



UNIVERSITY OF MINNESOTA EXTENSION

DEPARTMENT OF COMMUNITY DEVELOPMENT

Economic contribution of riverboats in Red Wing

A report of the Economic Impact Analysis Program

Presented by Brigid Tuck



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July 2025

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Roaming Red Wing

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Table of contents	
Executive summary	1
Project overview	3
Riverboat survey	3
Economic contribution	3
Direct effect	4
Indirect and induced effects	6
Total economic contribution	6
Survey insights	7
Notes on the analysis	11
Appendix: Methods and terms	13





Executive summary: Economic contribution of riverboats in Red Wing

Riverboats have a long history in Red Wing, and the tradition of enjoying the mighty Mississippi remains strong today. In 2024, two companies docked in Red Wing as part of their trips, bringing passengers, employees, and excitement surrounding the riverboat experience. Riverboat passengers debarked for a day in Red Wing, visiting local landmarks and attractions, such as museums. Passengers also had free time to explore downtown and shop at local businesses.

Given the many tourism aspects of riverboats, the Red Wing Port Authority was interested in understanding the economic contribution of riverboat visits. They hired University of Minnesota Extension to collect necessary data and conduct an economic contribution analysis. The data collection included a survey of riverboat passengers, riverboat employees, and visitors in Red Wing to view the riverboats.

Key conclusions include:

Riverboats generate visits and economic activity in Red Wing.

- On average, riverboat passengers, employees, and other visitors spent \$44.10 per person while in Red Wing. The largest expenditure was \$27.30 on retail items.
- In a typical year, riverboat-related visitors spend an estimated \$232,000 in the community, above and beyond the guided tours.
- In total, riverboats generate an estimated \$796,190 in economic activity in Red Wing on an annual basis. The boats support 57 jobs and \$263,210 in labor income.
- In addition to businesses patronized by riverboat-related visitors, the real estate industry, local government (including the Port Authority), and management of companies (back-office support such as advertising and accounting) are industries that most benefit from the riverboats.
- Ninety-nine percent of riverboat-related visitors were in Red Wing primarily due to the riverboats, and 96 percent were new visitors to the community. This indicates the boats are bringing new people into Red Wing who may not otherwise have visited.
- The riverboats attract an estimated 5,275 visitors to Red Wing in a typical year.

Riverboat-related visitors value many aspects of Red Wing.

- Two of every three survey respondents were highly satisfied with their visit to Red Wing.
- The most valued aspects of the community visit were the natural and scenic beauty of the area, the historic downtown, museum options, and the friendliness of the community.
- Riverboat passengers wished they had additional time to explore downtown Red Wing.

RIVERBOATS GENERATE VISITS AND ECONOMIC ACTIVITY IN RED WING

2/3

visitors highly
satisfied

ECONOMIC IMPACT



On average,
\$44.10
spent per riverboat
visitor and \$27 in
retail.



In a typical year,
riverboats generate
\$796,190
in economic activity



57 jobs supported
\$263,210
in labor income

WHO'S VISITING?



Riverboats
attract an
annual
estimated

5275 visitors

99% came for the
boats, and **96%** had
never visited before

WHAT THEY LOVE

- Natural and scenic beauty
- Historic downtown
- Museum options
- Friendliness



ROOM TO EXPLORE MORE

Riverboat passengers wish they had
additional time to explore Downtown
Red Wing



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Project overview

Riverboats have a long history in Red Wing, and the tradition of enjoying the mighty Mississippi remains strong today. In 2024, two companies docked in Red Wing as part of their trips, bringing passengers, employees, and excitement surrounding the riverboat experience. Riverboat passengers debarked for a day in Red Wing, visiting local landmarks and attractions, such as museums. Passengers also had free time to explore downtown and shop at local businesses.

Given the many tourism aspects of riverboats, the Red Wing Port Authority was interested in understanding the economic contribution of riverboat visits. They hired University of Minnesota Extension to collect necessary data and conduct an economic contribution analysis. This report is a summary of the results.

The goal of this project was to answer the following questions:

- How much economic activity do riverboat passengers generate in Red Wing?
- What activities do passengers engage in during their trip?
- What opportunities exist to generate more visitor spending?
- How can local businesses increase the economic benefits of riverboats?

Riverboat survey

To complete the economic contribution analysis, Extension, in partnership with Red Wing organizations, conducted a survey of riverboat passengers, workers, and spectators. Surveys were completed during the summer and fall of 2024. Extension designed a postcard, which was distributed by Roaming Red Wing and the riverboat greeters. The postcard contained the survey link and a QR code linking to the survey.

Spring and early summer of 2024 were marked by significant rainfall and flooding along Minnesota's rivers. The rain and high waters affected the arrival of several riverboats. The first boat was unable to dock at the traditional Levee Park location and instead docked at a more industrial area of Red Wing. Three other boats also cancelled their arrivals in Red Wing, as they were unable to navigate that far north on the river. In all, 11 individual riverboats docked in Levee Park between August 2 and October 17, 2024. A few boats docked twice in Red Wing, once on the trip north and then again on the trip back, but passengers only debarked in Red Wing on one of the stops.

The survey received 139 responses. The full capacity of boats arriving at Levee Park was 2,769. This yielded a 95 percent confidence level with a sampling error between 5 and 10 percent.

Economic contribution

Economic contribution is comprised of direct, indirect, and induced effects. The direct effect is the spending directly related to the activity itself—in this case, spending by riverboat visitors. Indirect and induced effects are the impacts on other businesses due to the direct spending. Indirect impacts relate to the supply chain. For example, a visitor buys dinner at a local restaurant. That restaurant, in turn, makes purchases from its food supplier, from the local utility for electricity, and so forth. Those businesses then increase their production, demanding more from their suppliers, and so forth. Induced impacts relate to the spending of income. A restaurant worker earns income, which they then spend on housing, health care, and food. This increases activity on those supply chains.



Direct effect

The direct effect of the riverboat visitors is their spending while in Red Wing. The formula for calculating total spending is to multiply per person spending by the number of visitors.

Per visitor spending

On average, each riverboat visitor in 2024 spent \$44.10 (Table 1). This is across all visitors. Some people may spend nothing, while others may spend significantly more. Survey respondents spent the most at retail stores, followed by restaurants and lodging. While riverboat passengers spent the night on the boat, a few people who did not arrive on a riverboat spent money on lodging.

Table 1: Average spending per person, Red Wing riverboat visitors, 2024

Category	Per Person Spending
Retail	\$27.30
Restaurants	\$5.00
Lodging	\$4.00
Transportation	\$2.80
Entertainment	\$2.30
Groceries	\$1.00
Other	\$1.70
Total	\$44.10

Number of visitors

Riverboat passenger estimates are relatively easy to determine, as each riverboat company advertises the passenger capacity of its boats. In 2024, the 11 riverboats that docked in Red Wing had the capacity for 2,769 passengers (Table 2). If all 15 riverboats had docked, that number would have increased to 3,680.

Table 2: Estimated number of Red Wing riverboat visitors, 2024

Category	Number of visitors, 2024	Number of visitors, typical year
Passengers	2,769	3,680
Crew	975	1,285
Spectators	225	310
Total	3,969	5,275

The number of riverboat crew is harder to estimate. It is important to include them in the estimate, though, as crew members use stops in ports for restocking their personal supplies and food. Published estimates from industry sources indicate riverboats, depending on their size, carry one

crew member per every 2.5 to three passengers. Based on published crew data, Extension estimated that in 2024 there were 863 crew members in total on boats that docked in Red Wing.¹

The hardest number to capture is riverboat spectators. Anecdotal evidence, via conversations with Red Wing tourism officials, indicates people come to Red Wing to watch the boats arrive. There is, however, no single source of data to determine an exact figure. Extension considered data from Placer.AI, a mobile analytics platform, which tracks cell phone locations to make estimates. Unfortunately, this data source did not yield much information. A best estimate from Placer.AI is that, on average, each ship drew 20 members of the public. In 2024, with 11 boats arriving, Extension estimates there were 225 people that came to Levee Park to observe the riverboats. In a normal year with 15 boats, that would increase to 310.

When added together, Extension estimates there were 3,969 riverboat-related visitors in Red Wing in 2024. Had all 15 ships been able to dock, as in a normal year, that figure would have increased to 5,275.

Total spending

Using the number of riverboat-related visitors and the spending per visitor, Extension calculated total spending associated with the boats. In 2024, riverboat-related visitors spent an estimated \$174,570 in the area (Table 3). If all 15 ships had docked, total spending would have been an estimated \$232,000.

Table 3: Estimated total spending, Red Wing riverboat visitors, 2024

Category	Total Spending 2024	Total Spending Normal Year
Riverboat visitors		
Retail	\$108,170	\$143,760
Restaurants	\$19,800	\$26,310
Lodging	\$15,970	\$21,230
Transportation	\$11,030	\$14,650
Entertainment	\$8,940	\$11,890
Groceries	\$4,040	\$5,370
Other	\$6,620	\$8,790
Total visitor spending	\$174,570	\$232,000
Fuel & lube	\$249,670	\$249,670
Group/individual tours	\$94,150	\$125,120
Total	\$518,390	\$606,790

Two additional items, above and beyond the survey-measured spending, are included in Table 3. The first item is expenditures for group and/or individual tours. Riverboat companies plan sightseeing

¹ <https://www.vikingrivercruises.com/ships/mississippi/viking-mississippi.html> and <https://allthingscruise.com/american-cruise-lines-low-river-means-bus-ride-to-board-american-symphony/#:~:text=When%20we%20arrived%20in%20Vicksburg,asking%20if%20we%20needed%20anything>

tours for passengers when they are in port. The expenses for these tours are included in the ticket price, so the passengers would not include an estimate in their survey responses. For group tours, the riverboat companies bring their own buses to transport visitors to and from their destinations. The riverboat companies then partner with a local tour company for tour guides. Since we do not have data on these costs, Extension assumed \$40 per person for actual costs. Based on survey data, it appears slightly more than 85 percent of passengers engaged in a tour. Thus, for 2024, the riverboat passengers created an estimated \$94,150 in spending for their group tours. This estimate includes payments for tour guides, entrance fees to activities, and bus-related costs.

Economic impact terms
 Direct effect: initial change
 Indirect effect: business-to-business impacts
 Induced effect: consumer-to-business impacts

Second is docking and fuel fees paid by the riverboat companies. The City of Red Wing charges a docking fee, which includes administrative and waste remediation charges. In addition, the riverboats pay for fuel and lube. Based on records provided to Extension by the Red Wing Port Authority, these costs totaled \$249,670 in 2024.

Thus, in total, riverboat companies and visitors spent \$518,390 in Red Wing in 2024. Had it been a more “normal” year, spending would have totaled an estimated \$606,790.

Indirect and induced effects

Extension used the input-output model IMPLAN to measure the economic contribution of riverboat-related visitors and riverboat operations in Red Wing. Input-output models capture the flow of goods and services within an economy. Once the pattern is established, the model can show how a change in one area of the economy (say, consumer spending) affects other parts of the economy (such as real estate and health care). For the purposes of this analysis, the region is Goodhue County.

Total economic contribution

In 2024, riverboat-related visitors and riverboat companies generated an estimated \$670,270 in Goodhue County (Table 4). This includes \$211,470 in labor income. The riverboats supported 55 jobs. These figures include direct spending and related employment and labor income, as well as the indirect and induced effects.

Table 4: Total economic contribution, Red Wing riverboat visitors, 2024

Category	Output	Employment	Labor Income
Direct	\$518,390	11	\$166,910
Indirect	\$88,750	21	\$26,410
Induced	\$63,130	23	\$18,150
Total	\$670,270	55	\$211,470

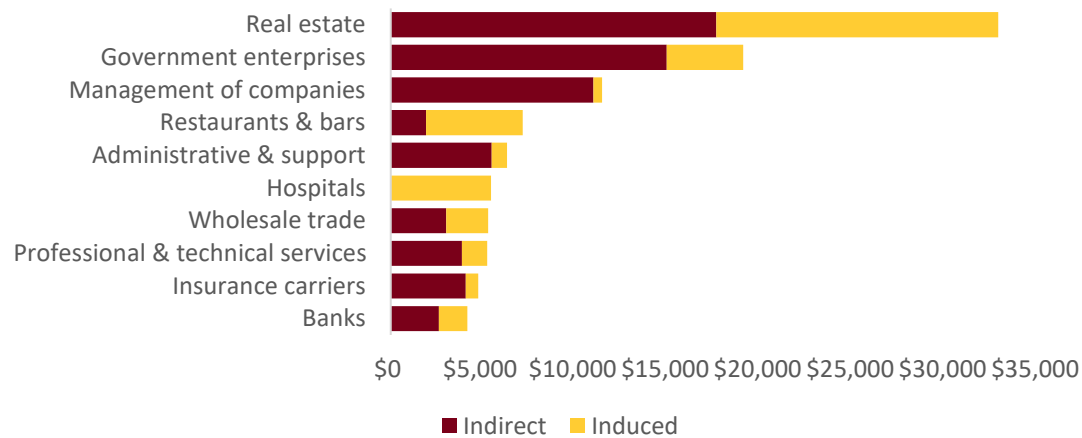
Had all 15 riverboats been able to dock, as in a normal year, the total economic impact of the riverboat-related visitors would have been \$796,190 (Table 5). This includes \$263,210 in labor income and 57 jobs.

Table 5: Total economic contribution, Red Wing riverboat visitors, normal year

Category	Output	Employment	Labor Income
Direct	\$606,790	11	\$208,020
Indirect	\$111,380	23	\$32,750
Induced	\$78,020	23	\$22,440
Total	\$796,190	57	\$263,210

In 2024, riverboat-related visitors and riverboat companies spent \$518,390 in the Red Wing area. This created \$151,880 of activity in other industries across the region. The industries benefitting the most from the riverboat-related visitors (outside of direct spending) include real estate, government enterprises (post office, etc.), and the management of companies (Chart 1). The management of companies industry includes “back office” activities, such as advertising, legal, and accounting services.

Chart 1: Top 10 industries impacted, indirect and induced effects, Red Wing riverboat visitors, 2024



Indirect effects are highest in those industries as well. Real estate includes payments for mortgages and rents. The places that visitors frequent (restaurants and retail stores, for example) require physical space, so they need to pay rent, which is an indirect effect of the visitors.

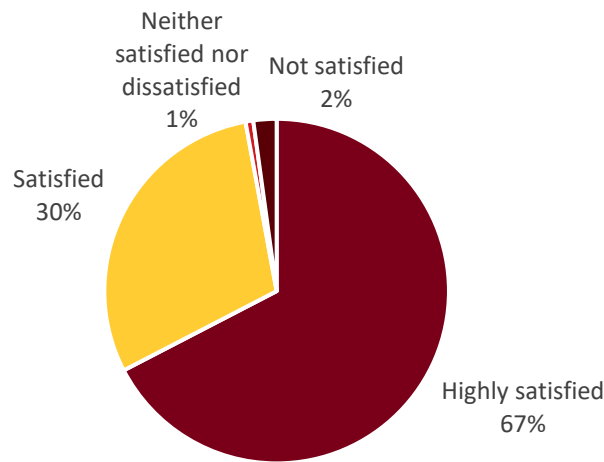
Induced effects are highest in real estate and health care. Workers, who help riverboat-related visitors, get paid wages and salaries, which they, in turn, spend on their own housing. Likewise, health care is one of the main expenditures for most households.

Survey insights

In addition to gathering data for the economic contribution analysis, the riverboat passenger, worker, and spectator survey provided insights into individual experiences in Red Wing.

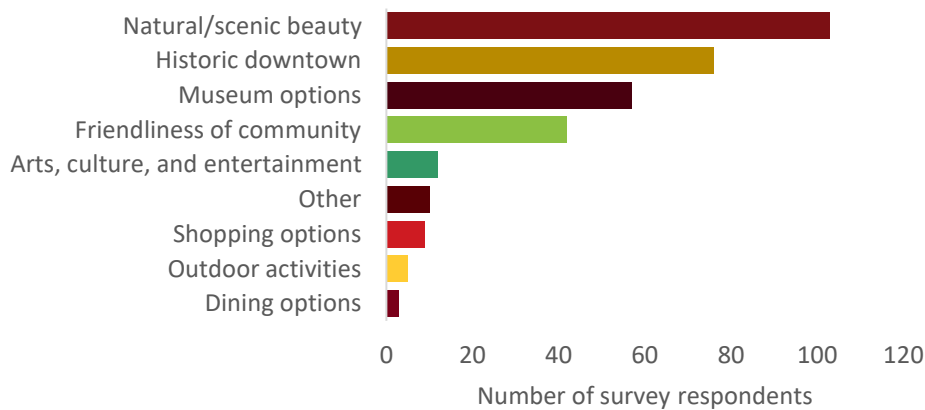
By and large, Red Wing riverboat visitors were highly satisfied during their trip to the community (Chart 2). Ninety-seven percent of survey respondents reported being “highly satisfied” or “satisfied” with the trip. Two of every three people were highly satisfied.

Chart 2: Level of satisfaction with Red Wing visit, Red Wing riverboat visitors, 2024



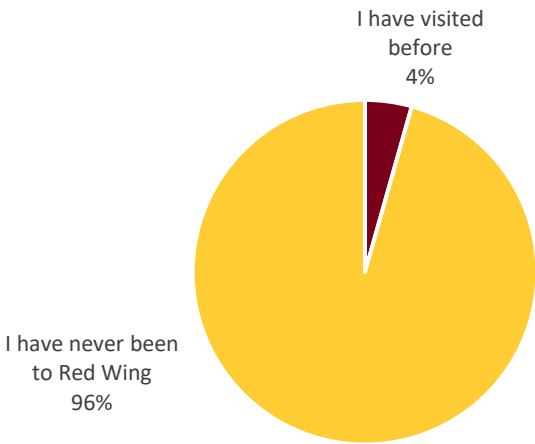
The high level of satisfaction was driven by Red Wing’s natural and scenic beauty, the historic downtown district, museum options, and the friendliness of the community (Chart 3).

Chart 3: Most enjoyable aspect of visit to Red Wing, riverboat visitors, 2024



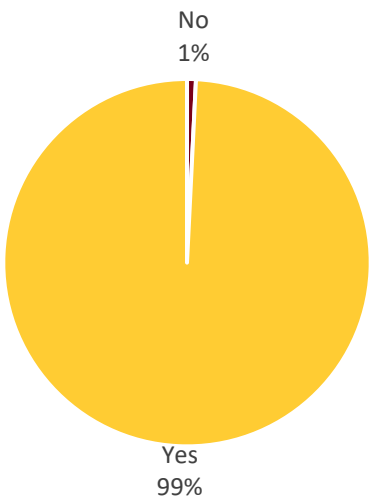
Making a favorable impression is important, as most riverboat visitors had not visited Red Wing prior to the riverboat-related trip (Chart 4).

Chart 4: Previous visit to Red Wing, Red Wing riverboat visitors, 2024



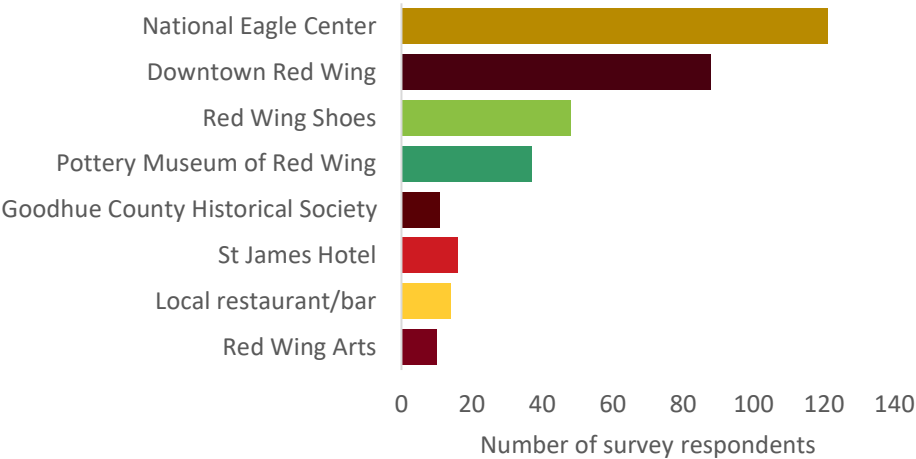
The riverboats, in turn, drove the visits. Nearly all survey respondents came to Red Wing primarily due to the riverboats (Chart 5).

Chart 5: Riverboats were primary reason for visit to Red Wing, riverboat visitors, 2024



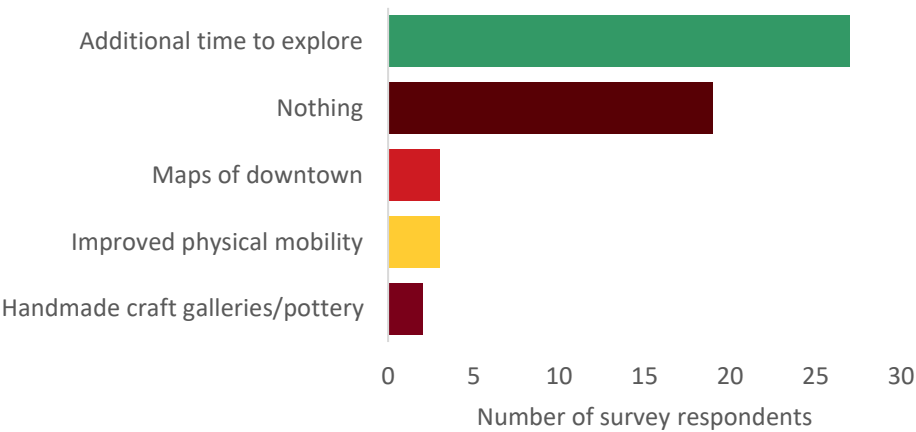
Riverboat visitors had the opportunity to visit multiple locations in and around Red Wing. The most visited places included the National Eagle Center, downtown Red Wing, and Red Wing Shoes (Chart 6).

Chart 6: Places visited in Red Wing, riverboat visitors, 2024



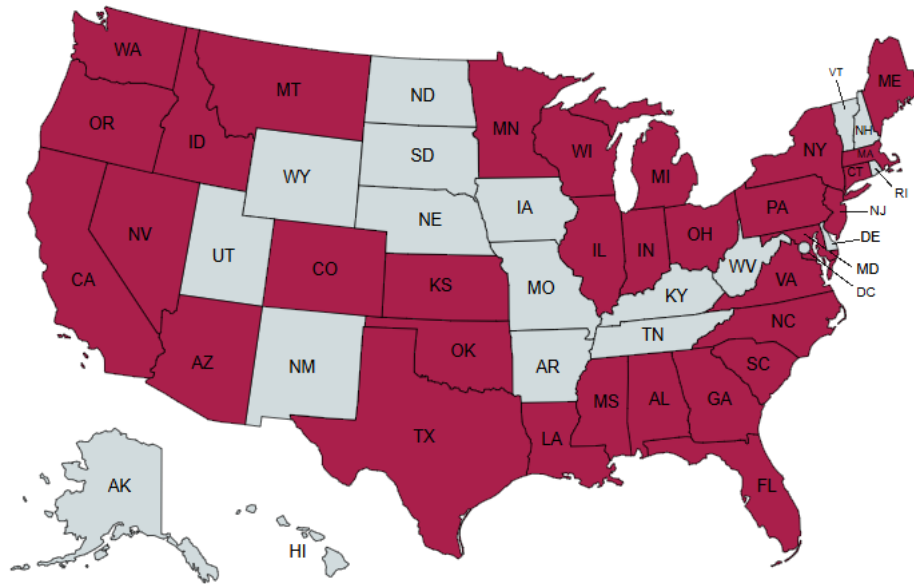
The survey also asked respondents to respond to the statement, “Name one thing that would have enhanced your visit to Red Wing.” The most cited response related to having additional time to spend exploring the community (Chart 7). Other responses listed by more than one respondent included nothing, maps of the downtown area, improved physical mobility (golf cart or shuttle to downtown), and additional handmade craft or pottery galleries.

Chart 7: Suggestions for improving visit to Red Wing, riverboat visitors, 2024



Survey respondents came from across the United States, representing 31 states (Map 1).

Map 1: Home zip code locations of Red Wing riverboat visitor survey respondents, 2024



Notes on the analysis

This analysis relies on several assumptions. They include:

- Riverboats were at full passenger occupancy.
- There were 20 spectators per riverboat docking, on average.
- There was \$40 in expenditures per passenger for group tours.

When multiple assumptions are included in an analysis, it is good practice to conduct a sensitivity analysis. Sensitivity analysis involves changing some of the fundamental assumptions and quantifying how those changes affect the total economic contribution. Extension modeled three scenarios that modify the assumptions.

The first scenario changes the assumption that the riverboats were at full capacity and instead supposes 85 percent occupancy. In this case, the total economic contribution of a normal year would decline to \$735,420 (Table 6). This represents an 8 percent decline.

Table 6: Total economic contribution, Red Wing riverboat visitors, normal year
Scenario 1: Riverboats at 85 percent capacity

Category	Output	Employment	Labor Income
Direct	\$563,750	10	\$186,080
Indirect	\$101,470	22	\$29,970
Induced	\$70,200	22	\$20,190
Total	\$735,420	54	\$236,240

The second scenario changes the assumption that 20 spectators come per riverboat docking. It increases the assumption to 40 spectators. In this case, the total economic contribution of a normal year would increase to \$815,610 (Table 7). This represents a 2 percent increase.

Table 7: Total economic contribution, Red Wing riverboat visitors, normal year
Scenario 2: 40 spectators per docking

Category	Output	Employment	Labor Income
Direct	\$620,430	10	\$211,120
Indirect	\$115,860	24	\$33,970
Induced	\$79,320	24	\$22,810
Total	\$815,610	58	\$267,900

The final scenario assumes that the riverboat companies spend \$30 per person for group tours, as opposed to the \$40 in the main scenario. In this case, the total economic contribution falls to \$751,290 (Table 8). This represents a 6 percent decrease.

Table 8: Total economic contribution, Red Wing riverboat visitors, normal year
Scenario 3: \$30 in spending per person for group tours

Category	Output	Employment	Labor Income
Direct	\$575,510	11	\$179,370
Indirect	\$107,390	23	\$31,460
Induced	\$68,390	23	\$19,670
Total	\$751,290	57	\$230,500

Appendix: Methods and terms

Input-output terms

Special models, called input-output models, exist to conduct economic impact analysis. There are several input-output models available, and IMPLAN is one such model. Many economists use IMPLAN for economic contribution analysis because it can measure output and employment impacts, is available on a county-by-county basis and is flexible for the user. While IMPLAN has some limitations and qualifications, it is one of the best tools available to economists for input-output modeling. Understanding the IMPLAN tool's capabilities and limitations helps ensure the best results from the model.

One of the most critical aspects of understanding economic impact analysis is the distinction between the “local” and “non-local” economy. The model-building process identifies the local economy. Either the group requesting the study, or the analyst defines the local area. Typically, the study area (the local economy) is a county or a group of counties that share economic linkages. In this report, the study area is Goodhue County.

A few definitions are essential to properly interpret the results of an IMPLAN analysis. These terms and their definitions are provided below.

Output

Output is measured in dollars and is equivalent to total sales. The output measure can include significant “double counting.” Think of food sold at a restaurant, for example. The value of food (say, beef) is counted when it is sold from the farmer to the food manufacturing company, again when the food item (say, a hamburger patty) is sold to the wholesaler, and yet again when the restaurant sells it as a hamburger to a riverboat passenger. The value of the beef is built into the price of each of these items, and then the sale of each item is added to determine total sales (or output).

Employment

IMPLAN includes total wage and salaried employees, as well as the self-employed, in employment estimates. Because employment is measured in jobs and not in dollar values, it tends to be a very stable metric (no inflation).

Labor income

Labor income measures the value added to the product by the labor component. So, in the beef/hamburger example, when the beef is sold to the food manufacturing company, a certain percentage of the price is for the farmer's labor to raise the cow. Then when the hamburger is sold to the restaurant, it includes some markup for its labor costs in the price. When the restaurant sells it to a riverboat passenger, he/she includes a value for the labor. These individual value increments for labor can be measured, which amounts to labor income. Labor income does *not* include double counting.

Labor income includes both employee compensation and proprietor income. It is measured as wages, salaries, and benefits.

Direct impact

Direct impact is equivalent to the initial activity in the economy. In this study, it is spending by riverboat passengers and employees, riverboat watchers, and the riverboat companies.



Indirect impact

Indirect impact is the summation of changes in the local economy that occur due to spending for inputs (goods and services) by the industry or industries directly impacted. For instance, if employment in a manufacturing plant increases by 100 jobs, this implies a corresponding increase in output by the plant. As the plant increases output, it must also purchase more inputs, such as electricity, steel, and equipment. As the plant increases purchases of these items, its suppliers must also increase production, and so forth. As these ripples move through the economy, they can be captured and measured. Ripples related to the purchase of goods and services are indirect impacts.

Induced impact

The induced impact is the summation of changes in the local economy that occur due to spending by labor, which is, spending by employees in the industry or industries directly impacted. For instance, if employment in a manufacturing plant increases by 100 jobs, the new employees will have more money to spend on housing, groceries, and going out to dinner. As they spend their new income, more activity occurs in the local economy. This can be quantified and is called the induced impact.

Total impact

The total impact is the summation of the direct, indirect, and induced impacts.

