



The Economic, Health, and Environmental Benefits of Completing

The Capital Trails Network



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Marvin Gaye Trail, DC

Front cover
Metropolitan Branch Trail, DC
Photo by Richard Anderson,
courtesy of Rails-to-Trails Conservancy

PREPARED BY

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A Trail Network That Will Transform Public Life

In 2015, the Capital Trails Coalition brought together planners, advocates, community leaders, and decision makers to get on the same page about what a world-class trail network could be. With effort, strategy, and collaboration that bold vision became the Capitol Trails Network: 881 miles of connected and equitably distributed multi-use trails for everyone in our region to use.

The Washington, DC region has a wealth of postcard-perfect places to walk and bike. The weeping willows and Potomac views along the Mount Vernon Trail, the streamside idyll of the Sligo Creek Trail, and the mural-lined Metropolitan Branch Trail—these outdoor spaces are woven into the urban fabric of the region and make every day life more joyful.

But while trails are beautiful places to spend a sunny day, they are more than that. They are a critical piece of our transportation system, connecting people to liveable communities, nature, and each other. And that's where there's work to be done.

Distribution of our existing trails makes it clear how generations of systemic injustice and bias in transportation planning and development have limited Black communities' access to transportation resources like trails. Together, we can repair this harm by prioritizing expanded trail access in underserved communities and places.

When we finish building the Capital Trails Network, nearly four million Washington area residents will live in close proximity to a trail and have easy access to an equitable, sustainable transportation system. Thanks to the dedication, commitment, and generosity of everyone who contributed to this report, we've taken the first steps down that path.

Now— let's build these trails!



Stephanie Piperno
Trails Coalition Manager
Washington Area
Bicyclist Association



Elizabeth Thorstensen
Vice President, Trail Development
Rails-to-Trails Conservancy
Chair, Capital Trails Coalition



We thank our generous supporters for their investment in this report and our region:

The Graham-Stretch Family Foundation
Wayne Clark, Jessica Hough, Tom Fulcher, Jack Koczela, Greg Meyer, John Hagner



The following have endorsed Capital Trails Coalition's work to complete the Capital Trails Network

- Walter Alcorn, Board of Supervisors, Fairfax County
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- Casey Anderson, Chair of the Planning Board, Montgomery County
- Monique Anderson-Walker, County Council Member, Prince George's County
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- Scott Surovell, State Senator, Virginia
- Deni Taveras, Council Council Member, Prince George's County
- Andrew Trueblood, Director of the DC Office of Planning, District of Columbia
- Bill Tyler, Director of the Department of Parks and Recreation, Prince George's County
- Shannon Valentine, Secretary of Transportation, Virginia
- Robert White, Councilmember At-Large, District of Columbia
- Justin Wilson, Mayor, City of Alexandria

About the Capital Trails Coalition

The Capital Trails Coalition is a collaboration of public and private organizations, agencies, and volunteers working to advance completion of an interconnected network of multi-use trails for the Washington metropolitan area.

Started in 2015, the Coalition has worked with each jurisdiction to identify planned trails that, once complete, will connect our region. The trails will be accessible to people of all ages and abilities, and will be developed and distributed equitably.




Paint Branch Trail, Prince George's County, MD

An Interconnected Active Transportation System For the Washington, DC Metropolitan Area

Capital Trails Coalition seeks to create a trail network that is . . .

ACCESSIBLE

 to people of all ages and abilities

HEALTHY & SAFE
 to promote wellbeing

EQUITABLY DISTRIBUTED
 to provide access across all communities

RELIABLE
 for affordable, sustainable transportation

WORLD-CLASS
 built to the highest design standards

Background and Context

The Region is Growing

The Washington metropolitan area has seen continuous growth for the past 14 years and ranks in the top ten metropolitan areas for the largest population growth between 2010 and 2019. The Metropolitan Washington Council of Governments (MWCOG) forecasts more than a million new residents and jobs between now and 2045 due to a robust economy. The region hosts the Nation's capital (~200,000 federal jobs) and numerous academic institutions (18 colleges and universities enrolling over 300,000 students).

Residents value trails for health and transportation, and they want more.

As our region continues to grow, investment in trail expansion is a priority for many residents.

Demand for recreation and active transportation is part of what supports the region's competitiveness, even during a pandemic. The Washington region is often ranked as one of the most active areas in the country. Many residents stay active through utilizing our trails and outdoor spaces; 65% of over 800 participants surveyed in the Washington metropolitan region consider trails and open space to be important to them. According to the Maryland National Capital Parks and Planning Commission's 2016 Trails Master Plan, 79% of Prince George's County residents surveyed think it is very important to add, expand, and improve trails in the county. Support for trails and green space is also evident through voter approval in bond referenda. For example, Fairfax County's \$112 million park bond passed in all nine magisterial districts in November 2020. The

county's park-bond referendum will be the 14th passed since 1959.

The region is already making progress on expanding its trail network.

In July 2020, The National Capital Region Transportation Planning Board (TPB), the federally designated metropolitan planning organization for metropolitan Washington, DC, adopted the National Capital Trail Network. The Network expands upon the Capital Trails Coalition's vision to increase multi-use trail connectivity across the region, and it enables specified trail projects to be prioritized for funding from the federal Transportation Alternatives Program and the Transportation Land-Use Connections Program. The MWCOG also formally endorsed the National Capital Trail Network in August 2020.

Trail use skyrocketed during the pandemic. It's time to start building more trails.

The COVID-19 pandemic has been traumatic and devastating to many across the globe. In an attempt to counteract the uncertainty, isolation, and immobility of quarantine, people have turned to walking, running, and cycling on trails. In March 2020, trails nationwide saw, on average, a 79% increase in use. This behavior shift does not look to be temporary. MWCOC's "Voices of the Region" survey shows that residents' travel patterns have changed as a result of the pandemic and that they would like to continue to walk and bike more and drive less post-pandemic. 53% of all respondents anticipate walking more and 26% anticipate biking more. Of the 2,400 residents surveyed, 31% would bike more if they had bicycle lanes or trails near their home.

As a result of the recent surge in use, many of our region's trails are seeing record use and even overcrowding—a solution that can be solved by more trails! The region is making steady progress toward building out the network, with 35 miles of trails currently under construction (as of March 2021). Many of these miles are combined with highway or road projects to create multi-modal facilities for all users. Continued, timely investment in trails can complete the 881 mile network by 2030.

About the Capital Trails Network

The Capital Trails Network supports the region's sustainability and resilience by providing an active transportation network for residents. To encourage residents to shift their transportation preferences to more environmentally-friendly modes where possible, our region needs to actively invest in alternative transportation modes. Environmental impacts from potential mode shift is also supplemented by the Network's long corridors of tree cover and protected green space across the region.

Trail networks provide valuable economic, environmental, and public health benefits to the communities they serve. However, these valuable impacts are often understated or overlooked when considering investment in active transportation networks within communities. This report evaluates the impacts of the Capital Trails Network across the Washington, DC metropolitan region, which is defined in this report as the District of Columbia; Alexandria City, Arlington County, and Fairfax County in Virginia; and Prince George's County and Montgomery County in Maryland.

The Capital Trails Network totals 881 miles of existing and planned trail infrastructure, connecting communities, workplaces, and amenities throughout the region. As a network of multi-use trails

providing active transportation options for residents and visitors to the region, the system offers access to open space and recreational opportunities to the diverse communities that call the region home.

Currently, the Capital Trails Network offers 479 miles of completed trails throughout the region. However, there are gaps throughout the system. The planned trails will both extend the network into new communities and connect segments of the trails that already exist. The network has 152 planned projects, totaling 402 miles of still-to-be built trail segments or connectors.

These remaining projects, upon completion, will provide the region with a comprehensive active transportation network that supports increased mobility and circulation around the region, provides more communities with green infrastructure and recreational assets, and improves the quality of life and attractiveness of the region.

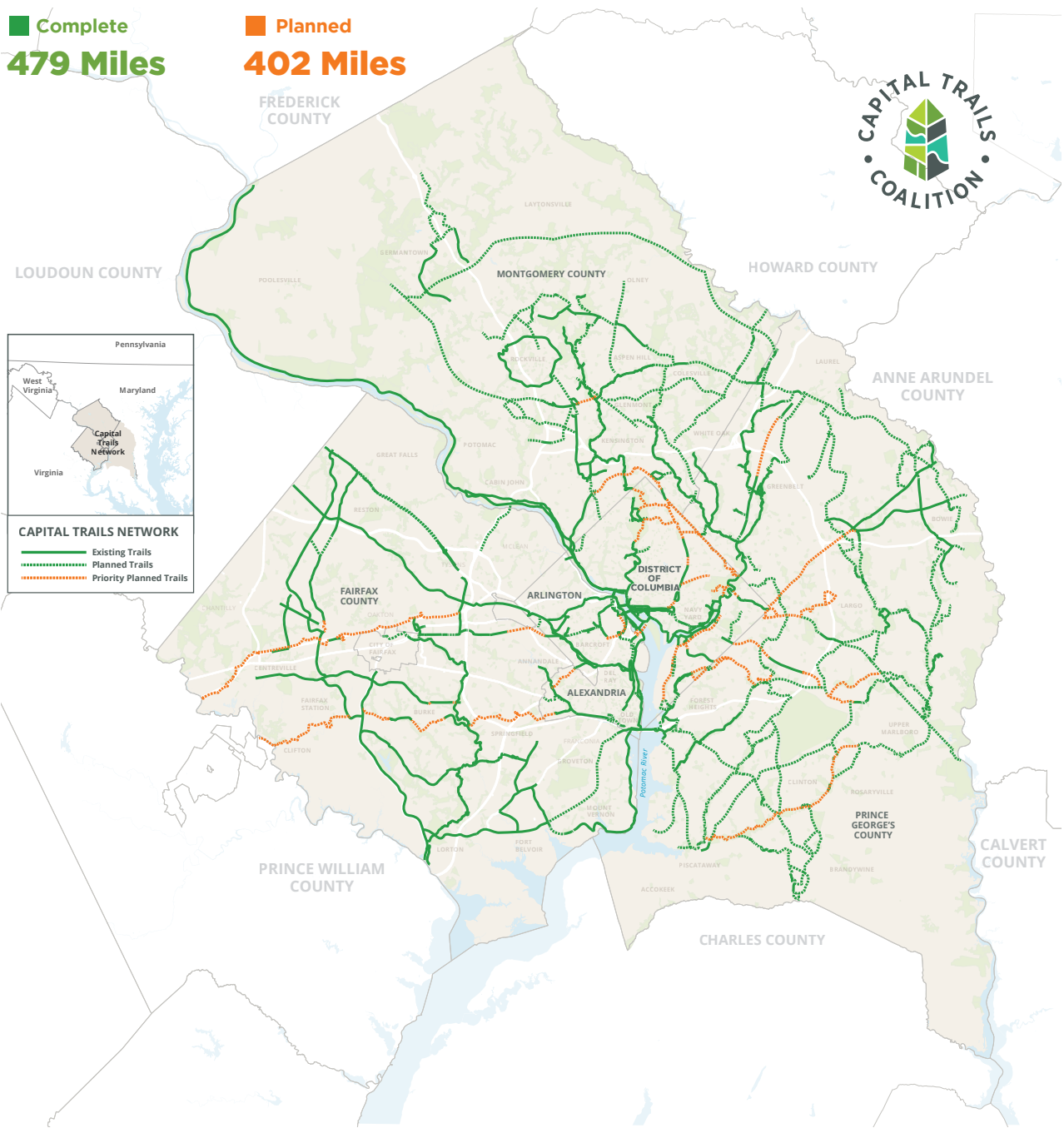
"I have seen firsthand how businesses in Prince George's County benefit from being located in close proximity to the trail network. Trails need to be a tool in our economic development toolbox. They are essential to our regional competitiveness and are instrumental in people's decisions to move here and stay here. I do not think this gets enough attention."

*-David Harrington, President & CEO
The Prince George's Chamber of Commerce*

Capital Trails Network

Complete
479 Miles

Planned
402 Miles



CAPITAL TRAILS NETWORK

- Existing Trails
- ⋯ Planned Trails
- ⋯ Priority Planned Trails

MILES OF TRAIL NETWORK BY LOCALITY

WASHINGTON, DC	68.2mi	43.2mi
ALEXANDRIA, VA	17.3mi	6.3mi
ARLINGTON, VA*	35.0mi	7.7mi
FAIRFAX, VA**	155.5mi	60.6mi
MONTGOMERY, MD	113.3mi	42.5mi
PRINCE GEORGE'S, MD	89.6mi	242.0mi

*Fall Church, VA trail segments are included in the Arlington, VA totals.
**Fairfax City, VA trail segments are included in the Fairfax, VA totals.

Nearly 75% of over 800 participants surveyed in the Washington, DC region consider trails and open space to be important to them. 30% of respondents think they are even more important given the changes in daily life, needs, and movement patterns that the COVID-19 pandemic has brought about.

Trail Networks as a Catalyst for Economic Development

Research and practice show that trails are essential infrastructure which improve the economic vitality of communities. Trails and trail networks create safe and easy access to open space, support healthy living, provide affordable transportation, and altogether improve the quality of life for residents who live nearby, as well as increase the competitiveness of the region. As an economic development tool, trail networks serve multiple purposes. The return on investment of a network can be viewed through a number of perspectives:

- › As an indicator of local investment in a place, trails and trail networks can serve as a catalyst for economic and community development projects.
 - › As part of a region's green infrastructure, trails contribute to a region's overall competitiveness.
 - › As a mode of active recreation for residents and out-of-town visitors, trails also often serve as a way to encourage "local tourism" and spending at businesses located nearby.
 - › As a well-connected and safe means for active transportation, trails strengthen a region's transportation network and increase mobility for residents.
-




Rendering of City-State Brewery
Metropolitan Branch Trail, DC

“City-State’s mission is to be a cultural institution and community hub. Our building is perfect for making beer, but the Metropolitan Branch Trail is vital to our larger goals, and we are looking forward to enhancing it. We are especially excited for the MBT to extend all the way to Silver Spring! Breweries and bicycles go together like malt and hops, and we will have bike racks and a water fountain available to the public. In addition to beer, we will offer to-go cold-brew coffee, tea, and other non-alcoholic drinks to MBT users.”

*James Warner, Founder,
City-State Brewing Co.
Washington, DC*

\$1.09 Billion in Network Expansion Investment Yields . . .

Increased Access

 **3.9M Residents** within 2 miles of a trail

 **930,000+ Regular Trail Users** throughout the DC Metro Area

Economic Impacts


 **\$2.05B** from construction over 25 years **supporting 16,100 Jobs**

 **\$9.9B** in property value premium benefits over 25 years

 **\$941M** from local annual spending **supporting 8,200 Jobs**

 **\$517M** annual public health savings

Environmental Benefits

 **\$433M** in lifetime carbon storage value

 **49M Miles** in reduced vehicle miles traveled each year

 **\$1.02 Billion total economic impacts per year**

 **\$2.4 Billion total savings per year**



Four Mile Run Trail, Arlington, VA

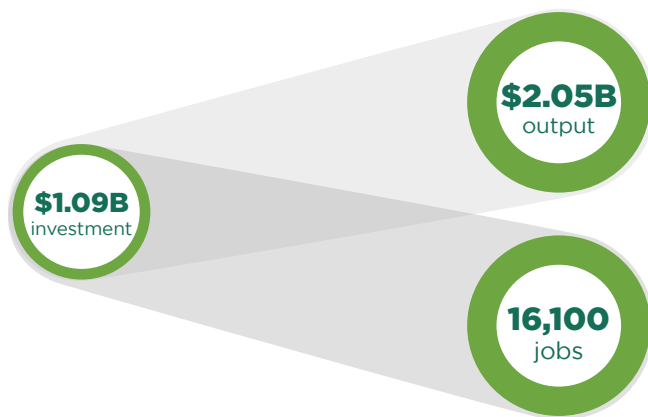


Metropolitan Branch Trail, DC
Photo by India Kea, courtesy of Rails-to-Trails Conservancy

Capital Investments

The Economic Impact on the DC Metro Area of Capital Trail Network Completion

generated from a \$1.09B investment over 25 years



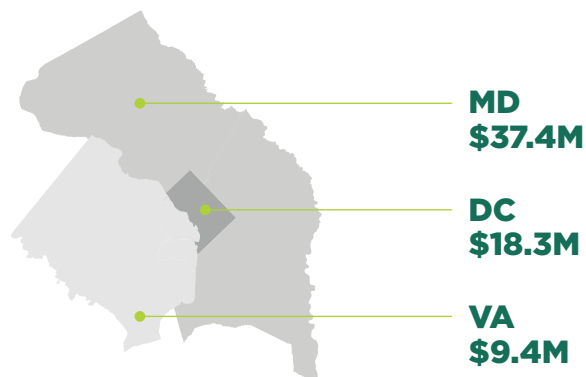
According to estimates provided by the Capital Trails Coalition, the expansion of the Capital Trails Network will represent a significant boost to the region's economies through the upfront investment of \$1.09 billion to construct 402 miles of new trails.

The economic impact of this capital investment in the network is calculated using the industry standard input-output economic model IMPLAN, estimating impacts on the DC, Maryland, Virginia region. Input-output modeling accounts for the *direct* impacts (i.e. the construction activity itself) as well as the spillover of spending within a regional economy through *indirect* and *induced* impacts. *Indirect* impacts result from direct spending on the purchase of goods and services from local vendors who in turn require additional purchasing from their own set of vendors. The portion of direct spending which goes to labor income—some of which will be spent locally by employees on goods and services—generates *induced* economic impacts, further stimulating the local economy.

The total investment in the Capital Trails Network will create a \$2.05 billion economic impact. This includes support for 16,100 jobs, \$966 million in employee compensation throughout the region, and more than \$65 million in state and local taxes. Annually, this equates to an economic impact of approximately \$81.8 million and 644 jobs per year during construction.

Potential State Tax Revenue

resulting from the completed Capital Trails Network over 25 years





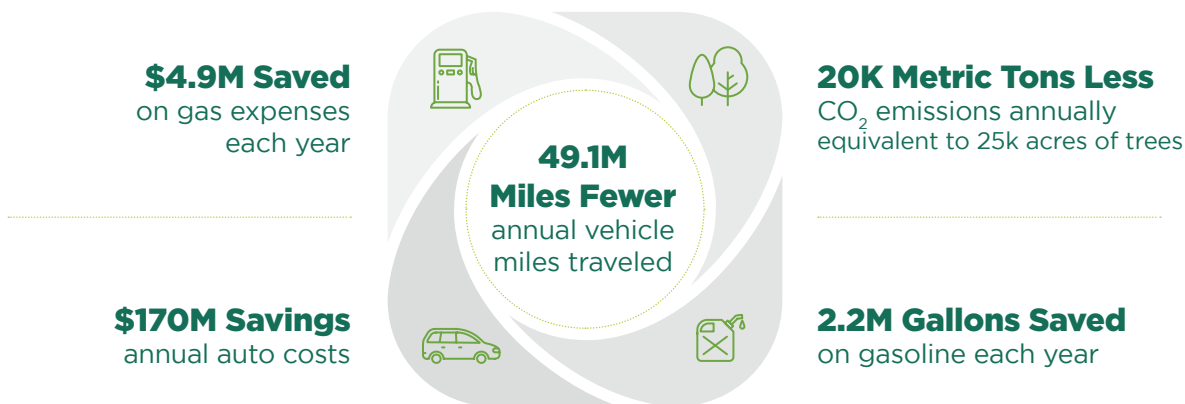
“2020 has been a challenging year to say the least. One year ago, we weren’t sure if we’d be able to keep our doors open. Due to the tireless work of local advocates, Maryland bike shops were declared essential transportation businesses. Since then, we’ve been going pretty much full tilt. Over the past year we’ve witnessed a bicycle boom as folks moved outside for recreation and exercise, turning to biking as a safe, socially distanced activity that’s great for physical and mental health. We are fortunate that our business is flourishing at a time when so many small businesses are struggling and are so thankful for the support of our customers—both old and new. We miss our community! We are excited to see so many folks out on the roads and the trails. We hope that they continue to ride their bikes beyond the pandemic and in doing so become advocates for better trail networks.”

*Laurie Lemieux, Owner,
Proteus Bicycles
Prince George’s County, MD*

Capital Crescent Trail, Montgomery County, MD

Transportation and Safety

A connected regional trail network will increase active transportation



As the Capital Trails Network becomes increasingly more connected, the region will benefit from improved mobility opportunities. Multi-modal infrastructure within a region helps residents reduce car trips, easing congestion and emissions and giving people more options for traveling throughout the region. According to the region's average daily Vehicle Miles Traveled (VMT), the region's car usage generates nearly 38,500 metric tons of CO₂ emissions a day. To encourage residents to shift their transportation preferences to

more environmentally-friendly modes where possible, a region needs to actively invest in alternative transportation modes.

The Capital Trails Network will expand mobility options for people that live and work in the DC region, providing a safe, extensive network for non-motorized transportation that is routed through major destinations.

Investments in bicycle infrastructure have paid off in terms of promoting more bicycling in the region. The share of all trips by bicycle doubled region-wide since 2007/2008, and increased three-fold in the region's core including the District of Columbia, Arlington, and Alexandria.

Potential Impact on Regional Mobility

Access to trails increase the number of people walking or biking to work by 13.1 percent compared to areas with less access to trail networks. In the DC region, approximately 13,500 residents will walk or bike to work once the trail network is completed (this is a conservative estimate as it does not account for potential growth in the percentage of people commuting by active transportation over time). This mode shift to active transportation generates additional benefits such as reduction in annual VMT (49.1 million annually), 2.2 million gallons of gasoline saved, and 19,580 metric tons of CO₂ avoided from shift in commute alone.

Residents may have lower operating expenses for their vehicles or may not need a car at all. Based on the number of additional active commuters attributable to the Capital Trails Network and average automobile-related household expenditures, it is estimated that households in the DC region stand to benefit from up to \$170 million each year in savings on automobile-related expenditures due to active commuting associated with the trail network.

Safety from Vehicle Traffic

Trails that are built to protect pedestrians and bicyclists from automobile traffic help reduce crashes that result in serious injuries and fatalities by providing a safe buffer for active transportation uses. As the Capital Trails Network expands its mileage, the system will contribute to the region's ability to achieve its Vision Zero goal of zero deaths from traffic accidents. These goals are important for each jurisdiction within the Network and align with not only traffic safety initiatives but broader climate and transportation goals. Washington, DC, Maryland, and Virginia are members of a 13 state collaborative, the Transportation and Climate Initiative (TCI), which "seeks to improve transportation, develop the clean energy economy, and reduce carbon emissions from the transportation sector."

According to a study from the Association for the Advancement of Automotive Medicine, the average lifetime cost of pedestrian-motor vehicle accidents for the pedestrian is approximately \$205,000 and the average lifetime costs of bike-motor vehicle accidents is approximately \$88,000. In total, annual traffic injuries result in more than \$400 million in estimated costs in the form of medical costs, reduced productivity, and lost quality of life.



Potomac Yard Trail, Alexandria, VA
Photo by Laura Stark, courtesy of Rails-to-Trails Conservancy

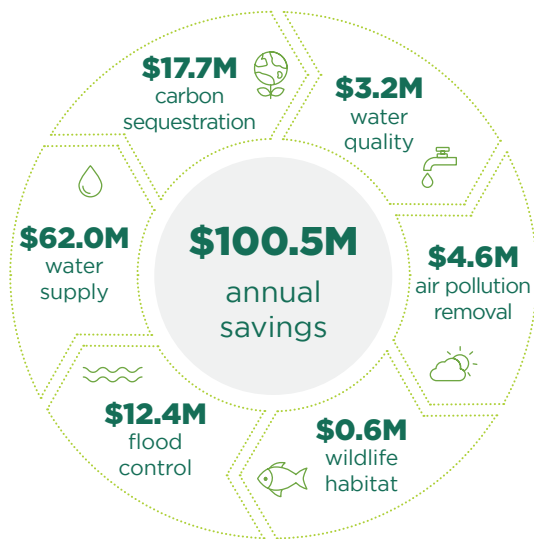


W&OD Trail, Arlington, VA
Photo courtesy of Rails-to-Trails Conservancy

More than 2,600 pedestrians and bicyclists are injured annually in crashes. 70 pedestrians or bicyclists die annually from crashes with cars. Total cost of injuries due to crashes each year \$450 million.

Environmental Services

Potential Annual Environmental Benefits to the DC Metro Area



\$433.1 Million

total lifetime carbon storage

It is estimated that, when completed, the Capital Trails Network will protect 74,000 acres of tree cover.

Trail networks such as the Capital Trails Network provide enumerable environmental benefits for the communities they serve. This section draws upon established research to evaluate the economic benefits in monetary terms of several types of ecosystem services provided by the network including the provision of water supply, water quality improvement, flood mitigation, wildlife habitat conservation, air pollution removal, and carbon sequestration and storage.

These impacts create ecosystem functions that would require costly measures to replicate if lost. The Capital Trails Network will ensure the value of the services of the ecosystems provide are retained, as the trail network is maintained or created.

Within a quarter mile of the Capital Trails Network there are approximately 138,000 acres of land that support ecosystems. The total value of the regional benefits from this protective buffer totals \$100 million annually in addition to a lifetime carbon storage value of \$433 million. These environmental benefits are estimated annually with the exception of carbon storage, which is stored in the biomass of trees for the lifetime of the tree.



Montgomery County, MD
Photo courtesy of Montgomery County Parks, M-NCPPC

Public Health

“Once COVID hit I found myself longing for some sort of routine. Since the gyms had closed, I lost my main stress relieving outlet, and was afraid of losing control of my health. As the pandemic progressed, I found myself demotivated. At first it was difficult and I found myself making excuses. Over time, I became consistent and going for a run on the Holmes Run Trail became my new found hobby. There’s nothing more I looked forward to after a long day of meetings from my makeshift home office. Running has helped alleviate my stress, clear my mind, and allows me to maintain a healthy lifestyle.”

Maria Kalsoom,
Resident, Falls Church, VA

Annual Health Benefits for the 932,000 Regular Trail Users



According to the 2018 Physical Activity Guidelines for Americans, individuals who engaged in at least thirty minutes of moderate to strenuous physical activity are considered to be physically active. The Capital Trails Network supports healthy lifestyles by providing an easily accessible and low cost recreational option for the surrounding communities.

In order to quantify the health benefits for trail users, the impacts of frequent trail users who are healthy and active because of the presence of the network within their community were measured. This study utilized data from the US Census regarding residents within two miles of the trail as well as survey data and research from the Rails to Trail Conservancy (RTC) to estimate frequent trail users and active adults. Measures from the CDC’s report Inadequate Physical Activity

and Health Care Expenditures in the United States were used to quantify the estimated value of an active lifestyle. These statistics were used as the basis for estimating the potential savings in the form of health care expenditures that are avoided as a result of increased physical activity on the trail network.

It is estimated that there are roughly 932,000 regular trail users in the DC region (a regular user is defined by usage of a trail three or more times a week). Of these, 438,000 are estimated to meet the CDC’s physical activity requirement due to the usage of the trail. These active users benefit from the health savings of their physical activity, estimated at roughly \$1,180 per active user. In sum, the CTC contributes to roughly \$517 million in health savings per year in the DC region.

“Kenilworth Aquatic Gardens is a unique and unexpected oasis filled with lush water lilies and lotus, located along the Anacostia River Trail (ART) in the District of Columbia. It is the only national park site dedicated to the cultivation and display of aquatic plants and provides important habitat for a wide variety of wildlife, including migratory birds.

Prior to the completion of the ART, neighbors and visitors could only access the park by street via Anacostia Ave, with most coming by car, some by foot, and a just few hardy visitors by bike and kayak. The park faces many barriers to access being tucked away in an area that is bound by I-295, the Anacostia River, and a decommissioned power plant.

With the extension of the ART in 2016, a new entrance to the park was created, greatly increasing accessibility by foot and bicycle. The following year, visitor attendance at Kenilworth Aquatic Gardens nearly doubled. Our experience shows how incredibly important filling gaps along trails is to connecting neighbors and visitors to natural treasures in their own backyard!”

*Tina O’Connell, Executive Director
Friends of Kenilworth Aquatic Gardens*



Anacostia River Trail, DC

Spending by Trail Users

Trail Users Spend \$538M Annually on Soft and Hard Goods

**\$11 average
per trip per trail user**

soft goods include: beverages, food

**\$490 average annually
per trail user**

hard goods include: shoes, bicycles,
parts, equipment, accessories

Generating

**Total
Economic Impact
\$941 Million**
annually

**Total
Jobs
8,200**
annually

**Total
Wages
\$298 Million**
annually

**Annual
Tax Revenues
\$23 Million**
local and state

Residents and visitors who access the region's trails often spend money on both goods and services related to active recreational activity during their trips. Much of this spending is happening at retailers in immediate proximity of the trails that users are accessing. The current and expanded trail network will enable visitors from communities within the network to travel and patronize shops in neighboring communities that may have been previously less accessible.

Trail users spend money related to trail in two ways: first, in the form of "soft goods" purchases such as spending on beverages or food during the use of the

trail and second, in the form of "hard goods" purchases such as bikes and accessories needed for the trail. Data from the RTC's 2020 Regional Trail Usage Survey was supplemented with US Census data on the number of working age adults within a two-mile radius of a trail to estimate the frequency of trail use by local residents and the annual visits to trails by local residents. Spending profiles on "hard" and "soft" goods are then applied to trail users of different types (frequency of trail use) based on observed spending patterns of trail users drawn from research and survey data.

Once the trail network is complete, it is estimated that trail users in the

DC area will spend approximately \$538 million annually on "soft" and "hard" goods.

These direct expenditures by trail users support local businesses and generate spillover effects in the local and regional economy. In the same way that \$1 of spending generates greater than \$1 of economic output, this \$538 million in annual spending will multiply through the economy and generate a total economic impact of \$941 million, supporting 8,200 jobs and \$298 million in wages and more than \$23 million in local and state tax revenue annually.



Potomac Yard Trail, Alexandria, VA

“Our homebuyers value having easy access to transit, retail and recreation within walking or biking distance. The local trails not only provide an essential space for exercise and enjoyment, but also an alternative means of transportation. Many of our communities offer biking-friendly amenities such as direct access to trails or bikeshare stations, as we know these features are important to our homebuyers.”

**McLean Quinn, President
EYA LLC**
(Sponsor of this report)

Potential Implications from Property Value Increases

Rising property values can benefit neighborhoods, as they increase demand for and vitality of the community by creating wealth for property owners and generating more tax revenue for jurisdictions. However, there are also challenges associated with rising property values for residents who have concerns about affordability and potentially displacement. Communities and their policymakers can mitigate the risks associated with increased home values, such as rising rental rates and increasing costs for homeowners, so that trails can serve as an asset and not a threat to current residents' ability to remain in their homes. Some potential opportunities to prevent displacement in regional communities that are most at risk include:

- Expand or target Washington DC's local rent supplement program to ensure residents that need housing assistance receive it.
- Provide property tax relief for long-term homeowners so that future tax bills do result in a cost burden for residents with fixed income (for example, Atlanta's Anti-Displacement Tax Fund programs).
- Introduce a Community Land Trust (for example, the 11th St Bridge Project's Equitable Development Plan) to allow homeowners to ground-lease their property.
- Place restrictions on predatory wholesale home buyers to ensure owners are receiving fair market value for their property.
- Offer tax abatements to multifamily property owners who agree to maintain a certain portion of units at affordable rents.
- Consider expansion of Montgomery County's Moderately Priced Housing (MPH) law, which requires between 12.5 to 15 percent of new houses in residential complexes of more than 20 units to be moderately priced (Moderately Priced Dwelling Units).

Residential Property Values

Close Proximity to Trails Increases Property Value

5% Property Value Premium 1/4 mi from trail

	Total Property Value Premium (\$M)	Median House Value
DC	\$862	\$554,319
MD	\$2,016	\$424,421
VA	\$2,823	\$564,658
Region	\$5,701 (total)	\$504,314

2% Property Value Premium 1/2 mi from trail

	Total Property Value Premium (\$M)	Median House Value
DC	\$696	\$586,592
MD	\$1,400	\$426,628
VA	\$2,136	\$563,586
Region	\$4,232 (total)	\$512,486

Several studies have shown that homeowners are willing to pay a premium to live near recreational outdoor space such as the Capital Trails Network. As a result, the trails are viewed as active transportation routes and safe spaces for walking and biking that increase the overall value of housing stock for their neighboring communities.

This increased wealth is captured by citizens through higher sales values of homes and also generates increased government revenues through increased property tax collections and greater transfer taxes at time of sale.

The existing and future trail segments of the Capital Trails

Network are estimated to produce a property value premium of \$9.9 billion across the region, supporting \$99 million in additional city/county property taxes annually.

An important consideration in ensuring this change is beneficial and not detrimental to existing residents is engaging and empowering those residents from the very beginning of the planning process. It is crucial to evaluate the equity considerations when planning new trails, and trail planners must actively seek out historically underrepresented voices, in particular Black, Indigenous, and People of Color and low-income communities, early on and throughout the process.

According to a 2020 study by the National Association of Realtors, people with more walkable amenities near their homes were most satisfied with the quality of life in their neighborhood.

Appendix

Sources

Background and Context

The District's population grows for the 14th year in a row, but at a weaker rate, Sunaina Kathpalia, DC Policy Center, April, 2020; <https://www.dcpolicycenter.org/publications/districts-population-grows-14th-year-row-weaker-rate/#:~:text=According%20to%20the%20latest%20population,minus%20the%20number%20of%20deaths.>

Actively Moving America to Better Health, American Fitness Index, American College of Sports Medicine; <https://americanfitnessindex.org/>

Fairfax Park Authority: Don't forget about bond referendum, Brian Trompeter, Inside NOVA, August, 2020; https://www.insidenova.com/news/election/fairfax-park-authority-don-t-forget-about-bond-referendum/article_533edfdce864-11ea-9f4a-3f7915315ab4.html

New Data Underscores Need for Safe Places to Walk and Bike Close to Home, Rails-to-Trails Conservancy, July, 2020; <https://www.railstotrails.org/resource-library/resources/new-data-underscores-need-for-safe-places-to-walk-and-bike-close-to-home/>

What did the Voices of the Region survey tell us about travel during COVID-19 and beyond?, Karen Armendariz, Metropolitan Washington Council of Governments, March, 2021; <https://www.mwcog.org/newsroom/2021/03/09/what-did-the-voices-of-the-region-survey-tell-us-about-travel-during-covid-19-and-beyond-tpb-visualize-2045/>

Capital Investments

IMPLAN Group, LLC. IMPLAN (2019). Huntersville, NC. IMPLAN.com.

Transportation and Safety

Metropolitan Washington Council of Governments, *Regional Transportation Data, 2021; Four travel trends from the TPB's Regional Travel Survey*, <https://www.mwcog.org/newsroom/2021/03/23/four-travel-trends-from-the-tpbs-regional-travel-survey/>, 2021; *Bicycle and Pedestrian Plan for the National Capital Region*, <https://www.mwcog.org/documents/bicycle-and-pedestrian-plan/>, 2014.

US Environmental Protection Agency (EPA), *Emissions Calculator*. [https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references.](https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references)

US Census American Community Survey (2014-2018).

Center for Neighborhood Technology Housing and Affordability Index (2021), Transportation Costs.

INRIX (2018), Traffic Scorecard.

US Environmental Protection Agency (2020), *Greenhouse Gas Equivalencies Calculator*. [https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator.](https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator)

Miller, Zaloshnja, and Lawrence, *Pedestrian and Pedalcyclist Injury Costs in the United States by Age and Injury Severity*. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3217422/#:~:text=The%20estimated%20lifetime%20cost%20of,as%20motor%20vehicle%20occupant%20injuries.>

Environmental Services

Costanza, Wilson, Tory, Voinov, Liu, and D'Agostino (2006), *The Value of New Jersey's Ecosystem Services and Natural Capital*. New Jersey Department of Environmental Protection, Division of Science, Research, and Technology.

i-Tree Canopy. i-Tree Software Suite v7.1. (2021). <http://www.itreetools.org>

Multi-Resolution Land Characteristics Consortium. National Land Cover Database Land Cover (2016). <https://www.mrlc.gov/>

Multi-Resolution Land Characteristics Consortium. National Land Cover Database US Forest Service Tree Canopy (2016). <https://www.mrlc.gov/>

Public Health

Centers for Disease Control and Prevention (2021), *Physical Activity Basics*. <https://www.cdc.gov/physicalactivity/basics/adults/index.htm>.

Carlson et al. (2013), *Inadequate Physical Activity and Health Care Expenditures in the United States*. <https://www.cdc.gov/nccdphp/dnpao/docs/carlson-physical-activity-and-healthcare-expenditures-final-508tagged.pdf>.

Chenoweth and Leutzinger (2006), *The Economic Cost of Physical Inactivity and Excess Weight in American Adults*. https://www.huffinsinstitute.org/Portals/0/Chenoweth_JPAH_3_06.pdf

Chenoweth and Bortz (2005), *Physical Inactivity Cost Calculator: How the Physical Inactivity Cost Calculator Was Developed*.

Götschia and Lohb (2017), *Advancing Project-Scale Health Impact Modeling for Active Transportation: A User Survey and Health Impact Calculation of 14 US Trails*. <https://www.sciencedirect.com/science/article/pii/S2214140516303255>.

Centers for Disease Control and Prevention (2021), *Benefits of Physical Activity*. <https://www.cdc.gov/physicalactivity/basics/pa-health/index.htm>.

US Census American Community Survey (2014-2018).

Rails to Trails Conservancy (2019), *DC Region Trail Usage Survey*.

US Census American Community Survey (2015-2019).

Spending by Trail Users

Rails to Trails Conservancy, *Schuylkill River Trail 2009 User Survey and Economic Impact Analysis* (2009). [https://www.chesco.org/DocumentCenter/View/5691/SRT-Economic-Impact?bidId=.](https://www.chesco.org/DocumentCenter/View/5691/SRT-Economic-Impact?bidId=)

US Census American Community Survey (2014-2018).

Rails to Trails Conservancy (2019), *DC Region Trail Usage Survey*.

IMPLAN (2019).

Washington, DC Comprehensive Annual Financial Report (CAFR) (2019); State of Maryland CAFR (2019); Commonwealth of Virginia CAFR (2019)

Residential Property Values

ESRI, ESRI Business Analyst (2020), bao.arcgis.com

What Is a Tree Worth? Green-City Strategies, Signaling and Housing Prices, Wachter, Susan M., and Grace Wong Bucchianeri, May 2008.

A Dynamic Approach to Estimating Hedonic Prices for Environmental Goods: An Application to Open Space Purchase, Riddel (2001)

The Potential Economic Impacts of the Completed Expansion of Schuylkill Banks, 2017 <https://www.schuylkillbanks.org/sites/default/files/attachments/Economic%20Impact%20of%20Schuylkill%20Banks%202017.pdf>

National Community and Transportation Preferences Survey, National Association of Relators, 2020.

Methodology

Economic Impact Modeling

The estimated economic outputs, jobs, and employee compensation calculated in this study used inputs provided by the Capital Trails Coalition and reviewed by ESI for verification. Using these inputs, ESI estimated potential economic activity resulting from the network's completion using IMPLAN, an industry-standard input-output model, to quantify impacts on the Washington Metropolitan Region as well as Washington DC, Maryland, and Virginia. This input-output model determines linkages between industries, and forecasts the magnitude and composition of impacts from a dollar spent in any one industry on all industries. According to this model, the total economic impact of the Capital Trails Network is the sum of the direct activities analyzed (whether that is capital investment or local spending by users) plus the indirect and induced effects generated by that direct investment.

IMPLAN generates job estimates based on the term "job-years", or how many jobs will be supported each year. There are 100 job-years supported in this example, which comes out to 50 jobs per year, given there are 2 years in this example.

Transportation Impacts

Many studies show that a robust network of pedestrian and bicycle trails encourage sustainable mode choices among residents for how they travel throughout the region (for example, residents may choose to shift from driving to biking, walking, or public transportation). To estimate the potential impacts of the Capital Trails Network on the region's transportation network, ESI evaluated the dynamics of commuter patterns within a 2-mile buffer of the existing and proposed trail network. By evaluating mode use patterns in the areas immediately surrounding the trails to those of the broader region, ESI estimated the number of active transportation trips attributable to trails. Based on these existing dynamics and the anticipated benefits of a fully connected trail network, ESI then calculated the potential savings in VMT and related costs associated with traffic and congestion.

Environmental Services

To quantify environmental services impacts, ESI calculated the land cover variation for each trail segment and applied the values associated with each of the ecosystem services to produce total value of the environmental impact of the Capital Trails Network. Dollar values approximating the economic value of each of these services are based on peer-reviewed estimates of value on a per-acre basis. These total value estimates represent the costs avoided by not having to artificially replicate the ecosystem services currently provided by the Capital Trails Network. A full summary of our methodology is provided in the longer technical report provided to CTC.

Public Health

To calculate the public health benefits of the network, ESI utilized data from the US Census regarding residents within two miles of the trail as well as survey data and research from the Rails to Trail Conservancy (RTC) to estimate frequent trail users and active adults. Measures from the CDC's report *Inadequate Physical Activity and Health Care Expenditures in the United States* were used to quantify the estimated value of an active lifestyle. More details on this methodology are available in the technical report.



The Capital Trails Coalition Includes the Following Members

- Washington Area Bicyclist Association
- Rails-to-Trails Conservancy
- Maryland Milestones/ATHA Inc.
- Latin American Youth Center
- The Trust for Public Land
- Virginia Bicycling Federation
- Friends of Oxon Run Park
- AARP Maryland
- Georgetown Business Improvement District
- NoMA Business Improvement District
- District of Columbia Recreational Trails Advisory Committee
- Montgomery County Planning Department
- BeechTree Pedalers
- Trust for the National Mall
- Urban Land Institute Washington
- City of Alexandria Department of Transportation and Environmental Services
- Medical Society of the District of Columbia
- Metropolitan Washington Council of Governments
- Metropolitan Washington Metro Area Transit Authority
- The District Department of Transportation (DDOT)
- Anacostia Watershed Society
- East Coast Greenway Alliance
- Black Girls Do Bike
- BikeArlington
- Visit Alexandria
- University of Maryland Department of Transportation Services
- Friends of Kenilworth Aquatic Gardens
- DC Sustainable Transportation
- Mid-Atlantic Off Road Enthusiasts
- DC Department of Parks and Recreation
- September 11th National Memorial Trail
- District Department of Energy and Environment
- Washington Rowing School
- Northern Virginia Regional Commission
- National Landing BID
- Washington Parks and People
- Fairfax Alliance for Better Bicycling
- Sierra Club-DC Chapter
- Coalition for Smarter Growth
- Bike Maryland
- C&O Canal Trust
- DC Cycling Concierge
- Black Women Bike DC
- The American Discovery Trail Society
- Washington Women Outdoors
- Adventure Cycling Association
- Sierra Club Virginia Chapter
- Gearin' Up Bicycles
- Potomac Heritage Trail Association
- Public Health Impact, LLC
- Friends of the Mount Vernon Trail
- DC Bicycle Advisory Council
- DowntownDC BID
- Potomac Pedalers Touring Club
- Netwalking
- Federal City Council
- Green Spaces for DC
- Park Rx America
- The Coalition for the Capital Crescent Trail
- Appalachian Mountain Club Potomac Chapter
- Bowie Multimodal Access and Public Spaces
- Sustainable Mobility for Arlington County
- Coburn & Greenbaum PLLC
- Potomac & Chesapeake Cycling
- The National Park Service
- Proteus Bicycles
- Department of Parks and Recreation, Prince George's County, The Maryland-National Capital Park and Planning Commission
- Montgomery Parks, The Maryland-National Capital Park and Planning Commission
- The District of Columbia Homeland Security and Emergency Management Agency
- Arlington County Department of Environmental Services

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C&O Canal Trail, Montgomery County, MD
Photo courtesy of Montgomery County Parks, M-NCPPC



Existing Trails
[479 miles]

Planned Trails
[402 miles]



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