1.65	3.19	2.30	3.93	1.11	1.39	6.62	4.08	4.93	2.01	1.46	33.96
1960	1.25	3.36	1.02	5.33	5.77	2.64	3.04	3.50	3.94	1.65	3.45	1.95	37.60
1961	1.13	.88	1.78	1.27	1.89	6.67	5.24	1.48	7.44	2.02	2.74	2.38	34.92

STATION HISTORY

This station was established late in 1941 by the Federal Aviation Authority and observations have been taken by employees of this agency to the present time (1962). The station is located at the Emmet County Airport, one and one half miles north northwest of Pelliston.

Average Temperature (°F)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1942	18.4	15.8	27.7	45.7	50.2	61.5	64.5	64.5	55.4	44.9	33.5	20.1	41.9
1943	13.2	15.8	17.4	34.7	50.5	63.0	66.8	64.1	53.0	44.6	32.2	22.5	39.8
1944	26.4	19.8	22.0	36.3	56.3	60.7	65.9	66.3	58.4	45.5	38.1	21.9	43.1
1945	10.1	17.9	37.1	44.2	47.9	59.4	65.0	65.7	55.6	44.6	35.0	19.3	41.8
1946	20.6	14.6	37.0	40.5	48.4	60.2	64.6	61.4	57.0	49.2	36.0	23.4	42.7
1947	20.1	15.6	23.4	35.6	46.1	60.0	66.7	71.3	58.3	54.5	31.1	22.6	42.1
1948	10.6	12.1	22.6	43.1	49.0	60.2	66.4	66.3	59.5	45.3	40.1	25.0	41.7
1949	22.0	20.7	26.0	41.1	51.7	65.3	67.9	66.9	55.2	49.6	32.0	25.5	43.7
1950	20.7	16.5	20.5	31.6	50.4	60.7	63.8	58.7	55.0	49.3	31.0	21.1	39.9
1951	16.0	19.0	25.4	40.7	55.7	59.6	65.1	61.5	54.2	46.7	27.8	22.5	41.2
1952	21.0	19.5	23.0	43.4	50.1	61.8	68.2	63.5	58.8	40.7	36.7	26.5	42.8
1953	21.0	21.5	29.2	37.5	51.2	61.9	65.4	65.5	55.7	48.4	39.4	27.7	43.7
1954	15.0	25.6	23.3	40.3	45.6	63.3	63.1	62.3	54.8	45.0	36.5	20.6	41.3
1955	17.1	16.3	21.3	46.0	53.0	65.1	71.1	69.2	54.4	49.1	31.3	19.9	42.7
1956	16.0	17.4	19.3	35.0	47.0	62.5	61.5	62.6	50.9	50.2	34.6	25.1	40.2
1957	10.4	18.6	25.8	39.9	49.9	60.2	65.0	61.8	54.1	43.5	35.0	25.7	40.8
1958	18.2	12.4	29.0	40.3	46.5	55.4	62.5	62.5	55.4	47.5	35.4	12.3	39.8
1959	12.0	8.5	20.4	37.5	55.5	63.1	65.7	68.8	58.3	43.6	27.8	27.7	40.7
1960	20.8	16.9	15.7	39.9	53.3	58.7	62.9	64.5	57.3	45.6	37.9	20.1	41.1
1961	10.7	18.8	29.3	38.0	47.9	59.0	65.7	63.8	60.4	48.4	35.2	22.7	41.7

DATES OF FREEZING TEMPERATURES IN THE SPRING AND FALL (1942-1961)

Minimum Temperature	Last in Spring		First in Fall	
	Earliest	Latest	Earliest	Latest
32° or Lower	5/19/52*	6/23/59	8/01/47	10/03/52
28° or Lower	5/07/52	6/08/49	9/09/49	10/11/44
24° or Lower	4/17/48	5/27/61	9/22/42	10/26/50
20° or Lower	3/26/51	5/24/56	10/07/54#	12/09/48
16° or Lower	3/09/53	5/08/56	10/07/54	12/23/48

\*Also in 1943 and 1944.  
#Also in 1953.

Example in using table: The average date of the last temperature of 32° or colder in the spring is June 3rd. The earliest date of this event in all springs of the 1942-1961 period was May 19, 1943, 1944 and 1952; the latest date was June 23, 1959. In the fall, 32° or colder occurred for the first time as early as August 1, 1947 and as late as October 3, 1952. The average date is September 4th.