

Via Facsimile

August 25, 1998

Mr. Dean Delong
Executive Director
Monroe County Municipal Waste Management Authority
912 Main Street
Suite 203
Stroudsburg, Pennsylvania 18360

Subject: **Analysis of Recycling and Refuse Collection Options for Eldred Township**

Dear Dean:

The purpose of this letter is to provide Eldred Township with the results of R. W. Beck's analysis of recycling and refuse collection options available to the Township. Presently, refuse and recyclable materials collected from Township residents and businesses by private haulers licensed to do business in the Township. Home owners and businesses in the Township are free to subscribe for collection services with anyone of the haulers licensed by the Township. However, an ordinance titled, Mandatory Recycling Program, enacted in 1994, requires residents to separate recyclable materials from refuse at the curbside for collection by the licensed hauler providing refuse collection services. The Township is concerned that this system does not provide the most efficient and cost effective service. Therefore, R. W. Beck has evaluated the costs associated with other collection options. The options are as follows:

- The cost of the present program as reported for each of the licensed hauler providing services to Eldred Township residents;
- The estimated annual cost per household (labor, vehicle and equipment capital, vehicle operation and maintenance, and processing/marketing costs) for the Township to operate a municipal residential refuse and curbside recycling collection system;
- The projected annual cost per household to contract with a singled private hauler for collection services to all Township residents based on contracted prices paid by residents in communities with contracted services in the northeast region; and
- Identify factors associated with the Township operating a drop-off refuse and recycling collection system, similar to the Polk Township program.

ANALYSIS OF SELECTED REFUSE/RECYCLING COLLECTION OPTIONS FOR ELDRED TOWNSHIP

CURRENT COLLECTION SYSTEM

To begin the analysis of refuse/recycling collection options for Eldred Township, R. W. Beck determined the cost associated with the present collection system in the County. Table-1 is a summary of the information compiled for the haulers licensed by the Township for calendar year 1998 to provide collection services in the Township.

Table 1

Current Collection Cost by Hauler for Eldred Township

	<i>Hauler Name</i>	<i>Service Level</i>	<i>Cost/HH/month</i>
1	Apex Waste Services, Inc.	Primarily commercial waste services	Not Applicable
2	Frable Sanitation	Weekly refuse collection and every other week curbside recycling collection.	\$16.00
3	Grand Central Sanitation, Inc. (USA Waste)	Weekly refuse collection and once per month curbside recycling collection.	\$16.00 plus \$7.00/quarter for recycling
4	Quality Waste Disposal	Weekly refuse collection and every other week curbside recycling collection.	\$15.00

Township residents and businesses may select anyone of the licensed haulers to provide collection services for refuse and recyclable materials. On average, the cost per household per month will range from \$15.00 to approximately \$18.00. In this scenario, the resident is free to select the hauler offering the highest level of service at the best price.

MUNICIPAL COLLECTION SYSTEM

In order to estimate the costs of a municipal collection system the following general assumption were developed. Other impacts such as intangible costs are also discussed, but are not included in the quantitative cost analysis. Attached are Collection Efficiency Worksheets, which detail the costs and analysis performed for Eldred Township to provide a municipal waste collection service.

COLLECTION COSTS ASSUMPTIONS

- 1,000 households served;
- 104 collection days per household per year;
- Collection crew works 2 days per week;

- Scheduled length of work day is 8 hours;
- 1.5 multiplier used to calculate overtime pay rates;
- 60 minutes spent at the vehicle yard prior to starting the route;
- 5 minutes spent traveling from the vehicle yard to the start of the route;
- 30 minutes spent on lunch and breaks during a typical day;
- 45 minutes spent traveling from the route to disposal site;
- 30 minutes spent unloading at the disposal site;
- 5 minutes spent at the vehicle yard for post-trip inspection, maintenance, etc.;
- 98 percent average set-out rate (in other words, on any given route an average of 98 percent of the households will set out one or more containers for up);
- Average hourly pay rate for a driver is \$13.36;
- Average hourly pay rate for a collector is \$10.50;
- Cost of annual benefits approximately equal to 30 percent of annual wage;
- 52 work weeks per year;
- Driver has 100 percent availability rate;
- No front-line supervisor costs built in;
- 8 percent rate of interest used to finance vehicle or container purchases;
- Expected useful life of vehicle of 7 years; and
- No spare trucks.

For the purposes of this analysis, it is assumed that one driver will service both the refuse and recycling collection programs. Two days per week will be spent with an additional person or Collector, providing refuse collection services and two days working alone collecting source-separated recyclable materials. Additionally, it is assumed that ninety percent of the cost to purchase the recycling vehicle will be reimbursed with State grant money.

A collection efficiency worksheet was preformed for the collection of, refuse and recyclable materials. The worksheet outputs, detail the assumptions and costs associated with the two collection systems.

The total estimated annual cost to collect residential refuse generated in Eldred Township is calculated to be \$54,779. This equates to approximately \$55.00 per household per year or approximately \$4.70 per household per month. This represents only the costs associated with collection and transporting refuse to the disposal facility. Assuming a disposal rate of \$40.00 per ton and the Township generating approximately 1,600 tons per year, the cost of disposal is estimated at \$64,000.00 per year. This represents an additional cost of \$64.00 per household per year, or approximately \$5.34 per household per month. Therefore, the cost of collection and disposal together for each resident of Eldred Township would be

approximately \$10.05 per month. Not included in this cost are the administrative costs associated with the Township operating a municipal collection program for refuse.

The total estimated annual cost to collect recyclable materials generated in Eldred Township is calculated to be \$16,538. This equates to approximately \$16.54 per household per year or approximately \$1.40 per household per month. This represents only the costs associated with collection and transporting recyclable materials to a processing facility. For purposes of this analysis no cost is assumed for tipping the recyclable materials at a facility designed to process and market the materials. This assumption is based on the fact that two facilities operating in the northeastern region of Pennsylvania are not charging customers for tipping commingle materials at these facilities. Not included in this cost are the administrative costs associated with the Township operating a municipal collection program for recyclable materials.

Together, the two collection systems will cost each resident of Eldred Township approximately \$11.45 per month. Again, the administrative costs have not been calculated into this figure. These costs include crew-supervision, billing related costs and development and distribution of public education materials.

CONTRACT COLLECTION SYSTEM

Under this scenario, local governments enter into contracts or agreements – which are awarded as the result of a competitive procurement – with one or more hauler(s) for specific collection services. This is a fairly common practice with municipalities in Pennsylvania. For instance, thirteen of thirty-six municipalities in Lancaster County contract for collection services. In all contracted instances, the service includes weekly curbside collection of recyclable materials.

When the cost paid by these Lancaster County municipalities is compared with the cost paid by residents in municipalities that license haulers to provide collection services, consistently, the cost per household is lower. For the ten municipalities reporting that collection services are under contract, the average cost per household per year was approximately, \$123.00. For municipalities reporting that collection is provided by licensed haulers, the average cost per household per year was \$213.00. Therefore, on average, customers served by a contracted hauler are paying \$90.00 per year less than customers served by a licensed hauler.

The prices paid by the residents of the Lancaster County municipalities are consistent with the fees being charged for collection services in municipalities surrounding Eldred Township. Below, is a summary of fees being assessed in selected municipalities in the region.

- Lehighton Borough, contracted collection refuse only - \$9.00 per month;
- Jim Thorpe Borough, contracted collection refuse and recycling - \$17.55 per month;
- Palmerton Borough, contracted collection refuse and recycling - \$13.00 per month;
- Lehigh Township, contracted collection refuse only - \$8.33 per month (recently bid);

All of the municipalities listed above are responsible for billing the resident for collection services provided by a selected contracted hauler. The cost varies between municipalities due to a number of factors, including what costs the municipalities adds to the hauler's fee for recapturing billing and administrative related costs. Also, how recently the service was bid can be factor. Lehigh Township reported a lower fee, after recently bidding the service, than what was being paid under a previous contract. Additionally, the distance to the disposal site can be a factor, as well as, housing density, convenience of the municipality to other areas served by the contracted hauler, and the level of competition between local haulers providing collection services in the region.

Generally, it was found that the contracted collection services charged much lower fees to the residents than what customers were paying in open systems or in municipalities that licensed multiple haulers to provide collection services. Contracted collection services can benefit from efficiencies in routing and therefore lower costs. There are environmental impact benefits associated with contracted services including, reducing solid waste collection vehicle traffic, which could substantially reduce the costs of street maintenance and repairs. Also, there is the potential of reducing litter, noise, air emissions, and aesthetic impacts.

DROP-OFF SYSTEM

Under this scenario, local government develops a drop-off site for refuse and recyclable materials typically located in the municipality. For instance, Polk Township offers a drop-off site for Township residents. The site located at the Township's Municipal Building has a roll-off container for refuse and receptacles for source separated recyclable materials. The Township has secured grant money from the State to develop an operation to accept and process recyclable materials for sale to intermediate and final secondary material markets.

Use of the drop-off facility is limited to Township residents that have purchased an annual permit issued by the municipality. The annual fee for the permit is currently \$60.00 per household. This allows permitted households to drop-off three (3) bags of refuse per week and an unlimited amount of recyclable materials. Presently, about 1,300 households are permitted to use the facility. The balance of the residents, have made alternative arrangements for the handling of their household refuse and recyclable materials including, subscribing for this service from a local hauler. Since, Polk Township is a neighboring municipality to Eldred, the same haulers provide residential collection of refuse and recyclable materials.

The drop-off site simply provides Polk Township residents with a less costly alternative for the management of the municipal waste they generate. However, they must transport and deliver the materials to the drop-off site in their own vehicles and on their own time. Individuals unwilling to do this, subscribe with a hauler to provide collection services.

CONCLUSIONS

Table 2 provides a summary of the costs associated with the four options evaluated for Eldred Township.

Table 2
Total Estimated Cost per Household

<i>Options</i>	<i>Yearly Cost per Household</i>	<i>Quarterly Cost per Household</i>	<i>Monthly Cost per Household</i>
Open System	\$192.00	\$48.00	\$16.00
Municipal Collection	\$140.00	\$35.00	\$11.70
Contract Collection	\$123.00	\$31.50	\$10.50
Drop-off	\$60.00	\$15.00	\$5.00

As Table 2 illustrates, the least cost method to municipal residents is the drop-off system, though it may also be the least desirable especially in a community that has traditionally only had curbside collection. Additionally, there may be costs associated with the program that are being absorbed as part of the other services provided by the municipality. Since, Polk Township offers the drop-off as a municipal service, certain costs may go unaccounted for as part of the drop-off service. Some costs are likely being paid for directly from the General Fund and not strictly from the permit fee of \$60.00 per household per year. There are also up-front costs that Eldred Township would have to incur to develop a drop-off system similar to Polk Townships. State grant money used by Polk Township for purchasing equipment and the building associated with the recycling drop-off portion of the service may not be available to Eldred Township, because it would duplicate an existing program. The State has become more selective about appropriating money for systems that duplicate operations that are located within a reasonable distance of each other.

Of the three option for the curbside collection of refuse and recyclable materials, the least costly to the customer is contracted collection. Though the actual price may vary from community to community, in general it is the most cost effective as demonstrated in the data from Lancaster County. With this option, the Township would select a single hauler to provide collection services to every residential unit. A selected hauler would use their existing equipment to collect and transport refuse and recyclable materials to a facilities designated by Eldred Township or to a facility of their choice depending on the bid specifications. The selected hauler could be responsible for all activities associated with the service or the Township could undertake the task of billing if it was to the Township's advantage.

There are advantages for the municipality to bill the residents including, a lower bid price for the collection services and the opportunity for the Township to assess a fee on the bill to cover Township related costs associated with administrating the program. Additionally, it would be a means for the Township to collect revenues to cover costs related to developing and operating the municipal yard waste composting operation proposed by the Township.

The third most cost attractive option is the municipality to purchase vehicles and perform the collection operation as a municipal service. There are costs to the municipality over and above the costs directly related to the collection, disposal and processing of residential refuse and recyclable materials. However, it is not likely the cost differential is equivalent to the difference in the cost associated with a municipal collection system and the cost incurred by residents under the present system. Typically, municipalities are not getting into the business of refuse collection, in fact the national trend is toward the privatization of municipal systems.

Finally, the least attractive option from a cost prospective, as shown in Table 2, is the present system. Beyond the cost issues, there are the environmental impacts associated with multiple haulers serving a municipality.

RECOMMENDATIONS

Based on our analysis, R. W. Beck concludes that a contracted hauler system would improve the cost-effectiveness of the current collection system. It will also allow the municipality a higher level of control over the collection system for refuse and recyclable materials. If the Eldred Township managed the billing of services and the hauler charged the municipality directly, there would be the opportunity to attach a fee for administering this service, as well as, secure revenues to support the municipal yard waste composting operation the Township is proposing to develop.

While a contracted system will likely offer a more favorable rate to the residents of Eldred Township, there may be some level of public opposition to the idea of the municipality contracting out the service. Residents may suggest you are taking away their privilege to select their hauler and level of service they desire or require. They may also suggest the Township is putting small businesses out-of-business. Therefore, the Township should proceed cautiously and openly with the concept of going to a contracted hauler system. Generally, a public meeting where public comment is invited is helpful in understanding how receptive the residents will be to a proposed change.

Clearly, the residents as a whole are not paying the lowest possible price for the service of refuse and recycling collection. A change is appropriate, but the public must be part of the change.

Please feel free to call me at (717) 730-0404 if you have any questions on the analysis explained in this letter report.

Sincerely,

R. W. BECK, INC.

Mr. Dean DeLong
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