

# PIKE COUNTY *DROP-OFF RECYCLING* PROGRAM ASSESSMENT



*Environmental Resources Associates*

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CONSULTANTS IN ENVIRONMENTAL RESOURCE MANAGEMENT



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SWANA/PADEP Technical Assistance Program

## **TABLE OF CONTENTS**

1.0 Executive Summary	1.
2.0 Background	2.
3.0 Current Situation	4.
3.1 Drop-Off Program Description	4.
3.2 Recycling System Equipment	6.
3.3 Recyclable Materials Marketing	8.
4.0 Recycling Programs Observations	10.
4.1 Program Economics	12.
5.0 Conclusions and Recommendations	14.
5.1 Conclusions	14.
5.2 Recommendations	15.

## **1.0 Executive Summary**

Pike County has been operating a source segregated drop-off recycling program since 2000. The unmanned drop-off recycling program is available to both the public and private sectors twenty four hours a day, seven days a week.

As a result of the ever growing population, both permanent and seasonal, the County is struggling to keep up with the increasing volumes of recyclables being collected at its drop-off depots.

The County's goals are to address the challenges associated with the ever increasing volume of recyclables, increase efficiency and provide recycling opportunities to more of its residents. To this end the County has requested technical assistance through the Recycling Technical Assistance Program.

Environmental Resources Associates (ERA) was requested to provide consulting services to assist the County in assessing its planned recycling program expansion and provides the following recommendations for the County's consideration.

### **Recycling System Equipment**

Based on review of the records and data and consultations with the County, ERA recommends:

- That the County consider purchasing twenty five (25) Haul-All, six (6) cubic yard hydraulically dumping drop-off collection bins to accommodate the estimated need for additional drop-off capacity.
- That the County considers the purchase of a Haul-All Twister 3000-Rotary Compaction Vehicle to meet it's current and planned program collection capacity needs in an efficient and cost effective manner.
- That the County applies for Act 101 Section 902 funding to assist in financing the recommended equipment.

### **Program Economics**

Given the uncertainty of future grant funding under Act 101 Section 902 and the fact that Section 903 and 904 funding is not guaranteed and only authorized by the legislature until 2012, the County should not be dependent on these funding sources to assist in financing its recycling program. ERA concurs with the PADEP that it is essential that Pennsylvania municipalities strive to improve program sustainability. To this end ERA recommends that:

- The County starts to assess the recycling program exclusive of Act 101 funding sources.
- To help improve/insure program sustainability it is recommended that the County dedicate the net recycling program revenues exclusively to the recycling program's maintenance and to provide for reasonable program improvements/expansion. It is also recommended that the County establish a program for assessing/auditing program operation and performance on an ongoing basis to determine what potential exists for economic and or operational improvements.

## **2.0 Background**

Pike County (County) is located in the Pocono Mountains in the northeast corner of Pennsylvania and encompasses 567 square miles. The County consists of eleven townships and two boroughs; its estimated population per 2000 census was 46,302 with a population density of 58 persons per square mile and 17,433 households. Pike County is the fastest growing county in Pennsylvania.

The 2000 census population was 46,302 and represents a 65.6 percent increase over 1990 census figures. The 2006 population was estimated at 58,185, making it one of the fastest growing counties in the nation and the fastest growing county in the northeast.

The population is projected to be 69,347 in 2010 and 92,392 in 2020. The 1980, 1996, 2000 and 2006 estimated population along with the percent changes (PC) for Pike County is presented in Table 1:

**Table 1**

Population and Percent of Change	<b><u>1980 Pop.</u></b>	<b><u>1990 Pop.</u></b>	<b><u>PC 1980/90</u></b>	<b><u>2000 Pop.</u></b>	<b><u>PC 1990/2000</u></b>	<b><u>2002 Pop.</u></b>	<b><u>PC 2000/02</u></b>	<b><u>2006 Pop.</u></b>	<b><u>PC 2000/06</u></b>
<b>Pike County:</b>	18271	27966	53%	46302	65.2%	50,095	8.2%	58,185	25.7%

Source: US Census Bureau, Penn State Data Center, and NEPA

Pike County is also a vacation area and during the summer tourist season the County's population doubles.

For several decades, residents from the metropolitan New York area have been moving to the Pocono area, looking to improve their lifestyle, purchase affordable housing, enjoy lower taxes and be within commuting distance to their existing employment. As a result of this trend, the County's municipalities are increasingly

becoming bedroom communities with current housing units estimated at approximately 36,000 and growing steadily.

One example of the type of existing and planned growth being experienced throughout the County is Lehman Township. Lehman Township is located in the southern tip of the County, approximately eighty miles from New York City and only a few miles from the New Jersey border. Lehman Township has experienced a population growth of more than 100 percent in each of the past three decades and its current population is estimated at more than 9,000 persons. More than seventy seven percent of Lehman residents are from other states according to the 2000 Census figures.

A recently approved planned residential development to be located in the Township will add 5,850 residential units on a 2,500-acre parcel of woodlands.

The new development will be the largest in the Pocono region and would double Lehman Township population over the next decade.

Pike County has been operating a source segregated drop-off recycling program since 2000. The unmanned drop-off recycling program is available to both the public and private sectors twenty four hours a day, seven days a week. The program's popularity and the associated volume of recyclables collected have continually grown from the program's inception. The County has attempted to accommodate this trend by increasing the number of drop-off locations and providing additional collection services to its commercial/institutional establishments. However, due to the continued rapid growth of the County, both residential and commercial sectors, the recycling program's ability to effectively accommodate the increasing volumes of recyclables has been impaired.

The problem of rapid growth is compounded in that the drop-off depots are used frequently by residents of adjacent states. The County is bordered to the north by the State of New York and to the east by New Jersey.

As a result of the ever growing population, both permanent and seasonal, the County is struggling to keep up with the increasing volumes of recyclables being collected at its drop-off depots.

The County's goals are to address the challenges associated with the ever increasing volume of recyclables, increase efficiency and provide recycling opportunities to more of its residents. To this end the County has requested technical assistance through the Recycling Technical Assistance Program. Environmental Resources Associates (ERA) was requested to provide consulting services to assist the County in assessing its planned recycling program expansion.

The County had considered, as part of its program expansion, to develop a

recyclables was being considered to improve the efficiency and cost effectiveness of transport of recyclables to markets. ERA initiated efforts to conduct a feasibility analysis and evaluations of proposed sites for the planned facility. The County applied for but was not successful in gaining Act 101 funding assistance for the development of the facility and decided that it was not economically feasible to proceed with this phase of the planned program expansion.

### **3.0 Current Situation**

Pike County does not have any Act 101 mandated municipalities or a County recycling ordinance mandating participation, the recycling program is entirely voluntary.

Pike County has been operating a drop-off recycling program since 2000 and currently operates ten (10) unmanned drop-off recycling depots; the most recent drop-off depot was established in 2007 in the Borough of Matamoras. The drop-off recycling depots service the public and private sectors. Recyclables collection services are also provided to the establishments listed in Figure 2.

The County's continued rapid growth, both residential and commercial, has presented challenges relative to efficiently operating its existing recycling program and the need to expand the program to provide recycling opportunities to areas currently not being served.

ERA conducted a program assessment to identify program strengths and weaknesses and identify options for program improvements and expansion for the County's consideration.

### **3.1 Drop-off Program Description**

As previously noted the County operates ten strategically located drop-off recycling depots. The depots are equipped with a series of specialized six cubic yard bins for the collection of a wide variety of recyclables. Recyclables are source separated and placed into designated bins by participants.

The materials collected by the recycling program include;

- |                                    |                |
|------------------------------------|----------------|
| ~ glass containers, commingled     | ~ cardboard    |
| ~ HDPE and PET plastic, commingled | ~ newspaper    |
| ~ aluminum cans                    | ~ junk mail    |
| ~ steel cans                       | ~ magazines    |
| ~ tin cans                         | ~ office paper |

The drop-off recycling depot sites are located throughout the County and are

available to residents on a twenty four hour a day, seven day a week basis (see Figure 1). Drop-off recycling depot sites are equipped with between four (4) and ten (10) six cubic yard bins, based on need.

**Figure 1**

**Depot Site Locations:**

Dutches Market - Greentown

8 Containers 3 Hyd-A-Bags  
1 Glass, 1 Cans, 2 Plastic, 2 OCC, 2 Magazine/Newspaper

Palmyra Municipal Bldg.

5 Containers 2 Hyd-A-Bag  
1 Glass & Cans, 2 Plastic, 1 OCC, 1 Magazine/News

Delaware Municipal Bldg.

5 Containers 2 Hyd-A-Bag  
1 Glass/ Cans, 1 Plastic, 2 OCC, 1 Magazines/News

Lehman Township Municipal Bldg.

5 Containers 1 Hyd-A-Bag  
1 Plastic, 1 Glass/ Cans, 2 OCC, 1 Magazine/News

Lackawaxen Township Municipal Bldg.

4 Containers 1 Hyd-A-Bag  
1 Glass/ Cans, 1 Plastic, 1 OCC, 1 Magazine/News

Midtown Convenience Store-Shohola

4 Containers 1 Hyd-A-Bag  
1 Glass/ Cans, 1 Plastic, 1 OCC, 1 Magazine/Newspaper

Dingmans Township Municipal Bldg.

8 Containers 2 Hyd-A-Bag  
1 Glass, 1 Steel/ Cans, 2 Plastic, 2 OCC, 2 Magazines/Newspaper

Milford Township Municipal Bldg.

10 Containers 2 Hyd-A-Bag  
1 Glass, 1 Glass/ Cans, 2 Plastic, 4 OCC, 2 Magazines/Newspaper

Matamoras Borough Municipal Bldg.

4 Containers  
1 Glass/ Cans, 1 Plastic, 1 OCC, 1 Magazines/News,

Pocono Environmental Center–Bushkill

3 Containers  
1 Plastic, 1 OCC, 1 Glass/Office Paper

Recyclables collection services are also provided to the establishments listed in Figure 2. The County does not have sufficient containers to provide to all of the participating schools.

**Figure 2**

**Commercial/Institutional Pick-ups**

Pike County Jail – Blooming Grove Township

2 Containers  
OCC

Erhardts – Tafton

1 Container  
OCC

Delaware Valley Middle School – Milford

2 Containers  
Both for Paper

School District Pickups

Shohola Elementary School

Delaware Middle School

Wallenpaupack High School

Wallenpaupack Middle School

No Containers  
Paper Mixed & OCC

**3.2 Recycling System Equipment**

The County's program utilizes the Haul-All Recycling System. The Haul-All Recycling System entails a series of six (6) cubic yard hydraulically dumping drop-off bins, specially designed collection vehicles and a transfer system for material consolidation. The Haul-All System is capable of handling separate stream and/or commingled materials.



Haul-All is a manufacturer of fully integrated recycling equipment systems including semi-automated drop-off containers, bear proof containers, side-loading collection vehicles and rapid cycle, self-dumping modular transfer stations.

Some of the reported benefits to the identified system included:

↗ Flexibility – Capable of handling commingled or various single stream materials.

↗ Expandable – Additional bins can be readily added.

↗ Ease in Siting – Sites has been easily developed at grocery stores, malls, State facilities and school properties.

- Little site preparation required only a flat hard surface.

- Does not have the appearance of a garbage container.

- Limited space required to do hydraulic side loading.

↗ Economics – Comparatively lower cost per ton of material collected.

↗ Residuals – Low rate of contamination/residuals due to the design of material specific bin openings.

The County's ten (10) Haul-All Recycling System drop-off depot sites are serviced by three (3) specialized collection vehicles. All drop-off depot sites are serviced on a weekly rotating basis by three (3) fulltime collection vehicle operators. The County also employs one (1) part time alternate collection vehicle operator.

The County's drop-off recycling program equipment consists of two (2) HUAL-ALL RP-235 and one (1) HUAL-ALL AugPac-3000 collection vehicles and one (1) pickup truck, sixty four (64) recyclables collection bins and fourteen (14) HYD-A-BAG bins, for collection of plastic bags (see Figure 3). The RP235 collection vehicles are dual compartment, variable compaction, automated collection vehicles that hydraulically load a six (6) cubic yard bin in less than three (3) minutes. The dual compartments allow for collection of two different types of materials. Total capacity of the RP-235 units is rated at thirty five (35) cubic yards. The AugPac-3000 series collection vehicle is a twenty two (22) cubic yard, auger feed compaction unit used for collection of cardboard and plastics. The pickup truck is used as a general utility vehicle.

The collection vehicles operated efficiently during ERA observations and appeared in good repair. However, interviews with the operators indicated and maintenance records indicated that two of the older units a 1999, RP-235 and a

2000, AugPac-3000 had been experiencing down time over the past two years as a result of increasing maintenance and repair needs.

A review of the maintenance records indicated that the recorded mileage of these units was high as were the corresponding maintenance costs (see Figure 3).

Collection bins for recyclables and plastic bags were in good repair and operating order.

**Figure 3**

***Collection Equipment***

<u>Collection Vehicles</u>	<u>Recorded Mileage</u>	<u>Repair Costs (2006-2007)</u>
1995 FORD 250, Pickup	48,000	\$ 2,742.19
1999 INTER. 4900, RP-235	256,050	\$14,022.72
2000 FORD 750, AugPac	267,509	\$32,534.25
2005 FORD 750, RP-235	81,238	\$ 5,083.02

<u>Collection Bins</u>	<u>Number</u>	<u>Condition</u>
BINS (six cubic yard)	64	Good
HYD-A-BAG	14	Good

**3.3 Recyclable Materials Marketing**

Glass is delivered to the Lackawanna County Recycling Facility located in Scranton, Pennsylvania. The glass is accepted at Lackawanna County Recycling Facility on a push or \$0.00 per ton basis.

Under a marketing agreement, Pike County delivers all other recyclables collected to the Monroe County Municipal Waste Management Authority Consolidation Center, located in Blakeslee, Pennsylvania. The agreement specifies the terms and conditions for acceptance of the recyclables and the market values to be paid for the recyclables.

Monroe County Municipal Waste Management Authority operates a similar drop-off program using Haul-All Recycling System equipment for its fifteen (15) drop-off depots, vehicles for collection of recyclables from the depots and storage equipment at its consolidation facility. The consolidation facility is designed for off loading of Haul-All collection equipment so it is completely compatible with Pike County's collection vehicles. Recyclables are marketed by the Monroe County Municipal Waste Management Authority on behalf of itself and several other county and municipal programs.

A major expense incurred by the County's recycling program is collection and transport of recyclables to market, fuel and manpower. Maintenance is also becoming a major expense resulting from the aging and high mileage collection

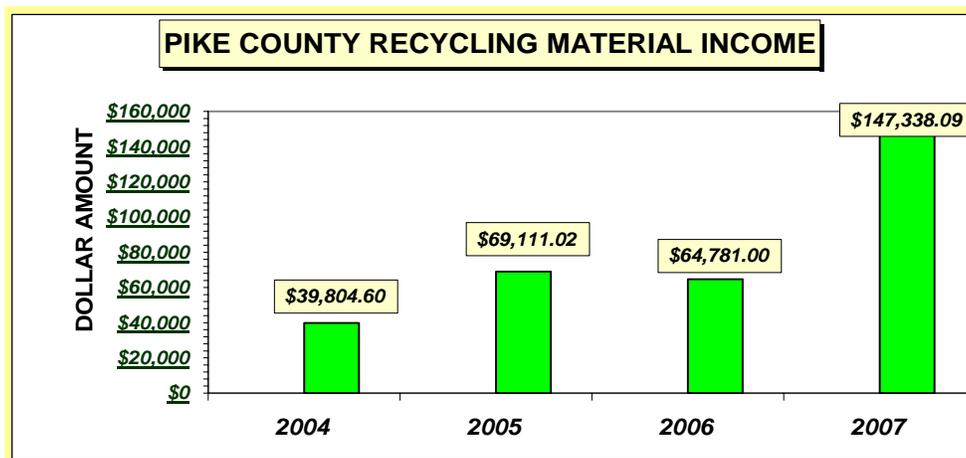
vehicles (see Figure 3). A component of this cost is transport of recyclables to market. The round trip distance traveled to the Lackawanna County recycling facility to deliver its glass is approximately 106 miles. Delivery of the remaining recyclables to the Monroe County Municipal Waste Management Authority Consolidation Center is approximately 110 miles round trip. The time required to transport and off load recyclables to their respective destinations averages two and one half hours per round trip.

Considering glass provides a \$0.00 market value, the distance traveled to the Lackawanna County facility, 106-miles round trip, and the time required to transport and off load recyclables, two to three hours, this situation results in a negative value for the tons of glass collected by the program annually (approximately 170 tons in 2007).

The cooperative marketing arrangement with the Monroe County Municipal Waste Management Authority provides the benefits of economy of scale for handling and marketing of recyclables. As a result of the volumes of recyclables accepted by Monroe County it is able to offer the market place a reliable source of high volume, source segregated recyclables. This situation provides a unique opportunity to develop contracts and agreements with markets that provide reliable and stable outlets for recyclables, at generally higher market prices than could normally be anticipated by Pike County marketing their recyclables.

The incomes received by the County from recyclables marketed under the aforementioned agreement (2004 to 2007) are provided in Table 2.

**Table 2**



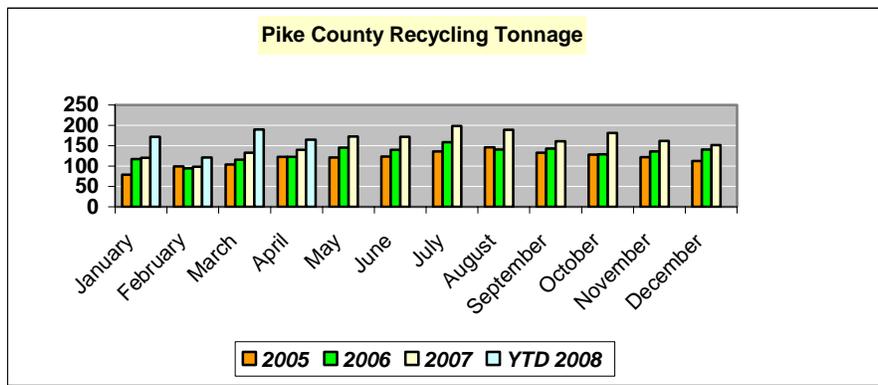
Pike County's marketing arrangement with Monroe County Municipal Waste Management Authority provides a reliable and secure market outlet (with the exception of glass) for the County's recyclables, at competitive prices. No markets were identified within a fifty (50) mile radius that could provide the benefits afforded under the existing cooperative marketing agreement.

#### 4.0 Recycling Program Observations

ERA has accompanied the collection vehicle operators on their routes during each of the four seasons, to interview the operators, observe collection practices at the drop-off recycling depot sites and to observe and interview participants. Based on observations of operations at the drop-off recycling depots and interviews with the County's recycling coordinator, collection vehicle operators and program participants, ERA offers the following comments.

- Overall the drop-off depots were well maintained and no illegal dumping was noted however, overflow conditions were noted at heavily used sites.
- Collection vehicle operators maintained a daily log and recorded starting time, the time required to collect recyclables and estimated volume of materials collected at each site. Problems encountered and/or difficulties experienced (if any) at a given site were also documented. The time of collection route completion and round trip delivery time to market outlet were recorded.
- Collection vehicle operator logs data and information is tabulated on computer spreadsheets. Tare weights for each variety of recyclable material marketed and income from the marketed materials are also compiled and are recorded on computer spreadsheets. The spreadsheets provide an accurate tool to track/monitor daily, monthly and annual collection performance on both a site specific and overall program basis. The compiled data and information can then be easily converted to graphic representations for ease of comparison; an example is presented in Table 3.

**Table 3**



- Overflow of materials resulting from full bins at the following high use depot locations, Delaware, Dingmans, Greene and Milford Townships and Matamoras Borough. The recyclable materials collection bins observed to be experiencing overflow conditions were cardboard and plastics and to a much lesser degree mixed paper bins.

- Collection equipment performed efficiently in loading of all materials.
- Collection equipment operators were well trained and loaded recyclables in a safe and timely manner. The only notable impediment to collection efficiency was when overflow conditions existed.
- Overflow conditions resulting from lack of capacity for certain recyclables (cardboard, plastics and occasionally mixed paper) resulted in participants placing recyclables (in cardboard boxes, plastic or paper bags or loose) in front of or on top of collection bins. Recyclables left in the noted areas were observed to be in some cases commingled and in others separated materials.
- Overflow conditions adversely affected collection efficiency by requiring additional work efforts on behalf of the collection personnel.
- Several individuals delivered recyclables to the County's drop-off depots in cars with New Jersey and/or New York license plates.
- Participants did not generally appear to find the separation of recyclables to be a problem, with the exception of the need to flatten cardboard for insertion into the collection bin receiving slots.
- Interviews of collection equipment operators and participants revealed one common and prominent complaint (although from different perspectives): the problems associated with overflow conditions at the depot sites.



#### **4.1 Program Economics**

Pike County's 2006 and 2007 Recycling Budget Analysis (Figure 4) reports 2007 income in excess of recycling program expenses of \$167,591.00. Act 101 Section 903 Recycling Coordinator and Section 904 Performance funding, hauler license fees and County administrative fees (collected from County designated disposal facilities) are included as income sources. A simple calculation translates the total net income into a per ton income of \$78.34 per ton.

**Figure 4**

**PIKE COUNTY SOLID WASTE/RECYCLING REVENUE AND BUDGET  
ANALYSIS  
YEAR END REPORT 2007**

	2006 APPROVED	2006 EXPENSES	2007 APPROVED	2007 EXPENSES
Coordinator	\$20,134.00	\$19,747.00	\$20,940.00	\$20,537.00
Driver	96,232.00	79,905.00	97,771.00	98,236.00
Travel/Meals	300.00	41.00	200.00	223.00
Public Ed	500.00		500.00	
Dues/Bond	250.00	95.00	250.00	
Seminars/Conferences			500.00	
Phone	700.00	640.00	720.00	1411.00
Postage	200.00	4.00	200.00	146.00
Supplies/Forms	600.00	817.00	700.00	726.00
Advertising	1200.00	170.00	1000.00	
Subscriptions				
Capital Improvements				
Professional Services	5,000.00	175.00		
Contract Driver				
Consultant			2000.00	
Gen. Authority Mtg	4,000.00	230.00		
Truck Expense	35,000.00	32,773.00	35,000.00	52,678.00
Fuel Expense	30,000.00	41,226.00	35,000.00	49,756.00
Recycling Expense	5,000.00	8,849.00	4,880.00	1,069.00
Waste Hauling Service	2,500.00	2,067.00	2,500.00	2,067.00
Uniforms	2,000.00	2,003.00	2,500.00	2,250.00
Insurance				
Miscellaneous	500.00	257.00	500.00	162.00
Life Insurance	174.00	235.00	162.00	229.00
Med. Benefits	26,257.00	38,390.00	28,833.00	42,313.00
Workers Comp. Benefit	9,990.00	10,542.00	11,877.00	14,282.00
Pension	6,749.00	5,647.00	6,647.00	6,027.00
CCAP Benefit/Unemployment	936.00	716.00	1,026.00	961.00
FICA	8,902.00	7,706.00	9,081.00	9,172.00
<b>TOTAL</b>	<b>257,124.00</b>	<b>252,236.00</b>	<b>262,787.00</b>	<b>302,245.00</b>
<b>REVENUES</b>				
ADMIN FEE	258,000.00	276,598.00	258,000.00	265,467.00
HAULER LIC	2,100.00	1,865.00	2,100.00	906.00
MONROE COUNTY FEE	60,000.00	64,781.00	66,000.00	147,307.00
903 COORDINATORS GRANT	18,000.00	28,461.00	29,000.00	24,408.00
904 PERFORMANCE GRANT	30,000.00		40,000.00	31,748.00
Misc	30.00	30.00		
<b>TOTAL</b>	<b>\$368,130.00</b>	<b>\$371,735.00</b>	<b>\$395,100.00</b>	<b>\$469,836.00</b>
<b>NET OPERATING REVENUE OVER OPERATING EXPENSES</b>		<b>\$119,499.00</b>		<b>\$167,591.00</b>

## 5.0 Conclusions and Recommendations

The following are ERA's conclusions and recommendations for improvements to the County's drop-off recycling program.

### 5.1 Conclusions

Overall the County drop-off recycling program is operated well considering the existing challenges of ever increasing volumes of recyclables and the limitations of the existing collection equipment. The lack of capacity to accommodate the current and increasing volumes of recyclables collected impedes the County's efforts to increase program efficiency, cost effectiveness, maintain its current participation rates and accommodate for program expansion.

The increases in volumes of recyclables collected during 2001 (the first complete year of operation), 2007 and 2008 (year to date) are provided in Table 2. Table 2 illustrates the dramatic and continuing increase in the volume of recyclables collected. From the first full year of operation in 2001 to 2007 the volume of recyclables has increased approximately threefold and collections for the first four months of 2008 have surpassed the same period of time in 2007 by more than thirty percent.

**Table 3**

#### Recyclables Collections

MONTH	TONNAGES		
	2001	2007	2008
January	33.75	120.19	171.99
February	26.91	98.31	121.12
March	36.14	133.01	189.66
April	46.06	139.87	164.57
May	56.71	172.85	
June	58.2	172.13	
July	78.01	198.57	
August	73.52	189.40	
September	55.64	161.24	
October	70.47	181.30	
November	62.95	161.87	
December	56.29	151.79	
<b>TOTAL</b>	<b>654.65</b>	<b>1880.53</b>	<b>647.34*</b>

\* Year to Date

The problem of rapid growth is compounded due to the fact that the County's recycling drop-off depots are used regularly by residents of adjacent states. The

County is bordered to the North by the State of New York and to the East by New Jersey. ERA has observed numerous individuals delivering recyclables to the County's drop-off depots in cars with New Jersey and/or New York license plates.

Additional volumes of recyclables have resulted in frequent overflow conditions (primarily cardboard and plastics) at a number of the drop-off sites, particularly those in higher population areas and in close proximity to commercial areas. The overflow of bins results in a variety of negative impacts including increased program costs, inconvenience for participants, potential for litter, exposure of recyclables to elements and inefficient program operations.

Volumes of recyclables generated by the program exceed the capacity of available collection bins at several drop-off sites and the ability/capacity of the collection vehicles to efficiently collect and transport them to market. Additionally, two of the three County's collection vehicles are in excess of eight years old and have logged more than 250,000 miles. This has resulted in more frequent repair needs resulting in higher repair costs and program interruptions.

The major deficiencies of the drop-off recycling program are readily identifiable,

- The County's ever growing population, both permanent and seasonal, has resulted in a steady increase in program participation (from residential, commercial, institutional and municipal sectors) generating ever increasing volumes of recyclables.
- Increased participation and lack of collection capacity at several of the drop-off depots has caused reoccurring overflow conditions (primarily cardboard and plastics) at recycling bins.
- Overflow conditions adversely affected collection and overall program efficiency.
- Current equipment and manpower is inadequate to efficiently handle the increasing needs for capacity both at the drop-off depots and for the collection of recyclables from the depots. This situation is exacerbated by the County's desire to expand the recycling program.

## **5.2 Recommendations**

### Recycling System Equipment

As described above the County records data and tracks/monitors daily, monthly and annual collection performance on both a site specific and overall program basis. This data has been used to determine the equipment required to address

the County's drop-off program needs to efficiently handle the current and projected future volumes of recyclables.

Based on review of the records and data and consultations with the County, ERA recommends:

- That the County consider purchasing twenty five (25) Haul-All, six (6) cubic yard hydraulically dumping drop-off collection bins to accommodate the estimated need for additional drop-off capacity. The new bins will be used to expand collection capacity at the following depot locations experiencing consistent overflow problems, Delaware, Dingmans, Greene and Milford Townships and Matamoras Borough, to establish a new drop-off depot at Blooming Grove Township and to service the participating schools.
- That the County considers the purchase of a Haul-All Twister 3000-Rotary Compaction Vehicle to meet its current and planned program collection capacity needs in an efficient and cost effective manner.

The advantages of this unit in meeting the County needs include:

- Provides a twenty cubic yard payload capacity.
- Permanently reduces HDPE volumes, increasing payload capacity by up to 8:1.
- Eliminates corrugation, bridges and gaps on OCC with a compaction ratio of 6:1 minimizing transportation costs.
- Destroys material memory, achieving a compaction rate of 6:1 for PET.
- High compaction of light weight bulky materials (OCC, HDPE and Pet) significantly reduces transportation cycles and costs.



**Haul-All Twister 3000- Rotary Compaction Vehicle**

- The manufacturers quoted cost for the purchase of twenty five (25) Haul-All six (6) cubic yard hydraulically dumping drop-off collection bins is \$251,923.44 (\$10,076.94 per unit). The quoted total cost for the purchase of a Haul-All Twister 3000- Rotary Compaction Vehicle is \$253,875.83. The total cost for the specified equipment is \$505,799.27. ERA recommends that the County apply for Act 101 Section 902 funding to assist in financing the equipment.

Although it is recommended that the County apply for Act 101 Section 902 funding it must be noted that this grant program is highly competitive, totally dependent on the availability of funds from the Act 101 Recycling Fund and it is uncertain how long this program will continue to be funded.

### Program Economics

As previously noted Pike County's 2006/2007 Recycling Budget Analysis reports 2007 income in excess of recycling program expenses of \$167,591.00. Act 101 Section 903 and 904 funding, hauler license fees and County administrative fees (collected from County designated disposal facilities) are included as income sources. The net total per ton income is \$78.34 per ton including Act 101 Section 903 and Section 904 funding.

Given the uncertainty of future grant funding under Section 902 and the fact that Section 903 and 904 funding is not guaranteed and only authorized by the legislature until 2012 the County should not be dependent on these funding sources to assist in financing its recycling program. ERA concurs with the PADEP that it is essential that Pennsylvania municipalities strive to improve program sustainability. To this end ERA recommends that:

- The County starts to assess the recycling program exclusive of Act 101 funding sources. The reported 2007 income was in excess of recycling program expenses by \$167,591.00. Subtract the funding sources received from Act 101 grants \$56,156.00 from the \$167,591.00 and the program's net income is \$111,435.00. This figure indicates that the County's recycling program has a good potential for being self sustaining, given that its income sources remain stable.
- To help improve/insure program sustainability it is recommended that the County dedicate the net recycling program revenues exclusively to the recycling program's maintenance and to provide for reasonable program improvements/expansion. It is also recommended that the County establish a program for assessing/auditing program operation and performance on an ongoing basis to determine what potential exists for economic and or operational improvements.