



Recycling Technical Assistance Project # 537

**Dickson City Borough
Lackawanna County, Pennsylvania**

Curbside Recycling Collection Optimization

*Sponsored by the Pennsylvania Department of Environmental Protection
through the Pennsylvania State Association of Township Supervisors*

FINAL REPORT

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MSW CONSULTANTS

MidAtlantic Solid Waste Consultants

6225 Sawyer Road, New Market, MD (301) 607-6428

11875 High Tech Avenue, Suite 150, Orlando, FL (407) 380-8951

www.mswconsultants.com



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RECYCLING TECHNICAL ASSISTANCE PROJECT # 537

DICKSON CITY BOROUGH, LACKAWANNA COUNTY

CURBSIDE RECYCLING COLLECTION OPTIMIZATION

1. STATEMENT OF THE PROBLEM

Dickson City Borough (Borough) requested assistance in improving their recycling program in two specific areas. First, they asked for a review of current curbside recycling and waste collection technologies and practices to verify that they are achieving appropriate productivity levels and are operating in a cost-effective manner. Second, they are interested in improving the effectiveness of the curbside recycling program through increased collection frequency, expansion of targeted materials, and the addition of small businesses to the collection program.

2. SUMMARY OF WORK COMPLETED

2.1 TASK 1: REVIEW OF THE CURRENT MUNICIPALLY-OPERATED COLLECTION SYSTEM

The first task was to review the current municipally-operated collection system, encompassing refuse, recyclables, yard waste, bulky waste, OCC and electronics. Historical data provided by Dickson City showed collection of approximately 3,400 tons per year for all materials, and records for 2010 through 2012 show a recycling rate increasing from 22 to over 24 percent. These data also showed that most materials are collected weekly, including refuse, most recyclables and yard trash. However, it was reported by Borough staff that OCC is collected monthly, as are bulky wastes and electronics.

MSW Consultants was further tasked with observing the collection system, focusing on recycling technologies, routing, set-out requirements, and staffing. Broadly, the Borough deploys two collection trucks per day, one a rearloader which collects refuse with a three person crew, and the second a manual side load, compartmentalized recycling truck which collects dual stream recyclables with a two person crew. These trucks collect different materials depending on the day of the week. A senior collection system expert observed recycling collection on Wednesday, May 15, 2013 and interviewed the City Manager and Public Works Director about the system. Pertinent data about the current collection system is provided in Appendix A.

MSW Consultants made the following observations about the Borough's recycling collection system:

- ◆ The recycling crew collects from all 2,600 homes within the City limits and about 30 small businesses which can utilize the 20 gallon recycling bins.
- ◆ Recyclables are collected by a two-person crew with a low entry, right-side drive truck with a manual side load compartmentalized body.
- ◆ The collection crews' typical start and ending times vary by day and by which material they are collecting. Daily route schedules are influenced by local traffic patterns, the location of the landfill and housing density, and appeared reasonable.

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- ◆ There is no step on the rear of the truck for the helper to ride, so he either walks from stop to stop or rides on the fuel tank hanging onto the door. This is dangerous for the helper and does not meet industry and regulatory safety standards.
- ◆ Many homes utilized two recycling containers, one for fiber material and the second for comingled beverage containers.
- ◆ A commonly used metric for evaluating a collection service is the Set-out Rate. This is a measure of the fraction of households that set out the material targeted for collection on the scheduled collection day. In the Borough, the observed set-out rate for recyclables was 58 percent, which is lower than expected. The nation's most successful recycling programs often achieve 80 percent or higher set-out rates.
- ◆ OCC is only scheduled to be collected once per month, on the first Friday. The lower recovery for OCC collection is because residents do not have the storage capacity for large volumes of OCC. It was reported and observed that although many people put it out for collection on the regular recycling day, much OCC is disposed with refuse rather than saved for one month until the next scheduled recycling day.
- ◆ The collection crew appeared to provide excellent customer service to maximize recycling. Crews routinely separated material in the recycling bins and put non-acceptable materials in refuse containers.
- ◆ Because of the low recycling set-out rate, corresponding collection productivity was higher than usual because trucks spent higher than average time driving past non-participating households. Borough crews achieved a productivity rate of 39 seconds per stop, compared to Industry average collection productivity rates between 25 and 30 seconds per stop for similar type collection vehicles.
- ◆ Collection crew members must hand sort the recyclables at each household, placing the paper stream in the rear compartment and the comingled containers in the front compartment.
- ◆ Individual recycling collection routes appeared logical and followed best practices for route definition.
- ◆ The Borough delivers all recyclables to the Lackawanna County material recovery facility. The Borough receives no revenue for these recyclables, nor do they pay any tip fees.

It was also noted that the Borough performs refuse collection with a standard cab rearloader using 3-person crews. Private sector haulers providing comparable service typically use a low-entry cab and a two-person crew, with the driver expected to assist on some set-outs. Yard waste was reported to be collected on Mondays, by both the Refuse and Recycling Crew, using the same crew configuration.

MSW Consultants entered the routing and collection system parameters for the Borough into a proprietary routing model for use in evaluating alternatives to the current system configuration. This will be discussed in the "Alternatives" section of this report.

2.2 TASK 2: REVIEW OF 2013 BUDGETED AND ACTUAL COLLECTION SYSTEM EXPENSES

MSW Consultants was also tasked with reviewing the 2013 budgeted and actual collection system expenses. From this data, it is estimated that the recycling collection costs \$89,100 and the refuse collection service costs \$138,000. Both ranges are within expected levels for residential collection services. The budget and expense data provided by the Borough are included in Appendix A. Important notes about overall collection costs include:

- ◆ Generally, the Borough incurs roughly \$400,000 annually in solid waste and recycling collection costs.
- ◆ Approximately \$165,000, or 39 percent, of the total annual cost is for waste tipping fees at the Keystone Landfill, where the Borough has a contract for disposal. The disposal tipping fee at this facility is \$64.40 per ton.
- ◆ The Borough delivers recyclables to the Lackawanna County Recycling Center for free. That is to say, it receives no revenues, nor does it incur costs.
- ◆ The average cost per route and total cost are reasonable based on municipal collection industry ranges.
- ◆ If the Borough were to evolve its refuse collection operations to conform with private sector operating practices, it could eliminate the second collector on the refuse route. This would result in approximately a \$40,000 annual savings.
- ◆ There appeared to be ample capacity on the recycling route to increase the volume of recyclables collected. Every ton of recyclables collected will save the Borough almost \$65 per ton of disposal expense, and little to no extra cost.

2.3 TASK 3: IDENTIFY AND EVALUATE COLLECTION ALTERNATIVES

Task 3 was to identify and evaluate alternative collection technologies, routing approaches, frequencies, and expanded targets for recyclable materials. Some alternatives were qualitative in nature, and some were derived from an analysis of the Dickson City collection model created in Task 1. All of the alternatives identified and evaluated are described in Section 3 of this report.

2.4 TASK 4: FINAL REPORT

The final task was the writing of this report. This report represents a draft for initial review by the Borough. An initial draft was reviewed by the Borough before sending to PSATS and DEP for review. The report was finalized after comments were received.

3. POSSIBLE SOLUTIONS

Some possible solutions for the Borough to consider are itemized and discussed below:

3.1 OPTIMIZED REFUSE COLLECTION

While refuse collection is not directly the focus of this study, it was noted that the Borough continues to use three-person crews for waste collection. Private sector haulers providing similar service would employ only two crew members, both of whom would be expected to help load wastes.



In conjunction with reducing crew size, the Borough may wish to consider converting to semi-automated or fully automated collection of wastes. This would require carts to be distributed to all 2,600 customers, at a cost of approximately \$130,000, plus another \$8,000 to install tipplers on the rearloader (see picture at left). The Borough could purchase this equipment outright, or finance the purchase over the useful life of the equipment (10 years for carts, 5 years for tipplers). The annualized cost of these capital improvements equates to only \$15,000, which is more than offset by the reduction of one crew member on the refuse collection operation.

3.2 OPTIMIZED RECYCLING TRUCK TECHNOLOGY

The Borough could immediately increase the quantity of recyclables it collects if it acquired a collection vehicle capable of handling OCC on regularly scheduled weekly recycling service. The Borough reported, and MSW Consultants confirmed, that much OCC is disposed as trash, rather than stored for the monthly OCC collection.

The optimal collection vehicle for providing recycling collection service in the Borough would be a dual compartment rearload compactor truck. This vehicle could accommodate OCC whether flat or boxed, and also would provide flexibility to accommodate future changes such as a conversion to single stream recycling (discussed below) or even waste/recycling dual collection.

The cost of a dual compartment rearloader is estimated at \$220,000. PA DEP allows municipalities to request payment for 90 percent of recycling related equipment through the Act 101 Section 902 Recycling Development and Implementation grants program. DEP has put a \$250,000 cap on such grant applications and has restricted applications from all recipients of the past year's grant funding round. It is not believed that Dickson City has applied for a Section 902 grant in the past several years, and should be eligible to participate in this grant program on the next grant cycle. The 902 Recycling Grant Application Guidelines are contained in Appendix B.

It should also be noted that Section 904 Recycling Performance grants could potentially be used to offset some recycling program costs, assuming the Borough can document its recycling.

3.3 EXPANDING LIST OF TARGETED RECYCLABLES

Once the Borough procures a suitable recycling collection vehicle, it can immediately expand the list of recyclables it actively targets. Some recyclables are technically acceptable in the current system – notably, mixed recyclable papers such as magazines, junk mail, office paper, and paperboard. However, these recyclable papers are not actively publicized by the Borough.

Additionally, with greater capacity for recyclables collection, the Borough should consider negotiating with the Lackawanna County MRF to determine the potential to add recyclables to the list of accepted items. Candidates for expanding the recycling program include aseptic containers/gable top cartons, as well as #3-#7 labeled plastic bottles, plastic tubs, and bulky plastic items (such as toys, 5-gallon buckets and plastic furniture). In recent years, markets have developed for these plastic items to the extent local processors can separate them from incoming recyclables.

If the Lackawanna County facility cannot handle additional recyclables, the Borough should consider other local processors (see below).

3.4 ADDING SMALL BUSINESSES TO RECYCLING ROUTES

Another opportunity to increase the volume of recyclables would be to add small business accounts to the recycling route. Even with an expanded list of targeted recyclables, the recycling route had sufficient capacity to add some small business accounts without increasing operating costs. The Borough should consider offering small business recycling as a benefit to local small businesses, or possibly via a nominal annual fee.

3.5 IMPROVING PUBLIC EDUCATION ON RECYCLING AND YARD WASTE DIVERSION

A review of the Borough website confirms that there is no readily available information about the recycling or yard waste collection program in the Borough. At a minimum, the Borough should consider adding a page to its website that clearly defines the collection schedule and specifies the materials that should be recycled.

While it was beyond the scope of this effort to elaborate on other public education strategies, the Borough can apply any of the following strategies that have been applied successfully elsewhere in Pennsylvania and nationally:

- ◆ Including information about the recycling program in a direct mail piece, or incorporate in other regularly scheduled mailings, newsletters or utility bills distributed to Borough residents;
- ◆ Placing public service announcements in local media;
- ◆ Issuing announcements from the Mayor or Borough Manager proclaiming the importance of recycling;
- ◆ Engaging schools to incorporate basic instruction on recycling; and
- ◆ Taking out low-cost ads in a local shopper or other newspaper.

3.6 IMPLEMENTATION OF SINGLE STREAM RECYCLING

U.S. EPA and other studies have shown that conversion from dual stream to single stream recycling, especially when new 64-gallon or larger carts are supplied as the receptacle for recyclables storage, will significantly increase the volume of recyclables collected. Further, Waste Management, Inc. has a material recovery facility in Dunmore that is capable of processing recyclables collected in single stream.

The Borough should therefore be aware of the opportunity to implement single stream recycling. Such a move could improve recycling collection efficiency as well as increase recycled material volumes. However, it is noted that the Borough recently entered into a long-term agreement for delivery of its dual stream recyclables with the Lackawanna County MRF. This agreement obligates the Borough to deliver recyclables for 10 years, at zero tip fee and no revenue share.

It was reported by a representative of Waste Management that any agreement for recyclables processing at its Dunmore single stream recycling facility would likely assure zero processing fee (i.e., no cost to the Borough, same as Lackawanna County's agreement), but would also provide the potential for payment of revenues in times of higher market value for recyclable materials. This option should therefore be considered over the longer term. Appendix C contains an example of how a recyclables processing revenue share agreement might work for the Borough.

3.7 IMPLEMENTATION OF VOLUME-BASED PRICING

As a final note, many communities in Pennsylvania and nationally have implemented volume-based pricing, or pay-as-you-throw (PAYT) pricing, for trash and recycling collection. The general notion of these programs is to provide a full slate of curbside recycling and yard waste collection so people can maximize their diversion, and then charge residents higher rates if they dispose of larger volumes of waste. It was beyond the scope of this project to configure PAYT program details.

4. RECOMMENDATIONS

Based on this study, it is recommended that the Borough take the following steps:

- ◆ Update the Borough's website to highlight collection schedules, publicize the list of designated recyclable materials, and confirm the changes to the cardboard collection schedule. Utilize low or no-cost methods of educating the public about the recycling program.
- ◆ Take steps to reduce one employee position from the refuse collection service, and consider using the cost savings to cover the annual financing costs of supplying refuse carts to all residents to convert to a semi-automated (and eventually fully automated) refuse collection system.
- ◆ Continue a dialog with the Lackawanna County recycling facility to identify and add recyclable materials to the list of acceptable recyclables, and then update Borough web pages and informational material accordingly.
- ◆ Offer recycling collection to small businesses in the Borough, either as a new service or else in conjunction with a nominal annual fee to cover the cost of recycling containers and marginal operating costs.

- ◆ Apply to PA DEP for an Act 101 Section 902 Recycling Grant to cover the cost of a new dual compartment compacting truck during the next grant cycle. This new vehicle will allow for increased paper and OCC recovery and better collection productivity. Once obtained, re-integrate OCC back into regularly scheduled weekly recycling collections.
- ◆ Apply to PA DEP for an Act 101 Section 904 Recycling Performance Grant. The grant is based on the amount of eligible materials recycled during the previous calendar year, and the population of the municipality.
- ◆ Determine how/when it might be possible to procure recyclables processing, rather than remain committed to Lackawanna County. If it is possible to secure single stream processing at the local private recycling facility, especially with revenue share to the Borough, additional recycling program enhancements are possible. The dual compartment packer truck can easily be used for single stream collection simply by mixing paper and containers in both compartments, rather than keeping them in separate compartments.

APPENDIX A

CURRENT SYSTEM

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Exhibit A-1
Dickson City Solid Waste and Recycling Expenditures

REVENUES	2010	2011	2012
Households	2,600	2,600	2,600
Annual Fee	\$100	\$100	\$100
Total Revenue	\$260,000	\$260,000	\$260,000

EXPENSES	2010	2011	2012	
Payroll	\$190,163	\$195,505	\$201,392	51%
Vehicle Repairs	\$16,076	\$11,788	\$9,789	2%
Tires	\$6,592	\$7,164	\$7,351	2%
Fuel 6 vehicles)	\$14,630	\$14,581	\$17,172	4%
Landfill Disposal Fees	\$162,921	\$168,143	\$153,697	39%
Miscellaneous	\$5,000	\$5,250	\$5,500	1%
TOTAL Expense	\$395,383	\$402,430	\$394,901	

Vehicle Cost	2010	2011	2012	
Vehicle -related Costs	\$37,299	\$33,532	\$34,312	9%
Daily Routes	2	2	2	
Cost/Route	\$18,649	\$16,766	\$17,156	

Labor Cost	2010	2011	2012	
Payroll	\$190,163	\$195,505	\$201,392	51%
Employees	4	4	4	
Cost/Employee	\$47,541	\$48,876	\$50,348	

Exhibit A-2**Dickson City Solid Waste and Recycling Quantities Collected**

Recycling Material Quantity (tons)	2010	2011	2012
Residential Recyclables	439	445	456
<i>Residue</i>	<i>(16)</i>	<i>(18)</i>	<i>(15)</i>
Commercial Recyclables	4,237	2,920	3,308
<i>Residue</i>	<i>(636)</i>	<i>(401)</i>	<i>(436)</i>
TOTAL Recyclables	4,024.94	2,945.80	3,312.78
Tons/Residential Unit	0.17	0.17	0.18
Yard Waste Quantity (tons)	2010	2011	2012
Yard Waste Tonnage	311.76	311.76	334.56
Tons/Residential Unit	0.12	0.12	0.13
Waste Quantity (tons)	2010	2011	2012
Residential Wastes	2,670	2,712	2,440
Tip Fee	\$64.40	\$64.40	\$64.40
Tons/Residential Unit	1.03	1.04	0.94
Summary (tons)	2010	2011	2012
Recyclables	439	445	456
Yard Waste	312	312	335
Wastes	2,654	2,694	2,425
Total Tons	3,405	3,451	3,215
Tons/Residential Unit	1.31	1.33	1.24
Residential Recycling Rate	22.1%	21.9%	24.6%

Exhibit A-3
Dickson City Recycling Potential

Divertible Materials	Percent of Waste Stream - Current System	Estimated Percent of Waste Stream - Expanded Recycling
<i>Designated and Publicized</i> Newspaper Other Papers? Corrugated Cardboard Glass Bottles and Jars Plastic Bottles Aluminum Cans Steel Cans	14%	17%
<i>Designated but Not Publicized</i> Junk Mail Paperboard/Boxboard	1%	2% 2%
<i>Yard Waste</i>	10%	13%
<i>Potential New Materials</i> Aseptic Cartons #3-#7 Plastic Bottles Plastic Tubs & Lids	0% 0% 0%	0.5% 0.5% 0.5%
Total	25%	36%

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APPENDIX B
902 RECYCLING GRANT APPLICATION
GUIDELINES

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902 Recycling Grant Application Guidelines

Act 101 Section 902 Recycling Grant Application Guidelines Regarding Proper Management of Recyclables, Including Leaf Waste

Assuring compliance with the terms and conditions of Act 101, the rules and regulations promulgated thereunder, other pertinent statutes and the Department's policies and grant guidance are key components of the Department's grant review process. The Act requires certain municipalities ("mandated municipalities") to recycle certain items and provide for the collection and composting of leaf waste. As such, any mandated municipality that allows the materials that are part of its municipal recycling program, including leaf waste, to be managed in a manner other than recycling or composting is in violation of Act 101. The Act also establishes the grant requirements for those communities not mandated to recycle. However, Act 175 states that the Department "shall not prohibit the award of any grant to a county or municipality that has adopted an ordinance allowing the limited burning of yard waste." Since grant funding is awarded on a competitive basis, the following guidelines have been developed to assure that a common understanding exists between the Department and municipalities regarding section 902 grant program requirements.

Mandated municipality requesting a section 902 grant:

1. DEP Regional Planning and Recycling Coordinators will review recycling ordinances and regulations submitted with the grant application to ensure compliance with Act 101, especially section 1501(c) (1)-(5), including commercial, municipal and institutional facilities and community events.
2. It will be assumed that a municipality that does not have an ordinance or regulation that addresses burning is not authorizing the burning of the materials that are part of its recycling program - unless the Department has evidence to the contrary. This evidence could include complaints or other information gathered by the Department.
3. The grant application should confirm that the municipality does not have an ordinance, regulation or other mechanism authorizing the burning of the materials listed in section 1501(c)(1)(i) and (iii) (except for leaf waste) that are part of its recycling program and that the municipality will enforce its recycling ordinances and regulations. Applications from municipalities that have adopted an ordinance allowing for the limited burning of yard waste will be evaluated on a case-by-case basis to ensure that, to the greatest extent practicable, sufficient effort has been made to comply with sections 1501(c)(1)(ii) and (iii) regarding the separation and composting of leaf waste.
4. The regional office should not recommend a grant until the municipality has adopted any necessary modifications to its ordinances or regulations in relation to these guidelines.

Non-mandated municipality requesting a section 902 grant:

Programs required by the municipality:

1. DEP Regional Planning and Recycling Coordinators will review recycling ordinances and other mechanisms submitted with the grant application to ensure compliance with Act 101, especially section 902(b)(3).
2. The recycling ordinance or other mechanism need only be applicable to that part(s) of the municipality that is being served by the recycling program.
3. It will be assumed that a municipality that does not have an ordinance or other mechanism that addresses burning is not authorizing the burning of the materials that are part of its recycling program - unless the Department has evidence to the contrary. This evidence could include complaints or other information gathered by the Department.

4. The grant application should confirm that the municipality does not have an ordinance, regulation or other mechanism authorizing the burning of the materials listed in section 1501(c)(1)(i) and (iii) (except for leaf waste) that are part of its recycling program and that the municipality will enforce its recycling ordinances and regulations. Applications from municipalities that have adopted an ordinance allowing for the limited burning of yard waste will be evaluated on a case-by-case basis to ensure that, to the greatest extent practicable, sufficient effort has been made to operate the program according to the intent of sections 1501(c)(1)(ii) and (iii) regarding the separation and composting of leaf waste.

5. The regional office should not recommend a grant until the municipality has adopted any necessary modifications to its ordinances or regulations in relation to these guidelines.

Voluntary Participation Programs:

1. DEP will accept applications from municipalities that have voluntary programs, but funding for a program that allows any material that is part of its recycling program to be burned is unlikely except where the limited burning of yard waste is authorized by an ordinance. Applications from municipalities that have adopted an ordinance allowing for the limited burning of yard waste will be evaluated on a case-by-case basis to ensure that, to the greatest extent practicable, sufficient effort has been made to operate the program according to the intent of sections 1501(c)(1)(ii) and (iii) regarding the separation and composting of leaf waste.

2. It will be assumed that a municipality that does not have an ordinance or other mechanism that addresses burning is not authorizing the burning of the materials that are part of its recycling program - unless the Department has evidence to the contrary. This evidence could include complaints or other information gathered by the Department.

3. The regional office should not recommend a grant until the municipality has adopted any necessary modifications to its ordinances or regulations in relation to these guidelines.

County requesting a section 902 grant:

1. The above guidelines apply if a county requests a section 902 grant on behalf of one or more municipalities within its jurisdiction. The county must include appropriate documentation from each municipality to satisfy the above provisions as they relate to mandated and non-mandated municipalities. It is not necessary that the county adopt its own ordinance to enforce any program for which the municipalities are seeking funding assistance.

2. Counties requesting funds for recycling education only do not need to comply with the requirements of section 1501(c).

3. The Department does not consider counties to be responsible for enforcing municipal recycling ordinances.

4. A county that requests section 902 funding for a material recovery facility (MRF) should ensure that the host municipality does not allow the burning of the materials that are part of the county's recycling program.

5. The regional office should not recommend a grant until the relevant municipalities have adopted any necessary modifications to their ordinances or regulations in relation to these guidelines.

APPENDIX C

REVENUE SHARING

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Recycling Revenue-Sharing

Examples of revenue-sharing contracts (contracts attached):

Lower Paxton Township, PA – Contract between the township and the processor, Penn Waste, Inc.

NOTE: There is no tipping/processing fee to the township or to their hauler.

“3. Price

“The purchase price for delivered Recyclable [sic] shall be eighty two and one-half percent (82.5%) of Official Board Markets Publication ("OBM") New York High Side for News #6 or Mixed Paper #1, whichever is greater, less twenty five dollars (\$25.00) per ton for processing and marketing, but in no event less than fifteen dollars (\$15.00) per ton. Purchaser is providing Seller with a floor price of fifteen dollars (\$15.00) per ton so that if market conditions deteriorate dramatically, Seller shall receive a minimum floor price of fifteen dollars (\$15.00) per ton for the term of the Agreement and any extensions thereto. For example, the current OMB New York High Side price for News #6 (April 5, 2008) is \$95.00 per ton. The current OMB New York High Side price for Mixed Paper # 1 (April 5, 2008) is \$95.00 per ton. The calculation is as follows: $\$95.00 \times 82.5\% = \78.83 per ton minus \$25.00 per ton = \$53.38 per ton that would be paid to Seller based on current pricing.

“Current pricing as set forth in this Agreement is based on OMB Publication dated April 5, 2008. Current market pricing each month for the term of this Agreement any extensions [sic] hereto would be based on the price set forth in the OBM Publication set at the first calendar issue of each month. If the OBM Publication is no longer reflective of prevailing market conditions, then Purchaser may propose to use an alternative publication(s) to determine the price for Recyc1ables, provided that the parties agree in writing.”

Jermyn Borough, PA – Contract between the borough and the hauler, Waste Management

SECTION V

“The Contractor further agrees that the Borough shall be reimbursed one hundred percent (100%) for all material, of whatever kind, recycled, to wit: the amount paid each month by the Borough to the Contractor for the collection of garbage shall be reduced in the following manner:

- a) The material to be recycled by the Borough shall be weighed and the Borough shall retain a certified weight slip;
- b) The certified weight slip shall be presented to the Contractor;
- c) Every three (3) months the Contractor may require that the recyclable material first be weighed before being disposed of at the recycling authority; and
- d) The amount credited to the Borough by the Contractor shall be that amount of money which should normally be paid by the Contractor to dispose of the materials at a licensed sanitary landfill (Le., if the Borough recycles 100 pounds of material in a particular month; then, upon presentation of the weight slip to the Contractor, the Contractor shall credit the Borough's

account in that amount it would have cost for the Contractor to dispose of 100 pounds of material at a licensed sanitary landfill).”

Sarasota County, FL – Contract for recycling processing:

	Initial contract	Amendment 2010
Term	5 years, to 10/29/08; option for one 5 year extension	Extension: through 9/30/13
Contractor	Resource Recovery Systems of Sarasota, Inc. and Casella Waste Systems	Resource Recovery Systems, LLC (previously assigned and consented to by Co. on 2/13/07) <i>(Now ReCommunity Recycling dba FCR)</i>
Contractor responsible for:	Operation and maintenance of RMPF and operation of South County transfer Station	No change
Type of Facility	Dual stream	No change
Processing Fee	Processing Fee for “Program User Recyclables and for Program Recyclables delivered by Participating Municipalities” is \$6.50 per ton, adjusted annually by a CPI formula.	Processing Fee for “Program User Recyclables and for Program Recyclables delivered by Participating Municipalities” is \$7.53 per ton, adjusted annually by a CPI formula.
“Residue Allowance”	Limited to 3%	No change
Reduction in Processing Fee	Not in original contract	Added: Processing Fee for “Program User Recyclables” decreases as market prices increase. When Average Commodity Revenue (ACR) is > \$80/ton, < or = \$90/ton, fee reduced by 1/3. ACR > \$90/ton, < or = \$100/ton, fee reduced by 2/3. ACR > \$100/ton, no processing fee.
Revenue Sharing	“The County will receive 75% of all revenue on Program Tons in excess of a Protected Base Price of \$65.00/ton for Recyclable Containers and \$45.00/ton for Recyclable Paper.” “The Contractor is not obligated to provide Revenue Share to the Participating Municipalities.”	“The County will receive 75% of all revenue on Program Tons in excess of a Protected Base Price of \$65.00/ton for Recyclable Containers and \$40.00/ton for Recyclable Paper.”
Calc. of Average Commodity Revenue (ACR) - Paper	ACR for paper calculated by summing revenue for three months (current and 2 previous) for each material in the paper stream and dividing by total tons shipped and sold for the three months.	ACR for paper calculated by summing revenue for the month for each material in the paper stream and dividing by total tons shipped and sold for the month.
Calc. of Average Commodity Revenue (ACR) - Containers	ACR for containers calculated by summing revenue for three months (current and 2 previous) for each material in the containers stream and dividing by total tons shipped and sold for the three months.	ACR for containers calculated by summing revenue for the month for each material in the container stream and dividing by total tons shipped and sold for the month.
Performance Bond	Performance bond of \$1 million	Performance bond reduced to \$500,000.
Boxboard added	Boxboard not included in recyclable materials	Boxboard added (unless with waxed or plastic coating or contaminated with food). (Not official part of program because ordinance would have to be changed.)

Note: In definitions in 2003 contract: “**Program User**” is defined as “Program Recyclables originating from residential users within the unincorporated Sarasota County that are collected and delivered by the County Contract Hauler.”

Other examples of provisions in revenue-sharing contracts:

(From Revenue-Sharing Strategies for Local Government Recycling Programs, SWANA report)

Nashville, TN, Metropolitan Government of Nashville and Davidson County (Metro) – five-year contract that was initiated in 2004

- Contract specifies 5% maximum contamination allowed in material reaching MRF
- Metro does not pay a tipping/processing fee. MRF pays Metro “a ‘material payment’ of approximately \$10 per ton for each ton of recyclable material collected from the curbside recycling program; \$35 per ton for cardboard, market rates for mixed paper; and a weighted average of the market value for aluminum, metal, and plastic from the Metro recycling drop-offs.”
- In addition, MRF pays Metro an “educational payment” to promote recycling
- MRF pays Metro “a ‘host community fee’ of \$5 per ton for recyclable materials delivered to the facility by other local governments and recycling companies in the Metro region.”

Note that the MRF is owned and operated by private industry.

Mecklenburg County, NC – contract was to expire June 30, 2009, but was extended

“Key contract terms with respect to sharing recycling revenues include the following:

- Gross revenues are greater than service fees—In the event that gross revenues are greater than service fees, then the contractor agrees to pay the county 75% of net revenues (i.e., gross revenues less service fees).
- Service fees are greater than gross revenues—In the event that service fees are greater than gross revenues, then the county agrees to pay the contractor an amount equal to the service fees minus gross revenues.”

Note that Mecklenburg County owns the MRF and leases it to a private company.

Processing Costs

(From US EPA, <http://www.epa.gov/wastes/conservation/tools/localgov/economics/processing.htm>)

Examples of sharing market risk include:

Des Moines, IA – recyclables processing contract

- The processor pays a minimum floor price to the city and an “annual minimum payment in return for the city’s guaranteed delivery of a minimum quantity of recyclables.”
- “The processor also agrees to market materials at the high end of prices quoted in the Official Board Markets: The Yellow Sheet (Chicago market) for newspaper and mixed paper, and to share these revenues in excess of floor prices with the city.”

Denver, CO – recyclables processing contract

- Processor is required to offer to pay to the city “recyclable revenue per ton”, “with a share in revenues received in excess of this base amount, which is referred to as the ‘up-market share’.”
- The processor “assumes the risk of market prices dipping below the proposed base market value”.
- “The up-market revenue is computed on a per ton basis; the city’s share is the per ton amount multiplied by the number of tons of recyclables multiplied by the percentage share offered to the city.”

Phoenix, AZ – recyclables processing contract

- Processor must bid “a guaranteed minimum floor price for each of 19 different commodities.”
- Processor must pay “the agreed-upon percentage share to the city, computing the city’s share using the greater of the actual price received for each commodity or the guaranteed minimum price for that commodity.”
- This means that the processor “accepts all of the market risk for prices dropping below the guaranteed minimum, and shares the profit potential if prices rise above the floor.”

Reporting Requirements

In a contract, reporting requirements are important and should be very specific. Some items to be included are:

- Daily records:
 - Date, truck number, ticket number, net weight for all incoming loads from the Borough;
- Monthly records;
 - Tons of material received for processing by type of commodity;
 - Revenues received for materials sold;
 - Any revenue due to the Borough;
 - Record of any rejected loads;
 - Educational and promotional activities conducted (if included in contract);
 - Complaints, accidents, incidents, or downtime that occurred; and
 - Proof of transfer of materials to end markets.