December 10, 2007



Mr. Ronald J. Heintzelman Recycling Coordinator North Whitehall Township 3256 Levans Road Coplay, PA 18037

### Dear Ronald:

This letter summarizes the findings of our evaluation of curbside leaf collection options and burn ordinances for North Whitehall Township (The Township). This evaluation was performed as part of a Recycling Technical Assistance project from the Pennsylvania Department of Environmental Protection (DEP) through the Solid Waste Association of North America (SWANA).

Details of the analysis are provided in the sections below.

## **Executive Summary**

The purpose of this project was to evaluate how other communities within Pennsylvania collect leaf waste and the costs associated with such programs. This information would then be used by the Township to determine which collection avenue was best suited for their particular situation.

North Whitehall Township is a mandated recycling community; however the Township has not yet developed a curbside leaf waste collection program to become fully compliant with Act 101. The Township has a drop-off program available for the collection of leaf waste; however, the Township needs to implement a curbside collection program to become fully compliant with Act 101. The Township requested that R. W. Beck identify and evaluate collection options for leaf waste. The Township was also interested in understanding any DEP grants that might potentially be available for funding program implementation and/or equipment. The Township is also interested in implementing a burn ordinance to prohibit the burning of leaf waste, therefore identification of burn ordinances, and key language of those ordinances, were identified as part of this project.

R. W. Beck's benchmarks of other Pennsylvania communities' leaf waste programs indicates that their reported costs vary significantly. Of the municipalities that provide municipal leaf waste vacuuming services, costs ranged from \$70,000 to \$122,000 or \$2.40 to \$17.40 per household. For the single community where a private hauler provides municipal leaf collection, the cost for leaf collection services was \$31,000 or \$6.60 per household. North Whitehall Township also has the opportunity to either retrofit their current yard-waste collection vehicle to collect leaf waste via a vacuum-based system, purchase a new leaf-vacuum vehicle or purchase a new self-contained vacuum system that is attached to a trailer. The costs associated with the purchase of the equipment alone ranged from \$52,000 to \$165,000 for the retrofit, \$179,000 for a new vehicle, and \$44,500 to \$49,000 for a new vacuum mounted on a trailer pulled by the current vehicle. When deciding whether to purchase new leaf-collection equipment, or have a sub-contractor provide the service, the Township will need to consider the

general costs of purchasing, maintaining, and operating the equipment, as well as staffing costs, and compare these costs to cost estimates they obtain from private haulers.

R.W. Beck reviewed the policies and guidelines that the Township must initiate to apply for a Section 902 Recycling and Implementation grant for the purchase of leaf waste collection and/or processing equipment, and provides recommendations and steps for the Township to begin this application process, which will hopefully be of value to the Township should they decide to purchase equipment.

Key language from three community ordinances banning the burning of leaf waste is provided in this report. If the Township modifies their current burn ordinance to include an outright ban on the burning of leaf waste, R.W. Beck recommends the following be considered:

- Utilize key language from current bans specifically prohibiting the open burning of leaf waste;
- Ensure that "leaf waste" is clearly defined in the ordinance language;
- Current definition per Ordinance 1991-2 is as follows: Leaf Waste shall mean leaves from trees, bushes, and all other plants, garden residues, shrubbery, bundled tree trimmings not exceeding two (2) inches in diameter with a maximum length of four (4)feet, and similar material. Grass clippings shall <u>not</u> be included in this definition.
- Consider adopting the Act 101 definition of leaf waste; and
- Leaf Waste Definition per Act 101 Section 103:
- "Leaves, garden residues, shrubbery and tree trimmings, and similar materials, but not including grass clippings."
- Ensure that the ordinance language is reviewed by Township legal counsel before it is introduced for passage.

This report should serve as a general guideline as to the options that the Township has to pursue leaf waste collection services, ensure compliance with Act 101 requirements, apply for Section 902 grants and pursue key language that has been used in other communities to successfully implement an ordinance banning the burning of leaf waste.

Complete details are contained in the full report.

## Introduction

North Whitehall Township (the Township) is located in the northeast quadrant of Lehigh County, Pennsylvania. The Township has a land area of 28.5 square miles and is bordered by Washington Township to the north, Lowhill Township on the west, South Whitehall Township to the south, and Whitehall Township to the east. (The Lehigh River is the physical divider between Lehigh and Northampton Counties. Appendix A provides a map of Lehigh County

with the individual municipal boundaries listed. According to the U.S. Census Bureau, in 2006 the Township had an estimated population of 16,117. The Township is still relatively rural (565 persons per square mile) and consists mostly of farmland and forested cover.

The Township is interested in evaluating the feasibility of implementing a twice-per-year (spring and fall) leaf waste collection program and amending their ordinances to prohibit the burning of leaf wastes. The purpose of this technical assistance is to evaluate how other communities within Lehigh County collect curbside leaf waste. Based on the benchmark data ascertained, the Township will evaluate the feasibility of collecting leaf waste curbside twice per year from approximately 6,100 households. The Township will either collect leaf waste with public vehicles (via modification of their existing yard waste collection vehicle or purchase of new equipment) or through a private contractor.

This report also provides a description of the process and procedures for applying for DEP grants to purchase leaf waste machinery and collection equipment. In addition, the Township requested guidance in developing an ordinance to prohibit the burning of leaf waste to be in compliance with the Municipal Waste Planning, Recycling and Waste Reduction Act of 1988 (Act 101). Currently the Township does not have a specific ban on the burning of leaf waste. However, Ordinance 1995-6 establishes an emergency open burning ban and Ordinance 1999-2 prohibits open burning during drought conditions. This guidance and examples of such ordinances are also provided in this report. The report is organized as follows:

- Background
- Benchmark of Curbside Leaf Collection Programs
  - Municipal Collection
  - Modification potential of current yard waste vehicles
  - Private Collection;
- Description of DEP Grant Programs; and
- Review of Existing Leaf Burn Ordinances

The report also contains multiple appendices, including:

- Appendix A: Lehigh County Municipal Boundaries
- Appendix B: Leaf Waste Collection Equipment Information
- Appendix C: ACT 101 Section 902 Recycling Grant Application Guidelines
- Appendix D Act 101 Section 902 Grant Application (FY 06/07 Version)
- Appendix E Millcreek Township Ordinance 2000-1
- Appendix F: Millcreek Township Ordinance 2001-14
- Appendix G: Lower Gwynedd Amended Ordinance

■ Appendix H: Lower Gwynedd Ordinance Summary

## **Background**

North Whitehall Township (the Township) is mandated by Act 101 to provide a residential *curbside* recycling program. The Act stipulates that the mandated municipalities collect at least three (3) of the following materials:

- Clear glass,
- Colored glass,
- Plastics,
- Aluminum,
- Steel and bi-metal cans,
- High-grade office paper,
- Corrugated paper, and
- Newsprint.

The Township must also collect leaf waste. The Township adopted Ordinance 1991-2 in order to be in compliance with the majority of Act 101. The ordinance establishes a comprehensive recycling program for the Township. Private haulers within the Township provide curbside collection, twice per month, on the same day as trash collection, to approximately 6,100 households within the Township. Trash collection is performed via independent subscription services (e.g., residents hire their own hauler).

Recyclables collected in the curbside program include:

- Clear, brown and green glass,
- Aluminum.
- Bi-metallic and steel cans,
- Newspaper,
- #1 (PET/PETE) plastic bottles, and
- #2 (HDPE) plastic bottles and jugs.

Grass clippings and leaves may be delivered to the North Whitehall Township Recycling Dropoff Center. Recyclables are processed at material recovery facilities (MRFs) selected by the individual haulers. Some MRFs that receive Township-generated recyclables include Todd Heller in Northampton, Liberty Recycling in Allentown, and Recycle America in York.

Residents of North Whitehall Township are educated about the recycling program through a newsletter, Township web site (<a href="www.northwhitehall.org">www.northwhitehall.org</a>), educational brochures and local newspaper articles.

In order to become in full compliance with Act 101, the Township would like to implement an efficient and cost-effective leaf waste curbside collection program. Act 101 defines leaf waste as "Leaves, garden residues, shrubbery and tree trimmings, and similar material, but not including grass clippings." In mandated communities, drop-off recycling programs for leaf waste can supplement curbside programs, but may not take the place of curbside programs.

Currently Township residents and/or businesses that wish to dispose of leaf waste generally use one of two means to manage their leaf waste. One is to deliver leaf waste to the North Whitehall Township Recycling Drop-Off Center on 3256 Levans Road in Coplay. Organic waste accepted at this facility includes leaves, grass clippings, yard waste, logs and stumps. The facility is open 24 hours per day, 7 days a week. The materials are transported to the Lehigh County Compost Facility (using a Mack Model MV322 yard waste truck) for processing. The second option is to burn the leaf waste in domestic fires as regulated by Ordinances No. 68-3 and 68-4, which regulate and restrict outdoor domestic fires, open fires and field fires. This second option does not comply with Act 101. Some residents may also hire private landscaping businesses, or use backyard composting of leaf waste.

In Calendar Year 2006, 222.8 tons of leaf waste was collected at the Levans Road drop-off center. A breakout of leaf and other yard waste organics for 2003 through 2006 within the Township is shown in Table 1 below.

Table 1 North Whitehall Township Organic Material Annual Tons Collected at Drop-Off Center (2003 – 2006)

Material Type	2003	2004	2005	2006
Yard Waste*	254	1,499	1,569	1,959
Leaf Waste**	131	295	122	223
Grass Clippings	613	838	584	724
Total Tons:	998	2,632	2,275	2,906

<sup>\*</sup> Township Ordinance Number 1991-2 does not have a definition for yard waste. It is included in the Leaf Waste definition. By process of elimination, yard waste is bushes garden residue, shrubbery, bundled tree trimmings not to exceed two (2) inches in diameter and four (4) foot in length. Leaves are leaves and grass is grass.

<sup>\*\*</sup> Leaf waste is defined by Ordinance 1991-2 as leaves from trees, bushes, and all other plants, garden residue, shrubbery, bundled tree trimmings not exceeding two (2) inches in diameter with a maximum length of four (4) feet, and similar materials

While the Township has averaged 193 tons per year at the drop-off center for the last four years, there is no indication as to the amount of leaf, grass, and other yard waste that is burned or left on the ground or dumped in empty lots to biodegrade.

In order to provide North Whitehall Township with a general idea of how other communities collect and process leaf waste, R.W. Beck performed a benchmark study of three communities within Lehigh County that have municipal leaf collection and two communities (both located within Montgomery County) that have the private sector collect leaf waste. R.W. Beck attempted to benchmark communities with similar population demographics and in close proximity to the Township. Further, because the Township expressed interest in using vacuum trucks for collection, R. W. Beck focused on identifying communities that use this type of collection equipment. In addition, R.W. Beck researched the potential to modify the Township's current yard waste vehicle to collect leaf waste curbside via vacuum based methods.

A summary of the information obtained by interviewing representatives of the five benchmarked communities (with a comparison to North Whitehall Township) and two equipment vendors is provided in the sections below.

## **Curbside Leaf Waste Collection Methods**

The purpose of this section is to provide the Township with an understanding of how other communities within Pennsylvania collect leaf waste (either via municipal crews or through private haulers) and to provide information pertaining to any associated costs and variables associated with the collection program. The Township is interested in examining the possibility of collecting leaf waste (curbside) for up to 6,100 households. Ensuring that a program is available for curbside collection of leaf waste would place the Township in compliance with Section 1501 (c)(ii) of Act 101.

## **Municipal Leaf Collection**

R. W. Beck identified and interviewed three communities that provide leaf vacuuming services to their residents. A summary of the information obtained by interviewing representatives of these three benchmarked communities is provided in Table 2. A summary of each individual community follows. Note that in the discussions for the individual communities, the term "loose leaves" is used to imply leaves that are not containerized and are left on the street curbside for collection by vacuum trucks. All of the benchmarked communities are located within Lehigh County.

Table 2 Summary of Loose-Leaf Vacuum Programs Provided by Selected Municipalities

Community Name	Population (2006 U.S. Census)	Approximate Number of Households Serviced	# of Square Miles	Persons per Square Mile	HH's per Square Mile	Loose-Leaf Program	Additional Yard Waste Services	Estimated Annual Cost <sup>3</sup>	Estimated Annual Cost Per Household
North Whitehall Township	16,117	6,100	28.5	565	214	Drop-off only	Drop-off only	\$ 125,000	\$ 20.50
South Whitehall Township	19,300	6,826	17.2	1,122	397	Leaves collected 3 times per year.	Branches, yard and garden waste collected curbside bundled or via drop-off. Grass collected curbside in open container weighing no more than 50 pounds. April to October only.	\$122,000	\$17.90
Lower Macungie Township	28,057	7,0001	22.9	1,225	306	Township and private firm collect leaves for six weeks. Other yard waste set out is also collected.	Leaves collected by contracted hauler 2x per year. Drop-off site for yard waste available.	No records from Township.	Not available from Township.
City of Bethlehem	68,144 <sup>2</sup>	29,000	19.0	3,586	1,526	Leaves collected 3 times per year	Bagged leaves also collected upon request, after Dec. 25. City has its own compost facility, with dropoff site.	\$70,000	\$2.40

<sup>&</sup>lt;sup>1</sup> Includes both collections by Lower Macungie in addition to collection by private hauler (Estate Maintenance Inc.). Collection methods explained in Task 3.4 below.

<sup>&</sup>lt;sup>2</sup> 2005 Census Data.

<sup>&</sup>lt;sup>3</sup> Includes collection and processing programs – however no breakout by costs was provided. Thus is in an assumption only. Estimated cost for North Whitehall Township provided by Township.

## City of Bethlehem

In the City of Bethlehem, loose leaf waste is collected three times per year during the months of late October, November, and late-December. The specific collection days vary annually. The city does not allow the placement of loose leaves on the street after December 25<sup>th</sup>. However, leaves may continue to be *bagged* after this date and residents can call the city for collection. The total number of square miles serviced by the city is 19.3.

In the City of Bethlehem, Public Works and to some extent the Parks Department, are responsible for the collection of leaf waste. All 30,000 households that reside within the city are eligible for the collection of leaf waste. During the October through December, curbside collection of loose leaves is performed by vacuum trucks, while bagged leaves are collected curbside by dump trucks. Approximately 25 personnel are used to collect leaf waste within the city. In addition to curbside collection services, the city operates a drop-off facility which is also the city's compost facility. The facility is located on Schoenersville Road and residents may drop off loose leaves or leaves bagged in paper bags – no plastic bags are accepted.

The city collects approximately 9,000 tons per year of leaf waste. The leaf waste is taken to the city's compost facility on Schonersville Road where it is ground with a horizontal grinder, placed into windrows, and turned with a windrow turner. The resulting compost and mulch is provided to the citizens at no charge or used in parks and recreational facilities.

The cost of the leaf waste collection program is approximately \$35,000. The City estimates that fuel costs are approximately \$5,000, personnel costs are \$25,000 per year, and maintenance costs are \$5,000 per year. The total cost of the program, including processing costs, insurance, electricity and other incidental costs, is closer to \$70,000.

## South Whitehall Township

In South Whitehall Township, loose leaf waste is collected three (3) times per year during the months of October, November, and part of December. The specific collection days vary depending on the weather and how and when the leaves fall. The total number of square miles serviced is 17.5.

The South Whitehall Public Works (Streets) Department is responsible for the collection of leaf waste within the Township. All 6,826 households that reside within the Township are eligible for the collection of leaf waste. Residents are asked to set-out leaf waste curbside where it is collected by the Township's two vacuum machines and two (2) leaf loaders. The vehicles utilized are ten-wheelers and single axle dump trucks with pick-up trucks for the laborers. Between 18 and twenty 20 Township personnel collect leaf waste. South Whitehall Township does not operate a drop-off facility, and the Township has a ban on the burning of "rubbish," which includes leaf waste. As such the only way for residents to dispose of loose leaf waste is either curbside during the scheduled collection times, or via backyard composting.

The Township collects between 13,000 and 16,000 cubic yards of loose leaf waste per year. The Township does not have information regarding participation rates. Assuming all households participate, this equates to between 1.9 and 2.3 cubic yards of leaf waste collected per household per year. The leaf waste that is collected by the Township is delivered to the Lehigh County Compost Facility in Schnecksville, Pennsylvania where the leaf waste is processed with other organics to make mulch and compost for use by residents and by public works crews.

The total cost to operate the South Whitehall Township leaf waste collection program is \$122,000.00 per year. R.W. Beck was not able to obtain a break out of the total cost by line item.

## Lower Macungie Township

In Lower Macungie Whitehall Township, leaf waste is collected by the municipal waste hauler once in May and once in October. In addition, the Township and Estate Maintenance Inc. (EMI) collect loose leaves curbside for six weeks beginning in November through early December. Collection at each household is usually once per week. No grass clippings are accepted at these collections. The total number of square miles serviced is 22.9.

The Lower Macungie Department of Public Works is responsible for the collection of leaf waste west of Brookside Road. A private hauler, Estate Maintenance Inc., collects leaf waste from all residences from the centerline of East Macungie Road, Brookside Road and Schantz Road east to the Township line. Estate Maintenance is required to collect all leaves and affiliated yard waste from piles and windrows that are placed within eight feet of the cart-way. The Township estimates that one-third of the approximately 7,000 homes eligible for leaf waste collection (single-family and multi-family) are collected by vacuum trucks, trailers and small box trucks. The Township uses mostly trailer-mounted vacuum units which blow the leaves into cages that are mounted on Mack Trucks. Two of the units have the containers mounted on the vacuum unit trailer. The vacuum units either blow the leaves forward into the trucks that are towing the vacuums, or blow the leaves back into 14- to 17-cubic yard bins that are mounted on the same frame as the vacuum. Estate Maintenance uses smaller trucks with boxes incorporated into the body of the vehicle. In order to collect the leaf waste, the Township utilizes up to 12 employees, depending on the peak season. In contrast, Estate Maintenance, Inc. utilizes four employees to collect leaf waste east of Brookside Road. Leaf waste collected by both the Township and Estate Maintenance, Inc. is taken to the Township Compost Site on Route 100.

In addition to the curbside collection of leaf waste, Lower Macungie Township operates a leaf and yard-waste drop-off facility located on Indian Creek Road. The Lower Macungie Township Drop-off site is open Monday, Wednesday, Friday and Saturday between 9 a.m. and 7 p.m. and Sundays between 12 p.m. and 7 p.m. June 1<sup>st</sup> through October 31<sup>st</sup>. The facility is also open Monday, Wednesday, Friday, Saturday and Sunday 12 p.m. to 5 p.m. November 1<sup>st</sup> through April 30<sup>th</sup> and Monday, Wednesday, and Friday 9 a.m. to 7 p.m. and Saturday and Sunday 12

p.m. to 7 p.m. May 1<sup>st</sup> through May 31<sup>st</sup>. Leaf waste collected at the drop-off site is delivered to the Township compost site located on Quarry Road for processing. The Quarry Road compost site is closed to the public. The Township does not maintain records as to the total amount of leaf waste collected at the drop-off facility or collected via curbside collection methods. The leaf waste that is collected and is brought to the Township Compost Site is processed for one or two years. The composted material is then screened and either transported to the drop-off site for use by residents of the Township at no charge, or the material is used as organic material in the Township's parks.

Lower Macungie Township does not maintain records as to the cost of the leaf waste collection and processing program.

### Modification Potential for Current Yard Waste Vehicle

North Whitehall Township currently owns and operates a 2002 Mack MV322, yard waste collection vehicle. The vehicle is currently being used to collect bulk residential yard waste items. The township would like to convert the truck into a curbside leaf collection vehicle or look into purchasing a vehicle that can help in to collection of residential leaf waste. R. W. Beck collected information on several options for the collection vehicle and retrofitting possibilities. In an effort to provide the Township with information pertaining to the retrofitting possibilities, R. W. Beck contacted the following two equipment vendors. Photographs and a description of the vacuum units are included in Appendix B.

### **■** Vacuum Sales Inc.

Contact: Mike Vittese, Sales Representative Address: 51 Stone Road Lindenwold, NJ 08021

Internet Address: <a href="www.VacuumSalesInc.com">www.VacuumSalesInc.com</a>
Email Address: <a href="mailto:mvittese@vacuumsalesinc.com">mvittese@vacuumsalesinc.com</a>

Phone: 800-547-7790 Fax: 856-627-3044 Cell: 856-649-9332

### ■ Municipal Equipment Sales Inc.

Contact: Tom Riggs, Sales Representative Address: 208 Bell Place Woodstock, GA 30188

Internet Address: www.municipalequipment.com

Email: <u>sales@municipalequipment.com</u>

Phone: 800-782-2243 Fax: 770-928-7512

The retrofitting options for the Township provided by each of these vendors are provided below.

### Vacuum Sales Inc.

The retrofitting option offered by VSI consists of a 16 cubic yard vacuum priced at \$125,000. The 16 CY vacuum is capable of collecting heavy wet leaves as well as street debris, bottles, cans, stones, rock, sand & similar materials. The machine can hold up to six tons of waste. VSI offers a new vehicle combo unit that can be utilized as a leaf collection system, street sweeping vehicle, sewer vacuum. The combo unit is a 13 cubic yard vehicle priced at \$179,000. Since the combo unit is multifaceted, it can potentially be utilized year round.

### Municipal Equipment Sales Inc.

Municipal Equipment Sales Inc. (MESI) has several options for retrofitting the Township's current vehicle. MESI offers a L'CAT Model CM-25 leaf compaction system at \$185,000 installed on the current vehicle. The CM-25 has a compaction system that is only offered by MESI. The compaction system is equipped with a full container packing mechanism as well as a chipper that breaks down the leaves as soon as they are collected and allows for more storage space. The machine is equipped with a water injection system to increase compaction. The leaf collection system allows a single operator to drive and collect residential leaf waste. Though the vacuum allows for single operator the steering column would have to be moved to the left hand side of the vehicle which can only be done by the manufacturer. The cost associated with this task is not included in the \$185,000 price.

MESI offers another compaction system – a 25 CY compaction body manufactured by IMPAC at \$165,000 installed on the fleet vehicle. The IMPAC Predator series has to option of one staff member operation or three staff operation. The system can be configured to work on the right hand side or the left hand side of the vehicle.

MESI also offers a more affordable option of retrofitting the current vehicle. MESI sells an American Road Machinery 25 cubic yard vacuum system at the cost of \$52,000 installed on the vehicle, or \$44,500 for a vacuum mounted on a trailer pulled behind the current vehicle. The vacuum system is designed to be operated by three staff members (one driver, a staff member operating the collection hose, and one staff member raking the leaves into the vacuum area). In addition, MESI offers a larger vacuum with trailer made by American Road Machinery. The 30/30 Leaf Collector is a 30 CY vacuum system priced at \$56,500 installed on the Townships current vehicle or \$49,000 on a freestanding trailer system. The machine collects wet leaves at a rate of 2600 RPM and dry leaves at 2000 RPM or less.

## **Vehicle Purchasing Options**

North Whitehall Township has several options if they wish to purchase a new leaf waste collection vehicle. All of the vacuum systems listed in the retrofitting section are also available on new vehicles. Information about additional vehicles offered by VSI and MES is provided in Table 3.

Table 3
Leaf Vacuum Equipment Summary Information

Vendor	Vehicle Name and Size	Retrofit or New Vehicle	Cost
Vacuum Sales Inc.	16 CY	Retrofit	\$125,000
Vacuum Sales Inc.	13 CY Combo Unit	New Vehicle	\$179,000
Municipal Equipment Sales Inc.	L'Cat Model CM-25 (25 CY)	Retrofit (steering column must be moved)	\$185,000
Municipal Equipment Sales Inc.	IMPAC 25 CY	Retrofit	\$165,000
Municipal Equipment Sales Inc.	American Road Machinery 25 CY	Retrofit	\$ 52,000
Municipal Equipment Sales Inc.	American Road Machinery 30 CY	Retrofit	\$ 56,500
Municipal Equipment Sales Inc.	American Road Machinery 25 CY	New Vacuum on Trailer	\$ 44,500
Municipal Equipment Sales Inc.	American Road Machinery 30 CY	New Vacuum on Trailer	\$ 49,000

As the information provided in Table 2 and Table 3 show, the cost of the municipality providing leaf waste vacuuming services can vary significantly. The communities that provide this service indicate that their programs cost between \$70,000 and \$122,000 per year, or \$2.40 to \$17.90 per household per year. Costs can vary significantly depending on the following factors:

- Other means available to manage yard waste, such as:
  - Backyard composting/dumping in woods;
  - Supplemental collection by trash haulers; and
  - Burning
- Density of households;
- Participation rates in programs;
- Distance to leaf waste tipping site;
- Frequency of collection;
- Types of material collected.

If the Township were to consider retrofitting their vehicle in order to provide this service, the cost of the retrofit could be as low as \$52,000 or as high as \$185,000 (if the steering wheel needs to be removed). Typically costs such as these could be amortized over seven years, so this would be analogous to an annual cost of approximately \$7,430 to \$26,430 per year for equipment. This cost is strictly for the purchase of the vehicle itself and does not include assessed interest or finance charges, fuel estimates, and labor or maintenance costs.

## **Private Sector Leaf Collection**

R.W. Beck located one community within Pennsylvania that *directly oversees* the collection of leaf waste by a private hauler (Whitpain Township) and one community (Lower Gwynedd Township) where the private service provider collects leaf waste in addition to solid waste and recyclables. R. W. Beck interviewed the service providers as well as municipal representatives of the two communities to understand the details regarding these programs. An overview of the communities' solid waste program and any charges for the collection of leaf waste is presented in this section. General demographic information and a comparison to North Whitehall Township are listed in Table 4.

Table 4
Summary of Yard Waste Collection Services Provided by Private Service Providers

Community Name	Population (2006 U.S. Census)	Approximate Number of Households Serviced	# of Square Miles	Persons per Square Mile	Summary of Yard + Leaf Waste Program	Total Annual Cost	Annual Cost Per Household
Lower Gwynedd Township <sup>1</sup>	11,248	4,177 <sup>2</sup>	9.1	1,236	Bagged leaves or grass can be set out each week for \$3 per bag, (no limit). Grass clippings in excess of 4 bags/\$3.00/bag.	Unknown	Unknown
Whitpain Township <sup>1</sup>	18,773	4,700 <sup>3</sup>	12.8	1,467	Leaf waste is collected four days per year, set out in compostable bags.	\$31,000	\$6.60

<sup>&</sup>lt;sup>1</sup> Located in Montgomery County

<sup>&</sup>lt;sup>2</sup> From 2000 US Census Bureau – Number of Occupied Households

<sup>&</sup>lt;sup>3</sup> 6,960 Total Occupied Households (2000 U.S. Census Bureau). 4,700 Households Serviced for Leaf Collection

## **Lower Gwynedd Township**

Lower Gwynedd Township contracts with a single private hauler to provide solid waste and recycling services to residents of Gwynedd Township. Ordinance 346 authorized the designation by the Township of a single trash hauler for the collection, transportation, and disposal of municipal waste, bulk items, white goods, Freon-containing appliances, *leaf waste*, grass clippings, and recyclable materials from all residential units in the Township except those who properly and in a timely manner elect to use the services of another hauler ("opt out"). Waste Management of Indian Valley is the Township's designated waste hauler and is contracted to provide services from November 1, 2004 until October 31, 2007. All commercial properties and communities whose trash hauler is contracted by a Homeowners' Association or property Management Company are exempt from the single-hauler program. For the majority of households in the Township, the hauler utilizes rear-load vehicles to collect leaf waste. In some areas of the Township side-load vehicles are used. Leaf waste is collected year round and must be set out in large, heavy-duty paper bags.

The service fees charged to individual households by Waste Management of Indian Valley are:

- Base Service Fee (2 x week collection): \$31.50 /Per Residential Unit Per Month;
- Low-Volume Municipal Waste Alternative: \$10.00 /Per Month \$3.00 /Per Bag;
- Extra Bulk Items and White Goods: \$25.00 /Per Item in Excess of One Per Week;
- Grass Clipping In Excess of Four(4) Per Pickup: \$3.00 /Per Bag;
- Leaf Waste: \$3.00 /Per Bag (no limit); and
- Freon-Containing Appliances \$30.00 /Per Item.

## Whitpain Township

Residents in Whitpain Township hire their own haulers (who must be registered and permitted by the Township) to provide for refuse and recycling collection services. There are eight registered trash haulers in Whitpain Township that provide these contract services. All residents of Whitpain Township are required to separate their recyclable materials from municipal waste at the curb for collection. Recyclable materials are set out and placed in separate, reusable metal or plastic containers. Residents are required to recycle newsprint, aluminum, and non-colored glass, and may also recycle colored glass, plastics and metals. Haulers are required to provide at least one recyclable collection per week.

Whitpain Township offers an annual leaf collection program to Township residents. The Township has contracted with a registered hauler within Montgomery County to provide residential curbside collection of bagged leaves. The leaf collection and disposal contract with the private hauler was signed in August 2007 and was awarded for one year with two one-year extensions. There are approximately 4,700 households that receive service as part of the

contract, which is worth \$31,000 for the first year and includes collection and delivery to a compost facility. The program provides four collection days per year per household, three in the fall (late October, mid November and mid-December) and one in the spring (mid April). The Township requires that leaves must be placed in special biodegradable paper bags, which are made available to residents at the Township Building. The paper bags are sold for four (4) bags for \$1.00. There are no other costs to residents. The private contractor brings the leaf waste to a DEP approved and permitted compost site in Franconia, Pa. The leaf waste is composted and sold, or given away to residents.

It is challenging to identify costs associated with private leaf waste collection services when the leaf waste collection is part of other "bundled" services, as often fees are not necessarily in line with actual program costs. In Lower Gwynedd Township, Waste Management of Indian Valley provides all solid waste and recycling collection services for a base rate of \$31.50 per month. However, in addition to this fee, residents are charged \$3 per bag of leaf waste. As this is the case, currently the cost of the leaf collection program cannot be ascertained. The hauler in Whitpain Township, however, as a service provider for leaf waste only, is expected to reflect actual program costs. The cost of the program is \$31,000 per year, which is \$6.60 per household per year, or \$1.65 per household per collection per year.

If North Whitehall Township were to purchase the least expensive 30 CY vacuum trailer the cost would be \$49,000 (not including tax, insurance, labor, maintenance, finance charges, etc.). A similar 30 CY retrofit of the Township's current vehicle would be \$56,500. Obtaining a private hauler to provide the leaf collection service could be more cost-effective to North Whitehall Township in the short term. A private hauler could immediately utilize their existing vehicles and collection crews. However, in the long term, purchasing equipment and using the Townships existing staff could be more cost effective. This study was not intended to provide a year by year analysis (gap or otherwise) of the cost of leaf collection via Township staff vs. the cost of utilizing a private hauler. Instead this task was performed to provide a general description of leaf collection costs by selected Townships using municipal collection crews vs. private haulers. It would be up to North Whitehall Township to use this information to determine which collection course best suits their financial constraints. The sections below intended to assist the Township is exploring potential DEP grants to help purchase leaf collection equipment if the Township determines municipal collection is more cost effective than collection by the private sector.

## Considerations Regarding Municipal Collection vs. Private Collection

When deciding whether the Township will provide leaf collection service, or hire a private hauler to do so, there are strengths and weaknesses to both options. The key strengths and weaknesses of municipal-provided collection are:

- Strengths of Municipal Leaf Waste Collection
- Township has more flexibility to make program changes, for example in collection frequency, schedules, and materials accepted;
- Township has more control over service, usually leads to higher level of customer service;
- Township has more control over where leaf waste is delivered, assurance that it is being properly managed;
- Township may be able to modify their current vehicle for 1/3 the price of a new vehicle; and
- Township may be able to receive 902 grants to partially offset their equipment costs.
- Drawbacks of Municipal Leaf Waste Collection
- If equipment is not fully utilized, may not be as cost-effective as private service, depending on cost of equipment;
- Purchasing and maintenance costs can be high;
- Can be challenging to balance labor needs in highly seasonal/highly fluctuating role like leaf waste collection; and
- Can be administratively challenging, particularly if residents call with complaints (e.g., must be handled by Township, can not be directed to private service provider).

## **Potential Grants for Equipment**

North Whitehall Township is interested in identifying grants that could potentially be used to purchase equipment, such as a vacuum truck and/or processing equipment. This section describes potentially available grants that the Township can apply for, in order to purchase recycling equipment. In most instances in order to be eligible for recycling grants under Section 902, the municipality must be in compliance with Act 101 - the proper management of recyclables, including leaf waste. Appendix C displays the Section 902 guidelines in its entirety.

Section 902 of the Act 101 Recycling Program Grant reimburses counties and municipalities up to 90 percent of eligible recycling program development and implementation expenses. Municipalities considered financially distressed by the Department of Community and Economic Development under the Municipalities Financial Recovery Act (53 P. S. §§ 11071.101--11701.501) are eligible for up to 100 percent of approved costs. Funding is available to all municipalities and counties for a wide spectrum of equipment. Since the program's inception, over \$345 million has been issued by the Department to establish, support and expand municipal recycling programs. In just the past 5 years, \$98 million has been

provided to municipal programs. Applicants must be in compliance with Act 101 and the implementing regulations, the Department's Guidelines for Proper Management of Recyclable Materials and any previous grant contract provisions to be eligible to receive grant funding. Todd Pejack from the Pennsylvania DEP stated that for a municipality to be eligible for Section 902 grant capital, a municipality does not have to pass a leaf burn ordinance unless: 1) The municipality already has an ordinance that allows for the burning of Act 101 materials; or 2) The municipality has no such ordinance but it is known that the practice of burning Act 101 materials in the municipality exists. As it is known that in North Whitehall Township the practice of burning leaf waste is common and to ensure that the Township is in compliance with Act 101, R.W. Beck recommends that the Township pass a leaf burn ordinance before the Township applies for Section 902 grants. R. W. Beck also recommends that the Township seek additional information and clarification from Christopher Fritz (DEP Northeast Regional Planning Coordinator) as explained in the pre-application conference section below. The Township should be aware that there are funding limits associated with Section 902 grants, and therefore applications requesting more than \$500,000 in grant funding will not be accepted.

The FY 2007/2008 (FY 07/08) application period for the Section 902 grants will open after the last round of successful applications from FY 2006/2007 is announced. The application period for the next round of grants is expected to open in September or October 2007, but could potentially be delayed. The application deadline for the FY 07/08 grant is expected to be in April 2008.

Before North Whitehall Township can apply for a Section 902 grant, a pre-application conference with DEP Regional Planning and Recycling Coordinators is required. Therefore, when appropriate, the Northeast Regional Planning and Recycling Coordinator, listed below, should be contacted for a pre-application conference with the Township.

### **Christopher Fritz**

(PA DEP, Waste Management Program) 2 Public Square Wilkes-Barre, PA 18711-0790 Phone: (570) 826-2516

Fax: (570) 826-5448 Email: <u>cfritz@state.pa.us</u>

It should be noted that grant priorities and funding restrictions change with each grant round. Information pertaining to the next round's priorities have not yet been announced, however the Township should periodically check DEP's web site for this information.

In general, however, projects eligible for recycling grant funding are those which divert the following recyclable materials from municipal solid waste: clear glass, colored glass, aluminum, steel and bimetallic cans, high-grade office paper, newsprint, corrugated paper,

other marketable grades of paper, plastics, source separated food scraps, and leaf and yard wastes.

Eligible recycling program implementation costs include:

- Purchase or lease of vehicles used to collect/transport recyclables;
- Purchase of reusable containers for the collection or storage of recyclable materials;
- Acquisition or renovation, or both, of buildings for the processing or storage of recovered materials;
- Equipment used to process or manufacture recyclable materials into usable products;
- Improvements to land needed to operate a recycling facility or yard waste composting facility authorized under 25 PA Code § 271.103(h) (relating to permit-by-rule for municipal waste processing facilities other than for infectious or chemotherapeutic waste; qualifying facilities; general requirements); and
- Costs associated with educating the public on recycling program requirements.

A municipality must retain sole ownership of equipment or facilities funded by the grant. Funding for equipment or facilities purchased for the recycling program that is used for recycling and other purposes will be prorated according to its recycling use. Funding for certain leaf and yard waste collection equipment may be limited according to its seasonal use. Funding for wood chipping equipment will be approved only when the equipment is part of an approved yard waste composting facility operating under the Department's guidelines and where the material is collected curbside from residents. Funding of street sweepers for the purpose of leaf collection will not be considered.

Grant application forms are available from the Department's regional offices and the Department's website, <a href="www.depweb.state.pa.us">www.depweb.state.pa.us</a> (DEP Keyword: Recycling Grants).

The FY 07/08 grant applications deadline is expected to be April 2008. R.W. Beck recommends that, when appropriate, the Township schedule a pre-application conference with Chris Fritz. Note that Mr. Fritz will not be scheduling such conferences until the application period opens, applications are available, and notice of the grants has been published in the PA Bulletin. Note that applications must be on forms provided by the Department, with two copies submitted to the Department's Central Office (Rachel Carson State Office Building, Harrisburg) and one copy submitted to the appropriate county recycling coordinator. Grant awards will be predicated on the receipt of recycling fees required by sections 701 and 702 of the act (53 P. S. §§ 4000.701 and 4000.702) and the availability of moneys in the Recycling Fund.

It should be noted that in recent years one of the priorities for recycling grants has been to implement joint programs among municipalities. As such, the Township might consider working with a nearby (possibly bordering) municipality, to see if they are interested in working together to provide leaf waste collection. This might not only increase the

municipalities' chances of obtaining recycling grant funds, but may also result in a more costeffective program, whether the program be provided by municipal service providers (e.g., North Whitehall Township staff) or through a contracted service provider. In general, more favorable contract terms can be negotiated if the customer base is larger, particularly if the area covered is contiguous, and therefore does not add significant additional costs for the hauler.

Application forms for the next round (FY 07/08) of Section 902 grants will be available from either the DEP Regional Planning and Recycling Coordinator (Chris Fritz), or from the PA DEP's on-line library at a later date. R.W. Beck was not able to obtain a copy of the FY 07/08 application form as the form is under revision by DEP. When the application period opens, the new application as well as the PA Bulletin announcement will be available for download (in both Microsoft Adobe and Word format) on Pennsylvania's Recycling Homepage under "Resources – Financial Assistance," on the DEP website.

(http://www.dep.state.pa.us/dep/deputate/airwaste/wm/RECYCLE/Recycle.htm).

The Township might also identify any potential needs for education and outreach and associated costs, and apply for funding to assist with these costs as a new program will require significant education and outreach to residents.

## Recommendations

R.W. Beck recommends that the Township pursue the following steps to apply for the FY 07/08 leaf waste collection equipment grant under Section 902 of Act 101.

- Ensure Township is in compliance with Act 101 management of recyclables;
- Monitor DEP web site and PA Bulletin to obtain information about FY 07/08 recycling grants;
- Consider contacting surrounding communities to see if they would potentially be interested in implementing a leaf waste program jointly with the Township;
- Identify and develop cost estimates for education/outreach activities needed, if curbside leaf waste collection program is implemented;
- Consider surveying residents regarding the number of times per year they believe they would require leaf waste collection. The Township might also survey residents to see how they currently manage leaf waste, to see whether the demand for leaf waste collection would be significantly increased if a "no burn" ordinance were put in place. The Township might also gain a better understanding of the type of equipment that would be needed (e.g., capacity) for leaf collection, and therefore be better able to estimate equipment costs. Residents might be surveyed online, at the yard waste drop-off site, or via an insert in a utility bill or other mailing.

- Schedule a pre-application conference with Chris Fritz (Northeast Regional and Recycling Planning Coordinator) to discuss grant application criteria and priorities, when appropriate (e.g., not until after grant announcements have been made). Ensure Township is clear on:
  - Application timeframe and dates;
  - Whether the Township must pass a leaf waste burn ordinance;
  - How to obtain FY 07/08 application form; and
  - Funding priorities.
- Pass Leaf Waste Burn Ordinance if needed (See Section 6.0 below for examples of existing leaf waste burn ordinances).
- Complete and submit FY 07/08 Section 902 grant application. While the FY 07/08 grant application has not yet been finalized, a copy of the FY 06/07 application is provided in Appendix D. Note that the FY 06/07 is now obsolete but has been included strictly for reference purposes only. The application deadline for FY 07/08 has not yet been determined.

## Leaf Burn Ordinance Issues

Act 101 and DEP policies mandate the following for leaf waste and yard waste from residential establishments:

- 1. The Township ordinance must prohibit the burning of recycled materials collected within the Township, including leaf waste; and
- 2. Requires curbside collection of leaves and garden residue, shrubbery, tree trimmings and similar materials.

## North Whitehall Township's Current Ordinances

Currently North Whitehall Township does not have an ordinance in place specifically prohibiting the burning of leaf waste; however four ordinances restrict and regulate open fires within the Township, including the following:

**Ordinance 68-3:** An Ordinance Regulating and Restricting Outdoor Domestic Fires, Open Fires and Field Fires within the Township of North Whitehall and Providing Penalties for the Violation Thereof.

**Ordinance 68-4:** An Ordinance Amending Ordinance No. 68-3 Regulating and Restricting Outdoor Domestic Fires, Open Fires and Field Fires within the Township of North Whitehall and Providing Penalties for the Violation Thereof.

Ordinance 1995-6: An Ordinance of the Board of Supervisors of the Township of North Whitehall, Lehigh County, Pennsylvania, Prohibiting all Open Burning in the Township Due to Emergency Drought Conditions; Setting Forth Specific Types of Open Burning Which are Prohibited, and which Types of Contained Burning Will be Permitted to Continue; Prohibition Against Open Burning in the Future as Conditions Change; Providing for Exemptions and Modifications in Certain Specific Instances, Locations, and Times; and Prescribing Penalties and Damages for Violations Thereof. (Suspended by Resolution 11-01-95):

Ordinance 1999-2: An Ordinance of the Board of Supervisors of the Township of North Whitehall, Lehigh County, Pennsylvania, Prohibiting all Open Burning in the Township Due to Emergency Drought Conditions; Establishing Levels of Fire Danger; Setting Forth Specific Types of Open Burning Which are Prohibited, and which Types of Contained Burning Will be Permitted to Continue; Providing for the Suspension and Reinstatement of the Prohibition Against Open Burning in the Future as Conditions change; Providing for Exceptions and Modifications in Certain Specific Instances, Locations, and Times; and Prescribing Penalties and Damages for Violations Thereof.

The four ordinances listed above state that domestic fires shall be set, maintained and confined in closed containers made of metal, brick, stone or metal mesh with openings not more than one square inch and no closer than 25 feet to any dwelling. In addition, all open fires need to be monitored by an adult in an area free of weeds and no closer than 100 feet to any building, structure, wooden fence, or piled combustible material. The ordinances also prohibit the open burning of leaf waste during drought conditions

## **Examples of Existing Leaf Burn Ordinances**

R.W. Beck identified three communities in Pennsylvania that have ordinances specifically banning the burning of leaf waste. The three communities examined are summarized in Table 5. In addition, R. W. Beck identified and abstracted "Key Language" from these ordinances. R. W. Beck suggests that when the Township develops a new ordinance banning the burning of leaf waste, or amends an existing ordinance(s) (specifically Ordinance No. 1995-6 to make the burning of leaf wastes during drought permanent), the key language from this section be considered. Some of the language from the three communities benchmarked might be similar to the Township's existing burning ordinances or to one another. It should be noted that the burn ordinances from these three communities also discuss the creation of any type of outdoor fires and the burning of yard waste in general. This language was included as it might be of use to the Township when developing new, or amending existing ordinances.

# Table 5 Examples of Townships with Leaf Burn Ordinances

Township	Location	2006 Population	Ordinance(s)
Millcreek	Erie County	52,541	2001-1 and 2001-14
Lower Gwynedd	Montgomery County	11,248	398

## Millcreek Township

In February, 2000 the Millcreek Township Board of Supervisors enacted Ordinance No. 2000-1, which amended and restated regulations governing open burning within the Township and prohibited the burning of recyclables and other materials on public and private property, including leaf waste. Ordinance 2000-1 was intended to supersede Ordinance 97-2 which defines leaf waste in Section 3(C)(13). After the ordinance was passed, the DEP expressed concern that references in Section 1.04 of Ordinance 2000-1 did not adequately define "leaf waste" and that the ordinance may be seen as intending to allow the burning of leaf waste. As a result, the DEP advised Millcreek Township that it would not be able to award performance and recycling grants unless the ordinance was amended to clearly and concisely define leaf waste as one of the materials prohibited from being burned. In November 2001, Millcreek Township passed Ordinance No. 2001-14 which separated leaf waste from the definition of yard waste and thus specifically forbade the burning of leaf waste. Copies of Ordinance 2000-1 and 2001-14 are provided in Appendix E and Appendix F.

## Lower Gwynedd Township

In Lower Gwynedd Township, the burning of leaves or leaf waste and any or all recyclable materials is prohibited from being burned at any time of the year. Leafless branches, twigs and similar yard trimmings may be burned during the months of April, May, November and December only. In the past, the burning of leaf waste was allowed (via part 16, chapter 1620) on premises occupied as a dwelling by two families or less, with some restrictions.

Ordinance number 398 of Lower Gwynedd Township amended the codified ordinance of Lower Gwynedd Township, part 16 (fire prevention code) chapter 1620 (open burning), section 1620.01 (prohibited acts) by adding a subsection that specifically prohibits the burning of all recyclable materials including leaf waste as defined by the Township. A copy of the Township's amended burn ordinance (No. 398) that prohibits the burning of leaf waste year-round is provided in Appendix I. In addition, a Lower Gwynedd Ordinance Summary is presented in Appendix J.

## Key language from Township Ordinances

Key Language from the three Township's are listed (by ordinance) below.

### ■ Ordinance 2000-1 (Millcreek Township)

- 1.01. It shall be unlawful for any person, corporation, partnership, association or other entity to burn or cause to be burned upon any land in Millcreek Township, public or private and including private roadways and drives:
  - A. Any materials of any nature whatsoever upon any public street or road in Millcreek Township;
  - B. Any garbage, food waste, refuse or other material classified by the Board of Supervisors as "solid waste" or "municipal waste" under Township ordinances governing the collection, transportation and disposal of municipal and solid waste; or
  - C. Any materials designated by the Board of Supervisors as "recyclable materials" under Township ordinances governing the collection, transportation and recycling of recyclable materials
- 1.04. Subject to the foregoing prohibitions, the burning of wood and yard waste in conjunction with the occupancy of a parcel of land for single-family or two-family residential use is permitted, limited to the following: Such burning shall take place only on Saturdays between the hours of 8:00 a.m. and 6 p.m. It shall be unlawful for any person, corporation, partnership or other entity to burn wood and yard waste except in conjunction with occupancy of a parcel for such residential use and/or on days or at times not permitted herein. "Yard waste" as used in this Ordinance shall not include "leaf waste" as defined in Ordinance 97-2, as the same may in the future be amended.
- Ordinance 2001-14 (Millcreek Township Amending Ordinance No. 2000-1)

**Section 1.** Section 1.04 of Ordinance 2000-1 is hereby amended by adding a final sentence, the Section is so amended to provide as follows:

1.04. Subject to the foregoing prohibitions, the burning of wood and yard waste in conjunction with the occupancy of a parcel of land for single-family or two-family residential use is permitted, limited to the following: Such burning shall take place only on Saturdays between the hours of 8:00 a.m. and 6 p.m. It shall be unlawful for any person, corporation, partnership or other entity to burn wood and yard waste except in conjunction with occupancy of a parcel for such residential use and/or on days or at times not permitted herein. "Yard waste" as used in this Ordinance shall not include "leaf waste" as defined in 53 P.S. § 4000.103.

**Section 5.** Section 3(C)(13) of Ordinance 97-2 defining "leaf waste" is hereby amended to define the term as follows, as established in 53 P.S. § 4000-103: "Leaves, garden residues, shrubbery and tree trimmings, and similar material, but not including grass clippings."

**Section 6.** Ordinance 97-2 shall be amended and restated to reflect the amendment of the "leaf waste" term as set forth in Section 3, above, provisions of Section 3 of this Ordinance being incorporated in the restated Ordinance 97-2.

### Ordinance 308 (Lower Gwynedd Township)

### Section I – <u>Amendment to Code</u>

No person shall cause, allow, permit or maintain an outdoor bonfire or the burning of any of the following on a street or on public or private property, whether in connection with any building operation, in an open dump or otherwise, except as otherwise permitted by this chapter:

- (a) Garbage;
- (b) Household, business or industrial trash or similar waste products of every kind of nature;
- (c) Open burning of Leaf Waste as that term in defined in Chapter 1084 (Recyclable Materials Management) of the Codified Ordinances of Lower Gwynedd Township, and
- (d) Open burning of any and all Recyclable Materials as that term is defined in Chapter 1084 (Recyclables Materials Management) of the Codified Ordinances of Lower Gwynedd Township.

### Section III - Amendment to the Code

The Codified Ordinances of Lower Gwynedd Township, Part Sixteen (Fire Prevention Code), Section 1620.03 (Variances) is hereby amended by adding the following new subsections to the existing section:

(f) All fires in the Township which are permitted by variance shall be attended by a responsible person. During burning, a water hose attached to an operable water faucet or equipment capable of covering the fire with earth must be in immediate readiness for use in extinguishing the fire. A water hose, if used, must be of sufficient length to extend at least 15 feet beyond the site of the burning. Furthermore, no burning shall be permitted during periods of high wind, drought or weather inversion (i.e. hazardous air quality conditions) or during or in any other situation deemed hazardous by the chief fire officer or his or her duly authorized agent

## Recommendations Pertaining to Ordinance Language

Although R. W. Beck did not consult an attorney to provide this information, nor is R. W. Beck considered to be providing legal services in identifying the above examples of ordinances and ordinance language, R. W. Beck notes that the Township should consider the following when developing their burn ordinance:

- Utilize key language from current bans specifically prohibiting the open burning of leaf waste;
- Ensure that "leaf waste" is clearly defined in the ordinance language;

- Consider adopting the Act 101 definition of leaf waste; and
- Ensure that the ordinance language is reviewed by Township legal counsel before it is introduced for passage.

We hope that these findings are useful to you. We appreciate the opportunity to work with North Whitehall Township on this project. If you have any questions or concerns, please feel free to contact me at 703-623-9456.

Sincerely,

R. W. BECK, INC.

Kristian C. Ferguson Consultant Analyst

KCF:ls

Attachments

# Appendix A LEHIGH COUNTY MUNICIPAL BOUNDARIES



# Appendix B DETAILED COLLECTION EQUIPMENT INFORMATION

## MES L'CAT MODEL CM-



Bringing innovative and efficient solutions to solve the problems of leaf, tree waste and other bio-waste disposal. We have incorporated new features into the proven methods of leaf collection and hauling that dramatically improve the efficiencies of the equipment and operations.



Chassis-mounted or fully independent roll-off systems.

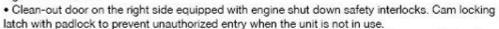


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The self-contained LeafCat system mounts on a 33,000 GVW truck chassis with a cab-to-axle clearance of 180 inches minimum. Customer's preference on chassis configuration.

#### CONFIGURATION:

- A 27 cubic yard container having a hydraulic-powered packing platen that is movable through the full length of the container.
- The front of the container configured for the mounting of a leaf vacuum / blower.
- An unloading door that unlocks and raises with sequentially-timed hydraulic cylinders. Container is self-unloading; no tipping required.
- A fully supported stainless steel, expanded metal screen enclosing the full top of the container and having an open area of 60 square feet for low velocity exhausting of the air stream.



- Can be used as a wood chip container when equipped with optional chip doors installed in the upper portion of the rear door.
- Bolt-on brackets mount body securely to the truck frame. Uses chassis-supplied power for DOT required running lights, brake lights and turn lights.
- Down-draft exhaust on left side of body.
- Designed to compress load of dry leaves to full legal axle load.

#### CONTAINER:

27 cubic yards
100 inches
94 inches
180 inches
90 inches
79 inches
177 inches

Tubular framing with steel floor and sidewalls.

Full section packing platen tilted 14 degrees for increased efficiency.



### This unit will ejection unload 5 tons of dry leaves!





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## IMPAC Predator Series Compaction Bodies from 20 to 33 Cubic Yards



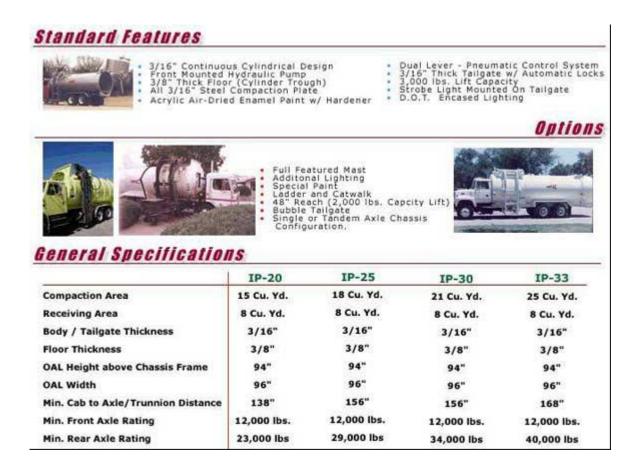


Impac's compaction bodies offer a perfect solution for those seeking the most from their waste transportation systems. The Impac is a side-loading compaction system perfect for curbside loading. And being fully automated for the one-man, in-cab operation with its high compaction storage area, it helps to keep overhead down allowing for more time spent picking up and less time dumping.





The IMPAC compactors are manufactured to strict A.S.M.E. code welding procedures in a variety of capacities from 20 to 33 cubic yards. You also have a choice of right or left hand side pickup styles with many standard features that are considered optional on other vehicles. The IMPAC is quick, having cycle times less than 30 seconds when handling steel or plastic containers, from 24" to 55" in diameter.



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## **AMERICAN ROAD MACHINERY 25 CY**



## Multi-Size Leaf Collector

Available with 17 & 25 cu. yd. hopper.

- Self contained unit with hopper
- Direct drive thru heavy duty power take-off with over-center clutch.
- 25" steel fan with six abrasion-resistant blades, dynamically & statically balanced; stress relieved to reduce vibration & maintenance.
- Rugged, free swinging, adjustable, chain supported hose boom.
- Low tip-to-housing clearance on suction fan, creates hurricane-force air flow.

## **AMERICAN ROAD MACHINERY 25 CY**



30/30 Leaf Collector Self-contained; 30 cu. yd. hopper

- Self-contained unit with 30 cubic yard hopper.
- Collect wet leaves at 2600 RPM, dry leaves at 2000 RPM or less.
- Direct drive, heavy duty P.T.O. with over-center clutch.
- Steel 30" diameter fan, balanced and stress relieved.
- 16" suction hose with hinged hose adaptor for transport.
- Front-mounted, positive mechanical advantage dump cylinder.
- 27,00 pound tri-axle slipper spring suspension with electric brakes

# Appendix C ACT 101 – SECTION 902 RECYCLING GRANT APPLICATION GUIDELINES INCLUDING LEAF WASTE

(Contact Pa. DEP for current version).

# Appendix D SECTION 902 GRANT APPLICATION (FY 06/07 Version)

(Contact Pa. DEP for current version).

# Appendix E MILLCREEK TOWNSHIP – ORDINANCE 2000-1

An Ordinance to amend Millcreek Township Ordinance No. 19, as amended, known as the Burning Ordinance; establishing regulations for outside burning on public and private property; prohibiting burning within 75' of any building or structure and/or 50' of any property line and on any day but Saturdays; prohibiting the burning of recyclable and other materials; setting forth recognized exceptions; establishing penalties for violation and including severability and repealor clauses.

**WHEREAS**, Millcreek Township Ordinance No. 19, enacted June 4, 1951 and commonly known as the Burning Ordinance, has established regulations governing outside burning of materials in the Township and prohibited specified actions and omissions; and

**WHEREAS**, Ordinance No. 19 has since been amended by Millcreek Township Ordinance Nos. 66-18, 73-15 and 91-20; and

WHEREAS, increased development of Millcreek Township and the development of programs to recycle materials since enactment of the Burning Ordinance and its amendments requires that ordinances address the existing conditions of Millcreek Township and its residents; and

**WHEREAS**, the Board of Supervisors finds that proper regulation of the outside burning of materials requires a regard for the interests of those residents having larger parcels and needs distinguishable from other residential, commercial and industrial properties; and

**WHEREAS**, the Board of Supervisors determines that environmental concerns and the public health, safety and welfare of the Township and its residents requires proper regulation of the outside burning of materials.

**BE IT ENACTED AND ORDAINED** by the Board of Supervisors of Millcreek Township, Erie County, Pennsylvania as follows:

- 1.01. It shall be unlawful for any person, corporation, partnership, association or other entity to burn or cause to be burned upon any land in Millcreek Township, public or private and including private roadways and drives:
  - D. Any materials of any nature whatsoever upon any public street or road in Millcreek Township;
  - E. Any garbage, food waste, refuse or other material classified by the Board of Supervisors as "solid waste" or "municipal waste" under Township ordinances governing the collection, transportation and disposal of municipal and solid waste; or
  - F. Any materials designated by the Board of Supervisors as "recyclable materials" under Township ordinances governing the collection, transportation and recycling of recyclable materials
- 1.02. The prohibitions against burning set forth above in Section 1.01(A), (B) and (C) shall be absolute, and without regard to any burning allowed under this Ordinance.
- 1.03. It shall be unlawful for any person, corporation, partnership, association or other entity to burn

or cause to be burned, within or upon any land in Millcreek Township, public or private and including private roadways and drives:

- A. Within fifty feet (50') of any property line and/or within seventy-five feet (75') of any building or structure upon any lot;
- B. Without a person sixteen (16) years of age or older attending to and monitoring such burning and fire at all times;
- C. Which is not within the confines of the premises owned, leased or rented by the person(s), corporation, partnership, association or other entity doing the burning or causing it to be done; and
- D. Which is not expressly authorized in Sections 1.04, 1.05 and/or 1.06 of this Ordinance.
- 1.04. Subject to the foregoing prohibitions, the burning of wood and yard waste in conjunction with the occupancy of a parcel of land for single-family or two-family residential use is permitted, limited to the following: Such burning shall take place only on Saturdays between the hours of 8:00 a.m. and 6 p.m. It shall be unlawful for any person, corporation, partnership or other entity to burn wood and yard waste except in conjunction with occupancy of a parcel for such residential use and/or on days or at times not permitted herein. "Yard waste" as used in this Ordinance shall not include "leaf waste" as defined in Ordinance 97-2, as the same may in the future be amended.

(As amended by Ordinance No. 2001-14, Section 1)

- 1.05. This Ordinance shall not be construed so as to prohibit burning in a suitable container or pit for the sole and express purpose of cooking or barbequing food.
- 1.06. This Ordinance shall not be construed so as to prohibit bonfires at school and community organization or neighborhood-sponsored activities, so long as such bonfire is (a) not within fifty feet (50') of any property line, (b) not within seventy-five feet (75') of any building or structure; (c) conducted upon property owned by the school, organization or a person giving prior permission to such bonfire; (d) attended to and monitored at all times by a person 16 years of age or older and (e) not upon any public street or road in Millcreek Township. It shall be unlawful for any person, corporation, partnership, association or other entity to create or cause the creation of a bonfire except in strict conformity with the conditions established in this Section.
- 1.07. This Ordinance shall not be construed so as to amend the Millcreek Township Nuisance Ordinance and other ordinances, including but not limited to the Millcreek Township Fire Protection Code, regulating conduct which may affect the health, safety and welfare of the Township and others, all of which ordinances shall remain full effect and which may apply even if burning permitted under this Ordinance causes a violation of such other ordinance. The Fire Prevention Code shall remain in effect and regulate matters related to this Ordinance. This Ordinance shall not be construed so as to suggest any liability of and by Millcreek Township for acts or omissions of private persons and entities. This Ordinance shall not be deemed to have modified, amended or repealed the Millcreek Township Municipal Waste and Recycling Ordinance, No. 97-2, as the same may be amended in the future.

(As amended by Ordinance No. 2001-14, Section 2)

1.08. Any person, corporation, partnership, association or other entity who/ which violates any provision of this Ordinance shall be liable to proceedings for enforcement of this Ordinance in accordance with Millcreek Township Ordinances 96-8 and 96-9, as the same may be amended, and the

Pennsylvania Rules of Criminal Procedure governing enforcement of summary offenses. The Millcreek Township Police Department and other code enforcement personnel designated by the Board of Supervisors shall have authority to investigate alleged violations and enforce the provisions of this Ordinance. Upon a determination by the Police Department or other designated code enforcement personnel that a violation of this Ordinance has occurred, a citation shall be given to or served upon the violator(s) and an action for enforcement of this Ordinance instituted in the District Justice Court having appropriate jurisdiction in accordance with the Pennsylvania Rules of Criminal Procedure governing summary violations. The administrative enforcement otherwise provided in Ordinance 96-8 shall not apply. Upon entry of judgment in favor of the Township and or the Commonwealth in such enforcement action, said judgment shall include the criminal action fine prescribed for the violation in Section 1.10 of this Ordinance, plus all court costs and plus all attorney fees incurred by Millcreek Township in such matter, pursuant to Ordinances 96-8 and 96-9, as the same have been or may in the future be amended. A person found to have violated this Ordinance shall be responsible for payment of all attorney fees incurred in the matter by Millcreek Township, including all appeals taken by the violator. The Board of Supervisors does not prescribe imprisonment for punishment of violations of this Ordinance. Each violation of this Ordinance, and each day a violation continues, shall constitute a separate offense.

- 1.09. When deemed necessary due to climatic conditions, the Millcreek Township Fire Prevention Officer shall be authorized to impose temporary bans on all outdoor burning or fires, which bans shall operate to prohibit outside fires and burning otherwise authorized by this Ordinance. It shall be unlawful for any person, corporation, partnership, association or other entity to burn or cause or allow to be burned any materials during the term of a burning ban.
- 1.10. Any person, corporation, partnership, association or other entity violating this Ordinance shall pay the fines prescribed for such violation in this Section. The following fines are hereby prescribed for violation of this Ordinance:

**Proceribed Fine** 

Violation

violation	Prescribed Fine
(a) Sections 1.01(A) and 1.03(C) (all violations)	\$300.00
(b) First violation of:	
Sections 1.01(B), 1.01(C), 1.03(A), 1.03(B), 103(D),	1.04 and/or 1.06 \$100.00
(c) Second and subsequent violations of:	
Sections 1.01(B), 1.01(C), 1.03(A), 1.03(B), 103(D),	
(d) Section 1.09	1.04 and/or 1.06 \$300.00 \$500.00

- 1.11. Upon the effective date of this Ordinance, Millcreek Township Ordinance Nos. 19, 66-18, 73-15 and 91-20 are expressly repealed and Section 11 of Ordinance 96-8 is repealed as to prescribed fines and administrative enforcement, though such ordinances shall govern all conduct and violations occurring prior to the effective date of this Ordinance.
- 1.12. If any section, subsection, sentence, clause, phrase or portion of this Ordinance or its

## **APPENDIX E**

application to any person, property or circumstances is for any reason held invalid or unconstitutional by any court, such holding shall not be construed to affect the validity of any of the remaining provisions of this Ordinance or its application, for such portion shall be deemed as a separate, distinct and independent provision from the remaining provisions which shall be and remain in full force and effect. It is hereby declared the legislative intent that this Ordinance would have been adopted had such valid or unconstitutional provision of its application not been included herein.

1.13. All Ordinances or parts of any Ordinances inconsistent herewith are hereby repealed.

**BE IT ENACTED** this **22nd** day of **February**, 2000.

Suzanne R.	Weber, Secretary	,

Notes:

The last sentence of Section 1.04 was added pursuant to Section 1 of Ordinance No. 2001-14.

The last sentence of Section 1.07 was added pursuant to Section 2 of Ordinance No. 2001-14.

**Township Ordinances** 

**Summary of Ordinances - 2000** 

# Appendix F MILLCREEK TOWNSHIP- ORDINANCE 2001-14

An Ordinance of Millcreek Township, Erie County, Pennsylvania, to amend the Open Burning Ordinance, No. 2000-1, by providing that the term "yard waste" as therein used shall not be deemed to include "leaf waste" as defined in 53 P.S. § 4000.103; amending the definition of "leaf waste" as defined in Section 3(C)(13) of Ordinance No. 97-2; and containing severability and repealor clauses

- WHEREAS, the Board of Supervisors on February 22, 2000 enacted Ordinance No. 2000-1, which amended and substantially restated regulations governing open burning in Millcreek Township; and
- **WHEREAS,** the Township's Municipal Waste and Recycling Ordinance, No. 97-2, as the same may in the future be amended, sets forth various definitions and regulations intended to comply with the Pennsylvania Municipal Waste Planning, Recycling and Waste Reduction Act (Act 101); and
- WHEREAS, the term "leaf waste" is defined in Section 3(C)(13) of Ordinance 97-2 as "only leaves"; and
- **WHEREAS,** Ordinance No. 2000-1 did not include any provisions indicating that it was intended to amend or supersede Ordinance No. 97-2; and
- **WHEREAS,** Section 1.04 of Ordinance 2000-1 limited those materials allowed to be burned, subject to stated requirements, under prior ordinances governing the subject to "wood and yard waste"; and
- WHEREAS, the Township has been advised that the Pennsylvania Department of Environmental Protection (PaDEP) has expressed concern that reference in Section 1.04 of Ordinance 2000-1 may be intended to allow burning of leaf waste by virtue of the Department's adoption, for purposes other than municipalities' recycling programs, of a "yard waste" term that includes "leaf waste"; and
- **WHEREAS,** PaDEP has advised Millcreek Township that it will not award performance and other recycling grants to which the Township is otherwise entitled under Act 101 because of this concern; and
- **WHEREAS,** PaDEP has also questioned the definition of "leaf waste" in Section 3(C)(13) of Ordinance 97-2; and
- **WHEREAS**, the Board of Supervisors believes that provisions of Ordinance 97-2 and Ordinance 2000-1 specifically prohibit the burning of recyclable materials and that Ordinance 2000-1 restricted the class of materials which can be burned even where all regulations of the Ordinance are met; and
- **WHEREAS,** the Board of Supervisors believes that the term "leaf waste" should be defined in Township ordinances consistently with the term's definition at 53 P.S. § 4000.103 as established by the General Assembly.
- **IT IS HEREBY ORDAINED AND ENACTED** by the Board of Supervisors of the Township of Millcreek, Erie County, Pennsylvania, and it is ordained and enacted, as follows:
- **SECTION 1.** Section 1.04 of Ordinance 2000-1 is hereby amended by adding a final sentence, the Section as so amended to provide as follows:
  - 1.04. Subject to the foregoing prohibitions, the burning of wood and yard waste in conjunction

with the occupancy of a parcel of land for single-family or two-family residential use is permitted, limited to the following: Such burning shall take place only on Saturdays between the hours of 8:00 a.m. and 6 p.m. It shall be unlawful for any person, corporation, partnership or other entity to burn wood and yard waste except in conjunction with occupancy of a parcel for such residential use and/or on days or at times not permitted herein. "Yard waste" as used in this Ordinance shall not include "leaf waste" as defined in 53 P.S. § 4000.103.

- **SECTION 2.** Ordinance No. 2000-1 shall not be deemed to have modified, amended or repealed the Municipal Waste and Recycling Ordinance, No. 97-2, as the same may be amended in the future.
- **SECTION 3.** Resolution 2000-R-37 is hereby amended to assign to the Township's Recycling Coordinator responsibilities for enforcement of the Open Burning Ordinance, No. 200-1 as amended herein, insofar as such enforcement relates to burning of leaf waste.
- **SECTION 4.** Ordinance 2000-1 shall be amended and restated to reflect the amendments set forth, provisions of this Ordinance being incorporated in the restated Ordinance 2000-1.
- **SECTION 5.** Section 3(C)(13) of Ordinance 97-2 defining "leaf waste" is hereby amended to define the term as follows, as established in 53 P.S. § 4000-103: "Leaves, garden residues, shrubbery and tree trimmings, and similar material, but not including grass clippings."
- **SECTION 6.** Ordinance 97-2 shall be amended and restated to reflect the amendment of the "leaf waste" term as set forth in Section 3, above, provisions of Section 3 of this Ordinance being incorporated in the restated Ordinance 97-2.
- **SECTION 7.** This Ordinance reflects substantive amendments to the original proposed Ordinance as initially advertised, and is enacted after a second publication of notice of the Ordinance in its final and amended form.
- **SECTION 8.** If any section, subsection, sentence, clause, phrase or portion of this Ordinance or its application to any person, property or circumstances is for any reason held invalid or unconstitutional by any court, such holding shall not be construed to affect the validity of any of the remaining provisions of this Ordinance or its application, for such portion shall be deemed as a separate, distinct and independent provision from the remaining provisions which shall be and remain in full force and effect. It is hereby declared the legislative intent that this Ordinance would have been adopted had such valid or unconstitutional provision of its application not been included herein.
- **SECTION 9.** All ordinances or parts of any Ordinances inconsistent herewith are hereby repealed. This Ordinance shall not be construed so as to repeal or amend Ordinance 97-2, as the same may in the future be amended.

BE IT ENACTED this 13th day of November, 2001.

# Appendix G LOWER GWYNEDD AMENDED ORDINANCE

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### BOARD OF SUPERVISORS LOWER GWYNEDD TOWNSHIP MONTGOMERY COUNTY, PENNSYLVANIA

ORDINANCE NO.

398

#### BURNING ORDINANCE

AN ORDINANCE AMENDING THE CODIFIED ORDINANCES OF LOWER GWYNEDD TOWNSHIP PART SIXTEEN (FIRE PREVENTION CODE), CHAPTER 1620 (OPEN BURNING), SECTION 1620.01 (PROHIBITED ACTS) BY ADDING A NEW SUBSECTION PROHIBITING THE BURNING OF ALL RECYCLABLE MATERIALS INCLUDING LEAF WASTE AND ALL OTHER RECYCLABLE MATERIALS AS DEFINED IN CHAPTER 1084 OF THE CODIFIED ORDINANCES OF LOWER GWYNEDD TOWNSHIP; AMENDING SECTION 1620.02 (EXCEPTIONS) BY DELETING IT IN ITS ENTIRETY; AND BY AMENDING SECTION 1620.03 (VARIANCES), BY ADDING A NEW SUBSECTION TO PERMIT A VARIANCE FOR FIRES USED FOR OR IN CONNECTION WITH CAMPING, COOKING, PICNICKING OR OTHER AUTHORIZED RECREATIONAL ACTIVITIES.

The Board of Supervisors of Lower Gwynedd Township does hereby **ENACT** and **ORDAIN** as follows:

#### SECTION I - Amendment to Code

The Codified Ordinances of Lower Gwynedd Township, Part Sixteen (Fire Prevention Code), Chapter 1620 (Open Burning), Section 1620.01 (Prohibited Acts) is hereby amended by deleting the existing Subsection (c) in its entirety and adding two new subsections as follows:

- (c) Open burning of Leaf Waste as that term is defined in Chapter 1084 (Recyclable Materials Management) of the Codified Ordinances of Lower Gwynedd Township; and
- (d) Open burning of any and all Recyclable Materials as that term is defined in Chapter 1084 (Recyclable Materials Management) of the Codified Ordinances of Lower Gwynedd Township.

### SECTION II - Amendment to the Code

The Codified Ordinances of Lower Gwynedd Township, Part Sixteen (Fire Prevention), Chapter 1620 (Open Burning), Section 1620.02 (Exceptions) shall be deleted in its entirety.

### SECTION III - Amendment to the Code

The Codified Ordinances of Lower Gwynedd Township, Part Sixteen (Fire Prevention), Section 1620.03 (Variances) is hereby amended by adding the following new subsections to the existing section:

- (e) For fires used for or in connection with camping, cooking, picnicking or other authorized recreational activities.
- All fires in the Township which are permitted by variance shall be attended by a responsible person. During burning, a water hose attached to an operable water faucet or equipment capable of covering the fire with earth must be in immediate readiness for use in extinguishing the fire. A water hose, if used, must be of sufficient length to extend at least 15 feet beyond the site of the burning. Furthermore, no burning shall be permitted during periods of high wind, drought or weather inversion (i.e. hazardous air quality conditions) or during or in any other situation deemed hazardous by the chief fire officer or his or her duly authorized agent.

### SECTION IV - Severability

The provisions of this Ordinance are severable, and if any section, sentence, clause, part or provision hereof shall be held 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 Ordinance. It is hereby declared to be the intent of the Board that

this Ordinance would have been adopted even if such illegal, invalid or unconstitutional section, sentence, clause, part or provision had not been included herein.

#### SECTION V - Failure to Enforce not a Waiver

The failure of the Township to enforce any provision of this Ordinance shall not constitute a waiver by the Township of its rights of future enforcement hereunder.

### SECTION VI - Effective Date

This Ordinance shall take effect and be in force from and after its approval as required by the law.

### SECTION VII - Repealer

All other ordinances and resolutions or parts thereof insofar as they are inconsistent with this Ordinance are hereby repealed.

ORDAINED AND ENACTED by the Board of Supervisors of Lower Gwynedd Township, Montgomery County, Pennsylvania, this 232 day of April

LOWER GWYNEDD TOWNSHIP

of the Board of Supervisors

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# Appendix H LOWER GWYNEDD ORDINANCE SUMMARY

## **MEMORANDUM**

Date: April 23, 2004

RE: BURNING IN LOWER GWYNEDD TOWNSHIP

The purpose of this memo is to clarify the conditions and requirements for burning in the Township. On April 23, 2002, Ordinance 398 was past that amended part 16 of the Codified Ordinances of Lower Gwynedd Township regarding Open Burning. The following is a summary of the requirements as stated in the revised Ordinance. The objective is to outline the requirements to allow a consistency of enforcement.

- 1 Period of year for Burning: Months of April, May, November & December.
- Time of day: begins 8 AM with complete extinguishment by Dusk—to be defined as one half hour after sunset.
- 3 What can not be burned at any time during the year:

Leaves or Leaf Waste

- Any or All Recyclable Materials
- Garbage
- Household, Business or Industrial Trash or Waste
- 4 What can be burned during the burning period:

Leafless Branches, Twigs or similar trimmings

- No Burning during periods of high winds, drought or weather inversion (ie hazardous air quality)
- Burning shall be constantly attended by a responsible person. During such burning, a water hose attached to an operable water faucet or equipment capable of covering the fire with earth must be in immediate readiness for use in extinguishing the fire. A water hose, if used, must be of sufficient length to extend at least fifteen feet beyond the site of the burning.
- 7 Fires are allowed for camping, cooking, picnicking or other authorized recreational activities.
- 8 Fires may be authorized by the Fire Marshal to:

Prevent/ abate a fire hazard Fire Training Control of Disease/pests Ceremonial Purposes

Al Comly, Fire Marshal-Lower Gwynedd