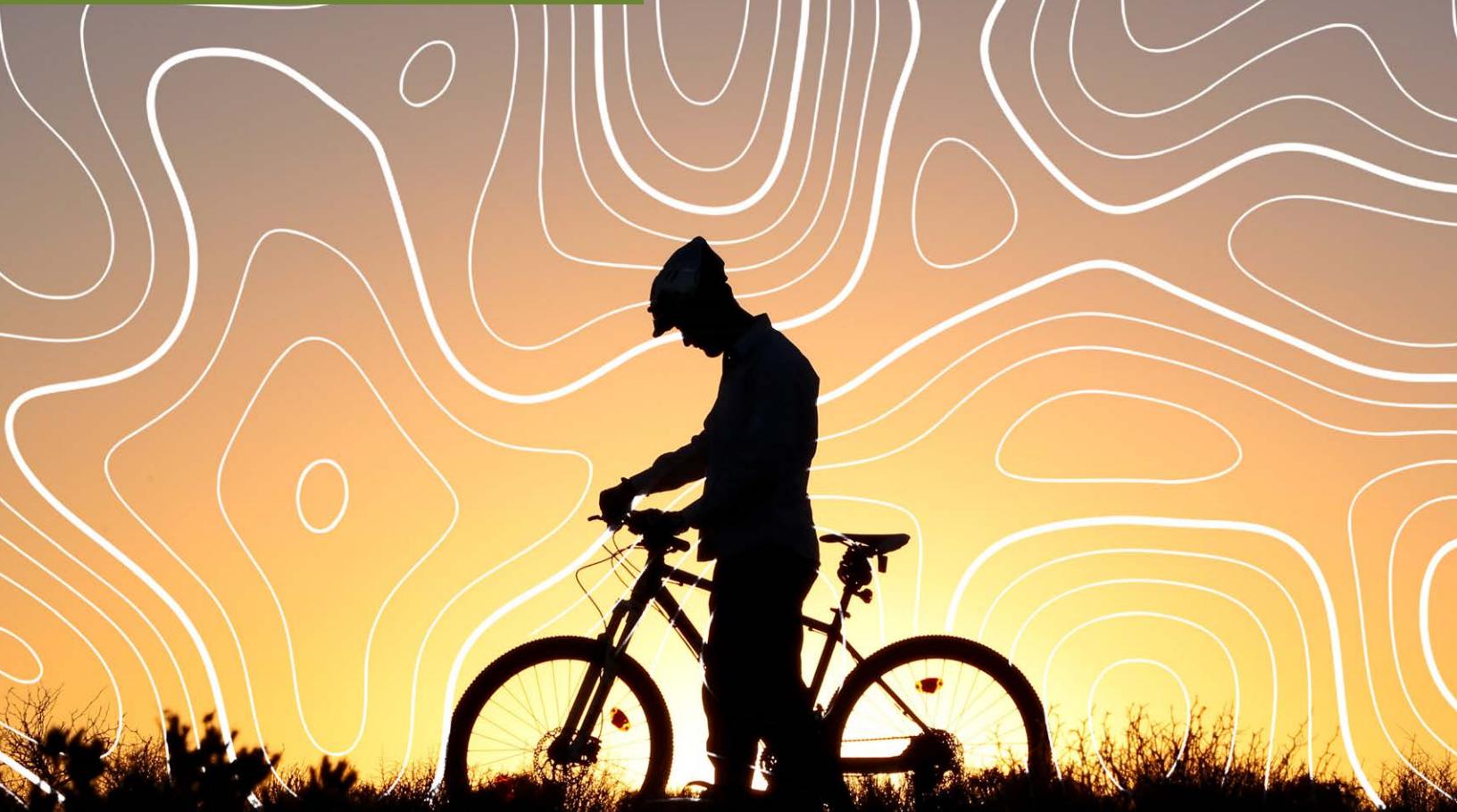




pennsylvania environmental council



Growing Mountain Biking in the North Central Appalachian Rec Belt

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Introduction

This report serves as a companion piece to the full report, *From Rust Belt to Rec Belt—Growing the Outdoor Recreation Economy in North Central Appalachia*, which takes a comprehensive look at how the tri-county region surrounding the Pittsburgh metropolitan statistical area can take advantage of its outdoor assets to expand its outdoor recreation industry. That report looked at several other comparable communities across the country to gather lessons learned and best practices for developing a robust outdoor recreation sector, as well as interviews with local outdoor recreation stakeholders to summarize strengths and opportunities for the region.

Building on that work, this report takes a deeper dive into a segment of the outdoor recreation economy—specifically, mountain biking. Inspired by communities like Bentonville, Arkansas, a city in the Ozark Mountains with just over fifty thousand people that built a globally known cycling culture, this study looks at the potential and realized economic impacts of mountain biking tourism and local recreation, as well as strategies that can help the region develop its mountain biking infrastructure and landscape.

Vision

Build on the region's strong community of mountain bikers, support entities, and existing infrastructure to expand local mountain biking culture and usage in order to generate increased economic impacts.

Goals

To reach the stated vision, the region should pursue the following goals:

- engaging in strategic trail planning to update outdated trails with purpose-built ones
- employing trail usage tracking that is coordinated among support entities
- improving signage, trail difficulty indicators, and overall communications
- building on the success of the rails-to-trails model to implement additional public-private partnerships, relationships with land banks, and trail management across multiple jurisdictions

Potential Benefits to North Central Appalachia

If the vision and goals are realized, potential benefits to North Central Appalachia include significant economic development driven by local and tourism spending, increased sector employment, health and conservation benefits and cost mitigation, and overall quality-of-life improvements that attract and retain residents.



Bentonville,
estimates

\$27M

in local spending
annually by out-of-
state visitors



Trails generate
valuable volunteer
and career
opportunities

Local Spending Benefits

- Bentonville generated an estimated **\$51 million business benefit** in 2017. This includes \$21 million in reported household / local resident spending on bicycles and bicycle goods, equipment, and events; \$3 million in bicycle retail sales and retail sales taxes paid by local customers.
- Bentonville estimates approximately **\$27 million annual tourism spending** by out-of-state visitors.
- Chattanooga notes that mountain bikers contribute **\$6.9 million to Hamilton County's economy annually**, which generates \$482,999 in county and state taxes and \$498,225 in federal taxes.
- The town of Cuyuna, a Ride the Range community in Minnesota, estimates annual spending of **\$2 to \$3 million** on riders' lodging and food spending.
- The Baileys Trail System near Athens, Ohio is projected to generate **\$20.1 million in increased spending** and \$7.3 million in increased tax revenue in the next ten years.
- Tourism along the 150-mile Great Allegheny Passage which runs from Pittsburgh, PA to Cumberland, MD drove over **\$121 million in economic impact** in 2019.

Employment and Workforce Benefits

- In Chattanooga, mountain biking supports **seventy-three full-time employees** in Hamilton County. An estimated total of **10,298 volunteer hours are contributed annually in the region**. Assuming a value of \$28.54 per volunteer work hour (IndependentSector.org, 2021), this accounts for \$293,913.50 of impact.
- The Baileys Trail System is estimated to generate **\$6.9 million in wages, 78 new jobs, and 150 jobs retained** in the next ten years.
- Intern opportunities ranging from trail stewardship to marketing have helped build the outdoor recreation talent pipeline.



The 88-mile Baileys Trail System is expected to generate more than

\$5,000

per mile in health-care cost avoidance

Chattanooga's biking trails contribute environmental services valued at more than

\$841

per acre

Health and Quality of Life Benefits

- In Bentonville, studies have shown that cycling has created more than **\$86 million in total health benefits to the local economy**, including \$79 million in reduced mortality benefits and \$7 million in avoided health-care costs.
- The Baileys Trail System is expected to generate **\$500,000 in local health-care cost avoidance** in the next ten years.
- When deciding where to live, approximately 30 percent of Northwest Arkansas residents and 28 percent of skilled workers consider the availability of paved bicycle infrastructure (e.g., bike lanes and shared-use paved trails) important. Similarly, **27 percent of Northwest Arkansas residents and 24 percent of skilled workers consider the availability of natural-surface trails important**.

Benefits to Conservation

- Chattanooga reports that a total of 3,435 acres in the region are dedicated to mountain biking trails, equating to **preventive air-quality cost savings of \$326,015 and \$2,565,945 for water mitigation annually**.



Why North Central Appalachia Is Poised to Specialize in Mountain Biking

There is an opportunity to use purpose-built trails to generate a significant return on investment, improve safety and sustainability, rehabilitate former industrial sites, and create connectivity to the region's scenic but underutilized rural places. The region has a variety of quality mountain biking sites, with more than two hundred miles of trail in only a thirty-mile radius from Pittsburgh. What makes North Central Appalachia unique is the proximity to Pittsburgh and its ability to offer significant urban amenities in addition to serving as a gateway to mountain biking opportunities near both the city and more outlying areas across the region.

There is already a strong community of mountain bikers in the region, with many established groups and clubs, significant traction among new riders, and increasing trail usage across the board. The vast amount of land suitable for outdoor recreation, and mountain biking in particular, also presents an opportunity for the area.

That said, the region could benefit from more strategic trail planning to update outdated trails with purpose-built ones. Additionally, more concerted efforts to track trail use would support more effective allocation of resources. Improving signage, trail difficulty indicators, and overall trail communications will be critical to improving access and increasing trail usage overall.

The region can build on the success it has had with the rails-to-trails model and utilize lessons learned from these efforts to secure land and maintain infrastructure, such as public-private partnerships, relationships with land banks, and trail management across multiple jurisdictions.



Trail Pittsburgh is an environmentally minded nonprofit organization and chapter member of the International Mountain Bicycling Association (IMBA) "dedicated to creating, enhancing, and preserving great singletrack trail experiences in Southwestern Pennsylvania parks" through advocacy, stewardship, and strategic partnerships with land managers. Since its formation, Trail Pittsburgh has built and maintained more than 220 miles of multiuse trails—including the North Park's Dr. J Freeride Trail and Skills Area and Alameda Park and Trail System—all with the support of more than thirty-three thousand volunteer hours, valued at more than \$160,000 per year. The organization focuses on a grassroots, bottom-up approach. They engage local mountain biking communities, empowering them with resources to build and maintain sustainable trails based on the needs they identified. This includes help developing memorandums of understanding, implementing safety measures, and navigating administrative work such as insurance.

Established in 1989, the Month of Mud is western Pennsylvania's oldest and largest off-road race series. The series is unique in that it doesn't offer just one style of racing. Cyclists of all ages may compete in any or all races, which include a cyclo-cross race, two cross-country races, a short-track cross-country race, and a downhill time trial. Those who compete in all the races may qualify for the series championship. Races are held all around Pittsburgh. In 2022, for example, the series featured rides in Riverview, Alameda, Moraine, Brady's Run, and Ohiopyle.¹

Key Findings

Case study analysis of mountain biking communities in other regions and within the North Central Appalachian Rec Belt Region provide promising practices related to the goals identified through this study.

Engaging in strategic trail planning to create new trails and update outdated trails with purpose-built ones

- Bentonville, Arkansas exemplifies how specialization and focused promotion of mountain biking as its primary form of outdoor recreation can help a community achieve its goals of talent attraction, tourism, health and wellness, and overall quality of life
- Chattanooga, Tennessee promotes mountain biking as part of its broader approach to cycling and outdoor recreation. By analyzing specific economic impacts of mountain biking, the community has developed actionable strategies, such as balancing the use of volunteerism with the potential for hiring full time staff to manage trail development and promotion. It also partners with large corporations, such as VW, to promote outdoor recreation and preservation as a tool for talent

attraction and business growth.

- Locally, Jakes Rocks Trail system is a model for introducing mountain biking as a new form of outdoor recreation in a community to boost complementary assets and nearby business communities.
- Minnesota's Ride the Range and the Baileys Trail System in Athens, Ohio serve as models for reclaiming land, like abandoned mine sites for example, to generate environmental benefits and economic development.

Employing trail usage tracking that is coordinated among support entities

- Duluth, Minnesota promotes regional connectivity through the Duluth Traverse broader trail networks. The community has measured impacts of this effort through a robust trail user study which informs future development and maintenance of its trail network. This reporting supports decision makers and investors in promoting mountain biking and its benefits.
- While all case study communities utilize programming to activate their mountain biking assets, Davis, WV is an example of how large-scale events can increase trail usage and build notoriety amongst mountain bikers around the country.

Improving signage, trail difficulty indicators, and overall trail communications

- In its survey of trail users, Duluth found that maps and trail difficulty are among the top types of information that visitors search for before their visit. IMBA offers tools for trail rating difficulty systems which encourages riders to find trails that match their skill sets, reduces risks of injury, and improves the overall trail experience for a wide variety of users.²

With its Ride the Range initiative, Minnesota demonstrates how coordinated marketing and promotion can increase awareness and grow mountain biking across a region. David Wiens, executive director of the IMBA, has ridden the Duluth Traverse Cuyuna and other trails across the state of Minnesota and notes that “for tourism, it takes a lot of trails to attract people ... the Iron Range, it is addressing that.” Riders like to take multiple days to a week to visit multiple places and trails.³ Baileys Trail System has undertaken similar marketing efforts to tell the story of mountain biking and provide trip planning resources through its website.

Building on the success of the rails-to-trails model to implement additional public-private partnerships, relationships with land banks, and trail management across multiple jurisdictions

- Davis, West Virginia uses a hub-and-spoke model to mountain biking and related community development. For example, First Energy Foundation granted the Blackwater Bicycle Association two hundred acres of their land for trail use, parking, and signage. This area is close to the town of Davis and serves as a gateway connecting the town's arts and culture assets to a more extensive outlying trail system.⁴
- The Baileys Trail System is managed by the Outdoor Recreation Council of Appalachia (ORCA), a council of governments whose mission is to develop outdoor recreation opportunities and sustainable, equitable development across governmental boundaries. To sustain this work, ORCA has a full time staff, and member jurisdictions pay or donate membership dues based on population density. While ORCA serves as a central governing body, it maintains a community based approach to trail development.



How this Looks in Other Regions: Case Studies



Bentonville, Arkansas

A True Specialization in Mountain Biking

Capitalizing on their regional system of more than 160 miles of trail, Bentonville declared themselves the Mountain Biking Capital of the World in 2020. They support their claim by building and promoting community around assets on, along, and off the trail.

Bentonville's hills, bluffs, forests, streams, and lakes provide the ideal natural terrain and scenery for mountain biking. The community maintains a mix of trails offering connectivity through downtown, rural areas of the region, and nearby cities.

One of the most significant investments in connectivity is the \$38 million Razorback Regional Greenway, a thirty-seven-mile shared-use paved trail that links the major cities in the Northwest Arkansas region.⁵

The community continues to increase accessibility on its professionally built multiuse trails to ensure mountain biking assets—including its cross-country single track, climb and flow trails, pump tracks, jump lines, and bike parks—can be enjoyed by riders of all skill levels.

Bentonville has built a strong cycling culture along and off the trail. For example, public art complements the region's natural scenery. Bike-centric businesses, such as bike shops, outfitters, and shuttle services, have grown in number and service or product offerings—as have establishments that cater to cyclists, including restaurants, hotels, historical and cultural sites, and retail shops.

Bentonville serves as a model in connectivity. It emphasizes physical connectivity through biking infrastructure and trail systems; human connectivity through programming, events, and cross-functional collaboration between stakeholders (cyclists and noncyclists); and connectivity of community benefits through economic, health, and quality-of-life outcomes.

When Bentonville cycling advocates have asked other mountain biking communities about lessons learned, building trails in conjunction with transportation systems and preservation and conservation of open space has almost unanimously been the top recommendation. To grow mountain biking in Bentonville, the community is focused on increasing connectivity across its hundreds of miles of mountain biking and multiuse trails and improving access to all user groups, including those who don't consider themselves cyclists.⁶

Impact: Lowering Costs While Maximizing Benefits

Over the last fifteen years, the Walton Family Foundation has invested more than \$74 million to support the construction of 163 miles of natural-surface trails and paved paths in Northwest Arkansas. The foundation conducted three significant studies in 2017–18 to understand the community's return on its biking investments. Through this work, it found that Northwest Arkansas's average greenway trail cost of \$217.09 per linear foot was lower than the average cost in peer cities, \$313.75 per linear foot. To understand its return on investment, the foundation also measured the impacts of bicycling in the region, including the following:⁷

Bicycling Activity

- Average daily weekday and weekend bicycle trail usage increased by about 32 percent and 14 percent, respectively, between 2015 and 2017.
- The region had higher daily cyclist trail use than bike-friendly areas like San Francisco.

Economic Benefits

- In 2017, the business benefit was \$51 million, including \$21 million in reported household and resident spending on bicycles and bicycle goods, equipment, and events; \$3 million in bicycle retail sales and retail sales taxes paid by local customers; and approximately \$27 million in tourism spending by out-of-state visitors.

Health Benefits

- The region saw \$86 million in total health benefits to the local economy, including \$79 million in reduced mortality benefits and \$7 million in avoided health-care costs.

Quality of Life

- When deciding where to live, approximately 30 percent of Northwest Arkansas residents and 28 percent of skilled workers consider the availability of paved bicycle infrastructure (e.g., bike lanes and shared-use paved trails) important. Similarly, 27 percent of Northwest Arkansas residents and 24 percent of skilled workers consider the availability of natural-surface trails important

DEIB

- Overall, the bicycle-riding population in Northwest Arkansas is less diverse than it is nationwide, and the majority of riders are white.
- Northwest Arkansas has a slightly higher percentage of women riders (41 percent) compared to the US rate (37 percent).
- The region's highest levels of use by cyclists and pedestrians was in densely populated and low-to-medium-income areas.

The Walton Family Foundation is a strong advocate for investing in mountain biking and messaging its benefits to the community. The foundation has conducted robust research, validating direct and indirect benefits of bicycling for the Northwest Arkansas community. This analysis goes beyond traditional economic measures such as visitor and local spending to include health, social, and quality-of-life impacts. Importantly, the research conducted has been an important tool for Bentonville in its mountain biking messaging across a variety of audiences, cyclists and noncyclists, all of whom stand to benefit from the growth of this activity.

Trail cost factors include land acquisition; land preparation such as vegetation clearing costs, grading, and excavation; environment designs such as boardwalks and bridges for streams, rivers, and floodplains; trail design including roadway overpasses or underpasses, trails width, trail material, lighting; and permitting and mitigation such as construction and historic structure permitting. A study conducted by Walton Family Foundation recognized Fayetteville, AR and the City of Raleigh for its ability to lower trail costs and accelerate project timelines by bringing construction and maintenance in-house. Fayetteville, Austin, and Minneapolis all have ordinances that require developers to either hold land for park or trail development or pay a fee to the city to be allocated to future park or trail development, thus reducing costs. Of the cities benchmarked in the study, those with the higher trail cost per linear foot included suspension bridges, landscaping, and/or public art features. In Chattanooga and Minneapolis, more expensive features were used to enhance trail experience, accessibility, and safety – including widening trails to enable commuter traffic, building overpasses to entirely separate trails from roadways, and adding switchbacks to maintain ADA compliance.

“To ensure a quality riding experience all year round, [the Walton Family Foundation has] also provided funding for a maintenance program for the state’s designated IMBA Epic Trails. With this investment, Arkansas is now the only state in the nation with a professional maintenance crew.”⁸



Bentonville's initial impetus for investment in mountain biking was talent recruitment. Tourism was the by-product of the community's success in growing this form of recreation. Now Visit Bentonville conducts monthly research on who is coming into town, how much they are spending, and where they are going when they are on their trails. They've recently implemented a new platform called Voyage to track mountain biking metrics.

Promising Practices: Focused Coordination, Investment, and Communication

Bentonville is unique in its coordinated approach to grow mountain biking as a niche specialization. Cross-functional partnerships demonstrate the community's emphasis of collaboration over competition.

For more than a decade, for example, the community has held a weekly roundtable with a diverse group of attendees, including representatives from its chamber of commerce, downtown association, the school district, Walton Family Foundation, Walmart, and Crystal Bridges. Participants discuss their current work and upcoming opportunities for the community, including growing as a mountain biking mecca.

While collaboration has been key to Bentonville's success, the community has also defined clear responsibilities to ensure quality riding and maximum benefits to the region.

This division of labor ensures that the variety of activities needed to promote and grow mountain biking can be achieved. The city leads trail maintenance and programming with support from volunteers. It also develops paved trails and sidewalks to connect communities to the trails.

Rather than invest in maintenance, private entities mostly invest in trail development. There are several for-profit and nonprofit organizations that offer programs such as skills camps and those tailored to women and youths.

Visit Bentonville does marketing outside the area, while the City of Bentonville markets mountain biking locally.

Bike Bentonville was established in 2009 as a nonprofit with the mission of creating a bicycle- and multisport-friendly community. In 2015, the organization was absorbed by the City of Bentonville and the city's tourism bureau, Visit Bentonville, to utilize the tax-base resources afforded to these municipal organizations.



Chattanooga, Tennessee

Regional Identity Based on Broad Mountain Biking Appeal

Offering fast, flow, cross-country, and technical trails—including more than one hundred miles of single track within fifteen miles of downtown—Chattanooga is a nationally recognized mountain biking community, ranked by Singletracks.com as one of the top 10 best mountain biking destinations in North America in 2014 and number 5 out of the top 10 US Mountain Bike Towns with the Lowest Cost of Living in 2018.

Chattanooga's mountain biking offerings transformed relatively quickly because of the formation and significant volunteer contributions of the Southern Off-Road Bicycle Association (SORBA Chattanooga) in 2003. Until this time, Chattanooga mountain bikers had to drive forty-five minutes from downtown to reach the nearest trail system, and many traveled out of state. In the organization's infancy, SORBA's greatest barriers to trail development were a lack of both funding and credibility. Through its cleverly branded "Singletrack Mind Initiative," however, the group began gaining traction. SORBA negotiated a deal with Tennessee Valley Authority (TVA), a federal hydroelectric power company, to build a twelve-mile loop on land shared by TVA's largest facility, Raccoon Mountain. The success of the project and partnership with a federal agency gave SORBA the credibility to continue building a network of trails all around the city.

Chattanooga mountain biking appeals to a variety of skill levels. Old forest service roads, for example, serve as multiuse off-road trails for beginner-to-intermediate-level mountain bikers seeking varied terrain. While its single track is mostly geared to intermediate and advanced riders because of features such as steep elevations and creek crossings, places like Raccoon Mountain and 5 Points offer options for beginners.

Volunteer and Advocacy Spotlight: Active since 2003 and recognized as a primary contributor to mountain biking growth in the region, the Southern Off-Road Bicycle Association (SORBA Chattanooga) "seeks to utilize advocacy, education, and recreational activities to promote land access, trail preservation, and new trail development in and around the Chattanooga area." In just over twenty years, SORBA has constructed and maintained 46.5 miles of trail at Raccoon Mountain,⁹ Enterprise South Nature Park, and Booker T. Washington State Park. The organization has also supported trail crews in trail construction at Stringers Ridge and assisted with the development of twenty-two miles at 5 Points Trail System.¹⁰

Impact: An Emphasis on Economic Development Efforts

In 2022, SORBA Chattanooga and the University of Tennessee at Chattanooga partnered to research and report the economic impact and consumer behaviors of mountain bikers across the region. Findings include:¹¹

Consumer Spending

- Mountain bikers contribute \$6.9 million to the Hamilton County economy annually, which generates \$482,999 in county and state taxes and \$498,225 in federal taxes. The study notes that annual federal taxes should be of particular interest to federal land managers responsible for mountain biking trails. Additionally, there is a \$4.2 million impact on thirty surrounding counties.
- The \$6.9 million of total overall sales and revenue from mountain bikers equates to an added net value of \$4 million after accounting for employment, taxes, and other business expenses.
- The largest expenditures for visitors to the region are on food and drink, which averages \$88.83, followed by lodging and retail shopping (including gear), which average \$85.49 and \$64.94, respectively.

Employment and Labor

- Mountain biking supports seventy-three full-time employees in Hamilton County. An estimated total of 10,298 volunteer hours are contributed annually in the region. Assuming a value of \$28.54 per volunteer work hour (IndependentSector.org, 2021), this accounts for \$293,913.50 of impact. The study found that more advanced riders, regardless of education or income, volunteered more hours and noted that volunteerism was a potential source of untapped support.

Conservation Benefits

- A total of 3,435 acres in the region are dedicated to mountain biking trails, equating to preventive air-quality cost savings of \$326,015 and \$2,565,945 for water mitigation annually.

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- Mountain bikers are, on average, 39.5 years old, as well as predominantly male (80 percent); have a bachelor's degree or higher (77 percent); and earn an upper-middle-class income (\$80–100K).
- Sixty-five percent of mountain bikers on local trails reside in Hamilton County.

The National Recreation and Park Association provides guidance on preventative cost savings of air and water quality by forested lands, which serve as buffers that mitigate quality issues driven by nearby urban environments. For every acre of forested land, \$94.91 of negative air-quality impacts and \$747 of negative water-quality impacts are prevented. These estimates can be applied to acreage dedicated to mountain biking in order to calculate its conservation value¹²

By measuring impacts, advocates can help build a case for support by policymakers, investors, and other community stakeholders. For example, outdoor recreation is cited as an important factor in VW's 2009 decision to build a new plant in Chattanooga, adjacent to Enterprise South Nature Park, which is widely regarded for its vast recreational trail network. VW has since expanded its regional operations and now employs around five thousand people in Chattanooga. The company gives back to the community by promoting outdoor recreation and assets, recently committing \$1.25 million to help expand nearby Cherokee National Forest and offering additional community grants up to \$50,000 each to help organizations improve water quality, increase outdoor recreation access, and advance environmental education.¹³

In addition to measuring economic impact, Chattanooga's mountain biking report also included findings on mountain biker preferences, providing insights on where support and funding might be directed. It noted that mountain bikers care most about having access to a lot of mileage and a variety of well-maintained trails, safe parking areas, and good information distributed online and at kiosks. The project was also used to understand communication channels, noting that 40 percent of its survey respondents utilize Strava when planning visits while another 18 percent use Facebook to assess current conditions.

Finally, the report has helped advance sustainable practices in advancing mountain biking in the region. Study findings emphasized the importance of balancing the community's reliance on and leveraging of volunteer support with the need for full-time staffing.

Promising Practices: Regional Collaboration to Build and Activate Mountain Biking Assets

Organizations such as SORBA, Lula Lake Land Trust, and Lookout Mountain are utilizing protected areas in Chattanooga—including forest, state, private, and conservation land—to build new trails and increase mountain biking access to existing trails while also preserving green space. In addition to partnering with TVA, SORBA has worked with the county, state, and national parks to build and maintain hundreds of miles of quality trails.

IMBA recommends an annual maintenance budget of one-tenth the cost of trail construction. The costliest maintenance categories include: toilets(13 percent), surface debris (10.8 percent), signage (6.4%), tree removal (5.4 percent), drainage (5.4 percent), parking areas (2.7 percent), and litter removal (2.7 percent). By understanding the benefits of mountain biking and other forms of recreation that share these trails, Chattanooga's mountain biking advocates can build a stronger case to land managers, nonprofits, foundations, and volunteers for establishing sustainable revenue streams to maintain quality trails.¹⁴

The approach has centered accessibility for a broad range of mountain bikers. To complement its well-established cross-country trails, Chattanooga shifted attention to developing downhill-only trails with bike-park features, jumps, berms, drops, and technical descents that appeal to the newer gravity-riding trend in mountain biking. While gravity riding is considered one of the least-accessible types of mountain biking, Chattanooga is strategically investing in these development efforts by simultaneously enhancing its other offerings. The new shuttle-access routes at Walden's Ridge, for example, will provide safe access to more double track in the adjacent Signal Mountain area.



CHATTANOOGA

Started in 2013, Southeast Conservation Corps engages teenagers ages sixteen to eighteen in paid summer internships that provide mentoring and experience in digging and maintaining trails, with an emphasis on teaching professional and personal skills. Many graduates of the program go on to join adult conservation programs, and some have found full-time employment with state and federal wildlife programs. The success of this program has led to other communities, including Prescott Mountain Bike Alliance in northern Arizona, to model similar mentorship programs in volunteer trail stewardship and paid summer internships.¹⁵

In addition to trail development, Chattanooga's cycling community promotes a multidisciplinary, inclusive culture that has assisted in its growth. Kat Volzer, for example, is a racer and instructor who teaches mountain biking skills as a tool for navigating urban obstacles. She is developing low-cost clinics and events to welcome more women and girls to mountain biking. Similarly, a program called Trips for Kids engages youths ages twelve to fifteen and provides them a new or slightly used mountain bike at the end of the course.

Programming such as the city's popular Tuesday-night rides are means for connecting various biking groups who wouldn't otherwise ride together, fostering a strong sense of community and a shared sense of possibility for mountain biking's growth. Initially spurred by a local home brewer who provided a growler of beer to the winner of a weekly, unofficial enduro race, the Tuesday-night ride tradition was carried on when SORBA initiated a free shuttle service up Raccoon Mountain, sponsored by a local bike shop, that connected various riding groups who had never cycled together, fostering a strong sense of community among mountain bikers.

Outdoor Chattanooga is a division within the city's Parks and Outdoors Department, supported by Friends of Outdoor Chattanooga, a 501(c)(3) volunteer-run organization that relies on the financial support of private citizens, grant-funding agencies, and the business community. Outdoor Chattanooga's mission is to "make outdoor recreation an attractive, healthy, and distinguishing lifestyle for Chattanooga's residents and visitors, which, in turn, will maintain and enhance the value of the region's resources, and help grow the region's economy." In 2016, Outdoor Chattanooga launched for riders ages ten years and up an Introduction to Mountain Biking course starting at ten dollars per person for two hours of instruction and equipment. This course, in addition to its more advanced trail course, eliminates the cost barrier for those wanting to try mountain biking before committing to a larger investment. Outdoor Chattanooga also offers mountain biking tours to highlight trail connectivity within the city and region, promote mountain biking education, and increase trail usership.¹⁶

According to Greg Laudeman, one of the original advocates for Chattanooga mountain biking, building the region's diverse project portfolio is the start of a bigger plan that emphasizes physical connectivity—both between trails and to outdoor recreation in general. "I can easily imagine a system of singletrack that loops all around Chattanooga and interconnects all of these trail systems," he says. "It would also be, to me, a great catalyst for outdoor recreation, for everything great about Chattanooga."¹⁷

Duluth, Minnesota

Regional Connectivity through Infrastructure and Inclusivity

Duluth bills itself as a four-season outdoor recreational hub with eleven thousand acres of green space alongside the largest freshwater lake in the world by surface area, Lake Superior. According to the Cyclists of Gitchee Gumee Shores (COGGS), a nonprofit mountain bike advocacy group in the Duluth and Superior, or Twin Ports, area of Minnesota and Wisconsin, Duluth has more than a hundred miles of bike-optimized single-track trail. The IMBA designated its trail network a Gold Level Ride Center, one of only six communities in the world with this recognition.

Backed by more than \$2 million in public funding, the Duluth Traverse is a multiuse mountain bike trail described as the “spine” that connects five main trail centers—Lester Park, Hartley Park, Piedmont/Brewer Park, Spirit Mountain, and Mission Creek Park—and neighborhood routes. The Duluth Traverse is the backbone to the diverse hundred-mile urban trail system that caters to all experience levels with individual trails ranging from flow lines, lift-serviced downhill, technical descents, and cross-country.¹⁸

Beginning in 2008, COGGS worked with the City of Duluth to spearhead the project that continues today. In addition to leading sustainable trail development, the nonprofit prioritizes the creation of a welcoming outdoor recreation culture and equitable trail access through education, programming, and partnership.

Equity and access were guiding principles of the 2017 Duluth Traverse trail master plan, for example, with the report emphasizing the need to “maximize accessibility for all users by ensuring Duluth Traverse Spine Trail is green level designated. Be respectful to adjacent landowners, neighbors, and other outdoor recreation users in the area. Connect under-served neighborhoods and explore methods to reduce barriers to mountain biking for all residents.”¹⁹

In addition to connecting neighborhoods and trail centers throughout Duluth, Minnesota has invested in building and promoting its trail networks regionally, an initiative that it hopes will solidify its growing national and international reputation as a mountain biking destination. In 2018, Iron Range Resources and Rehabilitation Board approved \$5 million in spending for up to ninety-two miles of trail for three systems, including construction on reclaimed mine sites near the towns of Cohasset and Chisholm.²⁰

These two communities are part of a collaboration among four Minnesota trail systems surrounding Duluth—Cuyuna in Crosby, Giants Ridge Bike Park in Biwabik, Redhead in Chisholm, and Tioga Recreation Area in Cohasset—called Ride the Range. Recipient of the One Minnesota Award for outstanding tourism initiative, the project is led by representatives from cities, tourism bureaus, a recreation area, and a museum and includes a shared website, social media channels, and digital advertising campaign that promotes all four communities. Trail development in the area has been cited as a benefit to talent attraction, small business growth, and tourism spending. Jordan Metsa of Minnesota Discovery Center, which manages Redhead trails, has spoken about the reclamation of these mine sites, noting that “people thought this land was useless and wrote it off. We see a really bright future for the Iron Range.”²²



Other Mine Restoration Insights

Members of the Walton family foundation worked with Pitkin County to continue the restoration of a 221-acre mine site just outside Aspen that they purchased in 2015, with the goal of ensuring free public access to trails built with mountain biking in mind. The project used a conservation easement, which can protect access for public use even if land ownership changes and help reduce liability for landowners. In Colorado, a recreational use statute gives landowners offering free public recreation on their land immunity from lawsuits. In addition to providing recreation opportunities, the Coal Basin project has created a community asset that benefits water, wildlife, and the environment. “Pitkin County’s land-use code prohibits all development on slopes greater than 30 degrees – even mountain bike trails. So the county had to work with Coal Basin’s trail builders to make sure single track would not cause erosion or impact water quality flowing off the property.” Trail builders worked with a professional design firm to develop the right pitch to build a trail along a tailings pile that would prevent erosion and add vegetation near tailings ponds to stabilize the slopes.²³

Pete Kero, a senior environmental engineer at Barr who supported the Redhead Mountain Bike Park in Chisholm, works with owners of mine sites to understand the opportunities of this land, particularly as it relates to their ESG and social impact goals. While reclamation was once mostly voluntary, there is a shift in framing which focuses on “issues of regulatory requirements, public safety, and social license to operate.”²⁴ The benefits have been clear in Redhead. For example, the 2022 high school mountain biking association’s championship race is estimated to have generated approximately \$1 million for the local community in just one weekend. Unlike the Coal Basin project, however, flexibility was given to the landowner, with the agreement that Redhead could be moved if mining interests return to the site

Impact: Using Trail User Profiles to Inform Planning and Marketing

In 2021, the Parks and Trails Council of Minnesota, a 501(c)(3) organization, conducted a Duluth Traverse visitor profile study for the Greater Minnesota Regional Parks and Trails Commission to help inform its planning and marketing efforts. The commission consists of thirteen governor-appointed members from each of the state’s six districts whose work is dedicated to system planning and providing recommendations to the legislature for grants from the Parks and Trails Legacy Fund.

A summary of findings include:²⁵

Visitor Demographics

- Sixty percent of Duluth Traverse visitors were men, compared to 40 percent women, driven by mountain biking. When considering all activities other than mountain biking, 66 percent of trail users were women, compared to 33 percent men.
- The average age was thirty-seven, and there was relatively equal distribution across age groups—Gen Z (29 percent), millennials (30 percent), Gen X (24 percent), baby boomers (16 percent).
- Ninety-six percent of visitors were white, 2 percent Asian, and 2 percent Native American.

- Visitors are highly educated and have disproportionately high incomes compared to the statewide average, with 75 percent of visitors having a bachelor's degree and 49 percent having an income of more than \$100,000.
- Five percent of visitors reported having a physical, mental, or sensory disability, which is significantly lower than the statewide average. The report notes that "future research will be needed to better understand park and trail visitors with disabilities and if/how parks and trails can better serve communities of all abilities."
- Thirty percent of trail users were tourists, representing fifteen different states.

Skill Levels

- Forty-seven percent of visitors considered themselves intermediate-level riders, compared to 32 percent advanced, 11 percent beginner, and 10 percent expert.

Trail Experience

- Sixty-one percent of visitors reported mountain biking as their primary activity, while 24 percent reported hiking.

- Seventy-two percent of respondents reported that improving physical health was one of their most important reasons for visiting, and 62 percent noted relaxation and/or stress relief.

Trail Tourism

- Twenty-nine percent of respondents were overnight visitors, and 39 percent of these overnight visitors stayed in campgrounds.
- Fifty-nine percent of overnight visitors stayed in the area for one to two nights, while 25 percent stayed three to four nights.
- Trail Use
- Summer total traffic (not unique visits) on the Duluth Traverse ranges from approximately 26,500 at Hartley Park to approximately 8,500 at Haines Road.

Trip Planning

- Fifty-three percent of respondents use trail apps to get information about the trail, with Trail Forks, Strava, and MTB Project being the three most used apps.
- Trail maps and trail difficulty are among the top types of information that visitors search for before their visit.

Founded in 1994 and run mostly by volunteers, COGGS has helped build and maintain 110 miles of trail system across the region. As of 2022, it has 908 members, a 57 percent increase since 2021 and a 119 percent increase since 2018. The group serves as a collective voice to advocate for mountain biking access, build a welcoming community, and support trail development. Its volunteers logged more than four thousand hours in 2022. It raised \$116,000 and \$19,000 through its annual gala and KA Bike Duluth Festival, respectively, and deployed \$56,000 for trail construction. The group is very transparent in its operations and impacts, sharing its annual membership meeting presentation, monthly meeting minutes, and operational bylaws publicly on its website.²⁶

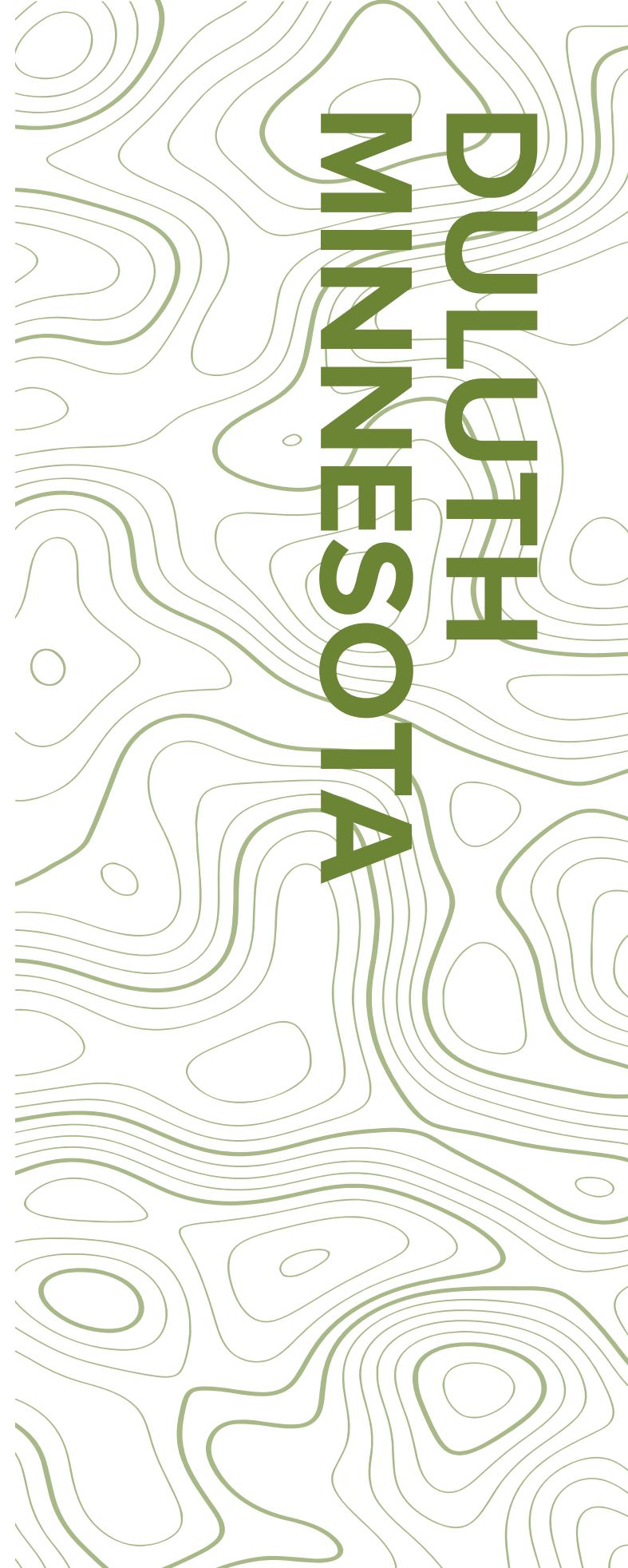
Various studies to measure the impact of the Ride the Range initiative and its individual mountain biking communities have been conducted. In 2014, Cuyuna estimated annual spending of \$2 to \$3 million calculated based on riders' lodging and food spending and DNR user counts. In the initiative's first three years, Cuyuna's ridership grew 43 percent to 22,253. In 2020, Ride the Range trail system usage was estimated to be more than 160,000 riders, driving more than twenty new businesses in Crosby, Ironton, and Riverton.²⁷

Promising Practices: Increasing Trail Usage and Tourism through a Combination of Increased Trail Mileage, Shared Marketing, and Inclusivity

David Wiens, executive director of the IMBA, has ridden the Duluth Traverse Cuyuna and other trails across the state of Minnesota and notes that “for tourism, it takes a lot of trails to attract people ... the Iron Range, it is addressing that.” Riders like to take multiple days to a week to visit multiple places and trails.²⁸

Collaboration across communities and counties has been key. The emphasis of history and heritage has also been a beneficial way to reclaim unused land, boost economic growth, and create a unique experience for trail users that draws a wider audience nationally and internationally. Ride the Range, for example, delivers a “trail and cultural immersion” that represents “Minnesota’s pioneering and current stakeholders in America’s iron-ore mining effort—one that helped the United States declare victory in both World Wars, and continues to fuel our country’s infrastructure growth today.”²⁹

The region purposefully designs and builds trails for riders ranging from beginners to Olympic champions. While its trail-user profile studies indicate that more work is needed to improve access to mountain biking across demographics such as income, ability, and race, the region has several initiatives to do so. In 2022, the Cuyuna recreation area opened its adaptive handcycle trail built for cyclists with disabilities, one of the first, if not the first, of its kind in a state park or recreation area. The City of Duluth is trying to secure funding to increase access to mountain biking assets such as the Duluth Traverse by buying a mobile bike fleet for public use and providing skills training as an entry point into this type of recreation.³⁰



Community Spotlights within the North Central Appalachia Region



Baileys Trail System – Athens, Ohio

Innovative Financing and a Strong Communications Platform

With forty-seven miles of already constructed purpose-built multiuse trail and eighty-eight more miles of planned trail development throughout Wayne National Forest, the Baileys Trail System serves outdoor recreationalists of all ability levels and connects communities across the Appalachian foothills from Athens, home of the University of Ohio, to Nelsonville to Buchtel to Chauncey.

The project is due to community tenacity, with the original idea for a mountain bike trail to the Wayne National Forest dating back to 1993. While the interest continued over the years, it wasn't until 2017 that the first version of the Baileys Trail System master plan was released. Later that same year, Baileys was chosen to be the first national forest outdoor recreation conservation finance pilot project, and shortly after, Wayne National Forest approved the eighty-eight-mile single-track development.

It has secured \$11 million in public funding across local, state, and federal sources and private financing from investors, donors, and business sponsors.³¹

The Baileys Trail System is managed by the Outdoor Recreation Council of Appalachia, which acknowledges support from more than thirty local, regional, and national partners and more than fifteen sponsors. These include Athens County Foundation, Public Libraries, and CVB; Rural Action; Appalachian Regional Commission; Applied Trails Research; IMBA; Appalachian Conservation Corps; National Park Service River, Trails, and Conservation Assistance Program; USDA Rural Development; and the US National Park Service.³²

The trail system's communications platform is robust relative to other mountain biking communities and their trail systems. The Baileys website features a history of the project, employment opportunities, news updates, volunteer resources, and trip planning tools like maps and bike rental information.

In 2022, the Ohio Department of Natural Resources granted \$17 million across six communities through the Abandoned Mine Land Economic Revitalization Program to help them transform abandoned mine lands. The Outdoor Recreation Council of Appalachia (ORCA) received \$3 million for the Baileys Trail System Visitor Hub, a five-thousand-square-foot multipurpose facility that will serve visitors while providing space to trail system offices and local entrepreneurs.³³



Impact: A Focus on Quality of Life for Residents, Not Just Tourism

Project leaders recognize the variety of benefits that the Baileys Trail System can bring to the region—including sustainable economic development, community connectivity and pride, health and wellness, and business development—and they have built these goals into their intentional planning process.

Athens County Comprehensive Plan notes that "while recreational resources bring tourism revenues, their greatest value is enhancing the quality of life of residents. The existence of parks, trails, and other recreational opportunities make Athens County a desirable place to live, and further development of these resources will help attract future residents."³⁴ Similarly, ORCA was formed to ensure that the growth of outdoor recreation provides economic, health, social, environmental, and quality-of-life benefits to community members.

Project developer Quantified Ventures estimates that in ten years, the eighty-eight-mile trail will generate \$6.9 million in higher wages, \$7.3 million in increased tax revenue, and \$20.1 million in increased spending. It also estimates 78 new jobs and 150 jobs retained, as well as \$500,000 in local health-care cost avoidance.³⁵

Promising Practices: A Community-Based Approach Led by a Central Body

Southeast Ohio has prioritized diversifying its local and regional economy and recognizes outdoor recreation as an important strategy in rural economic development. In 2019, ORCA was formed to deploy this strategy. ORCA is a council of governments whose mission is to develop outdoor recreation opportunities and sustainable, equitable development across governmental boundaries. Members represent the City of Athens, the Village of Chauncey, the Village of Buchtel, the City of Nelsonville, Athens County, and York Township.³⁶ To sustain ORCA's work, member jurisdictions pay or donate membership dues based on population density. The Athens-Wayne Outdoor Asset Development Corporation, a nonprofit wing of ORCA, was also established in 2019. The organization is run by ORCA staff and creates revenue-generating social enterprises that support development and maintenance of recreation assets like the trail system.

ORCA also works with Ohio University's Center for Campus and Community Engagement to link student interns to Baileys Trail System projects. Alli Mancz, for example, an English and environmental studies student interning with the Wayne National Forest,

helped launch the Baileys website and generate its blog content. “While many partners have been working to develop the infrastructure and organization needed to create social and economic development, we were aware of the need to start promoting the Baileys, and we wanted to start telling the stories through the lens of each of our partners and through the community.” Her work helped drive significant website traffic, with increases of more than 30 percent.³⁷

In addition to generating economic development through the creation of trails, ORCA is using other creative solutions to maximize community benefit from increased visitorship driven by the Baileys Trail System. Recognizing the barriers to starting a business in the region, the organization is planning a multiuse facility for trail visitors, trail offices, and entrepreneurs. This turnkey commercial space will allow makers and producers to access the new market created by the trail system.³⁸



Jakes Rocks – Warren, Pennsylvania

Building a Nationally Recognized Mountain Biking Attraction from Scratch

The Trails at Jakes Rocks is a thirty-plus-mile stacked-loop mountain biking trail developed with sister company of IMBA, Trail Solutions, with additional trails connecting the area's other points of attraction, such as the marina, campgrounds, and Kinzua Dam. While this trail is relatively remote, its expert design and scenic landscapes through the Allegheny National Forest draw thousands of visitors annually.

The idea for the trails was generated by students of Warren County’s leadership program, a nine-month curriculum focused on the heritage of the county and operations and collaboration among its six communities. As part of a SWOT analysis, students identified an opportunity for nonmotorized access between key assets throughout the county. This idea was then married with recommendations from an IMBA assessment that indicated that the region had geology

naturally suited for the growing sport of mountain biking.³⁹

Community organizers activate this mountain biking asset through an annual event called Trail Fest that has welcomed more than five hundred visitors in past years. The fall festival is held at Kinzua Beach and celebrates mountain biking through guided rides, clinics, demonstrations, shuttle services, and a vendor village with recreation and food entities. The event has driven an increase in overnight stays by attendees from Pittsburgh, Buffalo, Cleveland, Cincinnati, and DC, as well as New Jersey, bolstering business for lodging facilities.⁴⁰ One campsite, for example, has extended their season by a month to meet increased demand from Trail Fest.

Other than Trail Fest, much of the growth of the trails has been organic through word of mouth. Now, after recognizing the quality of trails and nearby attractions, other organizations from outside the region use the system to run events. Trans-Sylvania, for example, runs gravel and mountain biking races in the area.

Nearby attractions to the Trails at Jakes Rocks include Kinzua Bridge State Park, which features camping, hiking, and what was once the longest and tallest railway bridge in the world—the Kinzua Viaduct. In 2011, the state repurposed the six-hundred-foot section of bridge that remained as a skywalk with glass panels that allow for 360-degree views, which complements the historical exhibits in the park's visitors' center. The Trails at Jakes Rocks celebrates and preserves the area's history and heritage and complements the region's natural assets and broad range of recreational offerings.

Impact: Rural Economic Development

Funding for the project was split among local, state, and federal sources. During project planning, leaders estimated that the trails would generate ten thousand visitors and approximately \$1.5 million in revenue. This estimate was based on similar trails that served as an economic benchmark for the project, which garnered between thirty and forty thousand visitors per year and over \$4 million in revenue.⁴¹ Between the fall of 2018 and early summer of 2019, the trails surpassed this estimate, with visitor counts reaching around fifteen thousand.⁴²

Since the opening of the Trails at Jakes Rocks, the community has seen increases in lodging occupancy rates and business employment, including bike shops, as well as the opening of two new breweries. While the community cannot attribute these changes solely to the Trails at Jakes Rocks, project leaders believe this is a primary driver of recent growth.

“Everything that we were told would happen is coming to fruition. The Trails at Jakes Rocks is the busiest non-motorized trail system in the Allegheny National Forest by a factor of six in terms of user numbers,” said Jim Decker, President of the Warren County Chamber of Business and Industry. “Business development-wise, we’ve seen a 50% increase in bike shop sales, and the shops are adding employees, rental bikes and new lines of bikes for sale. Even restaurants are admitting that they’re seeing more traffic from visiting riders coming to eat. It’s been a win-win across the board.”⁴³



Promising Practices: A Community-Based Approach Focused on Mutual Benefit

Leaders used a grassroots, community-based approach to project implementation, which served as a learning opportunity for communities and built momentum and support for the investment. The project engaged paid interns from Pitt-Bradford, Clarion, and Indiana Universities to conduct the environmental survey in accordance with federal guidelines, which helped ensure sustainable trail development that considered preservation of rare plant and lands revered by the Seneca Nation of Indians. The trail was also designed to avoid water collection, runoff, and erosion.⁴⁴

“According to Andy Georgakis, a 25-year mountain biking veteran and member of [the Northern Allegheny Mountain Bike Association], Jakes Rocks is unique because it gives those young and old who are new to the sport an optimized mountain biking trail to explore.”⁴⁵ The location at Jakes Rocks was also strategically selected because of its proximity to the towns of Warren, Bradford, and Kane. Project leaders recognized the economic development potential of these surrounding communities.



In June 2023, the US Forest Service released an environmental assessment regarding its proposal to allow the use of class 1 e-bikes on the Jakes Rocks trail system. The report notes that this change in permission would “provide the opportunity for riders of all abilities to travel longer distances and access and enjoy more remote parts of the forest ... [and] increase trail traffic in certain areas while also spreading usage more evenly across the entire trail system ... This emerging technology makes mountain biking more accessible and enjoyable to users with different levels of experience, skill, and physical ability.”⁴⁶

Collaboration was key, as the project involved a great number of stakeholders in addition to the universities, including the Allegheny National Forest, US Forest Service, Warren County Chamber of Business and Industry, Northern Allegheny Mountain Bike Association, IMBA, Penn Soil Resource Conservation and Development, the Pennsylvania Wilds, Appalachian Regional Commission, Northwest Regional Planning and Development Commission, and the Department of Conservation and Natural Resources.

Anecdotally, some community members had doubts about the project’s feasibility because of administrative burdens such as permissions and funding. An important lesson learned from this project was relationship management to build mutual benefits across all stakeholders.

Davis, West Virginia

History of Community Building through Events and Notoriety for Rugged and Technical Riding

Started in 1984, the Canaan Mountain Series held in Davis, West Virginia, is one of the oldest race series in the world. It was held over three weekends through the year and attracted cyclists as far as the Eastern Seaboard and Florida, helping West Virginia become one of the most famous locations for mountain biking. Similarly, the Blackwater 100 that ran until 1993 brought notoriety to the area because of its brutal one-hundred-mile course, earning the nickname “America’s Toughest Race.”

In 1992, mountain bike enthusiast and creator of the Canaan Mountain Series Laird Knight launched the 24 Hours of Canaan, a twenty-four-hour mountain bike format inspired by the twenty-four-hour Le Mans car race, night skiing, and team camaraderie that eventually grew to become a national series of six twenty-four-hour events that ran until 2017.⁴⁷

Roger Lilly is a serving board member for Heart of the Highlands, a local trail advocate and builder, and former owner of the local Blackwater Bikes shop. According to Lilly, mountain biking has long been a driver of tourism in the area, especially because of its rugged trails, noting that “for many years Davis was the mecca of the East Coast for hard, technical riding.”

While other communities across West Virginia, realizing the benefits for world-class mountain biking, have begun building beginner-friendly trail systems, Davis maintains its niche offering of technical East Coast adventure riding.

Today, Davis’s rich history of mountain biking events lives on. The Canaan MTB Festival is an annual grassroots event celebrating mountain biking through competitions and

events. It serves as a fundraiser for local organizations like the Blackwater Bicycle Association. “It’s a chance for people to get together through an event that’s not a race,” said event organizer and local ambassador of stoke, Sue Haywood.⁴⁸

In addition to its events, the variety of Davis’s hundred-plus miles of trail featuring backcountry gravel, bikepacking double tracks, hard-packed single tracks, and rooty-rocky technical descents attract all styles of off-road cyclists from around the country.

Impact: Transforming Resource-Dependent Economies

Davis, West Virginia, and its neighbor three miles north, Thomas, were both built on extractive industries, timber and coal, respectively. As the area is home to one of the largest coal companies in the world, around 90 percent of its residents worked in the coal mines. When these operations ceased in the 1990s, four hundred people were out of work. Fast-forward to 2023, and the area’s poverty rate is around 7 percent, compared to the state’s rate of about 17 percent.

The community attributes its reinvention to the arts, retail, and outdoor recreation found in this vibrant mountain town. In Thomas, for example, a 1 percent increase in sales tax has generated important funding for revitalization such as road paving and neighborhood cleanup.

Physical connection to these arts, culture, and recreational assets has been critical to generating benefits for the community. After decades of planning and construction, West Virginia’s four-lane highway has recently reached Davis, significantly reducing travel time throughout the state and to Washington, DC. One business in the area has seen increases between 15 and 25 percent each month compared to the year before the highway connected to Davis.⁴⁹

Old Forth, North Carolina, similar to the towns of Davis and Thomas, West Virginia, is rebuilding its economy—once a hub for textile and furniture manufacturing—through its outdoor economy. The community is attracting people and investment by building trails in partnership with the US Forest Service. The town, headquarters of a cycling clothing and accessories maker, is also growing its outdoor recreation business through a public-private partnership, developing a multimillion-dollar community center and business incubator for retail and light manufacturing.⁵⁰

Promising Practices: A Vibrant Mountain Town Is the Gateway to Extensive Trail Networks

Much of Davis's success in growing mountain biking in the area is thanks to its local cycling nonprofit. Formed in 2015, Blackwater Bicycle Association is a local chapter of IMBA and the West Virginia Mountain Bike Association whose mission is to "advocate for cycling in the greater Tucker County, West Virginia area" by ensuring open access to bicycles and trails, trail maintenance, and quality cycling events. They support the recreational economy and encourage conservation, bringing together stakeholders from land managers and property owners to government leaders to promote mountain biking and sustainable trail management.

Davis uses a hub-and-spoke model. First Energy Foundation granted the Blackwater Bicycle Association two hundred acres of their land for trail use, parking, and signage. This area is close to the town of Davis and serves as gateway to a more extensive outlying trail system.

The mountain biking community in Davis is complemented by a vibrant arts, entertainment, and retail scene that helps to

balance the seasonal fluctuations of outdoor recreationalists, although other activities like skiing do support the four-seasons town. Together with the nearby towns of Thomas and Parsons, Tucker County offers art galleries, open-door studios, live music venues, restaurants, an arts festival, and acclaimed music festival, Pickin' in Parsons. The Purple Fiddle restaurant is well known among music lovers for its six months of acts ranging from local performers to nationally touring bands like the Avett Brothers.



West Virginia's chapter of the National Interscholastic Cycling Association (NICA) has generated exponential growth for mountain biking. NICA started in 2009 and has since served twenty-five thousand youths through thirty-one active leagues and the support of fourteen thousand volunteer coaches. A recreation once dominated by adult men has now become accessible to kids of all ages. The sport is recognized for not just its health benefits but also its ability to instill confidence and a passion for the outdoors among youths. NICA is helping rejuvenate and create sustainability for the sport.





Funding and Resources to Advance Mountain Biking Infrastructure and Programming



Funding Examples

There are many financial resources to tap into to help support the region's advancement of mountain biking infrastructure and programming. What follows is a sampling of effective funding sources:

Safe Streets and Roads for All (SSRA)

Source: USDOT

Type(s) of Projects Funded: Safety improvements

Funding Available: \$800M is allocated; projects range from \$50K to more than \$2M

The Safe Streets and Roads for All program funds regional, local, and tribal initiatives through grants to prevent roadway deaths and serious injuries. The program supports the development of a comprehensive safety action plan that identifies the most significant roadway safety concerns in a community and the implementation of projects and strategies to address roadway safety issues. Example projects include adding dedicated bicycle lanes and making safety improvements on urban trail networks. [transportation.gov/grants/SS4A](https://www.transportation.gov/grants/SS4A)

Transportation Alternatives

Source: USDOT

Type(s) of Projects Funded: Biking infrastructure

Funding Available: \$1.4B in set-aside federal transportation funds

The Transportation Alternatives program provides funding for smaller-scale transportation projects including pedestrian and bicycle facilities and recreational trails. [fhwa.dot.gov/environment/transportation_alternatives/](https://www.fhwa.dot.gov/environment/transportation_alternatives/)

Reconnecting Communities and Neighborhoods

Source: USDOT

Type(s) of Projects Funded: Biking infrastructure

Funding Available: 45 projects were funded for FY22 with projects ranging from \$67K to \$30M \$198M in funding is available for planning and technical assistance and capital construction through the Reconnecting Communities and

Neighborhoods Grant Program. The program seeks to address barriers to community connectivity by funding projects that redevelop roads, streets, highways, and other transportation facilities to improve connectivity and safety. Such projects may include "alternative roadway designs or other uses for the right-of-way" to include biking infrastructure. [transportation.gov/grants/rncnprogram](https://www.transportation.gov/grants/rncnprogram)

PADCNR Trail Grants

Source: USDOT

Type(s) of Projects Funded: Land acquisition, trail development, trail maintenance & improvement

Funding Available: Varies by type of project

PADCNR trail grants fund projects such as trail land acquisition, trail planning, trail development, rehabilitation, maintenance, and trail education programs. dcnr.pa.gov/Communities/Grants/TrailGrants/Pages/default.aspx

American Trails Capacity Program

Source: American Trails

Type(s) of Projects Funded: Trail maintenance, planning, stewardship training

Funding Available: \$2K to \$15K

Eligible nonprofits can apply for \$2K to \$15K for projects related to trail maintenance, research, or stewardship training, from the American Trails Capacity Program. americantrails.org/apply-for-the-trail-fund?blm_aid=56566

Land and Water Conservation Fund

Source: The Land And Water Conservation Fund

Type(s) of Projects Funded: Trail development, Land acquisition, planning support

Funding Available: \$890M annually

Since 1964, the Land and Water Conservation Fund has helped conserve thousands of acres across the United States. Programs include federal land acquisition, state and local assistance, and outdoor recreation development. lwcfcoalition.org/toolkit

National Wilderness Stewardship Alliance

Source: National Wilderness Stewardship Alliance

Type(s) of Projects Funded: Trail maintenance

Funding Available: a total of \$262K was granted to 17 trail projects in FY23

National Wilderness Stewardship Alliance grants support organizations leading trail maintenance efforts in national forests. wildernessalliance.org/trail_funding

Outride Fund

Source: The Outride Fund

Type(s) of Projects Funded: Youth trail use and programming

Funding Available: varies by project and funding cycle; over \$2M has been granted to 212 projects to date

The Outride Fund partners with community nonprofits to promote cycling as a tool to improve social, emotional, and cognitive health of youths and underrepresented demographic groups. outridebike.org/outridedefund-2

People For Bikes Community Grant Program

Source: People For Bikes

Type(s) of Projects Funded: Biking infrastructure and facilities

Funding Available: up to \$10K; the amount requested must not total 50% or more than the proposed project budget

The PeopleForBikes Community Grant Program supports bicycle infrastructure projects and targeted initiatives that make it easier and safer for people of all ages and abilities to ride.

peopleforbikes.org/grant-guidelines

PayDirt

Source: Santa Cruz Bicycles

Type(s) of Projects Funded: Trail improvement, events & programming

Funding Available: varies by project

PayDirt funds trail projects, local organizations, events, and programs that are geared toward creating and strengthening opportunities for people to get out on the trails. Example projects include trail development, facilities such as pump stations, trail maintenance, and more. santacruzbicycles.com/en-US/paydirt

Walmart Local Community Grants

Source: Walmart

Type(s) of Projects Funded: Safety, trail improvement, events & programming

Funding Available: projects should range from \$250 to a maximum of \$5,000

Local community grants range from a minimum of \$250 to a maximum of \$5,000. Eligible nonprofits can apply for grants that fall within one of eight categories, including increasing public safety, environmental sustainability, and quality-of-life access. walmart.org/how-we-give/local-community-grants

Fox Factory Trail Trust

Source: Fox Factory

Type(s) of Projects Funded: Trail development, trail maintenance, DEIB, education, trail stewardship

Funding Available: projects typically range from between \$2K and \$35K

Trail Trust funds projects that support trail building and maintenance, responsible recreation, and access expansion. Projects include trail building and restoration, workshops, events, and advocacy campaigns. forms.benevity.org/69197437-ab71-40ee-a391-efab49b98a

Other Resources

Additional, nonmonetary resources exist to help support the development of a robust mountain biking sector. Several are listed by recommendation area here, organized by the categories in which each resource can grow MTB and its benefits:

Coordinate Promotion of Specialization and Regional Identity

- [Deciding on Trails: 7 Practices of Healthy Trail Towns](#): This review of Amy Camp's [2020 book](#) provides an overview of the seven actionable steps trail communities can take to highlight, promote, and strengthen their trail-based and outdoor recreation economies. Amy's book is for those dedicated individuals who want to cultivate a trail culture, embrace Trail Town best practices, and once and for all "decide on trails."
- [Trail Towns: Capturing Trail-Based Tourism](#): This guide is designed not to help a community build a trail but rather to enhance a community that already has a trail in or near it. It focuses on communities near nonmotorized, multiple-purpose trails, such as towpaths and rail trails. This guide is designed to help leaders in these communities take advantage of the economic opportunity that rides or walks into town.
- [Attracting Bike Tourists to Your Trail: Lessons from the Canalway](#) ([Erie Canalway National Heritage Corridor, Parks and Trails New York, New York State Canal Corporation](#)): This guide offers recommendations for "enhancing the appeal of your community and your business to bicycle tourists."

Invest in Building Connected Infrastructure

- [IMBA's Guidelines for a Quality Trail Experience](#): As a mountain biker's quest for an extraordinary riding experience has evolved, so must the evolution of how trails are communicated, planned, designed, constructed, and managed. The guidelines will help improve the design, construction, and management of mountain bike trails all across the country.

- [Mountain Bike Trail Development: Guidelines for Successfully Managing the Process](#) ([Greater Minnesota Regional Parks and Trails Commission](#)): The commission recognized the need to create a resource for mountain bike trail construction that would assist land and park managers seeking to build sustainable trails. This 242-page guidebook aims to be an exhaustive resource that covers modern trail development from trail types to landscape analysis and design, environmental and construction considerations, cost implications, and more.
- [IMBA's Trail Champion's Introduction to NEPA \(National Environmental Policy Act\)](#): It's easy to lose sight of land and cultural stewardship while focused on the energetic process of championing, designing, or executing a project. This short guide provides relevant information for engaging cross-disciplinary leaders during the planning and feasibility stage of trail development.
- [Planning and Managing Environmentally Friendly Mountain Bike Trails](#): This guidebook can be used to assist in successfully planning, designing, and constructing mountain bike trail systems, while keeping in mind that user issues must be addressed at every stage of development.

Prioritize DEIB

- [Inclusionary Trail Planning Toolkit](#) ([Pennsylvania Environmental Council](#)): Drawing from case studies and community organizing principles, this guide includes strategies and advice for planning inclusive trail projects. As a lack of resources is a common obstacle to achieving an inclusive process, section 3 of this report outlines low-cost outreach methods and emphasizes the importance of leveraging existing community-based resources.

- [Improving Accessibility on Public Lands](#) (American Trails): This article from American Trails highlights the barriers to accessibility on public lands and outdoor developed areas and offers recommendations for increasing accessibility.
- [USDOT Equitable Transportation Community Explorer](#): This is a new tool to help advocates and decision makers plan more equitable transportation investments through five measures: transportation insecurity, climate and disaster risk burden, environmental burden, health vulnerability, and social vulnerability. This is especially important as most USDOT grant programs now require applicants to include equity considerations, such as identifying underserved communities and how proposed projects would reduce barriers to opportunity.

Activate Assets through Programming

- [Interpretive Planning Tools for Historic Areas, Historic Trails and Gateways \(National Park Service\)](#): This resource provides guidance for creating an interpretive management plan to leverage a site or region's unique heritage assets through interpretive programming.
- [Affinity and Identity-Based Crews and Programs](#) (the Corps Network): Affinity and identity-based crews and programs offer spaces for young adults from historically marginalized populations, underrepresented groups, or individuals with a shared lived experience, culture, and community with the goal of providing an opportunity for growth, learning, healing, and career pathways into the trail building and conservation industry. The purpose of this guide is to highlight the work of service and conservation corps who develop and manage identity-based programs and crews, discussing the intention and purpose of these crews, as well as why they are important and how they have been transformational experiences for corps members and partners.
- [Outdoor Sport Institute Mountain Biking Curriculum Guide](#): As a sport, mountain biking continues to grow in popularity across the globe. Well-run youth programs can provide a powerful entry point to this lifelong activity. This curriculum guide is designed to be a resource for leaders of introductory mountain bike programs.

Cultivate Partnerships with Health Care, Education, and Sustainability

- [Using Partnerships and Cooperation to Get What You Need for Trails](#): In his keynote address at the Arizona State Trails Conference, Skye Ridley, executive director emeritus of American Trails, outlines where trail communities are “missing the boat” and what can be done to harness partnership opportunities from a wide range of organizations and agencies.

Coordinate Marketing, Branding, Communications, and Promotion

- [IMBA’s Action Cultivator Tool](#): The Action Cultivator Tool allows local partners to reach more people and engage them on timely and relevant issues affecting the mountain biking community. Local chapters and affiliates can tap into IMBA’s expertise in the planning stages of an advocacy campaign, as well as mobilize IMBA’s wide network of members and partners through alerts, geographically targeted emails, and other advocacy campaign strategies.

Advance Regional Collaboration

- [IMBA’s Trail Accelerator Workshops](#): IMBA offers facilitated workshops designed to gather your stakeholders in the same room, further refine a vision, and define the specific steps your community needs to take next to increase the momentum of your project.
- [Outdoor Alliance Advocacy 101](#): This collection of resources covers key concepts of public land engagement, including how to talk to your lawmakers, how to make your voice heard, how to raise money for issues you care about, and more.
- [Become an IMBA Local Partner](#): The IMBA Local Program is a grassroots support system that helps mountain biking organizations and their partners create and sustain thriving trail communities. This program provides support services, education, and mentorship programs that help communities accomplish their goals.



Conclusion

The North Central Appalachian Rec Belt region has an opportunity to build on a strong network of mountain bike enthusiasts and supporters, as well as well-loved existing infrastructure, to expand local mountain biking culture and usage in order to generate increased economic impacts. This can be done through the pursuit of strategic goals such as the following:

- engaging in strategic trail planning to update outdated trails with purpose-built ones
- employing trail usage tracking that is coordinated among support entities
- improving signage, trail difficulty indicators, and overall trail communications
- building on the success of the rails-to-trails model to implement additional public-private partnerships, relationships with land banks, and trail management across multiple jurisdictions

Recent policy updates may support the buildup of mountain biking infrastructure and programming within the region. In early 2023, the US Senate reintroduced America's Outdoor Recreation Act, including several priorities specific to mountain biking. The Biking on Long Distance Trails Act, for example, would identify potential long-distance bike trails in federal public lands, promoting rural economic development through a low-cost, emissionless, and tourism-boosting approach. The Simplifying Outdoor Access for Recreation provision would streamline the recreation permitting process for guides and outfitters for multi-day and multijurisdictional bike trips.⁵³

The region's grasping this opportunity could mean millions of dollars in economic impact as well as extensive social, health, and sustainability benefits for local residents, all by improving just one segment of the overall outdoor recreation economy.

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