2022

TRANSPORTATION SYSTEM PERFORMANCE INDICATORS Sheboygan Metropolitan Planning Organization



January 2023



Prepared by:

Bay-Lake Regional Planning Commission

January 2023

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The contents of this report reflect the views of the Bay-Lake Regional Planning Commission, which is responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the official views and policies of the U.S. Department of Transportation. This report does not constitute a standard, specification, or regulation.

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Please note that the measures in italics have not been included in this report; however, these measures are going to be a part of thee proceeding report (2023) along with goals for each measure.

The PASER data are updated every odd numbered of year. Due to the lack of updated data, the PASER data have not been included in this report.

Introduction and Purpose

Key Findings of the Report

Positive Trends

- Decrease in the percentage of people driving to work alone.
- Decrease in the number of fatalities and fatality rate for motorized and non-motorized system users.
- Increase in transit ridership.
- Maintaining the fixed-route transit service area.
- Maintaining transit safety and reliability.

Negative Trends

- Decrease in excellent condition of pavement of State Trunk Highways.
- Steadiness, rather than decrease, in the percentage of deficient condition of bridge ratings.
- Steadiness, rather than increase, in the percentage of new and good condition of culvert ratings.

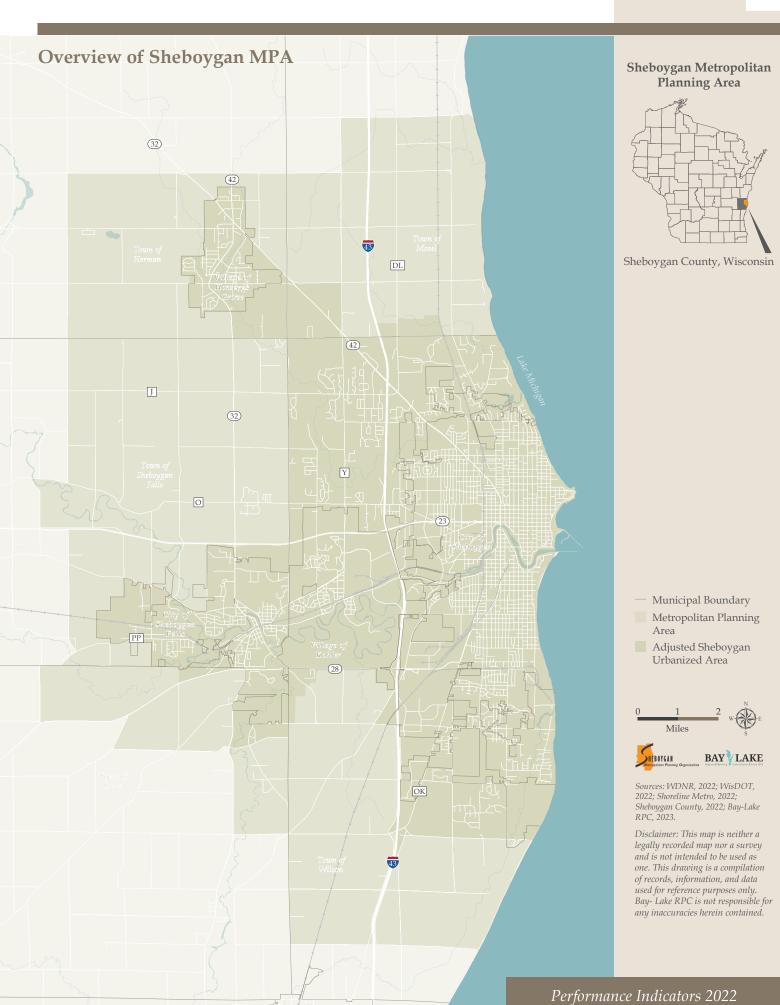
This report presents a set of system performance indicators and the base data relevant to the indicators. The purpose of the performance indicators is to provide some quantitative evaluation of the ability of the Sheboygan Metropolitan Planning Area to move toward the goals stated in the *Year* 2050 Sheboygan Area Transportation Plan (SATP); (these goals can be found in Chapter 4 of the plan, Mission Statement, Goals and Objectives). At this time, the majority of the indicators are not tied to any specific performance goals, and are only intended as a planning tool. Over time, it will become possible and/or desirable to compile realistic performance goals; however, some experience and trend data will be necessary to develop such quantitative goals. Overall, this report has been prepared to assist the Sheboygan Metropolitan Planning Organization (MPO) with general transportation planning.

It should be noted that some of the performance indicators in this report were impacted by the COVID-19 pandemic, which started to seriously impact activities across Wisconsin in March 2020.

About the Sheboygan MPO

The Sheboygan Metropolitan Planning Organization (MPO) is the policy board created and designed to carry out the area's metropolitan transportation planning process in the Sheboygan Metropolitan Planning Area (MPA). MPA boundaries are the official jurisdiction of the MPOs. These boundaries define the extent of the expected growth for the metropolitan area during the next 20 years, and comprise the area within which the MPO will conduct transportation planning activities over the next 10 years — until the next decennial census. The MPA boundary must include the entire area within the Adjusted Urbanized Area (UZA) boundary. The UZA boundary are adjusted every 10 years, following the release of decennial census data.

The Sheboygan MPO consists of 10 communities: the Cities of Sheboygan and Sheboygan Falls; the Villages of Kohler and Howards Grove; and the Town of Sheboygan which are completely within the Sheboygan MPA boundary, whereas the towns of Herman, Lima, Mosel, Sheboygan Falls, and Wilson are only partially within the Sheboygan MPA boundary. Some of the information within this report contains data for the entire communities, not just the portions within the MPA.



Overview of the Sheboygan MPO



Population



Unemployment Rate

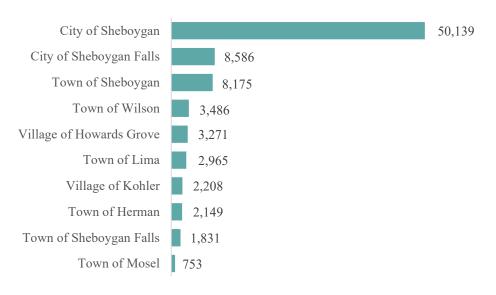
3.1%



Population

The population of Sheboygan County is 118,495. The Sheboygan Metropolitan Planning Area (MPA) consists of 31,162 acres and the population within the 10 communities of the MPA 83,563.

Sheboygan Metropolitan Planning Area Municipalities Population Estimates, 2022



Source: WDOA, Demographic Services Center 2022 Estimates

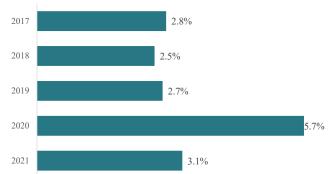
Please note that the towns of Mosel, Lima, Sheboygan Falls, Herman and Wilson are only partially within the Sheboygan MPA boundary.

Employment

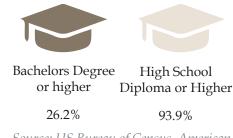
Sheboygan Metropolitan Statistical Area (MSA) had an average annual labor force of 62,287 in 2021. Of these, 60,350 were employed, while 1,937 (3.1 percent) were unemployed.

Source: U.S. Bureau of Labor Statistics, Local Area Unemployment Statistics (Labor force and employment estimates by county/Metropolitan Statistical Area, or MSA, 2021)

Unemployment Rate in Sheboygan County (Sheboygan MSA) by Year



Education Attainment

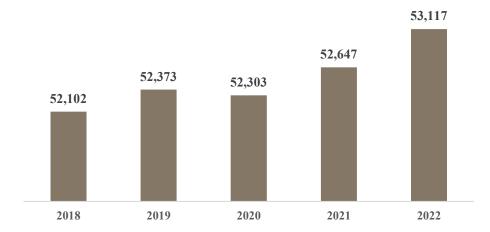


Source: US Bureau of Census, American Community Survey (ACS), persons age 25+ (2017-2021), Sheboygan County

Housing

The Wisconsin Department of Administration's Demographic Services Center estimated that there were 53,117 housing units in Sheboygan County on April 1, 2022. Estimates were not available below the county level.

Sheboygan County Housing Units Estimates



Source: WDOA, Demographic Service Center

Sheboygan Metropolitan Planning Area Municipalities: Housing Unit Additions and Deletions: 2021

Jurisdiction	Added Housing Units	Deleted Housing Units	Net Change in Housing Units
C. Sheboygan	94	24	70
C. Sheboygan Falls	251	0	251
V. Howards Grove	8	0	8
V. Kohler	8	0	8
T. Herman	1	0	1
T. Lima	5	0	5
T. Mosel	2	0	2
T. Sheboygan	26	1	25
T. Sheboygan Falls	3	0	3
T. Wilson	8	1	7
Total	406	26	380

Source: WDOA, Demographic Services Center, Housing Unit Additions and Deletions for Wisconsin Minor Civil Divisions, 2021

Sheboygan MPA

Source: 2020, Census







Net Change in Housing Units by Year in Communities of the Sheboygan MPA



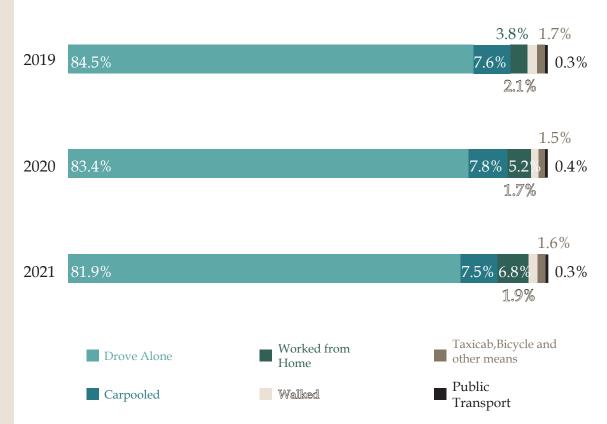
Impact of Transportation on the Environment

Modes of Transportation to work in Sheboygan County

Almost 50% of the Sheboygan County's total population is over 16 years and considered workforce population. Mean travel time to work was 18.8 minutes. Almost 46% of the population commuted to work in less than 15 minutes and 36.1% commuted in 15-30 minutes. 1.7% of the working population did not have any access to vehicles.

The goal is to reduce the number of work trips made by single occupant vehicles (SOVs), ultimately resulting in reduction of greenhouse gas emissions and increase the efficiency of the transportation network.

Means of Transportation to Work



Even though there is decrease in percentage of people driving alone to work, there is a proportional increase in the percentage of people working from home. Moreover, there is a decrease in percentage of people carpooling or taking public transport to work.

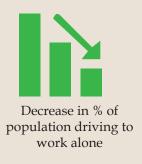
The comparison does show an increase in the percentage of people using active modes of transportation to work.

Source: US Census, ACS, 5-Year estimates, 2019, 2020 and 2021

DESIRED TREND



ACTUAL TREND (2019-2021)



Park-and-Ride Lots

Park-and-ride lots are provided for people who want to carpool to work or any other places. Increased use of park-and-ride lots indicates more people are carpooling or opting for alternate mode of transport which in turn reduces the impact of transportation on the environment. There are total of three lots in Sheboygan County of which two park-and-ride lots are located within the Sheboygan MPA. Average annual usage for the park-and-ride lots are in the table below and monthly use of the park-and-ride lots within the Sheboygan MPA is in the graphs below. All of the park-and-ride facilities have been underused throughout each month every year.

Average annual usage of park and ride lots in Sheboygan County

Park and Ride Lot	Capacity		Percent Used	
		2020	2021	2022
I-43 and STH 28	45	26.3%	20.0 %	31.1%
I-43 and CTH V/West Frontage Road	30	13.1%	13.3%	6.7%
I-43 and CTH AA	30	16.4%	13.3%	13.3%

I-43 and STH 28



I-43 and CTH V/West Frontage Road



DESIRED TREND



ACTUAL TREND 2020-2022



ACTUAL TREND



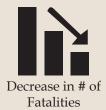
Source: WisDOT Northeast Region office – Park-and-ride capacity and use statistics for 2021 and 2022 (total spaces available per average weekday, spaces occupied per average weekday, and percent in use per average weekday)

Safety and Security on Street and Highway

Safety

Sheboygan MPA

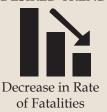
DESIRED TREND







DESIRED TREND







Roadway Miles (2022) **654.09**



Motorist Fatalities (2021)

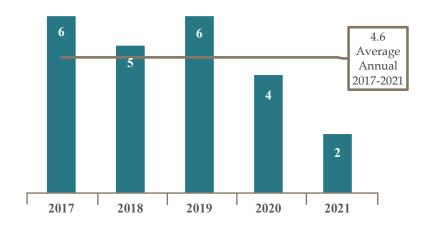
2



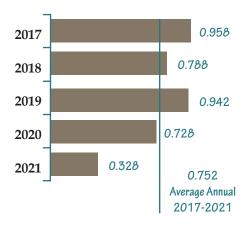
Motorist Serious Injuries (2021)

23

Number of Fatalities in Sheboygan MPA

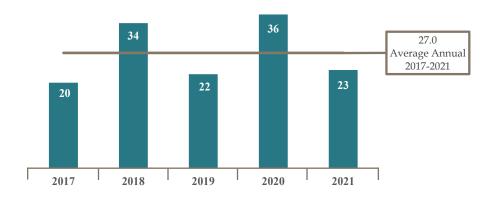


Fatality Rate in Sheboygan MPA

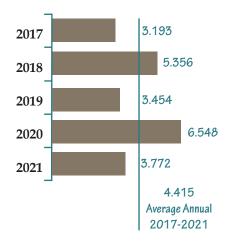


Source: Traffic Operations and Safety Laboratory, University of Wisconsin – Madison; and National Highway Traffic Safety Administration, Fatality Analysis Reporting System (FARS) Encyclopedia

Number of Serious Injuries in Sheboygan MPA



Serious Injury Rate in Sheboygan MPA



Source: Traffic Operations and Safety Laboratory, University of Wisconsin – Madison; and National Highway Traffic Safety Administration, Fatality Analysis Reporting System (FARS) Encyclopedia

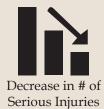
Crashes

Reportable Crashes by Crash Type in the Communities of the Sheboygan Metropolitan Planning Area: 2017 – 2021

	2017	2018	2019	2020	2021
Class A (Serious Injury)	23	32	19	36	23
Class B (Moderate Injury)	150	150	79	121	122
Class C (Minor Injury)	181	128	87	110	132
Class K (Fatality) Crashes	6	3	4	4	2
Property Damage Only Crashes	1,342	1,374	1,086	1,269	1,355
Total Crashes	1,702	1,687	1,275	1,540	1,634

Source: Traffic Operations and Safety Laboratory, University of Wisconsin – Madison; and National Highway Traffic Safety Administration, Fatality Analysis Reporting System (FARS) Encyclopedia

DESIRED TREND



ACTUAL TREND 2017-2021

Decrease in # of Serious Injuries

DESIRED TREND



ACTUAL TREND
2017-2021
Decrease in Rate

of Serious Injuries

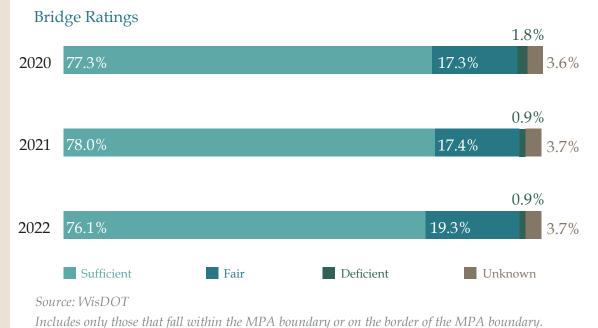
Transportation System Preservation

Bridge Conditions

Bridges are assessed using a 0- to 100-point scale known as a "sufficiency rating." WisDOT considers bridges with a sufficiency rating of 0 to 49.99 as being "deficient," while bridges with a sufficiency rating of 50 to 79.99 are considered to be in "fair" condition, and bridges with a sufficiency rating of 80 and higher are "sufficient," or in good condition.

Decrease in % of Deficient Rating





Pavement Condition Index (PCI)

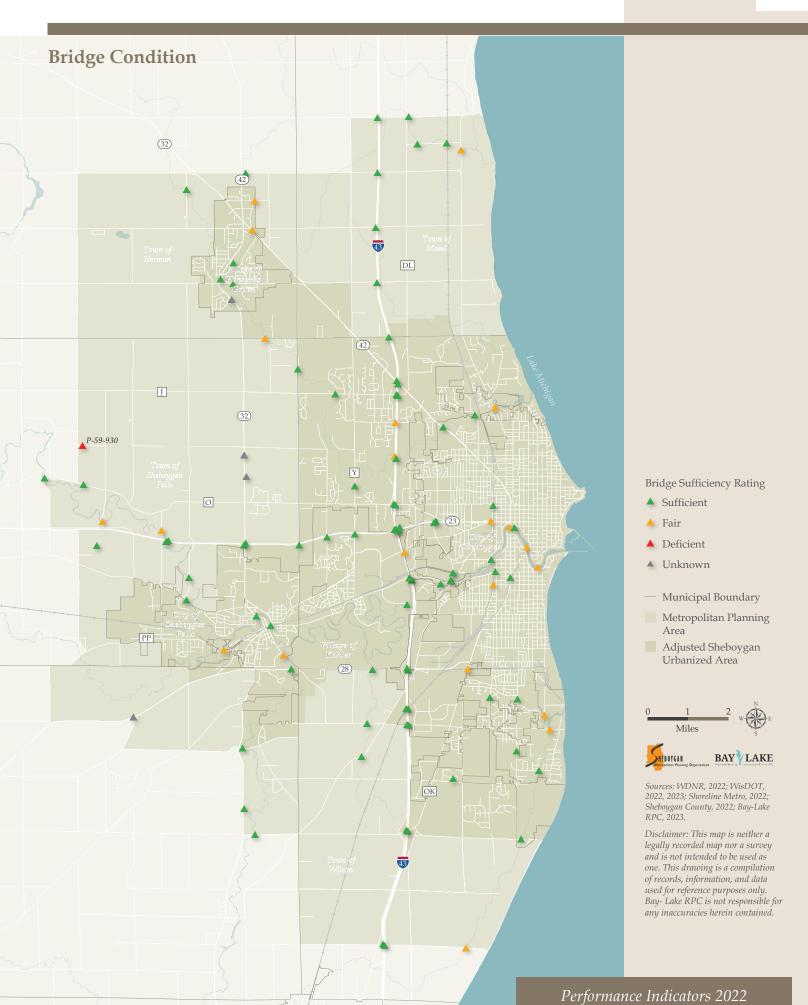
2022 inventories.

WisDOT supplies the MPO with Pavement Condition Index (PCI) data for the state trunk highway system. The PCI is a numerical rating that ranges from 0 for a totally failed pavement to 100 for a pavement in perfect condition.

In 2020, bridge P-59-133 was classified as deficient. This bridge is not included in either of the 2021 or

- Failed Condition (0-9.99): 0 Miles
- Serious Condition (10-24.99): 0 Miles
- Very Poor Condition (25-39.99): 0 Miles
- Poor Condition (40-54.99):1.64 Miles
- Fair Condition (55-69.99):6.91 Miles
- Good Condition (70-84.99):52.58 Miles
- Very Good to Excellent (85-100):26.19 Miles

The following is a comparison of the year 2022, 2021 and 2020 pavement condition trends. There has not been any "Failed" or "Serious" pavement conditions in 2021 or 2022. However, there has been significant decline in "Excellent" condition and significant increase in "Good" condition pavement in the MPA.



DESIRED TREND



Increase in % of Excellent Condition

ACTUAL TREND 2020-2022



Decrease in % of Excellent Condition

DESIRED TREND



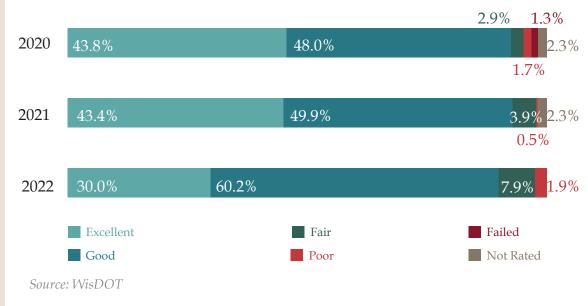
Increase in % of New and Good Condition

ACTUAL TREND 2020-2022



Steadiness in % of New and Good Condition

Pavement Condition of State Trunk Highways



Includes only those that fall within the MPA boundary or on the border of the MPA boundary

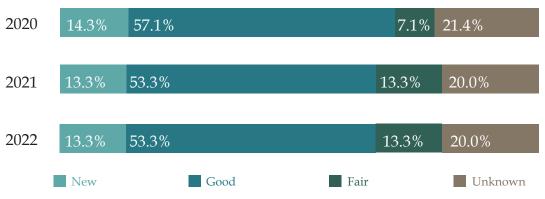
Culvert Condition

Culvert are rated on a scale of 0 to 9, with 0 meaning that the culvert has failed and 9 meaning the culvert is new. A total of 15 culverts were identified within the Sheboygan MPA, of which 3 were not rated, there were no culverts rated as failed, critical or poor.

- Two in Fair condition (rated 5 or 6)
- Eight in Good condition (rated 7 or 8)
- Two New culverts (rated 9)

Below is the comparison from the last three years to determine the trend of culvert condition.

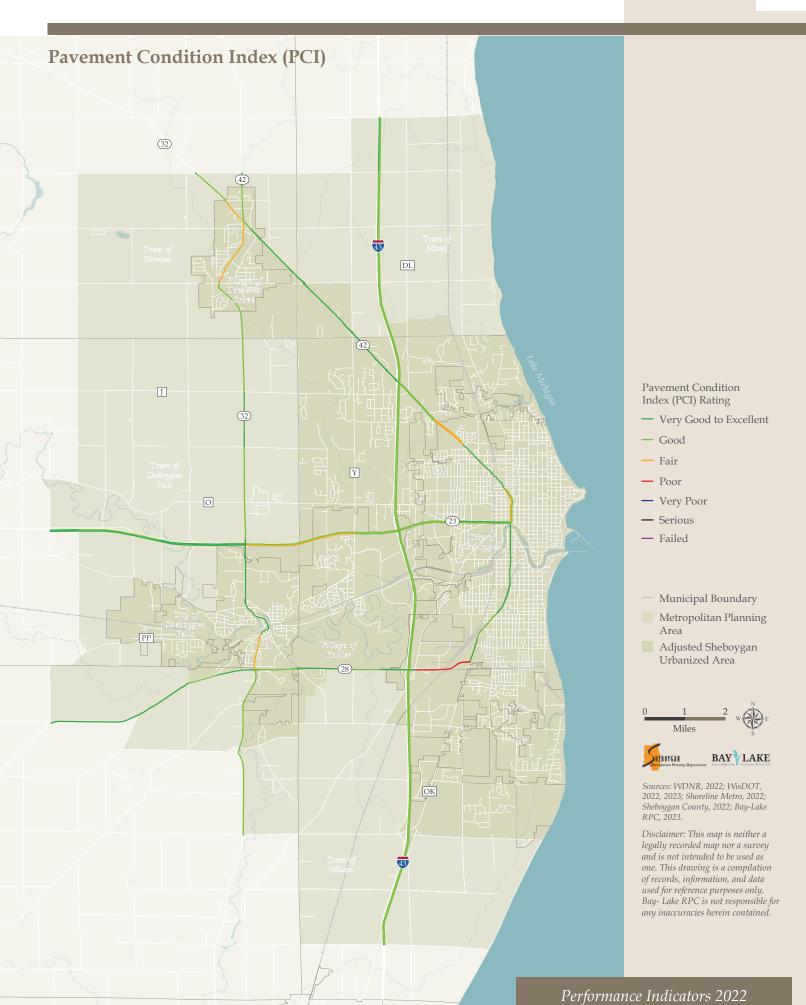
Culvert Ratings



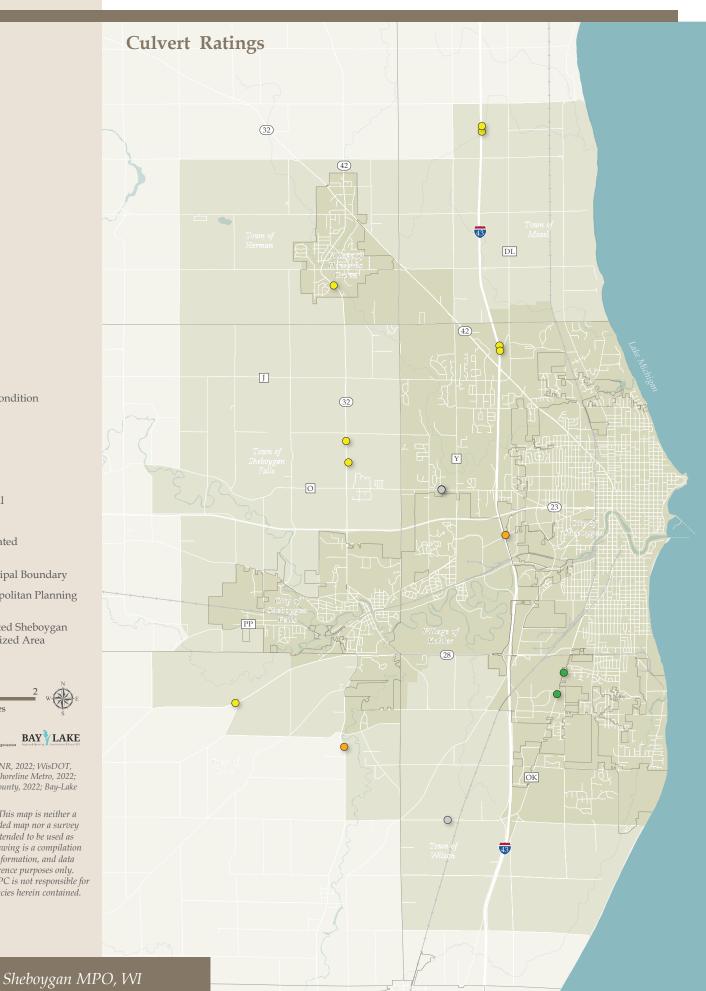
Source: WisDOT

Includes only those that fall within the MPA boundary or on the border of the MPA boundary.

In 2021 & 2022, culvert C590042 was classified as in Fair Condition (6 in both years). This culvert is not included within the 2020 inventory.



16 16



Culvert Condition

- New
- Good
- Fair
- Poor
- Critical
- Failed
- O Not Rated
- Municipal Boundary
- Metropolitan Planning Area
- Adjusted Sheboygan Urbanized Area







Sources: WDNR, 2022; WisDOT, 2022, 2023; Shoreline Metro, 2022; Sheboygan County, 2022; Bay-Lake RPC, 2023.

Disclaimer: This map is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information, and data used for reference purposes only. Bay- Lake RPC is not responsible for any inaccuracies herein contained.

Fixed Route Transit Provider

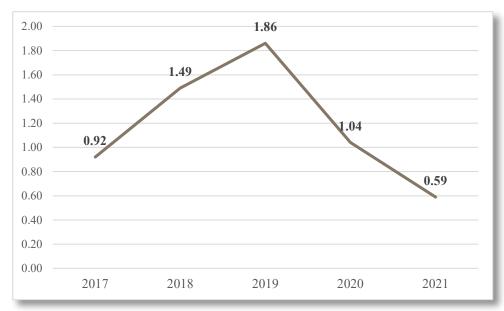


Shoreline Metro provides transit service to Sheboygan Urbanized Area, with a safe, reliable, affordable and courteous alternative to transportation. For more information visit https://shorelinemetro.com/

Safety/Crashes

With three preventable crashes and 506,006 vehicle revenue miles, there were 0.59 preventable transit crashes per 100,000 miles of service for the fixed-route component of Shoreline Metro in 2021.

Preventable Transit Crashes per 100,000 Miles of Service for the Fixed-Route Component of Shoreline Metro



Source: Shoreline Metro, 2021

Accessibility and Mobility



Miles of Fixed Transit Routes (2022)

88.59



Urbanized Area Covered by Transit **39.66**%



Transit Service Area **19.66 Sq. Miles**

The "transit service area" (0.25-mile buffer around Shoreline Metro fixed routes) is currently 19.66 square miles in total but is 19.31 square miles in the Sheboygan Urbanized Area. The Sheboygan Urbanized Area is 48.69 square miles. Approximately 39.66 percent of the urbanized area is covered by fixed-route transit service.

Source: Sheboygan County, Shoreline Metro, 2022

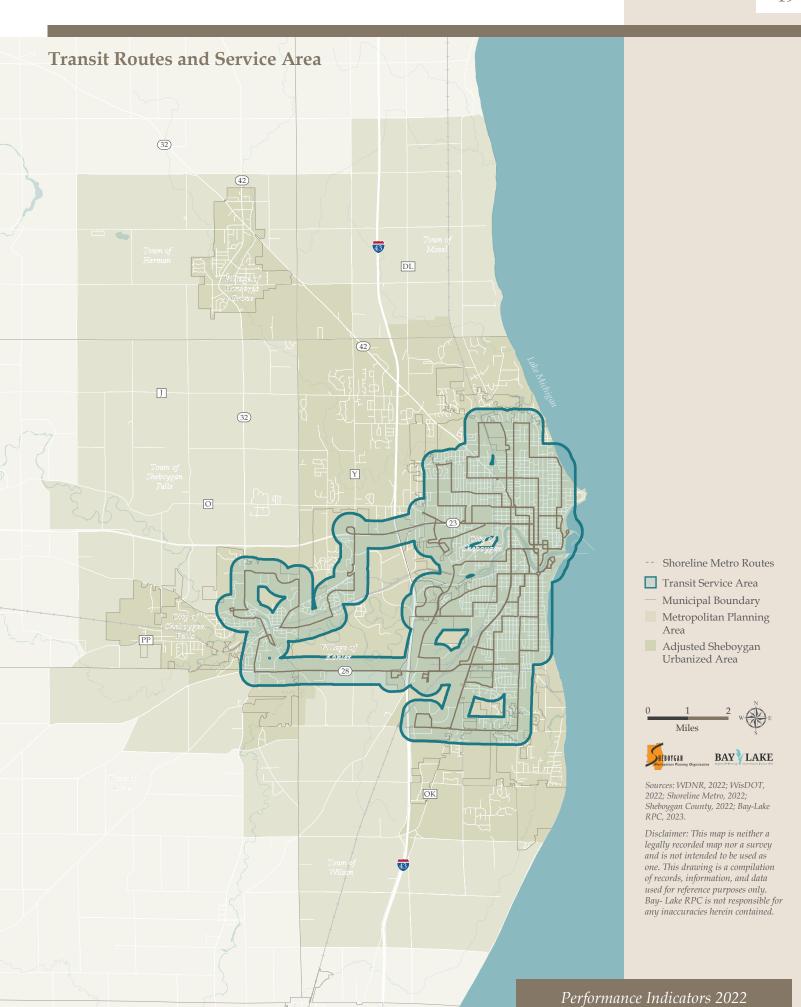




Private Transportation Providers in Sheboygan County

Company	Type(s) of Service Provided
Airport Connection and GO Riteway	Airport Limousine Service to various Cities, And Sheboygan to Lakeshore Technical College's Cleveland Campus
All Star Taxi	Taxi Service
Custom Care and Transport Service, LLC	Accessible Transportation
Discovery Coach, Inc.	Charter, Tour and School Bus Services
Lakeshore Transportation	Accessible Transportation
Lamers Bus Lines (Bought Otte Bus Service)	Charter, Tour and School Bus Services
The Best Taxi	Taxi Service
Transtar Medical Transport	Accessible Transportation

Source: Bay-Lake Regional Planning Commission, 2022 and 2023.



Efficiency Management and Operations



Passenger per Revenue Hour

11.72



Passenger per Revenue Mile

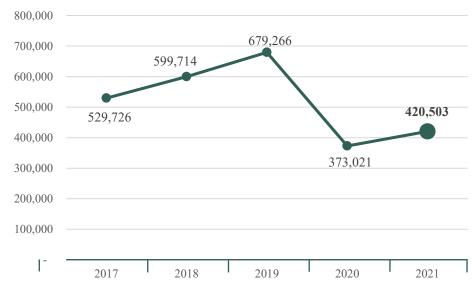
0.83



Annual Passenger Miles Traveled

1,118,538

Annual Ridership of Shoreline Metro (Transit)



ACTUAL TREND 2017-2021

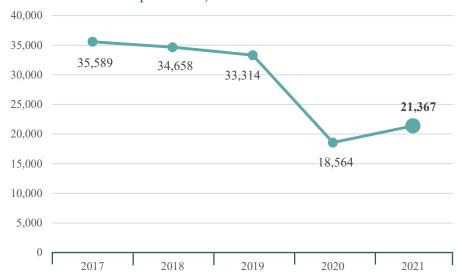
Increase in

Annual Ridership

DESIRED TREND



Increase in Annual Ridership Annual Ridership Paratransit (Shoreline Metro ADA and Sheboygan County Elderly and Disabled Transportation)



Source: Shoreline Metro and Sheboygan County Health and Human Services Department Aging and Disability Resource Center

Buses At or Past Replacement Age

Shoreline Metro evaluated the inventory of its vehicle capital items and divided all vehicle types into three categories: heavy duty bus; medium duty bus (cutaways); and light duty vehicles (auto, pickup truck, minivan, van, SUV, etc.). Shoreline Metro then used the FTA's Useful Life Benchmark (ULB) set in FTA 5010.D, page IV-17, to determine if the vehicles were beyond their useful life, heavy duty buses' ULB is 12 years, medium duty buses' is 7 and light duty vehicles' ULB is 10 years. However, Shoreline Metro also uses a mileage ULB for Vehicles with higher ages but relatively low mileage; Heavy duty buses' is 50,000 miles, medium duty buses is ULB is 150,000 miles and light duty vehicles ULB is 100,000 miles. Shoreline Metro requires a vehicle to be above both number of years and mileage to be beyond its ULB.

Type of Vehicle	% of Vehicles beyond ULB			
	2020	2021	2022	
Heavy Duty Buses	36%	38%	0%	
Medium Duty Buses	30%	40%	40%	
Light Duty Vehicles	0%	0%	0%	

Source: Shoreline Metro

System Safety and Reliability

Measure	Performance			
	Goal	2020	2021	2022
Number of Accidents per Year	5	5	5	5
On Time Performance	95%	95%	98%	98%
Number of Vehicles Out of Service for 30+ Days	1	1	0	1

Source: Shoreline Metro





Steadiness in Safety and Reliability

ACTUAL TREND 2020-2022



Steadiness in Safety and Reliability

Intercity bus lines

- Indian Trails Bus Lines provides one northbound departure (8:45 p.m.) and one southbound departure (6:35 a.m.) each day.
- Megabus/Coach USA also provides one northbound departure (11:35 a.m.) and one southbound departure (4:20 p.m.) each day.

Each bus line's trips to Milwaukee serve the Amtrak inter modal station. In addition, Megabus/Coach USA serves General Mitchell International Airport in Milwaukee.

Indian Trails Bus Lines

CY 2021 (Jan- Nov) 2022

Boarding: 176 Boarding: 1,360

Alighting: 986 Alighting: 1,531

Megabus/Coach USA Bus Lines

CY 2021 (Jan- Nov) 2022

Boarding: 363 Boarding: 544

Alighting: 1515 Alighting: 536

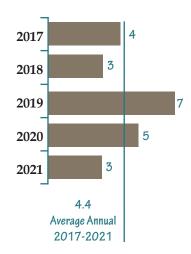
Source: WisDOT Bureau of Transit, Local Roads, Railroads and Harbors, Transit Section

Safety/Crashes

Non-Motorized Fatalities and Serious Injuries in Sheboygan MPA: 2017 - 2021

	2017	2018	2019	2020	2021	Average Annual 2017-2021
Bicycle Fatalities	0	0	1	0	0	
Bicycle Serious Injuries	1	1	0	0	2	
Pedestrian Fatalities	0	0	2	0	0	
Pedestrian Serious Injuries	3	2	4	5	1	
Total	4	3	7	5	3	4.4

Non-Motorized Fatalities and Serious Injuries in Sheboygan MPA



Source: Traffic Operations and Safety Laboratory, University of Wisconsin – Madison; and National Highway Traffic Safety Administration, Fatality Analysis Reporting System (FARS) Encyclopedia

Accessibility and Mobility

Sheboygan MPA



Miles of Trails **29.49**



Miles of Paved Shoulders **29.49**



Miles of Bike Lanes/ Sharrows 45.49

DESIRED TREND Decrease in # of NonMotorized Fatalities and

Serious Injuries

ACTUAL TREND
2017-2021

Decrease in # of NonMotorized Fatalities and
Serious Injuries



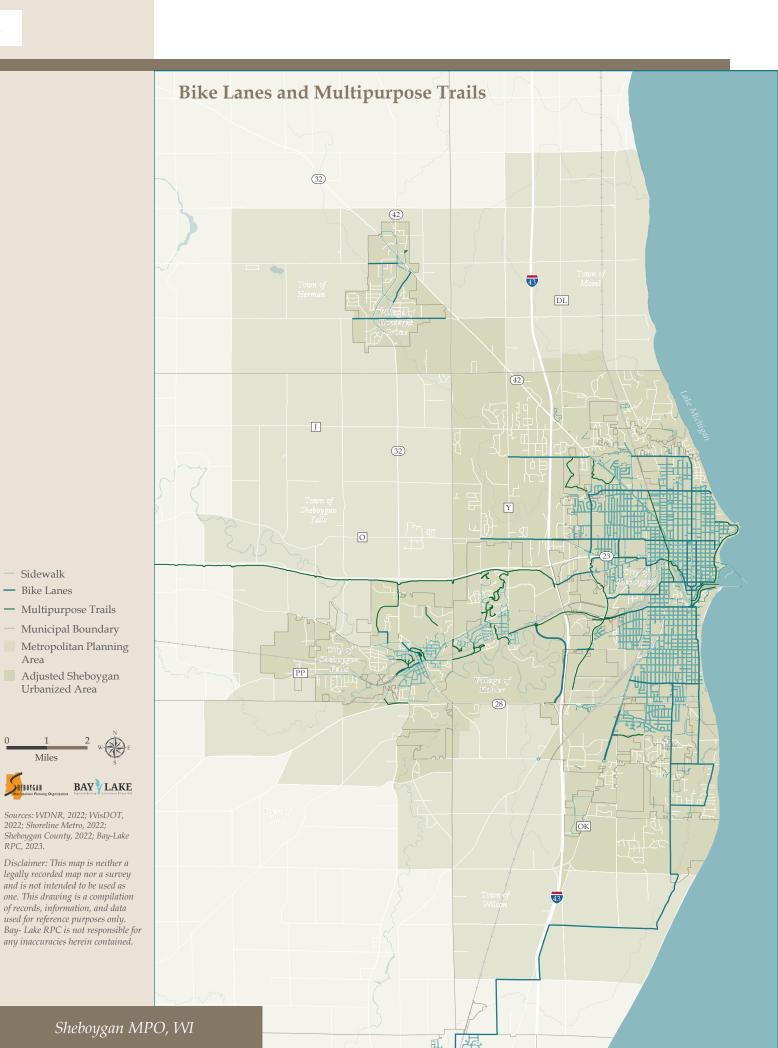
Miles of Sidewalks **606.89**

Sidewalk Bike Lanes

Area

Urbanized Area

Miles

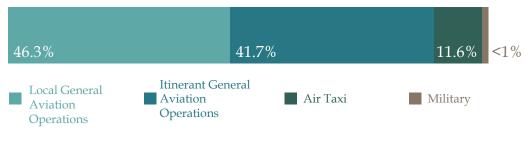


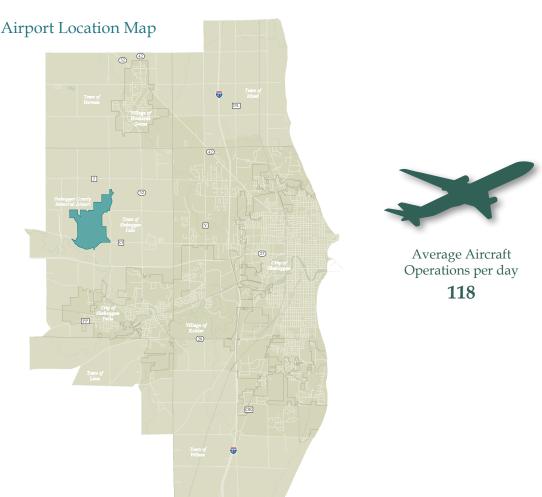
Air Traffic

Sheboygan County Memorial Airport is a county-owned public-use non-towered airport located in the Town of Sheboygan Falls, three nautical miles northwest of the City of Sheboygan, in Sheboygan County.

The airport mainly serves as a corporate aviation base for several county businesses, including Kohler Company, Bemis Manufacturing Company, Plenco and Richardson Bros. A new Customs facility opened in April 2021. There were **43,200** total annual operations in the 12-month period that ended on June 10, 2020. The percentage of type of operations are shown below.

Annual Aircraft Operations by Type at Sheboygan County Memorial Airport









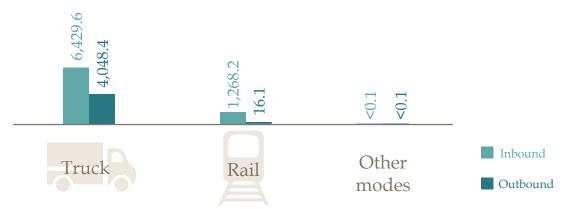
Runways 2

Source: Sheboygan County Memorial Airport and Federal Aviation Administration (FAA), 2020

Freight

The majority of the freight tonnage traveling through the Sheboygan MPA is carried by trucks along I-43, STH 23, 28, 32 and 42, and CTH OK and other county roads.

Shipment Weight by Mode (1,000 tons) For Sheboygan County



Sheboygan MPA



Miles of Truck Routes 150

Number of Freight Terminals 58

Outbound Shipments in Sheboygan County by Truck

Commodities	1000 Tons	Total %
Warehouse & Distribution Center	486.7	12.0%
Grain	467.0	11.5%
Dairy Farm Products	317.4	7.8%
Cheese or Special Dairy Products	260.4	6.4%
Aluminum or Alloy Castings	257.1	6.4%
Misc Plastic Products	253.5	6.3%
Ready-mix Concrete, Wet	175.8	4.3%
Sanitary Paper Products	175.8	4.3%
Broken Stone or Riprap	158.5	3.9%
Misc Waste or Scrap	132.0	3.3%
Other	1,363.9	33.7%

1000 Tons	Total %
486.7	12.0%
467.0	11.5%
317.4	7.8%
260.4	6.4%
257.1	6.4%
253.5	6.3%
175.8	4.3%
175.8	4.3%
158.5	3.9%
132.0	3.3%
1,363.9	33.7%
	486.7 467.0 317.4 260.4 257.1 253.5 175.8 175.8 158.5 132.0

Inbound Shipments in Sheboygan County by Truck

Commodities	1000 Tons	Total %
Dairy Farm Products	1,956.2	30.4%
Gravel or Sand	1,013.8	15.8%
Grain	442.4	6.9%
Broken Stone or Riprap	287.6	4.5%
Misc Industrial Organic Chemicals	267.7	4.2%
Warehouse & Distribution Center	258.4	4.0%
Petroleum Refining Products	210.7	3.3%
Ready-mix Concrete, Wet	125.4	2.0%
Concrete Products	114.2	1.8%
Distilled or Blended Liquors	100.3	1.6%
Other	1,652.5	25.7%

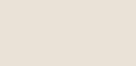
Outbound Shipments in Sheboygan County by Rail

Commodities	1000 Tons	Total %
Petroleum Refining Products	9.7	60.5%
Plastic Mater or Synth Fibers	3.7	23.3%
Railroad Cars	2.6	16.1%

Inbound Shipments in Sheboygan County by Rail

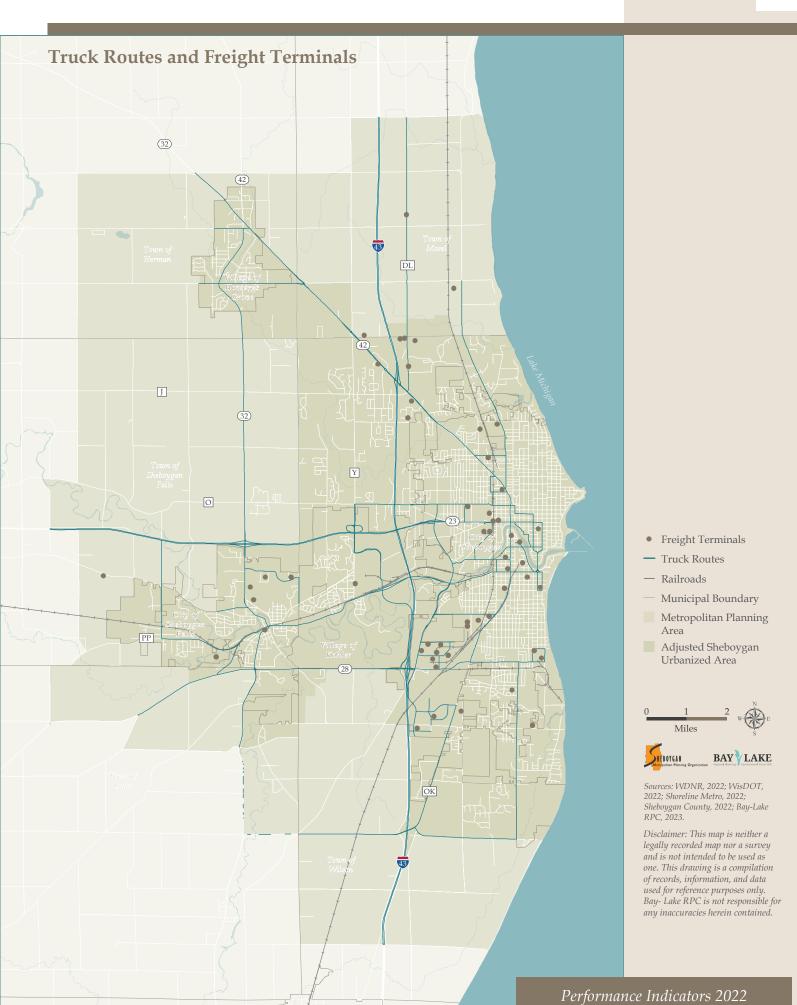
Commodities	1000 Tons	Total %
Bituminous Coal	879.2	70.8%
Cheese or Special Dairy Products	88.8	7.0%
Plastic Mater or Synth Fibers	76.8	6.1%
Misc Industrial Organic Chemicals	63.4	5.0%
Fiber, Paper or Pulpboard	36.7	2.9%
Potassium or Sodium Compound	29.7	2.3%

Source: Commodity Flow Survey, WisDOT (IHS TRANSEARCH, 2019)



Miles of Railroads

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