



The Economic and Fiscal Impact of the Hatfield- McCoy Trail System in West Virginia

July 11, 2014



CBER

CENTER FOR BUSINESS
AND ECONOMIC RESEARCH

marshall.edu/cber

The Economic and Fiscal Impact of the Hatfield-McCoy Trail System in West Virginia

Elizabeth Pardue
Demographic Research Specialist

Jennifer M. Shand, Ph.D.
Director

Research Assistance by:
Yosuke Hioki
Jessica Parrish

Prepared for:
Hatfield-McCoy Regional Recreation Authority

The contents of this report reflect the views of the authors, who are responsible for the accuracy of the data presented herein. The views expressed in this report are those of the authors and do not reflect the official policy or position of Marshall University or its governing bodies. The use of trade names, if applicable, does not signify endorsement by the authors.

One John Marshall Drive | Huntington, WV 25755
p 304.528.7201 | f 304.522.0024 | cber@marshall.edu

Table of Contents

EXECUTIVE SUMMARY 1

INTRODUCTION 4

ABOUT THE HATFIELD-MCCOY TRAILS..... 4

 BACKGROUND AND DEVELOPMENT 4

 GOVERNANCE..... 5

 CURRENT TRAIL SYSTEMS 5

 FUTURE PLANS..... 6

EXISTING RESEARCH 8

DATA AND METHODOLOGY..... 8

 STUDY AREA AND RELEVANT GEOGRAPHIC REGIONS 9

 DEMOGRAPHIC AND ECONOMIC DATA..... 9

 ECONOMIC IMPACT AND FISCAL ANALYSIS 10

Measuring Direct, Indirect and Induced Effects 10

State and Local Tax Benefit..... 11

 DATA COLLECTION AND MANAGEMENT 11

Operating Budget and Expenditures..... 11

Visitor Survey 12

Retail Sector Spending..... 12

REGIONAL DEMOGRAPHIC AND ECONOMIC CHARACTERISTICS..... 12

 AREA AMENITIES FOR VISITORS..... 14

 CHANGES IN REGIONAL BUSINESS ACTIVITY 14

Accommodations..... 15

Food Services..... 16

Gasoline Stations..... 17

SURVEY RESPONDENT SPENDING 18

ECONOMIC AND FISCAL IMPACTS 19

 DIRECT, INDIRECT AND INDUCED OUTPUT 20

Full-Time Equivalent Positions Sustained..... 20

Total Labor Income 21

Total Value Added..... 21

 FISCAL IMPACT 21

COMPARISON TO THE 2006 ECONOMIC IMPACT ANALYSIS 22

 ECONOMIC GROWTH MEASURED BY GROSS DOMESTIC PRODUCT (GDP) 23

SURVEY RESULTS 24

 RIDER SURVEY RESPONSES..... 24

Rider Behaviors..... 24

Overall Rider Satisfaction with the Hatfield-McCoy Trails Network..... 27

CONCLUSIONS 27

REFERENCES 29

Table of Figures

Figure 1 Economic Impact of the Hatfield-McCoy Trails Network 2006 to 2014..... 2

Figure 2 Overall Rider Satisfaction with the Hatfield-McCoy Trails Network 3

Figure 3 Proportion of Difficulty Ratings by Trail System 6

Figure 4 Region II Accommodations Trends 2000-2011 15

Figure 5 Region II Food Services Trends 2000-2011..... 16

Figure 6 Region II Gasoline Stations Trends 2000-2011..... 17

Figure 7 Economic Impact of the Hatfield-McCoy Trails Network 2006 to 2014..... 23

Figure 8 Typical Number of Accompanying People—All Riders..... 25

Figure 9 Rider Satisfaction Ratings for Hatfield-McCoy Trails Systems 26

Figure 10 Overall Rider Satisfaction with the Hatfield-McCoy Trails Network 27

Figure 11 Population Trends 1972-2012 44

Figure 12 Per Capital Income 1972-2012..... 45

Figure 13 Median Household Income 1995-2012 46

Figure 14 Rural Population Percentage 2010 47

Figure 15 Population Aged 25 + with at least a High School Diploma..... 48

Figure 16 Population Living Below Poverty 49

Figure 17 Per Capita Net Earnings 1982-2012 50

Figure 18 West Virginia Employment Trends 1995-2010 51

Figure 19 Regional Employment 1995-2010 52

Figure 20 Unemployment Rate 1995-2010 53

Figure 21 Labor Force Participation Rate 1995-2010 54

Figure 22 Reasons for Having Never Visited—Non-Rider Respondents..... 55

Figure 23 Potential to Increase Likelihood of Visiting—Non-Rider Respondents 56

Figure 24 Reasons for Not Having Visited Recently—Rider Respondents 56

Figure 25 Factors that would Increase Likelihood of Visiting—Rider Respondents 57

Figure 26 Rider Satisfaction in Locating Area Lodging..... 58

Figure 27 Rider Agreement for Improving Area Lodging Satisfaction..... 58

Figure 28 Survey Respondent Age Ranges—All Respondents 59

Figure 29 Survey Respondent Household Income Ranges—All Respondents 60

Table of Tables

Table 1 Hatfield-McCoy Trails Economic Impact Summary 1
 Table 2 Select Regional Demographic and Economic Characteristics..... 13
 Table 3 Survey Respondent Spending for Local and Non-Local Riders..... 19
 Table 4 2014 Economic Impact of the Hatfield-McCoy Trails 20
 Table 5 Full-Time Equivalent Positions Sustained 20
 Table 6 Total Labor Income 21
 Table 7 Total Value Added 21
 Table 8 State and Local Tax Benefit of the Hatfield-McCoy Trails 22
 Table 9 GDP Change for West Virginia Industries 2005-2012 24
 Table 10 Rider Visits to the Hatfield-McCoy Trails 25

Table of Appendices

Appendix A Hatfield-McCoy Trails Maps 30
 Appendix B Overview of Individual Hatfield-McCoy Trail Systems 39
 Appendix C West Virginia Map with Hatfield-McCoy Trails Project Counties 42
 Appendix D Hatfield-McCoy Trails Counties with Current Trails Presence 43
 Appendix E Regional Demographic and Economic Characteristics 44
 Appendix F Additional Discussion of Survey Responses 55
 Appendix G Survey Respondent Distribution by State of Residence 61
 Appendix H All Hatfield-McCoy Trails Rider Permit Sales by State of Residence 61
 Appendix I Survey Respondent Distribution by State of Residence 62
 Appendix J All Hatfield-McCoy Trails Rider Permit Sales by State of Residence 62

Executive Summary

The Hatfield-McCoy Trails project is a network of outdoor recreational trails located in seven historically economically distressed counties in southern West Virginia. Originally established to promote statewide and regional economic development opportunities, the network opened in 2000 with three trail systems and nearly 300 miles of cleared trails. Today, the Hatfield-McCoy Trails have expanded to include a total of eight trail systems totaling more than 700 miles of trails usable by ATVs, UTVs and off-road motorcycles. Plans for the next five years include additions and enhancements to the trail network.

Regional Demographic and Economic Characteristics

While population has declined in the seven West Virginia counties in which the Hatfield-McCoy Trails has a physical presence¹, this region has experienced growth in both labor force participation and income. **Regional income growth and labor force participation rate growth have exceeded the State as a whole.**

The number of regional businesses in the accommodations industry has increased by about 45 percent between 2000 and 2011. Total payroll for these businesses also increased by approximately 19 percent during this time. Payroll in food service businesses in the region increased by 44 percent since 2000.

Love it! Keep up the good work!

– 2014 Survey Respondent

Estimated Economic Impact

The diverse network of trails draws thousands of visitors into the project area each year. Non-local visitor spending, coupled with annual expenditures to maintain the function and operation of the Hatfield-McCoy Trails, stimulates the local economy and the State of West Virginia by extension.² Quantifying the value of the input lays a crucial foundation in better understanding the economic and fiscal benefits of the presence of the Hatfield-McCoy Trails in West Virginia.

Table 1 Hatfield-McCoy Trails Economic Impact Summary

	<i>Direct Impact</i>	<i>Total Impact</i>
<i>Hatfield-McCoy Trails Expenses</i>	\$1,697,307	\$3,333,463
<i>Non-Local Visitor's Spending</i>	\$12,582,980	\$18,914,231
<i>Combined Expenditures</i>	\$14,280,287	\$22,247,694

The analysis indicates that the nearly \$1.7 million in spending conducted by the

¹ The seven counties are Boone, Lincoln, Logan, McDowell, Mercer, Mingo and Wyoming.

² Non-local visitors refer to individuals visiting the Hatfield-McCoy Trails network who are not residents of the State of West Virginia.

Hatfield-McCoy Trails for **day-to-day operations generated an additional \$1.6 million** in economic activity within the State, for a total operational impact of \$3.3 million. Even more notably, the Hatfield-McCoy Trails bring non-local visitors to the area whose spending is estimated to generate an additional \$19 million in economic activity in West Virginia. **Together, the total estimated economic impact of the Hatfield-McCoy Trails is more than \$22 million.**

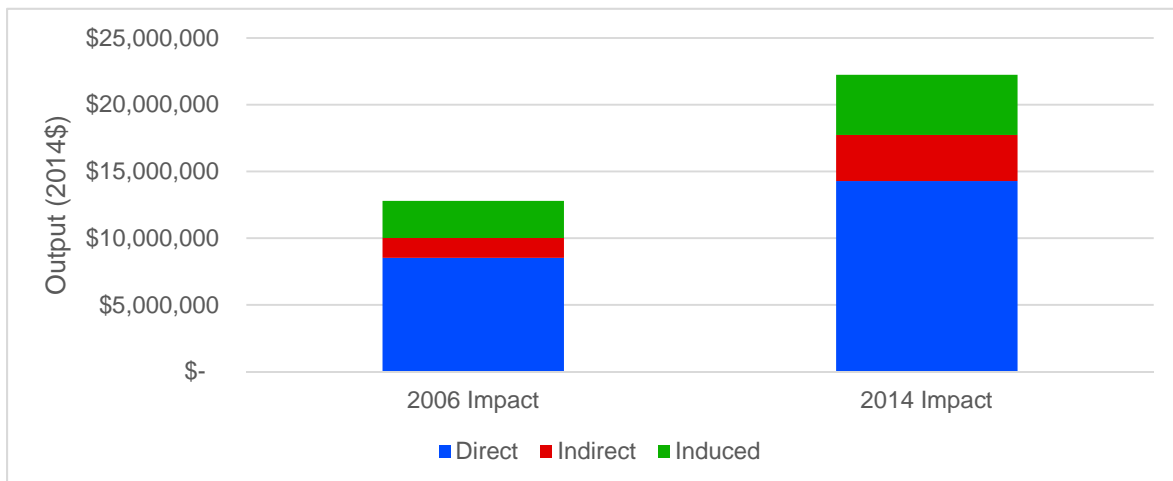
In addition to the dollar value of economic activity, the Hatfield-McCoy Trails supports employment and thus provides earnings. The Hatfield-McCoy Trails directly sustain 22 full-time equivalent (FTE) jobs year-to-year, and can be credited with **supporting a total of approximately 237 FTE positions across the State.**

The economic activity generated by the Hatfield-McCoy Trails' operations and visitors also yields tax revenues. **Direct employment related to the Hatfield-McCoy Trails impacts the state and local tax base by nearly \$120,000 annually.**³ When considering the estimated total employment sustained by the presence of the Hatfield-McCoy Trails, an annual state and local tax benefit of more than \$455,500 is estimated. An additional fiscal benefit to the State of more than \$1.5 million is estimated as a result of non-local visitor spending while visiting the Hatfield-McCoy Trails.

Economic Impact Change Since 2006

Since the first analysis in 2006, **the total economic impact of the Hatfield-McCoy Trails has grown by 74 percent.** This growth reflects not only the expansion of the trail system but also of the additional economic activity generated, as indicated through the larger indirect and induced effects of the initial spending.

Figure 1 Economic Impact of the Hatfield-McCoy Trails Network 2006 to 2014

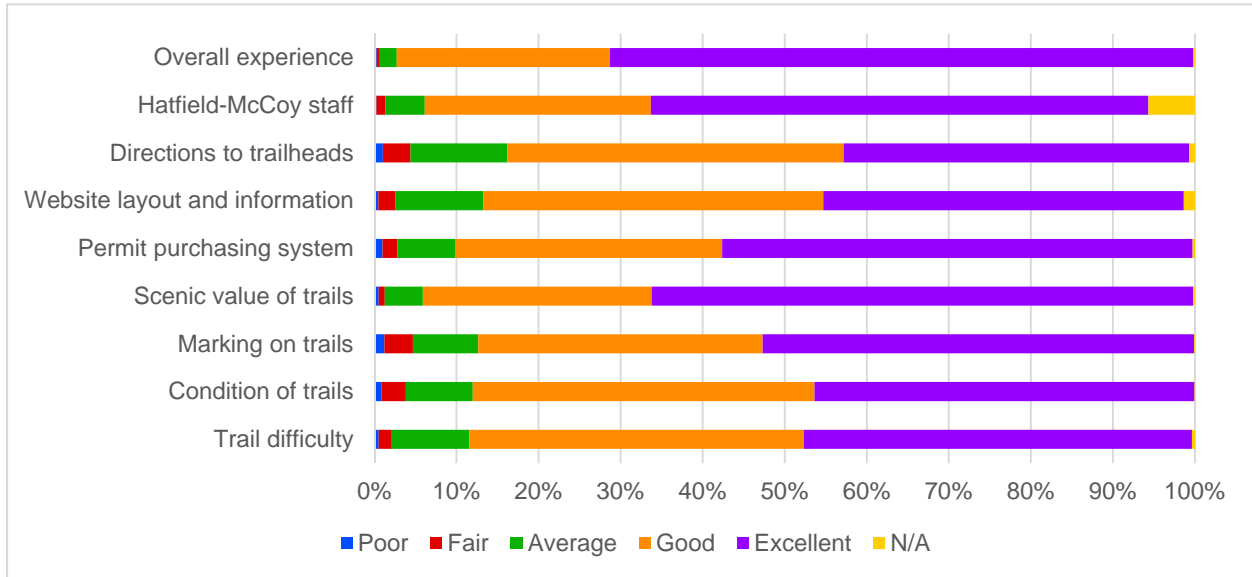


³ The direct and total state and local tax impacts reported here include personal, business and excise taxes, among others, as determined by considering employment only. These figures are not intended to estimate the total fiscal impact of the presence of the Hatfield-McCoy Trails in the State.

Rider Survey Results

In addition to providing data for estimating the visitor spending impact of the Hatfield-McCoy Trails, the rider survey indicated largely positive experiences among riders. The vast majority of respondents reported a good or excellent experience with the Hatfield-McCoy Trails overall, and more than 97 percent of riders surveyed would recommend the Trails to others.

Figure 2 Overall Rider Satisfaction with the Hatfield-McCoy Trails Network



Introduction

Nestled among the rolling hills in picturesque southern West Virginia, the Hatfield-McCoy Trails network draws thousands of off-road trail riders into the area each year. The Hatfield-McCoy Trails first opened in October 2000 with three trail systems in one of the most economically distressed areas of the State. Since that time, the Hatfield-McCoy Trails have expanded to include eight trail systems in seven southern West Virginia counties and currently include approximately 700 miles of trails, making it the largest professionally managed off-road vehicle trail systems on privately owned, non-public land in the world (Hatfield-McCoy Trails 2014).

The Hatfield-McCoy Trails have provided the region with increased employment opportunities in seven counties, an increase in tourism and attention for hosting a nationally-recognized trail system. The Hatfield-McCoy Trails have been featured in and received accolades from several off-road publications and television programs, including *Dirt Wheels*, *ATV Illustrated*, *Fisher's ATV World* and *Dirt Trax Television* (Hatfield-McCoy Trails 2014). The Hatfield-McCoy Trails also host the Hatfield-McCoy National TrailFest each year. According to the Hatfield-McCoy Trails, TrailFest is “one of

Fantastic system. I recommend it to anyone who asks about ATVing.

– 2014 Survey Respondent

the premier UTV, ATV and dirtbike riding events across the country” (Hatfield-McCoy Trails 2014). It is anticipated that the 2014 National TrailFest event could draw in more than 2,500 trail riding participants and a similar number of local and regional spectators (Hatfield-McCoy Trails 2014).

The Hatfield-McCoy Regional Recreation Authority (HMRRA), the organization that oversees the Hatfield-McCoy Trails, contracted with the Marshall University Center for Business and Economic Research (CBER) to

examine economic and fiscal benefits in detail. This report seeks to quantify the economic impacts of the presence of the Hatfield-McCoy Trails—its annual expenses and those of its visitors to the area—while also taking into account the non-quantified benefits that may be attributed to the Trail System’s presence and success. Comparisons will be drawn to the 2006 report also completed by CBER and will include an analysis of the improvements the Hatfield-McCoy Trails have made in their nearly 14 years of operation.

About the Hatfield-McCoy Trails

Background and Development

The concept of an economic development project for distressed southern West Virginia was put into action in the early 1990s. Spurred by the desire to promote tourism development potential in this area, entities including the Hatfield-McCoy Recreation Development Coalition and the U.S. Army Corps of Engineers conducted surveys of community leaders and feasibility and economic impact studies of proposed projects to examine the viability of development options. In 1996, the Hatfield-McCoy Regional

Excellent experience!

– 2014 Survey Respondent

Recreation Authority (HMRRA) was established by the West Virginia Legislature to oversee the continual development of the Hatfield-McCoy Trails economic development project.⁴

The initial plan included seven counties—Boone, Lincoln, Logan, McDowell, Mingo, Wayne and Wyoming—and was later revised to also include Mercer and Kanawha. Development of the first three trails concluded in 2000 and the Hatfield-McCoy Trails officially opened in October of that year with roughly 300 miles of trails. The long-term plan includes a goal of offering riders approximately 2,000 miles of trails in total, spanning all nine project counties.

Governance

Management and governance of the Hatfield-McCoy Trails is the responsibility of the Hatfield-McCoy Regional Recreation Authority (HMRRA). The HMRRA is a statutory corporation established by the West Virginia Legislature with the intent to maintain trail-oriented recreation and generate economic development in southern West Virginia. According to the current Five Year Trail Development Plan, the goal of the HMRRA includes developing “a world-class trail system with an emphasis on economic development” in the nine specified West Virginia counties (HMRRA 2014). The HMRRA’s governing board is required to include at least 17 members, including county commission members, the Director of the Division of Travel and Tourism, the Director of the Division of Natural Resources and the Director of the Division of Forestry.⁵

The HMRRA is responsible for both enabling and facilitating the development and operation of the Hatfield-McCoy Trails network.⁶ The Board is responsible for agreements with landowners—both corporations and individuals—to secure land for trail development. By legislation, landowners are protected from liability on lands used for the Hatfield-McCoy Trails network. Much of the continuing success of developing trails on land owned by corporations and individuals can be attributed to the public-private partnership established between HMRRA and other entities.

Current Trail Systems

The current Hatfield-McCoy Trails network includes roughly 700 miles of trails distributed over eight trail systems. Each system provides riders with a unique off-road perspective of southern West Virginia. Most trails can accommodate all-terrain vehicles (ATVs), utility terrain vehicles (UTVs or side-by-sides) and off-road motorcycles. The Ivy Branch Trail System also accommodates other vehicle types, including off-road vehicles (ORVs), which are prohibited on most Hatfield-McCoy Trail systems. The Hatfield-McCoy Trails network currently operates eight trail systems that are open 365 days a year from daylight to dark. Open trail systems are graded by difficulty. Trail difficulty

⁴ West Virginia Code §20-14, et seq.

⁵ West Virginia Code §20-14-3(b), et seq.

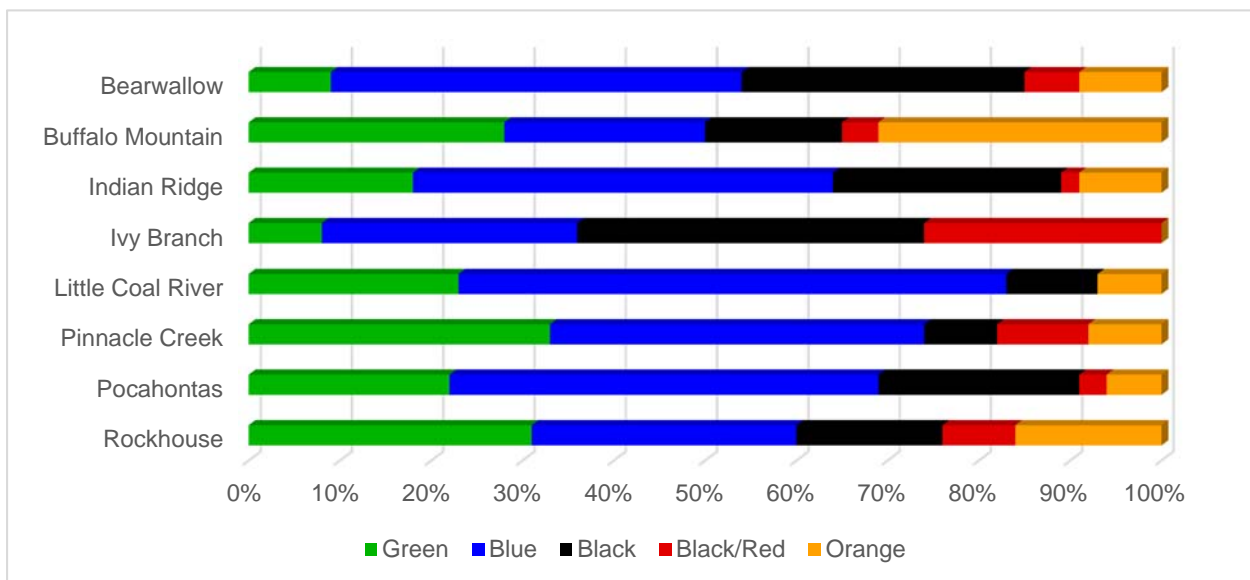
⁶ West Virginia Code §20-14-3.

increases in the following order (Hatfield-McCoy Trails 2014):

- Easiest (green trails)
- More difficult (blue trails)
- Most difficult (black trails)
- Most difficult with vehicle restrictions (black and red trails)
- Single track (orange trails).

HMRRA determines the proportion of trail difficulty levels by trail system (see Figure 3). These proportions represent an estimate of the number of trails in each trail system by trail difficulty rating. Pinnacle Creek offers the largest proportion of green trails (33 percent) while Little Coal River offers the largest proportion of blue trails (60 percent). Ivy Branch offers the largest proportion of both black and black/red trails (38 percent and 26 percent, respectively). Buffalo Mountain provides the largest proportion of single track only trails (31 percent) in the Hatfield-McCoy Trails network. Trail difficulties by system are also displayed on the maps provided in Appendix A. An overview of each trail system is provided in Appendix B.

Figure 3 Proportion of Difficulty Ratings by Trail System



Hatfield-McCoy Regional Recreation Authority (HMRRA), 2014.

Future Plans

The HMRRA updates its Five Year Trail Development Plan each year as part of its commitment to the continual enhancement of the Hatfield-McCoy Trails and the economic conditions of the region. The Plan details statistics of current trail systems; provides updates for planned trail systems and those currently in progress; notes the status of ancillary plans; and reviews the HMRRA's current and future staffing plan that shows any deficits in rangers and operators needed to manage the Hatfield-McCoy Trail

system. The most recent plan for years 2013 to 2017 outlines the status of several projects, each of which is a testament to the continued growth of the Hatfield-McCoy Trails network.

Planning for the Warrior Trail System in War, WV, has commenced. Mapping is complete and awaiting approval, and the environmental component of the site has been finished. If approved, the trailhead will be located on property owned by the McDowell County Board of Education in the Town of War. This system is expected to include approximately 70 miles of trails in Phase 1, connecting the towns and city of War, Gary and Welch (HMRRA 2014). In Phase 2, the system will add direct access connections in Anawalt, Davy, Twin Branch and Kimball, as well as to the Indian Ridge Trail System.

Planning for another trail system and trailhead in Oceana, WV, has also begun. Currently, mapping for the Oceana Trail System is complete and is awaiting approval from the Pocahontas Land Corporation (PLC) and Patriot Coal, the lessee of the property (HMRRA 2014).

A Wayne County Trail System is under site evaluation and other development. The proposed site is currently located near the East Lynn Lake area of Wayne County.

Other trail systems currently in varying stages of planning include the Devil Anse Trail System—named for Devil Anse Hatfield of the Hatfield-McCoy Feud—and the Madison/Danville Trail System (HMRRA 2014). Agreements for the Devil Anse Trail System, which will connect to the Rockhouse and Buffalo Mountain trail systems and possibly also the Devil Anse Cemetery, are currently being executed. Currently, the status of the Madison/Danville Trail System includes negotiating agreements with land owners. However, roughly 25 to 35 miles of new trail have been identified for this system (HMRRA 2014).

Connectors for the Pinnacle Creek and Bearwallow trail systems have been proposed. The proposed project for the Pinnacle Creek Trail System includes a connector between Twin Falls State Park and Mullens, WV (HMRRA 2014). Hatfield-McCoy staff are also working with the PLC to develop a parking lot. Planning for the City of Logan Fountain Place Mall connector for the Bearwallow Trail System is in process.

The Rahall Transportation Institute (RTI) has hired Summit Engineering, Inc., to design a CSX Trestle Project for the Rockhouse Trail System in Man, WV (HMRRA 2014). Completed designs and plans have been submitted to WVDOH and FHA for approval. Summit was also under contract for a feasibility study and design work for the Little Coal River Bridge Project, which would impact both the Ivy Branch and Little Coal River trail systems (HMRRA 2014).

I've always had a great experience each time I have visited the Trails and have found everyone I have [met] ... to be very friendly and helpful.

– 2014 Survey Respondent

Existing Research

Economic impact studies of recreational facilities such as the Hatfield-McCoy Trails quantify the monetary benefit that such amenities can provide to the regions in which they exist. In a 2006 study, Camoin Associates Economic Development evaluated non-resident ATV-related spending impacts in the Tug Hill region in New York.⁷ The authors concluded that approximately 369 full-time equivalent (FTE) jobs were sustained due to ATV presence in the area. The analysis estimated that nearly \$35.3 million in total output could be attributed to non-resident ATV-related spending (Camoin Associates 2006).

The East Central Florida Regional Planning Council (2011) evaluated the economic and behavioral impacts of the Little Econ Greenway, West Orange and Cady Way Trails on the Orange County, Florida, economy by administering a survey of the East Central Florida Greenways and Trails Users Group.⁸ The resulting analysis estimated that nearly \$32.6 million in total output could be related to the presence of the trails in the local economy (East Central Florida Regional Planning Council 2011). Total employment sustained exceeded 500 jobs.⁹

*Best ATV experience
both on and off the
trails!*

– 2014 Survey Respondent

Kaliszewski (2011) examined the impact of the Teton County, Wyoming, trail system—specifically the Jackson Hole Trail Project—on the Teton County economy. The Jackson Hole Trails provide walking and biking trail options in and around the Town of Jackson. The resulting analysis estimated that more than \$16 million in economic activity was generated in 2010 as a result of the presence of the trails (Kaliszewski 2011).

Data and Methodology

Data collected to analyze the impact of the Hatfield-McCoy Trails network on the State of West Virginia include financial statements and employment figures supplied by the Trails and spending patterns modeled from a visitor's survey distributed to the Hatfield-McCoy Trails email list. Other supplementary information is presented as appropriate to better model the economic and demographic base of both the State and the region housing the Hatfield-McCoy Trails network.

⁷ The authors used IMPLAN® economic modeling software for the analysis.

⁸ These trails are used more for biking and walking than ATV-related recreation.

⁹ The authors used the Regional Economic Model, Inc. (REMI) economic modeling software to conduct the analysis. It was unclear whether these jobs are representative of full-time, part-time and seasonal employment or FTEs.

Study Area and Relevant Geographic Regions

The State of West Virginia serves as the study area for the purpose of constructing the economic impact model in IMPLAN®.¹⁰ However, as the focus of the Hatfield-McCoy Trails project is nine southern West Virginia counties (seven of which currently have a Trails presence), this study analyzes the specific demographic and economic characteristics of the Trails' region as well.¹¹

Regional analysis for Hatfield-McCoy Trails counties is considered in two groups: Region I and Region II. Region I includes the nine counties in the Hatfield-McCoy Trails project area that benefit directly from the Trails network:

- **Boone**
- Kanawha
- **Lincoln**
- **Logan**
- **McDowell**
- **Mercer**
- **Mingo**
- Wayne
- **Wyoming.**

*We have a lot of fun
when we visit and
cannot wait to come
back!*

– 2014 Survey Respondent

Region II is a subset of Region I, containing all but two counties—Kanawha and Wayne. The seven remaining counties (**bolded** in the above list) represent those with a current Hatfield-McCoy Trails presence and are presented as such to better analyze changes in the immediate area surrounding the Trails network. Geographic representation of project county locations is provided in Appendices C and D.

Demographic and Economic Data

This report uses demographic and economic data releases as available from a number of federal sources, including the U.S. Census Bureau, the U.S. Bureau of Economic Analysis (BEA), the U.S. Bureau of Labor Statistics (BLS) and the American Community Survey (ACS) maintained by the Census. Most demographic and economic characteristics reviewed in this report are represented by a trend when possible, in most cases spanning at least the last 14 years to capture changes since the Hatfield-McCoy Trails opened. Data are provided for three main regions: the State of West Virginia;

¹⁰ IMPLAN® stands for IMpact analysis for PLANning. For more information, please visit the IMPLAN Group, LLC website at <https://implan.com/>.

¹¹ A number of factors, including representation of typical local spending patterns, is crucial in establishing the region for an economic impact model. Expanding the study region beyond the State will not likely add value to the analysis beyond capturing small amounts of existing leakages. The term “leakage” refers to monies being lost outside the study area, such as through purchases of goods and services outside the specified region. Leakages are relatively inconsequential to the overall estimate, as IMPLAN® accounts for some leakages to occur within the modeling software.

Region I (encompassing all nine counties included in the Hatfield-McCoy Trails project); and Region II (encompassing all seven counties with a current Trails presence).

*Best riding experience
of my life!*

– 2014 Survey Respondent

Economic Impact and Fiscal Analysis

CBER uses the IMPLAN[®] regional economic impact software, also known as an input-output (I-O) model, to analyze the impact of the Hatfield-McCoy Trails network on the State of West Virginia. The software analyzes the relationship between industries and socioeconomic characteristics of the local economy, resulting in an estimation of income, output and employment, as well as direct, indirect and induced effects of spending. The model used for this analysis is based on data for the year 2011. Unless otherwise specified, dollar figures reported as a result of the economic impact estimate are provided in 2014 dollars.¹²

Measuring Direct, Indirect and Induced Effects

The direct, indirect and induced effects on the economy from the presence of the Hatfield-McCoy Trails are best examined as a ripple effect, where one ripple leads to another and another.

- **Direct effect.** Expenses made by the Hatfield-McCoy Trails and visitors drive the economic impact. This is the direct spending occurring in the local economy on supplies, labor, equipment, goods and services. Direct spending in each of these areas creates respending¹³ throughout the region. Respending is also known as the multiplier effect.
- **Indirect effect.** Indirect spending stems from direct spending: businesses that offer these goods and services in turn spend the money received as payment in other areas of the economy (i.e. monies directly spent by the Hatfield-McCoy Trails and its visitors is respent elsewhere). One example of this respending is employee compensation in the form of wages.
- **Induced effect.** Wages earned by employees are respent for household and discretionary purchases, such as groceries, fuel and entertainment. This is the induced spending generated by direct and indirect spending.

Each tier of economic effect occurs as a result of expenses directly related to the presence of the Hatfield-McCoy Trails. The value of each effect will be provided as a result of the IMPLAN[®] model.

¹² Monetary values as provided by the U.S. Census Bureau, Bureau of Economic Analysis (BEA) and other sources are in nominal dollars and have not been adjusted to 2014 dollars for this analysis.

¹³ It is important to note that not all respending stays within the region. Instead, it is inevitable that some monies will be “leaked” out of the local economy by way of goods and services imported from outside the region. Leakages are accounted for in the modeling software.

State and Local Tax Benefit

The fiscal benefit of the Hatfield-McCoy Trails' presence is considered in two ways. The first, state and local tax impact, is calculated using a tax model developed by CBER. Data used for this calculation are based on preliminary budgeting estimated for FY 2012 as produced by the West Virginia Legislative Auditor's Office, and represent a portion of total State taxes based on direct and total employment related to the presence of the Hatfield-McCoy Trails. The model considers business, consumer sales and use, personal, excise and other taxes and fees with respect to total FTE employment sustained in the State and by the Hatfield-McCoy Trails directly and is not intended to represent a full fiscal impact of the Trails on state and local economies.

Beautiful trails.

– 2014 Survey Respondent

The second benefit is considered with respect to non-local visitor spending. Non-local visitors (those who do not reside in the State) provide fiscal benefit to West Virginia and regional economies through increased sales taxes. When these visitors purchase fuel, prepared food, souvenirs and other goods and services within the State as a result of their visit to the Hatfield-McCoy Trails network, sales taxes are collected that would likely not have been realized otherwise. This tax is approximated based on sales tax rates for each expenditure category in the visitor survey and the estimated expenses attributed to non-local visitors.

Data Collection and Management

Operating Budget and Expenditures

The HMRRA provided annual financial statements for 2000 to the present. These statements illustrate the progression the Hatfield-McCoy Trails has made since its inception. Trails-related expenses have increased nearly 400 percent since opening, and have experienced typical ebbs and flows that can be expected from an expanding organization.¹⁴ Given the pattern of expenditures over the last five years, expenses pertaining to the economic impact model for this analysis are representative of a five-year average of adjusted expenses.¹⁵ This average is indicative of an accurate yet conservative level of recent Trails expenses.

The HMRRA supplied payroll figures and hourly rate estimates, which were used to calculate the full-time equivalence (FTE) for an annual employment figure. To calculate FTEs, part-time individuals must be translated to full-time equivalent positions. The FTE value is important as IMPLAN[®] provides employment estimates based on expenses for FTEs only.

¹⁴ This percentage increase is representative of expenses from calendar years 2001 to 2013 in nominal dollars. Expenses for 2000 and 2014 YTD have been excluded as they are not representative of full years of spending.

¹⁵ Adjustments include allowances for such expenses as depreciation, which do not directly influence the economic impact.

Visitor Survey

Data collected in the Hatfield-McCoy Trails visitor survey include respondent perceptions of various aspects of the different trail systems, experiences while visiting any of the Trails locations and estimates of money spent in various spending categories. Survey responses form the basis of estimated total spending by all Trails visitors. Expenditures for all non-local visitors are estimated using a weighted average of survey respondents.¹⁶ Weighted spending for local visitors is also calculated for comparison. ZIP codes provided by respondents are used to classify each response with a local or non-local designation.¹⁷

Always a memorable experience!

– 2014 Survey Respondent

Retail Sector Spending

Retail spending estimates generated from the visitor survey are point-of-purchase estimates, and not all consumer spending necessarily accrues locally. For example, as West Virginia has very few petroleum refineries, most fuel (both gasoline and diesel) are imported from beyond the State borders. As such, only a small portion of monies used at the point-of-sale to purchase fuel remain in the State. To account for this potential leakage with retail spending, the economic impact is estimated using margined Gross Retail Sales (GSR) in the IMPLAN[®] model, which adjusts reported consumer spending accordingly.¹⁸

Regional Demographic and Economic Characteristics

The demographic and economic characteristics of the Hatfield-McCoy Trails counties are very diverse, especially when compared to those of the State of West Virginia. The region served by the Hatfield-McCoy Trails is among the poorest in both the U.S. and the State. To better understand the region, population, income, labor force, educational attainment and other relevant data are collected and analyzed. The Hatfield-McCoy Trails counties are divided into two groups for comparative purposes. These regions are compared to state-level West Virginia data, and with national data as indicated.

Since the Hatfield-McCoy Trails opened in 2000, the populations of Regions I and II have declined by approximately -0.4 percent and -0.5 percent per year on average, respectively (see Table 2). Comparatively, the West Virginia population has increased by nearly 0.25 percent per year on average.

¹⁶ Spending habits of non-local guests only are used in the IMPLAN[®] model, as monies spent by individuals who live in the area currently would likely still be spent in the area whether or not they visited the Trails. Including spending estimates for local individuals would overestimate the indirect and induced spending attributable to the Trails.

¹⁷ For the purpose of this analysis, local visitors are residents of the State of West Virginia; non-local visitors reside elsewhere.

¹⁸ For more discussion on margining see

http://implan.com/index.php?option=com_kunena&func=view&catid=80&id=16945&Itemid=35.

As population decline regionally, per capita income and median household income in Regions I and II increased from 2000 to 2011, each exceeding the growth in comparable characteristics in West Virginia. In both income categories, Region II annual average growth exceeded Region I.

Table 2 Select Regional Demographic and Economic Characteristics

	2000	2011	% Change	% Change (Annual)
<i>Population</i>				
Region I	471,459	450,751	-4.4%	-0.4%
Region II	228,767	216,722	-5.3%	-0.5%
West Virginia	1,807,021	1,854,908	2.7%	0.2%
<i>Per Capita Income</i>				
Region I	\$ 23,069	\$ 35,893	55.6%	5.1%
Region II	\$ 18,778	\$ 30,383	61.8%	5.6%
West Virginia	\$ 22,173	\$ 33,822	52.5%	4.8%
<i>Rural Population Percentage</i>				
Region I	53.2%	51.5% ^a	-1.6%	-0.2%
Region II	76.4%	72.2% ^a	-4.3%	-0.4%
West Virginia	53.9%	51.3% ^a	-2.6%	-0.3%
<i>Population Aged 25+ with at least a High School Diploma</i>				
Region I	71.4%	80.4%	9.0%	0.9%
Region II	63.8%	74.6%	10.8%	1.1%
West Virginia	75.2%	83.4%	8.2%	0.8%
<i>Labor Force Participation Rate</i>				
Region I	63.0%	63.9%	0.9%	0.1%
Region II	53.7%	56.2%	2.6%	0.2%
West Virginia	67.3%	66.3%	-0.9%	-0.1%
<i>Unemployment Rate</i>				
Region I	5.8%	7.6%	1.9%	0.2%
Region II	6.9%	8.4%	1.4%	0.1%
West Virginia	5.5%	7.8%	2.3%	0.2%

U.S. Bureau of Economic Analysis, U.S. Census Bureau and U.S. Bureau of Labor Statistics, 2014.

^a Most recent rural population percentages represent 2010 estimates.

The unemployment rate in Region II is consistently higher than Region I and the State; however, the regional labor force participation rates have been increasing despite a declining rate statewide. Further, labor force participation Region II has increased at the

fastest rate. A more detailed analysis of other demographic and economic characteristics is provided in Appendix E.

Area Amenities for Visitors

Cities and towns surrounding the eight Hatfield-McCoy Trail systems provide a variety of accommodation, entertainment, grocery, fuel and retail options for visitors to the Trails. Accommodation options include cabins, rental homes, lodges, motels, hotels, campgrounds, RV parks and bed and breakfast establishments (Hatfield-McCoy Trails 2014). Other amenities provided in the immediate area include ATV rentals, restaurants, information centers, welcome centers, white water rafting, gas stations, grocery stores and local shopping establishments.

According to the 2011 release of County Business Pattern data from the U.S. Census Bureau, there were 81 accommodation establishments in the nine-county Hatfield-McCoy Trails area (Region I). Roughly half of these accommodations (nearly 52 percent) lie within the seven-county Hatfield-McCoy Trails area (Region II). Approximately 243 food service establishments are available in Region II counties, along with 143 gas stations. Total annual payroll for these three sector classifications was nearly \$24 million in Region II alone in 2011. As Region II currently contains active trails, the analysis of establishments that follows will focus on this seven-county area.¹⁹

Changes in Regional Business Activity

Trends in regional business activity—measured by annual payroll and number of establishments—from 2000 to 2011 indicate overall growth in Region II counties. While this positive trend cannot be solely attributed to the presence of the Hatfield-McCoy Trails, this growth in regional business activity coincides with the operation and expansion of the Trails network in these key counties. Census estimates for four North American Industry Classification System (NAICS) coded industries were analyzed over the 12-year period since the Hatfield-McCoy Trails opened.²⁰ The four industries—accommodations; food services; gasoline stations; and real estate and leasing and renting—provide an economic overview of area amenities available to visitors. The Food Services industry experienced the largest increase in annual payroll from 2000 to 2011 (nearly 40 percent in Region I and 44 percent in Region II) while the Accommodations industry realized the largest increase in establishments (28.6 percent in Region I and 44.8 percent in Region II).

¹⁹ Region I levels of annual payroll and number of establishments followed a similar trend as Region II during this time period. Where appropriate, Region I annual payroll and/or establishment figures are provided for comparison.

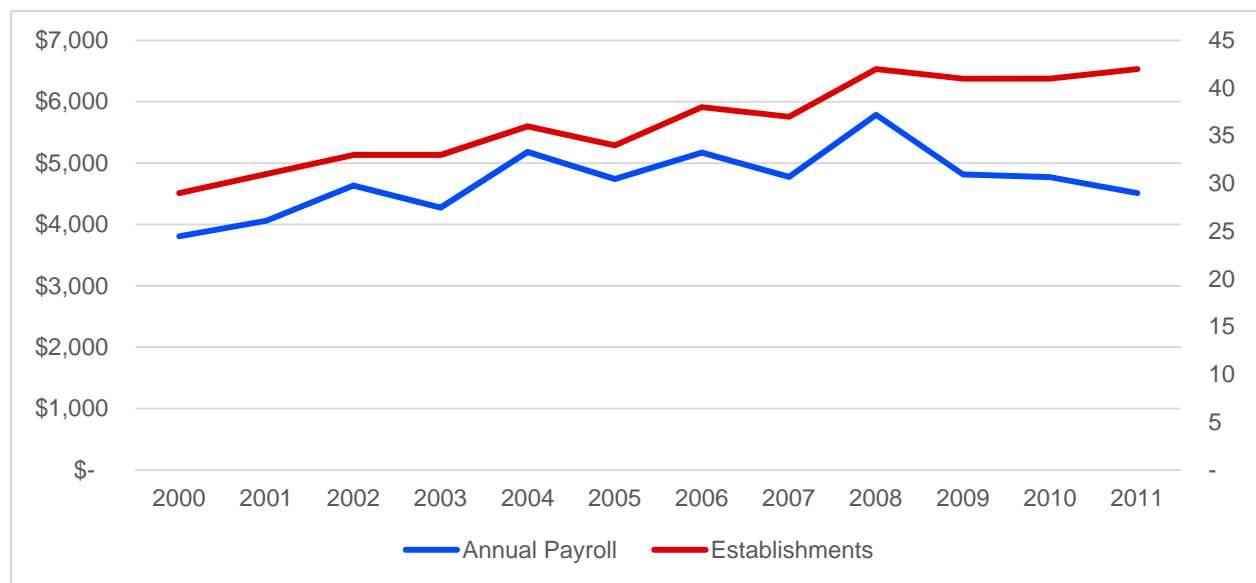
²⁰ Although the Hatfield-McCoy Trails system has been open for nearly 14 years, only 12 years of County Business Pattern data were available at the time of this writing.

Accommodations

Among businesses offering accommodations, Region II has experienced growth in both payroll (18.5 percent) and number of establishments (44.8 percent) from 2000 to 2011. Total annual payroll increased by approximately 1.9 percent per year on average in Region II (see Figure 4). After the economic downturn in 2009, annual payroll realized a decrease of roughly -3.1 percent in Region II. On average, annual payroll in this industry accounted for approximately 20.5 percent of the Region I total.

Number of establishments in Region II increased by roughly 4.1 percent per year on average during the overall time period. While the number of establishments in the larger Region I actually decreased after the economic downturn (by approximately -2.4 percent per year on average), establishments in Region II increased by approximately 1.2 percent. On average, accommodation establishments in Region II accounted for more than 48 percent of those in Region I.

Figure 4 Region II Accommodations Trends 2000-2011



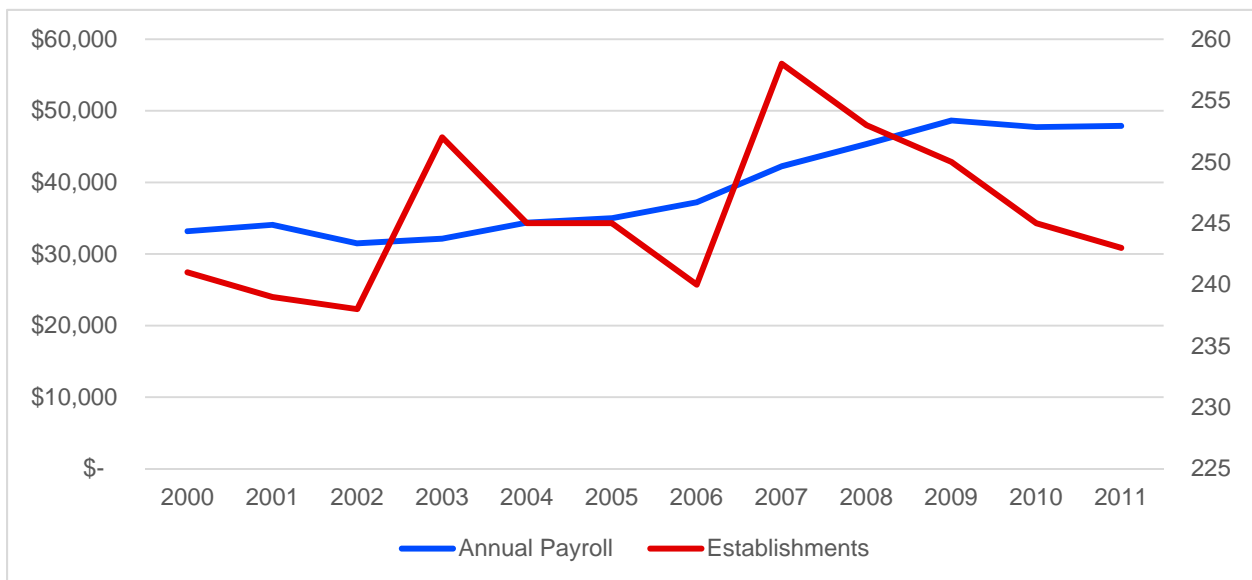
U.S. Census Bureau, 2014.

Food Services

Annual payroll for food services in Region II experienced a relatively stable increase of approximately 44 percent from 2000 to 2011 (see Figure 5). The period after 2005 accounts for much of the increase, which occurred at a rate of 1.1 percent per year on average. Region II annual payroll for food services experienced a slight decline of more than -1.5 percent following the 2009 economic downturn.

Compared to annual payroll, the number of food service establishments follows a slightly different pattern. Increases from 2000 to 2011 were slight (0.1 percent per year on average) and the number of establishments experienced some fluctuation during this time period. In the three years immediately following the economic downturn, Region II experienced a decrease of -1.4 percent per year on average. The proportion of food service establishments in Region II has consequently decreased since 2000: Region II food service establishments accounted for roughly 36.4 percent of Region I establishments in 2000 and only 25.7 percent in 2011.

Figure 5 Region II Food Services Trends 2000-2011



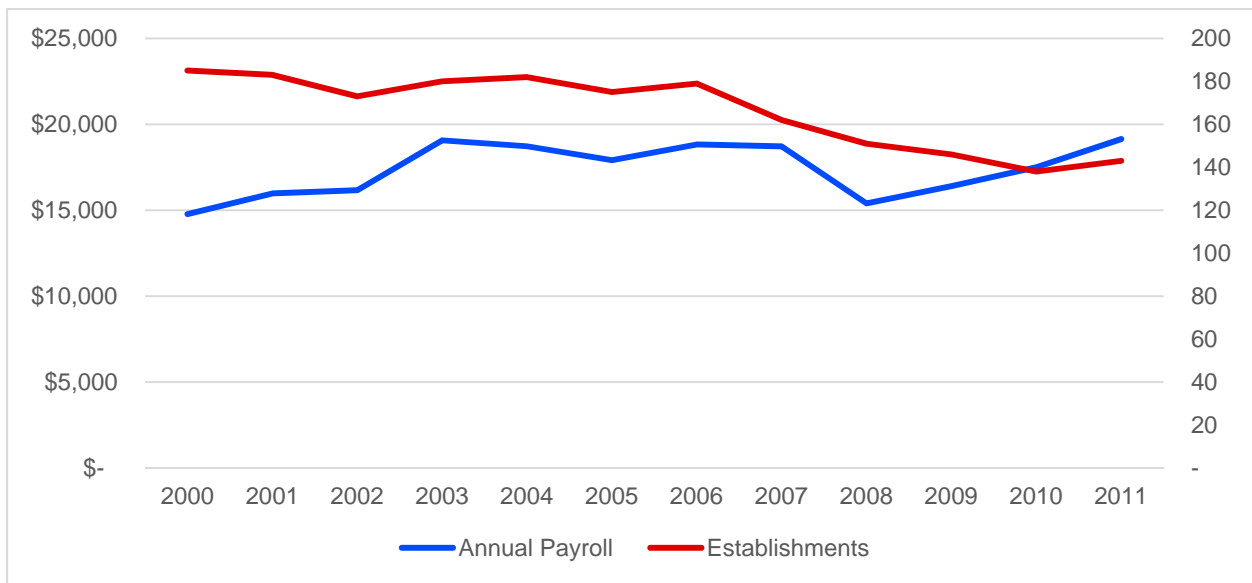
U.S. Census Bureau, 2014.

Gasoline Stations

Annual payroll for gasoline stations in Region II experienced some volatility from 2000 to 2011 (see Figure 6). Overall, annual payroll in this industry increased during this time period (roughly 2.7 percent per year on average) and experienced a similar decline in 2008 preceding the economic downturn. Region II realized an increase in annual payroll in gasoline stations following the economic downturn of roughly 8.3 percent per year on average.

The number of gasoline station establishments in Region II declined by approximately - 2.1 percent per year on average from 2000 to 2011. The proportion of Region II gasoline station establishments to those in Region I has mostly declined. The maximum portion of Region II gasoline station establishments to those in Region I was approximately 57 percent in 2003. The smallest proportion (roughly 53.3 percent) occurred in 2010.

Figure 6 Region II Gasoline Stations Trends 2000-2011



U.S. Census Bureau, 2014.

Survey Respondent Spending

A total of 2,411 responses to the 2014 Hatfield-McCoy Trails visitor survey were complete and valid, making the usable response rate nearly 10 percent of those polled.²¹ Of all usable responses, nearly 79 percent were non-local respondents who indicated a non-West Virginia ZIP code.

The structure of the survey allowed for categorizing three distinct cohorts of respondents:

- Non-riders (individuals who had never visited the Hatfield-McCoy Trails)
- Recent riders (individuals who last visited the Hatfield-McCoy Trails in 2011 or more recently)
- Non-recent riders (individuals who last visited the Hatfield-McCoy Trails in 2010 or prior).

Distinguishing respondents into these categories provides a greater level of detail in habits and opinions pertaining to the Hatfield-McCoy Trail system. This section details the methods used to model visitor spending while using the Hatfield-McCoy Trails. Responses for rider (both recent and non-recent) are provided in a later section, and more detailed discussion pertaining to non-rider responses and respondent demographics are provided in Appendix F.

Respondents who have visited the Hatfield-McCoy Trails were asked to provide spending estimates for 10 expenditure categories. Reported expenses are used in the economic impact to model visitor spending in the State based on the average number of annual riders. Expenditure estimates are also segmented into local and non-local responses to properly model non-local visitor spending for use in the impact analysis.²² Both cohorts are included here for comparison.

In each of the categories, non-local respondents indicated spending more money on their typical visit to the Hatfield-McCoy Trails than their local counterparts (see Table 3). On average, non-local riders spend nearly \$40 more on prepared food (such as at a restaurant) and more than \$35 more on groceries per person during a typical visit. Non-local riders reported larger expenses in other categories, such as fuel for vehicles (approximately \$93 more) and accommodations (approximately \$97 more), but this could be explained by the possible distance traveled and lack of other expense-free accommodations in the area (such as staying in their own home or with a friend/relative).

²¹ Responses were considered unusable if answers were incomplete or if the respondent indicated that he or she was younger than 18 years of age.

²² Local respondents include those who provided a West Virginia ZIP code. Non-local respondents are those who provided a non-West Virginia ZIP code.

Table 3 Survey Respondent Spending for Local and Non-Local Riders

	<i>Local</i>	<i>Non-Local</i>
<i>Prepared food</i>	\$ 66.78	\$ 105.54
<i>Groceries</i>	\$ 56.72	\$ 92.33
<i>Entertainment</i>	\$ 14.96	\$ 35.63
<i>Accommodations</i>	\$ 148.03	\$ 244.80
<i>Retail shopping</i>	\$ 36.54	\$ 60.94
<i>Visiting attractions</i>	\$ 9.95	\$ 20.92
<i>Fuel for vehicles</i>	\$ 101.05	\$ 193.93
<i>Fuel for trail vehicles</i>	\$ 35.97	\$ 66.91
<i>Trail vehicle repair</i>	\$ 16.41	\$ 42.58

Annually, approximately 36,000 riders visit the Hatfield-McCoy Trails, of which more than 28,000 are non-local visitors. These spending estimates suggests total non-local visitor spending exceeds \$21.2 million annually. Of this amount, about \$12.6 million is estimated to be retained in the State and thus constitutes the direct effect of the economic impact of retail spending from non-local visitors to the Hatfield-McCoy Trails.

Economic and Fiscal Impacts

Output figures provided by the IMPLAN[®] software represent the economic impact of the presence of the Hatfield-McCoy Trails network on the State. This impact is based on the direct, indirect and induced effects of spending related to the Hatfield-McCoy Trails and non-local visitors. Each of these effects are measured in four categories:

- **Output.** Total output reflects the dollar value of industry production and represents the total effect of direct, indirect and induced spending on the regional economy (IMPLAN 2014). Output is presented as an annual estimate.
- **Employment.** In this model, employment is measured in full-time equivalent (FTE) employment and represents the number of full-time equivalent positions being directly and indirectly affected by the presence of the Hatfield-McCoy Trails as well as those positions induced as a result of indirect spending. Employment numbers provided in the following results section reflect FTEs, so it is important to note that both full-time and part-time positions are included.
- **Labor income.** Labor income is inclusive of all types of employment income. This includes employee compensation, such as wages and benefits, as well as income received by those who are self-employed and unincorporated business owners (IMPLAN 2014).
- **Value added.** Value added, otherwise known as “gross profit” or “gross earnings”, is an estimate of the dollar value of output generated by the industry beyond the cost of intermediate inputs. This category includes such items as compensation

of employees, taxes on production and imports less subsidies and gross operating surplus (IMPLAN 2014).²³

Direct, Indirect and Induced Output

The direct, indirect and induced outputs are provided in Table 4. It is estimated that more than \$22.2 million in total economic output can be attributed to the presence of the Hatfield-McCoy Trails in the State. More than \$3.3 million of this impact is attributed to the operational expenses of the Hatfield-McCoy Trails, and nearly \$19 million is attributed to the impact of non-local visitor spending.

Table 4 2014 Economic Impact of the Hatfield-McCoy Trails

	<i>Operational Expenses Impact</i>	<i>Non-Local Visitor Spending Impact</i>	<i>Total Impact</i>
<i>Direct Effect</i>	\$ 1,697,307	\$ 12,582,980	\$ 14,280,287
<i>Indirect Effect</i>	\$ 356,988	\$ 3,103,427	\$ 3,460,415
<i>Induced Effect</i>	\$ 1,279,167	\$ 3,227,825	\$ 4,506,992
<i>Total Effect</i>	\$ 3,333,463	\$ 18,914,231	\$ 22,247,694

Operational expenses for the Hatfield-McCoy Trails account for nearly 12 percent of direct spending and non-local visitor spending accounts for the 88 percent balance. The induced effects attributed to operational expenses comprise a larger proportion than the direct and induced effects (nearly 30 percent) due to employee compensation for Hatfield-McCoy Trails employees.²⁴

Full-Time Equivalent Positions Sustained

Approximately 237 full-time equivalent (FTE) positions are supported each year due to the presence of the Hatfield-McCoy Trails (see Table 5).²⁵ Of these positions, 22 are directly sustained by the organization, and approximately 202 can be attributed to non-local visitor spending. With the exception of direct employment by the Hatfield-McCoy Trails, FTE employment in this analysis is estimated by the IMPLAN[®] model.

Table 5 Full-Time Equivalent Positions Sustained

	<i>Operational Expenses Impact</i>	<i>Non-Local Visitor Spending Impact</i>	<i>Total Impact</i>
<i>Direct Effect</i>	22	152	174
<i>Indirect Effect</i>	3	24	26
<i>Induced Effect</i>	10	26	36
<i>Total Effect</i>	35	202	237

²³ IMPLAN[®] defines value added as "...the difference between an industry's or an establishment's total output and the cost of its intermediate inputs. It equals gross output (sales or receipts and other operating income, plus inventory change) minus intermediate inputs (consumption of goods and services purchased from other industries or imported)" (IMPLAN 2014).

²⁴ The direct effect of operational expenses considers only purchases of goods and services by the Hatfield-McCoy Trails. Employee compensation (including wages and benefits) of Hatfield-McCoy Trails employees are included in the induced effect.

²⁵ Jobs represent the full-time equivalent (FTE) positions sustained from one year to the next.

Total Labor Income

Estimated total labor income resulting from Hatfield-McCoy Trails operating expenses and non-local visitor spending is nearly \$7.5 million (see Table 6). The estimated direct effect on total labor income from both operational expenses and non-local visitor spending exceeds \$4.9 million, approximately 13.4 percent of which is attributed to operational expenses directly. In total, operational expenses impact labor income by approximately \$1.2 million and the non-local visitor spending impact is more than \$6.3 million.

Table 6 Total Labor Income

	<i>Operational Expenses Impact</i>	<i>Non-Local Visitor Spending Impact</i>	<i>Total Impact</i>
<i>Direct Effect</i>	\$ 655,263	\$ 4,247,702	\$ 4,902,965
<i>Indirect Effect</i>	\$ 124,545	\$ 1,060,608	\$ 1,185,153
<i>Induced Effect</i>	\$ 399,570	\$ 1,008,257	\$ 1,407,826
<i>Total Effect</i>	\$ 1,179,378	\$ 6,316,566	\$ 7,495,944

Total Value Added

Total value added resulting from both operational expenses and non-local visitor spending exceeded \$12.3 million in this analysis (see Table 7). More than \$7.8 million of this value results from the direct effect, and approximately \$10.3 million is attributed to non-local visitor spending in total.

Table 7 Total Value Added

	<i>Operational Expenses Impact</i>	<i>Non-Local Visitor Spending Impact</i>	<i>Total Impact</i>
<i>Direct Effect</i>	\$ 1,081,033	\$ 6,765,450	\$ 7,846,483
<i>Indirect Effect</i>	\$ 201,973	\$ 1,694,904	\$ 1,896,877
<i>Induced Effect</i>	\$ 741,549	\$ 1,871,285	\$ 2,612,834
<i>Total Effect</i>	\$ 2,024,556	\$ 10,331,639	\$ 12,356,195

Fiscal Impact

The State of West Virginia and the local economies surrounding the Hatfield-McCoy Trails benefit from state and local tax revenue generated from the presence of the trail system and related spending supported by its activities and visitors each year. CBER used two methods to determine a conservative fiscal impact of the presence of the Hatfield-McCoy Trails on the State. Although not comprehensive, these estimates illustrate an additional benefit provided by the Hatfield-McCoy Trails.

The first method considered only the fiscal impacts based on sustained employment. The resulting economic impact analysis determined that an estimated 22 FTE positions are directly sustained by the Hatfield-McCoy Trails year-to-year, and that approximately 85 FTE positions are sustained statewide. The total estimated amount of tax revenue generated by direct employment is nearly \$120,000 (see Table 8). When indirect and induced employments are included, total estimated tax revenue exceeds \$455,500.

Table 8 State and Local Tax Benefit of the Hatfield-McCoy Trails

	<i>Direct</i>	<i>Total</i>
<i>Initial Business Taxes</i>	\$ 35	\$ 133
<i>Business Taxes</i>	\$ 17,930	\$ 68,262
<i>Consumer Sales & Use Taxes</i>	\$ 35,628	\$ 135,639
<i>Personal Taxes</i>	\$ 49,487	\$ 188,399
<i>Excise Taxes</i>	\$ 15,887	\$ 60,483
<i>Miscellaneous Fees and Transfers</i>	\$ 519	\$ 1,974
<i>Taxes Collected by Counties</i>	\$ 177	\$ 675
Total	\$ 119,663	\$ 455,565

Sales taxes resulting from non-local visitor spending were also estimated.²⁶ Tax rates for each expense category gathered in the visitor survey were applied to the approximated total expenses for non-local visitors, including:

- Prepared food: 6 percent
- Entertainment: 6 percent
- Accommodations: 3 percent²⁷
- Retail shopping: 6 percent
- Fuel: \$0.54 per gallon²⁸
- Vehicle repair: 6 percent.

The resulting fiscal impact due solely to sales taxes on non-local visitor spending exceeded \$1.5 million.

Comparison to the 2006 Economic Impact Analysis

In 2006, CBER conducted an economic impact analysis of the Hatfield-McCoy Trails network on the State of West Virginia. This study serves as a useful benchmark to better evaluate the progression of the impact of the Hatfield-McCoy Trails on the West Virginia economy by comparing those results with the current analysis. This comparison indicates that growth has occurred in the economic impact of the Hatfield-McCoy Trails, both from increased direct spending as the Trails have expanded as well as from growth in the indirect and induced effects generated by that spending.

Inflation-adjusted total output in the prior economic impact study of the Hatfield-McCoy

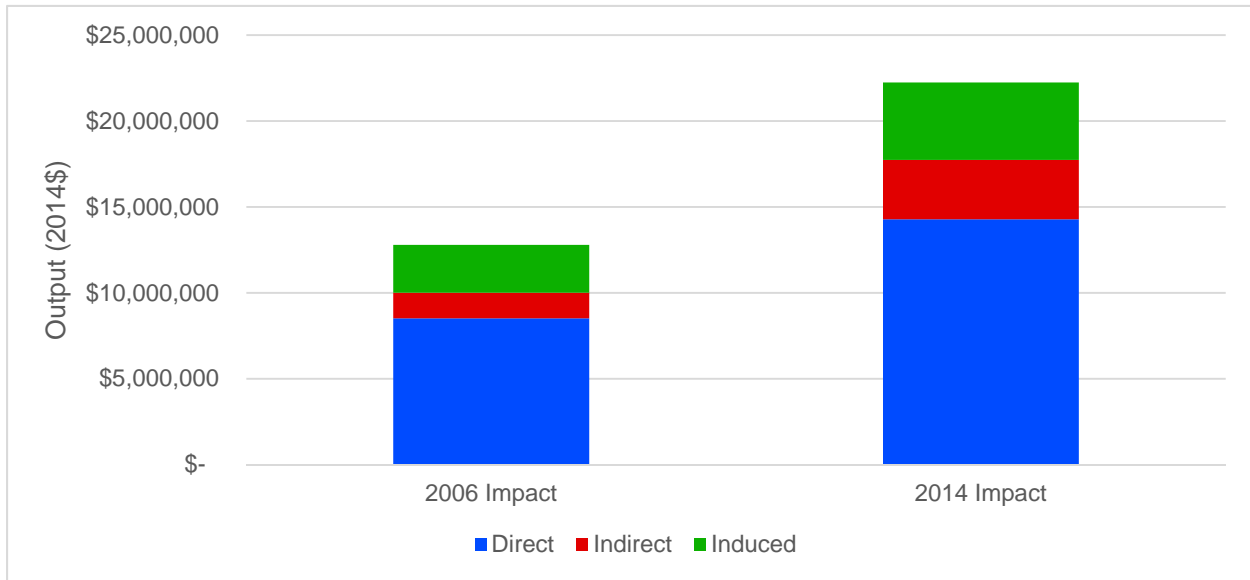
²⁶ Sales tax estimates for local visitor spending were excluded as West Virginia residents are likely to spend money in the State regardless of the presence of the Trails.

²⁷ Hotel/motel taxes are set at a minimum of 3 percent, not to exceed 6 percent, in West Virginia Code. Counties and municipalities have the option to increase this tax up to the maximum. The minimum tax was imposed on accommodations expenses as (a) it would be difficult to determine what portion of the spending habits were taxed at what rate and (b) this provides a conservative estimate of taxes levied.

²⁸ To determine taxes collected on fuel expenses, CBER used the average cost per gallon of regular gasoline as of May 2014 to convert fuel expenses to gallons. The per gallon tax was then applied.

Trails network was estimated to be nearly \$12.8 million (CBER 2006).²⁹ The progression between the 2006 and the current impact analysis is illustrated in Figure 7. Total output increased by nearly 74 percent between the 2006 and 2014 reports, equating to an approximate 9.2 percent increase per year on average. The direct, indirect and induced effects increased by approximately 7.5, 14.7 and 6.9 percent per year on average.

Figure 7 Economic Impact of the Hatfield-McCoy Trails Network 2006 to 2014



Economic Growth Measured by Gross Domestic Product (GDP)

Changes in Gross Domestic Product (GDP) for the State from 2005 to 2012 were also analyzed to better understand the benefit of the Hatfield-McCoy Trails to West Virginia.³⁰ Changes in GDP in two industries closely related to this analysis—arts, entertainment and recreation and accommodation and food services—as well as the total of all industries in the State were evaluated (see Table 9). The arts, entertainment and recreation industry realized a decrease of -1.1 percent per year on average from 2005 to 2012 while the accommodation and food services industry realized an increase of 5.4 percent per year on average. For comparison, the increase in the Hatfield-McCoy Trails’ economic impact exceeded the average annual GDP change of all industries in West Virginia by approximately 5 percent. This suggests that Hatfield-McCoy Trails-related annual economic output increased on average at a greater rate than the output of other goods and services in the area.

²⁹ Output for the CBER (2006) economic impact analysis was inflated to 2014 dollars using an inflation calculator provided by the U.S. Bureau of Labor Statistics (BLS).

³⁰ The 2005 to 2012 time period was used as more recent GDP data is currently unavailable. Due consideration should be given to this difference when comparing the change in economic impact studies.

Table 9 GDP Change for West Virginia Industries 2005-2012

Industry	GDP Change 2005-2012	Annual GDP Change 2005-2012
All industry total ^a	33.8%	4.2%
Arts, entertainment, and recreation	-9.1%	-1.1%
Accommodation and food services	42.8%	5.4%

U.S. Bureau of Economic Analysis (BEA), 2014.

^a Although not specifically listed, All Industry Total includes private industries (such as agriculture, forestry, fishing and hunting; mining; utilities; construction; manufacturing; wholesale trade; retail trade; transportation and warehousing; information; finance and insurance; real estate and rental and leasing; professional, scientific and technical services; management of companies and enterprises; administrative and waste management services; educational services; and health care and social assistance) and government.

Survey Results

West Virginia was the third most represented state based on responses to the visitor survey (11.7 percent).³¹ Among all respondents, 62 percent first heard about the Hatfield-McCoy Trails by word of mouth and 30.7 percent from the Hatfield-McCoy Trails website.³² Magazines, television and social media also accounted for large portions of respondent’s knowledge of the Hatfield-McCoy Trails. The following sections detail responses of both recent and non-recent riders of the Hatfield-McCoy Trails network. Discussion of non-riders (those who have never visited the Hatfield-McCoy Trails) is provided in Appendix F.

Rider Survey Responses

Among all riders, most (more than 62 percent) first heard about the Hatfield-McCoy Trails by word of mouth.³³ The Hatfield-McCoy Trails website was cited second at nearly 31 percent, followed by magazines (17.7 percent) and television (14.6 percent). Most rider respondents have visited the Hatfield-McCoy Trails since 2010 (nearly 93 percent) while the remaining 7 percent had not visited since 2010 or prior. Responses for all riders (both recent and non-recent) are discussed here. For discussion pertaining to non-recent riders who have not visited since 2010 or prior, please see Appendix F.

Rider Behaviors

All riders were asked to provide insight into the number of times they have visited the Hatfield-McCoy Trails since 2000. More than 56 percent indicated that they have visited the Hatfield-McCoy Trails 1-2 times in the last 12 months alone. Nearly 88 percent indicated they visited the Hatfield-McCoy Trails up to 10 times from 2011 to 2013 and

³¹ Most U.S. survey respondents indicated an Ohio (17.3 percent) or Pennsylvania (16.5 percent) residency. Other analysis of survey respondents are provided in Appendix F.

³² Due to the structure of this survey question, more than one response was permitted, resulting in multiple responses per participant in some instances. Responses do not equal 100 percent.

³³ Due to the structure of this survey question, more than one response was permitted, resulting in multiple responses per participant in some instances. Responses do not equal 100 percent.

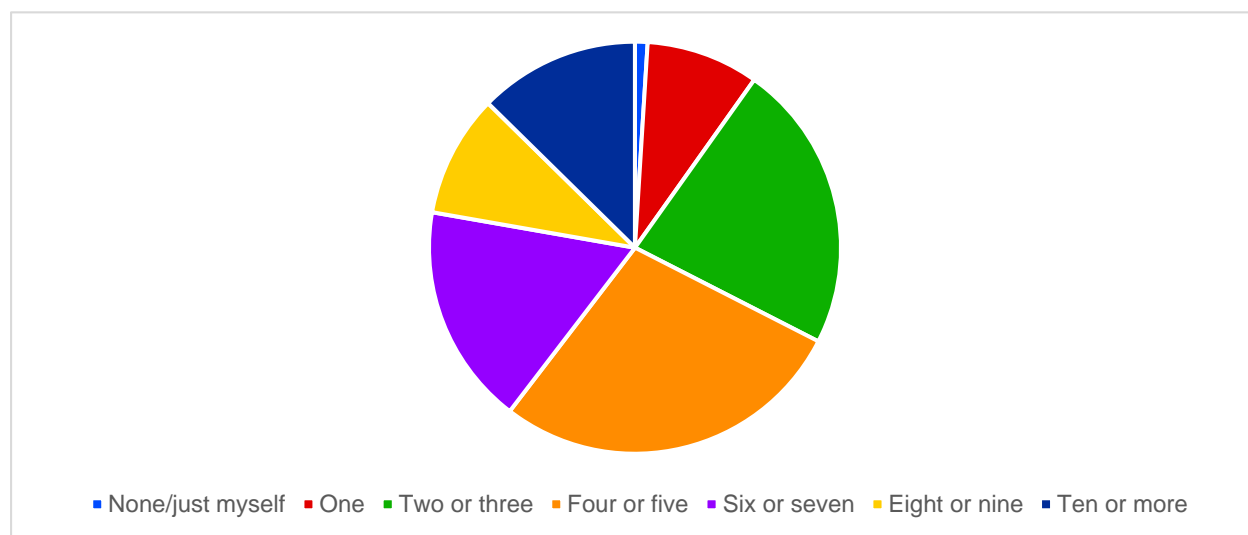
approximately 70 percent indicated they visited the Trails up to 10 times from 2005 to 2010 (see Table 10).

Table 10 Rider Visits to the Hatfield-McCoy Trails

<i>Up to 10 Visits:</i>	<i>All Riders</i>
<i>Within Past 12 Months</i>	76.7%
<i>From 2011 to 2013</i>	87.8%
<i>From 2005 to 2010</i>	70.1%
<i>From 2000 to 2004</i>	30.3%

Most riders (nearly 28 percent) indicated that four or five people typically accompany them on a visit to the Trail in addition to themselves (see Figure 8). An additional 22.7 percent indicated two or three people accompany them, and 17.3 percent indicated that six or seven people accompany them. More than 12 percent indicated a party size of 10 or more in addition to the respondent.

Figure 8 Typical Number of Accompanying People—All Riders

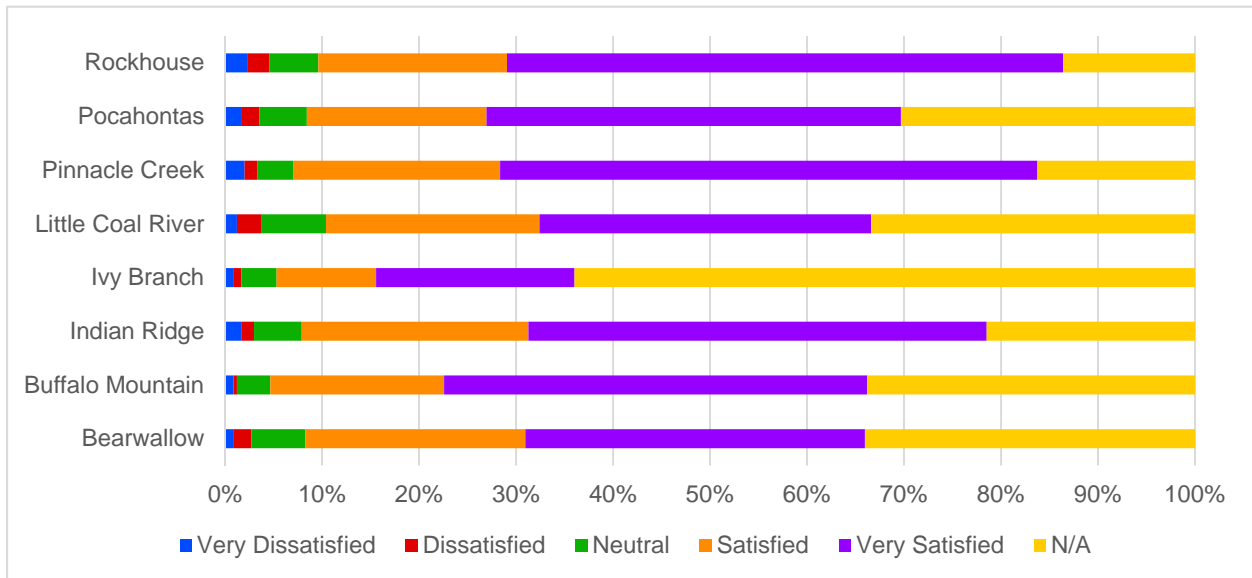


When asked to identify a rider category that best described the respondent, most respondents indicated that they ride trails for leisure and/or scenery (45.2 percent) or that they enjoy a challenging ride (42.9 percent). Most riders also indicated that they ride all-terrain vehicles (ATVs) (75.6 percent) or utility terrain vehicles (UTVs) (30.1 percent). Roughly 22 percent ride off-road motorcycles, and 1.4 percent indicated riding off-road vehicles (ORVs) and/or full-sized vehicles. Most respondents (roughly 57.3 percent) indicated they typically ride the trails two to three days during a visit to the Hatfield-McCoy Trails network, and nearly 30 percent indicated they ride the trails for four to five days.

Riders were asked to rate their level of satisfaction with each of the eight Hatfield-McCoy Trail systems (see Figure 9). If a rider had not ridden a trail, he or she was given

the option for not applicable (N/A). Of those riders who had ridden the various Trail systems, a large majority were either satisfied or very satisfied with their experience. Rockhouse, Pinnacle Creek and Indian Ridge received the highest satisfaction ratings (76.8 percent, 76.8 percent and 70.6 percent, respectively) among all trail systems. A large proportion of respondents (nearly 64 percent) indicated they had not ridden the Ivy Branch trail system. The share of respondents either dissatisfied or very dissatisfied did not exceed 5 percent for any trail system.

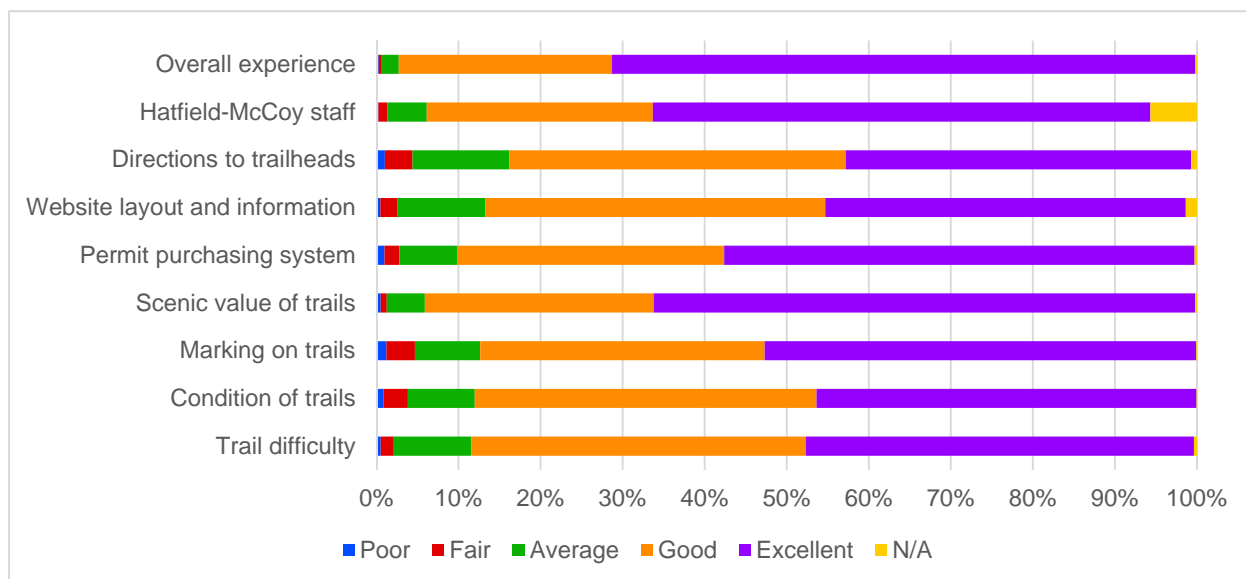
Figure 9 Rider Satisfaction Ratings for Hatfield-McCoy Trails Systems



Overall Rider Satisfaction with the Hatfield-McCoy Trails Network

Respondents were asked to rate their experience with nine categories related to the Hatfield-McCoy Trails (see Figure 10). Responses were largely positive, with most respondents indicating their experience to be “good” or “excellent” in all categories. Approximately 93.9 percent of respondents indicated either a good or excellent experience with respect to the scenic value of the trails, and nearly 90 percent indicated a similar experience with the permit purchasing system. As for overall experience, the vast majority of respondents (97.1 percent) indicated either a good or excellent experience with respect to the Hatfield-McCoy Trails. Nearly 97 percent of all riders either agreed or strongly agreed they would return to the Hatfield-McCoy Trails, and more than 97 percent would recommend the Trails to others.

Figure 10 Overall Rider Satisfaction with the Hatfield-McCoy Trails Network



Conclusions

Beyond the quantitative analysis of the economic impact, it is apparent that the presence of the Hatfield-McCoy Trails provides many intangible benefits to the region and the State of West Virginia as a whole. Although not quantified in this report, these benefits speak to the value of the Hatfield-McCoy Trails and their importance. Off-road trail sites, such as the Hatfield-McCoy Trails network, provide visitors with recreational benefits and promote recreational activity (Maine Department of Transportation, et al. 2006).

The Hatfield-McCoy Trails also provide benefits to land owners through public-private partnerships. By entering into such agreements, land owners are provided insurance, professional management services and law enforcement. By extension, continual development of the Hatfield-McCoy Trails will continue to improve the aesthetic value of the area and promote additional development in many other sectors of the local

economy.

The presence of the Hatfield-McCoy Trails in southern West Virginia has benefited the local economy and the State for more than a decade. Through the continual development and enhancement of the trail system and other amenities provided by the Hatfield-McCoy Trail network, the economic and educational wellbeing of area residents has improved and is likely to realize continued improvement in years to come.

References

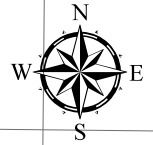
- ACS. 2014. "American Community Survey." *U.S. Census Bureau*.
<https://www.census.gov/acs/www/>.
- ARC. 2013. *Status of Corridors in West Virginia*. Washington, D.C.: Appalachian Regional Commission.
- BEA. 2014. *U.S. Bureau of Economic Analysis*. <http://bea.gov/index.htm>.
- Camoin Associates. 2006. *Tug Hill Region ATV Economic Impact Study*. Saratoga Springs, NY: Camoin Associates Economic Development.
- CBER. 2006. *The Economic Impact of the Hatfield-McCoy Trail System in West Virginia*. Huntington, WV: Center for Business and Economic Research.
- East Central Florida Regional Planning Council. 2011. *Economic Impact Analysis of Orange County Trails*. Alamonte Springs, FL: East Central Florida Regional Planning Council.
- Hatfield-McCoy Trails. 2014. *Hatfield-McCoy Trails*. <https://www.trailsheaven.com/>.
- Hatfield-McCoy Trails. 2014. *Hatfield-McCoy Trails Brochure*. Hatfield-McCoy Trails.
- HMRRA. 2014. *Hatfield-McCoy Trails Five Year Trail Development Plan*. Lyburn, WV: Hatfield-McCoy Regional Recreation Authority.
- IMPLAN. 2014. *Knowledge Base*.
http://implan.us/index.php?option=com_content&view=article&id=809%3Aknowledge-base-wiki&catid=187%3Afaq&Itemid=166.
- Kaliszewski, Nadia. 2011. *Jackson Hole Trails Project Economic Impact Study*. Laramie, WY: University of Wyoming.
- Maine Department of Transportation, et al. 2006. *Trail Management Plan and Proposal: Calais Branch Corridor*. Maine Department of Transportation.
- U.S. Census Bureau. 2013. "Urban and Rural Classification." *U.S. Census Bureau*.
<http://www.census.gov/geo/reference/urban-rural.html>.

Appendix A Hatfield-McCoy Trails Maps

(maps begin on following page)

Bearwallow Trail System


March 2014



Points of Interest

- Logan Overlook
- Radio Towers

Legend



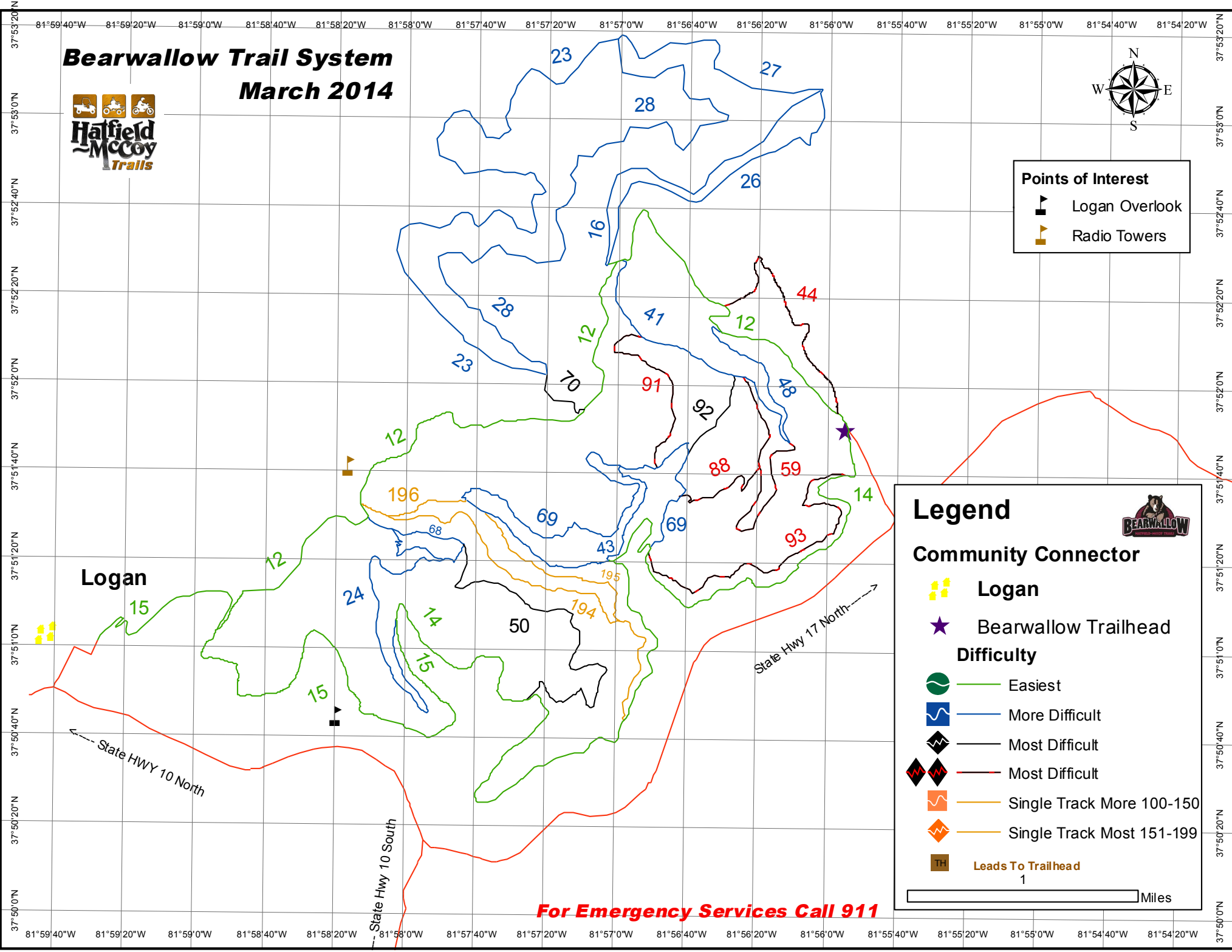
Community Connector

- Logan
- Bearwallow Trailhead

Difficulty

- Easiest
- More Difficult
- Most Difficult
- Most Difficult
- Single Track More 100-150
- Single Track Most 151-199
- Leads To Trailhead 1

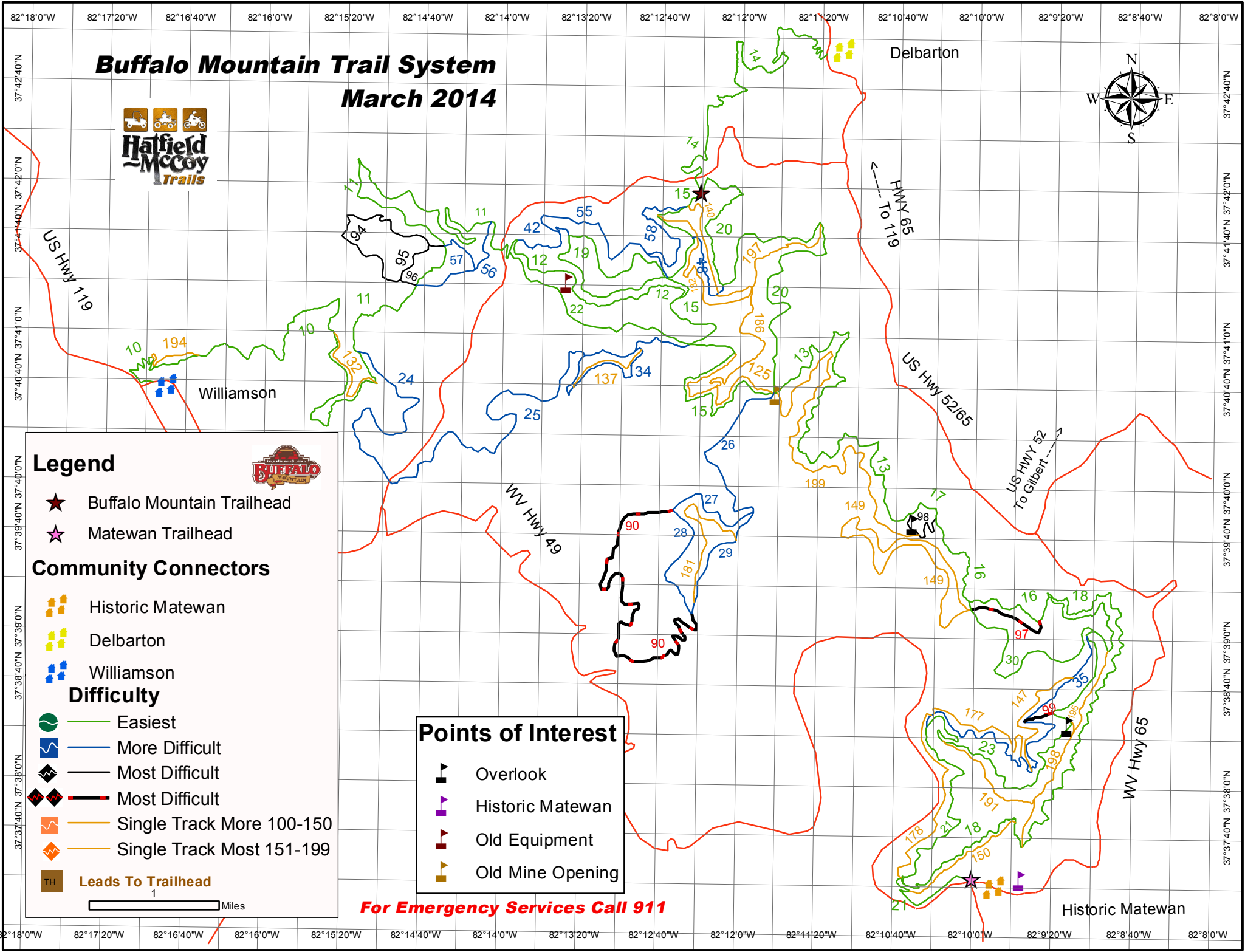
Miles



For Emergency Services Call 911

Buffalo Mountain Trail System

March 2014



Legend

- ★ Buffalo Mountain Trailhead
- ★ Matewan Trailhead

Community Connectors

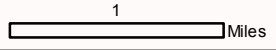
- Historic Matewan
- Delbarton
- Williamson

Difficulty

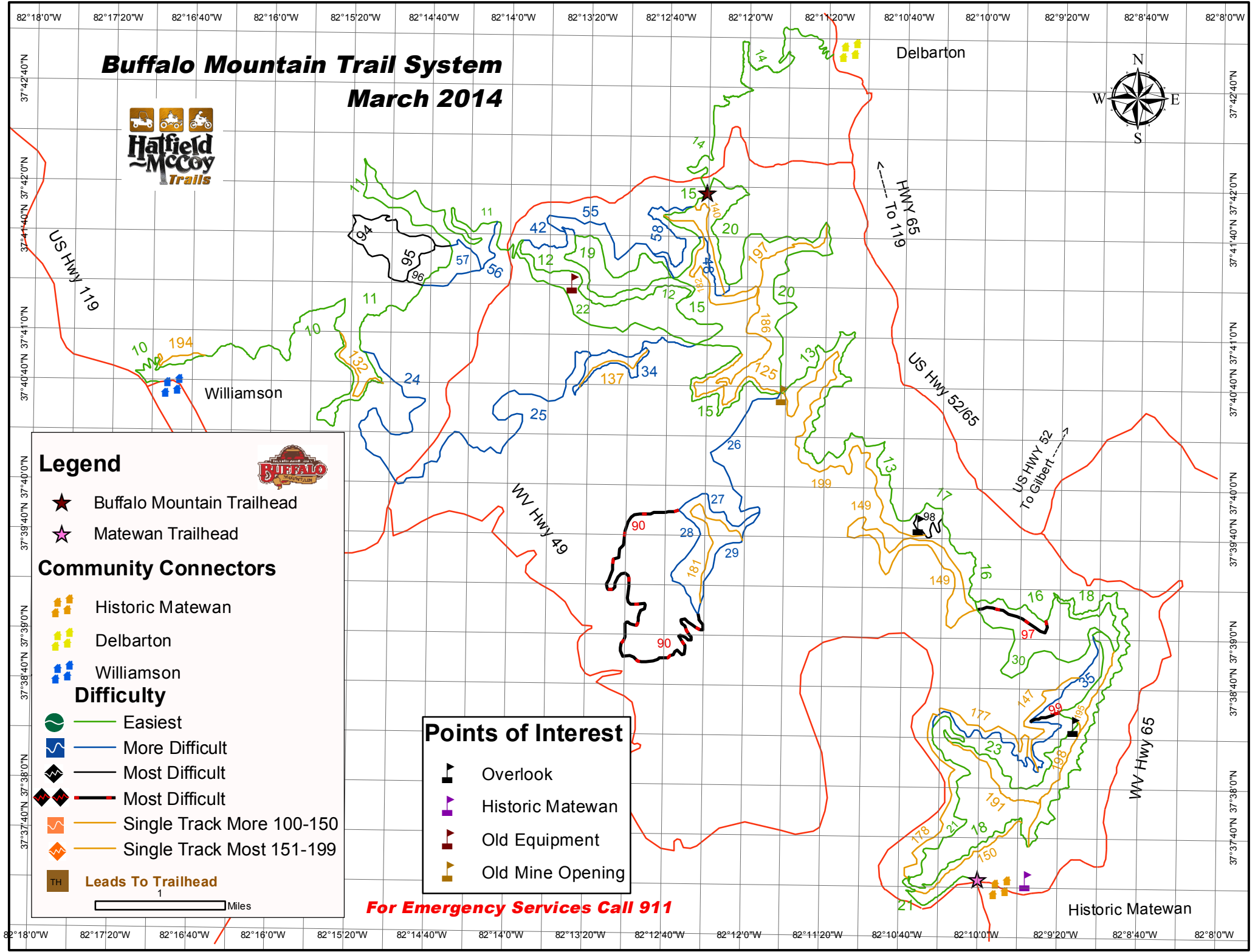
- Easiest
- More Difficult
- Most Difficult
- Most Difficult
- Single Track More 100-150
- Single Track Most 151-199
- Leads To Trailhead

Points of Interest

- Overlook
- Historic Matewan
- Old Equipment
- Old Mine Opening

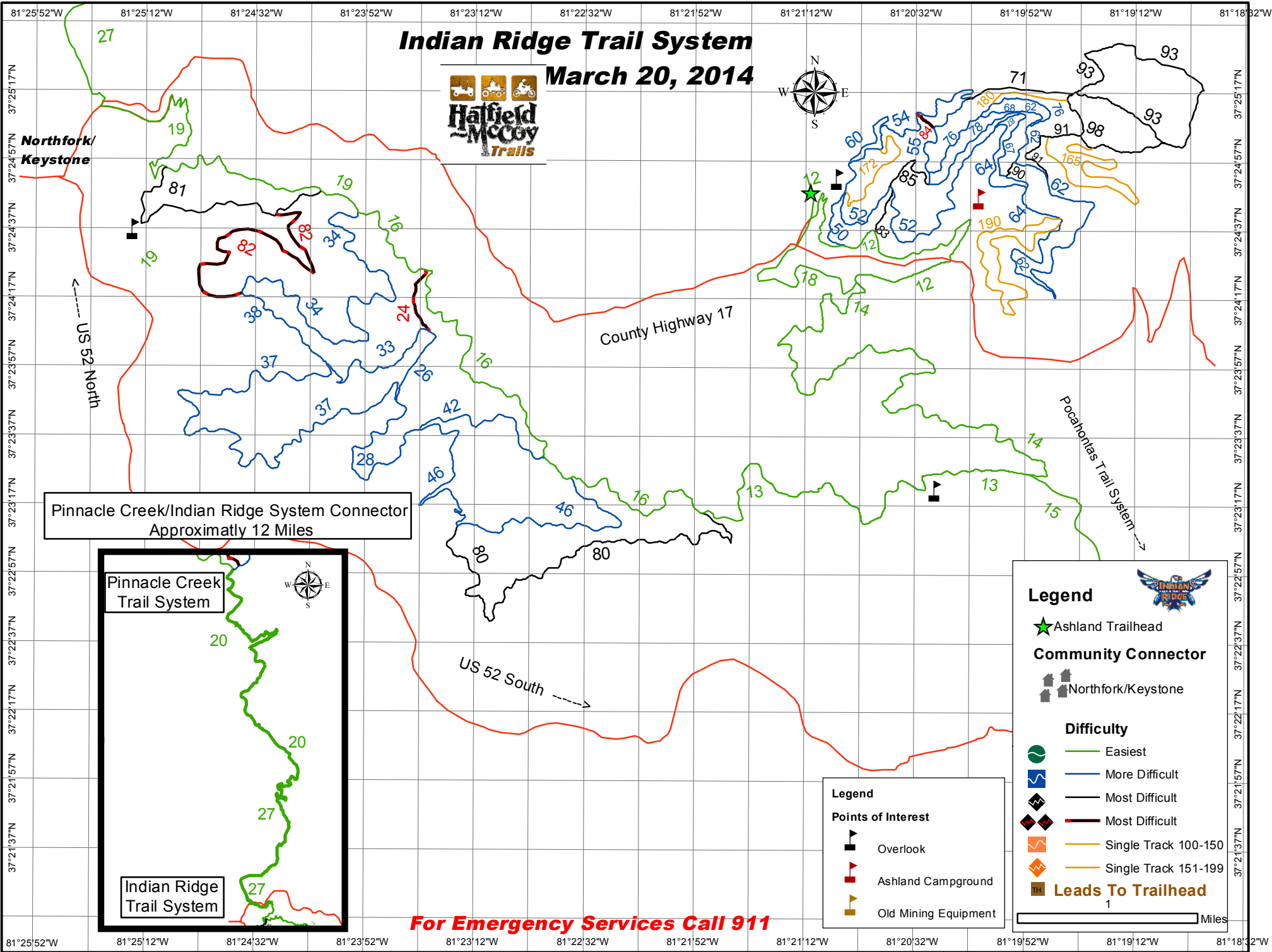


For Emergency Services Call 911

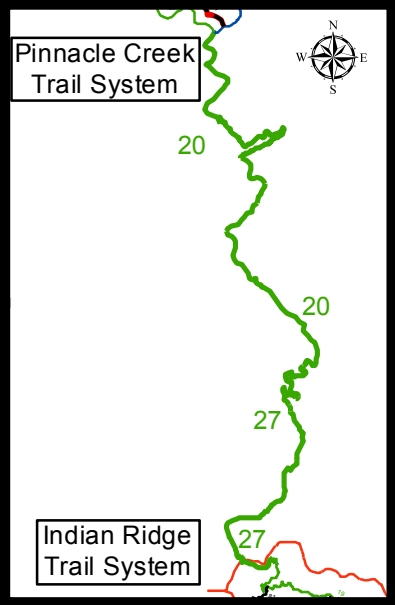


Indian Ridge Trail System

March 20, 2014



Pinnacle Creek/Indian Ridge System Connector
Approximately 12 Miles



Legend

- ★ Ashland Trailhead
- Community Connector**
- Northfork/Keystone
- Difficulty**
- Easiest
- More Difficult
- Most Difficult
- Most Difficult
- Single Track 100-150
- Single Track 151-199
- Leads To Trailhead

1 Miles

Legend

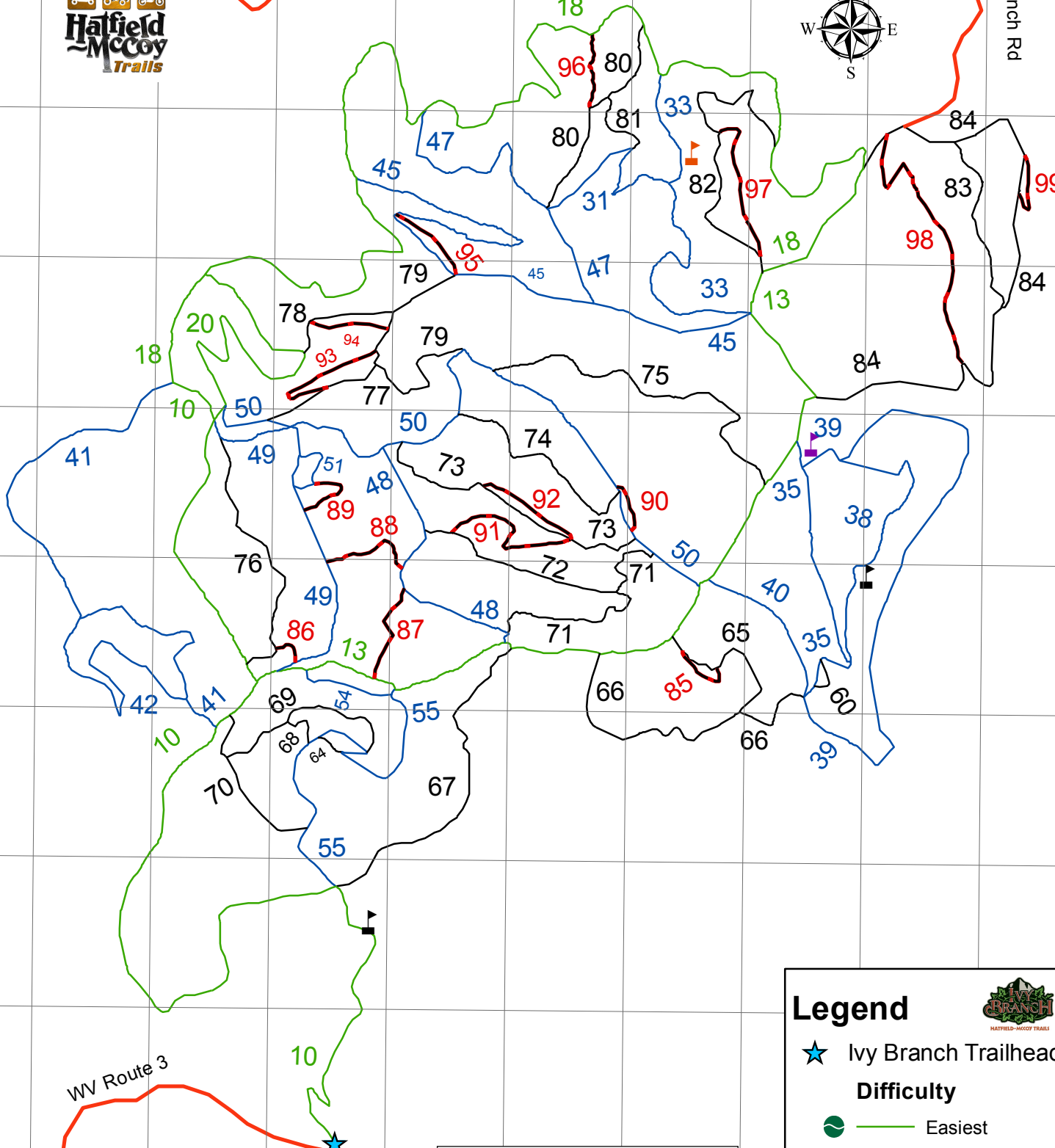
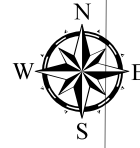
Points of Interest


- Overlook
- Ashland Campground
- Old Mining Equipment

For Emergency Services Call 911




Ivy Branch Trail System

March 2014





 All Trails are open to ORV's
 Roll cage required for ORV's on:
 Most Difficult (Black) All
 Most Difficult (Red/Black) All

Points of Interest






-  Overlook
-  Old Building Foundations
-  Rock Formation

Legend



-  Ivy Branch Trailhead

Difficulty

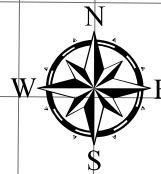
-  Easiest
-  More Difficult
-  Most Difficult
-  Most Difficult
-  Leads To Trailhead

0.5 Miles

For Emergency Services Call 911

Little Coal River Trail System

March 2014



US 119 N to Charleston

US 119 S to Danville/Madison

Points of Interest

- Overlook

Legend

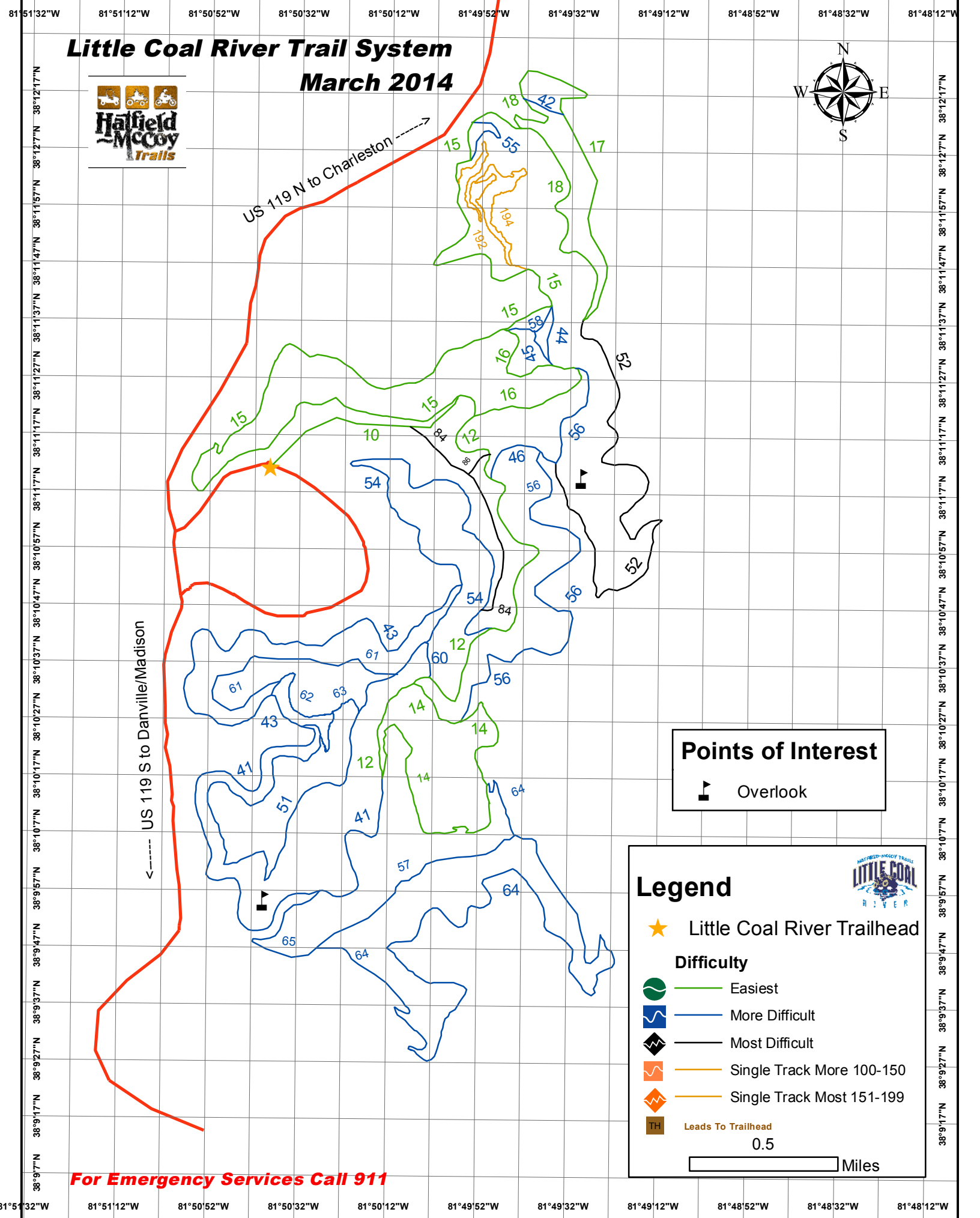


- Little Coal River Trailhead
- Difficulty**
- Easiest
- More Difficult
- Most Difficult
- Single Track More 100-150
- Single Track Most 151-199
- Leads To Trailhead

0.5 Miles

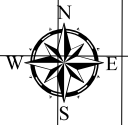


For Emergency Services Call 911



Pinnacle Creek Trail System

March 2014



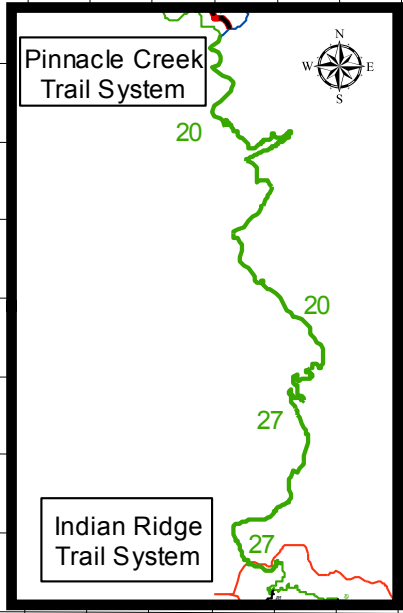
WV HWY 10/16

Mullens

Pineville


WV HWY 16

Pinnacle Creek/Indian Ridge System Connector
Approximatly 12 Miles



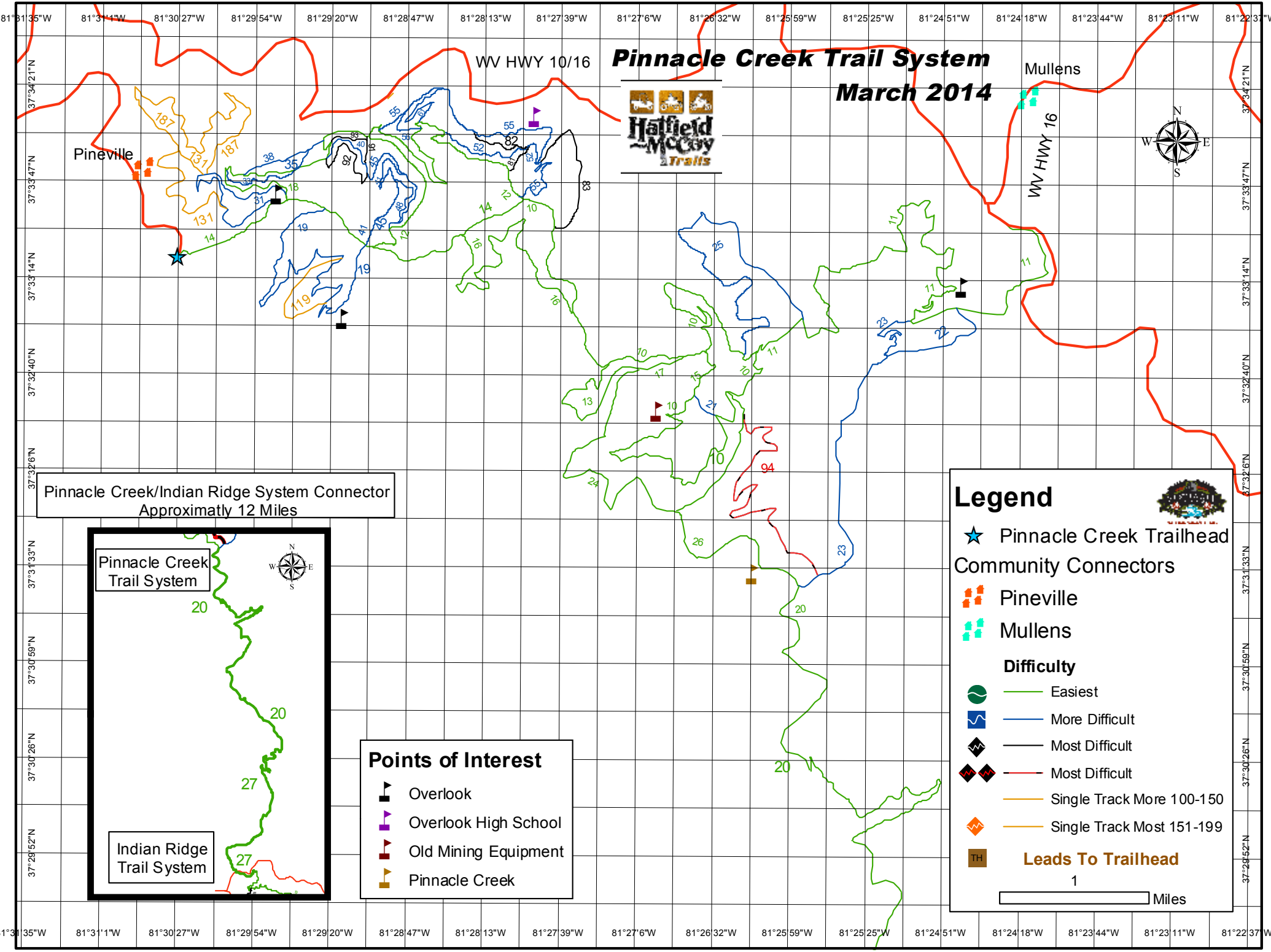
- ### Points of Interest
- Overlook
 - Overlook High School
 - Old Mining Equipment
 - Pinnacle Creek

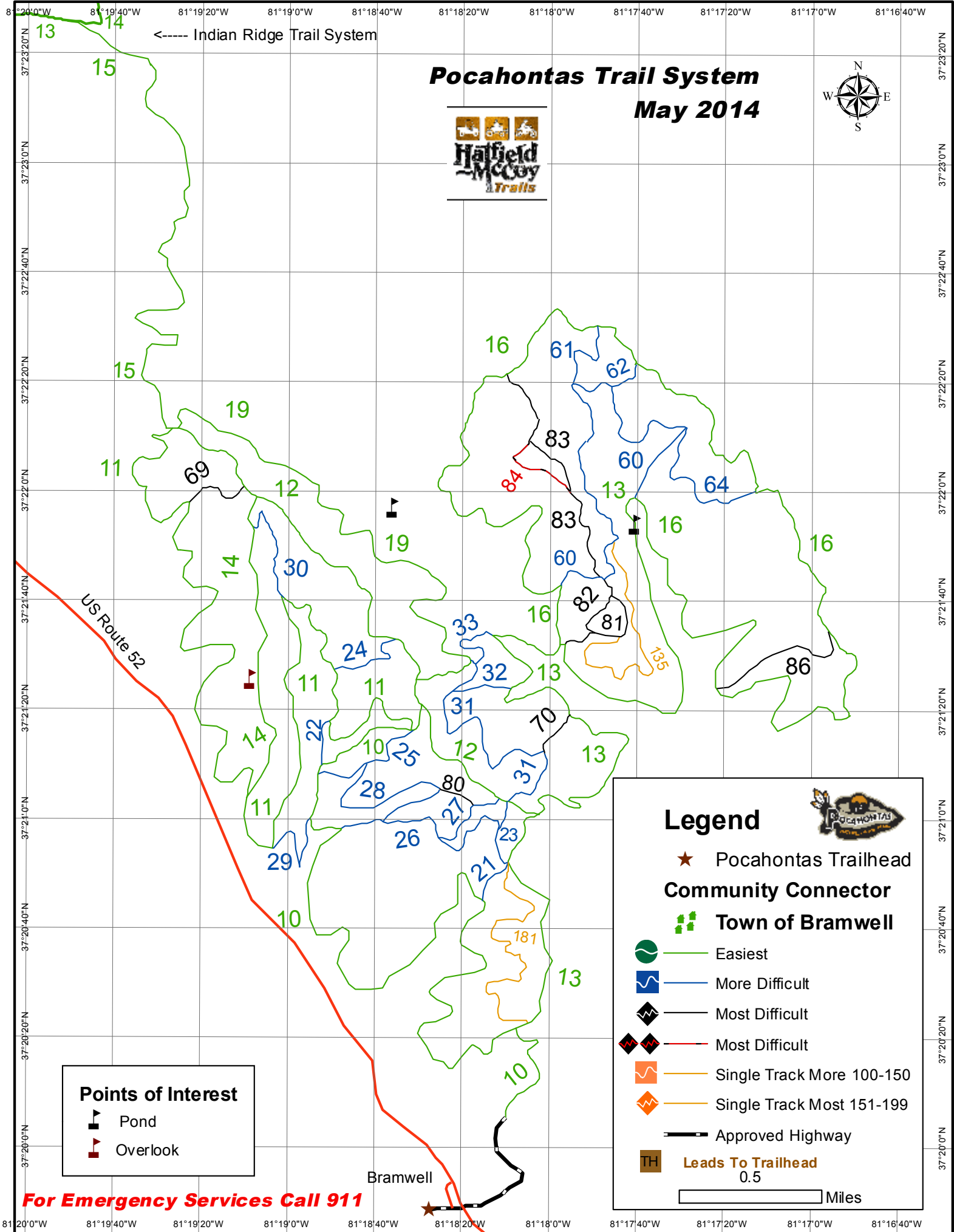
Legend



- Pinnacle Creek Trailhead
- Community Connectors**
- Pineville
- Mullens
- Difficulty**
- Easiest
- More Difficult
- Most Difficult
- Most Difficult
- Single Track More 100-150
- Single Track Most 151-199
- Leads To Trailhead

1
Miles





----- Indian Ridge Trail System

Pocahontas Trail System


May 2014



Points of Interest

- Pond
- Overlook

Legend



- Pocahontas Trailhead
- Community Connector
- Town of Bramwell
- Easiest
- More Difficult
- Most Difficult
- Most Difficult
- Single Track More 100-150
- Single Track Most 151-199
- Approved Highway
- Leads To Trailhead 0.5

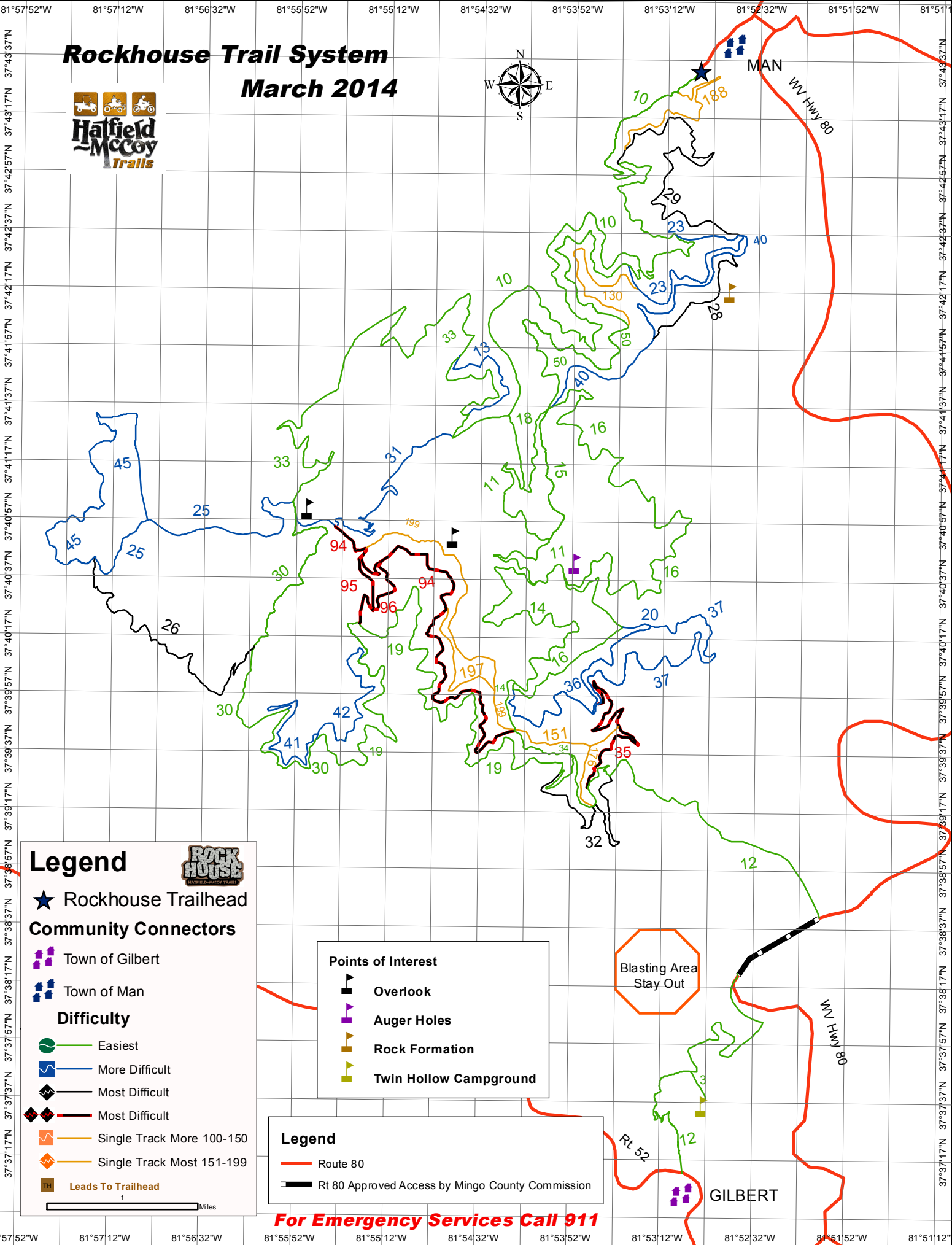
Miles

For Emergency Services Call 911

Bramwell

Rockhouse Trail System

March 2014



Legend

Rockhouse Trails

★ Rockhouse Trailhead

Community Connectors

- Town of Gilbert
- Town of Man

Difficulty

- Easiest
- More Difficult
- Most Difficult
- Most Difficult
- Single Track More 100-150
- Single Track Most 151-199
- Leads To Trailhead

1 Miles

Points of Interest

- Overlook
- Auger Holes
- Rock Formation
- Twin Hollow Campground

Legend

- Route 80
- Rt 80 Approved Access by Mingo County Commission

Blasting Area Stay Out

For Emergency Services Call 911

*Appendix B Overview of Individual Hatfield-McCoy Trail Systems***Bearwallow**

The Bearwallow Trail System, one of the three original Hatfield-McCoy Trail Systems, is located near the historic site of the 1921 Battle of Blair Mountain. Opened in October 2000, this system has one staffed trailhead in Ethel, WV, that offers restrooms, permit and merchandise sales and a two-acre parking lot. Bearwallow allows ATVs, UTVs and off-road motorcycles and has a community connector to Logan, WV. Most of the Bearwallow system is comprised of “Blue” and “Black” trails (roughly 45 percent and 31 percent, respectively) (HMRRA 2014).

Buffalo Mountain

Buffalo Mountain is one of the original three Hatfield-McCoy Trail Systems opened in October 2000 and is most noted for its historic relevance to the Hatfield-McCoy Feud and Matewan Massacre (Hatfield-McCoy Trails 2014). This trail system currently permits ATVs, UTVs and off-road motorcycles and provides visitors direct access to Williamson, Delbarton and Matewan (HMRRA 2014).

A large portion of the Buffalo Mountain Trail System is comprised of higher difficulty trails. Roughly 31 percent of the trails in this system are restricted to off-road motorcycles, and nearly 20 percent are either black or black/red trails. This trail system currently has two trailheads in Williamson and Matewan, which both provide visitors with restrooms as well as permit and merchandise sales (Hatfield-McCoy Trails 2014).

Indian Ridge

The Indian Ridge Trail opened in 2007 and is one of three systems that make up the largest continuous area of trails in the Hatfield-McCoy Trails network (Hatfield-McCoy Trails 2014). It connects to the Pocahontas and Pinnacle Creek trails and provides riders with direct access to the towns of Northfork and Keystone. Indian Ridge offers one unstaffed trailhead in Ashland, WV (near Northfork, WV) with restrooms and a two-acre parking lot. Permits and merchandise are available for sale at the nearby Ashland Resort. A large portion of the Indian Ridge Trails (roughly 46 percent) are the more difficult “Blue” trails (HMRRA 2014). Permitted vehicles include ATVs, UTVs and off-road motorcycles.

Ivy Branch

The Ivy Branch Trail System opened in 2013 and currently accommodates a broad range of vehicles, including full-sized ORVs (Jeeps, 4x4 trucks, Hummers and buggies), ATVs, UTVs, dirt bikes and other off-road vehicles (Hatfield-McCoy Trails 2014). The system is located within 3 miles of the Little Coal River Trail and approximately 20 miles southwest of Charleston, the West Virginia state capital.

The Ivy Branch Trail System has one trailhead, located in Julian, WV, which provides

visitor check-in, restrooms and permit and merchandise sales (Hatfield-McCoy Trails 2014, HMRRA 2014). Parking at the trailhead includes a two-acre parking area, and nearby amenities include restaurants and gas stations.

Little Coal River

The Little Coal River Trail System opened in 2002 and provides riders with the overall easier trails (Hatfield-McCoy Trails 2014). A large portion of its trails are “Blue” or “Green” (60 percent and 23 percent, respectively) and its trails are all UTV friendly.³⁴ The trailhead, located in Julian, WV, offers a two-acre parking lot, staffed visitor’s center, restrooms and permit and merchandise sales. Although not directly connected, the Little Coal River Trail System is located near Danville and Madison and approximately 3 miles from the Ivy Branch Trails. The West Virginia capital of Charleston is approximately 20 miles away (Hatfield-McCoy Trails 2014).

Pinnacle Creek

Pinnacle Creek opened in 2004 and is noted for being one of three systems that make up the largest continuous area of the Hatfield-McCoy Trails network (Hatfield-McCoy Trails 2014). This trail system is located within 15 miles of Twin Falls State Park and approximately an hour’s drive to skiing and whitewater rafting activities. The Pinnacle Creek System has one staffed trailhead in Pineville, WV, which provides a gift shop, restrooms, a two-acre parking lot and permit and merchandise sales to visitors.

This system offers mostly “Green” and “Blue” trails (33 percent and 41 percent, respectively) and permits ATVs, UTVs and off-road motorcycles (Hatfield-McCoy Trails 2014, HMRRA 2014). Direct access is available to Pineville and Mullens, and the Pinnacle Creek Trails connect to the Indian Ridge Trail System (Hatfield-McCoy Trails 2014).

Pocahontas

Along with Indian Ridge and Pinnacle Creek, the Pocahontas Trail System is known for being one of three systems that make up the largest continuous area of the Hatfield-McCoy Trails network (Hatfield-McCoy Trails 2014). Opened in 2012, this system offers a non-staffed trailhead in Bramwell, WV, which includes temporary restroom facilities and a two-acre parking lot.³⁵ Permits are available for purchase at Bramwell City Hall and nearby businesses.

The Pocahontas System benefits from its location, as it is the Hatfield-McCoy Trail System closest to the I-77 Turnpike (Hatfield-McCoy Trails 2014). As with many other

³⁴ The Little Coal River Trail System also permits ATVs and single track vehicles (Hatfield-McCoy Trails 2014).

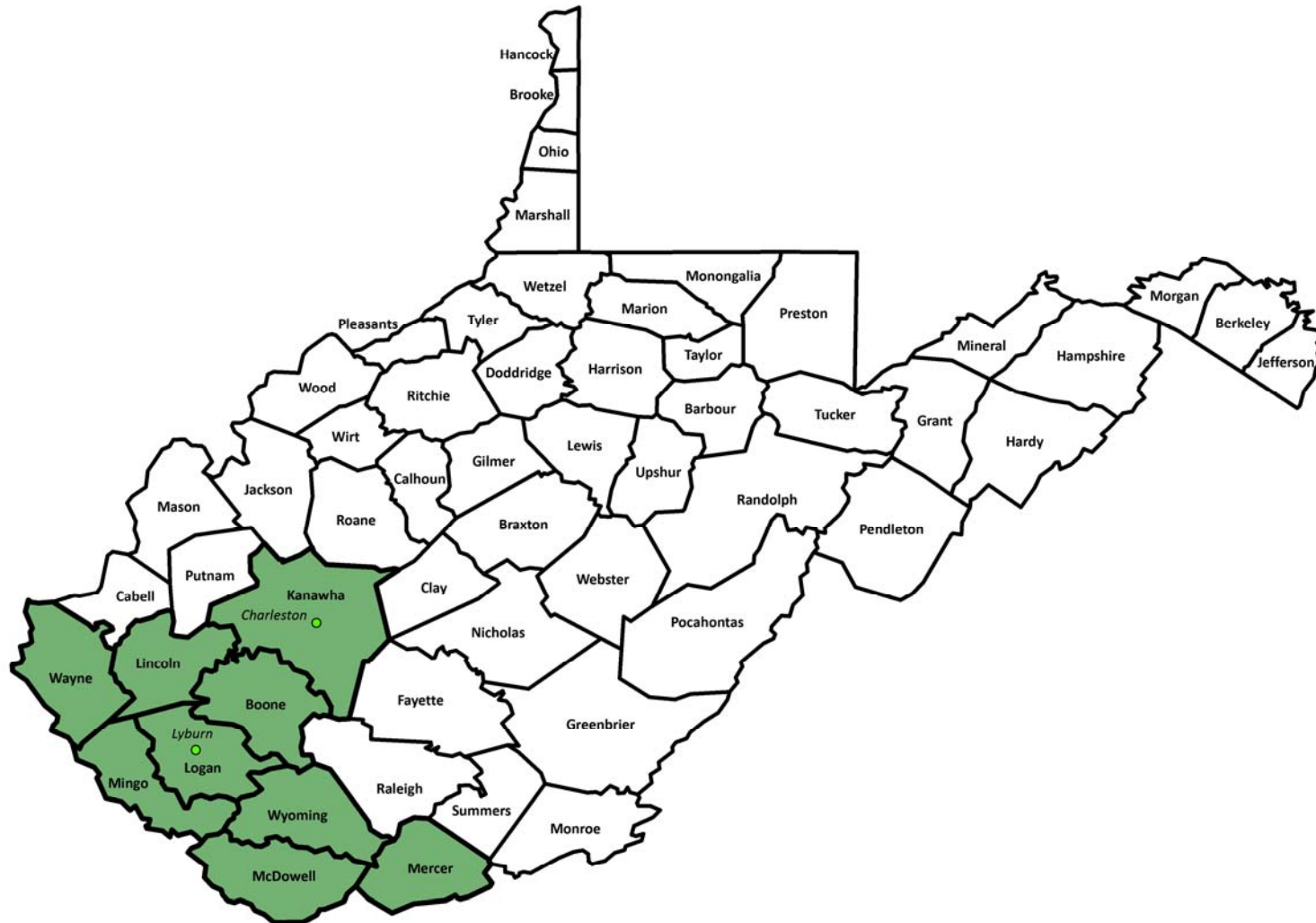
³⁵ Renovations are slated to begin on the Pocahontas trailhead sometime in 2014. Plan specifications and estimates have been completed and are awaiting approval (HMRRA 2014).

Hatfield-McCoy Trails, it permits ATVs, UTVs and off-road motorcycles. The Pocahontas Trails connect to the Indian Ridge Trail System (HMRRA 2014). Its trail difficulty dispersion is mostly “Blue” trails (approximately 47 percent) and “Green” and “Black” trails (22 percent each).

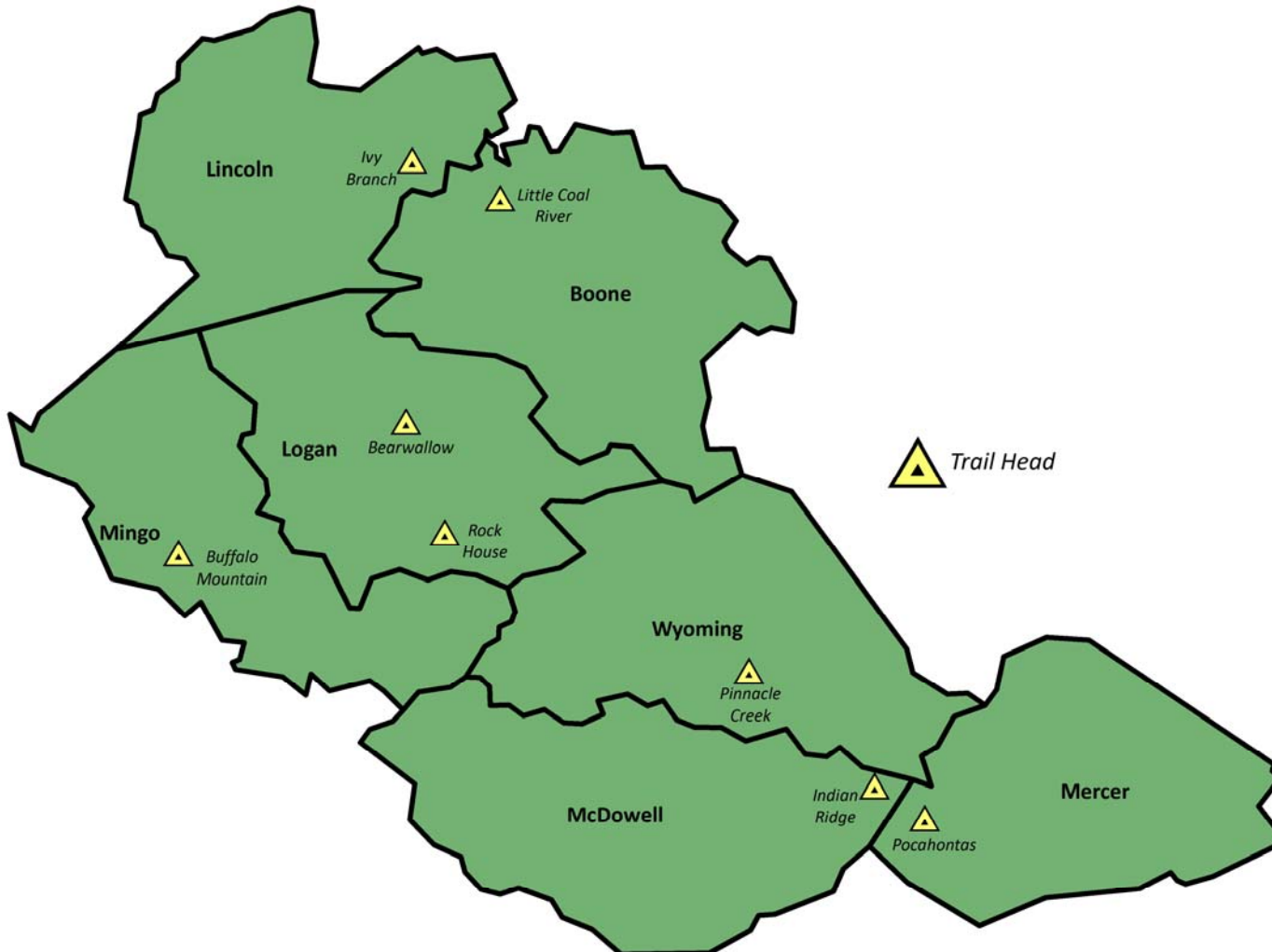
Rockhouse

The Rockhouse Trail System is one of the three original Hatfield-McCoy Trails opened in October 2000 (Hatfield-McCoy Trails 2014). This system is comprised mostly of “Green” and “Blue” trails (31 percent and 29 percent, respectively) and provides a wide variety of trail riding opportunities for visitors (Hatfield-McCoy Trails 2014, HMRRA 2014). Permitted vehicles include ATVs, UTVs and off-road motorcycles. One staffed trailhead is located in Man, WV, which offers a 2 acre parking lot, restrooms and permit and merchandise sales (Hatfield-McCoy Trails 2014). Riders on the Rockhouse Trail have direct access to the towns of Man and Gilbert.

Appendix C West Virginia Map with Hatfield-McCoy Trails Project Counties



Appendix D Hatfield-McCoy Trails Counties with Current Trails Presence

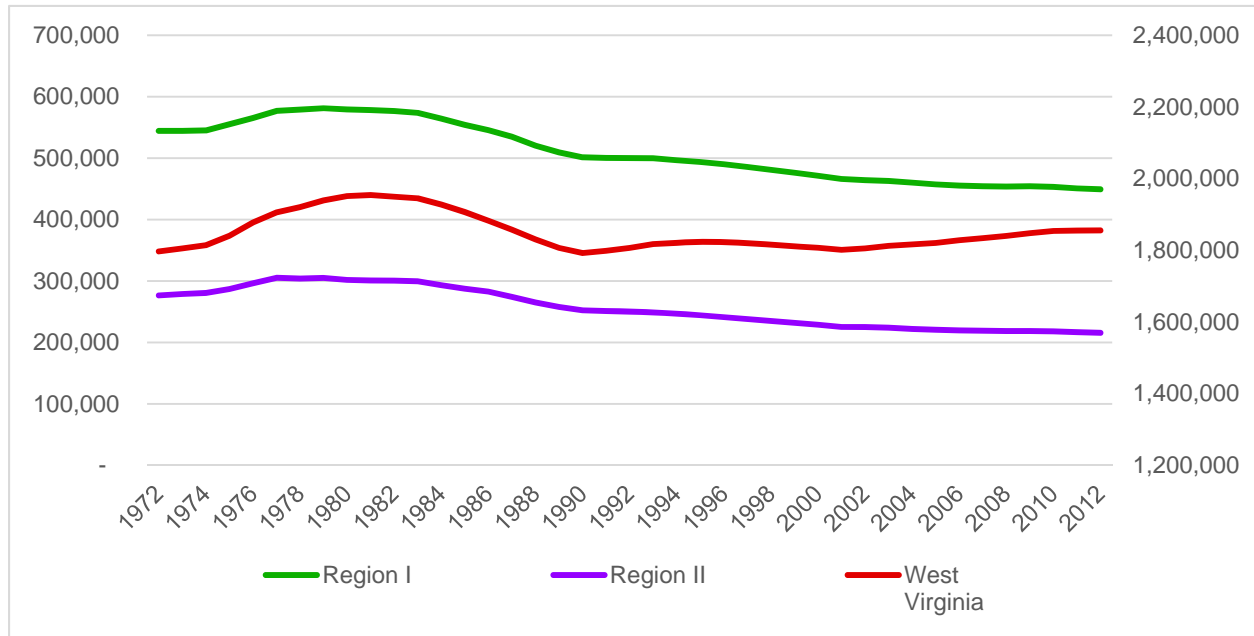


Appendix E Regional Demographic and Economic Characteristics

Population

The population of West Virginia fluctuated from 1972 to 2012, increasing approximately 3.3 percent overall during this time period (see Figure 11). By contrast, the population of both Region I and Region II declined in this 41 year time period by roughly -17.4 percent and -22.1 percent, respectively. Periods of highest population occurred in 1981 for West Virginia (more than 1,954,000 individuals), 1979 for Region I (more than 581,300 individuals) and 1977 for Region II (nearly 305,100 individuals). Lowest populations occurred in 1990 for West Virginia (nearly 1,792,600 individuals) and 2012 for both Region I and Region II (approximately 449,300 and 215,500 individuals, respectively).

Figure 11 Population Trends 1972-2012³⁶



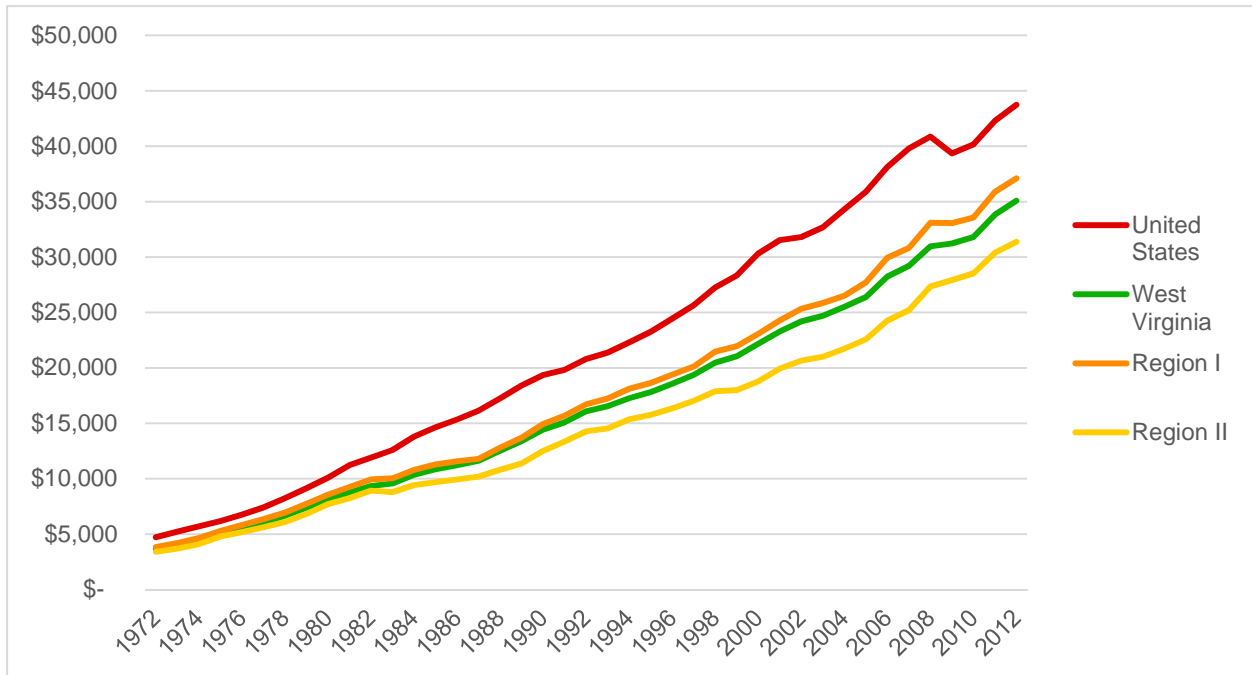
U.S. Bureau of Economic Analysis (BEA), 2014.

Income

Data show that per capita income in West Virginia, Region I and Region II are significantly lower than that of the U.S. (see Figure 12). Despite the disparity between national per capita income and that of the State, West Virginia’s annual average increase exceeded that of the U.S. by nearly 0.7 percent from 1972 to 2012. Region I additionally exceeded the State’s increase by nearly 0.3 percent annually on average during this time period, while the average annual change in per capita income in Region II was roughly 0.8 percent lower than the State.

³⁶ Note: the left-hand vertical axis represents the population in Regions I and II while the right-hand vertical axis represents the population in West Virginia.

Figure 12 Per Capital Income 1972-2012



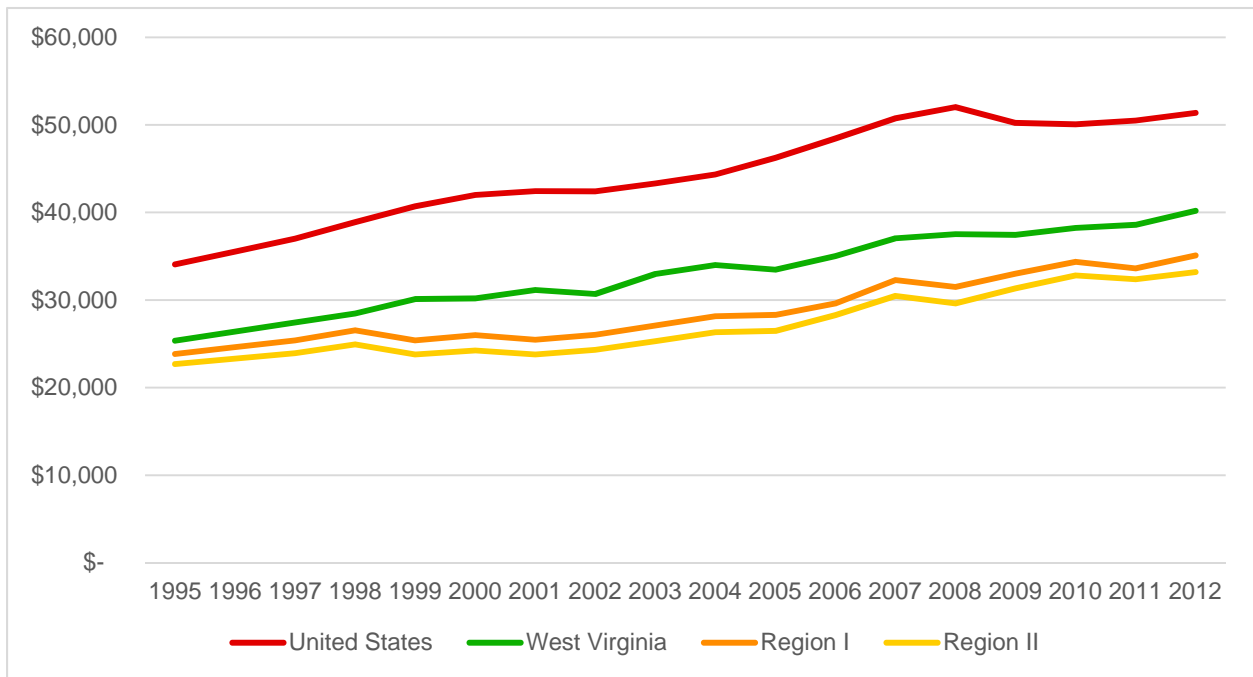
U.S. Bureau of Economic Analysis (BEA), 2014.

Region II per capita income is lower than that of West Virginia by an average of roughly \$3,700 in the last decade. Per capita income in Region I, which includes both Kanawha and Wayne counties, is slightly larger than that of West Virginia throughout the time period examined, likely largely due to the affluence in Charleston. In the last decade, per capita income in Region I exceeded that of West Virginia by approximately \$1,700 on average.

Median Household Income

Median household income has increased at a fairly steady rate across both Hatfield-McCoy Trails regions, the State of West Virginia and the U.S. (see Figure 13). Median household income increased nearly 59 percent from 1995 to 2012 in West Virginia (roughly 3.3 percent per year on average), exceeding that of the nation (50.8 percent overall or 2.8 percent per year on average). Region II median household income has increased at a slightly lower rate (roughly 2.6 percent per year on average) by comparison during that time period. Since 2000, however, the rate of increase in median household income in Region II exceeded that of Region I (by approximately 0.2 percent), the State (by approximately 0.3 percent) and the U.S. (by approximately 1.1 percent) each year on average. The inverse is true of the average annual change in the five years preceding the Hatfield-McCoy Trails’ opening in 2000.

Figure 13 Median Household Income 1995-2012

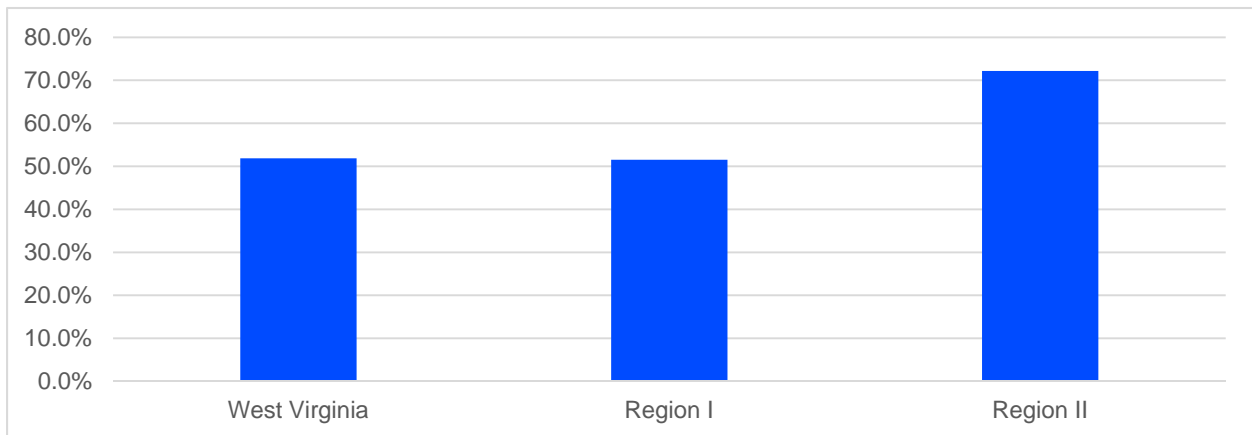


U.S. Census Bureau American Community Survey (ACS), 2014. Based on 2012 5-year estimates.

Rural Population Percentage

West Virginia is one of the most rural states in the nation, with approximately 52 percent of its citizens living outside urban areas (ACS 2014).³⁷ The rural population percentage of Region I was slightly lower (by roughly 0.4 percent) than that for West Virginia based on the 2010 Census (see Figure 14), but that of Region II was substantially more (by more than 20 percent).³⁸ Kanawha County greatly influences this difference, where only 25 percent of the population lives in a rural area. Rural population percentage in five of the seven Region II counties exceeds 80 percent. This relative isolation and its subsequent inaccessibility has contributed in part to the historic economic stresses of southern West Virginia. The construction of Corridor G, which follows nearly 80 miles of U.S. 119/State Route 214 from Charleston, WV, to Williamson, WV (near the Kentucky state line), has assisted in improving the accessibility of this region (ARC 2013).

Figure 14 Rural Population Percentage 2010



U.S. Census Bureau American Community Survey (ACS), 2014. Based on 2012 5-year estimates.

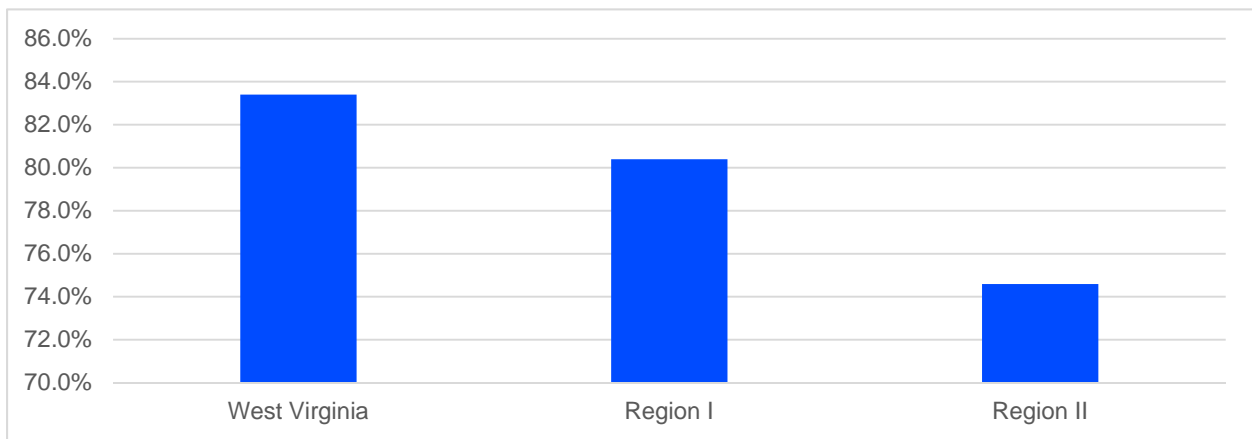
³⁷ The U.S. Census Bureau defines a rural area as one that “encompasses all population, housing, and territory not included within an urban area”, the latter of which is defined as an area of at least 50,000 people (U.S. Census Bureau 2013). The Census also defines Urban Clusters (UCs), which include at least 2,500 but less than 50,000 people.

³⁸ Rurality of the Hatfield-McCoy Trails counties has reduced by approximately 10 percent since 2000.

Educational Attainment

The educational attainment of residents plays a significant role in determining the economic development potential of a region. A consistent lack of job opportunities has resulted in a shift of more highly educated and skilled workers out of the Hatfield-McCoy Trails counties. As a result, a much larger percentage of the population lacks even a high school education compared to the State of West Virginia (see Figure 15). Approximately 83.4 percent of individuals aged 25 and older in West Virginia had at least a high school diploma or equivalent, compared to roughly 80.4 percent in Region I. Approximately 75 percent of individuals aged 25 and older in Region II completed high school.

Figure 15 Population Aged 25 + with at least a High School Diploma

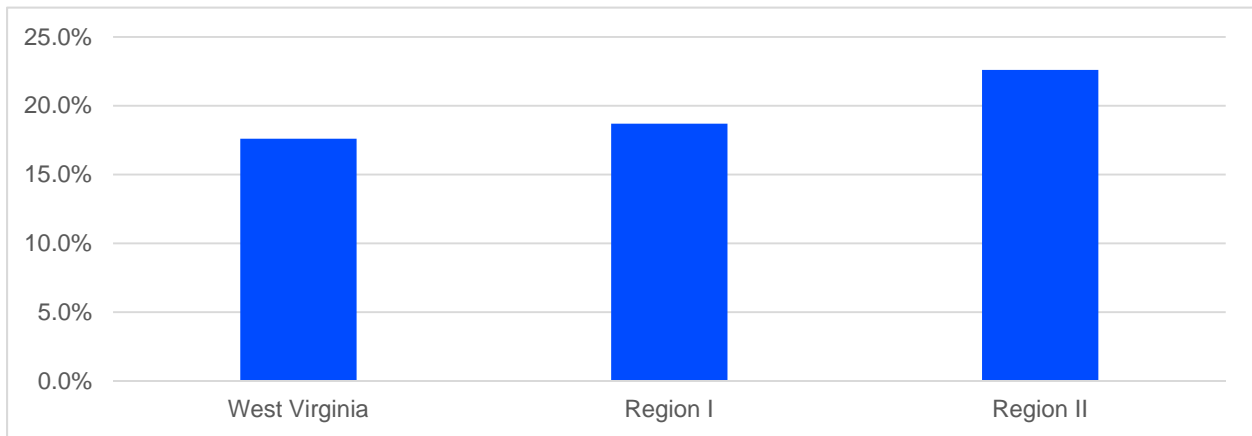


U.S. Census Bureau American Community Survey (ACS), 2014. Based on 2012 5-year estimates.

Incidence of Poverty

The incidence of poverty in Region II is larger than that of Region I and the State (see Figure 16). The proportion of Region II individuals living in poverty was nearly 23 percent based on 2012 5-year estimates. Comparatively, the incidence of poverty for Region I was nearly 19 percent and for the State was approximately 17.6 percent during this time period. Compared to individuals living below poverty in 2000, the State remained relatively unchanged (decreasing approximately -0.3 percent), while the Hatfield-McCoy Trails counties decreased by roughly -3.4 percent). The incidence of poverty in three of the seven Region II counties exceeded 22 percent in this time period.

Figure 16 Population Living Below Poverty



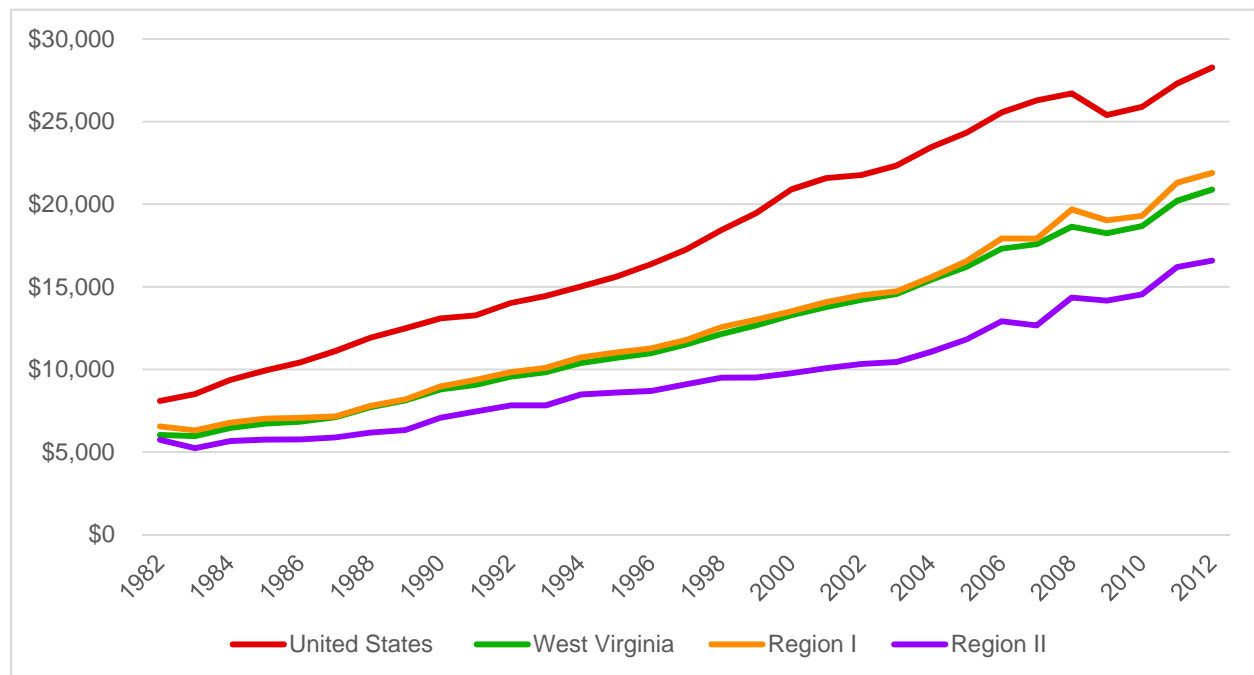
U.S. Census Bureau American Community Survey (ACS), 2014. Based on 2012 5-year estimates.

Net Earnings

Per capita net earnings for Region I and the State of West Virginia remained fairly close from 1982 to 2012, with Region I per capita net earnings being 3.2 percent higher than that of West Virginia's on average (see Figure 17). Region II per capita net earnings remained substantially lower than that of West Virginia's (less than 80 percent of the State's per capita net earnings on average). Unsurprisingly, per capita net earnings for the U.S. exceeded those of West Virginia and each region for the entire time period.

Annual average changes in per capita net earnings exhibit interesting trends compared to other measures of economic characteristics: annually on average from 2000 to 2012, per capita net earnings in Region II increased by roughly 5.4 percent each year. Comparatively, Region I and the State increased by approximately 4.8 percent and 4.4 percent, respectively, during this same time period. Prior to 2000, average annual increases in per capita net earnings were inverted, with the largest changes being realized by West Virginia as a whole and the smallest gains being made in Region II counties cumulatively.

Figure 17 Per Capita Net Earnings 1982-2012



U.S. Bureau of Economic Analysis (BEA), 2014.

Per capita net earnings measure what is earned as opposed to what is received. Transfer payments (such as welfare, social security, workers compensation and disability payments) are removed and dividends and rental incomes received are subtracted, resulting in a more accurate depiction of a region's economic vitality. Examining the per capita net earnings of each region as a percentage of the State of West Virginia illustrate a positive trend, particularly since 2000, suggesting that the

economic characteristics of the Hatfield-McCoy Trails counties may be improving.

Labor Force

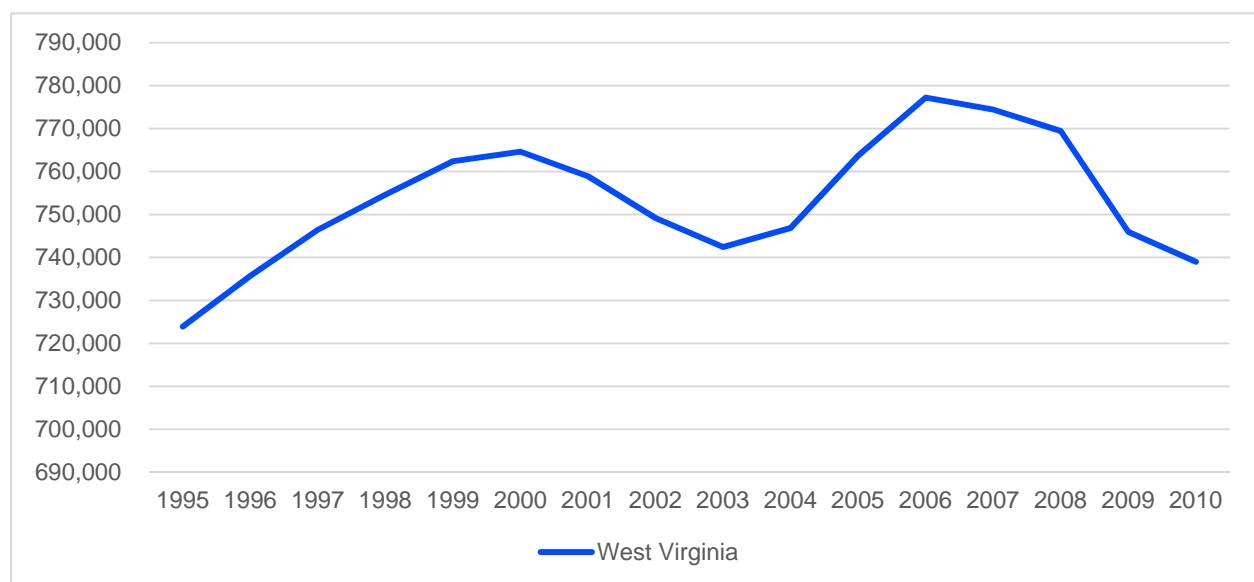
The labor force is comprised of individuals in a given area who are either employed or looking for work. The unemployment rate is derived by dividing the number of individuals unemployed by the population of the labor force. Although a common measure of the strength of the workforce, the unemployment rate is imperfect. In dire economic conditions, certain individuals who are unemployed—perhaps particularly those who have been unsuccessful in retaining work for an extended period—may become discouraged and leave the labor force. This decreases the number of unemployed thereby decreasing the unemployment rate, but does not necessarily signify an improvement in the workforce or the economy by extension. For this reason, the labor force participation rate is also commonly observed.

The labor force participation rate considers the proportion of the labor force (individuals who are both employed and unemployed but seeking work) to the working age population (most commonly defined as individuals aged 16 to 65 years). In the subsections that follow, these central measures of the labor force are evaluated for both the State of West Virginia as well as for Region I and Region II.

Employment

Overall employment in West Virginia increased roughly 2.1 percent from 1995 to 2010 (see Figure 18). A period of decline (nearly -3 percent) occurred from 2000 to 2003, followed by an increase (more than 4.6 percent) through 2006 and another decrease (nearly -5 percent) through 2010. In the 11 year period from 2000 to 2010, employment in West Virginia decreased by approximately -0.3 percent each year on average.

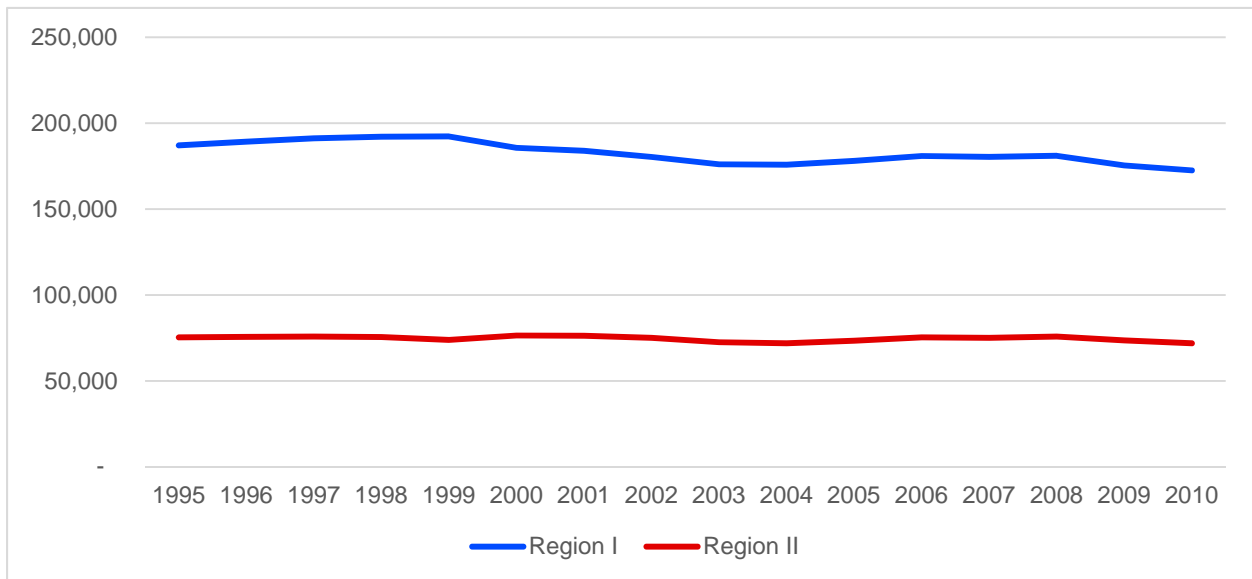
Figure 18 West Virginia Employment Trends 1995-2010



U.S. Bureau of Labor Statistics (BLS), 2014.

Employment in Regions I and II experienced decline from 1995 to 2010, but with much less volatility than that of the State (see Figure 19). In Region I, inclusive of both Kanawha and Wayne counties, employment decreased by nearly -7.8 percent over this time period (approximately -0.5 percent per year on average). Employment decline in Region II was less sharp (approximately -4.6 percent over the term or roughly -0.3 percent each year on average). In the period from 2000 to 2010, Region I employment decreased approximately -0.6 percent each year on average, while employment in Region II declined by approximately -0.5 percent each year on average. Employment peaked in Regions I and II in 1999 and 2000, respectively, during the 16-year time period.

Figure 19 Regional Employment 1995-2010

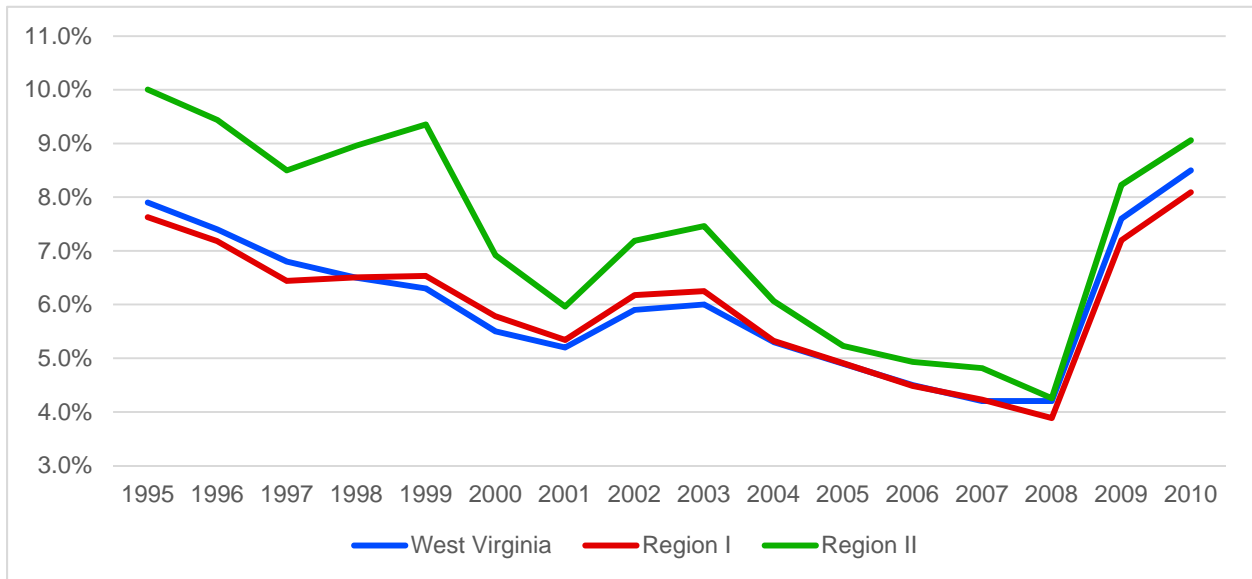


U.S. Bureau of Labor Statistics (BLS), 2014.

Unemployment Rate

The unemployment rates for West Virginia, Region I and Region II followed a similar pattern from 1995 to 2010 (see Figure 20). West Virginia and Region I unemployment rates remained fairly close, while the unemployment rate in Region II was consistently higher in each year. Respectively, the unemployment rate in West Virginia and Region I increased 7.6 percent (0.5 percent per year on average) and 6.1 percent (0.4 percent per year on average) from 1995 to 2010; the unemployment rate in Region II decreased by -9.5 percent (-0.6 percent per year on average) during this time period.

Figure 20 Unemployment Rate 1995-2010



U.S. Bureau of Labor Statistics (BLS), 2014.

Labor Force Participation Rate

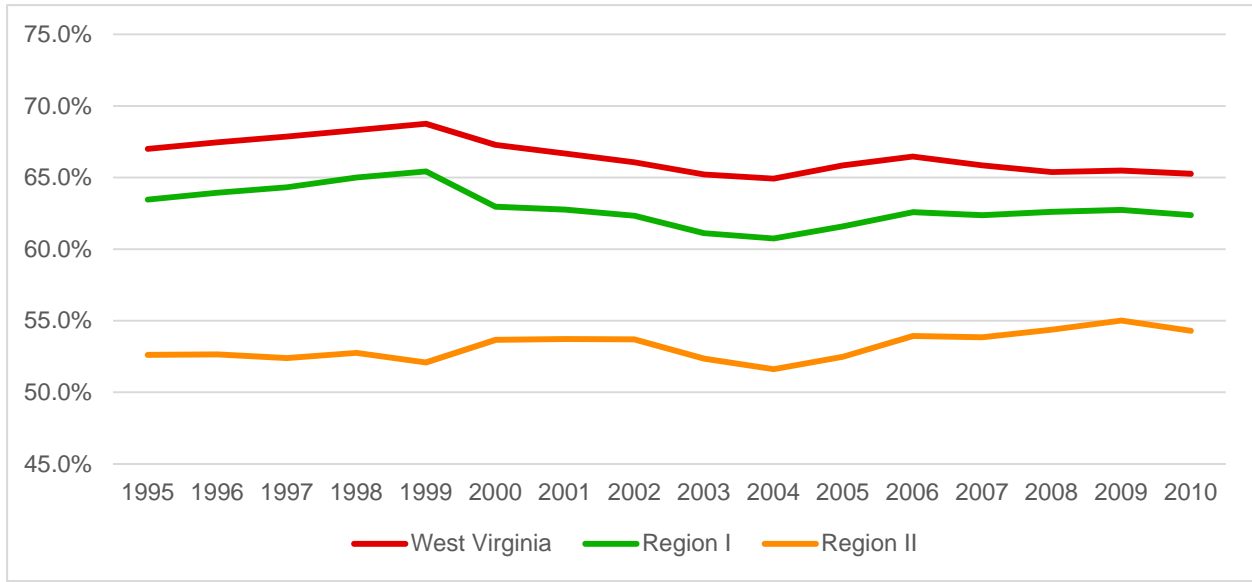
The labor force participation rate is representative of those in the labor force (both those employed and those unemployed) divided by the working age population.³⁹ From 1995 to 2010, the labor force participation rate declined in both West Virginia and Region I by approximately -2.6 percent and -1.7 percent, respectively (see Figure 21). In Region II, however, the labor force participation rate increased by more than 3 percent (0.2 percent per year on average), an indication of an improved workforce in this area.

Preceding 2000 when the Hatfield-McCoy Trails opened, labor force participation in West Virginia and Region I increased by roughly 0.5 and 0.6 percent per year on average, respectively, while decreasing by roughly -0.2 percent per year on average in

³⁹ Please note that the working age population from 1995 to 1999 is representative of individuals 16 to 64 years of age while the same population from 2000 to 2010 is representative of individuals 15 to 64 years of age due to data availability.

Region II. From 2000 to 2010, annual average labor force participation rates decreased in West Virginia and Region I by approximately -0.3 percent and -0.1 percent, respectively, while average annual labor force participation rates increased in Region II by more than 0.1 percent. This suggests that the opening of the Hatfield-McCoy Trails aided in improving the labor force in the immediate area.

Figure 21 Labor Force Participation Rate 1995-2010



Authors' calculations. Sources: U.S. Bureau of Labor Statistics (BLS) and U.S. Census Bureau, 2014.

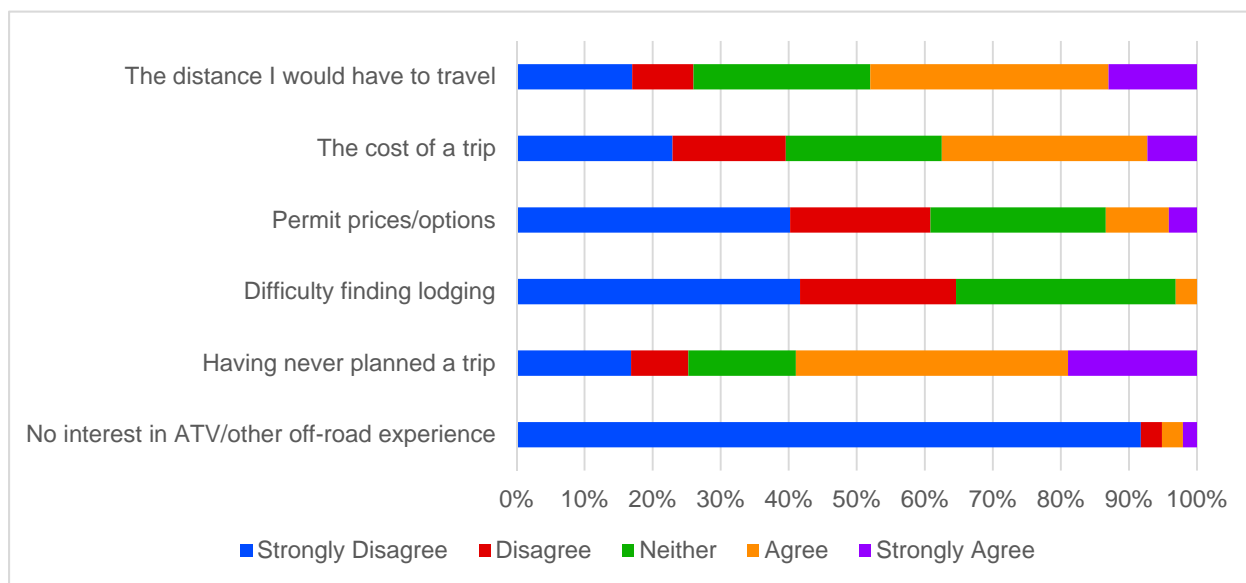
Appendix F Additional Discussion of Survey Responses

Non-Rider Survey Responses

Of all usable responses to the survey, approximately 4.4 percent of participants indicated they have never visited the Hatfield-McCoy Trails. Non-riders were asked to specify which statement best described their interest in the Hatfield-McCoy Trails; most indicated that they may be interested in visiting one day or that they enjoy off-road trails (43 percent and 34 percent, respectively) and an additional 15 percent of non-rider respondents indicated that they felt the System is a benefit to West Virginia. Remaining respondents (nearly 8 percent) indicated they either wanted to support a local tourist attraction or the “other” option.

To better understand why non-riders have never visited the Hatfield-McCoy Trails, respondents were asked to rate their level of agreement with six statements. An overwhelming majority of respondents (nearly 92 percent) strongly disagreed that they had never visited due to having no interest in ATV and/or other off-road experiences (see Figure 22). A relatively large portion agreed that they had never visited due to never planning a trip (40 percent), the cost of the trip (30 percent) or the distance of traveling to the Hatfield-McCoy Trails (35 percent). Responses indicated that permit prices and difficulty finding lodging were not significant visitation barriers to non-riders.

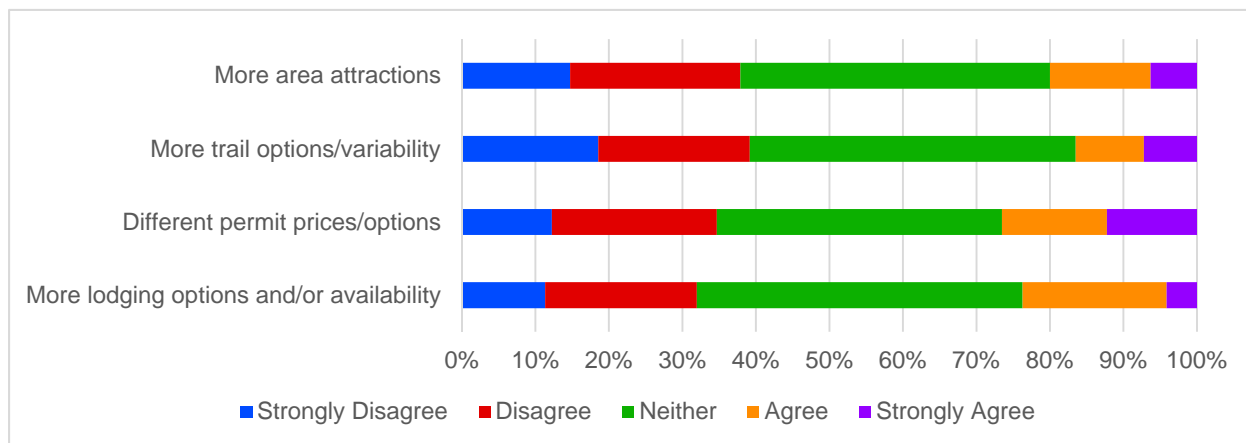
Figure 22 Reasons for Having Never Visited—Non-Rider Respondents



Non-rider respondents were also asked to indicate their level of agreement with four statements pertaining to the likelihood of them planning a trip in the future. Most non-rider respondents were indifferent (neither agreeing nor disagreeing) that the four options would increase the likelihood (see Figure 23). Nearly 40 percent either disagreed or strongly disagreed that more trail options or variability would increase the likelihood of a future visit. Nearly 24 percent either agreed or strongly agreed that more

lodging options and/or availability would increase the likelihood of a future visit.

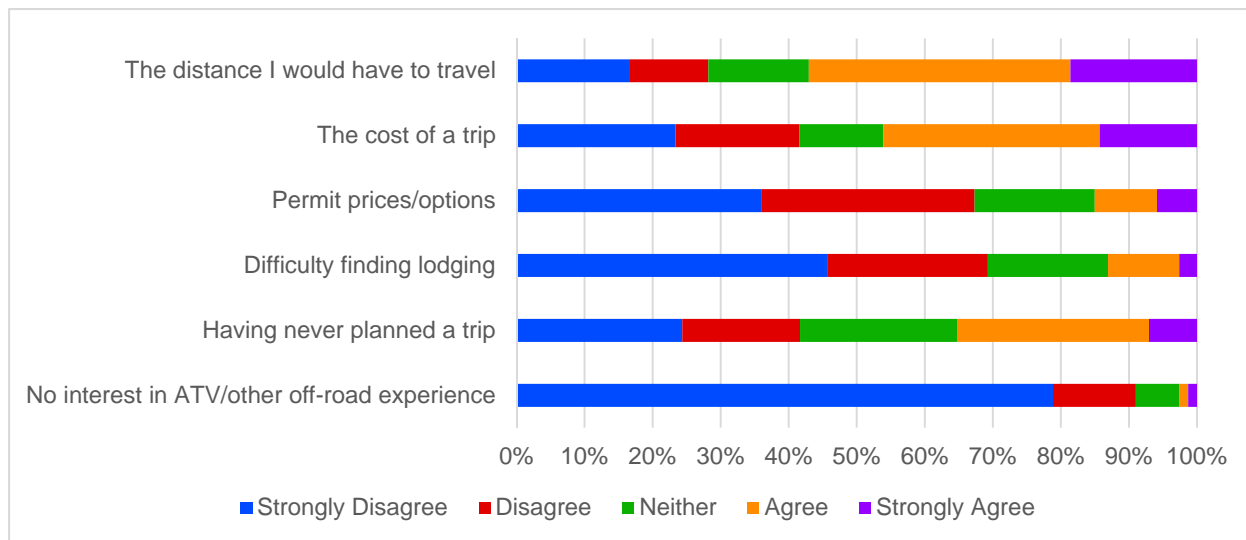
Figure 23 Potential to Increase Likelihood of Visiting—Non-Rider Respondents



Non-Recent Riders

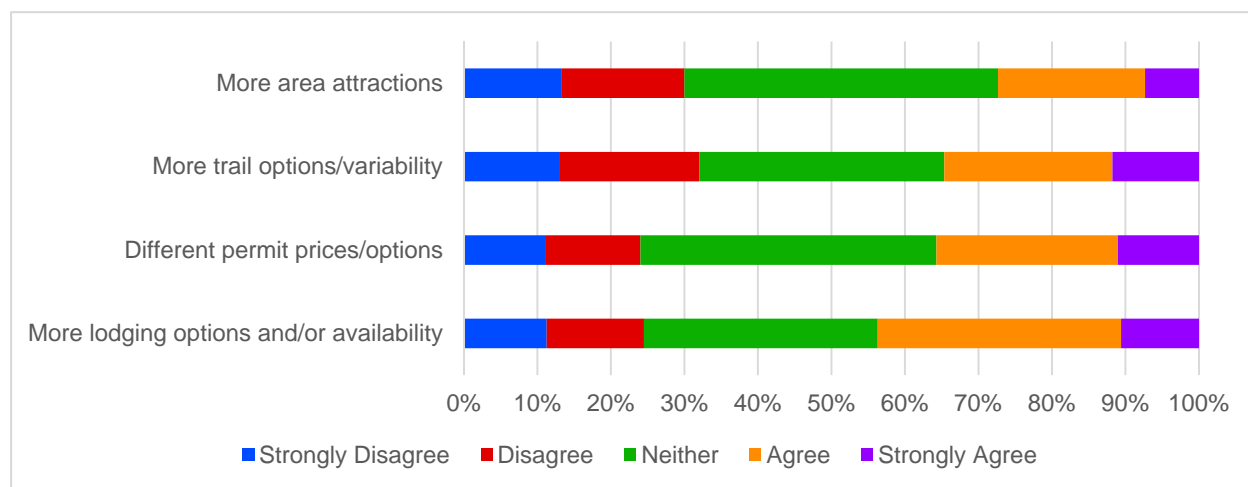
Non-recent riders (those who have not visited the Hatfield-McCoy Trails since 2010 or prior) were polled as to the reasons they have not visited the Hatfield-McCoy Trails recently. When asked to identify their level of agreement with six statements, respondents either agreed or strongly agreed that factors including the distance to travel (57.1 percent), the cost of the trip (46.1 percent) and having never planned a trip (35.3 percent) among the top reasons (see Figure 24). Respondents overwhelmingly (91 percent) indicated either disagreement or strong disagreement with not having an interest in ATV and/or other off-road experiences. Difficulty finding lodging and permit prices/options were also indicated as unlikely reasons for non-recent riders to have not visited the Hatfield-McCoy Trails.

Figure 24 Reasons for Not Having Visited Recently—Rider Respondents



Riders who have not visited the Hatfield-McCoy Trails recently were also asked to rate their agreement with statements pertaining to increasing the likelihood of visiting soon (see Figure 25). Most non-recent riders (43.7 percent) either agreed or strongly agreed that more lodging options and/or availability would increase the likelihood they may schedule a visit. Having more trail options and more area attractions seemed to be less of a deciding factor contributing to the likelihood of planning a visit. More than 40 percent of non-recent rider respondents indicated that they neither agreed nor disagreed that different permit prices/options may increase the likelihood of visiting the Hatfield-McCoy Trails.

Figure 25 Factors that would Increase Likelihood of Visiting—Rider Respondents



Rider Lodging Responses

Most riders (43.2 percent) indicated they stay in the area two or three days while visiting the Hatfield-McCoy Trails.⁴⁰ Other respondents (36.9 percent) indicated they stay in the area four or five days during their typical visit. Among those who stay, most indicated they stay in a cabin/lodge (67.8 percent) or at a campground (27.2 percent). Approximately 23 percent indicated they typically stay in a hotel or motel.

Approximately 77 percent of respondents indicated that either they or the person organizing their travel used a web or internet service to help locate lodging, and more than 40 percent were able to find lodging during their preferred travel dates. Nearly 12 percent found multiple locations that were not available.

To better understand impressions regarding lodging options, respondents were asked to rate their level of satisfaction in eight lodging scenarios (see Figure 26). Most respondents indicated they were either satisfied or very satisfied with each lodging scenario. Nearly 80 percent indicated they were satisfied or very satisfied with the

⁴⁰ For these questions, respondents were asked to consider the “area” the nine-county Hatfield-McCoy Trails region only.

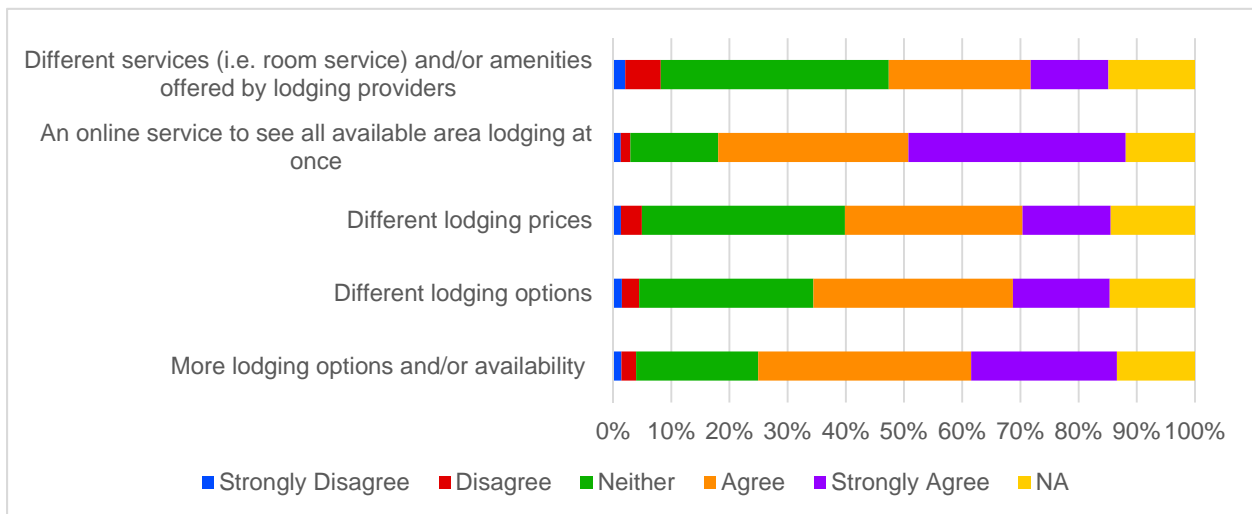
overall experience of finding lodging, while only 56.4 percent were satisfied or very satisfied in finding more than one lodging option that accommodated their plans.

Figure 26 Rider Satisfaction in Locating Area Lodging



Of those respondents who were either dissatisfied or very dissatisfied with their lodging experience while visiting the Hatfield-McCoy Trails, roughly 70 percent either agreed or strongly agreed that their level of satisfaction would improve with having an online service to see all available area lodging options at once (see Figure 27). More than 61.6 percent either agreed or strongly agreed that more lodging options and/or availability would improve their level of satisfaction.

Figure 27 Rider Agreement for Improving Area Lodging Satisfaction



Survey Respondent Profile

Respondent Locations

Of all respondents to the 2014 Hatfield-McCoy Trails survey, approximately 93 percent provided a ZIP code.⁴¹ Of this subgroup, more than 98 percent indicated U.S. residency, while approximately 1.7 percent indicated Canadian residency. Of U.S. respondents, Ohio was the most largely represented state (17.3 percent of U.S. respondents) followed by Pennsylvania (16.5 percent) and West Virginia (11.7 percent). Appendix G illustrates the distribution of U.S. survey respondent ZIP codes by state of residence.

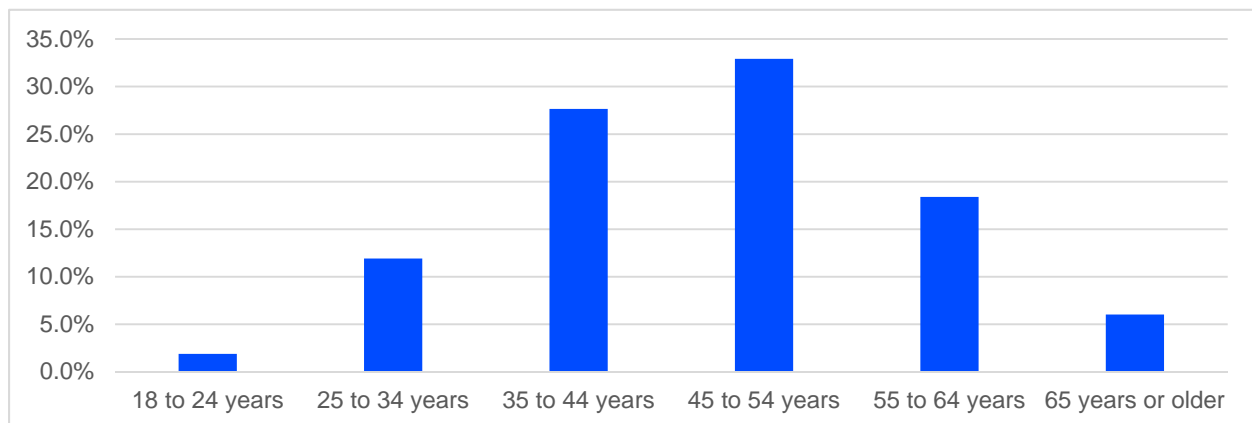
For comparison, Hatfield-McCoy Trails provided a ZIP code database representative of all permits sold since 2000 for which a ZIP code was collected. The distribution of U.S. ZIP codes was mapped as well (see Appendix H), and it is apparent that the distribution of respondents to the 2014 survey is comparable to the distribution of Hatfield-McCoy Trails riders over the last 14 years.

Respondent Demographics

Among all survey respondents, the majority (more than 80 percent) indicated that two or three adults 18 years of age or older live in their household including themselves. Nearly 60 percent of respondents had no children aged 17 years of age or younger living in their household, while 20 percent indicated two or three children and 17.8 percent indicated only one child.

Most respondents (approximately 33 percent) indicated their age to be 45 to 54 years of age (see Figure 28). Nearly 28 percent indicated their age to be 35 to 44 years, and more than 18 percent indicated their age to be 55 to 64 years. Only 1.2 percent of respondents preferred not to respond to this question.

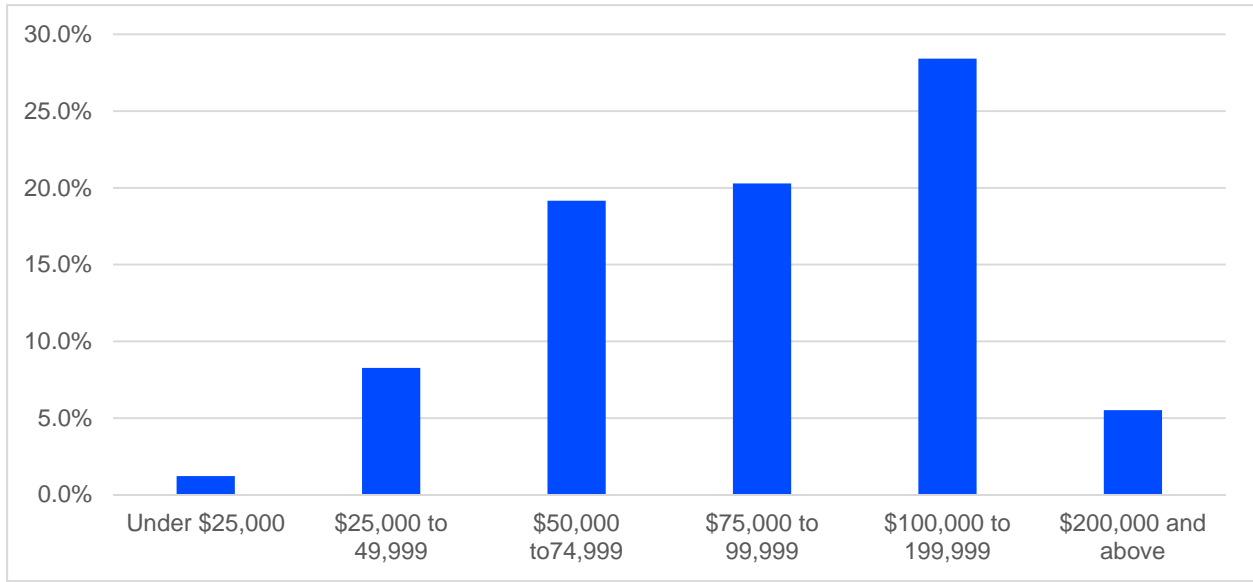
Figure 28 Survey Respondent Age Ranges—All Respondents



⁴¹ References to respondent ZIP codes in this section include all survey respondents, regardless of whether the individual has or has not visited the Trails.

Approximately 28 percent of respondents indicated their household income to be between \$100,000 and \$199,999 (see Figure 29). Slightly more than 20 percent indicated their household income to be between \$75,000 and \$99,999 and roughly 19 percent indicated their household income to be between \$50,000 and \$74,999. Approximately 17 percent of respondents preferred not to answer this question.

Figure 29 Survey Respondent Household Income Ranges—All Respondents



Appendix J All Hatfield-McCoy Trails Rider Permit Sales by State of Residence

