THE ECONOMIC AND FISCAL IMPACTS OF SPEARHEAD TRAILS FISCAL YEAR 2018-19

Prepared For:

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Executive Summary

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

- In FY2018-19, visitors to Spearhead Trails spent an estimated \$13.2M throughout the state. Approximately 85% [\$11.2M] of this money was spent inside the SRRA region.
- The total economic activity stimulated by Spearhead Trails in the state during FY2018-19 was approximately \$18.8M. Roughly 89% [\$16.7M] of this economic activity occurred within the SRRA region.
- ➤ The total "economic impact from travelers" attributed to Spearhead Trails during FY2018-19 was an estimated \$9.7M. "Economic impact from travelers" is a subset of the total economic activity figure and is a measure of "fresh money" infused into the SRRA 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 198 full-time equivalent (FTE) jobs in the state in FY2018-19.¹
- In terms of wages and income, the economic activity spawned by Spearhead Trails was responsible for roughly \$7.8M in wage and salary income in the Commonwealth during FY2018-19.
- Economic activity created by Spearhead Trails during FY2018-19 was associated with approximately \$11.8M 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 \$1.3M in state and local tax revenue in Virginia during FY2018-19.

¹ A total of 198 full-time equivalent jobs may equate to many more part-time jobs.

In comparison to the FY2016-17 results (2 years ago), the following observations can be made:

- Statewide economic activity supported by Spearhead Trails grew 52 percent from an estimated \$9.0M to \$18.8M.
- The economic impact from travelers attributed to Spearhead Trails within the SRRA grew from roughly \$4.3M to \$9.7M.
- ➤ In FY2016-17, the economic activity stimulated by Spearhead Trails supported approximately 94 full-time equivalent (FTE) jobs in the state; in FY2018-19 the economic activity supported an estimated 198 FTE jobs.
- In terms of wages and income, in FY2016-17 the economic activity spawned by Spearhead Trails was responsible for roughly \$3.6M in wage and salary income in the Commonwealth; in FY2018-19 this metric increased to \$7.8M.
- ➤ In FY2016-17, Spearhead Trails contributed roughly \$5.3M to the GDP of Virginia through value-added effects; two years later these value-added effects are estimated at \$11.8M.
- Economic activity stimulated by Spearhead Trails generated approximately \$528K in state and local tax revenue in Virginia during FY2016-17; state and local taxes during FY2018-19 tally to approximately \$1.3M.
- In comparison to two years ago, non-local visitors do <u>not</u> appear to be staying longer or visiting more frequently. Rather the increased economic impacts can largely be attributed to:
 - 1) more riders visiting (increased permit sales); and
 - 2) more visiting parties bringing non-riders (increase from 23 to 27 percent)
- A larger proportion of riders from within the SRRA area are purchasing annual permits as opposed to day permits; likewise, the average usage per year for local permit holders has increase from 14 to 18.6 visits.

Regarding indicators of continued success and growth:

92 percent of Spearhead visitors report being either "satisfied" or "very satisfied" with their experience, and these results are consistent for both SRRA residents and visitors to the area.

- ▶ 96 percent of Spearhead riders are either "likely" or "very likely" to recommend Spearhead trails to friends and/or relatives.
- > 97.5 percent of Spearhead visitors indicated that they would like to return.
- > 89 percent of visitors stated that they would visit *more often* if there were more connected trail miles.
- > 73 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.
- ➤ 69 percent of visitors indicated that they would likely visit for *longer periods of time* if the trail system had more connected amenities.

With regard to economic contribution trajectory, conservative modeling projects:²

- > FY2019-20 (projected):
 - Statewide economic activity: \$24.7M
 - State and local taxes generated: \$1.7M
 - Full-time equivalent jobs supported: 260
- > FY2020-21 (projected):
 - Statewide economic activity: \$28.7M
 - State and local taxes generated: \$2.0M
 - Full-time equivalent jobs supported: 302

² Basic assumptions of the trajectory modeling are listed in Tables 19 and 20.

Section 1. Introduction

The Spearhead Trail system boasts five ATV trail complexes 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 operation 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 one-way) 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 through 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?
 - o 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)?

Each of the above questions was addressed with the first economic impact study two years ago (FY2016-17); thus, the purpose of the current study is to address these same questions for the FY2018-19 period. The next sections of this report, therefore, describe the study's methodology and data collection procedures. Some elements of the 2017 study were not repeated in this (2019) work, so it is important to review both studies to get a complete set of results.

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 SRRA itself, but primary among these is the visitor spending component. 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 SRRA 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 SRRA staff to quantify spending patterns and habits 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).³

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.

In addition to spending-related patterns necessary for the economic modeling, the consumer survey also captured information such as frequency of visits, satisfaction with visitation

³ When this study was conducted two years ago, survey solicitation postcards were also sent to the residential address of some permit holders. These postcards yielded a very low response rate and, therefore, were deemed unnecessary in the current study.

experiences, and specific feedback regarding the individual trails.^{4, 5} A total of 400 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 (Johnson, Beaton, Murphy, and Pike, 2000; Sax, Gilmartin, and Bryant, 2003). All diagnostics confirmed sample adequacy.

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 SRRA 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 / trail maintenance and repair
- Maintenance and repair non-trail
- Cost of goods sold (permits and merchandise)
- > Facility and grounds expense
- ➤ Marketing and sales expense
- Capital and debt expenditures

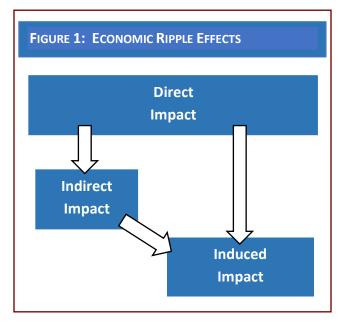
⁴ To manage survey length, some of the spending categories captured in the previous survey were not repeated on this survey; instead the previous spending profiles were adjusted to account for two years of inflation.

⁵ 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.

2.3 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 1, 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.⁶ Thus, **economic impact from traveler** figures reflect all of the "fresh money" entering an economy as a result of Spearhead Trails.

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⁶ 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 ¹		Non-Local Trail Users ² (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:		of total holders		of total t holders		of total it holders
Annual vs. Day Permits:	Annual Permits: 85%	Day Permits: 15%	Annual Permits: 67%	Day Permits: 33%	Annual Permits: 72%	Day Permits: 28%
Average number of trail visits per year of annual pass holders:	18.6 visit	ts per year	8.9 visit	ts per year	5.2 visi	ts per year
Trail miles covered per visit:	40 tra	il miles	48 tra	ail miles	53 tr	ail miles
Total per person spending in the Spearhead area per visit:	\$6	0.38	\$5	50.51	\$2	20.80
Total per person spending outside of the Spearhead area, but inside of Virginia per visit:	\$1.88		\$	7.71	\$:	25.68
Total per person spending outside of Virginia per visit:	\$7.76		\$1	17.39	\$.	24.18
Total per person spending per visit (sum of previous 3 rows): ³	\$7	0.02	\$7	75.61	\$272.66 (a	cross 3.3 days)

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 \$1.8M on gasoline. As another example, it can also be seen in Table 2 that visitors to Spearhead Trails spent \$1.3M in restaurants around the state and \$1.2M on hotels associated with their Spearhead trips.

TABLE 2: IN-VIRGINIA VISITOR SPENDING (BOTH INSIDE AND OUTSIDE OF THE SRRA AREA)		
	Total Spending	
Groceries	\$1.6M	
Gas	\$1.8M	
Restaurants	\$1.3M	
Hotels	\$1.2M	
Camping	\$1.1M	
Equipment	\$2.7M	
Clothing	\$381K	
Souvenirs	\$238K	
Other Transportation Expenses	\$643K	
Entertainment (including permits)	\$2.2M	
Other	\$88K	
Total Spending in Virginia	\$13.2M	

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 FY2018-19 moved through the state's economy and produced \$18.8M in total economic activity.

Effect Type	Economic Activity (Range) ^a	Economic Activity (Mean) ^b
Direct	\$9.8M → \$10.7M	\$10.2M
Indirect	\$3.8M → \$4.1M	\$3.9M
Induced	\$4.5M → \$4.8M	\$4.7M
Total Output	\$18.0M → \$19.6M	\$18.8M

a. Range in economic activity can be attributed to differing levels of economic strength throughout the Commonwealth.

b. The mean economic activity is the high and low end of the range summed and divided by two.

3.2.3 Statewide Employment and Labor Income

The economic activity stimulated by Spearhead Trails supports roughly 198 full-time equivalent jobs around the Commonwealth (see Table 4). Those jobs are associated with \$7.8M in labor income.

TABLE 4: IN-VIRGINIA EMPLOYMENT AND LABOR INCOME ATTRIBUTED TO SPEARHEAD TRAILS			
Effect Type	Employment (Full-time equivalent jobs)	Labor Income	
Direct	147	\$4.9M	
Indirect	21	\$1.3M	
Induced	30	\$1.6M	
Total Output	198	\$7.8M	

3.2.4 Statewide Value-Added Effects and Tax Revenues

In FY2018-19, the economic activity stimulated from Spearhead Trails contributed an estimated \$11.8M to the gross domestic product of Virginia. Moreover, the economic activity attributed to the trail system generated \$1.3M in state and local taxes. While IMPLAN modeling software does not partition state and local taxes, it is estimated in Virginia that this type of tourism-related economic activity produces an estimated 60-40 split between state and local tax revenues.

TABLE 5: IN-VIRGINIA VALUE-ADDED EFFECTS AND TAX REVENUES ATTRIBUTED TO SPEARHEAD TRAILS			
Effect Type	Value-Added	State and Local Taxes	
Direct	\$6.3M		
Indirect	\$2.6M	\$1.3M	
Induced	\$2.9M		
Total Output	\$11.8M		

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 89 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 \$1.2M in restaurants of which approximately \$814K was spent by non-locals. Even before entering 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.

TABLE 6: SPENDING WITHIN THE SRRA AREA			
	Total Spending	"Fresh Money" Spent by Non-Locals ^a	
Groceries	\$1.4M	\$897K	
Gas	\$1.5M	\$883K	
Restaurants	\$1.2M	\$814K	
Hotels	\$1.2M	\$1.2M	
Camping	\$1.1M	\$1.0M	
Equipment	\$1.9M	\$344K	
Clothing	\$352K	\$222K	
Souvenirs	\$223K	\$219K	
Other Transportation Expenses	\$286K	\$27K	
Entertainment (including permits)	\$1.9M	\$974K	
Other	\$73K	\$14K	
Total Spending within the SRRA Area:	\$11.2M	\$6.6M	

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 FY2018-19. 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.

TABLE 7: ECONOMIC ACTIVITY IN THE SRRA AREA ATTRIBUTED TO SPEARHEAD TRAILS		
Economic Activity ^a		
\$2.3M		
\$1.3M		
\$806K		
\$1.1M		
\$2.1M		
\$304K		
\$3.1M		
\$4.2M		
\$15.2M		

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.

3.3.3 Regional Economic Impact from Travelers

Non-locals infused considerable amounts of "freshmoney" into the SRRA area in FY2018-19. As depicted in Table 8, the economic impact from travelers stimulated by Spearhead Trails can be estimated at \$9.7M 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 \$9.7M
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 ^a	
Buchanan County	\$1.5M	
Dickenson County	\$842K	
Lee County	\$514K	
Norton (City of)	\$679K	
Russell County	\$1.3M	
Scott County	\$194K	
Tazewell County	\$2.0M	
Wise County	\$2.7M	
Regional (SRRA) Output	\$9.7M	
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.

3.3.4 Regional Employment and Labor Income

The economic activity stimulated by Spearhead Trails supports roughly 158 full-time equivalent jobs around in the SRRA region (see Table 9).⁷ Those jobs are associated with \$6.3M in labor income.

TABLE 9: EMPLOYMENT AND LABOR INCOME IN THE SRRA AREA ATTRIBUTED TO SPEARHEAD TRAILS			
County <u>or</u> City	Employment (Full-time equivalent jobs)	Labor Income	
Buchanan County	25	\$972K	
Dickenson County	14	\$548K	
Lee County	8	\$334K	
Norton (City of)	11	\$442K	
Russell County	22	\$865K	
Scott County	3	\$126K	
Tazewell County	32	\$1.3M	
Wise County	44	\$1.7M	
Regional (SRRA) Output	159	\$6.3M	

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.

⁷ 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 FY2018-19, the economic activity stimulated from Spearhead Trails within the SRRA region contributed an estimated \$9.4M to the gross domestic product of Virginia. Moreover, the economic activity within the SRRA area generated \$972K in state and local taxes.

Table 10: Value-Added Effects and Tax Revenues Attributed to Spending in the SRRA Area			
County <u>or</u> City	Value-Added Generated	State and Local Taxes Generated	
Buchanan County	\$1.4M	\$151K	
Dickenson County	\$815K	\$84К	
Lee County	\$497K	\$52K	
Norton (City of)	\$657K	\$68K	
Russell County	\$1.3M	\$133K	
Scott County	\$188K	\$19K	
Tazewell County	\$1.9M	\$196K	
Wise County	\$2.6M	\$269K	
Regional (SRRA) Output	\$9.4M	\$972K	

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.

3.4 Key Takeaways in Comparing FY2018-19 Results to FY2016-17

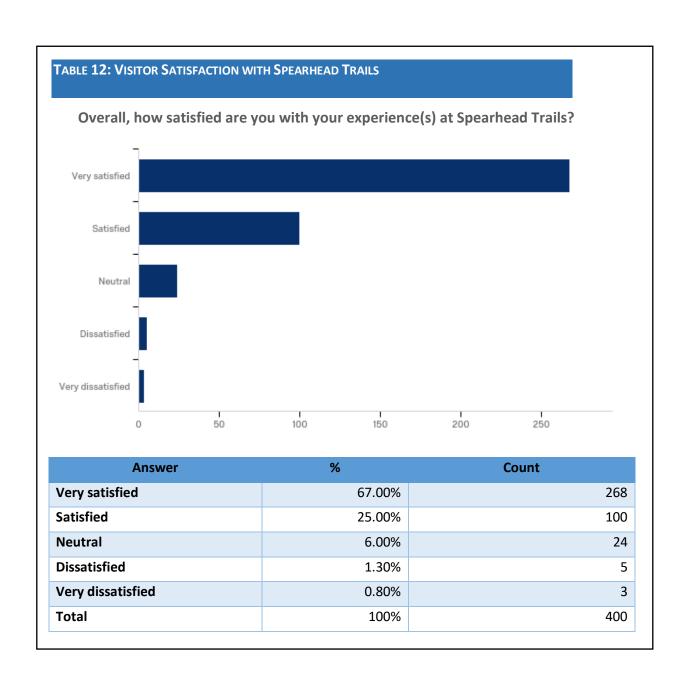
In comparing these results with those realized two years ago, the following observations can be made:

- Statewide economic activity supported by Spearhead Trails grew 52 percent from an estimated \$9.0M to \$18.8M.
- The economic impact from travelers attributed to Spearhead Trails within the SRRA grew from roughly \$4.3M to \$9.7M.
- ➤ In FY2016-17, the economic activity stimulated by Spearhead Trails supported approximately 94 full-time equivalent (FTE) jobs in the state; in FY2018-19 the economic activity supported an estimated 198 FTE jobs.
- In terms of wages and income, in FY2016-17 the economic activity spawned by Spearhead Trails was responsible for roughly \$3.6M in wage and salary income in the Commonwealth; in FY2018-19 this metric increased to \$7.8M.
- In FY2016-17, Spearhead Trails contributed roughly \$5.3M to the GDP of Virginia through value-added effects; two years later these value-added effects are estimated at \$11.8M.
- Economic activity stimulated by Spearhead Trails generated approximately \$528K in state and local tax revenue in Virginia during FY2016-17; state and local taxes during FY2018-19 tally to approximately \$1.3M.
- In comparison to two years ago, non-local visitors do <u>not</u> appear to be staying longer or visiting more frequently. Rather the increased economic impacts can largely be attributed to:
 - 1) more riders visiting (increased permit sales); and
 - 2) more visiting parties bringing non-riders (increase from 23 to 27 percent)
- A larger proportion of riders from within the SRRA area are purchasing annual permits as opposed to day permits; likewise, the average usage per year for local permit holders has increase from 14 to 18.6 visits.

3.5 Indicators of Future Spearhead Performance

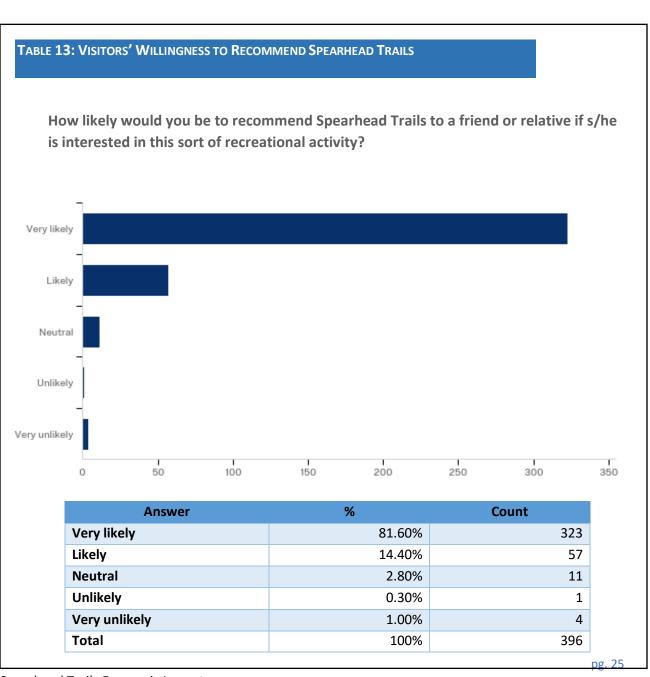
3.5.1 Visitor Satisfaction

Visitors to Spearhead Trails are overwhelmingly satisfied with their experiences, with ratings of "Very Satisfied" plus "Satisfied" measuring 92% in the current survey. These ratings are high for both resident users (90%) and those from outside the SRRA area (94%). The score in this area was 89% in 2017, but the difference is within the range of normal statistical variation (meaning that satisfaction remains high).



3.5.2 Visitor Willingness to Recommend

Willingness to recommend a service or product is an important indicator of success because it puts a person's reputation on the line and requires the respondent to more carefully consider the response. Spearhead scores very well in this area with 96% of all users saying they are "very likely" or "likely" to recommend. Support is statistically identical from SRRA residents (95%) and those outside of the area (96%). The overall score is up from 91% in the 2017 study.

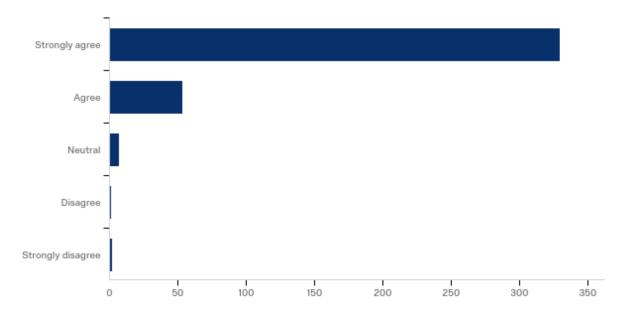


3.5.3 Visitor Return Intent

Returning customers are the foundation of any successful business. As shown in Table 14, the overwhelming majority of Spearhead users, 97.5%, plan to make return visits.



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	84.00%	330
Agree	13.50%	53
Neutral	1.80%	7
Disagree	0.30%	1
Strongly disagree	0.50%	2
Total	100%	393

3.5.4 Potential Outcomes of Increased Trail Connected Miles

As in the 2017 study, current users strongly indicate that they would visit more often and stay longer if more connected trail miles were created. As shown in Table 15a, 89% of respondents (in both 2017 and 2019) indicate that more connected miles would encourage them to visit more often.

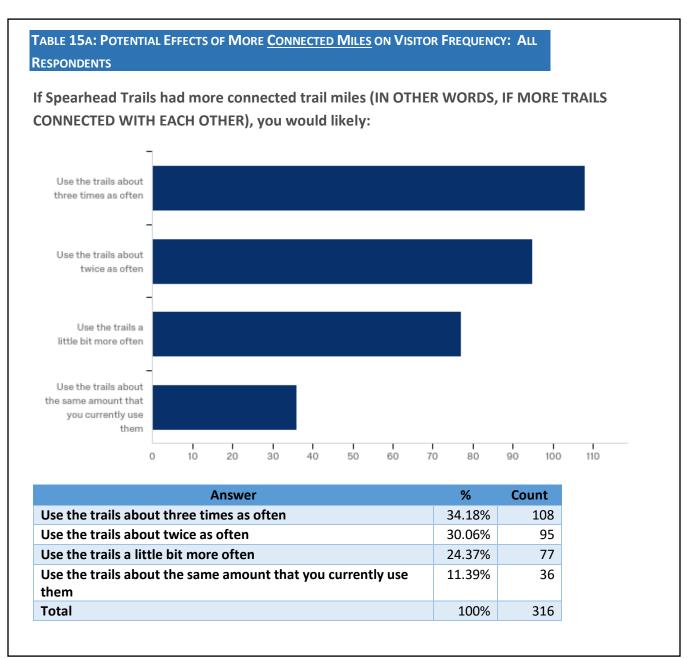


Table 15b shows that while the overall effect of additional mileage would be to increase visitation from both SRRA resident riders and from those outside the area, the frequency of visits would increase more for residents. This is understandable in that local riders are already frequent visitors and they would like new territory to explore. However, the predicted effect from non-local visitors is dramatic as well, showing that adding trail miles (and marketing this) should remain as a priority for Spearhead Trails.

TABLE 15B: POTENTIAL EFFECTS OF MORE <u>CONNECTED MILES</u> ON VISITOR FREQUENCY: SRRA RESIDENTS VS. OUT OF AREA VISITORS

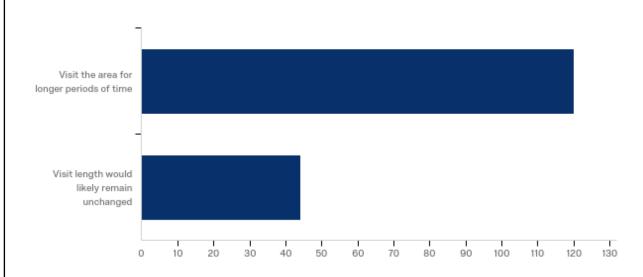
If Spearhead Trails had more connected trail miles (IN OTHER WORDS, IF MORE TRAILS CONNECTED WITH EACH OTHER), you would likely:

Question	Yes, I live in the No, I do not live SRRA area. In the SRRA area.			
Use the trails about three times as often	44%	66	25%	42
Use the trails about twice as often	27%	41	33%	54
Use the trails a little bit more often	18%	27	30%	50
Use the trails about the same amount that you currently use them	11%	17	12%	19
Total	Total	151	Total	165

As in the 2017 study, users continue to indicate that they would extend the time of the visit if more trail miles were available. This is important in terms of economic benefits to the area because longer stays translate into additional spending on lodging, food, etc. (see Section 3.2).



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	73.17%	120
Visit length would likely remain unchanged	26.83%	44
Total	100%	164

3.5.5 Potential Outcomes of Increased Amenity Connectivity

As illustrated in Tables 17 and 18, frequency and duration of visits (and associated 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 and 71% indicated that they would stay longer. These results are identical to those of the 2017 survey.

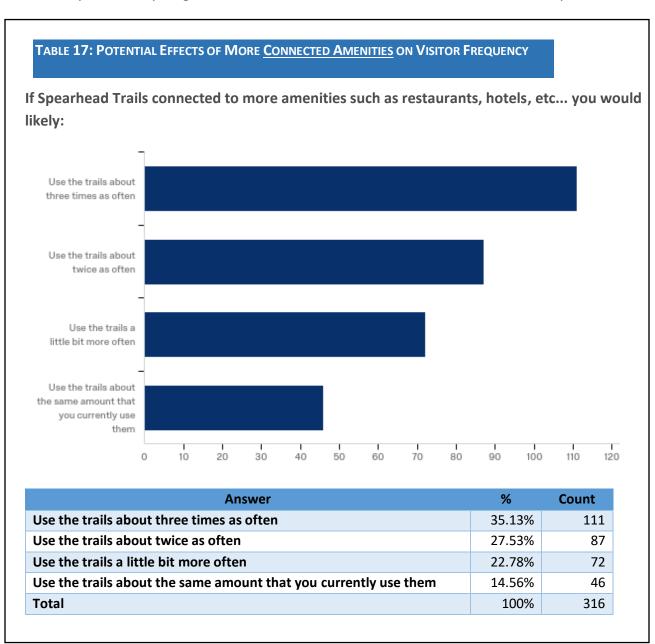
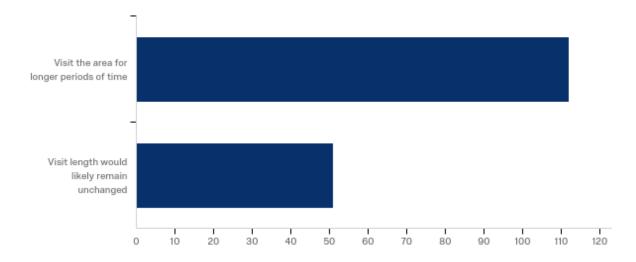


TABLE 18: POTENTIAL EFFECTS OF MORE CONNECTED AMENITIES ON VISITOR STAY DURATION

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	68.71%	112
Visit length would likely remain unchanged	31.29%	51
Total	100%	163

3.5.6 Economic Trajectory

It is difficult to forecast growth rates and patterns with very few years of history to serve as a basis for such forecasting. Nevertheless, based upon discussions with Spearhead's leadership, a 20 percent average annual increase in permit sales over the next two years seems reasonable. As such, Tables 19 – 20 and Figure 3 depict this trajectory.

TABLE 19: FISCAL YEAR 2019-20 PROJECTED ECONOMIC CONTRIBUTIONS	
Projected Economic Activity in Virginia attributed to Spearhead Trails:	\$24.7M
Projected State and Local Tax Revenues Attributed to Spearhead Trails:	\$1.7M
Projected Labor Income Attributed to Spearhead Trails:	\$10.3M
Projected Value-Added Effects Attributed to Spearhead Trails	\$15.5M
Projected Full-Time Equivalent Jobs Attributed to Spearhead Trails:	260 FTE jobs

BASIC MODEL ASSUMPTIONS COMPARED TO FY2016-17 MODELING

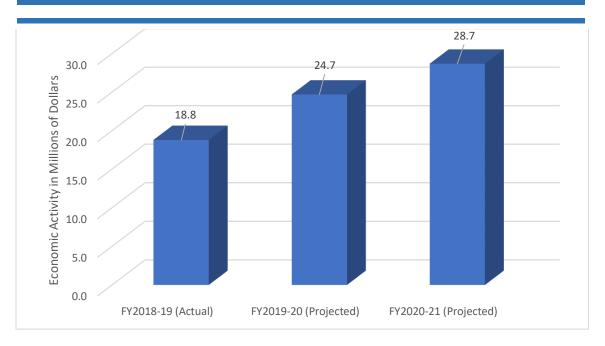
- 20 percent permit holder growth
- Local trail users increase visitation frequency by 1 visit per year
- Non-local day users increase visitation frequency by 1 visit per year
- Non-local overnight users increase visitation frequency by 1 visit per year
- Spending profiles of all user groups increase year-to-year by 3 percent to adjust for inflation

TABLE 20: FISCAL YEAR 2020-21 PROJECTED ECONOMIC CONTRIBUTIONS	
Projected Economic Activity in Virginia attributed to Spearhead Trails:	\$28.7M
Projected State and Local Tax Revenues Attributed to Spearhead Trails:	\$2.0M
Projected Labor Income Attributed to Spearhead Trails:	11.9M
Projected Value-Added Effects Attributed to Spearhead Trails	\$18.0M
Projected Full-Time Equivalent Jobs Attributed to Spearhead Trails:	302 FTE jobs

BASIC MODEL ASSUMPTIONS COMPARED TO FY2018-19 MODELING

- 20 percent permit holder growth
- Spending profiles of all user groups increase year-to-year by 3 percent to adjust for inflation





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

Section 4. Discussion

The purpose of this study was to update the findings of the 2017 work: *The Economic and Fiscal Impacts of Spearhead Trails, Fiscal Year 2016-17*. While much of the text and data in this new study is, necessarily, repetitive, the magnitude of the changes that have occurred in the past two years should not be overlooked. The Virginia economy benefits as a whole thanks to the Authority's activities (\$18.8M in economic activity, 198 jobs, \$11.8M increase to GDP) but of greater importance is the impact this has on the seven counties and one city⁸ that constitute the SRRA area. The increases for the area can be seen in Table 21. Most of the increases are attributed to increased visitation which has grown rapidly, as shown by the numbers of Spearhead permits sold.

	2047	2010
Economic Measurement	2017	2019
Visitor Spending	\$5.8M	\$11.2M
Economic Activity	\$9.0M	\$18.8M
Economic Impact from Travelers	\$4.3M	\$9.7M
Jobs	82	159
Wages	\$3.2M	\$6.3M
Value-Added	\$4.7M	\$9.4M
State and Local Taxes	\$475K	\$1.3M

⁸ The Counties of Buchanan, Dickenson, Lee, Russell, Scott, and Tazewell and the City of Norton

The commentary in the 2017 report regarding methodology, spending characteristics, etc.

remains pertinent but is not repeated here. The reader is referred to that document for a more complete discussion of these issues.

Respondents in both the 2017 and 2019 surveys strongly indicate that they would change their visitation behavior if additional trail miles were available and there were more connections to amenities such as towns and restaurants. They indicate that they would visit more often and would increase their length of stay. However, the 2019 survey results did not show a significant change in these visitation metrics. On the other hand, the trail system has not added a lot of new miles or connections since 2017 with the exception of additional trail bike mileage and a connection to Breaks Interstate Park, which has not

"The trails are amazing and very well maintained.
We drive over 6 hours to spend the weekend."

~ 2018-19 Trail Rider

been actively promoted yet. Additional miles and connections to amenities should continue to be a high priority. It should, however, be noted that at the time of this writing, the Authority is planning to open a new section of trails within the next two months.

As noted in the 2017 report (and illustrated by this work), Spearhead Trails should continue to conduct periodic research to track its economic success and to gain a more detailed understanding of its users. The Authority seems to be well-poised to continue to draw visitors into the area while also providing a well-supported recreational activity for local residents.

Investigator Bios

Dr. Vincent Magnini is the Executive Director of the Institute for Service Research. 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 250 articles and reports. Dr. Magnini has also been featured on National Public Radio's *With Good Reason, All Things Considered, Pulse on the Planet* and cited in the *New York Times* and *Washington Post*.



Recent economic impact studies or recreation participation studies conducted by Dr. Magnini include:

- ➤ The Economic Impacts of Michigan's Ports and Harbors (with Dr. John Crotts)
- The Fiscal and Economic Impacts of Virginia's Agritourism Industry
- Virginia State Parks Economic Impact Report (conducted annually)
- > State of Florida Outdoor Recreation Participation Study (with Chuck Wyatt)
- Florida State Parks Visitor Profile and Marketing Research Study (with Chuck Wyatt and Dr. Muzzo Uysal)
- The Economic Impacts of Spearhead Trails (with Chuck Wyatt)
- The Economic Significance and Impacts of West Virginia's State Parks and Forests (with Dr. Muzzo Uysal)

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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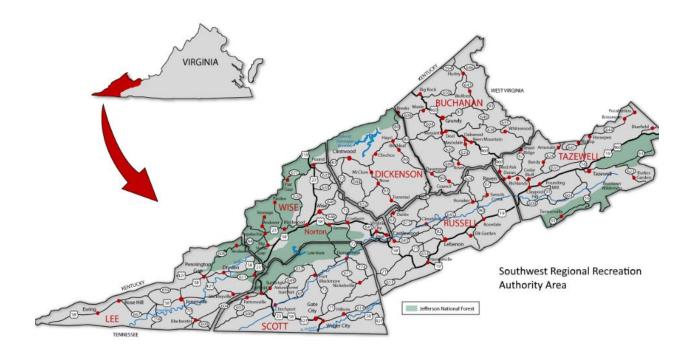
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Appendices

Appendix A: Map of SRRA Area



Source of image: www.trailsrus.com/spearheadtrails/srra.html (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 (one-way) to visit Spearhead Trails. Thus, economic impact figures reflect all of the "fresh money" entering an economy as a result of Spearhead Trails.

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 on 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.

Appendix C: County/City-Level Summary Sheets

{Sheets begin on next page}

Buchanan County and the Economics of the Spearhead Trail System

Economic Benefits for Buchanan

- \$2.3M in economic activity
- \$1.5M in economic impact from travelers...fresh money from outside the area
- \$972K in labor income.
- Approximately 25 FTE jobs
- \$1.4M in value added (contribution to gross domestic product [GDP] of Virginia)
- \$151K in state and local taxes

Valued by County Residents

- Local area users like the Spearhead Trails System with 90% rating them at the "excellent" and "good" levels
- 64% of local users say they would travel out of the area to use trails if Spearhead Trails were not available

- 64% say they would come 2-3 times more often if trails were linked up to make longer trails; 63% 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

- \$1.3M in economic activity
- \$842K in economic impact from travelers...fresh money from outside the area
- \$548K in labor income
- · Approximately 14 FTE jobs
- \$815K in value added (contribution to gross domestic product [GDP] of Virginia)
- \$84K in state and local taxes

Valued by County Residents

- Local users like the Spearhead Trails System with 90% rating them at the "excellent" and "good" levels
- 9 of 10 users say they would travel out of the area to use trails if Spearhead Trails were not available

- 64% say they would come 2-3 times more often if trails were linked up to make longer trails; 63% 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

Lee County and the Economics of the Spearhead Trail System

Economic Benefits for Lee

- \$806K in economic activity
- 514K in economic impact from travelers ...fresh money from outside the area
- \$334K in labor income.
- Approximately 8 FTE jobs
- \$497K in value added (contribution to gross domestic product [GDP] of Virginia)
- \$52K in state and local taxes.

Valued by County Residents

- Local area users like the Spearhead Trails System with 90% rating them at the "excellent" and "good" levels
- 62% of local users say they would travel out of the area to use trails if Spearhead Trails were not available

- 64% say they would come 2-3 times more often if trails were linked up to make longer trails; 63% 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

Norton City and the Economics of the Spearhead Trail System

Economic Benefits for Norton

- \$1.1M in economic activity
- \$679K in economic impact from travelers ...fresh money from outside the area
- \$442K in labor income.
- Approximately 11 FTE jobs
- \$657K in value added (contribution to gross domestic product [GDP] of Virginia)
- \$68K in state and local taxes

Valued by County Residents

- Local area users like the Spearhead Trails System with 90% rating them at the "excellent" and "good" levels
- 9 of 10 users say they would travel out of the area to use trails if Spearhead Trails were not available

- 64% say they would come 2-3 times more often if trails were linked up to make longer trails; 63% 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

Russell County and the Economics of the Spearhead Trail System

Economic Benefits for Russell

- \$2.1M in economic activity
- \$1.3M in economic impact from travelers...fresh money from outside the area
- \$865K in labor income
- Approximately 22 FTE jobs
- \$1.3M in value added (contribution to gross domestic product [GDP] of Virginia)
- \$133K in state and local taxes.

Valued by County Residents

- Local area users like the Spearhead Trails
 System with 90% rating them qt the "excellent" and "good" levels
- 62% of local users say they would travel out of the area to use trails if Spearhead Trails were not available

- 64% say they would come 2-3 times more often if trails were linked up to make longer trails; 63% 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

Scott County and the Economics of the Spearhead Trail System

Economic Benefits for Scott

- \$304K in economic activity
- \$194K in economic impact from travelers...fresh money from outside the area
- \$126K in labor income.
- Approximately 3 FTE jobs
- \$188K in value added (contribution to gross domestic product [GDP] of Virginia)
- \$19K in state and local taxes.

Valued by County Residents

- Local area users like the Spearhead Trails System, with 90% rating them qt the "excellent" and "good" levels
- 62% of local users say they would travel out of the area to use trails if Spearhead Trails were not available

- 64% say they would come 2-3 times more often if trails were linked up to make longer trails; 63% 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

- \$3.1 M in economic activity
- \$2.0M in economic impact from travelers...fresh money from outside the area
- \$1.3M in labor income
- Approximately 32 FTE jobs
- \$1.9M in value added (contribution to gross domestic product [GDP] of Virginia)
- \$196K in state and local taxes

Valued by County Residents

- Local area residents users like the Spearhead Trails System with 90% rating them at the "excellent" and "good" levels
- 62% of local users say they would travel out of the area to use trails if Spearhead Trails were not available

- 64% say they would come 2-3 times more often if trails were linked up to make longer trails; 63% 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

- \$4.2M in economic activity.
- \$2.7M in economic impact from travelers...fresh money from outside the area
- \$1.7M in labor income.
- Approximately 44 FTE jobs
- \$2.6M in value added (contribution to gross domestic product [GDP] of Virginia)
- \$269K in state and local taxes

Valued by County Residents

- Local area resident users like the Spearhead Trails System with 90% rating themat the "excellent" and "good" levels
- 62% of local resident users say they would travel out of the area to use trails if Spearhead Trails were not available

- 64% say they would come 2-3 times more often if trails were linked up to make longer trails; 63% 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