

10-1-2008

# Throwing Money in the Trash: Can the City of Atlanta Restructure and Expand its Existing Recycling Program in Order to Make it a Revenue Stream and Reduce the amount of Waste being deposited in area Landfills?

Jennifer Norfleet

Follow this and additional works at: <http://digitalcommons.kennesaw.edu/etd>

 Part of the [Public Affairs, Public Policy and Public Administration Commons](#)

---

## Recommended Citation

Norfleet, Jennifer, "Throwing Money in the Trash: Can the City of Atlanta Restructure and Expand its Existing Recycling Program in Order to Make it a Revenue Stream and Reduce the amount of Waste being deposited in area Landfills?" (2008). *Dissertations, Theses and Capstone Projects*. Paper 16.

**Throwing Money in the Trash:**  
**Can the City of Atlanta Restructure and Expand its Existing Recycling**  
**Program in Order to Make it a Revenue Stream and Reduce the amount of**  
**Waste being deposited in area Landfills?**

**Jennifer Norfleet**

A Practicum Paper

Submitted in Partial Fulfillment of the Requirements for the

**Master of Public Administration**

**Kennesaw State University**

December, 2008

## **ACKNOWLEDGEMENTS**

To Dr. Andrew Ewoh, thank you for your guidance. You challenged me to stretch myself academically, to produce a practicum that I can be proud of.

To my wonderful and supportive friends and family.....I could not have accomplished this without your love!

To Xeric, who has stood beside me through out this entire process. I love you deeply.

**Throwing Money in the Trash:**  
**Can the City of Atlanta Restructure and Expand its Existing Recycling**  
**Program in Order to Make it a Revenue Stream and Reduce the amount of**  
**Waste being deposited in area Landfills?**

**EXECUTIVE SUMMARY**

*Purpose:* The purpose of this project is to evaluate whether the City of Atlanta can earn revenue from the sale of its recyclable goods by changing the program's structure and improving citizen participation. This paper examines the background of the City of Atlanta's recycling program, along with other recycling programs in metropolitan Atlanta. The paper also compares and contrasts Atlanta's program with cities outside of Georgia to identify best practices that may be able to be adopted by the City of Atlanta.

*Methodology:* Primary data were gathered through interviews with city officials including recycling coordinators from the following metropolitan Atlanta cities: Atlanta, Smyrna, Conyers, Roswell, Milton, Sandy Springs, Johns Creek, Decatur and East Point. Additionally, the Director of Keep Georgia Beautiful was interviewed. Keep Georgia Beautiful is an affiliate of Keep America Beautiful, a national program that supports its local affiliates by providing educational resources and public awareness campaigns (Keep America Beautiful, 2006, 3). A survey instrument was used to evaluate City of Atlanta's residents' attitudes regarding the current recycling program.

The questions were structured to expose reasons for nonparticipation and identify ways that the City can close the gap between the existing participants and non participants. The sample consisted of 118 subjects. The survey was completed by self administered questionnaire in person or online.

Secondary research was used to gain a better understanding of the City's recycling program, how surrounding cities administer recycling programs, and the intergovernmental relationship between the federal government, the State of Georgia, and the City of Atlanta; as it relates to the disposal of recyclables. Recycling programs for cities outside of the State of Georgia were also referenced. Only cities similar in size and population were considered so that a clear comparisons could be made.

*Major Findings:*

- Of the 118 subjects surveyed, 111 (or 94 percent), reported being homeowners.
- Of the 118 subjects surveyed 112 (or 95 percent), answered that they would participate in the recycling program or increase their participation if they were aware that the program generated money for the City.
- Seventy two percent of the respondents who do not recycle through the City of Atlanta's curbside program, utilize drop off centers for recyclable goods not currently run by the City of Atlanta.
- Fifty percent of the respondents that do not currently participate in the City's recycling program cited being unaware of a program as being the reason for their non participation.

- Twenty nine percent of the respondents cited inadequate service as the reason for non-participation.

*Challenges:* The City of Atlanta's budget deficit is likely the biggest challenge to expanding and or modifying the current recycling program. The Georgia Environmental Protection Division released a study in 2003 which reported that the landfills serving metro Atlanta will reach zero capacity in 19 years (Dodd, 2003,1) In 2008, the City only has 14 years to identify a strategy to dispose off the 250,000 tons of waste that it deposits in landfills each year (Hall, 2003,1). The City is growing rapidly and as the population increases so too does the amount of waste generated. The City faces the challenge of cutting costs to overcome the current budget deficit while trying to implement a strategy to address its long range waste disposal issues. In the short term, it will be much less expensive to send trash to landfills instead of recycling centers. This is largely due to Georgia's low tipping fees. Tipping fees are fees that are charged for each ton of waste deposited in a landfill. Georgia's tipping fees are among the lowest in the nation, making landfill use the most cost effective choice in the short term. The City will have to overcome the attractiveness of utilizing the less expensive short term solution and focus at minimum on sustaining the recycling program to address a long term problem.

The second challenge is rebuilding a program in which many residents have lost faith. During the course of administering this survey, respondents expressed their frustrations with the program. A range of criticism was shared. Yet the program's inconsistency was the most frequently reported concern. If cuts are made to the program in the short term that affects the programs level of consistency, it will be difficult to regain participants in the long run.

## **Recommendations**

The following recommendations are being made to the City of Atlanta regarding the participation rate, program modifications, and obtaining additional resources.

*Participation:* Based on the results of this study, the City of Atlanta should consider the following to increase participation levels:

- Highlight the potential revenue that the City can recapture through the sale of recyclable goods. Based on the survey results, doing so would encourage residents to participate or increase their current participation.
- Include drop off centers in the recycling program mix. According to the research findings, cities with the most successful programs offer both curbside pick-up and drop off locations.
- Ensure that participants have the necessary bins to deposit recyclables. Not having a bin was cited as the number two reason for nonparticipation in the current program.

*Program Type:* Because the City has budget challenges it may be wise to look into a program with bi-weekly or monthly pick-ups instead of running a program with weekly service. For example, Nashville, Tennessee has instituted a successful recycling program with monthly pick-ups. The city has done so by enlisting community support through the use of block captains responsible for reminding residents the day prior to the monthly pick-up. Results from this study revealed that nearly 5 percent of the respondents do not recycle because they forget to put the bin out for collection.

*Additional Recommendation:* The City of Atlanta should become an affiliate of Keep America Beautiful. Although affiliates pay annual dues, the dues were reported as being nominal by the Keep America Beautiful affiliates interviewed for this study. Becoming an affiliate will allow the City to have access to educational resources, research tools, and greater grant funding opportunities, all of which would be helpful toward program sustainability.

**Throwing Money in the Trash:**  
**Can the City of Atlanta Restructure and Expand its Existing Recycling**  
**Program in Order to Make it a Revenue Stream and Reduce the amount of**  
**Waste being deposited in area Landfills?**

**TABLE OF CONTENTS**

<b>EXECUTIVE SUMMARY.....</b>	<b>iii</b>
<b>INTRODUCTION.....</b>	<b>1</b>
The City of Atlanta’s Recycling Program: An In-depth Evaluation	
<b>LITERATURE REVIEW.....</b>	<b>4</b>
The History and Evolution of Recycling Programs in the US	
Intergovernmental Relations	
Past Studies and Recycling Program Evaluations	
<b>METHODOLOGY.....</b>	<b>10</b>
<b>FINDINGS.....</b>	<b>12</b>
An In-depth Review of Metropolitan Atlanta Cities	
An In-depth Review of Two Comparable Cities Outside of Georgia	
<b>CONCLUSION.....</b>	<b>27</b>
<b>APPENDIX.....</b>	<b>30</b>

**Throwing Money in the Trash:**  
**Can the City of Atlanta Restructure and Expand its Existing Recycling**  
**Program in Order to Make it a Revenue Stream and Reduce the amount of**  
**Waste being deposited in area Landfills?**

**INTRODUCTION**

The State of Georgia spends \$90 million per year in the waste management of 2.6 million tons of recyclable materials which are dumped into landfills (Wheatley, 2008, 1). It is estimated that the State of Georgia throws away \$300 million in recyclable materials each year. According to an article recently released by a local periodical, Georgia residents produce 6.6 pounds of trash per day, which is twice the national average. At the same time, Georgia has the biggest market for recyclable materials in the nation. One-third of all recycled plastic bottles in North America are shipped to Dalton, Georgia to be used in carpet production. Furthermore, Georgians discard 320,000 tons of newspaper while similar materials are being trucked into Dublin, Georgia from Texas and other states. Forty seven percent of the recyclable materials generated, can be found in what is known as the Atlanta Regional Development Center. The Atlanta Regional Commission's Regional Development Center is comprised of the ten counties that make up metro Atlanta to include: Cherokee, Clayton, Cobb, DeKalb, Douglas, Fayette, Fulton, Gwinnett, Henry, and Rockdale. Among the counties listed, Fulton is the largest county and the City of Atlanta is the most populous city. Many of the cities located in the aforementioned counties have recycling programs. Roswell and Decatur are often credited with having flagship programs. Both programs will be discussed in detail (see Findings).

According to the Director of Public Works, Joe Basista, the City of Atlanta is responsible for the production of 150,000 to 175,000 tons of waste annually. Yet, according to data reported by several references in this study, the number is closer to 250,000 tons. Basista also reported that 7,000 tons of recycled materials were collected in 2007 (Wheatley, 2008, 1).

Until July of 2008, materials collected through the City's recycling initiative were processed by Dreamsan Inc., a College Park recycling business. For over five years, the company's contract with the City allowed it to collect, process, and keep all recyclables recovered. The company then processed the goods and sold them on the market. At present, the City of Atlanta faces a \$140 million deficit (Wheatley, 2008, 1). As the Mayor looks to balance the budget through increasing taxes and eliminating jobs, the recycling program faces severe cuts as well. Selling the City's recyclable materials should be considered in order to keep the program operational. The City could use the additional revenue to supplement the money that will be cut and potentially expand the program to increase its potential revenue stream and reuse the amount of waste deposited in area landfills.

The purpose of this project is to evaluate whether the City of Atlanta can earn revenue from the sale of its recyclable goods and reduce landfill deposits by changing the program's structure and improving citizen participation. This paper examines the background of the City of Atlanta's recycling program along with other recycling programs in metro Atlanta. The paper also compares and contrasts Atlanta's program with those in Miami, Florida and Nashville, Tennessee. Miami, Florida is comparable to Atlanta in population and currently sells its recyclable goods, which makes it a viable example for evaluation. Similarly, Nashville, Tennessee has a comparable population and has implemented a unique program strategy that Atlanta may be able to adopt.

## **The City of Atlanta's Recycling Program: An In-depth Evaluation**

The City of Atlanta has a population of 420,000 people (Wheatley, 2008, 1). Over the past 20 years, the metropolitan area has grown from 2.9 million to 4.1 million people (Wheatley, 2008, 1). Despite the City's exponential growth, no formal recycling program was implemented until 1996. In 2001, the City of Atlanta entered into a contract with Dreamsans, Incorporated to dispose off the recycled materials collected through the City's program. According to the current coordinator, Mary Harrington, the contract with Dreamsans was likely structured during a time when the market for recyclable goods was weak and the City was seeking only to reduce its landfill contribution. She also noted that Atlanta's recycling program has been challenged by many obstacles. The lack of funding, unfavorable contracts with past collection companies, high employee turnover and poor oversight, have left the program with few accurate records and a need to start from scratch (Harrington, 2008, interview). At the end of the most recent contract, the City decided to take back solid waste collection. The City is currently preparing a Request for Proposals (RFP), in hopes to solicit processing plants (Harrington, 2008, interview).

The new coordinator is evaluating a number of options for handling the program. She is hopeful that a few recent changes in how the program collects and redistributes revenue will significantly improve the program. The City plans to look at alternatives that will allow it to make revenue from the sale of the goods collected. To that end, the new recycling program will be attached to an Enterprise Fund, allowing the revenue generated to be reinvested in the program, instead of being placed in the General Fund (Harrington, 2008, interview). It is important to note here that due to insufficient record keeping over the past several years accurate tonnage and program costs could not be obtained.

## LITERATURE REVIEW

The History and Evolution of Recycling Programs in the US Recycling is, in its simplest sense, taking a used product and remaking it into a new, useful product instead of discarding it as waste. For most of history, recycling was typically done only when people lacked the resources to manufacture a new product from virgin materials (Strong, 1997, 1). The word “recycle” was coined by the petroleum industry during the 1920s (Zimring, 2005, 1). Centuries before industrialization in England, paper was made from 100 percent recycled materials (Ackerman, 1997, 16). Most of the recycling done at that time was out of necessity. Recycling and material recovery was done by independent citizens who made income from the sale of the goods. American hero Paul Revere is reported to be among the many tradesmen who recycled scrap metal from several sources to create new goods (Zimring, 2005, 83). This form of recycling continued in Europe and the United States until the Great Depression (Zimring, 2005, 83). The Depression reduced the demand for materials for a number of years. Demand for recyclable goods picked up slightly during World War II. However, new sources for raw materials were identified and the need for those goods again decreased.

It was not until the 1960s and early 1970s that recycling began to re-emerge as a common practice. Ackerman (1997) estimates that nearly 100 communities implemented recycling programs during approximately ten years. Programs collected a full range of materials to include: newspaper, aluminum cans, glass and bottles. In 1969, Seattle, Washington, was the first city to offer a curbside recycling program (Zimring, 2005, 134). Three years later, in 1972, Oregon became the first state to implement a recycling incentive program for bottles (Zimring, 2005, 134).

Participants were paid for the bottles they recycled. However, by 1975 the market had dried up for all materials except aluminum cans and the growth of programs slowed significantly (Ackerman, 1997, 16).

During the late 1970s and the early 1980s two factors played a role in making recycling regain popularity. The first was the Resource Conservation and Recovery Act (RCRA) of 1976. The RCRA placed restrictions on landfills and incinerators to protect the public (Ackerman, 1997, 17). At one time incinerators became a popular solid waste disposal method. However, it was found that incinerators release ash into the air that is more toxic than the waste being disposed off. By 1997, only 10 percent of the incinerators that were once quite popular were still in use (Ackerman, 1997, 16). The second was the “Landfill Crisis.” During the 1980s, Americans were inundated with information about the shortage of landfill capacity. Several reports were released stating that America’s landfills were “at capacity” and that something had to be done to reduce landfill deposits (American Chemistry Council, 2007, 1). As a result, cities across the US began investing in recycling programs. By the time reports were released discrediting the idea that the landfills were full, recycling had taken on a life of its own (Ackerman, 1997, 16). By 1989, 10,000 recycling drop off and buy back centers existed (Zimring, 2005, 134).

Ackerman (1997) credits several factors to the popularity of recycling programs. The first is psychological; Americans have become increasingly aware of how their actions negatively affect the environment. Ackerman cites that Americans feel that recycling is one way that they can demonstrate that they care about the environment. In essence, recycling programs make people “feel” like they are doing their part. There have been several recent examples to illustrate the public’s commitment to recycling programs. For example, in 2002, the mayor of New York

City, Michael Bloomberg, announced that due to a budget shortfall, the recycling program would stop collecting plastics and glass. Discontinuing the collection of these materials would save the city an estimated \$40 million per year (Zimring, 2005, 131). Furthermore, because the markets for the resale of plastic and glass was weak in that region, many of the materials collected ended up in the landfill (Zimring, 2005, 134). Despite the budget challenges and the lack of a market for the goods the public was outraged by the proposed changes. Elected officials, community groups and residents all voiced their concerns about the changes. The program was ultimately fully reinstated when the city closed its last landfill, Staten Island's Fresh Kill, leaving New York City to export all its waste out of state (Joseph, 2005, 1). Taking advantage of the demand, private landfills boosted the price per ton of garbage nearly 50 percent in three years making recycling and other waste reduction strategies more attractive (Joseph,2005,1). The second factor was also illustrated by the New York case described above. Some cities view recycling as a cost reduction strategy. In cities where tipping fees are high; diverting trash from the waste stream can save the city thousands of dollars over time. In his 1992 article, *Finding a Formula for Successful Recycling Collection*, Apotheker cites that higher landfill costs, revenue from recyclable material sales, and program design will provide programs with a better economic margin over time.

The concept of recycling has evolved significantly from a means of survival to a social responsibility. Although many programs still only collect a limited array of materials, the availability of programs has increased substantially over the past fifty years. According to a report released by the American Forest and Paper Association in 2008, an estimated 87 percent of the American public have access to curbside or drop off recycling programs. The study

reports that 191 million people have access to a curbside program and 196 million people have access to at least one drop off location (American Forest and Paper Association, 2008, 8).

### **Intergovernmental Relations**

The Federal government began taking legislative actions regarding waste reduction and disposal in 1965 through the Solid Waste Disposal Act. The Act provided state and local governments with technical and financial assistance to develop disposal programs. Since that time, the federal government has introduced new agencies, policies, and guidelines to address the issue. The Environmental Protection Agency (EPA), established in 1970, developed loose recycling guidelines for the majority of waste in the US and has instead focused its efforts on the disposal of toxic substances. To that end, the EPA left municipal waste guidelines to be established by the states and municipalities. However, the EPA does offer grant funding and other resources to recycling programs to assist with the development of facilities.

The State of Georgia has taken an active role in the development and implementation of recycling programs. Over twenty years ago the state began to examine the disposal of solid waste and recyclable goods. In 1990, the Georgia Comprehensive Solid Waste Act was adopted (Cobb, 2008, interview). This bill encourages cities and counties to decrease their solid waste by 25 percent within five years. It established the various policies. First, every effort should be made by companies to ensure that no adverse health effects from public or private solid waste facilities will occur. Second, it developed citizen waste reduction education initiatives. Third, it set waste reduction targets. The initial target was set to lower landfill input by 25 percent by 1996. The policy also named the Director of the Environmental Protection Division of the Department of Natural Resources as the person responsible for the solid waste management

program. Last, the plan required that each municipality submit a Solid Waste Management Plan every 10 years (Georgia Department of Community Affairs, 2008).

The bill's waste reduction guidelines served as a suggestion, not a mandate, and consequently few numbers were reported to measure the progress. Today, most local governments agree that the goal is still largely unmet. Although there were no direct penalties for not adhering to the guideline, cities that comply are eligible to receive grants. The City of Roswell, among others, has received over \$300,000 in grant funding (Lieberman, 2008). The City has used the money for the purchase and repair of equipment and to fund community outreach initiatives (Lieberman, 2008).

### **Past Studies and Recycling Program Evaluations**

In 1991, Folz and Hazlett surveyed 264 recycling program coordinators across the nation to evaluate the factors that contribute to a successful program. The researchers found that the programs that have the highest levels of material recovery have a high rate of participation, environmental groups are involved within the program planning phase, educational efforts are administered through community groups, paid newspaper ads are used and the recycling coordinators tend to have several years of experience verses those in programs that do not perform as well (Folz and Hazlett, 1991, 527).

In addition to recovery rates, they also found that educating the community about recycling and making the program convenient were the two biggest factors leading to participation. Folz and Hazlett (1991) noted that citizens increased their participation after being reminded of the cost of throwing the items in the landfill and the potential value of the goods being discarded.

The researchers also found that recycling revenues accounted for about 20 percent of the total cost. As they hypothesized, higher revenues were achieved by those communities that solicited competitive bids for recyclables. The researchers also found that curbside recycling collection efforts generally divert ten to 20 percent of the residential waste stream from the households served.

Folz and Hazlett's findings are consistent with the findings of research conducted a year earlier by Angela Ebreo. Ebreo (1990) surveyed 197 Illinois households in 1990, to assess the differences between recyclers and non-recyclers. Ebreo found that demographics played no role, but the program's convenience produced a statistically significant result. Non-recyclers were more likely to participate in a program if the program is convenient (Ebreo, 1990, 57).

In 2005, the ETC Institute conducted a survey of Kansas City, Missouri residents to identify reasons for nonparticipation in the city's recycling program (Curbside Partnership, 2007, 2). The 2005 study lists two main reasons why residents may choose not to recycle. The first was because they did not have a recycling bin. The second was because they lacked an understanding of why recycling is important. The findings from all the aforementioned studies are consistent with the results found in this study (see Findings). Moreover, a separate study conducted in 1998 produced findings quite similar to the findings done in the above studies. The researchers found that outside of mandating participation, education and convenience were the two biggest factors in resident participation in a recycling program (Pierce, 1998, 178).

In Folz's 1991 article, *Recycling Program Design, Management, and Participation*, he outlines reasons why recycling programs struggle. Folz cites finding markets for recyclable goods, low resident participation, and lack of grant funding, as being major challenges for

recycling programs (Folz, 1991, 12). Over the past seventeen years the issues that he identified have been addressed to varying degrees (see Findings).

In 1995, David O’Leary outlined the “Five Ps” of recycling program development. His recommendations are also consistent with the findings of this study and the other studies referenced in this paper. The five Ps are planning, price, publicity, politics and perseverance (O’Leary, 1995, 3). Each “P” has been addressed in full or in part by the aforementioned researchers and in the recommendations made to the City of Atlanta (see Recommendations).

### **Methodology**

The data for this study were gathered from cities in the Metropolitan Atlanta area through surveys and interviews. Coordinators of recycling programs in Atlanta and the following eight metropolitan Atlanta cities were interviewed: Roswell, Decatur, Conyers, Sandy Springs, Milton, Johns Creek, Smyrna and East Point. The eight cities that were chosen are located in different parts of the metropolitan area. With East Point located in the south of Atlanta, Decatur and Conyers on the east, Smyrna on west and Roswell, Sandy Springs, Milton, and Johns Creek located north of Atlanta.

In addition to gathering information from local city representatives, the Coordinator of Keep Georgia Beautiful was consulted regarding to the general information related to solid waste. The representative was able to provide an unbiased opinion about the City of Atlanta’s program and put Atlanta’s program in perspective as it relates to other programs in the state.

The second research method used was a survey. The survey was conducted to assess the City of Atlanta residents’ attitudes toward the City’s recycling program. This was done to examine the reasons for nonparticipation among some households, with the hope that it would

expose ways that the City can expand the program to close the gap between the existing participants and nonparticipants. The survey was distributed to residents of the City of Atlanta in person. An identical electronic version was also available. Participants were solicited at Neighborhood Planning Unit Meetings (NPU). NPUs are comprised of multiple neighborhoods in a specific geographic region of the city. For example, NPU-Y includes all neighborhoods within the city limits roughly south of Highway 20. There are a total of 24 NPUs. Surveys were conducted with 25 percent. The surveys were administered at each meeting and participants responded to the questions on a volunteer basis. NPUs were picked based on their location. Great care was taken to ensure that neighborhoods located throughout the city were included in the sample. Of the 118 participants, 20 percent live in North Atlanta, 25 percent live in East Atlanta, 24 percent live West of the city and 31 percent live in South Atlanta.

The survey results were analyzed using Survey Monkey. Survey Monkey is a software program that assists in the development and analysis of surveys. The program was used to assess the data and develop both the findings and conclusion reached by this research project.

## MAJOR FINDINGS

### Findings from the City of Atlanta Resident Surveys

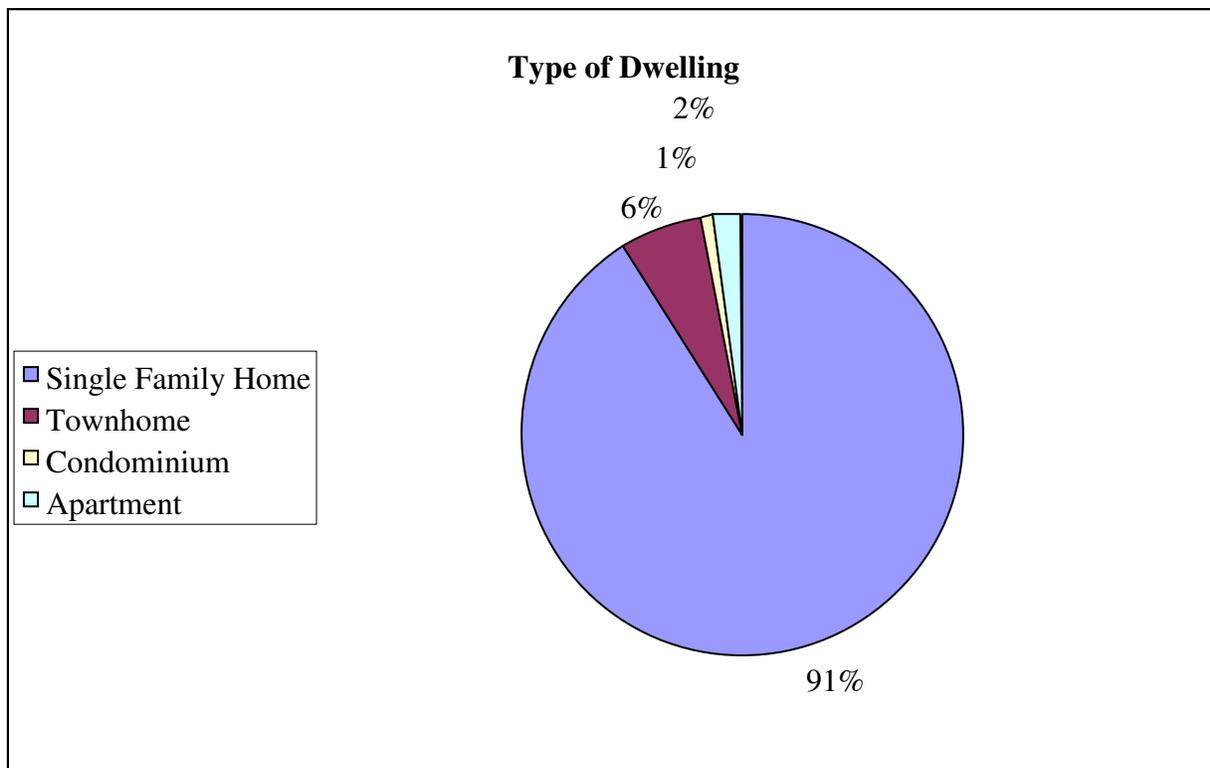
**Question 1** Are you a resident of the City of Atlanta?

The first survey question was asked to determine whether the respondent met the guidelines for participation. This survey was only open to individuals 18 and older who are City of Atlanta residents. Eight surveys were excluded based on this criterion.

**Question 2** In what type of dwelling do you reside?

Presently, the City's recycling program only services single family residences. Question two was designed to evaluate whether individuals living in multiunit housing (i.e., condominiums, townhomes, and apartments) without a formal program would still recycle. Having this information may compel the City to implement a multifamily unit collection program if appropriate. Ninety one percent of the individuals who answered question two reported living in a single family home, as presented in Figure 1. Therefore, the results of this question did not yield significant information about the recycling habits of individuals living in dwellings that are not single family homes.

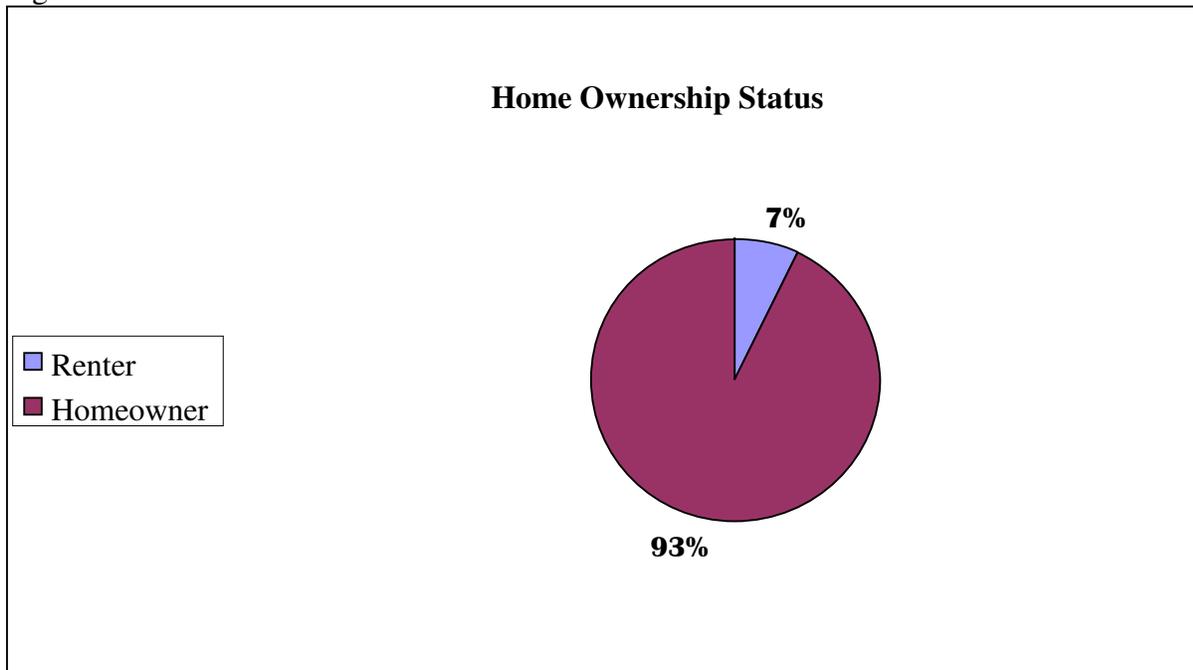
Figure 1



**Question 3** Are you currently a renter or a homeowner?

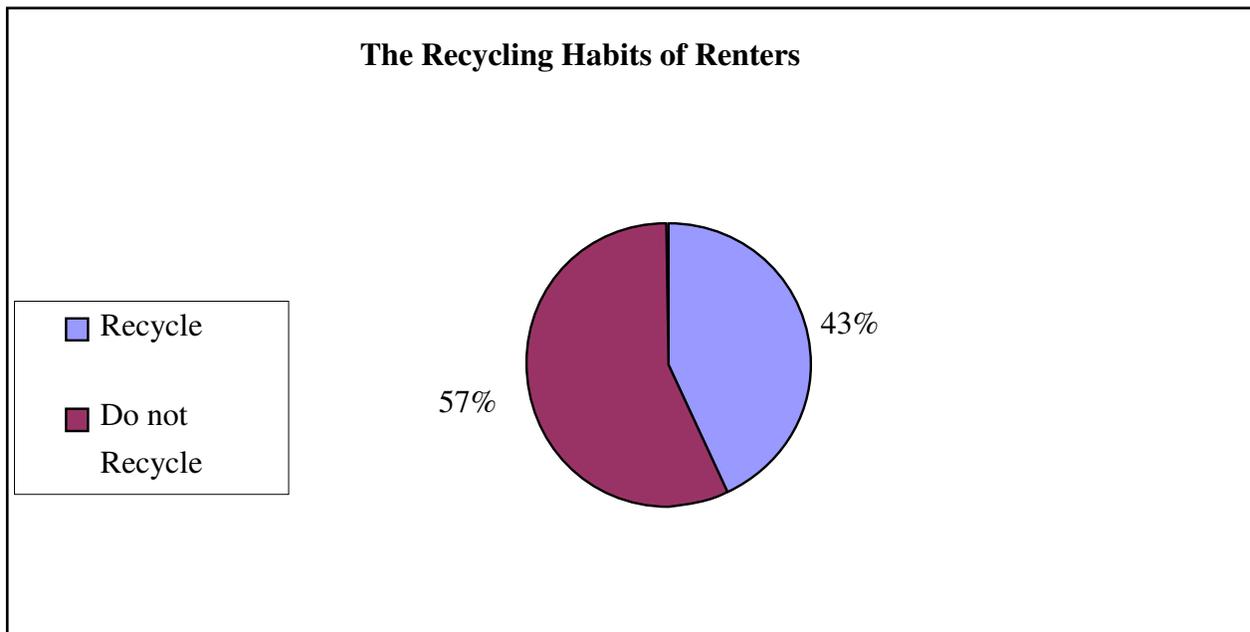
Question three was structured to determine whether there is a difference in recycling patterns for renters and homeowners. Of the respondents (93 percent) reported being homeowners (see Figure 2).

Figure 2



The responses from renters were further analyzed and it was found that forty three percent for renters participate in the curbside recycling program (see Figure 3). It could be concluded that homeownership status is not a factor in one's decision to participate in a program.

Figure 3

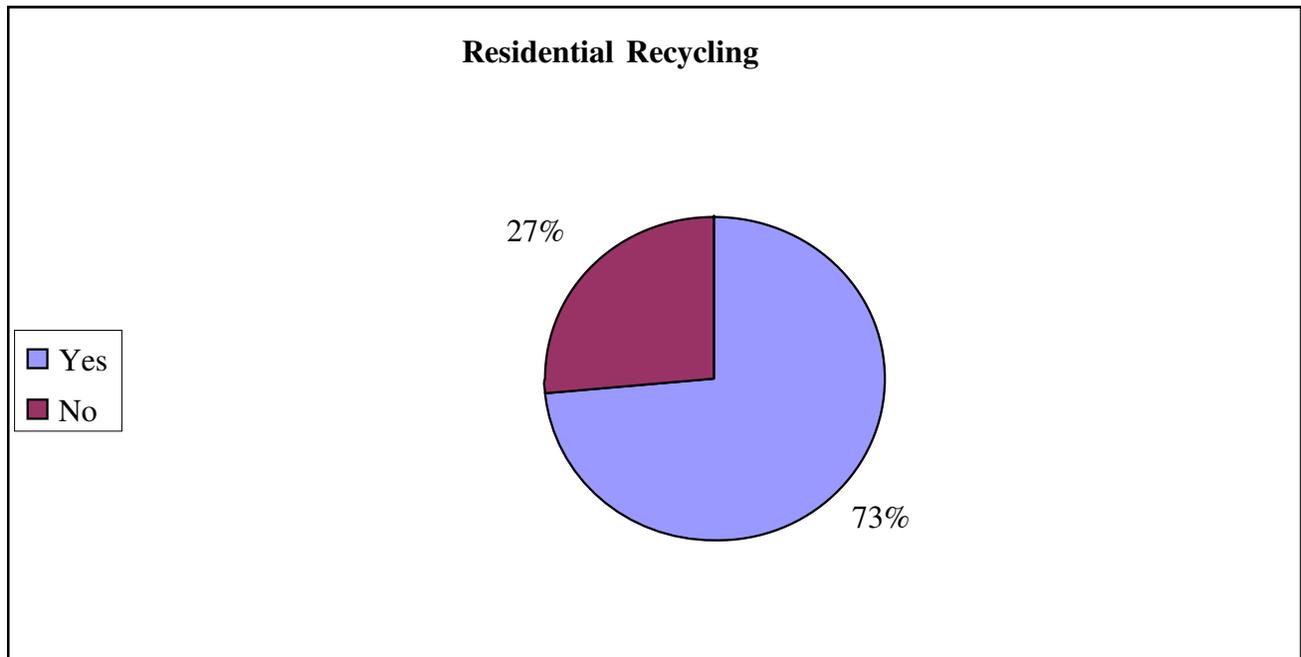


Of those that participate, sixty seven percent are enrolled in the City's program and thirty three percent use drop off centers. Based on the figures, it can be inferred that renters are slightly less likely to participate in the City's recycling program.

**Question 4** Do you currently recycle at home?

Question four was designed to identify whether the respondent currently recycles within his or her personal dwelling. The results would have been inaccurate if respondents answered the survey based on recycling patterns outside of the home. Many individuals recycle at work or in other locations. For the purpose of this research it was important to segment recycling practices at home from recycling done outside of the home (see Figure 4).

Figure 4



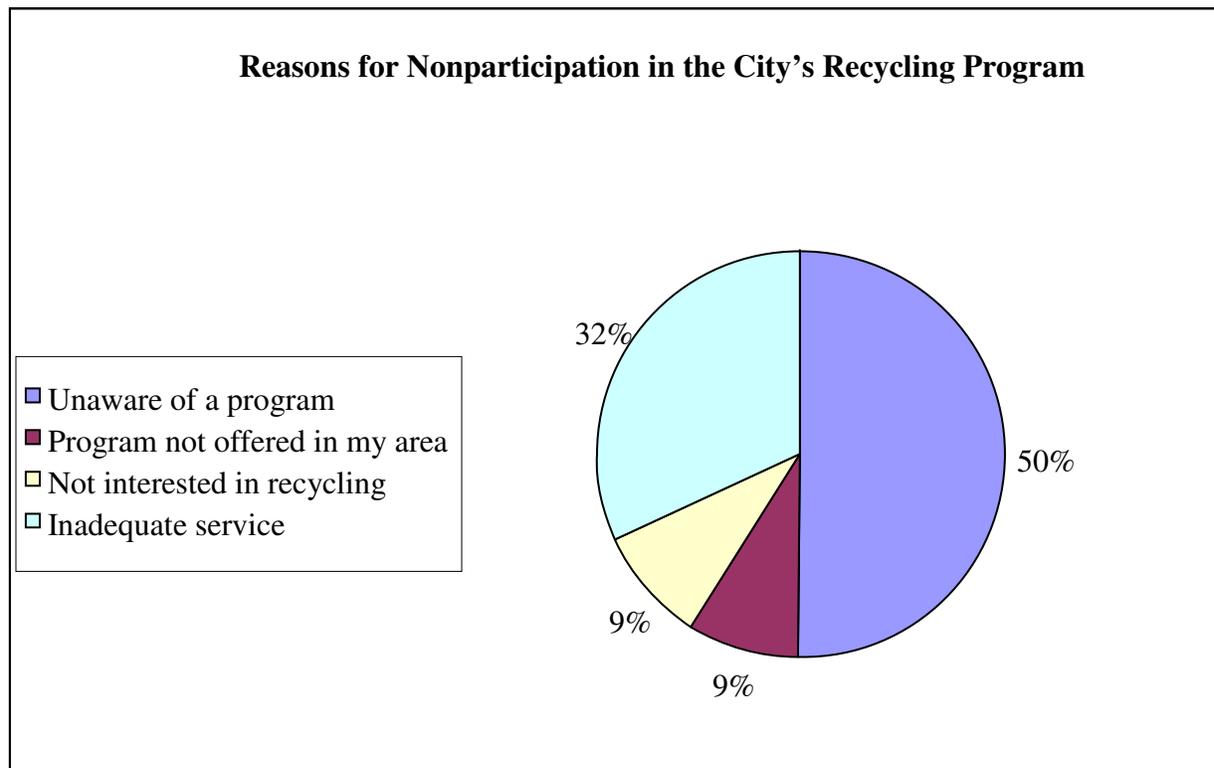
It was found that seventy three percent of the respondents recycle at home. Additional analysis was conducted to evaluate which recycling methods are used {i.e., drop off locations, curbside, etc.} Figures 6 and 7 present the results.

**Question 5** If no, which option best describes your reason for not recycling at home.

Question five allowed respondents to provide an explanation of their nonparticipation in the current program. Fifty percent of respondents cited being unaware of a program as being the reason for nonparticipation, thirty two percent of respondents cited inadequate service as the reason for nonparticipation as illustrated in Figure 5. A total of eighteen percent of the respondents reported not recycling due to lack of interest or lack of the knowledge of a program. Past studies have concluded that education and convenience are the biggest factors contributing to participation. It may be possible to capture a fraction of this group by expanding the program to make sure that all residents receive equal service. Education may assist in capturing a portion

of the other nine percent who are uninterested in recycling. Some residents are unaware of the benefits of recycling and due to that unawareness choose not to participate.

Figure 5



**Questions 6** Are your recyclables picked up by a service through the City of Atlanta?

The goal of question six was to find out if other collection agencies exist outside of the one provided by the City. If individuals had hired private collection companies or if the community had a collection program separate from the City's program, it would be important to evaluate those collection methods and their potential impact on the City's program.

**Question 7** If yes, how often are the recyclables picked up?

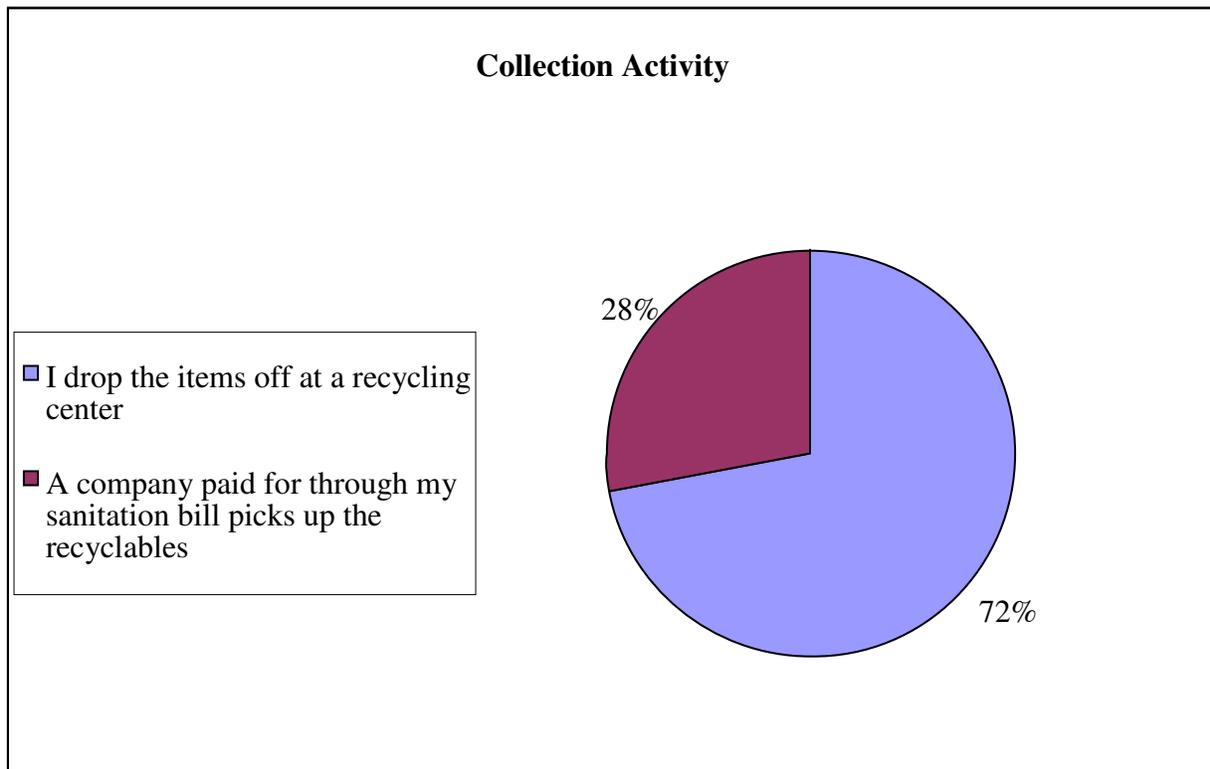
Question seven was structured to reveal whether all areas of the City receive equal service. The responses were evaluated to identify trends from each area of the City represented in the sample. No trends were found relating to the frequency of service. All respondents who answered this question reported service once a week. Their responses are consistent with the data provided by the recycling coordinator. In the future, researchers may consider asking the question in a slightly different way. For example, question number seven was asked in a way that met the objectives of this study. However, a future researcher may want to know if the frequency of service plays any role in participation levels.

One of the recommendations being made from this study is to reduce the frequency of collection to save money. The City of Nashville's program is used in this study as an example of a city that has successfully implemented a program with monthly collections. The program has high collection and participation rates. This survey did not approach the issue of frequency because it was outside the scope of the research. However, it may be helpful to have this information for future recommendations.

**Question 8** If no, how are your recyclables removed from your home?

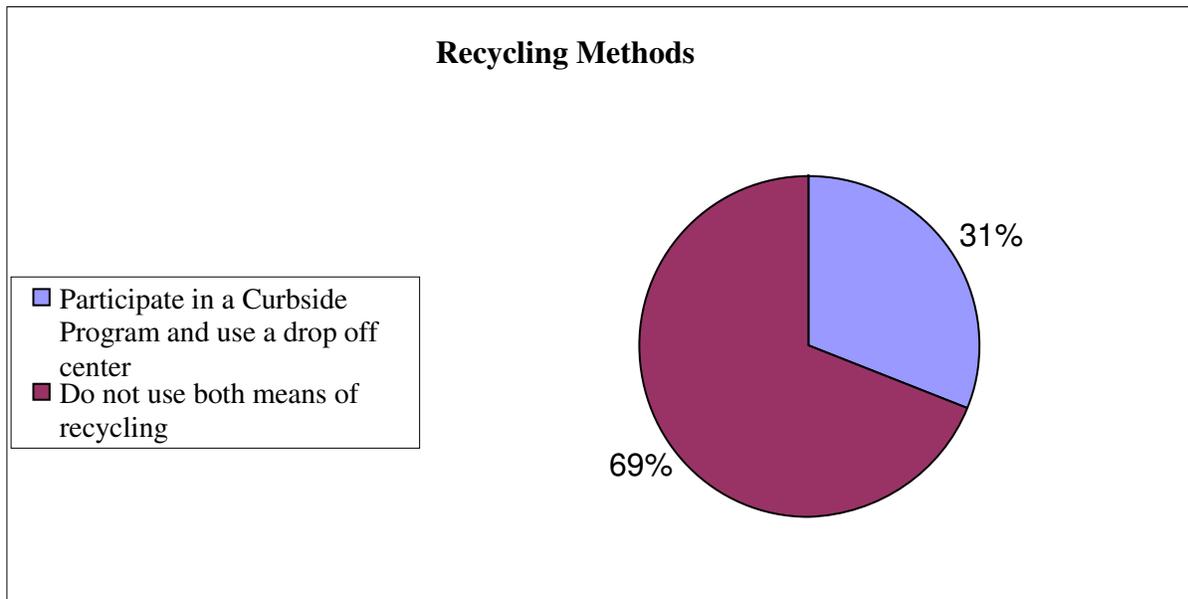
Question eight was designed to identify how individuals who recycle do so outside of participating in the City's program. Seventy two percent of the respondents, who do not recycle through the City of Atlanta's curbside program, utilize drop off centers for recyclable goods. These centers are not owned by the City (see Figure 6 below).

Figure 6



This question also yielded responses from individuals who participate in the curbside program and use drop off locations. Figure 7 shows that thirty one percent of respondents that currently recycle through the City's curbside program also use drop off centers.

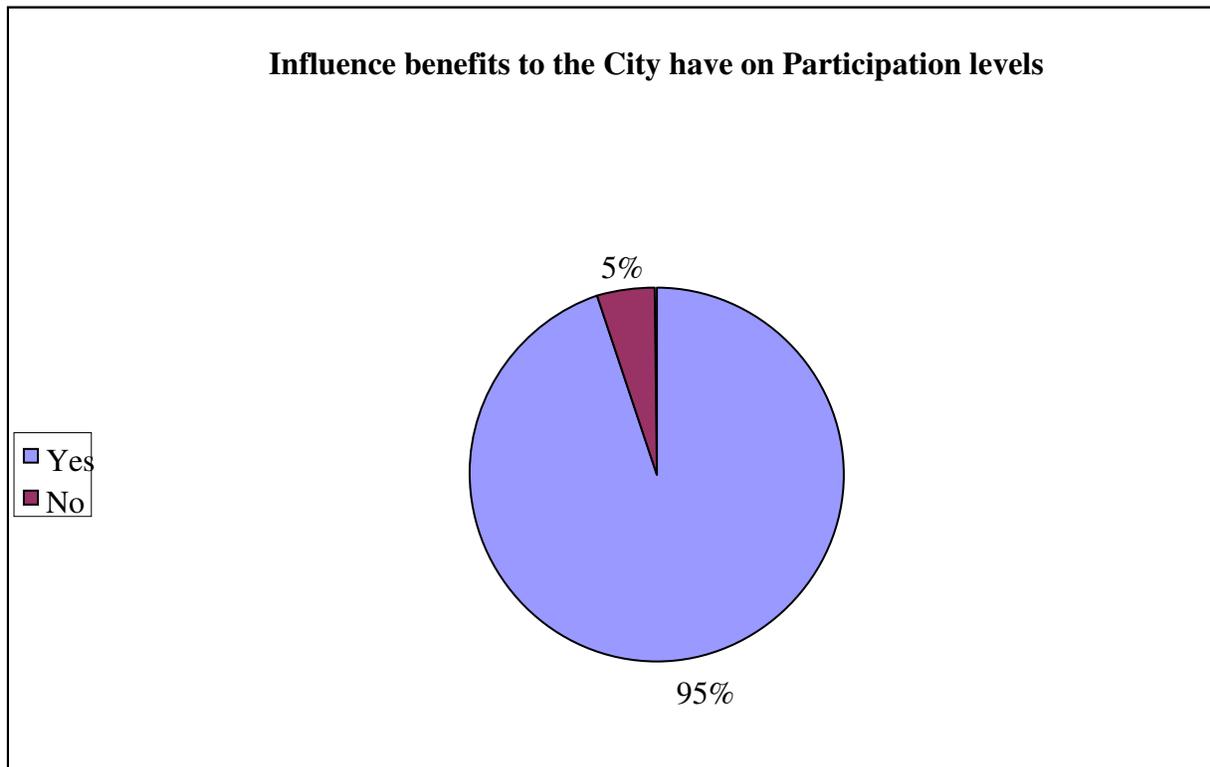
Figure 7



**Question 9** Would you increase your participation or choose to participate in the city's recycling program if you knew that more citizen participation would generate revenue for the City?

Question nine was developed to identify whether the public's awareness about potential monetary benefits to the City as a result of the recycling program would increase their participation. Ninety five percent of the individuals who answered this question responded that they would participate in the recycling program or increase their participation, if they were aware that the program generated money for the City (see Figure 8).

Figure 8



#### An In-depth Review of Metropolitan Atlanta Cities

According to Janet Liberman, the Recycling Coordinator for Keep Roswell Beautiful, the City of Roswell collects recyclables through a two-tier system. The first tier is comprised of curbside pickup. Roswell has a contract with Community Waste Services (CWS) to collect the curbside materials once per week. The program costs the city roughly \$700,000.00 annually. This number is based on the following calculation: (number of participating households x recycling fee) x (number of pickups per year). Liberman reported that the City of Roswell has a 90 percent program participation rate. Therefore, of the 25,000 households in the city, 22,500

participate. Each program participant pays \$2.57 per month which is included in resident's solid waste bills:  $(22,500 \times \$2.57) \times (12) = \$693,900$ . The city pays this amount to CWS to remove the recyclable goods. Although the city does not generate revenue from the sale of the recyclable goods collected, the city does make money from the sale of goods collected at the city run collection sites.

Roswell runs a drop off location complete with a processing plant. There the city prepares the recyclables collected for sale to a network of vendors. The city estimates that it recovers as much as fifty five percent of the total cost of the facility through the sale of the materials

(Lieberman, 2008, interview). According to Lieberman, the drop off center costs the city \$330,000 to operate. The site generates approximately \$180,000 in revenue (Lieberman, 2008, interview). Paper is the largest commodity sold at the site and the city negotiated a rather lucrative contract with SP Print to purchase the goods at a fixed rate (Lieberman, 2008, interview). The contract allows the city to increase the price but it does not allow SP Print to pay less than the amount outlined in the contract (Lieberman, 2008, interview).

The City of Decatur is located in the eastern part of metropolitan Atlanta with a population of roughly 18,147, according to 2000 Census figures. The City's recycling program has been in place for ten years. Since its introduction in 1998, the program is credited with reducing the City's MSW by 42 percent. Unlike the other cities examined, the City of Decatur offers recycling services to multi-family residences. Additionally, the city operates a "pay as you throw" system in addition to the curbside recycling program. "Pay as you throw" is a system in which residents pay for each *unit of waste discarded* rather than paying a fixed fee per residential household (City of Decatur, 2008). It is equivalent to putting a price tag on each

container of trash that is placed at the curb or taken to the landfill or transfer station for disposal. As residents pay directly for waste disposal services, they have a financial incentive to reduce their waste through recycling, composting, and source reduction. The city offers curbside pickup through a contract with Latham Home Sanitation and generates no revenue from the sale of recyclable goods (City of Decatur, 2008). According to a representative of the City of Decatur's Recycling Department the program costs the city \$102,000 annually and has a participation rate of 40 percent.

In July of 2008, as the recycling program in Atlanta was ending, the City of Conyers was busy launching its own curbside recycling program. The program allows residents to deposit all recyclable materials in one bin, which is known as the "single stream deposit method" (Harper, 2008, 1). Collection is offered once per week and the service is available to all residents residing within the Conyers city limits (Harper, 2008, 1). To get the program started, Pratt Industries, America's seventh largest paper and packaging company with annual sales approaching \$1 billion, provided the 65 gallon receptacles, and retrained drivers to address customer inquiries (Sutton, 2008, interview). According to Brad Sutton, Recycling Coordinator for the City of Conyers, Pratt also provided customers with materials outlining the appropriate items to be placed in cans. Additionally, Pratt, the City of Conyers, and Curbside Valued Partnership (CVP), a national invitation-only program designed to help communities grow their curbside programs through education, developed evaluation measures for the program. Currently, Pratt is not paying the city for the recyclables it collects. However, after 10 years, the city and Pratt will agree on prices for the materials. To get the program started Pratt supplied 65 gallons containers, hired a firm to help with the recycling education, and installed some equipment to sort the recyclables at their cardboard plant in Conyers (Sutton, 2008, interview). Additionally, the city

saves in tipping fees, fuel cost, and labor hours. The City of Conyers, with a population of 12,205 residents, produces about 563 tons of recyclable materials per year (Sutton, 2008, interview). Although a majority of the tonnage is handled by the contract company, the City of Conyers does make a profit from the sale of cardboard and glass (Sutton, 2008, interview). According to Sutton, the cardboard and glass that is collected at drop off centers is sold directly to a processing mill. According to Sutton, goods are sold at a nominal rate and the city makes very little on the sale of the materials (Sutton, 2008, interview).

The total population of Sandy Springs, Milton, and Johns Creek, Georgia is 167,830 [Sandy Springs, 85,781; Milton, 20,000; and Johns Creek, 62,049] (GeorgiaInfo, 2008). Keep North Fulton Beautiful is responsible for providing recycling services for all the three cities. At present, neither of the three has a curbside recycling program. Only one drop off center is available. According to the center's operations manager, Keep North Fulton Beautiful does sell recyclables on the market. Vendors purchase specific commodities from the center. For example, the steel cans collected are purchased by the Riverview Recycling. Although the organization sells recyclable goods, the sale of the goods alone does not produce enough revenue to sustain the program.

The City of Smyrna is home to approximately 40,999 residents and is located roughly 10 miles outside of Atlanta (GeorgiaInfo, 2008). Like Conyers, the Smyrna's recycling program has been active for one year. The program was reintroduced after several years under a program that has been described as inefficient. Now that the program has been revamped, the city is in an improved bargaining position. The program is structured similar to Roswell's program being comprised of both curb side pick-up and drop off locations. The city does not receive revenue from the goods collected by SP Recycling through the curbside program (Kirk, 2008, interview).

Yet, the city does garner a small return on materials collected at the drop off locations (Kirk, 2008, interview). According to the city's recycling coordinator Ann Kirk, materials collected at drop off centers are sold to processing plants. The city hopes to one day be able to sell all its recyclables. However, Ann Kirk believes the current process is better suited to accommodate a new program. According to Kirk, figures from the sale of the goods are unavailable at this time.

East Point, Georgia located right outside of Atlanta, runs its own recycling program. The city has a curbside program with collection once a week and offers residents one drop off location (City of East Point, 2008). According to a city official, the city does sell recyclable goods from both programs to vendors and generates a nominal profit which is reinvested in the program.

#### An In-depth Review of Two Comparable Cities Outside of Georgia

The City of Miami's recycling program was analyzed because it is one of the only cities with a similar population size (409,719) that sells the recyclable goods that it collects. According to the city's website, the city sells the goods at a small profit and the money is reinvested in the program (City of Miami, 2008). However, according to the city's website, the money collected is not enough to sustain the program. The City of Miami, like Atlanta, collects its own solid waste. The Solid Waste Department services 68,000 homes each year (City of Miami, 2008). Participation varies according to neighborhood, with an average of 42 percent citywide (City of Miami, 2008). City residents recycle 400 tons of newspaper and 225 tons of aluminum cans, glass bottles, jars and plastic bottles monthly. Recycling collection is provided on a weekly basis and all City of Miami residents in single family and multi-family residences up to three residential units, have curbside recycling service available to them (City of Miami, 2008). The City of Atlanta may not currently be in a position to offer weekly pick-ups. Yet, the

city may want to consider both selling its recyclables and offering recycling to multi-family residences based on Miami's model.

The City of Nashville has a population of approximately 505,000 residents (City of Tennessee, 2008). According to the city's website, the city collected 22,425.59 tons of recyclable goods in 2007. This figure represents roughly 10 percent or 215,399.59 tons of the total Municipal Solid Waste collected (MSW). In comparison, the City of Atlanta collects only about 5 percent or 7,000 pounds of recyclable goods from roughly 150,000 to 175,000 MSW (Wheatley, 2008, 1). Nashville is unique because its collection is done on a monthly basis. Although many skeptics have expressed concern that monthly programs encourage illegal dumping and create confusion among citizens regarding pick-up dates, Nashville's recovery rate is in line with the national average. The items are commingled in 96 gallon recycling carts (City of Tennessee, 2008). The city also offers drop off centers. The coordinator considers the program a success credits its success to community involvement. The program was structured to incorporate neighborhood captains which aid in reminding their neighbors about pick-up dates and times (City of Tennessee, 2008). The City of Atlanta may be able to benefit from Nashville's recycling model. If the City makes fewer pick-ups it could reduce costs. However the city would have to run a pointed community outreach campaign to enlist maximum participation and support.

Folz and Hazlett (1991) found that having a mix of curbside pick-up and drop off locations contributed to higher material recovery (Apotheker, 1992, 29). This finding was consistent with the information provided by the recycling coordinator for the City of Roswell and can be inferred from the high percentage of survey respondents (91 percent) reporting the use of

a drop off location as their primary option if they do not have curbside and as a secondary resource for items not accepted through the city's program.

In 1991, David Folz cited the following as major challenges to recycling programs. The information below explains how these concerns have been addressed since that time:

*Finding markets:* The State of Georgia has access to one of the best markets for recyclable goods based on manufacturing company's need for materials located within the state.

*Residential participation:* The programs researched for this project report various levels of participation. However, all the programs evaluated reported participation levels in line with the national average of approximately 25 percent. Even as the City of Atlanta's program struggles, it reports a 25 percent rate of participation in 2007. Roswell boasts a 90 percent participation rate. It could be inferred by evaluating the participation rates among what appear to be programs that vary in size, age, and structure, structure and age seem like the most prevalent evaluation factors when evaluating participation rates.

*Lack of grant funding:* In the State of Georgia, grant funding is available for cities that adhere to the states guidelines. The state also provides grants to cities that wish to start recycling programs but are faced with challenges that are related to infrastructure and logistics. The State of Georgia has provided money through the Solid Waste Trust Fund to Savannah, Valdosta and Griffin to establish recycling collection centers.

## **CONCLUSION**

To recapitulate, the City of Atlanta is being faced with many challenges. Budget shortfalls and program cuts threaten to weaken the recycling program. However, making a few key changes can significantly improve the program's viability. Based on the research conducted by this study it was found that many cities in Metropolitan Atlanta currently sell all or a portion

of the recyclable goods collected through their programs. Although none reported making a profit, they have certainly been able to pay some of the expenses from the revenue stream. The City of Roswell has been able to generate enough revenue to fund half of its recycling program. By reconfiguring the program, the City of Atlanta has the potential to match Roswell's success. The following recommendations are being made to the City based on the research findings of this study and those previously conducted on this topic as discussed in the literature review section.

The following recommendations may improve the City's overall participation:

- Highlight the potential revenue that the city can recapture through the sale of recyclable goods. Doing so would encourage residents to participate or increase their current participation.
- Include drop off centers in the recycling program mix. According to the research findings, cities with the most successful programs offer both curbside pick-up and drop off locations. The survey findings show that a significant number of current program participants use drop off locations exclusively or in conjunction with the curbside program.
- Ensure that participants have the necessary bins to deposit recyclables. Not having a bin was cited as the number two reason for nonparticipation in the current program.

Because the City is suffering from budget challenges it may be wise to look into a program with bi-weekly or monthly pick-ups instead of running a program with weekly service. Nashville, Tennessee has instituted a successful recycling program with monthly pick-ups. The city has done so by enlisting community support through the use of block captains responsible for reminding residents the day prior to the monthly pick-up. Results from this study revealed

that nearly five percent of the respondents do not recycle because they forget to put the bin out for collection. Instituting a block captain program has the potential to be a low cost solution to capture that five percent.

The City of Atlanta should become an affiliate of Keep America Beautiful. Although affiliates pay annual dues, the dues were reported as being nominal by representatives from the Keep America Beautiful affiliates interviewed for this study. Becoming an affiliate will allow the city to have access to educational resources, research tools, and greater grant funding opportunities, by being aligned with the nationally recognized program.

The City of Atlanta has a great opportunity to rebuild its program. The results of this study support the idea that residents are willing to participate in an expanded program. The City has a new coordinator who is exploring innovative ways to sustain the program despite cuts. Through innovation and creativity, the program can be restructured to be a benefit to the City, its residents and the environment.

**Throwing Money in the Trash: Can the City of Atlanta Restructure and Expand its Existing Recycling Program in Order to Make it a Revenue Stream and Reduce the amount of Waste being deposited in area Landfills?**

**Appendix A**

Survey Questions

1. Are you a resident of the city of Atlanta? (Please circle one)

Yes                  No

2. In what type of dwelling do you reside? (Please circle one)

- |                       |                |
|-----------------------|----------------|
| A. Single family home | B. Condominium |
| C. Townhome           | D. Apartment   |
| E. Other _____        |                |

3. Are you currently a renter or a home owner? (Please circle one)

Renter                  Homeowner

4. Do you currently recycle at home? (Please circle one)

Yes                  No

5. If no, which option best describes your reason for not recycling at home. (Please circle one)

- |                                   |                             |
|-----------------------------------|-----------------------------|
| A. Unaware of a program           | B. Inadequate service       |
| C. Program not offered in my area | D. Program is too expensive |
| E. Not interested in recycling    |                             |
| F. Other _____                    |                             |

**If you answered “No” to question #4, please skip to questions #9**

6. Are your recyclables picked up by a service through the city of Atlanta?  
(Please circle one)
- Yes                      No
7. If yes, how often are the recyclables picked up? (Please circle one)
- A. 1-2 times per week
- B. 3-5 times per week
- C. 6-or more times per week
8. If no, how are your recyclables removed from your home (Please circle one)
- A. I drop the items off at a recycling center.
- B. A company not paid for through my sanitation bill picks the recyclables up.
- C. Other \_\_\_\_\_.
9. Would you increase your participation or choose to participate in the city’s recycling program if you knew that more citizen participation would generate revenue for the city?  
(Please circle one)
- Yes                      No

## REFERENCES

- Ackerman, Frank. 1997. *Why Do We Recycle?* Washington DC: Island Press. pp.1-19.
- American Chemistry Council. 2007. Landfill Facts. [www.acc.org](http://www.acc.org). Accessed on November 12, 2008, p. 1.
- American Forest and Paper Association. 2008. 87 Percent of U.S. has Access to Recycling Programs. *BioCycle*, October, vol. 49, no.10, p. 8.
- Apotheker, Steve.1992. Finding a Formula for Successful Recycling Collection. *Resource Recycling*, October, pp 29-38.
- City of Decatur.2008. [www.decatur-ga.com](http://www.decatur-ga.com). Accessed on September 20, 2008.
- City of East Point.2008. [www.eastpointcity.org](http://www.eastpointcity.org). Accessed on September 12, 2008.
- City of Miami. 2008.[www.Miami.gov](http://www.Miami.gov). Accessed on September 17, 2008.
- City of Tennessee. 2008. [www.tennessee.gov](http://www.tennessee.gov). Accessed on September 28, 2008.
- Cobb, Lynn, 2008 phone interview by Jennifer Norfleet, October 3, 2008.  
Atlanta, Georgia
- Curbside Partnership. 2007. [www.recyclecurbside.org](http://www.recyclecurbside.org). Accessed on September 26, 2008, pp.2-3
- Dodd, Bonita. 2003. Trashing Landfills producing Community Crapshoot. Georgia Public Policy Foundation. [www.gppf.org](http://www.gppf.org) Accessed on November 11, 2008.
- Ebreo, Angela. 1990.What Makes a Recycler? A Comparison of Recyclers and Nonrecyclers *Environment and Behavior*, Vol. 22, No. 1, 55-73.
- Folz, David H.1991. Recycling Program Design, Management, and Participation: A National Survey of Recycling Programs. *Public Administration Review*, (May/Jun), vol.51, no.3; pp. 222-229.
- Folz, David and Joseph Hazlett.1991. Public Participation and Recycling Performance: Explaining Program Success. *Public Administration Review*. ( November/ December), vol. 5, No.6 pp.526-532.
- Georgiainfo.2008. <http://GeorgiaInfo.galileo.usg.edu/city.htm>. Accessed on October 18, 2008.
- Georgia Department of Community Affairs.2008. [www.dca.state.ga.us](http://www.dca.state.ga.us). Accessed on September 12, 2008.
- Hall, Rebekah.2003.Taking Up Arms. *Waste Age*. [www.wasteage.com](http://www.wasteage.com). Accessed on November 11, 2008.

Harrington, Mary, 2008, phone interview by Jennifer Norfleet, September 30, 2008  
Atlanta, Georgia.

Harper, Jennifer. 2008. Conyers, GA Launches Education Campaign  
to Promote New Curbside Program. [www.cvp.org](http://www.cvp.org). Accessed on August 30, 2008.

Joseph, Pat. 2005. Talkin' Trash: Recycling Resurrected: New York City finds that recyclables are a  
terrible thing to waste. [www.sierraclub.org](http://www.sierraclub.org). Accessed November 13, 2008.

Keep America Beautiful. 2006. Who We Are: An Overview. [www.kab.org](http://www.kab.org). Accessed on  
November 13, 2008.

Kirk, Ann, phone interview by Jennifer Norfleet, September 17, 2008, Atlanta, Georgia

Liberman, Janet, interview by Jennifer Norfleet, October 1, 2008  
Atlanta, Georgia.

O'Leary, Phillip. 1995. Decision Maker's Guide to Solid Waste  
Management Environmental Protection Agency. Environmental Protection Agency.

Peirce, J. Jeffrey, Weiner, Ruth F., Vesilind, P. Aarne. 1998. *Environmental Pollution and  
Control*. Publication: Boston, Massachusetts: Butterworth-Heinemann.

Sutton, Brad, phone interview by Jennifer Norfleet, September 17, 2008  
Atlanta, Georgia.

Wheatley, Thomas. 2008. Garbage Into Gold: Cash Strapped City Giving Away  
Garbage It Could Sell. *Creative Loafing*. June, p.1.

Zimring, Carl A. 2005. Cash for Your Trash: Scrap Recycling in America  
New Brunswick, New Jersey: Rutgers University Press, pp.83-134.

