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Institute for Public Policy and Economic Analysis

Preliminary Report:

Impacts of Greenways And Trails in Spokane's Great River Gorge

friends of the falls
spokane, washington

CONTENTS:

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EXECUTIVE SUMMARY

This preliminary report investigates the potential impacts of greenways and trails in Spokane's Great River Gorge on the regional economy. Including in the investigation are the following tasks: (1) a survey of the literature on the economic effects of projects most similar to the proposed Great Gorge Park; (2) a review of the methodologies used to measure the economic impacts of these projects; (3) a determination of a set of measures that can be used to quantify the potential impacts of the proposed Great Gorge Park. Major findings of the study are:

- ***Potential benefits of the proposed Great Gorge Park include heritage preservation, community health and recreation uses, and business development or retention.*** Greenways and trails provide an infrastructure where Spokane heritage can be showcased, where residents and visitors can engage in outdoor recreation activities, and where businesses can thrive.

- ***Methodologies used to measure potential benefits include benefit-cost analysis and economic impact assessment.*** Creation of positive economic benefits of the proposed Great Gorge Park depends on the capacity of Spokane to support greenway and trail-related economic activities that generate regional revenues beyond the initial cost of the park.

- ***Quantifiable economic impacts include construction costs, usage expenditures, and property value increases.*** Further research on the potential economic impact of the park should include (1) a construction and maintenance cost plan, (2) a survey of current level of use and attendance of existing outdoor recreation facilities and events, and (3) an assessment of increased property values for holdings adjacent to greenways and trails in Spokane's Great River Gorge.

PRELIMINARY REPORT: IMPACTS OF GREENWAYS AND TRAILS IN SPOKANE'S GREAT RIVER GORGE

INTRODUCTION

"Greenways" are corridors of protected open space managed for conservation and recreation purposes that often follow natural land or water features, linking nature reserves, parks, cultural features and historic sites with each other and with populated areas[1]. In particular, according to Edward T. McMahon, Director of the American Greenways Program, a greenway could be: (1) A linear open space established along either a natural corridor, such as a riverfront, stream valley, or ridgeline, or overland along a railroad right-of-way converted to recreational use, a canal, a scenic road, or other route. (2) Any natural or landscaped course for pedestrian or bicycle passage. (3) An open-space connector linking parks, nature reserves, cultural features, or historic sites with each other and with populated areas. (4) Locally, certain strip or linear parks designated as a parkway or greenbelt[2].

While lacking formal status, the regional equivalent of a greenway is the Spokane river corridor, which roughly follows the Spokane River from the Idaho border to Riverside State Park. However, access to some parts of the corridor is limited or nonexistent. From downtown Spokane east to Idaho, the corridor incorporates the existing Centennial Trail, but from downtown west to Riverside Park, few formal trails, access paths or other amenities have yet been created. To partially overcome this deficiency, as well as to preserve certain historical and cultural features, Friends of the Falls and the "Great Gorge Group" (G3) prepared a "Conceptual Plan for the Spokane River Gorge,[3]" proposing to create a "Great Gorge Park" roughly incorporating the Lower Falls, and to both rims – within the river gorge – along the river downstream as far as the confluence with Hangman (Latah) Creek. The working title of the project, and many of the improvements envisioned by the group echo a 1913 proposal to Spokane's first Parks Board by the famous Olmsted Brothers Landscape Architecture firm.

One aspect of this conceptual plan involved projecting the park's impact on the regional economy. Through the Eastern Washington University Institute of Public Policy and Economic Analysis, two members of the EWU Department of Economics undertook a preliminary assessment of the park's potential economic impact. The assessment included the following tasks: (1) a survey of the literature on the economic effects of projects most similar to the proposed Great Gorge Park; (2) review of the methodologies used to measure the

effects of these projects; (3) determination of a set of measures for measuring benefits and costs in a larger detailed study of the park.

The assessment was intended to be a general survey of the impact literature and a review of selected case studies; it did not involve data collection, calculation of specific benefits and costs or numerical determination of economic impacts. Instead, it sought to identify potential economic impacts that merit additional investigation as prospects for the park move from the conceptual to the planning stage.

BENEFITS OF GREENWAYS

For most communities, greenways are not a panacea for economic growth; however, their development can help achieve goals of economic stability and improved quality of life. Some of the many benefits of greenways include preserving biologically, culturally and historically rich places; encouraging physical fitness and healthy lifestyles; increasing retention of individuals and businesses; and encouraging development of economic activities in response to greenway-related activities. Some potential benefits to the regional economy include the following:

Preserving Spokane's heritage

Natural, historical and cultural resources are increasingly important outdoor attractions to residents and visitors alike[4]. Ecotourism is a responsible form of outdoor recreation through which individuals and groups experience natural areas, and learn about local history. Visits to historic places or museums and attendance of cultural events or festivals are activities which are gaining in popularity with travelers across the U.S.[5]

The Great Gorge Park would capitalize on what the legendary landscape architects and urban planners, the Olmsted Brothers saw in 1908 as Spokane's most dazzling feature – the Falls of the Spokane River[6]. As envisioned in the Conceptual Plan, the entrance of the park would be created at the historic Washington Water Power building, comprising a switchback trail or "grand staircase" down to the flatlands at the Lower Falls. The entire site is sacred ground in the tradition of the Spokane and numerous other regional tribes, as it has a rich history as a gathering space and salmon fishery.

Features that would support the History and Culture objectives of the Conceptual Plan may also include: designated view points, interpretive displays, and stronger links to existing allied features such as the Museum of Northwest Arts and Culture ("MAC"). One specific proposal calls for a Cultural Center for Tribal interpretation, possibly based at the existing Salty's restaurant site, which would compliment the MAC[7].

Recovery and protection of native plant and animal species is also recognized as a key element of the Spokane River Gorge conceptual plan. Protection and conservation efforts for the gorge area would be coordinated with the City of Spokane, the Spokane tribe, the State Department of Ecology, the State Department of Fish and Wildlife, Avista Corporation, and others[8] .

Healthier community

Regular exercise is important for maintaining good health. Greenways provide safe and inexpensive places to exercise. Individuals must choose to exercise, but greenways can make that choice easier by providing a user-friendly exercise environment. For example, in southeastern Missouri, 55 percent of trail users now exercise more than before they had access to a trail[9].

Washington State's population has grown about 20 percent between 1990 and 2002. Those years correspond to the latest releases of the Interagency Committee (IAC) recreation survey results. Importantly, this growth has resulted in an increased proportion of insufficiently active and inactive people[10]. The Washington State Department of Health has found that 50 percent of adults in Washington report some but insufficient physical activity to meet current recommendations for moderate physical activity during leisure time, and that an additional 18 percent report no activity at all during leisure time[11]. The Surgeon General of the United States has recently identified this lack of physical activity as a community problem inasmuch as solutions must include an improved public infrastructure that encourages people to engage in such activities. The IAC concluded its report by recommending that the State of Washington recognize outdoor recreation sites and facilities as vital elements of the public infrastructure, essential to the health and well being of Washington citizens.

The Spokane Gorge Park is envisioned supporting such activities as walking, bicycling, and children's play. Higher intensity activities such as rafting are expected to develop as well. The Gorge Park conceptual plan envisions a greenway corridor providing alternative transportation options connecting neighborhoods and business districts, thereby providing the additional benefit of reducing traffic congestion and air pollution. Access and linkage development objectives would be served by the proposed "Westlink" *(since named "Sandifur Memorial Bridge" and "Hamblin Connector")* extension of the Centennial Trail along the north rim of the Gorge and across the river near the confluence of Hangman (Latah) Creek; by a proposed Lower Falls Access Path, connecting Riverfront Park with the Lower Falls (Huntington Park) area, and by a possible south-side "loop trail" connecting the Lower Falls and Glover Field downstream[12].

Business retention

Retention of existing businesses within a community is a key element to its economic stability. The "quality of life" in a community is increasingly cited as a major factor in business location decisions. One important aspect of quality of life is convenient access to natural, recreational and cultural opportunities. Greenways play a role as an infrastructure that a community ought to provide to its residents and businesses.

The Moses Lake Community Pathways and Trails is one of the 2003 Washington State projects aided by the National Parks Service's Rivers, Trails and Conservation Assistance program *(The Gorge Park Conceptual Plan was also aided by the RTCA)*. [13] Moses Lake is currently considered by Boeing as a potential site to assemble its next-generation airliner, the 7E7.

Businesses are also realizing the benefits of healthy employees, both in increased efficiency and decreased health insurance claims. Schweitzer Engineering Laboratories, Inc., located in Pullman, WA, a leader in the electric power system protection industry, has a strict no-smoking policy. This policy is aimed at protecting the health of all its employees and minimizing loss of productivity due to smoking-related illness[14].

Economic stability and conservation must be balanced. If economic growth is not carefully planned, it may undermine the quality of life which helps attract and retain businesses[15].

Business development

Expenditures by residents on greenway related activities can help support the economy. Residents who engage in many outdoor activities along a greenway are encouraged to purchase recreation-related equipment and services, as they use the greenway or travel to and from it. Special events organized around the greenway can also generate additional revenues as well as further promote the greenway and community to residents and visitors alike.

Paul Green, an outdoor recreation professor at Eastern Washington University, recently studied the viability of a whitewater kayak park within the Gorge Park. Green estimated that, in addition to year-around activities, such a park could draw three kayaking events a year to Spokane and have an economic impact of about $300,000 in its first year and $900,000 in its second[16].

Greenways can enhance the pleasure level of business visits, or even encourage business visitors to extend their stay. As such, they contribute to the sustainability of economic activities in general. The Centennial Trail is advertised by Spokane area hotels as a

local attraction easily accessible from the hotels[17]. Nitze-Stagen & Co. is currently considering co-developing the 76-acre Summit site, stretching more than a mile along the north bank of the Spokane River just west of downtown Spokane. Kevin Daniels, president of Nitze-Stagen indicated that the proposed Great Gorge Park would enhance these development plans[18].

ECONOMIC IMPACT – METHODOLOGIES

Many cities are conserving or restoring urban greenways. All the benefits of greenways outlined above are presented as justifications for the projects to go forward. In some cases, such projects are presented as an integral part of a bigger economic urban redevelopment project. Rarely are those benefits actually fully and precisely estimated, mainly because they are numerous and complex.

Two basic types of economic analyses are used in evaluating urban parks and greenways projects: benefit-cost analysis and economic impact assessment. The objective of benefit-cost analyses is to determine whether the benefits associated with a project outweighs its costs. The economic impact assessments are aimed at tracing out the effect of initial investment and spending associated with parks and greenways projects on the level of output, earnings and employment. When used together, the two approaches provide a more complete picture of the economic impact of a project. The presentation of two methodologies used to measure the economic impact of urban parks and greenways presented below follows that of Lindsey and Przybylski[19].

General approaches to benefit-cost analysis (BCA) and economic impact assessment (EIA) are presented in Table 1. Note that for many urban parks and greenways, alternatives exist for any project. Ideally, all alternatives should be identified (step 1) and each should be submitted to a BCA and EIA (steps 2 to 4).

With BCA, the major positive effects associated with parks and urban greenways are the increase in recreational opportunities. The major negative effects are the costs of construction and development and the ongoing costs of operation and maintenance. In assigning economic value to positive impacts, projected uses as well as willingness to pay for such uses must be established. Both can best be determined by experience from existing parks and urban greenways. However, in most cases, willingness to pay can not be directly observed from the price paid by users. Individuals do not pay for the use of parks and urban greenways, which are public or quasi-public goods, as they do for private goods that are priced in competitive markets. Instead alternative methods must be used to infer willingness

to pay. These methods can be classified in three categories: revealed preference, stated preference and unit day value methods.

Table 1: Steps in benefit-cost analysis and economic impact assessment[20]

Benefit-cost analysis (BCA)	Economic impact assessment (EIA)
1. Identify project	1. Identify project
2. Identify all project impacts, positive and negative, in present and future	2. Identify implementation outlays and transfers of economic activity, including expenditures and induced construction
3. Assign economic value to all positive and negative impacts	3. Determine indirect or multiplier effects in economy, including production of inputs by local firms and changes in consumption resulting from increased local earnings
4. Determine present value of net economic benefits	4. Summarize total effects in terms of value of local output (sales), local earnings (income), or local employment (jobs)

Revealed preferences techniques involve the use of behavioral data to infer values. Two of the most frequently used are hedonic pricing and the travel cost methods. The hedonic price approach observes the prices of various properties, some next to parks and greenways, and some located away from parks and greenways. After accounting for all other characteristics of the properties, estimates of the willingness to pay for properties located next to parks and greenways can be computed. The travel cost approach estimates a lower bound on users' willingness to pay based on all expenditures they incurred in traveling to and engaging in recreational activities at those parks and greenways.

The most frequently used stated preference technique is contingent valuation. In this approach, a sample of the relevant population is surveyed and asked to state their willingness to pay. This method is the most controversial because, given the hypothetical nature of the survey, respondents may treat it casually or may answer it strategically. Finally, the unit day value method, although less attractive conceptually, is used more often because of its simplicity. This approach relies on expert judgment to determine benefits to users. Unit day values developed by various agencies vary by type of recreational activities, location, and quality of the recreation experience. Those values are evaluated for destination-type recreational areas. However, unit day values are very difficult to calculate for urban recreation projects like *(the current scope of)* the Gorge Park, which are primarily utilized by local residents for whom the park visit was not the main objective of their trip.

An EIA uses the same expenditure information, construction and development costs, number of expected users and their estimated expenditures. But these initial expenditures are only a portion of the total economic activity that can be generated through development of a park or greenway. Initial purchases of output for the construction and development phase of the project, as well as purchases of output by greenway users, result in additional purchase inputs by those producers of greenway related goods and services. Both these input and output purchases enhance the earnings and purchasing power of workers involved in those productive activities and who, in turn, buy additional goods and services. This chain reaction effect can be traced out to measure the ultimate economic impact of parks and greenways. Inter-industry relationships largely determine how regional economies are likely to respond to changes brought about by parks and greenways projects. Thus, input-output models, which account for these relationships, are use for conducting economic impact assessment. The effects are summarized in terms of total value of output, earnings and jobs created.

Potential economic impacts of the Gorge Park on Spokane and Kootenai counties are given below, based the Regional Input-Output Modeling System (known as RIMS II) developed by the Bureau of Economic Analysis[21]. The estimates provided below are only suggestive, as: (1) construction and development costs, (2) park usage, and (3) ancillary services and business associated with the park are currently unknown. Table 2 shows the potential economic impact of developing the park per million dollars spent, assuming half of the project funds are spent on construction and half on landscaping and horticultural services. Every one million dollars spent would generate $970,000 in regional output production, $738,000 in regional earnings and create 35 jobs. Table 3 shows the potential economic impact of using the park per million dollars spent on park related activities, assuming one fourth is spent on general retail trade, one fourth is spent on equipment rental, one fourth is spent on eating and drinking and one fourth is spent on amusement and recreational services. Every one million dollars spent on park related activities would generate an additional $762,000 in regional output production, $556,000 in regional earnings and create 32 jobs.

Table 2. Construction impact of Gorge Park on Spokane and Kootenai counties

Industry	Total increase Regional output	Total increase Regional earnings	Total increase Regional employment
Construction maintenance and repair	$980,000	$325,000	11
Landscape and horticultural services	$990,000	$413,000	24
TOTAL	$1,970,000	$738,000	35

Table 3. Usage impact of Gorge Park on Spokane and Kootenai counties

Industry	Total increase Regional output	Total increase Regional earnings	Total increase Regional employment
Retail trade	$443,000	$147,000	8
Miscellaneous equipment rental	$420,000	$129,000	5
Eating and drinking places	$459,000	$137,000	9
Amusement and recreation services	$440,000	$142,000	10
TOTAL	$1,762,000	$556,000	32

ECONOMIC IMPACT – SELECTIVE REVIEW OF EVALUATIONS

In its fourth edition, the *Resource Book* published by the National Park Service, remains the most complete summary of economic impact studies of urban parks and greenways. John Crompton, in addition to the evidence already presented by the *Resource Book*, reviewed more recent case studies relating to greenway trails[22]. The selected studies presented in this section are directly drawn from the *Resource Book* and Chapter 5 of Crompton's extensive review of the literature on the impact of parks and greenways on property values.

The review below provides references to studies that assess the relationship between greenways and property values, as well as greenways and expenditures by users. These measures infer values of greenways and make use of revealed preferences techniques

described in the previous section. Those techniques are considered the least controversial and the most appropriate techniques to assess economic impact of urban greenways.

Real property values

People value the amenities parks and greenways provide, such as attractive views, open space preservation, and convenient recreational opportunities. This can be reflected in increased real property values. Many studies have revealed increases in property values in instances where the property is located near or adjacent to open spaces, though a few are available for greenways.

An analysis of property surrounding four parks in Worcester, Massachusetts, showed a house located 20 feet from a park sold for $2,675 (1982 dollars) more than a similar house located 2,000 feet away[23]. In the neighborhood of Cox Arboretum, in Dayton, Ohio, the proximity of the park and arboretum accounted for an estimated 5 percent of the average residential selling price. In the Whetstone Park area of Columbus, Ohio, the nearby park and river were estimated to account for 7.35 percent of selling prices[24]. In the vicinity of Philadelphia's 1,300 acre Pennypack Park, property values correlate significantly with proximity to the park. In 1974, a park accounted for 33 percent of the value of a plot of land (when the land was located 40 feet away from the park), 9 percent when located 1,000 feet away, and 4.2 percent at a distance of 2,500 feet[25]. Surveys of property owners and real estate professionals also shows that proximity to parks and trails is believed to have either no effect or a positive effect on the salability of adjacent or nearby properties.

Along the suburban Lafayette/Moraga Trail in California, the majority of the owners felt that trails would make their properties sell more easily and at increased values[26]. A survey of real estate agents by the Office of Planning in Seattle, Washington revealed that property near, but not immediately adjacent to, the 12 mile Burke-Gilman trail sells for an average of 6 percent more. The survey of homeowners indicated that approximately 60 percent of those interviewed believed that being adjacent to the trail would either make their home sell for more or have no effect on the selling price[27]. The majority of landowners (87%) along the Luce Line rail-trail in Minnesota believed the trail increased or had no effect on the value of their property. New owners felt the trail had a more positive effect on adjacent property values than did continuing owners. Appraisers and real estate agents claimed that trails were a positive selling point for suburban residential property, hobby farms, farmland proposed for development, and some types of small town commercial property[28].

John Crompton, in addition to the evidence already presented by the *Resource Book*, reviewed more recent case studies relating to greenway trails[29]. The author points out that any added property value to greenway trails comes more from its functionality or activity potential, while added property value to parks comes mainly from the views of nature or open space. Homeowners with property adjacent to the Brush Creek Trail in Santa Rosa, California were interviewed in 1992. The dominant response was that they felt the trail had either no or a positive effect on the salability and value of their property. Only 17 percent of the sample perceived the trail to have a negative impact on salability while 8 percent thought it negatively affected value[30]. In 1994, the Maryland Greenways Commission funded an analysis of the impact of the Northern Central Rail Trail. Only 7 percent of the local brokers, appraisers, developers and tax assessors surveyed believed that the trail lowered nearby property values. Positive effects were estimated at an average of $2,459 per residence. Respondents believed that properties within 1,000 feet of the trail, but not abutting it, experienced the greatest positive impacts on value[31]. Three trails in the metro-Denver area were selected in a 1995 study sponsored by the Conservation Fund and The Colorado State Trails Program. Homeowner groups surveyed did not feel the trails had any impact on their property salability and value, while realtors favored a positive impact[32]. In 1995, households located in close proximity to three greenways in Cary, a city in the Research Triangle region of North Carolina, were surveyed. Only 3 percent of the respondent reported that the trail had a negative impact on their property value[33]. Finally, in 1997, the Green Bay-Brown County Planning Commission in Wisconsin investigated the impact of Brown County's Mountain-Bay Trail on property values. Results indicated that lots located immediately adjacent to the trail sold faster and, on average, for $2,800 more[34].

Table 4 summarizes the case studies reviewed in the literature that specifically relate to greenway trails. Table 5 and 6 summarize the case studies responses as they relate to the effects of a greenway trail on home salability, property value or house price or resale value, respectively.

Table 4. Case studies relating to Greenways Trails

Trail Name	Trail Location	Length (miles)	Year Studied
Alameda Creek	San Francisco Bay, CA		1978
Brush Creek	Santa Rosa, CA	1.25	1992
Burke-Gilman	Seattle, WA	12	1987
Heritage	Dubuque/Dyersville, IA	26	1992
LaFayette-Moraga	San Francisco Bay, CA	7	1978,92
Luce Line	MN		1988
Root River	MN		1988
St. Marks	Tallahassee/St. Marks, FL	16	1992
Three Trails: -Highline Canal -Weir Gulch -Willow Creek	Metro Denver, CO		1995

It should be noted that the potential for increase in property value depends upon the characteristics of the open space and the orientation of surrounding properties. Property value increases are likely to be highest near those greenways which (1) highlight open space rather than highly developed facilities, (2) have limited vehicular access, but some recreational access, and (3) have effective maintenance and security.

Table 5. Impact on Home Salability

Trail	Rater	Increase/ Positive	None/ Neutral	Decrease/ Negative	No Response
Burke-Gilman	owner	48%	26%	9%	18%
Burke-Gilman	condo	52	36	1	11
Burke-Gilman	RE agent	59	26	16	0
Brush Creek	owner	29	49	17	5
Heritage	RE agent	9	91	0	--
LaFayette-Moraga	RE agent	22	78	0	--
St. Marks	RE agent	38	46	16	--
Three Trails	owner	40	44	7	10
Three Trails	RE agent	68	27	5	0
Average		41%	47%	8%	7%

Table 6. Impact on Property Values or House Price or Resale Value					
Trail	Rater	Increase/ Positive	None/ Neutral	Decrease/ Negative	No Response
Alameda Creek	owner	36%	48%	7%	9%
Luce Line	owner	58	32	9	1
Root River	owner	14	62	14	10
Burke-Gilman	owner	26	44	8	23
Burke-Gilman	condo	21	51	2	26
Burke-Gilman	RE agent	38	50	13	0
Three Trails	owner	34	48	5	14
Three Trails	RE agent	32	69	0	5
Brush Creek	owner	20	69	8	3
Heritage	owner	12	81	8	--
Heritage	RE agent	12	85	3	--
LaFayette-Moraga	owner	50	48	2	--
LaFayette-Moraga	RE agent	36	52	12	--
St. Marks	owner	19	76	7	--
St. Marks	RE agent	20	80	0	--
Average		29%	60%	7%	9%

Expenditures by residents

Expenditures by residents on greenway related activities can enhance local economic activities. Residents might engage in many outdoor activities along a greenway, including walking for health or physical fitness exercises, running or jogging, as well as bicycling. Local residents who use the greenway on a regular basis might purchase recreation-related equipment and services, as they go to and from the site or when they use the site. Special events organized around the greenway can also generate additional revenues as well as further promote the greenway to residents.

A greenway, by providing local opportunities for activities, can be an important asset to a community. In 2002, The Interagency Committee completed an assessment of outdoor recreation in Washington State[35]. Findings reveal an active population pursuing close-to-home, low cost activities. Walking/hiking and bicycle riding emerge as the highest participation activities. Estimated start-up costs for those activities, as reported in the 1995 National Park Service *Resource Book*, are presented in Table 7.

Table 7. Estimated start-up costs by activity

Activity					
Walking/hiking			Bicycling		
Purchase	Low-end Cost	Mid-Range Cost	Purchase	Low-end Cost	Mid-Range Cost
Shoes/Boots	$45	$120	Bicycle	300	800
Socks	10	15	Helmet	50	50
Daypack	20	40	Lock	30	30
Water bottle	5	5	Bicycle rack		25
			Bicycle pack		50
			Water bottle		10
			Shoes		45
			Clothing		50
			Car rack		150
Total	80	180	Total	380	1,210

Three rail-trails in the State of Pennsylvania generated a total economic impact of over $1.2 million each. These trails were used mostly by people living nearby who visited frequently. Users spent an average of $9.21, $11.02, and $3.97 per person per day as a result of their visits to the Heritage, St. Marks, and Lafayette/Moraga Trails respectively[36].

The Hart-Montague Bicycle Trail in Michigan follows along 20 miles of the eastern coast of Lake Michigan. In 1992, six months of bicycle use along the trail increased business for several owners by 25 to 30 percent. Trail passes brought in revenues of approximately $40,000, up 33 percent from revenues in 1991[37]. A 1991 survey of trail users in Oil Creek State Park in Venango County, Pennsylvania revealed that each cyclist spent an average of $25.86 per visit/day[38].

Finally, the Northern Central Rail Trail, a 20 mile trail near Baltimore MD, is an example of a greenway with significant economic impact. According to a detailed study sponsored by the Maryland Greenways Commission[39], use of the trail increased from 9,820 in 1984 to 457,540 in 1994 when the study was conducted. The trail follows the right of way of an abandoned railroad line which before conversion to a "passive recreation resources (walking, biking) primarily for local residents" was "a popular destination for 'undesirable' activities such as underage drinking, illegal dumping, car and motorcycle racing, and various sorts of vandalism and defacement." However, these "undesirable activities have all but disappeared - partly because the Trail's users 'police' the Trail as their own and the

perpetrators of vandalism now congregate elsewhere. Accordingly, reports of crime and vandalism along the corridor have dropped appreciably."

When asked "Do you feel the North Central Rail Trail is a good use of State funds", 94 percent of trail users responded favorably while 88 percent thought it was "a strong asset of the community." In 1993 the trail was estimated to have created over 262 jobs and to have caused an increase in regional spending of $3,380,013, largely for food, trail bikes, walking accessories and transportation. The trail is also self-supporting. In 1993, state maintenance and operation expenditures were $191,893, while revenues to state and local governments were estimated to be $376,884, including $171,885 in state sales tax revenues on goods sold as a consequence of the trail, $132,257 in state income tax revenue from jobs supported by the trail and $72,742 in Baltimore County personal income tax surtaxes.

SENSE OF THE LITERATURE

Studies of the economic impact of greenways are part of a larger group of studies attempting to broadly determine the private and public impact as well as the benefits and costs of recreational and leisure time activities. As opposed to economic activities where people are compensated to undertake some action, recreational activities are those where people pay, either monetarily or through the expenditure of time, to undertake some action. Also associated with recreational activities is an elaborate support structure including a variety of recreation sites and facilities, personal services providers such as trainers, guides, hosts and administrators, clothing and equipment suppliers, food, transportation and housing services. Today, recreation is a major industry, representing expenditures over $500 billion annually, accounting for almost 10 percent of consumer expenditures and actively involving 25 percent of the population[40].

Collected in Sources Cited and Appendix A are a wide variety of studies on the impact of recreational activities, complied from a diversity of primary and secondary sources. The general sense of this literature on the economic impact of recreational activities, including greenways, is that after site preparation and construction, the magnitude of the impact depends on usage, including access and usage costs. Based solely on this conclusion, the Gorge Park will have a modest economic impact on the community. While an adjunct to local attractions, it seems unlikely that many people will travel to Spokane just to visit the park. Instead, park users will be mostly local and nearby residents who will simply add it to their list of regional recreation time activities. It is unlikely that the use of the park will require

additional or special equipment, nor will the volume of usage be sufficient to stimulate the creation of new support services such as food and drink establishments or equipment rentals.

However, these conclusions could dramatically change if the park is incorporated into a larger greenway linking downtown Spokane to Riverside Park on the west and to Idaho and the Idaho Centennial Trail to the east. While the economic consequences of a realized Spokane Greenway should be significant, their determination is beyond the scope of this study.

ADDITIONAL RESEARCH

Empirical information is required to measure the economic impact of the Great Gorge Park. To that end, the estimated use or expected demand for the park's facilities should be determined. This could be accomplished by questionnaire surveys of local businesses that might serve park users, Spokane residents and Centennial Trail users who might expand their use into the park. For a basis of estimating demand, the use and impact of the Centennial Trail should be intensively investigated. Events incorporating some aspect of the Trail should be determined. Trail users and business should be identified.

A second series of empirical studies are required to determine the impact of the existing Spokane greenway corridor on property values for comparative purposes. GIS maps of private and public property holdings adjacent to the Centennial Trail and the proposed Gorge Park should be created. Using property tax rolls, estimates of property value changes consistent with methodologies of similar greenway studies can be undertaken. Finally, area realtors and developers can be surveyed to estimate expected real estate market impacts.

For calculation of direct and total economic impact multipliers, the actual and expected construction and annual operation costs associated with the Centennial Trail and the park should be determined.

Finally, specific studies found in Appendix A consider situations similar to those found in the park that might merit further study. For example, creation of the park would facilitate access to Riverside Park and other public lands further down the Spokane River. In turn, this new access might make businesses providing river activities such as kayaking and canoeing more feasible. As another example, research has identified the benefits of walking as an alternative to automobile usage and the value of urban greenery, usually trees, on the local economy. While these benefits might seem esoteric, walking has measurable health benefits while trees have been shown to increase property values and to reduce pollution effects.

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APPENDIX A

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