

June 15, 1999

Mr. Charles J. Raabe
Director
Beaver County Department of Waste Management
469 Constitution Boulevard
New Brighton, PA 15066

Subject: Implementing Curbside Recycling in Conway and Midland Boroughs

Dear Skip:

This letter is to provide the Beaver County Department of Waste Management and Conway and Midland Boroughs with the results of R.W. Beck's review of the feasibility of implementing a cost-effective curbside recycling program in these two municipalities.

Given the layout of these municipalities—they are both compact, with easily navigable streets lined with single family dwellings—there is no reason that the cost to add curbside recycling should be prohibitive. Implementing some of the recommendations that come from this study should enable these municipalities to add efficient, cost effective curbside recycling programs.

PLANNING AND IMPLEMENTING CURBSIDE RECYCLING IN CONWAY AND MIDLAND BOROUGHES

This study considers the following: 1) the current waste collection program in each municipality; 2) results of attempts to get bids for curbside recycling collection to date; 3) what other similar southwestern PA municipalities are paying for services; 4) for Midland Borough, an estimate of the cost of implementing a municipal recycling collection program; and 5) approaches to be considered for soliciting bids and implementing a curbside collection program at a reasonable cost. Each of these issues is addressed separately below.

CURRENT WASTE COLLECTION CONTRACTS

Both Conway and Midland Boroughs currently have contracts with private companies to collection dispose of their residential municipal waste. Conway has a two-year contract with Waste Management through December 31, 1999, with a one-year renewal option. Midland Borough has a contract with Braddon Hauling, a local company that was recently purchased by Waste Management, through 2000. Both provide weekly waste collection to residents. The main differences are that Conway Borough pays the hauler for residential services, while Midland's residents pay the hauler directly. Midland reports that a fairly high percentage of residents are behind or in default on payments to the hauler, a factor that may be

contributing to the higher cost per household for Midland residents (Conway is \$24/quarter, and Midland is \$27.75/quarter, with seniors at \$18.75/quarter). Both municipalities receive some additional services through the contract, including collection at parks and municipal facilities.

The services provided in these contracts and the methods of payment are not substantially different from that of other municipalities that contract for waste management services throughout the state.

BIDDING FOR RECYCLING SERVICES

Conway and Midland Boroughs both report that they have received bids for adding curbside recycling services that would nearly double the cost for services provided under their current contracts. It is unclear that either municipality has recently received a formal bid to add recycling services, and no specific bid price has been identified by either municipality.

R.W. Beck has found that the last formal bid for recycling services was submitted to Conway Borough in 1991. On average, the bids received at that time would have added approximately 12 to 14 percent to the cost of the contract, or around \$9 to \$12.50 per household annually (\$.75 to \$1.00 per month).

The 1991 bids submitted to Conway Borough for recycling appear to be comparable with what other municipalities were paying at that time. However, they might have been lower had the bid specifications for recycling been more explicit. Conway Borough requested bids for curbside recycling services as an option since the Borough is not mandated to recycle by the Municipal Waste Planning, Recycling and Waste Reduction Act of 1988 (Act 101). The Borough did not, however, specify materials to be collected at the curb or frequency of collection, and stated that the hauler was to pick up material from commercial establishments that were using the proper receptacles. Without knowing what materials were to be collected or how many businesses might use the service, estimating the number of locations to be serviced and amount of materials that might be collected would have been difficult, and may have caused bidders to estimate high to ensure sufficient revenue to cover the cost of this service.

Without any recent bids from either municipality, it is impossible to assess reasonableness of the verbal quotes to add curbside recycling collection to the Conway and Midland Borough contracts.

REGIONAL AND STATEWIDE RECYCLING COSTS

Several southwestern Pennsylvania municipalities were surveyed to determine what others are currently paying for waste management and recycling services similar to the services under consideration in Conway and Midland Boroughs. Table 1 contains the results of this survey. Of the five municipalities surveyed, four privately contract for waste collection and recycling services, and one has an open system. In all cases, residents pay haulers directly for services.

TABLE 1
RECYCLING/WASTE MANAGEMENT PROGRAM COSTS
(SOUTHWESTERN PENNSYLVANIA MUNICIPALITIES)

Municipality	County	Materials Collected	Collection Frequency	Commingled / Separate	Municipal / Contracted/ Individual	Revenue Sharing	Who Pays	Cost/HH Total	Cost/HH Recycling
Freedom Boro	Beaver	Al G1 G2 P1 P2 S	Biweekly	Commingled	Contracted	Set % to municipality	Residents	\$99.96/yr.	Not known
North Sewickley Twp.	Beaver	Al G1 G2 Mag N P1 P2 S	Variable	Commingled	Individual	N/A	Residents	Variable	\$16.00/yr. *
Pine Twp.**	Allegheny	Al G1 G2 Mag N P1 P2 S	Weekly	Commingled	Contracted	N/A	Residents	\$92.40/yr.	Not known
Reserve Twp.	Allegheny	Al G1 G2 P1 P2 S	Biweekly	Commingled	Contracted	5% to municipality	Residents	Approx. \$96.00/yr.	\$1.45/mo.
Sewickley Boro	Allegheny	Al G1 G2 N P1 P2 S	Biweekly	Commingled	Contracted	N/A	Residents	\$94.56/yr.	Not known

*Rate one hauler charges for annual recycling sticker

**Pine is part of a multi-municipal contract with Marshall, McCandless and Hampton

With regard to recycling, two of these municipalities collect all cans, bottles and jars; the other three collect these materials plus newsprint. Two of the three that collect newsprint also collect magazines.

The average cost per household for both waste and recycling services is less than \$100 per year for the four municipalities with contracted services. While the average cost for waste and recycling services in the municipality with the open system is unknown, it was reported that at least one hauler charges \$16 for an annual recycling sticker (approximately \$1.33 per household per month). This is comparable to the \$1.45 per household per month cost for recycling services reported by one other municipality. The portion of the cost attributable to recycling is unknown for the other three municipalities.

The current costs per household in Conway and Midland Boroughs—without recycling—already compare unfavorably with the municipalities surveyed. Conway Borough collects an \$8 per month fee from its residents for waste services (the fee is \$88, or savings of \$8, for those who pay a lump sum at the beginning of the year). The actual contract cost is approximately \$88 per household per year, and the balance collected by Conway is used to cover the cost of managing the contract and billing residents. In Midland Borough, most residents pay \$111 annually (\$27.75 per quarter), and seniors pay \$75 annually (\$18.75 per quarter). The higher cost to Midland residents may be attributable to the delinquency problem cited earlier, and to the hauler including enough to cover the costs of billing residents.

Despite the fact that Conway and Midland Boroughs are paying more for their contracted service than other municipalities surveyed in southwestern Pennsylvania, contracting is almost always more cost-effective than municipal collection or an open system. Table 2 provides the results from a statewide survey R.W. Beck conducted for another project that illustrates the variation in costs for the different systems.

TABLE 2
TOTAL ESTIMATED COST PER HOUSEHOLD
(PENNSYLVANIA AVERAGES)

Options	Yearly Cost per Household	Quarterly Cost per Household	Monthly Cost per Household
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

APPROACHES

Based on the information contained in Table 2, contracting appears to be the approach that will make the most sense for Conway and Midland Boroughs. Given the differences between these two municipalities, however, the exact approach should probably be slightly different for each. Below are some comments on items to be considered in formulating the best approach for each.

Conway Borough

Conway Borough may wish to consider soliciting new bids for combined waste and recycling services starting in 2000, rather than accepting the optional third year of its current contract and requesting a separate bid to add recycling.

Bidding both services together generally yields a better price than bidding separately. While Table 1 provides information about what some municipalities are paying in southwestern Pennsylvania, Conway should probably consider speaking with other municipalities in the area as well. Municipalities that have received the most reasonable bids for services could be asked to share ideas and bid specifications so that Conway can learn what may have helped these municipalities obtain better bids.

Conway may also wish to consider looking into a cooperative contract with one or more neighboring municipalities. For example, one neighbor, Freedom Borough, has a contract that provides waste and recycling services at a cost of \$99.96 per household per year, though newsprint is not included for recycling. A multi-municipal effort, however, might result in a lower cost to all participating municipalities, and might make it financially feasible to add newsprint. It should be noted that Pine Township (Allegheny County), one of the municipalities included in Table 1, has the lowest annual household cost for its program. The Township's assistant manager attributes this to its multi-municipal effort with three other municipalities.

One other issue to consider is how a hauler will be paid for services. The Borough currently collects a fee from residents and pays the hauler. It may be worth including an option in the bid specifications for having the hauler bill residents directly, unless there is a compelling reason for Conway Borough to collect the fee. If the bids are the same or less than what the cost would be for the Borough to do the billing, it may be worth making this the hauler's responsibility.

Midland Borough

Similar to Conway Borough, Midland Borough should consider soliciting new bids for waste and recycling services as soon as its current contract allows, rather than requesting separate bids to add recycling to the current contract.

The same comments concerning bidding both services together and multi-municipal bidding also apply to Midland Borough. The difficulty may be in finding a neighboring municipality that wishes to add recycling, though contiguous borders are not absolutely required.

The Borough has expressed some interest in municipal collection. An estimate of the cost for the Borough to implement a collection program was calculated using R.W. Beck's Collection Efficiency Model, a computer program developed to estimate collection costs based on various data points including number of

households, estimated annual tonnages of recyclables, number and wages of employees, proximity to a materials recovery facility (MRF), and vehicle and maintenance costs. In order to arrive at this estimate, R.W. Beck used actual employee data from Midland Borough, along with estimates for the other data points based on the experience of other municipalities in Pennsylvania.

Inputs for Automated Worksheet

- Number of households served – 1,275
- Tons of recyclables collected per year (estimated) – 200 (approximately 15%)
- Average number of collection days per household per year – 26
- Average number of days per week on which collection crews work – 1 (1/2 of Borough collected each week)
- Average set out rate – 75%
- Average seconds per stop – 29.4
- Time spent at the yard prior to starting the route – 30 minutes
- Time to deliver and unload materials at the MRF – 2.5 hours
- Time spent at the yard for post-trip inspection, maintenance, etc. – 10 minutes
- Average hourly pay rate for driver (union) - \$10.57
- Average hourly pay rate for laborer (part-time) - \$5.15
- Multiplier used to calculate overtime pay rates – 1.5
- Percent of hourly rate that is required to pay for benefits (union position only) – 33%
- Number of weeks worked per year – 52
- Capital cost of one collection vehicle – \$35,000
- Average truck capacity – 6 tons
- Estimated scrap value of vehicle at end of useful life – \$3,500
- Estimated annual vehicle operation and maintenance (O&M) cost – \$3,500
- Rate of interest used to finance vehicle purchase – 6%
- Expected years of useful life of vehicle – 7

Results of Analysis

Based on calculations from the collection efficiency model, the annual collection cost for the Borough to operate a municipal collection program is estimated at \$15,103, or \$11.85 per household per year. A copy of the printout with results from the Collection Efficiency Model is included as Attachment 1. The model includes direct costs of labor up to the first level of supervision and vehicle capital and O&M. It does not, however, include costs associated with such things as tipping fees at a MRF, administration, legal matters, or contracting for a backup collection vehicle in the event of the breakdown of the regularly scheduled vehicle (this model assumes operation of only one vehicle).

In order to calculate an overall cost for municipal management of recyclables, any costs associated with processing recyclables would need to be included. For the purpose of this study, it is assumed that recyclables collected from Midland Borough would be delivered to Metalife Resources of Franklin Township (formerly the Franklin Township Recycling Center) at no cost. Should Metalife ever choose to charge a tipping fee for processing, however, this fee would need to be factored into the recycling program cost.

Other Issues

Because it is possible that payment delinquency problems are driving up waste management costs and limiting the number of haulers willing to bid for Midland Borough's contract, Midland may want to consider taking responsibility for paying a waste/recycling contractor, rather than having residents direct billed, in an effort to get a better price for services. This arrangement will add to the municipal workload, but Midland Borough can add set fees to residents to cover any costs they may incur.

CONCLUSIONS

- Conway and Midland Boroughs are looking to add curbside recycling services that are similar to services in many other Pennsylvania municipalities. Many municipalities that are not mandated to recycle under Act 101 have been able to implement cost-effective curbside recycling programs.
- Conway and Midland Boroughs' size, physical layout and topography should present no obstacles to implementing a cost-effective recycling program.
- R.W. Beck has not been able to find information concerning any recent formal bids for curbside recycling services for Conway or Midland Boroughs, nor has either Borough been able to provide verbal quotes from their current haulers for recycling services. Absent this information, no assessment can be made as to the reasonableness of costs to provide recycling services.
- Several southwestern Pennsylvania municipalities of similar size and characteristics to Conway and Midland Boroughs report per household costs for waste and recycling services that are comparable to or less than Conway and Midland Boroughs' per household cost for waste services only.
- Contract collection appears to be the most cost-effective option for managing waste and recycling services. Multi-municipal cooperation may contribute to lowering the cost of service to smaller municipalities.
- Soliciting bids for combined waste and recycling services usually yields a better price than soliciting separate bids.

RECOMMENDATIONS

- Conway and Midland Boroughs should solicit formal bids for combined waste and recycling services as current contracts end as a means of obtaining a better price to add curbside recycling. The bid specifications should provide

specific direction to bidders concerning recycling program requirements, such as materials to be collected and frequency of collection. The Boroughs should borrow ideas and specifications from other municipalities that have received reasonable bids and implemented successful programs.

- The Boroughs should investigate cooperating with neighboring municipalities to seek bids for services to add economies of scale that:
 - make bidding more attractive to potential bidders.
 - result in a lower cost to all participants.
- The Boroughs should be prepared to throw out bids and rebid for services if the initial bids appear to be high compared to similar size municipalities in southwestern Pennsylvania, rather than accept less than desirable bids or immediately eliminate implementation of curbside recycling.
- If after a second bid it is determined that the cost to add curbside recycling is still too great when compared to other municipalities in the region:
 - Conway Borough should continue its drop-off program, but investigate establishing a permanent drop-off site and re-energizing its public education program to boost participation.
 - Midland Borough should consider municipal collection of recyclables if it determines the cost is reasonable and residents will support it. If not, Midland should expand its drop-off program to accept more materials, investigate establishing a permanent site, and expanding its public education program to boost participation.
- Regardless of whether curbside recycling is implemented or the Boroughs continue with drop-off collection, the public education component should be reviewed and revised. The Boroughs should develop public education programs that clearly define the audience, set clear goals, and outline a plan for achieving these goals.

If Conway and Midland Boroughs take the time to review their current waste management programs in light of the recommendations outlined above, establish reasonable goals and develop clearly defined specifications to solicit bids that enable them to achieve these goals, these municipalities should receive proposals that offer an acceptable cost to implement their desired programs.

Sincerely,

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Environmental Analyst

cc: Kathleen Kilbane, SWANA
Carl Hursh, DEP
Debbie Miller, R.W. Beck