



January 5, 2001

Mr. Terry Carcella  
Zoning Administrator  
Washington Township  
11800 Edinboro Road  
Edinboro, PA 16412

**Subject:** Establishing a Drop-Off Recycling Program in Washington Township

Dear Terry:

This letter is to provide Washington Township with the results of R.W. Beck's study to evaluate options for a drop-off recycling program for the Township.

The Township was concerned that when the results of the 2000 Census become available, it would be determined that the Township would be required to recycle under the Municipal Waste Planning, Recycling and Waste Reduction Act (Act 101). R.W. Beck has determined that even if the population reaches or exceeds 5,000, Washington Township would not be mandated to recycle under the Act based on population density. The Township's area is 44.04 square miles, and based on a population of 5,000, the density would be around 114 persons per square mile. Act 101 exempts municipalities with populations between 5,000 and 10,000 if their population density is less than 300 persons per square mile. The Township's population would need to exceed 13,200 before it would be mandated to establish a curbside recycling program.

Given the state's new goal of 35 percent recycling by 2003, however, the PA Department of Environmental Protection (DEP) is encouraging counties and municipalities to recycle more materials. The Township has determined that it would like to make recycling available to its residents, but given that curbside recycling is not required, drop-off recycling may be a preferred alternative.

The Borough has requested assistance to establish a progressive recycling program that includes a public education and compliance program.

## **ESTABLISHING A DROP-OFF RECYCLING PROGRAM IN WASHINGTON TOWNSHIP**

This report is broken down as follows:

- Demographics and materials estimates
- Drop-off recycling options

- Curbside recycling
- Other recycling options
- Public education
- Enforcement
- Grant funding
- Conclusions and Recommendations

The following issues are considered:

- Approaches to drop-off recycling that will maximize the material collected and minimize the efforts of and cost to the municipality.
- Curbside recycling options and Pay-As-You-Throw
- Other recycling options
- Public education efforts that will build enthusiasm among residents for recycling and encourage them to recycle.
- Use of Act 101 Section 902 Recycling Program Grants to fund the Borough's recycling efforts.

## DEMOGRAPHICS AND MATERIALS ESTIMATES

Washington Township (Township) is a mostly rural municipality in southern Erie County. The Township surrounds Edinboro Borough, and much of the Township's population is in the portion of the Township that borders the Borough. The Township's population is projected to reach around 5,000 in the 2000 Census. While Act 101 requires that most municipalities of 5,000 or more must recycle, Washington Township is exempted, as noted above, because its population density is below the threshold established in Act 101.

There are, however, features that would make the establishment of a drop-off recycling program an attractive option for the Township. There is a center of population density around Edinboro Borough. This is a more commercial area that draws not only Township residents but also persons from the Borough and from outlying areas. It usually makes sense to establish drop-off points in high-traffic areas such as this. In addition, I-79 passes north/south through the western part of the Township, and Route 6N passes east/west through the central part of the Township. A major new development that includes a WalMart Superstore is being built at the intersection of I-79 and Rt. 6N. This development, with its ready access from these two roads, may offer an excellent site for establishing a drop-off collection point.

Because the Township's municipal waste is collected under an individual subscription system, with residents responsible for making their own arrangements for waste collection, the Township does not know the weight or volume of municipal waste generated in the Township. The state's average generation rate, based on municipal waste generated statewide, is 0.8 tons per person per year, and this is the figure used to estimate waste generation in the Township. If it is assumed that the population is approximately 5,000, municipal waste generation would be approximately 4,000 tons per year. It is this figure

**TABLE 1**  
**ESTIMATED RECYCLABLE MATERIALS AVAILABLE IN WASHINGTON TOWNSHIP**

<b>Material</b>	<b>Percent of MSW<sup>1</sup></b>	<b>Tons in MSW<sup>2</sup></b>
Corrugated Paper	10	400
Newsprint	10	400
Glass(Clear and Colored)	9	360
Yard Waste	9	360
Office Paper	6	240
Appliances	4	160
Wood	4	160
Plastic (PET, HDPE only)	3	120
Steel and Bimetallic Cans	2	80
Tires	2	80
Aluminum Cans	1	40
<b>TOTALS</b>	<b>60</b>	<b>2,400</b>

that is used in Table 1 to estimate the amount of recyclable materials that are potentially available in Washington Township.

It should be noted that this is what is *potentially* available. Recycling rates in rural areas are traditionally lower than in urban and suburban areas, and also in drop-off programs vs. curbside programs. The actual rate at which materials might be collected in a drop-off program would be significantly lower, and would depend on the mix of materials that are collected. Table 2 provides estimates of the amount of material that might be expected in a drop-off program in Washington Township based on the experience of the drop-off program operated by West Mead Township in Crawford County.

**TABLE 2**  
**PROJECTED TONNAGES FOR WASHINGTON TOWNSHIP RECYCLING DROP-OFF PROGRAM (1)**  
**POTENTIAL BASED ON CRAWFORD COUNTY (WEST MEAD) EXPERIENCE**

<b>Estimated Drop-Off (2)</b>		
<b>Low</b>	<b>Medium</b>	<b>High</b>
100.00	150.00	200.00

- (1) Populations of municipalities with curbside programs not included  
(2) Estimated annual per capita generation: Low = 40 lbs.; Medium = 60 lbs.; High = 80 lbs. Assumes the following breakdown by material: Aluminum-1%; Steel/Bimetal-12.3%; Clear Glass-12.9%; Colored Glass-6.1%; Plastics-6.2%; ONP-35.9%; OCC-21.1%; Mixed Paper-4.5%

<sup>1</sup> Based on a combination of sources including NSWMA and EPA

<sup>2</sup> Based on projected total MSW figure of 4,000 tons

Based on these estimates, Washington Township might expect a recycling rate of 2.5 percent (low estimate) to 5 percent (high estimates) through a drop-off recycling program. It should be noted, however, that the West Mead model is based on one-day drop-offs in each of the drop-off locations. A permanent site located in a high traffic area may yield more material than the estimates presented above.

#### DROP-OFF RECYCLING OPTIONS

The basic options available to Washington Township are as follows:

- Permanent or temporary drop-off site or sites operated by the Township
- Permanent or temporary drop-off site or sites operated by the private sector
- Permanent drop-off site or sites operated as a joint venture between the Township and private sector
- Permanent or temporary drop-off site sites operated by volunteers or a non-profit organization

While the fourth option—a site or sites operated by volunteers or a non-profit organization—is provided, this is an option that has often been difficult or problematic in other municipalities throughout Pennsylvania. The option is generally attractive only when revenues from recyclables are sufficient to maintain the interest of a non-profit, or as long as the original volunteers remain interested. Many have discovered that recruiting volunteers on an ongoing basis has been difficult. The focus in this report will be on the first three options.

It should be noted that regardless of the option selected, any drop-off collection site(s) should be:

- Easily accessible to the public
- Convenient to use
- Designed to limit the potential for contamination and/or illegal dumping
- Attractive and well-maintained

Before getting into the specific options, it may help to look into what is involved with regard to volumes of materials expected. Table 3 on the next page illustrates estimated tonnage by material for the materials most likely to be included in a drop-off recycling program at the low, medium, and high diversion estimates. Table 4 estimates the number of pulls required for commingled materials at the medium diversion level—all cans, glass, and plastic containers—for 8 cubic yard and 10 cubic yard containers. Table 5 estimates the number of pulls required for paper products collected separately at the medium diversion level—corrugated cardboard, mixed paper and newsprint. If all materials are collected, the estimated number of pulls is 269 for 8 cubic yard containers, which averages to more than five pulls per week, or 215 for 10 cubic yard containers, which averages to more than four pulls per week. This scenario is not likely to occur at the time a program is implemented, but if containers are placed at a prominent, convenient site and used by more than Township residents, this is probably not an unreasonable estimate.

TABLE 3  
ESTIMATED TONNAGE BY MATERIAL

Material	Percent of Recyclable Materials	Tonnage Available	Estimated Tonnages Collected		
			Low	Medium	High
Corrugated Paper	24.4%	400	24.4	36.6	48.8
Newsprint	24.4%	400	24.4	36.6	48.8
Glass (Clear and Colored)	22.0%	360	22.0	32.9	43.9
Office Paper	14.6%	240	14.6	22.0	29.3
Plastic (PET, HDPE only)	7.3%	120	7.3	11.0	14.6
Steel and Bimetallic Cans	4.9%	80	4.9	7.3	9.8
Aluminum Cans	2.4%	40	2.4	3.7	4.9
<b>TOTALS</b>	<b>100.0%</b>	<b>1,640</b>	<b>100</b>	<b>150</b>	<b>200</b>

TABLE 4  
ESTIMATED PULLS FOR COMMINGLED MATERIALS (1)

Material	Lbs./cu.yd.	Tons Collected	Lbs. Collected	% by Weight	Cubic Yards	% by cu.yd.
Aluminum	50	3.7	7,317	6.67%	146.3	13.99%
Steel	80	7.3	14,634	13.33%	182.9	17.48%
Glass	500	32.9	65,854	60.00%	131.7	12.59%
Plastics	37.5	11.0	21,951	20.00%	585.4	55.94%
<b>TOTALS</b>		<b>54.9</b>	<b>109,756</b>	<b>100%</b>	<b>1,046.3</b>	<b>100%</b>
Estimated pulls based on 8 cubic yard container (2):						130.79
Estimated pulls based on 10 cubic yard container (2):						104.63

- (1) Assumes medium level of diversion  
(2) Assumes full containers

TABLE 5  
ESTIMATED PULLS FOR PAPER PRODUCTS (1)

Material	Lbs./cu.yd.	Tons Collected	Lbs. Collected	Cubic Yards	Estimated Pulls (8 cu. yd) (2)	Estimated Pulls (10 cu. yd) (2)
Newsprint	400	36.6	73,200	183.0	23	18
Corrugated	90	36.6	73,200	813.3	102	81
Office Paper	400	22.0	44,000	110.0	14	11
<b>TOTALS</b>		<b>95.2</b>	<b>190,400</b>	<b>1,106.3</b>	<b>138</b>	<b>111</b>

- (1) Assumes medium level of diversion  
(2) Assumes full containers

### **Operation by the Township**

This option would involve the Township: (1) establishing a site or sites in the Township; (2) purchasing the necessary equipment; (3) providing personnel to service and maintain the sites; and (4) establishing markets for the materials collected.

This is not an attractive option for most small municipalities because personnel resources are generally limited. Unless a municipality has personnel that could be used without adding new persons to carry out this function, the cost to operate a program could be prohibitive. It may be an option for the Township if the choice is to offer a monthly recycling day on Township property, but it may be a burden for the Township to operate a permanent drop-off site.

### **Operation by the Private Sector**

This option would involve the Township contracting with the private sector to provide the service for Township residents, either through a monthly recycling day or a permanent drop-off site or sites.

Table 6 provides estimates for the cost to contract for this service. This is based on the experience in the Tri-County area (Clarion, Forest and Venango Counties) using Tri-County Industries to provide containers and pull them. They are paying \$100 per pull for two 8 cubic yard containers at a site, so it is assumed that the cost would be \$50 per container per pull.

TABLE 6  
ESTIMATED COST FOR PRIVATE SECTOR PULLS (1)

<b>Material</b>	<b>Estimated Pulls (8 cu. yd) (2)</b>	<b>Estimated Cost (8 cu.yd) (3)</b>	<b>Estimated Pulls (10 cu. yd) (2)</b>	<b>Estimated Cost (10 cu.yd) (3)</b>
Commingled	131	6,540	105	5,232
Newsprint	23	1,144	18	915
Corrugated	102	5,083	81	4,067
Office Paper	14	688	11	550
<b>TOTALS</b>	<b>269</b>	<b>\$13,454</b>	<b>215</b>	<b>\$10,763</b>

(1) Assumes medium level of diversion

(2) Assumes full containers

(3) Assumes \$50 per pull

Only experience will determine what the actual cost will be. Depending on usage, Washington Township could contract for collection on a weekly or biweekly basis, similar to what Tri-County has done, or could possibly arrange for collection to be done on-call. The cost for the service will depend on the level desired and what the Township is able to negotiate with a hauler. The Township should check into the possibility of revenue—some return—for the materials recycled, though in a drop-off program like this, negotiating revenues is unlikely.

One option that would limit costs considerably would be to collect only commingled containers and newsprint. Corrugated cardboard is a high volume material and as illustrated in Table 6, would require a significant number of pulls in comparison to the other materials—close to 40 percent of the total pulls. Table 7 provides estimated costs based on collecting only commingled materials and newsprint.

**TABLE 7**  
**ESTIMATED COST FOR PRIVATE SECTOR PULLS (1)**  
**COMMINGLED MATERIALS AND NEWSPRINT ONLY**

<b>Material</b>	<b>Estimated Pulls (8 cu. yd) (2)</b>	<b>Estimated Cost (8 cu.yd) (3)</b>	<b>Estimated Pulls (10 cu. yd) (2)</b>	<b>Estimated Cost (10 cu.yd) (3)</b>
Commingled	131	6,540	105	5,232
Newsprint	23	1,144	18	915
<b>TOTALS</b>	154	\$7,684	123	\$6,147

- (1) Assumes medium level of diversion
- (2) Assumes full containers
- (3) Assumes \$50 per pull

The Township could still offer the option to recycle corrugated cardboard and office paper by negotiating with a local business that already recycles these materials to accept them from the public. This may be an attractive option to a business that receives revenues for the sale of the materials. Other options would include Township management of these materials.

- In one scenario, the Township could provide permanent containers at the Township building to collect these materials. The Township could potentially market them to a broker for some revenue, or could deliver them to a facility that would accept them at no cost.
- In another scenario, the Township could offer monthly or quarterly drop-off collection for these materials, and possibly for other difficult to recycle materials. The Township could: (1) manage the programs and market the materials on its own; (2) establish a cooperative effort with another municipality to do this; or (3) contract with the private sector to provide equipment and haul the materials on these days.

**Joint Venture Recycling Program**

An option discussed during a meeting with the Township on November 10 appears to be a very good option for the Township, provided that all necessary details can be arranged. This involves the Township entering into a joint venture arrangement with a local business to establish a permanent drop-off recycling program. Such an arrangement could prove to be a win-win option for both parties, helping the Township to provide recycling for its residents and potentially for a wider area, and providing marketable materials and a highly visible community service/public relations opportunity for a business.

There may be an option for establishing recycling within the business district shared with Edinboro Borough, but the preferable option would be an arrangement with a new WalMart that is being built within the Township, located at the junction of I-79 and Rt. 6N. The Township has an option for the use of a section of the property adjacent to the WalMart parking area that could potentially be used to establish a permanent drop-off recycling site. The advantages to such a site are that: (1) it would be in a highly visible, well-traveled, convenient location; (2) it would be in an area that is under constant monitoring, limiting the potential for illegal dumping; (3) there is significantly more space available for vehicles to pull up or park and deliver materials to the site; and (4) there is tremendous potential for a close working relationship with WalMart for marketing and advertising purposes.

To determine the potential for such an arrangement, appropriate Township personnel would need to meet with appropriate WalMart personnel and developers at the earliest possible time to explore options. Options could range from total management by the municipality to total management by WalMart, though it seems that a joint arrangement would probably be the best option for both parties. If an arrangement could be negotiated, it would probably be best to establish a formal agreement to ensure that responsibilities of each party are clearly spelled out and understood. The basic options include:

- The Township purchasing and siting collection containers, and servicing the containers as required, marketing the materials, bearing all costs, but keeping all revenues (if any) from the sale of materials.
- The Township purchasing and siting collection containers, and contracting with a private hauler for the servicing of containers and the marketing of materials.
- The Township purchasing and siting collection containers, and arranging for WalMart to manage servicing of the containers and marketing materials.
- WalMart making arrangements for the placement of collection containers and managing all aspects of the program.

The last two would be the preferred options, limiting the cost and personnel time the Township would need to dedicate to managing a recycling program. The fourth option, with WalMart (or similar entity) managing all aspects of the program, would obviously result in no cost to the Township, other than what might be required for public education—and public education costs are eligible for grant funding under a Section 902 Recycling Program grant. The same is essentially true for the third option, except that the Township might incur minor costs for the purchase of collection containers, although, as with public education, the containers are eligible for funding under the Section 902 grant program. Most of the 10 percent match required by the Township could probably be borne by the use of in-kind services or might even be covered by a participating business. This would probably be a beneficial option for a WalMart or similar entity, which would either need to purchase or lease equipment otherwise.

The third option would probably be the best option for both parties. Township ownership of the containers demonstrates a commitment to recycling, while limiting the financial and personnel commitments that would be required for assuming complete operation of a program. The Township can also receive grant funding to carry out public education



efforts, which a WalMart or similar entity cannot. The participating business could probably offset at least some of its cost through the marketing of materials. For a business like WalMart, which recycles nationally, there is greater potential for revenue from the sale of materials like corrugated cardboard and office paper than there would be for the Township managing a very small scale effort. Even if a business assumes responsibility for site operation, the Township could participate in a visible way by assisting in the monitoring of the site, using Township personnel or working through a local service organization.

The exact cost to the Township for operation of such a site would be a function of the level of participation desired. Most of the cost would and probably should be for public education to ensure the success of the site.

### **Volunteer or Non-Profit Drop-off Sites**

There are drop-off recycling efforts managed by volunteers or non-profits throughout Pennsylvania. While many of these efforts are highly successful, they have often presented problems for the individuals or organizations that run them.

In a recent study conducted for Wilmington Township in Lawrence County, the Township operated a very successful monthly drop-off program. As participation grew, the Township encountered traffic problems with vehicles arriving to drop-off materials, illegal dumping of materials before and after the collection event, and difficulty in having sufficient volunteer help for the events. This was also the case in Peters Township (Washington County) several years ago when the success of the drop-off plastic collection effort overwhelmed the ability of the volunteers and Township to manage it. In Elk County, the Benedictine sisters that managed a long-term recycling effort suddenly notified the County that the program would be discontinued, leaving the County scrambling to find a way to manage the sites that had been operating for several years.

While this is an option for consideration, it is probably the least preferred option for the reasons cited above. Organizations that are eager to participate when the revenue level for materials is high are reluctant to continue when revenues fall or are non-existent. Even a program operated by a Township using volunteers, like those in Wilmington and Peters, are plagued with problems that often result in greater cost to the municipality, or ill-will among residents if a popular program must be discontinued.

### **CURBSIDE RECYCLING**

While the Township will not be mandated to establish a curbside recycling program even if the population reaches 5,000, it is an option the Township may want to consider if residents support it. Curbside recycling could be implemented on its own or as part of a comprehensive waste management program. The latter option may be less desirable for residents who prefer to contract on their own for waste collection as is currently the case, though a Township wide waste and recycling collection program might help to avoid many of illegal dumping or burning incidents that may exist.

## **Implementing an Integrated Waste Collection and Recycling Program**

An informal survey conducted nearly two years ago in southwestern Pennsylvania indicates that the total cost for waste collection and recycling is reasonable for most municipalities. Table 8 presents a summary of the results. As is demonstrated, the cost for both waste collection and recycling services was less than \$10 per month, and this cost has not changed substantially since the survey was conducted. One difference is that these municipalities are less rural than Washington Township, and it may cost more for a municipality like Washington to implement such a program. It may be worth exploring, however, if residents are generally paying more than this per month, which is usually the case because individual subscription programs are more inefficient than contracted collection programs that involve an entire municipality. Table 9 illustrates variations in cost that were observed in a comparison survey conducted for the Town of Bloomsburg, also approximately two years ago.

## **Implementing Curbside Recycling**

Another option is to simply implement curbside recycling on its own. East Washington Borough (Washington County) is a small municipality that has chosen to do this. The Borough has contracted with Waste Management to provide monthly curbside collection of commingled recyclables, including aluminum, steel/bimetal, glass, and #1 and #2 plastic containers, newspaper, and glossy paper (magazines and catalogs). The Borough pays for recycling from its general fund, and materials are collected from all properties, including single and multi-family dwelling units, institutions and a handful of local businesses. Residents are instructed to place all containers into the recycling bin provided by the Borough. Newspaper, magazines and catalogs are to be placed in kraft bags, cardboard boxes, or in separate recycling containers and kept separate from the containers. The contract cost is less than \$1.00 per unit per month.

The Borough also conducts two cleanup programs every year, one in early May, and one in early October. Most items are collected, with the exception of tires, building/construction materials, and garbage. Appliances that contain coolants (CFCs, freon, etc.) will be picked up if they are tagged that someone certified to perform this service has removed coolant gas.

Municipal waste collection is managed by individual subscription, with residents contracting individually with a waste hauler to pick up and dispose of their waste. The Borough reports that most residents have unlimited service and are able to dispose of most waste, including bulky items, during their weekly collection. It is not clear how many residents actually have waste collection service, and it is assumed that some do not.

## **Pay-As-You-Throw**

Also known as unit-based or variable rate pricing, customers in a Pay-As-You-Throw (PAYT) system pay for municipal waste management services per unit of waste collected rather than through a fixed fee. PAYT takes into account variations in waste generation rates by charging residents or households based on the amount of refuse they place at the curb, thereby offering residents an incentive to reduce the amount of waste they generate and dispose of. Well over 125 municipalities in Pennsylvania have implemented some form of a

**TABLE 8**  
**RECYCLING/WASTE MANAGEMENT PROGRAM COSTS**  
**(SOUTHWESTERN PENNSYLVANIA MUNICIPALITIES)**

<b>Municipality</b>	<b>County</b>	<b>Materials Collected</b>	<b>Collection Frequency</b>	<b>Commingled/ Separate</b>	<b>Municipal/ Contracted/ Individual</b>	<b>Revenue Sharing</b>	<b>Who Pays</b>	<b>Cost/HH Total</b>	<b>Cost/HH Recycling</b>
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

**TABLE 9**  
**SUMMARY OF COMMUNITY SURVEYS FOR BLOOMSBURG, PENNSYLVANIA**

	<b>Municipality</b>						
	<b>Bloomsburg</b>	<b>Hazleton</b>	<b>Lansdale</b>	<b>Lock Haven</b>	<b>Penn Township</b>	<b>Sunbury</b>	<b>Whitehall</b>
County	Columbia	Luzerne	Montgomery	Clinton	York	Northumberland	Lehigh
Population	12,439	23,800	17,200	9,200	13,500	12,500	12,500
<i>General System Information</i>							
Annual Fee Range per Household	\$180-\$216	\$100	\$250-\$270	\$150-\$198	\$2.20 /bag \$87/yr (avg)	\$2.50/bag; \$168/yr (flat rate)	\$150
Contracted or Private RSW Collection	Private	Contract	Private	Private	Contract	Private	Contract
Number of Haulers	15	1	10	5	1	14	1
How are Customers Billed?	By hauler	Quarterly Bill	By hauler	By hauler	No Bill <sup>3</sup>	By hauler	Yearly Bill
General Fund or Enterprise Fund	Enterprise	General	General	General	Enterprise	Enterprise	Enterprise
Landfill Tipping Fee per Ton	\$36	\$49.05	Not Available	Not Available	\$71 <sup>4</sup>	\$53	Not Available
RSW Collection Frequency	Weekly	Weekly	Weekly	Weekly	Weekly	Weekly	Weekly
Set-Out Limits	Depends on hauler	None	Depends on hauler	Not Available	None	None	None
<i>Recycling Collection</i>							
Method	Municipal CS	Same Contract as RSW - CS	Private CS	Clinton County Landfill - CS	Same Contract as RSW - CS	Municipal CS	Same Contract as RSW - CS
Frequency	Biweekly	Biweekly	Weekly	Biweekly	Weekly	Monthly	Weekly
Separate Fee?	Included in RSW fee	Included in RSW fee	Included in RSW fee	\$30/yr	None	None	Included in RSW fee
Materials Collected Curbside <sup>5</sup>	A, G, K, N, P, S	A, G, N, P, S	Not Available	A, G, M, N	A, G, P, S	A, G	A,G, M,N,P,S

<sup>3</sup> Customers purchase special bags through 13 distributors. Cost is \$2.20 per 40-gallon bag. Contract hauler is paid based on the number of bags purchased by residents. 209,890 bags were purchased in 1997.

<sup>4</sup> Transfer Station fee. Landfill fee is \$56/ton.

<sup>5</sup> A: Aluminum; G: Glass (3 colors);K: Kraft Bags; M: Magazines; N: Newspaper; P: Plastics; S: Steel

PAYT program. There is more information about PAYT available on the DEP website at [www.dep.state.pa.us](http://www.dep.state.pa.us).

**Potential Benefits of PAYT.** Municipalities that have implemented PAYT programs have reported a number of benefits, including: (1) waste reduction; (2) reduced waste disposal costs; (3) increased waste prevention; (4) increased participation in recycling and composting programs; (5) a more equitable waste management fee structure; and (6) increased understanding of environmental issues in general.

PAYT programs encourage residents to generate less refuse by charging them based on the amount of waste placed out for disposal. Setting costs according to generation encourages residents to become more conscious of disposal habits and to look for opportunities to generate less waste or divert a greater portion of the waste stream through alternative management practices such as recycling and composting. The key is that residents become more conscientious, and thereby more understanding of environmental issues and the impact of their behavior on the environment. PAYT also provides a mechanism that ties the rate paid per household to the level of service, similar to other utilities. Households that generate smaller amounts of refuse pay a lower rate than those generating larger amounts.

**Potential Barriers/Issues Associated with PAYT.** While there are clearly benefits associated with PAYT programs, there are also potential barriers/issues that must be overcome or addressed to successfully implement this system. These potential barriers/issues include: (1) illegal dumping; (2) ensuring full recovery of expenses; (3) controlling/covering administrative costs; (4) perception of increased cost to residents; and (5) building public consensus.

While communities throughout Pennsylvania have experienced some or all of the barriers/issues identified above, most have been able to take appropriate measures to overcome them. For example, the City of Wilkes-Barre experienced illegal disposal of household refuse in commercial dumpsters. Many businesses placed locks on their dumpsters to combat this problem. Stopping other illegal dumping may require stricter enforcement of existing ordinances and greater penalties for violations. Cost issues can be resolved with careful planning, a clear understanding of total service cost and demonstrating to the public that the program is likely to reduce the cost of service for many households. Including public input early in the process can help to build public consensus and understanding of the real benefits to the residents.

## OTHER RECYCLING OPTIONS

**Yard Waste.** Composting or land application of leaf and yard waste has the potential to divert large volumes of waste, though this is generally a less critical issue for rural municipalities. The Township could consider providing for the collection of yard waste through a drop-off program, placing a centrally located dumpster or rolloff container where residents could bring leaves and grass for composting or land application. The material could be hauled away and composted under contract, or the Township may be able to make arrangements with another municipality that has a composting site, if one is available within the area. Another option is to develop an agreement with a local farmer, landscaper,

nursery, cemetery or similar business to accept the material for land application or composting. The DEP has guidelines available both for yard waste composting and for land application that would need to govern any of these activities.

Regardless of whether or not the Township decides to implement any collection of yard waste, it should consider promoting home composting by residents. The Township could work with the County Cooperative Extension office or garden clubs to provide an educational program, and purchase of home compost bins is eligible for funding under Section 902 Recycling Program grants.

**Other Materials.** There are usually other opportunities throughout a county or region for recycling. Other materials that can be recycled include, but are not limited to, used oil, tires, automotive batteries, textiles, and appliances. There may also be opportunities to partner with other municipalities to sponsor periodic events to collect some of the larger, more difficult to recycle items. The Township should consult with the County Recycling Coordinator to determine what other options exist and provide the information to residents.

## **PUBLIC EDUCATION**

There is no specific “recipe” for public education that is guaranteed to work for every municipality. The variety of programs and vehicles is just about as numerous as the number of recycling programs in the state. Factors to consider include, but are not limited to size, demographics, geographic location, whether the area is urban, suburban or rural, type of program, mix of housing (single/multi-family, permanent vs. transient) proportion of residences to businesses/institutions. What works for a given area is a function of matching the type and size of effort to the target audiences in that area. Washington Township has a relatively small population, is fairly large in area and mostly rural.

There is a need for a heavy focus on education in the implementation phase of a program in order to promote participation and train program participants about how to recycle. As programs mature, some level of educational efforts must continue, but they can continue at a more moderate level. The typical citizen will do his or her duty, but usually needs regular reminders about the hows and whys of a program.

### **Brochures**

The Township should develop a recycling brochure that explains how the program works, including when and where, materials collected, preparation of materials, and why the program is important. This should be distributed to all residents of the Township, and the distribution is probably best accomplished by mail. However, it may also be possible to work with a local advertising publication to distribute the materials as an insert or to print the information prominently in the publications. Mailing the brochures would ensure that they are received, though there is still no guarantee that they will be kept.

### **Reminders**

If a monthly drop-off collection option is chosen (or if curbside collection is chosen), it is important that residents be reminded which day is recycling day. Missing recycling day means having to store recyclables for an additional month. Some residents may not be

willing to do this and may dispose of additional recyclables when storage space is tight or if they prefer not to have these materials sitting around for another month.

There are several reminder options that might be considered, some passive and some active. A passive option would be to distribute a recycling calendar that is small enough to be posted on the refrigerator, but distinctive enough to stand out among all the other materials that tend to be posted there as well. This could be mailed along with the Township's recycling brochure. A more active option would be use of reusable banners placed in prominent locations. This would involve a one time cost and use of Township personnel once each month to put them out before recycling day and remove them once collection has been completed.

The Township could also consider making available promotional items made from recycled materials—preferably something that would be used by residents so it remains in view as a reminder—to serve as constant reminders about the Township's recycling program. The Township could probably arrange for the distribution of these items by local merchants and at recycling events. Promotional items could include a range of products, from inexpensive pens, pencils, rulers, and refrigerator magnets to note pads or even tote bags. Any items purchased are eligible for funding through the Section 902 Recycling Program grants.

### **Spotlights on the Program**

The Borough could also engage in other activities that are fun, inexpensive, and bring attention to the recycling program. Some potential activities for consideration might include:

- Creating a recognizable slogan, logo or mascot associated with the recycling program. Having one or more of these things that identify the program would help to increase program visibility. Some municipalities have conducted local contests to ask residents to submit a slogan, a logo, and/or a mascot to be considered, with the winning entry incorporated into future materials used by the municipality. The winner or winners are usually recognized by the municipality in some way, and given some type of reward for their effort. Prizes could be donated by local businesses or could potentially be funded through Section 902 Recycling Program Grant.
- The Township could institute a “Recycling Household of the Month” program, with selected households featured in a local paper or similar publication, perhaps a Township newsletter. Specific criteria would need to be developed to determine who might be selected for this recognition, and households could be nominated from within the community (self or by neighbors) or selected through a procedure established by the Township. Criteria should include measures that indicate that a given household is doing more than just delivering materials to a drop-off locations or placing recyclables at the curb on a monthly basis, and could potentially include: home composting; buying recycled; recycling or reuse of materials other than those collected at the curb; use of less hazardous products; and creative uses of materials or activity in the community. Awards could be solicited through local businesses.
- The Township could bring attention to its recycling efforts by developing a visual method of showing progress. Preparing a sign that could be placed in a highly visible

location (similar to United Way) showing progress toward the goal (a thermometer, a recycling truck traveling to a materials recovery facility, etc.) will help residents to see where they are in relation to the goal and encourage them to recycle more to meet the goal.

- Some type of recycling display could be developed that can be used during community events, and rotated among schools, churches, and businesses. This display could be used as part of any presentations made by Township officials or the recycling committee.

### **Ongoing Education**

Sometimes residents forget or do not completely understand which materials are acceptable and which are not, or exactly how to prepare materials. In either case, friendly reminders may help to set these residents on the right track. This could be done through production of a new brochure that is distributed annually or through joint efforts with a local publication to include ongoing recycling information for residents.

### **Education in the Schools**

Educating students in grades K-12 may be a very effective way of reaching Borough residents both now and for the future. Students often become the strongest advocates of recycling, and will ensure that recycling is happening in their homes. The DEP has recycling curriculum materials available, and the County Recycling Coordinator usually has resources available to assist with education in the schools as well.

### **ENFORCEMENT**

Enforcement should not be an issue with regard to recycling if the Township decides to implement a drop-off recycling program. If the Township were to implement a curbside recycling program, or a joint waste collection and recycling program, enforcement would be an issue if the Township were to decide to make these collections mandatory. In these cases, the Township would need to adopt a comprehensive solid waste and recycling ordinance to guarantee that it has the authority to enforce any requirements it might have and the ability to take action against offenders.

If the Township decides to implement a drop-off recycling program, however, it may want to review any current solid waste ordinances to ensure that the Township has the authority to take action in the event of illegal dumping. Wilmington Township (Lawrence County) found that some residents were leaving materials at the collection site before and after the event, and sometimes they would leave trash or unacceptable materials. In some cases when the site was especially busy, residents would pull in, dump materials, and drive off. For Wilmington Township, it was suggested that having visible law enforcement officials available, or simply more volunteers, might help. Illegal dumping can also become a problem at permanent drop-off sites when residents do not take the time to load materials into the collection containers, or use the sites as a place to dump garbage.

It is important to have language in a local ordinance that allows the Township to take action if necessary for such offenders. Such language is useful even if there is no recycling program. However, the effectiveness of any prohibitions concerning illegal dumping requires the cooperation of (1) law enforcement personnel in responding to calls and



tracking down illegal dumpers, and (2) the court system in prosecuting these offenders. Individuals and haulers will continue to dump if it is clear that they will not be punished for the activity.

## GRANT FUNDING

A number of recycling options and educational programs and materials have been described throughout this report. All of the equipment and materials described, plus staff time and expenses (with the exception of postage, which can be used at match) in planning/preparing/purchasing the equipment, materials and programs, is eligible for funding by a Section 902 Recycling Program grant. These grants will pay for up to 90 percent of eligible costs. Fundable materials, containers and activities described throughout this report include:

- Recycling planning and implementation efforts, including public education
- All public education printed materials for a recycling program, including: brochures; recycling calendar (perhaps a magnet); banners; promotional items; visual display of progress toward recycling goal (similar to United Way); recycling display in public place
- Promotion and implementation of a slogan, logo and/or mascot contest
- Incentive programs to encourage household participation, such as rewards for "Recycling Household of the Month"
- Recycling equipment, including: containers to collect materials through a drop-off program; bins for a curbside recycling program; containers for drop-off collection of yard waste; home composting bins
- Planning for and implementing educational programs in the schools
- Purchasing equipment to implement or expand recycling in the schools

Application forms for Section 902 grants are available from the DEP Northwest Regional Office in Meadville. DEP requests that applicants schedule pre-application meetings to discuss proposals prior to submitting applications to ensure that applicants are submitting applications that include only fundable activities and equipment and to avoid duplication of efforts.

By implementing recycling activities in the Township, the Township also stands to be eligible for funding through the Section 904 Performance Grant program, which rewards municipalities based on tonnage recycled and waste diversion rate.

## CONCLUSIONS

- The Township has expressed interest in implementing some type of recycling program. While the population may reach 5,000, the Township's population density will remain under 300 persons per square mile, so recycling will not be mandatory.
- The Township has some positive features that may make drop-off recycling viable and successful. There are multiple options for implementing drop-off recycling.

- Curbside recycling may be an attractive option in coordination with the implementation of curbside waste collection, particularly if this would reduce any illegal dumping and ensure a higher level of recycling. A Pay-As-You-Throw program may be the best approach if curbside waste collection and recycling are considered.
- Implementation of any recycling efforts should involve a comprehensive and sustained public education program.
- Legal enforcement will be important to address any illegal dumping activities that may arise from the implementation of a drop-off recycling program. Implementing some type of illegal dumping enforcement program should probably be done regardless of whether or not the Township implements recycling if one doesn't already exist.
- Grant funding is available to pay for the cost of any recycling planning and implementation undertaken by the Township.

## RECOMMENDATIONS

- The Township should consider implementing a permanent drop-off collection program for its residents.
  - The preferred option, if available, is to enter into a joint venture with the new WalMart to establish a permanent site adjacent to the store, with the Township purchasing all necessary equipment in consultation with WalMart, and WalMart maintaining the site (possibly with assistance from the Township). If WalMart is willing to maintain the site, the Township should allow WalMart to keep the revenues from materials and only require that WalMart report the tonnage of materials recycled to the Township quarterly.
  - If the WalMart option is not available, the Township should explore options with other businesses and with the private sector to determine other viable, cost-effective recycling options.
- The Township should explore the possibility of establishing curbside waste collection and recycling, particularly the potential for implementing a Pay-As-You-Throw program.
- If the Township does not implement a recycling program, it should consult with the County Recycling Coordinator to provide information to residents about any recycling opportunities in the County or region.
- If the Township decides to implement either a drop-off or curbside recycling program, it should:
  - Plan for and implement a comprehensive recycling public education program.
  - Review its ordinances to ensure that any necessary enforcement language/mechanisms are in place, and if needed, adopt appropriate language/mechanisms.
  - Apply for Section 902 grant funding for all eligible activities and equipment.

- Work with the County Recycling Coordinator to obtain information about other recycling opportunities in the County.

Many municipalities in the state have chosen to implement some type of recycling program, even though they are not mandated to do so. There are certainly favorable conditions in Washington Township that could make recycling viable and cost-effective. Even if the Township chooses not to implement recycling, there are options available to the Township to educate its residents about recycling opportunities throughout Erie County and the region, and the Township should obtain this information by contacting and working with the County Recycling Coordinator.

Sincerely,  
R.W. BECK, INC.

Sandra L. Strauss  
Environmental Analyst

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