

# THE ECONOMIC, HEALTH, AND ENVIRONMENTAL IMPACT OF BICYCLING AND WALKING FACILITIES



Fond du Lac Riverwalk  
City of Fond du Lac

Approved October 28, 2022

Report produced by: **Econsult Solutions, Inc.**

# About East Central Wisconsin Regional Planning Commission

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The East Central Wisconsin Regional Planning Commission (ECWRPC) is the official planning agency for the ten counties of Calumet, Fond du Lac, Green Lake, Marquette, Menominee, Outagamie, Shawano, Waupaca, Waushara, and Winnebago in the East Central Region of Wisconsin (eight of these are members of the Commission). ECWRPC was created to transcend the political and fiscal limitations of the individual jurisdictions in its service area to provide comprehensive planning services for the region. These include environmental, economic development, open space, land use, housing, community, and transportation planning, as well as Geographic Information Systems services.

As part of ECWRPC's bicycle and pedestrian infrastructure planning, the Commission supported the creation of the existing 622 miles of municipal bicycle/pedestrian networks in Calumet County, Fond du Lac County, Outagamie County, and Winnebago County, and is facilitating the creation of a proposed 1,011 additional miles of bicycle/pedestrian trails, pathways, and new facilities. ECWRPC assists in ensuring the regional network flows seamlessly between and within municipal boundaries, includes consistent wayfinding signage, and links harmoniously with commercial areas.



**Carpenter Preserve**  
City of Neenah



# CONTENT



05	An Interconnected Bicycle and Pedestrian Network
06	The Bicycle and Pedestrian Network in the Four-County Study Area
09	The Construction Impacts of Completing the Network
10	Environmental Benefits of a Regional Network of Bicycle and Pedestrian Facilities

12	The Cost Saving Benefits of Active Transportation
14	Spending and Health Impacts from Bicycle and Pedestrian Network Use
16	Property Value Impacts of a Regional Bicycle and Pedestrian Network
18	Case Studies
23	Conclusions

## Oshkosh Riverwalk City of Oshkosh



### Striving to Create an Interconnected Bicycle and Pedestrian Network that is . . .



#### **ACCESSIBLE**

to people of all ages  
and abilities



#### **CONNECTED**

for affordable,  
sustainable transportation



#### **EQUITABLY DISTRIBUTED**

to provide access  
across all communities



#### **HEALTHY AND SAFE**

to promote wellbeing





# AN INTERCONNECTED BICYCLE AND PEDESTRIAN NETWORK

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Bicycle and pedestrian infrastructure networks provide valuable economic, environmental, and public health benefits to the communities they serve. Research and practice show that active transportation networks are essential infrastructure which improve the economic vitality of communities. These facilities create safe and easy access to a community's natural assets and connect destinations throughout a region. When developed as a network, they support healthy living, provide affordable transportation, and improve the quality of life for residents who live nearby. In addition to providing benefits to residents, investments in bicycle and pedestrian infrastructure make the area more attractive for businesses to locate and can bolster tourism.

Completion of the network will increase economic activity and jobs associated with construction of new segments across the study area; will ultimately increase property values for residents located close to completed network; and will provide environmental service benefits in the form of flood mitigation, carbon sequestration, and other avoided costs associated with the protection of surrounding tree cover. In addition to the benefits afforded to the region by the presence of the network, the usage of bicycle and pedestrian infrastructure by residents and visitors will support healthy lifestyles by expanding walking, biking, and other active transportation options, while also improving connectivity in the region, and generating greater economic activity for local businesses located near the network.

The purpose of this report is to highlight the potential range of benefits associated with building the recommended facilities within the Appleton (Fox Cities) TMA, Oshkosh MPO, and Fond du Lac MPO, referred to as the "study area." This report will help stakeholders understand the estimated value created by completing the network, including opportunities arising for the community, workers, and local businesses.

**Safe Routes to School**  
Village of Greenville

# THE BICYCLE AND PEDESTRIAN NETWORK IN THE FOUR-COUNTY STUDY AREA

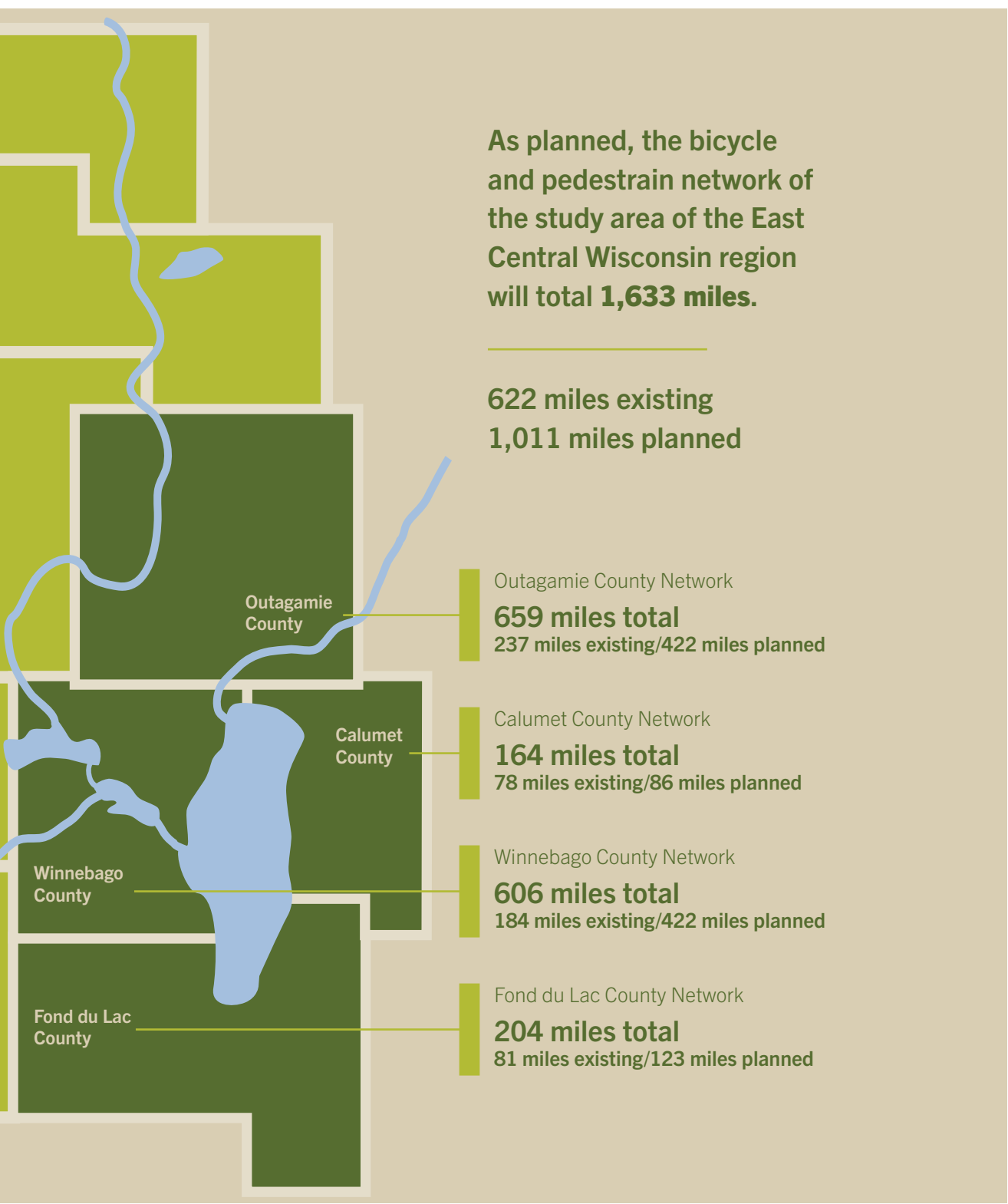
**Pedestrian and Bicycle Infrastructure**  
City of Fond du Lac



The existing network across the four-county study area encompasses 214 miles of off-road paved trails, 214 miles of off-road unpaved trails, 137 miles of bike lanes, and 58 miles of signed bike routes.<sup>1</sup> There are an additional 1,011 miles of planned facilities across the study area. Upon completion of the full bicycle and pedestrian infrastructure network, there will be 1,633<sup>2</sup> miles connecting Calumet, Fond du Lac, Outagamie, and Winnebago counties.

<sup>1</sup> As of August 2021

<sup>2</sup> May not sum due to rounding



As planned, the bicycle and pedestrian network of the study area of the East Central Wisconsin region will total **1,633 miles**.

622 miles existing  
1,011 miles planned

Outagamie County Network  
**659 miles total**  
237 miles existing/422 miles planned

Calumet County Network  
**164 miles total**  
78 miles existing/86 miles planned

Winnebago County Network  
**606 miles total**  
184 miles existing/422 miles planned

Fond du Lac County Network  
**204 miles total**  
81 miles existing/123 miles planned

Source: ECWRPC (2021)



# THE CONSTRUCTION IMPACTS OF COMPLETING THE NETWORK

According to cost estimates provided by ECWRPC, the expansion of the region’s bicycle and pedestrian network will represent a significant boost to the Wisconsin economy through the upfront investment of \$1.3 billion to construct 1,011 miles of new facilities. The total investment in the network will create a \$2.3 billion economic impact. This includes support for 12,970 jobs, \$776,000 in employee compensation throughout the state, and more than \$85 million in state and local taxes. This equates to a tax impact of approximately \$84,000 per mile of network constructed.

Economic impacts of these capital investments were calculated using the industry standard input-output economic model IMPLAN, estimating impacts on the four-county study area and state of Wisconsin. Input-output modeling accounts for the direct impacts (i.e. the construction activity itself) as well as the spillover of spending within a regional economy through indirect and induced impacts. Indirect impacts result from direct spending on the purchase of goods and services from local vendors who in turn require additional purchasing from their own set of vendors. The portion of direct spending which goes to labor income—some of which will be spent locally by employees on goods and services, like purchasing fuel or snacks at which goes to labor income, some of which will be spent locally by employees, and on goods and services, like purchasing fuel or snacks—generates induced economic impacts, further stimulating the local economy.



## **\$1.3B INVESTMENT**

to build  
1,011 mi. of  
new trails



## **\$2.3B ECONOMIC IMPACT**

12,970 jobs  
\$776K employee  
compensation



## **\$85M TAXES**

local and state tax  
revenues

**The tax impact of the constructed network amounts to \$84,000 for each completed mile.**



**Fritse Park**  
City of Neenah



# ENVIRONMENTAL BENEFITS OF A REGIONAL NETWORK OF BICYCLE AND PEDESTRIAN FACILITIES

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**Upon completion of the full network, the estimated economic value that ecosystem benefits provide to the region on an annual basis amounts to \$437.9 million**

**Woodland Prairie Park**  
Village of Fox Crossing

Bicycle and pedestrian networks, including those in East Central Wisconsin, provide environmental benefits for the communities they serve by bolstering natural resource management through active environmental conservation efforts. These networks help to preserve the surrounding natural environment, which otherwise may be at risk for development. Environmental benefits include air pollution removal, the provision of water supply, water quality improvement, flood mitigation, wildlife habitat conservation, and carbon sequestration and storage.

These benefits combined create ecosystem functions that would require costly measures to replicate if lost. In sum, the estimated economic value these ecosystems provide for the completion of the full network on an annual basis would be \$437.9 million. Additionally, the existing tree canopy on the fully completed network is estimated to be valued at \$90.9 million over the lifespan of the tree canopy; in other words, it would cost \$90.9 million to replicate carbon storage if the tree canopy did not exist or was removed.



**\$90.9 Million**  
total lifetime carbon storage

It is estimated that, when completed, the East Central Wisconsin Bicycle and Pedestrian Network will protect 50,000 acres of tree cover.

”

For eons, the Riverfront was more of an industrial function. However, the city has since moved towards greater walkability and trails. The community gave feedback that they want public access to the waterfront and the key is for everyone to have access to the trail system.

# THE COST SAVING BENEFITS OF ACTIVE TRANSPORTATION

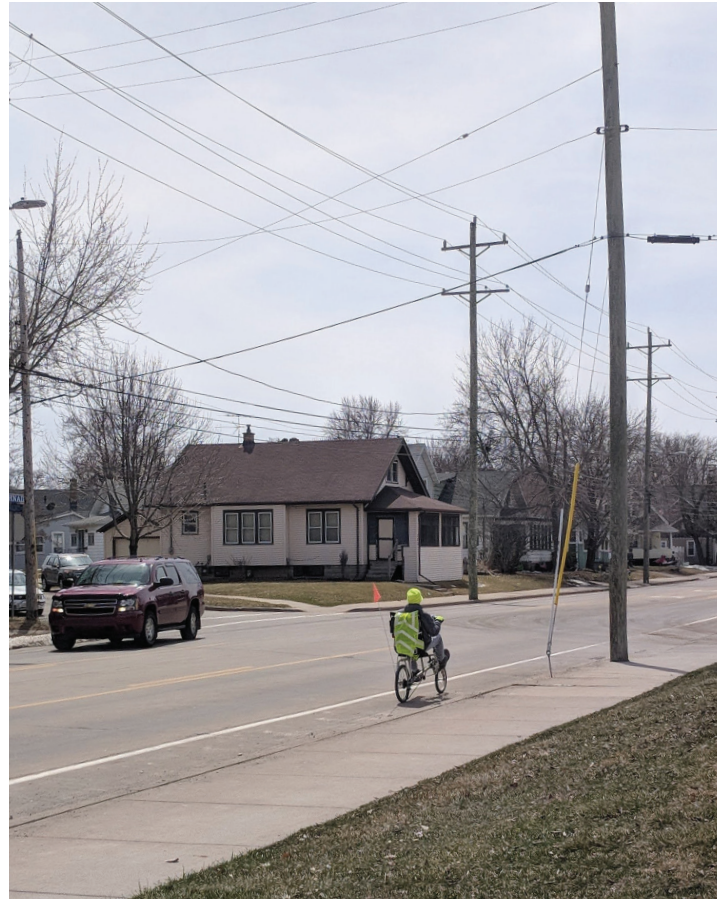
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The East Central Wisconsin bicycle and pedestrian infrastructure network expands mobility options for people who live and work in the region, providing a safe, extensive network for non-motorized transportation that is connected and routed through major destinations. The potential increase in users due to the proposed expanded network within the study area provides crucial support for the region's transportation system, including the reduction of Vehicle Miles Traveled (VMT) and safety improvements. It is estimated that users of the completed network who replace automobile trips with biking and walking trips could reduce annual VMT in the region by 17.5 million miles, yielding associated reductions in carbon emissions of 6,900 metric tons and avoided social costs of carbon emissions of around \$352,000.

A shift to active transportation modes not only has environmental impacts, but financial impacts for individual households as well. Car ownership and the attendant maintenance expenses cost an average household around \$11,000 a year. As the transportation network of the study area grows and continues to be interconnected, communities and workplaces become even more accessible. The reduction of VMT is associated with over \$3.15 million in operating costs for vehicles and 800,000 gallons saved on gasoline annually.

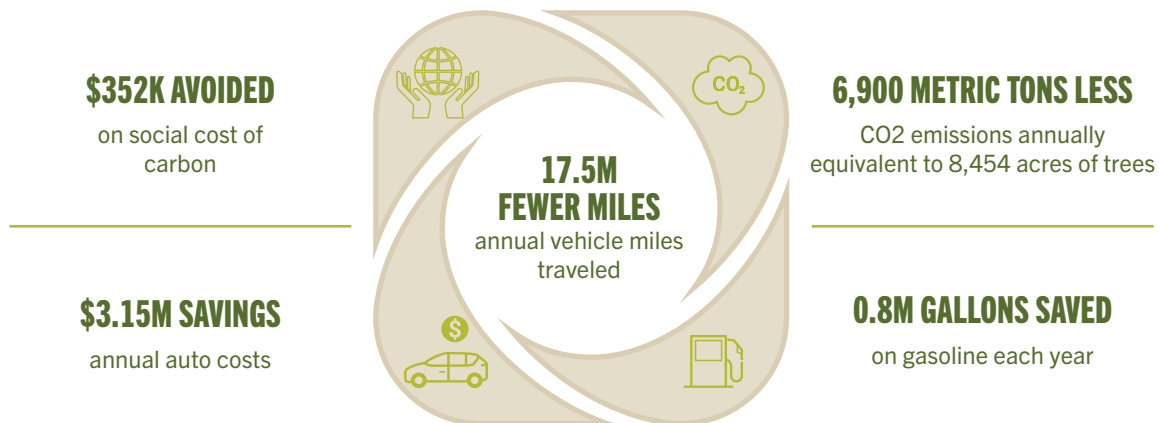
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I like the concept of trails and biking and walking. I like the concept of everyday use. You can use the same trail to go to work, to walk your dog, and for your exercise. A lot of neighborhood groups are downtown. There’s a coherence there and a way to make this work for everybody.



**Ahnaip Street Bike Lane**  
City of Menasha

## A Connected Regional Bicycle and Pedestrian Network will Increase Active Transportation which Results in Savings



# SPENDING AND HEALTH IMPACTS FROM BICYCLE AND PEDESTRIAN NETWORK USE

## 58,300 users

are physically active due to the presence of bike paths and trails

## \$69 million

aggregate annual healthcare cost savings by frequent users

## \$84 million

economic impact from user spending

## 690 jobs

supported by user spending

## \$145.3 million

productivity cost savings due to workers using bike paths and trails



**Wild Goose State Trail**  
City of Fond du Lac

A bicycle and pedestrian network user survey conducted in early 2022 by ECWRPC was completed by approximately 1,000 respondents who live or work in one of the four counties in the study area. The survey included questions on bike path and trail usage frequency and spending patterns. These results were used to extrapolate patterns for the study area overall. Over 75 percent of survey respondents reported using the network for physical activity.

Bicycle and pedestrian infrastructure network usage has two direct benefits on the region and state: 1.) users benefit from access to low-cost options to engage in physical activity and users often spend some of their money on amenities; and 2.) retail options that are located within close proximity of the network while on their trip.

Physically active people typically enjoy a variety of health benefits and tend to achieve higher rates of productivity at work. It is estimated that the completed network will support approximately 58,300 physically active users annually, enjoying an aggregate annual health care cost savings of nearly \$69 million. Workers who meet recommended physical activity levels using the completed network achieve associated benefits in workplace productivity, which could yield total productivity cost savings of \$145.3 million annually.

Local spending by active users will generate additional economic benefits for businesses located near the network as well as retailers selling recreational activity-related products. Residents and visitors who access the region's network often spend money on both goods for and during their trips. It is estimated that direct spending by users on the completed network in the study area will total over \$44 million annually. These direct expenditures are projected to generate approximately \$84 million in total economic impact in the state each year, supporting 690 jobs with \$21.3 million in earnings annually.

”

They created signs on the existing sign post that said, “Did you know you are only a 4-minute walk from a coffee shop?” That’s a revelation. I’m a 3-minute walk from getting a sandwich.

Kimberly Point  
City of Neenah





# PROPERTY VALUE IMPACTS OF A REGIONAL BICYCLE AND PEDESTRIAN NETWORK

Loop the Little Lake  
Winnebago County

Numerous studies have shown that homeowners are willing to pay a premium to live near recreational outdoor space. As a result, the bicycle and pedestrian infrastructure are viewed as active transportation routes and safe spaces for walking and biking that increase the overall value of housing stock for their

neighboring communities. This increased wealth is captured by residents through higher sales values of homes and also generates increased government revenues through increased property tax collections and greater transfer taxes at time of sale.

## 8% home value premium is due to proximity to recreational outdoor space

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Properties within a half mile of a pedestrian and bicycle facility within the four-county region have an approximate 8 percent premium on their property. The current network's premium results in an aggregate increased property value of \$507 million, producing \$9.6 million in additional county property taxes each year. For the segments of the system that are still in planning stages, the total property value impact totals \$137 million and would result in an additional \$2.6 million in county property taxes each year upon completion of the whole network.

 **CE Trail**  
Outagamie County

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I don't want to undersell the connection to campus. We have seen such an uptick of students and university folks who have come out and gravitated to this part of the community. Even though it is two blocks away the trail has broken that down. I think that's been great to see and will continue.



Case Study

City of Oshkosh, Winnebago County



# Oshkosh Riverwalk



**\$3.2M**

economic impact from construction of remaining segments



**18 FTE\***

jobs supported by remaining construction



**\$773K**

annual environmental services benefits upon full completion



**\$450K**

in annual healthcare cost savings achieved by active users



**\$485K**

economic impact from local spending



**51K MILES**

reduced VMTs annually



**\$9M**

increased assessed value



**\$184,390**

increased County tax revenue

\* "FTE" is Full-Time Equivalent.

The Fox River has long been recognized as a great asset for the City of Oshkosh, and with increased downtown revitalization efforts, the city developed a comprehensive Riverwalk plan in early 2006. The first phase of the Riverwalk was completed in 2008 and was gradually expanded in several phases to create a 3.5-mile contiguous Riverwalk that today links important Oshkosh amenities along the Fox River like the Leach Amphitheater, University of Wisconsin Oshkosh, William A. Steiger Park, and the South Shore Redevelopment Area. The South Shore Redevelopment Area includes the former Jeld-Wen industrial site which the City plans to redevelop as a gathering point for the local community and visitors, with transient docks for watercraft, added space for anglers, and rows of benches that will allow residents and visitors to stop and enjoy the riverfront area. A portion of the Riverwalk at the Oshkosh Corporation Global Headquarters is connected to the 3.5-mile contiguous Riverwalk via the Tribal Heritage Trail and the Wiouwash State Trail. This portion of the trail was not considered in this case study.

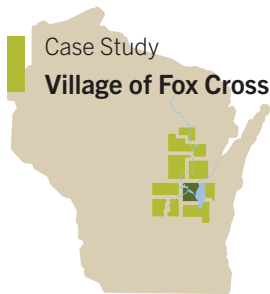


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Living in downtown Oshkosh within an apartment building without access to greenspace, being able to walk and bike to a trail is important. People who don't have backyards, being able to get to those publicly accessible places, whether they are biking or walking, is important too.

Case Study

Village of Fox Crossing, City of Menasha, and City of Neenah, Winnebago County



# Loop the Little Lake



**\$731K**

annual environmental services benefits



**\$450K**

in annual healthcare cost savings achieved by active users



**\$485K**

economic impact from local spending



**88K MILES**

reduced VMTs annually



**\$6M**

increased assessed value



**\$123,170**

increased County tax revenue



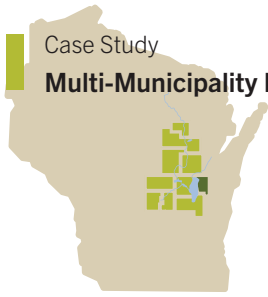
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We had a bunch of people to meet and take the loop. To me it’s about finding those opportunities to take advantage of the trails and paths and finding someone to do it with them to get them off the roads and allow them to explore a bit.

Loop the Little Lake, referred to as the “Loop,” is a 3.5-mile route dedicated to active transportation and recreation, with four trestles, immediate access to five parks, places to observe nature, and dedicated areas to fish. The Loop links three communities, Village of Fox Crossing, City of Menasha, and City of Neenah, and connects bicyclists and pedestrians with scenic vistas and access to Little Lake Butte des Morts. It was begun with the construction of the Fox Cities Trestle in the early 2000s to connect Broad Street in the City of Menasha to Fritse Park in the Town of Menasha (now the Village of Fox Crossing). The popularity of this east-west connection spurred subsequent construction of a trail along North Lake Street in the Village of Fox Crossing during a street reconstruction project, and construction of a trail through Herb and Dolly Smith Park and Arrowhead Park in the City of Neenah. The Loop was completed in 2018 with the construction of two additional trestles and a combination of on-road and off-road facilities.

Case Study

Multi-Municipality Link to High Cliff State Park, Calumet County



# High Cliff State Park Connection



**\$12.5M**

economic impact from construction of remaining segments



**71 FTE**

jobs supported by remaining construction



**\$3.7M**

annual environmental services benefits upon full completion



**\$2.2M**

in annual healthcare cost savings achieved by active users



**\$2.4M**

economic impact from local spending



**282K MILES**

reduced VMTs annually



**\$28M**

increased assessed value



**\$511,610**

increased County tax revenue

\* "FTE" is Full-Time Equivalent.

East Central Wisconsin Regional Planning Commission is in the process of developing a Master Plan to address the future of a new multi-modal trail connection along the northern edge of Lake Winnebago linking lakeshore communities to High Cliff State Park. The feasibility study, which was completed in early 2022, focuses on identifying a route that connects the City of Menasha, the Village of Harrison, and the Village of Harrison along an east-west corridor to High Cliff State Park. This connection would offer an opportunity to build off current bicycle and pedestrian facilities, including Loop the Little Lake and the Friendship Trail. While there are significant portions of a potential connection already in place, gaps still exist. A full connected route from the intersection of Oneida Street and Highway 114 to High Cliff State Park would be approximately 8-10 miles in length.

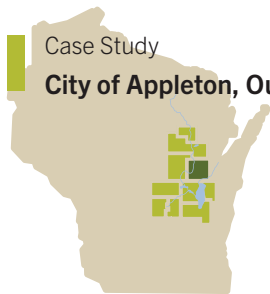


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We had monthly programs where we explored a trail each month. High Cliff State Park was one of them. Even if they are running the neighborhood, they are looking for a place to grab a coffee or a beer afterwards.

Case Study

City of Appleton, Outagamie County



# Newberry Trail



**\$501K**

annual environmental services benefits



**\$308K**

in annual healthcare cost savings achieved by active users



**\$333K**

economic impact from local spending



**61K MILES**

reduced VMTs annually



**\$12M**

increased assessed value



**\$220,040**

increased County tax revenue

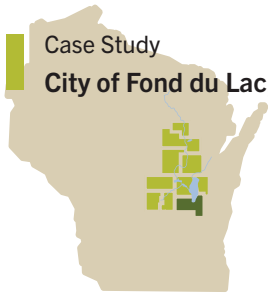


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In Appleton, we are building a more friendly and pedestrian friendly corridor which is great for the businesses. 462 residential units have been either built or proposed. It's an exciting time to focus in on the walkability and livability. Adding bike racks and fix stations along the routes. We are seeing that as a needed amenity.

Case Study

City of Fond du Lac, Fond du Lac County



# Fond du Lac Loop



**\$6.2M**

economic impact from construction of remaining segments



**34 FTE**

jobs supported by remaining construction



**\$8.2M**

annual environmental services benefits upon full completion



**\$1.5M**

in annual healthcare cost savings achieved by active users



**\$1.5M**

economic impact from local spending



**332K MILES**

reduced VMTs annually



**\$27M**

increased assessed value



**\$504,950**

increased County tax revenue

\* "FTE" is Full-Time Equivalent.

The Fond du Lac Loop is a 16-mile bicycle and pedestrian pathway designed to facilitate a safe, healthy, enjoyable way for community members to explore Fond du Lac. Comprised of a variety of trails that connect around the city, the Fond du Lac Loop provides a variety of scenic vistas, access to businesses, and connects to regional trail systems. With ninety percent of the route separated from traffic, it is a cost-effective alternative system of transportation, and one of the safest bike and pedestrian infrastructure systems in the Midwest.



”

Secondly, [visitors] want to know more about Fond du Lac County while they're here, about outdoor recreation and bike paths ... that's exciting to me because we have that.

# CONCLUSIONS

## The community value of pedestrian and bicycle network connectivity

The development of bicycle and pedestrian infrastructure make a profound economic impact on the region that surround them. The benefits are far-reaching and bring powerful outcomes to communities, including connecting people to jobs and other opportunities, creating opportunities for people to be physically active and outdoors, protecting natural resources, and revitalizing economies. However, these valuable impacts are often understated or overlooked when considering investment in active transportation networks within communities.

## Economic impacts and environmental benefits are measurable

This report analyzes the potential economic, environmental, and public health impacts of building out the planned pedestrian and bicycle network in the Appleton (Fox Cities) TMA, the Oshkosh MPO, and Fond du Lac MPO. The research shows that public investments in pedestrian and bicycle infrastructure within and between communities in East Central Wisconsin will deliver myriad benefits once completed. The range of benefits from bicycle and pedestrian infrastructure may seem too good to be true, but the evidence is there—as this report demonstrates.

### Summary of the Economic Impacts and Environmental Benefits of a Completed Pedestrian and Bicycle Network in Calumet, Fond du Lac, Outagamie, and Winnebago Counties



**\$2B**

economic impact from construction new facilities



**12,970 FTE\***

jobs supported by remaining construction



**\$438M**

annual environmental services benefits upon full completion



**\$69M**

in annual healthcare cost savings achieved by active users



**\$84M**

total economic impact from local spending



**\$352K**

reduced carbon emissions due to reduced auto trips



**\$644M**

premium for land in the proximity of the network



**\$11.8M**

increased County property tax revenue

\* "FTE" is Full-Time Equivalent.



Friendship Trail  
Town of Clayton



East Central Wisconsin  
Regional Planning Commission  
**ECWRPC**

Calumet • Fond du Lac • Menominee • Outagamie  
Shawano • Waupaca • Waushara • Winnebago

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Report produced by: **Econsult Solutions, Inc.**

Econsult Solutions provides businesses and public policy makers with economic consulting services in urban economics, real estate economics, transportation, public infrastructure, development, public policy and finance, community and neighborhood development, planning, as well as expert witness services for litigation support.

[Return to Contents](#)

## RESOLUTION NO. 32-22

### APPROVAL OF ECONOMIC IMPACT STUDY OF BICYCLE AND PEDESTRIAN FACILITIES IN CALUMET, FOND DU LAC, OUTAGAMIE, AND WINNEBAGO COUNTIES

**WHEREAS**, the East Central Regional Planning Commission is the designated Appleton (Fox Cities) Transportation Management Area (TMA) and designated Oshkosh Urbanized Area Metropolitan Planning Organization (MPO); and

**WHEREAS**, the East Central Wisconsin Regional Planning Commission entered into a contract with Econsult Solutions, Inc. from August 2, 2021 to June 30, 2022 to conduct the Economic Impact Study of Bicycle and Pedestrian Facilities in Calumet, Fond du Lac, Outagamie, and Winnebago Counties; and

**WHEREAS**, the consultant collected local data, modeled impacts, and worked with an advisory committee and ECWRPC staff to examine the economic impacts of bicycling and pedestrian facilities; and

**WHEREAS**, the findings of the study showcase the positive economic impacts of current and planned bicycle and pedestrian facilities in the urbanized areas of these counties.

**Now, therefore:**

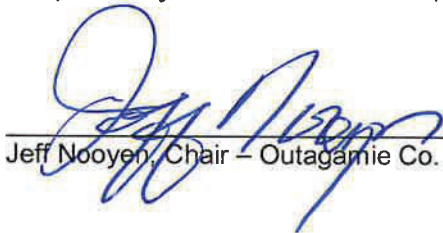
**BE IT RESOLVED BY THE EAST CENTRAL WISCONSIN REGIONAL PLANNING COMMISSION:**

**Section 1:** That the Commission, approves the Economic Impact Study of Bicycle and Pedestrian Facilities in Calumet, Fond du Lac, Outagamie, and Winnebago counties.

Effective Date: October 28, 2022

Submitted By: Transportation Committee

Prepared By: Kim Biedermann, Principal Planner

  
\_\_\_\_\_  
Jeff Nooyen, Chair – Outagamie Co.

  
\_\_\_\_\_  
Melissa Kraemer-Badtke – ECWRPC Executive Director