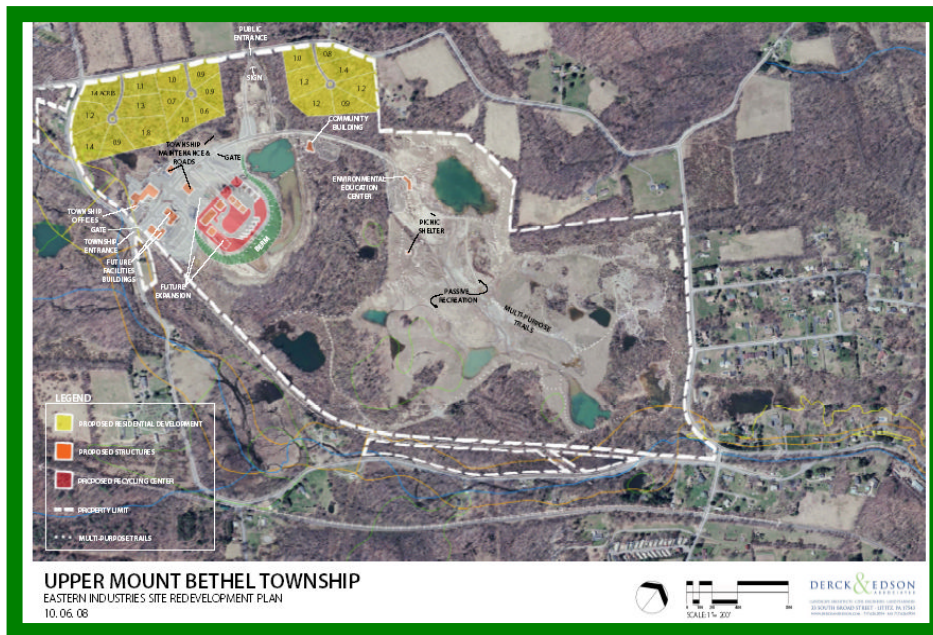


MULTI-MUNICIPAL COMPOST FACILITY



Environmental Resources Associates

CONSULTANTS IN ENVIRONMENTAL RESOURCE MANAGEMENT



TABLE OF CONTENTS

1.0 Executive Summary	1
2.0 Background	2
3.0 Overview and Current Situation	3
3.1 Current Yard Waste Programs	4
4.0 Proposed Compost Facility	5
4.1 Development and Operations	6
5.0 Estimated Project Costs	9
6.0 Program Sustainability.....	12
6.1 Capital Costs	12
6.2 Annual Operations and Maintenance Costs	16
7.0 Program Sustainability.....	18
8.0 Costs Distribution	22
9.0 Tracking Quantities	23
10.0 Inter-municipal Agreement	24
11.0 Recommendations	25

Figure

Site Plan Figure 1

Attachments

Draft Inter-municipal Agreement Attachment A

Stroud Township Fee Schedule Attachment B



1.0 Executive Summary

The Bangor Borough Authority (Authority) in conjunction with the Borough of Bangor (Borough) initiated an effort to identify, evaluate and permit a multi-municipal compost facility to meet its needs and those of the members of the Slate Belt Council of Governments (COG) for leaf and yard waste processing and composting services. As a result of these efforts a site was selected in Upper Mount Bethel Township (Township).

The Township has received approval for the construction and operation of the 4.1 acre compost facility under PADEP "Guidelines for Yard Waste Composting Facilities". The Township will own, operate and act as lead agency for the proposed multi-municipal compost facility/program and provide services to the Borough and potentially other COG municipalities.

Assistance provided by Environmental Resources Associates (ERA) during the preparation of this report included: assessment of manpower and equipment requirements and options for financing and sustaining the proposed compost facility/program and the preparation of a draft inter-municipal agreement.

Based on the assessments and evaluation presented in this report, ERA offers the following recommendations to assist the Township and the Borough in developing a cost effective and efficient multi-municipal compost facility.

- Continue to pursue a multi-municipal approach regarding the development and operation of the proposed compost facility, based on the assessments and analysis presented and the resulting consensus reached by the involved municipalities. A multi-municipal program will provide the benefits of economy of scale and enhance the prospects of receiving Act 101 Section 902 funding.
- Determine site development/construction costs.
- Make final determinations relative to specific equipment needs.
- Consider use of Township equipment and personnel and existing (on sight) stockpiles of gravel for the economic construction/development of the compost facility site.
- Apply for an Act 101 Section 902 Grant to assist in funding eligible program development, implementation and equipment costs.
- Identify and track all costs (full costs) associated with the overall development and operation of the compost facility as well as for specific efforts. This approach will greatly assist the Township to accurately determine fair and equitable fees for services and products.



Additionally, serious consideration should be given to a full cost approach for equipment depreciation (exclusive of Act 101 funding) to provide for an equipment replacement fund and help insure the compost facility's economic sustainability.

- ☑ Establish a system for tracking the origin and volume of feedstocks.
- ☑ Consider participation of the commercial sector patrons.
- ☑ Develop and execute an inter-municipal agreement that succinctly defines functional and financial aspects of the project and the roles, responsibilities and obligations of each participating municipality (both current and future).
- ☑ Survey the COG municipalities to determine their interest in participating in the proposed compost facility. Involving interested municipalities at this point would allow them to: contribute to the remaining planning and decision making process, make informed decisions and thus enhance the possibility of them committing to the project.

2.0 Background

The Bangor Borough Authority (Authority) in conjunction with the Borough of Bangor (Borough) initiated an effort to identify, evaluate and permit a multi-municipal compost facility to meet its needs and those of the members of the Slate Belt Council of Governments (COG) for leaf and yard waste processing and composting services. This approach was adopted to avoid duplication of efforts, provide the benefits of economy of scale and enhance the prospects of receiving Act 101 Section 902 grant assistance.

The Authority conducted a survey of the COG member municipalities (the Boroughs of Bangor, East Bangor, Pen Argyl, Portland, Roseto and Wind Gap and the Townships of Lower Mount Bethel, Plainfield, Upper Mount Bethel and Washington) to determine their interest (if any) in participating in a multi-municipal leaf and yard waste program.

Interested municipalities were also requested to indicate if they own any property (in the range of two to five acres) for consideration for development of a leaf and yard waste compost facility site to service a multi-municipal program. The consensus of the municipalities surveyed was positive and several municipalities identified potential sites.

Based on the preliminary evaluation of the sites identified, a candidate site located in Upper Mount Bethel Township (Township) was selected. The Township's site is located approximately six miles east of the Borough. The 4.1-acre site is located on a 61.46-acre parcel owned by the Township.



ERA conducted a detailed site assessment and developed the conceptual design for the candidate site and completed all forms and narratives required for submission under PADEP “Guidelines for Yard Waste Composting Facilities”.

These efforts were provided under the Recycling Technical Assistance Program. The permit application was submitted on January 20, 2009.

Although the consensus of remaining COG municipalities indicated interest in participating in an inter-municipal composting program (based on the survey conducted by the Bangor Borough Authority) only the Township and Borough have remained dedicated to advancing the program.

The Township has received approval for the construction and operation of the 4.1 acre compost facility under PADEP “Guidelines for Yard Waste Composting Facilities”. The Township will own, operate and act as lead agency for the proposed multi-municipal compost facility/program and plans to provide processing and composting services to the Borough and potentially other COG municipalities.

The Township requested technical assistance through the Recycling Technical Assistance Program to aid the Township and Borough in further evaluating the potential for establishing a multi-municipal leaf and yard waste facility. The proposed compost facility will serve the Township and Borough and potentially other COG municipalities, willing to commit to the project.

ERA was selected to provide consulting services to:

- Identify operation requirements for the proposed compost facility and required manpower and equipment needs (based on estimated generation/capture rates of leaf and yard waste).
- Identify and assess options for financing and sustaining the proposed compost facility/program.
- Assist the Township and the Borough to develop an inter-municipal agreement, identify and address the primary responsibilities and obligations (both functional and monetary) for participation in the multi-municipal composting facility/program.

3.0 Overview and Current Situation

The Township and Borough have worked cooperatively recognizing that a properly developed and operated multi-municipal compost facility will be a valuable asset that will potentially provide several benefits to their respective municipalities and potentially others. These include but are not limited to:

3.



- Diversion of valuable organic resources to the compost facility and away from the waste stream.
- Avoidance of disposal costs and/or processing and transport costs associated with use of distant facilities.
- Conserving disposal capacity.
- Providing the economic benefits associated with economy of scale.
- Producing valuable organic products (compost and wood chips/mulch) for use by the Township, Borough and potentially other participating municipalities and the resulting avoidance of costs associated with the purchase of these products.

3.1 Current Yard Waste Programs

Upper Mount Bethel Township

Upper Mount Bethel Township has a total area of 44.3 square miles and a population of 6,706 persons (2010 census). The Township is not an Act 101 mandated community and currently does not provide drop-off or curbside leaf and yard waste collection services for its residents. The Township does not plan to provide curbside collection services to its residents at the onset of the program. Rather, the Township has adopted a crawl, walk, run approach to developing a comprehensive leaf and yard waste management program, transitioning from a drop-off program into a drop-off and curb side leaf and yard collection program. Initially it is actively pursuing the development of a composting facility/program cooperatively with the Borough of Bangor. The Township will own and operate the proposed compost facility and provide drop-off and processing services for leaf and yard waste to its residents and processing services to the Borough and potentially several other COG municipalities.

Bangor Borough

Bangor Borough is a mandated municipality. The Borough has a total area of approximately 1.6 square miles, and a population of 5,273 persons (2010 census).

The Borough developed a leaf and yard waste collection program to bring it into compliance with the requirements of Act 101 for mandated municipalities. The Borough initiated a curbside collection and drop-off program for leaf and yard waste in 2008 with an initial curbside and drop-off collection in the spring followed by fall collections during October through December.



Borough public works personnel currently use dump trucks and self contained vacuum units for curbside leaf and yard waste collection. A drop-off site for leaf and yard waste is located at the Borough's Memorial Park. The leaf and yard waste collected is being delivered to Scott Farms for processing. Scott Farms is a privately operated compost facility located approximately ten (10) miles west of the Borough.

4.0 Proposed Compost Facility

The Township purchased sixteen parcels of property within or adjoining a quadrangle-shaped site (Eastern Industry Site), located in the Township. The property is bordered by Million Dollar Highway on the south, Jacoby Creek Road on the east, Boulder Drive on the north and Audubon Drive on the west. In total the parcels comprise approximately 295 acres.

Approximately one-half of the property is woodland, the remainder is land that was cleared and operated as a sand and gravel mining/quarry operation. The Site was classified by the PADEP as a "Non-Coal Surface Mine." An asphalt plant was constructed on a portion of the quarry site in 1988 and operated until it was dismantled in 1996.

There are two structures inside the fenced quarry site, a two-story office building and a combination office/lab and vehicle maintenance garage building that served the quarrying and asphalt operation.

The proposed compost facility is to be located on a 4.1-acre tract of a 61.46-acre parcel owned by the Township. The Township will act as lead agency and be responsible for the proposed compost facility operation. Initially the proposed compost facility will provide a drop-off site to service the Township's residents and provide processing services for leaf and yard waste collected by the Borough and potentially other COG municipalities.

The Township has recently completed a redevelopment plan for the entire 295-acre subject property. Initial redevelopment plans include renovation of existing buildings to provide much needed space for Township functions to include offices, equipment storage and maintenance and storage areas. The plan also includes the development of a recycling drop-off facility and the leaf and yard waste compost facility. The recycling and compost sites will be collocated and are collectively referred to as "Proposed Recycling Center" on the site development plan (see Figure 1).

The Township received approval for the construction and operation of the proposed compost facility under PADEP "Guidelines for Yard Waste Composting Facilities" in February of 2009. The facility will be limited to accepting and processing a maximum of 12,300 cubic yards of leaf and yard wastes.



Feedstocks accepted for processing and composting will be leaves and yard waste as per PADEP "Guidelines for Yard Waste Composting Facilities". Tree and brush trimmings and Christmas trees are also planned to be ground/processed into wood chips/mulch.

4.1 Development and Operations

Site Development

The proposed compost facility site is to be located on an area that was previously operated as a sand and gravel quarry and therefore disturbed, filled and developed and will not require clearing and grubbing. The site will require filling and grading to achieve optimum slopes. The site is primarily covered with gravel, and large stock piles of gravel remain on site. The stockpiles of gravel will be of great potential benefit and may provide a significant cost savings for site development and maintenance of the proposed compost facility.

Erosion and sedimentation and storm water management controls will also be required. Site development will also include, but not be limited to, engineering, construction/upgrading of access roads, installation of fencing and gates, facility signage, and other associated development efforts.

The compost facility will be located adjacent to the Township's planned new administrative and maintenance complex, thus providing additional benefits including enhanced security, user convenience and operations cost savings for equipment and labor.

The following sections have been developed through consultation with the Township and describe the proposed operation of the planned compost facility/program:

Leaf and Yard Waste Collection

The Township will collect leaf and yard waste from Township properties/projects and deliver same to the compost facility. Municipal residents may also deliver leaf and yard waste to a drop-off site at the compost facility on designated days, during specified hours. The Borough collects leaf and yard waste at curbside (during the fall and spring) as well as at drop-off locations. The Borough will then deliver the collected material directly to the Township's compost facility for processing. Neighboring COG municipalities may also (by inter-municipal agreement) deliver leaf and yard waste to the compost facility.

Technology

Open-air aerated windrow processing technology will be employed for the composting of leaf wastes. Leaves will be formed into parabolic shaped windrows of approximately 8' high X 16' wide X various lengths.



Windrows will be constructed on gravel improved surfaces to promote aeration and accommodate heavy equipment use. The windrows will be constructed in pairs with a wheel loader parallel to slope.

All collection vehicles delivering loads of leaves and yard waste will be visually inspected by compost facility employees prior to and during off-loading to ensure quality control. Any unacceptable materials/contaminants will be culled and properly disposed of by the compost facility personnel.

To minimize handling, incoming loads of leaves will be off-loaded where the windrows are to be formed. A wheel loader will be used initially to form windrows. The wheel loader bucket (3-3.5 cubic yard) will lift the organic material and allow it to cascade back into the windrow several times. This type of windrow formation and turning provides for optimum mixing and loose deposition of material, enhancing porosity and increasing airflow.

A slight indentation will be made at the top of the windrow to allow for rainfall retention, thus reducing the potential need of adding water to maintain optimum conditions for active composting.

Once windrows are initially formed by the wheel loader, a windrow turner (as is eventually planned for) will be acquired to turn and aerate the piles. The windrow turner will improve the turning efficiency and accelerate the composting process. The wheel loader will be used to turn and aerate the piles until a windrow turner is acquired.

A reduction in pile size will occur as a result of initial turnings and microbial activity, allowing the pairs of windrows to be combined to form one windrow, which will have similar dimensions to the initial parent windrows. Windrows will be constructed in sections as leaves are delivered. The individual sections will be monitored to insure active composting is maintained. Monitoring records will be maintained on each section. Eventually, through turning and mixing, the windrow will be homogenized and uniformly degrade.

Monitoring and Turning

Windrows will be regularly monitored to ensure the physical requirements of the compost process are met. Turning frequency will be based on maintaining the optimum environment for microbial activity/accelerated decomposition. All windrows will be monitored on a regular basis once a week for the first month, then once a month (at a minimum) thereafter.

The total composting time is dependent on a number of variables: primarily temperature, moisture, and oxygen content. The time period for turning the windrows will be adjusted as required, based on monitoring results. Monitoring will be done once monthly (at a minimum) to insure proper moisture and temperature ranges are maintained. Monitoring results will be recorded on Monitoring Log Sheets.



The key indicator for establishing the turning frequency is the internal windrow temperature. Windrows will be turned to maintain temperatures in the lower active (thermophilic) range (90 to 140-degrees Fahrenheit). The thermophilic temperature range should be reached within approximately two weeks to one month after initial windrow formation. Once the inner core of the windrow exceeds 140-degrees, the windrow will be turned. If the temperature of the windrow drops below 90-degrees, the windrow will likewise be turned to add oxygen and increase microbial activity. Once the temperature drops below 90-degrees and turning the windrow does not result in an increase in temperature, the compost will be moved to a curing area or allowed to cure in place for 30 to 90-days.

Windrow moisture content will also be monitored. Squeezing a handful of the composting material is a generally accepted method of determining moisture content. If a few drops of water are shed, the moisture level is sufficient. If appreciably more water is shed when the material is squeezed, the windrow's moisture content is too high and turning is required to aerate it in order to prevent anaerobic conditions from establishing.

Composting and curing will be judged complete when compost pile temperatures decrease to near ambient and remain there for 3 to 4 weeks. Finished compost will be stored in place or combined with other finished windrows until distribution.

Wood Waste Processing

The Township plans to process tree and large brush trimmings and Christmas trees at the compost facility. Wood wastes delivered to the facility will be stored at a wood waste storage area. When sufficient volumes are accumulated for economic processing, the Township will use a wood chipper and/or grinder to process the material. Wood chips will be formed into large piles. The piled wood chips will partially decompose and, therefore, generate heat and will be monitored to prevent any potential for spontaneous combustion. Partial decomposition will turn the wood chips/mulch a rich brown color.

Product Use and Marketing/Distribution

After products (compost and mulch) are used at Township and Borough properties, products will be offered to residents. Considering the residents are the ones providing the feedstocks and subsidizing program costs via tax dollars, it is only fair that residents be provided the first opportunity to receive/purchase products. Commercial sale of product will be pursued for any remaining surplus. The distribution of the product will be by truckload as well as in smaller amounts.

Drop-off Site

Residents from the Township will deliver feedstocks (leaf waste, brush and tree trimmings and Christmas trees) to the compost facility's drop-off site.



All feedstocks delivered to the facility will be segregated at the source and offloaded at designated areas at the drop-off site. If any residents deliver plastic bags to the drop-off site, their contents will immediately be emptied and inspected. Bags will be returned to the resident, as well as any unacceptable materials.

Consideration may also be given to accepting feedstocks from commercial landscapers and contractors.

Public Information and Education

The Township will post and maintain signage to identify the compost facility and inform the public of its operations, acceptable materials and rules and regulations, consistent with the requirements of the PADEP Guidelines for Yard Waste Composting Facilities.

The Township plans to develop public education/outreach campaigns to encourage program participation. The campaigns may include: announcements at public meetings, public service announcements, newsletter articles, advertisements in local newspapers and an information brochure.

5.0 Yard Waste Generation

Leaf and yard waste generation/capture rates can vary greatly based on numerous factors including, but not limited to: the type of municipality (rural, suburban or urban), the variety of feedstocks collected (leaves, yard waste, grass, brush and tree trimmings and Christmas trees), the type of collection (curbside and/or drop-off), program convenience, and public education.

Generation/capture rates can be as diverse as the individual municipalities and their particular programs. Generation/capture rates for municipal leaf and yard waste curbside collection programs typically range from 100 to 250 pounds per capita per year.

Program Start-up Estimated Generation Rate

Based on data provided by Bangor Borough Authority (2010 Annual recycling Report), the Borough collected an estimated 260 tons of leaf and yard waste. Given a population of 5,273, this translates into 98.6 pounds per capita per year.

As previously noted, the Township has adopted a crawl, walk, run approach to developing a comprehensive leaf and yard waste management program. ERA concurs with this approach. However, given that the Township has not previously operated any type of leaf and yard waste collection program (and that it initially does not plan to provide curbside collection services), it is difficult to estimate with any accuracy the quantity of leaf and yard waste that could be collected.



The actual quantity of yard waste collected by any type of a collection program (mandatory or voluntary, curbside and/or drop-off) will be highly dependent on the types of materials accepted (leaves, yard waste, grass, large brush and tree trimmings and Christmas trees) and the level of participation. Primary factors that encourage participation include developing and successfully implementing a comprehensive public education and outreach program as well as user convenience level. It is particularly important for a drop-off program to provide a centrally located drop-off site with convenient access for program participants. It is a plus that the Township's proposed compost facility/drop-off site will be centrally and conveniently located adjacent to the new municipal complex.

Considering that the Borough's leaf collection program has operated only for three years and that participation typically grows with program maturity a conservative estimate of 103 pounds per capita generation/capture will be used for this study. This estimate represents an approximate five percent increase (based on the Borough's 2010 per capita rate of 98.6 pounds) and is considered practical for the purpose of this study.

The 103 pound per capita per year generation rate of leaf and yard waste is an equitable gauge for what the Township's residents may generate. The estimated participation rate is presumed to be 50%, which is based on ERA's experience with municipal leaf and yard waste drop-off programs and the popularity of these programs among residents.

Table 1 presents the estimated annual leaf and yard waste generation based on the proposed start-up program with the Township and Borough being the only participants.

Table 1
Estimated Annual Generation of Leaf and Yard Waste

Municipality	Population	Cubic Yards
Bangor Borough	5,273	1,086
Upper Mt. Bethel	6,706	691
Total	11,979	1,777

NOTE: Yard waste estimates are calculated at a rate of 4 cubic yards of yard waste per ton (PADEP recommended conversion rate).

Program Expansions

ERA has prepared two additional scenarios to provide the Township with a general perspective of the potential quantities that could be anticipated with program expansions, considering the permitted capacity of the compost facility:



Scenario One - The Borough continues its current collection program and the Township continues a drop-off program and establishes a curbside leaf and yard waste collection program.

Scenario Two - The Borough, Township and all remaining COG members operate a drop-off and curb side collection leaf and yard waste program.

The estimates presented in Table 2 and Table 3 below are intended for the Township’s consideration and planning purposes. As noted above, a number of variables will ultimately determine actual generation/capture rates.

Scenario One – Township Institutes Curbside Collection

Table 2 presents the estimated annual yard waste generation, based on the Township continued operation of a drop-off program and establishes a curbside collection program. Estimates are based on the Borough’s projected generation rate of 103 pounds of leaf and yard waste per capita, for both the Borough and the Township.

Table 2
Estimated Leaf and Yard Waste Annual Generation

Municipality	Population	Cubic Yards
Bangor Borough	5,273	1,086
Upper Mt. Bethel	6,706	1,381
Total	11,979	2,467

NOTE: Yard waste estimates are calculated at a rate of 4 cubic yards of yard waste per ton (PADEP recommended conversion rate).

Scenario Two- The Borough, Township and all remaining COG members operate a drop-off and curbside leaf and yard waste collection program.

Table 3 presents the estimated annual leaf and yard waste generation based on the Borough, Township and all remaining COG members operating a drop-off and curbside leaf and yard waste collection program. Estimates are based on the Borough’s projected generation rate of 103 pounds of leaf and yard waste per capita, for the Borough, Township and remaining eight COG municipalities.

Scenario Two is unlikely in the near future, given that the remaining COG member municipalities are not mandated municipalities and have made no formal commitments to participation in the project. Based on the estimated leaf and yard waste volumes, Scenario Two demonstrates that the permitted processing capacity of the proposed compost facility (12,300 cubic yards of leaf and yard wastes) is more than adequate to accommodate future growth and expansion.



Table 3
Estimated Cubic Yards of Leaf and Yard Waste Generation

Municipality	Population	Cubic Yards
Bangor Borough	5,273	1,086
Upper Mt. Bethel	6,706	1,381
COG	23,934	4,537
Total	35,913	7,004

NOTE: Yard waste estimates are calculated at a rate of 4 cubic yards of yard waste per ton (PADEP recommended conversion rate).

In view of the facilities permitted capacity of 12,300 cubic yards the Township may wish to consider providing processing services to commercial sector patrons and/or accepting additional feedstocks (grass, wood chips and large diameter tree trimmings). Acceptance of commercial patrons and or additional feedstocks will increase the benefits of economy of scale and provide additional revenue streams to assist in offsetting operations costs.

6.0 Project Costs

The majority of a compost facility's capital costs for project development and equipment may be funded by Act 101, Section 902 grants, up to ninety percent of total costs.

Based on information provided by PADEP representatives it is anticipated that an Act 101, Section 902 grant offering will be announced in the near future.

Labor and other operations and maintenance costs for of the compost facility will also be significant and are not eligible for Act 101 grant funding. These costs should be funded primarily by the Township, Borough and other participating municipalities.

6.1 Capital Costs

Costs related to the compost facility's development/construction and requisite equipment are considerable. Assessment of capital costs are an essential element in determining the full costs associated with the compost facility.

Compost Site Development Costs

The 4.1 acre proposed compost facility site has previously been used as a stone quarry and therefore disturbed, filled and developed. The site, as a result of its previous use, is considered well suited for development of a compost facility. The



site is gravel covered with somewhat gentle slopes and therefore will not require clearing and grubbing, it will however, require filling and grading to achieve optimum slopes. Erosion and sedimentation and storm water management controls will also be required. Typical site development will also include: engineering, construction/upgrading of access roads, installation of fencing and gates, facility signage and other associated development efforts.

The Township, following its crawl, walk, run approach to project development may wish to consider phasing the construction of the facility. A phased approach would reduce the development costs for the proposed start up program. Should the Township follow a phased approach it is recommended that approximately fifty percent of the total site, two (2) acres, be developed initially. Two (2) acres are more than sufficient to accommodate the estimated volumes for the start-up program and allow for participation of additional municipalities and or commercial patrons.

The Township possesses the equipment, expertise and primary materials required for construction/development of the compost facility site including:

- An inventory of existing equipment (a track and a wheel loader, excavator, roller/compactor, backhoe and grader) of the types and sizes needed to accomplish site construction/development.
- Employees with the expertise to operate the equipment efficiently.
- Large stockpiles of gravel, remaining on site from previous surface mining operation.






These assets would undoubtedly provide for significant cost savings relative to the site construction/development for the proposed compost facility.

Whether the Township follows a phased approach or develops the entire 4.1 acre site it is imperative that the Township carefully track and record all cost associated with the site construction/development, to include any in-kind contributions provided. The value of labor, equipment and materials associated with site construction/development and the lease value of property are eligible to be used as a part of the required 10% match for Act 101, Section 902 Grants.

Typical Site Development Costs Include, but are not limited to:

- Land acquisition
- Engineering
- Site grading
- Preparation of site working surfaces (windrow pads, material processing and storage areas)



-  Storm water management
-  Utilities
-  Road construction
-  Fencing and security gate
-  Signage

Analysis of site development/construction costs are not included within the scope of this study.

Equipment Costs

The following types of equipment should be considered to meet the short and long term materials handling and processing needs for the planned compost operations. Cost ranges for equipment are present in Table 4.

Wheel Loader

A wheel loader with a 2.5 to 3 cubic yard bucket is required for efficient operation of the proposed compost facility. The wheel loader can be considered the work horse of a compost facility. The wheel loader is the most versatile piece of equipment at a compost site. This equipment can be used to accomplish initial construction of windrows, turn and combine windrows, load brush and tree trimmings into grinders, move feedstock materials and products on site and load bulk products for distribution.

Windrow Turner

The price range for windrow turners presented in Table 4 includes PTO and tow behind units. These windrow units are in the smaller range of windrow turners, suitable for small operations. Units within the price range are capable of turning a windrow that is five foot or greater in height. A windrow height five foot or greater insures that the windrows are capable of maintaining internal temperatures in the optimum range for proper decomposition.

A windrow turner will improve the turning efficiency, reduce particle size of leaves and thus accelerate the composting process and aid in improving final product quality.

Based on the relatively small volumes of leaves estimated to be accepted for processing during the start up phase and initial years of the proposed compost operation a windrow turner is not considered essential for these periods.

Chipper

The price ranges for chippers presented in Table 4 are based on commercial grade tow behind units.



A chipper is designed to process brush and tree trimmings into wood chips and is a relatively low capital cost option for processing the woody component of yard waste. However, the wood chips produced from chippers may require further processing if a consistent size is desired to produce a quality mulch product.

Additionally the units are hand fed and therefore labor intensive when processing large quantities. Additionally, stockpiled brush and tree limbs often become entangled and require some hand separation of the brush and limbs so they can be fed into the chipper.

Horizontal Grinder

The price ranges for grinders presented in Table 4 are for units that are in the lower price range for horizontal grinders. The units in the price range are portable and can be easily transported (towed) for on and off site use. This feature will allow the Township the ability to provide off-site grinding services to other municipalities and or private communities at designated drop-off sites. It would also potentially reduce the cost associated with transport of unprocessed woody waste and provide an additional source of revenue.

A horizontal grinder is a relatively more costly option, compared to a chipper, for processing brush and tree limbs. However, the grinder is less labor intensive, more efficient, accommodates larger diameter woody wastes and produces a consistent high quality wood chip/mulch product.

Trommel Screen

The price ranges for trommel screens presented in Table 4 are for units that can be transported (towed) for on and off site use.

Unscreened compost often contains clumps of partially decomposed material and various contaminants (stone, small branches and other non-compostable debris). A trommel screen is used to screen finished compost to produce a uniform, and contaminant free high quality product.

A trommel screen is also capable of screening wood chips, soil and blending compost and soil (to produce enhanced soil products). Screening and blending of materials will allow the Township to produce high quality and value added products.

Compost Thermometers

The price ranges for compost thermometers presented in Table 4 are on a per unit basis. The units are the heavy duty, long stem (48 inches) analog variety. At minimum three compost thermometers are suggested for efficient windrow monitoring.



Table 4 presents estimated cost ranges for equipment that will meet the needs of the proposed compost operation to produce compost and wood chips/mulch. Estimated ranges are based on estimated quotes and price ranges provided by various manufacturer representatives.

**Table 4
Processing Equipment**

Processing Equipment	Range of Costs
Wheel Loader	\$100,000.00 - \$175,000.00
Windrow Turner	\$67,000.00 - \$150,000.00
Chipper (brush & trimmings)	\$20,000.00 - \$50,000.00
Horizontal Grinder	\$110,000.00 - \$200,000.00
Trommel Screen	\$90,000.00 - \$200,000.00
Compost Thermometer	\$175.00 - \$450.00

The Township has indicated that: in view of the current economic conditions and the resulting fiscal constraints being experienced by the Township, Act 101 Section 902 funding assistance will be required for the practical development/construction of the proposed compost facility and for the procurement of required equipment.

6.2 Annual Operations and Maintenance Costs

The estimates presented below are meant to be used for planning purposes only. Decisions, yet to be made, regarding equipment and level of processing to be employed and the actual quantity of leaf and yard waste collected will be the determining factors of actual labor and operations and maintenance costs.

Labor Costs

The estimates for labor costs provided in Table 5 are those associated with the proposed startup compost operation (the receipt, handling and processing of acceptable feedstock's and distribution of products). Estimates are rounded to the nearest dollar.

The following estimated annual labor costs are based on:

- ↘ The estimated volumes of yard waste for initial/startup operations (Township drop-off and Borough curbside collection and drop-off).



↪ The drop-off site being monitored/manned during operating hours by a part time employee earning an hourly rate of \$7.25 (minimum wage).

↪ The Township provided average hourly labor rate of \$39.99 (inclusive of benefits) applies to facility manager and equipment operators.

Table 5
Estimated Annual Labor Costs

Task	Cost Per Hour	Hours Per Year	Annual Cost
Administration/Oversight (1)	\$39.99	24	\$960.00
Manning Drop-Off Site (2)	\$7.25	408	\$2,958.00
Windrow Formation (3)	\$39.99	50	\$2,000.00
Windrow Monitoring (4)	\$39.99	20	\$800.00
Windrow Turning (5)	\$39.99	56	\$2,239.00
Grinding/Chipping (6)	\$39.99	40	\$1,600.00
Screening (6)	\$39.99	30	\$1,200.00
Product Distribution (7)	\$39.99	30	\$1,200.00
Total			\$12,957.00

(1) Presumes 2 hours per month for this task.

(2) Presumes drop-off site being accessible 18 hours per week (October to mid December) and 6 hours per week (from mid December through end of September)

(3) Presumes an average of 5 hours a week for windrow construction during fall leaf collection season (10 weeks).

(4) Presumes windrows are monitored weekly after initial formation and every other week thereafter.

(5) Presumes 4 hours to turn windrows and windrows are turned 14 times over the term of compost process. Windrows assumed not to be turned January thru mid March.

(6) Grinding/chipping and screening labor costs will be highly dependent on the type of equipment purchased by the Township (material handling requirements and throughput capacity) and the type/quality of product desired.

(7) Product distribution labor costs will be highly dependent on the types and quality of products offered and if bulk loading services are offered.

Total Operations and Maintenance

The estimates for annual operations and maintenance costs provided in Table 6 are those associated with the planned startup compost operation and are provided as an example to be used for planning purposes only. As described above a number of variables exist that will impact the actual total annual operations and maintenance costs.



Table 6
Estimated Total Annual Operations & Maintenance Costs

Category	Annual Cost
Labor	\$12,957.00
Property Insurance	\$500.00
Equipment Insurance	\$1,500.00
Equipment Maintenance	\$2,000.00
Utilities	\$1,500.00
Fuel	\$3,500.00
Rejects Disposal	\$500.00
Education	\$1,000.00
Total	\$22,957.00

7.0 Program Sustainability

The Township’s basic goals are to develop and efficiently and economically operate a multi-municipal compost facility, with emphasis placed on economic sustainability. In order to operate a compost facility cost-effectively, a justifiable foundation for assessing fair and equitable fees for services and products must be established.

To achieve these goals an economic benchmark or yardstick should be established. It is suggested that the Township consider identifying all costs (full costs) associated with the overall development and operation of the compost facility as well as for specific efforts. This approach will greatly assist the Township to determine accurately fair and equitable fees for services and products.

Unlike more traditional accounting practices used by numerous municipalities that track only current cash expenditures, full cost accounting considers all of the costs associated with a waste management facility/operation.

The typical costs associated with a compost facility/operation include, but are not limited to: capital costs (facilities development/construction and equipment), operations and maintenance costs (associated with the handling and processing of feedstocks), utilities, insurance, program administration, product distribution and public education/outreach.

From an economic perspective, operation of a compost facility is a unique endeavor in that two potential revenue streams can be generated. One revenue stream can be derived from assessing fees on delivery of feedstocks for processing, and the other on sale/marketing of consistent high quality organic products.



Profiting from the planned compost facility is not the Township's purpose in establishing and operating a compost facility. However, to achieve economic sustainability, offsetting capital and operational costs is imperative.

Establishing equitable fees (based on a verifiable foundation of full costs) will assist in offsetting costs and achieving economic sustainability for the compost facility operation for those benefiting directly from the services and products the compost facility provides (participating municipalities, residential and potentially commercial patrons).

Equipment Depreciation

Presented below in Table 7 is an example of annualized equipment depreciation estimates for dedicated equipment typically used at a compost facility. Dedicated equipment is used exclusively for tasks related to compost operations. Depreciation on this equipment assumes a ten year useful life and is calculated on a straight-line basis rounded to the nearest dollar. Interest costs are not considered in the example.

Depreciation is computed on ten percent of the equipment purchase price, assuming ninety percent of the equipment cost is covered by Act 101 funding. Depreciation is also computed at 100% of the cost of the equipment (reflecting full cost) assuming no funding available from Act 101.

The Township should consider applying full cost depreciation when calculating service fees to enable it to set aside funds for equipment replacement. This approach is a conservative method to assist in assuring program financial sustainability, particularly considering the competitive nature of grant awards and the uncertainty of future grant funding. This approach will, however, result in increased annual budget costs and corresponding service fees.



Table 7
Estimated Annualized Equipment Costs Example

Equipment Description	Model Year	Make	Current Condition	Cost	Annualized Full Cost (1)	Annualized With Act 101 Grant (2)
Wheel Loader	2011	ACME	New	\$130,000.00	\$13,000.00	\$1,300.00
Hydraulic Track Excavator	2011	ACME	New	\$140,000.00	\$14,000.00	\$1,400.00
Skid Steer Loader	2011	ACME	New	\$50,000.00	\$5,000.00	\$500.00
Wood Waste Grinder	2011	ACME	New	\$130,000.00	\$13,000.00	\$1,300.00
Radial Stacker	2011	ACME	New	\$20,000.00	\$2,000.00	\$200.00
Compost Turner	2011	ACME	New	\$100,000.00	\$10,000.00	\$1,000.00
Trommel Screen	2011	ACME	New	\$80,000.00	\$8,000.00	\$800.00
TOTAL				\$650,000.00	\$65,000.00	\$6,500.00

NOTES

(1) Total annual depreciation **\$65,000.00** (based on purchase of equipment, at full cost, excluding Act 101 funding assistance).

(2) Total annual depreciation **\$6,500.00** (based on 10 % of actual purchase price borne by Township and 90% of cost covered by Act 101 funding).

Total Annual Costs

To determine the total annual cost for the compost facility, the Township will need to track all expenditures associated with the annual operation of the compost facility as well as the annualized capital costs for equipment and facility development. Estimates presented in Table 8 are based on ERA's experience



with development of similar facilities. These estimates are intended as an example of potential cost for consideration by the Township. Actual costs will most likely differ based on the variables discussed in previous sections.

Table 8 presents an overview example of what can be considered typical annual costs for a compost facility. The example includes annualized capital costs including and excluding Act 101 grant funding.

Table 8
Total Annual Costs

Category	Annual Full Cost (1)	Annual Cost Including Act 101 Grant (2)
Labor	\$12,957.00	\$12,957.00
Property Insurance	\$500.00	\$500.00
Equipment Insurance	\$1,500.00	\$1,500.00
Equipment Maintenance	\$2,000.00	\$2,000.00
Equipment Purchase	\$65,000.00	\$6,500.00
Utilities	\$1,000.00	\$1,500.00
Fuel	\$3,500.00	\$3,500.00
Rejects Disposal	\$500.00	\$500.00
Education	\$1000.00	\$1000.00
Facility Development (3)	\$7,000.00	\$700.00
Total	\$94,957.00	\$29,157.00

NOTES:

(1) –Assumes full capital costs of equipment (\$650,000.00) with annualized depreciation calculated over a ten year period. Depreciation of equipment not dedicated 100% to the compost operation must be calculated at the percent (%) of dedicated use at the facility.

(2) –Assumes ninety percent (90%) of costs provided by Act 101 funding with cost recovery over a ten year period. For equipment not 100% dedicated to the compost operation, only 90% of the allocated cost would apply.

(3) – Assumes \$70,000.00 capital cost for development of a two (2) acre facility, annualized using straight line depreciation over a ten year period.

Annual full cost associated with processing and handling of feedstocks and resulting products should be tracked and documented. A practical way to assess these cost is considered to be on a volumetric per unit (per cubic yard) basis. A scale is not considered a cost effective use of funds for



the size of the proposed compost facility. Accurate assessment of full costs calculated on a per unit basis will aid in providing verified annual costs, justifying fees for services and products.

Again, serious consideration should be given to a full cost approach (exclusive of Act 101 funding) to provide for an equipment replacement fund and insure the compost facility's economic sustainability.

8.0 Costs Distribution

It is imperative that a system be established for equitable distribution/sharing of costs among the municipalities participating in the compost facility/program. Cost distribution/sharing mechanisms are generally based on a per unit cost (weight or volume) per ton or cost per cubic yard.

Given the high costs associated with the purchase, installation and operation of a scale, a volume based system is considered the most practical for the Township.

Per-household or per-capita fees are options available to the Township to assess fees for the services provided to participating municipalities. These approaches are generally based on a per-household or per person estimated volume of leaf and yard waste generated annually in a given municipality. The per-household or per person estimated volume is then multiplied by the total number of households or population of that municipality. The applicable estimated costs for the compost facility to process these quantities are assessed to the municipality.

This option is often used as a fee assessment tool for curbside multi-municipal compost programs. The Township may wish to consider negotiating a per-household or per-capita approach with the Borough, at least for the initial year of the program's operation. Estimated cost/fee applied may be adjusted based on the actual quantities of feedstock's delivered and processed at the compost facility during the first year and annually thereafter.

Alternatively a volume based system based on a per delivery basis can also be considered by the Township. This option allocates a predetermined delivery fee for a specified volume of feedstock delivered to the compost facility. Under this option the Township could consider applying a tiered fee structure affording the participating municipality's preferential fees and charge higher fees to commercial patrons, should it decide to prove them access.

The potential drawbacks to a volume based system include tracking and estimating the volume of each delivery made by each patron and the costs associated with these activities. Also disputes can arise regarding the number of deliveries and or the volume of material estimated. To help alleviate these situations per delivery rates based on an established capacity of the delivery



vehicle, not the volume of material at the time of delivery are used by many municipalities. Attachment B contains a copy of the fee schedule established by Stroud Township located in neighboring Monroe County.

9.0 Tracking Quantities

The Township will be required to establish a system for tracking the origin and quantity of leaf and yard waste. This information is required for preparation of Act 101 municipal and county annual reports.

A simple check list type log could be used to track volumes of materials delivered by the Borough and potentially other municipalities. A separate log sheet could be maintained for each municipality, indicating the type of truck, type of material, estimated volume, truck license plate or other I.D. number. The facility operator/attendant would check pertinent information and have the truck driver date and sign the log. This option could be well suited to the start-up phase of the planned operation in view of the limited number of vehicles anticipated to be delivering feedstocks.

Township residents using the drop-off site could be required to provide proof of residency. The type and amount of materials they deliver could be recorded on either, a per delivery basis or calculated when sufficient quantities are aggregated to warrant processing.

Automated options also exist to track volumes of feedstock delivered. One option is the use of electronic access or key cards. This type of system is used by a number of municipalities operating compost programs. The card system can be applied to all municipal, residential and commercial patrons. The card is used in a similar manner to a credit card. The card is swiped through a groove in a reader and the user and vehicle is identified and a predetermined volume is recorded. The system can be programmed for limited or unlimited site visits. Fees can be predicated on the above noted basis and recorded accordingly. Municipalities using these types of systems have noted both benefits and drawbacks.

A bar code system is an additional option for consideration. The system would be applicable to all patrons of the compost facility (municipal, commercial and residential). A unique bar code would be printed on a card, bumper sticker or vehicle window decal.

The bar code would be read using a hand held laser scanner. According to manufactures contacted, the coded data can be transferred electronically to a computer program to record numerous items including but not limited to, the identity of the patron and vehicle, determined volume, track volumes delivered by each patron on a cumulative basis, time and date of delivery and various other pertinent data if required and/or desired. The computer program can also



generate bills and perform various other accounting functions.

The Township may wish to consider investigating the costs and benefits of the electronic systems discussed.

Based on its determination a fee structure and mechanism for fee collection should be established and implemented for all selected patrons.

10.0 Inter-municipal Agreement

An inter-municipal agreement (as authorized under Act 180) allows municipalities including counties to enter into cooperative agreements with other municipalities in the performance of their respective functions, powers or responsibilities.

The Township and Borough have determined that an inter-municipal agreement is a practical mechanism to equitably address the operation of a multi-municipal compost facility.

There are a variety of reasons that municipalities enter into an agreement for the cooperative development and operation of a compost facility for leaf and yard waste and/or to offer processing services at an existing compost facility to other municipalities. However, as with most cooperative projects the benefits of economy of scale is usually the driving force.

It is essential that the inter-municipal agreement:

- ↳ Is crafted with great care, all functional and financial aspects of the program must be considered.
- ↳ Clearly identify and succinctly define the roles, responsibilities and obligations of each participant (both current and future).

A draft inter-municipal agreement is provided in Attachment B for the Township's information and consideration. The draft inter-municipal agreement identifies the primary responsibilities and obligations for participation in the proposed compost facility, based on decisions made to date.

The draft document should be considered a work in progress. The draft document is intended as a frame work for the Township, Borough and potentially other interested municipalities to build upon during the remaining decision making process and the negotiation of final terms and conditions.

The Township and Borough will require the assistance of their solicitors in the review of the draft and the preparation and execution of the final agreement.



Serious consideration should be given to surveying the remaining COG municipalities to determine their interest in participating in the proposed compost facility. Involving any interested municipalities at this point would allow them to: contribute to the remaining planning and decision making process, make informed decisions and thus enhance the possibility of them committing to the project.

Participation by additional municipalities would further enhance the anticipated benefits of economy of scale.

10.0 Recommendations

Based on the assessments and evaluation presented in this report, ERA offers the following recommendations to assist the Township and the Borough in developing a cost effective and efficient multi-municipal compost facility.

- Continue to pursue a multi-municipal approach regarding the development and operation of the proposed compost facility, based on the assessments and analysis presented and the resulting consensus reached by the involved municipalities. A multi-municipal program will provide the benefits of economy of scale and enhance the prospects of receiving Act 101, Section 902 funding.
- Determine site development/construction costs.
- Make final determinations relative to specific equipment needs.
- Consider use of Township equipment and personnel and existing (on sight) stockpiles of gravel for the economic construction/development of the compost facility site.
- Apply for an Act 101 Section 902 Grant to assist in funding eligible program development, implementation and equipment costs.
- Identify and track all costs (full costs) associated with the overall development and operation of the compost facility as well as for specific efforts. This approach will greatly assist the Township to accurately determine fair and equitable fees for services and products.

Additionally, serious consideration should be given to a full cost approach for equipment depreciation (exclusive of Act 101 funding) to provide for an equipment replacement fund and help insure the compost facility's economic sustainability.

- Establish a system for tracking the origin and volume of feedstocks.



- ☑ Consider participation of the commercial sector patrons.
- ☑ Develop and execute an inter-municipal agreement that succinctly defines functional and financial aspects of the project and the roles, responsibilities and obligations of each participating municipality (both current and future).
- ☑ Survey the COG municipalities to determine their interest in participating in the proposed compost facility. Involving interested municipalities at this point would allow them to: contribute to the remaining planning and decision making process, make informed decisions and thus enhance the possibility of them committing to the project.

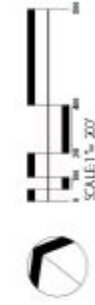


FIGURE 1 – Site Development Plan



UPPER MOUNT BETHEL TOWNSHIP
 EASTERN INDUSTRIES SITE DEVELOPMENT PLAN
 10.06.08

DERCK & EDSON
 A REALTY TRUST
 LANDSCAPE ARCHITECTS FOR PLANNING AND DESIGN
 33 SOUTH HAVEN STREET - LITTLE ROCK, AR 72201
 501.344.4444



ATTACHMENT A – Fee Schedule



ESTABLISHMENT OF A COMMERCIAL PERMIT AND FEE STRUCTURE

FOR

STROUD TOWNSHIP'S LEAF AND YARD WASTE COMPOST FACILITY

As an Act 101 mandated municipality, Stroud Township (Township) operates a leaf and yard waste composting facility/drop-off site located on Gaunt Road, off Route 611. The Compost facility and drop-off site provide Township residents, residents of surrounding municipalities and commercial landscapers/contractors the ability to deliver leaf and yard waste and acquire valuable products (compost and mulch), resulting from the processing of the leaf and yard waste.

The Pennsylvania Department of Environmental Protection (Department) has recommended that the Township establish a means to ensure the future financial sustainability/viability of its compost facility, including the maintenance and replacement of equipment used at this facility to process leaf and yard waste.

In consideration of the cost associated with the operation of the compost facility, the Department's recommendation and the increasing competitive nature and uncertainty of future ACT 101 Grant funding, the Township Board of Supervisors have established reasonable fees for continued use of the drop-off site and for products generated from the processing of leaf and yard waste at the compost facility. **NOTE: Stroud Township residents will continue to enjoy the ability to drop-off leaf and yard waste and to self-load products (compost and mulch) free of charge. A nominal fee (loading fee) will be charged for quantities of products loaded by Township personnel (as specified in the Fee Schedule).**

PROOF OF RESIDENCY IS REQUIRED.

Commercial Permit and Fee Structure

The Township Board of Supervisors has established an annual permit and vehicle registration (for each transport vehicle) for commercial users for transport to and unlimited disposition of leaf and yard waste at the Township's compost facility.

Commercial permits will be issued at the Municipal Building for an annual fee of \$500.00 plus \$100.00 registration fee per truck. A permit is not required to pick



up processed mulch or compost. For more information, inquire at the Municipal Building or call (570) 421-3362. Yard waste permit applications are available on the Township's Web Site www.township.stroud.pa.us, at the compost facility and at the Municipal Building.

Fees

Drop-Off

Stroud Township residential users will continue to be able to use the drop-off site free of charge. **Proof of residency is required.**

Nonresidents and commercial entities **that have not acquired a commercial user permit** will be charged (per delivery) as specified in the Drop-Off Fee Schedule.

Prices are subject to annual review and modification. Leaf and yard waste delivery vehicles not consistent with the following listed vehicle types tipping fee will be determined by the on site operator, based on comparative vehicle size/capacity. All fees are determined by the load capacity of the vehicle not by the volume of the load at the time of delivery. **Only acceptable materials, (leaves, grass clippings, brush and tree trimmings)** are to be delivered. These materials should be delivered source separated, to the extent possible. No plastic bags, metal, or municipal waste or rubbish of any kind will be accepted!

DROP-OFF FEE SCHEDULE

TYPE OF VEHICLE	PRICE
CAR/VAN	\$ 5.00
PICK-UP TRUCK	\$10.00
ONE TON DUMP TRUCK	\$15.00
SINGLE AXLE DUMP TRUCK	\$25.00
TANDEM-AXLE DUMP TRUCK	\$50.00
SINGLE AXLE UTILITY TRAILER	\$10.00
TANDEM-AXLE UTILITY TRAILER	\$15.00
HEAVY DUTY DUMP TRAILER	\$25.00
FIFTH WHEEL DUMP TRAILER	\$75.00
CHIPPER/FORESTRY TRUCK- WOOD CHIPS	\$10.00
CHIPPER/FORESTRY TRUCK- BRUSH & LIMBS	\$25.00



Products/Materials

Stroud Township residents will continue to be able to self load limited quantities of compost and mulch free of charge. **Proof of residency is required.**








All products loaded by the Township (**for all residential and commercial users**) will be charged as specified in the Products/Materials Loading Fee Schedule.

PRODUCTS/MATERIALS LOADING FEE SCHEDULE

PRODUCTS/MATERIALS	PRICE
MULCH	
MINIMUM LOADING FEE (3 yards or less)	\$10.00
EACH ADDITIONAL 3 YARDS	\$10.00
COMPOST	
MINIMUM LOADING FEE (3 yards or less)	\$20.00
EACH ADDITIONAL 3 YARDS	\$20.00

Yard Waste Site Rules & Regulations

1. Acceptable leaf and yard waste includes **only** leaves, grass clippings brush or tree trimmings to a maximum length of five (5) feet and a maximum diameter of thirty (30) inches and Christmas trees.
2. All leaf and yard waste shall be deposited in the **designated areas**.
3. The following items are **specifically prohibited** from being deposited at the drop-off site:

-  Tree Stumps
-  Construction/demolition waste of any nature, including lumber, stone, brick, asphalt or concrete
-  Metal
-  Plastic bags
-  Paper waste
-  Garden produce such as tomatoes, apples, pumpkins, etc.
-  Garbage or refuse or litter of any variety

4. Hours of operation:

-  Monday through Friday – 8:00 AM to 4:00 PM.





Saturday and Sunday 8:00 AM to 4:00 PM.

Stroud Township reserves the right to close access to the compost site at any time for the purpose of operating the equipment upon the site, the inspection and maintenance of the equipment and the site or for any reason it deems necessary.

5. Use of the site by commercial entities by permit, shall display the permit on the vehicle conveying yard waste to the compost site.
6. The following circumstances shall constitute a violation of these Rules and Regulations.



The disposition of any unacceptable material at the drop-off site.



The disposition of any material at the drop-off site by any commercial entity that does not possess a valid permit issued to that entity.



The disposition of any material at the drop-off site at any time other than the designated hours of operation.



All loads of materials/product must be taped prior to exiting the compost facility.



Smoking is not allowed at the Compost Facility.

7. Violation of any of the Rules and Regulations, upon conviction thereof in a summary proceeding, is subject to a fine not less than \$300.00 no more than \$1000.00 in addition to applicable costs.

Notice: Persons using the Compost Facility do so at their own risk .Any person using the Compost Facility who causes damage or injury to persons or property shall be liable for said damage or injury.

Compost Disclaimer: Compost is a natural material that has been stored and processed outside. The composting process has been managed to improve decomposition, reduce weeds, diseases and insects. However, compost may still contain allergens, weeds, insects or foreign matter. Sensitive users should wear proper clothing and protection when handling the compost. Stroud Township makes no guarantee concerning the quality of the compost, and assumes no liability for injury or property damage as a result of the use or delivery of the compost. Residents who use this compost do so at their own risk.



ATTACHMENT B. – Draft

INTER-MUNICIPAL AGREEMENT

THIS AGREEMENT made this _____ of _____, 2011, by and between the Township of Upper Mount Bethel, a municipal corporation organized under the laws of Pennsylvania with its municipal offices located in the County of Northampton, Commonwealth of Pennsylvania, and the Borough of Bangor.

WHEREAS, the Township of Upper Mount Bethel and the Borough of Bangor recognize that the growth and development within the county in general, and the Township of Upper Mount Bethel in particular, have increased the need for municipal services to their residents; and

WHEREAS, each Municipality has also recognized that establishment of an inter-municipal compost facility would provide efficient and economic services beneficial for its residents; and

WHEREAS, the Municipalities have recognized that the development of separate compost facilities to perform similar or identical tasks within each Municipality could result in the duplication of effort to the detriment of the residents of the Municipalities; and

WHEREAS, the Municipalities recognize that the coordination of services would enable each Municipality to minimize the costs of the operation and administration of a compost facility and

WHEREAS, the Act of July 12, 1972, P.L. 762, as amended, 53 P.S. § 2301, et seq., also known as the Intergovernmental Cooperation Act, permits Municipalities to enter into agreements to cooperate in the performance of their respective functions, powers or responsibilities; and

WHEREAS, the Township of Upper Mount Bethel will develop and operate a inter-municipal compost facility to provide for economic and efficient leaf and yard waste processing and composting services to the Municipalities.

NOW, THEREFORE, with the foregoing background incorporated herein by reference and made a part hereof, and in consideration of the mutual promises



and obligations set forth herein, and intending to be legally bound hereby, the parties agree as follows:

1. Establishment of a Compost Facility. The Township of Upper Mount Bethel shall establish and operate a facility, located in Upper Mount Bethel Township at 113 Million Dollar Highway, for the economic and efficient processing and composting of leaf and yard waste and shall provide processing and composting services in accordance with the provisions of this Agreement. Such facility shall be known as the “Upper Mount Bethel Township Compost Facility” and shall be operated in accordance with the provisions of this Agreement.

2. Operational Requirements.

A. Upper Mount Bethel Township Compost Facility shall accept the following materials at the compost facility: leaves, shrubbery, brush and tree trimmings, to a maximum length of _____ (--) feet and a maximum diameter of _____ (--) inches, and Christmas trees. Materials must be delivered in bulk and to the extent practical segregated.

B. Upper Mount Bethel Township Compost Facility will not accept plastic bags, metal, tree stumps, construction debris or municipal waste or rubbish of any kind.

C. Upper Mount Bethel Township Compost Facility will only accept organic materials as specified above and reserves the right to reject any unacceptable materials or materials containing contaminants.

3. Establishment of Program Committee. [Committee will provide a vehicle for communication with and input by participating municipalities, regarding facility operations, services and associated cost. This section]

A. Membership. The Committee shall be composed of one (1) Member of the governing body of each participating Municipality, appointed for a one (1) year term by the governing body at its first meeting in January of each calendar year. The initial members of the Program Committee shall be appointed by the governing bodies within thirty (30) days from the execution of this Agreement. Each governing body may, if it so desires, appoint an alternate member to the Committee.



B. Meetings. The Committee shall meet at times to be selected by the members of the Program Committee

C. Voting. All actions by the Program Committee shall be taken by a majority of the members of the Program Committee. In the event that there is a tie upon a particular Item, any Municipality may request that the issue be mediated.

4. Responsibility of Compost Program Committee. The following activities are the responsibility of the Program Committee:

A. Coordinate and review public education/outreach materials.

B. Review annual budget and negotiate costs/fees established for use of the compost facility.

C. Resolution of any problems between municipalities.

[other]

5. Responsibility of Municipalities. The following activities are the individual responsibility of each participating Municipality:

A. Drafting and enacting an ordinance that ratifies the Municipality's participation in the Composting Facility/Program and the entering of the Agreement in accordance with the requirement of the Intergovernmental Cooperation Act.

B. Program Cost Sharing. Each Municipality shall participate in an appropriate share of the cost of the compost facility including [identify any capital expenditures for facility development or equipment that will be allocated to municipalities]. Each Municipality shall pay Upper Mount Bethel Township costs/fees for services provided, as specified in **Exhibit A**.

Note: Appendix A. Terms and Conditions should include but not be limited to items listed below.

- Details regarding bases of service costs/fees (volume of material delivered, per capita or per household fee) and the time table for receipt of payment.
- Any allocated costs associated with the planning, design, development or capital expenditures for the compost facility (incurred for project development and/or required expansion) should be clearly identified, along with a formula and time frame for payment . Allocated costs should address both current and future participants, if applicable.
- Operating hours.

C. Grants. Each Municipality shall take every reasonable step to obtain from federal, state and other agencies such grants and aid as may be from time to time available. If grants may be obtained for the purchase of processing equipment for dedicated use at the compost facility the Township shall coordinate the application and shall take title to any such equipment.



6. Duration of Agreement. The term of this Agreement shall be for a period of ----- () year commencing with the date of execution hereof by the Township of Upper Mount Bethel (Township) and The Borough of Bangor (Borough). This Agreement shall be automatically renewed for an additional term of ----- () year at the conclusion of the initial term and each renewal term thereafter unless, at least ninety (90) days prior to the beginning of the renewal term, the Municipality which does not desire to renew the Agreement gives written notice of such refusal to renew the Agreement to the Township in writing.

7. Participation of Other Municipalities. Additional Municipalities may become a party to this Agreement upon the consent of the Program Committee at the time such a request is made. A Municipality which desires to become a party to this Agreement shall make application to the Program Committee and shall in writing agree to accept all terms and conditions of this Agreement. Failure to act upon an application to become a party to this Agreement within sixty (60) days of receipt of such application shall be considered to be a denial of consent to become a party to this Agreement.

8. Amendment. This Agreement may be amended only by written instrument signed by Participating Municipalities.

9. Interpretation. This Agreement shall be interpreted in accordance with the laws of the Commonwealth of Pennsylvania.

10. Severability. The provisions of this Agreement are severable, and if any section, sentence, clause, part or provision hereof shall be held to be illegal, invalid or unconstitutional by any court of competent jurisdiction, such decision of the court shall not affect or impair the remaining sections, sentences, clauses, parts or provisions of this Agreement. It is hereby declared to be the intent of the governing bodies of each Participating Municipality that this Agreement would have been entered into if such illegal, invalid or unconstitutional section, sentence, clause, part or provisions had not been included herein.

11. Enactment of Ordinance. The governing body of each Municipality agrees to enact an ordinance within ninety (90) days from the date hereof pursuant to and in accordance with the Pennsylvania Intergovernmental Cooperation Act for the purpose of authorizing and effectuating this Agreement.



12. Construction. When the tense so requires, word of any gender used in this Agreement shall be held to include any other gender, and words in the singular number shall be held to include the plural, and vice versa.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the day and year first above written.

Borough of Bangor
Commonwealth of Pennsylvania

Township of Upper Mount Bethel
Commonwealth of Pennsylvania

By: _____

By: _____

