# Coastal Georgia Greenway
# Market Study and Projected Economic Impact

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## Foreword

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## Executive Summary

The Georgia component of the East Coast Greenway, the Coastal Georgia Greenway (CGG), will be a 150 mile multi-use trail that will link Savannah in the North to St. Marys in the South. The 150 mile through-corridor will link to an additional 200 mile network of pedestrian, bicycle, on-road, equestrian, and water trails, thus forming a 350 mile regional system of recreational facilities. This study estimates annual use of the trail and the economic impact on the six county region (Chatham, Bryan, Liberty, McIntosh, Glynn, and Camden) after the trail is completed in 2015 and 2020 when usage is expected to reach its potential level. Highlights from the study are presented below.

Projected Annual Use (Total User-Days) and Expenditures:

- 220,000 in 2015.
- 495,000 in 2020.
- Expenditures of between $19.53 and $25.47 per user-day (includes local users).

Non-Quantifiable and Indirect Economic Benefits

- Numerous health, community, environmental, and recreational benefits.

Quantifiable Economic Benefits

- Property Value: adjacent property values will rise by 5% to 10%.
- Economic Impact of Expenditures (excludes local users).
  - ❖ If 50% of trail users are local residents (Low Scenario), the CGG will *annually*:
    - Add $5 million to business revenue in 2015, rising to $10.2 million in 2020.
    - Support 95 jobs in 2015, rising to 192 jobs in 2020.
    - Generate $1.7 million in labor income in 2015, rising to $3.5 million in 2020.
    - Generate $289,000 in state and local tax revenue in 2015, rising to $589,000 in 2020.
    - The impact is projected to increase by 2.5% per year after 2020.
  - ❖ If 80% of trail users are non-local (High Scenario), the CGG will *annually*:
    - Add $6.9 million to business revenue in 2015, rising to $15 million in 2020.
    - Support 133 jobs in 2015, rising to 285 jobs in 2020.
    - Generate $2.4 million in labor income in 2015, rising to $5.1 million in 2020.
    - Generate $407,000 in state and local tax revenue in 2015, rising to $871,000 in 2020.
    - The impact is projected to increase by 2.5% per year after 2020.
  - ❖ Construction expenditures of $67 million are projected to have a *one-time impact* that will:
    - Support 1,067 jobs earning $34.4 million in labor income.
    - Generate $103 million in business revenue and $2.4 million in tax revenue.
  - ❖ By 2025, maintenance and resurfacing expenditures of $4 million will *annually*:
    - Support 63 jobs earning $2 million in labor income.
    - Generate $6 million in business revenue and $141,000 in tax revenue.

The CGG will meet a key need for linking outdoor and recreational facilities throughout coastal Georgia and will become a key asset in the region's portfolio of natural resources.

Consideration of a regional park authority to manage, preserve and enhance the CGG is recommended.

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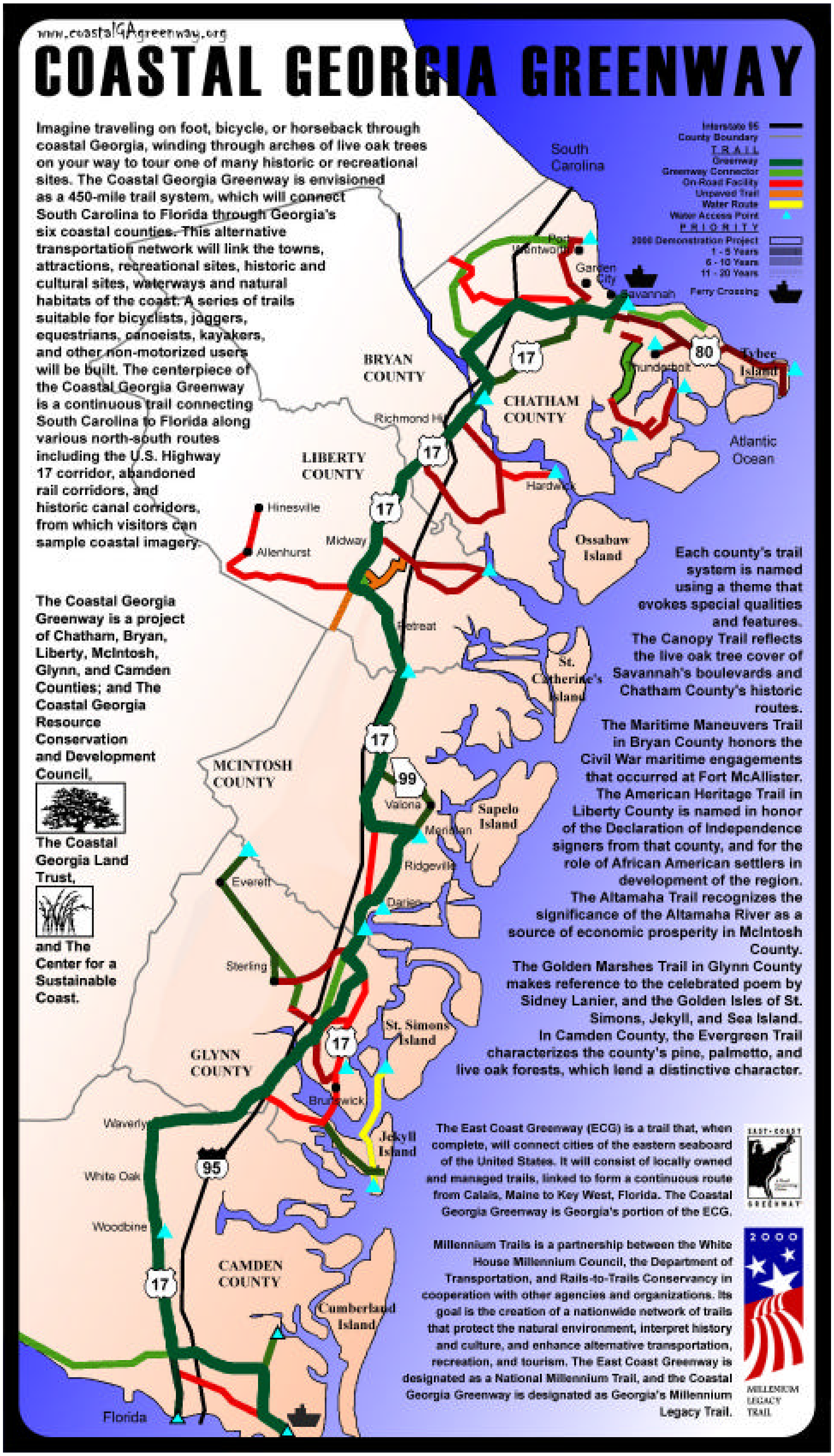
## 1. Introduction

The East Coast Greenway is a proposed system of bicycle and pedestrian trails that, when completed, will provide users with a continuous 2,600 mile route from Maine to Florida. The Georgia component of the East Coast Greenway, the Coastal Georgia Greenway (CGG), will be a 150 mile multi-use trail that will link Savannah in the North to St. Marys in the South. The 150 mile through-corridor will link to a 200 mile network of pedestrian, bicycle, on-road, equestrian, and water trails, thus forming a 350 mile regional system of recreational facilities. A map of the network is provided on the next page.

Since the East Coast Greenway will be a large network of trails spanning many states and municipalities, much of the funding for the project is expected to come from local governments while private sources contribute a smaller share (ECGA, 2001). Given the expenditures involved, funding entities desire to know potential trail usage. These entities are also keenly interested in the economic impact of trail systems. Greenway trails have been studied for their ability to generate spin-off economic activity that supports business and economic development in areas hosting the trails.

This study seeks to estimate the potential market size and economic impact of the multi-purpose Coastal Georgia Greenway. To do this, three broad questions must be addressed. First, how many users will the CGG attract? Next, what expenditure patterns will these users exhibit? Third, what other impacts are relevant? The answers to these questions require a substantial number of underlying assumptions and require the review of a number of related issues.

The organization of this study is as follows: First, a discussion of the U.S. cycling and pedestrian market, relevant legislation, and infrastructure investment in trail facilities is presented in Section 2. In Section 3, the non-quantifiable and indirect benefits associated with greenway development are reviewed. A discussion of assumptions regarding the number of trail users, expenditure patterns, and other related issues is found in Section 4. Economic impact methodology is briefly discussed in Section 5. The economic impact results are presented in Section 6. The projected economic impact is based on the estimated number of user-days, expected expenditure patterns, and construction and maintenance activities required for the trail. Section 7 provides an overview of the regional park authority method of managing recreational assets like the CGG. Section 8 is the conclusion.


www.coastalGAgreenway.org
COASTAL GEORGIA GREENWAY
Imagine traveling on foot, bicycle, or horseback through coastal Georgia, winding through arches of live oak trees on your way to tour one of many historic or recreational sites. The Coastal Georgia Greenway is envisioned as a 450-mile trail system, which will connect South Carolina to Florida through Georgia's six coastal counties. This alternative transportation network will link the towns, attractions, recreational sites, historic and cultural sites, waterways and natural habitats of the coast. A series of trails suitable for bicyclists, joggers, equestrians, canoeists, kayakers, and other non-motorized users will be built. The centerpiece of the Coastal Georgia Greenway is a continuous trail connecting South Carolina to Florida along various north-south routes including the U.S. Highway 17 corridor, abandoned rail corridors, and historic canal corridors, from which visitors can sample coastal imagery.
The Coastal Georgia Greenway is a project of Chatham, Bryan, Liberty, McIntosh, Glynn, and Camden Counties; and The Coastal Georgia Resource Conservation and Development Council,
The Coastal Georgia Land Trust,
and The Center for a Sustainable Coast.
Interstate 95
County Boundary
TRAIL
Greenway
Greenway Connector
On-Road Facility
Unpaved Trail
Water Route
Water Access Point
PRIORITY
2000 Demonstration Project
1 - 5 Years
6 - 10 Years
11 - 20 Years
Ferry Crossing
South Carolina
Savannah
Garden City
Tybee Island
Thunderbolt
BRYAN COUNTY
CHATHAM COUNTY
Richmond Hill
Atlantic Ocean
Hardwick
LIBERTY COUNTY
Hinesville
Allenhurst
Midway
Ossabaw Island
Retreat
St. Catherine's Island
MCINTOSH COUNTY
Valona
Meridian
Sapelo Island
Ridgeville
Darien
Everett
Sterling
St. Simons Island
GLYNN COUNTY
Brunswick
Jekyll Island
Waverly
White Oak
Woodbine
CAMDEN COUNTY
Cumberland Island
Florida
17
80
99
95
Each county's trail system is named using a theme that evokes special qualities and features.
The Canopy Trail reflects the live oak tree cover of Savannah's boulevards and Chatham County's historic routes.
The Maritime Maneuvers Trail in Bryan County honors the Civil War maritime engagements that occurred at Fort McAllister.
The American Heritage Trail in Liberty County is named in honor of the Declaration of Independence signers from that county, and for the role of African American settlers in development of the region.
The Altamaha Trail recognizes the significance of the Altamaha River as a source of economic prosperity in McIntosh County.
The Golden Marshes Trail in Glynn County makes reference to the celebrated poem by Sidney Lanier, and the Golden Isles of St. Simons, Jekyll, and Sea Island.
In Camden County, the Evergreen Trail characterizes the county's pine, palmetto, and live oak forests, which lend a distinctive character.
The East Coast Greenway (ECG) is a trail that, when complete, will connect cities of the eastern seaboard of the United States. It will consist of locally owned and managed trails, linked to form a continuous route from Calais, Maine to Key West, Florida. The Coastal Georgia Greenway is Georgia's portion of the ECG.
EAST COAST GREENWAY
Millennium Trails is a partnership between the White House Millennium Council, the Department of Transportation, and Rails-to-Trails Conservancy in cooperation with other agencies and organizations. Its goal is the creation of a nationwide network of trails that protect the natural environment, interpret history and culture, and enhance alternative transportation, recreation, and tourism. The East Coast Greenway is designated as a National Millennium Trail, and the Coastal Georgia Greenway is designated as Georgia's Millennium Legacy Trail.
2000
MILLENIUM LEGACY TRAIL

## 2. U.S. Market Size, Legislation, and Infrastructure

The US market for cycling and walking is quite large and is growing. The Sporting Goods Manufacturers Association (2001) report, *Sports Participation in America*, indicates that 53 million persons bicycled for recreational purposes in 2000, while 82.6 million engaged in recreational walking. The 2002 National Survey of Pedestrian and Bicyclist Attitudes and Behaviors sponsored by the US Department of Transportation indicated that 27.3% of the population, or approximately 52 million people aged 16 or above bicycled within the past thirty days of being surveyed during the summer of 2002. (U.S. Department of Transportation, 2003).[1]

A significant element contributing to the growth in the U.S. market during the previous decade is the attention that non-motorized transportation projects received in federal transportation legislation. The passage of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) required that metropolitan planning agencies explicitly recognize pedestrian and bicycling options for long range transportation planning. The initiative was reauthorized in 1998 as the Transportation Equity Act for the 21st Century (TEA-21). In early September of 2003, cycling and pedestrian advocacy groups won a victory in the House of Representatives as it voted 327 to 90 to restore funding for transportation enhancements that was originally stripped from the FY04 transportation program. At the end of the same month, TEA-21 was extended beyond its original authorization period for five months into the 2004 fiscal year. This short-run reauthorization is intended to provide time until the next iteration of the legislation, TEA-3, is acted upon by Congress.

The legislation's effect on funding for cycling and pedestrian transportation enhancement (TE) projects is very clear. In the twenty years prior to the passage of ISTEA, $41 million of federal funds were programmed for cycling and pedestrian projects.[2] The figure then sky-rocketed from $77.7 million in FY92 to $647.6 million in FY02 (NTEC, 2003).[3] The aggregate amount of funding programmed for TE activities between FY92 and FY02 was approximately $5.6 billion dollars. Of this amount, $3.9 billion was allocated to 11,456 bike and pedestrian related projects. The share of total TE programmed funds dedicated to bicycling and pedestrian projects was 55% in FY02 and is programmed to rise to 62.7% during the FY03 to FY06 period. During this latter period, 644 cycling and pedestrian facilities are programmed to receive $251 million while an additional 37 rail-trail projects are programmed for $27 million. The number of rail-trail facilities has increased from 415 in 1991 to over 1,000 in 2000 covering more than 15,000 miles in every state (Rails to Trails Conservancy, 2001). An additional 1,200 projects providing 19,000 miles are currently in various stages of planning and development (Betz, Bergstrom and Bowker, 2003).

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[1] Advocacy groups tend to report higher figures. For example, *Trails for All Americans* reported that 155 million people walk for pleasure and 93 million bicycle (cited in Iowa Trails, 2000). As early as 1993, the Bicycle Federation of America (1994) reported that over 100 million Americans were cyclists.

[2] Cited in Pucher, et al. (1999).

[3] The remaining Federal transportation funding statistics cited in this paragraph are from NTEC (2003).

**Table 1. Nationwide Annual Bicycle Trips and Mode Share**

| | 1977 | 1983 | 1990 | 1995 | 2001 |
|---|---|---|---|---|---|
| Bicycle Trips (millions) | 1,272 | 1,792 | 1,750 | 3,342 | 3,522 |
| Adj. Bicycle Trips (millions) | 1,476 | 2,078 | 2,030 | 3,342 | 3,522 |
| Bicycle Mode Share | 0.6% | 0.8% | 0.7% | 0.9% | 0.9% |
| Walking Mode Share | 9.3% | 8.5% | 7.2% | 5.4% | 8.6% |
| Combined Bike/Walk Share | 9.9% | 9.3% | 7.9% | 6.3% | 9.5% |

Source: Pucher, et al. (1999) and U.S. Department of Transportation, NHTS (various years).
Note: As in Pucher (1999), survey data prior to 1995 has been adjusted upward by 16% to account for differences in surveying techniques (Pickrell and Schimek, 1998).

Table 1 provides data from the National Household Travel Survey (NHTS, 2003) summarizing bicycling and pedestrian activity in the U.S. Given the amount of resources allocated to bicycle and pedestrian facilities as a result of federal legislation, it is not surprising that the total number of bicycle trips taken by Americans has doubled since 1990 (NHTS, 2003). In spite of this significant increase, cycling's mode share of total trips was unchanged 0.9%. However, the combined mode share for cycling and walking increased from 7.9% in 1990 to 9.5% in 2001. While mode share is increasing, it is unlikely to reach the target set in *The National Bicycling and Walking Study* (U.S. Department of Transportation, 1994) of doubling to 16% by 2004.

## 3. Non-Quantifiable and Indirect Economic Benefits

In addition to quantifiable economic impacts, greenway trails provide numerous less readily quantified or indirectly provided economic value to users and to host communities. A greenway's contribution to the community's quality of life is difficult to measure, but may contribute to economic development initiatives by adding one more recreational asset to the region's portfolio of desirable attributes. Residents close to the trail, however, may derive a more easily measured benefit as greenways have been found to increase property values. Other benefits related to health, transportation choice, and the environment have economic values that are more closely related to the avoidance of costs. For example, the health benefits of greenway use for exercise and recreation can reduce medical expenditures related to a sedentary lifestyle. Similar statements can be made with respect to reduced expenditures on pollution control and roadway infrastructure as a result of increased use of greenways for transportation. These benefits are discussed in greater detail below.

### 3-1. Health Benefits

Transportation and land use choices are having a significant effect on health care issues facing the country. This was highlighted in two recently reported news items. First, the U.S. Department of Transportation released results from the 2001 National Highway Transportation Survey that indicated that for the first time, the number of vehicles per household exceeded the number of drivers (NHTS, 2001). Second, Neergaard (2003) reports on recent research that finds that people living in sprawled-out suburbs where residents tend to drive, rather than walk or bicycle, to fulfill basic transportation needs are more likely to suffer from hypertension and out-weigh their counterparts in dense or compact areas by six pounds (Ewing, et al., 2003).

Sedentary lifestyles have been linked to 23% of deaths from major chronic diseases (Hahn, 1998), while other research has shown that activity patterns and diet were attributed to 14% of all deaths in the United States. Together, these factors were the second leading cause of death in the nation (McGinnis, 1993). Bicycling and walking are ideal activities to help reduce the medical costs associated with lifestyle related maladies.

In addition, more frequent cycling activity may increase health related benefits. The North Central Texas Council of Governments Transportation Department reports that bicycling three times per week lowers systolic blood pressure by nine points while daily cycling reduces it by thirteen points (NCTCOG, 2001). One-half hour of daily bicycling burns the equivalent of 11.4 lbs. per year, and a person starting at age 35 who cycles 60 miles per week could add 2.5 years to life expectancy (NCTCOG, 2001). Lastly, a person who engages in activities that build muscular strength, endurance, balance, and flexibility is less prone to injury and disability and is more productive, both at work and in the community (Holmes, 1994).

Returning to transportation, land use choices, and health, it was discussed in Section 2 that federal initiatives have contributed greatly to expenditures on multi-purpose trail facilities. This has substantially increased the opportunities available to derive health related benefits from trail use, but also addresses another concern among walkers and cyclists – safety. The 1994 *National Bicycling and Walking Study* notes that an important issue for increasing the use of non-automotive transportation modes is to make the facilities safer and more user friendly (U.S. Department of Transportation, 1994). Improved facilities, such as multi-purpose greenways like the CGG, provide safer outlets for trail users. This would reduce inhibitions to walking and cycling and thereby create the conditions under which users may more readily derive the health care benefits associated with exercise.

### 3-2. Quality of Life and Heritage

Greenway trails often make contributions that enhance the quality of life and social fabric of the community (RTC, 2003a, 2003c, 2003e). By creating ways for individuals or families to recreate with one another, trails improve social relationships and contribute to community cohesion. In addition, trails add aesthetic value by adding green space in areas where land use issues are often driven by residential and commercial development.

Trails provide users with first-hand opportunities to grasp, appreciate, and enjoy important heritage themes and values (RTC, 2003d). Of significance to the Coastal Georgia area is the fact that travelers have generally become more interested in educational oriented experiences provided by cultural and historic sites. This is one of the fastest growing segments of tourism (Department of Interior, 1995). Greenways and trails can provide a window into our history and culture by linking sites thereby making them more accessible and easier to interpret within a broader context.[4] This contributes to the frequency of use and can help preserve a site for future generations by increasing awareness and appreciation among today's generation.

[4] For example, consider the interpretive benefits of developing Civil War trails that link important sites, as does the Virginia Civil War Trail. A similar trail linking Civil War sites in Georgia is currently under development.

**3-3. Environmental Benefits**

Environmentally, trails are tools of conservation as well as air and water quality management (RTC, 2003b). As protected open space, trails preserve what are considered to be important natural landscapes and habitats. Trails are usually thought of as "greenways" and often provide much needed links between ecological communities and other natural areas. Dawson (1995), in a review of the comprehensive planning effort for Georgia's greenways, notes that they would serve as ideal hosts for trails linking Georgia's outdoor resources. The need for linking facilities in Georgia remains high, as indicated by the Georgia Department of Natural Resources (2003) in its most recent comprehensive outdoor recreation plan.

The contribution to improved air quality follows from the obvious - bicycling and walking do not require the use of fossil fuels and are non-pollutant. As noted by Holmes (1994), bicycling and walking trips in 1991 saved between 370 million and 1.3 billion gallons of gas, and reduced air pollution emissions by between 4.4 and 16.3 million metric tons. The displacement of this air-borne pollution occurs at the ground level where most of us do our breathing. In addition, the trips that are attractive to bicyclists and walkers, five miles or less, are generally the same trips that are the least fuel efficient and produce the most emissions per mile (Wisconsin DOT, 1998).

Greenway trails may also contribute to water quality by providing natural buffer zones that protect waterways from pollution resulting from fertilizer and pesticide run-off (RTC, 2003b). Better control or reduction of this pollution would enhance water quality and improve the environmental conditions affecting aquatic life, an important resource in Coastal Georgia.

**3-4. Transportation Mode Choice and User Safety**

Bicycling and walking trails may contribute to reduced highway congestion and enhance the safety of motorists using roads with shoulder trails. Trails that connect residential, recreational, and commercial areas provide users with additional alternatives for transportation choice. Trail accessibility affords individuals from all income levels to switch transportation modes from motorized vehicles to non-motorized modes of transportation (NCTCOG, 2001).[5] In addition, survey results from two polls have indicated that individuals would be willing to shift modes if safety issues were less of a concern – something provided by access to trail facilities (Harris Poll, 1992, and National Bicycle and Pedestrian Clearinghouse, 1995).

The reduction of vehicular traffic arising from mode-switching can have a direct effect on public expenditures for roadway infrastructure. The Minnesota Department of Transportation (1992) estimated savings of $1.64 per cyclist mile diverted from auto traffic. Of this amount was a reduction in highway construction expenditures of $0.84 per mile and a reduction of out-of-pocket consumer expenses by $0.68 per mile diverted.

[5] The Pinellas County Metropolitan Planning Organization (2002) survey of Pinellas County Trail users determined that 67% of trail users surveyed represented mode-shifts from a vehicle to the trail. The survey was conducted over a two-day period and results may not be applicable to all trail users.

When shoulder bicycle lanes are added to a roadway, they generally add three to five feet to the width of the paved roadway surface. The additional surface area provided by bicycle shoulder lanes can enhance the safety of motorists along the same road. For example, Zeeger (1987) found that the addition of four-foot wide paved shoulders on rural two-lane roads reduced run-off, head-on, and sideswipe motor vehicle crashes by 29 percent.

### 3-5. Property Values

Parks and greenways have been found to enhance the value of near-by property (U.S. Dept. of Interior, 1995). This research was reviewed and updated by Crompton (2001) who notes that of 25 empirical studies considered, 20 found that parks enhance the value of adjacent or near-by property.[6]

A property value premium of five to ten percent is characteristic for properties near multi-purpose trails. The Brown County Planning Commission (1998) found an increase of nine percent for properties adjacent to the Mountain Bay Trail in Brown County, Wisconsin. Moore and Barthlow (1998) found that property near the Burke-Gilman Trail sold at a premium of six percent while those adjacent benefited by an additional one-half to one percent. PKF (1994) notes that an extension of a California greenway was estimated to generate a 6.5 percent premium for properties adjacent to the trail. PKF (1994) also notes that housing prices declined an average of $4.20 for each foot of distance away from a greenway up to 3,200 feet (PKF, 1994). In one neighborhood, the figure was $10.20 for each foot away from the greenway. In addition, survey results indicate that a substantial number of realtors and homeowners believe that a nearby trail enhances the value of their property or would reduce the amount of time required to sell the property.[7]

## 4. Economic Impact: Foundations

As indicated in the introduction, in order to assess the economic impact of the CGG, three broad questions must be addressed. How many users? What expenditures will they make? What else should be considered? The answers to these questions will be discussed in this section.

### 4-1. How Many Users?

One very crude estimate of demand can be derived by using the National Recreation and Park Association's (Lancaster, 1990) benchmark of roughly one mile of multi-purpose trail for every 2,000 persons. The study area's current population is estimated at 452,000, thus the standard implies a benchmark of 226 trail miles. An inventory of trails in the six county study area is provided in Appendix Table 1. Approximately 216 miles of multi-purpose trails currently exist in the six county area. Thus, the region appears to meet the minimum standard established by the National Recreation and Park Association.

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[6] Four of the five studies finding no effect were determined by Crompton (2001) to be flawed.
[7] For example, see citations in PKF (1994) and Department of the Interior (1995).

This figure, however, is somewhat misleading for reasons considered next. First, the National Recreation and Park Association backed away from numerical guidelines for recreational facilities in 1996 (Mertes and Hall, 1996) suggesting instead that local areas define their needs as appropriate to their own demand. Second, the currently existing trails in coastal Georgia cannot be thought of as a regional network or system as recommended in the NRPA guidelines. The trails are short, with a median length of 6.4 miles, and are scattered across the region without a connecting link. The Georgia Coastal Greenway will provide such a link and serve as the spine of the 350 mile network that forms a comprehensive system. The linking feature of the CGG would enhance the overall appeal of the trail to its users and increase usage of other linked trails.

### 4-2. Trail Demand Modeling

In a 1998 report issued by the University of Baltimore's Jacob France Center, the authors note "in all of the literature [on greenways and usage] reviewed there was little information on the potential greenway user base" (Jacob France Center, 1998, p. 2). Our review of this literature and that of the ensuing five years yields the same general conclusion. Few readily available formal studies estimate potential use of proposed facilities. The limited number of studies that did attempt to develop estimates of usage for proposed trails include the following: Betz, Bergstrom, and Bowker (2003) for the Antebellum Rail-Trail in northern Georgia; PriceWaterhouseCoopers (2001) for the Alberta section of the Trans Canada Trail (2001); Southeast Michigan Greenways Specialist Team (2001) for three trails in Michigan; Wilbur Smith Associates (2001) for facilities in Maine; The Jacob France Center (1998) for the Lower Susquehanna Heritage Trail; and Northwestern Ontario Development Network (1996) for the 2,200 mile La Route Verte. These studies employ a variety of techniques to forecast trail usage, some of which are proprietary.

In fact, in a response to the lack of standardized methodology and scattered literature on the topic, the Texas Transportation Institute and the Federal Highway Administration recently completed a series of studies on bicycle and pedestrian facility demand forecasting. Five broad classifications of demand estimation techniques exist. These include comparison studies, aggregate behavior studies, sketch plan models, discrete choice models, and regional travel models. These methods are thoroughly discussed elsewhere, and will not be reviewed here (U.S. Department of Transportation, Federal Highway Administration (FWA) (1999a, 1999b), and Turner, Hottenstein and Shunk (1997, 1998)).

The approach used in this study can be considered a composite of an aggregate behavior model and sketch plan, with benchmarking via comparative analysis. Initially, an aggregate behavior model is developed to estimate the overall size of the bicycling and pedestrian market for the CGG within a 75 mile radius. Next, a sketch plan approach is used to generate an order of magnitude estimate for CGG trail use under several different scenarios. Lastly, a comparative analysis is conducted to ensure that the projections developed from the preceding methodology are plausible.

#### 4-2-1. Size of the CGG Bicycling and Pedestrian Market

The analysis proceeds in several steps. First, an estimate of gross day-trip use of the CGG is developed. Gross day-trips include those arising from non-local residents and local residents. Later, the net number of non-local day-trip users is derived by subtracting local use from the gross number of day-trip users. Non-local overnight use is estimated separately based on the gross number of day-trip users. The distinction between non-local day-trip, non-local overnight, and local use has important implications for modeling the expenditures of each type of user. This is discussed further in Section 4-3 below.

The first step of the process is to develop an estimate of the overall size of the day-trip bicycling and pedestrian market from which the CGG will draw. The market 'catchment' basin is defined as all counties within 75 miles the CGG. This includes counties in South Carolina and Florida as well as those in Georgia. The 75 mile radius is from Betz, Bergstrom and Bowker (2003) based on their estimate of demand for the gross number of day-trips to the Antebellum Rail-Trail in northern Georgia. The vast majority of day-trip cyclists will fall within this 75 mile range.[8]

An aggregate behavior model was developed for this study to predict bicycle and pedestrian mode share (BPMS), the proportion of all trips that are made by bicycle or by pedestrians, as a function of several explanatory variables. The variables identified for use were selected on the basis of the literature review. BPMS is related to explanatory variables in an equation estimated with year 2000 data for 34 states[9] via regression analysis as follows:

$$BPMS = 2.42 + 0.0002(PCI) + 3.45(BIKECOM) + 0.48(PUBT) - 0.0005(RAINHOT)$$

where bicycle and pedestrian mode share (BPMS) is found to be positively related to per capita income (PCI), the percentage of workers that commuted to work via bicycle (BIKECOM), the percentage of workers commuting to work via public transportation (PUBT), and negatively related to RAINHOT which is an interactive variable reflecting above average temperatures and rainy weather.[10] The model performs well and explains 90% of the variation in state level bicycle and pedestrian mode share.

When the state level estimates are applied to the six county region and the counties within 75 miles of the CGG, the model returns a mode share of 7.99% for the six county region and 7.00% for the larger area. This means that 8% of all trips made in the six county area and 7% of all trips made in the larger area are by cycling or walking. This result is reasonable considering that Georgia's BPMS is 6.3% and is approximately 8.7% for the 34 state sample (NHTS, 2001).

Once bicycle and pedestrian mode share has been estimated, the potential market size or demand, can be estimated by multiplying bicycle and pedestrian mode share for an area by the total number of trips for the area, resulting in the estimated number of trips for the area made by pedestrians or on bicycles.[11] Thus,

$$\text{Potential Demand} = BPMS * \text{Total Number of Trips}.$$

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[8] The figure approaches 90% for comparable day-trip participants at the Historic Savannah Bikefest.

[9] Model estimated using state level data from the Bureau of Transportation Statistics' 2001 National Household Travel Survey (NHTS, 2001) and the U.S. Census Bureau (2001a, 2001b). Data limitations caused 16 states to be dropped from the data set, leaving 34 states in the sample.

[10] After correcting for heteroskedasticity using the White (1980) procedure, BIKECOM and PUBTRANS were significant at the 1% level, RAINHOT was significant at the 8% level, and PCINC was significant at the 11% level. The adjusted R-square for the model was 0.90 and the F-statistic for the model was 68.6 indicating a statistical confidence level of 99% for the model as a whole.

[11] At this point, the methodology is more akin to the sketch plan approach rather than an aggregate behavior model.

The total number of trips in the region is extrapolated on a per capita basis from the total number of trips made in Georgia, Florida, and South Carolina. This figure is multiplied by the estimated mode share for the region, and then multiplied by cycling's share of total cycling and pedestrian trips. This yields the number of cycling trips available in the market, or the overall market size from which bicycle use of the CGG will draw. The following expression is used to estimate the gross number of day-trip users on the CGG:

CGG Cyclist Demand = Potential Cyclist Demand * CGG Market Share

where CGG market share is assumed to be one-half percent.[12]

The computed figure for CGG cyclist demand serves as a leverage point for the computation of the total number of potential user-days for the CGG. Total CGG user demand from cyclists and walkers is computed based on the assumption that 30% of CGG trail users will be walkers and that 5% of the trail users will be over-night cyclists.[13]

Based on data from 2000, the projected number of potential user-days on the CGG is 300,000. There are two adjustments that are applied to this figure. First, since the data are from 2000, the potential number of user-days must be projected to 2015. Second, the ratio of actual trail use to potential trail use is expected to rise as the trail becomes a known entity. These two facets of projected use are considered in the next section.

### 4-2-2. Projected Market Growth

There are two significant elements to consider when calculating CGG market growth. The first concerns overall growth in the outdoor recreation market. First, growth in the general cycling market and in the number of trail users is of interest. Second, the review of the literature suggests that initial use of the trail will start below its potential level and rise toward its potential after several years. Both of these factors will affect the overall number of trail users and consequently, the economic impact of the trail.

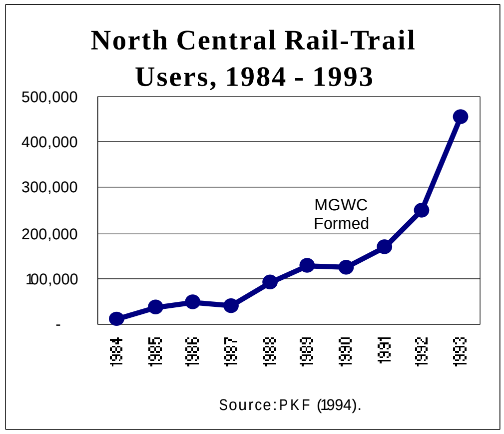
Projected growth in the overall size of the CGG cycling market from the present to 2015 is developed from figures provided by the Georgia Partnership for Economic Development (GPED, 2003) and by Bowker, et al. (1999). The Georgia Partnership for Economic Development, which is the coordinating force behind the *Dodge Tour de Georgia*, estimates that the Georgia bicyclist

[12] This may be considered a relatively conservative estimate. At the national level, estimated rail-trail market share of total bicycle trips taken was 2.9% in 1996 and 1.3% in 1988. This is based on estimates of rail-trail use by RTC (reported by Morris (2001) and Moore, et al. (1992)) as compared to total number of cycling trips reported in NHTS surveys (various years). However, when the method is roughly applied to the Antebellum Rail-Trail studied by Betz, Bergstrom and Bowker (2003), the implied market share is approximately 1.2%. The market share figure is slightly above one-half of one percent when roughly applied to the Washington and Old Dominion Trail (Regnier, 1989).
[13] See the discussion below in Sections 4-3-1 and 4-3-2 to motivate the use of these assumptions.

market has expanded at a rate of 4% per year since 1998 (GPED, 2003).[14] Bowker, et al. (1999) project that the bicycling market in the South will grow at the rate of 1.02% between 2000 and 2010. Expected growth in the size of the CGG market is assumed to be an average of these figures. This accounts for regional long-term trends (Bowker, et al.) and characteristics specific to Georgia (GPED). The figure is 2.51% for annual average growth in the CGG's market size.

Next, characteristics of growth in CGG trail usage are considered. A review of the literature suggests that recreational activities and specific site usage is influenced by previous usage.[15] Thus, it is expected that use of the CGG will increase through time as users become familiar with the trail. Long-term promotional activities directed toward non-local users are also likely to influence trail use through time. Lastly, as other elements of the East Coast Greenway are completed and begin to provide continuous links for long-distance riders, overall use of the CGG is expected to rise.

The review of the literature noted that trail use for a number of trails significantly grew in the years following the establishment of the trails. The highest rates cited in the literature are those from the North Central Trail in Maryland (PKF, 1994). In 1990, the Maryland Greenway Commission (MGWC) was formed, among other reasons, to promote the statewide trail system. In the years immediately following its formation, trail use increased by approximately 80% per year. PKF's (1994) study of the trail includes usage data that is plotted in the figure at right.




As indicated in Table 2, other trails have experienced annual growth rates that exceed 10%.[16] Of particular note from the table is the growth figure from the Rails to Trails conservancy indicating that use of the nation's rail-trail system has increased from 27 million in 1988 (Moore, et al.) to 96 million in 1996 (Morris, 2001) for an annual growth rate of approximately 17%. While there are examples of trails that have experienced substantially lower growth rates, this study

**Table 2. Growth in Trail Usage**

| Trail or Trail System | Years | Annual Growth Rate | Source |
|---|---|---|---|
| Northern Central Trail, MD | 1990 to 1993 | 80% | PKF (1994) |
| Northern Central Trail, MD | 1985 to 1989 | 40% | PKF (1994) |
| U.S. Rail-Trails | 1988 to 1996 | 17% | Moore, et al. (1992), Morris (2001) |
| Sugar River Trail, WI | 1979 to 1985 | 16% | Lawton (1986) |
| Minnesota Trails | 1980 to 1988 | 13% | Regnier (1989) |
| Maine, various | 1999 to 2005 | 12% | WSA (2001) |

[14] This relatively high figure for recent growth is consistent with data from the most recent Longwood International survey study of Georgia's visitors. In 2002, one percent of the state's visitors were bicyclists while the national average is three percent (O'Neill, 2003). This suggests that potential for sustained and significant growth is high.
[15] See Schreyer et al. (1984), Furuseth and Altman (1991), and Bowker and Leeworthy (1998).
[16] The mileage in the Minnesota system approximately doubled during this period. WSA (2001) figure applies to overnight touring cyclists. Day-trip use is expected to increase by 2% per year.

assumes that for the initial five years of existence, annual growth will be approximately 18%. After 2020, growth will continue at a rate of 2.51% per year. This growth pattern will move CGG trail use from 50% of potential in 2015 to 100% of potential by 2020.

### 4-2-3. Summary: Projected Number of Trail User-Days

This section briefly summarizes the findings of the preceding two sections on demand modeling and projecting the number of CGG user-days. A combination of an aggregate behavior model and a sketch plan was used to generate the potential number of user-days for the CGG. The figure, based on year 2000 data, was then projected to 2015. In that year, CGG trail usage is expected to be 50% of potential. By 2020, trail use will approach 100% of potential use. Thus, the expected number of user days for the CGG in 2015 is 220,000 and will grow to 495,000 by 2020.

These figures are reasonable as compared to actual and expected use for other longer distance trails. Table 3 presents usage levels from 11 studies of trails that range between 20 and 460 miles in length. CGG projections are noted in italics in the table.

**Table 3. Annual Trail Use: Longer Distance Trails**

| Trail | Location | Distance | Users |
|---|---|---|---|
| Overmountain Victory Trail* | VI, TN, NC, SC | 220 | 1,100,000 |
| ***Coastal Georgia Greenway (2020)*** | ***GA*** | ***300*** | ***495,000*** |
| Northern Central Rail Trail | MD | 20 | 457,540 |
| Trans Canada Rail Trail | Canada | 142 | 435,800 |
| Antebellum Rail Trail | GA | 23 | 416,213 |
| Bruce Trail* | Canada | 460 | 410,000 |
| McComb Orchard Trail | MI | 24 | 358,500 |
| Great Allegheny Passage | PA, MD | 150 | 350,000 |
| Little Miami Scenic Trail* | OH | 72 | 305,303 |
| Susquehanna Heritage Greenway | MD | na | 230,000 |
| ***Coastal Georgia Greenway (2015)*** | ***GA*** | ***300*** | ***220,000*** |
| Three trails in Maine | ME | 230 | 195,000 |
| Heritage Trail | IA | 26 | 135,000 |
| Black Hills Trails | SD | 110 | 50,000 |
| Elroy-Sparta Trail | WI | 32 | 50,000 |

Note: Actual trail usage denoted by *, other figures are ex-ante projections. Additional trail statistics available in Appendix Table 2 with references.

A number of factors contribute to the plausibility of the projections for the CGG. First, the six counties of coastal Georgia provide a substantial population base of 452,000. Nearby communities in Jacksonville, Florida have 800,000 persons, while an additional 140,000 persons are in nearby South Carolina counties. Several features of the population base are notable with respect to cycling. First, Savannah and Jacksonville both host a significant number of full time college students, while Liberty County serves as the primary base for the U.S. Army's Third Infantry Division. These subsets of the population are more likely than any other to engage in cycling for recreation or exercise.[17] In addition, Savannah's Historic Landmark District is the single most popular tourist attraction in the state of Georgia (GDITT, 2001), and the tourism cycling market is relatively under-developed at the present time (O'Neill, 2003). Finally, the region's climate provides year-round conditions for cycling.

### 4-3. What Expenditures Will Trail Users Make?

The expenditures of CGG trail users will be recycled through the regional economy and generate a multiplicative effect on the economy. It is therefore necessary to thoroughly consider the expenditure patterns of trail users. After the trail is constructed, the trail user expenditures will primarily drive the economic impact. Issues for consideration here include local vs. non-local users, mode share, expenditure patterns, local users 'diverted' away from non-local trails by the CGG, and durable goods purchases made in the local area.

#### 4-3-1. Local vs. Non-Local Users

An important consideration in computing any economic impact is whether the event considered injects income into the study area. Events that reshuffle income within the region generate little net impact. Thus, the degree to which CGG trail users are local residents or non-local visitors will significantly affect the economic impact. Non-local trail users inject income into the region by their expenditures on lodging and in restaurants, retail stores, gas stations. This 'new' money then recycles through the regional economy as the economic ripple spreads from their direct expenditures.

A frequently applied definition of non-local trail users includes those trail users who reside 25 or more miles from the trail. However, non-local use has been defined as narrowly as that arising from trail patrons who reside greater than 5 miles from the trail (Gobster, 1996). PWC (2001) uses a figure of 12.5 miles to identify non-local users of the Trans Canada Trail. For the purposes of computing economic impact in the six Georgia counties through which the CGG passes, the definition of non-local use is that which originates from outside the six counties. This roughly sets the range at approximately 10 to 15 miles from the CGG for non-local users.

A study conducted for the East Coast Greenway Alliance reported that the proportion of non-local users on longer distance trails generally falls in the 40% to 60% range (ECGA, 2001). This is generally confirmed by the literature review, although the proportion of non-local usage has been noted as high as 89% (Madden, 1990). Higher non-local proportions tend to arise as the trail lengthens, covers more distance in non-urban areas, and is considered a regional or statewide trail. Local and non-local use proportions are provided for a number of trails in Table 2 in the Appendix.

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[17] The U.S. Department of Transportation (2003) reports that 39% of those aged 16 to 24 recently cycled. This age category has the highest cycling penetration rate.

This study assumes two scenarios for the proportion of local and non-local users of the trail. The 'high' scenario assumes that 80% of CGG users are non-local. The 'low' scenario assumed that 50% of the trail's users are non-local. This is the same approach used by Madden (1990) in a study of the proposed Black Hills Trail.[18]

This study also identifies two types of non-local users: non-local day-trip users and non-local overnight trail users. WSA (2001) assumes that between 2 percent and 7 percent of Maine's trail users would be overnight or touring cyclists. Five percent of total CGG trail users are assumed to be non-local overnight users. Given the number of total users projected for the CGG, the breakdown among the three types of users is provided in Table 4.

**Table 4. Projected Annual CGG User-Days: Two Scenarios**

| High Scenario | Percent of Total | 2015 | 2020 |
|---|---|---|---|
| Local | 20% | 44,000 | 99,000 |
| Day-Trip | 75% | 165,000 | 371,250 |
| Overnight | 5% | 11,000 | 24,750 |
| Total | | 220,000 | 495,000 |
| Low Scenario | | | |
| Local | 50% | 110,000 | 247,500 |
| Day-Trip | 45% | 99,000 | 222,750 |
| Overnight | 5% | 11,000 | 24,750 |
| Total | | 220,000 | 495,000 |

### 4-3-2. CGG Mode Share: Cyclists and Pedestrians

The composition of CGG users by mode of use on the trail has the potential to influence the economic impact. While survey studies of trail use often delineate trail user types, many economic impact assessments do not note potential differences in expenditure patterns between pedestrian and cycling users.[19] However, the difference is primarily reflected in local vs. non-local expenditure patterns since pedestrian use is highly local in nature.

Longer trails and trails that serve as regional cycling attractions such as the CGG are characterized by a significantly sized bicycling majority.[20] Hunter and Huang (1995), in a summary review of eight trails, find mode shares ranging from 50% to 80% for cyclists. The Minnesota DNR (1989) reports that bicyclists constitute up to 75% of users on trails classified as non-local. PWC (2001) estimates that cycling's mode share is 80% of users on the long distance Trans Canada Trail. The assumed mode share for users of the CGG is 70% bicycling and 30% pedestrian.

### 4-3-3. Expenditure Patterns

The primary economic impact associated with the CGG arises from expenditures occurring in the region made by non-local trail users. These expenditures represent injections of income into the regional economy and further stimulate activity in a multiplicative ripple effect.

[18] Madden (1990) uses 50% and 90% for non-local use in the scenarios considered.
[19] State level studies are more likely to delineate these differences. See Gobster (1990). Cyclists tend to spend more on durable goods than pedestrians (Moore, Gitelson, and Graefe (1994).
[20] On shorter trails, particularly those with urban components, mode shares are mode likely to be balanced between pedestrians and cyclists. For example, see PKF (1994) and Moore, Gitelson and Graefe (1994).

As discussed above, trail users are divided into three categories: local, non-local day-trips, and non-local overnight users. The expenditure patterns for these types of users differ considerably in amount and composition. Generally, local riders tend to spend mostly on food and drink and little else. Day-trip users spend about as much on food and drink as they do on retail sales and transportation. Overnight users spend significantly on accommodations, followed by food and drink and retail sales in roughly equal proportion, while transportation expenditures represent are a relatively smaller share.[21]

**Table 5. Expenditure Patterns and Expenditures per User per Day**

| | Local | | Non-Local Day-Trip | | Non-Local Overnight | |
|---|---|---|---|---|---|---|
| | $ | % | $ | % | $ | % |
| Food and Drink | 5 | 70 | 12.50 | 50 | 15 | 25 |
| Retail Sales | 2 | 30 | 6.25 | 25 | 15 | 25 |
| Transportation | - | - | 6.25 | 25 | 10 | 18 |
| Lodging | - | - | - | - | 20 | 33 |
| Total | 7 | - | 25 | - | 60 | - |

The assumptions used in this study regarding expenditure patterns and expenditures per day are provided in the table at right and largely reflect those used by WSA (2001) and Northwestern Ontario Development Network (1996) in their studies of proposed multi-purpose trail facilities similar to the CGG. Local users of the CGG are assumed to spend $7 per day. This is similar to the figures used in other studies that mostly range from $5 to $9, with somewhat lower expenditures on shorter trails used more heavily by local residents.[22] A slightly higher figure ($7) is assumed for local expenditures given the proximity to tourist attractions near Savannah, Jekyll Island, and St. Simons Island. A much warmer overall climate in Georgia as compared to Maine is also expected to induce a relatively higher expenditure on beverages or other items related to hot weather conditions.[23]

WSA (2001) profiles approximately 1.4 million day-trip visitors to the state of Maine and approximately 90,000 overnight cyclist user-days to apportion expenditures among various categories. WSA develops an estimate of expenditures per day for overnight users from a profile of cyclists based on Holmes & Associates (1994) and Richelieu (1994). WSA's projected expenditure per day for non-local trails users is $26 for day-trip users and $57.30 for overnight users (WSA 2001 dollars are adjusted to 2003 dollars). This study uses approximately the same figures for non-local users.[24]

In summary, projected expenditures per day per CGG user are as follows: $7 for local users, $25 for non-local day-trip users, $60 for non-local overnight users of the trail. The non-local users of the trail generate a rippling economic impact in the area since these users inject income into the region. The expenditures of local users are assumed not to generate an impact since they most likely represent a reallocation of expenditures away from other local recreational or entertainment

[21] For examples of expenditure patterns, see WSA (2001), Joly (1998), and Moore, Gitelson and Graefe (1994).
[22] Studies making projections use $4.2 (WSA, 2001) and $8 (Northwestern Ontario Development Network, 1996). Figures converted to 2003 dollars.
[23] As a comparison, CUPE (1998) assumes $15 per day for local incidental users of the Ohio River Greenway. However, this is a short trail in an urbanized riverfront area.
[24] These figures may be considered somewhat conservative as several studies report (inflation adjusted) non-local expenditures per day of well over $60. For example, Regnier (1990) at $75, Gobster (1988) at $83, and CUPE (1998) at $100.

expenditures to trail-related expenditures. As such, there is no impact unless it is assumed that local trail users paid for these expenditures out of their savings accounts, an unlikely event. However, it is possible that the CGG causes local riders to remain in the region instead of traveling to trails elsewhere. This is discussed in the next section.

**4-3-4. Local Users Diverted from Non-Local Trails**

One element of the economic impact of the CGG is its ability to divert local riders from traveling to other trail facilities. When these local riders use facilities outside of the region, their expenditures represent a 'leakage' of income from the regional economy. Hence, when the trip is diverted to the CGG, their expenditures stay in the region and an additional economic impact can be attributed to the CGG. CUPE (1998) estimates that 15% of trail use arises from local riders whose trips are diverted away from non-local trails to the local trail. Their study focuses on urban trails in Indiana. Since a significant portion of the CGG is outside of urban areas, this study assumes that 10% of CGG trail users are locals diverted from trails outside of the region. The expenditure pattern is modeled as non-local day-trip cyclists as described in the previous section (See Table 5 above).

**4-3-5. Durable Goods**

A relatively small number of trail studies attempt to quantify local purchases of durable goods related to the use of the trail.[25] Moore, Gitelson, and Graef, (1994) provide specifics about the composition of durable goods purchased by users. Of the total amount spent on durables, approximately 64% was for equipment, 22% was for clothing, and 13% was for accessories.[26] These ratios are used in the current study to model the durable goods purchases of trail users. In addition, data from Moore, Gitelson, and Graef was used to estimate that the percentage of durables goods expenditures made in the local area by non-local users was approximately 10% of total direct expenditures made by all trail users.[27]

**4-3-6. Summary of Trail User Expenditure**

The discussion and assumptions of the previous sections regarding CGG trail user expenditure patterns are reflected in Table 6 on the next page. Note that this table does not provide the projected economic impact of expenditures for two reasons. First, the expenditures of local users are not included in the economic impact for reasons discussed above (See Section 4-3-1). Secondly, this table does not reflect the economic 'ripple' emanating from the injection of non-local expenditures into the regional economy. This is discussed further in Section 5 below.

[25]For example, see Moore, Gitelson, and Graef (1994), PKF (1994), OKI (1999), and Iowa Natural Heritage Foundation (1999).
[26]These figures primarily represent expenditures by bicyclists on the trails studied by Moore, Gitelson, and Graef (1994). Cyclists outnumbered pedestrian users by approximately eight to one on the two trails (Heritage and St. Marks) more heavily favored by cyclists than walkers.
[27]Derived from Tables 3 and 4 in Moore, Gitelson, and Graefe (1994).

Table 6 provides the total projected expenditures by all trail users (including local users) by year and scenario. Recall that trail use is projected to be 50% of its potential in 2015 and rises to 100% of potential by 2020. Under the ‘Low’ scenario assuming 50% local usage, total expenditures increase from $4.3 million in 2015 to $9.7 million in 2020. Under the ‘High’ scenario assuming that non-local usage is 80% of total usage, total expenditures increase from $5.6 million in 2015 to $12.6 million in 2020.

The figures for expenditure per trail user in Table 7 provide a basis of comparison with other trail studies. Table 2 in the Appendix provides a listing of similar data from other studies both before and after adjusting to 2003 dollars. In current dollars, the figures range from $8.34 to $37.45 per person, while the average is approximately $17.36 per person.

**Table 6. Total Projected Expenditure of CGG Users**

| | Total Expenditures | | |
|---|---|---|---|
| | 2015 (millions) | 2020 (millions) | Per User |
| Low Scenario | $4.3 | $9.7 | $19.53 |
| High Scenario | $5.6 | $12.6 | $25.47 |

Note: This is *not* the economic impact table.
All figures in 2003 dollars.

**Table 7. Expenditure Per User: Longer Distance Trails**

| Trail | Location | Expenditure per User: Reported | Expenditure per User: 2003 $ | Study Year |
|---|---|---|---|---|
| Elroy-Sparta Trail | WI | $24.00 | $37.45 | 1988 |
| ***Coastal Georgia Greenway (High)*** | ***GA*** | 25.47 | 25.47 | 2003 |
| Overmountain Victory Trail | VI, TN, NC, SC | 20.36 | 24.66 | 1995 |
| Interim Maine ECG Routes | ME | 21.47 | 23.84 | 1999 |
| Downeast Trail | ME | 21.16 | 23.49 | 1999 |
| ***Coastal Georgia Greenway (Low)*** | ***GA*** | 19.53 | 19.53 | 2003 |
| Black Hills Trails | SD | 13.00 | 18.36 | 1990 |
| Great Allegheny Passage | PA, MD | 15.33 | 17.36 | 1998 |
| Trans Canada Rail Trail | Canada | 15.57 | 16.69 | 2000 |
| Little Miami Scenic Trail | OH | 13.54 | 14.11 | 1998 |
| Mountain Division and Eastern Trail | ME | 11.72 | 13.01 | 1999 |
| Heritage Trail | IA | 8.89 | 12.05 | 1991 |
| Susquehanna Heritage Greenway | MD | 9.13 | 10.50 | 1997 |
| Northern Central Rail Trail | MD | 7.39 | 9.21 | 1994 |
| McComb Orchard Trail | MI | 8.00 | 8.34 | 2001 |

Note: Additional trail statistics available in Appendix Table 2 with references.

**4-4. What Else Should Be Considered?**

While the bulk of the trail's on-going economic impact is generated by trail user expenditures, other activities are of interest as well. This section considers the impact associated with new special events that have the CGG as a focal point, and the construction and maintenance expenditures associated with keeping the trail user friendly and passable.

**4-4-1. Special Cycling Events on the CGG**

Moderate scale bicycling events typically attract between 750 and 2,500 riders. For example, CRESP (2000) reviewed 10 bicycling events in Colorado that averaged 2,200 riders each. Nelson, et al (2000a, 2000b) studied two cycling events in Michigan that averaged 1,450 riders each. Lally (1992) finds that approximately 1,400 riders participated in cycling event in Canton, New York. Locally, the 2003 Historic Savannah Bikefest drew approximately 825 riders.

For this study, the estimated number of participants at special cycling events on the CGG is 3,000, or 1,500 for each of two regional rides in addition to, but not replacing, the Historic Savannah Bikefest and the Jekyll Island Jingle Bell Ride. The events are assumed to have duration of two days each.

Cyclists participating in the 2002 Historic Savannah Bikefest were surveyed to obtain expenditure, trip characteristic, and demographic data for use in this study. The survey took place during the month immediately following the event. Of 578 separate households represented on the list of registered riders, a total of 263 households responded to the survey with usable data. This yields a 46% usable response rate.

Summary expenditure data is provided in Table 8. Local riders, defined as those who reside in the six coastal counties of Georgia, numbered 12% of the total number of cyclists. Local riders spent $18.30 per person, most of which ($11) was for food, drink and entertainment. Expenditures on bicycling supplies were $5.50 per person. The distribution of expenditures across these categories is similar to the findings of other studies.

Non-local riders outnumbered local riders by over 7 to 1 (88% of total) and spent significantly more per day, $91.25.[28] Of this amount, spending on lodging and food/drink/entertainment was equal at $41 per person per day. Expenditures on souvenirs were slightly higher than those on bicycling supplies. Non-local riders traveled 200 miles on average, stayed 1.9 nights, and purchased approximately 360 room nights at local lodging establishments. The average party size was 2.5 persons.

**Table 8. 2002 Historic Savannah Bikefest Expenditure per Person per Day**

| | Local | Non-Local |
|---|---|---|
| Lodging | $0.00 | $41.00 |
| Food, Drink and Entertainment | 11.00 | 41.00 |
| Bicycling Supplies | 5.50 | 3.25 |
| Souvenirs | 1.80 | 5.75 |
| Other | 0.00 | 0.25 |
| Total | $18.30 | $91.25 |

[28] This is consistent with a number of studies that find that non-local expenditures exceed $80 to $100 per day. For example, see Holmes (1994), Summit County Community Development Department (1991), Regnier (1991) (after adjusting for inflation), CRESP (2000), WSA (1991), and Lally (1992).

The 3,000 participants in the two hypothetical CGG cycling events are assumed to exhibit similar expenditure patterns to the riders that participated at the 2002 Historic Savannah Bikefest. In addition, 80% of the participants are assumed to be non-local residents. This is somewhat higher than average for cycling events and is attributed to the anticipated features of the events.[29] A continuous trail and on-road environment provide the conditions to support longer distance events. Events featuring shorter rides tend to attract proportionately more local riders while the opposite is true for events with longer routes.[30] In addition, the attractiveness of Georgia's coastal counties as tourist destinations increases the likelihood of drawing a proportionately higher figure of non-local participants.

### 4-4-2. Construction Costs

A separate element of the economic impact associated with multi-purpose trails includes construction and maintenance expenditures. While the construction expenditures will be spread over a number of years, this study treats this expenditure as a lump sum in order to convey the magnitude of the construction impact. The expenditures on trail construction are assumed to end in 2015 after which annual maintenance expenditures are required.[31] Major resurfacing is assumed to begin ten years after trail construction is finished.

However, it should be noted that these expenditures may not represent or generate 'new' economic activity in the region. As with the effect of local trail user expenditures, construction impacts will not induce an impact if the funds are simply diverted from other local projects. This is more likely the case for local public funds allocated to the project. If construction and maintenance are supported by private funds, and if the private funds represent a 'new' donation rather than a reallocation of donated funds from other causes to the trail, the expenditures could represent an injection of income into the region and thereby generate an economic impact. Nonetheless, consistent with the standard methodology for many economic impact studies, the impact of CGG construction and maintenance expenditures are reported below.

Construction cost estimates for multi-purpose trails vary significantly depending on trail surface and host environment. There may be considerable cost differences even for similar surface types depending on the facility. For example, GITPL (1998) offers that construction costs for a standardized asphalt trail could range from $120,000 to $1 million per mile. In the aggregate, most estimates for a stand alone multi-purpose asphalt trail fall in the $50,000 to $150,000 per mile

[29] WSA (2001) estimates that approximately 50% of participants in 21 cycling tours in Maine are non-local. Nelson, et al (2000) estimate that 75% of participants at a Michigan cycling rally are non-local.
[30] For example, see WSA's (2001) profile of touring cyclists' preferences. Nelson, et al. (2002) and CRESP (1999) consider local participation at cycling events.
[31] Hickson (2003). The impact associated with construction is not necessarily dependent on the year assumed for completion of the trail. Later completion dates for the trail will have a marginal upward effect on the number of trail users as the underlying market size is assumed to grow by 2.5% per year.

range with figures up to $300,000 possible.[32] Available trail cost estimates usually reflect construction costs only, and do not include land acquisition, design, and engineering expenses.[33]

Based on construction data available from the Coastal Georgia Greenway Steering Committee, this study assumes that the 350 mile CGG system will be constructed at an average cost of $192,000 per mile.[34] The total amount directly expended on construction is estimated at $67.1 million. The CGG through-corridor and connector trails will form a 340-mile network of paved surface, divided nearly evenly between on-road asphalt and concrete surface. An additional 10 miles will be unpaved equestrian trails. Although a significant portion of the CGG will be on-road, water barriers will significantly add to the cost of both on-road and off-road segments. Consistent with other construction estimates, these figures do not include right of way or other land acquisition costs.

### 4-4-3. Maintenance Costs

The economic impact of the CGG includes the economic ripple associated with routine trail maintenance expenditures. A sampling of maintenance costs per mile from trails across the country is provided in Table 9. Higher figures typically include administrative and overhead costs, while lower figures tend to reflect the cost of maintenance materials and labor only. This study adopts a figure of $7,500 per mile per year for routine maintenance of the trail, including overhead and administrative costs. This is consistent with trail maintenance costs reported in Table 9. Total annual maintenance expenditures are projected to be $2.63 million.

**Table 9. Trail Maintenance Costs per Mile**

| Trail or Trail System | Reported | 2003 $ | Study Year | Source, notes |
|---|---|---|---|---|
| Pinellas Co, FL | $16,500 | 19,455 | 1996 | CIPM (1998) |
| North Central Trail, IA | 10,000 | 12,803 | 1993 | PKF (1994) |
| Washington & OD | 6,667 | 7,567 | 1998 | CIPM (1998) |
| ***Coastal Georgia Greenway*** | ***$7,500*** | ***$7,500*** | ***2003*** | ***Toma, Hoag, Griffin (2003)*** |
| Michigan & Ohio | 5,000 to 9,600 | na | na | Krupiarz (2003) |
| Cary, NC system | 6,550 | 7,434 | 1998 | GITPL (1998) |
| Asheville, NC system | 6,500 | 7,377 | 1998 | GITPL (1998), projected |
| Blackwater Heritage, FL | 5,412 | 6,142 | 1998 | CIPM (1998) |
| Trans Canada Trail | 5,000 | 5,372 | 2000 | PWC (2000), 10% of construction |
| Raleigh, NC system | 4,000 | 4,540 | 1998 | GITPL (1998) |
| Rails with Trails | 4,200 | 4,200 | 2003 | Alta Planning and Design (2003) |
| Iowa Trails | 1,500 | 1,611 | 2000 | Iowa Trails 2000 (2000) |
| Various | 1,000 | na | na | Ralph (2003), common figure |

[32] See Holmes (1994), Wisconsin DOT (1998), CIPM (1998), and Iowa DOT (2000).
[33] GITPL (1998) offer that design and engineering costs may be estimated at 10% to 15% of construction costs. Land acquisition costs will depend heavily on land use along the trail's right of way. Iowa DOT (2000), GITPL (1998), and Holmes (1994) provide detailed cost estimates for various trail features.
[34] Hickson (2003).

In addition to routine maintenance costs, trails will require resurfacing on a periodic basis. Resurfacing of asphalt trails typically occurs on a ten-year cycle.[35] Costs for resurfacing asphalt trails generally average about $50,000 per mile (Iowa Tails (2000), GITPL (1998), 60 trails surveyed by RTC (1996)). In this study, resurfacing expenditures of $50,000 per mile per year are assumed to begin in the tenth year after initial construction is completed and are prorated at 7.5% per year thereafter. Thus, total annual resurfacing expenditures are projected to be $1.3 million, beginning in 2025.

## 5. Economic Impact Methodology

The economic impact of the Coastal Georgia Greenway was estimated using a commonly applied approach, that of input-output modeling. An input-output model provides a snapshot of the structure of a regional economy at a given point in time. These models detail the relationships among industries and sectors of the economy and permit an analyst to 'follow the money' after it is injected into the economy. The model used in this study was originally developed by the U.S. Forest Service and is now available through the Minnesota IMPLAN Group of Stillwater, MN.

The IMPLAN input-output model is used to track the flow of expenditures through the region and provides a ready way of assessing the economic effects of an event, business, or industry. Dollars are injected into the economy as a firm, organization, or individuals purchase inputs from local firms and households. The suppliers and households then spend a percentage of this income purchasing goods and services from other local businesses, thus generating a second round of economic activity. Each subsequent round of spending results in a smaller impact as a portion of the spending leaks out of the local economy through the purchase of non-local goods and services. IMPLAN tracks each of these waves of spending and yields an economic multiplier that can be applied to the initial dollar infusion to estimate the total impact of the economic activity.

Economic activity associated with the greenway produces both direct and secondary (ripple) impacts in the economic of the six county study area. Direct impacts are the result of expenditures made by CGG trail users and also result from construction and maintenance of the trail itself. Secondary impacts are commonly referred to as "ripple effects" and result as firms supply goods and services to CGG users or support construction and maintenance efforts. Additional secondary effects arise as individuals who are employed by the establishments supported by CGG users and their suppliers spend their income in other regional business establishments. The total economic impact attributable to the CGG is the sum of its direct and secondary impacts.

## 6. Economic Impact Results

This section provides an overview of the projected economic impact of the Coastal Georgia Greenway on the six county study area through which the trail passes. The economic impact arises

[35] Iowa Trails (2000) and GITPL (1998).

from two major components: 1) expenditures made by non-local and diverted local trail users, and 2) construction, maintenance, and resurfacing expenditures.[36]

The annual economic impacts estimated for employment, business revenue and labor income are presented in Table 10. This table presents the projected impacts under the 'Low' scenario. The underlying assumption is that 50% of CGG users are from the local (six county) area. Note that the expenditures include those of non-local day-trip users, non-local overnight users, local users diverted from non-local trails, and purchases of trail-related durable goods made by non-local users in the six county study area. Note that the economic impact does not include the effect of local user expenditures since they do not represent an injection of "new money" into the region. In 2015 when trail use is 50% of potential, these expenditures are expected to generate $5 million in business revenue, support 95 jobs, generate $1.7 million in labor income, and add $289,000 to state and local government coffers. In 2020, when trail use is at full potential, the impacts are slightly more than double the 2015 figures.[37] After 2020, the impact is expected to increase at approximately 2.5% per year.

**Table 10. Annual Economic Impact I**
**CGG Trail User Expenditures**
**Low Scenario (50% Local Use)**

| Year | Business Revenue ($000) | Employment | Labor Income ($000) | State and Local Tax Revenue ($000) |
|---|---|---|---|---|
| 2015 | 5,030 | 95 | 1,715 | 289 |
| 2020 | 10,200 | 192 | 3,475 | 589 |

Note: Figures in 2003 dollars, except for employment. Does not include expenditures of local users, except for those diverted from non-local trails. Labor Income includes salaries, wages, and benefits.

Table 11 provides the annual projected economic impact of CGG trail user expenditures under the 'High' scenario. In this scenario, 80% of trail usage arises from non-local users. In 2015 when trail use is 50% of potential, these expenditures are expected to generate $6.9 million in business revenue, support 133 jobs, generate $2.4 million in labor income, and add $407,000 to state and local

**Table 11. Annual Economic Impact I**
**CGG Trail User Expenditures**
**High Scenario (80% Non-Local Use)**

| Year | Business Revenue ($000) | Employment | Labor Income ($000) | State and Local Tax Revenue ($000) |
|---|---|---|---|---|
| 2015 | 6,940 | 133 | 2,410 | 407 |
| 2020 | 15,020 | 285 | 5,120 | 871 |

Note: Figures in 2003 dollars, except for employment. Does not include expenditures of local users, except for those diverted from non-local trails. Labor Income includes salaries, wages, and benefits.

[36] Retail sales margins were applied to these expenditures of trail users to ensure that the activity was apportioned among the appropriate sectors. Failure to apply the margins would result in a distortion of the economic impact and overestimate the impact on retailers while underestimating the impact on wholesalers and distributors, for example, that support the retailers.
[37] The 2020 impacts are not equal to exactly double the 2015 impacts since the underlying potential level of use is increasing slightly each year.

government coffers. In 2020, when trail use is at full potential, the impacts are slightly more than double the 2015 figures. After 2020, the impact is projected to increase at 2.5% per year.

A second element of the economic impact associated with the CGG is that which arises from trail construction and annual maintenance activity. The impacts created by these activities are detailed in Table 12. Although construction will be spread over several years, the costs are treated as a lump-sum expenditure, thus the construction impact reported in Table 12 is not an annual impact, but represents the aggregate effect of trail construction. Initial construction will support nearly 1,070 jobs and will generate $34.4 million in labor income. Businesses will earn just over $103 million in revenue, while state and local governments will obtain $2.4 million in tax revenue.

Trail maintenance is an annual activity that will generate an economic impact as well. Trail maintenance begins in the year when the trail is completed, while resurfacing begins ten years after the trail is completed. Customary trail maintenance expenditures of $7,500 per mile will generate $4 million in business revenue while supporting 42 jobs annually. $1.4 million in labor income is generated while state and local government obtain $95,000 in tax revenue from this activity.

Resurfacing is projected to begin ten years after the trail is constructed. Resurfacing expenditures are estimated at $50,000 per mile with 7.5% of the trail requiring resurfacing each year once the age of the trail reaches ten years. The economic impact of resurfacing activity is approximately one-half that of routine trail maintenance.

**Table 12. Economic Impact II**
**CGG Construction**
**and Annual Maintenance and Resurfacing**

| Event | Business Revenue ($000) | Employment | Labor Income ($000) | State and Local Tax Revenue ($000) |
|---|---|---|---|---|
| Initial Construction | 103,030 | 1,067 | 34,390 | 2,417 |
| Trail Maintenance (starts 2015) | 4,050 | 42 | 1,350 | 95 |
| Resurfacing (starts 2025) | 2,000 | 21 | 670 | 46 |

Note: Figures in 2003 dollars, except for employment. Initial construction is a one-time event. Resurfacing begins ten years after initial construction is completed. Labor Income includes salaries, wages, and benefits.

## 7. Regional Park Authority

A model of park management that merits consideration for the CGG is a regional park authority. Numerous examples of these types of agencies exist to manage, preserve, and enhance recreational assets that overlap the jurisdictional boundaries of more than one municipal government. Examples of regional park authorities include the following:

Cleveland Metroparks (Cleveland, OH)
East Bay Regional Park District (San Francisco Bay Area)
Fox Valley Park District (Aurora, IL)
Maryland National Capital Park and Planning Commission
Metropolitan Park and Recreation District (St. Louis, MO area)
Northern Virginia Regional Park Authority
River Parks Authority (Tulsa, OK)

Varying preferences or priorities for park and recreation expenditures among host communities has the potential to jeopardize the continuity of trail maintenance and reduce overall use of the CGG. Given that annual maintenance and resurfacing costs are projected to reach $4 million (in 2003 dollars) by 2025, the creation of a regional authority with dedicated revenue sources merits serious review by interested parties along with county and city governments hosting the CGG.

The creation of a regional park authority is likely to require enabling action by the state legislature, particularly if the authority derives revenue from property or sales taxes levied in participating counties. Dedicated property taxes or assessment district taxes are more common than sales tax provisions, but are not the only methods of financing. Other regional park authorities submit budget requests directly to county or municipal governments. A supervisory board of appointed members typically oversees the park authority, while an executive director manages the day to day activity of the agency.

## 8. Conclusion

The 150 mile Georgia component of the East Coast Greenway, the Coastal Georgia Greenway (CGG), and its 200 miles of connector trails will provide its users with an unparalleled opportunity to experience the unique coastal Georgia environment and habitat. The pedestrian, bicycle, equestrian, and water trails that will link Savannah with St. Marys will serve as a highly valuable greenway resource for the state, its residents, and visitors.

The greenway will provide a wide range of benefits, ranging from less easily quantified improvements in community health, quality of life, social fabric, environmental cleanliness and preservation to more directly measured benefits in the form of increased values for adjacent properties. The CGG will also provide its six host counties with an economic stimulous that will inject millions of dollars into the region and support hundreds of jobs for local residents.

The economic impact has, at its foundation, a number of underlying assumptions. The number of trail users is estimated under two scenarios regarding capacity utilization, while two additional variants in the composition of the trail users influence the total amount of expenditures that non-local visitors inject into the regional economy. Other relevant issues contributing to the economic impact include two hypothetical special events as well as expenditures on trail construction and maintenance.

Key findings of the study are presented next. The economic impact on business revenue, labor income and tax revenue figures are reported in constant 2003 dollars.
The Coastal Georgia Greenway will:

- Attract 220,000 user-days in 2015 and 495,000 user-days in 2020.
- Generate per user-day expenditures of between $19.53 and $25.47. (These figures include local users' expenditures, and therefore do not represent the economic impact.)

The Coastal Georgia Greenway is projected to have the economic impacts as identified below.

Assuming that 50% of trail users are local residents (Low Scenario), the CGG will *annually*:

- Add $5 million to business revenue in 2015, rising to $10.2 million in 2020.
- Support 95 jobs in 2015, rising to 192 jobs in 2020.
- Generate $1.7 million in labor income in 2015, rising to $3.5 million in 2020.
- Generate $289,000 in state and local tax revenue in 2015, rising to $589,000 in 2020.
- The impact is projected to increase by 2.5% per year after 2020.

Assuming that 80% of trail users are non-local residents (High Scenario), the CGG will *annually*:

- Add $6.9 million to business revenue in 2015, rising to $15 million in 2020.
- Support 133 jobs in 2015, rising to 285 jobs in 2020.
- Generate $2.4 million in labor income in 2015, rising to $5.1 million in 2020.
- Generate $407,000 in state and local tax revenue in 2015, rising to $871,000 in 2020.
- The impact is projected to increase by 2.5% per year after 2020.

Construction expenditures of $67 million are projected to have a *one-time impact* that will:

- Support 1,067 jobs earning $34.4 million in labor income.
- Generate $103 million in business revenue and $2.4 million in tax revenue.

By 2025, maintenance and resurfacing expenditures will *annually*:

- Support 63 jobs earning $2 million in labor income.
- Generate $6 million in business revenue and $141,000 in tax revenue.

Consideration of a regional park authority to manage the CGG is recommended.

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Appendix

## Appendix Table 1. Coastal Georgia Bike Trail Inventory

| County and Trail Name | Length (miles) |
|---|---|
| **Bryan County** | |
| J.F. Gregory City Park, City of Richmond Hill | 2.8 |
| **Camden County** | |
| Woodbine Waterfront Park | 0.6 |
| **Chatham County** | |
| East-West Bikeway | 6.4 |
| Habersham St. Bikeway | 14 |
| Historic District Bikeway | 3.3 |
| Hunter AAF Base Perimeter Bikeway | 10 |
| Johnny Mercer Corridor | 5 |
| Lake Mayer Bikeway | 0.75 |
| Lincoln St. Bikeway | 14 |
| McQueens Island Rail Trail | 6 |
| River Street Bike Path | 0.8 |
| Robert McCorkle Bikeway | 2 |
| Skidaway Island State Park | 3 |
| Triplett Park Lake Trail | 7.6 |
| Wassaw Island National Wildlife Refuge (conditions vary) | 20 |
| **Glynn County** | |
| Jekyll Island Park | 20 |
| St. Simons Island | 18 |
| **Liberty County** | |
| Melon Bluff (private access) | 20 |
| **McIntosh County** | |
| Darien Trails | 6 |
| Blackbeard Island National Wildlife Refuge (conditions vary) | 10 |
| Harris Neck National Wildlife Refuge | 15 |
| Sapelo Island (limited access) | 30 |
| **Regional Facility in South Carolina** | |
| Savannah National Wildlife Refuge (other trail conditions and access vary) | 4 |
| **Total** | 216 |

Number of Trails: 23
Median Length: 6.4 miles
Average Length: 9.5 miles.

Sources: Chatham County-Savannah MPC (2000), Coastal Georgia Greenway. (2003), Metz (2003), RTC, (2001)

# Appendix Table 2. Comparative Trail Data

| | Location | Length | Annual Users | Local Use as % of Total | Non-Local Use as % of Total | Users per Mile | Total Annual Expenditures | Expend. Per Mile | Expend. Per User | Year | Source |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Proposed Trail Studies** | | | | | | | | | | | |
| Antebellum Rail Trail | GA | 23 | 416,213 | | | 18,096 | $7,500,000 | $326,087 | $18.02 | 1999 | Betz, Bergstrom, Bowker |
| Black Hill Trails | SD | 110 | 50,000 | | 50%-90% | 455 | $650,000 | $5,909 | $13.00 | 1990 | Madden |
| Great Alleghany Passage | PA, MD | 150 | 350,000 | | | 2,333 | $26,500,000 | $176,667 | $75.71 | 1998 | NTEC |
| La Route Verte | CAN | 2,165 | 2,734,375 | 7% | 93% | 1,263 | $11,148,800 | $5,150 | $4.08 | 1996, 1998 | NW Ontario Dev. Network |
| McComb Orchard Trail | MI | 24 | 358,500 | | | 14,938 | $2,868,000 | $119,500 | $8.00 | 1999 | Southeast MI Greenways Team |
| Susquehanna Heritage Greenway | MD | | 230,000 | 48% | 52% | | $2,100,000 | | $9.13 | 1997 | Jacob France Center |
| Three ME trails | ME | 230 | 195,000 | 62% | 39% | 848 | $2,697,500 | $11,728 | $13.83 | 1999 | Wilbur Smith Associates |
| Downeast Trail | ME | 135 | 43,000 | 47% | 53% | 319 | $910,000 | $6,741 | $21.16 | 1999 | Wilbur Smith Associates |
| Eastern Trail | ME | 55 | 91,500 | 66% | 34% | 1,664 | $1,072,500 | $19,500 | $11.72 | 1999 | Wilbur Smith Associates |
| Mountain Division | ME | 40 | 61,000 | 66% | 34% | 1,525 | $715,000 | $17,875 | $11.72 | 1999 | Wilbur Smith Associates |
| Trans Canada Rail Trail | CAN | 142 | 435,800 | 78% | 22% | 3,069 | $6,785,000 | $47,782 | $15.57 | 2000 | PWC |
| **Existing Trail Studies** | | | | | | | | | | | |
| Bruce Trail | CAN | 460 | 410,000 | 73% | 27% | 891 | $47,000,000 | $102,174 | $114.63 | 1994-1995 | NW Ontario Dev. Network |
| Cardinal Greenway Trail | IN | 10 | 9,169 | | | 917 | | | | 2000 | Lindsey & Doan |
| Elroy-Sparta Trail | WI | 32 | 50,000 | 11% | 89% | 1,563 | $1,257,000 | $37,500 | $25.14 | 1988 | Holmes & Associates |
| Heritage Trail | IA | 26 | 135,000 | 31% | 69% | 5,192 | $1,243,350 | $46,154 | $9.21 | 1991 | Moore |
| Lafayette/Moraga Trail | CA | 7.6 | 400,000 | 4% | 96% | 52,632 | $1,588,000 | $208,947 | $3.97 | 1992 | Moore |
| Little Miami Scenic Trail | OH | 72 | 305,303 | 77% | 23% | 4,240 | $4,133,803 | $57,414 | $13.54 | 1998 | Southeast MI Greenways Team |
| Northern Central Rail Trail | MD | 20 | 457,540 | | | 22,877 | $3,380,013 | $169,001 | $7.39 | 1994 | PKF Consulting |
| Oil Creek State Park Trail | PA | 9.7 | 22,700 | 34% | 66% | 2,340 | $1,800,000 | $185,567 | $79.30 | 1991 | Lawson |
| Overmount.Victory Nat'l Hist. Trail | VA, TN, NC, SC | 220 | 1,100,000 | | | 5,000 | $22,400,000 | $101,818 | $20.36 | 1995 | NW Ontario Dev. Network |
| Pere Marquette Rail-Trail | MI | 22 | 178,000 | 75% | 25% | 8,091 | | | | 2000-01 | Nelson, Vogt, Lynch, & Stynes |
| Pinellas Trail | FL | 34 | 1,518 | 87% | 13% | 45 | | | | | Renaissance Planning Group |
| Red Cedar Trail | WI | 14.5 | 40,000 | | | 2,759 | $2,000,000 | $137,931 | $50.00 | 1995 | Leholm & Havlovic |
| River Greenway Trail | IN | 15 | 25,573 | | | 1,705 | | | | 2000 | Lindsey & Luu Bao Doan |
| St. Marks Trail | FL | 16 | 170,000 | 18% | 82% | 10,625 | $1,873,400 | $117,188 | $11.02 | 1991 | Moore |
| Sugar River Trail | WI | 23.5 | 47,566 | 48% | 52% | 2,024 | $429,400 | $18,272 | $9.03 | 1985 | Moore & Barthlow |
| Summit County Trail | CO | | 212,779 | 84% | 16% | | $4,300,000 | | $20.21 | 1989 | Summit County Community Dev. Dept. |