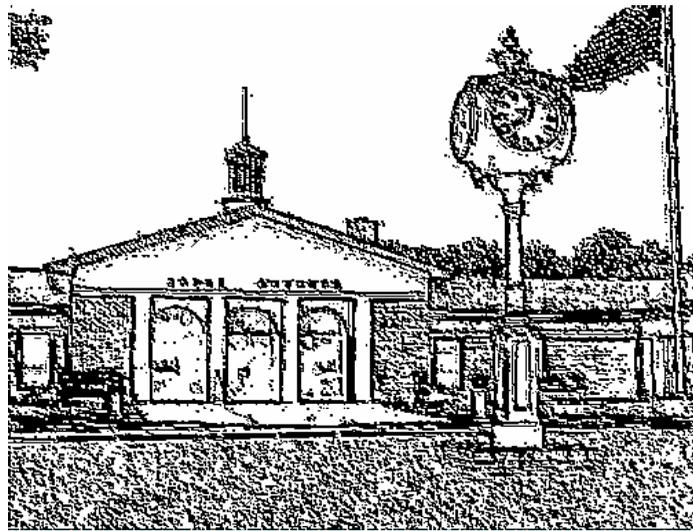


Upper Gwynedd Township Leaf and Yard Waste Collection



Environmental Resources Associates

706 MONROE STREET
STROUDSBURG, PENNSYLVANIA 18360

CONSULTANTS IN ENVIRONMENTAL RESOURCE MANAGEMENT



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SWANA/PADEP Technical Assistance Program

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1.0 Executive Summary

Upper Gwynedd Township (Township) is an Act 101 mandated municipality located in Montgomery County. The Township has a total area of 8.1 square miles, a population of 14,243 persons and 5,341 households (2000 census). The Township is rather densely populated at 675.4 housing units per square mile.

Private haulers provide curbside collection services for municipal waste and are also required under the Township's mandatory recycling program to provide curbside collection of recyclables within the municipality. The current collection program for leaf and yard waste provided by private haulers is not consistent with the requirements of Act 101 for mandated municipalities.

The Township, in order to economically and expeditiously become compliant with Act 101, amended its Recycling Ordinance (§ 160-26. Handling of Leaf Waste (Amended 3/24/08) to include the establishment of a curbside and drop-off program for leaf and yard waste.

The program requires Township approved waste collectors to provide curbside collection of leaf waste at least once during the spring and at least once during the fall of each year. The leaf waste collection program will be augmented by the Township by designation of a drop-off collection site for leaf and yard waste. The drop-off leaf and yard waste collection site will be available to residents, at a minimum, of once a month.

The Township requested technical assistance through the Recycling Technical Assistance Program. Environmental Resources Associates (ERA) was requested to provide/identify pertinent regulatory requirements and consulting services to assist in identifying and assessing options/alternatives for the curbside collection and proper disposition of leaf and yard waste consistent with the requirements of Act 101. The Township goal is to develop a program that is easy to implement, and does not create a financial burden and/or stress its current manpower resources.

The following are ERA's recommendations for the development of a program for the curbside collection and proper disposition of leaf and yard waste. ERA offers the following based on the information gained and considered during this analysis and its experience gained in providing similar services to other Pennsylvania municipalities. The recommendations are intended to assist the Township to develop a leaf and yard waste collection program that is easy to implement, does not create a financial burden and/or stress its current manpower resources and is consistent with the requirements of Act 101.

ERA recommends that the Township consider,

- ⇒ A competitive procurement process to contract, at a minimum, for one spring and two fall curbside collections of leaf and yard waste. Although not included in the scope of work for this study ERA further recommends that the Township consider including waste and recyclables collection as part of the procurement request. A combined request for all three noted services would provide a comprehensive integrated collection system providing the above noted benefits and greatly diminish the problems associated with the current redundant collection system of multiple haulers.

- ⇒ Establishing a task force or committee comprised of residents and stakeholders to review and consider the alternatives and recommendations presented in this study. The designated body could assist the Township in informing the public of available alternatives for collection of leaf and yard waste and comprehensive collection services to include waste and recyclables. To assist the Township in the decision making process they could also solicit input, via a public survey, relative to the types and frequency of collection services desired.
- ⇒ Submit an application for funding assistance under Section 902 of Act 101 (if available) for eligible program costs including those associated with, the preparation/revision of the Township's Recycling Ordinance and cost associated with procurement for obtaining services.

2.0 Introduction

Upper Gwynedd Township (Township) is an Act 101 mandated municipality located in Montgomery County. The Township has a total area of 8.1 square miles, a population of 14,243 persons and 5,341 households (2000 census). The Township is rather densely populated at 675.4 housing units per square mile.

The City of Philadelphia is located approximately 25 miles to the southeast with ready access via the Pennsylvania Turnpike, Schuylkill Expressway, Interstate 476, Routes 202 and 309. Upper Gwynedd Township is a bedroom community for Philadelphia due to its ease of access to the City.

As a mandated community under Act 101 the Township has a mandatory recycling program. The mandatory recycling program requires private haulers approved to provide waste collection services to also provide curbside collection of designated recyclable materials (aluminum and tin cans, glass bottles, newspapers, and HDPE and PET plastic bottles).

The Township's recycling program did not establish a leaf and yard waste collection program as required by ACT 101.

The Township has requested technical assistance through the Recycling Technical Assistance Program. Environmental Resources Associates (ERA) was requested to provide/identify pertinent regulatory requirements and consulting services to assist in identifying and assessing options/alternatives for the curbside collection and proper disposition of leaf and yard waste consistent with the requirements of Act 101. The Township goal is to develop a program that is easy to implement, and does not create a financial burden and/or stress its current manpower resources.

As an initial effort, ERA was requested to provide for the Township information and review copies of the pertinent regulatory requirements for the curbside collection and proper disposition of leaf and yard waste, i.e., composting or land application at a permitted facility. Copies of pertinent sections of Title 25 of the Pennsylvania Code (Sections 271. 421, 422 and 423) addressing the requirements for the development and implementation of a mandatory leaf and yard waste collection program are included in Attachment A.

ERA was also requested to research facilities potentially available to provide composting services to the Township for its leaf and yard waste.

Twenty (20) windrow compost facilities were identified within the County. Five (5) of the facilities are privately owned and operated and fifteen (15) are municipal operations. An additional composting facility was also identified in Skippack Township, operated by Graterford State Correctional Facility. A windrow compost facility and an in-vessel composting facility were also identified in Doylestown, Bucks County; both systems are operated by Delaware Valley College.

DEP representatives, Ms. Patti Olenick (Central Office) and Ms. Mary Alice Reisse (Regional Office) and the County Recycling Coordinator, Mr. Art Feltes were contacted to gather information regarding the amount of available capacity (if any) at compost facilities within a reasonable haul distance and contact persons at the identified facilities.

Based on the information provided by DEP, the County and municipal compost facility operators, the majority of the County's municipal composting facilities are operating at or near capacity (as specified in their permits).

Municipal facilities contacted were either operating at or near capacity or wished to maintain their remaining capacity to meet future needs.

Delaware Valley College representatives were contacted regarding the acceptance/processing of the Township's leaf and yard waste. ERA discussed the potential mutual benefits of establishing an agricultural land application site or integration of leaves into their current compost operations. Delaware Valley College was not interested in accepting additional organic materials at this time.

ERA also contacted representatives at Graterford State Correctional Facility and expressed that the Township was interested in securing capacity for its leaf and yard waste at an existing compost facility or land application site and/or developing a leaf and yard waste compost site. Facility representatives stated that Graterford would potentially be interested in accepting the Township's leaf and yard waste at their composting operation.

Private compost operations that responded to ERA's inquires indicated interest in accepting additional leaf and yard waste however, did not provide information relative to available capacity or tip fee rates for leaf and/or yard waste. Facility operators stated that the cost/tip fee for leaf and yard waste will be dependent on quantity and type of materials and mode of delivery, bulk/loose, or bagged (Kraft paper bags, or plastic trash bags).

The aforementioned data and information was provided to and discussed with the Township. A copy of PADEP listing of leaf and yard waste drop-off and composting sites located in Montgomery County is included in Attachment B.

3.0 Current Situation

Private haulers provide curbside collection services for municipal waste and are also required under the Township's mandatory recycling program to provide curbside collection of recyclables within the municipality.

ERA contacted private haulers providing collection services to the Township to determine the types of collection services being offered and the associated cost.

- ⇒ All of the private haulers contacted indicated that they currently offer collection services for leaf and yard waste. Collection modes included Kraft paper bags, plastic trash bags and rigid containers.
- ⇒ Collection services provided varied (collection frequency, number of containers allowed per collection and designated collection days) depending on the selected private hauler.
- ⇒ Cost of collection services also varied for all haulers, depending on required services.

The current collection program for leaf and yard waste provided by private haulers is not consistent with the requirements of Act 101 for mandated municipalities.

The Township's wishing to economically and expeditiously become compliant with Act 101 amended its Recycling Ordinance (§ 160-26. Handling of Leaf Waste (Amended 3/24/08) to include the establishment of a curbside and drop-off program for leaf and yard waste.

§160-26. Handling of leaf waste. [Amended 3-24-2008 by Ord. No. 2008-08]

- A. The Township hereby authorizes establishment of a program for curbside collection of leaf waste at least once during the spring and at least once during the fall of each year. In addition thereto, the leaf waste collection program shall be augmented by designation by the Township of a DEP-permitted drop-off compost facility for residents of the Township to utilize as needed, which facility must be open at least once per month for collection of leaf waste generated between scheduled collections.
- B. Leaf waste collection shall be undertaken by Township waste collectors in accordance with regulations of the DEP, and leaf waste disposal shall be undertaken by municipal waste collectors in a DEP-approved facility or in a DEP-approved manner.
- C. All private Township waste collectors shall provide the Township with the name and address of the facility (ies) where the leaf waste will be disposed and report the quantity in tons or cubic yards. Leaf waste shall not be commingled with any other Township solid waste. The disposal of leaf waste at a sanitary landfill, waste-to-energy facility or any other facility which is not DEP-permitted composting facility is strictly prohibited.
- D. The methodology for separating and collecting leaf waste shall be established and implemented by the Township and by the municipal waste collectors. The leaf waste collection guidelines set forth in this section are intended to be general in nature. The actual leaf waste collection and education program shall be established in more detail by the Township pursuant to resolution and is subject to modification, as needed from time to time, provided any modifications to the program comply with this section and the most recent regulations of DEP.

E. Leaf waste shall not be left at curbside more than 24 hours prior to collection and shall not be left in a form which obstructs the flow of traffic or affects the performance of drainage facilities or catch basins.

The Township has also required,

- ⇒ Residents to purchase of Kraft biodegradable leaf and yard waste collection bags (bags are thirty (30) gallon capacity, available at Lowes and Home Depot in packs of five (5) at a price of \$2.50 per pack).
- ⇒ Limited residents to ten or less bags per collection.
- ⇒ Initial collection to take place in October, a second in November and a Third in May.

Presented below is a description/clarification provided by DEP relative to Act 101 minimum requirements for leaf and yard waste recycling.

PENNSYLVANIA'S ACT 101 WASTE COLLECTION REQUIREMENTS

Act 101, Section 1501 (c) (1) (ii) and (iii), requires persons in mandated municipalities to separate leaf waste from other municipal waste generated at residential, commercial, municipal and institutional establishments. **“Leaf waste” is defined in the Act and its regulations as “Leaves, garden residues, shrubbery and tree trimmings, and similar material, but not including grass clippings.”** Source separated leaf waste, as with other recyclable material, is to be collected at least once per month as set forth in Act 101 Section 1501(c) (2) and (3) and processed at PA, DEP-approved composting facilities.

Act 101 mandated municipalities with programs that collect leaves only in the fall are not in compliance with the Act. Mandated municipalities desiring to establish leaf waste collection programs in compliance with Act 101 must, as a minimum:

1. Require by ordinance that leaf waste consisting of leaves, garden residues, shrubbery and tree trimmings, and other similar material are targeted for collection from residences and commercial, municipal and institutional establishments: and
2. Establish a scheduled day, at least once per month, when leaf waste is collected from residences; or
3. Establish a scheduled day, not less than twice per year and preferably in the spring and fall, when leaf waste is collected from residences, and facilitate a drop-off location or other collection alternative approved by PA DEP that allows persons in the municipality to deposit leaf waste for the purposes of composting or mulching at least once per month. The leaf waste drop-off location may be located in a neighboring municipality or at a private sector establishment provided that an agreement is in place to utilize that location and the municipality keeps residents and commercial, municipal and institutional establishments informed of the option at least once every six months.

4. Ensure that commercial, institutional and municipal establishments generating leaf waste have collection service.
5. Municipalities are encouraged to manage source separated Christmas Trees as leaf waste for processing at a PA DEP-approved composting facility.

By comparison it appears that the Township's planned program will meet, if properly implemented and enforced, the minimum requirements under Act 101 for a leaf waste collection program. The planned program however, is a work in progress and as noted above certain program particulars are still being formulated.

The recycling ordinance is the backbone of any mandatory recycling program. It establishes the recycling program and empowers the municipality to enforce it. The ordinance must clearly and concisely define the program parameters and the responsibilities of all the involved parties e.g., the municipality, residential commercial, municipal and institutional establishments and private haulers. Although not included in the work scope, ERA conducted a preliminary review of the Township's Recycling Ordinance and noted that clarifications and updating of definitions and requirements may be required to be fully compliant with Act 101.

A sample draft recycling ordinance is being provided to the Township to assist in addressing its needs and the regulatory requirements for establishment of a recycling program, to include leaf and yard waste programs. The sample ordinance is a compilation of ordinances prepared by ERA for various municipal recycling programs with the assistance of a number of municipal solicitors. The sample ordinance has been modified for the Township's consideration and use. It is recommended that the Township work with its solicitor to revise and update its ordinance to meet its specific needs and Act 101 requirements.

The following sections are intended to provide the Township insight, guidance and recommendations regarding its planned leaf waste collection program, to bring it into compliance with Act 101, and to identify and evaluate alternatives that may present a more efficient and economical long term option.

Presented below are Options for development, implementation and operation of curbside collection program for leaf and yard waste.

4.0 Parameters for Leaf and Yard Waste Programs

Presented below are Options for development, implementation and operation of curbside collection program for leaf and yard waste.

4.1 Leaf and Yard Waste Preparation

Although Act 101 clearly defines the types of materials required for collection it does not address in any detail the preparation of the various materials. Preparation of leaf and yard wastes is an important consideration from both a practical and public education standpoint.

Act 101 did not intend that municipalities provide services for the removal of tree trunks and large branches but rather normal seasonal leaves, trimmings and pruning generated from landscaping and gardening at residential properties.

The collection program for mandated municipalities must include the noted categories (“Leaf waste” is defined in Act and its regulations as “Leaves, garden residues, shrubbery and tree trimmings, and similar material, but not including grass clippings.”) limited only by a municipality’s ability to collect and provide for the processing. For example, garden trimmings might include trimmings from herbaceous plants but not fruit and/or vegetables. Leaf and yard waste compost facilities are not permitted to accept fruits, vegetables or similar organics under a general permit by rule for leaf and yard waste. Likewise shrubbery and tree trimmings must be restricted to a size and weight that can reasonably be handled by collection crews, the collection vehicle and the available processing equipment.

The type of material that can and will be collected by a leaf and yard waste collection program must clearly be defined. For example, shrubbery and tree trimmings not to exceed X inches in diameter and Y feet in length. The Township should be specific to prevent potential contamination e.g., garden residue consisting of hedge and brush trimmings and pruning are not to include fruits or vegetables, weeds or green plants. Fruits, vegetables, weeds and green plants are not acceptable at compost facilities in that they have the potential to attract vermin and vectors and/or cause odor problems. A program must explicitly educate the public relative to the types of materials collected or inevitably unacceptable waste materials will be set out for collection.

Leaf and yard waste can be collected (depending on available equipment) in loose form, e.g., piles at the curb or other designated area; placed in bags (Kraft paper) or in rigid containers. Yard waste can be bundled to a specific size and weight. If plastic bags are used (for leaves or yard wastes) the bags must be emptied by the collection crew or at the compost facility. Use of plastic bags will undoubtedly decrease collection and/or processing efficiency and increase program costs.

To facilitate ease of handling, brush trimmings should be bundled with twine or cotton string. The bundles should not exceed three or four feet in length. Larger bundles would be extremely difficult to load. A maximum size of four feet is suggested. Forty to sixty pounds is a good range for maximum weight for bundles.

Tree trimmings should be no larger in diameter than practical for ease of handling and processing capabilities. Lengths should also be specified for safety and ease of handling. It is suggested that trimmings also not exceed four feet in length and not greater than six inches in diameter. Tree trimmings can be stacked alongside leaves or other yard waste materials to be collected.

A program should collect specified types of material in sizes and amounts that can reasonably be accommodated by personnel and equipment.

4.2 Drop-Off Site Considerations

The following describes the parameters to be considered to site and develop a drop-off program consistent with the goals of the Township.

A drop-off site should to the extent practical:

- ⇒ Be centrally located, and ingress and egress for site does not impact traffic flow.
- ⇒ Provide easy access and have ample areas for off-loading materials and parking. Access is extremely important and should not be overlooked when siting and designing a drop-off site. For example, if forty-yard roll-off containers are used for collection of leaf and/or yard wastes an ample area for truck maneuverability is required. Ease of access to the site is essential.
- ⇒ Be manned during the times it is open to residents and all incoming materials inspected prior to acceptance, for quality assurance. If the site cannot be manned, security cameras, an electronic key card type security gate or other security should be implemented to prevent misuse and vandalism.
- ⇒ Clearly post rules and regulations governing use of the site, material accepted and preparation, scheduled operations and also make printed copies available to residents.
- ⇒ The Township provides ample information and educational material to its residents e.g., through newsletters, public notices, brochures and pamphlets relative to leaf and yard waste collections at the drop-off site.
- ⇒ The drop-off site is available to residents on a regularly scheduled basis.
- ⇒ The drop-off site is available at convenient times and preferably open on weekends, if only on a limited basis.
- ⇒ Employ a method for identifying residents.

The Township has options with regards to the development and operation of a leaf and yard waste drop-off program. The Township can develop and operate the site with its personnel or have a private contractor develop/provide and operate a site or as a public private partnership.

Described below are options available to the Township for operation of a drop-off collection of leaf and yard waste.

Municipal Operation

Municipal operation of a leaf and yard waste drop-off program requires the purchase or lease of equipment, operations personnel, transport of materials to a facility capable of processing the volume and types of leaf and yard waste collected and program administration.

Contracted Operation

Contracted operations would be procured in a similar manner to that described in Section 6.1.4. The selected contractor could provide full service, e.g., provide the drop-off site, equipment, personnel, transport of materials to a facility capable of processing the volume and types of leaf and yard waste collected and program administration. Alternatively, the contractor could provide only selected services. Few municipalities opt for private contractors to operate and maintain a site due to cost.

Public/Private Partnership

Many municipalities favor a public/private sector partnership arrangement. Usually under a public/private sector arrangement the municipality provides the site, conducts the education program and may provide containers ((40) forty cubic yard) for collection of leaf and yard waste. The private contractor provides transport services for containers to a compost facility, when full. A charge is assessed per container and/or per mile transported and containers are leased, if required.

4.3 Curbside Collection Options

Curbside collection practices used by municipalities for Municipal Solid Waste (MSW) and/or recycling are as individual and unique as each municipality. What works and is best suited for one municipality is not necessarily well suited to others. The standard options for curbside collection are as follows:

- Municipal Collection
- Individual Contract/Subscription Collection
- Municipal Contracted Collection

A summary of the pros and cons (operational and financial) of the above noted alternatives/options are presented below for the Township's consideration.

Municipal Collection

Described below are options available to the Township for collection and disposition of leaf and yard waste. Few options are available for the curbside collection of leaf and yard waste. This is primarily due to the limited types of collection equipment that can be used for the efficient collection of these materials.

Municipal operation of a leaf and yard waste curbside collection program requires an extensive financial commitment, initially for the purchase of specialized collection equipment and over term for equipment maintenance, labor and program administration costs.

To provide the Township with a perspective of the collection equipment options and costs associated with operating a leaf and yard waste curbside collection program. Presented below are descriptions of various collection systems and related equipment cost.

The majority of municipally operated curbside leaf collection programs use a vacuum collection system. These systems generally consist of vacuum units that are either tow-behind units that load into a leaf collection box (mounted on a dump truck) or a self-contained trailer mounted unit (towed by a truck). Costs

for these systems range from approximately \$15,000 to \$35,000. These systems are labor intensive. Two to three men crews are typically used with these systems.

Vacuum/compactor systems are also available that are totally self-contained (truck mounted) and require only one person to operate. The operator drives the unit and collects the leaves via an articulating vacuum hose controlled by a joystick mounted in the truck's cab. These systems include a compactor unit allowing loads of up to thirty cubic-yards. These self-contained truck mounted systems reduce manpower requirements and increase collection efficiency via compaction and load capacity and reduces the number of trips required to offload materials. Self-contained truck mounted systems are very expensive ranging from approximately \$125,000 to \$150,000 in price.

Specialized compactors, which auto load rigid containers, are used for collection of leaves and yard waste. Automated compactors have the ability to load large, (in the range of sixty to ninety gallon) capacity carts. The carts are equipped with wheels for the convenience of residents.

The driver controls a mechanical clamp mounted on the vehicle's side that secures the cart and tips the contents into the collection chamber of the truck's body, which is subsequently compacted. Again, this is a one-man collection system. This system also reduces manpower requirements and increases collection efficiency via compaction and increased load capacity (up to thirty cubic-yards) thus reducing the number of trips required to offload materials.

The compactor auto loader systems are also expensive, ranging from approximately \$100,000 to \$150,000 and most require the purchase of specialized carts. The system is efficient particularly in densely populated areas where houses are in close proximity and containers are placed in relatively the same area (curbside) for collection.

Rear loading compactor trucks are often used by municipalities and private haulers for collection of leaves and yard waste (these entities typically also provide residential MSW collection services). These collection programs generally require specific materials preparation. Leaves must be bagged and placed in thirty-gallon Kraft paper bags, in rigid containers. Shrubbery and trimmings must be restricted to a size and weight that can reasonably be handled by collection crews and the collection vehicle. This system is labor intensive, requiring a crew of two to three persons, however, it increases collection efficiency via compaction and load capacity (up to thirty cubic-yards) and reduces the number of trips required to offload materials. Rear loading compactor trucks have a wide range of costs, \$140,000 to \$200,000 depending on numerous variables.

Dump trucks, generally ten-ton, are also used for municipal collection of leaf and yard waste. Leaves must be bagged in thirty-gallon Kraft paper bags or placed in rigid containers. Shrubbery and trimmings must be bundled and restricted to a size and weight that can reasonably be handled by collection crews and the collection vehicle. This system of collection is very labor intensive and manually loading of leaf and yard waste on a dump truck is both difficult and strenuous. Costs of dump trucks have a range of \$80,000 to \$100,000 depending on numerous variables and are not usually dedicated entirely for leaf and yard waste collection.

Due to the limited capacity of these vehicles, they do not provide for efficient collection and require numerous trips to offload materials at the compost site. This situation significantly decreases collection efficiency and increases collection cost.

A wood chipper is sometimes used at the point of collection to reduce volume of brush and tree trimmings. Wood chippers used for this service range in price from \$25,000 to \$35,000. Although this process is labor intensive it increases collection efficiency via volume reduction and reduces the number of trips required to offload collected materials.

As an alternative to the above noted systems, the Township could provide residential curbside collection services for leaf and yard waste on an “on request” or “reservation” basis for collection from individual households. Collection services would be provided only during specified period(s) and only to those residents who specifically request them.

Details about the collection particulars, types of materials to be collected, required preparation, the collection period and the time frame for making reservations must be well defined and publicized, well in advance of the program.

A program co-coordinator is required to take and log the requests and schedule pickups, monitor participation, quantity of materials collected and program costs.

Reservations provide a municipality advance notice of the number of collections required. Equipped with the number of required pickups the municipality is able to calculate/estimate the number of days and crews required to complete the collection efforts. This type of program is often carried out as a pilot allows a municipality to gain experience with collection practices and provide valuable data and insight relative to quantities and types of materials generated.

A reservation collection program will require at a minimum,

- ⇒ Manpower - Collection crew(s) and a coordinator.
- ⇒ Education - A public education campaign to inform and instruct residents regarding program particulars.
- ⇒ Equipment – Use of existing or specialized equipment to collect and transport leaves and/or yard waste to a compost facility.
- ⇒ Financial Resources - To cover program cost (collection, transport, processing, coordination and education).

Reservation collection programs are normally conducted in the fall and/or in the spring.

To cover program costs a service fee can be charged (flat rate or quantity based) to residents requesting collection services.

Municipal operation of a curbside collection program requires an extensive financial commitment, initially for the purchase of specialized collection equipment and over term for equipment maintenance, labor and program administration costs.

All levels of municipal governments have, over the past few decades, faced ever-increasing responsibilities and resulting rising cost to address infrastructure needs, planning and zoning issues and public demands for additional services. Given the increase in municipal responsibilities and the corresponding financial strain associated with providing services any consideration of providing new/additional services necessitate scrutiny to avoid adding additional financial burden to an already stressed tax base.

Given the high cost for collection equipment (particularly considering the highly competitive and uncertain nature of future Act 101 grant funding assistance), equipment maintenance and personnel costs, municipal collection is not the option of choice for many municipalities.

The Township recognizes the many challenges associated with establishing and operating a municipal leaf and yard waste collection program that it lacks the experience, manpower and equipment associated with initiating and operating a program and therefore indicated that at this time it is not interested in pursuing this option.

Individual Contracts / Subscription Collection

Individual contracts or private subscription for curbside collection services is the system currently used by the Township for collection of MSW and recyclables. Municipal waste haulers are required under the Township's mandatory recycling program to provide recyclables collection services. Residents contract directly with the hauler of their choice for waste and recyclables collection services.

Although several analyses have shown that individual contracting is the most costly type of all collection service; it is still preferred in many areas. Predominately, collection services provided under individual contracts are by local haulers and/or a mix of larger firms and local haulers. Local residents often favor the service provided under individual contracts in that local haulers are apt to meet special needs or wants of the household e.g., place of collection, types of materials collected or provision of special collection services.

The system of private subscription is not only costly but it is inefficient in that it requires duplication of efforts, increases air pollution and can create traffic and safety problems. Several trucks travel essentially the same routes each collecting only a portion of the households along the way. For mandatory programs enforcement is, at times, a challenge with this system and may require enforcement actions to assure compliance with municipal ordinances governing collection and disposition of leaf and yard waste.

Municipalities initiating mandatory collection programs, as in the case of the Township, often favor this system for its ease of implementation and administration and the fact that there are few, if any, direct costs to the municipality. The residents using the services of a private hauler pay costs of collection.

This option is the current choice of the Township to establish a leaf and yard waste collection program. The Township has revised its recycling ordinance to include provisions for establishment of a mandatory leaf and yard waste collection program including a requirement that private haulers provide specified leaf and yard waste collection services at specified times. The cost to the Township is nominal, revision of ordinance and associated cost of public notice and public education. Collection costs will be passed on to the residents.

Although this option appears to meet the Township's goal to establish a leaf and yard waste collection program that will require minimal effort and cost for development and implementation, as previously noted, it is not an efficient or cost effective system. Again, problems include, duplication of efforts and additional truck traffic resulting from several private haulers collecting different households along the same routes. Duplication of collection efforts also reduces collection efficiency and increases costs and enforcement and program monitoring may require a great deal of time and effort for responsible Township personnel.

Municipal Contracted Collection

Numerous municipalities who wished to avoid the burdens and challenges associated with municipal collection and the costs and problems associated with private subscription have opted to privatize or procure contracted services for their collection programs for MSW and/or recyclables. Many municipalities have also recently opted to contract for collection of leaf and yard waste as part of an existing MSW and/or recyclables contract or on as a separate contract. Privatization/contracted services generally provide cost savings in the range of twenty to thirty percent or better, through increased efficiencies and economy of scale. The amount of savings generally increases with the number of services contracted for with a single contractor.

In Pennsylvania, a municipality is required to follow a competitive procurement process if they intend to contract for curbside collection services. This process entails preparation of a procurement document, commonly known as a Request for Proposal (RFP) or Request for Bid (RFB). The document usually provides a detailed description of the requested collection services, municipal background information, requirements for responses and bids and general contract terms and conditions. Upon review and evaluation of the responses, the municipality will usually negotiate the final terms and conditions of a contract with the lowest qualified bidder. Concise contract terms and conditions will help ensure a quality level of services and avoid potential areas for conflicts.

The competitive procurement process is a multi-stepped process. The process includes setting objectives, selecting a procurement strategy, defining the service required and key terms and conditions for business arrangements, preparing the Request for Proposals (RFP), interacting with the proposes, evaluating proposals, selecting a party and negotiating a contract. A successful procurement will attract competitive proposals from qualified parties, obtain attractive terms that meet procurement objectives and result in an equitable contract that fairly serves both parties.

Many municipalities who do not wish the burden of providing curbside collection services and/or are seeking the lowest cost option for curbside collection services favor contracting. A number of comparative

analyses have concluded that per household cost for curbside collection is lower under a contract system vs. municipal collection or individual contract/private subscription. Procurement of combined collection services (MSW, recyclables and leaf and yard waste) is likely to be more attractive to prospective bidders and present the greatest economic benefit to the Township, based on lower cost of operation and improved efficiency of collection.

Often municipalities who consider contracting for curbside collection service experience political pressure applied by residents in support of small haulers and open competition. Specifically, some residents oppose municipal contracting on the basis that the small haulers will go out of business, eliminating future competition and establishing a potential monopoly. Concerns regarding the quality and level of service under a municipal contract are also often voiced. Some residents favor the service provided under individual/subscription contracts due to the fact that their selected private hauler meets special needs or wants e.g., place of collection, types of materials collected or provision of special collection services. Studies and municipal surveys have shown and it is ERA's experience that the vast majority of residents favor the economic benefits associated with municipal contracted services.

The procurement process described above is usually designed to secure one contractor, a single source, to provide specified collection service(s). Specific contract terms will help ensure compliance and level of services, reduce traffic and potential safety hazards in service areas, increase collection efficiency and consistency, simplify enforcement, if the municipality has a detailed service contract with a single responsible entity.

Alternative methods for procuring private sector collection services include division of a municipality into regions or zones and contracting with multiple haulers. These alternative methods generally do not provide the same economic benefits and require greater involvement on behalf of the municipality.

5.0 Public Education/Outreach

To satisfy the requirements for public education under Act 101, it is suggested that, at a minimum, the Township;

- ⇒ Place a notice in a newspaper of general circulation providing the leaf and yard waste program requirements and particulars. (The notice must be in place 30 days prior to program initiation).
- ⇒ Provide public service announcements to the local media (Radio, TV, Newspapers and Periodicals). This is a good way to get the message out and gain support and participation.
- ⇒ Develop a brochure with a "how to message," detailing the particulars and requirements of the program. A simple tri-fold brochure will suffice. The brochure should be distributed to all targeted participants.
- ⇒ Post details of the collection program/requirements on the Townships web site (and private sector sites if applicable).

Implementing and sustaining a comprehensive public education/outreach campaign will help insure that the Township's planned leaf and yard waste program is successful initially and over the long run. The following are additional suggested components for developing a public education/outreach program that will meet the regulatory requirements, gain public interest and increase enthusiasm and support. The suggested components listed below are applicable to recycling and/or leaf and yard waste programs.

- ⇒ Place advertisements and/or public notices in a newspaper of general circulation, at least 30 days prior to initiation or modification of a recycling program and every six months thereafter. Provide details of the recycling program, its merits and the importance of participation, in an enthusiastic and interesting manner.
- ⇒ Prepare and distribute news releases and public service announcements to the local media and utilize the Township's web site and newsletter to herald the initiation of the recycling program. Provide program details and accomplishments. Emphasize the importance of the program e.g., waste stream reduction, saving on disposal fees, saving/reuse of valuable resources, reduction of dependence on disposal facilities and, of course, ***it is the law.***
- ⇒ Form a citizen's task force or recycling advisory committee. The committee can assist in program development and monitor the recycling program success, assist in public education and explore the potential for expansion of recycling efforts.
- ⇒ Develop a slogan e.g., "Send your leaves to a mulch better place"; "Recycle today for a better tomorrow". Slogans help with program identity and purpose.
- ⇒ Develop a logo representing the program that will be readily identifiable. The logo can act as a constant reminder to recycle.
- ⇒ Prepare an instructional flier, door hanger or brochure that is eye catching and to the point: (i.e.: who, what, where, when and why). The flier, door hanger or brochure may be distributed by interested volunteer organizations, or be sent with a newsletter, utility or tax bill. Additional brochures and/or posters should be placed in public buildings, schools, churches and local businesses.
- ⇒ A banner or banners can help publicize the program, e.g., herald the kick-off of the new or expanded recycling program. The banner may be used repeatedly to reinforce and encourage participation (e.g., on Earth Day and other events).
- ⇒ Distribute promotional items that encourage participation, e.g., a refrigerator magnet, collection calendar, or similar handouts displaying recycling collection requirements and/or schedules. Items that are seen or used regularly will act as a constant reminder.
- ⇒ Develop a recycling display detailing the program's benefits, chart participation and avoided cost of disposal. Exhibit the display in a municipal building or school and at various civic events.

- ⇒ Develop incentive programs that will provide rewards to households, business and institutions that participate in recycling.
- ⇒ Encourage and assist schools to provide for recycling/composting education programs. Youth can be effective reminders to adults of the importance of recycling and composting. Youth are often the best educators of adults.

6.0 Recommendations

The following are ERA's recommendations for the development of a program for the curbside collection and proper disposition of leaf and yard waste. ERA offers the following based on the information gained and considered during this analysis and its experience gained in providing similar services to other Pennsylvania municipalities. The recommendations are intended to assist the Township to develop a leaf and yard waste collection program that is easy to implement, does not create a financial burden and/or stress its current manpower resources and is consistent with the requirements of Act 101.

ERA recommends that the Township consider,

- ⇒ A competitive procurement process to contract, at a minimum, for two fall and one spring curbside collection of leaf and yard waste. Although not included in the scope of work for this study, ERA further recommends that the Township consider including waste and recyclables collection as part of the procurement request. A combined request for all three noted services would provide a comprehensive integrated collection system providing the above noted benefits and greatly diminish the problems associated with the current redundant collection system of multiple haulers.
- ⇒ Establishing a task force or recycling advisory committee comprised of residents and stakeholders to review and consider the alternatives and recommendations presented in this study. The designated body could assist the Township in informing the public of available alternatives for collection of leaf and yard waste and comprehensive collection services to include waste and recyclables. To assist the Township in the decision making process they could also solicit input, via a public survey, relative to the types and frequency of collection services desired.
- ⇒ Developing, implementing and sustaining a comprehensive public education/outreach campaign. The importance of comprehensive and sustained education and outreach efforts cannot be over emphasized. A direct correlation can be made between the level of sustained public education/outreach efforts and the level of a program's success.
- ⇒ Submitting an application for funding assistance under Section 902 of Act 101 (if available) for eligible program costs including those associated with, the preparation/revision of the Township's Recycling Ordinance and cost associated with procurement of collection services.

Attachment A.

Title 25. Pennsylvania Code

Presented below are pertinent sections of Title 25 Pennsylvania Code (emphasis added) for the establishment and operation of a recycling program for a mandated municipality.

Title 25, Pennsylvania Code

Program Elements Section 272.421

The source separation program shall include, at a minimum, the following elements:

1. An **ordinance or regulation** adopted by the governing body of the municipality, in accordance with Section 272.422 (relating to municipal ordinance).
2. A **scheduled day** during which separated materials are to be placed for collection at the curbside. Collection shall be at least once per month for materials other than leaf waste. Collation for leaf waste shall be scheduled as appropriate. If no curb exists, separated materials shall be placed at a location similar to the curb where they may be collected easily.
3. A **system**, including trucks and related equipment, that collects recyclable materials from the curbside or similar location at least once per month from each residence or other person generating municipal waste in the municipality.
4. A public information and **education program**, in accordance with 272.423 (relating to public information and education).
5. Provisions for the **recycling of** collected materials.

Municipal Ordinance Section 272.422

(a) The ordinance or regulation adopted by the governing body of the municipality shall contain the following requirements:

1. Persons shall separate **at least three materials** from municipal waste generated at their homes, apartments, and other residential establishments, and shall store the materials until collection. The three materials shall be designated in the ordinance, and shall be chosen from the following:
 - **Clear glass**
 - **Colored glass**
 - **Aluminum**
 - **Steel and bimetallic cans**
 - **High-grade office paper**
 - **Newsprint**
 - **Corrugated paper**
 - **Plastics**

2. Persons shall separate leaf waste from municipal waste generated at their homes, apartments and other residential establishments until collection, unless those persons have otherwise provided for the composting of leaf waste.
3. Persons shall separate high-grade office paper, aluminum, corrugated paper and leaf waste generated at commercial, municipal or institutional establishments and from community activities, and store the materials until collection. The ordinance may designate additional materials for recycling.

(b) The ordinance shall allow an owner, landlord, or agent of an owner or landlord of multifamily rental housing properties with four or more units to comply with its responsibilities under this subchapter by establishing a collection system for recyclable materials at each property. The collection system shall include suitable containers for collecting and sorting materials, easily accessible locations for the containers and written instructions to the occupants concerning the use and availability of the collection system. Owners, landlords, and agents of owners and landlords who comply with the ordinance under this subsection are not liable for the noncompliance of occupants of their buildings.

(c) The ordinance shall exempt persons occupying commercial, institutional and municipal establishments within its municipal boundaries from the ordinance if the following requirements are met:

1. The persons have otherwise provided for the recycling of materials that they are required by this subchapter and the ordinance to recycle.
2. The persons annually provide written documentation to the municipality of the amount of municipal waste generated as well as the type and weight of materials that were recycled in the previous calendar year.

(d) Nothing in the ordinance or regulation may impair the ownership of separated materials by the persons who generated them until separated materials are placed at curbside or similar location for collection by the municipality or its agents.

Subchapter E. Municipal Recycling Program

Public Information and Education Section 272.423

- (a) A municipality subject to this subchapter shall establish a comprehensive and sustained public information and education program concerning recycling program features and requirements. As part of this program, a municipality shall, at least 30 days prior to the initiation of the recycling program and at least once every 6 months thereafter, notify persons occupying residential, commercial, institutional and municipal premises within its boundaries of the requirements of the ordinance. This notice shall include an explanation of how the system will operate, the dates of collection, and responsibilities of persons within the municipality and incentives and penalties.

- (b) The governing body of a municipality may place an advertisement in a newspaper circulating in the municipality, post a notice in a public place where public notices are customarily posted; including a notice with other official notifications periodically mailed to residential taxpayers, or utilize a combination of the foregoing.

Program Implementation Section 272.424

- (a) Except as provided in subsection (b), a municipality shall implement its responsibilities for collection, transportation, processing and marketing materials under this subchapter in one or more of the following ways:

(1) Collect, transport, process or market materials as required by this subchapter.

(2) Enter into contracts with other persons or license other persons for the collection, transporting, processing or marketing of materials as required by this subchapter. A person who enters into a contract or is licensed under this subsection shall be responsible with the municipality for the implementation of this section.

- (b) Nothing in this subchapter requires a municipality to collect, transport, process and market materials or to contract for the collection, transportation, processing and marketing of materials from an establishment or activity if the following are met:

(1) The municipality is not collecting and transporting municipal waste from the establishment or activity.

(2) The municipality has not contracted for the collection and transportation of municipal waste from the establishment or activity.

(3) The municipality has adopted an ordinance as required by this subchapter and the establishment or activity is in compliance with this subchapter.

Preference Section 272.425

In implementing its recycling program, a municipality shall accord consideration for the collection, marketing, and disposition of recyclable material to persons engaged in the business of recycling on September 26, 1988, whether or not the persons were operating for profit.

To implement an enforcement program – Your program is to periodically monitor, receive and resolve complaints, issue warnings and, when necessary, assess fines and penalties.

Attachment B.

List of Montgomery County Composting Facilities

List of Composting Facilities Montgomery County

		Materials																	Products						
Facility Name	Municipality	Pmt?	Bran	Wd Wst	Stmp Dbr	Wd Chps	Saw Dust	Mnur	Hay	Mus Soil	Bio Sol	Ppr Res	Bru	Chr Tree	Food Wst	Grs	Lvs	Plts	Ch Srv	Mul Pro	Com	Com Tea	Wrm Cst	Msh Soi	Bio Com
Abington Township	Abington Township	x	x										x			x	x		x		x				
Barnside Farm	Lower Salford Township	x															x			x					
Cheltenham Township Compost Site	Cheltenham Township		x										x			x	x		x	x	x				
Collegeville-Trappe Joint Public Works	Trappe Borough		x	x									x			x	x		x	x					
Conshohocken Borough	Conshohocken Borough	x														x	x				x				
Douglass Township	Douglass Township	x															x			x					
Lower Merion Township	Lower Merion Township	x	x										x				x		x	x					
Mac Mulch	Upper Merion Township	x															x			x	x				
Mascaro Composting	Franconia Township	x															x			x					
Norristown Farm Park Environmental Landscaping Services Inc.	East Norriton Township	x															x					x			
Plymouth Township	Plymouth Township	x	x										x				x		x	x	x				
Royersford Borough	Royersford Borough	x																		x					
Springfield Township	Springfield Township	x															x					x			
Telford Borough	Telford Borough	x															x		x	x	x				
Two Particular Acres	Upper Providence Township	x				x		x					x		x	x	x					x			
Upper Dublin Township	Upper Dublin Township	x	x										x			x	x		x		x				
Upper Merion Township	Upper Merion Township		x			x								x		x	x			x	x				
Upper Moreland Township	Upper Moreland Township	x											x			x	x		x	x					
Valley Forge Fill Site	Upper Merion Township	x															x			x					
Wayne Carmint Landscaping	Upper Merion Township	x															x			x					
Whitemarsh Township	Whitemarsh Township	x											x				x		x	x					

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