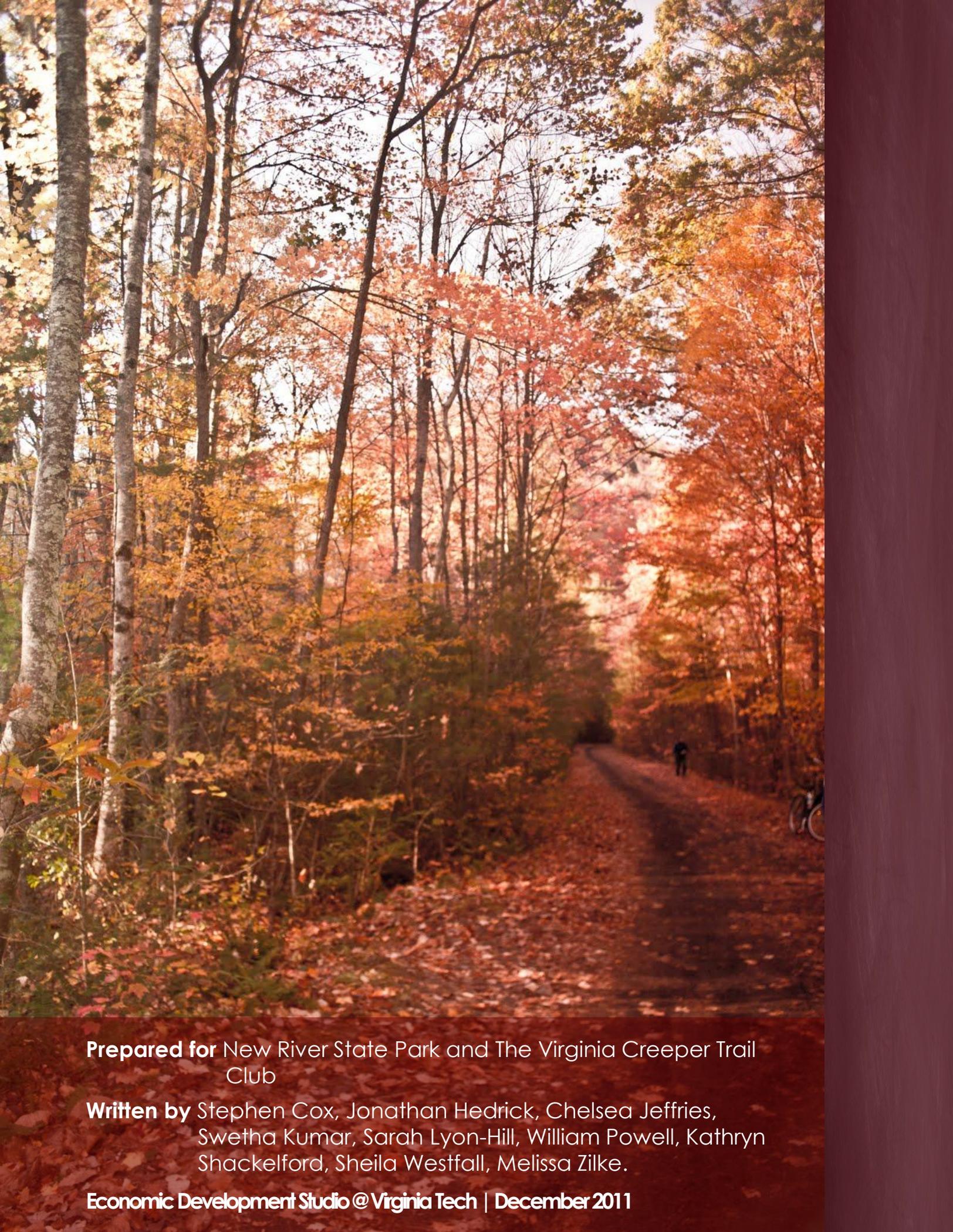


**BUILDING**  
**CONNECTIVITY**  
**THROUGH**  
**RECREATION**  
**TRAILS**

*A CLOSER LOOK AT NEW RIVER  
TRAIL STATE PARK AND THE  
VIRGINIA CREEPER TRAIL*

ECONOMIC DEVELOPMENT STUDIO @ VIRGINIA TECH  
DECEMBER 2011



**Prepared for** New River State Park and The Virginia Creeper Trail Club

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**Economic Development Studio @ Virginia Tech | December 2011**

# FORWARD

The Economic Development Studio @ Virginia Tech is a resource for communities. We conduct research on economic development issues to empower community decision – making with technically sound recommendations for economic development strategy and action.

The Studio is a collaborative effort of Virginia Tech's Urban Affairs and Planning Program and Virginia Tech's Office of Economic Development. Graduate students work under faculty supervision on behalf of real-life clients and deliver actionable research projects. The students design and shape the implementation of the project, which typically provides a final sheltered work experience before they embark on their careers.

This year's Studio team includes students from Virginia Tech's programs in Urban Affairs and Planning, and Public Administration. I am proud to have worked with this fine group of emerging professionals. I commend to you both their work that follows and their potential to make future contributions to communities across the Commonwealth, the nation, and the world.

On behalf of the team, I would like to express my sincere thanks to this year's clients, the New River Trail State Park and the Virginia Creeper Trail Club. They have been excellent partners, opening their organizations to the students and taking the time to engage in a sincere and open discussion about ideas. I would especially like to thank Link Elmore, Sam Sweeney and Chuck Wyatt, representatives of our client organizations, for working with us to scope out the nature of the project you see here. Our thanks also goes to many government and community leaders in Damascus and Galax, government representatives of Washington County, as well as industry leaders elsewhere including those from the Virginia Tourism Corporation, Roanoke Regional Partnership, Pulaski County, the Town of Pulaski, all of who provided insights and guidance to the students over the course of this project.

We could not have undertaken the project without the support and guidance of our client and others. It should be noted however that any errors and omission in this report are the sole responsibility of the authors.

John Provo. Ph.D.

Director, Virginia Tech Office of Economic Development  
Instructor, Economic Development Studio @ Virginia Tech



# CONTENTS

- 01** EXECUTIVE SUMMARY
- 02** INTRODUCTION  
*PROJECT SCOPE, PROCESS, DATA ANALYSIS AND REPORT OUTLINE*
- 07** ECONOMIC ANALYSIS  
*ECONOMIC IMPACT ANALYSIS AND ASSET-BASED DEVELOPMENT*
- 12** NEW RIVER TRAIL STATE PARK  
*FINDINGS AND RECOMMENDATIONS*
- 18** VIRGINIA CREEPER TRAIL  
*FINDINGS AND RECOMMENDATIONS*
- 26** CONCLUSION
- 32** APPENDIX A: HISTORY OF RAILS TO TRAILS
- 33** APPENDIX B: CONTEXTUAL BACKGROUND
- 35** APPENDIX C: ASSET MAPPING
- 43** APPENDIX D: TRAIL USER SURVEY
- 47** APPENDIX E: BUSINESS SURVEY
- 51** APPENDIX F: STAKEHOLDER QUESTIONNAIRE
- 53** APPENDIX G: HOW-TO-GUIDE  
*CONDUCTING YOUR OWN STUDY*

## REFERENCES

### *LIST OF FIGURES AND MAPS*

- 7** FIGURE 1: ECONOMIC IMPACT CYCLE
- 12** FIGURE 2: ANNUAL APPLICABLE LOCAL TAX REVENUE ATTRIBUTED TO NEW RIVER TRAIL USERS
- 18** FIGURE 3: ANNUAL APPLICABLE LOCAL TAX REVENUE ATTRIBUTED TO THE VIRGINIA CREEPER TRAIL
- 19** FIGURE 4: MONTHLY APPLICABLE LOCAL TAX REVENUE ATTRIBUTED TO THE VIRGINIA CREEPER TRAIL
- 35** FIGURE 5: STAR MODEL OF COMMUNITY ECONOMIC DEVELOPMENT
- 15** MAP 1: NEW RIVER TRAIL STATE PARK REGION
- 16** MAP 2: GALAX AREA AND ASSETS
- 22** MAP 3: SOUTHWEST VIRGINIA AND SURROUNDING BOUNDARIES
- 25** MAP 4: VIRGINIA CREEPER TRAIL REGION AND ASSETS
- 28** MAP 5: SOUTHWEST VIRGINIA TRAILS



*Photographs by Swetha Kumar.*

# EXECUTIVE SUMMARY

The New River Trail State Park and Virginia Creeper Trail are two prominent rail-trails located in southwest Virginia. During Fall 2012, the Economic Development Studio @ Virginia Tech engaged with representatives from New River Trail State Park and Virginia Creeper Trail Club to conduct an economic impact study of these recreation trails. In an effort to better document economic impact and identify strategies for maximizing economic benefits to trail communities, the studio team used asset-based development techniques. This approach focuses on local and regional assets, identifying the disconnects between assets so that their relationships may be strengthened and leveraged to produce greater economic impact. As such, the City of Galax and Town of Damascus were chosen as the two study areas for this analysis based on what the studio team saw as an unrealized potential in terms of untapped or disconnected community assets.

After conducting surveys of both trail-users and local businesses, as well as expert and stakeholder interviews, individual and combined findings and recommendations for these two trails were reached. The team found that Galax employs a broad, vibrant tourism model; however, the New River Trail State Park has the opportunity to play a much larger part in the Galax tourism industry by strengthening relations between park officials, the city government and local businesses. Meanwhile, the Virginia Creeper Trail has a significant impact on Damascus, so much so that increasing its economic impact would require diversifying the local tourism market and improving marketing of other local and regional assets, resulting in increased tourist spending. Findings from both trails suggest the importance of out-of-state tourists, particularly from North Carolina, and a need to cater more to youth both within and outside of the two communities.

## *Overall Recommendations*

- The New River Trail State Park should identify stakeholders and take an active role in recreating a Friends of the Park group in order to increase collaboration between the park and trail communities like the City of Galax
- The State Park should also partner with the city to identify the best use and means of redeveloping the property next to the trail
- The Virginia Creeper Trail Club should become a stakeholder in the new public library and tourism center in Damascus to promote its presence in town
- The Club should promote diverse tourist activities: help create local and regional tourism maps for trail users, advocate for heritage- and artisan-centered tourist activities, sponsor a trail event that brings together other regional tourist groups.
- Both trail groups can serve as intermediaries between communities along the trails to promote information-sharing, collaboration and regional efforts to increase economic impacts of trails. One regional project could be radio and other social media along the trails.
- Both groups should promote youth involvement in trails, for instance, creating more opportunities for environmental education activities that would attract young families and employ youth or recent college graduates.

# INTRODUCTION

## PROJECT SCOPE

The Virginia Creeper Trail and the New River Trail State Park are part of a larger movement beginning in the late 20th century to convert abandoned railroad lines into outdoor recreational trails.<sup>32</sup> A brief overview of the history of Rails-to-trails can be found in Appendix A. In order to sustain funding of these newly formed trails, several rail-to-trails groups have conducted economic impact analyses to explain the trails' economic benefits to adjacent communities. This study was designed to measure the economic value and to determine ways to maximize the economic benefits of the Virginia Creeper Trail and New River Trail State Park on the communities along their respective corridors. To identify regional opportunities, the team took into account the clients' objectives of: (1) strengthening connections between the trails and surrounding jurisdictions; (2) maintaining the trail, quality of life, and view shed; and (3) increasing and documenting visitation to the trails.

This study examines two communities along each trail—the Town of Damascus and City of Galax. The team chose these communities for several reasons. First, both clients expressed the desire to strengthen their relationships with the two communities. Second, the two municipalities, Damascus and Galax, host two of the most popular access points to their respective trails. Third, both communities recognize the importance of their trails but have approached their tourism market differently with respect to promoting assets and thus had potential for a meaningful comparison. Finally, both communities have untapped potential assets that could contribute to an increased economic impact from the trails on their communities. Background information on the Town of Damascus and the City of Galax can be found in Appendix B.

The studio team identified several potential opportunities by examining historic data, conducting interviews with trail stakeholders, analyzing results from studio-designed business and trail-user surveys, and applying asset-based development strategies to provide a better contextualized assessment of the communities studied. Some recommendations will be applicable to both trails while some will suggest how one can replicate the success of the other. Other communities along these trails may also find the results and recommendations from this study adaptable to their own circumstances.



Photograph by Swetha Kumar.

## PROCESS

The data gathered for this study was collected from a variety of sources, each of which was used to consider multiple facets of the economic impact of the trails on two specific communities in Virginia: Damascus on the Virginia Creeper Trail and Galax on the New River Trail. First and foremost, the 2004 Virginia Creeper Trail study<sup>3</sup> and 2004 Waterway at New River Trail State Park study<sup>4</sup> provided an in-depth background of the Virginia Creeper Trail and New River Trail State Park user demographic and economic benefits and impacts attributed to trail usage. The studio team developed a fairly comprehensive framework tailored to the two trails that provided a step by step process to measuring economic impact.

The research team took the following steps to conduct the study:

- Conducted a brief review of current economic impact studies and asset based economic development.
- Reviewed previous studies of the two trails as well as studies on other trails in the US and Canada.<sup>26</sup>
- Data collection including business surveys, trail user surveys, discussions with key stakeholders, and tax information.
- Data analysis which included determining trends of trail users, the perceived impact of trail users on businesses, tax revenue created based on these estimations, and asset mapping.
- Recommendations were developed based on the results of the data analysis and key questions or issues raised by stakeholder interviews.



Two surveys were developed to gather information from trail users and business owners in the focus communities. The trail user survey, which was adapted from the 2004 Virginia Creeper Trail study, was developed to determine user trends, demographics, and spending information. Questions were also added to address issues brought up by the clients, such as how to determine the needs of users with disabilities. The business survey questions were developed based on Campos, Inc.'s *The Great Allegheny Passage Economic Impact Study* to determine the economic benefits of the trail systems on target communities including type of business, income generated by trail users, and impact of the trail on business decisions.<sup>6</sup>

The trail user surveys were distributed differently for each trail. The New River Trail State Park Service staff administered the surveys on the New River Trail for two weeks in October. On the Virginia Creeper Trail, research team members administered the surveys in person one Saturday afternoon in October. Some survey responses for Virginia Creeper Trail users were also collected online through the Virginia Creeper Trail Club website.

The majority of business surveys were distributed in person by research team members. A list of businesses was collected for each target community using a variety of sources including the local chamber of commerce and municipal websites. The surveys were either filled out in person or returned by mail. A number of vacation rental properties in Damascus were also identified. These businesses were invited by email to fill out an online version of the survey. In addition, there were several Galax businesses that received online surveys due to time constraints.

The quantitative data collected were primarily obtained from local officials with online sources providing the remainder of the data. Information collected included meals and lodging tax, and sales tax figures.

A number of stakeholders in each community were identified for informal interviews to gather information not covered by the surveys or quantitative data. Stakeholders included the clients, individual business owners, experts on outdoor and regional tourism, and a number of public sector agents. These individuals were identified through the clients as well as in subsequent stakeholder interviews. These interviews provided valuable information about the communities and included references to public documents such as comprehensive plans and tourism plans.



*Photograph by Swetha Kumar.*

## **DATA ANALYSIS**

Data collected were analyzed by a variety of means. Qualitative data from both the trails and the localities in which they reside, including interviews, observations, and information from websites, were used to determine assets and categorize them by type under the Shaffer et. al. Star Model<sup>31</sup> (See Appendix C). The collection of assets under the different categories was later examined to determine the various community assets. The assets could be used to fill the gaps identified in the quantitative analysis and stakeholder interviews, as well as create linkages between assets that would strengthen overall economic impact of the trails. Quantitative data gained from the business surveys and the trail user surveys were generally used to create statistics. Using Excel, the research team calculated the percentages and averages of different response types and found trends in the responses based on cross-analysis of different questions. Responses to some open-ended questions helped the team to uncover the assets used in the Star Model analysis. Tax data and statistics derived from the business survey were utilized to create an estimate of tax revenue generated by the trails. All of the different components of the data analysis were considered together to form both findings and recommendations.

## **REPORT OUTLINE**

The remainder of this report is organized as follows. First, an overview of economic impact analysis and asset-based development is presented. Following this section, a description regarding the research process is highlighted. The four step process consists of a review of current literature, asset-based mapping, trail-user and business surveys and stakeholder interviews, and identification of economic opportunities. A series of trail-specific findings and recommendations follows, estimating economic benefits accruing to trail users and local businesses. The trends in the relationship between the trails and local communities offer key recommendations on how to build regional connectivity between these recreation trails while maintaining the local rural charm and inherent beauty.



## ECONOMIC ANALYSIS

The key purpose of an economic impact analysis is to measure the economic return a community receives on an investment in the subject being studied.<sup>27</sup> The subject can be an event, a program, a policy, or even a trail, for example. Economic impact is measured in terms of economic growth, which is often translated into increased income and job growth. The focus, in this case, is not simply on the revenue brought in, but the overall economic effects on the community. This difference between a financial analysis and economic analysis is significant in this respect as it is the reason that economic impact analyses are so important when measuring the economic value of a program, policy, or event in a community. For example, the organizers of a community event may report a loss when revenues from the event don't cover expenditures. However, the event may have generated economic returns within the community that make it an important economic development tool<sup>13</sup>. Furthermore, these analyses incorporate data from the community, revealing a broader communal trend toward cyclical investment and returns (see Figure 1 below). Community residents pay taxes, which are then used by local officials to maintain recreational facilities. These facilities then attract out-of-town visitors who spend money in the local area, which creates jobs and income for the community residents who pay taxes. The jobs and income created from the visitor spending would not have been possible otherwise since this is new money entering the local economy. This cycle shows the full picture measured by an economic impact analysis.<sup>27</sup>

**Figure 1: Economic Impact Cycle**



# ECONOMIC ANALYSIS

An economic impact analysis uses financial data to estimate the overall economic impact of the study subject, in this case recreational trails, on a community. The study has quantifiable results which can create an impression that the analysis is 'scientific' and strictly objective. It must be recognized that this assumption is incorrect because an economic impact analysis is an inexact process. Any results should be considered an estimation rather than scientific truth due to the subjectivity of assumptions that must be made when inputting data. For example, visitor spending figures are often based on self-reported estimates rather than exact numbers. Researchers can make other errors as well if certain principles are not used in the analysis.

These principles include: excluding local residents, excluding visits that were not caused by the trail<sup>27</sup>, estimating average level of spending of visitors, and determining the ripple effects of this spending<sup>13</sup>. The procedure for conducting an economic impact analysis is discussed in further detail in the 'How To Guide' in Appendix G.

Economic impact analysis studies measure the impacts of non-local visitors only. Local residents may utilize local trails but their expenditures most likely would have been recirculated in the community regardless of the presence of the trail. On the other hand, out-of-town visitors would most likely have spent their money elsewhere if it were not for the trail. These out-of-town monies have a real impact on the local community since they are new money injected into the local economy.<sup>23</sup> It is also important to exclude out-of-town visitors that were not drawn to the community by the trail. The money spent by these visitors would have been spent regardless of the existence of the trail and so don't contribute to the trail's calculated economic impact.<sup>23</sup>

Surveys are often the method used to collect visitor expenditure information. There are a number of choices that must be made with respect to sampling method and survey design. The overall goal of the survey is to estimate the total visitor expenditures generated by the trail and the sampling method and survey design chosen should reflect this.<sup>13</sup> A survey should also include questions that focus on other important information such as demographics of users, suggestions for improvements, or the willingness of visitors to pay extra fees for more services. There are many resources which discuss proper economic impact analysis methodology, some of which are included in Appendix G.

When new money enters a local economy through visitor spending it spreads through the economy and is re-spent which then creates a multiplier effect: the money spent by a visitor at a local business will not only affect that business but also the business's suppliers, the businesses its owners and employees shop at, and so on. An economic impact analysis can measure these multipliers but they can often be difficult to understand and are easily misused. In many cases it is adequate to focus on direct effects, or initial visitor spending, and not attempt to quantitatively analyze indirect effects, or multipliers. There are also a number of input-output models such as IMPLAN, RIMS-II or REMI which can be used to derive multipliers based on the inputs provided.<sup>13</sup>

An economic impact analysis was chosen for this study because it could provide important information that could be used by local officials and stakeholders. The research team reviewed many economic impact analysis studies on trails throughout the US and Canada<sup>26</sup> to develop a methodology for measuring the economic impact of the Virginia Creeper Trail and the New River Trail on local communities. The studies reviewed included an economic impact analysis of the Virginia Creeper Trail,<sup>3</sup> an economic impact analysis of the High Bridge Rail-Trail State Park,<sup>8</sup> and others.<sup>5</sup> By critiquing existing studies, the research team developed a simple study that could be replicated in the future.

## **ASSET-BASED DEVELOPMENT**

Within the world of development, the practice of Asset-Based Development (ABD) is not considered a traditional planning tool, although it has a growing number of followers. Its primary component is an emphasis on what a community has (the assets) rather than what the community needs (the liabilities).<sup>21</sup> This approach is based on the idea that a focus on the positive rather than the negative will inspire more positive action.<sup>24</sup> Emphasizing an area's merits is a key part of the Self-Help Approach on which ABD is based.<sup>21</sup> Attempting to solve the community's problems typically involves bringing in outside resources, turning residents into people who require help. The Self-Help Approach of asset based development, on the other hand, gives residents the power to solve their own problems. This type of empowerment and ownership makes new initiatives more likely to succeed.<sup>22</sup>

Before diving in, it is important to define what is meant by a community. A community could be a collection of people with similar interests such as members of a church, charity or fans of the Star Wars saga. This type of community has no

# ECONOMIC ANALYSIS

specific geographic context and, especially with the invention of the Internet, allows for communication on a global level. A community of place, by contrast, does exist in a specific geographic context and can be used to define a neighborhood or municipality. In the setting of asset based development, this is the most relevant type of community.

A key aspect of ABD is the use of the word development; it is not Asset Based Growth. In the planning context these are often used as synonyms but they are actually quite distinct. The difference could be thought of in terms of quantity vs. quality. Growth-focused planning often means bringing resources into a community—more people, more jobs and more money. But it is not necessarily a change for the better in terms of quality of life. Development is more about the process—how resources are used and distributed, and the net impact on the economy and society, with the goal of improving quality of life for individual households. That is why it is Asset-Based Development and not Asset-Based Growth - growth comes from building up industry and people from the outside while development is about utilizing what is already there. Development may result in growth: attracting new people, jobs or money into the community. Ideally, though, that attraction is based on an appreciation of and desire to maintain the current quality of life in the community.

By framing this economic impact study with the asset-based development framework, the studio team wishes to highlight ways in which trail assets could be harnessed along with other community assets to produce an even greater economic impact on the study's communities. The multiplier effect described in the previous economic impact section can increase by fostering stronger linkages between local assets. Hence, this report is not simply an economic impact study, but a study that may help initiate more thought on overall economic development using trail and other community assets.



Photograph by Stephen Cox.



Photograph by Stephen Cox.



Photograph by Jonathan Hedrick.



# NEW RIVER TRAIL STATE PARK

## FINDINGS

The study of the New River Trail State Park produced 68 trail-user and 28 business survey responses. In addition, several institutional representatives and business owners in Galax were interviewed along with regional experts and stakeholders. After analyzing the data collected, the following trends emerged.

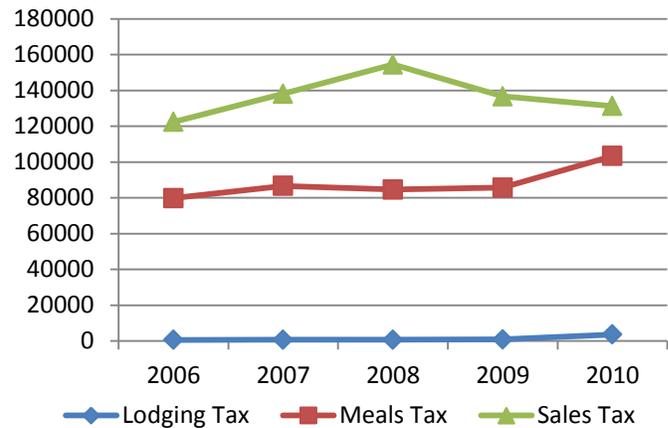
### ***Galax employs a broad tourism model.***

Results from the data collected within the City of Galax present a diversified tourism industry. The stakeholder interviews presented the New River Trail State Park as part of a series of opportunities for visitors. One business affirmed this statement by stating their reason for opening a business in Galax as “bluegrass music, Blue Ridge Parkway, small town atmosphere of Galax, River and Trail” and the fact that there are ample “things for people to do when they visit”. Another business stated that all of the tourist spots work well together. One enthusiastic city official felt that the New River Trail State Park is an asset for both local recreation and tourism and is part of the overall experience in Galax. Nevertheless, the trail has the capacity to become a larger part of the overall experience.

Although Galax has a diverse tourism base, most businesses are still in some way affected by trail use. The average percentage of business revenue attributed to the trail by survey respondents is 8%. This percentage has opportunity for growth in attracting new business development based on the trail. In 2010, the total tax revenue attributed to the trail was approximately \$238,279 or 2% of the 2010 total tax revenue. Broken down by type of tax, the 8% of the hotel and motel tax revenue, 9% of the meals tax revenue, and 7% of the sales tax revenue were attributable to the trail. These numbers were estimated based on the 2010 fiscal year local tax revenue and the average proportion of local business revenue attributed to the

trail. Figure 2 shows the trends of the aforementioned taxes in Galax over the last five fiscal years.

**Figure 2 - Annual Applicable Local Tax Revenue Attributed to New River Trail Users**



Source: Auditor of Public Accounts

Trail user survey results also indicate a positive impact of the New River Trail State Park on local businesses. For example, the trail influenced a large percentage (47%) of respondents to buy a bike. For those respondents who provided a dollar value, the average party expenditure was approximately \$133 for privately-owned lodging, \$13 for publicly owned lodging, \$44 for food and drinks consumed at restaurants or bars, \$32 for other food and drinks. Trail users spent approximately \$43 for gasoline, oil, and repairs, \$1 for other transportation, \$2 for bicycle rentals or service, \$0.40 for horse rentals, and \$3 for trail use, entry, or parking fees.

Promoting the New River Trail State Park fits into the goals and strategies outlined in the Galax Comprehensive Plan Update which intends to better utilize resources within Galax. Some strategies that are stated within the Comprehensive Plan Update include enhancing “Galax as a major tourist attraction, focusing on its mountain heritage, natural beauty and outdoor recreation”, developing “a system of permanent open space and recreational resources, designed to be accessible to all City residents and

visitors", and attracting "strong, high quality tourist lodging [facilities]".<sup>9</sup>

***Though the majority of trail users are local or from Virginia, Galax strives to attract out-of-state visitors.***

Both surveys and interviews show an opportunity to market to out of state visitors particularly from North Carolina. The trail user survey highlighted the average proportion of local and in-state trail users to be 59% of all trail users. A lower percentage of trail users (41%) are from out of state; the largest percent of out of state users are from North Carolina (22%). Ray Kohl, the Director of Tourism for the City of Galax, agreed saying that the city has found that the main tourist market is in North Carolina.<sup>25</sup> These trail user results also match the estimates offered by business owners. The average proportions of local, non-local in state, and out of state customers are as follows: on average, 45% are local customers, 15% are non-local, in-state customers, and 40% are out-of-state customers.

***A stronger relationship between New River Trail State Park and City of Galax would encourage collaboration and cooperation for maintaining and promoting the trail.***

Based on information gained from interviews, the City of Galax seems to have a positive relationship with the New River Trail State Park. The City made several walkway improvements near the trail and downtown 5 to 6

years ago which enhanced the connection between the trail and downtown Galax. Currently, the City and the New River Trail State Park collaborate to host outdoor recreation events such as the 13th Annual New River Trail/Dr. Ed Dannelly 10-K Run and 5-K Walk which the two entities co-sponsored on May 7, 2011. In addition, the City's tourism department utilizes the trail for an annual bike race known as the Fall Foliage Bike Ride.<sup>29</sup> According to the Twin County Calendar of Events, Fall Foliage bike riders can choose to purchase a ride package which includes "dinner in downtown Galax and an evening of entertainment at the Historic Rex Theater".<sup>39</sup> The City also provides incoming Fall Foliage riders with a list of unique local restaurants to encourage interaction between the trail and the business community. To add to events included with the Fall Foliage Bike Ride, the Chestnut Creek School for the Arts hosts a series of nature related classes. Another way the City is fostering a relationship with the trail is by reviving another bike ride on the trail known as the New River Challenge.<sup>39</sup>

There is room for improvement in the relationship between the City and the state park. One state park employee said that one of the goals of the park is to improve existing partnerships and reach out to make new partnerships. Because the trail is a state park, it is an asset that does not require any expenditure by the City. The New River Trail State Park provides all maintenance; therefore no portion of

# FINDINGS

the city budget is dedicated to the trail. The park does not reach out to the City regarding financial opportunities such as addressing public safety and the City does not have an agreement with the state park to provide police to the area, as many of the neighboring localities do. At present, the City only makes informal verbal agreements with the state park and cannot place vendors on the trail, because doing so would require approval by an entity in Richmond. Chuck Wyatt, Enterprise Director for Virginia State Parks, confirmed that commercial interests are not allowed on the New River Trail State Park without a permit, but stated that a permit would be relatively easy and inexpensive to obtain.

The state park also owns a vacant house near the Galax trailhead which the City would like to see utilized for some purpose. Unfortunately, the state currently does not have the funding to make needed improvements. In fact, the cost to renovate the building may be more than

the cost of simply demolishing it and financing new construction, something to consider when determining the best uses of the site both for the park and the city. The Director of the Parks and Recreation Department in Galax stated that the City could do more to partner with the state park and promote the trail.

## ***The Trail Could Increase its Revenue through User Fees***

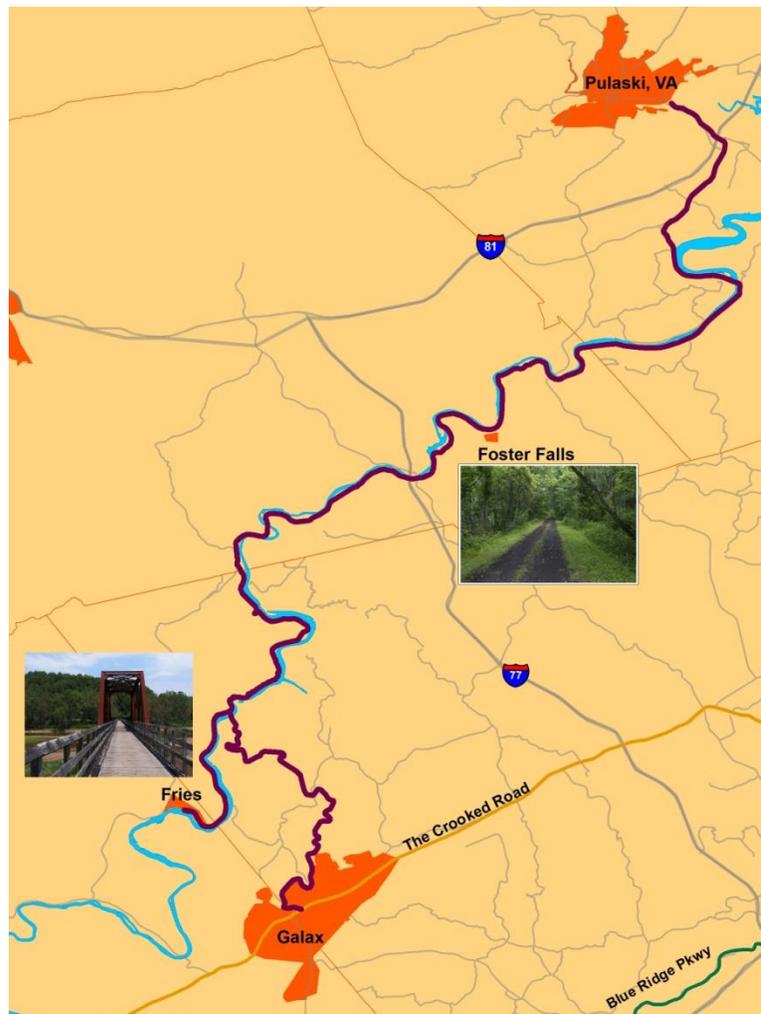
Chuck Wyatt stated that recently there has been more interest in revenue for the state parks and that revenue is a big deal, especially in tough economic times.<sup>52</sup> According to the survey of trail users, approx. 82% of respondents would be willing to pay a small usage fee and approximately 66% would be willing to pay for a special event located on the trail. The New River Trail State Park could consider levying small user or event fees to help increase the revenue for the state park.



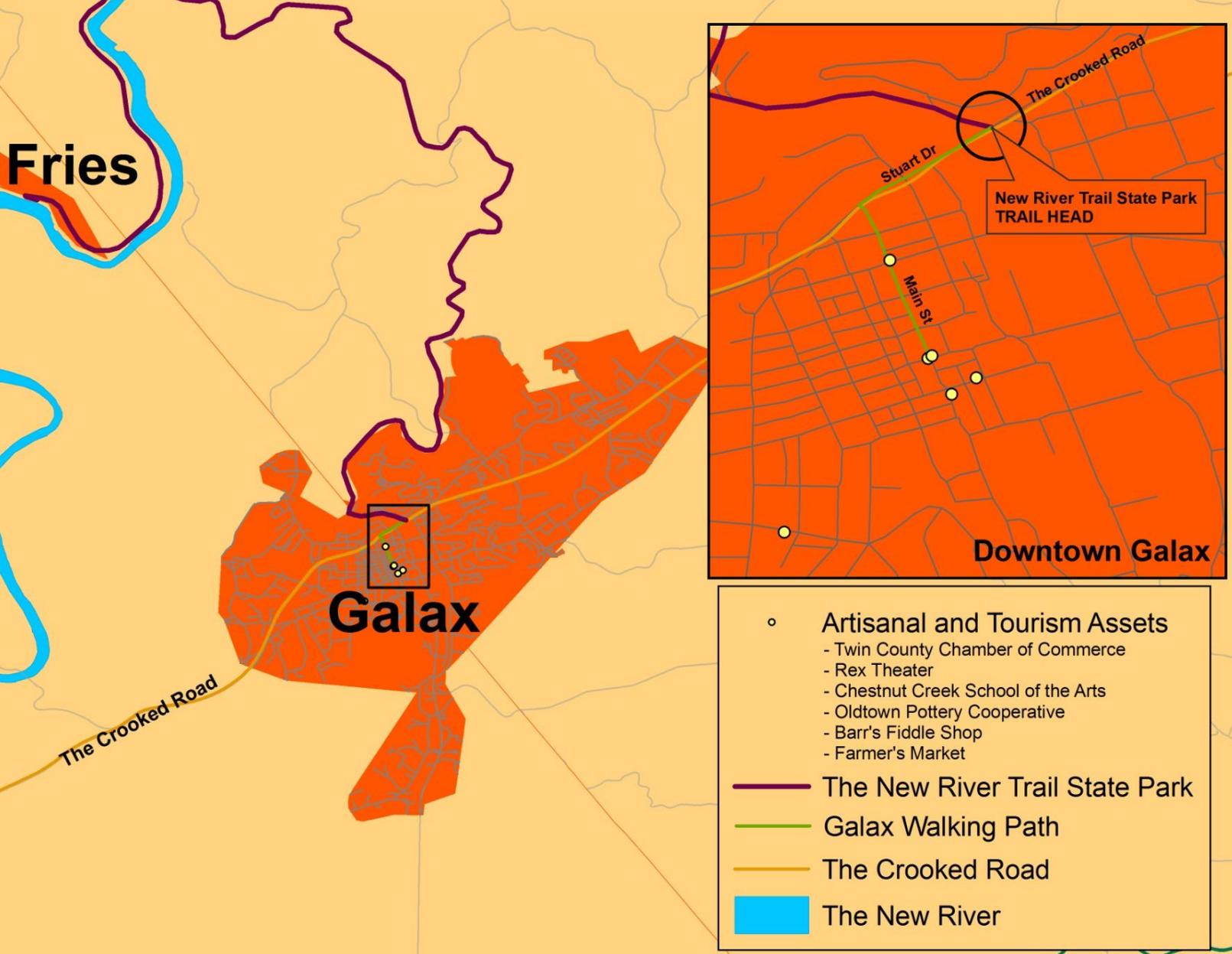
Photograph by Stephen Cox.

# RECOMMENDATIONS

Several recommendations can be made based on the trends that have emerged from the survey data and interviews along with the mapping of local and regional assets. These recommendations identify opportunities that can be addressed by the New River Trail State Park. First, the New River Trail State Park should identify stakeholders in each jurisdiction to recreate the Friends of the Park group. The former friends group was actually two separate groups, the northern and southern friends groups, which managed park volunteers and maintained connections with the local communities. By redeveloping the Friends of the Park, the park could expand its current relationships with local communities and develop relationships with outdoor recreation organizations. The park should also organize a formal conversation with the City of Galax to discuss how the two entities can partner financially. From the findings, there is an opportunity to partner and redevelop or replace the property next to the state park, provide police services for the Galax portion of the trail and promote the trail to out-of-state visitors. In relation to the redevelopment of the property, the structure can be utilized as a multi-use facility with a nature education center, park information center and cafe.

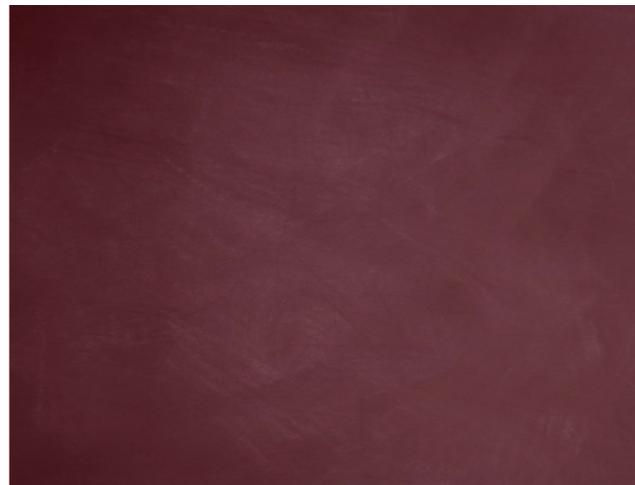


Source:ESRI Download Census 2000 Tiger/Line Data  
Foster Falls, <http://virginiatrailguide.com/2011/06/08/new-river-trail-fries-to-foster-falls/>  
Fries, <http://develo.wordpress.com/page/6/>



Source: ESRI Download Census 2000 Tiger/Line Data

Along with these recommendations, the New River Trail State Park should encourage the City of Galax to improve several aspects of outdoor recreation tourism. Currently, the City uses the slogan “Best Pick in Virginia”.<sup>12</sup> The marketing campaign, however, does not represent all of the diverse local assets that Galax has to offer. The State Park should encourage the City to look into creating a branding campaign around identifying and marketing local assets. To assist with the branding campaign, the park can serve as a stakeholder to initiate the creation of a regional tourism plan. The Virginia Tourism Corporation is a good resource and potential facilitator to turn to during this process. In addition, the State Park can promote the introduction of economic development incentives for new businesses by the City of Galax. The City can use the incentives on a case by case basis to encourage new business development closer to the trail by offering general economic development incentives for trail-based businesses such as outfitters, cafes, and/or hostels. Lastly, the New River Trail State Park should develop a stronger connection with the Crooked Road. This connection can begin by advertising the park in a more positive manner and not branding it as competition on the Crooked Road's website.



Photographs by Swetha Kumar.

# VIRGINIA CREEPER TRAIL

## FINDINGS

The 2011 Economic Development Studio Team conducted and received responses to 77 trail-user and 19 (out of 35 distributed) business surveys. Team members also interviewed over a dozen institutional representatives and business owners in Damascus, the Town of Abingdon and Washington County as well as experts and stakeholders in trail-based and outdoor tourism. Individual data sets were collected and analyzed for various trends related to the linkages and gaps in the current trail-based tourism market. These individual data sets were then aggregated and coded for overall themes that emerged in our study.

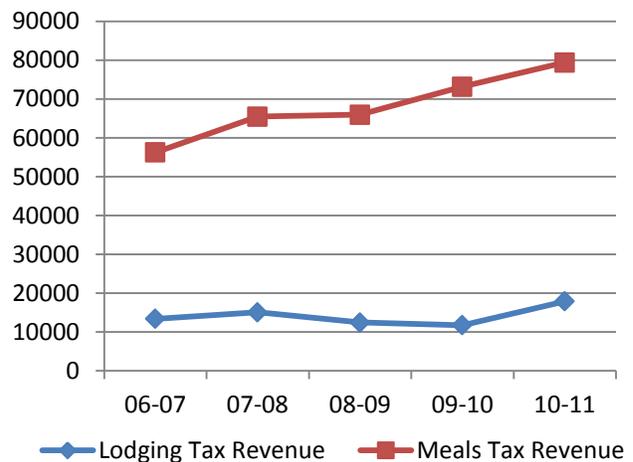
**Economic impact from trail use in Damascus is significant and strongly correlates with the character of the town.**

Results from the surveys, interviews, and data provided by the Town of Damascus reinforce the economic importance of the Virginia Creeper Trail to 'Damascus' livelihood. One business owner stated, "There is not a business in the community that is not impacted by the trail users. Although some do not cater to the tourist/trail user directly, they all cater to the owners and employees of the tourist/trail user business, all of whom would not be living in the community if not for the trail."

Over half of the businesses surveyed said more than 61% of their income is from trail use. Using the average proportion of income that businesses estimated to be due to trail user spending from the business survey, the analysis team extrapolated the amount of town meals and lodging tax revenue collected thanks to the Creeper Trail during FY2006-FY2010. Those businesses that pay meals and lodging taxes are very dependent on tourism for their revenue. Eight businesses surveyed paid a meals tax – restaurants, cafes, bed & breakfasts – and estimated 79% of their revenue

was attributed to the Creeper Trail. Thus the total amount of meals tax revenue attributed to the Creeper Trail in FY2010 equaled \$79,356. Likewise, eight businesses surveyed paid lodging tax – bed & breakfasts, cottages, hotels, motels, cabins – and estimated 71.38% of revenue was thanks to Creeper Trail users. The estimated lodging tax revenue was \$17,858 (FY2010). Below are two charts illustrating the trends in meals and lodging tax revenue. Figure 3 shows the annual meals and lodging tax revenue attributed to Creeper Trail Users. The increasing meals tax revenue may indicate a growing food/restaurant market in Damascus.

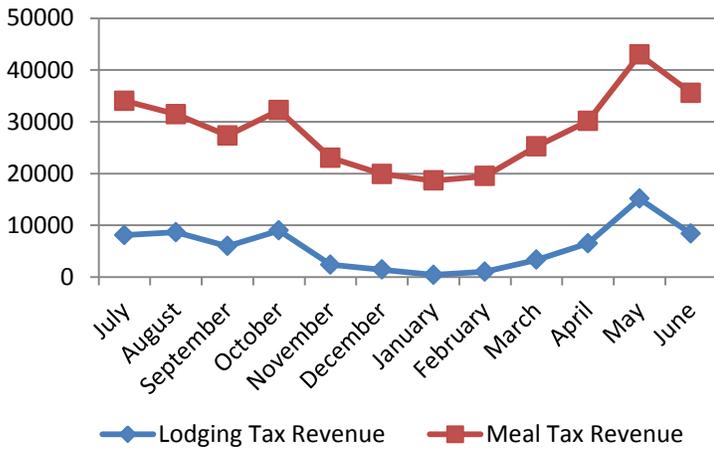
**Figure 3 - Annual Applicable Local Tax Revenue Attributed to Creeper Trail Users**



Source: Town of Damascus

Figure 4 breaks down the total monthly meals and lodging tax revenue during the same time period that is also due to purchases by Creeper Trail users. The chart shows distinct peaks in June/July, October and May with higher revenues in general during the summer months and a dip in the winter months. In general, business owners said the peak times for the Creeper Trail were in July and October, while one business owner distinguished May as the peak season for the Appalachian Trail, during the Trail Days Festival. Considering this assertion, one could assume the May peak to be not as sharp as the graph portrays.

**Figure 4 - Monthly Applicable Local Tax Revenue Attributed to the Creeper Trail**



Source: Town of Damascus

Both trail users and trail-related businesses largely equate their investment in the Creeper Trail to the character of Damascus. On one Fall Saturday, there were as many as 2,500-3,000 tourists from as far as Florida and Georgia who were biking the Creeper Trail. A few of those trail users specifically commented on the character of Damascus, appreciating the lack of big chain stores and the relaxed feel. 51% of users said they visited the Creeper Trail a few times a year, revealing a crowd of regulars, many of which are further away than just a day trip. While filling out the surveys, they told studio team members how much they enjoyed spending time in Damascus and riding the Creeper Trail. Average expenditures for Creeper Trail users were not calculated as surveys were collected only on one, very unique day. For information on how to calculate initial average expenditures, see Appendix G.

When asked what motivated the 19 business respondents to open a business in Damascus, seven respondents stated reasons relating to the natural aesthetic of the area and character of the Damascus community; seven stated practical reasons including convenience of location to the Creeper and low expenses (e.g. rent); eight businesses directly stated the Creeper and Appalachian Trails in their answers; and two respondents said they were influenced by other community members, one being the town manager. 16 out of 19 respondents said their choice of store location was Strongly (3) or Very Strongly (13) Influenced by the Creeper Trail. Many of those stores that reported not being significantly impacted financially by the Creeper Trail (or Appalachian Trail), still said the Creeper Trail strongly or very strongly influenced their choice of location.

Although Damascus owes its financial success to trail-based tourism, many of the Damascus locals who are not required to operate a trail-based business on the weekends, evacuate the town during large tourist weekends. It can be assumed they like the quiet nature of the town when tourists are not present. While conducting surveys and interviews, team members heard the reoccurring sentiment that Damascus citizens want to encourage the tourism industry and bring more money into the town without changing the inherent character or natural resources of the town.

# FINDINGS

## **Gaps and disconnects in the Damascus tourism market exist in terms of diverse recreational offerings.**

Both surveys and interviews revealed a need to diversify Damascus' market somewhat in order to appeal to a larger tourist demographic, particularly the "casual trail-user". According to those interviewed, this group tends to spend more money than hardcore trail users, and they spread their expenditures among businesses and business types. Thus, several tourism and economic development experts interviewed advised marketing to this demographic through other recreational activities as well as places to stay and socialize in Damascus.

The surveys revealed this gap in tourist catering. The largest age group of survey respondents was between the ages of 36-45; this group comprised families and family groups out for a recreational day with the kids.<sup>21</sup> Families could be an untapped market in some respects. One group observed that more local food options that provided outdoor seating, such as a sun patio, where they could relax with a beer, would be a great improvement. Another trail-user commented that she had very little to do while waiting for her husband and children to ride down from Whitetop. Even a few of the trail-based stores stated they catered more to hardcore hikers from the Appalachian Trail than the casual crowd who bike the Creeper. Lodgings in the area also cater to a more avid outdoors, single/couples crowd with

camping, cabins and bed & breakfasts. Fewer than 30% of respondents stayed in Damascus overnight.<sup>21</sup> Reasons included:

- They lived within a days driving distance of the Creeper Trail
- They were staying with friends who lived close to the trail
- Several mentioned they had gotten lodging in Abingdon or Bristol

Those from far distances, who were staying in the area overnight (often two or more nights), chose to stay elsewhere. This report coincides with much of what was said by stakeholders and business surveys: lodging in Damascus has a difficult time doing business because people generally choose to stay in places like Abingdon, which has hotels, a choice of good restaurants and cultural activities. Other potential revenue is lost as well when trail-users only spend an afternoon or morning riding the trail before leaving. One trail user respondent said that he "spent almost \$850 for the weekend but most of that was in Abingdon."

Diversifying Damascus' tourist market would address another issue that occasionally arises—overcrowding on the trail. At least four respondents complained about overcrowding on the trail, particularly in terms of trail safety and most casual bikers not knowing proper bike etiquette (e.g. how to pass). One individual, who had visited the trail on multiple occasions, said he would not come back. Offering multiple activities in town would

mitigate this problem somewhat by helping to stagger trail use. Currently, those who visit Damascus to bike down the Creeper Trail have very little choice or know of no other option but to ride the trail upon arrival, even if they find the trail too crowded.

Thanks to Damascus' ideal location on the Creeper Trail, diversifying Damascus' commercial offerings is a logical next step to capturing more tourist dollars. The Creeper plays a vital role in bringing tourists to the town no matter where they begin their journeys on the trail. Trail user survey results show 55% of users got on the trail at White Top Station, 20% in Damascus, and 11% in Abingdon. Although only 20% of trail users actually parked in Damascus, the town serves as a natural stopping/resting point for all users coming from either end of the trail. The 55% of users who start at White Top often end their journey at Damascus. Those coming from Abingdon may take a mid-way break or turn around at Damascus. Many of the trail users surveyed who parked in Damascus, took a shuttle up to White Top and rode all the way down the mountain to end in Damascus. Damascus seems to be the end point for many of these casual bikers, which provides the opportunity for businesses to capture more tourist dollars before these users return to their cars. Indeed, the restaurants stationed at the trailhead have already benefited from this demographic as seen in their rising revenues (See Figure 3).

Market diversification has already proven to be beneficial in some cases. Five businesses reported making \$250K

or more. Only two of these businesses said they were significantly influenced financially by the trail, both of which provide multiple services such as bike rental, trail outfitting and restaurant/café services. They also offer more employment than most of the trail-related businesses.

Other opportunities to diversify the tourism market through leveraging other resources in the town and region also exist; however there is a disconnect between those assets and the consumer because of lack of information and capitalization. These assets include the six other trails and natural resources in Damascus, the growing artist community and the advantageous placement of Damascus with respect to other outdoor recreational hotspots. Besides the Creeper and Appalachian Trail, very little marketing or signage exists to promote trails in Damascus. Similarly marketing that advertises Damascus' proximity to other outdoor activities, a fact that could help the town brand itself as not only a crossroads for so many trails (Trail Town USA) but also a hub for many different regional outdoor activities, is limited. Finally, one tourism expert recommended harnessing the educational capacity of natural resources along the Creeper and Appalachian Trail as well as the potential for successful artisans in the community. Several interpretative signs already exist along the Creeper Trail. Upon entering Damascus from Abingdon on the Creeper Trail, there is an education panel discussing the presence of kudzu in the area, which

# FINDINGS

could serve as an example of a first step toward environmental education in the area. Artisans in Damascus often work from their homes, but have limited possibilities to create and sell their products elsewhere in the town; they therefore sell their items out of the Heartwood Artisanal Center. While this process still brings money into the community via the producers' homes, enlarging the tourism market in Damascus to include this group would bring more direct funds into the community and help in diversification.

## ***The majority of trail users are from out of state.***

Based on the zip codes acquired from the Creeper Trail User survey, trail user demographics are estimated to be non-local, in-state: 30%; out-of-state: 70%. Considering most trail-user surveys were collected during a weekend during peak season and most locals tend to leave town during these times, this proportion matches up relatively well with the proportion of trail-user customers estimated by businesses – local: 18%; non-local, in-state: 26%; out-of-state: 56%. Out-of-state trail users usually come from adjacent North Carolina and Tennessee, which in this case was 43% and 17% of total respondents respectively. These findings suggest that the Creeper Trail plays a vital role in attracting out of state dollars to Virginia. Map 3 shows the adjacent states to Virginia and their close proximity to the Virginia Creeper.

## **Map 3 – Map of Southwest Virginia and Surrounding Boundaries**



***Findings show a desire and need to capitalize on regional connectivity, primarily through marketing and branding the region as an outdoor recreation hotspot.***

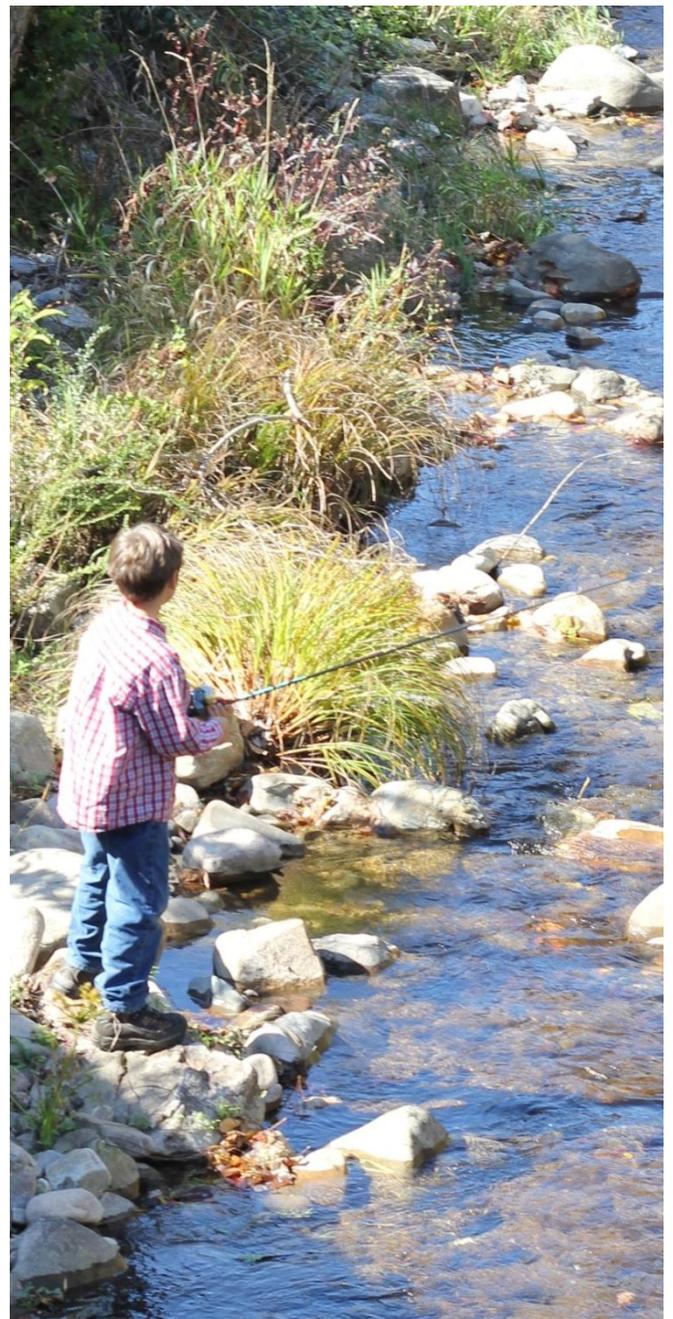
One goal stated in the Damascus Comprehensive Plan was to “coordinate the town’s goals with the surrounding recreational areas, for instance, provide parking for hikers and bicyclers.”<sup>14</sup> Like many localities, Damascus recognizes that its roots are spread throughout the larger Washington County region. During interviews, surveys and in several regional economic development documents, the notion of interconnectivity through physical, financial and institutional structures continuously emerged. Damascus is Trail Town USA, intersected by numerous trails, not to mention state route roads connecting it to other major tourist sites in the county and North Carolina. The Town of Damascus is financially linked to all of Washington County through government and taxes.

# FINDINGS

Abingdon and Damascus share custody of the Creeper Trail between the localities. To date, Abingdon has financially invested more in the Creeper Trail than Damascus because it is more financially capable, but Damascus has most likely benefited more considering the impact of the trail on its community. Meanwhile, the Creeper Trail Club crosses all of these jurisdictions. These two towns are inextricably linked. One interviewee stated, "Damascus feeds off of Abingdon visitors. Abingdon feeds off of the Creeper Trail." As stated above, trail users often take advantage of other assets in the region, particularly going to Abingdon for food, culture and rest.

Those interviewed, both inside and outside of the county lauded regional collaboration in development of cultural and trail-based economies. One individual from the Virginia Tourism Corporation expressed the desire to create a marketing alliance made up of every tourist-oriented business and organization in Washington County. The alliance would brand the county as one giant tourist destination. One tactic of this regional marketing strategy would be one website that would allow visitors to make a connection between all destinations they plan to visit in the area. Currently, many websites exist but only show the assets local to them. Yet, the data collected during this study as well as economic impact studies from other trails agree that the primary marketing tool for advertising trails is word-of-mouth. Seventy-seven percent of trail users referenced word-of-mouth marketing as

how they found out about the Creeper Trail. One interview respondent commented that no current marketing campaign exists that somehow leverages word-of-mouth marketing destinations they plan to visit in the area.



*Photograph by Swetha Kumar.*

# RECOMMENDATIONS

Several recommendations can be made based on the trends that have emerged from the survey data and interviews along with the mapping of local and regional assets. These recommendations identify opportunities for the Virginia Creeper Trail Club to partner and support different groups to leverage the already strong asset, the Creeper Trail, with other community assets. These partnerships would result in a multiplier effect on the economic impact of the Creeper Trail on Damascus and the surrounding area, reaffirming the legitimacy and importance of the Virginia Creeper Trail and its advocate, the Creeper Trail Club.

The Virginia Creeper Trail Club should find ways of partnering with other institutions that have a stake in Damascus tourism. The new public library and tourism center is an excellent example. During her interview, the Director of Washington County Public Libraries mentioned the involvement of the Crooked Road and Around the Mountain groups in creating information displays on the two trails for the tourism center. With the library serving as the Damascus regional tourism center, it will be the main resource for visitors to access information about the outdoor assets. The Virginia Creeper Trail Club should become a stakeholder in the new public library to promote its presence in Damascus, maintain its relationship with Damascus' tourism community and strengthen linkages between the Creeper and the other trails in the area. In addition, the Club should work with other outdoor recreation organizations to develop a regional outdoor recreation map. The 2009 Washington County Area Tourism Plan suggests a regional map would assist in marketing outdoor recreation and providing families with access to area tourism services. The Creeper Trail Club is a strong nonprofit group with a good reputation and membership support. With its collaboration and backing, Washington County would be better able to conduct a marketing campaign to attract even more tourists to the area. One way to help drive this regional collaboration is the creation of an annual marathon or triathlon on the Creeper Trail that would bring together other outdoors groups and promote the regional outdoor tourism base in Washington County. In cooperation with the area jurisdictions and other stakeholder groups, the Virginia Creeper Trail Club can organize this event.

In order to increase the indirect impact of the Creeper Trail and assist in regulating the occasionally overburdened capacity of the trail, the Virginia Creeper Trail Club should also consider promoting more diverse activities in Damascus. The Club can partner with the Town of Damascus to maximize the potential of the existing outdoor recreation assets. Stakeholder interviews showed that local businesses can further harvest the visitor base by diversifying their current outdoor recreation portfolios such as incorporating water activities like fishing or tubing. The Blue Ridge Highlands Fishing Trail located at the head



Source:ESRI Download Census 2000 Tiger/Line Data  
 Mount Rogers Recreation Area, <http://www.burnhamvirginia.com/hike-mountrogers.html>  
 Cherokee National Forest, [http://www.bestlidsplaces.com/?page\\_id=426](http://www.bestlidsplaces.com/?page_id=426)  
 Backbone Rock, <http://www.adventuredamascus.com/gallery.htm>

of the Virginia Creeper Trail at Whitetop Laurel Creek serves as one of Virginia's freshwater trout streams. A local outfitter could increase its revenue by providing fishing gear and bait, perhaps even launching a fishing competition. Damascus could also benefit from improved marketing of its outdoor assets other than the Creeper and Appalachian Trails. The Creeper Trail Club could offer these suggestions to businesses and government, and perhaps offer assistance in mapping and marking the seven trails and other resources. Along with diversifying the outdoor assets, the Virginia Creeper Trail Club can encourage the Town of Damascus to attract a diverse business mix by working with potential investors. Advocating further investment in local artisans and environmental education are two possible approaches to appealing to a wider tourism crowd. Trail user surveys reflect that 70% of the respondents choose to stay outside of Damascus. This loss of revenue stream can be addressed by the development of a chain hotel or motel that compliments the current character of the Town of Damascus. The Virginia Creeper Trail Club can suggest a new lodging establishment based on their interest to protect the view-shed and best practices of comparable trail towns.



Photographs by Jonathan Hedrick and Swetha Kumar.

# CONCLUSION

Asset-based development is an accepted approach to economic development in southwest Virginia as evidenced by the many projects funded by the Appalachian Regional Commission<sup>1</sup>; yet it is not commonly associated with studies on economic impact analyses. The purpose of incorporating asset-based development with an economic impact analysis is to both establish that the New River Trail State Park and Virginia Creeper Trail have a significant impact on the economies of surrounding communities and to highlight practical ways of fostering greater economic impact from those trails. In doing so, many trends emerged revealing gaps and disconnects between existing assets that could potentially, once partnered, improve the economic benefits of all assets involved. For a synopsis of the assets considered in this study, please see Appendix C. The recommendations in this report offer simple suggestions to the New River Trail State Park and the Virginia Creeper Trail Club of possible partnerships or opportunities to strengthen connections between themselves and other regional assets surrounding the communities of Galax and Damascus.

By focusing on local assets, the choice of Damascus and Galax becomes clear because they are in many respects, two sides of the same tourist-driven coin. Both municipalities are principle entrances to their respective trails; both have similar histories of manufacturing-based economies, mountain and musical heritage; both appreciate and wish to protect the natural view sheds surrounding their localities; and both communities have realized the potential of their natural, historic and institutional assets in encouraging tourism. Damascus has focused its attention on building a chiefly recreation trail-based economy, centered primarily on the Virginia Creeper Trail and Appalachian Trail, with opportunity to expand its economic base to other tourism endeavors. Meanwhile, Galax has embraced a broader variety of tourist activities, derived from heritage tourism (e.g. music, woodworking and embracing The Crooked Road), and is now looking to focus its efforts on outdoor recreation assets including the New River Trail State Park.

This yin-yang dynamic provides interesting perspectives on how the Galax and Damascus communities as well as others along each trail can better connect their trail assets with other assets in their communities. The City of Galax can learn from the Town of Damascus about how to brand its outdoor recreation assets and how to encourage trail-based business development. Encouraging shops and activities along or near the trail entrance, for instance, would capture more trail-user dollars. The Town of Damascus can take note from the City of Galax on how to develop more heritage- and artisan-centered tourist activities. The Crooked Road signage used in Galax for example could be implemented



Photograph by Swetha Kumar.

effectively along the Virginia Creeper Trail. Such signage could highlight the history of Damascus along with information about the Virginia Creeper Trail. Other communities along the two trails may also, to some extent, identify with either Galax or Damascus and adapt certain aspects of this study to their own situations. Abingdon, for instance, may consider steps required or already taken in Galax to better incorporate the trail into the diverse Abingdon tourism market. Smaller towns along the New River Trail State Park may examine their local assets to determine if certain components either already existing or suggested in Damascus would work well in their communities.

The New River Trail State Park and the Virginia Creeper Trail Club are well positioned to advise and serve as intermediaries between the jurisdictions that encompass individual trails. First, both trails are regional assets connecting their respective communities. The two organizations should therefore encourage these interconnected localities to share information and collaborate on how to make two of their main outdoor assets have a larger impact on the local economy. They should advocate regional marketing campaigns that focus in part on regional outdoor recreation and partner with communities to encourage greater interaction between the trail, businesses, community groups and other institutions. The use of radio on the Crooked Road Trail is one option for connecting all communities along the New River Trail State Park and The Virginia Creeper Trail. It could be a great first step toward incorporating technology and social media along the trail<sup>35</sup>, eventually leading to integrated activities like geocaching adventures. The Virginia Creeper Trail Club and the New River Trail State Park could advise jurisdictional collaboration or take active steps themselves to begin such as process.



Source: ESRI Download Census 2000 Tiger/Line Data

Second, even as this study focuses on two geographic communities—Galax and Damascus—other communities, both geographic and interest-based, play distinct roles in the overall cohesiveness of asset-based development efforts involving trails. One such interest-based community, comprised of outdoor recreationalists and trail-users, strongly binds together the Galax and Damascus communities in this study. Although the localities have adopted different economic development strategies, both Galax and Damascus attempt to appeal to those individuals interested in outdoor recreation activities such as hiking and biking, and draw this group's time and money to their communities. Based on the stakeholder interviews, business owners and local government officials acknowledge the impact of trail usage on their local economies but have not realized the full potential of recreation trails on diversifying the tax base. As advocates for trail use, the New River Trail State Park and Virginia Creeper Trail Club can engage and partner with local governments, businesses and citizens, illustrating ways in which trails can work with other local and regional assets to increase their economic impact. Finding greater connectivity between the trails and communities through heritage tourism is one way that these two groups can frame the issue for these community groups. The new library and tourism center in Damascus is designed like an old train station depot, a reflection of when the Creeper Trail was still used as a railroad pathway. Capitalizing on that connection and encouraging new development of historic buildings or facades could further partner the Virginia Creeper Trail Club with not only the Damascus

community but also the character of that community. In Galax, where heritage tourism is prominent, the New River Trail State Park should find ways of inserting the trail into that heritage either by placing greater emphasis on its historic railway roots or perhaps by highlighting the major natural resources along the trail used in historic industries like wood furniture manufacturing.

One significant subset of the trail-user community for both trails is the non-local tourists from North Carolina. The New River Trail State Park and the Virginia Creeper Trail Club should increase their current marketing to attract North Carolina tourists while keeping in mind that most trail users hear about the trailways through word of mouth. Based on zip codes from trail user surveys, both trails could overlap their marketing to communities along I-77, particularly areas around Charlotte, NC and smaller communities like Matthews, NC. One way the New River Trail State Park could increase visitors would be to work with the City of Galax to strategically place signage in North Carolina similar to the existing Crooked Road signs. Additionally, both trailways can encourage the use of social media by visitors at visitor centers. A report produced by the Outdoor Foundation highlights the prominence of social media usage amongst visitors. Social networking sites were the most commonly reported activity. Visitors primarily use Facebook and YouTube to plan events and share and receive quick updates<sup>35</sup>. Each locality can take advantage of this by making social networking sites available for visitors to describe their experiences on the trail. This will serve as a powerful word of mouth marketing method as visitors' posts have the potential to reach a wider audience.

The youth communities in both Damascus and Galax are also two relatively untapped markets that should be addressed. As stated in the Damascus Comprehensive Plan, the youth population in Damascus often leaves the area for school and other employment. Survey results show that those that come to the area for tourism are generally young families with children. With this young demographic in mind, diversifying the market in Damascus could potentially help retain local youth and increase more tourism dollars in town. Meanwhile in Galax, 51% of trail users are between the ages of 46-65, and the Galax municipality has expressed the desire to attract a younger demographic of tourists out on the trail. Better branding, as done in Damascus, could benefit that endeavor. In both instances, the Virginia Creeper Trail Club and the New River Trail State Park could look to environmental education as a means of engaging youth populations, both tourists and workforce. Creating more opportunities for environmental education and advertising these activities well could encourage other community groups to take up the environmental education mantle, create a larger market for it in these two localities, and therefore attract greater youth participation.

While addressing recommendations for both New River Trail State Park and Virginia Creeper Trail, it is important to note the study's limitations and opportunities for further research. Due to the time constraints of the Economic Development Studio, researchers were limited in the time available to collect data and survey all jurisdictions associated with the trails. Even acquiring sufficient amounts of trail-user surveys for one jurisdiction along each trail proved to be difficult. Although business



*Photograph by Swetha Kumar.*

surveys and stakeholder interviews compensated greatly for this constraint, a study covering several trail seasons would produce more statistically significant data. For this reason, the research team constructed a comprehensive how-to guide to economic impact studies (see Appendix G) that offers ways of tailoring the study to the specific trails and can be used by the clients.

Future studies should expand in scope to examine all areas of the trail not just those within the town limits. Compared to the surveys used in this study, futures survey questions should be more targeted to certain research goals in order to avoid extraneous responses. Again due to time constraints, surveys were shortened to allow for larger survey collection in a short amount of time. Trail user survey limitations were particularly true for Damascus where researchers primarily collected surveys over a busy tourist weekend and so did not gauge the use of the trail by locals. Distinguishing the difference between local and nonlocal users is incredibly important to determining the impact of trail users and should be altered in future studies to encompass all jurisdictions along the trail. In this case, the studio team used zip codes to determine local from nonlocal. A better method for examining all communities along a trail would be to designate a boundary around the entire trail which would define local and non-local users (see Appendix G). Future studies should also conduct further stakeholder interviews to provide greater comprehension of all regional collaborations and the involvement of community or civic groups. Public meetings are effective tools for engaging in conversation with stakeholders. Involvement from the business community was greatly appreciated and useful in this study and should be considered in later studies.

The New River Trail State Park and Virginia Creeper Trail both serve as important local and regional assets. Both play a significant role in influencing the economy and character of their respective communities. To increase that impact and foster greater community economic development, stakeholders must pool their local and regional assets, realize how these assets can work in partnership, and what assets must be further encouraged to achieve greater economic impact on communities. These findings and recommendations may act as a first step in that process.

# **ACKNOWLEDGEMENTS**

**New River Trail State Park  
Virginia Creeper Trail Club  
Town of Damascus and Business Community  
City of Galax and Business Community  
Washington County  
Pulaski County  
Pulaski Town Economic Development Department  
Roanoke Regional Partnership  
Virginia Tourism Corporation**

# APPENDIX A

## HISTORY OF RAILS-TO-TRAILS

The United States rail system was once the cutting edge technology for both freight and passenger transport. With the advent of the automobile, the creation of the interstate highway system and the passenger air system, the reliance on rail systems declined in the mid to late twentieth century. This decline resulted in many abandoned railways which were a dynamic part of the economic center of towns throughout the United States including those in Virginia. In the 1960s an effort to transform these abandoned derelicts into greenspace for communities began; the New River Trail and the Virginia Creeper Trail were created in the latter 20th Century.

The Rails-to-Trails movement began at what could be described as a grassroots level. According to the Rails-to-Trails Conservancy: "Once the tracks came out, people just naturally started walking along the old grades, socializing, exploring, discovering old railroad relics, marveling at old industrial facilities such as bridges, tunnels, abandoned mills, sidings, switches and whatever else they could find. In the snows of winter the unconventional outdoor enthusiast skied or snow shod on the corridor, but these were days before even running and all-terrain bicycles were common, so the predominant activity was walking. Of course, none of the corridors were paved or even graded — they were simply abandoned stretches of land."<sup>28</sup>

With the creation of various rail-trails in the United States, many significant milestones occurred to ensure that the rails-to-trails movement continued to gain momentum. Snapshots of these milestones are summarized below<sup>33</sup>:

- October 1985: Ronald Reagan signs the National Trails System Improvement Act; this secures the governments interest in federally graded rights of way.
- February 1990: The United States Supreme Court unanimously upholds the constitutionality of rail banking.
- 1998: The Transportation Equity Act of the 21st Century is created. This act increases funding for programs such as rails-to-trails as community enhancement tools.
- October 2005: There are 1,359 rail-trails in the United States, a total of 13,150 miles of trail.

Rail-trails are found in several locations in Virginia. In addition to the Virginia Creeper Trail and the New River Trail, the following trails were once railways, each differing in size, length and scope: Bluemont Junction Trail, Chessie Nature Trail, Dahlgren Railroad Heritage Trail, Huckleberry Trail, Warrenton Branch Greenway, Washington and Old Dominion Railroad Trail, Blue Ridge Tunnel, Blue Ridge Railway Trail, and High Bridge Trail State Park. Only two are state parks, the New River Trail State Park and the High Bridge Trail State Park. The Virginia Creeper Trail is maintained by conservancies, local governments or a combination of stakeholders.

# APPENDIX B

## CONTEXTUAL BACKGROUND

### **Virginia Creeper Trail**

The Virginia Creeper Railroad began as a small gauge extraction rail line that ran from Todd, North Carolina, a location north of Boone and south of West Jefferson, north through West Jefferson, and then between Pond Mountain, North Carolina and Whitetop, Virginia, known as White Top Station, and then on to Damascus and Abingdon, Virginia. It became a portion of the greater Cincinnati, Virginia, Carolina railroad. In the late 1970's after the line was abandoned, North Carolina made the decision to give its portion of the rail right of way to the adjoining property owners. Virginia, however, chose to preserve the right of way that led to Damascus and Abingdon. Had it not been for this foresight in Virginia, the Virginia Creeper Trail would not exist as a usable tourist attraction. Today, the Virginia Creeper Trail runs 34 miles from Whitetop through Damascus to Abingdon. While Whitetop still remains a small community with less than 500 people, Damascus has remained fairly stable at nearly 1000, while Abingdon has grown to 8190.

All but forgotten in today's times is the fact that Ashe County, Watauga County and Alleghany County, North Carolina had no all-season connection to the Piedmont of North Carolina. These areas were essentially client states of economic markets in Abingdon and Galax, who themselves were clients of Bristol, Tennessee. In this sense, Damascus had become a gateway to Abingdon and when the timber industry closed down in the region, the role of the Virginia Creeper was to take people and livestock into Abingdon, which was the trading capital of the area.

Perhaps the most important thing to realize about Damascus is that, while spatially isolated, it has never been estranged or cut off from the larger Appalachian Highland in which it

resides. Indeed Damascus sits at a crucial juncture between three states: Virginia, North Carolina and Tennessee and the connection to these three states, be it from Daniel Boone to the Virginia Creeper Railroad, to the Timber Extraction Industry or the Water Based industry in the region has been consistent for over 150 years. For this reason, one of the key elements of our overall report focuses on the location of Damascus at the juncture of three states and the advantages of that location as it creates economic synergies that favor Damascus.

### **Town of Damascus, Virginia**

The Town of Damascus, Virginia is an excellent example of the three American phenomena of the late 19th Century:

1. Development despite spatial isolation, thanks to the narrow gauge rail line (i.e. the Virginia Creeper line) and extractive industries fueled by out of state owned timber interests.
2. The use of natural resources such as unique water quality that built a small societal outpost on the edge of the larger and wealthier communities of Abingdon, Virginia and Bristol, Tennessee.
3. The combination of the mill and town in classic industrial fashion where community and product become synonymous.

### **New River Trail State Park**

The New River Trail State Park is a 765 acre linear park that stretches through several counties (Carroll, Grayson, Pulaski and Wythe), communities (Allisonia, Austinville, Draper, Fries, Hiwasee, Ivanhoe, and Pulaski), and the City of Galax. The trail runs along the former Norfolk Southern rail line which was discontinued in December 1986 and donated to the Commonwealth. With the assistance of volunteers and regional chambers of commerce, the trail opened in May 1987. Fifty seven miles of trail are now open for public use and managed by the Virginia

# APPENDIX B

Department of Conservation and Recreation.<sup>17</sup>

The New River Trail State Park provides many outdoor recreational activities, to appeal to a wide variety of visitors. These activities are:

- Fishing and Boating
- Biking and Hiking
- Camping
- Canoeing and Tubing
- Horseback Riding
- Picnicking
- Birding

These activities are not all available along the entire stretch of the park; each of the numerous access points has unique facilities and recreational opportunities. The Galax Trailhead is one of the major entrances as well as the Southern most entrance. The trailhead provides parking and is in close proximity to Route 58 and the Chestnut Creek making it an ideal access point for visitors from North Carolina and Tennessee. The Galax Trailhead is used primarily for hiking and biking.

## **City of Galax**

The City of Galax sits in the Blue Ridge Mountains of Southwestern Virginia. This independent city is the center of the region comprised of Carroll County (to the northeast), and Grayson County (to the southwest). The City was founded along the Chestnut Creek and grew with the expansion of the railroad. Galax has a deep history of manufacturing in furniture, textiles, mirrors, garments, and hardwood flooring which developed in conjunction with the railroad. The City is close to the Virginia/North Carolina border and has access to interstate 77.<sup>41</sup> This close proximity makes it a popular

destination for tourists and outdoor enthusiasts from North Carolina.

This small city of 7,042 residents has a deep history and rich cultural background particularly in the area of music. According to the City's website, Galax "is rich with tradition, shopping, recreation and scenic beauty. A visit to Galax, Virginia offers everything from quaint downtown shops to hiking and Old Time Bluegrass Music festivals."<sup>20</sup> Galax is home to the Rex Theater and the Blue Ridge Music Center, both of which are part of the Crooked Road Heritage Music Trail. The City is even known as "The World Capital of Old Time Mountain Music".<sup>11</sup> Galax also fosters the arts and artisans through the Chestnut Creek School of the Arts and establishments such as the Oldtown Pottery Cooperative and Barr's Fiddle Shop.<sup>12</sup> Some of these amenities, such as the Chestnut Creek School of the Arts, are located in downtown Galax which is a walkable and well-maintained asset to the community.

As a City, Galax seeks to foster entrepreneurship through the Crossroads Rural Entrepreneurial Institute. The Institute "houses a mixed-use business incubator facility, high-tech educational center for high school and college students, and a continuing education center for GED, workforce, and corporate training."<sup>42</sup> In 2004, the region comprised of Galax, Carroll County, and Grayson County was deemed "The Entrepreneurial Region of Virginia" by the Virginia General Assembly.<sup>42</sup> However, Galax still has strong ties to traditional industry; the largest percentage of the population still works in the manufacturing industry, with Vaughan Basset Furniture as the largest employer within the city limits.<sup>42</sup>

# APPENDIX C

## ASSET MAPPING

As a means to better understanding how various community players influence economic impact, one method of analysis used in this study was asset mapping, based on the Star Model from *Rethinking Community Development*. The authors, Shaffer et al., emphasize the importance of asset-based development, distinguishing it as the route to *development* rather than to simple *growth*. According to Shaffer et al., “Development is change in the capacity to act and innovate... is longevity, purposeful, and permanent... tends to imply more understanding, more insight, more learning, more nuances” of the many structures and associations within a community.<sup>31</sup> The Shaffer et. al. Star Model is an aid to listing and understanding the idiosyncrasies and relationships between the many assets within a locality. Asset information was collected and organized into the following categories (illustrated in Figure 5):

Space-- the characteristics and location of space, geographic proximity and connections to other places within the region.

Resources-- represent the asset categories typically included in an asset-mapping exercise such as land, natural resources, labor, human capital, and physical infrastructure.

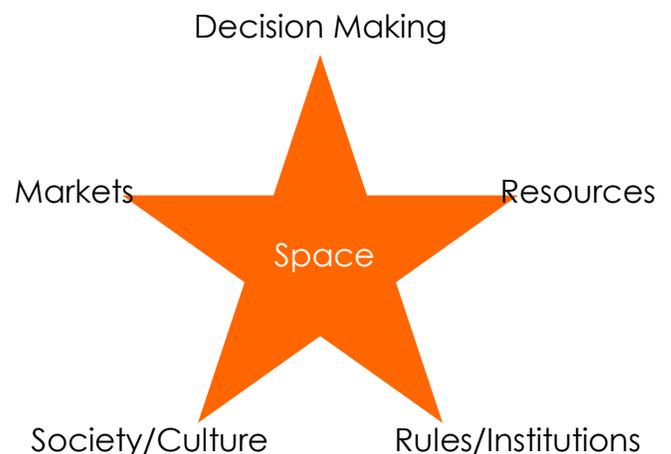
Rules and Institutions-- the imposed rules, limitations, and social structures that can help or constrain local economic development efforts.

Society and Culture-- the character of the community, residents' attitudes toward change, experimentation and entrepreneurship.

Markets-- beyond the more basic supply and demand side of markets, community economic development focuses on local and regional market networks including the linkages and gaps between different businesses.

Decision Making--a means of evaluating the underlying motivations and processes for assessing economic development problems, needs and opportunities for a given community.

**Figure 5: Star Model of Community Economic Development**



The Shaffer et. al. Star Model was then used to develop recommendations for the two trails and the target communities. These recommendations can be used to optimize assets and maximize the economic and community benefits of the trails. Please see the following pages for the studio asset mapping analysis of both trails.

# APPENDIX C

## ASSET MAPPING

### **Decision Making**

The studio team put decision making first in this section because it represents a next step in this impact assessment process. Clients and stakeholders will read this analysis, which will hopefully inform certain decisions concerning trail impacts in their respective communities.

While considering how the impact of the New River Trail State Park and the Virginia Creeper Trail may be increased, it is vital to consider the players involved and how their decisions will affect that impact. The direction and pace of a community's economic development is contingent on decision-making: the participant(s) involved in making the decisions, the underlying values of those decisions, and the motivation to implement those decisions. Shaffer et al. contend that effective and sustainable community economic development requires the participation of many different groups and individuals from the public, for-profit and not-for-profit sectors.<sup>31</sup>

The first decisions that the clients must take into account are their own – what motivates those decisions and how they will affect those of the other agents in their communities. Second, to gain alliances and trust, consider the motivations of other stakeholders. The character of the community or the profit incentive for business owners may come into play here.

### **NEW RIVER TRAIL STATE PARK**

#### **Space**

The City of Galax is the physical center of the region comprised of Carroll County, Grayson County, and Galax.<sup>41</sup> The city is also considered the occupational center of the region, as many workers commute into Galax from the other counties.<sup>42</sup> The city is a major access point on the southern end of the New River Trail which is more developed than the northern end.<sup>20</sup> The trailhead is within one mile of some downtown establishments; the downtown is situated roughly in the center of the city.<sup>18</sup>

#### **Resources**

As discussed above, Galax is home to a number of cultural and recreational assets. In the “World Capital of Old Time Mountain Music” visitors can attend live broadcasts of the Blue Ridge Backroads radio program and enjoy bluegrass and old time music. To learn more about the music of the area, they can visit the Blue Ridge Music Center's interpretive center and catch a concert at its outdoor amphitheater. For those interested in art there are local galleries like the Golden Gallery of Galax and the Winterberry Gallery.<sup>43</sup> The New River Trail and city owned parks also serve as community assets.<sup>42</sup>

Infrastructure around the trail also serves as an asset. The city completed walkway improvements between the trail and downtown Galax 5 to 6 years ago, connecting the trail and the downtown farmers' market and providing a pedestrian

# APPENDIX C

friendly mode of travel between the two city resources.<sup>29</sup> A sign featuring the Crooked Road and downtown Galax businesses stands at the Galax trailhead which also prompts drivers and trail users to tune their radios to 99.9 FM. Another local resource comes in the form of the employment. Galax has a strong economic base, as more employees commute into the city than commute out of the city.

## **Rules and Institutions**

Galax is in control of some of the assets within the City including the Rex Theater<sup>19</sup> which is “owned and operated by the City of Galax.”<sup>12</sup> The creation of the Chestnut Creek School of the Arts was aided by the City and two City employees currently serve as directors.<sup>7</sup> The Crooked Road is funded and governed by a committee that includes many different entities, including the City of Galax.<sup>37</sup> However some assets are under the control of other organizations. The Old Fiddlers Convention is run by the Galax Moose Lodge, and The New River Trail State Park owned by the commonwealth.

Galax is currently undergoing an update of the comprehensive plan, and the new plan will aim to better utilize the resources within Galax and better promote tourism.<sup>9</sup> To boost tourism in the area, the region has received a 9th District Revolving Loan Fund for tourism in past years, which allowed tourism-related start-up businesses to receive loans of up to

\$35,000. The city is now applying for a second round of loans to help incentivize businesses. The city already offers tax incentives for historic renovations and for businesses within the enterprise zone. Because of these incentives, 35 businesses have currently undertaken façade renovations.<sup>3</sup>

One respondent commented that the tourism department in the City of Galax was particularly helpful to local businesses. The respondent noted that the Director of Tourism, Ray Kohl, spends a great deal of time at conventions promoting tourist destinations. The respondent felt that this dedication is starting to boost tourism in the city.

Galax is an attractive area for businesses to locate. Although it does have zoning that restricts some uses from locating in certain areas, the zoning is fairly flexible and offers some conditional zoning options that could lead to the development of mixed-use areas. For example, Bed and Breakfast establishments are a conditional use in areas zoned low, medium, and high density.<sup>10</sup> Galax also has an advantage in terms of taxes. As compared to other independent cities in Southwest Virginia, Galax has lower real estate and personal property taxes.<sup>41</sup>

## **Society and Culture**

The Crossroads Rural Entrepreneurial Institute, mentioned above, is helping to encourage the development of

# APPENDIX C

new businesses and giving residents the opportunity to develop their skills.<sup>41</sup>

In Galax, downtown businesses owners tend to work together, but they do not have as much interaction with the larger business community. One respondent reported that the Galax Downtown Association, comprised of downtown business owners in Galax, used to be a prominent organization with a lot of support. However the importance of the Galax Downtown Association declined as businesses on route 58 began to feel separated from downtown businesses.

## **Markets**

Although plenty of linkages within the arts, culture and music businesses exist within Galax, there are far fewer linkages between these businesses and the New River Trail. A representative of Parks and Recreation for the City of Galax, stated that the Crooked Road and the trail are complementary but the only connection between music and the trail is the increased use of Galax's parks and the New River Trail during the week-long Old Fiddler's Convention each August.<sup>29</sup>

The lack of a connection between the New River Trail State Park and the Crooked Road is apparent in some of the marketing from the Crooked Road. The following quote from the website of the Crooked Road trail did not necessarily paint the trail as an important asset:

"Yes, there are golf courses as well as canoeing, tubing, kayaking and fishing in the area's trout streams and the very old New River. True, the 57-mile New River Trail State Park starts in Galax and is one of the top ten mountain bike trails in the USA. The quaint shops of Main Street do offer antiques, crafts and the like, but the heart and soul of this western Virginia town lies in its exceptional musical heritage... The Annual Downtown Fest takes place in Historic Downtown Galax during the Old Fiddler's Convention. Grayson Street is filled with crafts, food, music and dance on Friday and Saturday."<sup>34</sup>

Although the city has had some success creating linkages between the trail and other assets, the state park does not seem to connect to other resources on its own. It does not seem as if the state park reaches out to the business community. Some business owners in Galax could benefit from some outreach; while filling out a survey, one respondent remarked that although the establishment had merchandise specifically for trail riders, it did not seem as if anyone knew the establishment existed.

# APPENDIX C

## ASSET MAPPING

### VIRGINIA CREEPER TRAIL

#### Space

This report's chosen definition of community relies on the notion of the community being set in a particular space. The characteristics of that space and the proximity and connections to other spaces influence how that space develops. Damascus is such a town where space and location to other spaces have astronomically affected the town's character and prosperity.

Damascus is a small mountain community surrounded by numerous natural resources. Located near the base of Whitetop Mountain, the town is an ideal rest stop for those riding the Virginia Creeper Trail. Damascus is also a crossroads for six other hiking/biking trails and a gateway to Mt. Rogers and the Virginia Highlands. Moreover the town is in close proximity to many different outdoor recreation and other entertainment locales, all of which are within a relatively short driving distance<sup>14</sup>:

- Whitetop Laurel Creek, a premier trout streams
- Jefferson and Cherokee National Forests
- Backbone Rock
- Beaverdam Creek trout stream runs through town
- Virginia's tallest mountains—Mount Rogers and Whitetop—are within a 30 minute driving distance
- Abingdon: provides restaurants, culture, lodging
- Gateway to Boone, NC and its

thriving ski industry

The resulting character of Damascus is one of beautiful, mountainous and rural view sheds and a large economic emphasis on outdoor recreational tourism.

#### Resources

Damascus contains and is surrounded by many natural resources: over thirty different types of trees, over a dozen edible and non-edible vegetation, as well as Beaverdam and Laurel Creeks. Without a doubt, the leading natural resources in Damascus are its seven different trails: the Appalachian Trail, Daniel Boone Heritage Trail, The Crooked Road: Virginia's Heritage Music Trail, Virginia Birding and Wildlife Trail, Iron Mountain Trail, Transamerica 76 National Bicycle Route and The Virginia Creeper Trail.<sup>14</sup>

Many Damascus citizens and the larger Washington County recognize the Virginia Creeper Trail, in particular, as the economic engine of Damascus. Since its inception several biking, hiking and trail related stores have opened up in Damascus. Trail users of all kinds including hardcore hikers/bikers, recreational trail users often with friends and family, local trail users and a growing number of motorcyclists, now visit Damascus on a regular basis, becoming an asset in and of themselves. Many tourists become regular visitors of the trail, some even buy houses in the area as a primary or secondary residence. These individuals are income generators and advocates for trail use and outdoor preservation.

# APPENDIX C

To inform and foster greater matriculation of trail users in Damascus and throughout the larger region, the Washington County Public Library system has designed a library/tourism center. Partners include the Town of Damascus, Round the Mountain Trail, The Crooked Road, the Virginia Department of Tourism, U.S. Forest Service and the American Chestnut Foundation. This building is designed to look like the old Damascus railroad depot and will provide services that provide information on the forest service, trails, and both cultural and natural history of the area; storage units for travelers; a display for local artists and craftsmen; and wireless internet access.

Damascus also has a plentiful stock of older housing. The Damascus Comprehensive Plan estimates about 30% of houses in town were built before 1940. While some of these houses are blighted or derelict, residents of Damascus have renovated several with the help of Community Development Block Grants. Walking along the streets of Damascus, pedestrians can see many revitalized historic buildings, some of which serve as bed & breakfast establishments and other tourist-oriented businesses. The Old Mill, an old grinding mill revitalized and converted into an inn, restaurant and small convention center, is an excellent example of the town's vision to develop historical assets to maintain the "mountain town feel".

New construction is difficult in Damascus because 50% of the town's

land is undevelopable. A large portion of Damascus is located on a flood plain; the soil composition in other areas is porous and not conducive to new, sustainable development; the slope of the land in many parts of town does not accommodate for successful development either. The other 50% of Damascus is mostly developed already. Yet a small, precious portion is still available for development, presenting a unique opportunity to determine the most vital need and best uses of land for the town.<sup>14</sup>

The citizens of Damascus represent another strong asset to the community. Several interviewees attributed the success of the Virginia Creeper Trail at least in part to support from community members. Many of these individuals are entrepreneurs - 8.5% of citizens in Damascus are self-employed and 16% hold executive, administrative, managerial or professional positions.<sup>14</sup> Several of these entrepreneurial business owners are currently in the process of creating a business association in Damascus. Women are an untapped labor force. As of 2000, 62.5% of women in Damascus considered themselves outside the labor force often due to their homemaking and child rearing roles sometimes necessitated by lack of daycare services. Damascus does have an aging population, some who have lived in Damascus their entire lives and others, mostly single or empty nesters, who have moved to

# APPENDIX C

maintained in the Damascus area, could play a large part in the development of other economic assets.<sup>14</sup>

## **Rules and Institutions**

Various entities in Damascus and Washington County have served to create official and unofficial rules, and social structures that encourage local economic development efforts. The Damascus municipality takes a somewhat hands-off approach to business development, offering low-taxes, fees, and flexible zoning and zoning waivers. In essence, it allows the preexisting assets in the town to serve as the incentive to business investment and then businesses can drive community economic development from there. Meanwhile the town's government focuses on provision of ancillary services: police services, developing a pedestrian/bike plan, and assistance in coordinating town-wide events. These services help to create a safe, welcoming environment in which businesses can prosper; for example, Damascus has the highest number of police (full-time and volunteer) per capita in all of Virginia. Damascus police patrol the Creeper Trail all the way up to White Top and are first responders for any emergency.

Since tourism is the major economic generator in Damascus, several institutions have grown around that industry. In order to create opportunities for greater social and economic interaction, Damascus town officials play a large role in funding and coordinating Trail Days:

Damascus' principal annual trail related event. The 4th of July Celebration and the Christmas Parade are two other events. The Damascus municipality dedicates approximately \$2000 of the town's general funds to tourism, primarily for printing purposes. A Tourism Advisory Board is also in the development stages. Although Damascus had a Director of Tourism in the past, that position is current inactive.

The Virginia Tourism Corporation, in collaboration with Washington County, is also working to create a countywide strategy that would network all tourism-related industry in Washington County and would serve as an all-in-one marketing resource for these groups. Many institutions actively support this regional endeavor including: the Town of Damascus, Washington County, Heartwood: Southwest Virginia's Artisan Gateway, The Creeper Trail Advisory Board and the Virginia Creeper Trail Club.<sup>15</sup> In addition to attempting a regional marketing tourist campaign, Washington County works to protect natural resources and view sheds in the county through Purchase of Development Rights (PDR) Programs. The Creeper Trail Advisory Board, a group composed of jurisdictional stakeholders, and the Virginia Creeper Trail Club, a "friends of the trail" civil society group, do the area. There is also a well-educated youth population that, if their parts by coordinating events and collaborative efforts along the Virginia Creeper Trail. The Washington County citizens that make up the Virginia Creeper Trail

# APPENDIX C

Club maintain and promote this inter-regional trail.<sup>40</sup>

## **Society and Culture**

The character of a community can often be difficult to describe; however within that character are assets and attitudes that could be harnessed to create a vision and motivation for future economic development. Damascus has branded itself Trail Town U.S.A. It is a crossroads between many different trails and a prime destination for outdoor recreation. According to the town's Comprehensive Plan, "Damascus is a destination point for people who want to leave behind the traffic, smoke, and hectic pace of city life" (pg. 31). As a small mountain town, the culture in Damascus is relaxed, "down-to-earth" and offers a unique commercial identity with few chain stores. Damascus has a reputation as a fun rail-trail town with good customer service as evidenced by the excellent word-of-mouth marketing and returning customer base. The Damascus Comprehensive plan also describes it as "a hotspot for heritage music and crafting activities" (pg. 47). Damascus' townspeople appreciate the prosperity that the tourism industry has brought. They wish to develop that industry while maintaining the size and character of the town.

## **Markets**

In the community economic development context, markets are more than just supply and demand. They are interconnected networks of

local and regional assets. The connectivity between these assets will determine their success and impact on economic development. Gaps and disconnects represent the lack of or inefficient use of assets within the network. The data analysis section discusses the results to the surveys and interviews that were used to determine the economic impact of the Virginia Creeper Trail, paying particular attention to the linkages, gaps and disconnects in connectivity, in terms of leveraging trail-use, between different community assets within Damascus and the region at large. Findings include:

- A gap in commercial offerings for the more casual recreationalist in terms of shopping activities and more restaurant offerings
- Limited information sharing: other trails and outdoor activities in the area
- Display and sales space for local artists
- Few pedestrian friendly walkways to explore the town

As discussed before, Damascus has chosen to capitalize on the trail-based tourism market. Current Damascus businesses that serve trail users include: bike rentals and repairs, shuttle services, hiking outfitters, restaurants, cafes, lodging and convenience stores. There is also a growing artisan community whose members sell their products at the Heartwood artisanal center near Abingdon.

# APPENDIX D

## TRAIL USER SURVEY

In order to provide you with a high quality recreational experience, the Virginia Tech Economic Development Studio is conducting a survey of trail users. Your cooperation in completing this survey will be greatly appreciated. Please reflect on your current or last trail visit and fill in the answers to the best of your knowledge. Limit one survey per user.

1. What is your zip code? \_\_\_\_\_

2. Do you live and/or work in Damascus?  Yes  No

3. How often, on average, do you use the trail?

Daily  1 to 2 times a week  
 3 to 5 times a week  Once a week  
 Once a month  A couple of times a month  
 A few times a year  First time

4. Please identify your age group.

15 and under  36-45  66 or older  
 16-25  46-55  
 26-35  56-65

5. What is your gender?  Male  Female

6. What is your primary activity on the trail?

Walking/ Hiking  Biking  
 Jogging/Running  Horseback Riding  
 Camping  
 Other activity (specify) \_\_\_\_\_

7. Generally, when do you use the trail?

Weekdays  Weekends  Both

8. During your trail visit, did you

Fish  Canoe  Kayak  Tube  
 Camp  Other: \_\_\_\_\_

9. If you have a physical disability, have you ever experienced obstacles that have impeded your transit along the trail?

Yes  No

# APPENDIX D

If yes, to where and why.

---

10. How did you find out about the trail?

- |   |   |
|---|---|
| <input type="checkbox"/> Word of mouth  | <input type="checkbox"/> Roadside signage             |
| <input type="checkbox"/> Driving past   | <input type="checkbox"/> Newspaper                    |
| <input type="checkbox"/> Local business | <input type="checkbox"/> Convention & Visitors Bureau |
| <input type="checkbox"/> DCR Website    | <input type="checkbox"/> VA Outdoors Website          |
| <input type="checkbox"/> Social Media   | <input type="checkbox"/> Other _____                  |

11. Has your use of the trail influenced your purchase of any of the following...

- |                                       |  |   |
|---------------------------------------|--|---|
| <input type="checkbox"/> Bike         | <input type="checkbox"/> Bike supplies | <input type="checkbox"/> Auto accessories |
| <input type="checkbox"/> Footwear     | <input type="checkbox"/> Clothing      |   |
| <input type="checkbox"/> Other: _____ |  |   |

12. Did you rent any equipment? If so, what did you rent, from where did you rent it and what was the cost?

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13. Did your visit to the trail involve an overnight stay in one of the following types of accommodations in Damascus?

- |   |  |
|---|--|
| <input type="checkbox"/> Motel/Hotel                  | <input type="checkbox"/> Bed and Breakfast |
| <input type="checkbox"/> Friend or Relatives Home     | <input type="checkbox"/> Campground        |
| <input type="checkbox"/> Other (please specify) _____ |  |

If no, why did you choose not to stay in Damascus?

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14. How many nights did you stay in conjunction with your visit to this trail? \_\_\_\_\_

15. Would you be willing to pay a small usage fee to help maintain the trail?

- Yes       No

We would like to ask you about your **ESTIMATED EXPENSES** for this trip to the Creeper. The information will be used to calculate the economic effects of rail trails on the local economies.

ESTIMATE your spending (or the spending of your family if filling out the survey as a group) **within the Damascus town limits.**

# APPENDIX D

Note: If your trip is not yet complete, include what you expect to pay where appropriate. For example, if you spent \$10 on gas to get here and you will need to fill up in town before heading home, enter \$10 for gas and any additional dollars you think you might pay.

How many people are in your party? \_\_\_\_\_

## ESTIMATED EXPENSES IN DAMASCUS

### Lodging:

Privately owned (motel, cottage, bed & breakfast) \_\_\_\_\_

Publicly owned (state or FS campgrounds) \_\_\_\_\_

### Food & Beverage:

Food and drinks consumed at restaurants or bars \_\_\_\_\_

Other food and drinks (carry-out, groceries) \_\_\_\_\_

### Transportation:

Gasoline, oil, repairs \_\_\_\_\_

Other transportation (tolls, airfare, vehicle rental) \_\_\_\_\_

### Trail Related:

Bicycle rentals or service \_\_\_\_\_

Shuttle or guide service \_\_\_\_\_

Horse rental \_\_\_\_\_

Trail use, entry, or parking fees \_\_\_\_\_

### Any other expenses:

Clothes \_\_\_\_\_

Other services or equipment \_\_\_\_\_

16. Would you be willing to pay for a special event (ex. festivals, races, and community events) located on the Creeper Trail?

\_\_\_\_ Yes      \_\_\_\_ No

17. Which trail access point do you generally use when you visit the trail?

\_\_\_\_\_  
\_\_\_\_\_

18. Where do you park to access the trail?

\_\_\_\_\_

# APPENDIX D

Additional comments:

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Thank you for your time.

# APPENDIX E

## BUSINESS SURVEY

The following survey is designed to measure the economic benefits of the Creeper Trail on Damascus. **NOTE: All information from the survey will be compiled and individual information will be kept confidential.**

1. What is your primary business classification?

- |   |   |
|---|---|
| <input type="checkbox"/> Hotel/motel/B&B                  | <input type="checkbox"/> Campground                   |
| <input type="checkbox"/> Restaurant/tavern/café/ice cream | <input type="checkbox"/> Retail/specialty             |
| <input type="checkbox"/> Convenience/grocery store        | <input type="checkbox"/> Bike rentals/sales/supplies  |
| <input type="checkbox"/> Outdoor recreation/outfitter     | <input type="checkbox"/> Cultural Heritage Attraction |
| <input type="checkbox"/> Arts and Crafts                  | <input type="checkbox"/> Other _____                  |

2. Do you think your business is affected by trail use?  Yes  No

3. Do you provide parking for trail users?  Yes  No

4. How long have you been in business in this location?

- |   |                                      |   |
|---|--------------------------------------|---|
| <input type="checkbox"/> Less than a year | <input type="checkbox"/> 6-10 years  | <input type="checkbox"/> More than 40 years |
| <input type="checkbox"/> 1-2 years        | <input type="checkbox"/> 11-20 years |   |
| <input type="checkbox"/> 3-5 years        | <input type="checkbox"/> 21-40 years |   |

5. Are you open seasonally or year-around? \_\_\_\_\_

6. During what months of the year do you experience your peak seasons?

- |                                   |                                |                                    |                                   |
|-----------------------------------|--------------------------------|------------------------------------|-----------------------------------|
| <input type="checkbox"/> January  | <input type="checkbox"/> April | <input type="checkbox"/> July      | <input type="checkbox"/> October  |
| <input type="checkbox"/> February | <input type="checkbox"/> May   | <input type="checkbox"/> August    | <input type="checkbox"/> November |
| <input type="checkbox"/> March    | <input type="checkbox"/> June  | <input type="checkbox"/> September | <input type="checkbox"/> December |

7. Do you think these seasonal fluctuations in business are due to seasonal fluctuations in trail use?  Yes  No

8. What are your hours of operation? \_\_\_\_\_

9. How many people, including yourself, do you employ full-time? \_\_\_\_\_

10. How many people, including yourself, do you employ part-time? \_\_\_\_\_

11. Do you increase employment during the peak season?  Yes  No

# APPENDIX E

12. How many hours a week do your employees typically work on average?

Full-time: \_\_\_\_\_hours

Part-time: \_\_\_\_\_hours

13. What impact did the trail location have on your choice of store location?

\_\_\_ Very Strong influence

\_\_\_ Strong influence

\_\_\_ Some influence

\_\_\_ Limited Influence

\_\_\_ No influence

14. Has the trail impacted your decision to do the following with respect to operations?

\_\_\_ Expand operations in the past year

\_\_\_ Downsize operations in the past year

\_\_\_ Make plans to expand operations

\_\_\_ Make plans to downsize operations

\_\_\_ None

\_\_\_ Other: \_\_\_\_\_

15. If expanding, how did/will you expand your operations?

\_\_\_ At your current business location

\_\_\_ Open a new shop (not specified)

\_\_\_ At a location that is not part of the trail system

\_\_\_ At another location of the trail system

\_\_\_ Other

16. Has the trail impacted your decision to do the following with respect to your workforce?

\_\_\_ Create new positions in the past year

\_\_\_ Eliminate positions in the past year

\_\_\_ Plan to create positions

\_\_\_ Plan to eliminate position

\_\_\_ None

# APPENDIX E

17. Approximately, what are the annual gross-revenue figures for your business during the past three years?

- Less than \$50K
- \$50K to \$149K
- \$150K to \$249K
- More than \$250K

18. What percent of your 2011 annual business would you estimate could be largely attributed to the existence of the area's biking/hiking trail?

- |                                       |                                     |                                      |
|---------------------------------------|-------------------------------------|--------------------------------------|
| <input type="checkbox"/> None         | <input type="checkbox"/> 31% to 40% | <input type="checkbox"/> 81% to 90%  |
| <input type="checkbox"/> Less than 5% | <input type="checkbox"/> 41% to 50% | <input type="checkbox"/> 91% to 100% |
| <input type="checkbox"/> 5% to 10%    | <input type="checkbox"/> 51% to 60% |                                      |
| <input type="checkbox"/> 11% to 20%   | <input type="checkbox"/> 61% to 70% |                                      |
| <input type="checkbox"/> 21% to 30%   | <input type="checkbox"/> 71% to 80% |                                      |

19. Please explain any other actions that you have taken to attract and/or cater to trail users?

- |   |   |
|---|---|
| <input type="checkbox"/> Shuttle Service            | <input type="checkbox"/> Signs on the trail               |
| <input type="checkbox"/> Bike repair/mechanics/shop | <input type="checkbox"/> Ads on the Internet/Social Media |
| <input type="checkbox"/> Bike rentals               | <input type="checkbox"/> Garage/bike storage/bike racks   |
| <input type="checkbox"/> Ads in publications        | <input type="checkbox"/> Other: _____                     |

20. In your estimation, what percentage of your customers are from...

- Local Area
- Nonlocal, In-state
- Out of state
- 100% Total

21. What motivated you to open your business in Galax?

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22. Are you the first owner of this business? If not, how many previous owners are you aware of?

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# APPENDIX E

23. In your estimation, what proportion of your business revenue is attributed to the New River Trail State Park or New River State Park Trail users?

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Additional comments:

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Thank you for your time.



# APPENDIX F

## STAKEHOLDER QUESTIONNAIRE

1. What is the public perception of the Creeper Trail according to you?
2. Does Damascus have a comprehensive plan? Parks and rec, economic development strategy, tourism?
3. What are the zoning regulations for properties along the trail?
4. Is protecting the viewshed of the trail important to the town? If so have you included this in your comprehensive plan?
5. What is your ideal community relationship with the Creeper Trail?
6. What is the current community's relationship with the Creeper Trail Club?
7. How could it improve?
8. What is your community's relationship with Abingdon regarding the Creeper Trail?
9. How could it improve?
10. What is the town's role in the maintenance of the Creeper Trail?
11. What's the town role in the Creeper Board?
12. Do you encourage volunteerism along the Trail? If yes, who participates and for what reason? If no, what would you like to see participation in and from whom?
13. Have you ever sought out alternative funding to support the Trail?
14. How much of your local budget goes toward the Trail?
15. Is there a tourism budget? Does a portion go to advertise for the trail?
16. Do you advertise for the trail? If so, where?
17. Do you consider Trail Days or similar community events as a tourism activity? Do you contribute funding or services?
18. Do you effectively use the trail for events?
19. Do local utilities utilize the trail easement for locating services, and if so do they contribute to its maintenance?
20. Do you utilize purchase of development rights?
21. Is any part of the community or nearby region a conservation reserve, conservation easement, or part of a purchase of development rights.
22. Are there any known protected or endangered flora or fauna in the area?
23. Is there any industry that the trail prevents from moving into Damascus?
24. Are there any incentives for entrepreneurs in your town?
25. Do you rent motorized vehicles, horses, bikes, or other form of locomotion to help people travel the trail?
26. Are there any eyesores along the trail or within the town that would detour users?
27. Who polices the trail?

# APPENDIX F

## STAKEHOLDER QUESTIONNAIRE

28. Do you think there is an issue of public safety on the trail?
29. Does the trail have support of the residents and officials in Damascus?
30. Are there any properties in or near Damascus owned by industry that they are seeking to release custody? i.e., abandoned coal mines?
31. What are the procedures to obtain a business license?
32. Do you allow conditional uses along the trail?
33. Do encourage conditional uses along the trail?
34. Approximately how many new business licenses are sought each year?
35. Is there a community philanthropist or entrepreneur that is influential in the area?



# APPENDIX G

## HOW TO GUIDE PERFORMING AN ECONOMIC IMPACT ANALYSIS

The tools and recommendations in this guide are based on other studies on the impacts of trails, a Trail User Survey Workbook created by the Rails-to-Trails Conservancy (will be referred to as the Workbook)<sup>38</sup>, and the experiences of this economic impact analysis.

Many of the steps outlined in this guide are not hard and fast but rather questions that must be asked and decisions that must be made.

### **Why study the economic impact of your trail?**

A trail is a wonderful addition to a community, providing inexpensive recreational opportunities and the health benefits that come with outdoor exercise. It can provide locals with an alternative means of transportation, increase the value of adjacent property and bring tourists to the area. But trails require investment and maintenance and generally do not pay for themselves. Whether overseen by a “Friends of” group or a government entity, grants and funding must be applied for. The data from an economic impact analysis is greatly beneficial for such applications because it shows how the trail contributes to the local community and thus why it is worthy of further investment.<sup>37</sup>

The data obtained can also be used to improve and expand marketing strategies.<sup>6</sup> Knowing where the majority of trail users come from and what the dominant uses are can allow you to target those populations

and/or to expand marketing to underserved customers.

### **Characterizing Your Study**

#### *Step 1: Define your objective*

The very first thing you need to ask yourself before starting an economic impact analysis is, “What do I plan to do with this data?” How you wish to use the information garnered will figure heavily into the types of data you seek. The use of the term “economic impact” indicates that the primary goal is to learn about how the trail interacts with the local economy and this is true. But there are a number of other pieces of information that you may be interested in that can add to or complement your economic data. In addition to how much money trail users spend you may also be interested in:

- Trail user demographics (age, gender, socio-economic status, etc.)
- Preferred trail activity (walking, running, biking, horseback riding)
- Most common time of use (evenings, weekends, holidays)
- User attitudes (regarding safety, maintenance, access)

The type of information you are interested in obtaining will determine who you survey and/or speak to, what questions you ask and what pre-existing data you may seek to use.<sup>38</sup>

It will also be a key factor in deciding the scope of your study. Trails differ greatly in length and how you frame your study will depend on how much of your trail you wish to examine. The analysis performed by the Economic

# APPENDIX G

Development Studio team was limited to the areas surrounding Damascus and Galax on the Virginia Creeper and New River Trails, respectively. Our objective was to study only a small portion of the trails, resulting in a small scope. By contrast the Ontario portion of the Trans Canada Trail, studied in 2004, is 4,061 kilometers (2,523 miles) long; that project's scope was much larger.<sup>26</sup>

## *Step 2: Define Local*

By definition an economic impact analysis on a trail is interested in the effect the trail has on the local economy. But what is meant by local may not be totally clear. In the Trans Canada study, "local" was determined by the Province of Ontario Ministry of Tourism and Recreation, which considers visitors to be those who have traveled 40 km (25 mi) or more to their destination.<sup>26</sup> Anything within that 40 km radius is local.<sup>30</sup> Another method is to define local as the towns, cities, small communities and/or counties through which the trail passes.<sup>44</sup> Whatever method you choose, your definition of local should be included in survey questions about purchases made. Participants should be asked what they purchased in that geographic area.

The definition of local is also important because purchases made by local residents are considered to be irrelevant. This money is only being redistributed and not bringing new funds into the area. When calculating economic impact, it is nonlocal purchases that are of greatest

importance. Thus, when surveying trail users, it is important to separate local and non-local users. (Asking for zip codes is a fairly simple way to do this.)

In the Bowker et al. economic impact studies, local was defined as Washington and Grayson counties for the Virginia Creeper Trail<sup>3</sup>; Carrol, Grayson, Pulaski, Whythe counties, the towns of Fries and Pulaski, and the city of Galax constituted local for the New River Trail State Park.<sup>4</sup>

## **Designing Your Study**

### *Step 3: Choose your study method(s)*

Thus far, this guide has referred to surveys as the way that you will conduct your study. This is because it is the accepted method of obtaining this type of data; all of the resources referenced here involved the use of trail user surveys. We are also recommending the use of a survey as it is the simplest method for obtaining this type of data. However, we also recommend that this not be your only data source. In the social sciences there is a technique called data triangulation, the gist of which is that using multiple data types and sources makes your study more reliable and defensible to criticism.<sup>16</sup>

### *Trail User Counts*

The Rails-to-Trails Conservancy Trail Survey Workbook suggests that your analysis include information on the number of trail visits, which can then be used to calculate the overall economic impact of the trail. Estimating the number of trail visits is

# APPENDIX G

generally done via one of two methods—infrared counters and volunteers counting users as they pass certain points along the trail. Both of these methods have their advantages and disadvantages, which must be weighed when selecting an option.

Infrared counters, which pick up on a person's heat signature<sup>43</sup>, are far less time consuming than manual counters. They are however, more expensive and can be very inaccurate.<sup>38</sup> Those who are on the trail for an extended period may pass more than one counter, thus being counted twice, and most users (95% in the Schuylkill River Trail study) enter and exit at the same location, also resulting in a double count.<sup>43</sup> To address the double count issue, researchers in the Perkiomen Trail study divided all trail counts in half.<sup>24</sup> Infrared counters can also report an undercount because of cyclists traveling faster than the counter can register and groups of walkers who are not counted individually.<sup>36</sup>

Volunteer counters are less expensive than infrared but they are far more time consuming and require a large number of people to assist in the study. Volunteers must conduct their counts (~2 hours) on multiple, randomly selected days and times throughout the study period to get a representative sample. It is important to be sure that the counts are not biased toward certain times of the day or favors weekends over weekdays. It is also useful to differentiate between peak and non-peak seasons depending on your

study period. Under and over counts are still possible because of human error, an issue, which can be alleviated to a certain point by stationing volunteers in pairs.

When estimating annual counts, accuracy can be improved by averaging the raw counts based on similar times, days, and seasons. For instance, one could average Monday through Thursday morning counts taken during peak season months, and then multiply the average by the total weekday mornings in that season to find the total estimated visits during that period. The more precise the time period averages, the more accurate the result.

Because the method used is dependent upon the resources you have available, this guide is not recommending one method in particular. We will only say that, regardless of which method you choose, it is important to keep in mind that you will only be making an estimate at the number of trail visits. Neither will give you a 100% accurate count.

## *Stakeholder Interviews*

A study of the economic impact of a trail is in some ways a study of the relationship between the trail and the communities through which it travels. For a complete picture, you must talk to both parties. To whom you speak will, as always, be determined by what you wish to do with your findings and therefore what kinds of information you want to learn.

# APPENDIX G

A stakeholder is a person who affects or is affected by the trail. This includes those who use the trail, those who help to maintain the trail and those who receive economic benefit from the trail. It also includes community and government officials who make decisions with regard to the trail. Such interviews may not give you direct information on how the trail impacts the economy (X number of trail users = Y dollars in the local economy) but can provide more subtle details. Impact is not a one way street and choices made by the municipality affect access to and awareness of the trail. Knowing about these bi-directional impacts can help you to make suggestions and changes in the future. (Questions to be asked are also determined by the desired information but an example can be seen in Appendix E.)

## *Surveys*

Trail user surveys are the principle method for performing an economic impact analysis. The simpler and straight forward these documents are, the better. The studio team found that offering multiple choice responses was easiest for those filling out the surveys. The question concerning where the user got on the trail, for instance, should certainly be translated into a multiple choice response as many users are unfamiliar with the area. While the studio team did not choose to create separate surveys for local and nonlocal trail-users due to already limited data collecting time, this method is something to consider.

Conducting business surveys is

another component that is not often used, but the studio team suggests. The Greenbrier River Trail study completed “an inventory of all recreation and recreation-related providers within the corridor” which was used to create maps of entities that affect the local economy. We suggest taking this a step further and surveying inventoried businesses to gain a more accurate depiction of the economic relationships.

This is a prime example of why the use of multiple data sources (triangulation) improves a study. Data obtained from trail user surveys can only provide estimates because they are based on samples and not the entire user population. The information is incomplete. Likewise, money that is spent at local establishments is not marked as local or non-local in origin so it is not possible to determine the precise impact of each dollar. Together, however, these estimates complement each other.

## *Using Pre-existing Data*

There are two main benefits to using pre-existing data. The first is that it requires less effort on your part; you do not have to gather it yourself. The second is that it can provide information that you would not be able to gather. For the purposes of an economic impact analysis, data on lodging and meals taxes and sales taxes contribute to assessing the impact of tourists (i.e. trail users). Another question that can be answered through pre-existing data is, how much tax payer money is spent on the trail? Funds to maintain,

# APPENDIX G

police and promote the trail are taken away from the local economy and must be subtracted to inputs attributed to the trail. The municipality's budget should provide this information.

## *Step 4: Choose your study period*

To get a representative sample of trail users, it is necessary to count and survey through all or most of the year.<sup>38</sup> The Workbook suggests sampling May through October although other studies including the Schuylkill and Perkiomen Trail studies were conducted for a full year. The decision to sample in the winter is typically based on whether there are specific winter activities like snowmobiling and cross country skiing that would attract different users than the spring through fall months.<sup>38</sup>

## *Step 5: Choose your survey distribution method*

Because it may affect the type of questions you ask, you should choose your distribution method prior to writing the survey. The Workbook provides six options, which we will discuss in relation to both trail user and business surveys.

### *Self Selecting: Drop Box*

This least expensive and minimally time consuming method involves placing surveys at trail access points for users to fill out and put into a collection box. The advantages having already been named, the disadvantage is that it is self selecting. According to Schuylkill River Trail

study, a representative sample can not be obtained via this method because the type of person who chooses to participate may not be representative of the entire population. It can also have limited results as far as the level of participation. The Studio team used a variation of this method, placing surveys at local establishments for patrons to fill out; none of these surveys were returned. Self-selecting methods are not applicable to business surveys.

### *Self-Selecting: Mail Back*

In the Mail Back method, surveys are still placed at access points but participants are provided with self-addressed, stamped envelopes rather than a drop box to return completed surveys. This is quite a bit more expensive because of the postage<sup>38</sup> and still had the problem of being self selecting and thus non-representative. The Schuylkill and Perkiomen Trail studies had great success with this method, collecting 1,223 drop box and 694 mail back forms.

### *Personal Intercepts*

Performing personal intercepts (otherwise known as standing on the side of the trail asking people to fill out your survey) can result in a more representative sample but it is extremely time consuming and requires a lot of assistance. Conducting surveys at the same time as trail user counts can help to lessen the overall time commitment for volunteers. To obtain a representative sample, surveys must be collected "randomly across all daylight hours

# APPENDIX G

and every day of the week." This is not to say that someone has to be on the trail all day everyday but that all days and times must be sampled at some point, ideally in equal proportions. This must be done over the course of the entire study period.

The Workbook lists training volunteers and staff in the art of personal intercepts as a requirement for use of this method but both the Studio team and the Greenbrier Trail study employed novice interceptors. Graduate students conducted surveys on the Greenbrier and Virginia Creeper trails while park rangers distributed surveys on the New River Trail. All three were limited in time period but the response rates (268 on the Greenbrier, 77 on the Virginia Creeper and 68 on the New River) were encouraging in terms of how many might be collected over a longer time period.

The Studio team also used personal intercepts to distribute business surveys, delivering the surveys to the premises. The majority were accompanied by a return envelope so that the owner could fill out the form at his or her convenience. Response rates were fairly limited (19 on the Virginia Creeper and 28 on the New River) but follow-up phone calls might increase this.

## *Direct Mail*

Direct mail can not be used for trail user surveys but could be utilized for business surveys. This would require less time than personal intercepts but would be more expensive since two stamps would have to be provided

per survey.

## *Website Based*

The Workbook lists this as a potential distribution method but does not recommend it. The Studio team was able to employ this method thanks to the Virginia Creeper Trail Club's website which directed visitors to an online survey.

## *Email*

Again, email can not be used for trail users but we were able to use it for distributing business surveys. Many of the businesses in Galax on the New River Trail had email addresses available via the internet and a link to the online survey was sent via this method.

## *Step 6: Write your survey(s)*

As already discussed, the type of survey questions you choose will be dependent on what type of information you are interested in. Fortunately it is not necessary to reinvent the wheel. The Workbook has four sample surveys for different types of trails from which you can pull your questions. Many of the questions used by the Studio team come from these sample surveys. Shorter surveys are less obnoxious to trail users. To create a shorter survey, one important question to ask about each question is "What will I do with the information gathered in response to this question?" Given the ultimate goal of your study, the survey examples in Appendix C could be far more targeted.

# APPENDIX G

A question that must be asked when designing your survey is whether you want to use open ended questions. The Workbook recommends avoiding such questions because they are harder to analyze. Questions related to economic impact can probably be fully answered with multiple choice quantitative data but if you are interested in how users feel about the trail you might consider using some qualitative data. The Schuylkill and Perkiomen Trail studies both asked for comments and got some great quotes on how much people love the trail. In the Virginia Tech Studio Study, the team found that open ended questions were beneficial. They reinforced ideas found in the other survey results as well as revealed nuances in responses that could inform future actions taken by stakeholders.

## **Analyzing your Data**

The studies reviewed when designing this research project and writing this guide demonstrate that there is not a single accepted model for analyzing economic impact data. Some are quite complex and others are much simpler. Lacking a comparative analysis on which model yields more accurate results and knowing that all models give only estimates we suggest a simpler approach and only calculate direct effects. If you are interested in a more in depth analysis we refer you to the IMPLAN model used in the previous studies on the Virginia Creeper, New River and Old Dominion Trails or the Trans Canada study.<sup>3 4 26</sup>

## *Trail Surveys*

The first step to analyzing the trail surveys is to create an Excel spreadsheet with the responses to each of the questions. This will allow you to perform calculations and identify trends. Next you should calculate percentage for each non-monetary, closed-ended (multiple choice) question to determine the majority response(s). From this information you can also do cross comparisons to see if different age groups, genders, etc. answered differently. Open ended questions should be categorized based on the type of response provided, for example whether a positive or negative assessment of the trail was given. Again these can be compared to characteristics of the survey participant.

When analyzing the money spent in the study region, you should calculate an average within each category of goods purchased. Some studies suggest differentiating hard goods like bicycles, and spreading those costs over the estimated longevity of the good (e.g. six years for a bike). The Studio Team suggests focusing on the time of initial purchase because that is when the money enters the study region. When averaging purchases, be sure to count only those surveys that have dollar amounts as some users will refrain from filling out this section. For a more accurate analysis, you can provide a check box for those who spent nothing within the local boundary. In this case they would be counted in the average. These values can then be added for an overall average.<sup>38</sup>

# APPENDIX G

To calculate the total annual spending, multiply the average expenditures and total annual user visits counts. We suggest using the proportion of total nonlocal trail users instead of the total annual user count in order to determine money coming into the study region. You can determine this proportion through the trail user survey and support it using the business survey.

## *Business Surveys*

Analyzing business survey data is similar to the analysis used for the trail user surveys. Responses should be entered into an Excel spreadsheet from which percentages can be calculated to find the majority answer for each question. Cross comparisons can also be made, this time based on the business type. The most important calculation to be made is an average of the percent of annual income they attribute to the existence of the trail. Assuming that the answer choices you provided were ranges (e.g. 11 to 20%, 21 to 30%) use the middle of the range. Although the studio team did not do this, we would advise you to ask for annual income attributed to **nonlocal** trail user spending. This question would better estimate money coming into the community.

## *Tax Data*

Assuming that the available tax data is broken up by month, you can compare the peak tax months to the peak trail months (based on the number of surveys obtained per month or the averaged perspectives of business owners). This will give you an approximation of how much tax

revenue is attributable to the trail.

A second use of the tax data is to combine it with the percentage annual income attributed to the trail provided in the business surveys. For each business category (e.g. Hotel/motel/B&B, Retail) multiply the average income attributed to the trail by the tax revenue applicable to that business. This will also approximate the amount of tax revenue attributable to the trail.

## *Stakeholder Interviews*

The stakeholder interviews will provide only qualitative, non-numerical data so analysis will be all about looking for commonalities among what is said. Do the majority of the individuals interviewed think that the trail has a significant economic impact? is an example of the type of trend you will look for.

## *Net Direct Economic Impact*

Coming up with that one economic impact number translates to adding up the trail user expenditure data. In the case of a state park, those expenses that come from the state and are then dispersed into the community (e.g. salaries and goods brought into the region) may be included in the total number. The rationale here is the money is coming from outside the region and would be spent elsewhere if not for the trail. Refrain from including tax data or dollar amounts coming from businesses as that would result in double counting. Those numbers should be used as additional indicators of economic impact.

# APPENDIX G

This final summed-up number is considered the *gross direct impact*. It does not, however, take into account the money spent or “lost” by regional stakeholders to create or support the trail. Thus, in this case, subtracting the average annual cost to maintain the already existing trail is necessary for determining the true financial “profit” of the trail – the *net direct impact*.

## **Final Report**

The final report should include a 1-2 page executive summary highlighting key findings, an introduction defining the study region, a detailed account of your methods used, and a section describing your results. Pay special attention to the executive summary. It will essentially make or break many readers’ opinions of your study. Many of these studies also have an appendix charting responses of each close-ended question on the trail-user survey.

## **Economic Impact Models**

Economic impact models attempt to calculate *total* economic impact of a policy or project by determining net initial impact, or *net direct effects*, and then adding the indirect and induced effects (*secondary effects*) calculated using regional multipliers. Indirect effects are the changes in sales, income and jobs in “backward linked” industries. These are firms that supply goods and services to those businesses that sell directly to the visitor. Induced effects are the changes in economic activity in the region resulting from household spending of income earned through

a direct or indirect effect of the visitor spending. In essence, these effects estimate the amount of visitor spending that is re-circulated within the study region.<sup>53</sup>

The multipliers used to determine these secondary effects are based off of several economic indicators including jobs, per capita income

and sales within the region. They are calculated for all the various industries involved in the study project, in this case, hotels/motels, gas and oil, grocery stores, etc. The Bureau of Economic Analysis (bea.gov), for example, uses and calculates the multiplier values for the RIMS input-output model. Many models like RIMS attempt to account for “leakages”, or money spent outside the study area to buy other goods and services. The smaller the study region, the more leakage occurs and the smaller the likelihood of larger secondary effects.

Because the study regions of both the New River Trail State Park and the Virginia Creeper Trail are so small in terms of jobs, goods and services, the secondary effects should realistically be very small in these cases. Regional businesses import many of their goods from elsewhere; they may outsource certain services. Employees and those whose livelihoods are in part dependent on the trails may spend a decent portion of their money outside the region. Consider a project in a metropolitan area, where many of the goods (save perhaps raw materials) may be bought in the area and people/businesses also spend

# APPENDIX G

their money gained from the project in that area. In comparison, the secondary effects in a small rural region are minimal.

The team therefore suggests focusing on the direct effects. Strengthening connectivity and partnerships between the trail and community businesses, offering events that capitalize on the patronage of all community entities may increase the *one big impact number*. Although the team also argues that other indicators of impact may equally if not more so reveal overall impact of the trail. These include community health, population growth or retention, percent business attributed to the trail, change in household retail prices and more.

If you wish to include secondary effects in your total analysis of economic impact, we recommend the IMPLAN model. Using this model would require training on your part or contracting out. The costs of these types of endeavors could likely outweigh the benefits.

## **MGM2 Model**

The MGM2 Model is a spreadsheet created using IMPLAN and designed to estimate the total economic impact of a national park.<sup>32</sup> After careful research and discussions with those who regularly use these types of models (particularly IMPLAN), we see serious challenges using this tool.

The more striking deterrents of this

model are its generic, outdated multipliers. Regional economies, even rural regional economies, vary immensely. To compensate, this model averages numbers from three rural park regions. Even then, this approach can grossly overestimate jobs, spending and income in certain regions and underestimate these factors in others. To make a truly valid argument, you would have to calculate these multipliers based on the small region you are studying. Only then can you take into account what industries exist in the area, a relatively valid rate of consumption (spending), and the amount of leakage outside of the study region.

The rate of consumption in this model is also somewhat questionable as rates can vary dramatically from region to region, and are not necessarily determined based solely on economic indicators. Even within small regions rates vary. So the more precise you can be in your estimate, the more confident you can be in your results. This can only be done using a more detailed model like IMPLAN.

This model also lacks a well-defined boundary for the economic impact. The direct effects may take this aspect into account, however, because of the generic multipliers, the secondary effects neglect it. We hope this How-To guide has sufficiently highlighted the importance of defining the study region, differentiating between local and nonlocal. Here is another instance where, if the boundary is not

# APPENDIX G

well defined, determining the amount of spending being recirculated in the area and the ensuing leakages is difficult to determine. Overestimations result.

Finally, the multiplier data is outdated. One set of data is over a decade old and thus ignores the recent economic crisis and recession that greatly affected spending throughout the nation including areas in southwest Virginia. Trail user spending fluctuates over the years. Multipliers therefore change. This model requires constant updating of these numbers, at least every 2-3 years. This is a task made simpler if using IMPLAN outright.

The MGM2 model is a spreadsheet that seems a well-reasoned step-by-step approach for assessing total economic effects of a park. Although we would like to say there is a simple solution to improving the MGM2 model so that it may be used effectively, its calculations are just too flawed and overly generalized for such a small study region. Even the most intricate models would have difficulty.

We hope that you have found this how-to guide useful and that it may help in pursuing new studies on the economic impacts of trails. Important steps to remember are:

- ❑ **Know your ultimate objective while designing your study:** what typed of data do you want in the end?

- ❑ **Define your study region:** what is local?
- ❑ **Choose your study period**
- ❑ **Choose your study method:** trail counts, surveys, stakeholder interviews, tax data
- ❑ **Choose your survey distribution method:** drop box, personal intercepts, mail back, direct mail, email, web-based
- ❑ **Write your surveys:** keep in mind what you will do with the information gathered in response to each question
- ❑ **Analyze your data:** quantitative and qualitative data that may back each other up; calculating gross direct impact versus net direct impact



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