

# ECONOMIC AND FISCAL IMPACTS



**FULFILLING OUR MISSION  
BUILDING TRAILS, CREATING JOBS, INSPIRING HOPE FOR THE COALFIELDS**



**Spearhead Trails**

An Initiative of Southwest Regional Recreation Authority  
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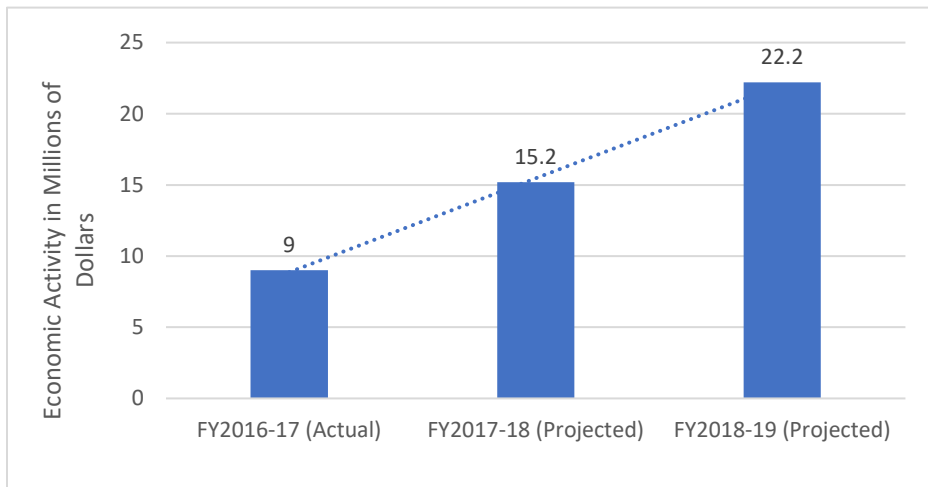


**INSTITUTE FOR  
SERVICE RESEARCH**



# Southwest Regional Recreation Authority Economic Impact Summary

## VIRGINIA ECONOMIC ACTIVITY ATTRIBUTED TO SPEARHEAD TRAILS\*



**FY2017-18 (projected):**  
 Statewide economic activity:  
 \$15.2M- State and local taxes  
 generated: \$989K - Full-time  
 equivalent jobs supported: **168**

**FY2018-19 (projected):**  
 Statewide economic activity:  
 \$22.2M- State and local taxes  
 generated: \$1.5M - Full-time  
 equivalent jobs supported: **250**

\*Future projections are based upon currently available IMPLAN multipliers.

- The cumulative economic impact of Spearhead Trails from 2013 until June 30, 2017 is \$18.6-21.8 million.
- Funding from the General Assembly of the Commonwealth from 2013-June 30, 2017 was \$520,000.
- Spearhead Trails contribution to Virginia's Gross Domestic Product in 2016/2017 was \$5.3 million. State and local taxes equaled \$528K last year.
- In FY2016-17, out of area visitors to Spearhead Trails spent an estimated \$6.7M in the Commonwealth- 87% [\$5.8M] of this money was spent inside the SRRA region.
- The total economic activity stimulated by Spearhead Trails in the Commonwealth during FY2016-17 was \$9.0M- 88% [\$7.9M] of this economic activity occurred within the SRRA region.
- Funding from Virginia Tobacco Region Revitalization Commission/ Funding from Virginia Coalfield Economic Development Commission has been 3.7 million to date.

The full report may be found at [https://spearheadtrails.com/wp-content/uploads/2017/11/SRRA\\_ImpactStudy2017-Final.pdf](https://spearheadtrails.com/wp-content/uploads/2017/11/SRRA_ImpactStudy2017-Final.pdf)

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## TABLE OF CONTENTS

<a href="#">List of Tables</a>	5
<a href="#">List of Figures</a>	7
<a href="#">Acknowledgements</a>	8
<a href="#">Executive Summary</a>	9
<a href="#">Section 1. Introduction</a>	12
<a href="#">Section 2. Methodology</a>	14
<a href="#">2.1 Consumer Data</a>	14
<a href="#">2.2 Capital Investment and Operational Data</a>	17
<a href="#">2.3 Economic Modeling</a>	18
<a href="#">Section 3. Findings</a>	20
<a href="#">3.1 Descriptive Characteristics of Trail Riders and Accompanying Guests</a>	20
<a href="#">3.2 Statewide Economic and Fiscal Results</a>	21
<a href="#">3.2.1 Statewide Spending</a>	21
<a href="#">3.2.2 Statewide Economic Activity</a>	22
<a href="#">3.2.3 Statewide Employment and Labor Income</a>	23
<a href="#">3.2.4 Statewide Value-Added Effects and Tax Revenues</a>	24
<a href="#">3.3 Regional Economic and Fiscal Results</a>	24
<a href="#">3.3.1 Regional Spending</a>	24
<a href="#">3.3.2 Regional Economic Activity</a>	26
<a href="#">3.3.3 Regional Economic Impact from Travelers</a>	27
<a href="#">3.3.4 Regional Employment and Labor Income</a>	28
<a href="#">3.3.5 Regional Value-Added Effects and Tax Revenues</a>	29
<a href="#">3.4 Return on Investment</a>	30
<a href="#">3.5 Indicators of Future Spearhead Performance</a>	32
<a href="#">3.5.1 Visitor Information Sources</a>	32
<a href="#">3.5.2 Visitor Satisfaction</a>	33
<a href="#">3.5.3 Visitor Willingness to Recommend</a>	34
<a href="#">3.5.4 Visitor Return Intent</a>	35
<a href="#">3.5.5 Potential Outcomes of Increased Trail Connected Miles</a>	36
<a href="#">3.5.6 Potential Outcomes of Increased Amenity Connectivity</a>	38
<a href="#">3.5.7 Potential Outcomes of Non-ATV Trail Usage</a>	40
<a href="#">3.5.8 Economic Trajectory</a>	43
<a href="#">Section 4. Discussion</a>	46
<a href="#">Investigator Bios</a>	48
<a href="#">References</a>	50

Appendices

<u>Appendix A: Glossary of Terms</u>	52
<u>Appendix B: Map of SRRA Region</u>	53
<u>Appendix C: County-Level Summary Sheets</u>	55

## List of Tables

**TABLE 1: SUMMARY OF SPENDING PROFILES OF TRAIL USERS**

**TABLE 2: IN-VIRGINIA VISITOR SPENDING (BOTH INSIDE AND OUTSIDE OF THE SRRRA AREA)**

**TABLE 3: IN-VIRGINIA ECONOMIC ACTIVITY ATTRIBUTED TO SPEARHEAD TRAILS**

**TABLE 4: IN-VIRGINIA EMPLOYMENT AND LABOR INCOME ATTRIBUTED TO SPEARHEAD TRAILS**

**TABLE 5: IN-VIRGINIA VALUE-ADDED EFFECTS AND TAX REVENUES ATTRIBUTED TO SPEARHEAD TRAILS**

**TABLE 6: SPENDING WITHIN THE SRRRA AREA**

**TABLE 7: ECONOMIC ACTIVITY IN THE SRRRA AREA ATTRIBUTED TO SPEARHEAD TRAILS**

**TABLE 8: ECONOMIC IMPACT FROM TRAVELERS IN THE SRRRA AREA ATTRIBUTED TO SPEARHEAD TRAILS**

**TABLE 9: EMPLOYMENT AND LABOR INCOME IN THE SRRRA AREA ATTRIBUTED TO SPEARHEAD TRAILS**

**TABLE 10: VALUE-ADDED EFFECTS AND TAX REVENUES ATTRIBUTED TO SPENDING IN THE SRRRA AREA**

**TABLE 11: SPEARHEAD GRANT HISTORY FROM THE VIRGINIA TOBACCO REGION REVITALIZATION COMMISSION**

**TABLE 12: VISITOR SATISFACTION WITH SPEARHEAD TRAILS**

**TABLE 13: VISITOR WILLINGNESS TO RECOMMEND SPEARHEAD TRAILS**

**TABLE 14: VISITOR RETURN INTENTION TO SPEARHEAD TRAILS**

**TABLE 15: POTENTIAL EFFECTS OF MORE CONNECTED MILES ON VISITOR FREQUENCY**

**TABLE 16: POTENTIAL EFFECTS OF MORE CONNECTED MILES ON VISITOR STAY DURATION**

**TABLE 17: POTENTIAL EFFECTS OF MORE CONNECTED AMENITIES ON VISITOR FREQUENCY**

**TABLE 18: POTENTIAL EFFECTS OF MORE CONNECTED AMENITIES ON VISITOR STAY DURATION**

**TABLE 19: SPENDING PROFILES OF VIRGINIA STATE PARK VISITORS IN 2016**

**TABLE 20: SPENDING PROFILES OF WEST VIRGINIA STATE PARK VISITORS IN 2015**

**TABLE 21: FISCAL YEAR 2017-18 PROJECTED ECONOMIC CONTRIBUTIONS**

**TABLE 22: FISCAL YEAR 2018-19 PROJECTED ECONOMIC CONTRIBUTIONS**

## List of Figures

**FIGURE 1: SURVEY SOLICITATION POSTCARDS**

**FIGURE 2: ECONOMIC RIPPLE EFFECTS**

**FIGURE 3: WORD CLOUD OF RESPONSES: “HOW DID YOU FIRST LEARN ABOUT SPEARHEAD TRAILS?”**

**FIGURE 4: IN-VIRGINIA ECONOMIC ACTIVITY ATTRIBUTED TO SPEARHEAD TRAILS**

## Acknowledgements

**This study could not have been conducted without the 300+ trail riders who completed surveys. Spearhead's Executive Director and administrative staff members were also very helpful in providing the organization's fiscal information.**



## Executive Summary

Visitors attracted annually to Spearhead Trails stimulate a large amount of economic activity throughout the state and within the SRRRA area, validating state and local investments in the development and operation of these public facilities and services. A summary of key findings of this study are as follows:

- In FY2016-17, visitors to Spearhead Trails spent an estimated \$6.7M throughout the state. Approximately 87% [\$5.8M] of this money was spent inside the SRRRA region.
- The total economic activity stimulated by Spearhead Trails in the state during FY2016-17 was approximately \$9.0M. Roughly 88% [\$7.9M] of this economic activity occurred within the SRRRA region.
- The total “economic impact from travelers” attributed to Spearhead Trails during FY2016-17 was an estimated \$4.3M. “Economic impact from travelers” is a subset of the total economic activity figure and is a measure of “fresh money” infused into the SRRRA area economy that likely would have not been generated in the absence of the trail system.
- Regarding employment, the economic activity stimulated by visitation to Spearhead Trails supported approximately 94 full-time equivalent (FTE) jobs in the state in FY2016-17.<sup>1</sup>
- In terms of wages and income, the economic activity spawned by Spearhead Trails was responsible for roughly \$3.6M in wage and salary income in the Commonwealth during FY2016-17.
- Economic activity created by Spearhead Trails was associated with approximately \$5.3M in value-added effects which is a measure of the trail system’s contribution to the gross domestic product of the Commonwealth.
- Economic activity stimulated by Spearhead Trails generated approximately \$528K in state and local tax revenue in Virginia during FY2016-17.

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<sup>1</sup> A total of 94 full-time equivalent jobs may equate to many more part-time jobs.

- Regarding indicators of continued success:
  - The majority of trail users first learn about Spearhead through word-of-mouth which is a signal of rider loyalty and attachment.
  - 89 percent of Spearhead visitors report being either “satisfied” or “very satisfied with their experience.
  - 91 percent of Spearhead riders are either “likely” or “very likely” to recommend Spearhead trails to friends or relatives.
  - 93 percent of Spearhead visitors indicated that they would like to return.
  
- In terms of opportunities for continued growth:
  - 89 percent of visitors stated that they would visit more often if there were more connected trail miles.
  - 72 percent of visitors indicated that they would likely visit for longer periods of time if the trail system had more connected miles.
  - 85 percent of visitors stated that they would visit more often if there were more connected amenities (e.g. restaurants and hotels) around the trails.
  - 71 percent of visitors indicated that they would likely visit for longer periods of time if the trail system had more connected amenities.
  - There appears to be opportunity for SRRRA to serve additional outdoor recreation segments such as horse riding, mountain biking, and hiking, but in the assessment of this research team, the SRRRA should give priority to ATV/Off-Road trails in order to maximize economic impacts due to the high spending rates of ATV users and the scarcity of ATV trails in the marketplace.

- With regard to economic contribution trajectory, conservative modeling projects:<sup>2</sup>
  - FY2017-18 (projected):
    - Statewide economic activity: \$15.2M
    - State and local taxes generated: \$989K
    - Full-time equivalent jobs supported: 168
  - FY2018-19 (projected):
    - Statewide economic activity: \$22.2M
    - State and local taxes generated: \$1.5M
    - Full-time equivalent jobs supported: 250

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<sup>2</sup> Basic assumptions of the trajectory modeling are listed in Tables 21 and 22.

## Section 1. Introduction

Merely an idea a decade ago, the Spearhead Trail system now boasts five trails with hundreds of miles of connectivity. The Southwest Regional Recreational Authority (SRRA), with responsibility for overseeing the trail system, comprises seven counties and one city in Southwest Virginia (see map in Appendix A).

While the successful operations of the trails is evident based upon numerous criteria, the questions surrounding economic impact are important; such as:

- What levels of economic activity does the trail system stimulate in the Commonwealth and in the SRRA region?
- Of this economic activity, what portion can be attributed to non-locals (traveling 50 miles or more) infusing 'fresh money' into the economy?
- How many jobs does the trail system support both directly and indirectly?
- What amounts of labor income are stimulated by the trail system?
- How many state and local tax dollars can be attributed to the trail system?
- What contributions does the trail system make to the gross domestic product of Virginia (a.k.a. value-added effects)?
- Will the trail system continue to be successful going into the future?
  - Are visitors satisfied?
  - Are visitors willing to recommend the trails to others?
  - Are visitors willing to return?
  - Would the visitors stay longer or visit more often with more connected trail miles?
  - Would the visitors stay longer or visit more often with more connected amenities (e.g. nearby restaurants)?
- What sorts of return on investments (ROIs) are being realized on trail funding sources?
- What additional economic benefits might be gained by expanding the Spearhead Trails System to include horseback riding, mountain bicycling, and/or hiking trails?

The purpose of the current study is to address the above questions. The next sections of this report, therefore, describes the study's methodology and data collection procedures.

Lastly, it is prudent to note in this introduction section that a glossary of economic impact terminology is included in Appendix B of this report. The research team made a conscious effort to craft this report using language, terms, and explanations that non-economists can understand, yet the glossary of terms is included as a resource.

## Section 2. Methodology

### 2.1 Consumer Data

Economic benefits are derived from a number of sources including participant spending, construction expenditures for trails and facilities, and the ongoing operational activities of the SRRRA itself, but primary among these is the visitor spending segment. Therefore, the economic modeling in this study requires that spending profiles be built for those visiting Spearhead Trails in groupings that can be readily identified, and who are likely to have significantly different spending patterns. The segments identified for this study are:

- 1) Local visitors to Spearhead Trails (those living within the Spearhead area)
- 2) Non-local day visitors to Spearhead Trails
- 3) Non-local overnight visitors to Spearhead Trails

In order to gather information regarding how much money each of these visitor types spend, an internet survey was designed in collaboration with SRRRA staff to quantify spending for each group and to measure visitor use patterns. Survey solicitations were sent via email to recent trail permit purchasers. (All trail users are required to purchase a permit, providing ready access to customers for the survey.) If the permit purchaser did not provide an email address when purchasing the permit, then the postcard displayed in Figure 1 was sent to his/her postal mailing address. A survey-by-phone service was offered for those without internet availability, but only a few surveys were taken by this means.

The survey was hosted on the Qualtrics platform, which is widely regarded as the most robust hosting platform in the world. Qualtrics has many user-friendly features such as the capability for a respondent to pause a survey and continue later. All Qualtrics survey templates are mobile optimized as well.

FIGURE 1: SURVEY SOLICITATION POSTCARDS



In addition to spending profiles necessary for the economic modeling, the consumer survey also captured information such as frequency of visits, satisfaction with visitation experiences, and specific feedback regarding the individual trails. A total of 319 permit holders completed or substantially completed the survey (some questions were optional and not all questions required mandatory response). The sample sizes of the three profiling groups exceed the benchmark of 50 recommended by Stynes et al. (2000) for outdoor recreation economic impact modeling. Armstrong and Overton's (1977) method of comparing early to late responses was used as an additional check to confirm that the collected responses are reflective of the sector. All diagnostics confirmed sample adequacy.

Visitors were asked to report spending in two separate areas of the survey. The first had to do with spending associated with a specific, most recent visit and included money spent on food, fuels, lodging, etc. (see table in section 3.2.1). This information, when analyzed and segregated into the three visitor groups, forms the basis for estimating average visitor costs per visit and can be extrapolated to estimate average annual spending per permit holder. The second type of user spending is in the form of major purchases made in association with the overall activity (off highway trail use) but not with a specific visit. These expenditures include buying ATV's, helmets and riding apparel, repair and maintenance services, etc. Because this spending typically involves items with long lifespans, and is often shared among users within a party, it needed to be discounted accordingly in the modeling.<sup>3</sup>

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<sup>3</sup> Large equipment spending amounts discounted 28 percent, 53 percent, and 48 percent for local, non-local day, local, and non-local overnight segments, respectively, and then divided by two.



## 2.2 Capital Investment and Operational Data

As previously mentioned, capital (construction) costs and ongoing operational expenditures can provide significant economic benefits. It should be noted that the benefits from capital projects are present only during the life of the construction, but the plans for the development of the Spearhead Trails system calls for a series of additional trail and facilities projects to continue for a number of years. In many cases, funding for these projects comes from grants and appropriations outside of the SRRRA area.

It must also be noted that any portion of the funding for capital and operating expenses that comes from visitor payments (permit sales, for instance) were deducted from these project expenses in the economic modeling in order to avoid double counting (since the visitor spending was previously counted in the visitor spending analysis.)

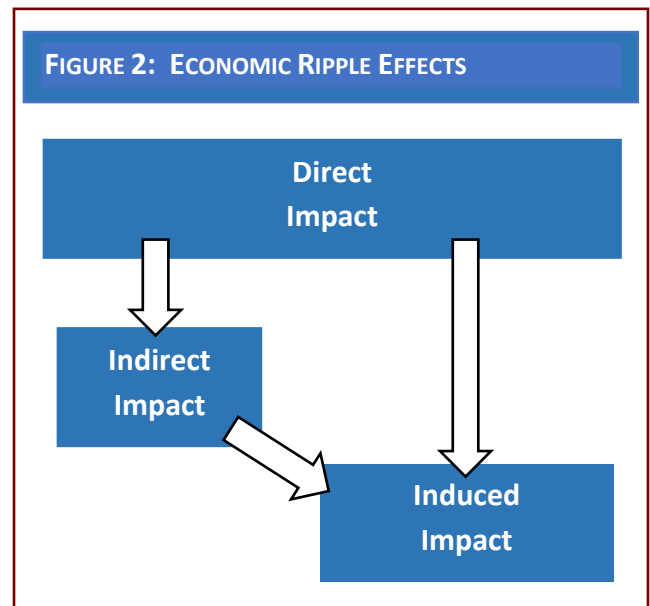
For economic modeling purposes, expenditures were compartmentalized in the following categories which mirror standard industry coding used in most economic modeling tools:

- Personnel expenses (wages and benefits)
- Operating expenses (non-personnel)
- New trail construction
- Maintenance and repair – trail
- Maintenance and repair – non-trail
- Cost of goods sold (permits and merchandise)
- Facility and grounds expense
- Marketing and sales expense
- Capital and debt expenditures

## 2.3 Economic Modeling

As previously mentioned, economic activity for Spearhead Trails stems from three sources: visitor spending, Spearhead’s operational spending (to the extent that it is not supported by visitor spending), and Spearhead’s capital investment (again, to the extent that it is not supported by visitor spending). These amounts create the direct economic effects to the economies of the local and state areas.

In addition to assessing these direct effects of trail-related spending, this study also models secondary or ripple effects which comprise economic activity from subsequent rounds of re-spending of money. As shown in Figure 2, there are two types of ripple effects: indirect and induced. Indirect effects entail the changes in sales, income, and jobs of suppliers to the operation (Stynes et al., 2000). For example, a convenience store that sells gasoline uses the money from the sale to pay employees and to buy more gasoline. Induced effects are the changes in economic activity in the region stimulated by household spending of income earned through direct and indirect effects of Spearhead-related monies. To continue the previous example, the employees of the convenience store then use their income to purchase goods and services.



Indirect and induced effects are estimated using economic multipliers. Multipliers reflect the extent of interdependency between sectors in a region's economy and can vary significantly between regions and sectors (Stynes et al., 2000). Here is a simple example of how a multiplier can be interpreted: if the multiplier for the restaurant sector in a given region is 1.27 then it can be estimated that every dollar spent at a restaurant results in 27 cents of secondary economic activity in the region. Economic multipliers for the State of Virginia are commercially available in an economic impact estimation software titled IMPLAN commercialized by MIG, Inc. Therefore, the most recent IMPLAN multipliers were purchased and used in this study to calculate indirect and induced economic impacts. Used by more than 1,000 entities, IMPLAN is said to be the most widely adopted regional economic analysis software in the industry for estimating economic ripple effects (Dougherty, 2011).

In the input-output modeling for this study, **economic activity** describes the modeling that includes all visitor spending and consequent multiplier effects by both locals and non-locals as well as any money spent by Spearhead (both operational and capital improvement) that was not supported by visitor spending. Consequently, **economic activity** figures represent all of the economic activity stimulated by the Spearhead Trail system within the state. As will be seen in the subsequent section of this report, **economic activity** is reported as a range with a high and low end to account for differing levels of economic strength between various regions in the state where a visitor traveling to Spearhead Trails may have stopped and spent money. More specifically, one end of the range represents **adjusted economic activity** which calibrates output figures based upon whether a given location has economic activity above or below the state average. The other end of the range represents **unadjusted economic activity** which are the output figures computed using statewide IMPLAN multipliers.

In the modeling, **economic impact from travelers** represents the modeling that includes all visitor spending and consequent multiplier effects by those who traveled 50 miles or more (one way) to visit Spearhead Trails.<sup>4</sup> Thus, **economic impact from traveler** figures reflect all of the "fresh money" entering an economy as a result of Spearhead Trails. In the next section of this report, **economic impact from travelers** is reported as a range to account for adjusted and unadjusted figures. **Adjusted economic impact from travelers** are reduced by 6% to account for spending by visitors who would have traveled and spent money in the Spearhead area regardless of whether the trail system existed. **Unadjusted economic impact from travelers** are the output figures computed using IMPLAN multipliers.

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<sup>4</sup> Post-hoc zip code analyses confirmed that those who do not live within the SRRA area typically drive 50 miles or more to ride the Spearhead Trail(s).

## Section 3. Findings

### 3.1 Descriptive Characteristics of Trail Riders and Accompanying Guests

TABLE 1: SUMMARY OF SPENDING PROFILES OF TRAIL USERS						
	Local Trails Users <sup>1</sup>		Non-Local Trail Users <sup>2</sup> (Day visitors)		Non-Local Trail Users (Overnight visitors)	
Average party size:	2.7 persons		2.8 persons		3.1 persons	
Percentage of total permit holders:	29% of total permit holders		30% of total permit holders		41% of total permit holders	
Annual vs. Day Permits:	Annual Permits: 76%	Day Permits: 24%	Annual Permits: 65%	Day Permits: 35%	Annual Permits: 63%	Day Permits: 37%
Average number of trail visits per year of annual pass holders:	14 visits per year		9 visits per year		5 visits per year	
Trail miles covered per visit:	36 trail miles		48 trail miles		57 trail miles	
Total per person spending in the Spearhead area per visit:	\$58.04		\$48.55		\$214.15	
Total per person spending outside of the Spearhead area, but inside of Virginia per visit:	\$1.80		\$7.41		\$24.68	
Total per person spending outside of Virginia per visit:	\$7.46		\$16.71		\$23.24	
<b>Total per person spending per visit (sum of previous 3 rows):<sup>3</sup></b>	<b>\$67.30</b>		<b>\$72.67</b>		<b>\$262.07 (across 3.6 days)</b>	

1) Local users are defined as those who live within Spearhead's seven counties or the City of Norton.

2) For parties visiting the area due to Spearhead Trails, the spending of non-trail riders within the parties are also included in the economic modeling.

### 3.2 Statewide Economic and Fiscal Results

#### 3.2.1 Statewide Spending

Visitors to Spearhead Trails spent significant amounts of money around the Commonwealth (spending activity specifically within the SRRA area will be discussed in Section 3.3). For instance, as seen in Table 2, in the previous fiscal year, they spent nearly \$1M on gasoline. As another example, it can also be seen in Table 2 that visitors to Spearhead Trails spent \$712K in restaurants around the state and \$658K on hotels associated with their Spearhead trips.

<b>TABLE 2: IN-VIRGINIA VISITOR SPENDING (BOTH INSIDE AND OUTSIDE OF THE SRRA AREA)</b>	
	<b>Total Spending</b>
Groceries	\$871K
Gas	\$970K
Restaurants	\$712K
Hotels	\$658K
Camping	\$579K
Equipment	\$1.3M
Clothing	\$204K
Souvenirs	\$133K
Other Transportation Expenses	\$425K
Entertainment (including permits)	\$1.1M
Other	\$46K
<b>Total Spending in Virginia</b>	<b>\$6.7M</b>

### 3.2.2 Statewide Economic Activity

As previously explained in section 2.3, when visitors spend money, that spending causes ripple (secondary effects) in the economy. Thus, as reported in Table 3, spending of visitors to Spearhead Trails in FY2016-17 moved through the state’s economy and produced \$9.0M in total economic activity.

<b>TABLE 3: IN-VIRGINIA ECONOMIC ACTIVITY ATTRIBUTED TO SPEARHEAD TRAILS</b>		
<b>Effect Type</b>	<b>Economic Activity (Range) <sup>a</sup></b>	<b>Economic Activity (Mean) <sup>b</sup></b>
Direct	\$4.7M → \$5.1M	\$4.9M
Indirect	\$1.7M → \$1.8M	\$1.8M
Induced	\$2.1M → \$2.3M	\$2.2M
<b>Total Output</b>	<b>\$8.6M → \$9.3M</b>	<b>\$9.0M</b>
<p>a. Range in economic activity can be attributed to differing levels of economic strength throughout the Commonwealth.</p> <p>b. The mean economic activity is the high and low end of the range summed and divided by two.</p>		

### 3.2.3 Statewide Employment and Labor Income

The economic activity stimulated by Spearhead Trails supports roughly 94 full-time equivalent jobs around the Commonwealth (see Table 4). Those jobs are associated with \$3.6M in labor income.

<b>TABLE 4: IN-VIRGINIA EMPLOYMENT AND LABOR INCOME ATTRIBUTED TO SPEARHEAD TRAILS</b>		
<b>Effect Type</b>	<b>Employment (Full-time equivalent jobs)</b>	<b>Labor Income</b>
Direct	70	\$2.3M
Indirect	10	\$600K
Induced	14	\$718K
<b>Total Output</b>	<b>94</b>	<b>\$3.6M</b>

### 3.2.4 Statewide Value-Added Effects and Tax Revenues

In FY2016-17, the economic activity stimulated from Spearhead Trails contributed an estimated \$5.3M to the gross domestic product of Virginia. Moreover, the economic activity attributed to the trail system generated \$528K in state and local taxes. By comparison, the SRRA receives about \$330k in state funding (general appropriation plus Virginia Tourism Corporation) and \$75k from local funding. (SRRA Financial Report Fiscal Year Ending 2017).

<b>TABLE 5: IN-VIRGINIA VALUE-ADDED EFFECTS AND TAX REVENUES ATTRIBUTED TO SPEARHEAD TRAILS</b>		
<b>Effect Type</b>	<b>Value-Added</b>	<b>State and Local Taxes</b>
Direct	\$2.9M	<b>\$528K</b>
Indirect	\$1.1M	
Induced	\$1.3M	
<b>Total Output</b>	<b>\$5.3M</b>	



### 3.3 Regional Economic and Fiscal Results

#### 3.3.1 Regional Spending

Visitors to the Spearhead Trails system make substantial statewide expenditures during their visits (see Table 2), and it is important to note that the great majority of this spending is made within the SRRA area. Approximately 88 percent of all statewide spending occurs within the counties and city of the SRRA partnership. Additionally, most of this spending is made by non-locals, representing a substantial infusion of outside money into the area. For instance, as seen in Table 6, in the previous fiscal year, trail users spent approximately \$647K in restaurants of which almost \$502K was spent by non-locals. Even before plugging these figures into the economic model to also include ripple or secondary effects, this level of spending serves as evidence of the significant value the Spearhead Trails system is bringing to the area.

<b>TABLE 6: SPENDING WITHIN THE SRRA AREA</b>		
	<b>Total Spending</b>	<b>“Fresh Money” Spent by Non-Locals <sup>a</sup></b>
Groceries	\$750K	\$556K
Gas	\$805K	\$570K
Restaurants	\$647K	\$502K
Hotels	\$652K	\$652K
Camping	\$579K	\$555K
Equipment	\$819K	\$227K
Clothing	\$187K	\$136K
Souvenirs	\$126K	\$124K
Other Transportation Expenses	\$338K	\$56K
Entertainment (including permits)	\$1.0M	\$651K
Other	\$33K	\$10K
<b>Total Spending within the SRRA Area:</b>	<b>\$5.8M</b>	<b>\$4.0M</b>

### 3.3.2 Regional Economic Activity

Spearhead Trails generated considerable economic activity (which includes effects from local users) within the SRRA area (Table 7) during FY2016-17. As previously noted, the break-downs of this economic activity between counties are estimates based on SRRA-provided information about trail usage and other factors. Precise break-downs between counties are not possible, because visitors often do not know which county they are in when spending on a particular item (e.g. stopping at a gas station) and are unable to report this information accurately. For ease of interpretation, in addition to the information in the Tables in this section, Appendix C summarizes county-level information in a different format.

<b>TABLE 7: ECONOMIC ACTIVITY IN THE SRRA AREA ATTRIBUTED TO SPEARHEAD TRAILS</b>	
<b>County or City</b>	<b>Economic Activity <sup>a</sup></b>
Buchanan County	\$504K
Dickenson County	\$817M
Lee County	\$551K
Norton (City of)	\$630K
Russell County	\$1.2M
Scott County	\$157K
Tazewell County	\$1.7M
Wise County	\$2.3M
<b>Regional (SRRA) Output</b>	<b>\$7.9M</b>
<p>a. The break-downs between locations are best estimates. Precise break-downs are not possible, because many visitors do not know which county/city they are in when they are spending money.</p>	

### 3.3.3 Regional Economic Impact from Travelers

Non-locals infused considerable amounts of “fresh-money” into the SRRA area in FY2016-17. As depicted in Table 8, the economic impact from travelers stimulated by Spearhead Trails can be estimated at \$4.3M within the SRRA area. While county break-downs are not precise, it can be seen that all seven counties and the City of Norton received shares of this spending.

*... Economic impact from travelers is estimated at \$4.3M and is important economically, because it represents the ‘fresh money’ that likely would not have entered the SRRA economy if not for the existence of the Spearhead Trails.*

TABLE 8: ECONOMIC IMPACT FROM TRAVELERS IN THE SRRA AREA ATTRIBUTED TO SPEARHEAD TRAILS	
County <u>or</u> City	Economic Impact from Travelers <sup>a</sup>
Buchanan County	\$274K
Dickenson County	\$445K
Lee County	\$300K
Norton (City of)	\$343K
Russell County	\$660K
Scott County	\$86K
Tazewell County	\$917K
Wise County	\$1.3M
<b>Regional (SRRA) Output</b>	<b>\$4.3M</b>
<p>a. The break-downs between locations are best estimates. Precise break-downs are not possible, because many visitors do not know which county/city they are in when they are spending money.</p>	

### 3.3.4 Regional Employment and Labor Income

The economic activity stimulated by Spearhead Trails supports roughly 83 full-time equivalent jobs around in the SRRA region (see Table 9).<sup>5</sup> Those jobs are associated with \$3.2M in labor income.

<b>TABLE 9: EMPLOYMENT AND LABOR INCOME IN THE SRRA AREA ATTRIBUTED TO SPEARHEAD TRAILS</b>		
<b>County or City</b>	<b>Employment (Full-time equivalent jobs)</b>	<b>Labor Income</b>
Buchanan County	5	\$204K
Dickenson County	9	\$331K
Lee County	6	\$223K
Norton (City of)	7	\$255K
Russell County	13	\$491K
Scott County	2	\$64K
Tazewell County	18	\$682K
Wise County	24	\$930K
<b>Regional (SRRA) Output</b>	<b>83</b>	<b>\$3.2M</b>
<p>a. The break-downs between locations are best estimates. Precise break-downs are not possible, because many visitors do not know which county/city they are in when they are spending money.</p>		

<sup>5</sup> IMPLAN economic modeling is not precise in assessing location of indirect and induced job location. Therefore, it is plausible that some of the jobs reported in this Table might be outside the SRRA area.

### 3.3.5 Regional Value-Added Effects and Tax Revenues

In FY2016-17, the economic activity stimulated from Spearhead Trails within the SRRA region contributed an estimated \$4.7M to the gross domestic product of Virginia. Moreover, the economic activity within the SRRA area generated \$475K in state and local taxes.

<b>TABLE 10: VALUE-ADDED EFFECTS AND TAX REVENUES ATTRIBUTED TO SPENDING IN THE SRRA AREA</b>		
<b>County or City</b>	<b>Value-Added Generated</b>	<b>State and Local Taxes Generated</b>
Buchanan County	\$299K	\$30K
Dickenson County	\$484K	\$49K
Lee County	\$326K	\$33K
Norton (City of)	\$373K	\$38K
Russell County	\$719K	\$73K
Scott County	\$93K	\$9K
Tazewell County	\$999K	\$102K
Wise County	\$1.4M	\$140K
<b>Regional (SRRA) Output</b>	<b>\$4.7M</b>	<b>\$475K</b>
<p>a. The break-downs between locations are best estimates. Precise break-downs are not possible, because many visitors do not know which county/city they are in when they are spending money.</p>		

### 3.4 Return on Investment

Regardless of which metric or funding source is considered, Spearhead Trails is producing healthy returns on investments. As an illustration, this report considers Spearhead’s largest funding source: The Virginia Tobacco Revitalization Commission. As summarized in Table 11, this Commission has provided approximately \$2.4M in financial support to Spearhead since 2008. Lifetime support to-date of \$2.4M, can be argued, is a wise investment given that a single-year’s value-added effect of the trail system is \$5.3M. This return on investment is particularly formidable considering that two of the grants funded by the Commission will not be fully invested until 2018 and 2019, respectively (see Table 11).

<b>TABLE 11: SPEARHEAD GRANT HISTORY FROM THE VIRGINIA TOBACCO REGION REVITALIZATION COMMISSION</b>		
<b>Date Awarded</b>	<b>Project Title</b>	<b>Project End Date</b>
5/18/2017	Continued Growth for Spearhead Trails through Expansion of Services	8/1/2019
9/23/2015	Adventure Playground of the East: Maintaining Successful Startup Momentum	7/1/2018
9/25/2014	Adventure Playground - Expanding the Regional Footprint of Economic Impact	9/25/2017
9/26/2013	Adventure Playground of the East - Developing a Network of Sustainable & Profitable Trail Systems	9/26/2016
9/27/2012	SRRA Spearhead Trails	9/27/2015
9/29/2011	Adventure Tourism, Playground of the East - An Enterprising Pathway to Economic Diversification and a Locally Sustainable Economic Engine for Southwest Virginia	9/28/2014
7/29/2010	Multi-use Trails Implementation Plan	8/3/2013
7/29/2010	Inviting the World to Southwest Virginia - Creative Economy Development Initiative for the Southwest Virginia Cultural Heritage Project	7/29/2013
7/31/2008	Southwest Virginia Multi-Use Trail System Feasibility Study	1/30/2009
7/31/2008	Regional Tourism Initiative	7/31/2011
		<b>Total Grant Funding: \$2.4M</b>

While the Virginia Tobacco Region Revitalization Commission was used as the example in this section, any municipalities or organizations that have contributed funding to Spearhead Trails can use the figures in the report to see that a generous ROI is being achieved. It is prudent to note, that the trail rider survey in this project asked individuals where they would ride if Spearhead Trails did not exist. In response to this question, nearly 9 out of 10 (88 percent) of Spearhead riders who do not reside in the SRRA area indicated that they would instead patronize a trail system outside of Virginia if not for the existence of Spearhead. This statistic is a testament to the return on investment that is being realized at Spearhead.

*Nearly 9 out of 10 non-local Spearhead trail riders would patronize a trail system outside of Virginia if not for the existence of Spearhead.*

Another ROI illustration can be made using the generous support of Virginia Coalfield Economic Development Authority (VACEDA). Spearhead development in Buchanan, Dickenson, Tazewell, and Wise counties has been made possible, in part, from approximately \$1.4M in support from VACEDA. ROI is strong for this investment given that the **single year** (FY2016-17) economic activity from the trails in these four counties is estimated at \$5.3M. This ROI on VACEDA support is particularly formidable considering that approximately \$146K of this VACEDA support has not been fully executed to-date.

Also with regard to return on investment, it should be noted that approximately one-quarter (23 percent) of non-local trail riders are accompanied on their trips to the area by an individual(s) within their parties who does not ride the trails. Therefore, for every fourth group of non-local riders that one sees on the trails, there is one or more individuals who came with that group and is patronizing local businesses while their party rides.

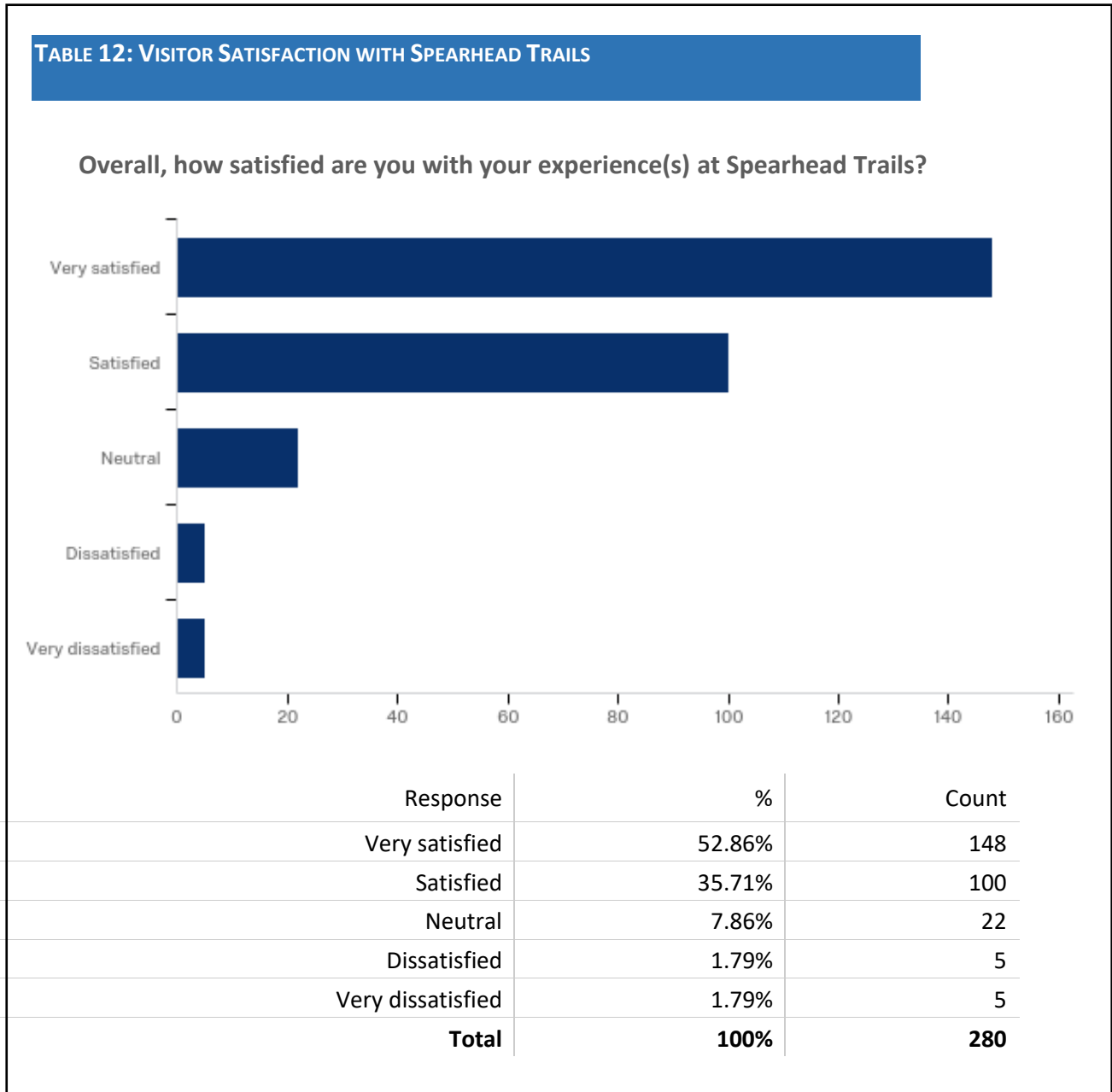
Return on investment discussions such as the ones contained in this section beg this question: How much economic activity has the Spearhead Trail system stimulated since its inception? This is a difficult question to address given that each of the economic modeling inputs differ from one year to the next. For instance, the IMPLAN multipliers that account for how money ripples through an area's economy change from year to year. Other factors such as how often an annual pass holder visits also likely varies depending upon whether the Spearhead system is comprised of three trails versus five trails. Due to the numerous model estimation caveats, lifetime economic activity for the 4-year span of permit sales can be better expressed as a range as opposed to single amount. As such, this study estimates that the total economic activity attributed to Spearhead Trails in the Commonwealth from FY2013-14 through FY2016-17 likely falls between \$18.6M and \$21.8M. Even at the low point in this range (\$18.6M), ROI for stakeholders and investors is strong.





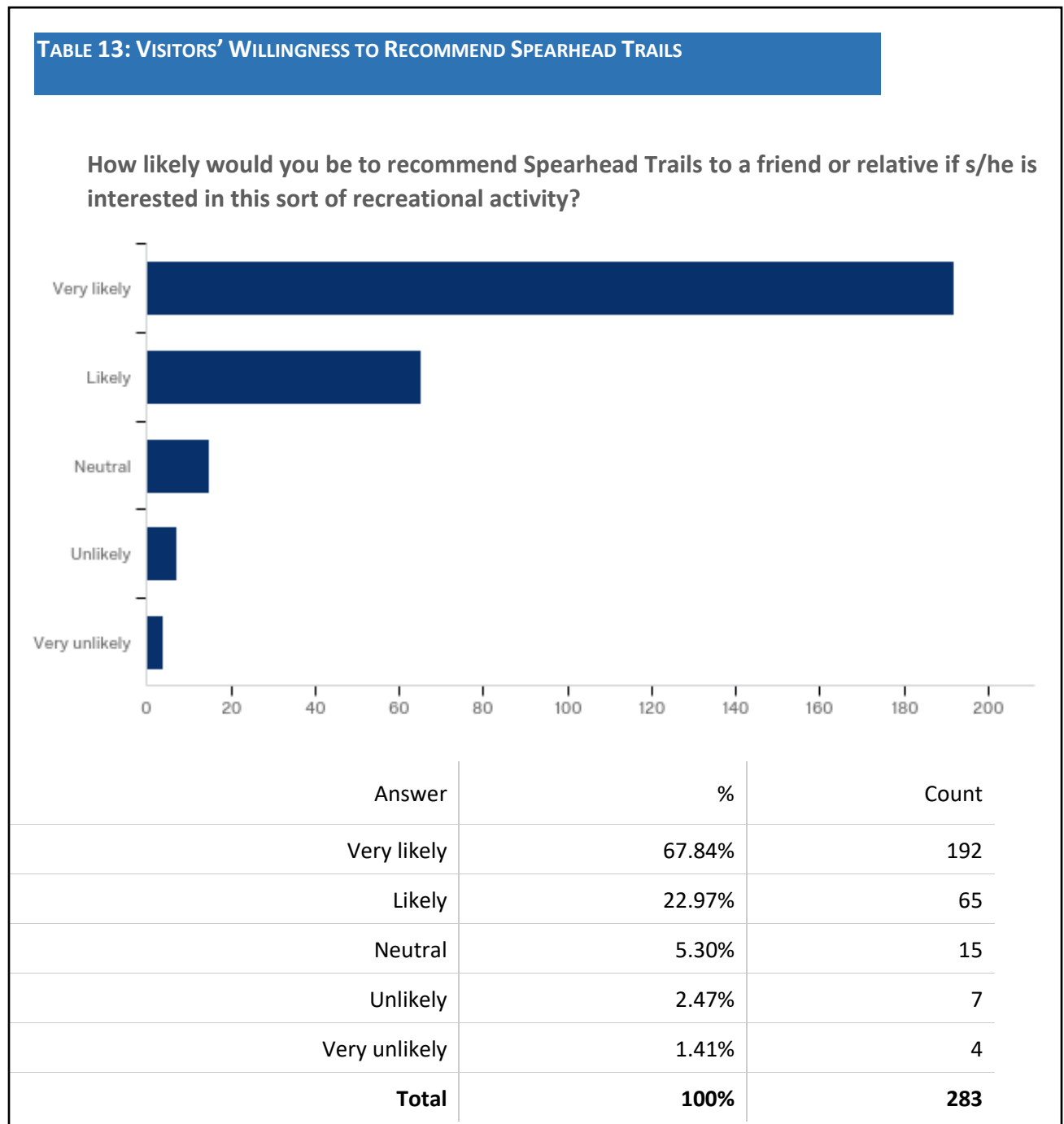
### 3.5.2 Visitor Satisfaction

Visitors to Spearhead Trails are overwhelmingly satisfied with their experiences, which bodes well for the future operation and development of the system and indicates that the SRRA is in tune with user demands. Specifically, as seen in Table 12, 89 percent of visitors report being either “satisfied” or “very satisfied.”



### 3.5.3 Visitor Willingness to Recommend

Another indicator of future success is riders’ willingness to recommend the trail system to others. As depicted in Table 13, 91 percent of riders are either “likely” or “very likely” to recommend Spearhead Trails to friends or relatives.

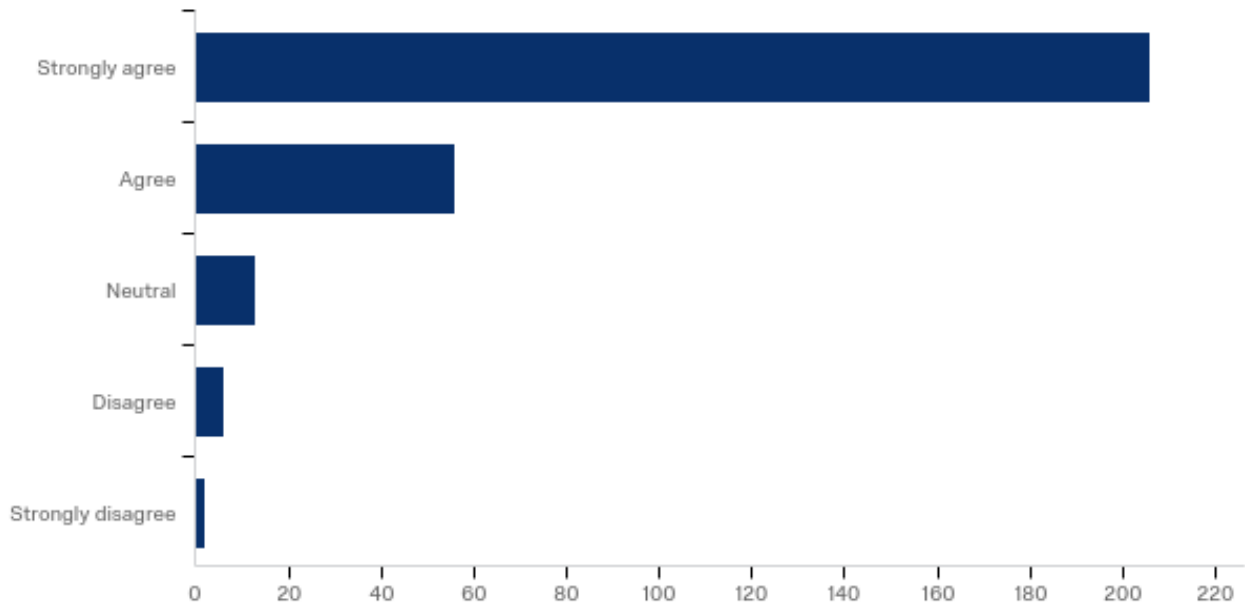


### 3.5.4 Visitor Return Intent

As seen in Table 14, 93 percent of Spearhead visitors indicated that they would like to return. As such, Spearhead is poised for continued visitation and revenue growth.

**TABLE 14: VISITOR RETURN INTENTION TO SPEARHEAD TRAILS**

Please indicate your level of agreement with this statement: If I had the opportunity, I would like to visit Spearhead Trails again in the future.



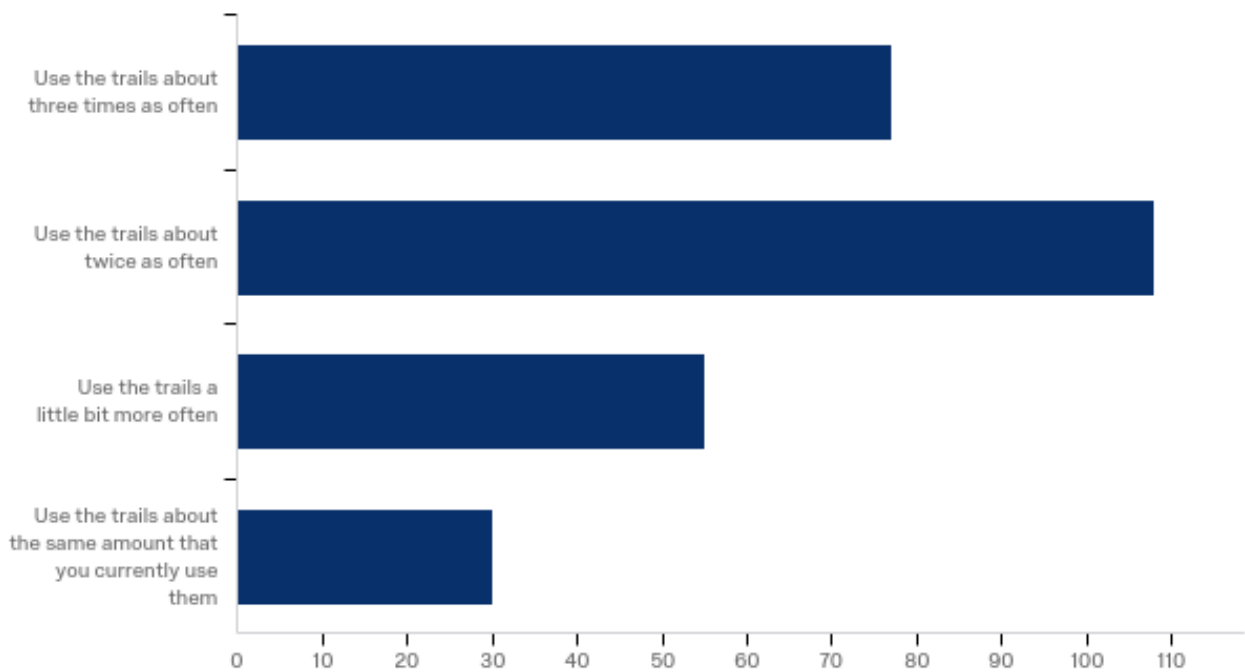
Answer	%	Count
Strongly agree	72.79%	206
Agree	19.79%	56
Neutral	4.59%	13
Disagree	2.12%	6
Strongly disagree	0.71%	2
<b>Total</b>	<b>100%</b>	<b>283</b>

### 3.5.5 Potential Outcomes of Increased Trail Connected Miles

One of the questions explored by the user survey was to what degree were trail riders seeking longer riding opportunities and more variety in putting together trail loops, which can be accomplished by linking existing trail segments. According to the findings reported in Tables 15 and 16, usage (and accompanying economic impact) would benefit by adding more connected miles to the trail system. That is, 89 percent of visitors stated that they would visit more often if there were more connected trail miles.

**TABLE 15: POTENTIAL EFFECTS OF MORE CONNECTED MILES ON VISITOR FREQUENCY**

**If Spearhead Trails had more connected trail miles (IN OTHER WORDS, IF MORE TRAILS CONNECTED WITH EACH OTHER), you would likely:**

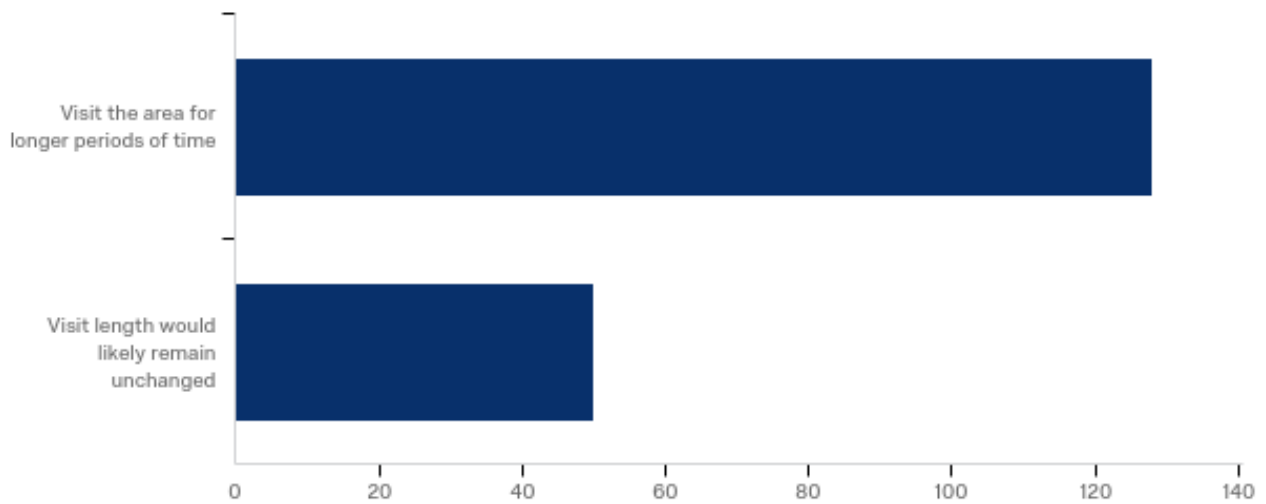


Answer	%	Count
Use the trails about three times as often	28.52%	77
Use the trails about twice as often	40.00%	108
Use the trails a little bit more often	20.37%	55
Use the trails about the same amount that you currently use them	11.11%	30
<b>Total</b>	<b>100%</b>	<b>270</b>

Also with regard to more connected miles, approximately 72 percent of visitors indicated that they would likely visit for longer periods of time if the trail system had more connected miles (see Table 16). Because lodging and restaurant revenues are two of the spending categories that have the largest effects on economic impact (see Table 2), these longer stays would have substantial economic influence in the SRRA region.

**TABLE 16: POTENTIAL EFFECTS OF MORE CONNECTED MILES ON VISITOR STAY DURATION**

**If Spearhead Trails had more connected trail miles (IN OTHER WORDS, IF MORE TRAILS CONNECTED WITH EACH OTHER), you would likely:**



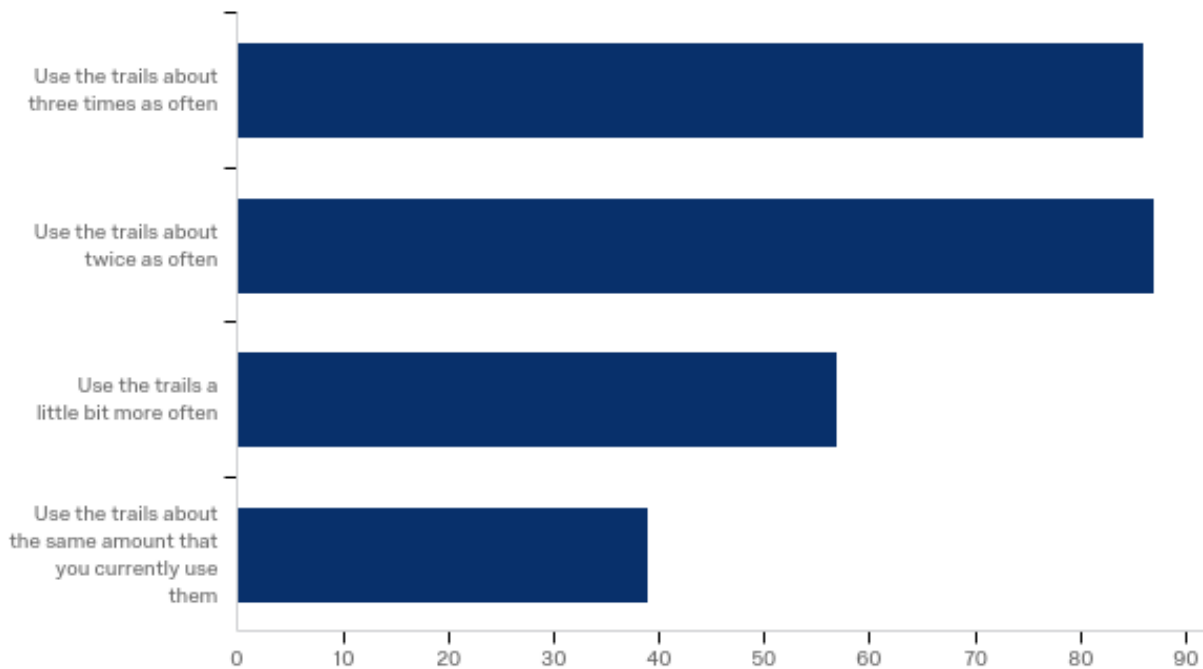
	Answer	%	Count
	Visit the area for longer periods of time	71.91%	128
	Visit length would likely remain unchanged	28.09%	50
	<b>Total</b>	<b>100%</b>	<b>178</b>

### 3.5.6 Potential Outcomes of Increased Amenity Connectivity

Another potential area for trail development is to link trails to amenities such as restaurants, hotels, etc. so that trail riders could access them conveniently from the trails. The survey of users shows this as a highly desirable feature. As illustrated in Tables 17 and 18, trail usage and economic impact would continue to grow as more connected amenities (e.g. restaurants / hotels) are connected to the trail systems. More specifically, 85 percent of visitors stated that they would visit more often if there were more connected amenities around the trails.

**TABLE 17: POTENTIAL EFFECTS OF MORE CONNECTED AMENITIES ON VISITOR FREQUENCY**

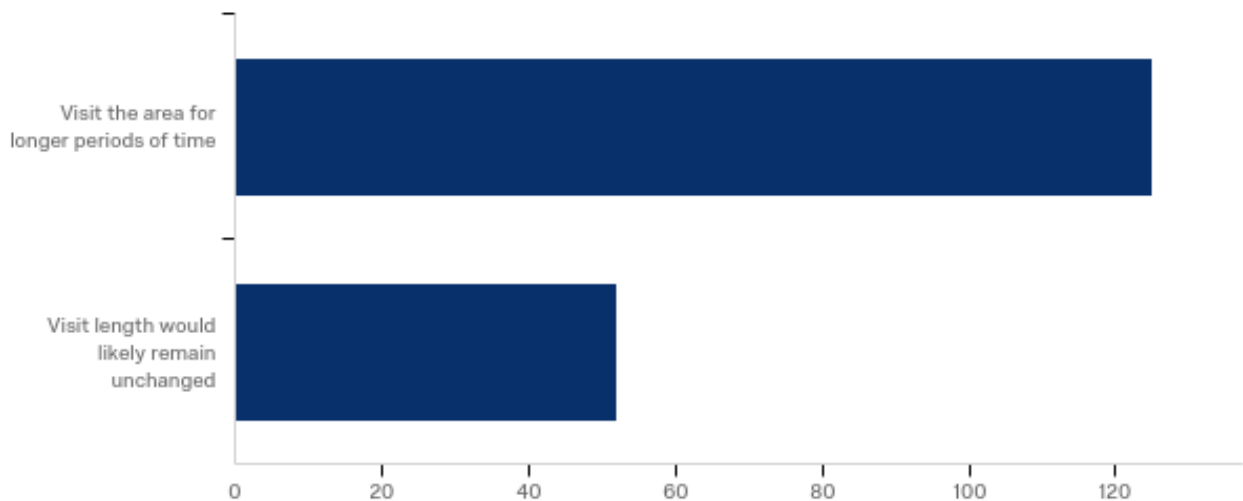
If Spearhead Trails connected to more amenities such as restaurants, hotels, etc... you would likely:



Also in term of more connected amenities, roughly 71 percent of visitors indicated that they would likely visit for longer periods of time if the trail system had more connected amenities (see Table 18). As state in the previous section, because lodging and restaurant revenues are two of the spending categories that have the largest effects on economic impact (see Table 2, these longer stays would have substantial economic influence in the region.

**TABLE 18: POTENTIAL EFFECTS OF MORE CONNECTED AMENITIES ON VISITOR STAY DURATION**

If Spearhead Trails connected to more amenities such as restaurants, hotels, etc... you would likely:



Answer	%	Count
Visit the area for longer periods of time	70.62%	125
Visit length would likely remain unchanged	29.38%	52
<b>Total</b>	<b>100%</b>	<b>177</b>

### 3.5.7 Potential Outcomes of Non-ATV Trail Usage

#### **Potential Alternate Recreational Segment Plans:**

Spearhead has not yet opened any exclusive hiking trails, equestrian trails, kayaking, or mountain bike trails, but it is entertaining various options to do so. With the next 12 months of this report, for example, Spearhead hopes to open two equestrian trails: one in Dungannon and the other in Haysi; both of which would likely connect to US Forestry Trails. Spearhead is also contemplating forging parallel trails for mountain bikes next to some of the current ATV trails. In addition, the organization is currently applying for a grant to build six access points in Lee County on the Powell River and 2 access points in Wise County on the Pound River. It is hoped that these efforts will create more reasons for visitors to stay in the area longer and enjoy a range of different outdoor recreation opportunities. Also, the provision of additional trail types might attract a more inclusive cross section of the supporting localities.

#### **Critical Success Factors in these Plans:**

##### ***Supply Relative to Demand:***

While there are many more providers in southwest Virginia that offer non-ATV trail experiences than there are for ATV experiences, the demand for such activities appears to be robust. According to the most recent Virginia Statewide Comprehensive Outdoors Recreation Plan (SCORP), 14 percent of Virginians bicycle,<sup>7</sup> 13 percent demand trail walking, and 6 percent participate in horseback riding (Virginia Department of Conservation and Recreation, 2013).

Because much of the visitation at Spearhead derives from out-of-state, it is also instructive to consider national recreation trends. According to the Outdoor Foundation's *Topline Report 2017*, trail running, bicycling, fishing, and hiking are 4 of the top 5 most popular outdoor recreation activities for those older than 25 years of age. Interestingly, those same four activities also make appearances on the top 10 lists of younger demographic groups as well (Outdoor Foundation, 2017).

##### ***Visitor Spending for Potential Alternative Users:***

As seen in Tables 19 and 20, spending by individuals who participate in biking, hiking, equestrian, and boating is substantially lower than spending by ATV riders. As comparisons, for example, a non-local day visitor to a Virginia State Park (in which hiking, biking, and fishing are some of the most frequently participated-in activities), spends \$50.09 in the outing. In comparison, a non-local day visitor to a Spearhead Trail spends 31 percent more: \$72.67 (Table 1). As seen in Table 20, the difference is even more pronounced in West Virginia.

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<sup>7</sup> The Virginia SCORP does not distinguish between road cycling and mountain biking.



**TABLE 19: SPENDING PROFILES OF VIRGINIA STATE PARK VISITORS IN 2016 (TOTAL SPENDING IN/OUT OF PARK, BUT WITHIN VIRGINIA)<sup>1</sup>**

Day Users				Overnight Users			
Spending Category	Local Day User	Non-Local Day User	Non-Resident Day User	Cabin Resident	Camping Resident	Cabin Non-Resident	Camping Non-Resident
OVERALL PER PARTY:	\$62.22	\$197.84	\$258.36	\$224.19	\$131.36	\$278.36	\$150.11
OVERALL PER VISITOR:	\$15.75	\$50.09	\$65.40	\$56.76	\$33.26	\$70.47	\$38.00

1. Magnini, V. (2016). Virginia State Parks Economic Impact 2016.

**TABLE 20: SPENDING PROFILES OF WEST VIRGINIA STATE PARK VISITORS IN 2015 (TOTAL SPENDING IN/OUT OF PARK, BUT WITHIN WEST VIRGINIA)<sup>1</sup>**

Day Users				Overnight Users					
Spending Category	Local Day User	Non-Local Day User	Non-Resident Day User	Lodge Resident	Cabin Resident	Camping Resident	Lodge Non-Resident	Cabin Non-Resident	Camping Non-Resident
OVERALL PER PARTY:	\$37.47	\$112.49	\$131.34	\$457.31	\$390.31	\$186.87	\$495.67	\$431.37	\$171.06
OVERALL PER VISITOR:	\$10.99	\$32.99	\$38.52	\$134.11	\$114.46	\$54.80	\$145.36	\$126.50	\$50.16

1. Magnini, V.P. and Uysal (2015). "The Economic Significance and Impacts of West Virginia State Parks."

***The Issue of User Conflict:***

Adding additional uses to existing Spearhead trails that are currently employed by off-highway vehicles would bring at least some level of user conflict into play. ATV's create some level of perceived conflict with most other land based types of recreation. (Wisconsin Outdoor Recreation Plan, 2005-2010). However, these conflicts can be avoided or mitigated through a number of efforts, including trail design, public education, signage, and interaction with user groups. (Cascade Environmental Resource Group, LTD) Some types of usage, especially hiking, would be best served by having physically separate trails. Others, such as mountain bicycling may be easier to co-locate on the same properties as existing ATV trails. Equestrians greatly prefer trails that are separate from all other users except hikers. In summary, additional types of outdoor trail users would certainly attract additional dollars to the SRRA

area, although with somewhat lesser economic impact than ATV users and at the risk of complicating trail design and management, but this would also broaden the scope of the SRRA to a wider range of area residents.

***The Top Two Determinants of Success: Memories of Past Visits and Word-of-Mouth:***

While spending profiles are lower for non-ATV usage groups, and it is unclear whether or not there is unmet demand for biking, hiking, boating, and equestrian in the region, one factor is the most important in determining the potential success of Spearhead's non-ATV expansion projects: the quality of the experiences that are delivered. Each time that the *Institute for Service Research* conducts an outdoor recreation study and asks recreational patrons what information sources they used when deciding to visit, the top two sources that emerge in every study are memories of past visits and word-of-mouth from friends or family. Therefore, the top determinant of whether non-ATV offerings will be successful will be the quality of the venues and experiences that are created at them.

### 3.5.8 Economic Trajectory

Regardless of strategic decisions surrounding Spearhead's expansion into other recreational sectors, the economic trajectory of their ATV sector is steep. The steep trajectory is a function of several factors:

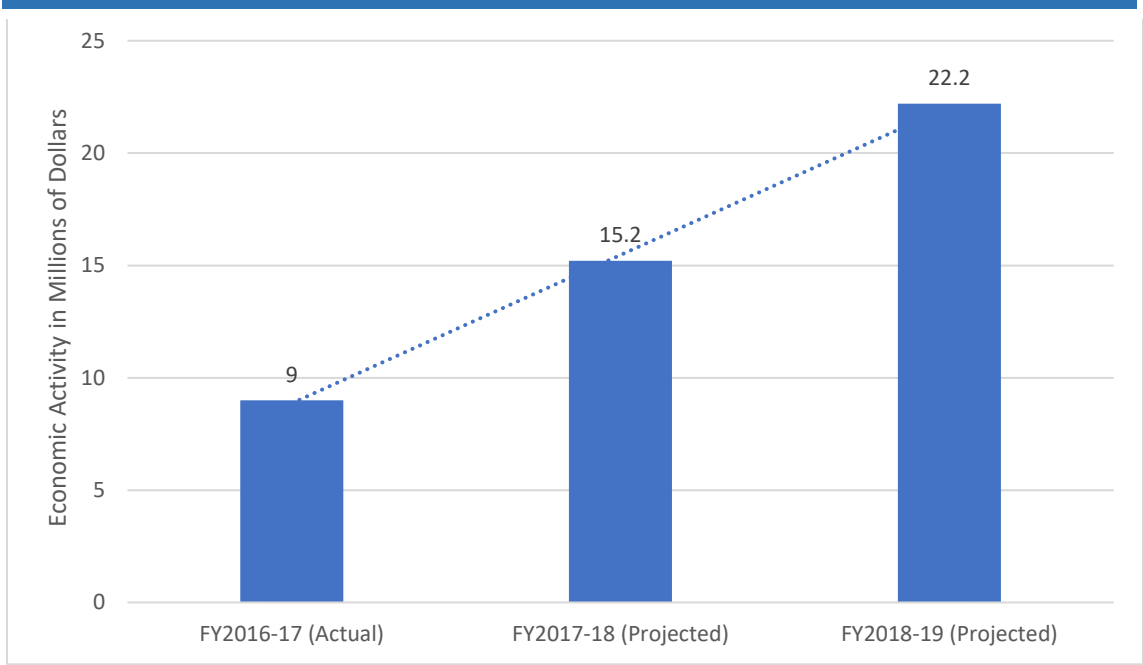
- Spearhead's permit sales have recorded a year-to-year growth in the most recent time period of 66 percent.
- As previously stated in this report:
  - 89 percent of visitors stated that they would visit more often if there were more connected trail miles.
  - 72 percent of visitors indicated that they would likely visit for longer periods of time if the trail system had more connected miles.
  - 85 percent of visitors stated that they would visit more often if there were more connected amenities (e.g. restaurants and hotels) around the trails.
  - 71 percent of visitors indicated that they would likely visit for longer periods of time if the trail system had more connected amenities.

As seen in Tables 21-22 and Figure 4, it is possible to highlight the positive effects of the above factors on the trail system's economic contributions to the Commonwealth.

<b>TABLE 21: FISCAL YEAR 2017-18 PROJECTED ECONOMIC CONTRIBUTIONS</b>	
Projected Economic Activity in Virginia attributed to Spearhead Trails:	\$15.2M
Projected State and Local Tax Revenues Attributed to Spearhead Trails:	\$989K
Projected Labor Income Attributed to Spearhead Trails:	\$6.1M
Projected Value-Added Effects Attributed to Spearhead Trails	\$9.0M
Projected Full-Time Equivalent Jobs Attributed to Spearhead Trails:	168 FTE jobs
<b>BASIC MODEL ASSUMPTIONS COMPARED TO FY2016-17 MODELING</b> - 50 percent permit holder growth - Local trail users increase visitation frequency by 2 visits per year - Non-local day users increase visitation frequency by 2 visits per year - Non-local overnight users increase visitation frequency by 1 visit per year - Non-local overnight users increase spending by 15 percent per visit due to longer stay duration - Spending profiles of all user groups increase year-to-year by 3 percent to adjust for inflation	

<b>TABLE 22: FISCAL YEAR 2018-19 PROJECTED ECONOMIC CONTRIBUTIONS</b>	
Projected Economic Activity in Virginia attributed to Spearhead Trails:	\$22.2M
Projected State and Local Tax Revenues Attributed to Spearhead Trails:	\$1.5M
Projected Labor Income Attributed to Spearhead Trails:	9.0M
Projected Value-Added Effects Attributed to Spearhead Trails	\$13.2M
Projected Full-Time Equivalent Jobs Attributed to Spearhead Trails:	250 FTE jobs
<b>BASIC MODEL ASSUMPTIONS COMPARED TO FY2018-19 MODELING</b> - 50 percent permit holder growth - Spending profiles of all user groups increase year-to-year by 3 percent to adjust for inflation	

**FIGURE 4: IN VIRGINIA ECONOMIC ACTIVITY ATTRIBUTED TO SPEARHEAD TRAILS<sup>1</sup>**



1. All future projections are based upon currently available IMPLAN multipliers.

## Section 4. Discussion

The results of this economic and fiscal impact study highlight the importance of Spearhead Trails to Virginia's economy. In FY2016-17, the statewide economic activity associated with the trail system was an estimated \$9.0M with about \$4.3M of this representing 'fresh money' infused into SRRRA the economy by travelers. The economic activity attributed to the trail system supported approximately 94 full-time equivalent jobs around the state, with approximately 82 of these FTE jobs in the SRRRA region. These jobs are associated with 3.6M in wage and salary income, of which roughly \$3.2M is within the SRRRA Region. The trail system produces \$5.3M in value-added effects around the state which contribute to the gross domestic product of Virginia. Moreover, economic activity stimulated by the sector generated approximately \$528K in state and local tax revenue in the Commonwealth during FY2016-17.

*"The best features of the trail are awesome views and good local people."*

-2016 Trail Rider

The economic activity described in the previous paragraph is readily visible in the SRRRA region. In St. Paul (location of the Mountain View Trail), for example, there has been more than \$10.5M in private investment and at least 12 new businesses created, in part, to serve Spearhead visitors. The Original Pocahontas Trail has witnessed more than \$2.5M in private investment around the trail. As another example, the Coal Canyon Trail has been associated with at least \$1.5M in private investment in the area. As described earlier in this report, economic impact modeling entails direct, indirect, and induced effects. Therefore, the private investment examples in this paragraph are manifestations of those effects.<sup>8</sup>

It is also prudent to note in this discussion section, that some consumer spending related to Spearhead occurs outside of Virginia. For example, as was seen in Table 1, non-local overnight visitors spend about \$23 per person in other states when making their way to Spearhead. This out of state spending was not included in any of the modeling in this study for three reasons: 1) this study is concerned with Spearhead's economic contributions in the SRRRA and in Virginia-at-large; 2) economic multipliers are different between states; and 3) including out-of-state spending in the modeling could only be justified if the modeling also accounted for the economic displacement of out-of-state trails being patronized less frequently.

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<sup>8</sup> The private investment examples used in this paragraph are derived from "Spearhead Trails: Economic Development in Southwest Virginia." Southwest Virginia Regional Recreation Authority.

According to Crompton (1993), the validity and reliability of an economic impact study depends on: 1) the accuracy of visitor spending estimates; 2) adherence of statistical rules applied in the study in particular pertaining to the use of the multiplier coefficients; and 3) reasonable attendance estimates. First, in terms of spending estimates, customized spending profiles were developed by the research team by collecting spending data from more than 300 visiting parties during 2017. Second, regarding the multiplier coefficients, the most recent IMPLAN multipliers were utilized. Third, in terms of attendance estimates, the attendance estimates in the modeling were precise because riders on Spearhead Trails are required to purchase permits. Moving forward into future years' calculations, these inputs should be continually evaluated and refined through time because all three (spending, multipliers, and attendance) are dynamic and change according to economic and other external conditions.

As described in this report, the prospects for Spearhead Trails going into the future look bright. The vast majority of current trail riders are highly satisfied, would like to return, and are willing to spread positive word of mouth. Most riders report that they would visit more often and stay longer if there were more connected miles. In addition, most riders indicate that they would visit more often and stay longer if there were more amenities such as restaurants and hotels around the trails.

Economic impact will continue to grow as expansion persists on all trails. Just within the past 12 months, a new single track system opened on the Old Pocahontas Trail; the Ridgeview Trail was connected to the Coal Canyon Trail; and, Coal Canyon was connected into Grundy. Furthermore, as a few examples of coming expansion, there are plans to open a single track system on Stone Mountain in late 2017 and a Ridgeview single track system in early 2018. As such, it is reasonable to forecast that the Spearhead trail system will be associated with an annual economic activity figure of approximately \$22.2M by FY2018-19. This projected economic activity would support about 250 full-time equivalent jobs in the Commonwealth

Further research is warranted: As the growth of the trail system persists, the type of research support that went into the building of this report should continue. For example, it seems plausible that as trail connected miles increase, a threshold will be achieved at where additional connected miles will not equate to increased permit sales or visitation. On the other hand, what might become more important at that pivotal threshold is more connected amenities (e.g. lodging and restaurants). Examining such a threshold was outside the scope of the current study, but might be best addressed through a series of focus groups with trail patrons.

If managed and marketed correctly, Spearhead Trails will experience continued success.

## Investigator Bios

**Dr. Vincent Magnini** is the Executive Director of ISR. He holds a Ph.D. in International Business / Marketing from Old Dominion University, an MBA from Wichita State University, and a Bachelor's of Science in Hospitality and Tourism Management from Virginia Tech. He was recently ranked as one of the top 12 most prolific hospitality researchers worldwide and holds editorial board appointments on all of the top-ranked research journals in the field. Further, he is a U.S. Fulbright Scholar. He has published six books and more than 150 articles and reports. Vince has also been featured on National Public Radio's (NPR) *All Things Considered*, *With Good Reason*, *Pulse on the Planet* and cited in the *New York Times* and *Washington Post*.



**Dr. Muzzo Uysal** holds a Ph.D. in Tourism and Recreation from Texas A&M University, an MBA from the University of New Haven, and a Bachelor of Science in Accounting and Business Administration from the Ankara Academy of Economics and Commercial Sciences. He has extensive experience in the travel and tourism field; he has worked on several funded tourism management and marketing projects and conducted tourism workshops in more than 20 countries. Dr. Uysal is a member of the International Academy for the Study of Tourism, the Academy of Leisure Sciences, and serves as co-editor of *Tourism Analysis: An Interdisciplinary Journal*. He has also (co)authored a significant number of articles, five monographs, and seven books related to research methods, tourist service satisfaction, tourism and quality-of-life, creating experience value, and consumer psychology.





**Chuck Wyatt** is a Senior Researcher at ISR. He holds a Master's of Urban and Regional Planning and a B.S. in Biology, both degrees from Virginia Commonwealth University. He has over 43 years of experience in all levels of public sector service delivery, operational management, and central administration. During his 32 year tenure with state parks, Chuck led a number of successful efforts in revenue growth, development of customer culture, and the expansion of the park system. In recent years, he has conducted numerous economic analyses of parks and facilities. He has received a number of achievement awards and was named agency Employee of the Year at the Virginia Department of Conservation and Recreation.



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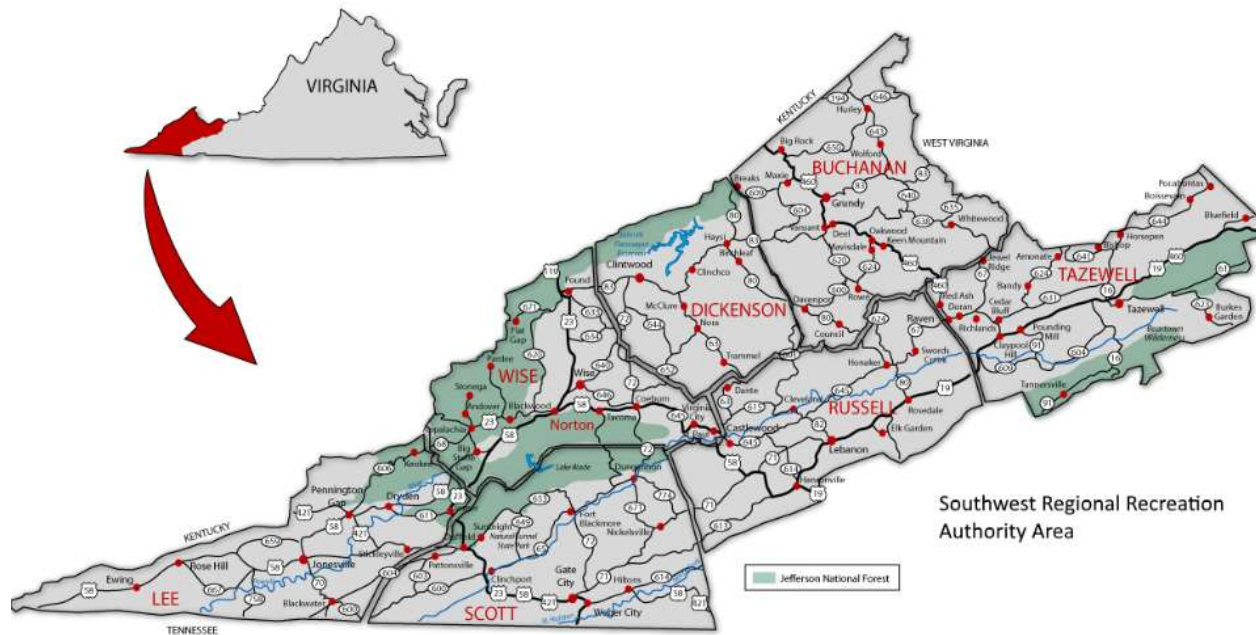
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## Appendices

# Appendix A: Map of SRRA Area



Source of image: [www.trailsrus.com/spearheadtrails/srra.html](http://www.trailsrus.com/spearheadtrails/srra.html) (accessed October 24, 2017)

## Appendix B: Glossary of Terms

{Many of the definitions in this glossary are paraphrased directly from  
Stynes et al. (2000) MGM2 user's manual}

**Direct effects** – the changes in sales, income and jobs in an area as a result of first-round visitor spending and spending by Spearhead Trails not supported by visitor revenues.

**Economic impact from travelers** – economic output modeling that includes all visitor spending and consequent multiplier effects by those traveling 50 miles or more to visit Spearhead Trails. Thus, economic impact figures reflect all of the “fresh money” entering an economy as a result of Spearhead Trails.

- **Unadjusted economic impact from travelers** – economic impact output figures computed using IMPLAN multipliers.
- **Adjusted economic impact from travelers** – calibrated economic impact output figures reduced downward to account for spending by visitors who would have traveled and spent money in the state regardless of whether Spearhead Trails existed.

**Economic activity** – economic output modeling that includes all visitor spending and consequent multiplier effects by both locals and non-locals as well as any money spent by Spearhead Trails that was not supported by visitor spending. Consequently, economic activity figures represent all of the economic activity stimulated by Spearhead Trails within the state.

- **Unadjusted economic activity** – economic significance output figures computed using statewide IMPLAN multipliers.
- **Adjusted economic activity** – calibrated economic significance output figures based the level of economic activity in an area.

**Indirect effects** – the changes in sales, income, and jobs of suppliers of goods and services to those businesses where consumers spend direct money.

**Induced effects** – the changes in economic activity in an area stimulated by household spending of income earned through direct and indirect effects of visitor spending.

**IMPLAN** – a computer-based input / output economic modeling system. With IMPLAN one can estimate 528 sector input / output models for any region consisting of one or more counties. IMPLAN includes procedures for generating multipliers and estimating impacts by applying final demand changes to the model.

**Multipliers** – express the magnitude of the secondary effects in a given geographic area and are often in the form of a ratio of the total change in economic activity relative to the direct change. Multipliers reflect the degree of interdependency between sectors in a region’s economy and can vary substantially across regions and sectors.

**Secondary effects** – the changes in economic activity from subsequent rounds of re-spending of visitor dollars and operational and capital expenditures. There are two types of secondary effects: indirect and induced.

**Value-added (also termed ‘gross regional product’)** – the economic contribution to an area’s gross domestic product. Value-added calculations avoid the double counting of intermediate sales and incorporates only the ‘value-added’ by the region to final products.

## Buchanan County and the Economics of the Spearhead Trail System

### Economic Benefits For Buchanan

- \$504K in economic activity
- \$274K in economic impact from travelers...fresh money from outside the area
- \$204K in labor income
- Approximately 5 FTE jobs
- \$299K in value added (contribution to gross domestic product [GDP] of Virginia)
- \$30K in state and local taxes

### Valued By County Residents

- Local area residents have the highest rating of “excellent” and “good” (95%) for Spearhead Trails
- 9 of 10 users say they would travel out of the area to use trails if Spearhead Trails were not available

### Potential For Growth

- 69% say they would come 2-3 times more often if trails were linked up to make longer trails; 65% if better linked to amenities...stores, restaurants, etc.
- Trail users bring high demand for fuel, groceries, restaurants, hotels, and equipment in the SRRA area
- Other users such as mountain bikers can bring additional impacts by expanding into additional types of trails

# Dickenson County and the Economics of the Spearhead Trail System

## Economic Benefits For Dickenson

- \$817K in economic activity
- \$445K in economic impact from travelers...fresh money from outside the area
- \$331K in labor income
- Approximately 8 FTE jobs
- \$484K in value added (contribution to gross domestic product [GDP] of Virginia)
- \$49K in state and local taxes

## Valued By County Residents

- Local area residents have the highest rating of “excellent” and “good” (95%) for Spearhead Trails
- 9 of 10 users say they would travel out of the area to use trails if Spearhead Trails were not available

## Potential For Growth

- 69% say they would come 2-3 times more often if trails were linked up to make longer trails; 65% if better linked to amenities...stores, restaurants, etc.
- Trail users bring high demand for fuel, groceries, restaurants, hotels, and equipment in the SRRRA area
- Other users such as mountain bikers can bring additional impacts by expanding into additional types of trails



## Lee County and the Economics of the Spearhead Trail System

### Economic Benefits For Lee

- \$551K in economic activity
- 300K in economic impact from travelers ...fresh money from outside the area
- \$223K in labor income
- Approximately 6 FTE jobs
- \$326K in value added (contribution to gross domestic product [GDP] of Virginia)
- 33K in state and local taxes

### Valued By County Residents

- Local area residents have the highest rating of “excellent” and “good” (95%) for Spearhead Trails
- 9 of 10 users say they would travel out of the area to use trails if Spearhead Trails were not available

### Potential For Growth

- 69% say they would come 2-3 times more often if trails were linked up to make longer trails; 65% if better linked to amenities...stores, restaurants, etc.
- Trail users bring high demand for fuel, groceries, restaurants, hotels, and equipment in the SRRRA area
- Other users such as mountain bikers can bring additional impacts by expanding into additional types of trails

# City of Norton and the Economics of the Spearhead Trail System

## Economic Benefits For Norton

- \$630K in economic activity
- \$343K in economic impact from travelers ...fresh money from outside the area
- \$255K in labor income
- Approximately 7 FTE jobs
- \$373K in value added (contribution to gross domestic product [GDP] of Virginia)
- \$38K in state and local taxes

## Valued By County Residents

- Local area residents have the highest rating of "excellent" and "good" (95%) for Spearhead Trails
- 9 of 10 users say they would travel out of the area to use trails if Spearhead Trails were not available

## Potential For Growth

- 69% say they would come 2-3 times more often if trails were linked up to make longer trails; 65% if better linked to amenities...stores, restaurants, etc.
- Trail users bring high demand for fuel, groceries, restaurants, hotels, and equipment in the SRRRA area
- Other users such as mountain bikers can bring additional impacts by expanding into additional types of trails

## Russell County and the Economics of the Spearhead Trail System

### Economic Benefits For Russell

- \$1.2M in economic activity
- \$660K in economic impact from travelers...fresh money from outside the area
- \$491K in labor income
- Approximately 13 FTE jobs
- \$719K in value added (contribution to gross domestic product [GDP] of Virginia)
- \$73K in state and local taxes

### Valued By County Residents

- Local area residents have the highest rating of "excellent" and "good" (95%) for Spearhead Trails
- 9 of 10 users say they would travel out of the area to use trails if Spearhead Trails were not available

### Potential For Growth

- 69% say they would come 2-3 times more often if trails were linked up to make longer trails; 65% if better linked to amenities...stores, restaurants, etc.
- Trail users bring high demand for fuel, groceries, restaurants, hotels, and equipment in the SRRR area
- Other users such as mountain bikers can bring additional impacts by expanding into additional types of trails

## Scott County and the Economics of the Spearhead Trail System

### Economic Benefits For Scott

- \$157K in economic activity
- \$86K in economic impact from travelers...fresh money from outside the area
- \$64K in labor income
- Approximately 2 FTE jobs
- \$93K in value added (contribution to gross domestic product [GDP] of Virginia)
- \$10K in state and local taxes

### Valued By County Residents

- Local area residents have the highest rating of “excellent” and “good” (95%) for Spearhead Trails
- 9 of 10 users say they would travel out of the area to use trails if Spearhead Trails were not available

### Potential For Growth

- 69% say they would come 2-3 times more often if trails were linked up to make longer trails; 65% if better linked to amenities...stores, restaurants, etc.
- Trail users bring high demand for fuel, groceries, restaurants, hotels, and equipment in the SRRA area
- Other users such as mountain bikers can bring additional impacts by expanding into additional types of trails

## Tazewell County and the Economics of the Spearhead Trail System

### Economic Benefits For Tazewell

- \$1.7M in economic activity
- \$917K in economic impact from travelers...fresh money from outside the area
- \$682K in labor income
- Approximately 18 FTE jobs
- \$999K in value added (contribution to gross domestic product [GDP] of Virginia)
- \$102K in state and local taxes

### Valued By County Residents

- Local area residents have the highest rating of “excellent” and “good” (95%) for Spearhead Trails
- 9 of 10 users say they would travel out of the area to use trails if Spearhead Trails were not available

### Potential For Growth

- 69% say they would come 2-3 times more often if trails were linked up to make longer trails; 65% if better linked to amenities...stores, restaurants, etc.
- Trail users bring high demand for fuel, groceries, restaurants, hotels, and equipment in the SRRA area
- Other users such as mountain bikers can bring additional impacts by expanding into additional types of trails

## Wise County and the Economics of the Spearhead Trail System

### Economic Benefits For Wise

- \$2.3M in economic activity
- \$1.3M in economic impact from travelers...fresh money from outside the area
- \$930K in labor income
- Approximately 24 FTE jobs
- \$1.4M in value added (contribution to gross domestic product [GDP] of Virginia)
- \$140K in state and local taxes

### Valued By County Residents

- Local area residents have the highest rating of “excellent” and “good” (95%) for Spearhead Trails
- 9 of 10 users say they would travel out of the area to use trails if Spearhead Trails were not available

### Potential For Growth

- 69% say they would come 2-3 times more often if trails were linked up to make longer trails; 65% if better linked to amenities...stores, restaurants, etc.
- Trail users bring high demand for fuel, groceries, restaurants, hotels, and equipment in the SRRRA area
- Other users such as mountain bikers can bring additional impacts by expanding into additional types of trails