



Central Canal Towpath

chapter five

ECONOMIC IMPACT REVIEW





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Users enjoy the many amenities along the Monon Trail.



CHAPTER 5

economic impact review

“Successful cities are a mix of commercial and economic generators, living quarters and open space.” This theory was analyzed in the Trust for Public Land *Measuring the Economic Value of a City Park System*. As part of that 2003 study, they acknowledged that, while not every aspect of a community’s open space system can be analyzed, they did review the property value, tourism spending, usage, potential health impacts, connections and environmental benefits of such open space systems in communities. What this study noted was that in successful cities, both the private and public spaces work together – providing areas for recreation, transportation, stormwater runoff collection, air pollution mitigation and natural beauty. In return, these are the places where people naturally navigate towards. They are the places where people want to live, the places where they establish their business and the places where they go to recreate, relax and socialize.

Parks, open space and greenway systems work collectively to elevate the quality of life – and the byproduct of this connectivity is community stability and economic growth. Living patterns focused on new urbanism as well as urban lifestyle choices have illustrated the trends to re-focus growth inward. A study in *Sprawl Costs: Economic Impacts of Unchecked Development* from the Center for Urban Policy at Rutgers University in 2005 highlighted that the financial costs of sprawl to urban areas increase the costs of public infrastructure (roads, sewer, water, public safety) and in most cases do not generate enough property taxes to cover that investment. After the economic downturn in the mid 2000’s, urban growth strategies have begun to invest in denser, lower-cost (from an infrastructure perspective) and more sustainable development. The addition of amenities within these types of development – such as greenways and trails – provide alternative transportation and recreational resources that enhance a community. These have become model strategies for development practices for urban centers around the country – many of which, such as the High Line in New York City or the Belt Line in

Atlanta – already having instant impact on property values and auxiliary tourism spending related to those investments. Both projects are multi-year, multi-million dollar investments in their cities. Both highlight the economic impact as part of their success stories – even as the corridors remain unfinished. In Atlanta, the Beltline is a 22-mile open space corridor that has spurred new housing development and transportation connections. Public officials, including former Mayor Bloomberg credit the High Line – an elevated public park and trail corridor in Chelsea neighborhood of New York City for generating \$2 billion in private investment surrounding the corridor. Of that \$115 million in city investment, these public officials point to over 8,000 construction jobs and 12,000 jobs related to the redevelopment projects and new housing the area has seen since the investment in the High Line Project (*The High Line Isn't Just a Sight to See; It's Also An Economic Dynamo*, The New York Times, June 5, 2011). Similar studies to the Trust for Public Lands report on the economic value of public open space have concluded comparable findings over the years:

The greenways provide connections to a variety of land uses including neighborhood commercial centers, such as this one along the Central Canal Towpath at 56th and Illinois Streets.



Residential development has increasingly utilized amenities such as trails to strengthen property values. Connections from those properties, such as this one along Little Buck Creek, provide opportunities to increase healthy lifestyles through recreation and transportation alternatives.



- In Leadville, Colorado, they reported a sales tax revenue increase of 19% in the months following the opening of the Mineral Belt Trail from people visiting the trail to ride and spend ancillary dollars at restaurants or other services (*Enhancing America's Communities: A Guide to Transportation Enhancements*, National Transportation Clearinghouse, November 2002).
- The Mountain Bay Trail in Brown County, Wisconsin saw a direct correlation with property value increases with lots adjacent to the trail selling faster and for an average of 9% more than comparable property removed from the trail. (*Recreation Trails, Crime and Property Values: Brown County's Mountain-Bay Trail and the Proposed Fox River Trail*, Brown County Planning Commission, Green Bay, July 6, 1998).
- In 2002, a survey completed by the National Association of Realtors and the National Association of Home Builders ranked trails 2nd among 18 community amenities as reasons chose specific locations when buying properties. (Consumer's Survey on Smart Choices for Home Buyers, National Association of Realtors and the National Association of Home Builders, April 2002).
- Chicago's Millennium Park acts as a tourist draw, generating an anticipating visitor spending of \$1.9 billion to \$2.6 billion in ancillary expenditures in the city between 2005 and 2015 (*Conservation: An Investment that Pays*, The Trust for Public Land, 2009).

Building essential public infrastructure no longer is limited to just roads and sewers. These communities recognize the investments being made into the public realm – and that greenways and trails support, encourage and sustain economic growth and development.

Increased residential development has occurred adjacent to the Monon Trail.



Since the Indy Greenways system is no longer in its infancy, this master plan update sought to include a cursory review of the economic impact that these greenways have had on our community. The purpose of this economic impact evaluation is not to complete a full market analysis on the benefits of greenways. Rather, it is a “snapshot” of the typical trails in the Indy Greenways system and how they have impacted or influenced change within their impacted neighborhoods or community areas. Through the course of this evaluation, observations can be made relating to the economic benefits of these greenway corridors, and how those benefits have drastically changed both the physical and social landscape of the city.

THE VALUE OF GREENWAYS IN INDIANAPOLIS

The analysis details the expected impacts from trail development from a planning level perspective. As such, the metrics derived within are representative of potential, broad impacts that are part of a multitude of factors in determining trail prioritization. Other factors beyond the scope of this analysis (regulations, funding mechanisms, or other incentives) may impact development and redevelopment of an area in ways that may not be similar to the outcomes described here. These statistics are not to be used on a site specific level but rather in system wide assessments. They are not intended to replace a detailed analysis of the expected impacts of trail development.

Assessing the Impact of Trails

Using three existing trails in Indianapolis, an existing baseline for economic impacts has been established. A half-mile buffer (½ mile in each direction) was created from the centerline of the trail alignment in GIS. This distance was used because an average person can walk this distance in about ten minutes (average of 3 miles/hr) and users tend to drive more than this distance. In addition,

researchers indicate that the impacts on property values from parks and greenways are typically limited to 2000 – 3000 feet.¹ The trails used in the existing impacts analysis include the following:

	Monon Trail	Pleasant Run Greenway	Fall Creek Greenway
Trail Type	Mixed-Use	Residential	Natural Feature
Length	10.29 miles	8.81 miles	22.61 miles
Age(s) of Construction	1996-2003	1998-Ongoing	1995-Ongoing
Common Adjacent Land Uses	Residential, Commercial & Light Industrial	Residential	Open/Green Space Riparian Buffer Agricultural
Adjacent Destinations	Broad Ripple Village, O'Bannon Soccer Park, Mass Ave. Cultural District	Garfield Park, Howe High School, Fountain Square, Ellenberger Park	Geist Reservoir, Ft. Harrison State Park, Skiles Test Nature Park, Riverside Park, IUPUI
Total Population within half-mile of trail	47,759	31,020	35,517

Based on readily available data, 1990 and in some cases 2000 Census data was used as a pre-construction point and 2010 as a post-construction point for the demographic analysis and 1992 and 2012 aerials were used as pre- and post-construction points for the physical analysis.

A generalized demographic, physical and economic impact of the existing trails was determined for each trail type (an average for the entire length of trail as seen in Classifying Trails). It is important to consider that many changes might have occurred due to other influences; therefore, the demographic shifts, redevelopment potential and economic impacts will be used as only one consideration in prioritizing new trail development. These impacts are also only intended to be broadly applied and not used as detailed projections.

Demographic Assessment

Census Block Groups and Tracts that fall within the ½ mile zone were used for the analysis. If the ½ mile zone does not include at least 50% of a Block Group, that Block Group was not included. However, all Tracts intersecting the ½ mile zone are included in the analysis regardless of the percent contained to prevent large geographic gaps that would result from the approach taken in the more refined Block Group methodology. Using the U.S. Census data, the following was compiled to determine changes that occurred since the trail was constructed.

Definitions of Measurement

- Population: Total population as counted by the Decennial Census.
- Number of Households: Total households as counted by the Decennial Census.

¹ Lindsey 2004

- Race: Measured by the percentage of the population not identifying as “white – one race”.
- Ethnicity: Measured by the percentage of the population identifying Hispanic or Latino origin.
- Median Age: Measured in years.
- Vacancy Status: Measured by percentage of unoccupied housing units.
- Means of Transportation to Work: Measured by those identifying a commute to work by walking or by means other than private automobile (driving alone or carpooling) or public transportation (this could include taxicabs and bicycle use since the Census Bureau does not currently capture these modes separately).
- Educational Attainment (25 years and over)
 - High School Graduate or higher
 - Bachelor’s Degree or higher
 - Graduate or Professional Degree
- Median Household Income: Measured in dollars.
- No Car Households: Measured by households with no vehicles available.
- Median House Value: Measured in dollars.

The percent values shown in the table below illustrate the change in population characteristics over the last twenty years. As shown, Indiana and Marion County witnessed double-digit population growth from their 1990 population to 2010 population. Comparing demographic changes in the existing trail corridors begins to highlight potential impacts of trail development. Looking at 1/2 mile zone around the Monon Trail is a great example that illustrates this concept. It is outpacing the average growth of the County with 31.9% population growth and a commuting population increased 185.7% compared to 7.4% in Marion County.

DEMOGRAPHICS	Percent Change (1990 – 2010 unless otherwise noted *)				
	Indiana State	Marion County	Monon Trail Mixed-Use Trail Type	Pleasant Run Greenway Residential Trail Type	Fall Creek Trail Natural Trail Type
Population	16.9%	13.3%	31.9%	13.6%	57.2%
Number of Households	11.4%	*4.0%	45.1%	11.6%	62.7%
Race	94.1%	84.8%	1.9%	224.3%	-9.4%
Ethnicity	294.5%	*153.7%	400.0%	738.0%	268.4%
Median Age	12.8%	*0.9%	*±1.2%	*±3.1%	*±9.7%
Vacancy Status	7.1%	*37.8%	25.3%	70.8%	-7.2%
Means of Transportation to Work Other than Driving	*6.1%	*7.4%	*185.7%	*-11.6%	*43.5%
Educational Attainment					
High School Graduate or higher	12.4%	9.4%	*±6.0%	*±6.8%	*±9.8%
Bachelor’s Degree or higher	12.8%	27.6%	*±15.8%	*±36.0%	*±23.3%
Graduate or Professional Degree	*43.1%	*9.2%	*±32.7%	*±34.3%	*±15.2%
Median Household Income	65.6%	49.4%	±53.6%	±59.3%	±100.5%
No Car Households	*-13.9%	*63.9%	*±-23.4%	*±-15.4%	*±-33.1%
Median House Value	*30.4%	*23.4%	*±50.6%	*±28.8%	*±43.4%

* 2000-2010 Data comparison

± Lowest level of geography to Census Tract

Above County Trend / **Following** County Trend / **Below** County Trend

Physical Assessment

Using historical (1992) and current aerial photography (2012), the physical analysis looked at property within the ½ mile buffer of each of the three trails to identify:

1. Underutilized or vacant land (greyfield) that is now developed.
2. Commercial or industrial land that was redeveloped.
3. Other potential physical drivers of development (new road, school, etc.).

The above areas were mapped. The approximate acreage was mapped to determine the total percent of land that was redeveloped along each trail type.

PERCENT LAND REDEVELOPED	Monon Trail	Pleasant Run Greenway	Fall Creek Greenway
Trail Type	Mixed-Use	Residential	Natural Feature
Acres redeveloped	412	175	281
Acres within the ½ mile radius	7,055	3,972	6,994
Percent redeveloped	5.8%	4.4%	4.0%

Construction activity signals new developed adjacent to the Canal Towpath.



The economic baseline included looking at property value impacts to determine if the trail development impacted property value.

Property Value Impacts

Greg Lindsey and other professors at IUPUI have extensively researched and documented the economic impacts of trails in Indianapolis. Following the 2002 Greenways Master Plan, Lindsey’s team evaluated the 14 greenway corridors identified in this plan. This work is the most extensive and detailed look into greenways in the Indianapolis region and still has applicability today. They estimated the property value impacts of the greenways using the hedonic price approach for property within ½ mile of publically accessible trails and conservation corridors. The resulting effects of greenways on property values were determined to include:

- Properties within ½ mile of the Monon Trail had a significant impact on sales price (11.4%) as well as properties within ½ mile of a conservation corridor (25.9%).
- No significant effects were found for properties within ½ mile of other greenway trails (-0.1%).

These impacts on property values will be used in determining potential impacts for new greenway development.

PROPERTY VALUE IMPACT	Monon Trail	Pleasant Run Greenway	Fall Creek Greenway	Conservation Corridor
Trail Type	Mixed-Use	Residential	Natural Feature	
Property Value Impacts	11.4%	0.0%	0.0%	Not analyzed in this report.

POTENTIAL IMPACTS OF FUTURE TRAILS

Classifying Future & Proposed Trails

Each future or proposed trail identified in the master plan is classified into one of three trail types: Mixed-Use Trail, Residential Trail or Natural Feature Trail. This classification is based upon the overall existing land uses along the proposed trail alignment, not necessarily existing character of the trail itself.

MEASUREMENT	Trail Type		
	Mixed-use Trail	Residential Trail	Natural Feature Trail
B&O Trail	•		
Interurban Trail	•		
Pennsy Trail	•		
Vandalia Trail	•		
86th & 82nd St	•		
Northtown Trail		•	
Southeast Trail		•	
Little Buck Creek Trail		•	
Monon Connector		•	
Walnut Street Connector		•	
Eagle Creek Greenway		•	
Pogues Run Greenway		•	
Pleasant Run Greenway		•	
Fall Creek Greenway			•
Southwest Trail			•
White River Greenway			•
White Lick Creek Greenway			•
Grassy Creek Greenway			•
Buck Creek Greenway			•
Lick Creek Greenway			•
Central Canal Towpath			•

IDENTIFYING POTENTIAL AREAS OF CHANGE

The five highest priority new trails identified in the recommendations of the master plan (Chapter 3) are examined for redevelopment potential. Each trail alignment is shown over an existing aerial and areas within a ½ mile of the trail alignments are analyzed to identify potential areas of change with consideration given to the physical assessments identified previously. This includes:

- Land with limited connectivity, visibility or an under-functioning street network (Table: Potential Areas of Improved Connectivity).
- Underutilized or vacant land and commercial or industrial land that could be redeveloped (Table: Potential Areas of Redevelopment).

These areas have the potential to change with redevelopment or new development and a new greenway could help to spur this redevelopment.

The top five new corridors designated as Mixed-Use and Residential trail alignments are in significantly built-out areas of the county and thus have less overall acreage for development potential when compared to Natural Feature trails that have vast areas of open or agricultural space adjacent to them.

Although there is significant land available for development along Natural Feature trails, as shown by the large percentage of potential below, these are not necessarily prime areas for development. The land uses adjacent to the Natural Feature trails are predominately open space and agricultural. If development were to occur, it is anticipated that residential uses would be the primary land use. However, given the large percentage of potential developable land, full build-out of these corridors is not expected within the foreseeable future, thus a large percentage of the developable land is likely to remain open space and agricultural uses. Natural Feature trails exhibit certain characteristics which call for their identification as such; these include rivers, streams, wetlands, floodplains, wildlife habitat areas, steep terrain, green space, open space, agricultural land and often include forested or vegetated riparian buffers. Both because these inherent characteristics are part of the namesake of Natural Feature trails and because the above listed are typical issues related to natural feature trail development which affects the amount of adjacent developable area, it is recommended that some amount of natural buffer or open space be preserved. The width of preserved land area around the natural feature trails would vary depending on the quality and width of existing vegetated areas, property ownership and terrain. This plan does not identify these preservation areas and thus has included the entire land area adjacent to natural feature trails in the “acres of land with redevelopment potential” in the potential areas of change table. Actual development potential would be subject to open/green space preservation.

This is a broad level and cursory look at land that could be developed without taking into account a detailed analysis of development constraints such as the existence of floodplains, wetlands, terrain and protected wildlife.

POTENTIAL AREAS OF IMPROVED CONNECTIVITY for TOP 5 NEW PRIORITY TRAILS (Acres of Land)					
	B&O Trail	Interurban Trail	Northtown Trail	Grassy Creek Greenway	Buck Creek Greenway
Trail Type	Mixed-Use	Mixed-Use	Residential	Natural Feature	Natural Feature
Number of acres with limited connectivity	30	0	350	87	0

POTENTIAL AREAS OF DEVELOPMENT for TOP 5 NEW PRIORITY TRAILS (Acres of Land)					
	B&O Trail	Interurban Trail	Northtown Trail	Grassy Creek Greenway	Buck Creek Greenway
Trail Type	Mixed-Use	Mixed-Use	Residential	Natural Feature	Natural Feature
Number of acres with development potential	277	305	228	2,221	3,373
Underutilized or vacant (includes agriculture land)	160	186	170	2,174	3,372
Commercial or industrial	117	119	58	47	1
Acres of land within ½ mile radius of future trails	5,668	6,152	9,813	9,213	7,404
Percent of land with development potential	4.9%	5.0%	2.3%	24.1%	45.6%

ESTIMATING GENERAL ECONOMIC BENEFIT

Property Values

The methodology used for determining property value impacts for the future trails is based upon Lindsey's research previously identified, including:

- Mixed-Use Trail: 11.4% increase in property values within ½ mile.
- Residential Trail & Nature Feature Trail: While Lindsey's research found that trails of this type had a -0.1% impact on property values, a neutral 0.0% impact was used for this analysis.
- Conservation Corridor: Changes in property values for new conservation corridors are not analyzed in this assessment.

Existing property values for parcels within ½ mile are totaled for each future trail. The total estimated increase in property value for each future trail are determined by multiplying the total existing property value for each trail by the percentage change for each type of trail to determine the approximate net property value impacts. These impacts represent pre-construction and post-construction values and are not calculated for incremental construction.

Property Tax

The applicable property tax rate was applied to existing property values and future property values to determine the anticipated increase in property tax revenue post-construction. The applicable property tax rate was determined by aligning each parcel with one of the 108 taxing districts in Marion County using GIS (DLGF 2013 Certified Budget Order). This analysis does not take into consideration changes in land uses due to redevelopment or new development. It is likely that if an underutilized area is redeveloped, the tax revenue would be more than estimated in this analysis.

For example, if an underutilized greyfield (such as a parking lot) were to redevelop as a commercial use (such as a hotel), the property tax revenue from this property would increase significantly. Since this hypothetical construction would occur after this analysis, the resulting increase in tax revenue based on this development would not be captured here.

PROPERTY VALUE & TAX REVENUE	B&O Trail	Interurban Trail	Pennsy Trail	Vandalia Trail	86 th & 82 nd St Trail	TOTAL
Trail Type	Mixed-Use	Mixed-Use	Mixed-Use	Mixed-Use	Mixed-Use	
Property Value Impact	11.4%	11.4%	11.4%	11.4%	11.4%	
Existing Property Net Assessed Value	\$1,352,073,132	\$4,140,340,437	\$1,018,271,303	\$457,297,608	\$4,551,708,121	\$11,519,690,601
Existing Tax Revenue on Net Property Value	\$46,250,825	\$136,928,454	\$33,092,822	\$17,305,025	\$100,001,893	\$333,579,019
Post-Construction Property Net Assessed Value	\$1,506,209,469	\$4,612,339,247	\$1,134,354,232	\$509,429,535	\$5,070,602,847	\$12,832,935,330
Post-Construction Tax Revenue on Net Property Value	\$51,928,587	\$152,978,484	\$37,124,812	\$19,397,711	\$111,921,325	\$373,350,919
New Property Tax Revenue (per year)	\$5,677,761	\$16,050,030	\$4,031,990	\$2,092,685	\$11,919,325	\$39,771,791
Estimated total construction costs	\$8,570,000	\$9,450,000	\$4,220,000	\$6,780,000	\$13,900,000	\$42,920,000
ROI of Construction Costs Post-Construction	66%	170%	96%	31%	86%	90%

There are a number of assumptions to consider in this property tax impact analysis. As mentioned before, the impacts above represent pre-construction and post-construction values related to the complete construction of the trail on existing development and are not calculated for incremental trail construction. The tax revenue outcomes above would only be realized if all properties within the half-mile buffer of each trail alignment were reassessed by Marion County's Assessors Office at a post trail construction time. The above values are based on existing development only and do not take a corridor build out scenario into account.

There are other benefits from the construction of a residential or natural feature trail beyond property value increases of existing development. One of which is the potential to increase the general desirability of the adjacent properties resulting in homes or businesses that are easier to sell and remain on the market for fewer days. Another benefit is new development. Although no significant effects to existing property value in Residential or Natural Feature Trails are expected, development of vacant or underutilized land may still be spurred by the construction of a trail. The improved land generates greater tax revenues than the undeveloped land.

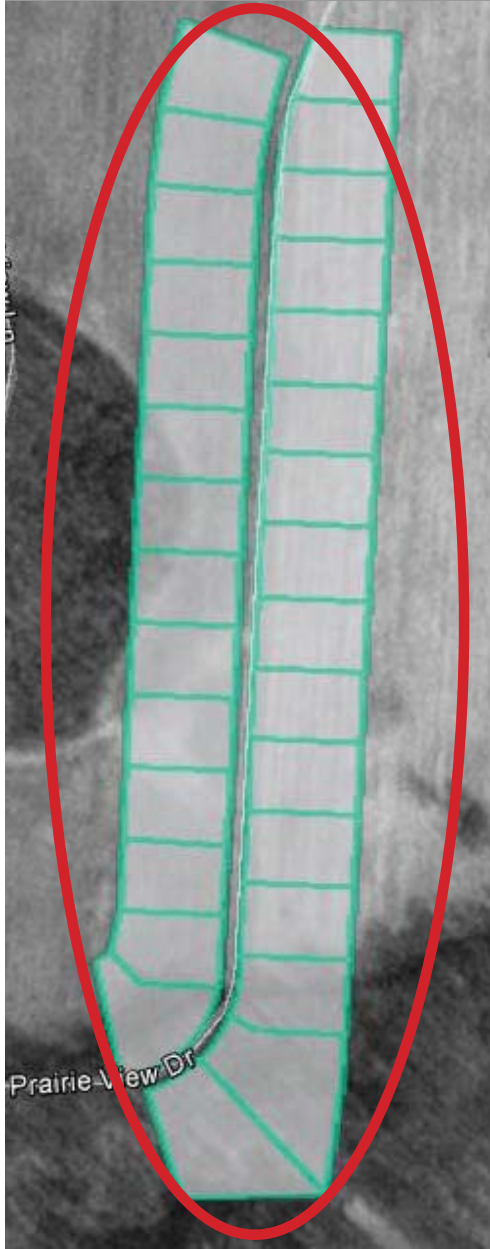
Following is an example of a localized area of development contained within a trail which sees no property value increase on existing development but has potential for increased tax base through new development. The property value (1992) of the undeveloped land will be estimated by the 2013 agricultural base rate of \$1,760 per acre.²

LOCAL AREA ASSESSMENT	Fall Creek Trail
Trail Type	Natural Feature
Distance from Trail	~1,750 feet
Property Value Impact	0.0%
Number of Properties	30
Acres of land developed	8.7
1992 Estimated Property Value (\$1,760/acre)	\$15,312
2013 Property Net Assessed Value	\$6,797,690
Pre-Improvement Tax Revenue on Property Value (at the district tax rate 2.4651)	\$377
Post-Improvement Tax Revenue on Net Property Value (at the district tax rate 2.4651)	\$167,570
New Property Tax Revenue	\$167,193

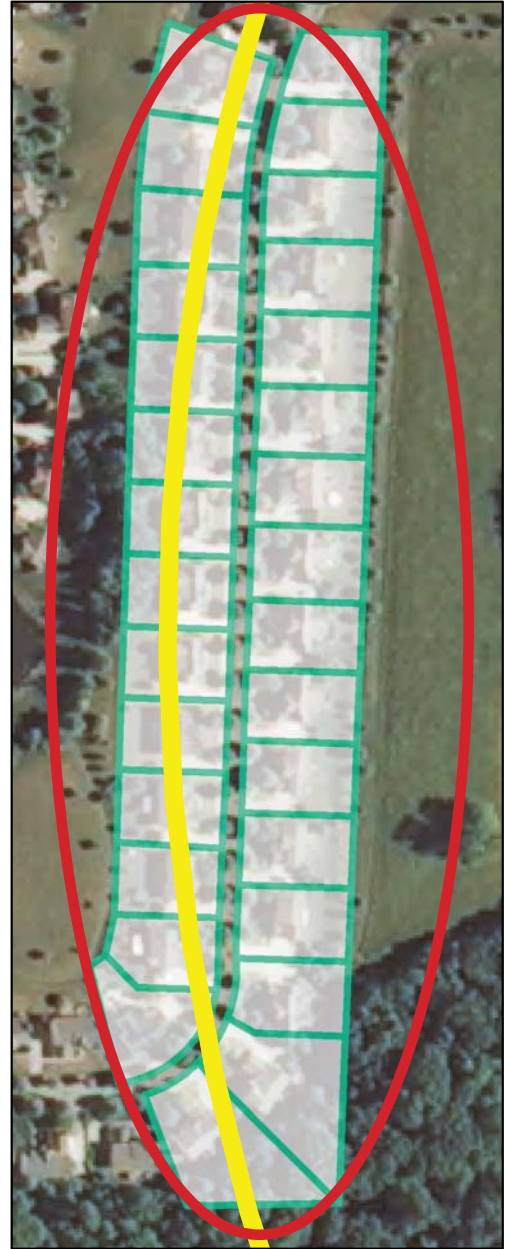
The map on the following page depicts an area within the ½ mile buffer (yellow line) of the Fall Creek Trail that experienced residential new development on previously agricultural land. There are 30 selected properties which were previously taxed at an agricultural use that are now taxed at a single family residential use – resulting in \$167,193 of additional property tax revenue. This is illustrative of the power that trails have in spurring development which is not represented in the estimating general economic benefit analysis showing an additional \$39.7 million in new property tax revenue. For this reason, it can be said that the economic benefits may be greater than this depending on new development.

² DLGF, Certification of Agricultural Land Base Rate Value for Assessment Year 2013

Although the Lindsey study indicated that “natural trails” such as the Fall Creek Greenway generally had no impact on property values, the aerials above depict how new development has occurred within the ½ mile buffer of the trail. This type of development brings many other economic benefits including an increase to the local tax base.



1992 Aerial

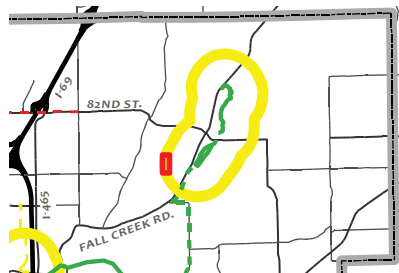


2013 Aerial



example: local area development change along fall creek greenway

key map



Legend

-  FALL CREEK GREENWAY
-  FALL CREEK HALF MILE BUFFER
-  PARCELS WITHIN THE HALF-MILE BUFFER
-  LOCAL AREA DEVELOPMENT STUDY AREA (ENLARGED AERIAL PHOTOS ABOVE)

Job Creation

Trail development is expected to both create and support employment opportunities during construction. Construction job creation is directly related to the cost of construction, including all labor, materials, and other costs to complete construction. Using an industry average of labor costs totaling 40% of the construction costs and cost estimates for each future trail, labor costs were estimated. An estimated construction cost of \$1 million per mile of trail was used in determining labor costs, however, depending on design standards this cost can fluctuate and thus change the number of jobs created.

The number of jobs created (employees supported) are determined by dividing the total labor costs attributed to construction for each future trail by the average annual pay for Highway, Street, and Bridge Construction (NAICS 2373) in Marion County (Bureau of Labor Statistics, Quarter Census of Employment & Wages). In 2011, the annual average pay for this sector was \$66,535.

The resulting number shows how many "person years" would be supported by construction of each future trail. For example, if a future trail resulted in 100 "person years," and the project took one year to build, it would then support approximately 100 jobs. Alternatively, if the project took 5 years to build, it would support approximately 20 jobs.

Conservation corridors are exempt from construction cost estimation because no construction will occur.

The chart below summarizes the potential total job creation from new trail construction.

TOTAL JOB CREATION from NEW TRAIL CONSTRUCTION *	
Miles of trail unbuilt	183.3 miles
Estimated total construction costs (\$1 million per mile)	\$183,300,000
Estimated total labor costs (40% of Construction costs)	\$73,316,000
Person Years Supported	1,102 person years

** Note: Job Creation does not include additional person years supported by administrative / city staff or design and engineering labor costs.*

A breakdown of the job creation from new trail construction as compared to the three types of trails (mixed-use trail type, new residential trail type and nature feature trail type) can be found on the charts on the following page.

JOB CREATION MIXED-USE TRAILS	B&O Trail	Interurban Trail	Pennsy Trail	Vandalia Trail	86th / 82nd St Trail
Miles of trail unbuilt	8.5 miles	9.4 miles	4.2 miles	6.7 miles	13.9 miles
Estimated total construction costs (\$1 million per mile)	\$8,570,000	\$9,450,000	\$4,200,000	\$6,780,000	\$13,900,000
Estimated total labor costs (40% of Construction costs)	\$3,428,000	\$3,780,000	\$1,680,000	\$2,712,000	\$5,560,000
Person Years Supported	52	57	25	41	84

JOB CREATION NEW RESIDENTIAL TRAIL	Northtown Trail	Southeast Trail	Little Buck Creek Trail	Monon Connector	Eagle Creek Greenway	Pogues Run Greenway	Pleasant Run Trail
Miles of trail unbuilt	13.3 miles	8.2 miles	16.9 miles	1.85 miles	15.6 miles	2.8 miles	2.1 miles
Estimated total construction costs (\$1 million per mile)	\$13,300,000	\$8,210,000	\$16,910,000	\$1,850,000	\$15,670,000	\$2,850,000	\$2,140,000
Estimated total labor costs (40% of Construction costs)	\$5,332,000	\$3,284,000	\$6,764,000	740,000	\$6,268,000	\$1,140,000	\$856,000
Person Years Supported	80	49	102	11	94	17	13

JOB CREATION NATURAL FEATURE TRAIL	Fall Creek Greenway	Southwest Trail	White River Greenway	White Lick Creek Greenway	Grassy Creek Greenway	Buck Creek Greenway	Lick Creek Greenway	Central Canal Towpath
Miles of trail unbuilt	6.9 miles	4.2 miles	7.78 miles	15.2 miles	12.74 miles	12.4 miles	14.8 miles	2.4 miles
Estimated total construction costs (\$1 million per mile)	\$6,930,000	\$4,180,000	\$7,780,000	\$15,170,000	\$12,740,000	\$12,420,000	\$14,770,000	\$2,420,000
Estimated total labor costs (40% of Construction costs)	\$2,772,000	\$1,672,000	\$3,112,000	\$6,068,000	\$5,096,000	\$4,968,000	\$5,908,000	\$968,000
Person Years Supported	42	25	47	91	77	75	89	15

Economic Potential

Based on a qualitative analysis of factors, each trail is assessed as Low, Moderate, or High Economic Potential. The factors used in evaluation included:

- a. Regional Connectivity: Does this trail make connections?
 - Score of 1: Trails with a lower number of users, often contain terminal destinations, and lack connectivity to other major trails. Low scoring trails predominately serve transportation purposes but rather recreational purposes.
 - Score of 2: Intermediary trail with a medium number of users which likely connect to major trails.
 - Score of 3: Trails with a higher number of users with possible trail extensions beyond Marion County. This score indicates the potential for major trail connections in adjacent counties.

- b. Land Use & Density: Are the surrounding land uses supportive of retail or commercial development?
 - Score of 1: Very limited presence of retail/commercial development and limited potential for this type of development in the future. Low scores will often accompany natural feature trails and residential trails due to limitations such as available land and zoning.
 - Score of 2: Limited to moderate presence of retail/commercial development with a favorable outlook for future development.
 - Score of 3: Moderate to high presence of retail/commercial development with high capacity for future development.

- c. Destination Hierarchy: What is there to visit along the trail?
 - Score of 1: Local destinations along or adjacent to the trail alignment attracting local visitors.
 - Score of 2: Local and county-wide destinations along or adjacent to the trail alignment attracting both local and county-wide visitors.
 - Score of 3: Major destinations along or adjacent to the trail alignment attracting regional visitors.

Each factor was scored on a scale of 1-3 with higher values representing a stronger indication that the characteristics of that factor are present in the trail.

Economic Potential	Total Score
High	7 or greater
Moderate	Greater than 5, less than 7
Low	5 or lesser

The chart on the following page summarize the scoring and assessment ranking of the greenway segments by both type of trail (Mixed-use, Residential or Natural Feature) and in descending order of economic potential ranking.

	ECONOMIC POTENTIAL	Rank	Regional Connectivity	Land Use & Density	Destination Hierarchy	Total Score
Mixed-use (MU)	B&O Trail	High	3	2	3	8
	Interurban Trail	High	3	3	3	9
	Pennsy Trail	High	3	3	2	8
	Vandalia Trail	Low	2.5	1	1	4.5
	86th & 82nd St	Moderate	2	2	2	6
Residential (R)	Northtown Trail	High	2	2.5	3	7.5
	Southeast Trail	Low	1	1	1	3
	Little Buck Creek Trail	Moderate	2.5	1.5	2.5	6.5
	Monon Connector	Low	1	1.5	1	3.5
	Walnut Street Connector	Low	1	1	1	3
	Eagle Creek Greenway	Moderate	2	2	2.5	6.5
	Pogues Run Greenway	Low	1	1	1	3
	Pleasant Run Greenway	Low	1	1	1	3
Natural Feature (NF)	Fall Creek Greenway	Low	1.5	1	2.5	5
	Southwest Trail	Low	2	1	1	4
	White River Greenway	Moderate	2.5	1	3	6.5
	White Lick Creek Greenway	Moderate	3	1	2.5	6.5
	Grassy Creek Greenway	Moderate	2.5	1	2.5	6
	Buck Creek Greenway	Low	2.5	1	1.5	5
	Lick Creek Greenway	Low	1.5	1	1	3.5
	Central Canal Towpath	Low	1	1	2	4
	ECONOMIC POTENTIAL (descending score)	Rank	Regional Connectivity	Land Use & Density	Destination Hierarchy	Total Score
MU	Interurban Trail	High	3	3	3	9
MU	B&O Trail	High	3	2	3	8
MU	Pennsy Trail	High	3	3	2	8
R	Northtown Trail	High	2	2.5	3	7.5
R	Little Buck Creek Trail	Moderate	2.5	1.5	2.5	6.5
R	Eagle Creek Greenway	Moderate	2	2	2.5	6.5
NF	White River Greenway	Moderate	2.5	1	3	6.5
NF	White Lick Creek Greenway	Moderate	3	1	2.5	6.5
MU	86th & 82nd St	Moderate	2	2	2	6
NF	Grassy Creek Greenway	Moderate	2.5	1	2.5	6
NF	Fall Creek Greenway	Low	1.5	1	2.5	5
NF	Buck Creek Greenway	Low	2.5	1	1.5	5
MU	Vandalia Trail	Low	2.5	1	1	4.5
NF	Southwest Trail	Low	2	1	1	4
NF	Central Canal Towpath	Low	1	1	2	4
R	Monon Connector	Low	1	1.5	1	3.5
NF	Lick Creek Greenway	Low	1.5	1	1	3.5
R	Southeast Trail	Low	1	1	1	3
R	Walnut Street Connector	Low	1	1	1	3
R	Lick Creek Greenway	Low	1.5	1	1	3.5

Retail Sales

Trail users can potentially generate retail sales and have an ongoing impact in the adjacent area. The Rails-to-Trails Conservancy documented trail user expenditures on soft goods (beverages, foods, restaurant meals, etc. – not including lodging) for 14 trails in the Northeast in 2009. Their findings showed a great variation (\$2.00/user to \$30.30/user) based on many factors, such as trail type (urban, suburban, rural), local versus non-local users and purpose of use (recreation, health, etc.).

A lower range of the presented statistics (\$2.00-\$4.11/user) is used to determine the retail sales impact of future trails in Indianapolis. The average dollars spent on soft goods by a trail user are multiplied by the projected number of users annually.

Based upon the estimated retail sales generated by the future trail, an estimated number of retail employees supported are calculated. The average sales per employee in Marion County for the retail trade are \$243,000 (2007 Economic Census: Sales divided by Number of Paid Employees [Table EC0744A1]). The estimated retail sales generated by the future trail are divided by \$243,000 to determine the number of retail employees that could be supported annually.

The charts below summarize the total potential retail sales based on this analysis for all new trails.

ANNUAL USERS	Monon Rail -Trail	Pleasant Run Trail	Fall Creek Trail
Trail type	Mixed-use Trail	Residential Trail	Natural Feature Trail
Annual User Count (5 year average 2008-2012)	206,166	32,170	30,417
Annual Use Count per mile	20,036	16	5,139

TOTAL RETAIL SALES ALL NEW TRAILS	
Annual Retail Sales	
High (\$4.11 per 1,291,112 Estimated Users)	\$5,710,208
Low (\$2.00 per 1,291,112 Estimated Users)	\$2,778,690
Retail Employees Supported Low/High (\$243,000 sales per employee)	11/23

A breakdown of the retail sales from the various greenways can be found on the charts on the following page.

ANNUAL RETAIL SALES	B&O Trail	Interurban Trail	Pennsy Trail	Vandalia Trail	86th / 82nd St Trail
High (\$4.11 per User)	\$705,706	\$778,171	\$347,501	\$558,307	\$1,144,611
Low (\$2.00 per User)	\$343,409	\$378,672	\$169,100	\$271,682	\$556,988
Retail Employees Supported Low/High (\$243,000 sales per employee)	1/3	2/3	1/2	1/2	2/5

ANNUAL RETAIL SALES	Northtown Trail	Southeast Trail	Little Buck Creek Trail	Monon Connector	Eagle Creek Greenway	Pogues Run Greenway	Pleasant Run Trail
High (\$4.11 per User)	\$281,541	\$173,402	\$357,154	\$39,074	\$330,964	\$60,195	\$45,199
Low (\$2.00 per User)	\$137,003	\$84,381	\$173,798	\$19,014	\$161,053	\$29,292	\$21,994
Retail Employees Supported (\$243,000 sales per employee)	1/1	0/1	1/2	0/0	1/1	0/0	0/0

ANNUAL RETAIL SALES	Fall Creek Greenway	Southwest Trail	White River Greenway	White Lick Creek Greenway	Grassy Creek Greenway	Buck Creek Greenway	Lick Creek Greenway	Central Canal Towpath
High (\$4.11 per User)	\$447	\$269	\$501	\$978	\$821	\$800	\$952	\$156
Low (\$2.00 per User)	\$217	\$131	\$244	\$476	\$400	\$389	\$463	\$76
Retail Employees Supported (\$243,000 sales per employee)	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0

ECONOMIC REVIEW & IMPACT CONCLUSION

Summary

The review of the economic benefits of the greenway system in Indianapolis points to a very positive outlook for the future economic and usage impact of the greenway system on the Indianapolis-Marion County economy. Throughout this section, a series of highlights including property value, job creation and general user spending were generated. Highlights include:

- There is 6,371 acres of land with development potential in the ½ mile surrounding the five highest priority future trails.

The Monon Trail (pictured below) is an example where new development has been encouraged due to volume of trail users on the greenway.



- After all mixed-use trails are constructed, \$39.7 million in new property taxes may be generated by increases in property value. The result is a return of \$0.90 on each construction dollar spent on mixed-use trails currently estimated at \$44.2 million in total construction costs.
- The construction of 183.3 miles of new mixed-use and residential trails in the county at a construction cost of \$183.2 million will create \$73.3 million in labor costs creating 1,102 jobs in the process.
- Based on annual trail user counts, the expected retail sales generated by future trails range from \$2.7 to \$5.7 million supporting 11 to 23 retail employees.

While this review is not a comprehensive economic analysis or market benefit study, it does illustrate the worth of the greenway as a collective public benefit. As the system continues to be implemented, grow and mature, continued data collection and monitoring should be maintained to further examine how the greenway system aids in the strategic growth, health and vibrancy of a community's economic engine.

HIGHLIGHT:
Once constructed, 90% of mixed-use trail construction costs (\$39.7 of \$44.2 million) may potentially be recovered as a result of tax revenues increases from higher evaluations on nearby property.



FACT:

Based on annual trail user counts, expected retail sales generated by future trail users is estimated to be \$2.7-\$5.7 Million.





If you build it...

The economic benefit of increase property values and viability of market potential for land increases with added amenities, such as parks, open space and greenways.