

Actual settlement of the county dates from 1833, when settlements were made at Two Rivers, Manitowoc, Manitowoc Rapids, and Shoto. The influx of German settlers started about 1846. In 1847, 15 German families settled at Mishicott and more than 40 families in Newton. In 1854 a colony of Badenese settled in Eaton Town, founding St. Nazianz under the leadership of Father Oschwald. Many Norwegians were among the early settlers. They first settled in 1843 at Manitowoc Rapids. The Irish settled mostly in Maplegrove, Rockland, Cato, Meeme, and Franklin Towns. Several English settlements were made in Kossuth and Manitowoc Towns. In 1850 the population of the county was 3,720, of which 1,378 were Germans, 246 Norwegians, 175 Irish, 129 British, 165 Canadians, and 255 other foreign-born people of different nationalities. Of the native born 409 came from Wisconsin, 376 from New York, and the remainder from several other States.

The cities of Manitowoc and Two Rivers and the smaller towns and villages of the county afford local markets for considerable farm produce, but the greater part is shipped out of the county. The largest items in the merchantable produce are the dairy products.

The Minneapolis, St. Paul & Sault Ste. Marie Railway, the Chicago & North Western Railway, and the Chicago, Milwaukee, St. Paul & Pacific Railroad systems furnish good transportation facilities. Car ferries cross Lake Michigan from Manitowoc to Ludington and Frankfort, Mich., where they join with the Pere Marquette Railway and the Ann Arbor Railroad.

The wagon roads and highways within the county are being improved under a joint State and county system, and 75 miles of improved concrete highways have been constructed representing about one-fifth of the main system. Good road-building material is abundant in the county, and poor roads are yearly becoming scarcer. County and State trunk highways are graded and crowned with gravel, crushed rock, or cement, and most of the side roads are also graveled.

CLIMATE

The climate of Manitowoc County is typical of the eastern part of Wisconsin. Climatic conditions along the lake are somewhat different from those 20 to 30 miles distant from it.

The region covered by this report is included in the "Michigan shore," which is one of eight climatic provinces in Wisconsin.² This province stretches along the western shore of Lake Michigan and extends inland as far as the influence of the lake modifies the climate to any appreciable extent, in few places more than the width of a county.

The Michigan shore possesses the most equable climate in Wisconsin. The winters are mild and somewhat more moist than elsewhere in the State, spring is retarded and cool, summer is mild and pleasant, and autumn is warmer than it is farther west. The lake shore is not especially a corn region but is excellent for pasture grasses, peas, and hay. The average frost-free season extends from May 2 to October 11, and the latest and earliest recorded killing

² WHITSON, A. R., and BAKER, O. E. THE CLIMATE OF WISCONSIN AND ITS RELATION TO AGRICULTURE. Wis. Agr. Expt. Sta. Bul. 223, 65 p., illus. 1912.

frosts, respectively, were on May 26 and September 13. The average rainfall is slightly lower than that of the State and a larger proportion falls in summer and less in winter.

Table 1 shows the normal monthly, seasonal, and annual temperature and precipitation as recorded at the Weather Bureau station at Manitowoc.

TABLE 1.—Normal monthly, seasonal, and annual temperature and precipitation at Manitowoc

[Elevation, 616 feet]

Month	Temperature			Precipitation			
	Mean	Absolute maximum	Absolute minimum	Mean	Total amount for the driest year (1895)	Total amount for the wettest year (1924)	Snow, average depth
	° F.	° F.	° F.	Inches	Inches	Inches	Inches
December.....	24.9	60	-24	1.78	1.54	1.50	10.4
January.....	18.7	55	-32	1.70	1.64	1.06	13.6
February.....	19.4	56	-29	1.47	.49	2.76	10.6
Winter.....	21.0	60	-32	4.95	3.67	5.32	34.6
March.....	30.3	73	-13	2.09	.42	3.68	6.9
April.....	42.2	87	8	2.49	1.52	5.40	3.4
May.....	52.1	92	18	3.06	4.42	5.40	.1
Spring.....	41.5	92	-13	7.64	6.36	14.48	10.4
June.....	62.1	98	33	3.48	1.49	3.00	.0
July.....	67.6	100	38	3.59	1.85	4.38	.0
August.....	66.4	99	38	2.93	3.51	11.07	.0
Summer.....	65.4	100	33	10.00	6.85	18.45	.0
September.....	59.7	96	26	3.22	1.16	1.89	.0
October.....	48.8	84	11	2.64	.53	.14	.5
November.....	36.1	69	-10	2.18	1.59	2.76	3.4
Fall.....	48.2	96	-10	8.04	3.28	4.79	3.9
Year.....	44.0	100	-32	30.63	20.16	43.04	48.9

AGRICULTURE

The first agricultural efforts in Manitowoc County were in the production of subsistence crops and feed for the livestock kept. Lumbering preceded agriculture in most places, and permanent settlement followed after lumbering operations had partly cleared the land. The main products of the county were pine and hemlock lumber, and it was not until about 1847 that sufficient flour and dairy products for local needs were produced in the county. During early settlement, most of the settlers worked in sawmills and in the woods and did not clear much land. About 1865 agriculture began to assume importance.

In 1840 there were produced in the county 225 bushels of wheat, 1,750 bushels of oats, 175 bushels of corn, 1,900 bushels of potatoes, and 67 tons of hay. There were then in the county 81 milk cows and 90 hogs. By 1870, the total yield of wheat had risen to more than 500,000 bushels. It continued to increase until about 1880, after which time there was a decrease in acreage. Very little rye was