

Motor Coach Tourism in Savannah

Produced for the City of Savannah

By the

**Armstrong Atlantic State University
Center for Regional Analysis**

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Armstrong
CENTER FOR REGIONAL ANALYSIS

Foreword

This study was produced by Michael Toma, Richard McGrath, Yassaman Saadatmand, and Nicolas Byrd of the Center for Regional Analysis at Armstrong Atlantic State University. The report was produced on behalf of the City of Savannah is intended for its use. Sean Brandon, Buddy Bishop, and Dominic Ross of the City of Savannah, provided valuable assistance, without which, this report could not have been completed.

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Motor Coach Tourism in Savannah

Executive Summary

Economic Impact for the City of Savannah

Out-Of-Town Visitors	80,335
Direct Spending	\$21 million
Total Economic Impact	\$35 million
Total Employment Supported	381

Fiscal Impact

Total Tax Revenue	\$1,469,000
Tax Revenue per Permit Issued	\$745
City Costs per Permit (approx.)	\$51
Net Benefit per Permit	\$694

Total Impact in Chatham County

Direct Spending	\$26.2 million
Total Economic Impact	\$43.8 million
Total Employment Supported	477
Total Tax Revenue	\$3,463,000

Motor Coach Regulation:

- New Orleans, Charleston, Washington, D.C. and San Francisco have among the most restrictive regulations for motor coaches among cities reviewed: limited access, required tour guides, and idling restrictions apply.
- Savannah's motor coach fee structure is comparable to fees elsewhere.
- Peak load pricing is unlikely to significantly change seasonal demand.
- Limited access to areas or limiting the issuance of permits is likely to be injurious to tourism in Savannah.
- Policy to encourage the use of step-on guides (discount for permit fee) in Savannah is likely to improve the enforcement of motor coach regulations.

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1. Introduction

1-1. Background of the Project

The City of Savannah issued 1,973 permits for tourist motor coaches in 2010. The passenger-tourists generate both economic benefits and costs for the City of Savannah and Chatham County. These costs and benefits are examined in greater detail in the sections that follow.

1-2. Objectives

This report provides an estimate of the economic costs and benefits arising from motor coach based tourism in Savannah. Coach permit data from 2010 is analyzed while results are reported in terms of 2012 dollars.

The fundamental source of economic impact is funds spent by motor coach-based tourists who reside outside of Chatham County. The visitor spending represents an injection of “new money” into the county economy which then recycles in subsequent spending waves in the area. This report provides a quantification of total visitor spending in the economy of Savannah and Chatham County, the economic ripple effects (indirect and induced impact), and the gross and net government fiscal impact resulting from motor coach-based tourism.

Motor coach regulation in other cities is reviewed and comments are provided for various regulations considered for Savannah.

2. Economic Impact: Jobs, Business Revenue, Labor Income

This section provides a review of economic impact terminology, analytical assumptions, and results of the impact analysis. It includes an enumeration of the economic impact benefit analysis on Chatham County and the City of Savannah by those who travelled to Savannah using permitted motor coaches (MC) in 2010.

2-1. Measures of Economic Impact

The economic impact of coach-based tourism expenditure on the county economy was estimated using an input-output model that tracks the flow of dollars and economic activity in the area. In this case, dollars are injected into the county economy by the expenditures of those travelling to Savannah by motor coach. The MC-based tourists allocate their expenditures to accommodations, restaurants, gifts and entertainment. The expenditures directly benefit those sectors and also indirectly affect other sectors of economy in Chatham County. This spurs additional “virtuous” cycles of subsequent spending and re-spending of tourist based dollars injected into the county economy.

The establishments that directly receive a portion of the money spent by those visitors in turn purchase goods and services from other county businesses, triggering further rounds of economic

activity. Each subsequent round of spending results in a smaller impact compared to the previous round because a portion of the spending “leaks out” of the county economy through the purchase of goods and services from businesses located outside of the Savannah area. An input-output model tracks each of these waves of spending and yields economic multipliers that can be applied to the calculation of gross and net benefits to the city.

The estimated economic impacts of MC-based tourist expenditure include direct and secondary impacts. Direct impacts result from traveler expenditures at various establishments while visiting Savannah. Secondary impacts are commonly referred to as ‘ripple effects,’ and can be both indirect and induced. Indirect impacts are generated in the supply chain of firms providing directly-benefitting establishments with their inputs. Induced impacts result from the expenditures of workers employed by establishments that directly and indirectly benefited from travelers’ expenditures. This increased spending flows through the county economy, further stimulating business activity and increasing employment, labor income, and revenue. The total economic impact of the Savannah motor coach travelers’ expenditures is the sum of direct and secondary (indirect and induced) impacts on the county economy.

2-2. Key Assumptions

All economic models are constructed on the basis of key assumptions. The economic impact of MC-based tourist expenditure on the Savannah economy is estimated based on assumptions described next.

The **total number of MC-based tourists** is estimated based on the number of coach permits issued, type of coaches in the market, and coach occupancy rates. A total of 1,973 permits were issued in 2010 for motor coaches. Table 1 provides the estimated number of passengers given bus type and observed market characteristics. Of the permits issued, 80% were issued to 45-foot, 59-seat coaches with 71% occupancy. Ten percent of the permits were issued to 40-foot, 51-seat coaches with 95% occupancy, while the remaining 10% of permits were issued to 33-foot coaches with 25 to 34 seats.¹

Bus Type	Number of Seats	Bus Occupancy	Passengers per Coach	Bus Type Market Share	Permits by Type	Estimated Passengers by Type
45 feet	59	71%	41.89	80%	1,578	66,119
40 feet	51	95%	48.45	10%	197	9,559
33 feet	29.5	80%	23.60	10%	197	4,656
Total Passengers						80,335

¹Proportions drawn from an interview with a major coach operator in Savannah and extrapolation from city data.

Next, the **length of stay** is estimated and **apportioned to the city and county**. Roughly 8% of groups requested permits for a one-night visit, about 31% of the permits were for a two-night visit, about 41% were for a three-night visit, and about 21% were for a four-night visit. Approximately 75% to 90% of passengers on three-night stays are assumed to have taken a day trip to eastside islands such as Tybee (also includes Fort Jackson and Fort Pulaski). Nearly 95% of the four-night coach visitors are assumed to have taken a day trip outside of Savannah metro area. See Table 2 and Table 3.

**Table 2
Non-Church Group Passengers**

Type	Market Share	(Non-Hotel) % spent in County	(Non-Hotel) % spent in City	Total Spending Days	Weighted Days* in County	Weighted Days* in City	Location of Hotel
1-pass-thru	7.75%	100%	100%	0.75	0.058	0.058	I-95
2 night	30.75%	100%	100%	2.0	0.615	0.615	Mid/Downtown
3 night**	40.75%	100%	72.5%	3.0	1.223	0.886	Mid/Downtown
4 night***	20.75%	76%	56%	4.0	0.633	0.462	Mid/Downtown
Total days per visitor					2.53	2.02	
*	Weighted by market share. For example, for 4 night stays: $0.2075 \times 0.76 \times 4 \text{ days} = 0.633 \text{ days in County}$. For 4-night stays, only 5% of the fourth day is assumed to be spent in Chatham County. Thus, $3.05/4 = 76\%$ of spending during the four days in is the county.						
**	75-90% of 3 night visitors will take a side trip to eastside islands, Tybee, etc.						
***	95% of 4 night visitors will take a day trip outside of MSA.						

**Table 3
Church Group Passengers**

Type	Market Share Weight	Tourism Bureau Actual Groups	Tourism Bureau Weight	(Non-Hotel) % spent in County	(Non-Hotel) % spent in City	Total Days	Weighted Days* in County	Weighted Days* in City
1-pass-thru	7.75%	12	25.00%	100%	100%	0.75	0.188	0.188
2 night	30.75%	18	37.50%	100%	100%	2.0	0.750	0.750
3 night**	40.75%	13	27.08%	100%	72.5%	3.0	0.813	0.589
4 night***	20.75%	5	10.42%	76%	56%	4.0	0.318	0.232
Total days per visitor							2.07	1.76
*	Weighted by market share. For example, for 4 night stays: $0.2075 \times 0.76 \times 4 \text{ days} = 0.633 \text{ days in County}$. For 4-night stays, only 5% of the fourth day is assumed to be spent in Chatham County. Thus, $3.05/4 = 76\%$ of spending during the four days in is the county.							
**	75-90% of 3 night visitors will take a side trip to eastside islands, Tybee, etc.							
***	95% of 4 night visitors will take a day trip outside of MSA.							

Total spending days in Tables 2 and 3 are estimated based on half-day expenditures on the first and last day of the trip. For example, on a two-night stay, half of the first and last days are assumed to be travel days, leaving only a half-day for spending in Savannah on two of the three days of the trip. Continuing, all expenditures on day two are assumed to be spent in Savannah, so a three-day, two-night trip has only two spending days in Savannah.

Coach-based tourists can be divided into two groups with different travel characteristics: church groups and non-church groups. Of coach-based visitors, nearly 90% were passengers not affiliated with a church group (non-church passengers), and the remaining 10% were passengers touring with a church group. In the period of study, church groups spent fewer days in the area than non-church groups. The average length of time that non-church passengers spent in the county was 2.53 days as calculated in Table 2.² The average length of time that church passengers spent in the county was 2.07 days as calculated in Table 3. Church group market share, by length of stay, is based on tourism bureau data.

Given the number of permits granted, the allocation between non-church group and church group passengers, and their length of stay, the (market share- and passenger share-weighted) time that MC-based tourists stayed in the County was calculated to be 2.48 days (See Table 4). The time that MC-based tourists stayed in the City of Savannah was calculated to be 1.99 days.

Table 4						
Days in City and County						
	Market Share Weighted Days in County	Market Share Weighted Days in City	Passenger Share Weight	Passenger Weighted Days in County	Passenger Weighted Days in City	Total Passengers
Non-church	2.53	2.02	0.9	2.28	1.82	70,775
Church	2.07	1.76	0.1	0.21	0.18	9,559
Total				2.48	1.99	80,335

It was assumed the visitors spend money where they spend time.³ This assumption allows for the rough apportionment of MC-based tourism impacts to areas in the City of Savannah and to other areas of Chatham County outside city limits. Of the total time spent in the county, approximately 80% of the time was spent in the city. Consequently, 20% of MC-based tourist time was spent in other areas of the county.

Estimates of **tourist spending** are required to compute the economic impact. Calculations of coach-based visitors' expenditure patterns are based, in part, on the 2008 conversion study conducted for the Savannah CVB. The calculation draws on the expenditure profile of a typical

²The trip length reported in the Longwoods, International report on Savannah tourism in 2011 was 2.5 days.

³This is a rough estimation method. More precise estimates of expenditure patterns could be derived from surveying coach-based tourists. Surveying was beyond the budgetary scope of this report.

auto-based visitor with double-occupancy accommodations. This data is re-weighted by age and income factors reported for coach-based tourists from conversion studies performed for the Savannah CVB from 2000 to 2008. Spending data from previous conversion studies for coach-based tourists was statistically unreliable.

This methodology yields an estimate of typical motor coach visitor spending equal to \$131.20 per day in 2008 while visiting Savannah. This is equivalent to \$140.05 in 2012 dollars.⁴ Approximately 45% of visitor expenditures were on accommodations apportioned 80% to the city and 20% to the County outside of the city, while 26.5% were for food and beverages. The remaining 28.5% of visitor expenditures were on shopping, entertainment and other miscellaneous items. See Table 5 below.

Table 5	
Tourist Spending per Person per Day	
Category of Expenditure	Spending per person per day ⁵
Accommodations	\$63.22
Dining and Beverage	\$37.09
Ground Transportation <i>Ground Transportation includes taxis, gasoline, public transit, parking, etc.</i>	\$2.91
Entertainment and Attractions <i>Entertainment is defined as live shows, exhibits, clubs, and nightlife.</i>	\$11.78
Shopping and Gifts <i>Shopping is defined as purchases of souvenirs, clothing, jewelry, electronics etc.</i>	\$21.41
Miscellaneous Expenditure <i>Miscellaneous is defined as spending not elsewhere classified.</i>	\$3.62
TOTAL	\$140.05

A summary of key assumptions for the study are as follows:

Total number of MC-based tourists: 80,335	Tourist spending per person per day: \$140.05
Length of stay	Accommodations spending: \$63.22
In County: 2.48 days ⁶	In City: 80%
In City: 1.99 days	In County outside of city: 20%
In County outside of City: 0.49 days	All other spending: \$76.83
	In City: 80%
	In County outside of city: 20%

⁴Based on US Bureau of Labor Statistics' Consumer Price Index.

⁵Expenditures for overnight visitors to Savannah, as reported in the Longwoods, International report on Savannah tourism in 2011 were comparable: \$68 for accommodations, \$45 for food/beverage, \$27 for shopping, \$19 for entertainment, and \$18 for transportation. Lower figures for MC-based entertainment/sightseeing are expected because the MC-based trip package likely includes some sightseeing admissions. MC-based transportation spending is also expected to be lower, for obvious reasons.

⁶The trip length reported in the Longwoods, International report on Savannah tourism in 2011 was 2.5 days.

2-3. Employment, Business Revenue, and Labor Income Impacts

This section provides an overview of the estimated economic impacts resulting from issuing 1,973 motor coach permits in 2010. The economic impacts for business revenue and labor income are adjusted for expected inflation and reported in terms of 2012 dollars¹. Employment impact is presented in terms of full and part-time workers. Discounting the employment data by four percent yields the number of full-time equivalent positions supported by MC-based tourism.

Table 6 lists a summary of the employment, business revenue and labor income impacts. “Total” refers to the impact in the combined city and county areas. The individual city and county impacts are reported separately.

	Direct Impact	Secondary Impact	Total Impact	Multiplier
Total Employment	328	149	477	1.5
City	262	119	381	
County (outside of city)	66	30	96	
Business Revenue*	\$26,230,000	\$17,520,000	\$43,750,000	1.7
City	\$20,984,000	\$14,016,000	\$35,000,000	
County (outside of city)	\$5,246,000	\$3,504,000	\$8,750,000	
Labor Income*	\$8,660,000	\$6,020,000	\$14,680,000	1.7
City	\$6,928,000	\$4,816,000	\$11,744,000	
County (outside of city)	\$1,732,000	\$1,204,000	\$2,936,000	
Notes: *Business Revenue and Labor Income are reported in 2012 dollars. Labor Income includes salaries, wages, benefits, and proprietor’s income. Secondary impact includes indirect and induced impacts.				

In 2010, Savannah coach-based visitor expenditures supported 477 jobs in the combined area of the City of Savannah and Chatham County. The combined area also experienced a total business revenue impact of \$43.8 million. The total labor income impact of \$14.7 million across 477 jobs implies compensation, benefits, and proprietor’s income of roughly \$32,100 per full-time equivalent job.

In the city of Savannah, coach-based visitor expenditures supported a total of 381 jobs. The direct employment from coach-based visitors was 262 jobs, and the secondary employment impact, or the economic ripple effect, was 119 jobs. The employment multiplier was 1.5. This indicates that for every 10 jobs at businesses directly benefiting from motor coach tourism another 5 jobs were created elsewhere in the city.

The total impact on business revenue in the City of Savannah was \$35 million. The direct effect was \$21 million, while the secondary effect was \$14 million. The multiplier for business revenue was 1.7. This means that for every \$1 spent by MC-based tourists in businesses catering to their needs, an additional 70 cents in business revenue was generated for other enterprises in the city.

Coach-based tourism resulted in a total labor income impact \$14.7 million in the City of Savannah. The direct labor income impact was \$11.7 million and the secondary (indirect and induced) earnings and benefits were \$3 million. The labor income multiplier was 1.7, meaning that for every \$1 earned by workers employed in firms catering to the needs of MC-based tourists, an additional \$.70 was earned by other workers at other firms in the city.

In other areas of Chatham County outside of the city, coach-based visitor expenditures supported 96 jobs. These areas also experienced a total business revenue impact of \$8.8 million and a total labor income impact of \$2.9 million.

The economic impacts for the top five sectors, ranked by employment impact, are listed in Table 7. Accommodation and Restaurants/Bars combine for nearly 60% of the total employment impact. Retail stores and museums/historical sites are the next largest sectors benefitting from MC-based tourism. These impacts also adhere to the 80% city and 20% county apportionment of impacts.

Description	Employment	Labor Income	Business Revenue
Hotels and motels	143	\$4,093,000	\$14,336,000
Food services and drinking places	140	\$3,098,000	\$8,558,000
Retail stores - general merchandise	25	\$690,000	\$1,275,000
Museums, historical sites, zoos, and parks	22	\$733,000	\$2,353,000
Transit and ground passenger transportation	10	\$276,000	\$563,000

3. Fiscal Impacts

This section provides an estimate of the gross and net fiscal impact of MC-based tourism on the finances of the City of Savannah. The software used to estimate the economic impact reports the effects on an aggregate county-wide basis which are then apportioned to City of Savannah and the remaining portions of Chatham County outside of city limits.⁷ The method of apportionment is based on ratios derived from Georgia Department of Revenue reports (*Summary of Property*

⁷The apportionment of fiscal effects in Chatham County outside of the City of Savannah should not be interpreted strictly as the effect on Chatham County government finances *per se*, because, for example, a portion of retail sales tax revenue collected in the county is distributed to various other municipalities in Chatham County.

Tax Revenue Levied in Georgia Counties, 2011 and Georgia County Ad Valorem Tax Digest Millage Rates by Taxing Jurisdiction, 2011) and *Savannah's Comprehensive Annual Financial Report, 2011*. As such, the data of this section are presented as estimates, not as accounting matters of fact.

Gross impacts are computed based on the economic impact presented in the previous section and arise from the revenue stream created by taxable retail sales, hotel and motel lodging taxes, property tax revenue, and various fees paid by businesses.

Net fiscal impacts are based on interviews of city staff and staff fulfillment of requests for information about city resources (staff time, and operating and maintenance expenditures) expended on issuance of motor coach permits, the cost of monitoring compliance with motor coach permits, and the cost of enforcing motor coach parking regulations. Further, city staff were queried about the opportunity cost of parking set-asides for motor coaches that might otherwise have generated revenue from metered parking. It was determined, based on interviews of city staff from the Office of Mobility Services, that such set-asides and foregone revenue were largely an insignificant matter because of the lack of metered parking in the vicinity of the parking set-asides for motor coaches. The single exception to this is the MC stop on MLK Jr. Blvd. between Orange Street and Broughton Street, at which four metered spaces are lost.

3-1. Gross Benefit to City and County

The gross effect of MC-based tourism on City of Savannah government finances primarily is comprised of retail sales tax revenue, property tax revenue, hotel and motel sales tax revenue, preservation tax revenue, and other miscellaneous business fees yielding revenue for the city.

Gross fiscal impacts reported below are based on the direct and total economic impacts reported in the previous section. Recall that “Direct” expenditures/impacts are those arising from the injection of “new money” into the county economy by the MC-based tourists. “Total” impacts are both the direct expenditures/impacts and the resulting economic ripple effects resulting from the re-cycling of a portion of the new money in the county economy.

The fiscal impacts are further refined to apportion the impact to the City of Savannah and the remaining portion of Chatham County.

- Impacts referred to as “City” pertain to the City of Savannah and include:
 - LOST and SPLOST retail sales tax revenue allocated to the city
 - Property tax revenue allocated to the city
 - Hotel sales tax revenue allocated to the City for “tourism enhancement” and the Savannah Civic Center⁸
 - Preservation fee revenue of \$1 per person levied on tours in Savannah
- Impacts referred to as “Related County” pertain to the rest of the county and include:
 - LOST and SPLOST retail sales tax revenue allocated to Chatham County and other municipalities in Chatham County

⁸*Savannah's Comprehensive Annual Financial Report, 2011*

- ESPLOST retail sales tax revenue allocated to the Savannah-Chatham County Public School district
- Property tax revenue allocated to the public school district
- Property tax revenue allocated to Chatham County
- Property tax revenue allocated to Chatham Area Transit
- Hotel sales tax revenue allocated to VisitSavannah and the Savannah International Maritime and Trade Center

The following points are of note for this section:

- Of the 7% retail sales tax levied in Chatham County in 2012, the state tax rate is 4% while county level LOST, SPLOST, and ESPLOST tax rates are 1% each.
- The aggregate property tax revenue estimate is provided by the economic impact software and is based on an aggregation of state and local residential, commercial, and other property tax incidence.
- The fiscal impacts are presented on a per motor coach basis and per passenger basis, assuming an average of 41 passengers per coach across the three motor coach sizes considered.⁹

The gross fiscal impacts on the City of Savannah and remaining portion of Chatham County are substantial, totaling \$3.5 million in tax revenue. In 2010, 1,973 motor coach permits were issued. Each motor coach yields a total **gross tax revenue impact** of approximately **\$745 for the City of Savannah** and \$1,006 for the rest of Chatham County. This includes additional tax revenue generated by the economic ripple effect. On a per person basis, each MC-based tourist yields approximately \$18 for the city and about \$25 for the rest of the county. A listing of tax revenue impact by category of tax revenue is provided in Table 8 below. Also, the direct impacts, or those associated solely with the spending behavior of MC-based tourists, are provided in Table 8.

Fiscal Category	DIRECT IMPACT		TOTAL IMPACT	
	City	Related County	City	Related County
City				
LOST/SPLOST	\$187.08		\$224.19	
Hotel Tax	202.99		229.14	
Preservation Fee	41.00		41.00	
Property Tax	208.81		250.24	
Related County				
LOST/SPLOST		\$91.06		\$109.13
ESPLOST		138.86		166.41
Hotel Tax		183.22		206.82
Property Tax: School		240.56		288.28
Property Tax: Chat MO		182.65		218.89
Property Tax: CAT		14.12		16.93
Per Permit, sum	\$639.88	\$850.49	\$744.57	\$1,006.45
Per Person, sum	15.61	20.74	18.16	24.55

⁹See Table 1.

3-2. Net Benefit Analysis for City of Savannah

The section calculates the net benefit on City of Savannah finances resulting from the economic activity induced by MC-based tourists. In general, the net benefit is computed by subtracting city expenditures on servicing MC-based tourists from the gross benefit of \$745 in tax revenue per coach estimated in the previous section. The directly measurable expenditure by the City of Savannah on motor coach-based tourism is approximately \$51 per permit issued.

The expenditure per permit issued is comprised of personnel and non-personnel expenditures to the city that are related to motor coach tourism. Personnel expenditures are associated with issuance of permits, monitoring compliance with permit requirements, and enforcement of motor coach parking requirements. None of the personnel involved with issuance and compliance of motor coach permits have full time commitment to the task. All have other duties and allocate some of their time to MC issuance and compliance. The number of city staff and annualized personnel expenditures is provided in Table 9 below.

Non-personnel expenditures include signage for motor coaches, street maintenance expenditures, and foregone parking meter revenue. Based on discussion with personnel from the city's Public Works department, street maintenance expenditures result from the cost of repairing four parking spaces each year for \$1,250 each, apportioned equally among motor coaches, trolleys and other local busses, and CAT busses. The vehicles leak fluids that degrade the asphalt, resulting in repair work that cannot be attributed to any particular class of vehicle. Based on discussion with Office of Mobility Services personnel, it was determined that foregone parking meter revenue is associated with only one motor coach-only bus stop on Martin Luther King, Jr. Blvd. The revenue from four metered parking spaces is foregone because of the motor coach stop. It is assumed that the meters would generate \$1/hour for 9 hours of 100% occupancy between 8am and 5pm for 250 days per year, yielding \$9,000 per year.

	City Staff Assigned	Annualized Wages and Benefits for Staff Time Assigned
Personnel Expenditures		
Issuance of coach permits	5	\$31,529
Monitoring compliance and enforcement of permit and parking requirements	18	\$57,165
Non-Personnel Expenditures (Annual Cost)		
Signage for motor coaches		\$1,000
Maintenance (streets and curbs)		\$1,667
Foregone parking meter revenue		\$9,000
Total, Personnel and Non-Personnel		\$100,361
Permits Issued (2010)		1,973
City Expenditure per Permit Issued (2010)		\$50.87

Based on the above discussion, the total annual expenditure by the city for motor coach matters is \$100,361. This calculates to \$50.87 for each of the 1,973 permits issued in 2010. This assumes the City of Savannah expenditure data from 2012 was applicable for 2010.

The **net fiscal benefit** to the city of motor coach based tourism, then, is approximately \$745 less approximately \$51, or **\$694 for each permit issued**.

This methodology does not include an estimation of lost local worker productivity (income) attributed to time lost because of increased traffic congestion, the psychic cost of coach-related visual blight, environmental and health costs attributable to motor coach engine fumes or other environmental pollutants, or the cost of trash disposal, policing, and other city services required for MC-based tourists.

An alternate methodology that indirectly apportions the City of Savannah's \$280 million budget to MC-based tourists yields an "order of magnitude" estimate of approximately \$250 in city expenditures per motor coach permit issued. This assumes the entire city budget is expended to collectively contribute to the portfolio of desirable amenities comprising the "Savannah experience" for tourists.

This back-of-the-envelope computation assumes that 12.1 million tourists are "converted" into resident-equivalents based on their duration of stay; must account for in-commuting of workers from outside the city of Savannah in Bryan, Chatham and Effingham Counties; and consider the "tourist-like" visitation of regional (but not Savannah city) residents enjoying the amenities of Savannah for festivals as well as cultural, leisure and other social events. A number of "heroic" assumptions must be made because there is no definitive estimate of the frequency and duration of non-Savannah city residents' visits to the city, or what proportion of the regional population makes such trips. Further, definitive data about within-county commuting patterns is lacking. U.S. Census Bureau and U.S. Commerce Department commuting pattern data is reported for county level activity. For these reasons, the estimated \$250 expenditure per motor coach permit from this methodology must be considered an "order of magnitude" upper bound.

4. Motor Coach Regulation

There have been calls for increased regulation of motor coaches in Savannah. This section reviews the motor coach regulatory policy of other cities and provides comments on the efficacy of several regulatory options.

4-1. Motor Coach Regulation In Other Cities

Motor coach policies and regulations were reviewed from 17 cities with a high degree of tourism activity. Parking and loading zone restrictions are the most frequently imposed regulations on motor coaches. Parking fees of \$10 to \$50 per day are commonly found, but most are well below \$50 per day. Table 10 on the following page provides details of restrictions by city.

The most tightly restricted MC-based tourism is in cities of high population density and of significant interest to tourists: New Orleans, Charleston (SC), Washington, D.C., and San Francisco. In these markets, it is more common to find requirement for a step-on tour guide, idling restrictions, and route or area limitations on motor coach operation. Savannah's 12 million visitors (2011) are beginning to move it toward the company of these heavily toured cities.

Table 10
Motor Coach Restrictions in Tourist Destinations

	Parking Permits	Parking Fee	Overnight Fee	Tour Permit	Tour Guide	Parking Zones	Loading Zones	Idle Restrictions	Route Restrictions	No or few Restrictions
Alexandria, VA	X	X	X			X	X			
Austin, TX	X	X				X				
Boston, MA							X	X		
Cambridge, OH					X	X	X			
*Charleston, SC	X	X		X	X	X	X		X	
Chattanooga, TN						X	X			
Chicago, IL			X			X				
Jacksonville, FL						X				X
Memphis, TN						X				X
Mobile, AL						X				X
Nashville, TN		X				X	X	X		
*New Orleans, LA	X			X	X	X	X	X	X	
Ocean City, MD	X	X				X				
San Antonio, TX						X	X			
*San Francisco, CA		X				X	X	X		
St Augustine, FL		X	X			X	X			
*Washington DC	X	X		X	X	X	X	X	X	
*Savannah	X ⁺	X ⁺		X ⁺		X	X	X	X ⁺	
* Indicates more tightly restricted motor coach touring. + Savannah requires a daily transportation permit (\$10), daily touring permit (\$20), or combination permit (\$30 for 72 hours). Coaches are prohibited in specific areas of the city.										

4-2: Comments on Motor Coach Regulation

One issue related to motor coach travel to Savannah is its **highly seasonal nature**, peaking in March-April-May period when 50% of the year's permits were issued for 2010. The seasonal pattern in permit issuance is consistent in data dating back to 2000. Street congestion is a noted issue with double or triple stacking at some bus-stops. As a solution to similar congestion problems on transportation infrastructure, peak load pricing is sometimes used. The **peak-load**

pricing model sets up a price structure in which the economic activity in question is priced with a premium (has an additional surcharge) at times of highest demand. This is common, for example, in subway systems when route fares are higher during typical commuter hours. This is done to shift persons who are more sensitive to price (elastic demand) to the non-peak time periods.

To be an effective tool of demand management, peak load pricing requires a non-trivial component of demand to be sensitive (elastic) to the premium price. Peak load pricing in the presence of inelastic demand, while likely to generate more revenue, is unlikely to shift demand to other time periods. The pattern of tourism demand in Savannah is highly seasonal, and is likely to be relatively inelastic, although no direct studies of its price elasticity are a matter of public record or availability. The choice to travel to Savannah is likely constrained by preferences to visit the city during certain times of the year because of the cycle of seasonal beauty and amenities in Savannah and because of work and/or education schedules in the point of origin.

Using a **peak load fee per coach** to shift demand to other times of the year is **unlikely to be a viable policy** because the peak-load fee would likely need to be exceptionally high to alter the pattern of demand. As a hypothetical, consider, for example, an exorbitant peak-load fee of \$1000 levied per coach in high-demand months. Based on 2010 data, an average of 41 persons per motor coach would share the peak-load fee of \$1,000 per coach. Rounding, the hypothetical \$25 per person peak-load fee represents approximately 4% of the estimated total cost of the trip per person to Savannah, including personal expenditures in Savannah (\$221) and the cost of a typical two-night trip package paid to the tour company operator (\$300-\$600). Note that this example is not meant to suggest the City of Savannah should impose a \$1000 peak load fee, but that with such an unusual and relatively high hypothetical fee¹⁰, the per person share of the peak load fee is unlikely to significantly affect the pattern of demand.

Placing a **cap on the issuance of permits or restricting access** to specific zones would conceivably reduce the number of motor coaches in certain areas of the city, but is likely to simply push coaches to relatively less desirable areas outside the downtown historic landmark district or the most desirable subsets of it. Caps and limited access create undesirable outcomes if tourists are unable to access city amenities when desired or are shunted off to a holding pen while waiting for a specific time of access. Given the high degree of loyalty (repeat trips and recommendations) of Savannah tourists and the importance to Savannah tourism of person to person communication through social media and word of mouth¹¹, these less-than-desirable outcomes are **likely to be injurious to tourism in Savannah**.¹² Further, caps and limited access

¹⁰Nine of seventeen cities researched have motor coach fees for permits or overnight parking, but the cost of both is no more than \$50 per day, and generally is \$25 to \$35 per day.

¹¹See the 2006 Savannah Image Study by D.K. Shiflett, 2011 Longwoods International Final Visitor Report, and numerous conversions studies conducted on behalf of the Savannah CVB during the 2000s by the Armstrong Atlantic State University Center for Regional Analysis.

¹²Lack of access effectively raises the price of a Savannah tourist trip to infinity, thus inducing a change in demand. This is the extreme example of a peak load pricing model when access to the desired good or service is prohibited by a cap.

must be enforced to have the intended effect, thus requiring the diversion of municipal personnel and resources from other tasks.

Policy to **encourage more frequent use of step-on tour guides** is less likely to be traumatizing to tourism in Savannah than would caps on the issuance of coach permits and limited access. Appropriately trained step-on tour guides could provide valuable assistance to coach drivers, alerting them to adhere to existing rules and educating drivers about new rules and thereby acting as soft-glove enforcers of parking rules and regulations. Further, the per person cost of a step-on guide for each coach is unlikely to significantly alter tourism demand for the Savannah experience, even among more cost-conscious groups. Short of mandating the use of step-on guides, their frequency of use could be encouraged by city policy to **reduce the fee paid for the coach permit** if the coach operator makes use of a step-on tour guide.

5. Conclusion

Motor coach based tourism in Savannah contributes to the economic vibrancy of the city and region, but is not cost-free. This report estimates both benefits and costs and presents a net benefit estimate to the city per motor coach permit issued. Further, discussion of motor coach regulation in other cities and alternatives for such regulation in Savannah is also provided. The “Executive Summary” section of this document provides a summary of key findings.