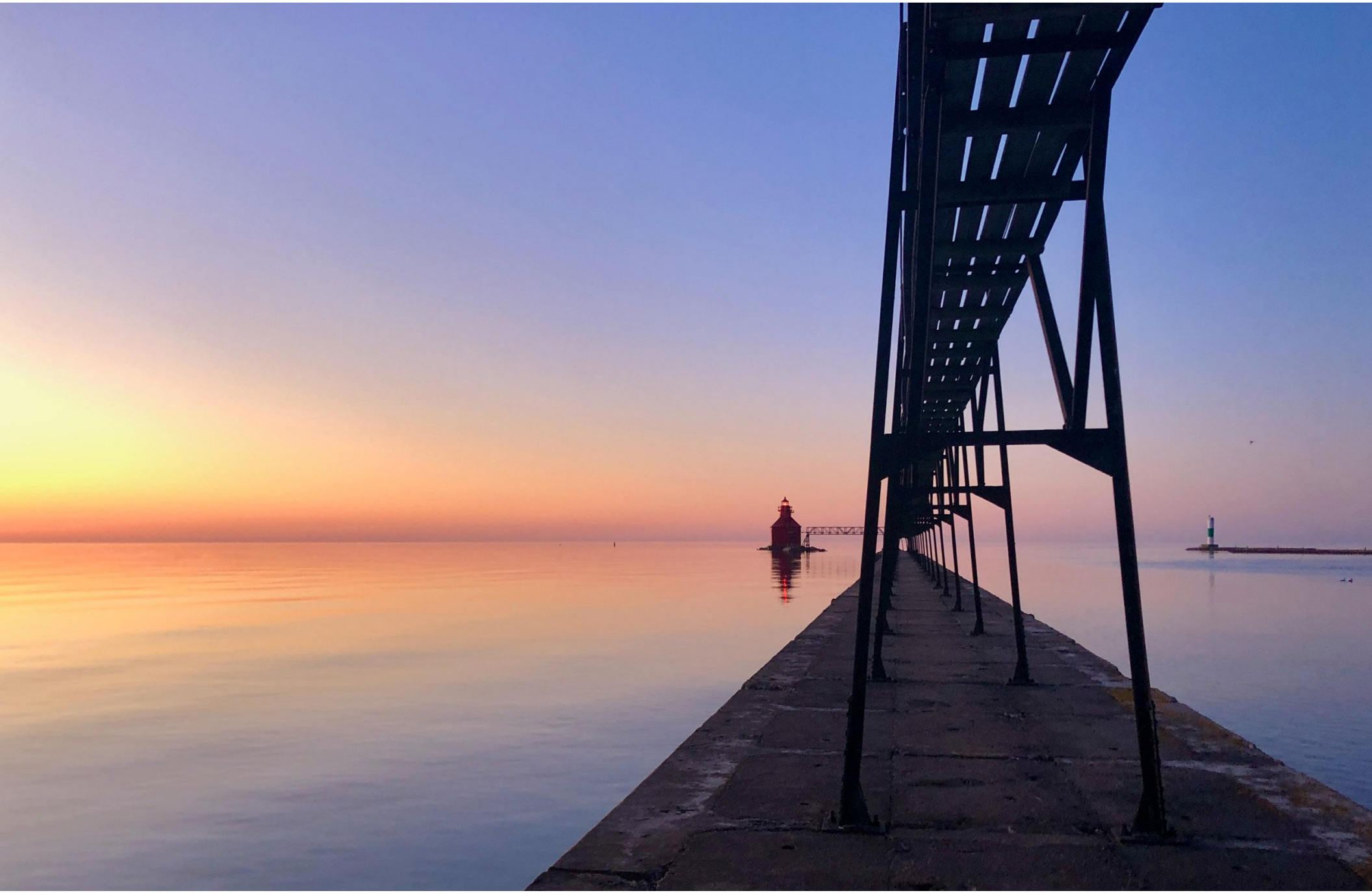
Fund For Lake Michigan

THE TOTAL ECONOMIC IMPACT FROM 2014 TO 2023

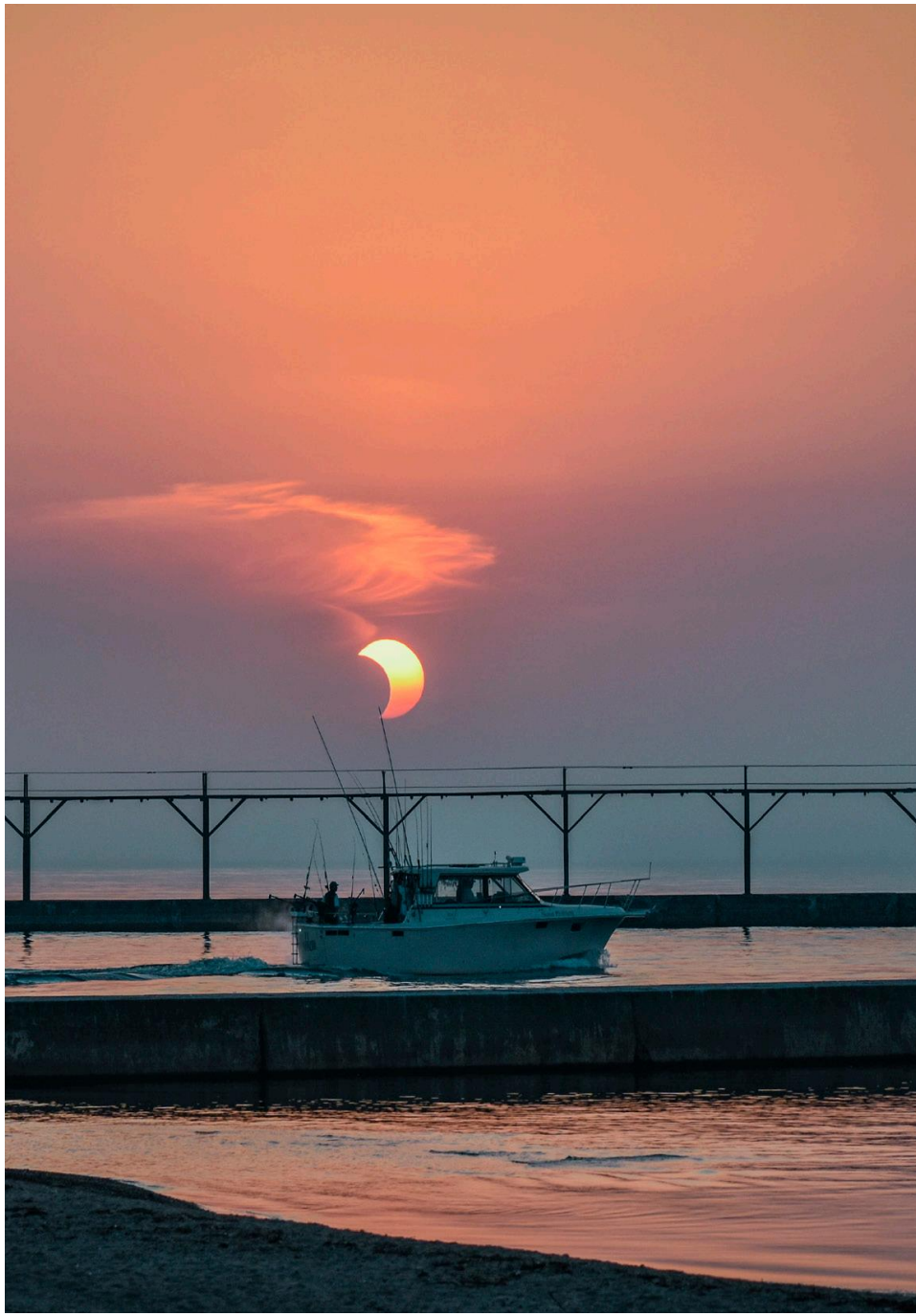
University of Wisconsin
Whitewater

College *of* Business and Economics
Fiscal and Economic Research Center



The Fund for Lake Michigan

The Fund for Lake Michigan (FFLM or the "Fund") was established in 2008 as part of an agreement between We Energies, Madison Gas and Electric, WPPI Energy, Clean Wisconsin, and Sierra Club to safeguard the lake and improve water quality. The Fund supports efforts that enhance the health of Lake Michigan and its shoreline and tributary river systems for the benefit of communities that depend upon the system for water, recreation, and commerce. Under the terms of the agreement, the Fund receives payments of $4 million a year from 2011 through 2035 from its utility partners. The Fund has since awarded millions of dollars in grants to restore habitats, improve beaches, clean up rivers and streams, and revitalize waterfronts in communities within Wisconsin's Lake Michigan basin.



In 2020, the Wisconsin Department of Natural Resources (WDNR) declared 1,203 waterways as impaired and 386 waterways as polluted but undergoing restoration. Of the 9,287 waters assessed, 17 percent were either labeled as impaired or undergoing pollution restoration. Pollutant particles, such as phosphorus or mercury, determine the impairment level of a waterway.

The structure for impairment standards originated under the 1972 Clean Water Act (CWA), a vital source in the movement to repair waterways nationally. Impairment of waterways affects both environments and communities throughout Wisconsin. Restoration of rivers along the Western Shore of Lake Michigan has accelerated through the Fund's resources.

The Fiscal and Economic Research Center (the FERC) at the University of Wisconsin Whitewater calculated the economic impact of FFLM-funded projects. The FERC examined projects from the spring of 2014 to fall of 2023, with the addition of the cycles from the fall of 2021 to fall of 2023.

Using IMPLAN (an input-output analysis platform), the FERC found that FFLM and its projects **created 48 jobs, 2 million dollars in labor income, and 8 million dollars in economic output** from 2021 to 2023.

Since 2011, the Fund stimulated **a total of 2,200 jobs, 105 million dollars in labor income, and 297 million dollars in economic output**. The FERC concluded that continuous work by the Fund would lead to similar results in the future for FFLM and Wisconsin's economy. FFLM awards grants on a quarterly rotation with smaller sponsorships granted throughout the year. FFLM has funded **657 total projects since 2014**.

Positive environmental effects of projects funded through FFLM include daylighting streams, removing blockages for the movement of aquatic species, adding green infrastructure to public schools and libraries to capture and treat stormwater, revitalizing polluted lands, restoring wetlands, and reducing runoff from agricultural lands, amongst many others. These projects improve water quality and other environmental values of the waterways integrated with Wisconsin communities.

Based on FERC findings, Fund for Lake Michigan has had a substantial and concrete impact on the economy by adding **2,200 jobs, providing approximately 105 million dollars in labor income, and stimulating the economy with 297 million dollars** in economic output from Spring 2011 to Fall 2020.

Since the previous report in 2018 and spanning from Fall 2018 to Fall 2020, FFLM added **48 jobs, 2 million dollars in labor income, and 8 million dollars** in economic output. If FFLM receives continual support in its environmental restoration projects, then a similar return on the Fund's investment with a comparable economic impact will likely occur in the future.

As a continuation of the 2018 report, the FERC found the impact of FFLM's projects on southeastern Wisconsin's economy using IMPLAN (an input-output method of analysis). The added property values for each year, averaged over seven years, served as the input for this analysis. Output from IMPLAN includes the number of jobs created, the labor income generated, and the total economic output that the activity stimulated.

The output further breaks down into direct, indirect, and induced impacts. Direct impact stems from the funds provided by FFLM for application to a project. Indirect spending stems from the organizations that received funds from FFLM and the impact of their activities.Induced impact stems from the employees of the funded organizations and the increase of their labor income in response to funding (Kashian, 2018).

Data

Input numbers for IMPLAN stemmed from the total added property value from FFLM-funded projects for each year from 2014 to 2023. The average of these numbers was applied to the annual percentage of total national expenditure by industry from 2014 to 2023. These numbers then served as the final input numbers for IMPLAN by industry, depending on the expenditure type.

Added property values stemmed from the number of houses within 1,500 feet of a project area with tangible work per funding from FFLM. The average property value in the project area, the environmental impact multiplier, and the number of houses within 1,500 feet of the project area were multiplied together to result in the added property value for each project.

Results

Based on FERC findings, the Fund for Lake Michigan has had a substantial and concrete impact on the economy by **adding 2,200 jobs**, providing approximately **105 million dollars in labor income**, and stimulating the economy with **297 million dollars in economic output** from Spring 2014 to Fall 2023.

Since the previous report in 2018 and spanning from Fall 2018 to Fall 2020, FFLM added 330 jobs, 14 million dollars in labor income, and 52 million dollars in economic output. If FFLM receives continual support in its environmental restoration projects, then a similar return on the Fund's investment with a comparable economic impact will likely occur in the future.

Table 1: Summary of Economic Impact Over 10 Years

2,200 total jobs created	**105** **million dollars** in labor income stimulated	**297** **million dollars** economic output
657 projects funded to improve water quality and watersheds	**20%** increase in housing prices near the FFLM projects	**29** **million dollars** annual economic output over 10 years

Table 1 illustrates a summary of the economic impact for the time period of Spring 2014 to Fall 2023. The values of jobs created, labor income, economic output, projects funded, and housing price increases are summarized.

Table 2 shows the average annual economic impact over 10 years. By funding projects, FFLM stimulates an average of **29 million dollars** in annual economic output.

The numerical values of estimated economic impact in this report signify one aspect of the economy as valued in dollars.

Table 3 displays the total economic impact of FFLM from 2021 to 2023. However, a less quantifiable profit exists through the actual environmental impacts of these projects and the work of FFLM.

Table 2: Average Annual Economic Impact Over 10 Years

IMPACT TYPE	NUMBER OF JOBS	LABOR INCOME	OUTPUT
Direct Effect	155	$6,590,000	$17,100,000
Indirect Effect	25	$1,680,000	$5,600,000
Induced Effect	40	$2,230,000	$7,000,000
Total	220	$10,500,000	$29,700,000

Beyond the employment, labor income, and overall economic output effects that these projects provide for Wisconsin and its water-centered communities, these projects also enhance the environment and provide a higher quality of life for those affected by these projects and environments. These projects not only added economic value but also supplemented the environmental quality to enhance the overall value of the affected areas.

Table 3: Impact from Fall 2021 to Fall 2023

IMPACT TYPE	NUMBER OF JOBS	LABOR INCOME	OUTPUT
Direct Effect	32	$1,300,000	$5,100,000
Indirect Effect	7	$500,000	$1,700,000
Induced Effect	8	$500,000	$1,550,000
Total Effect	47	$2,300,000	$8,350,000

Table 4 goes over additional benefits and impacts of FFLM. Despite not having the concrete valuation of the other economic impacts, these other effects must also be taken into consideration while evaluating the aggregate effects that Fund for Lake Michigan has had and continues to have on the Wisconsin economy.

Table 4: Additional Impacts and Benefits

BENEFIT	DESCRIPTION
Restoration and Health	Providing a cultural service which delivers non-material benefits (e.g., leisure) to people through the enjoyment of ecosystems has been valued at $5.12 per visitor annually from utilizing parks and trails contained within urban green infrastructure (Sen et al., 2014; Broekx et al., 2013).
Air Filtration and Ventilation	Estimated savings from installing plants and trees which absorb toxic air pollutants (e.g., particulate matter) and improve healthcare and labor productivity have been valued at $82 per kilogram of particulate matter reduced annually (Michiels et al., 2012).
Education	FFLM has funded many projects that involve educating students on watersheds and the environment as well as adding green infrastructure to public schools and libraries.
Wetland Restoration	Estimated savings from flood damage to properties near wetlands have been valued at approximately $2,000 per acre (Thibodeau and Ostro, 1981).
Habitat Creation	Wetland restoration, removing stream blockages, clean water educational projects, and other positive environmental impacts by FFLM all contribute to habitat creation and restoration.
Aesthetic Appreciation and Noise Reduction	Reductions to ambient noise from traffic and improving the aesthetics of the urban environment with green space have been valued at $20-$25 per person annually (Wang et al., 2014).

ABOUT THE FERC

The University of Wisconsin-Whitewater Fiscal and Economic Research Center provides research services for area businesses, not-for-profits organizations and government entities, including:

- Economic Analysis
- Geographic Information Systems (GIS) analysis
- Market research, marketing strategy and planning
- Statistical analysis
- Simulation analysis
- Ecological and biological analysis
- Government and public policy analysis
- Entrepreneurship
- Economic forecasting and business development

This study was commissioned by the Fund for Lake Michigan.

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For More Information: A full version of the Wisconsin Economic Development Corporation Evaluating The Total Economic Impact of the Fund for Lake Michigan from 2011-2018 , complete with methodology, documentation, footnotes and appendices, is available at www.uww.edu/ferc/completed.

ABOUT THE AUTHORS

Dr. Russ Kashian is a professor of economics at the University of Wisconsin-Whitewater. He served as a specialist for the University of Wisconsin-Extension and is the director of the Fiscal and Economic Research center at UW-Whitewater. In the 20 years that he has taught at the university, his focus has been conducting applied research projects that develop students, are of value to others, and serve the region. Dr. Kashian's main areas of interest are financial intermediaries, tourism, education, and economic development.

Email: kashianr@uww.edu

Phone: (262) 472-5584

Data Analysts

Matthew Kirchoff

Arnish Gupta

Editor and Graphic Designer

Shannon Murray

University of Wisconsin
Whitewater

College *of* Business and Economics

Fiscal and Economic Research Center