



# Board of County Commissioners Agenda Request

8A

Agenda Item #

**Requested Meeting Date:** August 26, 2025

**Title of Item:** ATV Economic Impact Study- Information Only

<input checked="" type="checkbox"/> REGULAR AGENDA <input type="checkbox"/> CONSENT AGENDA <input type="checkbox"/> INFORMATION ONLY	<b>Action Requested:</b> <input type="checkbox"/> Approve/Deny Motion <input type="checkbox"/> Adopt Resolution (attach draft) <input type="checkbox"/> Direction Requested <input checked="" type="checkbox"/> Discussion Item <input type="checkbox"/> Hold Public Hearing* <i>*provide copy of hearing notice that was published</i>
<b>Submitted by:</b> Mark Jeffers	<b>Department:</b> Administration
<b>Presenter (Name and Title):</b> Mark Jeffers, Economic Development Coordinator	<b>Estimated Time Needed:</b> 10 minutes
<b>Summary of Issue:</b> Through a collaborative effort with the University of Minnesota Extension, the Land Department and Economic Development have analyzed the economic impact of the Northwoods ATV Trail System in Aitkin County. The full results are provided in the attached report.	
<b>Alternatives, Options, Effects on Others/Comments:</b>	
<b>Recommended Action/Motion:</b> Information only.	
<b>Financial Impact:</b> Is there a cost associated with this request? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No What is the total cost, with tax and shipping? \$ Is this budgeted? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Please Explain:	



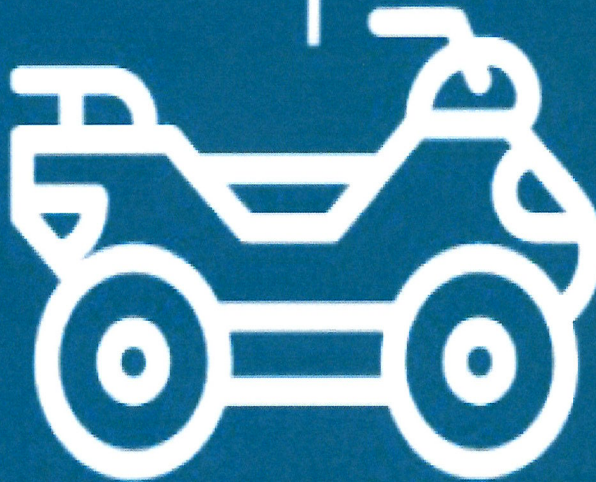
Aitkin County

# ATV Riders in 2024

**138,460** ATV rider visits

**65%** were visitors

**94%** rode on a designated trail system



**180** Minnesotan's jobs supported

**\$16.8 million** economic activity generated

**4** average number of days visitors were in the region

Restaurants, gas stations, and lodging

Businesses that see the most direct spending by ATV riders

Real estate and utilities

Industries that most indirectly benefit





UNIVERSITY OF MINNESOTA EXTENSION

DEPARTMENT OF COMMUNITY DEVELOPMENT

# Economic contribution of ATV trails in Aitkin County, Minnesota

A report of the Economic Impact Analysis program

Presented by Brigid Tuck and John Bennett



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A report of the Economic Impact Analysis program.

August 2025

Presented by Brigid Tuck, applied research specialist, community economics and John Bennett, Extension educator

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## **Executive summary: Economic contribution of ATV trails in Aitkin County, Minnesota**

In Aitkin County, ATV riders can experience Minnesota's scenic beauty through the Northwoods ATV trail system. The former Soo Line serves as a primary trail through the county, connecting with additional trails to provide riders access to 207 miles of maintained ATV trails. With the development of new and expanding ATV trails, the county has seen a steady year-over-year increase in the number of ATVs using the trails.

Aitkin County was interested in understanding the economic benefits of ATV trail riders and trail development. Thus, University of Minnesota Extension conducted an economic contribution analysis in partnership with the county. As part of the project, Extension conducted a survey of ATV riders in the county. The survey received 478 usable responses. Major findings of the analysis include:

### **ATV trails are attracting visitors to Aitkin County, particularly families.**

In 2024, there were an estimated 138,460 trail rider visits in Aitkin County. Of the visits, 65 percent were generated by tourists while 35 percent were generated by residents. Many of the ride visits included families and children. Of the survey respondents, 63 percent reported their riding group included family members. In addition, more than one in four (27 percent) of riding groups included children.

Once in the county, ATV trail users stayed an average of 4 days and 3 nights. The most common place for ATV riders to stay was at a campground, which was used by 22 percent of overnight visitors. Visitors are choosing Aitkin County trails because of the ability to be outdoors, the scenic beauty of the region, amenities along the trails, and the trail conditions. The ATV trails are contributing to a positive perception of Aitkin County. Nearly 25 percent of respondents indicated they were "very likely" to move to Aitkin County based on their visit, while another 17 percent indicated they were "somewhat likely" to move.

### **ATV trail users support communities and businesses.**

ATV trail users directly spent an estimated \$13 million in Aitkin County in 2024. Visitors spent an estimated \$144.50 per person per day, while residents spent \$61.10. Spending by ATV-related visitors (those from outside of Aitkin County) supported 4 percent of all retail service, food service, and accommodation sales in the county. Visitors supported 14 percent of all sales at restaurants/bars and 25 percent of all sales at lodging establishments.

ATV trail users enjoy being able to visit communities and other local attractions. Of the survey respondents, 61 percent indicated they visited a place of interest during their most recent ATV-related trip to the county. When asked what would encourage them to ride more in Aitkin County, many survey respondents mentioned additional connections to communities and/or amenities.

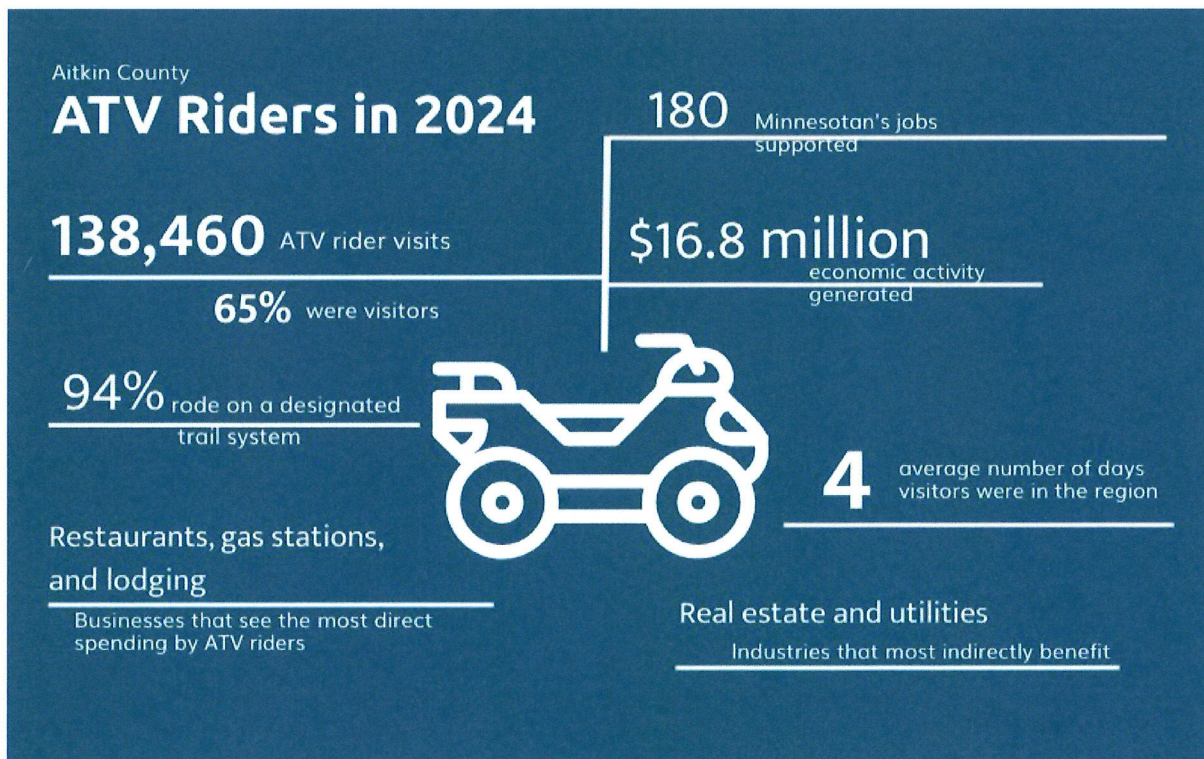


**ATV trail users generate economic activity in Aitkin County's economy.**

In total, ATV riders in Aitkin County generated \$16.8 million in economic activity in 2024. This included \$4.7 million in labor income. The riders supported 180 jobs. Of the \$16.8 million, \$13.4 million (80 percent) came from visitors. The industries that most indirectly benefitted from ATV trail users included real estate, food services and drinking places, and utilities.

The survey results indicated riders were also riding on trails in neighboring counties during their visits, generating economic activity in those counties as well. Two of every three people who rode ATV trails in Aitkin County reported also riding in neighboring counties.

In addition, ATV trail development projects in Aitkin County generated \$1.3 million in economic activity between 2023 and 2025. This includes \$400,510 in labor income. The projects supported 9 jobs.



## Project overview

In Aitkin County, ATV riders can experience Minnesota's scenic beauty through the Northwoods ATV trail system. The former Soo Line serves as a primary trail through the county, connecting with additional trails to provide riders with access to 207 miles of maintained ATV trails. Through the years, trail development in the county has focused on 1) creating a family-friendly experience that allows riders of various ages and skill levels to enjoy the trails 2) using techniques and materials to build trails while minimizing environmental impacts, 3) forming trail systems that allow riders to explore the diversity of Aitkin County's land and forest types, and 4) connecting communities to ATV trails.<sup>1</sup>

With the development of new and expanding ATV trails, the county has seen a steady year-over-year increase in the number of ATVs using the trails. ATV trail riders bring with them their spending. When they come to Aitkin County, they rent hotel rooms or campsites, eat at restaurants and buy groceries, and shop at local stores, among other things. ATV trail user spending creates economic activity, as the businesses serving the riders increase their spending in response to the riders.

In addition to ATV trail users, Aitkin County and partners have been investing in trail development. Trail development also creates economic activity during the construction phase.

Aitkin County was interested in understanding the economic benefits of ATV trail riders and trail development. Thus, University of Minnesota Extension conducted an economic contribution analysis in partnership with the county.

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

- How much do ATV riders spend in Aitkin County during their visit?
- Which businesses directly benefit from ATV use?
- Which businesses indirectly benefit from ATV use?
- What opportunities exist to increase the economic benefits of trail riding?

## Project approach

In fall 2024, University of Minnesota Extension, in partnership with Aitkin County, surveyed ATV trail users. The goal was to collect data on ATV ridership and spending to inform the economic contribution study.

The online survey was deployed on August 15, 2024. Notifications were sent to members of the major ATV clubs in Aitkin County. In addition, the county pushed notifications out via its social media platforms. The survey closed on November 15, 2024.

The survey received 563 responses. Respondents were initially screened to determine if the respondent had ridden ATVs in Aitkin County in the twelve months prior to the survey. Of the respondents, 484 responded positively and were directed to complete the survey.

From there, respondents were asked to identify themselves as either local residents or visitors. The screening question read "when you rode in Aitkin County, did you travel more than 50 miles to ride and/or stay overnight during your trip". Those responding "yes" were categorized as visitors and

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<sup>1</sup> Aitkin County. (n.d.). *Northwoods ATV trails*. <https://www.co.aitkin.mn.us/departments/atv/>





directed to one set of questions. Those responding “no” were categorized as local residents and directed to a different set of questions.

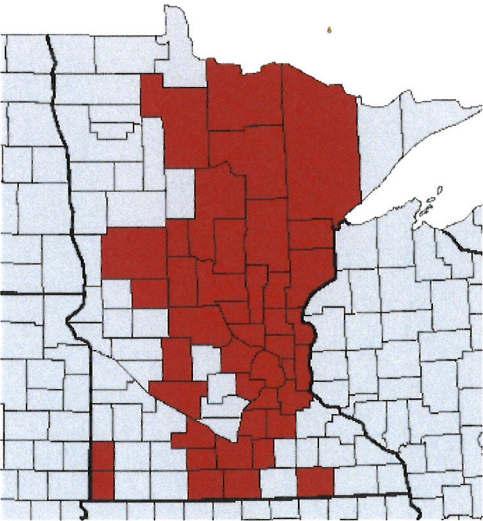
In all, 310 respondents indicated they were visitors under the definition and 168 indicated they were residents (Table 1). Six respondents did not complete the question and therefore did not complete the survey. Thus, in total, there were 478 complete and useable responses to the survey.

**Table 1: Breakout of survey respondents, Aitkin County ATV survey, 2024**

Metric	Number of Respondents
Total responses	563
Number who rode in Aitkin County in last 12 months	484
Number who identified as local residents	168
Number who identified as visitors	310

Survey respondents came from across Minnesota (Map 1). Forty Minnesota counties were represented in the survey responses. The survey also drew respondents with home zip codes in five other states – Florida, Nebraska, North Dakota, Oregon, and South Dakota.

**Map 1: Primary zip code of Aitkin County ATV survey respondents, 2024**



The survey results point to differences in trail use statistics between visitors and residents (Table 2). On average, residents reported having more people on one ATV vehicle (2.7) compared to visitors (2.4). Visitors reported spending more time riding (6.5 hours) compared to residents (5.0 hours).

**Table 2: Statistics for most recent ride, ATV trail users, Aitkin County**

Category	Visitors	Residents
Number of people per vehicle	2.4	2.7
Number of hours spent riding	6.5	5.0
Travel party size	7.1	N/A
Number of ATVs riding on trail	N/A	4.4

As mentioned, there are two ways ATV trails drive economic activity in the county. The first is through spending by ATV trail users. These impacts are on-going, as long as ATV users continue to ride in the county. The second is through the construction of new trail development. These impacts are shorter-term in nature and will dissipate when the project is completed. Given this, Extension measured the two types of economic activity separately.

## Economic contribution of ATV trail users

Economic contribution includes direct, indirect, and induced effects. Direct effects are an initial change in an economy, for example, ATV riders visiting Aitkin County. The direct effects, in turn, generate ripple effects throughout the economy as the businesses and workers directly affected purchase more from their supply chains. These ripple effects are the indirect and induced effects.

The first step of an economic contribution study is to quantify the direct effect. The next section of this report will explain how Extension calculated the direct effect of ATV riders in the county. The direct effects were then entered into an input-output model which calculated the indirect and induced effects. Input-output models trace the flow of goods and services within an economy. Once the flow is known, the model can measure how a change in one sector (say, restaurant sales) affects other components of the economy (say, utilities and banks).

### Direct effect of ATV trail users

To measure the direct effect of ATV trails users in Aitkin County, Extension needed two pieces of information. The first was a spending profile for the average ATV rider per day. The second was a count of ATV trail users.

#### Per person spending

Survey respondents provided data related to spending by ATV trail users. Visitors and residents had different spending profiles, so it was important to calculate per person spending for each group.

On average, Aitkin County visitors spent \$144.50 per day during their 2024 ATV riding trip (Table 3). Meanwhile, residents spent on average \$61.10 per day. Residents did not have any lodging expenses and reported spending less on dining out and transportation.

**Table 3: Spending per person, per day,  
Aitkin County ATV survey respondents**

Category	Visitors	Residents
Restaurants/bars	\$42.50	\$28.70
Lodging	\$34.00	\$0
Transportation	\$31.10	\$13.80
Groceries	\$13.20	\$5.30
Shopping	\$7.70	\$3.20
Recreation/entertainment	\$6.70	\$5.10
ATV-related	\$6.20	\$3.90
Other	\$3.10	\$1.10
<b>Total</b>	<b>\$144.50</b>	<b>\$61.10</b>

#### ATV trail user counts

To get a count of the number of ATV riders, Extension started with trail counts provided by Aitkin County. Aitkin County has trail counters at 14 locations:

- Axtell Technical Riding Area
- Berglund Soo Line

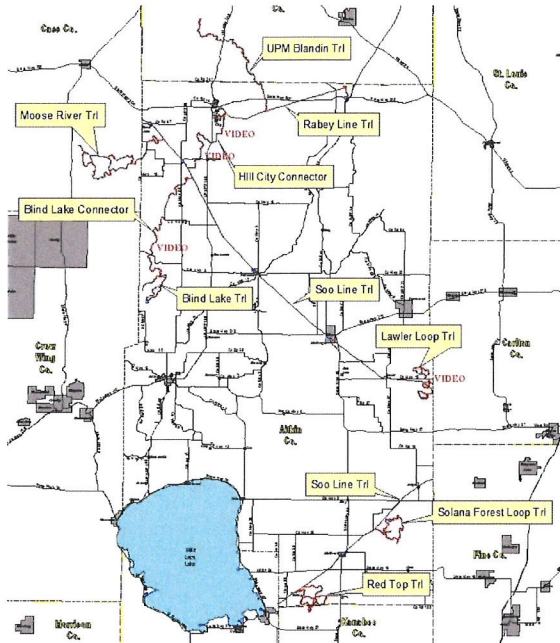




- Blind Lake Connector
- Hill City Connector
- Lawler Loops
- Lawler Soo Line
- Rabey Line
- Rat Lake ATV
- Red Top
- Red Top Soo Line
- Solona Loop
- Solona Soo Line
- Swatara Soo Line

The trail systems are shown on Map 2.

**Map 2: ATV trails in Aitkin County, Minnesota**



The 14 trail counters recorded 127,508 ATVs between May and October 2024. Extension needed to make several adjustments to the counts in order to get a count of “people” visits. An estimate of “people” visits was needed to multiply by per person spending. Adjustments to the counts included the following.

- Occasionally, the trail counters did not work properly, so there were a few missing data points. Extension extrapolated the data to fill in the missing trail counts.
- A single ATV could have passed by the counters on multiple occasions on a single trip. First, if a trail is mostly out and back, a single ATV is likely to pass the same counter twice.

Extension assumed that on straight trails, 90 percent of ATVs were counted twice. On looping trails, Extension assumed 80 percent of ATVs were counted twice.

- Second, if counters are along a common route, a single ATV could pass by multiple counters. For example, many riders use the Lawler section of the Soo Line to access Lawler Loops. In these cases, Extension adjusted the counts to reflect that the majority of ATVs were counted twice.
- Finally, an ATV, particularly a side-by-side, can hold multiple passengers. The survey results indicate that visitors had an average of 2.7 people on one ATV while residents had an average of 2.4 people.

Using this approach, Extension estimated there were 138,460 trail ride visits (“people” visits) in 2024 (Table 4). Of these, an estimated 86,230 were visitors and 55,270 were residents. Extension calculated the ratio of visitors (65 percent) to residents (35 percent) based on the survey results.

**Table 4: Estimated number of ATV ride visits  
Aitkin County, 2024**

<b>Metric</b>	<b>Number</b>
ATV counts (from trackers)	127,508
Number of unique ATVs (estimated)	55,270
Total ride visits (estimated)	138,460
Ride visits by residents (estimated)	52,230
Ride visits by visitors (estimated)	86,230

#### **Total spending by ATV trail users**

In total, ATV riders in Aitkin County spent an estimated \$13 million in 2024 (Table 5). Visitors generated the largest portion of the spending (\$10.3 million). The highest amount of spending was at restaurants and bars (\$4.3 million), gasoline stations and vehicle repair shops (\$2.8 million), and at hotels, vacation rentals, and campgrounds (\$2.4 million).

**Table 5: Total spending by ATV trail users  
Aitkin County, 2024**

<b>Category</b>	<b>Visitors</b>	<b>Residents</b>	<b>Total</b>
Restaurants/bars	\$3,041,600	\$1,244,240	\$4,285,840
Lodging	\$2,433,280	\$0	\$2,433,280
Transportation	\$2,225,740	\$598,270	\$2,824,010
Groceries	\$944,690	\$229,770	\$1,174,460
Shopping	\$551,070	\$138,730	\$689,800
Recreation/entertainment	\$479,500	\$221,100	\$700,600
ATV-related	\$443,720	\$169,080	\$612,800
Other	\$221,860	\$47,690	\$269,550
<b>Total</b>	<b>\$10,341,460</b>	<b>\$2,648,880</b>	<b>\$12,990,340</b>

The direct spending figures have been adjusted to account for the role of ATV trails in the generation of the trip. In economic contribution theory, ATV rider spending can be attributed to the trails if the trails were the primary purpose of the trip. Of the survey respondents, 83 percent indicated the primary reason for their visit to Aitkin County was to ride on the ATV trails.

To provide some context for the spending, Extension looked at Aitkin County’s retail and leisure/hospitality sales.<sup>2</sup> In 2023 (the most recent data available), Aitkin County businesses that

<sup>2</sup> Minnesota Department of Revenue. (2025, June 25). *Sales and use tax statistics and annual reports*. <https://www.revenue.state.mn.us/sales-and-use-tax-statistics-and-annual-reports>





either provided retail services, food services, or accommodations recorded \$236.8 million in sales (Table 6).

Overall, spending by ATV trail users that are visitors to the county accounted for about 4 percent of all sales. Spending by visitors versus residents is important to understand, as the spending by visitors is considered “new money” or spending that likely would not have occurred in the county if not for the trails.

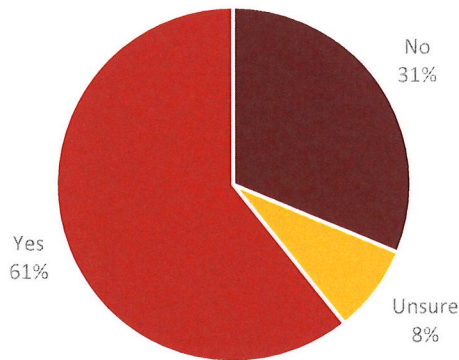
Spending by ATV trail visitors supported 14 percent of restaurant/bar sales and 25 percent of lodging sales

**Table 6: ATV spending in the context of Aitkin County’s retail and service sector**

Category	ATV trail visitor spending	Total sales	Percent of all sales attributable to ATV visitors
Restaurant/bars	\$3,041,600	\$21,436,674	14%
Lodging	\$2,433,280	\$9,683,628	25%
Groceries	\$944,690	\$42,254,156	2%
Total retail and service sector spending	\$10,341,460	\$236,829,246	4%

.In addition to the spending data, survey results demonstrate that ATV riders are visiting attractions across Aitkin County. The majority (61 percent) of survey respondents indicated they also visited Aitkin County attractions or points of interest during their most recent ride (Chart 1). Examples of activities included visiting a park or exploring a town.

**Chart 1: Visited other attractions or points of interest during most recent ride, Aitkin County ATV survey, 2024**



### Indirect and induced effects of ATV trail users

As mentioned, indirect and induced effects are often called the ripple effects. The ripples are generated when businesses and workers purchase necessary goods and services. The indirect effects are related to the business supply chain. For example, if a group of ATV riders dines at a local restaurant, that restaurant purchases more food, uses more electricity, and perhaps uses additional banking services. The impact on the wholesale food supplier, the electric utility, and the bank are indirect effects.

The induced effects are related to employee spending. When that same group of ATV riders dines at the restaurant, the waitstaff receives payments and tips. The waitstaff then might use that money to pay rent or buy groceries. The impact on the landlord and the grocery store are the induced effects. Extension used the IMPLAN model for the input-output analysis in this study.

**Total economic contribution of ATV trail users**

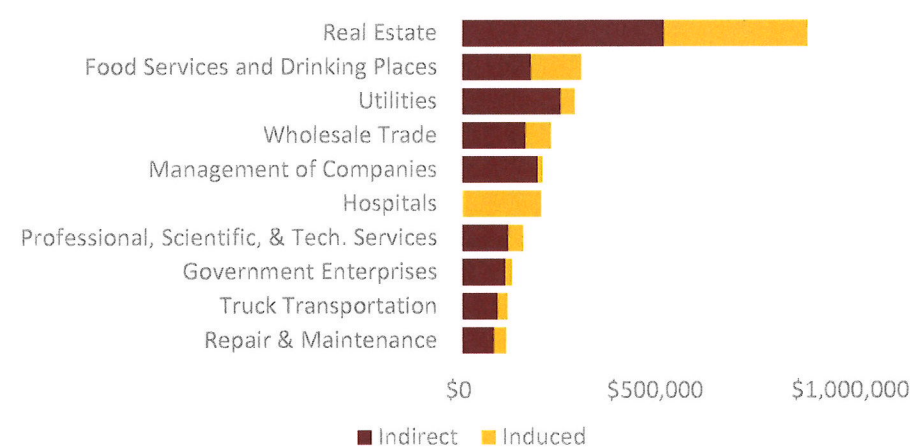
In total, ATV riders in Aitkin County generated \$16.8 million in economic activity in 2024 (Table 7). This included \$4.7 million in labor income. The riders supported 180 jobs. Of the \$16.8 million, \$13.4 million (80 percent) came from visitors.

**Table 7: Total economic contribution of ATV trail users  
Aitkin County, 2024**

Category	Output	Employment	Labor Income
Direct	\$12,990,340	150	\$3,727,770
Indirect	\$2,410,640	20	\$609,530
Induced	\$1,423,110	10	\$378,390
<b>Total</b>	<b>\$16,824,090</b>	<b>180</b>	<b>\$4,715,690</b>

ATV trail riders generated \$16.8 million of economic activity. Of this, \$3.8 million was through indirect and induced effects. These are the businesses that are indirectly affected by ATV riders. The industries that most indirectly benefitted included real estate, food services and drinking places, and utilities (Chart 2).

**Chart 2: Top industries impacted, indirect and induced effects,  
Aitkin County trail users, 2024**



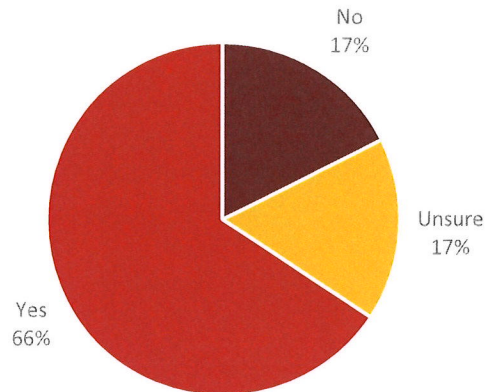
**Additional economic benefits of ATV trail users**

This study focuses on the economic contribution of ATV trail users in Aitkin County. Aitkin County's trail systems are well-connected with other counties, particularly Itasca County's trail system. The survey results indicated riders were also riding on trails in neighboring counties during their visits, generating economic activity in those counties as well.



Two of every three people who rode ATV trails in Aitkin County reported also riding in neighboring counties (Chart 3). Nearly 20 percent were “unsure”.

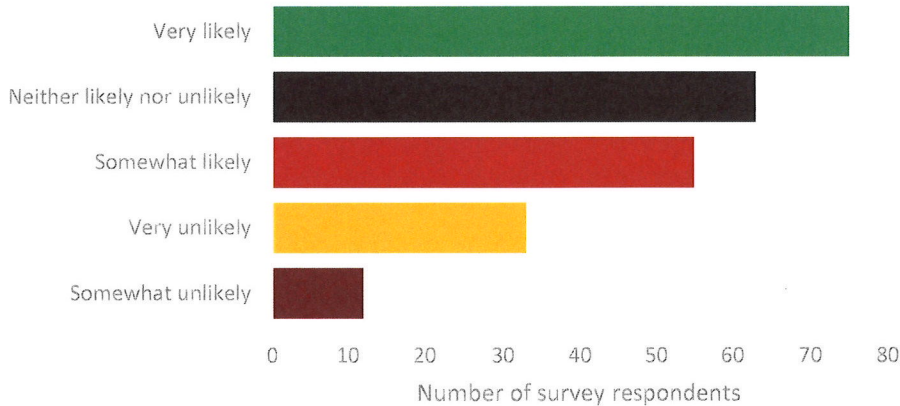
**Chart 3: Rode on trails in neighboring counties, Aitkin County ATV survey, visitors only, 2024**



The survey results also indicate ATV trails may be creating a more positive perception of Aitkin County, leading to longer-term impacts stemming from people moving to the county.

When asked about the likelihood of moving to Aitkin County based on the most recent ATV trail experience, nearly 25 percent of respondents indicated they were “very likely” to move while another 17 percent indicated they were “somewhat likely” to move (Chart 4).

**Chart 4: Likelihood of considering a move to Aitkin County based on ATV trail experience, Aitkin County ATV survey, visitors only, 2024**



## Economic contribution of ATV trail development

Beyond the economic activity generated by ATV trail users, trail development also creates economic activity.

### Direct effect of ATV trail development

The direct effect of ATV trail development in Aitkin County is the amount of money invested in the project(s). Between 2023 and 2025, Aitkin County, local ATV clubs, and the State of Minnesota have invested (or plan to invest) slightly less than \$1 million in trail development projects (Table 8).

**Table 8: Direct effect of ATV trail development**  
Aitkin County, 2023-2025 in 2024 dollars

Year	Investment
2023	\$262,541
2024	\$375,000
2025	\$357,930
<b>Total</b>	<b>\$995,471</b>

These figures are in 2024 dollars to be consistent with the dollar figures elsewhere in this report.

### Indirect and induced effects of ATV trail development

As with the ATV trail users, Extension used the IMPLAN model to quantify the indirect and induced effects.

### Total economic contribution of ATV trail development

In total, ATV trail development projects in Aitkin County generated \$1.3 million in economic activity between 2023 and 2025 (Table 9). This includes \$400,510 in labor income. The projects supported 9 jobs.

**Table 9: Total economic contribution of ATV trail development**  
Aitkin County, 2023-2025, in 2024 dollars

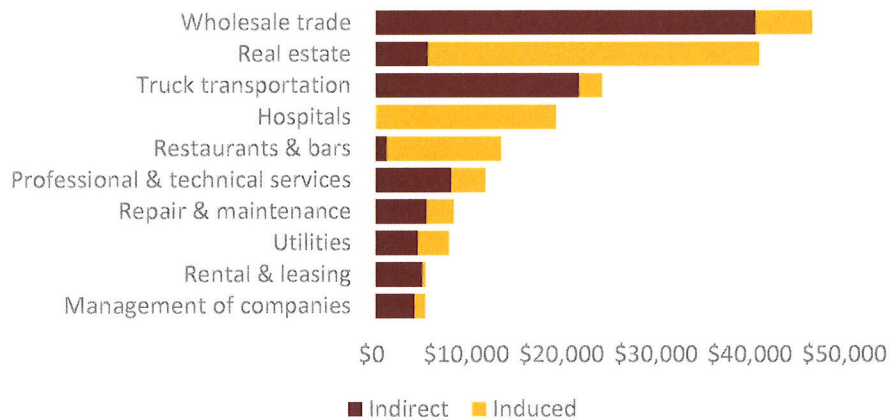
Category	Output	Employment	Labor Income
Direct	\$995,471	7	\$331,770
Indirect	\$120,310	1	\$33,100
Induced	\$134,360	1	\$35,640
<b>Total</b>	<b>\$1,250,141</b>	<b>9</b>	<b>\$400,510</b>

Beyond the companies directly employed to perform the trail projects, the industries that most benefited from trail development included wholesale trade, real estate, and truck transportation (Chart 5). These are industries that often benefit from construction-related activities. Wholesale trade, for example, is the industry where businesses buy directly from a supplier rather than via a retail store.





**Chart 5: Top industries affected, indirect and induced effects, Aitkin County trail development, 2023-2025**



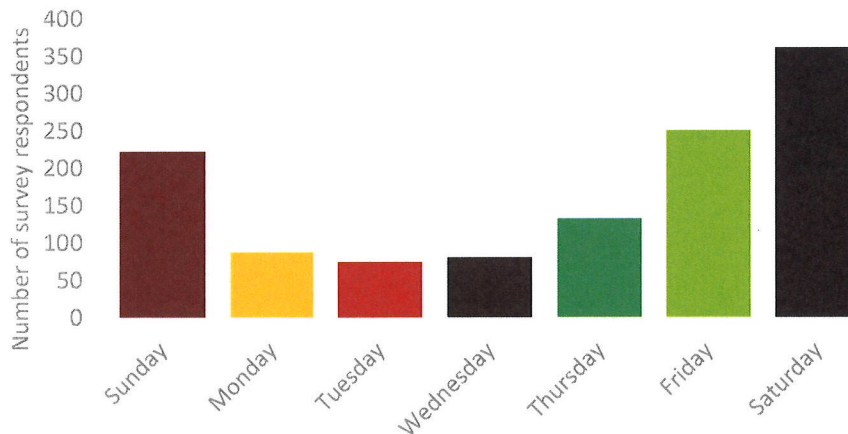
### Insights into ATV ridership trends

In addition to providing data for the economic contribution analysis, the survey results provide some insight into ATV ridership trends in the county. The results can be useful for understanding how previous trail planning efforts influenced ATV ridership in the county.

#### Insights from rider survey

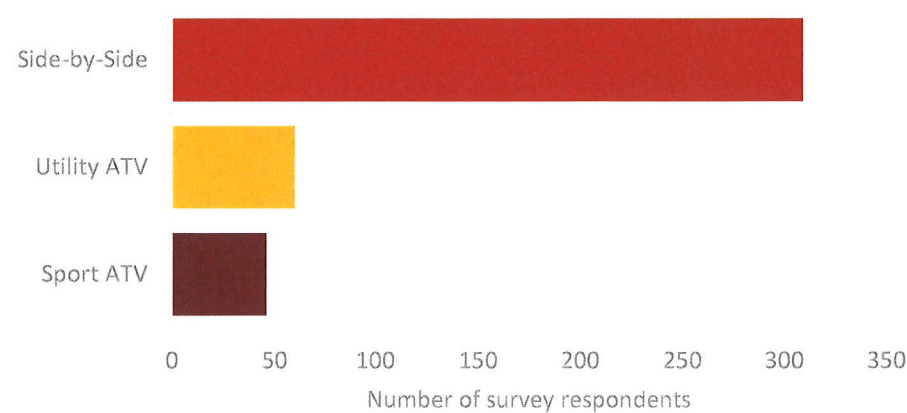
Survey respondents reported riding ATVs in Aitkin County on all seven days of the week (Chart 6). Ridership peaked on Saturday. Visitors in particular indicated they spent 4 days/3 nights in Aitkin County on average during their trip. This is consistent with the data which shows an uptick in ridership starting on Thursday and running through Sunday.

**Chart 6: Ridership by day of the week, Aitkin County ATV survey, 2024**



Side-by-sides are increasing in popularity among ATV enthusiasts, which is reflected in the survey responses. The most common type of ATV used by Aitkin County riders was the side-by-side (Chart 7). Side-by-sides allow for passengers – the average number of passengers per vehicle for residents was 2.7 and was 2.4 for visitors.

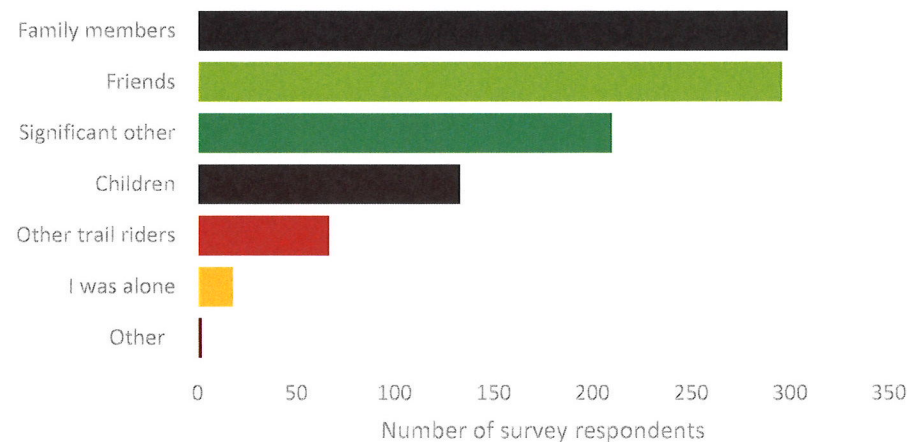
**Chart 7: Type of ATV Ridden on most recent trip, Aitkin County ATV survey, 2024**



ATV riders reported riding with a mix of people. Most commonly, Aitkin County ATV riding groups we comprised of family and friends (Chart 8). One of Aitkin County’s guiding principles for trail development was to be family friendly and it appears the trails are appealing to families, as slightly more than one in four groups contained a child (27 percent).

Fourteen percent reported riding with “other trail riders” which includes organized trail rides.

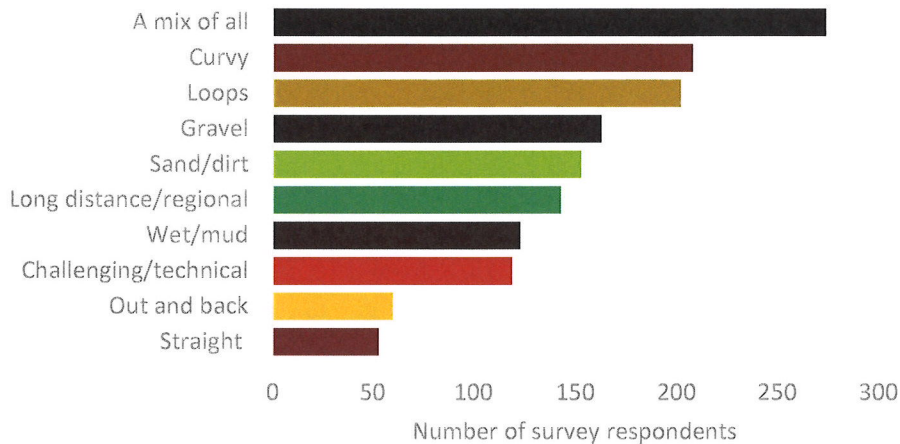
**Chart 8: Members of riding party, Aitkin County ATV survey, 2024**





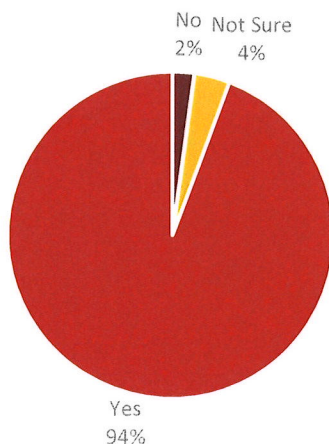
Survey respondents were asked to identify which types of trails they prefer to ride. Overall, the most common choice was a “mix of all”, followed by curvy trails and loops (Chart 9). Straight and out and back trails received the least number of responses.

**Chart 9: Type of preferred trail, Aitkin County ATV survey, 2024**

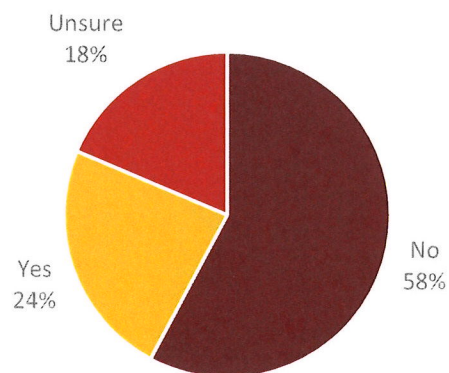


Another guiding principle of Aitkin County's ATV trail development was to have a mix of experiences for riders of all skill levels. Nearly all of the ATV trail survey respondents (94 percent) reported riding on an officially designated trail (Chart 10). This indicates the trail designations are drawing riders to the county. Approximately one in every four survey respondents had also ridden in the Axtell Technical riding area (Chart 11).

**Chart 10: Rode on an officially designated trail, Aitkin County ATV survey, 2024**



**Chart 11: Rode in the Axtell Technical Riding Area, Aitkin County ATV survey, 2024**

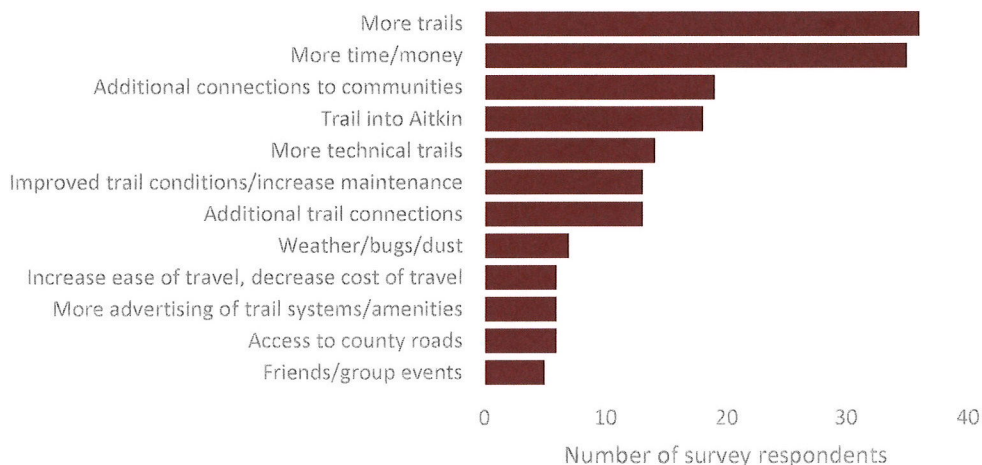


### Insights for future trail and community development

The survey results also provide some insights that can help guide future trail development. They may also point out ways to increase the economic contribution of ATV trail users.

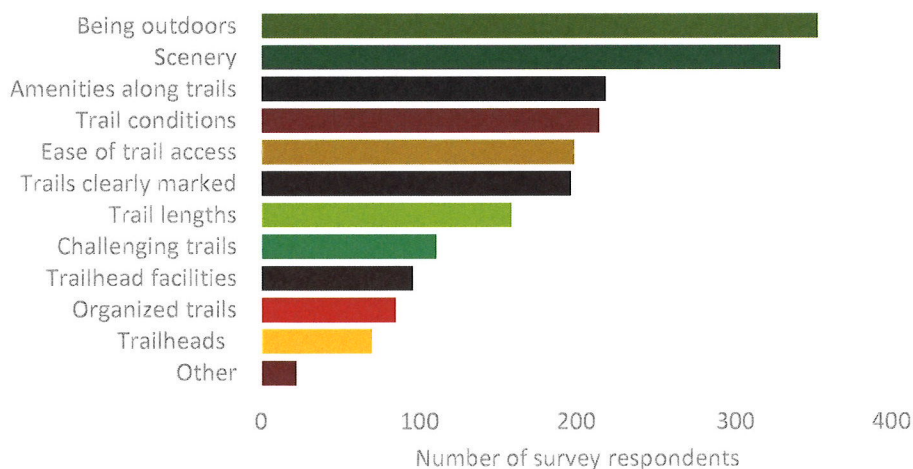
ATV survey respondents were asked to list items that would encourage them to ride more in Aitkin County. Common themes in the responses included building new trails, finding more time and or money, and building additional connections into communities so riders could access restaurants and stores (Chart 12).

**Chart 12: Items that would encourage ATV users to ride more in Aitkin County, Aitkin County ATV survey, 2024**



When asked what they most enjoyed about riding ATVs in Aitkin County, survey respondents rated the ability to be outdoors as their top item (Chart 13). This was followed by the scenery, amenities along the trails, and trail conditions.

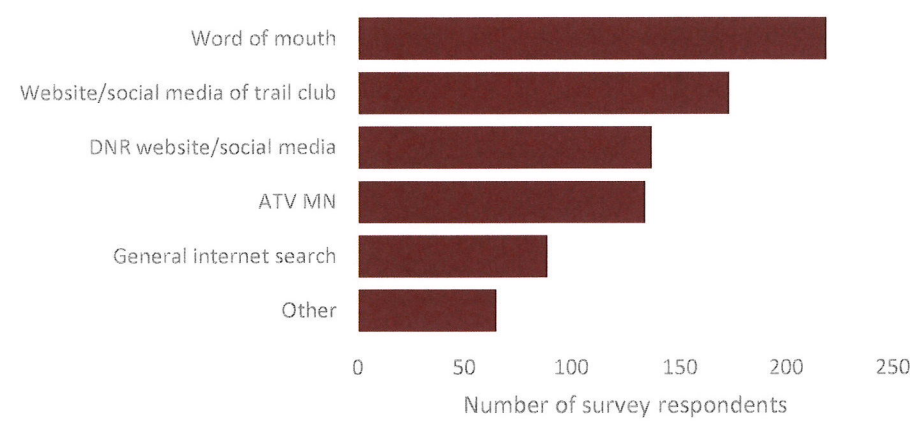
**Chart 13: Most enjoyed aspect of ATV trails in Aitkin County, Aitkin County ATV survey, 2024**





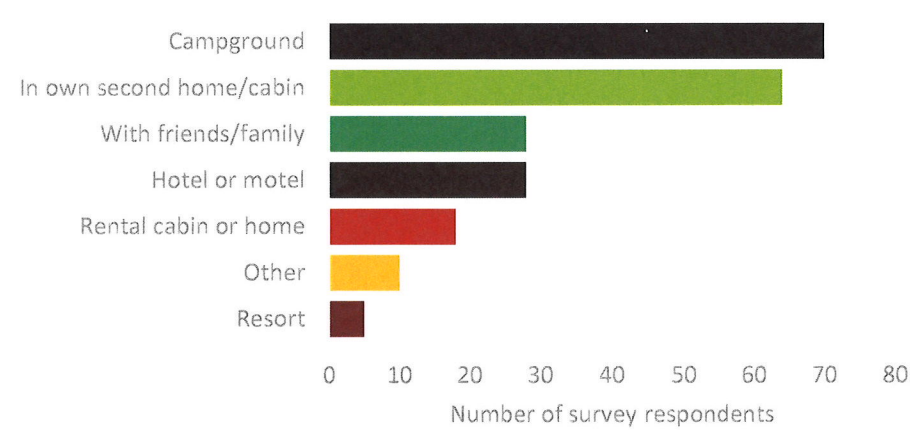
ATV riders learned about Aitkin County trails through a variety of channels, the most common were word of mouth and the website or social media account of local trail clubs (Chart 14).

**Chart 14: Methods for learning about trails, Aitkin County ATV survey, 2024**



Those who opted to stay overnight in Aitkin County during their ATV ride reported staying in a variety of accommodation arrangements (Chart 15). Campgrounds and a second home/cabin were the most commonly used lodging types. Aitkin County has several ATV-friendly campgrounds that have direct access to the trails.

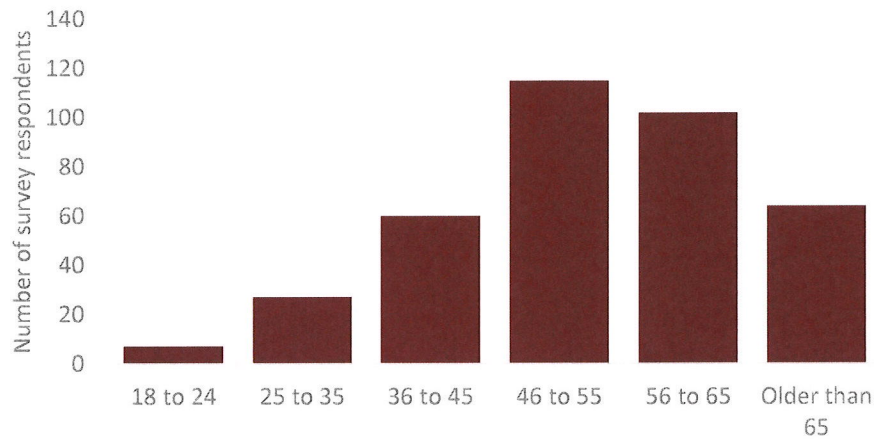
**Chart 15: Accommodations used by overnight visitors, Aitkin County ATV survey, 2024**



Finally, the survey asked respondents some basic demographic questions.

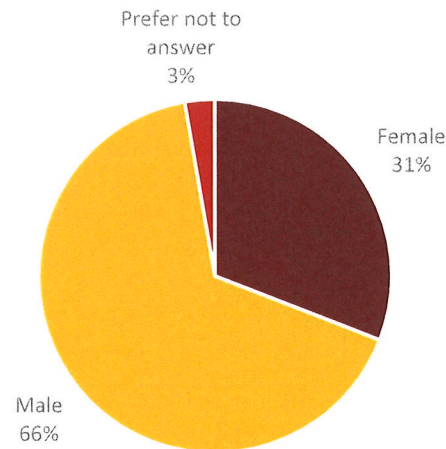
Survey respondents represented a variety of ages (Chart 16). People aged 46 to 55 recorded the highest number of responses.

**Chart 16: Survey respondents by age, Aitkin County ATV survey, 2024**



More males (66 percent) responded to the survey than females (Chart 17).

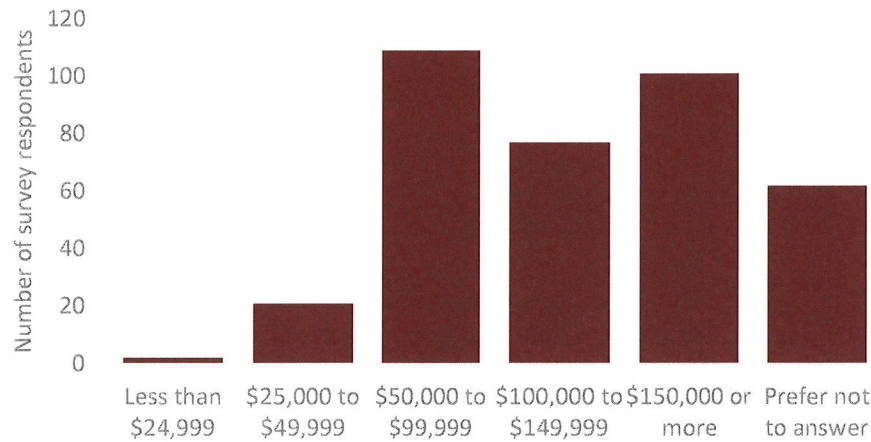
**Chart 17: Survey respondents by gender, Aitkin County ATV survey, 2024**





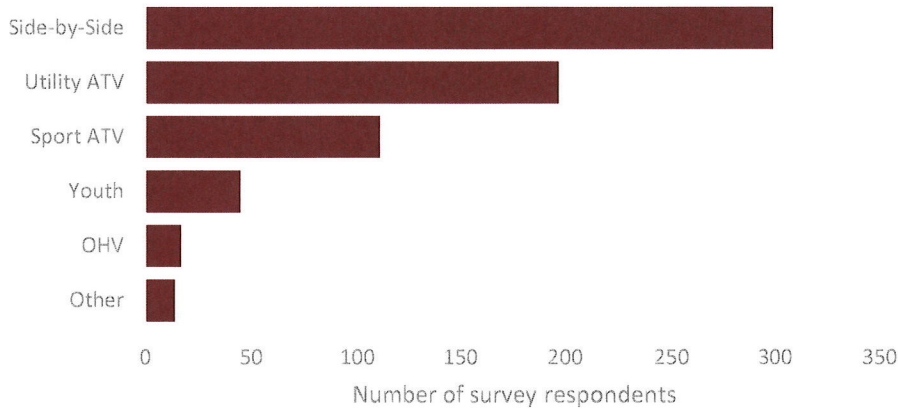
Survey respondents came from across income categories. The highest number of respondents came from households with incomes of \$50,000 to \$99,000 (Chart 18).

**Chart 18: Survey respondents by income category, Aitkin County  
ATV survey, 2024**



Finally, households reported owning a variety of types of ATVs. Side-by-sides and utility ATVs were the most commonly owned vehicles (Chart 19).

**Chart 19: Type of ATV vehicles owned by household, Aitkin County  
ATV survey, 2024**



## Sensitivity analysis

In conducting the analysis, Extension made several assumptions. When assumptions are made in a study, it is good practice to run a few scenarios that alter the assumptions. The scenarios can show how changing the assumptions affects the results. This is called sensitivity analysis because it measures the sensitivity of the results to the underlying assumptions.

One assumption of the analysis is that the majority (90 percent) of riders who were on the trails such as the Lawler Loops also passed the counters on the Soo Line trail. If that assumption were to change, so that 80 percent of riders passed multiple counters, the total number of trail ride visits would increase to 145,180, a 4.9 percent increase.

Correspondingly, the economic contribution of the trail users increases to \$17.6 million, a 4.6 percent increase (Table 10).

**Table 10: Scenario 1: Higher ATV counts**  
**Total economic contribution of ATV trail users**  
**Aitkin County, 2024**

Category	Output	Employment	Labor Income
Direct	\$13,620,660	140	\$3,946,890
Indirect	\$2,480,090	20	\$631,270
Induced	\$1,495,320	10	\$397,630
<b>Total</b>	<b>\$17,596,070</b>	<b>170</b>	<b>\$4,975,790</b>

A second assumption of the analysis is that residents spent an average of \$61.10 per person per day of riding. A previous study of ATV riders in Northeast Minnesota found a lower spending per person for residents. Therefore, Extension ran a second scenario where resident spending was half the amount or \$30.55.

In response, the total economic contribution drops to \$15.1 million, a 10 percent decrease (Table 11).

**Table 11: Scenario 2: Lower spending by resident trail users**  
**Total economic contribution of ATV trail users**  
**Aitkin County, 2024**

Category	Output	Employment	Labor Income
Direct	\$11,665,880	120	\$3,378,460
Indirect	\$2,120,870	10	\$541,820
Induced	\$1,280,450	10	\$340,490
<b>Total</b>	<b>\$15,067,200</b>	<b>140</b>	<b>\$4,260,770</b>



## Appendix: definitions 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 Aitkin 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 an ATV rider. 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 an ATV rider, 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 riders of the ATV trails and by organizations doing trail development.

### 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—that 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.