

Recycling Technical Assistance
Final Report

White Township

Pennsylvania DEP/SWANA

November 2002



WHITE TOWNSHIP FINAL REPORT

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Introduction

White Township is a community of 1,434 residents located in Beaver County, Pennsylvania. There are an estimated 425 occupied single-family households and 268 multi-family households in the Township. A form of bag-based pay-as-you-throw (PAYT) waste collection system exists in the Township. At the current time, the Township is seeking to improve the cost-effectiveness and assure appropriate service levels for the refuse and recycling offered to Township residents.

The Township's hauler is currently providing service despite the lack of a formal collection contract. The lack of a formal arrangement leaves the Township with prices that may not be market-competitive or may be raised at any time, and provides no safety net in the event the hauler unilaterally stops or changes the collection services offered.

In light of these solid waste management issues, the Township is seeking guidance and information on:

- Evaluating the appropriateness and effectiveness of the Township's existing PAYT system;
- Documenting the extent and success of PAYT programs in surrounding communities;
- Evaluating options for contracting for refuse and recycling collection that would improve the current non-binding hauling arrangement; and
- Assuring an appropriate location for delivering yard waste.

This report provides an evaluation of the Township's options to improve their solid waste management system and maintain or improve recycling and yard waste diversion.

Methodology

R.W. Beck was retained to assist the Township systematically address these problems. Our evaluation of the Township's system included the following tasks:

- Documenting the service levels and costs of the Township's current solid waste management system;
- Reporting on the benefits and disadvantages of different private sector arrangements for refuse, recycling and yard waste collection and disposal/processing, including open collection, hauler licensure, franchising, and contracting for services;
- Surveying other communities with comparable demographics to collect information about the refuse, recycling, bulky waste, and yard waste collection and management systems and rates offered in these communities; and

- Interviewing local private haulers and local compost facility managers to gather additional relevant information.

The results of these tasks are described in the remaining sections of the report. Conclusions and recommended courses of action are provided at the end of the document.

Current Collection System Summary

Refuse

White Township has an informal arrangement with a private hauler to collect all refuse from the Township's single-family households. Collection is provided weekly and employs a PAYT system. Residents must purchase bags from the Township, at a cost of \$1.25 per bag. The Township remits payment to the hauler on a monthly basis, at a rate of \$0.95 per bag sold.

Township officials indicate that the hauler may be increasing the rate in the future. Last year, the Township paid the hauler approximately \$14,740 for refuse collection, or an average of \$32.76 per household served. When the cost of bags and ties is included, the total cost of refuse services is approximately \$17,000 per year. This does not include the staff time involved with ordering bags, folding bags, and selling bags to customers. The Township Secretary/Treasurer indicates that she or a staff person spends approximately two to four hours per week folding bags. Time is also spent ordering and selling bags, and depositing bag receipts. The Township was unable to quantify these hours. We have assumed that the \$2,394 annual difference between (i) the price residents pay for the bags and (ii) the cost to the Township of the bags, ties, and collection service, is attributable to the staff time needed to administer the PAYT bag program. This cost suggests that staff spends over five hours per week spent administering the program.

Based upon estimates of 2002 bag sales, there will be 15,516 bags sold in the Township this year. This is an average of 3.04 bags per household per month, which is significantly lower than the expected 8 bags per month that most households typically generate. The Township's latest census data indicates that the majority of their residents fall in the 25-45 age range. This is typically not a low-volume waste generation segment of the population. It is suspected, therefore, and confirmed by Township officials, that many residents take their trash to other locations for collection. Alternative collection options may include a dumpster at work or a nearby relative who has unlimited refuse collection service.

Multi-family properties do not receive service via the PAYT system. It is up to the owner/manager of the apartment complexes to provide a dumpster for their residents.

Table 1 summarizes the costs and services associated with refuse collection in White Township.

Table 1

White Township Annual Refuse Costs

Service/Cost Line Item	Annual Cost
Collection	\$14,740
Bags & Ties	\$2,261
Staff Labor	\$2,394 [1]
Total Refuse Costs	\$19,395 [2]
<i>Annual Cost per Single Family HH</i>	<i>\$45.64</i>
<i>Monthly Cost per Single Family HH</i>	<i>\$3.80</i>

[1] Time spent administering bags, such as folding, selling, and recording sale of bags.

[2] Costs to the Township are offset in their entirety by bag sales totaling \$19,395. The full cost of refuse collection is borne by single family residents.

Recycling

White Township offers its residents curbside recycling services. Recycling is voluntary, and is available to the single-family homes, as well as the 268 households living in the Township's two apartment complexes. Collection is provided every other week. Materials recycled include plastics (#1 and #2 bottles), newspapers, aluminum cans, steel cans, magazines, and glass containers. The recyclables are transported to the Metalife Resources processing center, owned by Franklin Township. The Township does not currently pay a tip fee, nor do they receive revenue sharing for materials. The Township has no contractual arrangement with the facility, and there is some concern that Metalife Resources may charge a tip fee in the future.

Recycling truck fuel and vehicle inspections cost the Township \$490 per year, and labor costs are estimated to be \$6,864 per year. This is a total gross annual cost of \$7,354, which averages to \$17.30 per household per year, or \$1.44 per household per month.

The Township received a rebate from the Department of Environmental Protection (DEP) of \$979 in FY 2000 and \$1,049 in FY 2001 for tonnage diverted. Metalife Resources indicates that the Township recycled 89.15 tons of materials in 2001 – 32.75 tons of commingled materials, and 46.40 tons of loose newspaper.

Table 2 summarizes the costs and services associated with recycling collection in White Township.

Table 2

White Township Annual Recycling Costs

Service/Cost Line Item	Annual Cost
Labor	\$6,864
Fuel & Inspections	\$490
Total Recycling Costs	\$7,354
<i>Annual Cost per Household (SF & MF)</i>	<i>\$10.61</i>
<i>Monthly Cost per Household (SF & MF)</i>	<i>\$0.88</i>

Yard Waste

In the past, White Township’s residents brought their yard waste to a dump site where there was no tip fee. This site has been closed by DEP. Residents complained when the dump site was closed, so the Township offered a drop-off site for yard waste at a site that is co-located at the bulky waste dumpster site. Residents are not charged for using this facility. So far the Township has been accumulating yard waste debris, but has not yet had to haul it anywhere. The Township believes that yard waste will be transported to the Beaver County Composting Facility by White Township staff.

The bullets below present other alternatives for managing leaf waste in Beaver County:

- East Rochester, Rochester, and Freedom Borough, have formed a leaf waste cooperative located at an old mill site in Rochester Borough. Farmers take leaves from this site to use as soil amendment. There is no tip fee for the member communities.
- There is a “free” composting site at Zinc Corporation of America, which is located on Frankfort Road in Monaca.
- There are several DEP-approved land application sites in Beaver County. These sites do not charge a tip fee, although the number of these sites has diminished, and frequently they are “picky” about what they will accept, and when they will accept it. A full listing of these sites located in Beaver County is provided in Appendix B.
- Beaver Falls, West Mayfield, and Patterson Township share a leaf waste transfer site in Beaver Falls. Leaves are allowed to build up at the site, and the Townships share transportation costs and tip fees when leaves are hauled away. There is no more space for additional materials at their site at this time.

If the Township brings their leaf waste to a composting site or facility, they will be able to receive recycling performance grant credits for yard waste tonnage diverted, for the first time.

The yard waste/bulky dumpster facility is expected to remain open through November to accommodate the full season. In prior years, the bulky waste dumpster was available through October only. The dumpster area is staffed by one crew person. The facility is open Tuesdays and Thursdays from 2:00 to 3:30 p.m., and one Saturday per month from 8:00a.m. to 4:00 p.m. It is expected that, if the Township tips their leaves at the Beaver County facility, they will spend approximately \$600 per year in tip fees (based on tip fees of a similar community in the area that is comparable in size). In addition, the cost of labor associated

with the dumpster site that can be attributed to leaf waste (half of the cost) is \$1,823 per year. This is a total cost of \$2,423 per year, or \$5.70 per household per year.

Table 3 summarizes the costs and services associated with yard waste collection in White Township.

Table 3

White Township Annual Yard Waste Costs

Service/Cost Line Item	Annual Cost
Labor	\$1,823
Estimated Tip Fees	\$600
Total Yard Waste Costs	\$2,423
<i>Annual Cost per Single Family Household</i>	<i>\$5.70</i>
<i>Monthly Cost per Single Family Household</i>	<i>\$0.48</i>

Bulky Waste

White Township has a dumpster available to residents, which is primarily for bulky items. Historically the dumpster has been available March through October. However, recently the leaf waste drop-off site and bulky waste site have been co-located, and it is expected that bulky and leaf waste drop-off sites will now be staffed March through November. Residents must purchase a “pass” to use the dumpster, at a cost of \$10.00 per car load or \$20.00 per pick-up truckload. The Township has collected an average of \$205 per month in dumpster receipts to date this year. They pay a private hauler \$400 to pull the dumpster, although the rate will soon increase to \$450 per pull. The Township does not restrict use of the dumpster strictly to bulky items.

So far in 2002, dumpster fees have raised \$1,230 in revenues, and the dumpster has been pulled seven times at a total cost of \$2,800. In 2001 there were eight pulls total, at a cost of \$3,200. Assuming that the Township continues to receive an average of \$205 per month in dumpster revenues, and one more pull is required at a cost of \$400, the Township will have spent a total of \$3,200 in pulls in 2002, and received \$1,845 in dumpster fees. The Township is subsidizing this service to residents at a cost of \$1,355 per year, or \$3.01 per single family household per year.

If the rate increases to \$450 per pull, the subsidy will increase to \$1,755 per year unless the Township raises its fees. In addition, the yard waste and bulky dumpster area is staffed. Half of that staff salary can be attributed to the yard waste costs, and half to bulky waste. This is approximately 11 hours per week for 39 weeks of the year (as of this year). The dumpster portion of this cost is \$1,823 per year.

Table 4 summarizes the costs and services associated with bulky waste collection in White Township.

Table 4

White Township Annual Bulky Waste Costs

Service/Cost Line Item	Annual Cost
Pull Fees	\$3,200
Labor	\$1,823
Total Bulky Waste Costs	\$5,023
<i>Annual Cost per Single Family Household</i>	<i>\$11.82</i>
<i>Monthly Cost per Single Family Household</i>	<i>\$0.98</i>

Collection System Summary

Table 5 summarizes the cost of all solid waste collection services provided to White Township residents. As shown, the Township’s collection and disposal system cost over \$34,000 annually. Note that this total excludes \$1,049 in performance grants received from PA DEP in 2001.

Table 5

White Township Annual Solid Waste Collection and Disposal Costs

Service	Total Cost	Cost per SF Household per Year	Cost per MF Household per Year
Refuse	\$19,395	\$45.64	NA
Recycling	\$7,354	\$10.61	10.61
Yard Waste	\$2,423	\$5.70	NA
Bulky Waste	\$5,023	\$11.82	NA
Totals	\$34,195	\$73.77 (\$6.15 /mo.)	\$10.61 (\$0.88/mo.)

SF = Single family; MF = Multi-family

Note that the costs shown in Table 5 are based only on actual refuse bag sales of roughly 3 bags per household per month. Assuming all residents actually purchased enough bags for their solid waste—estimated at 8 bags per month—the total annual cost per household would more than double, to \$148.13 (\$12.34/month).

Overview of Private Sector Collection Service Arrangements

In evaluating future options for engaging the private sector to provide refuse, recycling, bulky waste, and yard waste collection service, the Township will need to determine the most appropriate way to assure collection services for Township residents. Generally speaking,

there are four ways private sector haulers offer service to a community like White Township. These are:

- Open collection;
- Hauler licensure;
- Franchises; and
- Contracts.

These are discussed below.

Open System

Under an open system, residents are free to hire their own refuse hauler. The advantages of open system are:

- Residents can select their own service providers;
- Competition may be enhanced;
- Smaller haulers have an opportunity to compete with larger haulers; and,
- Local government is not involved.

The disadvantages of an open system are:

- The proliferation of many small hauler means more vehicles are on the road, causing more wear and tear on streets;
- Lower efficiency caused by multiple haulers driving down each street to serve only a portion of the households on the street;
- Higher collection rates driven from the lower collection efficiency; and
- Little ability to manage and enforce proper refuse and recycling collection practices and policies.

Many townships and boroughs in Beaver County have open collection systems (see survey results).

Hauler Licensure

Communities can negotiate agreements with area haulers or establish conditions of licensure that set forth:

- Agreed-upon tipping fees to be charged to the contract haulers at the transfer stations and/or area landfills in exchange for certain guarantees (e.g., haulers agree to provide designated services or agree to limit number of days per week that they service each neighborhood); or
- Government-provided administrative services (e.g., customer billing and collections) in exchange for certain guarantees (e.g., haulers agree to provide designated services or agree to limit number of days per week that they service each neighborhood).

Hauler licensure can provide the benefit of keeping collection vehicle traffic at lower levels compared to an open system (as the licensing requirements can discourage some haulers), while residents still maintain the ability to choose from competing haulers. Hauler licensure systems do not appreciably increase the local municipality's ability to enforce solid waste policies, nor do they allow haulers to achieve more efficient (and therefore less costly) routing.

While none of the communities interviewed in Beaver County establish hauler licensure requirements, it is presented here as another option.

Franchise Collection

Under a franchise collection system, the municipality establishes one or more franchise areas, which could include residential and/or commercial collection services. The municipality awards a collection franchise through negotiations or through a competitive procurement. The franchise is a property right for the designated hauler(s) for the term of the franchise agreement. Thus, if the municipality determines at any time during the franchise agreement to discontinue the franchise (except for reasons of non-performance), the franchisee would need to be compensated for the lost earnings. Many options exist under a franchise system:

- **The franchise can be exclusive or non-exclusive.** In an exclusive franchise, the franchisee would be the only acceptable service provider for the designated services. In a non-exclusive franchise, the franchisee(s) would be the only authorized competitors within the designated service territory.
- **Participation can be mandatory or non-mandatory.** In a mandatory franchise, all customers would be required to use the franchisee(s)' services. In a non-mandatory system, those customers that elected to receive the services would be required to use the franchisee(s).
- **Franchises can include some or all services and generators.** Franchises can address all collection services to all sectors or be limited to a specific generating sector (e.g., residential) or waste stream (e.g., bulky waste, etc.).
- **Billing can be done by the franchisee or municipality.** In a franchise system, it is possible for the franchisee to bill customers directly and bear the administrative burden and costs of marketing, billing, collection, customer turnover, and complaint management.
- **A franchise can be bid or negotiated.** A franchise system can be established through a negotiated agreement, where the community negotiates with more than one hauler to provide collection services.

Some significant benefits are provided by a franchise system. These include:

- Collection vehicle traffic is reduced to the one or several franchise haulers;
- Collection is more efficient, because fewer haulers are collecting from denser routes,
- Billing can be left the responsibility of the franchisee, so the municipality does not have to dedicate resources to billing,
- If participation is mandatory, litter and illegal dumping may decrease; and

- If multiple franchise territories are established, several haulers may be able to provide service in the municipality, keeping some perception of competition.

The drawback to franchises is that, once the franchise(s) is granted, there is no external competition from other non-franchise haulers. No franchise systems were found to exist in the interviewed communities in Beaver County.

Contract Collection

Under a contract collection system, however, it is possible to establish more than one service area, which could include residential and/or commercial collection services. Communities typically award collection contracts through a competitive procurement process. The contracts establish a scope of services, terms, and conditions.

Similar to franchises, collection contracts can be:

- **Exclusive or non-exclusive:** In an exclusive contract, the contractor would be the only acceptable service provider for the designated services. In a non-exclusive contract, the contractors would be the only authorized competitors within the designated service territory.
- **Mandatory or non-mandatory:** In a mandatory contract arrangement, all customers would be required to use the contracted services. In a non-mandatory system, those customers that elected to receive the services would be required to use the designated contractor(s).
- **Some or all services and/or sectors:** The collection contract could address all collection services to all sectors or be limited to a specific generating sector (e.g., residential) or waste stream (e.g., bulky waste, etc.). In some cases the communities interviewed provided refuse collection only, and in some cases refuse and recycling collection services are both provided under the same contract. In one case, the municipality contracts out recycling services only.

It is most common for the governing jurisdiction (i.e., the Township) in a contract system to bill customers directly and bear the administrative burden and costs of billing, collections, customer turnover, and complaint management.

Contracts may be short-term (e.g., one to three years) or longer-term (e.g., five to 10 years). Based on research reported by the Solid Waste Association of North America, contract terms that more closely approximate the useful life of vehicles (e.g., seven years, on average) tend to result in lower contract rates.

Contract systems have all of the same benefits as franchise systems. In addition, contract systems also provide more control to the community to manage their solid waste—making it easier to implement waste reduction programs.

The primary drawback that is cited for contract systems is that once the contract is granted, there is no further competition to provide solid waste collection. In some instances around the country, it has been argued that the successful contracted hauler may drive other haulers (usually smaller haulers) out of business, and raise prices after the contract expires and no

remaining hauler exist to compete. Additionally, once a hauler obtains a contract, there may be a tendency to lose some degree of customer service.

Several jurisdictions in Beaver County have contracts with haulers. Those communities all opted to have a single hauler under contract, providing all services for the entire community.

Survey Findings

A total of 11 communities in Beaver County were surveyed for this project to obtain information about their collection systems. Each community's solid waste and recycling programs are summarized below in Table 6. More detailed program descriptions for each of the 11 communities are provided in Appendix A.

Table 6

Beaver County Solid Waste System Community Survey Results

Community	Trash	Recycling	Yard Waste	Bulky Items	Program Costs
<p>Conway Borough Population: 2,424 HH: 850 SF</p>	<p>Contract with Valley Refuse. Unlimited service. Cost is \$7,800 per month. Includes recycling and grass clippings and bulky. Borough bills households quarterly at a rate of \$9.50 per month.</p>	<p>Weekly curbside included in refuse contract. Glass, metal cans, plastic (#1 and #2) only – no fibers. Papers recycled through monthly drop-off program. Farmers take for animal bedding.</p>	<p>Hauler will collect small amounts of bagged refuse.</p>	<p>Included in contract with private hauler.</p>	<p>\$9.50 per HH per month – cost to HH includes refuse, curbside recycling, and bulky Borough pays hauler \$9.17 per HH per month (\$0.33 per HH per month covers billing, administrative costs)</p>
<p>Freedom Borough Population: 1,763 HH: 708 SF</p>	<p>Contract with Waste Management includes trash, recycling, and bulky. Contractor bills households \$24.99 per quarter.</p>	<p>Every other week. Recyclables include glass, plastic, aluminum, tin, no fibers. Revenue share is about \$250 per quarter.</p>	<p>Small amounts of bagged yard waste accepted by hauler. Borough has leaf waste vacuum service. Leaves recycled at centralized site in Rochester Borough. No tip fee. Farmers get leaves.</p>	<p>Included in contract with private hauler. Residents are asked to call first, to ensure adequate crew on vehicle.</p>	<p>\$8.33 per HH per month includes refuse, bulky, and twice monthly curbside recycling.</p>

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Community	Trash	Recycling	Yard Waste	Bulky Items	Program Costs
Greene Township Population: 2,573 HH: 1,200	Open system, residents select own hauler. Three or four choices.	Drop-off available once per month. Commingled glass, plastics, aluminum, newspaper, magazines. Vehicle is shared with Independence, Hanover, and Raccoon.	Township does not provide services. Residents burn or compost on property, for the most part.	Dumpster available at Township Building on Saturdays, year-round. \$12,992 is total annual cost	\$9.92 to \$13.25 per HH per month \$0.90 per HH per month spent by Township on Bulky waste program.
Ohioville Borough Population: 3,865 HH: 1,371	Contract with Valley Refuse. Valley bills residents \$29.25 per quarter. Unlimited weekly collection.	None.	Borough does not provide yard waste services. Some compost, and some take to Beaver County Composting facility.	Included in contract with private hauler.	\$9.75 per HH per month includes refuse and bulky only.
Patterson Township Population: 3,197 HH: 1,200	Open system. Two major haulers in area – Burgess and Valley Refuse. Generally weekly collection with two can limit.	Contract with Valley Refuse. Cost is \$9,962 per year. No revenue share. Includes multi-family and single-family residences. Recyclables include Aluminum and steel cans, glass, plastic (#1 and #2), newspaper and magazines.	Township has leaf vacuum system. Brings leaves to Beaver County composting site. Counts toward recycling tonnage. Tip fee is charged. Last year paid \$1,000 in tip fees for about 150 tons of leaves.	Annual bulky drop off provided by private contractor. Residents charged a fee, which covers cost of event. Budget for event is \$700.00	\$9.92 to \$13.25 per HH per month \$0.69 per HH per month includes curbside recycling only for SF and MF HH. \$0.05 per HH per month – bulky waste event

Community	Trash	Recycling	Yard Waste	Bulky Items	Program Costs
Pulaski Township Population: 1,697 HH: 700	Open system. Residents hire own hauler. Haulers include Valley Refuse and Burgess	Township does not provide recycling services. Some residents take to Metalife Resources.	Township does not have yard waste or leaf waste program. Some residents bring yard waste to Beaver County composting facility.	Residents must provide own bulky waste collection.	\$9.92 to \$13.25 per HH per month (limited service)
Raccoon Township Population: 3,426 HH: 1,500	Open system. Residents hire own haulers. Example of rate -- \$37.50 per quarter for two cans weekly.	Drop-off program once per month. Greene, Independence, and Hanover share vehicle. Commingled aluminum cans, ONP, magazines, aluminum cans, plastic (#1 and #2). Farmers collect ONP for animal bedding.	Trying to get a grant for a leaf waste vacuum system so can recycle leaf waste. Private haulers will not accept yard waste.	Have a bin at Township building April through October. Staffed for eight hours each weekend. Residents pay a small fee. Costs the Township \$4,000 per year, on average, beyond fees. Allow people to take what they want.	\$9.92 to \$13.25 per HH per month (limited service)
Rochester Township Population: 3,247 HH: 1,200	Open system. Two haulers in Township are Waste Management and Valley Refuse.	Drop-off site where OCC, ONP, and OMG can be recycled – unstaffed, available 24- hours per day. Valley offers weekly curbside recycling for \$3.00 extra per quarter	Township has leaf vacuum program. Leaves go to County composting facility. Haulers will accept small amounts of bagged yard waste.	Township hires contractor to provide dumpster once per year. Cost is \$5,000 per year. Residents charged small fee per truckload.	\$9.92 to \$13.25 per HH per month (limited service) \$1.00 extra per month per HH for weekly curbside recycling

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Community	Trash	Recycling	Yard Waste	Bulky Items	Program Costs
South Beaver Township Population: 2,974 HH: 1,090	Open system. Usually weekly collection limited to three bags per week for \$12.00 per month.	Drop-off – trailer set out for three hours each month. Accepted materials include ONP, OCC, OMG, plastics, aluminum and steel cans, and glass containers.	No Township program. Residents can bring yard waste to Beaver County facility.	Hauler will collect curbside for extra fee.	\$12.00 per HH per month , refuse only, up to three bags (example, open system).
Vanport Township Population: 1,451 HH: 860 (285 SF; 575 MF)	Open system. Residents hire own haulers.	Drop-off —weekly, trailer at fire station. Available one Saturday per month. Accepted materials: ONP, OMG, OCC, and UBCs. One hauler (Bixler) will also take recyclables (containers only) curbside, if separated from waste, but not very formal. \$742.50 per year	Private hauler will not accept at curb. Leaf vacuum system for curbside collection of leaves. Leaves brought to County facility. Drop off at Township building for brush, grass, etc. Township hauls to County composting facility.	Hauler will take for extra fee. Township has semi-annual curbside cleanup collection days, one in fall and one in spring. Last year spring was \$1,400 and fall was \$1,200. Contracted w/private hauler (Bixler).	\$10 per HH per month (example, open system) includes unlimited weekly refuse. \$0.21 per HH per month recycling \$0.76 per HH per month bulky
West Mayfield Borough Population: 1,100 HH: 400	Contract with Valley Refuse. \$29.80 per quarter, unlimited weekly service.	No recycling program. Residents may take recyclables to Brady's Run.	Hauler will accept bagged yard waste.	Included with refuse contract – one item per week.	\$9.93 per HH per month includes refuse, bagged yard waste, and bulky.

Community	Trash	Recycling	Yard Waste	Bulky Items	Program Costs
<p>White Township Population: 1,434 HH: 693 (425 SF; 268 MF)</p>	<p>Collected by private hauler – no contract PAYT -- \$0.95 per bag paid by Township. Residents pay \$1.25 per bag</p>	<p>Township collects curbside twice monthly. Cost is approximately \$0.88 per HH per month.</p>	<p>Drop-off co-located with dumpster site. Residents charged a fee per car or truckload. Cost is estimated to be \$0.48 per SF HH per month</p>	<p>Dumpster for bulky waste. Cost is approximately \$.098 per SF HH per month.</p>	<p>\$6.15 per SF HH per month includes average cost of refuse, twice monthly curbside recycling, yard waste, and bulky drop-off. If two bags per HH, cost of all services would be \$12.34 per SF HH per month. Excluding yard waste, would be \$11.86 per SF HH per month</p>

¹ HH = Households; SF = Single family; MF = Multi-family

Findings

This section summarizes key findings.

Overall Cost of Services

- White Township's services appear at first glance to be inexpensive and comprehensive, compared to other municipalities in White Township. All services cost the average household \$6.15 per household per month, based on a straight average of bags.
- Under the current PAYT system, the average number of bags being purchased/used by households is estimated to be 3.04 bags per month. This is less than one bag per week per household. This is unusually low, and it is therefore suspected that many residents are circumventing the PAYT system by disposing of their refuse elsewhere, free-of-charge.
- Nationally, most households produce an average of two trash bags per week. Based on two bags per week, the average household's refuse, recycling, and bulky waste services would sum to \$12.34 per household per month. (This excludes yard waste, as the haulers in the area do not accept large amounts of yard waste).
- This \$12.34 per month average is higher than that of all of the communities with contracts in place.
- White Township risks unexpected price increases due to the fact that they have no contract in place with their hauler.
- Conway Borough's contract with Waste Management appears to be particularly cost-effective, as it includes curbside recycling and solid waste collection, for \$8.33 per month. Note that Waste Management does not accept fibers in this curbside recycling program.
- If a private hauler provided refuse, recycling, and bulky services to residents, and residents incurred all of the costs, the Township would save approximately \$10,954 per year (\$7,354 in recycling program costs, and \$3,600 in bulky waste tip fees). These calculations assume that the pull fee for the bulky waste dumpster increases to \$450 per pull, and that the leaf waste dumpster continues to remain staffed at current levels.
- Under this contract arrangement, residents would pay an average of \$120 to \$132 per year. Households paying for two bags of refuse per week are currently spending \$120 per year on refuse collection. This segment of the population, then, would not be expected to see a significant increase in service costs, under this scenario.
- If the Township negotiated a contract in which bulky waste was provided on an as-needed basis for an extra charge, they would be more likely to receive a lower price. However, the incidence of roadside littering might also increase.

Private Sector Collection Arrangements

- Communities with collection contracts tend to have more cost-effective refuse collection programs over communities with open systems.

- Communities that do not have contracts tend to have limited service (e.g., one, two, or three cans per week) provided by their haulers.
- Communities with contracts tend to have additional services provided by their hauler included in the contract. Examples include:
 - Bulky waste provided free of charge to residents – municipality does not have to provide dumpster or cleanup days.
 - One municipality has free dumpster service for their municipal building.

PAYT Program

- No other PAYT programs were located in Beaver County.
- Because White Township is in close proximity to several communities that have unlimited service, it appears that many residents have found ways to circumvent the Township's PAYT system.
- The Township might consider a contract with a "hybrid" system, whereby residents were provided with a certain level of service under their contract with a private hauler, and would pay \$1.25 per bag over their limit.

Recycling Program

- White Township's curbside collection costs are approximately \$7,354 per year (assuming no vehicle repairs), which is an average of \$0.88 per household per month. This includes both single-family and multi-family households.
- Single-family household costs are less than multi-family, due to less frequent collection (twice per month) vs. weekly. Single-family homes cost \$0.72 per month for recycling, whereas multi-family recycling costs an average of \$1.14 per household per month.
- White Township's single family recycling program is more expensive than the one community that has a contract for recycling collection. Patterson Township's contract with Valley Refuse at \$0.69 per household per month, compared with \$0.72 per month in White Township. Patterson Township receives weekly collection, vs. twice-per-month in White Township.
- In Rochester Township, where there is an open system for refuse, Valley Refuse will provide weekly curbside recycling to their refuse customers for just \$3 extra per quarter. This is more costly than White Township's program, but provides more frequent collection (weekly rather than two times per month).
- Several communities interviewed have once-per-month drop-off programs rather than curbside. These programs cost much less – on the order of \$760-\$800 per year to operate. It is expected, however, that these programs result in fewer recyclables being diverted from the waste stream.

Bulky Waste

- The cost incurred by White Township to manage bulky waste is comparable to that of other communities. The total cost of the program is \$5,023 per year. This cost may increase \$5,223 in the future, if the hauler increases the pull fee to \$450 from \$400 per pull. Other communities' costs range from \$700 per year (for a one-day event) to nearly \$13,000 per year (for a larger community with a year-round program).

Yard Waste

- The Township's yard waste drop-off program is popular with the residents.
- Private haulers in the area do not offer separate yard waste collection. They accept only small amounts of bagged leaves commingled with refuse.
- White Township will receive performance grant money from PA DEP for all yard waste that is recorded as being composted.

Recommendations

Based on the analysis and survey results described above, R.W. Beck recommends that White Township enter into a contract with a single hauler to provide solid waste collection services. The contract would stipulate the following general details:

- The selected hauler (contractor) would have the exclusive right to provide all specified services in the Township;
- Township residents would participate in the refuse program on a voluntary basis. Those opting to participate would coordinate for billing and payment directly with the hauler;
- Township residents would participate in the recycling program on a voluntary basis. Those opting to participate would coordinate for billing and payment directly with the hauler;
- Using White Township's recycling vehicle, the contractor will provide bi-weekly, curbside collection of the following recyclables: plastics (#1 and #2 bottles), newspapers, aluminum cans, steel cans, magazines, and glass containers. The contractor will be responsible for all costs associated with collecting and processing recyclables. The contractor must submit quarterly reports on the quantity and composition of recyclables collected from White Township.
- Within 24 hours of receiving a request from the Township, the contractor will transport the bulky waste roll-off from the collection site to the disposal facility. No residential refuse will be accepted at the bulky waste collection site. The contractor will be responsible for all costs associated with transporting and disposing bulky waste.
- The hauler would bill the Township directly for bulk waste collection (pulls);

In addition to these general requirements, R. W. Beck recommends that the Township itemize three discrete options for refuse collection. By requiring bids for each of the three options,

the Township will best be able to evaluate both PAYT and flat-fee billing, as well as a hybrid of the two. These options are described in more detail below.

Option 1—Monthly Flat Fee

This option would require bidders to specify the monthly charge per household they would be willing to offer.

- The contractor will provide weekly, unlimited collection of residential refuse collection.

Option 2—Pure PAYT

This option would require bidders to specify the per-bag fee they would be willing to offer.

- The contractor will take over the management of the Township’s PAYT system, by assuming responsibility for distributing and collecting revenues from selling the designated collection bags (either through local retail establishments or direct delivery to the residents).
- The contractor will provide weekly collection of residential refuse that is set out in designated refuse collection bags.
- The contractor will collect the revenue associated with the sale of the designated refuse collection bags.

Option 3—Hybrid PAYT

This option would require that bidders specify the base monthly charge they would be willing to offer, as well as the cost per bag for set-outs over and above the base monthly rate.

- Residents are permitted to set out up to two, 30-gallon containers per week and must use designated refuse collection bags for additional refuse.
- The contractor will bill residents directly for collecting up to two, 30-gallon containers of refuse per week.
- The contractor will collect the revenue associated with the sale of the designated refuse collection bags
- The contractor will be responsible for assuring the designated collection bags are distributed to residents either through local retail establishments or direct delivery to the residents.

R.W. Beck does not recommend that the township include yard waste collection and transportation services in the Request for Bids. However, the Township may want to consider the following options to reduce costs associated with management of yard waste:

- The Township might want to consider hauling leaves to a “free” composting site at Zinc Corporation of America, which is located on Frankfort Road in Monaca.

- White Township might consider forming a leaf waste cooperative with other communities, and link with farmers who can use the leaf waste.
- White Township might also want to consider disposing of leaf waste at PA DEP-approved land application sites in Beaver County, if they can find one nearby that they can form a mutually beneficial agreement with.
- Another alternative for the Township is Beaver County's site, where there is a tip fee. The County will come to White Township's site to chip, for no additional charge. This would reduce transportation costs for the Township.
- White Township might want to consider sharing transportation costs with other boroughs or municipalities. Other communities have done so. This cooperative arrangement reduces the need for all communities to have a "stockpile," and allows them to share the costs associated with transporting the leaves to the site.

Description of Other Communities' Programs

Conway Borough

Conway Borough has a population of 2,424 (1990 Census). The residents comprise roughly 850 single-family homes (three units and under). Multi-family units with more than three units have to provide their own refuse collection. Conway Borough contracts their solid waste and recycling services under one contract to the lowest bidder. Currently the Borough has a contract with Valley Refuse. The Borough pays Valley Refuse \$7,800 per month, or \$93,600 per year. This translates into \$110 per household per year, or \$9.17 per household per month. Households are billed \$9.50 per month. They are billed on a quarterly basis by the Borough, on a separate bill. If they pay their bill in full by the end of January, they receive one month free. Approximately half of the residents pay in full by the end of January.

Refuse

- Valley Refuse provides unlimited weekly collection; and,
- Materials can be bagged or placed in residents' own cans.

Recycling

- Valley Refuse provides weekly collection on the same day as refuse collection;
- Township provided recycling bins, via a grant;
- Recyclables collected curbside include containers only – glass, metal, and plastics (#1 and #2 bottles);
- County has drop-off program for papers – last Saturday of each month – newspapers only, hours are 9:00a.m to 12:00p.m;
- Newspaper donated to farmers for animal bedding – tonnage goes toward grant money; and,
- Drop-off program run by volunteers – no staff time.

Bulky Waste

- Included in contract with private hauler – no extra charge.

Yard Waste

- Hauler will accept small amounts of bagged yard waste curbside (which is landfilled); and

- Residents may take yard waste the County's Brady Run's drop-off site.

Freedom Borough

Freedom Borough has a population of 1,763 (2000 Census). There are 708 households in the Borough defined as single family – having three units or fewer. Freedom Borough contracts with a private hauler to provide refuse and recycling collection services. The hauler has been Waste Management for a long period of time. The current contract is for four years, with two possible

Waste Management bills residents directly. The cost of service is \$24.99 per quarter. This is approximately \$6.26 per month per household. The value of the contract is approximately \$70,772 per year. As part of the contract, the Borough building received free refuse dumpster service.

Refuse

- Unlimited weekly collection is provided by contractor (Waste Management); and,
- Borough ordinance stipulates that residents must use contracted waste hauler.

Recycling

- Same day service, but provided every-other-week;
- Recycling bins provided by Borough via a grant;
- Recyclables – containers only – glass, plastic bottles (#1 and #2), and metal cans;
- Revenue-sharing is approximately \$250 per quarter; and,
- Residents may use Beaver County's drop-off for recycling paper, which is about five miles away from the Borough.

Bulky Waste

- Included in contract with hauler; and,
- Residents are asked to call in advance to ensure adequate collection staff.

Yard Waste

- Borough provides leaf vacuum service;
- Approximately 80 crew hours devoted to this in the fall;
- Leaves are brought to old mill site in Rochester Borough. Cooperative operation with Rochester, East Rochester, and Freedom Borough; and,
- Farmers collect leaves for soil amendment -- no tip fee.

Greene Township

Greene Township has a population of 2,573. There are an estimated 1,200 single-family households in the Township, and no multi-family dwellings.

Refuse

- Open system;
- Three or four haulers collect from residents, including Waste Management, Valley Refuse, and New Cumberland Sanitation (based in West Virginia); and,
- Typical rates range from \$29.75 per quarter (\$9.91 per month) for one can to \$39.75 per quarter (\$13.25 per month) for three cans (Valley Refuse).

Recycling

- Drop-off available one weekend per month;
- Acceptable materials are newspaper, glass, magazines, plastics (#1 and #2 bottles), and metal cans;
- Materials are collected commingled, and delivered to the Metalife recycling center;
- No revenue share;
- Last year Township recycled 44.3 tons – all residential; and,
- Recycling vehicle purchased and shared with other communities in South Beaver County Council of Governments – Independence, Hanover, and Raccoon Townships.

Bulky Waste

- 20-yard dumpster located behind Township building for bulky waste;
- Dumpster available Fridays 3p.m. to 9p.m. and Saturdays 9a.m. to 3:00p.m.;
- Staffed by one person;
- Scavenging permitted;
- No charge to residents;
- Pull fees last year were about \$8,000;
- Private haulers will collect bulky at additional charge; and,
- Pull fee and labor charge sum \$12,992 per year.

Yard Waste

- Township does not provide any yard waste services;
- Private hauler will accept small amounts of bagged yard waste, which is landfilled; and,
- Residents can use County drop-off facility, where a tip fee is charge.

Ohioville Borough

Ohioville Borough has a population of 3,759 people (2000 Census). The Borough contracts with a private contractor for refuse collection services. The current hauler is Valley Refuse. There are 439 households in the Borough, 1,371 of which are occupied. This figure includes multi-family households, which are included in the contract. Valley Refuse bills customers directly, at a rate of \$29.25 per quarter. Approximately 31 tons per week are collected in the Borough.

Refuse

- Unlimited weekly collection provided by contractor (Valley Refuse).

Recycling

- No recycling program is currently available in the Borough;
- The Borough used to have a drop-off program run by volunteers; and,
- The Borough is considering the possibility of offering a recycling program again.

Bulky Waste

- Included with refuse collection.

Yard Waste

- Hauler will accept small amounts of bagged yard waste or bundled sticks; and,
- Yard waste collected is landfilled.

Patterson Township

Patterson Township has a population of 3,197 (2000 Census), and consists of an estimated 1,200 households. Last year the Township received roughly \$2,000 in recycling performance grants.

Refuse

- Open system;
- Haulers include Valley Refuse and Burgess Refuse; and,
- Typical rates range from \$29.75 per quarter (\$9.91 per month) for one can to \$39.75 per quarter (\$13.25 per month) for three cans (Valley Refuse).

Recycling

- Contracts with Valley Refuse for weekly collection;
- Township pays \$9,962.00 per year, or \$8.30 per household per year;
- No revenue share;
- Contract includes multi-family and single-family households;

- Bins provided by Township via a grant; and,
- Township recycled 177.4 tons last year, according to Metalife Resources.

Bulky Waste

- Township hires contractor one day per year for cleanup day in May;
- Charge residents a fee, for example \$10 per car, \$30 per large truck;
- Fees collected cover cost of event;
- Budget for event is \$700; and,
- Haulers will collect bulky materials curbside for a fee.

Yard Waste

- Township runs leaf vacuum system;
- Collect 150 tons per year;
- Township spends 600 hours of crew time per year on leaf vacuum service;
- Leaves brought to two facilities, City of Beaver Falls and Brighton Township;
- Paid \$1,000 in tip fees last year; and,
- Leaves composted, so tonnage contributes to grant tons.

Pulaski Township

Pulaski Township has a population of 1,697, representing 700 households.

Refuse

- Open system;
- Haulers operating in Township include Joseph J. Brunner, Inc., Valley Refuse, and Burgess; and,
- Typical rates range from \$29.75 per quarter (\$9.91 per month) for one can to \$39.75 per quarter (\$13.25 per month) for three cans (Valley Refuse).

Recycling

- Haulers do not offer curbside recycling in the Township, and Township has no recycling program.

Bulky Waste

- Private haulers typically accept bulky items for an additional fee; and,
- Township does not provide extra services for bulky waste.

Yard Waste

- Township recently received a grant to implement leaf vacuum service; and,

Appendix A

- Township has not yet purchased equipment.

Raccoon Township

Raccoon Township has a population of 3,426, comprising an estimated 1,500 households. The Township spans 17 square miles.

Refuse

- Open system;
- Haulers operating in Township are Valley Refuse, Bradden (a subsidiary of Waste Management); and,
- Typical rates range from \$29.75 per quarter (\$9.91 per month) for one can to \$39.75 per quarter (\$13.25 per month) for three cans (Valley Refuse).

Recycling

- Drop-off available one weekend per month;
- Share recycling vehicle with other South Beaver County Council of Government Communities;
- Recyclables include commingled containers (glass, plastic bottles (#1 and #2), metal cans, and newspapers;
- If residents like, they can go to drop-off in other South Beaver County COG communities, too; and,
- Township was able to provide residents with recycling bins, via a grant.

Bulky Waste

- Township has dumpster available April through October, available for bulky waste;
- Residents are charged a small fee to use dumpster, for example \$15 for pickup truck, \$25 large truck;
- Cost is generally \$4,000 per year (\$300 per pull), net of receipts.
- Scavenging is allowed;
- Township feels that providing this service helps keep roadsides clean; and,
- Haulers will typically collect bulky items curbside for an additional fee.

Yard Waste

- Township does not currently have yard waste program in place;
- Hope to get a grant to implement program in future; and,
- In general, the private haulers do not accept yard waste.

Rochester Township

Rochester Township is a community of 3,247 residents (1990 Census), comprising about 1,200 households.

Refuse

- Open system;
- Two haulers operating in Township – Waste Management and Valley Refuse; and,
- Typical rates range from \$29.75 per quarter (\$9.91 per month) for one can to \$39.75 per quarter (\$13.25 per month) for three cans (Valley Refuse).

Recycling

- Drop-off available 24-hours per day, 7 days per week;
- Recyclable materials include newspaper, cardboard, and magazines;
- Last year recycled 15.66 tons at Metalife Resources
- Valley Refuse offers weekly same day curbside recycling for an extra \$3.00 per quarter (\$1.00 per month) in Township.

Bulky Waste

- Township has a clean-up day once per year;
- Event costs approximately \$5,000; and,
- Residents pay a small fee, but majority of cost paid by Township.

Yard Waste

- Leaf vacuum system operated by Township; and,
- Leaves brought to Beaver County facility.

South Beaver Township

South Beaver Township has a population of 2,974 (2000 Census). There are an estimated 1,090 households in the Township. The Township spans almost 29 square miles.

Refuse

- Open system;
- Haulers operating in Township include Carl Goehring Refuse and others; and,
- Typical service is weekly collection of up to three bags for \$12.00 per month.

Recycling

- Drop-off program available three hours per month;
- Trailer is located at the Fire/Police Station;

Appendix A

- Trailer is generally staffed with two people;
- Drop-off available three hours per month;
- Recyclable materials include newspapers, magazines, cardboard, plastics #1 and #2 bottles), aluminum and steel cans, and glass containers;
- Recyclables are brought to the Metalife Resources/Franklin Township recycling center;
- No revenue share;
- Township recycled 15.66 tons of residential material in 2001;
- Township also allows Darlington Township to use their recycling trailer – township of less than 400, for two hours per month;
- Total labor cost per year is approximately \$792 per year; and,
- Haulers do not offer curbside recycling in the Township.

Bulky Waste

- Provided by private haulers with regular collection.

Yard Waste

- The Township does not currently provide any yard waste services.

Vanport Township

Vanport Township is a community of 1,451 residents. There are between 850 and 860 households in the Township, including multi-family. There are an estimated 285 single-family residences, and 575 multi-family households are in the Township, 400 of which are located in a co-op across the street from the Township building. The area spans one square mile.

Refuse

- Open system;
- Primarily one hauler -- Bixler Refuse;
- Average rates are \$10 per month for unlimited weekly collection; and,
- Bixler will accept recyclables that are left separated.

Recycling

- Drop-off (trailer) available on the third Saturday of each month, from 9:00a.m. to 12:00pm;
- Staffed with two road crew workers;
- Recyclables include newspaper, magazines, cardboard, and aluminum beverage cans;
- Trailer is located in the Vanport Fire Department Lot at 435 Jefferson Street;

- Township hauls recyclables every other month at the Metalife Resources/Franklin Township Recycling Center;
- No revenue share;
- Recycled 56.18 tons of residential recyclables in 2001 including ONP, OCC, and commingled;
- Received \$1,336 in performance grants last year (includes commercial, and residential); and,
- Total cost of program is approximately \$742.50 per year.

Bulky Waste

- Township holds a spring and fall event – bulky items collected curbside;
- Each year Township puts out to bid – last year Brunner was awarded contract;
- Brunner charged \$1,200 for fall cleanup and \$1,400 for spring; and,
- Total annual cost of \$1,600 or \$5.61 per household per year.

Yard Waste

- Curbside leaf vacuum system;
- Operate approximately nine weeks of the year;
- Two staff members devote approximately 168 hours, total, to the collection;
- Leaves chipped and delivered to Beaver County facility;
- Tonnage delivered counts toward recycling grant money;
- Tip fees were \$607.50 last year;
- Last year delivered 160 cubic yards of leaves;
- Labor Cost \$1,588 per year, or \$5.60 per household per year;
- Drop-off site available for grass, brush, Christmas trees, and leaves co-located at bulky waste dumpster; and,
- Drop-off site is not staffed --available 24 hours per day, 7 days per week.

West Mayfield Borough

West Mayfield Borough is a community of roughly 1,100 residents comprising an estimated 400 single-family households served by their refuse collection contract. The Borough is one square mile in size – about the same size as White Township.

Refuse

- The Borough contracts with a private hauler, Valley Refuse;
- Valley refuse bills customers \$29.80 quarterly; and,
- Weekly, unlimited service.

Appendix A

Recycling

- The Borough has no recycling program at this time, and no plans to implement such a program.

Bulky Waste

- Included in contract with private hauler, but limited to one item per week.

Yard Waste

- Hauler will accept bagged yard waste;
- Starting leaf vacuum program this fall; and,
- Plan to take leaves to Beaver Falls facility for composting.

Appendix B

Leaf Waste Land Application Sites

Table B-1

DEP-Approved Leaf Waste Land Application Sites

Site Number	Site Name	Site Address	Contact Information
1	Lake Forest Gardens	Lake Forest Gardens RD # 2 Box 875 Fombell, PA 16123	Alan Dambach (724)758-5706
3*	Floyd Farm	Floyd Farm 405 Pleasant Drive Aliquippa, PA 15001	Phillip Floyd (724)773-3890
6*	Samchuck Farm	Samchuck Farm RD #2 Box 26 Reno Street Extension Rochester, PA 15074	Andrew Samchuck (724)774-7043
9	Nicol Farm	Nicol Dairy 1745 Dutchridge Road Beaver, PA 15009	Randy Nicol (724)728-4920
10	Hornick Farm	Horticultural Industries Hornick Farm 287 Ridgemont Drive Industry, PA 15052	Ernie Dostalík (724)643-4137
11	Kretschmann Farm	Kretschmann Farm Rd#1 Box 50 Ziegler Road Rochester, PA 15074	Donald Kretschmann (724)452-7189
Not Provided	Helen's Perennial Gardens	Helen's Perennial Gardens 175 Russell Hill Road Industry, PA 15052	Donald J. Tindell (724)643-4170

Source: PA DEP Southwest Region

* These sites are known to be inactive.