



March 23, 2000

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**Subject:** Evaluation of the City of Lancaster's Solid Waste and Recyclables Collection System

Dear Julie:

This letter is to provide the City of Lancaster with the results of R.W. Beck's evaluation of the City's current open-subscription waste and recyclables collection system.

The City has expressed concerns that: (1) the current open-subscription system is costly to City residents; (2) many haulers do not comply with regulations that require haulers to provide for recycling, as well as parameters for collection days and times; (3) monitoring and enforcement are time consuming and costly. The goals are to determine how the City's system compares with that of other cities in the Commonwealth in terms of cost and efficiency with an eye toward recommending the best system for the City, and to review the enforcement program in an effort to find ways to improve it.

## **EVALUATION OF LANCASTER'S COLLECTION SYSTEM**

Residential solid waste (RSW) and recyclables generated in the City of Lancaster are currently collected under an open subscription system. In this system, the City has licensed approximately 35 haulers with whom the residents can contract directly. The level of service and fees are negotiated between the resident and the hauler.

Under the current system, the City has experienced the following:

- Residents are required by ordinance to contract with a licensed hauler for waste collection and recycling services, but there is a significant discrepancy between the total number of households—21,189 units—and the number of households under contract as

reported by haulers—somewhere around 14,000. While the City’s license application says the City reserves the right to request customer lists, haulers have not been required to do so, making enforcement difficult.

- While collection is only supposed to take place on certain days by area, this may not always be happening. Even if most are collecting on the assigned days for each area, there are still a number of haulers all operating in the same residential areas at the same time.
- Most of the smaller haulers in particular are not really equipped to provide recycling, so recycling may not be occurring in a significant number of residences.
- The cost to Lancaster residents for service provided is higher than in other cities that contract for services for their residents.
- The City has problems with litter and dumping that may or may not be attributed to the collection system. If there is no adequate means of enforcing the current system, it is possible that some residents are dumping illegally—either in open dumps or by unauthorized use of commercial dumpsters.

## COMPARISON WITH OTHER CITIES

According to a survey of costs conducted by the Lancaster County Solid Waste Management Authority in 1998, the cost per household for services under the City’s open subscription system ranged from \$160 to \$260 annually. The overall range for Lancaster County municipalities that have open subscription systems was \$140 to \$275, for an average of \$207.50 annually. The range in cost for Lancaster County municipalities that contract for municipal waste and recycling collection services—in most instances, leaf/yard waste collection is included as well—is significantly lower, from approximately \$107 to \$141 for an average of \$124 annually, or more than \$80 less on average annually than open subscription systems.

Table 1 presents a comparison with other cities in Pennsylvania. This table shows the range for the cities that were contacted was from \$93.52 to \$160 annually, and all include waste, recyclables, and yard waste collection in their contracts. The city with the highest cost for contracted services—the City of Allentown—is at the same level as the low end of the range presented for the City of Lancaster in the 1998 survey. It should also be noted that Allentown has one of the most comprehensive waste management programs in the Commonwealth, with twice weekly unlimited waste collection, weekly recyclables collection which includes all Act 101 materials, and weekly yard waste collection for eight months of the year.

## OPTIONS FOR WASTE COLLECTION AND RECYCLING IN THE CITY OF LANCASTER

There are almost as many options for the collection of municipal waste and recyclables as there are municipalities that have waste collection and recycling programs. However, the basic options are as follows:

- Open subscription system (the current system)
- Single contractor for all services
- Municipal provision of services

**TABLE 1**  
**SUMMARY OF SERVICES/COSTS PROVIDED TO OTHER PENNSYLVANIA CITIES AND MUNICIPALITIES BY CONTRACT**

	Municipality				
	York	Allentown	Wilkes-Barre	Penn Township	Whitehall Township
County	York	Lehigh	Luzerne	York	Lehigh
<i>General System Information</i>					
Annual Fee Range per Household	\$93.52 <sup>1</sup>	\$160	Approx. \$105	\$2.20 /bag \$87/yr (avg)	\$150
Contracted or Private RSW Collection	Contract	Contract	Contract <sup>2</sup>	Contract	Contract
Number of Haulers	1	1	1	1	1
How are Customers Billed?	By City	By City	???	No Bill <sup>3</sup>	Yearly Bill
Tipping Fee per Ton	\$56	Not Available	Not Available	\$71 <sup>4</sup>	Not Available
RSW Collection Frequency	Twice Weekly	Twice Weekly	Weekly	Weekly	Weekly
Set-Out Limits	Only on bulky items—up to 5 per year	None	No more than one large item per week	None	None
<i>Recycling Collection</i>					
Method	Same Contract as RSW	Same Contract as RSW	Same Contract as RSW	Same Contract as RSW - CS	Same Contract as RSW - CS
Frequency	Weekly	Weekly	Weekly	Weekly	Weekly
Separate Fee?	Included in RSW fee	Included in RSW fee	Included in RSW fee	None	Included in RSW fee

<sup>1</sup> Calculated from overall contract which included waste and recyclables collection for some small customers and collection from City refuse containers.

<sup>2</sup> The City is considering switching from the municipally-operated Pay-As-You-Throw system to a contracted one. The numbers indicated are from the low bid received.

<sup>3</sup> Customers purchase special bags through 13 distributors. Cost is \$2.20 per 40-gallon bag. Contract hauler is paid based on the number of bags purchased by residents. 209,890 bags were purchased in 1997.

<sup>4</sup> Transfer Station fee. Landfill fee is \$56/ton.

	Municipality				
	York	Allentown	Wilkes-Barre	Penn Township	Whitehall Township
Materials Collected Curbside <sup>5</sup>	A, G, J, M, N, P, S, W	A, G, J, M, N, P, S	A, G, M, N, P, S	A, G, P, S	A,G, M,N,P,S
<i>Leaf Collection</i>					
Method	Same Contract as RSW	Same Contract as RSW	???	Municipal	Same Contract as RSW
Frequency & Duration	Weekly 8 Months	Weekly April-November Christmas trees	???	2x/yr 1 month	1x/yr (leaves); Weekly collection of grass only
<i>Bulky Waste Collection</i>					
Method	Same Contract as RSW	Same Contract as RSW	Same Contract as RSW	Separate Contract	Same Contract as RSW
Frequency & Duration	N/A	N/A	N/A	1x/yr 1 Day	Appliances 1x/mo
Comments	Each HH can place up to 5 large items out per year; City will pay for up to 325/week at \$1.74/unit	Service is unlimited – any amount of bulky items can be set out	Up to 1 item per week	Wrapping paper accepted for 1 week; student organization separates for recycling	

<sup>5</sup> A: Aluminum; G: Glass (3 colors); J: Mixed Paper; M: Magazines; N: Newspaper; P: Plastics; S: Steel; W: White Goods

- Other options

### **Open Subscription**

An open subscription system involves individual households contracting directly with haulers for waste and recyclables collection services. It is a system that has been prevalent in Pennsylvania, primarily in rural areas, but it has also been used in other cities throughout Pennsylvania—Reading, Bethlehem, Altoona and Bloomsburg, for example. All have looked into contracting for services, but have been either unable to do so or have been limited in some way. In many cases, the process was political—the local haulers appealed to elected officials and residents to keep the current system, claiming that a change would put some small haulers out of business. In other cases, residents have supported keeping the open subscription system because of the opportunity to have “personalized” service.

As illustrated in the previous section, the current open subscription system appears to be significantly more expensive than contracted collection. The City has also cited a number of problems with the system as it exists, as outlined in the introduction. While the costs to the City to administer the program have been quantified to some degree, this process is not perfect. What is evident is that the City must dedicate significant time, energy and expense to address the problems with the system.

Because services are provided on an individual basis, there is no means by which the City can reduce the cost of services. Open subscription systems are inherently inefficient, because rather than one truck traveling from one residence to the next on a set route, the hauler may collect from a one or two residences on one street, a handful on the next street, and so on. And, as reported by the City, enforcement is difficult because haulers are not required to provide customer lists. Some residents may be sharing services, while others may not be using any of the services and finding alternative means of disposal. Recycling has tended to be “hit or miss” with many of the smaller haulers ill-equipped, if equipped at all, to collect recyclables or yard waste.

### **Contracted Collection**

Letting a contract for municipal waste and recycling appears to be the preferred method of managing waste for many cities and larger townships. This option involves preparing specifications for the service desired, requesting bids to carry out that service, and awarding a contract to the lowest responsible bidder.

Most municipalities do not wish to maintain collection equipment and personnel to manage a collection service, and the cost has generally been lower for contracting. The reason for this is that larger private haulers can generally achieve economies of scale that small haulers in open subscription systems and even most municipal collection programs cannot—lower cost per unit for services because fixed costs are allocated over a greater pool of units. While some municipalities still pay for contracted services from general funds, many have

viewed contracting as an opportunity to separate waste management costs (which are more easily separated than costs for other services) and have them charged directly to residents.

Contracting with the private sector for services could take much of the burden off of the City in terms of enforcement. It is easier to monitor the activities of one hauler than it is to monitor many haulers providing residential collection services. The question of whether or not a hauler is providing the all services required (i.e. recycling and yard waste as well as municipal waste collection) and whether or not all residents are participating would no longer be an issue.

### **Municipal Collection**

A number of larger Pennsylvania cities have municipal collection programs for municipal waste, recyclables, and yard waste. Among them are the largest—Philadelphia and Pittsburgh—but also a number of the smaller cities as well—Erie, Scranton, and Wilkes-Barre, to name a few. Most of them have been managing collection for many years, though in some cases, these cities have considered a change to contracted collection. The City of Pittsburgh has looked into this in the past, though it has decided to continue with municipal collection for the foreseeable future. The City of Wilkes-Barre is the most recent, and it will probably privatize services in 2000. Rising costs, particularly for personnel, are a concern and a reason why such a change is often considered.

Implementing a municipal collection program would involve substantial investment in equipment and personnel, and would involve ongoing maintenance. The initial costs would probably be prohibitive. While mentioned in this report, it is probably not a real option for Lancaster.

### **Other Options**

While a number of municipalities have changed from open subscription systems to contracted collection over the last ten years—many driven in that direction when recycling became mandatory—the change has not always been an easy one. In some cases, change has been investigated and often pursued, often to be defeated when small haulers argue that they would be driven out of business because they cannot compete for larger contracts, and when residents say they would lose the “personalized” service that the smaller haulers provide. In other words, decisions are often based on politics and emotions rather than efficiency and cost effectiveness. Municipalities that have looked into contracting but have continued with open subscription systems include Reading<sup>6</sup>, Altoona, and Bloomsburg, among others.

There are some options that may address these concerns and offer some opportunities to improve efficiency and cost effectiveness. These options are outlined below.

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<sup>6</sup> Reading has implemented contracted collection for some residences. Reading’s system is described later in this report.

Contracted Recycling Services. Because there have been concerns over whether or not recycling services are provided adequately through the current open subscription system, and the potential difficulties in making a complete switch to contracting for all collection services, one option to consider is continuing the current system for waste collection and contracting for recycling services. This is an option that the City of Bethlehem has employed, and it appears to be working fairly well.

When recycling became mandatory, Bethlehem elected to contract separately for recycling services and leave the open subscription system for municipal waste collection in place. The current contract for recycling services is \$12.56 per unit annually, or just under \$1.05 per month. The City's current recycling rate is 33 percent, though it should be noted that the City has aggressive drop-off and composting programs as well.

Contracting separately for recycling services would ensure that recycling is equally available to all City residents, addressing the concerns over how well recycling is functioning within the current structure. It could either be employed as a permanent supplement to the open subscription system as it has in Bethlehem, or it could serve as a stepping stone to contracting for all collection services as it has in other municipalities throughout Pennsylvania.

Zone Systems. A means of addressing the concern that some smaller haulers may be driven out of business if the City decides to privatize collection is to develop a zone system that allows at least some of the smaller haulers to compete to provide services. While there are probably a number of options for carrying this out, there are really only two basic options: (1) divide the City into a set number of zones with approximately the same number of units per zone; and (2) divide the City into zones proportionate with the number of units each hauler claims to be collecting now. Under each of these scenarios, the City would be required to develop specifications appropriate to the scenario and a Request for Proposals to solicit bids for services. All haulers would then have an opportunity to compete for any or all zones.

Under the first scenario, if the City (and the smaller haulers) are concerned that one bidder could win in all zones—which would have the same effect as switching directly to an individual contract system—a limit could be placed on the number of zones that any one bidder could win, with awards in other zones going to the next lowest responsible bidders. If the goal is to avoid loss of income or ability to provide service to any of the haulers that currently service residences, the second scenario might be more appropriate. Haulers could still have the opportunity to bid on any or all zones, with a limit on the number of zones that could be won, or haulers could be asked to provide a bid for the area that represents their proportionate number of customers, with some assurance that they would be awarded the contract for that area if the bid is “reasonable”—the process would need to be very carefully defined to avoid legal concerns.

Under both options, the City would need to ensure that all bidders are able to provide equal services—residents would demand that the services they receive in their zones be equivalent to the services provided in other zones. The City would also need to equalize the cost per unit based on the overall cost for collection resulting from all successful proposals. There will almost certainly be some distinct differences among the per unit prices specified in the proposals, and residents in one zone cannot be required to pay more than residents in another zone for the same service when they do not have a choice of hauler. Because of the need to establish a single price Citywide, the City would need to be responsible for managing the collection of fees from City residents. This is an added function, but it may possibly be added on to an activity the City is already doing. The City would then be responsible for paying each of the haulers based on the contracted price.

As with the “Bethlehem scenario,” a zone system could also be used as a bridge between the open subscription system and a single contract system. However, it should be noted also that this option does not preclude contracting separately for collection of recyclables.

Seminole County, Florida, employed a specific example that might be of interest to Lancaster. R.W. Beck worked with this County to make the change from an open subscription system to contracted services through franchise districts. The County offered a franchise to every existing hauler (21 at the beginning of the process) based on each hauler’s current customers. The County then began working with each hauler to negotiate terms and rates. By the time the negotiation process was completed, there were only nine haulers remaining. The reason was primarily because the larger haulers began purchasing smaller haulers so that they were, in effect, “buying” the franchise districts that the smaller haulers would have held, guaranteeing them a larger customer base. This process took place in the mid-1990s, and the R.W. Beck representative that worked with the County reports that the County is now down to only four franchise districts.

The advantage to the method used by Seminole County is that no haulers were put out of business. They all had the opportunity to have a franchise district, and if they opted out it was their choice. Some simply chose to sell and may have benefited significantly from the sale.

R.W. Beck’s representative strongly suggested that in order to achieve a fair establishment of franchise districts, each hauler should submit a customer list. This will help in two ways—units can be divided equitably among the existing haulers, and the City can determine where there are gaps such as residents that do not carry a collection service. He also suggested that adequate personnel and time be assigned to carry out this process. It should be noted, however, that in the case of Seminole County, each contract was negotiated separately. In the case of Lancaster, services provided should be uniform throughout the City. To ensure equal services, the City should probably develop a contract that specifically defines the services to be provided that is the same for all haulers who wish to have a franchise district. In order to be awarded a franchise district, haulers must agree to operate

under the conditions of the agreement. The only variation would be in number of units serviced and price per unit.

The City of Lubbock, Texas, has established franchise districts as well. A sample of an agreement used in Lubbock is included as Attachment 1.

Partial Contracted Collection. The City of Reading recently tried to convert from an open subscription system to a Citywide contract. After significant discussion, which included the possibility of establishing a zone system (which was opposed by the local haulers), the issue was finally offered to local voters in a referendum. It should be noted that like Bethlehem, Reading does contract for recycling collection services. Yard waste collection is managed by the City.

When offered the opportunity to move from open subscription to contracted collection of municipal waste, the voters of Reading overwhelmingly voted to keep the open subscription system. Reading solid waste/recycling coordinator Jane Meeks reported that approximately 4,000 voters actually voted on this referendum and not in the mayor's race that was on the same ballot, which sent a message concerning the importance in the voters' minds of keeping the current system.

Reading did, however, elect to contract for service for the residences that had caused the most enforcement problems—individual residences in buildings of four or less units not occupied by the property owner. There are approximately 7,500 units that fit this description. The property owners are billed quarterly for waste management services (municipal waste disposal only) at a rate of \$12.00 per unit per month, or \$36.00 per quarter. The owners may then include waste collection as a service provided as part of the rent.

It should be noted that the rate for municipal waste collection would probably be less if all units in the City were under contract. Collecting only from rental units means that collection vehicles cannot travel regular routes as they would in a citywide collection system, so collection is not as efficient.

Recycling is contracted separately. All residences in Reading are billed \$17.00<sup>7</sup> per year for collection of recyclables. For the rental units described above, the annual total for waste collection and recycling is \$163, not including leaf/yard waste that is collected by the City. The owner-occupied residences remain on an open subscription system, and the average cost per unit for open subscription service is \$200 annually. When recycling is added, the cost jumps to \$217 annually. This is, on average, \$54 more annually than the contracted service. These rate differences are comparable to the differences between municipalities with contracts and municipalities that use open subscription systems as cited earlier for Lancaster County.

## **Other Considerations**

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<sup>7</sup> The range statewide runs from around \$.90/month (\$10.80/year) to \$2.00/month (\$24.00/year).

The City could also consider options designed to encourage greater recycling. While generally used in smaller towns and rural areas, Pay-As-You-Throw (PAYT) is considered as an option that provides an incentive to recycle. A simple explanation of PAYT is that it is a volume/weight-based system that rewards those who reduce waste and recycle because user costs are directly attributable to the amount of waste disposed. In a classic PAYT system, residents purchase bags or tags at a set price, and the revenue from the bags/tags is used to cover the cost of the program. Elizabethtown Borough uses a classic PAYT system. Many other PAYT programs are “hybrids” — there is a set fee that covers the collection costs and bag/tag purchases cover disposal, or there is a set fee that covers disposal of a set number of containers, and bags or tags must be purchased for anything over the allowable number. This is much more common than the classic system because it is difficult to anticipate what revenues will be. The hybrid system ensures coverage of fixed costs.

While mostly rural programs and smaller municipalities have used PAYT, the City of Wilkes-Barre has used this option for a number of years. John Bergold, manager of Wilkes-Barre’s program, has reported that PAYT has worked well for the City. The City plans to continue with PAYT, though it is currently considering a move from municipal to contracted collection services. Other cities, including Erie and Scranton, have considered PAYT but have chosen not to implement it.

## ENFORCEMENT ISSUES

The City has reported that enforcement in its waste management system has been problematic, particularly with regard to licensed haulers. The ordinance currently contains little specific language concerning requirements for licensed haulers. While haulers are also required by Lancaster's ordinance to be licensed by the Lancaster County Solid Waste Management Authority (Authority) and abide by the Authority's Rules and Regulations, the City of Lancaster cannot enforce these requirements. A relatively simple means of addressing this problem is for the City to adopt the Authority's Rules and Regulations by reference.

While the City's licensing application specifies that the City can require submission of customer lists with addresses, in practice this is not happening. The City's license fees are based on total number of units collected with a \$500 minimum licensing fee, so for smaller haulers there is incentive to underreport units collected if the fee will be above \$500. The City knows that some units have no collection service in place, and it is believed that others are sharing service with neighbors or relatives. With virtually unlimited service, there is significant incentive for residents to share service in an effort to save money. The only way this could be avoided is to implement a PAYT system as presented earlier in this report.

It should also be noted that the City's licensing methodology is not one that is commonly used. Most licensing programs require a flat fee for each hauler and a per vehicle fee. This is significantly easier to administer than one based on number of units collected.

While the hauler licensing provision is inadequate and can be fixed fairly easily by incorporating the Authority's Rules and Regulations, it should be noted that Chapter 258-Solid Waste of the Lancaster City Code is dated and there are some inconsistencies and probably provisions that the City would prefer to eliminate upon review. This is common as changes are made over the years to address changing needs without a comprehensive review of the ordinance as a whole.

First, many of the definitions have changed. The definitions contained in Pennsylvania Code, Title 25, Chapters 271-285 (Municipal Waste) should be used where possible. These are the definitions that relate to the Solid Waste Management Act (Act 97) and the Municipal Waste Planning, Recycling and Waste Reduction Act (Act 101), and the City's definitions should really be consistent with those used by the state.

Article I, which defines requirements for "dumps" in the City of Lancaster, should probably be eliminated or completely overhauled. Besides being in conflict with later articles that require waste to be disposed of in permitted facilities and specify materials that are to be recycled (rather than burned or disposed, as suggested in this article), open dumps in a City where residences are in close quarters and in an area where population is growing is undesirable.

Article III, which defines requirements for scavengers, is dated as well and should probably be removed. Offal and “night soil” are no longer materials that would need to be collected in the City. The issue of scavenging with regard to recyclables is addressed in another article, so there is no need for a separate article.

It would be difficult to address specifically all the areas that should be revised in the remaining articles, but some highlights are as follows:

- In Section 258-41, Preparation of Refuse, it states that all cans, bottles and other food containers should be rinsed free of food particles and drained before storage. The City requires that glass, aluminum, steel/bimetal and plastic containers be recycled, and this section implies they should be disposed. Section 258-42 discusses storage of bundled newspapers and magazines and yard waste for disposal, and these materials are also required to be recycled.
- Section 258-46A states that refuse may be disposed of on premises owned or leased by the producer of the refuse as long as it is done in a safe and nuisance-free manner, yet later it is stated that municipal waste must go to an Authority, County or otherwise licensed facility. Having waste stored or buried on individual properties is not a desirable activity.
- Section 258-62 says that it is unlawful for a person to accumulate municipal waste in an amount greater than 20 tons, other than materials source separated for recycling. Twenty tons is a significant amount of waste, and could provide an undesirable opportunity for those who are inclined to accumulate waste on their properties. This may not be an unreasonable amount, however, for a business that stores wastes in compactor units.
- There is mention in Section 258-65 (Intermunicipal agreement) that the County will coordinate recycling activities and marketing, which is not the case. Has this agreement changed, and if so, does this section need to be revised?

These are just a few examples of language in the ordinance that appears to be problematic. The easiest and probably most effective solution is to set this ordinance aside and prepare a new comprehensive ordinance that includes all required updates and addresses issues more effectively than the current ordinance. It should also be written in such a way as to facilitate small changes on a regular basis as needed through Rules and Regulations that are authorized by the ordinance.

The Cities of Allentown and York each have comprehensive ordinances that might serve as examples for consideration by Lancaster. This office has copies of these and other solid waste and recycling ordinances and regulations from southcentral Pennsylvania municipalities.

## CONCLUSIONS

- The City of Lancaster's current open subscription system is:
  - More expensive for residents than in similar municipalities with contracted collection.
  - Time consuming and expensive to monitor and enforce.
- Service is not provided equally to all residents. While required by ordinance, some haulers are not providing recycling services or service is inadequate. Some residents do not contract for services at all, while others may be sharing services. It is believed that these things may be resulting in some illegal dumping and a lower than might be expected recycling rate.
- Lancaster's solid waste and recycling ordinance is dated and there is contradictory language that appears to have resulted from revisions and additions made in response to state legislation.

## RECOMMENDATIONS

- The City of Lancaster should strongly consider implementing a contracted collection system to save money for residents, reduce expenditures of personnel time, energy and money for the City due to difficulties in enforcing the current program, and to address problems with inconsistent service or lack of service to all customers.
- If the City is concerned that contracting will negatively affect small haulers, the City should consider one of the following:
  - Implementing a district franchise system that gives all haulers an opportunity to participate.
  - Contracting for collection of recyclables and leaving the current system in place for municipal waste.
- The City should perform a comprehensive review of its solid waste and recycling ordinance to determine where changes are needed. Based on what appears to be a need for extensive changes, the City should consider the possibility of drafting an entirely new ordinance.

The current program is not serving either the citizens or the elected or appointed officials of Lancaster as well as it could. Implementing a contracted collection program could prevent most of the problems the City has faced with regard to dumping and litter, and could save significant money for both residents and the government, as well as time and energy for government personnel.

Sincerely,  
R.W. BECK, INC.

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