



October 31, 2003

Ms. Bekki Titchner
Recycling/Solid Waste Coordinator
County of Elk
300 Center Street, Box 448
Ridgway, PA 15853

Subject: Improving Cost-Effectiveness and Participation in the St. Marys City Recycling Program

Dear Bekki:

Elk County has requested assistance on behalf of St. Marys City to evaluate the City's recycling program to determine how to make it more cost-effective and how to increase participation, particularly in light of the fact that recycling service is not currently available to all residents of the City. This letter is to provide the County/City with the results of R.W. Beck's evaluation of the City's recycling program.

EVALUATING ST. MARYS CITY'S RECYCLING PROGRAM

This evaluation is broken down as follows:

- Residential recycling
- Leaf collection and composting
- Pay-As-You-Throw
- Education and outreach
- Commercial recycling
- Recycling at Special Events
- Development of a recycling task force/advisory committee
- Grant funding

The following issues are considered:

- The current program
- Identifying areas for improvement in the residential recycling programs, including extending the program to all residents of the City.
- Considering Pay-As-You-Throw as an option to encourage residents to reduce waste generated and potentially save money.
- Considering information/education needs and defining appropriate vehicles to reach the residential sector.
- Providing information designed to boost recycling in commercial and institutional entities.

- Providing information on establishing recycling at special events within the City.
- Developing a recycling task force/advisory committee to assist the City in all facets of its recycling program.
- Analyzing the potential for greater return on Section 904 Performance Grants by making improvements and/or changes/additions to the City's recycling program; reassessing distribution of Section 904 funds to commercial establishments to determine if more funds could be distributed to the City.

RECYCLING IN ST. MARYS—CURRENT FACTS AND FIGURES

The state's average generation rate, based on municipal waste generated statewide, is 0.8 tons per person per year, and this is the figure used to estimate total waste generation in the City. This is very close to the national rate of 4.33 pounds/capita/day identified in *Characterization of Municipal Solid Waste in the U.S.* (U.S. Environmental Protection Agency). Assuming a population of 14,500 (as provided by the City), municipal waste generation is approximately 11,600 tons per year. This is the figure used in Table 1 to estimate the amount of Act 101 recyclable materials that are potentially available in St. Marys City.

As for the overall recycling rate, assuming that the total waste generation is approximately 11,600 tons (as indicated above), the recycling rate for the City is only 12.5 percent. If more waste is being disposed than estimated, or if there are more recyclables than estimated in Table 1, the recycling rate would be lower. Because the City's residential waste collection is managed by individual subscription, no disposal data is available, and neither the City nor the County track commercial disposal. Table 2 attempts to break the City's recycling down by residential and commercial tonnages, and shows that commercial recycling contributes the greatest amount to the recycling rate (8.9 percent), followed by dropoff recycling (2.4 percent) and curbside recycling (1.2 percent).

Elk County reported a total of 1,448.9 tons actually recycled from St. Marys' residential and commercial sources in 2002. The breakdown is provided in Table 3. It should be noted, however, that the estimated amount of recyclables potentially available in "Tons in MSW" may actually be higher because of the significant amount of industry in St. Marys in relation to its population. For example, the total tons of corrugated cardboard (OCC) available in the waste stream for St. Marys is believed to be significantly greater than 730.8 tons estimated, probably because of the City's larger than average commercial/industrial base. In fact, the City reported nearly 900 tons of OCC recycled in 2002. Further study would be required to determine the amount of recyclable material that is actually available in the City's commercial waste stream.

If the percentages in Table 1 are reasonably accurate, it would be impossible to reach a 35 percent recycling rate with Act 101 materials alone. What this means is that the City needs to encourage the recycling of additional materials both at the residential and commercial levels, and engage in significantly more effort to provide education and assistance in order to realize any dramatic increases in the City's recycling rate.

TABLE 1
ESTIMATED RECYCLABLE MATERIALS AVAILABLE IN ST. MARYS CITY

Material	Percent of MSW¹	Tons in MSW
Corrugated Paper	6.3%	730.8
Newsprint	4.5%	522.0
Magazines	2.6%	301.6
Glass (Clear and Colored)	2.2%	255.2
Office Paper	2.1%	243.6
Plastic (PET, HDPE only)	2.1%	243.6
Steel and Bimetallic Cans	1.5%	174.0
Aluminum Cans	0.7%	81.2
Yard Waste	2.7%	313.2
Grass	2.7%	313.2
TOTALS	27.4%	3,178.4

TABLE 2
PERCENT RECYCLED IN ST. MARYS CITY BY CATEGORY--2002

Category	Total Generation	Tons Recycled	Recycling Rate
Curbside		140.9	1.2%
Dropoff		274.1	2.4%
Commercial		1,033.9	8.9%
TOTALS	11,600	1,448.9	12.5%

The City estimates that approximately 75 percent of its residents have access to biweekly curbside collection (10,875 of 14,500). Based on the City's contract with Elk Waste, which involves payment for 3,900 households, and the total households indicated in the 2000 U.S. Census (5,123), this number appears to be correct. The City also asserts that only about 20 percent actually use the service. An analysis of data provided by Elk Waste for the months of June, July and August indicates that the actual figure may be a bit higher than 20 percent, as illustrated in Table 4. Elk Waste provides data on the total number of households where recyclables are collected—the set-out rate. Unfortunately, neither Elk Waste nor the City tracks the actual households participating by address. The high-end data in Table 4 assumes that all households counted for a given month are different, and that no household places materials at the curb every other week—a very unlikely scenario. The low-end data assumes that the same households are participating in every collection—also an unlikely scenario. The actual participation is probably somewhere in between the estimates provided, possibly around 30 percent. Even the high-end estimate of participation is less than 50 percent, and this is an indication that there is a problem—such as lack of education, not realizing that the program exists, or similar—that needs to be addressed.

¹ Based on aggregate data from Pennsylvania Waste Characterization Study (2001-02) for Northwest Region of PA Department of Environmental Protection.

TABLE 3
ACTUAL RECYCLING IN ST. MARYS CITY--2002

Material	Tons in MSW	Curbside	Dropoff	Commercial	Capture Rate²
Corrugated Paper	730.8			896.9	122.7%
Newsprint	522.0	21.3			4.1%
Magazines	301.6				0.0%
Glass (clear/colored)	255.2	45.4		136.1	71.1%
Office Paper	243.6		19.1		7.8%
Plastic (PET/HDPE only)	243.6				0.0%
Steel/bimetal cans	174.0				0.0%
Aluminum cans	81.2	14.2		0.9	18.6%
Yard Waste	313.2	60.0			19.2%
Grass	313.2				0.0%
Commingled Materials			255.0		
TOTALS	3,178.4	140.9	274.1	1,033.9	45.6%

In addition to curbside collection, the County provides seven drop-off locations in the City. Materials accepted at each site are listed in Table 5. Without these sites, the City's recycling rate would be considerably lower than currently indicated. As of 2002, material recycled at the drop-off locations was nearly double the amount collected at curbside. This is probably because the sites accept several materials that are not accepted in the curbside program, and because they are used by residents who have no access to curbside recycling. The City also has a spring and fall clean up program for large items, where, according to the County, some of the items collected are recycled.

The City of St. Marys recycling education efforts are very basic. The City, through its contractor, Elk Waste, distributes a calendar annually to provide collection dates and instructions on preparing the recyclables. The City also advertises every six months in the local paper – *The Daily Press* (circulation approximately 5,000) – and at City Hall and the St. Marys Public Library.

INCREASING RECYCLING IN ST. MARYS CITY

EXPANDING RESIDENTIAL RECYCLING

Curbside Recycling. The most significant barrier to increasing recycling in St. Marys is that curbside recycling is currently not available to all residents of the City. When the former Borough of St. Marys merged with the former Benzinger Township in 1994, the result was the formation of a city of approximately 14,500 (as of the 2000 Census) with one

² This is percent of materials available only, not of entire waste stream.

TABLE 4
SET-OUT RATE IN ST. MARYS CITY—JUNE–AUGUST 2003

Households	June-03				July-03				August-03			
	High*	Participation Rate	Low**	Participation Rate	High	Participation Rate	Low	Participation Rate	High	Participation Rate	Low	Participation Rate
Red Households	926	23.7%	569	14.6%	789	20.2%	433	11.1%	865	22.2%	448	11.5%
Black Households	861	22.1%	525	13.5%	1112	28.5%	404	10.4%	883	22.6%	504	12.9%
Total Households***	1,787	45.8%	1,094	28.1%	1,901	48.7%	837	21.5%	1,748	44.8%	952	24.4%

*Assumes each pick-up was from a different household, with no household participating more than once within a month

**Assumes that only the same households participated in each collection

***The figure for July is higher because there were three total collection weeks

TABLE 5
COUNTY OPERATED DROP-OFF COLLECTION SITES IN ST. MARYS CITY

Location	Materials Accepted
Stackpole Street	Large rolloff for plastics and paper; small container for glass
South Michael Street	South Michael Street
Carbon Road	Glass and aluminum
Intersection of Trout Run Rd./Rt. 120	Glass and aluminum
Intersection of Joseph Rd./Rt. 255	Glass and aluminum
Intersection of Woodland/Washington Rds.	Glass
Robin Road	Glass, aluminum, #1 & #2 plastics

of the largest land masses in the Commonwealth, at nearly 95 square miles. The overall population density is just over 150 persons per square mile. The average number of households per square mile, based on 2000 Census data (5,123 households), is approximately 54.

While this density is very low, data provided by Elk County suggests that the population density figure based on total area is deceptive. Converting to acreage, the City contains approximately 60,800 acres. A very significant amount of this acreage, however, is taken up by properties where there is, and can be, no residential development. There are two state game lands areas in the City—State Game Lands 25, and State Game Lands 293. These areas contain 13,075 acres and 2,273 acres respectively. The County also reports that another 4,743 acres is the former Stackpole property now owned by Forest Investors/Forest Land Group. While exact figures were not immediately available, the County estimates that Seneca Resources owns another 6,000-7,000 acres, and that another 4,000-5,000 acres is privately owned industrial land and is not developed. Additional acreage is occupied by the airport, and old landfill, and the Laurel Run Reservoir. A conservative estimate, using the low end acreages cited above, indicates that the City's population density, when estimated based on land available for residential development (about 50 percent of the total land area), is closer to 300 persons per square mile, or 108 households per square mile.

A map produced by the County that illustrates housing distribution indicates that most of the population is centered in the former St. Marys Borough, with other denser pockets of development scattered around, but close to, this population center. A drive around the area seemed to confirm what the map illustrates. In other words, while there are some areas that are very sparsely populated, most residents are located in areas of significantly greater density than the average (even the higher averages of 300 persons/108 households per square mile) would indicate.

As a mandated municipality, the City has a legal responsibility to provide curbside collection to all residents of the City. At a minimum, the City must expand the program to include all City residents. However, this alone is not enough. Currently the City only collects clear and colored glass, aluminum cans, and newsprint, and participation is extremely low. The City must consider including other materials—which would help increase the tonnage and volume collected—but with such a low participation rate (as indicated in Table 4) the City also must examine its recycling education program and implement a program that encourages greater participation in the recycling program.

Yard Waste. The City provides for the collection of leaves from residents every fall. Leaves are collected street by street. Some are collected using a leaf vacuum, and some are collected in bags. The City reports that the material is shredded and most is hauled away to local farmers, and any remaining material is sent to a designated composting site, though the site was not specified. The City says that the shredder/chipper is available all year for use by residents who deliver brush and other vegetative materials to a site operated by the City. The City asserts that it is currently looking into a program to offer shredded material/mulch to residents for free.

Composting or land application of leaf and yard waste has the potential to divert large volumes of waste. While leaves may not be claimed for Section 904 Performance Grant funding, expanded efforts to collect leaves and other yard waste and to track the material

already being collected would help to increase the City's recycling rate and avoid disposal costs. It should be noted that Elk County is working with several neighboring counties to develop a regional composting program. An Act 101 Section 901 application has been submitted to DEP to look at all sources of compostable materials, including biosolids, wood waste, and other industrially-generated materials, and the study will determine the feasibility of constructing one or more sites to accommodate these materials. Elk and Jefferson Counties are the main focus, but parts of McKean and Clearfield Counties are being considered because of geography. The City could benefit significantly by working cooperatively with the County to collect and send materials to a County composting site once the regional program is established.

The City should also consider promoting home composting by residents as a means of diverting waste from disposal. The County has been partnering with the Penn State Cooperative Extension for several years to offer home composting classes to County residents. The City could work with the County Recycling Coordinator and/or Cooperative Extension office or garden clubs to provide an educational program. Purchase of home compost bins is eligible for funding under Section 902 Recycling Program grants.

Recycling Other Materials. As noted above, it would be impossible to reach a 35 percent recycling goal with Act 101 materials alone. Many municipalities encourage recycling of other items as well in order to boost their recycling rate and limit the waste that must be sent for disposal. There are usually other opportunities throughout a county or region for recycling of this type. The City could increase tonnage at the curb by adding steel cans, #1 and #2 plastics, and magazines to its mix. It may even be worth exploring adding corrugated cardboard to the curbside mix.

Other materials that can be recycled include, but are not limited to, used oil, tires, automotive batteries, textiles, appliances, and electronics, including computers. Some of these materials are currently recycled from the spring and fall cleanup programs, but this is not enough. The County already sponsors and/or promotes the recycling of many of these materials. The City should work closely with the County Recycling Coordinator to determine what other options exist, provide the information to residents, and promote the recycling of a range of materials beyond the Act 101 materials.

Pay-As-You-Throw. The City should also consider the possibility of implementing a "Pay-As-You-Throw" (PAYT) program since a PAYT program has a built in incentive for residents to reduce the waste they generate and recycle as much as possible to reduce their disposal costs. Regardless of whether PAYT is implemented, the City should enforce the provision in its ordinance (§106.3) that requires that solid waste accumulated on any residential property be collected, conveyed, and disposed of in accordance with the provisions in the solid waste portion of the ordinance. This would help to ensure that waste is disposed of properly, and, if combined with a PAYT program, would provide incentive to recycle in order to reduce the cost of managing waste.

PAY-AS-YOU-THROW

Also known as unit-based or variable rate pricing, customers in a Pay-As-You-Throw (PAYT) system pay for municipal waste management services per unit of waste collected rather than through a fixed fee. PAYT takes into account variations in waste generation

rates by charging residents or households based on the amount of refuse they place at the curb, thereby offering residents an incentive to reduce the amount of waste they generate and dispose of. Over 200 municipalities in Pennsylvania have implemented some form of a PAYT program. Most require residents to buy special bags or tags, with the cost of collection and disposal factored into the cost of these items.

Potential Benefits of PAYT

Municipalities that have implemented PAYT programs have reported a number of benefits, including:

- Waste reduction
- Reduced waste disposal costs
- Increased waste prevention
- Increased participation in recycling and composting programs
- A more equitable waste management fee structure
- Increased understanding of environmental issues in general

PAYT programs encourage residents to generate less refuse by charging them based on the amount of waste placed out for disposal. Setting costs according to generation encourages residents to become more conscious of disposal habits and to look for opportunities to generate less waste or divert a greater portion of the waste stream through alternative management practices such as recycling and composting. The key is that residents become more conscientious, and thereby more understanding of environmental issues and the impact of their behavior on the environment. PAYT also provides a mechanism that ties the rate paid per household to the level of service, similar to other utilities. Households that generate smaller amounts of refuse pay a lower rate than those generating larger amounts.

Potential Barriers/Issues Associated with PAYT

While there are clearly benefits associated with PAYT programs, there are also potential barriers/issues that must be overcome or addressed to successfully implement this system. These potential barriers/issues include:

- Illegal dumping
- Ensuring full recovery of expenses
- Controlling/covering administrative costs
- Perception of increased cost to residents
- Multi-family housing
- Building public consensus

While communities throughout Pennsylvania have experienced some or all of the barriers/issues identified above, most have been able to take appropriate measures to overcome them. For example, the City of Wilkes-Barre experienced illegal disposal of household refuse in commercial dumpsters. Many businesses placed locks on their dumpsters to combat this problem. Stopping other illegal dumping may require stricter enforcement of existing ordinances and greater penalties for violations. Cost issues can be resolved with careful planning, a clear understanding of total service cost and demonstrating to the public that the program is likely to reduce the cost of service for many

households. Including public input early in the process can help to build public consensus and understanding of the real benefits to residents.

Challenges to Balancing the Budget

In every program there are fixed costs that exist regardless of the amount of waste that is disposed. Collection costs are fixed because regardless of the amount of material collected, the collection vehicles must cover the route or routes in the program. Doing this requires some set number of personnel and their associated costs, as well as vehicle costs that include, among other things, maintenance, fuel and insurance. Reductions in the volume of waste may result in some saving due to fewer trips to a disposal facility, but for the most part, the collection cost is fixed.

Waste disposal is a variable cost, which is largely based on the tonnage of materials disposed.

The goal for any program is to ensure that revenues are sufficient to cover program-related expenditures. The best way to do this is to ensure that a fixed amount of revenue is generated that covers the fixed costs. Because all or part of the revenue required to operate the system is raised through a fee attached to a unit that varies with the level of usage, many municipalities/haulers have split the costs between a fixed rate and variable rate system. Fewer have assigned all the costs associated with the system to a strict variable rate fee.

Setting appropriate fees can generally be accomplished using historical data, assuming cost and revenue data contained in past budgets is complete and accurate.

Maintaining PAYT and Balancing the Budget

It can be difficult to balance revenues with expenditures in a classic PAYT program because revenues are solely dependent on the sale of bags or on container size and/or number. If there is a significant decline in sales or container setout for any reason with no corresponding decline in disposal, there is a good probability that the program's costs will outweigh its revenues. This occurred in the PAYT program operated by Elizabethtown Borough in Lancaster County. Raising the cost of bags could only compound this problem—and did in the case of Elizabethtown. This is the reason that a majority of municipalities in Pennsylvania with PAYT programs have opted to implement “hybrid” systems that include a flat fee and variable rate (pre-paid bags).

There are two basic hybrid options used throughout the Commonwealth:

- Residents pay a standard base rate per household that covers fixed collection costs—i.e., administrative and personnel costs and the cost for a collection vehicle to service a given area—and purchase bags or stickers, or use specific containers at a set rate per container. The cost to residents still varies by the amount of waste they dispose, but because the fixed costs are spread equally among households, differences in cost per household are less than that of a classic PAYT system such as that used by Elizabethtown.
- Residents pay a base rate per household that includes a fixed number of bags, stickers or containers, then purchase additional bags or stickers, or use specific containers at a set rate per container. Depending on the number of containers allowed, many residents may be able to manage all their wastes without purchasing additional bags or stickers.

Limiting the number of containers allowed during a given collection provides some incentive for residents to recycle, compost, or reduce waste generation as a means of avoiding additional cost for collection and disposal. This appears to be the best option for the City of St. Marys.

There are two additional variations on PAYT that other municipalities have employed. These include:

- Offering more than one container size option.
- Offering price reductions to low and fixed income residents.

Regardless of the PAYT scenario used, the City would need to implement controls that help to ensure proper disposal of wastes generated in the City. Improper disposal is less likely under most hybrid scenarios. If residents are required to pay a fee, even if it is only a partial fee to cover fixed costs and purchase of bags is still required, they are more likely to use the service. However, good enforcement is still necessary to ensure compliance.

RESIDENTIAL RECYCLING EDUCATION

Educational Materials - The City already states that an annual calendar with the collection schedule and instructions on preparing materials is distributed to households by the hauler. However, it may also be possible to work with a local advertising publication to distribute additional materials to promote awareness and to educate residents as an insert or to print the information prominently in the publications. Other potential outlets might include grocery and/or other retail stores, churches, schools, or any other locations where they are likely to have good public visibility. The point is to find distribution methods that stand out so that residents cannot miss them. Mailing materials would ensure that they are received.

Many municipalities have chosen to develop brochures that describe the recycling program. Information in a brochure may include the types of materials that will be collected, how they should be prepared, how often they will be collected, why the municipality is recycling, why recycling is important, and contact information, among other things. These brochures may be a good initial investment, but brochures tend to get lost or be thrown away over time. Another method that has a better potential for being posted prominently/visibly in a residence is a refrigerator magnet. Magnets could be kept simple, with very basic information about materials being collected and how they should be prepared, along with appropriate contact information. A suggestion could be made that residents use the magnet to hold their recycling calendar in place. Magnets are much less likely to be lost or disposed than brochures.

Preparation and printing of recycling educational materials is an eligible expense under DEP's Section 902 Recycling Grant program.

Reminders - It is important that residents be reminded to recycle. The City could consider making available promotional items made from recycled materials—preferably something that would be used by residents so it remains in view as a reminder—to serve as a constant reminder about the City's recycling program. The City could probably arrange for the distribution of these items by local merchants, at recycling events, and at other public events. Promotional items could include a range of products, from inexpensive pens,

pencils, rulers, and refrigerator magnets to note pads or even tote bags. The City should consider partnering with local businesses as a promotional opportunity for both the businesses and the City, and to have these types of products funded.

Spotlights on the Program - The City could also engage in other activities that are fun, inexpensive, and bring attention to the recycling program. Some potential activities for consideration might include:

- Creating a recognizable slogan, logo or mascot associated with the recycling program. Having one or more of these things that identify the program would help to increase program visibility. Some municipalities have conducted local contests to ask residents to submit a slogan, a logo, and/or a mascot to be considered, with the winning entry incorporated into future materials used by the municipality. The winner or winners are usually recognized by the municipality in some way, and given some type of reward for their effort. Prizes could be donated by local businesses, or the City's contribution toward prizes could be applied as part of the City's match under a Section 902 grant.
- The City could institute a "Recycling Household of the Month" program, with selected households featured in the local paper or similar publication, perhaps a City newsletter, or on the City's website. Specific criteria would need to be developed to determine who might be selected for this recognition, and households could be nominated from within the community (self or by neighbors) or selected through a procedure established by the City. Criteria should include measures that indicate that a given household is doing more than just placing recyclables at the curb, and could potentially include: home composting; buying recycled; recycling or reuse of materials other than those collected at the curb; use of less hazardous products; and creative uses of materials or activity in the community. Awards could be solicited through local businesses.
- The City could bring attention to its recycling efforts by developing a visual method of showing progress. Preparing a sign that could be placed in a highly visible location (similar to United Way) showing progress toward the goal (a thermometer, a recycling truck traveling to a materials recovery facility, etc.) will help residents to see where they are in relation to the goal and encourage them to recycle more to meet the goal.
- Some type of recycling display could be developed that can be used during community events, and rotated among schools, churches, and businesses. This display could be used as part of any presentations made by City officials or a recycling committee.

Ongoing Education - Sometimes residents forget or do not completely understand which materials are acceptable and which are not, or exactly how to prepare materials. In either case, friendly reminders may help to set these residents on the right track. Act 101 requires that mandated municipalities provide reminders about the recycling program two times a year. While the City claims that it has, in fact, been providing semi-annual reminders, based on program results the reminders do not appear to have been effective. Constant—or at least more regular—reminders, and not just reminders provided semi-annually, would be more effective. This could be accomplished through many of the strategies suggested above.

St. Marys City Website - The City should include a recycling page on its website. The website address could easily be incorporated on something like a refrigerator magnet, and

residents could go to the site to find information about the program, special collection efforts, municipal composting, home composting, and related information. The City could even offer an option for residents to sign up for a list serve that provides updates and information about upcoming recycling events sponsored by the City, the County, or the state. This would provide a very inexpensive means of educating and informing the residents of the City.

Education in the Schools - Educating students in grades K-12 may be a very effective way of reaching City residents both now and for the future. Students are often the strongest advocates of recycling, and will ensure that recycling is happening in their homes. The DEP has recycling curriculum materials available, and the County could work with the City to see that some type of recycling educational curriculum is implemented.

ESTIMATED PROGRAM COSTS

If the City expands its curbside recycling program, as mandated by Act 101, the cost under the current scenario (all glass, aluminum cans, and newsprint) would be \$61,476 (5,123 households at \$1.00 per month). Since the current recycling contract does not specify additional cost if expanded to include steel cans, it is assumed that the cost would be the same. The current contract specifies that the cost will be an additional \$0.15 per household per month if the City adds plastics to the program. The cost under this scenario would be \$70,697. Elk Waste reports that if the program is expanded, it would need, at a minimum, a new recycling collection truck to replace the 12 year old truck provided by the City (originally purchased through a Section 902 grant). It is more likely that two trucks will be needed, and this is especially true if additional materials are to be collected. It is estimated that the cost for a new recycling collection vehicle would be approximately \$120,000, based on a recent bid obtained by Ridgway Borough to purchase a new vehicle. The total cost would be \$240,000, of which 90 percent could be covered by a Section 902 Recycling Program Grant; the net cost to the City to purchase two new collection vehicles would be \$24,000.

The City would also need to put some effort into recycling education. The cost would be dependent on the level of effort. The City should be able to retrieve all or nearly all of the cost to design and purchase recycling education materials through the Section 902 grant program because the 10 percent match can include staff time and other internal expenses. Most or all “out of pocket” expenses should be covered.

The City can offset a portion of its costs through Section 904 Performance Grants as well. The City currently receives some funds under this program, but the amount received has not been significant because of the low participation/recycling rate. In order to boost return from this program, the City would need to expand its education program and provide incentives for residents to participate. Even if Section 904 funding can be expanded, however, it is unlikely that the City will be able to cover all its costs because it only receives funds for the residential materials recycled. Funds received based on commercial recycling are distributed to participating businesses under a program established by the County. Unless the City is able to convince businesses to either share or give up their access to these funds—which, according to the County, they appear unwilling to do—the City will continue to be limited to funds related to residential materials only.

Estimated returns for Section 904 Performance Grants will be provided later in this report, using several different scenarios.

COMMERCIAL AND INSTITUTIONAL ESTABLISHMENTS

At first glance, commercial recycling in the City seems to be working reasonably well. As a municipality mandated to recycle under the Municipal Waste Planning, Recycling and Waste Reduction Act of 1988 (Act 101), the City must include mandatory recycling for all commercial and institutional establishments in its recycling ordinance. A review of the City's ordinance shows that the City has done this, with the required materials for separation being those required by Act 101 – high grade office paper, corrugated cardboard, aluminum cans, and leaf waste.

While commercial recycling appears to be working well, actual participation is unclear. The County has a list of major businesses that are recycling because it distributes a portion of the County's Section 904 Performance Grant award to businesses based on tonnages reported. In 2000, only 13 businesses, plus the Benedictine Sisters and the City of St. Marys, received monies from this program. The County reports that more businesses are now submitting their own reports to the County. Elk Waste and Grolls include a list of businesses they collect from with their commercial recycling reports. The other hauler, Onyx, reports data for larger businesses, but only reports aggregate figures for smaller businesses. The County may want to require that all haulers provide a list of all the businesses that are recycling with their commercial reports to make it possible to determine actual participation and determine whether or not businesses are in compliance with the City's recycling ordinance.

The City may also want to consider a survey to help in determining the best ways to promote commercial and institutional recycling in the City. A suggested survey is included as Attachment 1. To save distribution costs, the survey could be distributed along with the annual report that is sent each year to collect recycling data from businesses. It might, however, get greater attention if it is distributed separate from the annual report, and if the survey becomes a joint effort with the Chamber of Commerce or other business organization in the City.

RECYCLING EDUCATION FOR BUSINESSES AND INSTITUTIONS

It is important to know who the target audiences are. The City should have a pretty good idea of the major sectors that would need to be addressed. A basic education campaign should include the following:

- Requirements – state, county, and local, including data collection requirements
- Basic program components to implement new or improve existing programs

In addition, it is helpful to be prepared to provide information more specific to the targeted sectors. Attachment 2 includes basic commercial recycling education materials, including fact sheets targeted at specific sectors or certain materials.

Educating Reluctant Commercial Establishments - Many small businesses are reluctant to implement recycling programs because they believe that recycling will result in greater waste management costs. While it is true that recycling does entail some cost, most

businesses and institutions should find that their overall waste management costs – that is, cost for collection and disposal of waste and collection and processing of recyclables combined – should not increase, and in fact, there is significant potential for reduced cost.

Before going further, however, it should be noted that businesses and institutions in St. Marys are mandated to recycle under Act 101 and the City’s recycling ordinance, which carries penalties for non-compliance. It is always preferable, however, when a municipality can use a “carrot” instead of a “stick” approach to convince businesses and institutions to recycle.

There has almost always been a misconception that businesses and institutions should earn money from recycling. While this may be possible for larger entities when the market price for recyclables is high, it is usually not possible for small businesses and other small entities. The reason for this is because the revenue from sale of materials almost certainly will not cover the cost to collect and process the material. It should, however, result in a less costly service, since revenue should offset a portion of the cost.

A mistake that many businesses make is that when they implement recycling programs, they do not take corresponding measures to reduce waste collection and disposal services. Most businesses pay by the pull for waste – this means that they pay a flat amount every time a waste container is emptied or pulled based on the size of the container, regardless of how full the container happens to be. When a business implements a recycling program, depending on the amount of recyclables produced, fewer waste collections should be required. Many, if not most, businesses should be able to reduce the number of waste pickups/pulls, and this should result in a reduction in disposal cost that correlates to the reduction in pickups/pulls. The savings achieved by reducing waste collection should, in most instances, cover the cost of recycling collection and processing.

Unfortunately, it is difficult to provide any meaningful data to illustrate how recycling will affect a given business in a given community. The resulting overall cost depends on a variety of factors, including, but not limited to, rates in a given area (which varies by region, population density, cost of labor, disposal cost, and what the market will bear, among other things), the materials a business is recycling and the weight and volume of the material, and recycling markets (i.e. what the market price is for any given material, which fluctuates and often varies by region). As noted above, however, managing services efficiently should ensure that overall waste management cost, which includes recycling, should not increase.

There are also some strategies that have been used in other communities to assist small businesses with recycling. Possible options include:

- **Cooperative efforts.** Several businesses located within a given area could act cooperatively to bid for recycling collection and processing services. This would require some coordination concerning internal efforts and materials to be recycled. In this scenario, several businesses could deposit their recyclables into a common container or containers for collection, and the cost of service would be prorated among the participants.

- **Non-profit services.** In some areas, non-profit agencies like Goodwill have developed collection programs for recyclables. Because their costs are much lower, the cost to customers is usual much lower.
- **Joint bidding by an umbrella organization.** Some business and professional groups such as chambers of commerce have acted on behalf of members to bid for services, often at a reduced price for the group.
- **Drop-off recycling.** Some municipalities have elected to provide for the drop-off of recyclables from small businesses. While this requires some initiative by the business to deliver materials to a drop-off site, it can provide a nearly no cost option for recycling. This can be as simple as the program in Camp Hill Borough (Cumberland County), where containers for paper and cardboard are provided in the Borough's parking lot, or can be as elaborate as the staffed facility in the City of Bethlehem that takes nearly every material imaginable. Obviously this kind of program does result in cost to the municipality, but any costs can be offset by (1) Section 902 grants to pay for eligible equipment or education, and (2) Section 904 performance grants that are based on the weight of material and the recycling rate that can be used to pay for operation. The amount of effort to the municipality can be kept to a minimum by doing what Camp Hill does, which is simply to contract with a local company to set containers on site, pick up materials, and process and market them.

The City should explore coordinating efforts with the County to provide for drop-off recycling specifically for businesses and the materials they generate in the areas of greatest concentration.

SPECIAL EVENTS RECYCLING

Recycling at special events, required for all mandated municipalities, presents a significant challenge. These are events that in most cases involve hundreds or thousands of people, numerous activities, and are spread over a wide area. There is little or no opportunity for advance education in most cases.

St. Marys has one major event, its annual Hometown Festival held in September, where recycling is mandated. Other events, such as school sporting events, should provide opportunities for recycling as well.

Most special events can be broken into three major categories: (1) street or large area activities spread over a large area; (2) contained activities (i.e. located in a specific facility, but which may differ significantly from event to event); and (3) sporting events (usually in a stadium or arena).

STRATEGIES FOR SPECIAL EVENTS RECYCLING

Because no two events are exactly alike, there is no one strategy that will work for all special events. Contained events such as sporting events or those that take place within a single facility may be somewhat easier, but recycling at special events is never a simple activity. Several basic strategies are discussed below.

Street or Large Area Activities

Planning for large-scale annual events should ideally begin just after completion of the event, while the experience is still fresh in the minds of planners and participants and to give sufficient time to prepare for the next year's event. Once recycling is carried out at one of these events, the basic strategy can be used and "fine tuned" for other similar events.

This kind of event cannot be managed adequately by a single recycling coordinator. Planning and implementation will require the cooperation and experience of all those who have a stake in the event, so it is best to establish a planning committee that has representation from all of the major groups and activities that will be represented at the event. For St. Marys, a special events planning committee might consist of the following:

City special events representative	Vendor representatives
Public Works Dept. representative	• Food
Sponsor representatives (major sponsors)	• Arts
Organizations	• Other
• Environmental	End market (who will accept materials)
• Volunteer	

Having representation from all sectors will help in identifying the types of materials generated and in projecting the tonnage/volume of materials that might be expected.

In general, planning should consider the following:

- Layout—While there may not be a final layout until much closer to the event, it helps to begin with a general layout/schematic that will help in determining basic placement of containers. These events are usually structured quite similarly from year to year, so there is no need to wait until a final layout is developed to design the recycling program. The layout will play a large role in dictating where containers should be placed, the number and size of containers for different materials, type of containers, how collection will be undertaken, and how to place volunteers and educate the public.
- Containers—The choice of containers for special events is extremely important, and can help greatly in determining the success of the program. Some considerations for container selection include: (1) size—large enough to manage large amounts of material without needing to be serviced constantly to prevent overflowing, but small enough that they are easily accessible to the public and do not inhibit the flow of people; (2) restrictive—openings should be designed for the intended recyclable materials so as to reduce the incidence of contamination; (3) attractive—recycling containers should be clearly labeled, easily recognizable and designed to attract attention, inviting event participants to use them; (4) simple to service, transport and store—because these containers will probably need to be serviced regularly throughout a several day event, and because it will often need to be done in the presence of crowds, emptying them should be quick, simple, and require little additional space. Also, because most or all of them will not be needed once the event has ended, the containers should be lightweight enough to move easily, designed to maximize the number that can be moved at one time and minimize storage space required, and sturdy enough to withstand regular movement.

- **Collection/Hauling**—The placement of containers should be planned with collection in mind. The space available will dictate the method that must be used to collect the materials from the event site. The method chosen for managing materials from special events would need to be compatible with whatever entity is used for the processing and marketing of materials. One strategy to consider is to get such a facility to become an event sponsor and contribute the processing and marketing of recyclables in exchange for recognition at the event.
- **Education**—While the public will certainly need to be educated on how to recycle at special events, generators (vendors) will need to be educated about how to manage the materials they generate and to assist the public. With the vendors, information/education materials can be distributed with permits/materials supplied to them when they register for the event.

With vendors, educational materials provided with permits also present an opportunity to present waste reduction concepts. For example, vendors could be encouraged to serve beverages in recyclable rather than disposable containers, serve condiments in refillable containers rather than single serve packets, or give discounts to members of the public who supply their own containers for beverages.

Separate flyers or other recycling-specific stand-alone documents are not very practical for special events. The best methods for educating the public include providing recycling information in programs and other materials that are handed out to everyone, good signage, and having volunteers to assist and instruct persons attending the event. Volunteers have been used in such events with good success. For example, the Boy Scouts/Girl Scouts assist in Penn State’s successful tailgate recycling program.

Sporting Events and Multiple Use Facilities

In sporting and multiple use facilities, it may be best to consider placement of permanent containers for the collection of recyclables from the public. Any containers placed in these locations must be of sufficient size to accommodate the amount of material expected, and must be of a design to minimize contamination. They must also be conveniently placed to maximize use and well labeled and attractive to discourage confusion with waste containers. It is probably easier to place one container for commingled recyclables (metals, glass and plastic containers) at these types of locations.

Signage is extremely important for any containers of this type. “Rules” for usage should be simply and clearly stated and the information should be placed strategically with any containers used. It may also be beneficial to work with individuals and organizations that use these facilities to obtain cooperation and assistance in getting spectators/attendees to recycle at these locations. Assuming that there is some type of contract for users of the facility, recycling requirements should be made a provision within the contract.

Because space will probably be an issue, as noted above, it may be best to plan for the use of a single container for commingled materials. The basic options are cluster or multiple material style containers, and Toters or Toter-type containers. A newer option is now available from Resourceful Bags and Tags that provides foldout holders for clear plastic bags, making it easier to see that containers are for recyclables. Another option would be specially fabricated containers using 55-gallon drums with lids having openings that will

only accommodate bottles and cans easily, though these are not as attractive and many may equate them with garbage or burning garbage.

Cluster/Multiple Material Containers. The cluster-style and special multi-material containers are very attractive, compact and designed to minimize contamination. They are relatively easy to service, though they must be serviced manually. The greatest drawback is probably cost, though capacity is somewhat limited as well.

Toter or Toter-style Containers. Toter/Toter-style containers are attractive and compact, and can accommodate reasonable volumes of material. They may not protect as well against contamination as the clusters, but can be configured in ways that should minimize contamination. These containers are easy to move and service, and can be serviced either manually or using a vehicle designed to lift and empty them.

Resourceful Bag and Tag Containers. Resourceful Bag and Tag's containers are simple metal foldout frames that hold clear plastic bags. Lids can be designed to suit materials being collected. These are easy to move, bags can quickly be lifted out and replaced, and they should reduce contamination because it is easy to see inside the clear bags, plus they are clearly different from waste containers.

Specially Fabricated Drums. Fifty-five gallon drums that are specially outfitted for the collection of recyclables may be a reasonable option for collection in heavy use areas. Assuming they are designed properly, they can be attractive, and they are compact and can accommodate reasonable volumes of material. If the lids are designed properly, they can also minimize contamination. These containers would need to be serviced manually. They should be sturdy enough to withstand heavy usage.

The drawback is that they may be perceived as waste containers, since they are often used for waste. An advantage, however, is cost—55-gallon drums can usually be obtained at a very reasonable cost, and can be modified as necessary to be used for recycling.

It should be noted, however, that the public is not the only generator of recyclables at sporting events and conventions. As is true for large-scale street events, vendors and event organizers usually generate significant amounts of corrugated cardboard. The advantage is that permanent collection areas can be established within the facility for the collection of cardboard, and users can be instructed on preparation and placement of these materials. Management of this material as a recyclable item rather than as disposable should not place a heavy burden on the vendors or organizers.

RECYCLING TASK FORCE

In a municipality like St. Marys, where size and budget limit the ability to hire separate personnel to manage a recycling program or time that existing personnel can dedicate to recycling, it may be useful to form a recycling task force or advisory committee to assist with planning and implementation efforts. Such a group, consisting of personnel who have a stake in recycling in the community, may provide the best option to assist the municipality in expanding and improving its recycling program. This group should contain a cross-section of people representing a wide range of interests in order to address recycling issues in a manner that considers and meets the needs of all involved. Representatives should have an interest in recycling, and should be, to the extent possible,

known and respected in the community. One community that recently established a recycling task force is Mechanicsburg Borough (Cumberland County). They have held several meetings and their activities have already served to raise awareness of recycling in the community.

The following is a list of the organizations that should be considered for representation on a task force or advisory committee:

- City administration official
- Elected official
- Waste/recycling hauler
- Recyclables processor
- End user of recycled materials
- Business organizations such as:
 - Chamber of Commerce
 - Rotary
 - Business and professional associations
- Service organizations such as:
 - Kiwanis
 - Lions
 - Jaycees
- Environmental organizations
- School district
- Media
- Major businesses that recycle or are able to contribute time/funds to program
 - Property management companies (that manage complexes with multiple businesses)
 - Hospitals or other major facilities
 - Banks
 - Respected professionals such as lawyers, doctors, etc.
- Citizens/volunteers

There may be other organizations or individuals that the City is able to identify who could make valuable contributions to this type of effort as well. Having representation from all sectors can help in: (1) identifying the issues that need to be addressed; (2) identifying businesses and institutions that should be recycling or may require assistance; (3) identifying types of materials generated and in projecting the tonnage/volume of materials that might be expected; (4) recycling education; and (5) data collection.

Perhaps more significant, a task force or committee may be able to make additional contributions beyond those identified above. For example, a task force or committee may want to implement a technical assistance program to help businesses and institutions that are having difficulty with their recycling programs or have not implemented a program. Representatives from businesses that are doing well could be paired with similar businesses in a sort of “peer match” approach to help those that are struggling. This kind of group may also want to consider cooperative efforts among businesses that would improve collection efficiency and achieve cost savings for businesses that participate.

Finally, a task force or advisory committee spreads the workload over a larger group, and a group where members are affected directly by the decisions of the group. This approach should help to reduce burnout and boost commitment.

RECYCLING GRANT FUNDING

The City has the potential to qualify for significantly more funds than it currently receives through the Section 904 Performance Grant if it expands its recycling program to include the entire City, boosts collection of materials already being collected, and adds materials not currently being collected. Also, the distribution formula for Section 904 funds would need to be changed. Currently, the County files for Section 904 grant funds on behalf of the entire County. The City receives funding at the rate of \$10 per ton for each ton recycled at the curb and in the dropoff program, and businesses that report recycling also receive \$10 per ton from the County. The City could receive greater funding if the distribution formula from the County were to be changed, or if the City files separately from the County.

The recycling rates used to prepare the estimates in this section are based on waste generation of 0.8 tons per person per year. At 14,500 population, the waste generation rate is 11,600 tons per year. The following assumptions are made: (1) recycling is offered to all 5,123 households; (2) in Tables 6 and 8, the same materials continue to be collected from the curb (glass, aluminum cans, and newspaper), and in Tables 7 and 9, steel cans and plastics are added; (3) commercial recycling tonnage is doubled; (4) in Tables 6 and 7, payouts are made to businesses for all commercial tonnage at \$10 per ton (which is not the case now, but using this figure results in more conservative estimates of grant award remaining after commercial awards are distributed), and in Tables 8 and 9, payouts are made at \$5 per ton; and (5) all remaining grant award funds (after distribution to businesses) are distributed to the City.

Each table provides comparisons to illustrate what the net program cost would be to the City under each scenario. In all but one case, the City's net cost for all households (after receiving 904 grant funds) would be less than the current cost of \$46,800 for only 3,900 households. Of course, the City receives Section 904 funding now at the rate of \$10 per ton recycled, which offsets the current cost (\$46,800) somewhat. This may result a higher cost than at present for the low end (25 percent recovery) for the scenarios presented in Tables 6 and 7, but the City would almost certainly experience savings in every case if recycling recovery is increased. If the City continues to receive Section 904 funds based on the current \$10 per ton distribution, the greatest amount the City would receive (based on the scenarios in Tables 6 through 9) would be \$12,320 (957 tons curbside at 75% capture rate plus 275 tons through dropoff efforts). Paying out Section 904 funds to the City based on the formula used by the state would provide a significantly greater incentive for the City to make changes to its recycling program, but would require that the City prepare its own application for these funds in order to benefit from the increased recycling rate. Under the current system, the City's recycling is included in the County total, and the return to the City is based on the County-wide recycling rate, rather than the recycling rate for the City. The County's recycling rate in 2002 for purposes of the Section 904 grant program was under five percent.

Any activity that helps to increase curbside collection of recyclables will help in the bottom line. In particular, newsprint should receive attention because it is the most significant recyclable material by weight in the residential waste stream. Newsprint generally makes up 40 to 50 percent of the tonnage collected in curbside programs. A higher recycling rate means more paid per ton collected under the Section 904 grant formula. For example, as indicated in the following tables, based on the 2002 recovery rate, the City would receive \$17.49 for every ton of residential recyclables (from the curb and from dropoffs) plus a 1:1 match with commercial recyclables. The amount received is based on a flat \$5.00 per ton, plus \$12.49 (\$1.00 for each percent recycled).

TABLE 6
ESTIMATED 904 GRANT AWARD WITH EXPANDED COMMERCIAL AND RESIDENTIAL TONNAGE
WITH CURRENT MATERIALS

Category	2002 Tonnage	Residential @ 25% of Available + 100% More Commercial	Residential @ 50% of Available + 100% More Commercial	Residential @ 75% of Available + 100% More Commercial
Residential	140.9	214.6	429.2	643.8
Commercial	1,033.9	2,067.8	2,067.8	2,067.8
Drop-Off	274.1	275	275	275
Total Recycling	1,448.9	2,557.4	2,772.0	2,986.6
Recycling Rate	12.49%	22.05%	23.90%	25.75%
Estimated Total 904 Grant Award*	\$20,706	\$37,373	\$47,297	\$58,808
Commercial Award based on \$10/ton**	\$10,399	\$20,678	\$20,678	\$20,678
Remaining Grant Award Available to St. Marys	\$10,367	\$16,695	\$26,619	\$38,130
Recycling Program Cost to City (after grant award)***	\$51,100	\$44,781	\$34,857	\$23,346

*Calculated as follows: \$5 plus \$12.49 (or \$22.05, \$23.90, \$25.75) (based on 904 recycling rate) times residential tonnage plus 1:1 match with commercial tonnage, plus \$10 times the remaining commercial recycling tonnage; totals for additional commercial tonnage include the greater balances of commercial tonnage after the 1:1 match

**Assumes that this entire amount is distributed to businesses

***Assumes program cost of \$1.00/household/month for 5,123 households (\$61,476)

TABLE 7
ESTIMATED 904 GRANT AWARD WITH EXPANDED COMMERCIAL AND RESIDENTIAL TONNAGE
WITH ADDED MATERIALS (STEEL CANS AND PLASTICS)

Category	2002 Tonnage	Residential @ 25% of Available + 100% More Commercial	Residential @ 50% of Available + 100% More Commercial	Residential @ 75% of Available + 100% More Commercial
Residential	140.9	319	638	957
Commercial	1,033.9	2,067.8	2,067.8	2,067.8
Drop-Off	274.1	275	275	275
Total Recycling	1,448.9	2,661.8	2,980.8	3,299.8
Recycling Rate	12.49%	22.95%	25.70%	28.45%
Estimated Total 904 Grant Award*	\$20,706	\$42,003	\$58,476	\$78,459
Commercial Award based on \$10/ton**	\$10,399	\$20,678	\$20,678	\$20,678
Remaining Grant Award Available to St. Marys	\$10,367	\$21,325	\$37,798	\$57,781
Recycling Program Cost to City (after grant award)***	\$60,330	\$49,372	\$32,899	\$12,916

*Calculated as follows: \$5 plus \$12.49 (or \$22.95, \$25.70, \$28.45) (based on 904 recycling rate) times residential tonnage plus 1:1 match with commercial tonnage, plus \$10 times the remaining commercial recycling tonnage; totals for additional commercial tonnage include the greater balances of commercial tonnage after the 1:1 match

**Assumes that this entire amount is distributed to businesses

***Assumes program cost of \$1.15/household/month for 5,123 households (\$70,697)

TABLE 8
ESTIMATED 904 GRANT AWARD WITH EXPANDED COMMERCIAL AND RESIDENTIAL TONNAGE
WITH CURRENT MATERIALS, ASSUMING \$5.00/TON DISTRIBUTION TO BUSINESSES

Category	2002 Tonnage	Residential @ 25% of Available + 100% More Commercial	Residential @ 50% of Available + 100% More Commercial	Residential @ 75% of Available + 100% More Commercial
Residential	140.9	214.6	429.2	643.8
Commercial	1,033.9	2,067.8	2,067.8	2,067.8
Drop-Off	274.1	275	275	275
Total Recycling	1,448.9	2,557.4	2,772.0	2,986.6
Recycling Rate	12.49%	22.05%	23.90%	25.75%
Estimated Total 904 Grant Award*	\$20,706	\$37,373	\$47,297	\$58,808
Commercial Award based on \$5/ton**	\$5,170	\$10,339	\$10,339	\$10,339
Remaining Grant Award Available to St. Marys	\$15,536	\$27,034	\$36,958	\$48,469
Recycling Program Cost to City (after grant award)***	\$45,940	\$34,442	\$24,518	\$13,007

*Calculated as follows: \$5 plus \$12.49 (or \$22.05, \$23.90, \$25.75) (based on 904 recycling rate) times residential tonnage plus 1:1 match with commercial tonnage, plus \$10 times the remaining commercial recycling tonnage (0 in this case); totals for additional commercial tonnage include the greater balances of commercial tonnage after the 1:1 match

**Assumes that this entire amount is distributed to businesses

***Assumes program cost of \$1.00/household/month for 5,123 households (\$61,476)

TABLE 9
ESTIMATED 904 GRANT AWARD WITH EXPANDED COMMERCIAL AND RESIDENTIAL TONNAGE
WITH ADDED MATERIALS (STEEL CANS AND PLASTICS),
ASSUMING \$5.00/TON DISTRIBUTION TO BUSINESSES

Category	2002 Tonnage	Residential @ 25% of Available + 100% More Commercial	Residential @ 50% of Available + 100% More Commercial	Residential @ 75% of Available + 100% More Commercial
Residential	140.9	319	638	957
Commercial	1,033.9	2,067.8	2,067.8	2,067.8
Drop-Off	274.1	275	275	275
Total Recycling	1,448.9	2,661.8	2,980.8	3,299.8
Recycling Rate	12.49%	22.95%	25.70%	28.45%
Estimated Total 904 Grant Award*	\$20,706	\$42,003	\$58,476	\$78,459
Commercial Award based on \$5/ton**	\$5,170	\$10,339	\$10,339	\$10,339
Remaining Grant Award Available to St. Marys	\$15,536	\$31,664	\$48,137	\$68,120
Recycling Program Cost to City (after grant award)***	\$55,161	\$39,033	\$22,560	\$2,577

*Calculated as follows: \$5 plus \$12.49 (or \$22.95, \$25.70, \$28.45) (based on 904 recycling rate) times residential tonnage plus 1:1 match with commercial tonnage, plus \$10 times the remaining commercial recycling tonnage; totals for additional commercial tonnage include the greater balances of commercial tonnage after the 1:1 match

**Assumes that this entire amount is distributed to businesses

***Assumes program cost of \$1.15/household/month for 5,123 households (\$70,697)

CONCLUSIONS

- St. Marys City has a lower than average recycling rate for municipalities of its size and type.
- The City does not provide recycling for all residences in the City.
- Nearly twice as much material is collected through the County's dropoff program than in the curbside program.
- The City could boost its recycling rate significantly by expanding the curbside recycling program to include all residences and by adding materials not currently included in the program.
- The City does little to promote yard waste collection and composting.
- Recycling education among residents has been minimal.
- Improved recycling education and incentives could boost the City's recycling rate.
- The City could increase commercial recycling with greater recycling education.
- The City could benefit from the establishment of a recycling task force to assist City officials involved in the program.
- The City has the potential to qualify for significantly more funds through the Section 904 Performance Grant if the distribution formula is changed or if the City files separately from the County.

RECOMMENDATIONS

- The City should consider implementing a Pay-As-You-Throw program as a means of reducing waste and reducing the cost of disposal and recycling for residents. This would provide a direct incentive for residents to increase their recycling and composting practices. It should also enforce the provision of its solid waste ordinance that requires all residences to properly dispose of waste in order to ensure that this happens.
- The City of St. Marys should expand its curbside recycling program to include all residences in the City. It should add steel cans and plastic containers, and consider adding corrugated cardboard.
- The City should improve its recycling education program by providing materials and implementing activities that reach residents through a variety of vehicles and that meet the requirements of Act 101.
- The City should promote recycling of additional materials through participation in special collection programs (at the county or regional level) and through its recycling education program.
- The City should promote leaf and yard waste collection, and should promote home composting by residents.
- The City should use the survey provided in Attachment 1 to collect information from commercial and institutional facilities as a means of determining the status of recycling in commercial establishments.
- The City should implement a comprehensive recycling education program for commercial establishments and institutions, beginning with the use of materials provided in Attachment 2. Ideally, the City should assign some employee time to

improving the City's recycling program, tasking that employee to provide information and technical assistance to commercial establishments. This assignment of time could be justified given the potential for additional grant awards as illustrated in this report.

- The City should implement a recycling program for its Hometown Festival, and should require all who sponsor special events in the City to provide for recycling as part of the event.
- The City should establish ways to boost recycling from residences and businesses as a means of increasing the award available through the Section 904 Performance Grant program.
- The City should establish a Task Force or Advisory Committee consisting of key persons from all sectors of the City to assist the City in expanding and improving its recycling program.

The City of St. Marys is mandated to recycle, yet recycling is barely visible. The City stands to benefit financially from an expanded and improved residential recycling program (through grants that offset costs), as well as increases in commercial recycling efforts. It is for these reasons that the City should strongly consider implementing the recommendations listed above.

Sincerely,
R.W. BECK, INC.

Sandra L. Strauss
Environmental Analyst

cc: Carl Hursh, DEP
Maurice Azain, City of St. Marys