

FINAL REPORT
ASSESSMENT OF OPTIONS FOR
RECYCLING
FOR
KANE BOROUGH

July, 2003

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1.0 Background

Kane Borough (Borough) is located in the southwest corner of McKean County. The Borough has a population of 4,126 people and 1,766 households. The Borough is one of the more densely populated and compact municipalities within the region and is surrounded on three sides by the Allegheny National park. The Borough is interested in investigating the potential for developing its own recycling program.

2.0 Introduction

McKean County Solid Waste Authority currently provides a recycling drop-off site within the Borough. The site provides an opportunity for the residents of the Borough to recycle. The site is centrally located, and is available 24 hours per day, seven days a week. The site is not manned. The county provides drop-off containers and services them when full. The county program accepts glass containers, aluminum cans, bimetal and steel cans, corrugated cardboard and newspapers. The McKean County Solid Waste Authority (MCSWA) provides the recycling services to the Borough free of charge and in return takes credit for tonnages recycled for Section 904 Performance Grant Award. Curbside collection of recyclables is available from some of the waste haulers servicing the Borough.

The Borough is interested in developing its own recycling program and requested technical assistance to help them in developing and evaluating recycling program options. The Borough also wishes to assess alternatives for reducing the costs for curbside collection of Municipal Solid Waste (MSW). MSW collection costs have risen substantially due to a recent increase in disposal costs at the MCSWA landfill. Per ton disposal costs have increased from \$46.00/ton to \$86.00/ton. Although not a part of the project workscope, ARI will include curbside options for collection of MSW in this evaluation.

3.0 Program Options

Recycling programs are as unique as the municipalities that operate them. No template exists for the perfect recycling program. A variety of recycling program options are available to the Borough. Understanding the various options and program development and implementation issues will allow the Borough to make an informed decision as to what type of a program will best serve its residents.

The following is a listing of program options and development considerations.

- **Program Options**
 - Curbside (Municipal-Private)
 - Drop-Off (With Attendant – Without)
 - Mandatory
 - Voluntary
 - Processing

- Program Development
 - Establish Goals and Objectives
 - Determine types of materials to be collected
 - Identify Markets
 - What requirements (if any)
 - Develop Education/Outreach Campaign
 - Program Funding

Table 1

RECYCLING PROGRAM COMPARISONS OF OPTIONS

VOLUNTARY RECYCLING PROGRAM

| ADVANTAGES | DISADVANTAGES |
|---|--|
| | Lower Participation Rates |
| Avoidance of Cost, Time and Effort for enforcing Ordinances | Lack of Control over Participation Rates |
| | Requires Intense Education and Reinforcement |

MANDATORY RECYCLING PROGRAM

| ADVANTAGES | DISADVANTAGES |
|---------------------------------------|--|
| Higher Participation Rates | The Need to Adopt and Enforce an Ordinance |
| Leverage to Increase Participation | Time and Effort Needed for Enforcement |
| Shows Municipal Commitment to Program | Cost of Collection |

DROP-OFF CENTERS

| ADVANTAGES | DISADVANTAGES |
|--|--|
| Not Labor Intensive (if not Staffed) | Low Participation Rate (Requires Additional Effort by Public) |
| Small Operating and Maintenance Costs | Lack of Quality Control (if not Staffed) |
| Can be available 24 hours per day, 7 days per week | Capital Costs (i.e. Purchasing of Collection Containers and Specialized Collection Vehicles) |
| Availability Even in Remote Regions | Vulnerable to Vandalism and Theft |
| Lower Capital Cost, Ease of Implementation | Increased Handling of Material (i.e. Transport to MRF or Market) |
| Easy to Collect more Categories of Materials | Personal Cost (if manned) |

Table 1 (continued)

CURBSIDE COLLECTION

| ADVANTAGES | DISADVANTAGES |
|--|--|
| High Participation Rates (Easy For Homeowners) | Program Costs: a) Collection Costs b) Large Capital Investment (Special Collection Vehicles, Containers) c) Equipment Maintenance |
| Control of Recyclables | Economic Deficiencies in Low Population Density Areas |
| Steady Flow of Recyclables | Extra Handling of Recyclables |
| Economic Effectiveness in High Density Areas | Requires Personnel |

PROCESSING OF MATERIALS

| ADVANTAGES | DISADVANTAGES |
|--|--|
| Reduces Preparation of Materials at Source | Large Capital Investment; a) Cost of Building Construction b) Cost of Specialized Equipment for Processing |
| Central Control over Level of Separation, Resulting in Higher market Prices for Materials | Requires Hiring of Personnel for Operation, Management, Maintenance and Administration |
| Prepares Materials to Market Specifications, Resulting in Higher Market Prices for materials | Operation and Maintenance Cost |

4.0 Estimate of Recyclable Materials

Table 2 provides the estimates of the recyclables available in the Township municipal waste stream. The estimates are based on County and in house information, EPA and DEP data.

Table 2
Estimated Recyclable Materials in Waste Stream

| Material | Percent MSW | Tons in MSW |
|---------------------------|-------------|-------------|
| Newsprint | 8.5% | 263 |
| Corrugated Paper | 9.0% | 278 |
| Office Paper | 5.0% | 155 |
| Glass (Clear,Brown,Green) | 8.0% | 248 |
| Plastic (PET, HDPE only) | 3.0% | 93 |
| Steel & Bimetal Cans | 2.0% | 62 |
| Aluminum Cans | .9% | 28 |
| TOTALS | 36.4% | 1,126 |

(1) Estimates are based on .75 tons of MSW generated per person per year or 3,094 tons.

4.1 Capture Rate

The amount of materials captured by recycling, (diversion rate) will depend on the type of program, mandatory/voluntary, types and numbers of materials included in the program and the level of participation. The captured diversion rate for the current drop-off program is approximately 4%. A mandatory program will provide higher participation rates. A comprehensive and sustained public information program will also increase participation.

5.0 Consideration of Options

5.1 Drop-Off

Further consideration for establishment of a Borough operated drop-off program is not recommended. The County currently provides a drop-off facility at no real cost to the Borough. The Borough is only responsible for assisting in public education and tending to the cleanliness of the site and disposal of unacceptable materials. The County does

apply for 904 Performances Grant monies for the materials recycled by the Borough in return for its recycling services.

If the Borough were to take on the responsibility for the operation of a drop-off facility its cost would undoubtedly be higher to operate the facility and market the materials than the 904 Grant funds gained from the program. It is estimated that the County receives a little more than \$1,100.00 in 904 Performance Grant monies from the Borough's site. Under the 904 grant program for residential waste, a municipality is awarded \$5.00 per ton of materials recycled. The 904 program also provides \$1.00 for each per cent of waste diverted by recycling. Based on an estimated annual generation rate of 3,094 tons of MSW per year the Borough diverts approximately 4% through recycling. (129.72 tons reported in 2002)

The total per ton Performance Grant Award would be $\$9.00/\text{ton} \times 129.72 \text{ tons} = \1167.00 .

The Borough would gain little if anything from operating its own drop-off facility and could potentially adversely affect the county's program. Additionally markets are limited within the county and the region as shown in Table 3. Manpower and equipment cost to collect, transport, market materials, and dispose of residual waste can be safely assumed to be in excess of the potential 904 Performance Grant award. Transition from the County to a Borough sponsored program would require reeducating the public and could result in lower participation rates. It is not recommended that the Borough develop a drop-off recycling program.

| |
|--|
| <p style="text-align: center;">Table 3 Material Markets McKean County</p> |
|--|

1. Goodmans Recycling

287 High Street
Bradford, PA 16701
Telephone (814) 362-6873
Contact: Mr. Michael Coder
Al. cans - \$35.00/lb (\$700.00 ton)
Tin - \$ 0.00/ton
Cardboard - \$ 0.00/ton
Newsprint - \$ 0.00/ton

2. Recycle All

RD#1 Box 621A
Port Allegany, PA 16743
Telephone (814) 642-5057
Contact: Mr. Luke Healy
Clear glass - \$40.00 to \$45.00/ton
Green glass - \$22.00 to \$26.00/ton
Brown glass - \$25.00 to \$29.00/ton
Mixed glass – mixed glass is accepted at a charge of \$22.00/ton delivered
NOTE: Price paid dependent on product quality

3. McKean County Solid Waste Authority

MCSWA Landfill
Telephone: (814) 778-9931
Contact : Mr. Dick Tagent
Will accept materials (included in its program) at \$0.00/ton
Corrugated Cardboard – 5% to 15% current market price

5.2 Curbside Collection

During meetings held to review program options, the Borough has expressed interest in providing curbside collection services to its residents. The Borough's concern is that the collection services not create a financial burden. The expressed opinion of the Borough representatives was, that worse case scenario, the program would break even or very close to it.

The Borough basically has two choices if it is interested in providing a curbside collection program for recyclables.

1. Municipal operation
2. Private sector operation

Under municipal operation the Borough would have total control of the program and would be responsible for program costs. Cost associated with the program include education, collection equipment and associated operations and maintenance cost, manpower costs, marketing of materials and residual disposal cost. Based on current information the vast majority of existing municipal curbside collection programs are not breaking even. Municipally operated collection programs have proven to be more costly than private sector contracted services.

Municipal operated collection program costs are generally higher even with grant assistance, than cost for contracted private sector collection. Additionally, the Borough lacks experience in operating recycling program and does not want to hire additional personnel to operate the program.

In that it is truly the Borough's goal to provide a curbside recycling program to its residents at the most economical rate, the Borough should consider contracted services for curbside collection of recyclables.

The Borough may also wish to consider contracting for curbside collection of residential municipal solid waste (MSW). The potential exists that the reduction in cost for contracted collection of MSW (compared to existing changes) may cover the cost for collection of recyclables.

The contracting of private sector services for both curbside collection of recyclables and MSW will most likely present the best value to the Borough residents. Contracting for services is particularly appropriate and timely considering the recent increase in tip fee at the MCSWA Landfill, \$46.00/ton to \$86.00/ton and the resulting increase for MSW collection services from \$16.00 per month to \$22.00 per month.

Several monetary benefits can be anticipated by contracting for both services.

- Dual collection services are usually the most economical.

- Contracted services on the average range between 15% to 25% lower than private subscription by households (status quo).
- Contractor will be able to pass along savings of avoided landfill disposal cost as a result of recycling.
- The Borough will be eligible to receive 904 Performance Grant monies. For example, it is reasonable to assume that the curbside collection of recyclables will increase the capture/diversion rate for the Borough. For demonstration purposes, it is assumed that the 4% rate for the existing drop-off program will double to 8%. As previously discussed a 904 Performance Grant provides \$5.00 per ton of MSW.

\$5.00 per ton

\$1.00 per percent of recyclables diverted from waste stream (8%=\$8.00 per ton)

\$5.00 + \$8.00 = \$13.00 per ton

\$13.00 X 260 tons recycled = \$3380.00

The \$3380.00 can be used to help defray cost of collection program or at the Borough's discretion for other needs.

If it is the Borough's goals to provide curbside recycling services and reduce the cost per household for MSW collection then contracting for these services will best achieve these goals.

A competitive procurement process will be required to gain these collection services. This will require the Borough to develop a Request For Proposal (RFP) detailing the required services and containing the terms and conditions required for a contract.

5.3 Other Options

The Borough could alternatively offer a franchise for collection services. A franchise is similar to contracted service and would also require a competitive procurement process. In that franchises have had some legal challenges in the Commonwealth it is suggested that the Borough consider contract services.

Another option is that the Borough require under its municipal waste ordinance (as a condition of its collectors licensing) that curbside collection of recyclables be provided by all licensed waste collectors. Householders would receive these services through subscription with their selected hauler as they currently do for MSW collection. This scenario would require additional redundancy on the part of haulers and would not provide the most economical alternative.

6.0 Observations/Conclusions

- The existing county operated program provides an opportunity for the Borough's residents to recycle at little or no cost to the Borough.
- The operation of a drop-off recycling facility by the Borough would not provide an economic advantage over the existing program.
- The Borough's size and population density is conducive to curbside collection of recyclables.
- Dramatic increases in MSW collection and disposal cost have occurred recently.
- Issuance of a Request For Proposal (RFP) for curbside collection of recyclables and MSW will allow the Borough to accurately compare and assess the economics of the various collection options available.

7.0 Recommendations

To achieve the Borough's goals of curbside collection of recyclables and reduce the cost of MSW collection, it is recommended that the Borough:

- Issue a request for proposal (RFP) for curbside collection of recyclables and MSW.
 - The RFP should include a variety of bid options including (but not limited to): one contractor bid both collection services; and MSW collection, quotes for weekly collection of MSW and biweekly (every other week) collection of recyclables; quotes for limited number of bags (e.g. two – 40 gallon bags) and on a per bag basis. The request should include a quote for billing of services by the contractor and by the Borough.(1)
- Develop and implement a comprehensive education and information program.(2) It is recommended that the program include reuse and waste reduction tips for households and identify additional opportunities for recycling, (e.g. clothing, electronics, toys, etc.)(3)
- Consider establishing a mandatory recycling program. A mandatory program will help maximize participation thus increasing diversion rate, (and 904 Performance Award.) A mandatory program will provide the Borough preference for 902 Grant funding.(4)
- Apply for a Section 902 Grant to assist in program development cost (cost for preparation of RFP and a recycling ordinance) and to develop and sustain a public education/outreach program.

Notes:

- (1) A model request for proposal was prepared and transmitted via computer file to the Borough.
- (2) A copy of recommended education efforts is included in Attachment A.
- (3) Information regarding additional recycling opportunities is available through PADEP website (www.dep.state.pa.us)
- (4) A model ordinance was transmitted to the Borough via computer file.