HEADWATERS ECONOMICS

Economic Potential of the Great American Rail-Trail

Methods & Data Sources

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About Headwaters Economics

Headwaters Economics is an independent, nonprofit research group whose mission is to improve community development and land management decisions. https://headwaterseconomics.org/

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1. Introduction

Headwaters Economics estimated the economic impact of the completed Great American Rail-Trail® (GRT) based on an evaluation of the trail's potential to bring visitors, spending, jobs, income, and tax revenue to the communities along its 3,700-mile route. Economic impact analyses are based on the idea that something—whether a new trail, new business, or a new policy—can bring new money to town by attracting visitors who otherwise would not have come to the area. This new money, in turn, supports local businesses that employ residents, pay taxes, and support other businesses. These analyses require measuring the number of visitors drawn to the area and how much they spend. This report provides details on methods and results summarized in the main report.[1]

The economic benefits presented in this report rely on three underlying assumptions. First, we assume that communities will capitalize on the trail with businesses like gear shops, restaurants, and lodging; signage directing GRT users to these local businesses; and marketing the community as a welcoming stop for GRT users. Second, we assume that the increase in outdoor recreation observed during the pandemic will persist. This assumption is supported by data from Rails-to-Trails Conservancy's national network of trail counters[2] and the Outdoor Industry Association's national survey on participation in outdoor recreation.[3] Finally, we assume that the route in this assessment will be built and maintained at a level of quality that is connected to other segments; has a safe separation from vehicles; and has a surface that is sufficiently maintained to allow most skills and abilities to walk, bike, and roll. This analysis does not assume that all segments would be paved.

[1] The main report is available at https://headwaterseconomics.org/outdoor-recreation/great-american-rail-trail

[2] Brooks, P. "New Data Reveals Banner Year for Trail Use." Rails-to-Trails Conservancy, 21 Dec. 2021. https://www.railstotrails.org/resource-library/resources/new-data-reveals-banner-year-for-trail-use/. Accessed April 4, 2022.

[3] Outdoor Industry Association. 2021. Outdoor Recreation Participation Report. Retrieved from https://outdoorindustry.org/resource/2021-outdoor-participation-trends-report/

2. Data Sources and Methods

Economic impact analyses depend on two primary factors: estimates of the number of visitors using the trail and the amount these visitors spend during their trips. This section describes the data sources and methods used to estimate these factors.

Visitor estimates

The number of visitors were estimated according to one of two sources: counter data on a specific GRT segment or statistical interpolation calibrated with infrared counter data.

Trail counters

Counter data was available for 36 counties in 12 states along the GRT route. For the remaining 78 counties along the GRT, we used a statistical regression model to predict use.

The COVID-19 pandemic changed where and how often people recreate, increasing trail use across the country. Rails-to-Trails Conservancy reported seeing a 36% average increase in trail use from 2019 to 2021 based on data from dozens of trail counters. In the dataset of trail count data we used in this analysis, data in six counties were from prior to 2021. To adjust for the change in recreational use since the pandemic began, we increased the pre-2020 trail counts by 36%.

Statistical interpolation

To estimate trail use where trail counter data was not available, we built on previous statistical models developed by Rails-to-Trails Conservancy and other researchers. To parameterize the statistical model, we used data from trail counters on rail-trails in 57 counties across the United States. This included data from the trail counters in 36 counties along the GRT route, as well as data from rail-trails in 21 additional counties. The counter locations, average annual trips measured, and year the data were collected are summarized in Appendix A.

In addition to using counts, the statistical model considers population density, the share of households earning at least $150,000/year, and the county's degree of urbanization measured using the county's Rural-Urban Continuum Code (RUCC). We included these variables in the model because other researchers found them to be important in predicting trail use.

Definitions

GDP Contribution*:* the wealth generated by the new spending brought into the community by visitors. It includes the value of the goods and services produced minus the cost of producing them. Income is a part of GDP.

Labor Income*:* wages supported by visitors' spending in the community. Wages are created from direct spending at businesses by visitors, as well as the ripple effect throughout the community as employees at those businesses spend money in the community.

Jobs: employment supported by visitor spending in the community as a result of the trail. Part-time and seasonal jobs are included proportionally. A person can hold more than one job, so job count is not necessarily the same as the count of employed persons.

Tax revenue: expected new state and local taxes earned as a result of the trail and associated economic activity.

Trips*:* the number of times someone travels one direction along the trail. A "point to point" excursion along the trail counts as one trip; an "out and back" excursion counts as two trips. Trail counters record trips, not users.

Users*:* the number of people who use the trail. On average, users equal a little more than half of trips.

Visitors*:* users who come from at least 50 miles away to use the trail. The number of visitors underpins the estimates of spending and economic impact.

Visitor spending*:* the amount of money visitors spend during their visit to the trail. This spending represents new money brought into the community.

Table 1 shows each of these variables and its source. Because the model is built using data from counters on existing, completed trails, the results reported assume the GRT is safe, connected, and accessible for all skill levels to walk, bike, and roll.

Table 1. Variables used to estimate annual trail trips

Variable	Source
Average annual trips	Data from 57 trail counters across the U.S. See Appendix A for a summary of locations.
Population density (calculated from population and land area)	*Population:* U.S. Department of Commerce. 2020. Census Bureau, American Community Survey Office, Washington, D.C. *Land area:* U.S. Geological Survey, Gap Analysis Program. 2018. Protected Areas Database of the United States (PADUS), Version 2.0.
Share of households earning at least $150,000/year	U.S. Department of Commerce. 2020. Census Bureau, American Community Survey Office, Washington, D.C.
Rural-urban continuum codes	U.S. Department of Agriculture, Economic Research Service. 2013. Rural-Urban Continuum Codes. https://www.ers.usda.gov/data-products/rural-urban-continuum-codes.aspx

In 12 counties along the GRT, the statistical model predicted use that exceeded the mean plus two standard deviations for similarly urbanized counties in their state. In these cases, average annual trips was set to the state mean for the same RUCCs, and confidence intervals were calculated using state mean and standard deviation for the same RUCCs.

For each county we calculated the predicted number of trips annually as well as a 95% confidence interval around the midpoint using the standard error of the predicted value. This confidence interval is the foundation for the low and high estimates for economic impacts, reported in the Results.

Users versus trips

Trail counters record trips, not individual users. Economic impact analyses rely on spending by individual users and would greatly exaggerate economic impacts if they used total traffic. On many trails, people go out some distance and turn around, and thus are counted twice by the trail counter, which records two trips. The Rails-to-Trails Conservancy, using observations from dozens of trail counters over many years, estimates *users* to be 58% of total *trips*.

Day-use & overnight visitors

While trail use by residents is invaluable for quality of life and health, trail use by visitors brings new spending and new economic opportunities to a community. A "visitor" is defined as someone coming from at least 50 miles away. We calculate the visitor share based on the average value reported from 12 other studies, summarized in Appendix B. We apply this average—43.6%—to the estimated average total annual users to estimate average annual visitors to the GRT.

The GRT offers an opportunity for users to enjoy multiday outings on a connected trail. Because overnight users tend to spend more than day users, it is important to estimate the share of users who are

overnight visitors. We calculate the share of overnight visitors based on the average value reported from seven other studies, summarized in Appendix C.

We apply the average of 36.9% to our estimate of annual visitors to the GRT to determine overnight visitors.

Spending estimates

We based our estimates of spending on a review of the literature of the economic impacts of trails and, where available, estimates from specific trail segments or regions. We adjust dollar values reported in studies to 2021 dollars using the consumer price index. The studies we used are summarized in Appendix D.

The averages by region, and nationally, are summarized in Table 2.

Table 2. National and regional averages used to estimate visitor spending along the Great American Rail-Trail

Region	States where used	Average spending per visitor per day, 2021$	
		Day visitor	Overnight visitor
National average	Wyoming, Montana, Idaho, Washington	$57.53	$128.51
East	Washington, D.C.; Maryland, Pennsylvania, West Virginia	$67.53	$150.28
Midwest	Ohio, Indiana, Illinois, Iowa, Nebraska	$30.87	$153.61

We apply the national average to Wyoming, Montana, Idaho, and Washington because we did not have a sufficient number of studies from these states to create a regional spending profile.

We then multiplied the total number of day visitors by the average day-visitor spending, and the total number of multiday visitors by the average overnight-visitor spending. We summed the two to calculate total visitor spending.

Calculating economic impacts

We input total visitor spending into IMPLAN—an economic modeling program—to estimate the economic impact of the GRT, measured in terms of jobs, income, value-added, and tax revenue. Value-added is akin to gross domestic product, measuring the value of goods and services produced minus the cost of inputs. Tax revenue includes money from local and state taxes. The results presented here are the sum of three levels of economic impact: direct impact, indirect impact, and induced impacts. These three levels of impact are summarized in Figure 1.

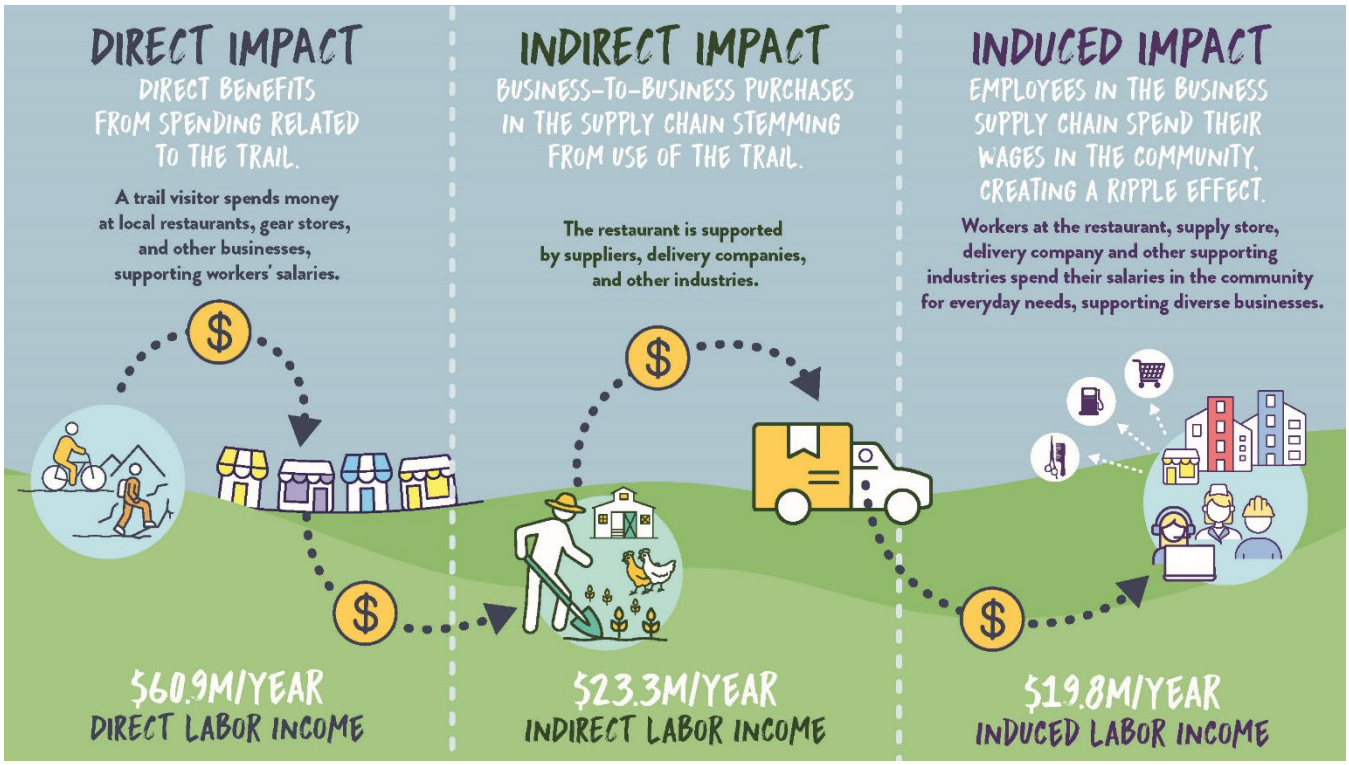

Figure 1: Direct, indirect, and induced impacts.
Graphic inspired by Capital Link: https://www.caplink.org/how-economic-impact-is-measured

For this example of labor income, we estimate the GRT will directly support $60.9 million in labor income in communities as trail users spend money at businesses. This will translate into an additional $23.3 million in indirect labor income for the supporting businesses in the supply chain, and $19.8 million in induced labor income as employees at these businesses spend money throughout their communities.

We ran IMPLAN for each state separately. We also ran IMPLAN for counties in three case studies: Henry, Bureau, and LaSalle counties in western Illinois; Adams, Grant, and Whitman counties in central Washington; and Mineral County in western Montana. In the two case studies that include multiple counties—western Illinois and eastern Washington—we aggregated the results from the group of counties.

3. Results

Overall economic potential

Our analysis finds the Great American Rail-Trail® can expect 25.6 million trail trips annually, resulting in $229.4 million in visitor spending. Approximately 2,500 jobs will be supported each year, resulting in $104 million in labor income. The trail will contribute $161 million to GDP each year and generate $22.7 million in new state and local tax revenue. Figure 2 summarizes overall economic potential.

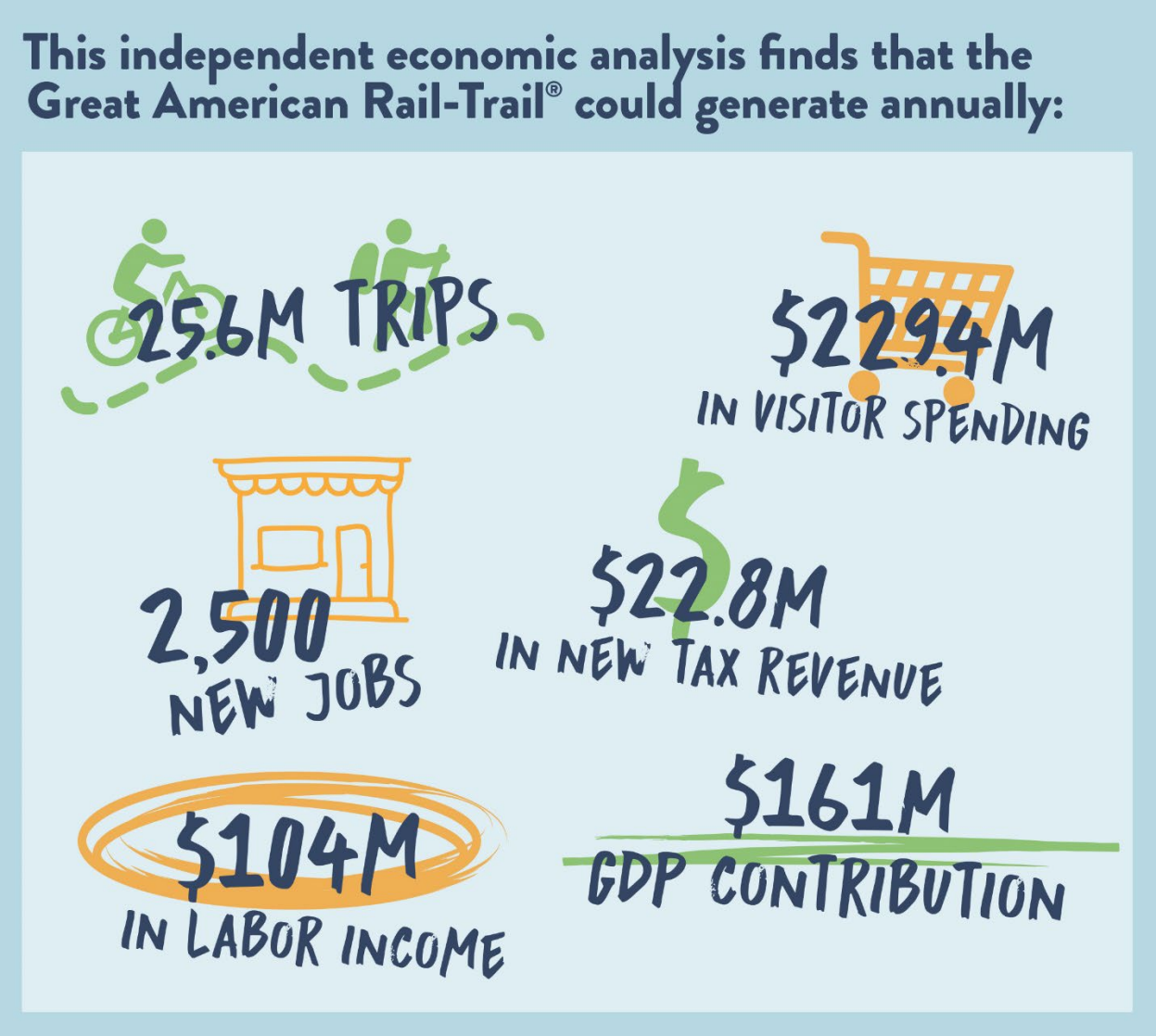

Figure 2: Overall economic potential of the Great American Rail-Trail.

Results by state

Table 3 provides detailed results for each of the 12 states, Washington, D.C., and the combined total for all states. Tables 4 – 16 include summaries, by state, of the economic impacts of the GRT including the midpoint and lower and upper ranges predicted.

Table 3. Summary of the annual economic impact of the Great American Rail-Trail

State	Miles Upon Trail Completion	% Complete (as of May 2022)	Users	Trips	Visitor Spending	Jobs	Labor Income	GDP Contribution	Tax Revenue
Idaho	90	88%	300,000	500,000	$13,400,000	160	$5,400,000	$8,100,000	$1,060,000
Illinois	194	85%	1,200,000	2,100,000	$18,800,000	200	$9,600,000	$15,300,000	$2,320,000
Indiana	215	55%	900,000	1,500,000	$13,100,000	150	$6,200,000	$9,100,000	$1,060,000
Iowa	467	53%	1,000,000	1,700,000	$14,300,000	170	$5,800,000	$8,900,000	$1,210,000
Maryland*	200	100%	5,000,000	8,600,000	$43,300,000	430	$19,700,000	$31,600,000	$5,800,000
Montana	427	24%	600,000	1,100,000	$16,000,000	210	$7,000,000	$9,800,000	$770,000
Nebraska	590	52%	1,000,000	1,700,000	$14,500,000	170	$6,100,000	$9,900,000	$1,280,000
Ohio	335	70%	900,000	1,600,000	$13,300,000	160	$6,500,000	$10,000,000	$1,280,000
Pennsylvania	172	94%	1,000,000	1,700,000	$31,600,000	370	$16,700,000	$24,300,000	$2,770,000
Washington	554	68%	900,000	1,600,000	$24,900,000	240	$11,800,000	$19,400,000	$3,190,000
Washington, D.C.	7.5	100%	1,400,000	2,500,000	$12,400,000	80	$4,600,000	$7,200,000	$1,070,000
West Virginia	8.7	53%	20,000	40,000	$800,000	10	$300,000	$400,000	$70,000
Wyoming	510	3%	500,000	900,000	$13,200,000	150	$4,500,000	$7,000,000	$880,000
All states			14,900,000	25,600,000	$229,400,000	2,500	$104,000,000	$161,000,000	$22,770,000

*** Maryland**'s visitation, spending, and economic impact numbers are particularly high because the GRT route includes the Chesapeake & Ohio Canal National Historic Park, one of the most visited parks in the National Park System.

Table 4. The annual economic impact of the Great American Rail-Trail in Idaho (90 miles).

Idaho	Low estimate	Middle estimate	High estimate
Users	117,000	284,000	451,000
Trips	201,000	490,000	778,000
Visitor Spending	$5,500,000	$13,400,000	$21,200,000
Jobs	67	164	260
Labor Income	$2,220,000	$5,403,000	$8,586,000
GDP Contribution	$3,300,000	$8,100,000	$12,900,000
Tax Revenue	$436,000	$1,061,000	$1,685,000

Table 5. The annual economic impact of the Great American Rail-Trail in Illinois (194 miles).

Illinois	Low estimate	Middle estimate	High estimate
Users	919,000	1,207,000	1,495,000
Trips	1,584,000	2,080,000	2,577,000
Visitor Spending	$14,300,000	$18,800,000	$23,300,000
Jobs	152	200	247
Labor Income	$7,310,000	$9,603,000	$11,896,000
GDP Contribution	$11,700,000	$15,300,000	$19,000,000
Tax Revenue	$1,763,000	$2,315,000	$2,868,000

Table 6. The annual economic impact of the Great American Rail-Trail in Indiana (215 miles).

Indiana	Low estimate	Middle estimate	High estimate
Users	315,000	889,000	1,463,000
Trips	543,000	1,533,000	2,523,000
Visitor Spending	$4,600,000	$13,100,000	$21,500,000
Jobs	52	147	242
Labor Income	$2,185,000	$6,163,000	$10,141,000
GDP Contribution	$3,200,000	$9,100,000	$14,900,000
Tax Revenue	$376,000	$1,060,000	$1,744,000

Table 7. The annual economic impact of the Great American Rail-Trail in Iowa (467 miles).

Iowa	Low estimate	Middle estimate	High estimate
Users	473,000	1,004,000	1,534,000
Trips	816,000	1,731,000	2,645,000
Visitor Spending	$6,700,000	$14,300,000	$21,800,000
Jobs	79	167	255
Labor Income	$2,736,000	$5,800,000	$8,865,000
GDP Contribution	$4,200,000	$8,900,000	$13,600,000
Tax Revenue	$570,000	$1,210,000	$1,849,000

Table 8. The annual economic impact of the Great American Rail-Trail in Maryland (200 miles).*

Maryland	Low estimate	Middle estimate	High estimate
Users	2,104,000	5,005,000	7,906,000
Trips	3,628,000	8,630,000	13,632,000
Visitor Spending	$18,200,000	$43,300,000	$68,300,000
Jobs	182	434	685
Labor Income	$8,259,000	$19,665,000	$31,072,000
GDP Contribution	$13,300,000	$31,600,000	$50,000,000
Tax Revenue	$2,437,000	$5,802,000	$9,167,000

* Maryland's visitation, spending, and economic impact numbers are particularly high because the GRT route includes the Chesapeake & Ohio Canal National Historic Park, one of the most visited parks in the National Park System.

Table 9. The annual economic impact of the Great American Rail-Trail in Montana (427 miles).

Montana	Low estimate	Middle estimate	High estimate
Users	190,000	612,000	1,034,000
Trips	327,000	1,055,000	1,783,000
Visitor Spending	$5,000,000	$16,000,000	$27,000,000
Jobs	64	206	348
Labor Income	$2,176,000	$6,986,000	$11,797,000
GDP Contribution	$3,000,000	$9,800,000	$16,500,000
Tax Revenue	$240,000	$771,000	$1,302,000

Table 10. The annual economic impact of the Great American Rail-Trail in Nebraska (590 miles).

Nebraska	Low estimate	Middle estimate	High estimate
Users	488,000	1,011,000	1,534,000
Trips	841,000	1,743,000	2,645,000
Visitor Spending	$7,000,000	$14,500,000	$22,100,000
Jobs	83	172	261
Labor Income	$2,920,000	$6,052,000	$9,184,000
GDP Contribution	$4,800,000	$9,900,000	$15,000,000
Tax Revenue	$619,000	$1,283,000	$1,947,000

Table 11. The annual economic impact of the Great American Rail-Trail in Ohio (335 miles).

Ohio	Low estimate	Middle estimate	High estimate
Users	495,000	925,000	1,356,000
Trips	853,000	1,595,000	2,337,000
Visitor Spending	$7,100,000	$13,300,000	$19,400,000
Jobs	86	161	236
Labor Income	$3,473,000	$6,493,000	$9,513,000
GDP Contribution	$5,300,000	$10,000,000	$14,600,000
Tax Revenue	$685,000	$1,282,000	$1,878,000

Table 12. The annual economic impact of the Great American Rail-Trail in Pennsylvania (172 miles).

Pennsylvania	Low estimate	Middle estimate	High estimate
Users	591,000	1,014,000	1,437,000
Trips	1,018,000	1,748,000	2,477,000
Visitor Spending	$18,400,000	$31,600,000	$44,800,000
Jobs	213	366	519
Labor Income	$9,742,000	$16,736,000	$23,729,000
GDP Contribution	$14,100,000	$24,300,000	$34,400,000
Tax Revenue	$1,613,000	$2,771,000	$3,930,000

Table 13. The annual economic impact of the Great American Rail-Trail in Washington (554 miles).

Washington	Low estimate	Middle estimate	High estimate
Users	391,000	948,000	1,505,000
Trips	675,000	1,635,000	2,595,000
Visitor Spending	$10,300,000	$24,900,000	$39,600,000
Jobs	99	240	381
Labor Income	$4,861,000	$11,777,000	$18,694,000
GDP Contribution	$8,000,000	$19,400,000	$30,800,000
Tax Revenue	$1,317,000	$3,192,000	$5,066,000

Table 14. The annual economic impact of the Great American Rail-Trail in Washington, D.C. (7.5 miles)

Washington, D.C.	Low estimate	Middle estimate	High estimate
Users	269,000	1,447,000	2,625,000
Trips	463,000	2,494,000	4,525,000
Visitor Spending	$2,300,000	$12,400,000	$22,500,000
Jobs	16	84	152
Labor Income	$861,000	$4,627,000	$8,393,000
GDP Contribution	$1,300,000	$7,200,000	$13,100,000
Tax Revenue	$200,000	$1,074,000	$1,948,000

Table 15 The annual economic impact of the Great American Rail-Trail in West Virginia (8.7 miles).

West Virginia	Low estimate	Middle estimate	High estimate
Users	4,000	22,000	39,000
Trips	7,000	37,000	68,000
Visitor Spending	$200,000	$800,000	$1,300,000
Jobs	2	8	15
Labor Income	$67,000	$274,000	$480,000
GDP Contribution	$100,000	$400,000	$800,000
Tax Revenue	$17,000	$68,000	$120,000

Table 16. The annual economic impact of the Great American Rail-Trail in Wyoming (510 miles).

Wyoming	Low estimate	Middle estimate	High estimate
Users	186,000	502,000	818,000
Trips	321,000	865,000	1,410,000
Visitor Spending	$4,900,000	$13,200,000	$21,500,000
Jobs	54	145	236
Labor Income	$1,657,000	$4,465,000	$7,273,000
GDP Contribution	$2,600,000	$7,000,000	$11,400,000
Tax Revenue	$326,000	$878,000	$1,431,000

Jobs and sectors supported

The GRT is expected to support around 25,000 jobs over the next 10 years, spread across several economic sectors. Businesses related to hospitality—restaurants, lodging, and retail—will see the biggest gains, but the GRT is also expected to support businesses across a wide range of sectors. Table 17 summarizes the top ten sectors for new jobs supported by the GRT.

Table 17. Top ten sectors for new jobs supported by the Great American Rail Trail.

Rank	Sector	Jobs over the next 10 years
1	Restaurants	8,650
2	Lodging	3,980
3	Retail	4,990
4	Real estate	710
5	Sporting and athletic goods manufacturing	630
6	Business management	310
7	Hospitals and other health care	290
8	Professional services (e.g., marketing, accounting, payroll)	230
9	Warehousing	160
10	Building & landscape maintenance	140

In places where the trail is not yet complete, the figures in Table 17 represent new jobs. Additionally, these new jobs represent an opportunity for entrepreneurs to open new businesses like restaurants, lodging destinations, and gear stores, that can build on the new activity the trail will bring to communities along the GRT.

Investments in the GRT can help revitalize communities, attract businesses and entrepreneurs, and keep residents, especially in rural places. In communities where the trail is not yet complete, it can help create new business opportunities and diverse jobs.

Appendix A: Locations for counter data used in statistical model

Location	Average annual trips	Year of counts
California		
San Diego County*	138,122	2021
Colorado		
El Paso County*	218,825	2021
Washington, D.C.	2,494,329	2021
Iowa		
Black Hawk County	19,569	2021
Boone County	41,962	2021
Dallas County	138,599	2021
Story County	154,261	2021
Idaho		
Benewah County	163,200	2002
Kootenai County	163,200	2002
Shoshone County	163,200	2002
Illinois		
Bureau County	23,120	2012
Henry County	9,126	2012
Will County	172,720	2012
Indiana		
Delaware County	747,770	2021
Grant County	61,956	2021
Henry County	13,713	2021
Randolph County	14,832	2021
Wayne County	122,689	2021
Maine		
Cumberland County*	295,654	2021
Maryland		
Allegany County	406,558	2021
Frederick County	1,430,718	2021
Montgomery County	5,938,212	2021
Washington County	854,196	2021
Minnesota		
Hennepin County*	772,129	2021
St. Louis County*	366,673	2021
Montana		
Gallatin County	241,265	2021
Yellowstone County*	102,018	2021
New Mexico		
Bernalillo County*	81,240	2021
Ohio		
Delaware County	168,811	2021
Franklin County	355,000	2021
Greene County	43,200	2021

Location	Average annual trips	Year of counts
Knox County	65,308	2021
Montgomery County	58,500	2021
Stark County	175,000	2021
Tuscarawas County	34,000	2021
Wayne County	32,677	2021
Pennsylvania		
Armstrong County*	78,819	2021
Allegheny County	585,605	2014 for Three Rivers Heritage Trail segment; 2020 for Great Allegheny Passage segment
Berks County*	81,762	2021
Bucks County*	50,492	2021
Carbon County*	59,436	2021
Cumberland County*	92,511	2021
Fayette County	532,450	2021
Lancaster County*	135,469	2021
Lawrence County*	34,860	2021
Somerset County	490,439	2021
Union County*	126,768	2021
Venango County*	29,565	2021
Washington County	20,000	2021
Westmoreland County	119,069	2021
York County	74,131	2021
Texas		
Harris County*	98,343	2021
Tarrant County*	295,847	2021
Virginia		
Arlington County*	496,688	2021
Washington		
King County	723,795	2021
West Virginia		
Brooke County	16,320	2021
Wisconsin		
Milwaukee County*	255,790	2021

* Counties that are not on the GRT.

Appendix B: Studies used to estimate the share of trail users who are visitors

Trail and location	Share of users who are visitors	Source
Burlington Waterfront Path (VT)	67%	Zhang, C., L. Jennings, and L. Aultman-Hall. 2010. Estimating Tourism Expenditures for the Burlington Waterfront Path and the Island Line Trail, Report # 10-003. Burlington, VT: University of Vermont Transportation Research Center.
Catskill Mountain Rail-Trail (NY)	23%	Camion Associates. 2013. Catskill Mountain Rail-Trail Economic and Fiscal Impact Analysis. Presented at the New York-New Jersey Trail Conference, June 17, 2013.
D&L Trail (PA)	23%	Tomes, P. and C. Knoch. 2012. D&L Trail 2012 User Survey and Economic Impact Analysis. Camp Hill, PA: Rails to Trails Conservancy.
Elroy-Sparta Trail (WI)	89%	Toma, M., J. Hoag, and R. Griffin. 2003. Coastal Georgia Greenway Market Study and Projected Economic Impact. Armstrong Atlantic State University Center for Regional Analysis.
Ghost Town Trail (PA)	7%	Tomes, P. and C. Knoch. 2009. Ghost Town Trail 2009 User Survey and Economic Impact Analysis. Rails to Trails Conservancy and Pennsylvania Department of Conservation and Natural Resources.
Great Allegheny Passage (PA)	33%	Fourth Economy. 2021. Great Allegheny Passage Economic Impact Report. Great Allegheny Passage Conservancy.
Great Miami Trail (OH)	18%	Dean Runyan Associates. 2014. Columbia River Gorge Bicycle Recreation: Economic Impact Forecast for the Communities Along the Historic Columbia River Highway. Prepared for the Friends of the Historic Columbia River Highway, Oregon Tourism Commission, Port of Cascade Locks, Port of Hood River, Port of The Dalles.
Heritage Trail (IA)	69%	Toma, M., J. Hoag, and R. Griffin. 2003. Coastal Georgia Greenway Market Study and Projected Economic Impact. Armstrong Atlantic State University Center for Regional Analysis.
Little Miami Trail (OH)	23%	Toma, M., J. Hoag, and R. Griffin. 2003. Coastal Georgia Greenway Market Study and Projected Economic Impact. Armstrong Atlantic State University Center for Regional Analysis.
Oil Creek State Park (PA)	66%	Toma, M., J. Hoag, and R. Griffin. 2003. Coastal Georgia Greenway Market Study and Projected Economic Impact. Armstrong Atlantic State University Center for Regional Analysis.

Trail and location	Share of users who are visitors	Source
Pere Marquette Trail (MI)	25%	Toma, M., J. Hoag, and R. Griffin. 2003. Coastal Georgia Greenway Market Study and Projected Economic Impact. Armstrong Atlantic State University Center for Regional Analysis.
Trail of the Coeur d'Alenes (ID)	81%	Dean Runyan Associates. 2014. Columbia River Gorge Bicycle Recreation: Economic Impact Forecast for the Communities Along the Historic Columbia River Highway. Prepared for the Friends of the Historic Columbia River Highway, Oregon Tourism Commission, Port of Cascade Locks, Port of Hood River, Port of The Dalles.

Appendix C: Studies used to estimate the share of trail users who are on the trail for multiple consecutive days

Trail and location	Share of users who visit for multiple consecutive days	Source
Allegheny Trail Alliance (PA)	13%	Farber, S., J. Argueta, S. Hughes. 2003. 2002 User Survey for the Pennsylvania Allegheny Trail Alliance. University of Pittsburgh University Center for Social and Urban Research.
Columbia River Gorge (WA)	47%	Dean Runyan Associates. 2014. Columbia River Gorge Bicycle Recreation: Economic Impact Forecast for the Communities Along the Historic Columbia River Highway. Prepared for the Friends of the Historic Columbia River Highway, Oregon Tourism Commission, Port of Cascade Locks, Port of Hood River, Port of The Dalles.
D&L Trail (PA)	11%	Tomes, P. and C. Knoch. 2012. D&L Trail 2012 User Survey and Economic Impact Analysis. Camp Hill, PA: Rails to Trails Conservancy.
Great Allegheny Passage (PA)	41%	Campos, Inc. 2009. The Great Allegheny Passage (GAP) Economic Impact Study (2007-08). The Progress Fund.
Great Allegheny Passage (PA)	57%	The Progress Fund. 2015. Trail User survey and Business Survey Report: Great Allegheny Passage. Prepared for the Allegheny Trail Alliance.
Great Allegheny Passage (PA)	8%	Fourth Economy. 2021. Great Allegheny Passage Economic Impact Report. Great Allegheny Passage Conservancy.
TransCanada Trail (ON)	81%	Price Waterhouse Coopers. 2004. Economic Impact Analysis Trans Canada Trail in Ontario. Prepared for the Ontario Trillium Foundation and the Trans Canada Trail.

Appendix D: Studies and associated values used to estimate visitor spending along the Great American Rail-Trail

Trail and location	Average spending per visitor per day, 2021$		Citation
	Day visitor	Overnight visitor	
Burlington Waterfront Path (VT)	$85.00	$194.09	Zhang, C., L. Jennings, and L. Aultman-Hall. 2010. Estimating Tourism Expenditures for the Burlington Waterfront Path and the Island Line Trail, Report # 10-003. Burlington, VT: University of Vermont Transportation Research Center.
Catskill Mountain Rail-Trail (NY)	$73.90		Camion Associates. 2013. Catskill Mountain Rail-Trail Economic and Fiscal Impact Analysis. Presented at the New York-New Jersey Trail Conference, June 17, 2013.
Chesapeake & Ohio Canal National Historic Park	$19.66		Thomas, C.C., L. Koontz, and E. Cornachione. 2019. 2018 National Park Visitor Spending Effects: Economic Contributions to Local Communities, States, and the Nation. (Natural Resource Report NPS/NRSS/EQD/NRR—2019/1922). Fort Collins, CO: National Park Service. As reported by Headwaters Economics.
Columbia River Gorge (WA)		$57.86	Dean Runyan Associates. 2014. Columbia River Gorge Bicycle Recreation: Economic Impact Forecast for the Communities Along the Historic Columbia River Highway. Prepared for the Friends of the Historic Columbia River Highway, Oregon Tourism Commission, Port of Cascade Locks, Port of Hood River, Port of The Dalles.
D&L Canal Trail (PA)	$39.08	$193.55	Tomes, P. and C. Knoch. 2012. D&L Trail 2012 User Survey and Economic Impact Analysis. Camp Hill, PA: Rails to Trails Conservancy.
Elroy-Sparta Trail (WI)	$54.53		Toma, M., J. Hoag, and R. Griffin. 2003. Coastal Georgia Greenway Market Study and Projected Economic Impact. Armstrong Atlantic State University Center for Regional Analysis.
Gandy Dancer Trail (WI)		$153.61	Kazmierski, B., M. Kornmann, D. Marcouiller, and J. Prey. 2009. Trails and their gateway communities: A case study of recreational use compatibility and economic impacts. Madison, WI: University of Wisconsin Division of Cooperative Extension Publication #G3880.

Trail and location	Average spending per visitor per day, 2021$		Citation
	Day visitor	Overnight visitor	
Ghost Town Trail (PA)	$16.98	$97.32	Tomes, P. and C. Knoch. 2009. Ghost Town Trail 2009 User Survey and Economic Impact Analysis. Rails to Trails Conservancy and Pennsylvania Department of Conservation and Natural Resources.
Great Allegheny Passage (PA)	$92.97	$116.18	Fourth Economy. 2021. Great Allegheny Passage Economic Impact Report. Great Allegheny Passage Conservancy.
Heritage Trail (IA)	$17.54		Toma, M., J. Hoag, and R. Griffin. 2003. Coastal Georgia Greenway Market Study and Projected Economic Impact. Armstrong Atlantic State University Center for Regional Analysis.
Little Miami Trail (OH)	$20.54		Toma, M., J. Hoag, and R. Griffin. 2003. Coastal Georgia Greenway Market Study and Projected Economic Impact. Armstrong Atlantic State University Center for Regional Analysis.
Oil Creek State Park (PA)	$156.38		Toma, M., J. Hoag, and R. Griffin. 2003. Coastal Georgia Greenway Market Study and Projected Economic Impact. Armstrong Atlantic State University Center for Regional Analysis.
Silver Comet Trail (GA)	$56.25		Alta/Greenways. 2013. Silver Comet Trail Economic Impact Analysis and Planning Study. Rome, GA: Northwest Georgia Regional Planning Commission.
Montana Touring Cyclists		$86.96	Nickerson, N., J. Jorgenson, M. Berry, J. Kwenye, D. Kozel, J. Schutz. 2013. Analysis of Touring Cyclists: Impacts, Needs and Opportunities for Montana. University of Montana College of Forestry and Conservation's Institute for Tourism and Recreation Research, Research Report 2013-17.

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