



August 2, 1999

Mr. Rocco Damiano  
Director of Public Works  
City of Scranton  
Rear 800 Providence Road  
Scranton, PA 18510

**Subject: Evaluation of City Municipal Waste and Recycling Collection Costs and Analysis of Implementing a Pay-As-You-Throw or Volume base program**

Dear Mr. Damiano:

This letter is to provide the City of Scranton with the results of R.W. Beck’s evaluation of the City’s municipal waste and recycling collection program costs. It also, examines the value of the City converting the municipal refuse collection service to a volume based fee system. The attached pages describe the methods R. W. Beck used to determine the cost of this City service and offers a program for implementing a volume based fee system.

**ANALYSIS OF CURRENT REFUSE AND RECYCLING COLLECTION COSTS**

The current refuse and recyclables collection program in Scranton was examined to determine the average cost per household to collect residential refuse and recyclables. In order to estimate costs associated with the entire program, the collection operations were analyzed according to three different scenarios as presented in Table 1.

**TABLE 1**

**ANALYSES PERFORMED**

<i>Analysis</i>	<i>Material Collected</i>
1	Refuse
2	Newspaper
3	Commingled Recyclables

## INPUTS FOR AUTOMATED WORKSHEET

A number of data inputs are required in order to estimate costs using the computerized Collection Efficiency Worksheet developed by R.W. Beck. When possible, the City of Scranton provided R.W. Beck with actual data from the City's budget and first-hand knowledge of the refuse operations. For parameters not available from the City, R.W. Beck used estimates based on average values from the collection programs of similar cities, which have previously been analyzed using the worksheet.

## DATA THAT DOES NOT CHANGE BETWEEN ANALYSES

For the three analyses performed, the following data inputs remained the same from one scenario to the next:

- Number of households served – 22,000
- Scheduled length of work day – 8 hours
- Actual length of work day – 8 hours
- Number of days per week worked by collection crews - 5
- Multiplier used to calculate overtime pay rates - 1.5
- Time spent at the yard prior to starting the route - 15 minutes
- Time to travel from the yard to the start of the route – 5 minutes
- Time to travel from the route to the processing facility – 20 minutes
- Time unloading at the disposal/processing facility – 45 minutes
- Time on lunch and breaks during the day – 30 minutes
- Time to travel from the disposal/processing facility back to the yard – 25 minutes
- Time spent at the yard for post-trip inspection, maintenance, etc. – 15
- Average truck capacity – 8.5 tons
- Number of trips to the disposal facility per day - 1
- Number of collection crew members - 3
- Average hourly pay rate for laborer - \$12.43
- Percent of hourly rate that is required to pay for benefits - 0%
- Rate of interest used to finance vehicle purchases - 8%
- Expected years of useful life of vehicle – 7
- Estimated Annual Vehicle Operation and Maintenance (O & M) Cost - \$14,700

## DATA THAT CHANGES WITH EACH SCENARIO

Table 2 shows the data that varies between scenarios, including tons of materials collected, number of routes per day, etc.

**TABLE 2**  
**DATA THAT VARIES BETWEEN SCENARIOS**

<i>Data</i>	<i>Input for Each Analysis...</i>		
	<i>Analysis 1 Refuse</i>	<i>Analysis 2 Newspaper</i>	<i>Analysis 3 Commingled</i>
Total Tons of Materials Collected per Year	24,310 <sup>1</sup>	880 <sup>2</sup>	1320 <sup>2</sup>
Number of Collection Days per Year	52	26	26
Number of Routes per Day	11	3	4
Set-Out Rate	98%	95%	95%
Average Seconds per Stop <sup>3</sup>	50	33	44
Average Hourly Pay Rate for Driver	\$13.10	\$12.81	\$12.81
Number of Routes per Supervisor	4	3	4
Capital Cost of One Collection Vehicle	\$100,250	\$98,450	\$98,450
Estimated Scrap Value of Vehicle at End of Its Useful Life	\$10,025	\$9,845	\$9,845
Spare Truck Percentage	27	33	25

### **OTHER IMPORTANT ASSUMPTIONS AFFECTING WORKSHEET CALCULATIONS**

- Each 20 cubic yard collection vehicle makes two trips to the disposal facility per day, while in 90 percent of the cases, the 26 cubic yard collection vehicles make only one trip per day
- Employee benefits are factored into hourly rate shown in budget
- Spare truck percentage is based on a total of four spare trucks, with three allotted to refuse collection and one allotted to recycling collection

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<sup>1</sup> Estimated based on vehicle capacity and number of routes per day for refuse collection

<sup>2</sup> Estimated based on average annual tonnages of recyclables collected in previously analyzed cities

<sup>3</sup> Estimated by dividing the time spent on route by the average number of homes collected per route

## RESULTS OF ANALYSIS

Table 3 presents the results of the Collection Efficiency Worksheet as calculated using the assumptions and inputs previously presented.

The \$101.00 per household per year calculated by the Collection Efficiency Model is the costs associated with the collection of materials. Not factored into this value are the costs associated with disposal and administration of the collection program. These costs are defined below based on data provided by City staff.

**TABLE 3**

**RESULTS OF COLLECTION COST ANALYSIS**

<i>Data</i>	<i>Analysis 1 Refuse</i>	<i>Analysis 2 Newspaper</i>	<i>Analysis 3 Commingled</i>
Total Annual Collection Cost	\$1,342,600	\$387,700	\$489,800
Number of Households Served	22,000	22,000	22,000
Average Annual Cost per Household	\$61.03	\$17.62	\$22.26

<b>Cumulative Annual Collection Cost per Household:</b>	<b>\$101</b>
Total Costs (\$2,220,100)/No. HH (22,000)	

**ADDITIONAL REFUSE AND RECYCLING PROGRAM COSTS**

In using the collection model to calculate refuse and recycling program costs, it is important to consider that the model does not account for all costs incurred. The model is used only in estimating the costs of collection. In addition to the cost of collection calculated above, a program must also account for administrative, disposal, and other miscellaneous costs. The following table estimates the additional costs of refuse and recycling services based on line items provided in the City's 1998 Operating Budget. When a line item applies to more than one department, the percentage of the item related to refuse and recycling services is estimated and applied to the total expense for the item.

The \$191.00 per household per year estimates the total cost of operating and administrating the refuse and recycling collection program for the City of Scranton. To substantiate this calculated value, actual budget figures and projections were used to derive the total estimated cost of the program. Table 5 shows the full cost accounting of the program based on the budget values.

Based on the actual budget figures, the annual full cost of the refuse and recycling collection services is approximately \$204. This value is only \$13 greater than the value calculated by the model and adjusted for other related costs. The two values are off by a margin of seven percent. The values are close enough to assume that the actual cost of this City service is in the range of \$200 per residence per year.

## COMPARISON WITH OTHER MUNICIPAL COLLECTION PROGRAM COSTS

A survey of communities in eastern Pennsylvania has found refuse and recycling household fees to range from \$90 per year up to \$270 per year. Typically, the annual cost per household for contracted collection services ranged from \$90 up to \$150. However, households in an “open system” or those subscribing for collection services directly with a hauler of their choice pay between \$150 to \$270 per year.

**TABLE 4**  
**ADDITIONAL PROGRAM EXPENSES**

<i>Item</i>	<i>Cost</i>
<b>Administration</b>	
Director - 1 at 50%	\$ 19,000
Chief Clerk - 1 at 50%	\$ 10,852
Assistant Chief Clerk - 1 at 50%	\$ 10,387
Payroll Clerk II - 1 at 50%	\$ 10,359
General Superintendent - 1 at 50%	\$ 15,000
<b>Other Departmental Expenses</b>	
Foreman	\$ 31,000
Foreman – Recycling	\$ 31,000
Recycling Coordinator	\$ 28,875
Dispatcher	\$ 25,854
Additional Employees not Accounted for in Model	\$ 189,342
Miscellaneous Materials and Supplies	\$ 1,181
<b>Garage Expenses</b>	
Employee Compensation - 25% of Total	\$ 108,121
Preventive Maintenance - 25% of Total	\$ 3,032
<b>Disposal Cost</b>	
Landfill	\$ 1,500,000
<b>Total Additional Expenses</b>	<b>\$ 1,984,003</b>
<b>Total Additional Annual Cost per Household</b>	<b>\$ 90</b>

**Total Refuse and Recycling Program Costs per Household**

<b>Total Annual Collection, Administrative, Disposal and Maintenance Costs per Household:</b>	<b>\$191</b>
Total Costs (\$4,204,103)/No. HH (22,000)	



**TABLE 5**  
**FULL COST ACCOUNTING OF REFUSE AND RECYCLING COLLECTION PROGRAM**

1998 Budget Figures for The City of Scranton's Refuse Collection Services			
Expense Items		Projected Amount	Applied Amount
Total Projected Refuse Budget		\$2,777,039	
Gas, Oil, Lubricants @	40%	\$253,527	\$101,411
Tires @	40%	\$82,958	\$33,183
Parts @	100%	\$102,000	\$102,000
Landfill Disposal Fees @	100%	\$1,500,000	\$1,500,000
Liability/Casualty Insurance @	20%	\$871,538	\$174,308
Workers Compensation	20%	\$3,000,000	\$600,000
Postage & Freight	40%	\$1,000	\$400
Advertising	20%	\$25,000	\$5,000
<b>Labor - Administrative</b>			
Chief Payroll Clerk @	10%	\$21,034	\$2,103
Insurance Clerk @	10%	\$19,446	\$1,945
Personnel Director @	10%	\$31,100	\$3,110
City Treasurer @	10%	\$31,767	\$3,177
Accounts Receivable Clerk @	10%	\$19,446	\$1,945
Public Works Director @	50%	\$38,000	\$19,000
Chief Clerk/CRT Operator	50%	\$21,704	\$10,852
Asst. Ch. Clk./Accts. Pay @	50%	\$20,775	\$10,387
Pay Clerk II/CRT Operator @	50%	\$20,719	\$10,359
General Superintendent @	50%	\$30,000	\$15,000
<b>Labor - Staff @</b>	<b>100%</b>	<b>\$1,247,623</b>	<b>\$1,247,623</b>
Staff Overtime @	100%	\$80,235	\$80,235
Staff Uniform Allowance @	100%	\$10,100	\$10,100
Garage Labor @	40%	\$386,088	\$154,435
<b>Capital Fund for Equip. @</b>	<b>100%</b>	<b>\$400,000</b>	<b>\$400,000</b>
<b>Total Costs Associated with Collection</b>			<b>\$4,486,574</b>
<b>Total Number of Residential Units</b>			<b>22,000</b>
<b>Total Estimated Annual Cost Per Residential Unit</b>			<b>\$203.94</b>
<b>Per Month</b>			<b>\$16.99</b>

The rate calculated for Scranton is clearly in the range of what is being reported as the rates paid by residents in other Pennsylvania municipalities. It is however, on the high side and significantly more than what the City is charging residents annually for the service. The City reports charging residents \$120 per year for refuse and recycling collection services. This is at least \$70 to \$80 less than what should be collected to make the program self-sustaining. To compensate the difference, the City is using General Fund money to support this City service.

City staff also reports that the number of residential units delinquent in paying the fee is significant. Therefore, not only is the City charging a rate below the actual cost of the service, revenue generated is even less than projected due to delinquent accounts.

## **FINDINGS OF PREVIOUS COLLECTION SYSTEM STUDY**

A Solid Waste Management Report prepared for the City in 1994 evaluated the costs associated with refuse and recycling collection and determined the total annual cost per residence to be \$217. The Report recommended a number of measures to reduce costs and improve the collection of the fee. Recommendations in the Report included:

- Improve collection of delinquent fees;
- Reduce collection costs by modifying collection practices;
- Maximize the use of available Act 101 grant funds for recycling programs, specifically those targeting the commercial generators;
- Use bags and tags with specific fees to collect revenues for the City to collect special waste streams such as, grass, leaves and bulky items; and
- Collect a fee on all bags set out at a residence in excess of two, which would be collected as part of the flat fee system.

One mechanism the Report recommended for the City to move toward a full-cost recovery rate structure for waste collection was, a pay-as-you throw or per-bag system for certain items and excess amounts of refuse generated from a single residence. The remainder of this evaluation examines the pay-as-you throw system for Scranton.

## **PAY-AS-YOU-THROW (PAYT)**

PAYT is also known as unit pricing or variable rate pricing. Under this type of a system, residents pay for municipal waste management services per unit of waste collected rather

that through a fixed fee. PAYT takes into account variations in waste generation rates by charging households or residents based on the amount of refuse they place at the curb, thereby offering individuals an incentive to reduce the amount of waste they generate and dispose of. Well over one hundred municipalities in Pennsylvania have implemented some form of a PAYT program. In fact, Wilkes-Barre has operated a per-bag system for a number of years and reports a significant reduction in the cost of their waste management services. A City representative reported the reduction to be approximately fifty percent of what it was prior to the per-bag program.

## **POTENTIAL BENEFITS OF PAYT**

Communities that have implemented PAYT programs have reported a number of benefits, which include:

- Waste reduction;
- Reduced waste disposal costs (as suggested above by the City of Wilkes-Barre representative);
- Increased waste prevention;
- Increased participation in composting and recycling programs;
- More equitable waste management fee structure; and
- Increased understanding of environmental issues in general.

PAYT programs encourage residents to generate less refuse by charging them for the amount they place out for disposal. They become more conscientious of their disposal habits and look for opportunities to generate less or recover a greater portion of the waste stream through alternative management practices such as recycling and composting. A key here is that they can become more conscientious, thereby making them more understanding of environmental issues and the impact of their behavior on the environment. It also provides a mechanism by which the rate paid by an individual correlates with the level of use of the service. Households generating smaller amounts of refuse pay a lesser rate than those generating larger amounts.

## **POTENTIAL BARRIERS TO PAYT**

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

- Illegal dumping;
- Recovering expenses;
- Administrative costs;

- Perception of increased costs to residents;
- Multi-family housing; and
- Building public consensus.

While communities have experienced some are all of the barriers identified, measures have been taken to overcome these barriers. For the City of Scranton, illegal dumping may take the form of household refuse being abandoned on road-sides, empty lots or more commonly in commercial and institutional facility dumpsters. Stricter enforcement can be used and locks placed on dumpsters to combat this problem. Cost issues can be resolved with careful planning, a clear idea of the total service cost and demonstrating to the public that the program will more likely reduce a household's cost for the service. Including public input early in the process can help to build public consensus and understanding of the real benefit to the residents.

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, revenues are subject to fluctuations not common to the flat fee system. To stabilize this situation, many communities have split the costs between a fixed rate and variable rate system. Fewer have assigned all the costs associated with a system to a strict variable rate fee.

Additionally, all costs associated with the program must be factored into the rate system. For instance, the costs associated with recycling and composting collection and processing must be factored into the rate system unless a separate fee is charged for these services. Since they supplement the refuse program it is advisable to keep the fees in the rates charged for the overall program.

## **CHALLENGES TO BALANCING THE BUDGET**

In every program there are fixed costs that exist regardless of the amount of waste that is disposed. These include municipal salaries, administrative costs, and collection costs. Municipalities have personnel who manage the program—some full time, some as part of a range of duties, so their entire salary and benefits or portion of the salary and benefits attributable to these duties should be assigned to the program. 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. For the City of Scranton this cost was calculated by the Collection Efficiency Worksheet and is shown in Table 3 as \$101 per household per year or a total of \$2,220,100.

Variable costs include waste disposal and processing of recyclables, which are largely based on the tonnage of materials disposed and/or processed. This cost for the City of Scranton is approximately two million dollars or the difference between the total Refuse and Recycling

budget and the fixed costs identified above. Tables 4 and 5 and the 1994 Report all show the total budget to be approximately four million dollars a year. If you subtract out the fixed costs of 2.2 million dollars the balance is the variable costs.

The goal for any system 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 at least covers the fixed costs. Revenue to cover variable cost expenditures can be variable as well, as long as the charges are set based on good estimates of the variable costs. This can generally be done using historical data.

The City of Wilkes-Barre reports that fee is broken into two parts, the per-bag fee and taxation. Collection costs, or the fixed costs as discussed above are paid through taxes, while the per-bag fees pay for the tipping fee (disposal cost) and bag distribution costs. The City offers two prepaid bags for sale at local grocery and convenient stores. They offer five - 15 gallon bags for \$3.65 and five – 30 gallon bags for \$6.25. The revenue generated by the bag sales is primarily used to pay the variable costs associated with the program.

## **MAINTAINING PAYT AND BALANCING THE BUDGET**

It can be difficult, however, to balance revenues with expenditures in a classic PAYT program, because revenues are solely dependent on the sale of bags. If there is a significant decline in sales 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 implemented 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 which include a flat fee and variable rate (pre-paid bags).

There are two basic hybrid options used throughout the Commonwealth. These include:

- Residents pay a standard base rate per household which covers fixed collection costs— i.e., administrative and personnel costs and the cost for a collection vehicle to service a given area—and then 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 in a system such as Elizabethtown's.
- 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.

The difficulty with implementing one of these hybrid options is that it requires establishing a system to invoice residents for the base rate, which is not required under the classic PAYT scenario. This can be avoided as in the case of Wilkes-Barre by using money raised through taxes. Presently, the City of Scranton is relying on tax dollars to support the current program since it has been demonstrated that the actual program cost is greater than the \$120 per year charge to each of the City's residential units. Also, delinquent accounts payable have only further reduced revenues generated by the fee and required more tax money to pay the total program costs.

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

- Some PAYT programs offer more than one container size option. Some programs also offer price reductions to low and fixed income residents.

Regardless of the PAYT scenario used, the City should 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.

## **IMPLEMENTING A PAYT PROGRAM**

When developing a program that will result in a significant change it is important to have a solid plan of action. Presently, the City of Scranton offers basically an unlimited refuse collection service to its residents which includes recycling, yard waste and bulky waste collection at a cost of \$10.00 per month. Suggesting a change to this system could be met with strong public opposition, residents may feel they are getting less service at a greater cost. Therefore, it will be imperative to involve the public in the process that ultimately structures the new system.

## **PLANNING THE PROGRAM**

Solid waste management can be a confusing business, therefore it is important to carefully consider new programs before implementing a change. Involve the public in this process and solicit their input on structuring the program. The change will be implemented much more smoothly if there is public consensus in favor of the change. Make sure the public knows what is going on, how it will work and what the benefits are to them. Use the media wisely in getting information out to the public as the process is taking form.

The first action should be the formation of a committee to oversee the planning and implementation of a program change. The committee's role would include:

- Setting goals;
- Defining the system;

- Develop public information strategy; and
- Oversee implementation.

Also, as discussed above there are a number of ways to price a variable rate system. These include four specific options shown in Table 6.

**TABLE 6  
PRICING OPTIONS**

System	Rate
Proportional (linear)	Flat rate per container
Variable Container	Different rates for different size containers
Two-tiered	Flat fee (usually charged on a monthly basis) and flat rate per container
Multi-tiered	Flat fee (usually charged on a monthly basis) and different rates for different size containers

**PROPORTIONAL RATE SYSTEM**

This is the simplest and purest form of a PAYT and involves the household paying a flat price for each container of waste they place out for collection. This is the system used by Elizabethtown Borough discussed above.

**VARIABLE CONTAINER RATE**

With this system a different rate is charged for different size containers. Like the Proportional rate, the entire cost of the service is made up through the revenue generated on the container prices. While this system creates strong incentives for residents to reduce waste, it requires that communities carefully set their rates to ensure revenue stability.

**TWO-TIERED RATE SYSTEM**

This system assesses households both a fixed fee and a per container fee. The fixed fee ensures that revenue is generated for the fixed costs while the per-container fee is used to cover the variable costs. Some communities use this two-tiered approach as a transition to the purer totally variable rate system.

**MULTI-TIERED RATE SYSTEM**

This system charges a fixed fee plus variable fees for different container sizes and is a hybrid of all the systems presented above. This is the structure used by Wilkes-Barre where tax dollars pay the fixed costs and two different size bags are available for purchase in local

retail outlets. Here residents that generated a smaller amount of waste can pay less for a smaller bag and set the material out on a weekly basis.

### SELECTING PREFERRED SYSTEM

Regardless of the system selected the collection of refuse in the City of Scranton will not functionally change. Refuse trucks will still need to drive by each residence on a weekly basis. The amount of refuse collected from each household may decrease, however, material will still need to be collected on a weekly basis. The real choice is how best to structure collecting the fees required to fund the operation up to approximately four million a year based on the cost calculations in this evaluation.

This is where the committee will need to consider the goals of the change and evaluate the costs and benefits of the different options. Ultimately, the City wants a program that will be generally acceptable to the public at large.

To help with this evaluation, this report provides some preliminary costs estimates for different PAYT programs. Regardless of the form, the PWD needs to generate at least four million dollars to pay the costs associated with the total collection program including recycling, yard waste and bulky waste collections. Table 7, presents the estimated fees for each rate structure scenario.

**TABLE 7**

**ESTIMATED FEES FOR DIFFERENT RATE STRUCTURES**

<b>Rate Structure</b>	<b>Assumptions</b>	<b>Fees</b>
Proportional (linear)	2 – 30 gallon bags per household per week	\$2.00 per bag
Variable Containers	25 percent of households 1 – 15 gallon bag per week	\$1.25 per bag
	75 percent of households 2 – 30 gallon bags per week	\$2.25 per bag
Two-tiered System	\$100 per household per year flat fee	\$2.2 Million
	2 – 30 gallon bags per household per week	\$1.00 per bag
Multi-tiered System	\$100 per household per year flat fee	\$2.2 Million
	25 percent of hh 1 – 15 gal bags/week	\$0.60 per bag
	75 percent of hh 2 – 30 gal bags/week	\$1.20 per bag



All four scenarios shown in Table 7 are designed to generate the full amount of revenue, or the four million dollars required to operate the collection services based on current annual costs. In the first two scenarios the total program cost is paid through the fees charged for the bags. The assumption in the proportional example is that each household or 22,000 residential unit will use two – thirty gallon bags per week. What is more likely to happen is that some households will use less than two bags per week, while some will use more than two bags per week. This is where a PAYT can be difficult to administer due to variations in the expectations of the program. However, two bags per household per week is a reasonable average.

In the two-tiered and multi-tiered scenarios, the fixed fee of \$100 per household per year will be used to generate the \$2.2 million required to cover the collection costs. The variable costs are paid through the revenues generated by the per-bag fees consistent with the first two scenarios.

Included in the per-bag fees in all scenarios are the costs to purchase and distribute the bags through local retail outlets. The fees at this point are estimates, and should be refined once the City has selected a preferred system and a container or containers to be used for refuse.

To ensure collecting the full costs associated with the services and given the historical problem the City has had collecting delinquent accounts payables, including all costs in the price of the bags seems preferable. However, if tax dollars are used to pay the fixed cost portion at approximately \$2.2 million then the two-tiered or multi-tiered system makes sense. The only way the flat fee could be charged directly to the residence is to get tougher with collecting accounts payable. If the revenues from the flat fee are less than expected, the cost charged per bag will not make up the difference based on the figures presented in this report.

## **ADDITIONAL CONSIDERATIONS**

The discussion above has centered primarily around services of residential units and developing a PAYT for households. However, there are a number of multi-family dwellings in the City of Scranton that cannot be serviced by this system. Therefore, any multi-family dwelling with four or more units should be treated like a commercial or institutional facility.

To deal with bulky items, the City may want to consider a “tag system” for collecting these materials. Residents desiring to place large bulky items out for collection and disposal would be required to purchase a tag at a set rate and attach it to the item at the curbside. Refuse crews could radio in the location of items to dispatch a vehicle equipped to handle these items if it is inappropriate to place in the rear-packer. The price of the tag would be set to compensate for this additional service.

## **CONCLUSIONS**

- The City of Scranton's Public Works Department operates a successful collection system for refuse, recycled items, yard waste materials and bulky waste. Like many other municipal collection systems, it offers a level of service above what is commonly offered to households in communities with contracted or subscription collection programs.
- The costs associated with strictly collection services is estimated to be approximately \$2.2 million or \$101 per household per year.
- The cost of collection, disposal and administration is estimated to be approximately \$4 million or \$200 per household per year. This rate is consistent with a rate defined in a previous Study prepared for the City in 1994.
- The rate of \$200 per household per year is in the range of what other communities report their costs are for refuse and recycling collection services. It is, however, on the high side of the range, which was determined to be between \$90 and \$270 per household per year.
- The City is charging residents \$120 per year for refuse and recycling collection services. This is approximately, \$80 less than what the projected costs are for the City to provide these services.
- The 1994 Solid Waste Management Report prepared for the City recommended measures to reduce costs associated with these services.
- A PAYT program for refuse could be implemented to encourage waste reduction, recycling and yard waste composting practices. It could also ensure the collection of fees required to fully fund the City's program costs. There are, however, draw backs to PAYT that could generate negative public sentiment if not handled properly.
- Public input and ultimate acceptance of a change to a PAYT system will be important to the overall success of the program.
- The City of Wilkes-Barre reports a significant reduction in the overall cost of their collection program after implementing a PAYT system.

## RECOMMENDATIONS

- The City of Scranton should reexamine the recommendations in the 1994 Solid Waste Management Report relating to reducing collection program costs.
- The City should immediately form a committee to plan and oversee the implementation of a PAYT program.
- PAYT could benefit the City in number of ways including collecting all the revenue required to fund the refuse collection system.

- Once a preferred system is defined, the City should allow at least a three to six month period to educate the public about the change and the costs/benefits it provides.
- A sound public education program should be developed so the public clearly understands the mechanisms of the new program and are invested into the success of the program.
- The City of Wilkes-Barre can provide a good model for the City of Scranton to follow given the similarities in each City's geography, topography and socio-economic situations.

Moving in the direction of a variable rate system seems appropriate for the City at this time. It would provide a mechanism for a fairer distribution of the costs associated with refuse services. The City should set a schedule to move quickly toward implementing a PAYT program. However, sufficient time should be allowed for proper planning and educating the public. The overall time frame should be at least six to twelve months.

Please feel free to call me at (717) 730-0404 with any questions relating to this report.

Sincerely,

Richard M. Schlauder, Jr.  
Director Environmental Services, Pennsylvania Office

cc: Alex J. Hazzouri, Scranton City Council Member  
Kathleen Kilbane, SWANA  
Carl Hursh, DEP  
Debbie Miller, R.W. Beck