

The Economic and Fiscal Impact of the Hatfield-McCoy Trail System in West Virginia – 2021



Final Report
April 11, 2022

Prepared for the Hatfield-McCoy Regional Recreation Authority

The Economic and Fiscal Impact of the Hatfield-McCoy Trail System in West Virginia 2021

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The Hatfield-McCoy Trails project, governed by the Hatfield-McCoy Regional Recreation Authority, is a network of outdoor recreational trails and amenities serving fourteen economically distressed counties in southern West Virginia. Originally established to promote statewide and regional economic development opportunities related to tourism, 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 ten trail systems totaling more than 900 miles of trails usable by All Terrain Vehicles (ATVs), Utility Terrain Vehicles (UTVs), Off-Road Vehicles (ORVs) and off-road motorcycles.

Estimated economic impact

The extensive trails network 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. Quantifying the value of these inputs lays a crucial foundation in better understanding the economic and fiscal benefits of the presence of the Hatfield-McCoy Trails in West Virginia. **Table E1** summarizes the estimated economic impact of the Hatfield-McCoy Trails for 2021.

Table E1. Hatfield–McCoy Trails economic impact summary, 2021

	Direct impact	Total impact
Hatfield-McCoy operating expenses	\$7,409,780	\$14,667,795
Non-local visitor spending	\$34,222,969	\$53,388,078
Combined expenditures	\$41,632,749	\$68,055,874

This analysis indicates that the roughly \$7.4 million in spending by the Hatfield-McCoy Trails generated an **additional \$7.3 million in economic activity** within the State, for a **total operational impact of \$14.7 million**. Even more notably, the Hatfield-McCoy Trails bring non-local visitors to the area whose spending is estimated to generate an additional \$53.4 million in economic activity in West Virginia. **Combined, the total estimated economic impact of the Hatfield-McCoy Trails in 2021 is more than \$68 million.**

In addition to the dollar value of economic activity, the Hatfield-McCoy Trails supports employment and thus provides household earnings. The Hatfield-McCoy Trails directly sustain 36 full-time equivalent (FTE) jobs year-to-year and can be credited with **supporting a total of approximately 665 FTE positions across the State.**

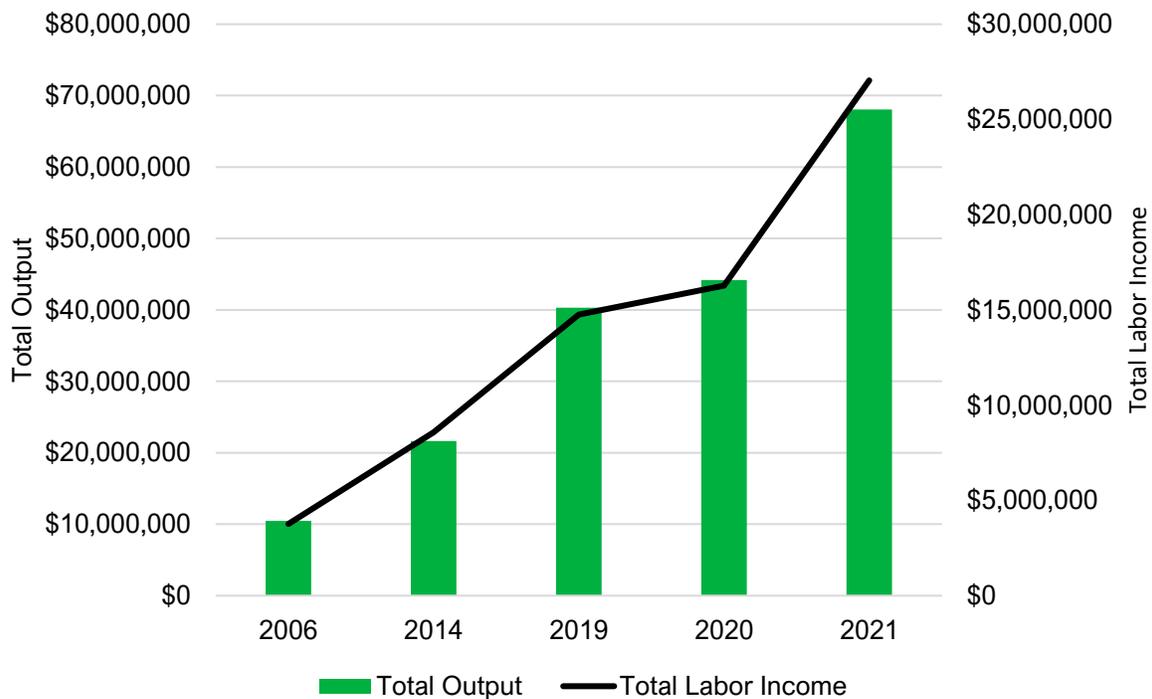
This economic activity generated by Hatfield-McCoy Trails' operations and visitor spending also yields significant tax revenues. Direct employment related to the Hatfield-McCoy Trails improves the state and local tax base by roughly \$291,000 annually. When considering the estimated total employment sustained by the presence of the Hatfield-McCoy Trails, an annual state and local tax benefit of more than \$546,000 is estimated. **An additional fiscal benefit to the State of more than \$2.2 million is estimated as a result of non-local visitor spending while visiting the Hatfield-McCoy Trails.**

Changes from prior estimates

CBER has periodically conducted economic impact analyses of the Hatfield-McCoy Trails network on the State of West Virginia. Estimates of FTE employment and inflation-adjusted labor income and total output from prior economic impact studies undertaken by CBER indicate substantial growth in the economic impact of the Hatfield-McCoy Trails. **Figure E1** illustrates the trend in labor income and total output.

- **Total estimated impacts of total employment have risen from 146 FTE in 2006 to 665 in 2021.**
- **Inflation-adjusted total labor income was roughly \$3.7 million in 2006, rising to \$27.0 million in 2021.**
- **Total inflation-adjusted estimated impacts of output have risen from \$10.4 million in to \$68.1 million in 2021.**

Figure E1. Inflation-adjusted economic impact change since 2006

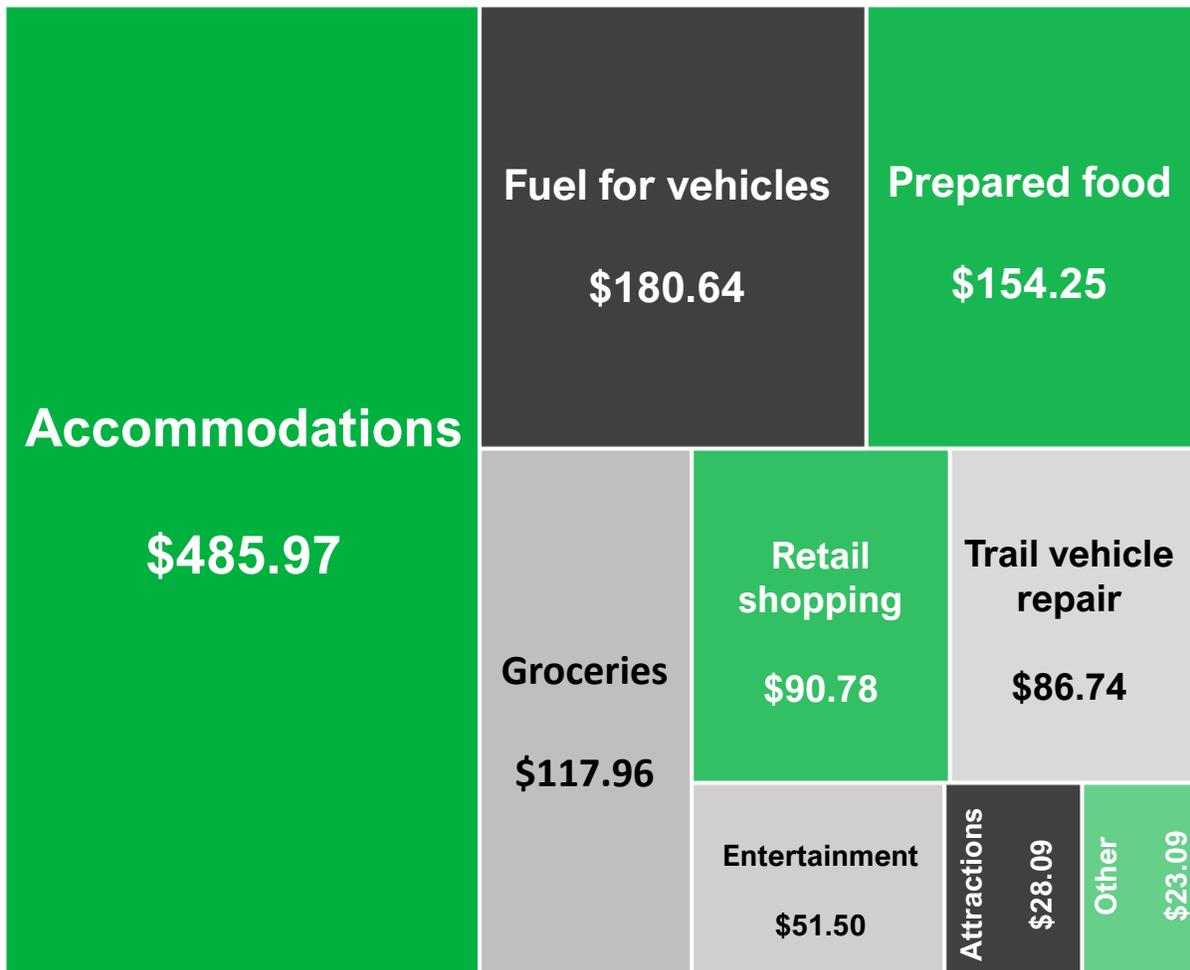


Visitor survey

Surveys were distributed to visitors during the TrailFest event that occurred on October 8-11, 2021, as well as the general email contact database with 1,961 valid responses collected.

- More than 80 percent of survey respondents indicated that they last visited the trail system in 2021 and nearly 93 percent had visited within the last two years.
- Nearly 60 percent of respondents indicated that they typically spent “Two or three” days riding the Hatfield-McCoy Trails.
- An overwhelming majority of respondents to the survey (nearly 92 percent) indicated that they were from states other than West Virginia, roughly corresponding to the number of ‘resident’ versus ‘non-resident’ permit sales for 2021.
- On average, non-local respondents report spending nearly \$535 more during a typical visit than their local counterparts. See **Figure E2** for more detail.

Figure E2. Non-local visitor spending profile, 2021



Introduction

The Hatfield-McCoy Regional Recreation Authority (HMRRRA), 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 expenditures and those of its visitors to the area—while also considering the non-quantified benefits that may be attributed to the Trail System’s presence and success. Comparisons will be drawn to the prior reports (also completed by CBER) in 2006, 2014, 2019, and the addendum produced for 2020.

The Hatfield-McCoy Trails have provided the region with increased opportunities for employment and entrepreneurship across the Southern and Central portion of the state, as well as an increase in tourism venues and attention for hosting one of the largest off-highway vehicle trail systems in the world. The success of the Hatfield-McCoy Trails has been documented in several off-road publications and television programs. For nearly two decades, the Hatfield-McCoy Trail System has hosted the National TrailFest, a premier off-road event for Side by Side, ATV, and dirt bike enthusiasts in Gilbert, WV.

The Economic and Fiscal Impact of the Hatfield-McCoy Trail System in West Virginia 2021 comes during a time of uneven economic recovery, where multiple industry sectors face constraints within their supply chains and relating to the labor force. Undoubtedly, COVID-19 pandemic brought with it sharp changes to economic and demographic data. Nonetheless, it is important to view these changes in context, and perhaps as significant outliers. Much of the most recent data available to describe economic performance and demographics represents 2020 observations. Instead of presenting 2020 information as a trend from prior years’ data, the information is presented here as a standalone observation to help explain the contextual environment of this estimation of economic impact.

The increased frequency of economic impact estimations speaks to significant increases in ridership and Hatfield-McCoy’s contribution to the regional economy.

Background and development

The concept of an economic development project for distressed Southern West Virginia has its origins in the early 1990s, influenced by the desire to promote tourism development potential in the region. Entities including the Hatfield-McCoy Recreation Development Coalition and the U.S. Army Corps of Engineers conducted surveys of community leaders as well as feasibility and economic impact studies of proposed projects to examine the viability of development options.

In 1996, seeking an opportunity to support trail-oriented recreation facilities utilizing private property in the mountainous terrain of southern West Virginia to provide significant economic and recreational benefits to the state by increased tourism, the Hatfield-McCoy Regional Recreation Authority (HMRRA) was established by the West Virginia Legislature to oversee the continual development of the Hatfield-McCoy Trails economic development project.¹

The initial plan included seven counties—Boone, Lincoln, Logan, McDowell, Mingo, Wayne, and Wyoming—and was later revised to include Kanawha and Mercer counties. In 2018, this was expanded further to include Braxton, Clay, Fayette, Nicholas, and Webster counties.² 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.

Governance

Management and governance of the Hatfield-McCoy Trails is the responsibility of the Hatfield-McCoy Regional Recreation Authority (HMRRA). The HMRRA is a public corporation established by the West Virginia Legislature first as a statutory corporation and converted to a joint development entity for the purpose of enabling and facilitating the development and operation of a system of trail-oriented recreation facilities for use by off-highway motor vehicle enthusiasts.

¹ West Virginia Code §20-14, et seq.

² West Virginia Code §20-14-3(a).

The HMRRA's governing board is made up of members (not to exceed an amount twice the number of participating counties), representative of the various interests involved in the Hatfield-McCoy Recreation Area project in the participating counties. This includes county commission member appointees with expertise in travel and tourism, licensed land-surveyors or engineers associated with a mining, logging, natural gas, or other resource-extraction industry and individuals representing or associated with a corporation or individual landowner whose land is being used or is expected to be used in the future as part of the Hatfield-McCoy Recreation Area project.³

The HMRRA is responsible for both enabling and facilitating the development and operation of the Hatfield-McCoy Trails network.⁴ 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.⁵ 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 more than 900 miles of trails distributed over ten trail systems. Each system provides riders with an exciting and safe off-road adventure highlighting Southern West Virginia. Most trails can accommodate all-terrain vehicles (ATVs), utility terrain vehicles (UTVs or side-by-sides) and off-road motorcycles. The Bearwallow System also accommodates other vehicle types, including off-road vehicles (ORVs), which are prohibited on all other Hatfield-McCoy Trail systems. The Hatfield-McCoy Trails network currently operates 365 days a year from daylight to dark. Open trail systems are graded by difficulty.

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

⁴ West Virginia Code §20-14-3.

⁵ West Virginia Code §20-14-9.

HMRRA determines the proportion of trail difficulty levels by trail system. These proportions represent an estimate of the number of trails in each trail system by trail difficulty rating. The *Pocahontas Trail System* offers the largest proportion of green trails (70 percent) while *Devil Anse* offers the largest proportion of blue trails (63 percent). *Ivy Branch* offers the largest proportion of black trails (23 percent), while *Bearwallow* offers the highest percentage of red/black trails (8 percent). *Buffalo Mountain* provides the largest proportion of single track only trails (23 percent) in the Hatfield-McCoy Trails network. A summary of trail ratings is provided in **Table 1** and an overview of each trail system is provided in **Appendix A**. Trail difficulty increases in the following order:

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

Table 1. Summary of HMRRA trail difficulty ratings by trail system

Trail System	Easiest	More difficult	Most difficult	Most difficult with vehicle restrictions	Single track
Bearwallow	20%	48%	20%	8%	4%
Buffalo Mountain	49%	19%	5%	4%	23%
Cabwaylingo	58%	36%	3%	0%	3%
Devil Anse	24%	63%	2%	2%	9%
Indian Ridge	30%	52%	7%	1%	10%
Ivy Branch	30%	36%	23%	7%	4%
Pinnacle Creek	63%	25%	4%	2%	6%
Pocahontas	70%	20%	6%	2%	2%
Rockhouse	47%	39%	5%	1%	8%
Warrior	52%	34%	8%	3%	3%

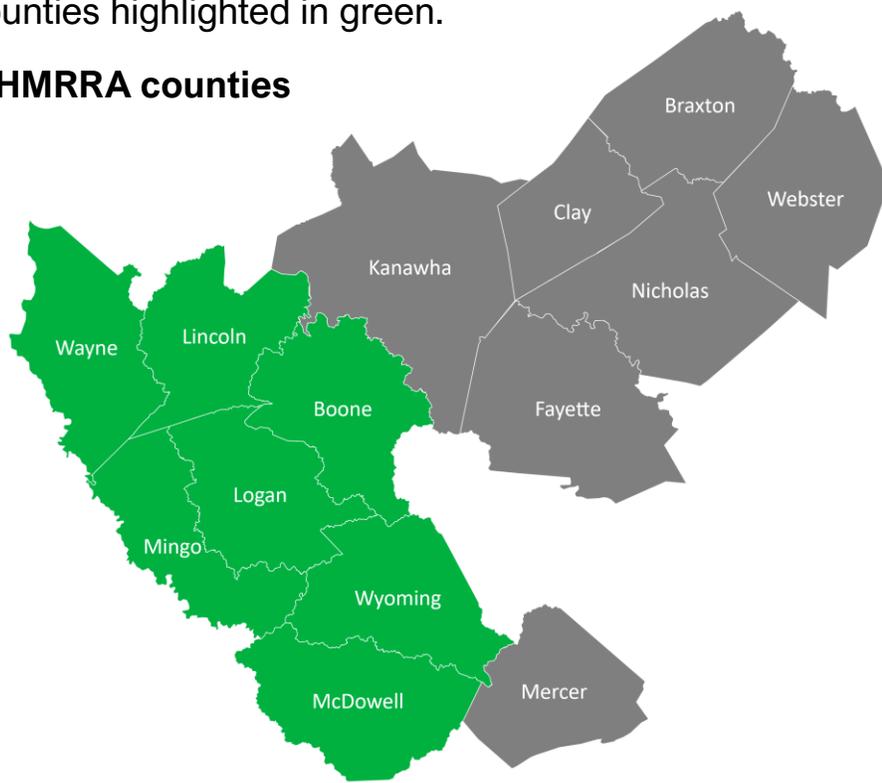
Source: <https://trailsheaven.com/>

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 HMRRA and spending patterns modeled from a visitor's survey distributed to the Hatfield-McCoy email contact list and directly to event visitors. Other supplementary information is presented as appropriate to assist in describing the economic and demographic base of both the state and the region.

Study area and geography

The state of West Virginia serves as the study area for the purpose of constructing the economic impact model in IMPLAN[®].⁶ However, as the focus of the Hatfield-McCoy Trails project is fourteen southern West Virginia counties (five of which currently have a Trails presence), this study analyzes the specific demographic and economic characteristics of the Trails' region as well. Hatfield-McCoy Trails counties are illustrated in **Figure 1**, with the seven original counties highlighted in green.

Figure 1. HMRRA counties



⁶ IMPLAN[®] stands for IMpact analysis for PLANning. For more information, please visit the MIG IMPLAN website at <http://implan.com/v4/index.php>.

Demographic and economic data

This report uses demographic and economic data releases as available from several federal sources, including the U.S. Census Bureau, the U.S. Bureau of Economic Analysis (BEA), and the U.S. Bureau of Labor Statistics (BLS). Most demographic and economic characteristics reviewed in this report are represented with trend analysis when possible.

Economic impact

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 2020.

Fiscal analysis

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 estimates for FY 2021 as produced by the West Virginia State Tax Department 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 trail system on state and local economies.

The second benefit is considered with respect to non-local visitor spending. Non-local visitors 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.

Operating budget and expenditures

The HMRRA provided annual financial statements for 2019 and 2020 as well as budgeted figures for 2021. 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.

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 expenditures in various spending categories. Survey responses form the basis of estimated total spending by all trail system visitors. Expenditures for all non-local visitors are estimated using a weighted average of survey respondents.⁷ Weighted spending for local visitors is also calculated for comparison. ZIP code, state and/or country of residence provided by respondents are used to classify responses with a local or non-local designation.⁸

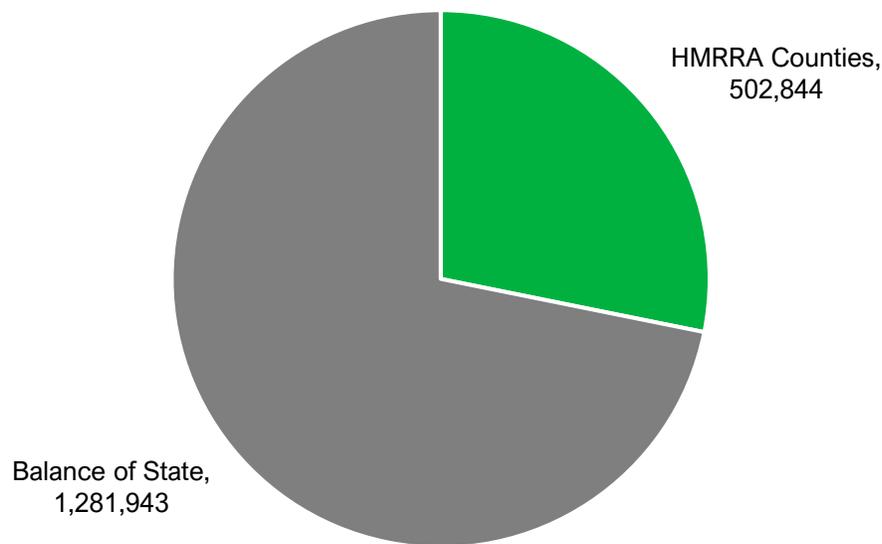
⁷ Spending habits of non-local respondents only are used in the IMPLAN© modeling software, as monies spent by individuals who live in the area currently would likely still be spent in the area and would overestimate the indirect and induced spending attributable to trails system activity.

⁸ For the purpose of this analysis, local visitors are residents of the State of West Virginia; non-local visitors reside elsewhere.

To help demonstrate the characteristics of the region, data related to population, income, labor force and unemployment is presented below. The Hatfield-McCoy Trails counties are compared to state-level West Virginia data as well as counties making up the balance of the state.

The 2020 population for Hatfield-McCoy Trails counties is estimated at 502,844. This represents about 28 percent of the statewide total of 1,784,787. More detail is presented in **Figure 2** and **Table 2**.

Figure 2. HMRRA region population, 2020



Source: U.S. Bureau of Economic Analysis, Regional Economic Information System (REIS).

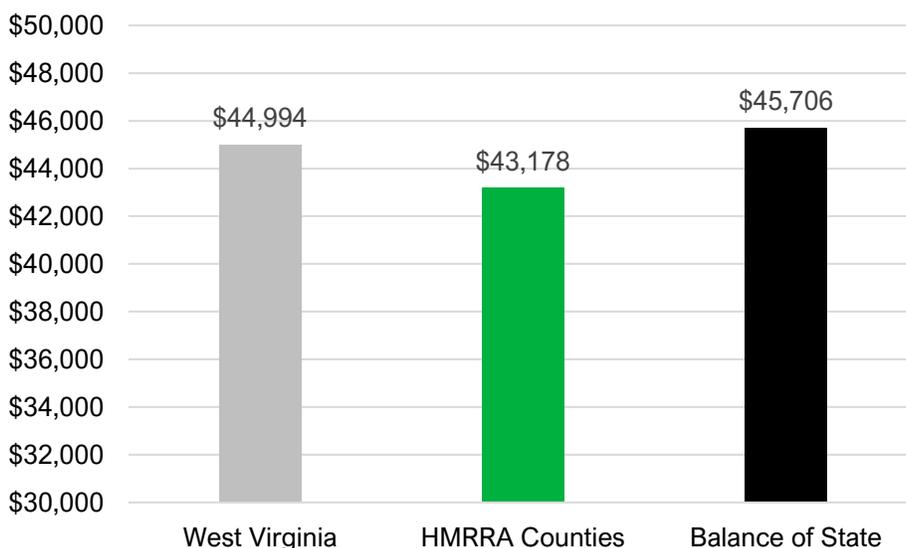
Table 2. HMRRA County populations, 2020

County	2020 Population	County	2020 Population
Boone	21,055	McDowell	16,916
Braxton	13,702	Mercer	58,258
Clay	8,341	Mingo	22,951
Fayette	42,062	Nicholas	24,340
Kanawha	176,253	Wayne	39,054
Lincoln	20,043	Webster	8,058
Logan	31,688	Wyoming	20,123

Source: U.S. Bureau of Economic Analysis, Regional Economic Information System (REIS).

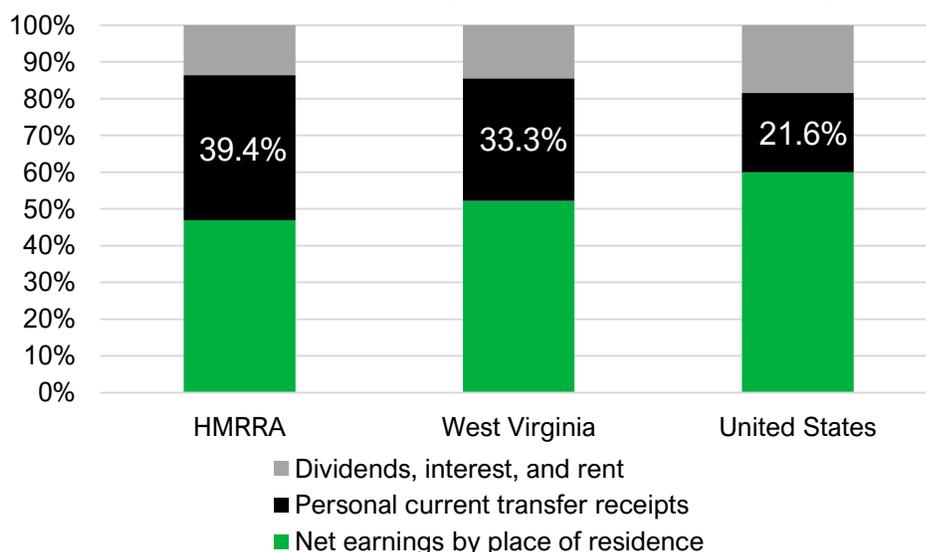
Per capita income for the Hatfield-McCoy counties slightly lags those figures for the state and remaining counties. For 2020, HMRRA regional per capita income is roughly 96 percent of the statewide figure, although a portion of per capita income figures were influenced by a loss of earnings and an influx of transfer receipts. **Figure 3** compares per capita income, while **Figure 4** demonstrates that transfer receipts make up a larger portion per capita personal income for the HMRRA region compared to the state and the United States.

Figure 3. HMRRA region per capita income, 2020



Source: U.S. Bureau of Economic Analysis, Regional Economic Information System (REIS).

Figure 4. Derivation of per capita personal income comparison, 2020



Source: U.S. Bureau of Economic Analysis, Regional Economic Information System (REIS).

U.S. Bureau of Labor Statistics data for 2019 and 2021 permit a comparison of labor force and unemployment data that removes some initial pandemic-impacted observations.

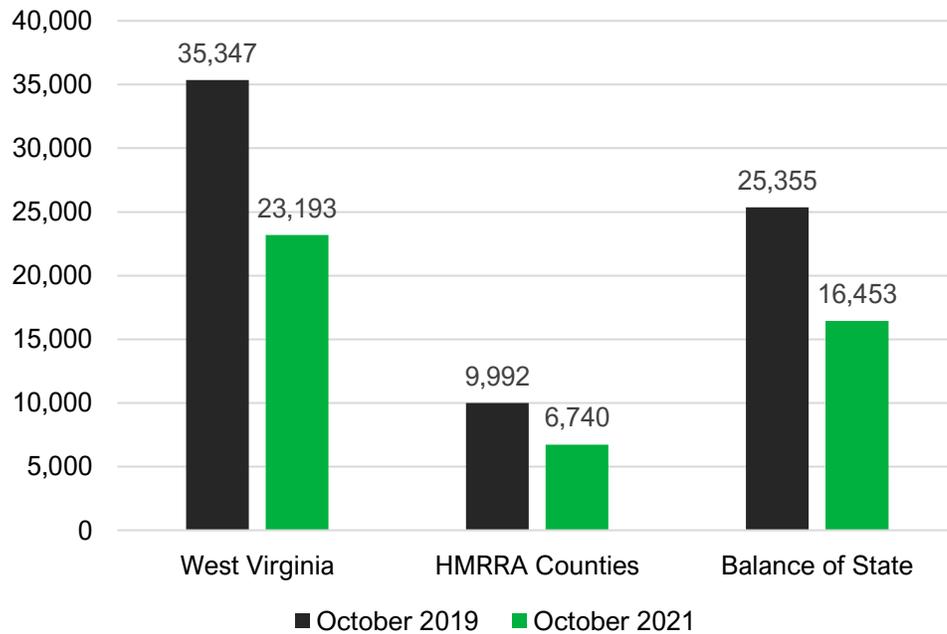
Unemployment (and the unemployment rate) declined significantly from the October 2019 to the October 2021 point estimates for all geographies. Declines in the labor force are also observed (including a 2.7 percent reduction for the HMRRA region). Please see **Table 3**, **Figure 5** and **Figure 6** for additional detail.

Table 3. Regional labor force summaries, 2021

Geography	October 2019			
	Labor force	Employment	Unemployment	Unemployment rate
West Virginia	807,336	771,989	35,347	4.4%
HMRRA counties	202,308	192,316	9,992	4.9%
Balance of state	605,028	579,673	25,355	4.2%
Geography	October 2021			
	Labor force	Employment	Unemployment	Unemployment rate
West Virginia	791,333	768,140	23,193	2.9%
HMRRA counties	196,907	190,167	6,740	3.4%
Balance of state	594,426	577,973	16,453	2.8%

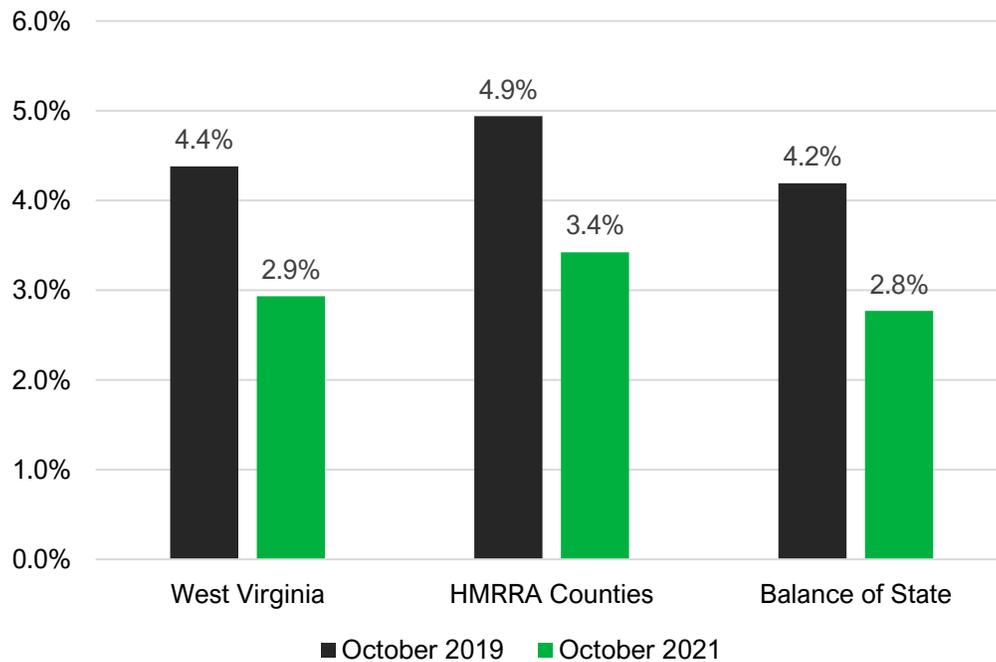
Source: U.S. Bureau of Labor Statistics, Local Area Unemployment Series (LAUS). Not seasonally adjusted data.

Figure 5. Regional unemployment, October 2019 and October 2021



Source: U.S. Bureau of Labor Statistics, Local Area Unemployment Series (LAUS)

Figure 6. Regional unemployment rate, October 2019 and October 2021



Source: U.S. Bureau of Labor Statistics, Local Area Unemployment Series (LAUS)

Area amenities for visitors

Cities and towns surrounding the ten 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.

Other amenities provided in the immediate

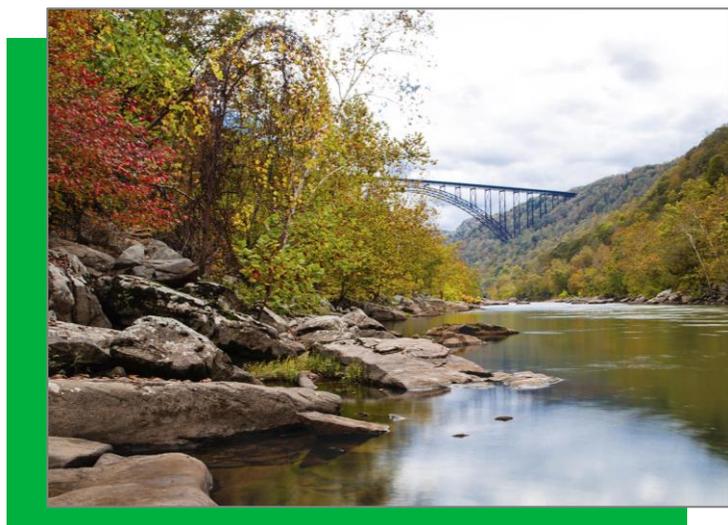
area include ATV rentals, restaurants,

information centers, welcome centers, white water rafting, gas stations,

grocery stores, and local shopping establishments. On December 27, 2020,

the region welcomed the naming of New River Gorge National Park and

Preserve.



Source: www.nationalparks.org

Regional business activity

Published data from the 2019 release of County Business Pattern data from the U.S. Census Bureau, indicate that there were 781 *Food Service and Drinking Places* establishments and 280 *Gasoline Stations* in the fourteen Hatfield-McCoy counties. Data disclosure issues prevent the provision of accurate assessments of figures for Accommodations and Arts, Entertainment and Recreation establishments across the Hatfield-McCoy counties⁹ but that available data suggests a minimum of 182 *Arts, Entertainment and Recreation* establishments, 113 *Accommodation* establishments in the region. Data for the Food Service and Drinking Places and Gasoline Stations sectors is provided for the Hatfield-McCoy counties in **Table 4**.

⁹ Data disclosure issues for Accommodations establishments and employment were observed for Clay, McDowell, Webster and Wyoming counties. Similarly, data disclosure issues for Arts, Entertainment and Recreation establishments and employment were observed for Clay, McDowell, and Webster counties..

Table 4. HMRRA establishments in selected industries, 2019

County	Food services and drinking places		Gasoline stations	
	Establishments	Employment	Establishments	Employment
Boone	15	248	13	165
Braxton	24	308	11	114
Clay	3	35	4	34
Fayette	68	975	29	223
Kanawha	386	7,391	79	733
Lincoln	11	79	6	53
Logan	54	940	19	164
McDowell	10	97	18	103
Mercer	85	1,783	33	240
Mingo	16	207	12	101
Nicholas	41	692	17	249
Wayne	44	729	17	187
Webster	6	37	6	64
Wyoming	18	208	16	197
HMRRA	781	13,729	280	2,627

Source: U.S. Census Bureau of Labor Statistics, County Business Patterns, 2019

A total of 1,961 responses to the visitor survey were complete and valid. Of the 1,784 respondents providing information regarding their residence, nearly 92 percent were non-local respondents who indicated a non-West Virginia ZIP code, state, or country designation.

Across the nine broad expenditure categories, non-local respondents indicated spending more money on their typical visit to the Hatfield-McCoy Trails than their local counterparts (see **Table 5**). On average, non-local respondents report spending \$535 more during a typical visit. Non-local visitors reported larger expenses in each category, with expenditures in food, accommodations, and fuel representing the largest differences.

Table 5. Survey respondent spending for local and non-local visitors

Expenditure category	Non-local respondents	Local respondents
Prepared Food	\$154.25	\$88.20
Groceries	\$117.96	\$67.90
Entertainment	\$51.50	\$14.38
Accommodations	\$485.97	\$262.66
Retail Shopping	\$90.78	\$54.63
Visiting Attractions	\$28.09	\$16.29
Fuel for Vehicles	\$180.64	\$113.50
Trail Vehicle Repair	\$86.74	\$59.58
Other	\$23.31	\$6.52
Total	\$1,219.24	\$683.66

In 2021, more than 94,000 riding permits were sold for the Hatfield-McCoy Trails, of which more than 78,000 were out-of-state permits. Accounting for respondent party size and length of stay, reported spending patterns suggest total non-local visitor spending in excess of \$79.8 million annually. Of this amount, approximately \$47.9 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.

The estimates generated 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. The economic impact is measured in three main categories:

- **Output.** Total output reflects the **dollar value of industry production and represents the total effect of direct, indirect, and induced spending** in the regional economy. Output is represented as an annual estimate of the impact of economic activity.
- **Employment.** IMPLAN measures employment in **full-time equivalent (FTE)** positions and reflects the number of FTEs directly and indirectly supported by the facility, as well as FTEs supported by induced spending. Thus, employment numbers provided in the following results reflect both full-time and part-time positions and are not a count of individual jobs.
- **Labor income.** Labor income is inclusive of **all types of employment income**. This includes employee compensation, such as wages, benefits, as well as income received by those who are self-employed and unincorporated business owners.

Direct, indirect and induced output

For the purposes of this report, two sets of impact estimates are provided. The first focuses solely on estimated visitor spending and the second on operational expenditures. Both impact estimates include 2019, 2020 and 2021. Impacts are statewide and will be seen annually from operations and visitor, although subsequent annual impacts will differ as operational spending changes.

CBER also generated multipliers for the economic activities associated with the Hatfield-McCoy Trail System. Multipliers describe how for a given change in a particular industry; a resultant change will occur in the overall economy. For example, a multiplier of 1.25 implies that for every dollar spent in the economy an additional \$0.25 of economic activity is generated.

Impacts from operations

Table 6 contains the economic impact results for the year of operations based on estimated operational expenditures. In 2021, direct spending is estimated to generate approximately \$7.3 million in indirect and induced spending in the region, for a total impact of \$14.7 million in economic activity, with an output multiplier of 1.98 (see **Table 6** for more detail).

Table 6 – 2021 Estimated operations impacts

Impact	Employment	Labor income	Output
Direct	36.0	\$4,192,550	\$7,409,780
Indirect	25.5	\$1,750,487	\$6,248,831
Induced	6.0	\$336,152	\$1,009,184
Total	67.5	\$6,279,190	\$14,667,795
		Multiplier	1.98

Additionally, the Hatfield-McCoy Trail System is estimated to support a total of 67.5 FTEs in 2021. Operations were estimated to generate about \$6.3 million in total labor income in 2021.

Impacts from visitor spending

In 2021, direct visitor spending (based on reported estimates from the visitor survey and out-of-state permit sales) is estimated to generate approximately \$19.2 million in indirect and induced spending in the region, for a total impact of \$53.4 million in economic activity, with a multiplier of 1.56 (see **Table 7**).

Table 7 – 2021 Estimated visitor spending impacts

Impact	Employment	Labor income	Output
Direct	470.6	\$14,524,189	\$34,222,969
Indirect	58.8	\$2,972,546	\$9,353,116
Induced	67.8	\$3,268,484	\$9,811,993
Total	597.3	\$20,765,219	\$53,388,078
		Multiplier	1.56

Visitor spending associated with the Hatfield-McCoy Trail system is estimated to support a of total 597.3 FTEs and about \$20.8 million in total labor income in 2021.

Total estimated Statewide one-year impacts

Combining operations and visitor spending, the total estimated state-wide impact for 2021 is approximately \$68.1 million in economic output (a multiplier of 1.63), \$27 million in labor income and nearly 665 FTEs. **Table 8** contains the total estimated impacts from 2021 operations and visitor spending.

Table 8 – Combined 2021 estimated impacts (spending and operations)

Impact	Employment	Labor income	Output
Direct	494.6	\$18,716,738	\$41,632,749
Indirect	95.4	\$4,723,064	\$15,601,947
Induced	74.8	\$3,604,636	\$10,821,177
Total	664.8	\$27,044,408	\$68,055,874
		Multiplier	1.63

Fiscal impact estimation

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 the scope of additional benefit provided by the Hatfield-McCoy Trails.

The first method considers the fiscal impacts based on sustained employment and shares of state taxes. The current economic impact analysis determined that an estimated 36 FTE positions are directly sustained by the Hatfield-McCoy Trails year-to-year and that approximately 67.5 FTE positions are sustained statewide. The total estimated amount of tax revenue generated by direct employment exceeds \$291,000. When indirect and induced employments are included, total estimated tax revenue exceeds \$546,000. Please see **Table 9** for additional detail.

Table 9 – State and local tax benefit of Hatfield-McCoy Trail employment

Source	Direct	Total
Initial Business Taxes	\$42	\$78
Business Taxes	\$59,681	\$111,901
Consumer Sales and Use Taxes	\$80,202	\$150,378
Personal Taxes	\$117,590	\$220,480
Excise Taxes	\$32,373	\$60,700
Miscellaneous Fees and Transfers	\$690	\$1,293
Taxes Collected by Counties (state share only)	\$977	\$1,832
Total	\$291,553	\$546,662

Sales and use taxes resulting from non-local visitor spending were also estimated. Motor fuel purchases excise tax rates were calculated at 35.7 cents per gallon.¹⁰ A six percent sales tax rate for each expense category gathered in the visitor survey was applied to the approximated total expenses for non-local visitors, including:

- Prepared food
- Entertainment
- Accommodations¹¹
- Retail shopping; and
- Vehicle repair.

The resulting fiscal impact due solely to sales taxes on non-local visitor spending exceeded \$2.2 million.

¹⁰ This includes \$0.205 flat excise tax per gallon and a variable sales tax rate that cannot be less than \$0.152 per gallon, based on an average wholesale price of \$3.04. Please see West Virginia Tax Laws - Fifty-Fourth Biennial Report, October 2021.

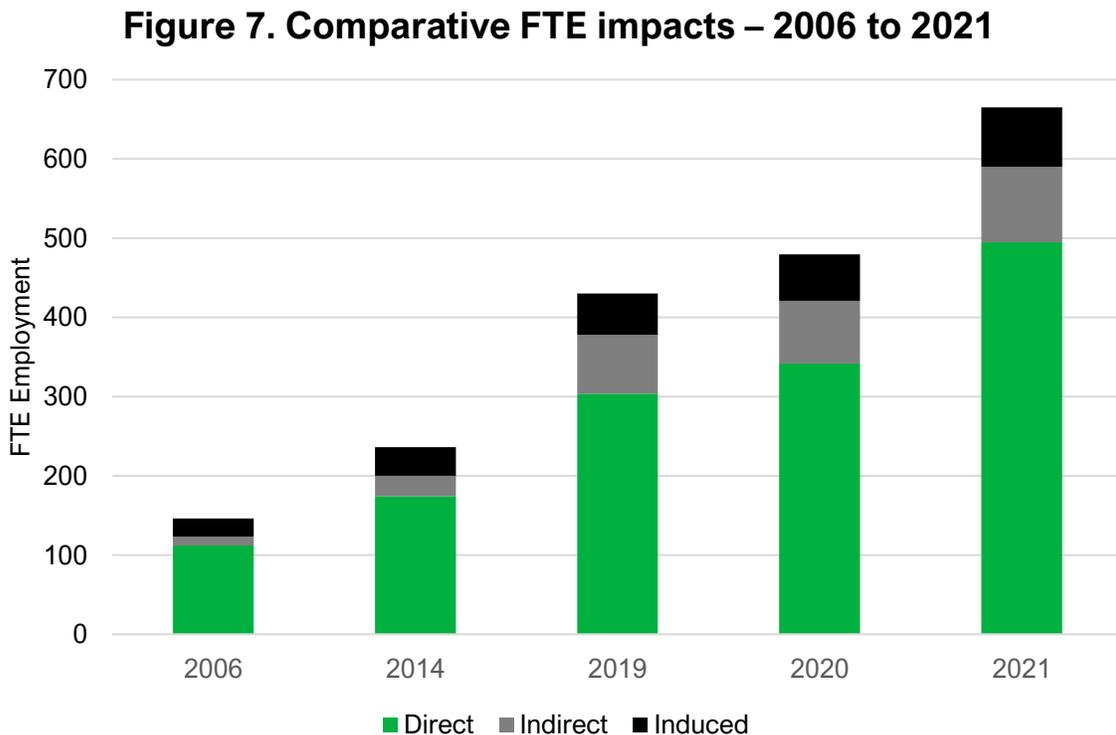
¹¹ This does not include locally administered county or municipal hotel occupancy taxes. Please see <https://tax.wv.gov/Documents/Legal/TaxLawReport.54.pdf> for further information.

Comparison to prior estimates

CBER conducted economic impact analyses of the Hatfield-McCoy Trails network on the State of West Virginia in 2006, 2014, 2019, and 2020 (an extension of the prior year's report). These study efforts serve as a useful benchmarking tool to evaluate the progression of the impact of the Hatfield-McCoy Trails on the West Virginia economy by comparing those results with the current analysis.

Comparable estimates of FTE employment and inflation-adjusted¹² labor income and total output from prior occurrences of economic impact studies undertaken by CBER indicate 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.

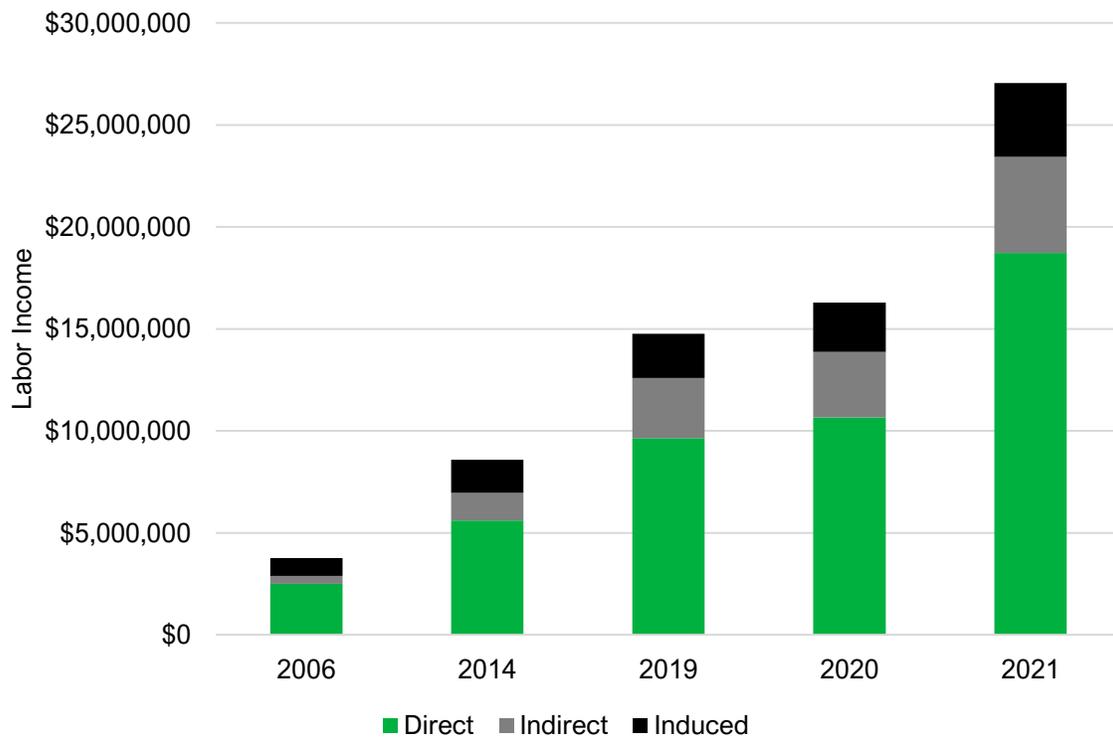
Total estimated impacts of total employment have risen from 146 FTE in 2006 to 665 in 2021. This estimate reflects an increase of approximately 4.6x the FTE level in 2006. **Figure 7** illustrates the increases in FTEs supported by activities related to Hatfield-McCoy Trail operations and visitor spending.



¹² Output estimations from prior CBER economic impact analyses were inflated to 2021 dollars using an inflation calculator provided by the U.S. Bureau of Labor Statistics (BLS).

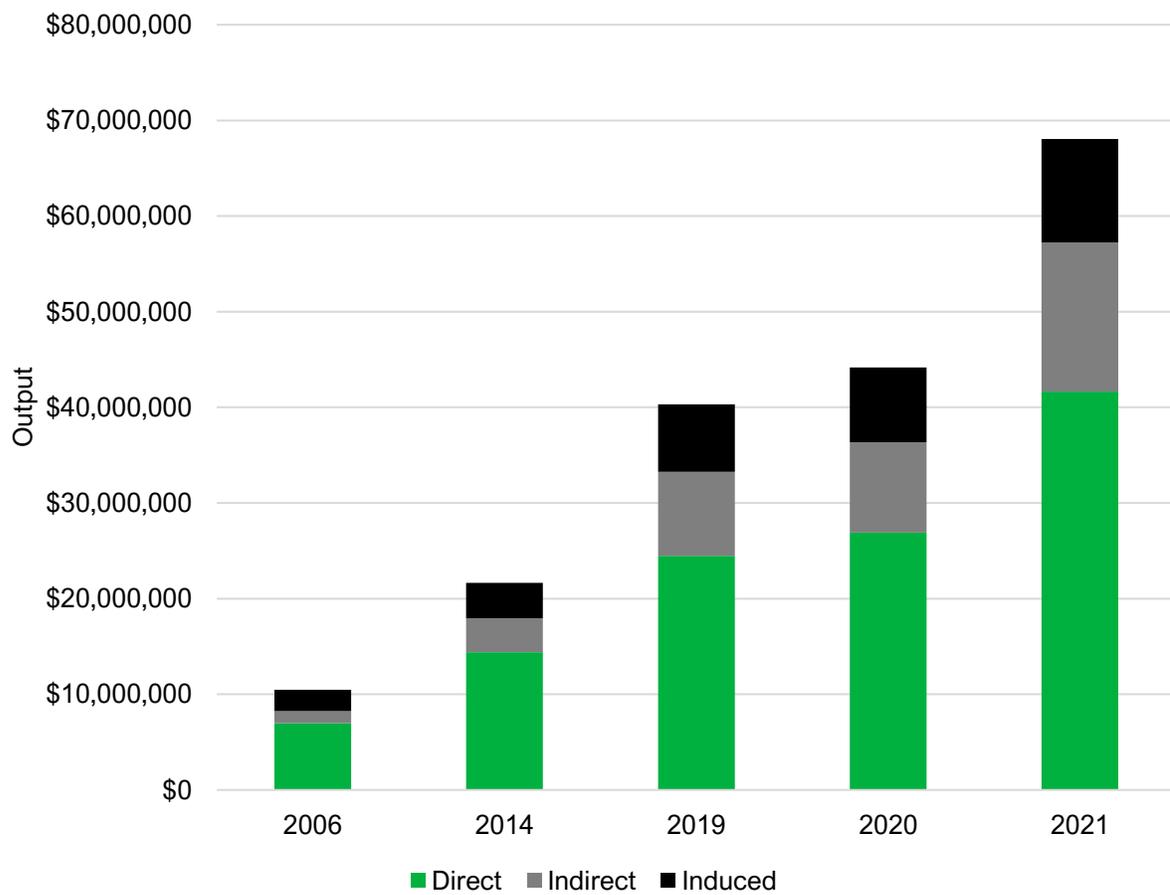
Total labor income impacts are estimated to have increased at an even larger rate, reflecting an increase of approximately 7.2x the total labor income in 2006. Inflation-adjusted total labor income was roughly \$3.8 million in 2006, rising to \$27.0 million in 2021. Please see **Figure 8** for more detail.

Figure 8. Comparative inflation-adjusted labor income impacts – 2006 to 2021



Total inflation-adjusted estimated impacts of output have risen from \$10.5 million in 2006 to \$68.1 million in 2021. This estimate reflects an increase of approximately 6.5x the total output level in 2006. **Figure 9** illustrates the increases in total output arising from activities related to Hatfield-McCoy operations and visitor spending.

Figure 9. Comparative inflation-adjusted output impacts – 2006 to 2021

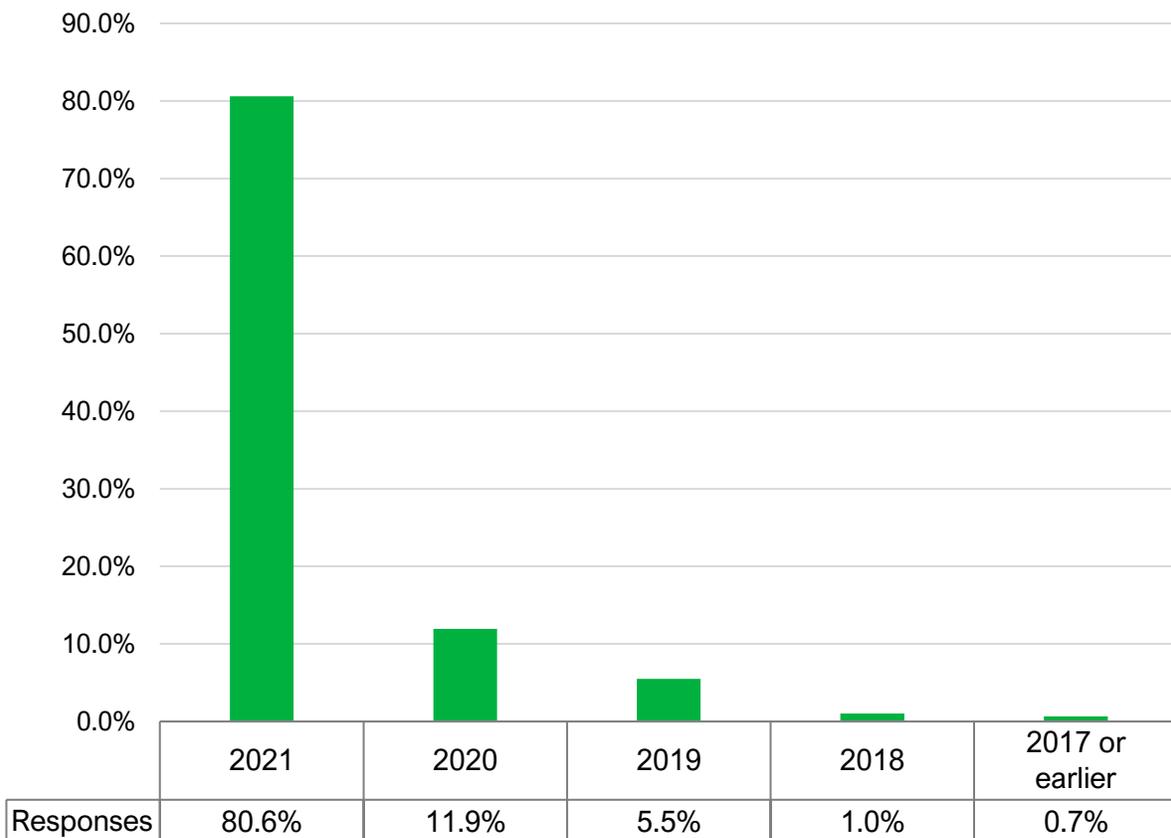


Surveys were distributed to visitors during the TrailFest, an event that occurred on October 8-11, 2021, as well as the general email contact database. A discussion of the results for the 1,961 valid responses is provided below. The survey instrument is provided in **Appendix B**.

When was your last visit to the Hatfield-McCoy Trails?

Respondents were asked to provide the most recent year that they had visited the Hatfield-McCoy Trail System. More than 80 percent of survey respondents indicated that they last visited the trail system in 2021 and nearly 93 percent had visited within the last two years.

Figure 10 – Survey respondent’s most recent visit



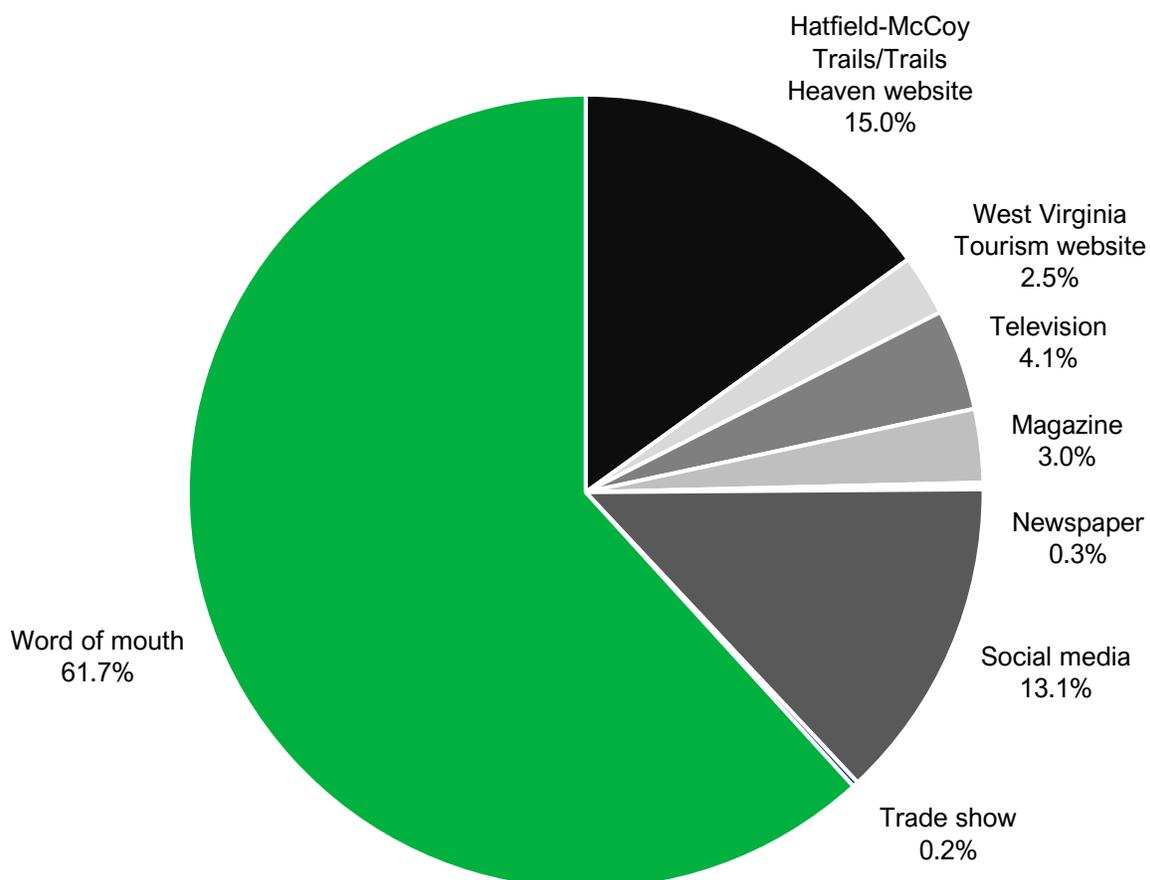
How many visits have you made to the Hatfield-McCoy Trails in each of the following time periods?

More than 99 percent of total survey respondents provided valid data on the number of visits they have made to the Hatfield-McCoy Trails. Of those, approximately 93 percent indicated visiting the trail system within the last 12 months and nearly 54 percent reported making multiple visits within that timeframe.

How did you first hear about the Hatfield-McCoy Trails?

Survey respondents were asked to indicate how they had first learned about the presence of the Hatfield-McCoy Trails. Roughly 62 percent of respondents indicated that they had first heard of the system through word of mouth. Fifteen percent of respondents indicated that they first heard of the trail system through the Hatfield McCoy Trails website and another 13 percent cited social media. Please see **Figure 11** for additional detail.

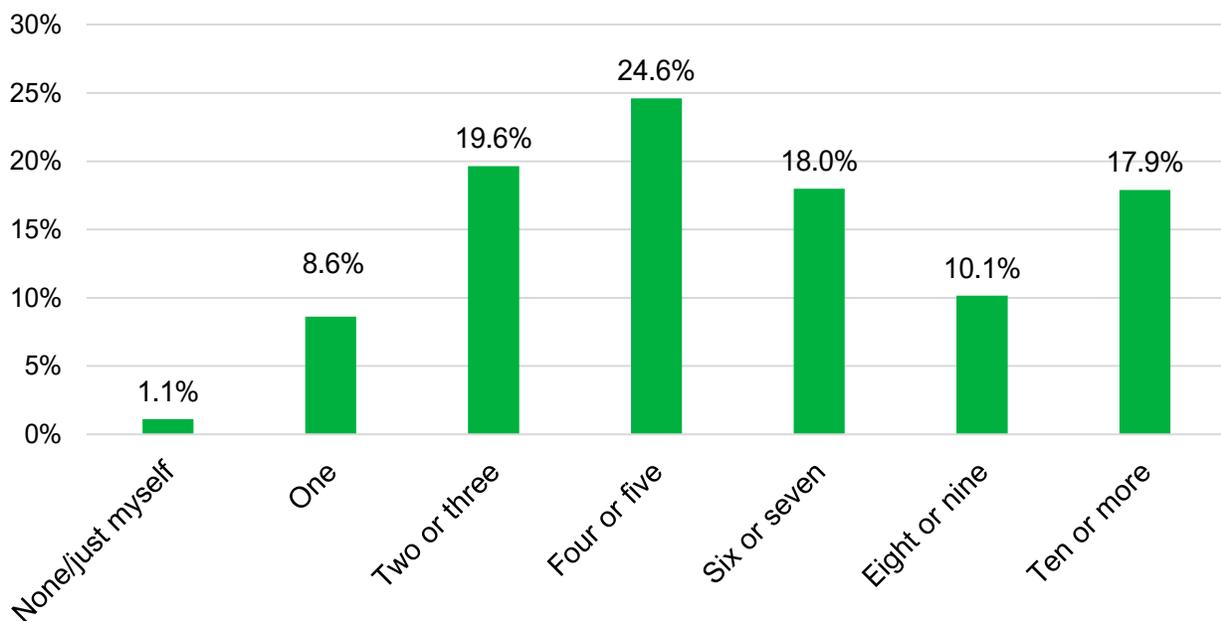
Figure 11 – Survey respondent, first learned of Hatfield-McCoy Trails



Thinking about your typical visit to the Hatfield-McCoy Trails, how many people in addition to yourself generally accompany you?

Survey respondents were also asked to estimate the approximate size of their parties when making trips to Hatfield-McCoy Trails. Roughly one-quarter of respondents indicated that “Four or Five” people accompany them on trips to the Hatfield-McCoy Trails. Please see **Figure 12**.

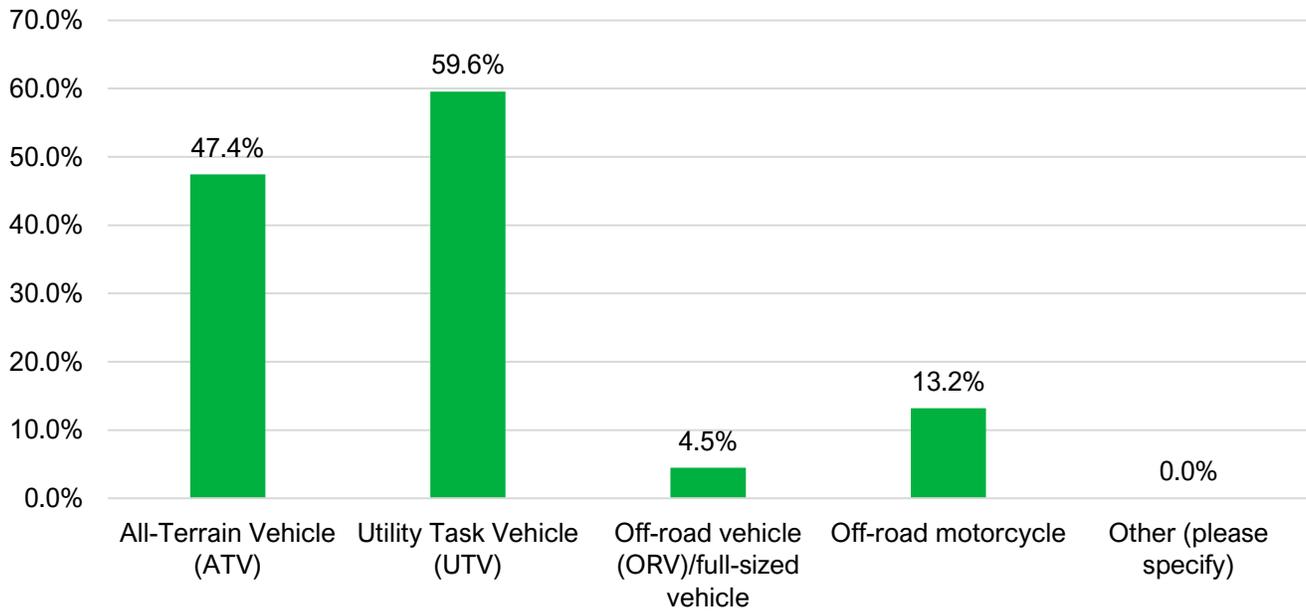
Figure 12 – Survey respondent group size



What type of vehicle(s) do you ride?

Respondents were also asked to indicate which types of vehicles they ride (with multiple selections possible). All-Terrain Vehicles (ATVs) and Utility Terrain Vehicles (UTVs) were equally popular among respondents, both accounting for approximately 55 percent of respondents. Please see **Figure 13** for more detail.

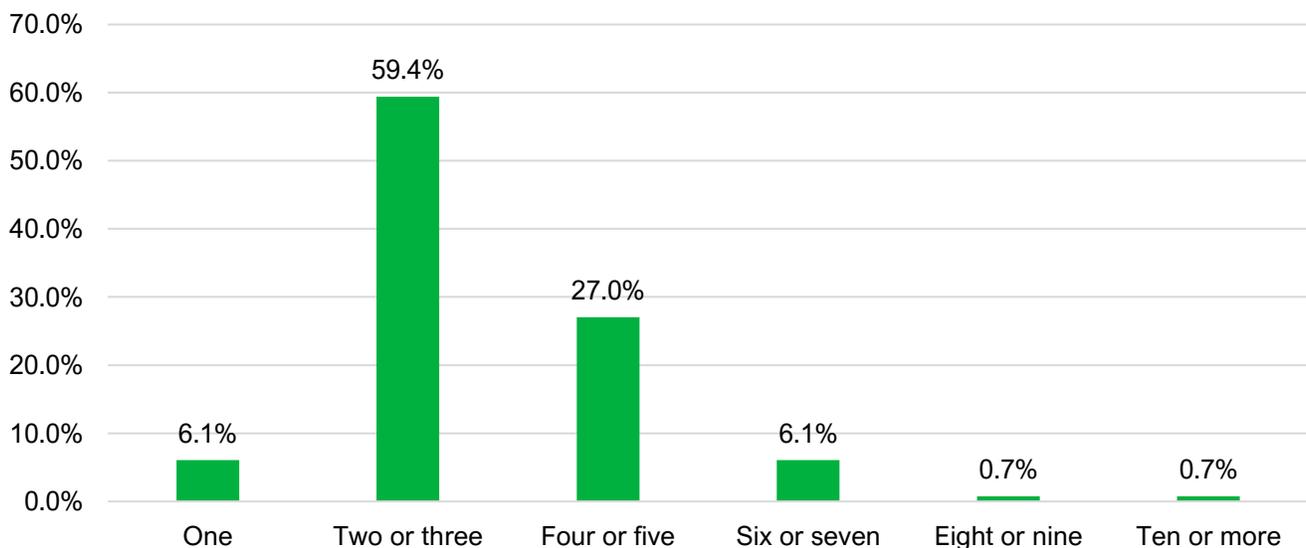
Figure 13 – What type of vehicle(s) do you ride?



Thinking about your typical visit to the Hatfield-McCoy Trails, how many days do you typically ride the trails?

Figure 14 illustrates the number of days that survey respondents indicated they spent riding the trails during a typical visit. Nearly 60 percent of respondents indicated that they typically spent “Two or three” days riding the Hatfield-McCoy Trails. Another 27 percent indicated riding the trails for “Four or Five” days. These two categories combined account for more than 86 percent of respondents’ choices.

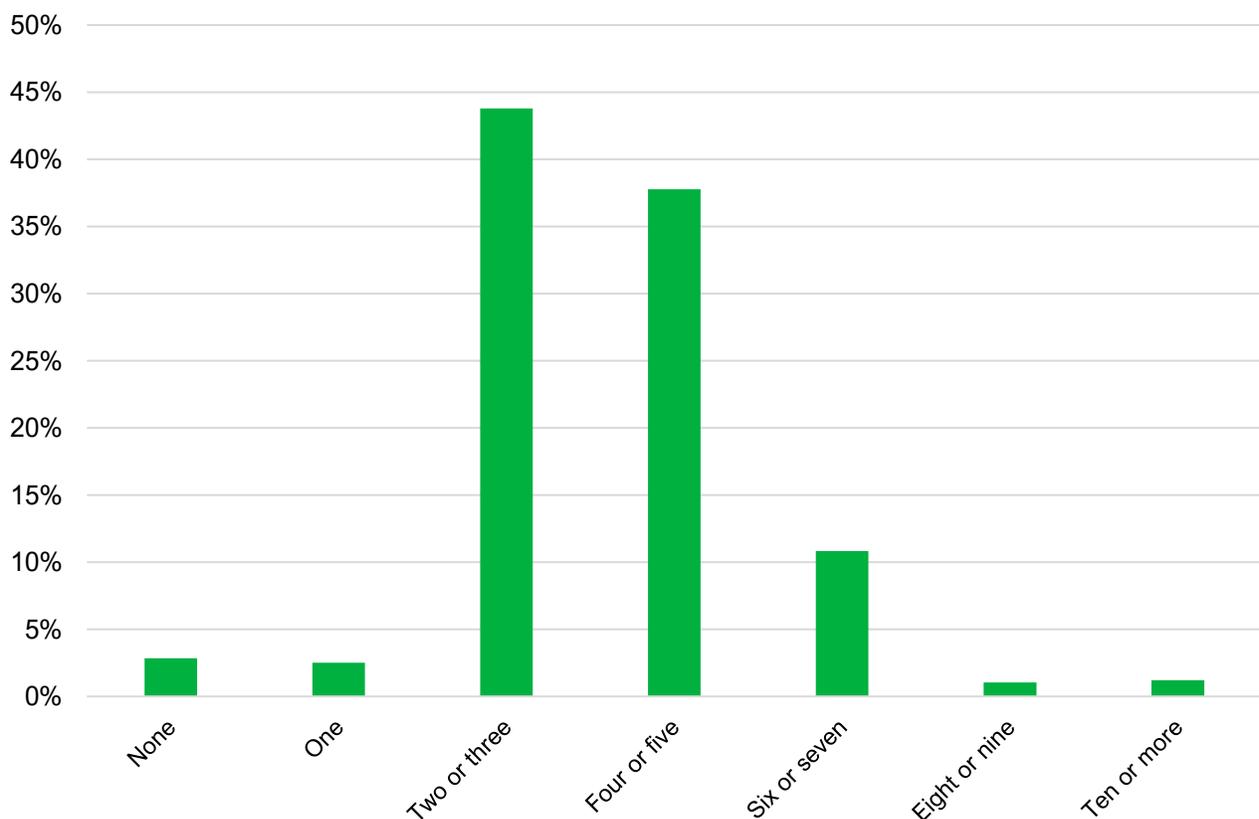
Figure 14 – Survey respondent days riding trails



Thinking about your typical visit to the Hatfield-McCoy Trails, how many days do you typically stay in the area?

Respondents were asked to indicate the number of days that they stayed in the area during a typical visit. Again, “Two or three” and “Four or Five” days were the most common responses (at 43.8 percent and 37.8 percent respectively). These two categories combined to account for nearly 82 percent of respondent choices. Please see **Figure 15** for more detail.

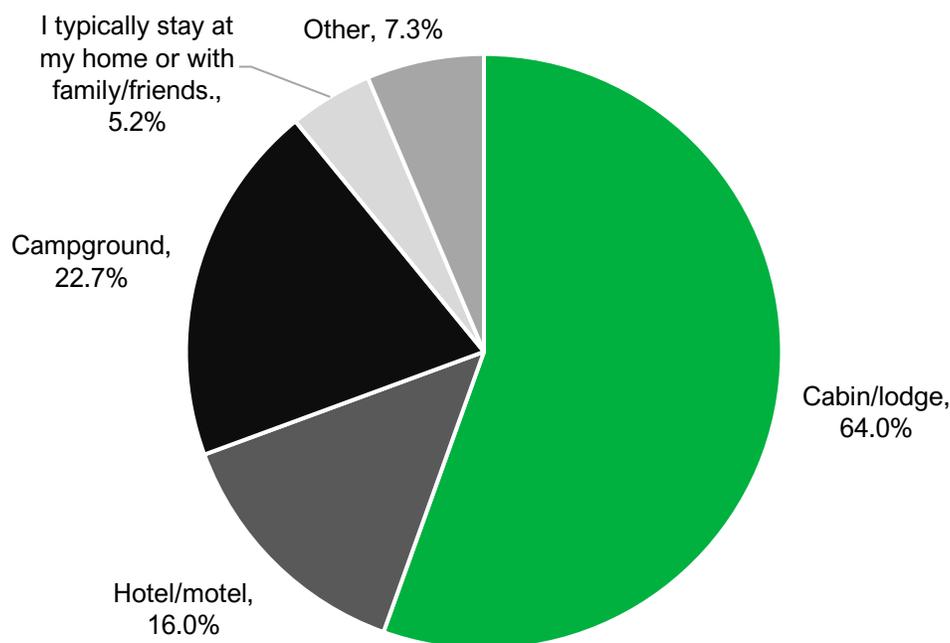
Figure 15 – Survey respondent length of stay in area



If you stay in the area while visiting the Hatfield-McCoy Trails, in what type of lodging do you typically stay?

For those respondents indicating that they stay in the area during a typical visit, 64 percent answered that they have utilized a “Cabin or lodge”. Another 22.7 percent indicated utilizing a “Campground” with another 16 percent staying in a “Hotel or motel”. Please see **Figure 16**.

Figure 16 – Survey respondent length of stay in area



Please tell us where you are from.

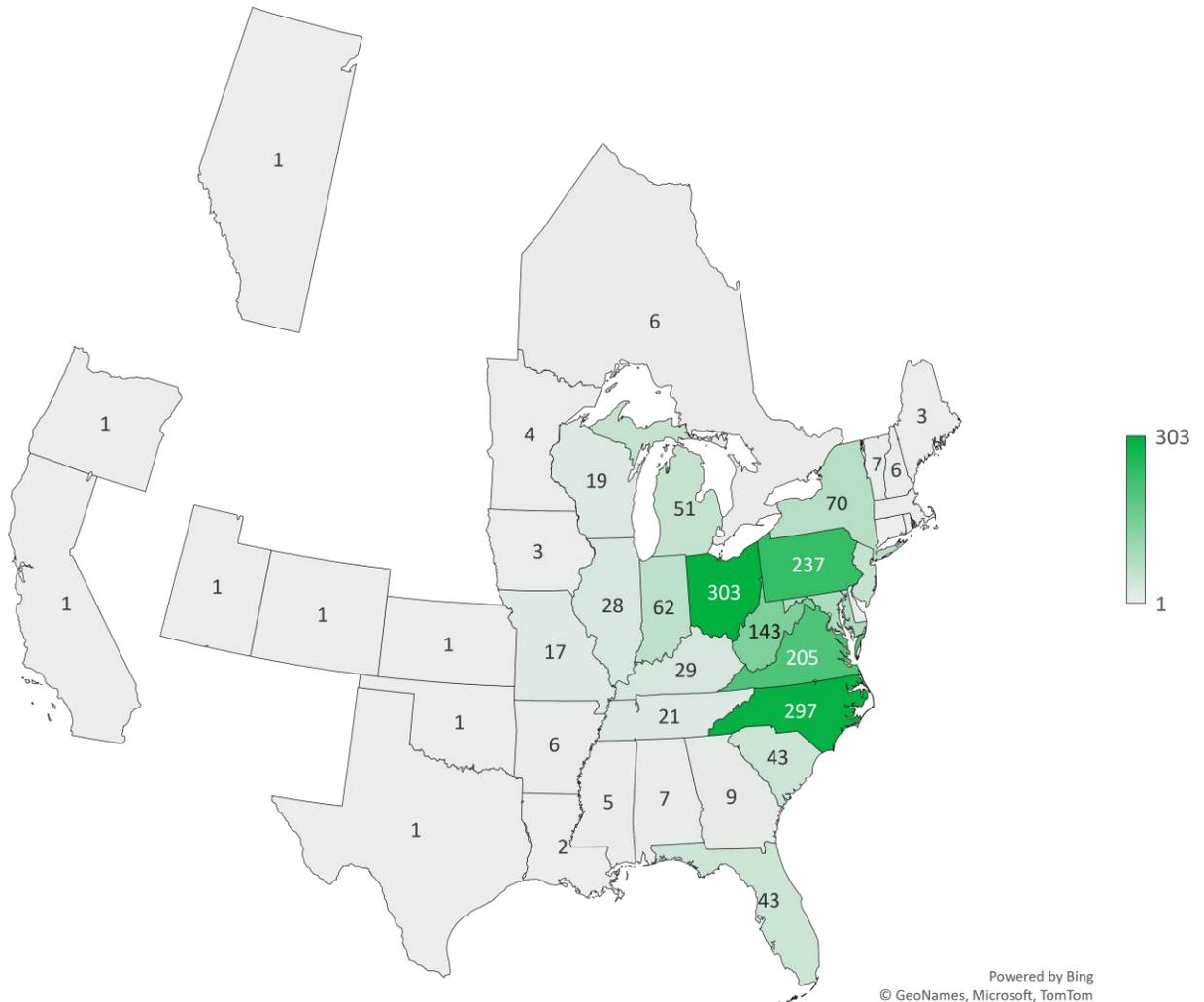
As is the case in past iterations of the visitor survey, an overwhelming majority of respondents to the survey (nearly 92 percent) indicated that they were from states other than West Virginia. More respondents indicated hailing from Ohio (17 percent), North Carolina (16.7 percent), Pennsylvania (13.2 percent), and Virginia (11.5 percent), than those from West Virginia (8.0 percent).

Respondents from other states made up about one-third of the total, but no other state accounted for more than 4.7 percent individually. This roughly corresponds to the number of resident versus non-resident permit sales for 2021 (17 percent resident to 83 percent non-resident). The top ten respondent states are outlined in **Table 10**. A U.S. map illustrating respondent state of residence is provided as **Figure 17** (seven respondents indicated foreign residence).

Table 10. Survey respondent state of residence (Ten largest percentages)

State	Percent Respondents
Ohio	17.0%
North Carolina	16.6%
Pennsylvania	13.3%
Virginia	11.5%
West Virginia	8.0%
Maryland	4.7%
New York	3.9%
Indiana	3.5%
Michigan	2.9%
New Jersey	2.9%

Figure 17 – Survey respondent state of residence



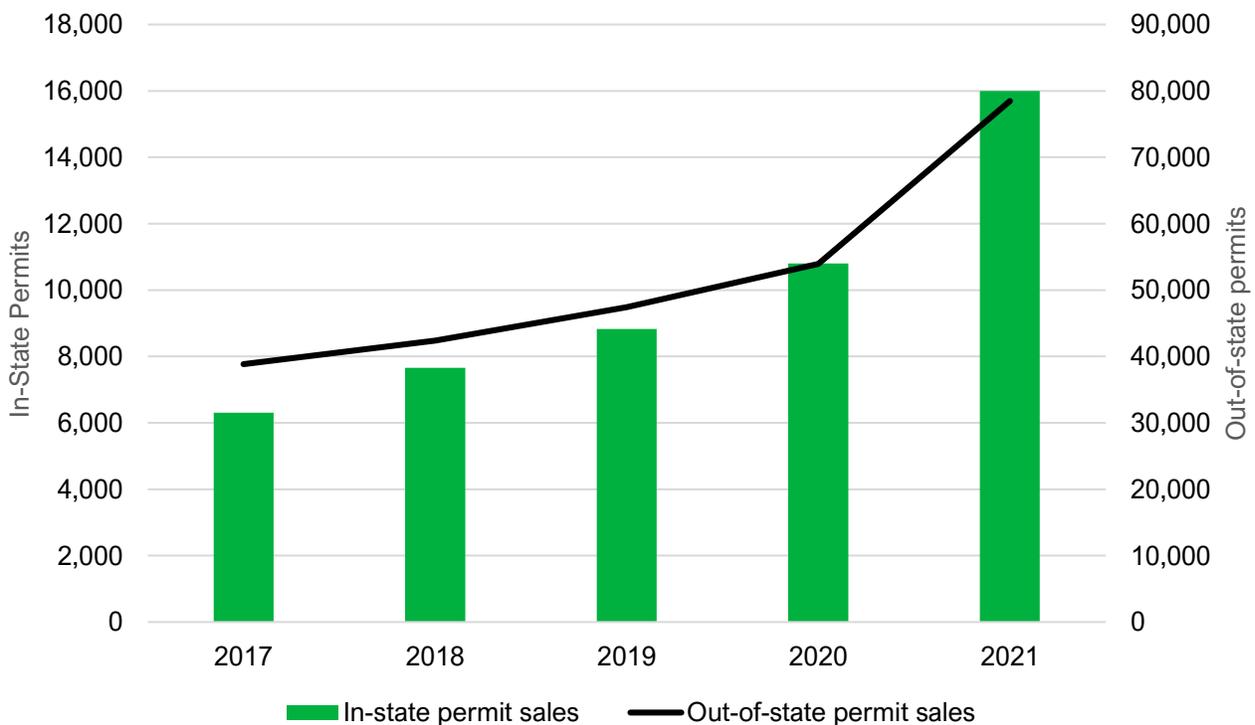
Conclusions

The last several years have been witness to significant growth in ridership on the Hatfield-McCoy Trail System, both for in-state residents and out-of-state tourists (see **Table 11** and **Figure 18**). The extensive network of trails continues to draw thousands of visitors into West Virginia each year.

Table 11. Permit sales, In-state versus Out-of-state

State	2017	2018	2019	2020	2021	Increase
In-state	6,310	7,661	8,824	10,802	15,998	154%
Out-of-state	38,823	42,370	47,434	53,942	78,466	102%
Total	45,133	50,031	56,258	64,744	94,464	109%

Figure 18. Permit sales, In-state versus Out-of-state



These visitors not only bring tourism dollars, (delivering jobs, wages, and tax impacts to the region) but also provide an opportunity to enhance the image of the state and its natural beauty. Further benefits include the recreational activities provided to West Virginia residents that they might otherwise have to seek elsewhere. Ultimately, the continued success of the Hatfield-McCoy Trail System can provide a necessary ingredient to leverage private investments and regional economic growth.

Trail system overviews

Bearwallow Trail System

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.

Country Roads Byway Visitor Center serves as an additional trailhead for the Bearwallow System. Bearwallow is the only trail to be open to ORVs as well as ATVs, UTVs and off-road motorcycles, and has a community connector to Logan, WV. Much of the Bearwallow system is comprised of “Blue” trails (roughly 48 percent).



Buffalo Mountain Trail System



Buffalo Mountain is another 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. It is comprised of roughly 23 percent single-track trails, making it incredibly popular with dirt bike enthusiasts.

This system has one staffed trailhead that offers restrooms, permit and merchandise sales, and a two-acre parking lot. It also has three community connectors providing direct access to the ATV-friendly towns of Matewan, Delbarton, and Williamson, WV. Much of the Buffalo Mountain system is comprised of “Green” trails (roughly 49 percent).

Cabwaylingo State Forest Trail System



Cabwaylingo State Forest sits on nearly 8,300 acres of land in southern West Virginia. Its colorful name was chosen as a combination of the four closest West Virginia counties surrounding the forest – Cabell, Wayne, Lincoln, and Mingo.

The trail offers 100 miles of new trails to explore, plenty of parking for trucks and trailers, and a trailhead facility. Fifty-eight percent of Cabwaylingo trails are classified as easiest “Green” trails while another 36 are the more difficult “Blue” trails.

Indian Ridge Trail System

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.

It connects to the Pocahontas and Pinnacle Creek trails (allowing for extended off-road trips) and provides riders with direct access to the towns of Northfork and Keystone. Indian Ridge offers one unstaffed trailhead in Ashland, WV with restrooms and a two-acre parking lot. A large portion of the Indian Ridge Trails (roughly 52 percent) are the more difficult “Blue” trails.



Devil Anse Trail System



Devil Anse Trail System links up to two other Hatfield-McCoy Trail Systems (Rockhouse and Buffalo Mountain) totaling over 300 miles. The staffed trailhead is located in the town of Matewan and offers restrooms, permit and merchandise sales, and a two-acre parking lot.

This area is historically known for being the heart of the Hatfield-McCoy Feud. The trail system has direct access to gas, food and lodging. More than half of the Devil Anse system are rated as the “Blue” trails. (roughly 63 percent).

Ivy Branch Trail System

Ivy Branch Trail System – located just twenty minutes from West Virginia’s capitol city of Charleston – offers real adventure for riders of full-sized, off-road vehicles like Jeeps and land cruisers along with ATVs, UTVs and dirt bikes. One-third of the Ivy Branch system is comprised of “Blue” trails.



Pinnacle Creek Trail System



Opened in 2004, Pinnacle Creek is located within 15 miles of Twin Falls State Park and connects to the Warrior, Indian Ridge and Pocahontas Trail Systems. The Pinnacle Creek System has one staffed trailhead in Pineville, WV, which provides restrooms and a two-acre parking lot. This system offers mostly “Green” and “Blue” trails (63 percent and 25 percent, respectively).

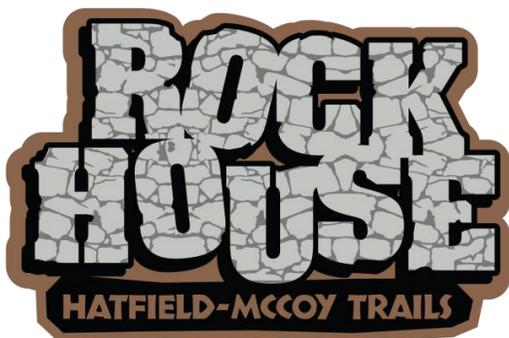
Pocahontas Creek Trail System

Opened in 2012, the Pocahontas Trail System offers a staffed trailhead located in Coaldale, just outside of the town of Bramwell. This area is historically known for its numerous millionaire homes from the early 20th century. The

Pocahontas System benefits from its location, as it is the Hatfield-McCoy Trail System closest to the I-77 Turnpike. Its trail difficulty dispersion is mostly “Green” trails (approximately 70 percent) and “Blue” trails (20 percent).



Rockhouse Trail System



The Rockhouse Trail System is one of the three original Hatfield-McCoy Trails opened in October 2000. Offering more than 100 miles of trails, the system provides a variety of difficulty levels (“Green” and “Blue” trails make up 47 percent and 39 percent, respectively). Permitted vehicles include ATVs, UTVs and off-road motorcycles.

One staffed trailhead in Man, WV, offers a two-acre parking lot, restrooms, and permit and merchandise sales. Riders on the Rockhouse Trail have direct access to the towns of Man and Gilbert.

Warrior Trail System

The Warrior Trail System is located in the City of War (West Virginia’s southern-most city). This trail system also accesses the ATV-friendly City of Gary. The Warrior Trail System offers numerous scenic views and has direct access to gas, food and lodging. A staffed trailhead in War, WV offers a two-acre parking lot, restrooms, and permit and merchandise sales. Its trail difficulty dispersion is mostly “Green” trails (approximately 52 percent) and “Blue” trails (34 percent).



Visitor and contact list survey instrument

Please take a moment to complete this survey about your experiences visiting the Hatfield-McCoy Regional Recreational Trail system. Your answers will remain confidential and no personally identifiable information will be collected.

1. **When was your last visit to the Hatfield-McCoy Trails?**
 2019 2018 2017 2016 2015 or earlier

2. **How many visits have you made to the Hatfield-McCoy Trails in each of the following time periods?**

Time Period	Number of Times Visited
Within the past 12 months	
Since 2016	
2015 or earlier	

3. **How did you first hear about the Hatfield-McCoy Trails?**
 Hatfield-McCoy Trails/Trails Heaven website West Virginia Tourism website
 Television Magazine Newspaper
 Social media Trade show Word of mouth

4. **Thinking about your typical visit to the Hatfield-McCoy Trails, how many people in addition to yourself generally accompany you?**
 None/just myself One Two or three
 Four or five Six or seven Eight or nine
 Ten or more

5. **What type of vehicle(s) do you ride? Please select all that apply.**
 All-Terrain Vehicle (ATV) Utility Task Vehicle (UTV)
 Off-road vehicle (ORV)/full-sized vehicle Off-road motorcycle

6. **Thinking about your typical visit to the Hatfield-McCoy Trails, do you generally make purchases in any the following categories? For affirmative answers: approximately how much money did you typically spend per visit for each category? Please provide your best estimate.**

Category	Yes	No	Amount
Prepared food (i.e. restaurant)	<input type="checkbox"/>	<input type="checkbox"/>	\$
Groceries	<input type="checkbox"/>	<input type="checkbox"/>	\$
Entertainment	<input type="checkbox"/>	<input type="checkbox"/>	\$
Accommodations	<input type="checkbox"/>	<input type="checkbox"/>	\$
Retail/souvenir shopping	<input type="checkbox"/>	<input type="checkbox"/>	\$
Visiting other attractions	<input type="checkbox"/>	<input type="checkbox"/>	\$
Fuel for automobile(s) and/or trail vehicle(s)	<input type="checkbox"/>	<input type="checkbox"/>	\$
Trail vehicle repairs	<input type="checkbox"/>	<input type="checkbox"/>	\$
Other (please specify):	<input type="checkbox"/>	<input type="checkbox"/>	\$

7. **Thinking about your typical visit to the Hatfield-McCoy Trails, how many days do you typically ride the trails?**
- One Two or three Four or five Six or seven
 Eight or nine Ten or more
8. **Thinking about your typical visit to the Hatfield-McCoy Trails, how many days do you typically stay in the area?**
- One Two or three Four or five Six or seven
 Eight or nine Ten or more
9. **If you stay in the area while visiting the Hatfield-McCoy Trails, in what type of lodging do you typically stay?**
- Cabin/lodge Hotel/motel Campground
 My home or with family/friends Other (please specify): _____
 I don't stay in the area

The remaining questions are for classification purposes only.

10. **Please tell us where you are from.**
City: _____ State: _____ Zip Code: _____
11. **Including yourself, how many persons 18 years of age and older live in your household?**
- One/just myself Two or three Four or five
 Six or seven Eight or nine Ten or more
 Prefer not to answer
12. **Which broad category best describes your age?**
- 18 to 24 years 25 to 34 years 35 to 44 years
 45 to 54 years 55 to 64 years 65 years or older
 Prefer not to answer
13. **Which broad category best describes your household income range?**
- Under \$25,000 \$25,000 to \$49,999 \$50,000 to \$74,999
 \$75,000 to \$99,999 \$100,000 to \$149,999 \$150,000 to \$199,999
 \$200,000 or more Prefer not to answer

Thank you very much for your participation in this survey. We appreciate your assistance in helping us better understand the relationship between the Hatfield-McCoy Trails and its patrons.