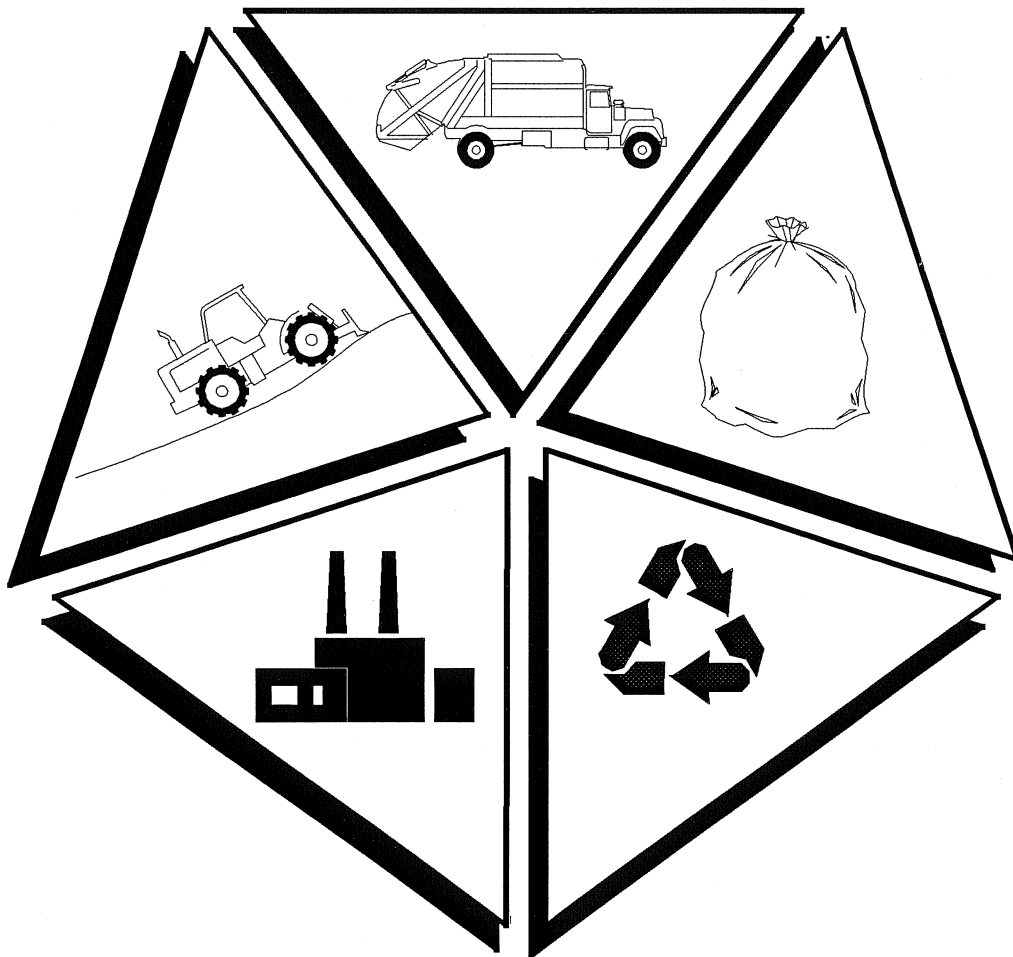# THE LICENSING OF SOLID WASTE HAULERS

IN SOUTHEASTERN PENNSYLVANIA

DELAWARE VALLEY REGIONAL PLANNING COMMISSION

FEBRUARY 1993

THE LICENSING OF WASTE HAULERS

IN SOUTHEASTERN PENNSYLVANIA

PREPARED FOR THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BY:
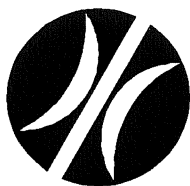
DELAWARE VALLEY REGIONAL PLANNING COMMISSION

THE BOURSE BUILDING

21 SOUTH FIFTH STREET

PHILADELPHIA, PENNSYLVANIA 19106

FEBRUARY 1993

Created in 1965, the Delaware Valley Regional Planning Commission (DVRPC) is an interstate, intercounty and intercity agency which provides continuing, comprehensive and coordinated planning for the orderly growth and development of the Delaware Valley region. The region includes Bucks, Chester, Delaware, and Montgomery counties as well as the City of Philadelphia in Pennsylvania and Burlington, Camden, Gloucester, and Mercer counties in New Jersey. The Commission is an advisory agency which divides its planning and service functions between the Office of the Executive Director, the Office of Public Affairs, and three line Divisions: Transportation Planning, Regional Information Services Center, which includes Regional Planning Office, and Finance and Administration. DVRPC's mission for the 1990s is to emphasize technical assistance and services and to conduct high priority studies for member state and local governments, while determining and meeting the needs of the private sector.

The DVRPC logo is adapted from the official seal of the Commission and is designed as a stylized image of the Delaware Valley. The outer ring symbolizes the region as a whole while the diagonal bar signifies the Delaware River flowing through it. The two adjoining crescents represent the Commonwealth of Pennsylvania and the State of New Jersey. The logo combines these elements to depict the areas served by DVRPC.

DELAWARE VALLEY REGIONAL PLANNING COMMISSION

Publication Abstract

TITLE	
THE LICENSING OF WASTE HAULERS IN SOUTHEASTERN PENNSYLVANIA	Date Published: February 1993 Publication No. 93008

Geographic Area Covered:

Southeastern Pennsylvania, including Bucks, Chester, Delaware, Montgomery and Philadelphia counties.

Key Words:

Licensing, Solid Waste, Haulers, Act 101, Flow Control

ABSTRACT

This report explore the way in which the licensing of solid waste haulers is conducted in Southeastern Pennsylvania. Licensing programs in other areas of the country are also profiled. The report considers data collection, reporting and enforcement procedures which can aid in tracking solid waste.

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EXECUTIVE SUMMARY

It has been five years since the passage of Pennsylvania's *Municipal Waste Planning and Waste Reduction Act of 1988 (Act 101)* which charged counties with the responsibility of planning for the disposal of solid waste generated within their borders. Most counties within Southeastern Pennsylvania have prepared municipal solid waste management plans which have been approved by the Pennsylvania Department of Environmental Resources. These plans are designed to ensure that municipal waste continues to be disposed of in a way that complies with the appropriate regulations and standards, minimizes health impacts and promotes future planning.

This report looks at licensing procedures that have been implemented in Bucks, Chester, Delaware, Montgomery and Philadelphia Counties to monitor the movement of county waste. Licensing has been an initial effort to control the flow of waste. Although haulers in the region operate in several counties, each licensing program has been established independently. Bucks County, for example, has placed the responsibility for controlling the flow of waste on its municipalities. In all other counties, waste flow is handled at the county level by either the county or waste authority.

While the licensing programs currently in effect may function adequately on the county level, the system is much more difficult to negotiate when one considers that many haulers operate in more than one county and therefore, must comply with the licensing procedures required by the various counties located within Southeastern Pennsylvania.

Following an examination of licensing procedures in Southeastern Pennsylvania and other areas of the country, the report identifies several strategies for improving licensing within the region. These include strengthening enforcement by encouraging cooperation of enforcement officers in adjacent counties; standardizing licensing fees, requirements and penalties; and, requiring haulers to submit to background checks.

The report also looks at the advantages of a regional approach to licensing. One method of linking counties in the region is to network the various solid waste software systems currently in use to ensure the adequate exchange of information among administrative offices, transfer stations and landfills. The report discusses available software and methods for networking existing systems. Another starting point is to encourage solid waste coordinators to agree to standardize procedures to create a more uniform licensing system.

Given the multi-county character of licensing and flow control, this is an issue that cannot effectively be addressed by one county. Uniform strategies and implementing actions are critical to achieving both efficiency and effectiveness. County coordinators have worked constructively in the past to address solid waste issues and are encouraged to continue to collaborate in order to develop a viable region-wide licensing program.

CHAPTER I
INTRODUCTION

BACKGROUND

The *Municipal Waste Planning and Waste Reduction Act of 1988 (Act 101)*, which was signed into law by Governor Casey on July 28, 1988, mandated changes to solid waste planning in Pennsylvania. One of the most significant changes precipitated by the Act was that it wrested the solid waste planning function from the municipalities and placed it in the hands of the counties.

Act 101 was passed in the midst of Pennsylvania's solid waste crisis. In Southeastern Pennsylvania — an area which includes Bucks, Chester, Delaware, Montgomery and Philadelphia Counties (Figure 1) — the counties were developing new Municipal Solid Waste (MSW) disposal facilities and long term contracts to provide assured disposal capacity.[1] The Region's dependence on facilities located outside of the Region had resulted in rapidly escalating disposal costs.

Prior to Act 101, Act 97 conferred responsibility for preparing solid waste management plans on local municipalities, however, municipalities were not compelled to abide by the plans.[2] Municipal solid waste planning did not have a significant effect on the solid waste crisis because the planning was merely advisory, and, economies of scale favor solid waste management planning on the county level. Recognizing this, Pennsylvania legislators enacted Act 101 which authorized a county level approach to solid waste planning.

Under Act 101, the primary responsibility of the counties is to insure the availability of adequate permitted processing and disposal capacity for the waste which is generated within its borders. To this end, counties can issue licenses to waste haulers who operate within the county limits and enact flow control ordinances. Under Section 303 of Act 101, counties are given the power to require all persons to obtain a license to collect and transport waste subject to its plan to ensure that waste is delivered to the appropriate municipal waste processing and disposal facility.

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[1]Delaware Valley Regional Planning Commission, *"Legislative and Regulatory Compendium For Municipal Solid Waste Management In Southeastern Pennsylvania,"* June 1986.

[2]Ibid

WHY LICENSE?

Many communities have found licensing necessary to control the flow of waste and ensure the long-term economic viability of designated transfer stations, resource recovery facilities and municipal waste landfills. More importantly, licensing provides communities with better information about the flow of solid waste which will lead to better planning for solid waste disposal. Licensing affords local governments the opportunity to track the flow of waste in order to calculate existing facility capacity, adequacy of financing, and control of costs. A licensing program can provide the following information:

- Which haulers are collecting MSW and which are collecting recyclables;
- What type of MSW is being collected;
- How much waste is being collected (which can then be used to determine how much disposal capacity must be reserved at a designated disposal site);
- Whether or not haulers have disposal capacity agreements with disposal sites and transfer stations; and,
- Vehicle information.

This information can be used to determine that waste is going where it is supposed to be going in order to guarantee the long term economic viability of solid waste facilities and to protect against the unplanned loss of these facilities. Licensing also protects the health and welfare of residents by ensuring that waste is transported and disposed of safely.

The development of a flow control system including the licensing of waste haulers is underway in Southeastern Pennsylvania counties in order to ensure that all acceptable wastes will be disposed of at designated facilities. The implementation of these waste systems will likely result in several benefits. First, the counties will be able to determine where waste is processed and disposed. Therefore, each county can more successfully monitor municipal waste generated in its borders. This will help insure that municipal waste continues to be disposed of in a way that complies with the appropriate regulations and standards, minimizes health impacts and promotes future planning. Second, greater opportunities exist for recycling if the county has some degree of control over the method of delivery and processing of waste. Finally, the control and delivery of significant portions of waste generated within a county may be helpful in ensuring the long term viability of a designated disposal site. Counties also may be able to secure more favorable long term disposal contracts when they can guarantee large amounts of waste.

PURPOSE OF THE REPORT

Throughout the Delaware Valley, the licensing of solid waste haulers is handled in many different ways. The Delaware Valley Regional Planning Commission (DVRPC) undertook this report under contract to the Pennsylvania Department of Environmental Resources (PA DER) to analyze the various licensing procedures in effect in Southeastern Pennsylvania in

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FIGURE 1

SOUTHEASTERN PENNSYLVANIA
COUNTIES

WARREN

NORTHAMPTON

LEHIGH

HUNTERDON

SOMERSET

BERKS

MIDDLESEX

BUCKS

MERCER

MONMOUTH

MONTGOMERY

LANCASTER

PHILA.

OCEAN

CHESTER

DELAWARE

BURLINGTON

CAMDEN

CECIL

GLOUCESTER

NEW
CASTLE

SALEM

ATLANTIC

CUMBERLAND

CAPE
MAY

0   6   12 MILES
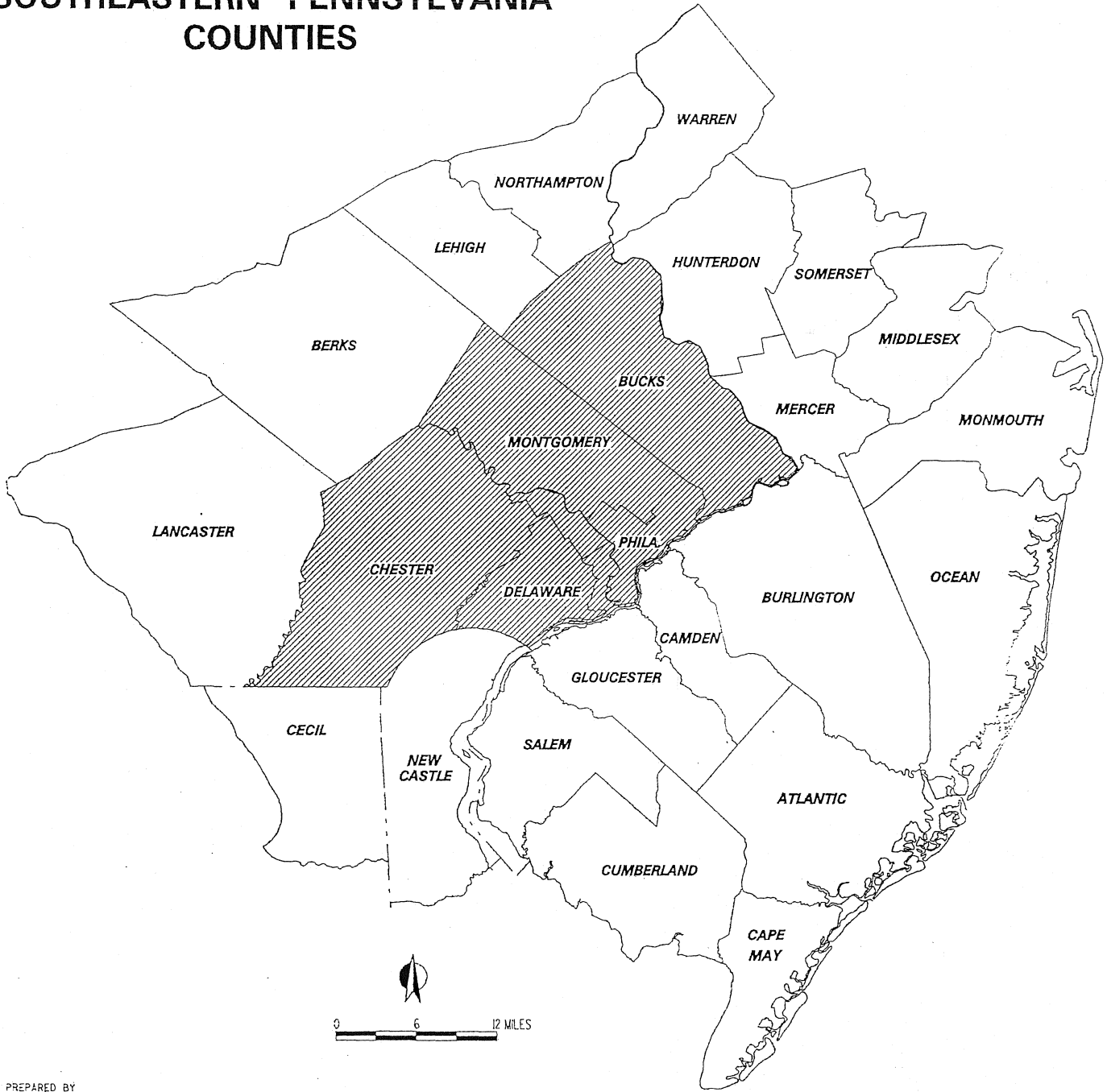
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order to gain an overview of how the system currently operates and to provide recommendations for improvements to the current system.

The first chapter provides a synopsis of licensing and flow control requirements in Bucks, Delaware, Chester, Montgomery and Philadelphia counties. The similarities and differences between the various programs are discussed. The report proceeds to consider data collection, reporting and enforcement procedures which can aid in tracking solid waste.

Within the report, other examples of licensing programs throughout the country are discussed. The report concludes with recommendations for strengthening licensing within the region.

CHAPTER II
LICENSING IN SOUTHEASTERN PENNSYLVANIA

Controlling the flow of waste within a county allows for better solid waste planning and provides economic, environmental and social benefits. Under Act 101, counties have been given primary authority to plan for waste flow control and have adopted a number of strategies for controlling the flow of waste. In this chapter the licensing procedures which have been adopted by Bucks, Chester, Delaware, Montgomery and Philadelphia Counties are discussed. Although not all of these programs are tied to waste flow control ordinances, all programs have been adopted to ensure that waste is being directed through the proper channels. This chapter concludes with a discussion of how county programs interface on a regional level.

BUCKS COUNTY

Bucks County has recognized the need for waste flow control within the County and, in June of 1991, adopted a *Flow Control Ordinance for Municipal and Source Separated Recyclables* (Ordinance #80). Ordinance #80 instructs Bucks County municipalities to undertake flow control in their communities by licensing waste haulers and directing waste to County designated disposal sites. Although Pennsylvania's Act 101 authorizes counties to require licensing of trash haulers to control the flow of waste, the County has opted to delegate this authority to its municipalities. Bucks County is one of the only Southeastern Pennsylvania counties to divest itself from the day to day waste flow control issues and rest the authority in the hands of the locals. This decision appears to be somewhat inconsistent with Act 101's purpose of shifting responsibility for developing and implementing municipal waste plans from the municipal to the county level.

Bucks County municipalities, under the County's directive, have been required to adopt flow control ordinances and designate disposal sites. In order to ensure some continuity among the municipalities, the Bucks County Planning Commission developed a model flow control ordinance for the licensing of waste haulers and encouraged, but did not command that municipalities adopt it. While the majority of the County's municipalities have adopted the licensing requirement recommended by the County, several have made minor changes. Some communities have mandated additional conditions such as Doylestown Borough and Falls Township which require even those haulers who are passing through the municipality to obtain licenses. For a summary of municipal ordinances, please see Appendix A.

Generally, the licensing requirements recommended by the County in its model ordinance have been adopted by Bucks County municipalities. The following is a summary of procedures that are in effect in Bucks County:

a) Licenses are issued for a calendar year (January 1 through December 31). Renewal and application must be submitted at least 45 days before the license expires, although licenses issued in Richland Township are valid February 1 through January 31.

b) Licensing fees do not exceed $100 per waste hauling company per year, with the exception of Bensalem and Northampton Townships which have established fees of $300 and $400 respectively.

c) Haulers are NOT required to display licensing stickers except in Richland, East Rockhill and Doylestown Townships where sticker display is required. In all municipalities, the hauler's name must appear in six inch high letters on the side of the vehicle.

d) Collection vehicles must comply with Act 97 and 101 vehicle requirements.

e) Liability and Automobile Insurance must be in accordance with the minimum amount established by the municipality and Workers Compensation coverage is required.

Neither the County nor the municipalities require haulers to complete disclosure statements or submit to background checks. The County does not address the issue of performance bonds and the only municipality to specify a right to require a performance bond is Lower Southampton Township.

In order to ensure that waste is being directed to a designated disposal site, the County has requested that municipalities adopt ordinances or resolutions indicating the county designated disposal site to which waste will be sent. Many municipalities have not designated specific disposal sites and haulers are using any of the County designated sites.
While all municipalities request that licensed haulers report significant changes to the proper officials in the communities which they service, the municipalities do not require waste haulers to submit regular reports. Hauler must produce evidence regarding volume and weight of waste collected and furnish this information to the municipalities upon demand.

In an effort to track waste within the County, the Bucks County Planning Commission will implement a County Documentation Program (WasteDoc) which will become effective in 1993. In anticipation of this program, all Bucks County municipalities have required haulers to participate and prepare bi-annual reports once the Program is implemented. The program will provide a system of documenting the amount, origin and final disposal destination of municipal waste and source separated material by municipality. With this approach, the County hopes to streamline data collection and adopt a low paperwork system. PA DER has awarded a $42,000 grant to the county to develop this program. Bucks County is currently

one of the only Southeastern Pennsylvania counties that does not have a reporting system which allows the County to track the flow of waste.

Both the County's model ordinance and the municipal ordinances cite penalties that will be meted out by the municipalities in the form of fines, imprisonment, license suspension or injunctions, but enforcement mechanisms vary by municipality and are not always clear. DVRPC randomly sampled six municipalities within the County and found that enforcement is handled at the local level — most often in response to citizen complaints. In most communities, the police department is responsible for responding to complaints and stopping unlicensed haulers. The South West Bucks Solid Waste Committee has instructed the police to use their powers to stop trucks that fail to display a license. Neither the County not the municipalities have hired solid waste enforcement officers.

CHESTER COUNTY

Of Chester County's 73 municipalities, 13 have enacted ordinances which require waste haulers to be licensed. Beginning January 1, 1993, however, Chester County enacted a county-wide licensing program. The County's intention is that the County program will supersede those operated by individual municipalities. *Municipal Waste Flow Control Ordinance 92-1* provides for collection, licensing requirements, waste disposal at designated sites, penalties, enforcement, and mandatory waste tonnage reporting.

Under this ordinance, the collection and transportation of waste in Chester County must be performed by licensed waste haulers. In order to be granted a license, a hauler must complete a form which is submitted to the Chester County Health Department. The $250.00 application fee is paid annually. The County has instituted a $25.00 per vehicle fee and a $15.00 per container fee. Licensed haulers are required to retain Worker's Compensation Insurance, Comprehensive General Liability for bodily injury and property damage coverage, and Comprehensive Automobile Liability Insurance.

Licenses are renewed annually on a calendar year basis and licenses cannot be transferred from one vehicle to another. The County requires the licensee to attach and display the license so that it is clearly visible on both sides of the truck and container. The County has also instituted a manifest system.

The County intends to develop a comprehensive data collection and retrieval system to track all municipal waste (and eventually recyclables) that is received, disposed, or processed within the county. The monitoring system will be designed to enable the County to enforce its Municipal Waste Flow Control Ordinance by having current waste flow information readily available. Systems capable of allowing information exchange are discussed in the following chapter.

To address the issue of enforcement, the County recently hired to flow control officers. The Ordinance outlines the administrative actions that can be taken if a licensee violates the

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Flow Control Ordinance or the Rules and Regulations. Penalties may include: fines, imprisonment or license revocation. The flow control officer will track the County's solid waste by computer but will also monitor haulers by following them to ensure that trash is disposed at designated disposal facilities.

DELAWARE COUNTY

In December of 1990, Delaware County enacted a Waste Flow Control Ordinance which required all acceptable solid waste generated within the County to be collected and transported only in County licensed and permitted vehicles and containers. Licensing is administered by a Division of the Delaware County Waste Authority and every vehicle and container used to transport waste must be registered with this office. County licenses are valid for one year - from January 1 through December 31.

The County issues four types of solid waste hauling stickers. These include: a Type **M** sticker which is issued for vehicles owned by a municipality or private hauler who collects residential waste; a Type **C** sticker is available for vehicles used to collect commercial waste and, a Type **R** stickers which are issued for roll-off and lugger containers. A Type **S** sticker can be issued at the discretion of the Solid Waste Authority for vehicles or containers used to collect waste from generators who are involved in special types of activity which produce both commercial waste and unacceptable or hazardous waste. Sticker fees range from $20.00 for Type **R** stickers to $50.00 for Type **M** and Type **C** stickers, and $100.00 for Type **S** stickers. Sticker fees are in addition to the $150.00 licensing application fee. Only one sticker is issued for each vehicle or container. The Authority requires haulers to display these stickers on both sides of the cab.

During the licensing application process, haulers are required to estimate the quantity of waste they will be hauling. Attached to their application, each hauler must include the rules and regulations governing waste collection in the communities in which the hauler will operate. During the application process, the hauler is required to arrange to have all vehicles that will be licensed weighed by the Authority in order to establish a tare weight. The tare weight is then printed on both sides of the vehicle along with the collector's name and address.

Each applicant must provide a certificate of insurance for vehicles for which stickers are issued and provide liability coverage for bodily injury and property damage. Vehicle inspection stickers must also be kept current for each vehicle.

The Authority does not require haulers who dispose of waste in designated facilities to submit reports, however, haulers must keep accurate logs of incoming and outgoing vehicles and containers — including information about location of containers, routes of vehicles and location of final waste disposal. Haulers who transport waste to facilities other than those designated by the Authority submit annual reports to the County and identify from whom

the waste was received, type of waste received and amount in tons, and the persons or facilities to whom the waste was sent for processing.

In Delaware County, enforcement is handled by Solid Waste Enforcement Officers who are supervised by the Solid Waste Authority. The officers are responsible for investigating and reporting violations of the Delaware County Municipal Waste Flow Control Ordinance. Although these officers have the authority to issue citations, they have no greater arrest powers than any other citizen.

MONTGOMERY COUNTY

The Montgomery County Commissioners created three waste authorities to manage the transportation and disposal of municipal solid waste in the eastern, northern and western portions of Montgomery County. Montgomery County entered into an assignment and delegation agreement with all three authorities under which the county conferred on the authorities powers, under Act 101, required to fully implement the adopted municipal waste management plan. Among the powers specifically assigned to the authorities is the enforcement of the county adopted flow control ordinance. The authorities are also delegated powers to adopt and implement appropriate rules and regulations needed to develop a licensing program as called for in the municipal waste management plan. The Eastern Authority has required licensing since 1990 and the other two authorities began licensing waste haulers in January 1, 1991. Licenses are valid from January until December and must be renewed annually.

Haulers must obtain a license for each of the three service areas in which they operate. Also, some communities require additional licenses which they have enacted as a revenue source. The primary license fee for licenses issued through the Solid Waste Authority is $300.00 with each additional license costing $100.00. The County also charges a $30.00 per vehicle fee. All haulers must prepay municipal disposal service or post a security deposit in the form of cash or a letter of credit. Haulers are expected to provide stated minimum amounts of Worker's Compensation, employer's liability, comprehensive general liability and comprehensive auto liability. The County's **Rules and Regulations** identify acceptable vehicle specifications. Before receiving a license, a hauler must present his vehicle to the appropriate Waste Authority for inspection.

The County issues a **Waste Origin Booklet** to all licensed waste haulers — this system allows the County to track waste within its borders. Drivers complete a ticket upon entering one of the county's facilities (i.e. transfer station, landfill or resource recovery facility) to discharge waste. Information requested on the form includes vehicle identification number, type of waste being hauled and origin of the waste. The County has directed that all of its waste be disposed of in Montgomery County. This information is used for billing purposes and enforcement. At the facility the information is entered into the computer and each night the day's input is downloaded into the Waste Authority's computer.

In order for waste to enter the Montgomery County waste stream, it must be deposited at a designated facility which has obtained a point of entry license. These licenses are issued on a calendar year and must be renewed annually. Facility operators must submit a license fee and prove that they have obtained a valid PA DER operating permit. In addition, the facility must post a performance bond and agree to maintain complete and accurate records.

The County employs four full-time enforcement officers to conduct enforcement. The County's Waste Flow Ordinance establishes the enforcement program but does not grant enforcement officers any police powers. Their role is merely to document problems which, if serious enough, are eventually turned over to the Authority's solicitor. The duties of the officers are to inspect vehicles, conduct surveys of commercial trash generators, conduct surveillance of out of county disposal sites and follow up on complaints against haulers. Disputes are handled through the Waste Authority Boards.

PHILADELPHIA COUNTY

Philadelphia's licensing regulations for trash haulers became effective in 1975 and are being updated to include recycling. Currently, all haulers who are interested in collecting or transporting waste must contact the Department of Licenses and Inspections (L & I) to receive a license. The cost of licensing is $50.00 per vehicle and a separate application is required for each vehicle. Applications are renewed annually and are valid from January 1 through December 31. The City's licensing program is not tied to a flow control ordinance. The City's Solid Waste Advisory Committee is currently working with PA DER to develop a flow control ordinance.

At the time of the application, the hauler must present a certificate of title, motor vehicle registration for the current year, insurance certificates for public liability and property damage, proof of coverage by a State approved insurance company, and, an affidavit indicating the procurement of disposal capacity for the life of the license at disposal or processing facilities approved by PA DER. L & I issues identification stickers which the hauler is required to affix to the vehicle. Haulers must also print the vehicle's license plate number, hauler's name and address and tare weight on the left side of the vehicle.

Vehicles must comply with the vehicle standards that are promulgated by L & I and each vehicle is inspected before a license is issued. Because of limited funding and personnel, Philadelphia has not implemented any type of enforcement program.

LICENSING IN THE REGION

Licensing across the region has taken various forms and has been implemented with varying degrees of sophistication. Licensing as a component of a flow control ordinance allows a county to exert control over the haulers who operate in the county, impose restrictions on haulers to insure that MSW reaches its intended destination, and levy fines and penalties against haulers who do not conduct their operations within county sanctioned parameters.

Montgomery County's licensing program is one of the more comprehensive in the region. Recognizing the importance of waste monitoring, the County requires that both the hauler and waste facility to report on the origin and destination of waste. Two levels of data collection provide the County an opportunity to double check reported information and investigate any discrepancies and inconsistencies. Another strong feature of Montgomery County's program is that the design of the software system makes it possible for the County to receive information daily from all designated facilities — regardless of whether or not they are County owned. This kind of open network allows the County to keep its finger on the pulse of the solid waste operation by having quick access to current information.

Delaware County has adopted solid waste software system which is designed to permit its administrative office to tap into select solid waste operations and access information. Philadelphia County has purchased a solid waste software system which allows it to track municipal waste. Chester County is moving towards adopting a tracking system which is similar to Montgomery County's and will incorporate both a computer networking and manifest system.

Although Bucks County's licensing program is tied to a flow control ordinance, it operates more like a common carrier licensing program. Many of the municipalities have required the haulers to choose from the eight county designated processing and disposal facilities. In addition, until the County implements its Waste Documentation Program, there are no reporting requirements for haulers who operate in Bucks County. The County currently is not hooked in to any of its designated disposal sites via a software system. This arrangement, while freeing the County of some of the tedium of managing the more mundane solid waste operations, has the potential of creating a fragmented county-wide licensing program which will make it difficult to monitor and control the activity of haulers and will create an unnecessarily complex and bureaucratic maze for haulers to negotiate.

NEGOTIATING THE SYSTEM

While the licensing programs currently in effect may function adequately on the county level, the system is much more difficult to negotiate when one considers that many haulers operate in more than one county and, therefore, must comply with the licensing procedures required by the Southeastern Pennsylvania counties. For a partial listing of haulers who operate in more than one county, please see Appendix C.

Geographic variations in licensing procedures and flow control create confusion for haulers. For example, a hauler who collects in all five counties would begin by paying the $250.00 application fee in Chester County as well as an additional $25.00 per vehicle and container fee. In Delaware County he remits the $150.00 application fee and then must determine which type of sticker corresponds to the waste he will haul. Stickers can range from $25.00 to $100.00. Before he purchases his Montgomery County license, he must decide in how many of the County's three service areas he will haul. An initial license will cost $300 and each additional license will cost $100 in addition to a $30 per vehicle registration fee. In

Philadelphia he will be required to pay and complete a $50 per vehicle license and application fee. By the time he reaches Bucks County, with its individual municipal licensing fees of between $25 and $400, a confusing system is mired even deeper in inconsistency.

License renewal is another area which presents problems. While all counties and most municipalities operate on a calendar year and licenses are effective from January 1 through December 31, Richland Township, Bucks County has established a license renewal period that is effective from February until January. Until recently, Delaware County operated on a March through February licensing period. In addition, sticker display requirements vary from county to county and municipality to municipality.

While this crazy quilt approach to licensing among adjacent counties may appear only to create headaches for the haulers who try to navigate the system, it may serve to negate the very order that counties attempt to create by implementing licensing procedures.

Enforcement is the weakest element in all of the county licensing programs. While most of the counties employ enforcement officers, their numbers are small and their approach to enforcement is reactive — responding to complaints — rather than proactive. Cooperation among counties could be enhanced by adopting unified licensing procedures and using stickers that are color coded by county. Uniform expiration dates allow enforcement officers to readily recognize when a license has expired and increases the possibility that an officer can alert neighboring officers of haulers who are travelling with expired licenses. Trading lists of licenses haulers enforcement officers and notifying neighboring counties about enforcement actions taken against haulers can increase the benefits of cooperation. Cooperation among enforcement officers is critical and will ensure that waste can continue to be tracked after it passes county borders.

Variable licensing fees and penalties can create a situation where a hauler plays the odds in areas where licensing fees and penalties are low. Also, unusually low penalties may encourage haulers to take their waste to unauthorized disposal sites if the costs savings of disposal outweighs the penalty. Generally, the fines imposed throughout the region are within the $100 to $1000 range and do not compare with some of the stiffer penalties imposed by states like New York whose civil and administrative sanctions can run as high as $10,000.

Finally, none of the licensing programs require haulers to submit disclosure statements and report on any prior criminal activity or environmental crimes. While the Southeastern Pennsylvania Solid Waste Coordinators have created a strong network for exchanging information, an informal network cannot always provide the most comprehensive information about a hauler's past. Requiring disclosure statements can help to weed some of the more questionable haulers from the system. States such as New Jersey have required that haulers' submit disclosure statements and this process has been effective becuase the Attorney General's Office is involved in the investigation. Without the Attorney General's support, it is difficult to make a determination about a haudler's background.

In the next chapter licensing programs that have been implemented in other states and counties are examined.

CHAPTER III
LICENSING PROGRAMS THROUGHOUT THE COUNTRY

Locating states or counties which have implemented licensing programs is no easy task. What commonly is found are jurisdictions which issue common carrier or cartage licenses. States which require cartage licenses usually regulate them through their public utility or service commissions. This type of license generally regulates the bidding process, geographic area served by the hauler, tariffs/fees/rates and insurance and inspection requirements. States which require cartage licenses include Washington, New Hampshire, Montana and Massachusetts.

Transporter licenses, on the other hand, can be an integral part of a county's or state's solid waste management system and reporting and enforcement requirements are important components of the program. State and county licensing programs are discussed briefly below.

LANCASTER COUNTY

Lancaster County, under its *"Lancaster County Municipal Waste Management Ordinance,"* which was adopted May 30, 1990 to establish flow control in accordance with Pennsylvania's Act 101, instituted a licensing program for waste haulers. The stated purpose of the program is to protect the health and welfare of residents of Lancaster County.

In order to obtain a license, a hauler must satisfy the following conditions:

- Complete the application form and submit a fee of $25.00 for each vehicle registered and $10.00 for each container. In 1993, a flat rate of $12.00 will be charged for vehicles and containers.

- Present the vehicle and container for inspection by the Lancaster County Solid Waste Management Authority (LCSWMA).

- Obtain vehicle liability in accordance with at least the minimum insurance coverage required under the Motor Vehicle Financial Responsibility Law. The hauler must also secure general liability for bodily injury and property damage and provide Worker's Compensation as required by law.

Licenses are issued on a calendar year. The LCSWMA requires that the licenses be affixed in a prominent location on each side of the vehicle and container.

Haulers complete a manifest which is a critical component of the County's record keeping system. Within Lancaster County, all of the landfills and transfer stations are owned and operated by the County. There are three solid waste management points within the County

— a transfer station in Lancaster, a Waste-to-Energy Facility in the northwest section of the County and the Fry Farm Landfill.

When a hauler arrives at a facility, he passes a completed manifest to the weighmaster. The load is given a track number and the information is recorded electronically through the County's computer system. Other information that is recorded includes: type of waste, origin, generator type, permit number and time and date of load. This information is tied to the LCSWMA accounting system. Recycling information is also fed into the system. This database allows the County to not only track waste flow but also to use the system's reporting capacity to produce different types of reports.

The LCSWMA uses the WEIGHMASTER system by ISI. All daily information is stored on the IBM microcomputer at the LCSWMA office. The Landfill and Waste to Energy Facility transmit their daily transaction files to the LCSWMA at the end of each day using a modem. The County's transfer station is located next door to the LCSWMA office and is hooked up to the Authority by network wire.

Enforcement is conducted by two compliance officers who perform weekly road checks and search for anything that they may consider to be suspicious and worthy of follow-up. They may take photographs or check for sticker display and permit numbers. The enforcement officers also organize checkpoints at certain strategic roads which lead into and out of the County. Because the system is computerized, enforcement officers can immediately access information on a truck by entering its permit number into the computer. The County also employs two compliance officers who are stationed at each landfill, incinerator and transfer station to survey the loads that are brought into these facilities.

While the LCSWMA periodically initiates road checks to flesh out unlicensed track haulers, however, the majority of the monitoring is conducted by licensed haulers who report unlicensed haulers to LCSWMA.

MONTGOMERY COUNTY, MARYLAND

Within Montgomery County, licensing is currently not tied to a flow control ordinance but the County anticipates that flow control will follow in the near future. Before being issued a license, a hauler must meet two preconditions imposed by the County. First, hauling companies must maintain an office within the County and secondly, the company must furnish the County a performance bond in the amount of $500.00 per vehicle and maintain each bond annually.

Although not as stringent as New Jersey's background check, Montgomery County asks that the hauler disclose background information about the company and its officers. Haulers are also required to submit with their licensing application, a list of the names and addresses of their customers as well as a statement concerning the approximate weight and type of

garbage that will be hauled, time intervals for collection and hauling, and a geographic description of the route.

The County performs inspections to ensure that collection vehicles conform to County requirements and do not pose a threat to public health and safety. The County requires that the hauling company's name be printed on both sides of the vehicle along with a business telephone number and the words "solid waste."

Effective July 1, 1992, all licensed waste haulers in the County are required to maintain and report information to the County describing that materials are collected and hauled from commercial businesses or multi-family properties for recycling; how much of each type of material was recycled and whether it was deposited at a recycling center in the County or outside of the County. The same information is required of solid waste haulers. The information is submitted on a standard report which was developed by the county. This information is currently collected monthly with plans to change the reporting requirements to quarterly. The County will not renew the operating license of any hauler who fails to meet the reporting requirements.

Licensing is enforced by a team of inspectors who work in the field. The team consists of 16 members who interact with the police department, health department and other agencies.

BALTIMORE COUNTY, MARYLAND

Any hauler who collects and transports solid waste in the County is required to have a permit. The County does not distinguish between household and commercial waste.

Permits are issued annually at a cost of $20.00 per vehicle. A vehicle inspection occurs at the time the application is made in order to ensure the vehicle meets minimum County established requirements. Neither the hauler nor the hauling company is required to submit to a background check. Permits do not have to be displayed on the vehicle, but the hauling company must retain copies of the permit in its administrative office. The County has also not established insurance requirements for haulers.

While the County has enacted enabling legislation which would require haulers to officially report on their activities, at this time, all reporting is voluntary.

Enforcement is conducted by the Department of Permits and Licenses, however, they do not have the resources to have a proactive program. The County inspects vehicles and verifies the accuracy of the information which the haulers submit on their applications. Enforcement officials also respond to complaints.

STATE OF NEW JERSEY

New Jersey's waste hauling industry was brought under state regulation 20 years ago to pry it out of the grip of organized crime. Any person involved in the collection and disposal of solid waste in New Jersey must first file a registration statement with the New Jersey Department of Environmental Resources and Energy (DEPE). The rules require that every solid waste container used to transport waste to a disposal site must be registered. Registration fees range form $47.00 for containers to $222.00 for cabs, trailers or single unit vehicles.

New Jersey's licensing procedure is a lengthy process which can take as long as one year. The procedure involves multiple agencies including NJ DEPE and its Division of Solid Waste, Bureau of Registration and Permits Administration, Bureau of Licenses and Collections and the Bureau of Compliance and Enforcement as well as the Attorney General's Office, local health boards and county health departments and law enforcement agencies.

In 1983, the State began performing background checks on haulers who applied for licenses. The investigation focuses on those who are in a position of authority within the company. Although the constitutionality of this procedure was once challenged, the court ruled in favor of the State. In order to receive a license, a hauler must first file an A901 disclosure statement with the Attorney General's Office and pay a fee for the investigation. It is not uncommon for investigations to take up to nine months. The Attorney General's Office will perform the investigation and the DEPE may not issue a license until it has received the results of the Attorney General's investigation. Applicants whose ranking officers have been convicted of serious crimes — including environmental crimes — are denied permits if they fail to show that they have been rehabilitated. Once a license is issued, it must be renewed annually in order to be valid.

Haulers, when renewing their transporter licenses annually, must submit an Operational Statement. This is a one page report that includes the following questions: waste type and amount, origin of waste, and destination of waste for that year. This information is submitted to the Bureau of Registration and entered into its computer system.

Enforcement is mandated under the State's Solid Waste Management Act. Six enforcement groups have been established which cover the following areas: surveillance, facility inspection, citizen complaints, tariff investigations, transportation inspections and a general investigative unit. DEPE has the authority to monitor compliance (N.J.S.A. 12:1E-9) with the statute and rules and also to enforce the rules. The State uses a summons program that allows for fast turn around on violations in order to ensure that problems are addressed quickly. In more serious cases, disputes are resolved through the Office of Administrative Law.

New Jersey differs from other states and counties to the extent that the public policy it is seeking to protect through licensing is to prevent persons with know criminal records who

are participating in the solid and hazardous waste business from participating in the solid waste industry in New Jersey and engaging in unfair, unsound and unsafe practices. Since the 1970's, haulers had been treated as if they were a public utility and were allowed to raise rates, buy equipment and sell their companies only if they received permission from the State. Under the Regulatory Reform Act, signed into law by Governor Florio in January of 1992, private waste haulers have been given free reign to raise service rates and pass on increases in state taxes and fees levied against them by landfill operators. Deregulation will come in stages over the next four years. Whether deregulation will bring more haulers into the marketplace and renew the competition which was lost with regulation is debatable.[3]

From a market point of view, deregulation would seem to encourage competition, however, there are those who feel that New Jersey's intricate licensing provision will quell any rush of new applicants. Many haulers complain that the regulations are strict, intrusive and lengthy.

STATE OF DELAWARE

The State of Delaware's Department of Solid Waste Management Branch adopted state-wide licensing regulations in January of 1991. In March of 1992 the most recent amendments were adopted. The regulations govern the transportation of solid waste in and through Delaware. The permit fee is $300 and covers all vehicles which a hauling company owns for a one year period — or three years if the hauler runs five or less vehicles. Haulers with a manufacturer's Gross Vehicle Weight Rating of less than 26,000 pounds, do not require a solid waste transporter permit.

The State also requires that all drivers of solid waste transportation vehicles and employees of the hauling companies, receive training and instruction to ensure the safe operation of solid waste vehicles and awareness of what to do in the event of a solid waste spill. Haulers are required to display the company name and permit number on both sides of a vehicle. The permit number must be exhibited on the back of the vehicle as well.

Haulers are required to submit reports on an annual basis. The hauler is responsible for documenting type and weight and volume of solid waste transported in, into, or out of the State. Haulers must also maintain records regarding the weight or volume of solid waste delivered to each destination.

The State, in 1992, enacted a Disclosure Law and enforcement officers now perform background checks on an applicant before a license is issued. The officers primarily investigate haulers' environmental records but significant criminal violations can bar a hauler from receiving a license.

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[3]Fried, John. *"New Jersey Waste Haulers Set Free."* The Philadelphia Inquirer. March 6, 1992.

Enforcement within the State is conducted by a team of enforcement officers who are fully empowered and their reach is multi-jurisdictional. There are currently 12 officers within the Division of Solid Waste. These officers receive their training at the State Police Academy and their power is derived from the Secretary of the Delaware Department of Natural Resources. All officers are authorized to carry weapons, write summons, make arrests and stop vehicles with probable cause. While enforcement officers are most likely to stop haulers for solid waste violations, they may also enforce the Code of Federal Regulation concerning truck safety and cite haulers for other motor vehicle infractions.

Enforcement officers are not stationed at solid waste facilities on a regular basis but may occasionally establish check points at these sites. Violations can be addressed in both the civil and criminal courts.

SUMMARY

A review of existing licensing programs reveals that those that have been implemented in Southeastern Pennsylvania are as advanced as those in effect in other areas of the country. One of the major differences between Pennsylvania's programs and those in New Jersey and Delaware is the emphasis placed on ensuring the integrity of the waste hauling company. This is not surprising, especially in a state like New Jersey where the solid waste disposal field has historically been under the control of organized crime. Although the region has not confronted such problems to a significant degree, it appears that background checks should be an integral part of the licensing process to preclude the possibility of hiring haulers who have engaged in environmental crime.

Other states, especially New Jersey and Delaware have taken a more proactive approach to enforcing flow control and licensing. Delaware is probably the best example of an enforcement program with teeth. In Delaware, enforcement officers are trained as State Police Officers and are authorized to pull over haulers in order to further their investigative efforts. This approach differs from the more reactive approach that has been implemented in the Region. In the counties that have identified the powers and duties of the enforcement officer, most have opted to treat the officer as a compliance rather than enforcement officer. These officers have limited power — as much as the average citizen — and are not authorized to arrest haulers who violate rules and regulations. An officer can, however, investigate permitted haulers and most counties have made that a condition of issuing a permit.

Finally, in order to be most effective, licensing programs must include additional components which can assist solid waste officials in monitoring and tracking waste. Again, the State of Delaware provides a good example of a comprehensive licensing program. Delaware combines strong reporting, documentation and enforcement requirements to ensure that waste is being sent to the proper sites.

CHAPTER IV
KEEPING TRACK OF THE TRASH

Act 101 changed solid waste planning in Pennsylvania by vesting primary responsibility for the planning and disposal of solid waste with the counties rather than with the municipalities which had previously been mandated under Act 97. Counties have been authorized to control the flow of waste in order to ensure adequate disposal capacity and protection against the unexpected and unplanned loss of facilities. It is critical for counties to direct their waste to approved disposal sites and establish monitoring and reporting systems to guarantee that waste is going where it has been directed and to insure the life expectancy of these disposal facilities. Shoddy or inaccurate record keeping can seriously impair a county's ability to enforce its flow control regulations.

Each year Pennsylvania DER collects operations reports from disposal sites and transfer station operators. These reports yield information about waste received by county, however, there is usually a delay in getting this information from the state to the counties and many of these reports are either not fully completed or contain reporting errors. The Delaware Valley Regional Planning Commission will soon release a report which makes recommendation for improving transfer station reports in order to facilitate the tracking of waste in Southeastern Pennsylvania. To varying degrees, the Southeastern Pennsylvania counties have begun to implement reporting procedures which allows them to closely monitor the flow of waste within their counties.

BUCKS COUNTY

Currently, Bucks County has designated eight landfills as disposal sites. The County has delegated a strong role to its municipalities in the implementation of the Bucks County Municipal Waste Management Plan and has directed municipalities to gain control over the solid waste stream by adopting and administering waste flow control ordinances which includes licensing collectors and designating disposal sites. To date, most municipalities require by ordinance and resolution, that haulers operating in their municipalities choose only processing and disposal facilities that are county-designated.

The County hopes to improve its monitoring of waste flow through its soon to be implemented Waste Documentation System. Limited waste tracking has been initiated in Bucks County municipalities. County Ordinance #80 and most waste flow control ordinances contain language which requires that the municipality, waste haulers and processing and disposal site owners participate in the County's Waste Documentation Program. The County ordinance and many of the municipal ordinances state that the amount of waste generated from each municipality and the final destination point of the waste should be reported. Although reporting has been sporadic, it is hoped that the "WasteDoc" program will aid in acquiring the needed information.

The County's Waste Documentation System will require waste haulers to keep updated records regarding the movement and volume of trash. As currently planned, waste haulers and processing and disposal facilities will be required to complete biannual reports which detail total weight and volume of municipal solid waste as well as the name of processing and disposal facility used. At this point, no plans exists to link the County's computer system with the disposal sites.

CHESTER COUNTY

Chester County directs all of its waste to three landfills-Lanchester Landfill, SECRA and Pottstown. The Lanchester Landfill is owned and operated by the Chester County Solid Waste Authority. The SECCRA Landfill is owned by the Southeastern Chester County Refuse Authority and the Pottstown Landfill is owned by Waste Management. All landfills use the WEIGHMASTER system from ISI. The County intends to purchase a computer software system which will allow it to access the data from the landfills directly. The County is not bound to using the WEIGHMASTER system and is exploring a range of systems, some of which are discussed in the following pages.

The County currently receives information regarding waste deliveries from the manifests which the haulers complete and submit at the landfills. Eventually, information may be received directly from each site's computer system.

DELAWARE COUNTY

Within Delaware County, solid waste is delivered to publicly owned Transfer Stations Number 1 and Number 3 and the Delaware County Resource Recovery facility (DCRR). The County has designated the DCRR as the disposal site for all Delaware County waste. Ash from DCRR is sent to Colebrookdale Landfill.

The two transfer stations receive waste from 150 haulers who operate within Delaware County. The County has contracted with a private hauler to transport the waste from the transfer stations to DCRR. Several of the larger County haulers deliver their loads directly to DCRR.

The two transfer stations and the Delaware County Waste Authority are on the ISI WEIGHMASTER program, while DCRR uses CompuWeigh. The WEIGHMASTER program is more advanced than the program used by DCRR. DCRR is tied into the Authority's administrative office by modem through a translator program. The transfer stations have the capacity to deliver immediate information to the Waste Authority regarding tonnage, material and disposal. This information is used by the Authority for accounting and reporting purposes. DCRR reports to the Authority monthly, via a modem.

DCRR keeps track of all waste brought into the facility and knows that all haulers, with the exception of the two private haulers which haul from the transfer station to the facility, are

either hauling in-county waste not previously counted or out of county waste. Only the two transfer station-to-Westinghouse haulers use a manifest which provides information about the waste transported from the transfer station.

MONTGOMERY COUNTY

Montgomery County has five points of entry into their waste management system including: two publicly owned transfer stations, a scalehouse at Montgomery County Resource Recovery Facility, a scalehouse owned by Waste Management, Inc. located at the Pottstown Landfill and the Indian Valley Transfer Station. All sites, except the Waste Management sites, use the WEIGHMASTER program.

The Waste Authorities can access information from the points of entry by using a program called CarbonCopy — this allows the Authorities to retrieve information without disrupting the activity at the facility. When waste is transferred from a transfer station to one of the Waste Management facilities, waste origin is recorded as "transferred" and "no charge" is assessed to the load. This eliminates any double counting. Data from the Pottstown Landfill and Indian Valley Transfer Station is transferred to ASCII and sent daily over the phone lines to The Waste Authority. By tapping into this information the county is able to keep accurate records on the flow of waste in the County.

The waste origin booklet which each licensed hauler is required to complete, acts as a double check on the data. All important information about the truck is included, such as waste origin, waste origin code, and Authority code. This information is physically attached to the printed ticket and is filed so that it is easy to confirm recorded information.

PHILADELPHIA COUNTY

Philadelphia has adopted a custom written software package from Cuski, Ibson and McCall Consultants, Inc. (CIMCI). This system has been installed and integrated with the City's administrative solid waste office, three municipal transfer stations, two Waste Management transfer stations and a leaf composting facility. Waste from the three municipal transfer stations is disposed of at Waste Management owned landfills. The Waste Management facilities send a consolidated ASCII flat file to the City's office where it is worked into dBase and loaded into the system. The program is used to keep track of waste collected by the Philadelphia Streets Department. This waste represents about one third of the waste generated in the City.

Using this system, each transfer site can print daily reports at any time listing tonnage received by date and time, vehicle number, or ticket number. The system also has a built in report generator that permits users to create a wide variety of ad hoc reports which may include detail or summary information and subtotals and may be sorted on up to four different data fields.

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CONCLUSION

The record keeping system of a landfill, transfer station, or resource recovery facility can be an invaluable source of information to solid waste managers. Solid waste facility records not only can provide critical descriptions of the waste, but can also be the basis for management decisions dealing with solid waste collection, processing and disposal. Poorly kept records can jeopardize solid waste planning.

Record keeping within the region is complicated by the fact that a county's designated disposal site may not use data collection software which is compatible with the system used by that county. Solid waste coordinators are looking for solid waste systems that are adaptable and flexible and will allow them to access data from a number of remote sites in order to obtain a better understanding of the flow of waste.

Needs also differ from county to county. Delaware County for example, has done an excellent job of hooking into the County transfer stations and is able to access information from the Westinghouse Facility. Reporting is less complicated because all County generated waste is directed to one facility. Montgomery County, on the other hand, has a more complicated range of issues to address because much of its waste is directed to Waste Management facilities which do not use the same software as the County, thereby requiring, translator programs.

While current software programs may be suitable for the counties short term needs, long range disposal alternatives may call for solid waste arrange which differ from current strategies. Regionalization of solid waste management, solid waste partnerships and regulatory reporting requirements will change the needs of coordinators. One characteristic that appears to be important for future information management systems within the region is networking. Solid waste offices will continue to need to connect to MSW operations via telephone lines and data may need to travel through even larger networks to planning departments, tax departments and other users. Future data management options for the region may include multi-user networks which allow every site within a system to know what is happening at every other site. This type of arrangements allows counties to prevent haulers from moving from disposal site to disposal site until his credit is used up. Other functions to improve record keeping are systems which track vehicle activity on the tipping floor and compares that to vehicle activity at the scalehouse. This system ensures that all haulers are processed correctly and eliminates the possibility of haulers discharging their loads without passing through the scales.[4]

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[4]Goldberg, Daniel, *"Planning Your Information Management System"* MSW Management. January/February 1992.

A well designed information system can help handle the complexities which arise from tracking the flow of waste. In the next chapter available software systems and their capabilities are explored.

SOUTHEASTERN PENNSYLVANIA DISPOSAL SITES

SOLID WASTE SOFTWARE SYSTEMS

SITE	SYSTEM
CCSWA Lanchester Landfill	ISI WEIGHMASTER
Southeastern Chester County Refuse Authority (SECCRA)	ISI WEIGHMASTER
Pottstown Landfill	Scale System, Inc.
Colebrookdale Landfill	ISI WEIGHMASTER
Tullytown Landfill	Scale System, Inc.
GROWS Landfill	Scale System, Inc.
Delaware County Resource Recovery Facility	Compu-Weigh
Abington Transfer System	ISI WEIGHMASTER
Lower Merion Transfer Station	ISI WEIGHMASTER
Montgomery County Resource Recovery Facility	ISI WEIGHMASTER
Waste Management of Indian Valley Transfer Station	Scale System, Inc.
Transfer Station #1 (Delco)	ISI WEIGHMASTER
Transfer Station #3 (Delco)	ISI WEIGHMASTER
Waste Management Philadelphia Transfer	Scale System, Inc.
All Philadelphia Owned Transfer Stations	Cuskey, Ipsen & McCall

CHAPTER V
CURRENT TRENDS IN SOLID WASTE SOFTWARE

Computerized scale systems started the trend toward total information management when state solid waste regulations began requiring weight-based record keeping. For many large operations, this became a tremendous job and required the assistance of software application.

Some software packages are written by scale manufacturers to accompany and enhance their scales, but are usually adaptable to other manufacturer's scales. These, however, are limited in flexibility, and usually fall short in performance. Other software packages are written by software vendors to be used with a number of different scales. While some prepackaged software systems are designed to be used at a single site — with multi-site use optional — there are other prepackaged or custom designed software programs that are built to be used in a networking environment (i.e. to be used by more than one user at more than one location).

Recently, solid waste coordinators have begun exploring scale software suitable for their solid waste management needs. Solid waste managers' software needs and requirements go beyond printing weigh tickets and billing waste haulers. Origin and destination information is important in monitoring waste flow patterns and determining points of waste flow reduction, either by diversion or increased recycling rates. Tracking a municipality's waste can eliminate illegal dumping and determine whether waste is going where it has been directed. It is important to realize such needs before choosing a software package, since many packages are not designed to expand as more is required from the software by the solid waste coordinators and the community.

Within our region, the required reporting to PA DER has created a mountain of paperwork. Moving towards electronically transferring data will reduce paperwork and make the reporting process more efficient. Also, with standard report formats that match the state's requirement for daily, quarterly tonnage, and annual summary reporting, no interpolation of data is needed.

DATA TRANSFER

Collecting the data is the initial operation in a solid waste management system. The next step is transferring the collected data to a common location where all data from an entire area, operation, company, or waste authority can be collected and stored for future use as a reference, reporting, or management tool. This may be as simple as pulling information from three on-site scales to a field office, or as complicated as collecting information from every solid waste entity within a county to be processed for regulatory reporting.

There are four ways of transferring data electronically, and each way has its advantages and disadvantages.

Floppy Disk Transfer

Files can be copied to disk and sent in the mail or delivered in person. This may sometimes be the least expensive option, but it can be labor intensive. Mailing disks is not always safe, and data can be corrupted, lost, or erased. Also, the person receiving the data files on disk (which must be in ASCII or a similarly recognized format) has to rework the data so that it can be incorporated into reports or spreadsheets. This method is not the most efficient because efforts are duplicated each time a disk is received. If daily reporting is required, the transferring of ASCII files to an understandable format can become a full time operation.

Modem File Transfer

With the proper software and a computer which is hooked up to a modem with a minimum 2400 Baud rate, files can be transferred directly to other computers through the phone lines. This system is a time saver because the files can be sent directly from a PC work station. If a file is sent from a waste management facility to an administrative office which both run the same software, the transfer is easy because data is compatible. If the two locations run different software programs (as in a municipal solid waste authority and a private contractor), a translator program must be obtained from each of the vendors to convert the data to an understandable format. Most larger vendors are capable of doing this. When this is not an option, ASCII codes can be generated from any program, sent, and retrieved at the other location in a spreadsheet like LOTUS.

E-Mail can utilize a modem to transfer data from different computers running different operating systems. This type of transfer is best used to send messages. Transferring data fields is more difficult because they must be converted to a universal text file that can be read by any computer.

Inconsistencies in phone connections mean that this system is not always reliable. Also, files may sometimes have to be sent multiple times before information can be transmitted. Because both computers are tied up while sending and receiving, work stoppages occur when a modem transfer is made during the day. While modems can be sent after hours, this option may create inconveniences by requiring employees to stay late or to leave computers on all night.

On-Line Network

For an on-line network, one host computer, or server, can run software and store files that can be accessed by any remote terminal that is hooked up to the server. Also, individual computers running the same software can be linked to a main computer, which can handle centralized billing and reporting. The initial setup of the communication cables is expensive

and can lead to some problems if the installer is inexperienced. Twisted, coaxial and telephone cables can be used for networking using software such as BTRIEVE, NETWARE and NOVELL. On-line capabilities let remote sites effectively interact with each other, and many systems allow multi-tasking, allowing one operation to take place in the foreground, while in the background another operation is conducted. For example, with an on-line network it is possible to simultaneously conduct a scale transaction on site, while the main office retrieves information from the previous day's transactions. On-line networks work best when scales and administrative offices are closely situated, however, these networks can also work with distant remote sites.

Electronic Data Interchange (EDI)

EDI is a computer based system aimed at automating the acquisition, processing, and transfer of information from one user to another. The two partners trading information are called trading partners and their agreement is dubbed the *"Trading Partner Plan."* Bar code readers insure that stored information is retrieved easily.

EDI allows computers running different operating systems and using different hardware and software to communicate. This means that every solid waste entity could run the program of choice and hook up to EDI to meet regulatory reporting requirements. Files from any program can be altered (or translated) to be sent electronically, containing certain transaction sets, such as for invoicing, and monthly reporting. The receiver must have a translator program that can translate certain predetermined data fields into a new file. This file can then be opened using any standard database program, such as LOTUS, ORACLE, and dBASE.

EDI allows landfill and transfer station operators to set up a computer "envelope" containing all pertinent information for regulatory reporting. Each agency has access only to those fields allowed in the Trading Partner Agreement. A Trading Partner Agreement depicts the data elements the trading partners' translator program is capable of converting into a file. Under this arrangement, a state authority, for example, could not access a private operators financial records, unless it was agreed upon in the Trading Partner Agreement.

One of the advantage of using an EDI system, besides it's versatility, is that electronic messages can be composed and sent to trading partners, much like E-Mail. Such direct communication can be sent in a file if the sender has the proper security clearance. Validation of data can be accomplished via an electronic signature. Also, information retrieved is always accurate and timely. Currently there are two types of EDI. The ANSI ASC X12 which is used within the United States and the EDIFACT which is used internationally.

Critics of the system maintain that EDI could not be fully implemented on a regional scale because many small operators do not have the computers or computer knowledge necessary to implement a system as complex as EDI.

CHALLENGES IN CHOOSING A SCALE MANAGEMENT PROGRAM

Choosing a program that is easy to learn is an important consideration when choosing computer software. The simple programs will run on almost any personal computer, but the more complex systems require high up-front expenses because of the need for special computer equipment. There are a few systems that are flexible starter systems which can be expanded as necessary. For ease of processing at the solid waste scale, many programs offer optional peripheral devices to speed up operations and information gathering and to assist with security. Many of these devices may not justify their high price.

Software requirements which differ from site to site can make networking difficult. Each site may customize its program to perform particular operations that another site may not want or need. Even if software programs are procured from the same vendor they may not be compatible if they are customized differently. It is important to realize that customized programs can be a potential problem and include software vendors in the planning process in order to determine if a regional format of their programs are feasible.

COMPARISON OF SCALE MANAGEMENT PROGRAMS

A total of 16 scale software and waste-flow management programs were evaluated (see chart, Appendix D). Comparisons were based on capabilities, versatility, growth expansion potential, and hardware requirements. Price was not considered in this evaluation. All of the scale systems evaluated run on an IBM or IBM compatible computer.

Advanced Scale Company (ASC)

This software is attractive because it is easy to use. However, while a simple program may be easier to learn, in the long run, it may limit expansion potential and capability. The software is written in Clipper, which utilizes dBASE files, and is not as powerful as some of the other software packages. Because the software runs in Windows instead of DOS, the information it contains is easily adaptable to other programs. The R&R Relational Report Writer allows an unlimited number of reports to be generated, in addition to the 21 standard reports. Telephone support is available. This software seems to be particularly well suited to recycling because up to six compartment trucks can be handled — a feature which is important in an expanding recycling market.

This software is certified by the National Bureau of Standards which establishes national standards for weighing.

Automation Services Inc. (ASI)

The AUTOSCALE program allows one operator to control four scales, or unattended operation on each scale, using coded identification cards and an outdoor terminal.

Recyclables can also be handled by AUTOSCALE. Security controls include video cameras, radiation monitors, traffic lights and gates, and photo cells.

A micro, mini, or mainframe computer based, network ready, Central Management and Reporting System allows information transfer to multiple remote sites and an administrative office. This is not a scale program which runs in a central location, but a separate program designed exclusively for data management in the office. This system is appropriate for a centralized accounting system that is not involved with the daily scale activities. The program can interface with standard accounting packages, such as SOLOMON, MICA, CONCORD etc., and interfaces with LOTUS and dBASE. Inbound and outbound tracking helps account for waste flow. Four standard reports are available plus an infinite number of user-defined reports may be declared using the Generic Report Writer. A 4-level user-defined password provides security. Color, menu driven screens, user defined reports, tables, and fields — along with optional E-Mail — makes the system user friendly and versatile. Automatic communications allow the user to predetermine a specific time at the end of the day for the central computer to call up the other sites and retrieve daily transaction information. A service contract is offered for phone and site support.

AUTOSCALE is a National Conference of Weights and Measures (NTEP) approved system. NTEP does not enforce their standards at present, but may require all new scale systems in New Jersey and Pennsylvania to comply as early as 1994.

Cardinal Scale Manufacturing Company

Cardinal Scale manufactures a program called Vehicle Recording System VRS-7800 version 4.9, which is designed to interact with a Model 738 Cardinal Scale. Weighing can be done by tare or accumulated net weight. Unattended scale operations can be accomplished by using an outside bar code reader and printer.

A modification of the scale program can be run at the administrative site. The Vehicle Recording System can also be networked. For security, the program has five levels of password protection. This program is menu driven, with four standard reports, and additional user-defined reports available with the report generator. An adaptation of one of the standard reports can be used for invoicing — this is a downscaled, low-tech answer to on site invoicing. Billing can be done by weight, volume, or flat fee, and materials can be taxable or non-taxable, with or without EPA surcharge.

CMI Weighing Equipment

This company offers the CMI 4002 Database Management System for Solid Waste Management. CMI has not had experience using unattended operation or networks; consequently, the system is designed to function at the scalehouse only. Compatible peripheral devices have not been identified. Weight can be calculated by either gross, net, or tare weights. Up to four scales can be managed by one program.

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The software can track inbound and outbound materials by weight, cubic yards, or flat rate, and automatically updates files. Only origin or destination data can be stored in the file. Reporting capabilities include 12 standard reports plus unlimited user-defined reports. Invoicing, inventory, cash transactions and pricing features are standard for this system. An optional interface with REALWORLD accounting software is also available. The menu driven program is easy to operate and user-friendly. An optional OnLine product support package is available.

CompuWeigh Corporation

CompuWeigh offers the Waste Management System (WMS), the only scale software that uses the Windows operating environment for the IBM. Security devices include traffic lights, cameras, and bar code readers.

The WMS is designed to utilize either a desktop PC, mini or mainframe computer to maintain and store files. The color graphics generated in Windows provide the easiest system to learn and use. Users have the option of using the keyboard or a mouse. Also, the system has multi-tasking ability, so that others can use the system without interrupting the scale activity. Integrating this program with other standard desktop programs is easy because the Windows environment is very flexible, offering a simple approach to the transfer of data. The Windows operating environment allows data to be copied out of the Waste Management Program and into spreadsheets, word processing documents, and accounting applications. The system hardware has a built in Local Area Network (LAN) capabilities and a modem which create an inexpensive way to tie other computers into the system. Transfer stations, landfills and resource recovery facilities can be linked with collection routes to determine the "cradle to grave" life of the waste. Compaction ratios and average weight per cubic yard is calculated daily to keep track of productivity. An unlimited number of reports can be generated by simply clicking on the information needed.

On-line help allows the company to log on to the system and guide the user through the system. The CompuWeigh system is presently used at Delaware County Resource Recovery Facility owned by Westinghouse and the Dutches County Resource Recovery in New York.

Creative Information Systems (CIS)

CIS offers a software package called Scale Management System — Turbo. The primary shortcoming of this software package is that it cannot function unattended because the program does not utilize peripheral devices. Up to eight scales can be operated by one computer.

This system has eight predefined reports and the ability to create additional reports. Accounting can be accomplished by using their ICONS software package. This color screen, menu driven program is multi-user, multi-tasking, which makes it easy to network with and

user friendly. The Scale Management System - Turbo is not designed for use by more than one user and is not network ready.

This company may not be able to offer much support since the president is also in charge of technical questions, sales, and marketing, indicating that it is a small operation. Also, no present clients have been identified as references.

Cuskey, Ipsen & McCall Consultants, Inc. (CIMCI)

CIMCI wrote a waste management program for the City of Philadelphia, Sanitation Engineering Division. This program runs at six locations plus the administrative office and mainframe computer. The six locations run the software on IBM PS/2, and are linked via modem to an IBM 486 fileserver which is linked via twinax cabling to a computer in the City's central administrative office. This computer manipulates the data received and then sends it to a minicomputer IBM System/38 which stores and records information and generates reports for the state.

The CIMCI program works with the GREAT PLAINS accounting software package. A maximum of 999 different password protection levels are available. The number of reports in the City of Philadelphia program is not specified. It is likely that any number of standard reports can be declared since CIMCI writes the program.

CIMCI has 10 employees with remarkable resumes and the company is located in the Delaware Valley. The downside to CIMCI is that their past experience lies in the medical and health industry. Although their first solid waste flow program has been successful, they lack the experience of other established companies.

Enviromentrics Systems, Inc. (ESI)

The "Integrated Waste Flow And Recyclables Tracking System" is a program custom designed to meet a user's individual needs. The program can be written in a common database program, such as dBASE, UNIX, ALFA-4, and PARADOX, eliminating training time for personnel already familiar with a common database program.

ESI works with the client to define present and future needs. The number of reports generated by their program is not specified, because ESI custom designs the program. Their software is user-friendly, utilizing draw-down menus. Data verification is written into the program to insure that double counting of waste loads and recycled tonnage and overbilling does not occur.

Planning features include: analysis of waste and reclaimed recyclables trends; utilization of solid waste collection to minimize truck routes; estimation of waste flow from Small Quantity Generators discharging minimal hazardous wastes into the municipal solid waste

stream; and, classification of recyclable commodities to determine potential areas for expansion.

An unlimited number of scales can be managed. Also, an unlimited number of password configurations can be created. ESI is unique because of their use of EDI to accomplish data transfer. The company was not able to offer any brochures or pamphlets describing their system, and could not identify any clients in the area.

Fairbanks Scales

Fairbanks Scales offers a program called DATAMASTER The program can be used unattended, with the help of a scaleside keypad or card reader. The system can handle up to four scales and the user can choose which scale company to use in the setup configurations.

The scale program will run at the administrative site to generate reports. One standard report is provided with the option of defining 16 additional reports. The system is menu driven with a multilevel password log-in offered for report access. An ASCII Text Editor will translate all account information to any of the standard accounting packages.

Fairbanks Scales is a large company with locations throughout the United States. The company's sales and service office which serves the Delaware Valley is convenient for on-site support and technical assistance.

Fairbanks DATAMASTER has a NTEP Certificate of Conformance.

Information Systems, Inc. (ISI)

ISI offers a system called WEIGHMASTER, which is a collection of little programs that perform specific tasks. This modular system is advantageous to the solid waste planner who does not need the actual weigh-in program but wants to access the data from that program with little effort. The Scalehouse program, which his most widely used, includes functions that control peripheral devices, printing, reporting, invoices, and accounting at the site. The device function handles up to three printers, eight scales, card readers, one or more cash drawer, traffic lights, seven video surveillance cameras and radio frequency tags for truck identification. It has been used to interface scales from 11 manufacturers.

Programs have been specifically written for office staff and management who do not need to see the daily scalehouse operation, but need to access that information. The Totals Report, Weight History, and Invoicing programs can accommodate these needs. Configuring the system to include all master files on a large file server PC, mini, or mainframe computer allows for central reporting and data management. Approximately 10 different standard reports can be generated and a basic report writer will alter certain criteria to create about

10 additional specialized reports. The accounting function is compatible with SOLOMON and GREAT PLAINS accounting software.

Currently, two counties in the region are able to tap into the WEIGHMASTER system (Chester and Montgomery) as well as Lancaster and Berks County. Some present customers of ISI have seen a weakness in the updates because they do not have extensive written documentation to accurately explain the changes in the software.

WEIGHMASTER is NTEP certified.

Norwesco Computing, Inc.

The company's Refuse Industry Computer Software (RISC) division offers a program called the RISC Waste Accounting System. Weighing can be done by gross or tare weights and volume.

The Waste Accounting software is a set of computer programs which creates specialized systems. Up to eight commodities can be handled for each load, which allows for recycling management. A total of 37,000 different commodities can be defined. Thirteen different taxes can be assessed, where necessary, for each commodity. Eight standard reports are available. A self-defining report program allows the client to design any type of report required. Up to three passwords can be declared in this menu-driven program. Telephone support and on site technical support is available. A custom designed accounting program is available to work with this program. No interface with standard accounting program is identified.

Norwesco has no clients in this region. There software is used by the City of Seattle.

PC Automation, Inc.

PC Automation offers a software program called the GEOWARE Waste Management Automation System. It is a standard automated scale program with many additional modules for particular tasks, such as invoicing, cash management, traffic control, and video security, that support input and output readings from security devices. This system notifies the operator of any reporting or equipment errors as well as unidentified trucks that cross the scale.

A number of report formats are standard and custom reports can be written. For recycling, totals for individual materials within multi-compartment vehicles can be maintained. Route recycling rates are interpreted to maximize collection. GEOWARE is a network designed multiple operations system that implements the Remote Monitoring System module to communicate with the site computers and generate an up to the minute summary of activity using five levels of password protection. GEOWARE is written in C programming language, and data can be translated into dBASE for further data processing and manipulation.

<u>Scale Systems, Inc. (SSI)</u>

SSI offers a software package called WONDO software. Many peripheral devices can be integrated with the software system, such as video surveillance, Radio Frequency tags, and magnetic card machines.

The WONDO Software is written in DATAFLEX. An unlimited number of query reports can be generated in addition to the five standard reports. Statements and invoices can also be generated. A different password can be assigned to each item on the menu, allowing an unlimited number of password configurations. The menu-driven system is presently being designed to incorporate graphic representation of data for ease of data interpretation. Origin, destination, recyclables and disposables can be tracked.

The Administration Module allows for networking of remote sites to an administrative office which can download daily transactions and generate daily reports. WONDO Software has replaced many of the original scale company designed software. WONDO software has been interfaced with CMI, Thurman, Weigh-Tronix, Fairbanks, Unibridge, Toledo, Cardinal scales, and many others. SSI is being used at the Pottstown, Tullytown and G.R.O.W.S. Landfills and Waste Management's Indian Valley and Philadelphia Transfer Stations. SSI offers unlimited on-site support. The accounting package written into their system is very basic but data can be translated to accounting packages, such as REALWORLD, which offer much more flexibility.

WONDO Software is presently going through the NTEP certification process.

<u>ScaleWare</u>

ScaleWare offers many customized program add-in modules to perform specific site functions, such as operating of multiple scales and interfacing with security and peripheral devices (i.e. hoses, infrared beams, traffic lights, touch screens, bar code readers, magnetic card readers and ticket printers). Interfaces with peripheral devices allow for unattended operations. Weighing can be accomplished using tare, gross, or net weight. Multi-compartment recyclables handling can be accommodated with the ScaleBatch module.

An unlimited number of report formats can be produced from this menu-driven program. Customized program add-in modules are also available to perform specific functions at the administrative office, such as networking with remote sites, sharing of data files on Local Area Networks, accessing host computer files, transmitting electronic faxes, and tabulating payroll, inventory, and billing. A three level password protection is available through Custom Scale Management Systems.

The ScaleWare system is limited by a lack of adaptability to commonly used accounting software. The system is NTEP certified.

Solid Waste Technologies, Inc. (SWTI)

SWTI offers a program called the Facilities Management System. This software can interface with security devices, such as video security systems, and password protection can be used to protect access to accounts receivable information. Unmanned scale operations are not available. The software can handle several scales at both single and multiple sites.

This company offers a multi-user system that runs on a Unix operating system, a system which is better than DOS for large data management and networking systems because it provides up to the minute, on-line capabilities. DOS configurations are also available. Software modules allow programs to be customized for specific system requirements. These modules handle traditional accounting and regulatory and operational report generation as well as waste flow tracking in a user-friendly, menu environment. Add-in modules are available for accounts payable, payroll and general ledger options. The program is written in BBX database language. Haulers have on-line access at the weigh stations and transfer stations in order to check on credit availability. The Facilities Management System software offered by SWTI operates at transfer stations, landfills and recycling centers.

This system is operating in Mercer, Burlington, and Camden counties, and possibly Gloucester in the near future. Camden County Division of Solid Waste has a privately owned incinerator using SWTI software and a municipal landfill, using Fairbanks Scales software. Daily, two data disks are hand delivered and information is merged using LOTUS. Two separate versions of the data are needed for reporting and billing. State requirements allow New Jersey Department of Environmental Protection and Enforcement access to waste flow information at any of the sites.

Oneida-Herkermen County in New York uses the SWTI system to link their one scale at their Waste-To-Energy (WTE) incinerator and two scales at their recycling/composting/ transfer station. Their administrative offices are 15 miles from the WTE plant and five miles from the recycling/composting/ transfer station. At their administrative offices is an IBM 386 clone with a 300 Megabyte hard drive, running on a DOS operating system, that acts as a file server. Each remote site has a terminal with a direct line to the server. Their terminals have printers and can print weigh tickets. The billing and report generation is done from the host computer at the administrative office.

SWTI is limited because it cannot be adapted to most commonly used accounting software.

Thurman Scale

The Thurman Scale company offers a scale program called the 4400 Weight Data Management System. With the use of a scaleside keyboard and barcode or radio frequency identification reader, this system can run unattended. The screen can also display two scale transactions simultaneously.

A modification of the scale program can be run at the administrative site. This program offers the user up to 40 self-declared reports formats in a user friendly menu environment. Invoicing and accounting sub-programs are optional. The system is menu driven, and offers four levels of password security. Standard configurations of the Weight Data Management System include recycling. All data files are dBASE compatible.

A major disadvantage of this system is that present computer systems meeting the suggested configurations must be sent to the company's lab where a Scale Interface Card is installed. The software is then tested and debugged. This presents a considerable amount of down-time for computerized scales, which conceivably will effect profits or create waste backup at other scales.

Weigh-Tronix, Inc.

Weigh-Tronix, Inc. offers a program called PDOX Waste Management System. Ten different modules are available for different site functions such as cash drawer systems and security cameras.

This system runs on PARADOX software, which is a powerful relational database. The software handles inbound and outbound solid waste and recyclables. This package can record origin of solid waste by percentage of loads. The software is color menu-driven, using a WINDOWS-looking graphic environment, which makes it user friendly. Multiple levels of password protection are available. Standard PDOX system operations include: up to 12 standard reports; an unlimited number of user defined reports; invoicing; and, data transfer capabilities. Optional interface with SOLOMON Accounting System is available, and additional custom configured modules are also available to meet desired needs.

SUMMARY AND CONCLUSIONS

Issues to consider when choosing a solid waste management system include: experience, availability of telephone and on-site support services, references, and reputation. Software should be expandable to meet the growing needs of different communities, to optimize waste flow and to incorporate recycling into the system. The software should also be versatile to meet the needs of all that are using it — whether that be on a county-wide or region-wide scale.

Most of the systems evaluated meet the needs of a solid waste management system, however, some were more noteworthy than others. All system will work with a scale that has an RS 232C output (the standard scale output that can be translated by the scale interface). All vendors produced brochures of some kind describing their system specifics, except ESI. And, all systems, in one form or another, could incorporate data transfer, including networking, except CMI Weighing Equipment. A few systems stood out as excellent and appeared to be capable of meeting the varied needs of the region, at different levels of sophistication. Those systems are the ones produced by Automation Services Inc.,

CompuWeigh Corporation, Cuskey, Ipsen & McCall Consultants, Inc., Information Systems, Inc., Scale Systems, Inc., and Solid Waste Technologies, Inc.

Automation Services Inc. has many years of experience in the field and an extensive list of clients. This is important for the regionalization of solid waste because their expertise and experienced support staff should be able to solve problems that arise with little difficulty resulting in minimal down time at the scales. ASI program runs in the Windows operating system.

CompuWeigh Corporation also offers a system that runs in the Windows operating environment. One advantage that CompuWeigh has over its competitors is that Windows is more versatile than other operating systems, such as DOS, and the transferring of data from one program to the other is made easy. Also, the option of using a mouse or keyboard for operation makes this system one of the easiest to learn.

Cuskey,Ipsen & McCall Consultants, Inc. have successfully tackled the City of Philadelphia's waste flow problems, and designed a system that could easily be implemented or cloned on a regional scale. Also, purchasing one custom program from a consultant may be easier than purchasing multiple copies of the same software from a vendor. They are located in the Delaware Valley, which is convenient for on-site support when problems occur.

Information Systems, Inc. has an extensive list of clients presently using their system in the area and great technical support. Telephone conversations with users of the WEIGHMASTER system have determined that this system works well in a networking environment.

Scale Systems, Inc. has a presence within the private sector in our area, including Waste Management, Inc., and has worked with scales from numerous manufacturers. They also claim that their service contracts with customers are the biggest part of their business, meaning a customer is never left without support. Their location in the Delaware Valley is also convenient when on-site support is necessary.

Solid Waste Technologies, Inc., which has an extensive client list in New Jersey and New York, provides a system designed especially for networking. Operating on a Unix system rather than a DOS operation system allows up-to-the-minute reports.

As counties vary, so do solid waste management software systems. While one system may never satisfy the needs of every community, an informed selection will increase the probability that a solid waste system can grow with the community. EDI will allow the region to network using its present programs. Although cost was not discussed in this evaluation, EDI may be a technology that is cost prohibitive. An EDI system could be set up at any pace, depending on need, allowing for medium and long-term goals to be set progressively. A community could hook up two entities now, and wait five years to hook up others. This is not an option with networking, where all programs have to be the same version, requiring new updates to all existing facilities when a new facility comes on-line.

The existing solid waste system includes solid waste facilities that are privately owned or located outside the county. It is unrealistic to believe that an entire region can convert to one solid waste program. Many political and economic boundaries will prevent the sharing of data throughout the region. For example, many large private companies, like Westinghouse and Waste Management, have specific programs which they use. For one reason or another, they each use their approved systems and probably are unable to change systems even if they wanted to. Many of their parent companies may have national contracts and converting to a region's chosen system may break that contract, so working with multiple systems will have to be permitted. Although information from these systems can be translated and downloaded into a county system, true networking cannot be accomplished.

Even if facilities use the same system such as WEIGHMASTER, in order to network, the programs must be identical. Therefore, no custom changes can be made to the facility's program. A facility manager who has customized scale software will not be able to network with other facilities or offices unless they share the same customized software. Small facilities that handle waste or recyclables may only need a simple program and a more advanced program which would allow them to network with other facilities may be much more complex then they need.

There are many benefits to linking all solid waste entities within the region. First, because transfer facility reports are not due until six months into the following year, by implementing a region-wide linked solid waste software system, solid waste coordinators can get a picture of solid waste flow throughout the region at any time of the year, without waiting to receive annual reports. This information will provide solid waste coordinators and planners with a six month head start on determining the future solid waste needs of a county.

Second, when annual reports are available, the information can be easily double-checked with the solid waste tracking programs of the surrounding counties. Also, major blunders in reporting on the part of the county, transfer station, or landfill will easily be recognized through a regional linkup of solid waste systems.

Finally, counties that have flow control ordinances that prevent waste from entering or exiting their county can easily check the efficiency of their ordinance by calling surrounding counties and checking if any waste received by transporters originated in their county.

By linking a region with modems, everyone within the link will be more informed about the challenges, successes, and problems with tracking solid waste. This should be a short-term goal no matter what type of system is selected. With the proper translator programs purchased from respective software companies, the translation to a common database can be a fairly straight forward task.

CHAPTER VI
LICENSING OPTIONS

Licensing is one component of a comprehensive planning and regulatory framework for the storage, collection, transportation and processing and disposal of solid waste. Licensing provides pertinent information to county administrators about the haulers who operate within the county. Licensing also allows counties to impose standards with which haulers must comply in order to operate. Licensing has been implemented with varying degrees of success throughout the region. For the purposes of this report success is defined as a program which is capable of enhancing a jurisdiction's ability to monitor and control the flow of waste. Montgomery County is perhaps the best example of a county that has taken full advantage of its authority to impose requirements on haulers to ensure the proper flow of waste within the County. Bucks County's municipal licensing program has done little to improve information about the flow of waste primarily because many of the communities have not designated disposal sites and merely issue operation licenses to haulers. The Southeastern Pennsylvania counties do not operate in isolation, many share haulers as well as disposal sites. When county licensing programs are viewed in relationship to those in adjacent counties, a patchwork of various procedures and programs emerge. Some of these problems include: lack of uniformity among licensing procedures, restricted enforcement capabilities and limited information exchange. In a situation where a number of government activities need to be coordinated, regionalization of licensing procedures, flow control and waste management may provide a solution.

In its most simplistic form, a regional approach to licensing would require that counties and municipalities modify their procedures to ensure consistency among jurisdictions. This can be accomplished either formally or informally. The region currently has the informal mechanism in place to begin discussing the standardization of licensing procedures. The Southeastern Pennsylvania Solid Waste Coordinators is a group that meets to discuss current and emerging solid waste issues. This forum is the logical starting place to begin discussing these issues and could result in "cooperative agreement" among counties. At the very minimum, coordinators would consider standardizing periods of coverage, reporting requirements and sticker display. Agreements on these basic points would primarily benefit the haulers by creating a more uniform system which is easier to navigate.

Informal regional arrangements which modify existing requirements are most effective as short term solutions, however, a comprehensive regional strategy for licensing may be necessary in order to improve flow control. A regional licensing strategy involves the optimum integration of four components: standardized procedures, efficiency of operation, cooperative enforcement procedures and information sharing and computer networking.

At the most basic level, procedures that are not uniform create a system which is unnecessarily complex. It is to the counties advantage to simplify and standardize the system

so that haulers are more likely to comply with requirements. Minor adjustments can ease the haulers entry into the system and ensure that haulers are being held to the highest and best standards.

Efficiency is another important element of licensing and can be achieved by identifying one central source which is responsible for the processing of applications. Geographically, it is impractical to identify one central source as being responsible for issuing licenses. If it is not possible to identify one central source as responsible for processing applications, the next best option is to improve information exchange among counties so that efforts to process information is not duplicated. The counties could identify a central office to store this information on a dBASE program and maintain information on each hauler and identify problems as they occur. Counties can easily access this information with privileged passwords and a modem. This is a easily implementable solution given the fact that all counties within the region are using personal computers. In addition, for those not currently using modems, an investment in one is a very inexpensive proposition.

Information sharing through computer networking can provide county coordinators with a wealth of information that can be used for licensing, reporting and enforcement. As discussed above, one of the best approaches for accomplishing this is to identify a host agency that is responsible for maintaining solid waste information that is of mutual interest to the region's solid waste coordinators. In order to accomplish this, coordinators should identify their common needs. Again, during the start up stages, the easiest and least inexpensive means of accessing this information is through modem transfer. However, much of the region's data information needs are for solid waste facility information and, as discussed previously, this is best accomplished through uniform software and data transfer.

Finally, regionalization of licensing affords opportunities for strengthening and expanding enforcement procedures within the counties. As many coordinators have noted, enforcement is reactive rather than proactive. This is largely due to the fact that the number of enforcement officers working within each county is low and the number of haulers in operation is high. Regional information sources can allow officers to quickly access information about haulers and share information with officers in other counties about suspicious haulers. Also uniform procedures and display requirements allow officers to tip other officers off about haulers who may be operating with expired licenses or committing other violations.

Regionalization of licensing procedures and flow control can be the first step in implementing a regional approach to solid waste management. Act 101 grants counties the authority to enter into arrangements to conduct joint planning efforts. Increasingly, communities are turning to regional approaches to solid waste management because it allows them to accomplish together what they cannot accomplish alone. A regional perspective has the potential for attracting resources that would not be available alone. Regionalized solid waste management planning can result in reduced environmental impacts as fewer facilities are designed to serve a wider range of waste types; possible economies

of scale through the integration of waste streams; and, greater recycling and resource conservation through market development and centralized materials and processing facilities.

STATE COORDINATED LICENSING

State coordinated licensing is another option to current licensing practices. Because of the purpose and intention of Act 101, it does not appear that the State would be receptive to implementing licensing on the State level. Act 101 was enacted to provide the counties with the responsibility for developing and implementing solid waste plans. To put the State in charge of licensing procedures would give them greater control at the local level — a result which does not appear to be consistent with the Act.

CONCLUSION

Given the multi-county character of licensing and flow control, this is an issue that cannot be effectively addressed by one county. Uniform strategies and implementing actions are critical to achieving both effectiveness and efficiency. County coordinators have worked constructively in the past to address solid waste issues and are encouraged to continue to collaborate in order to develop a viable region-wide licensing procedure.

APPENDIX C

HAULERS OPERATING IN MORE THAN

ONE COUNTY IN

SOUTHEASTERN PENNSYLVANIA

APPENDIX C
HAULERS OPERATING IN MORE THAN ONE COUNTY IN SOUTHEASTERN PENNSYLVANIA

1. AAA Waste Disposal: Montgomery, Chester
2. Ace Service Corp.: Montgomery, Chester, Delaware
3. Allen Brothers Rubbish Removal: Montgomery, Bucks
4. BFI:
   BFI-Bucks — Montgomery
   BFI of Delaware Valley — Chester
   BFI (West Chester, Pennsylvania) — Delaware
   BFI-Valley Forge — Montgomery
   BFI-Trappe — Borough of Trappe — Montgomery
   BFI/Bucks-Montgomery-Amble — Montgomery
   BFI Eastern — Delaware
5. Charles Blosenski Disposal: Montgomery, Chester
6. BUX-Mont Refuse Service, Inc.:

   in Colmar for Montgomery

   in Montgomeryville for Chester
7. Cleanway, Inc. or Clean Away: Montgomery, Bucks
8. Daley-Roberts Refuse Removal: Montgomery, Bucks
9. Del Guerico's Disposal: Montgomery, Bucks
10. Eastern Waste Industries: Montgomery, Chester, Delaware
11. Eastern Waste Removal: Montgomery, Delaware
12. Galante Hauling Inc.: Montgomery, Chester
13. Gorski Trash Removal Inc.: Montgomery, Bucks
14. Harvey & Harvey Inc.: Delaware, Chester
15. J & K Trash Removal Inc.: Montgomery, Delaware
16. Kasper Brothers Disposal:

    in Medford, NJ for Montgomery

    in Philadelphia for Bucks
17. George Leck & Son, Inc.: Montgomery, Bucks
18. McCusker & Sons Inc.: Montgomery, Delaware
19. J. P. Mascaro/ S W Services: Montgomery, Bucks, Chester

20. Muth Disposal Service:
    in Walnutport for Montgomery
    in Palm for Bucks
21. Nacarelli's Gen. Hauling:
    in Schwenksville for Montgomery
    in Rahns for Chester
22. Northeast Disposal Inc.:
    in Bristol for Montgomery
    in Bensalem for Bucks
23. Nu-Way Trash Removal Corp.: Montgomery, Delaware
24. Olsen Environmental Services: Montgomery, Bucks
25. Paper Recycling Inc.:
    in Philadelphia for Montgomery
    in Sanatoga for Chester
26. Quick-Way Inc.: Montgomery, Bucks
27. Santangelo Hauling Inc.: Montgomery, Chester, Bucks
28. T & L Container Services, Inc.: Montgomery, Bucks
29. Twin County Disposal: Montgomery, Chester
30. E. S. Vile & Sons:
    in Langhorne for Montgomery
    in Levittown for Bucks
31. Waste Management of PA/Pottstown: Montgomery, Chester
    in Philadelphia for Delaware there is also a Waste Management-Indian Valley in
    Telford that works in Montgomery
    Waste Management PA-ATS Contract in Gilbertsville for Montgomery

APPENDIX D

COMPARISON OF SOLID WASTE

MANAGEMENT SOFTWARE

APPENDIX D

Comparison of Solid Waste Management Software: I

Company Name / Software Requirements	Features	Versitility of data	Training	Technical Support	Client List	Modif-ications	Records/ Parameters	Hardware Requirements
ASI	IBM Windows Point&Shoot	All Windows Applications	Onsite	Phone, Service Contract	Extensive List	Free upgrade w/warranty	Limited by disk size	IBM PS/2 Color Monitor
Cardinal Scale	Lookup Menu	N/A	N/A	N/A	Not Provided	N/A	Limited by disk size	IBM 386SX Color Monitor
CompuWeigh	IBM Windows Great Graphics	All Windows Applications	Onsite Available	Online support Phone	Only Two	Upgrades via modem	Limited by disk size	IBM 486 SVGA Monitor
CMI Weighing	N/A	N/A	Optional	Phone, Service Contract	Not Provided	N/A	Limited by disk size	IBM 286 Mono Monitor
CIS	Menu Driven w/Help Screen	N/A	Yes	Phone	Not Provided	N/A	N/A	Hardware Independant
CIMCI	Yes	Transfers to Dbase, 123	N/A	Yes	City of Philadelphia	Unlimited	Limited by disk size	Any
Environmentrics	N/A	Can be in any prog language	N/A	Yes	Not available w/o contract	Yes	Limited by disk size	Any
Fairbanks Scale	Lookup Menu	N/A	Yes	Toll Free Phone Service Contract	Not Provided	Upgrades	Limited by disk size	IBM 386 Color Monitor
ISI	N/A	N/A	Yes	Service Contract	Extensive List	Free Upgrades w/srvce cntrct	N/A	IBM 286 VGA Color Mon
Norwesco	Menu Driven	ASCII to Dbase and others	Optional Training	Phone Support	Only One	Customized Upgrades	Limited by disk size	IBM 386 Color Monitor
PC Automation	N/A	Transfers to C, Dbase,E-mail	N/A	N/A	Not Provided	Updates Newsletter	N/A	N/A
Scale Systems	Graphic Data Representation	Transfers to Dataflex,Dbase	N/A	Online support Phone	Extensive List	Customized	Limited by disk size	IBM 286 Color Monitor
ScaleWare	N/A	N/A	N/A	N/A	Not Provided	Add-in Modules	Limited by disk size	IBM 286 Turbo Mono Monitor
SW Techno.	N/A	N/A	Yes	Online support Phone	Extensive List	Can easily be upgraded	Limited by disk size	IBM Compatable
Thurman Scale	Menu Driven	Transfers to Dbase,ASCII	N/A	N/A	Only One	Can be Specialized	N/A	IBM 286
Weigh-Tronix	Menu Driven Pop-up Scrns	Transfers to many programs	N/A	Toll Free Phone Support	Not Provided	Can be Specialized	N/A	VGA Color Mon

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Comparison of Solid Waste Management Software: II

Company Name / Software Requirements	Password Protection	Report Generation	Invoicing	Accounting	Remote Site Networking	Maximum # of Scales	Safety Security Items	Certification/ Compliance
ASI	Multiple Levels	Unlimited User-defined	Standard Report	Interfaces most software	Multi-user network	8	Many	NTEP
Cardinal Scale	Operator ID + 4 levels	4 standard + user-defined	Adaption of a report	Basic Acctng by program	Disk, modem network	4	N/A	N/A
CompuWeigh	Multiple Levels	Unlimited	Through report Modification	Interfaces most in Windows	Multi-user Mult-tasking	Unlimited	Yes	N/A
CMI Weighing	N/A	12 Standard + User-defined	Yes	Interface w/ RealWorld	Disk, modem	4	N/A	N/A
CIS	N/A	8 predefined + additional	Separate CIS Software	N/A	Multi-user Mult-tasking	8	N/A	N/A
CIMCI	999	Unlimited	Yes	Interface w/ GreatPlains	Modem	3	N/A	N/A
Environmentrics	Unlimited #	N/A	N/A	N/A	Suggests EDI	Unlimited	Yes	N/A
Fairbanks Scale	Multiple Levels	16 Customized	Optional	Optional	Multi-user	4	N/A	NTEP
ISI	N/A	Custom	Optional	Interface w/Grt Plains,Solomon	Modem Carbon Copy	8	Yes	NTEP
Norwesco	3 levels	Approx. 50 + User-defined	Unlim w/Opt. Report writer	Optional	Network via CLOSEUP	4, expandable to 12	Yes	N/A
PC Automation	5 levels	Many Defined + User-defined	Optional	Optional	Multi-user Multi-tasking	N/A	Yes	Going Through NTEP Process
Scale Systems	Yes	5 Standard + User-defined	Yes	Interface w/ RealWorld	Disk, modem network	Unlimited	Yes	NTEP
ScaleWare	3 levels	23 Standard + User-defined	Optional	Optional	Network LAN	Multiple	Yes	N/A
SW Techno.	Yes	Customized	Yes	Optional	Multi-plexors Modems	N/A	Yes	NTEP
Thurman Scale	4 levels	40 User-defined	Optional	Optional	N/A	8	Yes	N/A
Weigh-Tronix	Multiple Levels	12 Standard + User-defined	Yes	Interface w/ Solomon	Phone, Disk LAN	N/A	Yes	N/A

APPENDIX E

SCALE SOFTWARE VENDOR CONTACTS

APPENDIX E

SCALE SOFTWARE VENDOR CONTACTS

Automation Services Inc.
AutoScale A500v4
3167 Custer Drive
Lexington, KY 40517
Kathaleen Barry
(606) 272-7348
FAX: (606) 273-5430

Cardinal Scale Manufacturing Co.
VRS-7800 v4.9 Vehicle Recording
  System
Post Office Box 151
Webb City, MO 64870
Roger Von Atzinger
(417) 673-4631
(717) 738-1021
FAX: (417) 673-5001

CompuWeigh Corporation
Waste Management System
108 North Plains Industrial Road
Wallingford, CT 06492
How Ecke
(203) 284-9184
FAX: (203) 284-3832

CMI Weighing Equipment
Model CMI 4002
Post Office Box 270180
Oklahoma City, OK 73137-2359
Cindy Gruntmeir
(800) 498-5249
FAX: (405) 491-2359

Creative Information Systems
500 Harvey Road
Mandes, NH 03103
Kevin Saint John
(603) 627-4144

Cuskey, Ipsen & McCall Consultants,
  Inc.
Data Management Weighing System
2333 West Darby Road
Havertown, PA 19083
Walter R. Cuskey
(215)449-3471
FAX: (215)449-3471

Enviromentrics Systems, Inc.
Integrated Waste Flow And Recyclables
  Tracking System
6829 Elm Street - Suite 310
McLean, VA 22101
Anthony Mitchell
(703) 761-1466
FAX: (703) 893-2123

Fairbanks Scales
Datamaster Uniweigh
122 Hamilton Building, Darby Commons
Folcroft West Business Park
Folcroft, PA 19032
Tom Luke
(215) 237-1010
FAX: (215) 461-1232

Information Systems, Inc.
The WEIGHMASTER
Mill Centre - Suite 210
3000 Chestnut Avenue
Baltimore, MD 21211
Jim Manley
(410) 366-3995

Norwesco Computing, Inc.
RISC Waste Accounting System
13256 N.E. 20th Street - Suite 11
Bellevue, WA 98005
Rick Eriksson
(800) 331-3553
FAX: (206) 747-7816

PC Automation Inc.
Geoware Waste Management
  Automation System
27 Manitou Drive
Kitchener, Ontario, Canada, N2C 1K9
Mark Wills
(519) 748-9365
FAX: (519) 748-9769

Scale Systems, Inc.
Wondo Software
Post Office Box 193
77 West Baltimore Pike
Chester Heights, PA 19017
Donald P. Tefft, President
(215) 558-1920
FAX: (215) 558-1925

ScaleWare
ScaleWare
10603 Grant Road - Suite 102
Houston, TX 77070
Mike Gibson, Tech
Charlie Greere, Sales
(713) 469-4676
(717) 644-5614
FAX: (713) 469-7548

Solid Waste Technologies, Inc.
Facilities Management System
Business Systems Center
50 Mount Bethel Road - 2nd Floor
Warren, NJ 07059
Jerome Prevete
(800) 548-9789
FAX: (908) 561-7319

Thurman Scale
4400 Weight Data Management System
1939 Refugee Road
Columbus, OH 43207
James Gottliebson
(614) 443-9741
FAX: (614) 444-8333

Weigh-Tronix, Inc.
PDox Waste Management System
1000 Armstrong Drive
Fairmount, MN 56031
Paul Batson
(507) 238-4461, Ext. 333
(800)788-1879

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APPENDIX A

LICENSING STUDY

SOUTHEASTERN PENNSYLVANIA

BUCKS COUNTY MUNICIPALITIES

LICENSING STUDY: SOUTHEASTERN PENNSYLVANIA
BUCKS COUNTY MUNICIPALITIES I
APPENDIX A

	BENSALEM TWP.	BRISTOL BOROUGH	BUCKINGHAM TWP.	CHALFONT BOROUGH	DOYLESTOWN TWP.
WHO REGULATIONS APPLY TO	All municipal solid waste haulers except: private individuals and self-generators of agricultural or organic waste.	All municipal solid waste haulers except: private individuals and self-generators of agricultural or organic waste.	All municipal solid waste haulers except: private individuals and self-generators of agricultural or organic waste.	All municipal solid waste haulers except: private individuals and self-generators of agricultural or organic waste.	All municipal solid waste haulers except: private individuals and self-generators of agricultural or organic waste.
TYPE OF WASTE REGULATED	Municipal waste.	Municipal waste.	Municipal waste.	Municipal waste.	Municipal waste.
REGISTRATION REQUIREMENTS	License application and fee, must provide customers with information sheet annually.	License application and fee, certificate of insurance.	License application and fee, provide a Municipal Waste Disposal Site Affidavit, comply with specific provisions, meet requirements of Act 97 and 101, County Plan, DER rules and regulations and Health Dept. regulations.	License application and fee.	Application and fee, must meet the requirements of Act 97 and 101, county plan, and any applicable county health department regulations.
LICENSING PERIOD	Annual, calendar year. Renewal application must be submitted at least 45 days before expiration date of existing license.	Annual, calendar year. Renewal application must be submitted at least 45 days before expiration date of existing license.	Annual, calendar year. Renewal application must be submitted at least 45 days before expiration date of existing license.	Annual, calendar year.	Annual, calendar year.
FEES	$300. (According to county should not exceed $100.)	Fee not to exceed $100 per waste hauling company/year.	Fee not to exceed $100 per waste hauling company/year.	$25 annual license fee.	$100 annual license fee.
STICKER DISPLAY	No. However, collector's company name and address must be identified on vehicle.	No.	No.	No.	Yes. License sticker shall be displayed on the left front door of tractor body of each vehicle. Replacement sticker costs $5.
VEHICLE REQUIREMENTS	Non-leakable, tight cover.	1. Must comply with requirements of Act 97 and 101, including Title 25 PA Code Chapter 285, Subchapter B. 2. Watertight. 3. Enclosed or covered. 4. Bear signs identifying name and business address of vehicle owner.	1. Must comply with requirements of Act 97 and 101, including Title 25 PA Code Chapter 285, Subchapter B. 2. Watertight. 3. Enclosed or covered. 4. Bear signs identifying name and business address of vehicle owner.	1. Compacting devices. 2. Enclosed, covered. 3. Good condition and comply with the minimum safety and sanitary regulations of the laws of the Commonwealth, county, borough. 4. No leakage. 5. Each truck manned by at least 1 driver and 1 collector. 6. At least 1 broom and shovel. 7. Park at lawful place.	None.
BACKGROUND CHECKS	Minimal: background information is given on application form.	Minimal: background information given on application form.	Minimal: background information given on application form.	Minimal: background information given on application form.	Minimal: background information given on application form.

Category	Column 1	Column 2	Column 3	Column 4	Column 5
DISCLOSURE STATEMENTS	No.	No.	No.	No.	No.
INSURANCE REQUIREMENTS	Yes. 1. General liability. 2. Automobile liability.	Yes. 1. Liability 2. Automobile 3. Workmen's compensation.	Yes. 1. Liability 2. Automobile 3. Workmen's compensation.	Yes. 1. Liability 2. Automobile 3. Workmen's compensation.	Yes. 1. Liability 2. Automobile 3. Workmen's compensation.
PERFORMANCE BONDS	No.	No.	No.	No.	No.
REPORTING REQUIREMENTS	County Waste Documentation Program: Includes origin and destination of waste; Semi-annual report to be submitted to municipality (Jan.-June and July-December). Indicate: 1. Total weight and/or volume. 2. Name of each processing and/or disposal facility; and total weight and/or volume of each type of municipal waste delivered to each facility during each month of the reporting period. 3. Any other info. determined to be necessary during the development and implementation of Program.	1. Report any significant changes. 2. Maintain current records. 3. Participate in the Bucks County Municipal Waste Documentation Program: submit semi-annual reports to Borough (Jan.-June and July-December). Indicate: 1. Total weight and/or volume. 2. Name of each processing and/or disposal facility; and total weight and/or volume of each type of municipal waste delivered to each facility during each month of the reporting period. 3. Any other info. determined to be necessary during the development and implementation of Program.	1. Report any significant changes. 2. Maintain current records. 3. Participate in the Bucks County Municipal Waste Documentation Program: submit semi-annual reports to Borough (Jan.-June and July-December). Indicate: 1. Total weight and/or volume. 2. Name of each processing and/or disposal facility; and total weight and/or volume of each type of municipal waste delivered to each facility during each month of the reporting period. 3. Any other info. determined to be necessary during the development and implementation of Program.	1. Report any significant changes. 2. Maintain current records. 3. Participate in the Bucks County Municipal Waste Documentation Program: submit semi-annual reports to Borough (Jan.-June and July-December). Indicate: 1. Total weight and/or volume. 2. Name of each processing and/or disposal facility; and total weight and/or volume of each type of municipal waste delivered to each facility during each month of the reporting period. 3. Any other info. determined to be necessary during the development and implementation of Program.	1. Maintain current records. 2. Participate in the Bucks County Municipal Waste Documentation Program: submit semi-annual reports to Borough (Jan.-June and July-December). Indicate: 1. Total weight and/or volume. 2. Name of each processing and/or disposal facility; and total weight and/or volume of each type of municipal waste delivered to each facility during each month of the reporting period. 3. Any other info. determined to be necessary during the development and implementation of Program.
ENFORCEMENT	Law enforcement officials.	Law enforcement officials.	Law enforcement officials.	Borough Council.	Township.
PENALTIES	1. Fines ($1000/violation). 2. Suspend/revoke license.	1. Fines ($100-$600) 2. Imprisonment up to 30 days 3. Revoke/suspend license.	1. Fines ($100-$1,000) 2. Imprisonment up to 30 days 3. Revoke/suspend license.	1. Fines ($25-$100) 2. Revoke/suspend license.	1. Fines: first conviction $50, second $250, third and subsequent $1,000. 2. Revoke/suspend license.
TEMPORARY LICENSES	No.	No.	Yes. Township has right to issue a temporary permit or license.	No.	No.
DESIGNATED DISPOSAL SITES	Must use approved county sites.	Must dispose at designated county sites.	Must dispose at designated county sites.	Must dispose at designated county sites.	Must dispose at township designated sites.

LICENSING STUDY: SOUTHEASTERN PENNSYLVANIA
BUCKS COUNTY MUNICIPALITIES II

	DOYLESTOWN BOROUGH	DUBLIN BOROUGH	DURHAM TWP.	HAYCOCK TWP.	HILLTOWN TWP.
WHO REGULATIONS APPLY TO	All municipal solid waste haulers except: private individuals and self-generators of agricultural or organic waste.	All municipal solid waste haulers except: private individuals and self-generators of agricultural or organic waste.	All municipal solid waste haulers except: private individuals and self-generators of agricultural or organic waste.	All municipal solid waste haulers except: private individuals and self-generators of agricultural or organic waste.	All municipal solid waste haulers except: private individuals and self-generators of agricultural or organic waste.
TYPE OF WASTE REGULATED	Municipal waste.	Municipal waste.	Municipal waste.	Municipal waste.	Municipal waste.
REGISTRATION REQUIREMENTS	License application and fee, file a schedule of rates, certificate of insurance, shall meet requirements of Act 97 and 101, county plan, all DER rules and regulations, and Health Dept. regulations.	License application and fee, certificate of insurance, shall meet requirements of Act 97 and 101, county plan, all DER rules and regulations, and Health Dept. regulations.	License application and fee, certificate of insurance, list of services and prices, shall meet requirements of Act 97 and 101, County Plan, DER rules and regulations and Health Dept. regulations.	License application and fee, certificate of insurance, list of services and prices, shall meet requirements of Act 97 and 101, County Plan, DER rules and regulations and Health Dept. regulations.	Notarized application and fee, certificate of insurance, must meet the requirements of Act 97 and 101, county plan, DER rules and regulations and any applicable county health department regulations.
LICENSING PERIOD	Annual, calendar year. Renewal application must be submitted at least 45 days before expiration date of existing license.	Annual, calendar year. Renewal application must be submitted at least 45 days before expiration date of existing license.	Annual, calendar year. Renewal application must be submitted at least 45 days before expiration date of existing license.	Annual, calendar year. Renewal application must be submitted at least 45 days before expiration date of existing license.	Annual, calendar year. Renewal application must be submitted at least 45 days before expiration date of existing license.
FEES	$100.	$50	Fee not to exceed $100 per waste hauling company/year.	Not given.	Not given.
STICKER DISPLAY	No. However, vehicle must bear signs identifying collector's name and business address of owner and type of material transported.	No. However, vehicle must bear signs identifying collector's name and business address of owner and type of material transported.	No. However, vehicle must bear signs identifying collector's name and business address of owner and type of material transported.	No. However, vehicle must bear signs identifying collector's name and business address of owner and type of material transported.	No. However, vehicle must bear signs identifying collector's name and business address of owner and type of material transported.
VEHICLE REQUIREMENTS	1. Must comply with requirements of Act 97 and 101, including Title 25 PA Code Chapter 285, Subchapter B. 2. Watertight. 3. Enclosed or covered. 4. Compacting device. 5. Not overloaded. 5. 1 driver and 1 collector. 6. 1 broom. 7. Park at lawful place.	1. Must comply with requirements of Act 97 and 101, including Title 25 PA Code Chapter 285, Subchapter B. 2. Watertight. 3. Enclosed or covered. 4. Stored and parked at a lawful site.	1. Must comply with requirements of Act 97 and 101, including Title 25 PA Code Chapter 285, Subchapter B. 2. Watertight. 3. Enclosed or covered.	1. Must comply with requirements of Act 97 and 101, including Title 25 PA Code Chapter 285, Subchapter B. 2. Watertight. 3. Enclosed or covered.	1. Must comply with requirements of Act 97 and 101, including Title 25 PA Code Chapter 285, Subchapter B. 2. Watertight. 3. Enclosed or covered.
BACKGROUND CHECKS	Minimal: background information is given on application form which must be notarized.	Minimal: background information given on application form.	Minimal: background information given on application form.	Minimal: background information given on application form.	Minimal: background information given on application form.
DISCLOSURE STATEMENTS	No.	No.	No.	No.	No.

	Municipality	Borough	Township	Township
INSURANCE REQUIREMENTS	Yes. 1. Comprehensive General liability. 2. Comprehensive Automobile liability. 3. Workmen's Compensation and Employer's General Liability.	Yes. 1. Liability 2. Automobile 3. Workmen's compensation.	Yes. 1. Liability 2. Automobile 3. Workmen's compensation.	Yes. 1. Liability 2. Automobile 3. Workmen's compensation.
PERFORMANCE BONDS	No.	No.	No.	No.
REPORTING REQUIREMENTS	1. Report any significant changes. 2. Maintain current records. 3. Participate in the Bucks County Municipal Waste Documentation Program: submit semi-annual reports to Borough (Jan.-June and July - December). Indicate: 1. Total weight and/or volume. 2. Name of each processing and/or disposal facility; and total weight and/or volume of each type of municipal waste delivered to each facility during each month of the reporting period. 3. Any other info. determined to be necessary during the development and implementation of Program.	1. Report any significant changes. 2. Maintain current records. 3. Participate in the Bucks County Municipal Waste Documentation Program: submit semi-annual reports to Borough (Jan.-June and July - December). Indicate: 1. Total weight and/or volume. 2. Name of each processing and/or disposal facility; and total weight and/or volume of each type of municipal waste delivered to each facility during each month of the reporting period. 3. Any other info. determined to be necessary during the development and implementation of Program.	1. Report any significant changes. 2. Maintain current records. 3. Participate in the Bucks County Municipal Waste Documentation Program: submit semi-annual reports to Borough (Jan.-June and July - December). Indicate: 1. Total weight and/or volume. 2. Name of each processing and/or disposal facility; and total weight and/or volume of each type of municipal waste delivered to each facility during each month of the reporting period. 3. Any other info. determined to be necessary during the development and implementation of Program.	1. Report any significant changes. 2. Maintain current records. 3. Participate in the Bucks County Municipal Waste Documentation Program: submit semi-annual reports to Borough (Jan.-June and July - December). Indicate: 1. Total weight and/or volume. 2. Name of each processing and/or disposal facility; and total weight and/or volume of each type of municipal waste delivered to each facility during each month of the reporting period. 3. Any other info. determined to be necessary during the development and implementation of Program.
ENFORCEMENT	Municipality.	Borough.	Township.	Township.
PENALTIES	1. Fines ($100 -$1000/violation). 2. Imprisonment up to 30 days. 3. Suspend/revoke license. 4. Injunction.	1. Fines ($25-$1,000) 2. Imprisonment up to 30 days 3. Suspend/revoke license. 4. Injunction.	1. Fines (up to $1,000). 2. Imprisonment up to 90 days. 3. Suspend/revoke license. 4. Injunction.	1. Fines ($500-$1,000) 2. Imprisonment up to 30 days. 3. Suspend/revoke license. 4. Injunction.
TEMPORARY LICENSES	No.	No.	No.	No.
DESIGNATED DISPOSAL SITES	Must use municipality designated sites.	Must dispose at Borough designated sites.	Must dispose at Township designated sites.	Must dispose at designated county sites. / Must dispose at township designated sites.

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LICENSING STUDY: SOUTHEASTERN PENNSYLVANIA
BUCKS COUNTY MUNICIPALITIES III

	MORRISVILLE BOROUGH	NEW BRITAIN TWP.	NEWTOWN TWP.	NORTHAMPTON TWP.	PENNDEL BOROUGH
WHO REGULATIONS APPLY TO	All municipal solid waste haulers except: private individuals and self-generators of agricultural or organic waste.	All municipal solid waste haulers except: private individuals and self-generators of agricultural or organic waste.	All municipal solid waste haulers except: private individuals and self-generators of agricultural or organic waste.	All municipal solid waste haulers except: private individuals and self-generators of agricultural or organic waste.	All municipal solid waste haulers except: private individuals and self-generators of agricultural or organic waste.
TYPE OF WASTE REGULATED	Municipal waste.	Municipal waste.	Municipal waste.	Municipal waste.	Municipal waste.
REGISTRATION REQUIREMENTS	License application and fee, certificate of insurance, shall meet requirements of Act 97 and 101, county plan, all DER rules and regulations, and Health Dept. regulations.	Notarized license application and fee, certificate of insurance, provide a Municipal Waste Disposal Site Affidavit, shall meet requirements of Act 97 and 101, county plan, all DER rules and regulations, and Health Dept. regulations.	License application and fee, shall meet requirements of Act 97 and 101, County Plan, DER rules and regulations and Health Dept. regulations.	License application and fee, certificate of insurance, must comply with all rules and regulations and ordinances of Board of Health, local, county and state. regulations.	Notarized application and fee, must meet the requirements of Act 97 and 101, county plan, DER rules and regulations and any applicable county health department regulations.
LICENSING PERIOD	Annual, calendar year. Renewal application must be submitted at least 45 days before expiration date of existing license.	Annual, calendar year. Renewal application must be submitted at least 45 days before expiration date of existing license.	Annual, calendar year. Renewal application must be submitted at least 45 days before expiration date of existing license.	Annual. Renewal application must be submitted at least 45 days before expiration date of existing license.	Annual.
FEES	Not to exceed $100/waste hauling company.	Not to exceed $100/waste hauling company.	Fee not to exceed $100/waste hauling company.	$400/year.	$100.
STICKER DISPLAY	No. However, vehicle must bear signs identifying collector's name and business address of owner and type of material transported.	No. However, vehicle must bear signs identifying collector's name and business address of owner and type of material transported.	No.	No.	No.
VEHICLE REQUIREMENTS	1. Must comply with requirements of Act 97 and 101, including Title 25 PA Code Chapter 285, Subchapter B. 2. Watertight. 3. Enclosed or covered.	1. Must comply with requirements of Act 97 and 101, including Title 25 PA Code Chapter 285, Subchapter B. 2. Watertight. 3. Enclosed or covered.	Not given.	1. Compacting devices. 2. Enclosed/covered. 3. Not overloaded. 4. 1 driver and 1 helper. 5. 1 broom. 6. Store and park vehicle at a lawful place.	Not given information (did not receive copy of ordinance).
BACKGROUND CHECKS	Minimal: background information is given on application form.	Minimal: background information given on application form.	Minimal: background information given on application form.	Minimal: background information given on application form.	Minimal: background information given on application form.
DISCLOSURE STATEMENTS	No.	No.	No.	No.	No.

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INSURANCE REQUIREMENTS	Yes. 1. Liability. 2. Automobile 3. Workmen's Compensation.	Yes. 1. Liability 2. Automobile 3. Workmen's compensation.	No.	Yes. 1. General liability. 2. Automobile liability.	Not given information.
PERFORMANCE BONDS	No.	No.	No.	May be required. If so, then $25,000 is required.	No.
REPORTING REQUIREMENTS	1. Report any significant changes. 2. Maintain current records. 3. Participate in the Bucks County Municipal Waste Documentation Program: submit semi-annual reports to Borough (Jan. -June and July - December). Indicate: 1. Total weight and/or volume. 2. Name of each processing and/or disposal facility; and total weight and/or volume of each type of municipal waste delivered to each facility during each month of the reporting period. 3. Any other info. determined to be necessary during the development and implementation of Program.	1. Report any significant changes. 2. Maintain current records. 3. Participate in the Bucks County Municipal Waste Documentation Program: submit semi-annual reports to Borough (Jan. -June and July - December). Indicate: 1. Total weight and/or volume. 2. Name of each processing and/or disposal facility; and total weight and/or volume of each type of municipal waste delivered to each facility during each month of the reporting period. 3. Any other info. determined to be necessary during the development and implementation of Program.	1. Maintain current records. 2. Participate in the Bucks County Municipal Waste Documentation Program: submit semi-annual reports to Borough (Jan. -June and July - December). Indicate: 1. Total weight and/or volume. 2. Name of each processing and/or disposal facility; and total weight and/or volume of each type of municipal waste delivered to each facility during each month of the reporting period. 3. Any other info. determined to be necessary during the development and implementation of Program.	1. Report any significant changes.	Not given information.
ENFORCEMENT	Borough.	Township.	Township.	Township.	Borough.
PENALTIES	1. Fines ($100 -$1000). 2. Imprisonment up to 10 days. 3. Suspend/revoke license. 4. Injunction.	1. Fines ($100-$1,000) 2. Imprisonment up to 30 days 3. Suspend/revoke license. 4. Injunction.	1. Fines. 2. Suspend/revoke license. 3. Injunction.	1. Fines not to exceed $600. 2. Imprisonment up to 30 days. 3. Suspend/revoke license. 4. Injunction.	1. Fines ($100-$600)
TEMPORARY LICENSES	No.	Yes.	No.	No.	No.
DESIGNATED DISPOSAL SITES	Must use borough designated sites.	Must dispose at Township designated sites.	Must dispose at Township designated sites.	Must dispose at designated county sites.	Must dispose at county designated sites.

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LICENSING STUDY: SOUTHEASTERN PENNSYLVANIA
BUCKS COUNTY MUNICIPALITIES IV

	PERKASIE BOROUGH	RICHLAND TWP.	RIEGELSVILLE BOROUGH	EAST ROCKHILL TWP.	WEST ROCKHILL BOROUGH
WHO REGULATIONS APPLY TO	All municipal solid waste haulers except: private individuals and self-generators of agricultural or organic waste.	All municipal solid waste haulers. 2 classes: 1. Scheduled haulers 2. Part-time haulers. (This is from 1987.)	All municipal solid waste haulers except: private individuals and self-generators of agricultural or organic waste.	All municipal solid waste haulers except: private individuals and self-generators of agricultural or organic waste.	All municipal solid waste haulers except: private individuals and self-generators of agricultural or organic waste.
TYPE OF WASTE REGULATED	Municipal waste.	Municipal waste.	Municipal waste.	Municipal waste.	Municipal waste.
REGISTRATION REQUIREMENTS	Notarized license application and fee, certificate of insurance, shall meet requirements of Act 97 and 101, county plan, all DER rules and regulations, and Health Dept. regulations.	Notarized license application and fee, certification from the disposal facility that it is licensed by the Commonwealth.	License application and fee; provide a Municipal Waste Disposal Site Affidavit, shall meet requirements of Act 97 and 101, County Plan, DER rules and regulations and Health Dept. regulations.	License application and fee, certificate of insurance, shall meet requirements of Act 97 and 101, County Plan, DER rules and regulations and Health Dept. regulations.	Application and fee, certificate of insurance, shall meet requirements of Act 97 and 101, County Plan, DER rules and regulations and Health Dept. regulations.
LICENSING PERIOD	Annual, calendar year. Renewal application must be submitted at least 45 days before expiration date of existing license.	Annual, February 1 to January 31.	Annual, calendar year. Renewal application must be submitted at least 45 days before expiration date of existing license.	Annual, calendar year. Renewal application must be submitted at least 45 days before expiration date of existing license.	Annual, calendar year.
FEES	$100/waste hauling company.	$100.	Not given.	Not given.	Not given.
STICKER DISPLAY	No. However, vehicle must bear signs identifying collector's name and business address of owner and type of material transported.	Yes.	No. However, vehicle must bear signs identifying collector's name and business address of owner and type of material transported.	Not given (did not send entire ordinance).	No. However, vehicle must bear signs identifying collector's name and business address of owner and type of material transported.
VEHICLE REQUIREMENTS	1. Must comply with requirements of Act 97 and 101, including Title 25 PA Code Chapter 285, Subchapter B. 2. Watertight. 3. Enclosed or covered.	Did not send a current ordinance. Does this mean they have adopted the county ordinance?	1. Must comply with requirements of Act 97 and 101, including Title 25 PA Code Chapter 285 subchapter B. 2. Watertight. 3. Enclosed/covered.	Not given.	1. Must comply with requirements of Act 97 and 101, including Title 25 PA Code Chapter 285 subchapter B. 2. Watertight. 3. Enclosed/covered. 4. 1 driver and 1 helper. 5. 1 broom and 1 shovel. 6. Store and park at a lawful place.
BACKGROUND CHECKS	Minimal: background information is given on application form.	Minimal: background information given on application form.	Minimal: background information given on application form.	Minimal: background information given on application form.	Minimal: background information given on application form.
DISCLOSURE STATEMENTS	No.	No.	No.	No.	No.

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	Column 1	Column 2	Column 3	Column 4	Column 5
INSURANCE REQUIREMENTS	Yes. 1. Liability. 2. Automobile 3. Workmen's Compensation.	Not given information.	No.	Yes. 1. Liability. 2. Automobile. 3. Workmen's compensation.	Yes. 1. Liability. 2. Automobile. 3. Workmen's compensation.
PERFORMANCE BONDS	No.	Not given information.	No.	No.	No.
REPORTING REQUIREMENTS	1. Report any significant changes. 2. Maintain current records. 3. Participate in the Bucks County Municipal Waste Documentation Program: submit semi-annual reports to Borough (Jan.-June and July - December). Indicate: 1. Total weight and/or volume. 2. Name of each processing and/or disposal facility; and total weight and/or volume of each type of municipal waste delivered to each facility during each month of the reporting period. 3. Any other info. determined to be necessary during the development and implementation of Program.	Not given information.	1. Maintain current records. 2. Participate in the Bucks County Municipal Waste Documentation Program: submit semi-annual reports to Borough (Jan.-June and July - December). Indicate: 1. Total weight and/or volume. 2. Name of each processing and/or disposal facility; and total weight and/or volume of each type of municipal waste delivered to each facility during each month of the reporting period. 3. Any other info. determined to be necessary during the development and implementation of Program.	1. Report any significant changes. 2. Maintain current records. 3. Participate in the Bucks County Municipal Waste Documentation Program: submit semi-annual reports to Borough (Jan.-June and July - December). Indicate: 1. Total weight and/or volume. 2. Name of each processing and/or disposal facility; and total weight and/or volume of each type of municipal waste delivered to each facility during each month of the reporting period. 3. Any other info. determined to be necessary during the development and implementation of Program.	1. Report any significant changes. 2. Maintain current records. 3. Participate in the Bucks County Municipal Waste Documentation Program: submit semi-annual reports to Borough (Jan.-June and July - December). Indicate: 1. Total weight and/or volume. 2. Name of each processing and/or disposal facility; and total weight and/or volume of each type of municipal waste delivered to each facility during each month of the reporting period. 3. Any other info. determined to be necessary during the development and implementation of Program.
ENFORCEMENT	Borough.	Township.	Borough.	Township.	Township.
PENALTIES	1. Fines ($100 -$1000). 2. Imprisonment up to 30 days. 3. Suspend/revoke license. 4. Injunction.	1. Fines up to $300. 2. Suspend/revoke license. 3. Injunction.	1. Fines up to $300. 2. Suspend/revoke license. 3. Injunction.	1. Fines ($500-$1,000). 2. Imprisonment up to 30 days. 3. Suspend/revoke license. 4. Injunction.	1. Fines ($500-$1,000). 2. Imprisonment up to 30 days. 3. Suspend/revoke license. 4. Injunction.
TEMPORARY LICENSES	No.	No.	No.	No.	No.
DESIGNATED DISPOSAL SITES	Must use borough designated sites.	Must dispose at County designated sites.	Must dispose at Borough designated sites.	Must dispose at designated county sites.	Must dispose at township designated sites.

LICENSING STUDY: SOUTHEASTERN PENNSYLVANIA
BUCKS COUNTY MUNICIPALITIES V

	LOWER SOUTHAMPTON TWP.	TINICUM TWP.	TRUMBAUERSVILLE BOROUGH	TULLYTOWN BOROUGH	WARRINGTON TWP
WHO REGULATIONS APPLY TO	All private municipal solid waste haulers, except self-generators.	All municipal solid waste haulers except: private individuals and self-generators of agricultural or organic waste.	All municipal solid waste haulers.	All municipal solid waste haulers except: private individuals and self-generators of agricultural or organic waste.	All municipal solid waste haulers, except: private individuals and self-generators of agricultural or organic waste.
TYPE OF WASTE REGULATED	Municipal waste.	Municipal waste.	Municipal waste.	Municipal waste.	Municipal waste.
REGISTRATION REQUIREMENTS	Application and fee, certificate of insurance.	Notarized license application and fee, certificate of insurance, shall meet requirements of Act 97 and 101, County Plan, DER rules and regulations and Health Dept. regulations.	Notarized license application and fee, certificate of insurance, shall meet requirements of Act 97 and 101, County Plan, DER rules and regulations and Health Dept. regulations.	License application and fee, certificate of insurance, shall meet requirements of Act 97 and 101, County Plan, DER rules and regulations and Health Dept. regulations.	Application and fee, certificate of insurance, shall meet requirements of Act 97 and 101, County Plan, DER rules and regulations and Health Dept. regulations.
LICENSING PERIOD	Annual, calendar year.	Annual, calendar year. Renewal application must be submitted at least 45 days before expiration date of existing license.	Annual.	Annual, calendar year. Renewal application must be submitted at least 45 days before expiration date of existing license.	Annual, calendar year.
FEES	Not given.	Not to exceed $100.	Not given.	Not to exceed $100.	Not given.
STICKER DISPLAY	No.	No. However, vehicle must bear signs identifying collector's name and business address of owner and type of material transported.	No. However, vehicle must bear signs identifying collector's name and business address of owner and type of material transported.	No. However, vehicle must bear signs identifying collector's name and business address of owner and type of material transported.	No.
VEHICLE REQUIREMENTS	1. Enclosed/covered. 2. Must comply with the requirements of Act 97 and 101 and the Department regulations adopted therein, including Title 25, PA Code Chapter 285 subchapter B. 3. Not overloaded. 4. No leakage. 5. 1 driver and 1 helper. 6. 1 broom and shovel. 7. Store and park vehicle at a lawful place.	1. Must comply with requirements of Act 97 and 101, including Title 25 PA Code Chapter 285 subchapter B. 2. Watertight. 3. Enclosed/covered.	1. Must comply with requirements of Act 97 and 101, including Title 25 PA Code Chapter 285 subchapter B. 2. Watertight. 3. Enclosed/covered.	1. Must comply with requirements of Act 97 and 101, including Title 25 PA Code Chapter 285 subchapter B. 2. Watertight. 3. Enclosed/covered.	Given on 1975 ordinance: 1. Compacting device. 2. Enclosed/covered. 3. Not overloaded. 4. 1 driver and 1 helper. 5. 1 broom and shovel. 6. Store and park vehicle at lawful place.
BACKGROUND CHECKS	Minimal: background information is given on application form.	Minimal: background information given on application form.	Minimal: background information given on application form.	Minimal: background information given on application form.	No. Minimal background information given on application form.

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DISCLOSURE STATEMENTS	No.	No.	No.	No.
INSURANCE REQUIREMENTS	Yes. 1. Liability. 2. Automobile. 3. Workmen's Compensation.	Yes. 1. Liability. 2. Automobile. 3. Workmen's compensation.	Yes. 1. Liability. 2. Automobile. 3. Workmen's compensation.	Yes. 1. Liability. 2. Automobile. 3. Workmen's Compensation.
PERFORMANCE BONDS	No.	No.	No.	No.
REPORTING REQUIREMENTS	1. Report any significant changes. 2. Maintain current records. 3. Participate in the Bucks County Municipal Waste Documentation Program: submit semi-annual reports to Borough (Jan.-June and July - December). Indicate: 1. Total weight and/or volume. 2. Name of each processing and/or disposal facility; and total weight and/or volume of each type of municipal waste delivered to each facility during each month of the reporting period. 3. Any other info. determined to be necessary during the development and implementation of Program.	1. Report any significant changes. 2. Maintain current records. 3. Participate in the Bucks County Municipal Waste Documentation Program: submit semi-annual reports to Borough (Jan.-June and July - December). Indicate: 1. Total weight and/or volume. 2. Name of each processing and/or disposal facility; and total weight and/or volume of each type of municipal waste delivered to each facility during each month of the reporting period. 3. Any other info. determined to be necessary during the development and implementation of Program.	1. Report any significant changes. 2. Maintain current records. 3. Participate in the Bucks County Municipal Waste Documentation Program: submit semi-annual reports to Borough (Jan.-June and July - December). Indicate: 1. Total weight and/or volume. 2. Name of each processing and/or disposal facility; and total weight and/or volume of each type of municipal waste delivered to each facility during each month of the reporting period. 3. Any other info. determined to be necessary during the development and implementation of Program.	1. Maintain current records. 2. Participate in Bucks County Municipal Waste Documentation Program: submit semi-annual reports to Borough. Indicate: total weight and volume; name of each processing and/or disposal facility and total wight and volume of each type of municipal waste delivered to each facility monthly; any other information deemed to be necessary during the development of the WasteDoc Program.
ENFORCEMENT	Township.	Township.	Borough.	Township.
PENALTIES	1. Fines not exceeding $600. 2. Imprisonment up to 30 days. 3. Suspend/revoke license. 4. Injunction.	1. Fines up to $300. 2. Imprisonment up to 3 days. 3. Suspend/revoke license. 4. Injunction.	1. Fines ($500-$1,000). 2. Imprisonment up to 10 days. 3. Suspend/revoke license. 4. Injunction.	1. Fines: 1st conviction $50, 2nd conviction $250, 3rd and subsequent $1,000. 2. Suspend/revoke license. 3. The township may take whatever action it shall see fit to enforce the Ordinance, including but not limited to injunctive relief.
TEMPORARY LICENSES	No.	No.	No.	No.
DESIGNATED DISPOSAL SITES	Must dispose at township designated sites.	Must dispose at township designated sites.	Must dispose at Borough designated sites.	Yes. Township designated facility on list of County designated facilities.

LICENSING STUDY: SOUTHEASTERN PENNSYLVANIA
BUCKS COUNTY MUNICIPALITIES VI

	QUAKERTOWN BROUGH	WARWICK TWP.	YARDLEY BOROUGH			
WHO REGULATIONS APPLY TO	All municipal solid waste haulers except: private individuals and self generators of agricultural or organic waste.	All municipal solid waste haulers except: private individuals and self-generators of agricultural or organic waste.	All municipal solid waste haulers except: private individuals and self-generators of agricultural or organic waste.			
TYPE OF WASTE REGULATED	Municipal waste.	Municipal waste.	Municipal waste.			
REGISTRATION REQUIREMENTS	Application, contract or agreement between haulers and approved disposal facility, meet requirements of Act 97 and 101, county plan, all DER rules and regulations and Health Dept. regulations.	License application and fee, certificate of insurance, a list of optional services and prices, shall meet requirements of Act 97 and 101, County Plan, DER rules and regulations and Health Dept. regulations.	License application and fee, certificate of insurance, shall meet requirements of Act 97 and 101, County Plan, DER rules and regulations and Health Dept. regulations.			
LICENSING PERIOD	Annual, calendar year.	Annual, calendar year. Renewal application must be submitted at least 45 days before expiration date of existing license.	Annual, calendar year. Renewal application and fee must be submitted 5 days prior to the expiration date of the existing license.			
FEES	$100.	Not to exceed $100.	Not to exceed $100/waste collector company.			
STICKER DISPLAY	No. However, vehicle must bear signs identifying collector's name and business address of owner and type of material transported.	No. However, vehicle must bear signs identifying collector's name and business address of owner and type of material transported.	No. However, vehicle must bear signs identifying collector's name and business address of owner and type of material transported.			
VEHICLE REQUIREMENTS	1. Must comply with requirements of Act 97 and 101, including Title 25 PA Code Chapter 285 subchapter B. 2. Watertight. 3. Enclosed/covered	1. Must comply with requirements of Act 97 and 101, including Title 25 PA Code Chapter 285 subchapter B. 2. Watertight. 3. Enclosed/covered.	1. Must comply with requirements of Act 97 and 101, including Title 25 PA Code Chapter 285 subchapter B. 2. Watertight. 3. Enclosed/covered.			
BACKGROUND CHECKS	No. Minimal background information given on application form.	No. Minimal background information given on application form.	No. Minimal background information given on application form.			
DISCLOSURE STATEMENTS	No.	No.	No.			

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INSURANCE REQUIREMENTS	No.	Yes. 1. Liability. 2. Automobile. 3. Workmen's compensation.	Yes. 1. Public Liability. 2. Property Damage. 3. Automobile. 4. Workmen's compensation.
PERFORMANCE BONDS	No.	No.	No.
REPORTING REQUIREMENTS	1. Maintain current records. 2. Participate in WasteDoc and submit semi-annual reports to the Borough.	1. Report any significant changes. 2. Maintain current records. 3. Participate in the Bucks County Municipal Waste Documentation Program: submit semi-annual reports to Borough (Jan. - June and July - December). Indicate: 1. Total weight and/or volume. 2. Name of each processing and/or disposal facility; and total weight and/or volume of each type of municipal waste delivered to each facility during each month of the reporting period. 3. Any other info. determined to be necessary during the development and implementation of Program.	1. Report any significant changes. 2. Maintain current records. 3. Participate in the Bucks County Municipal Waste Documentation Program: submit semi-annual reports to Borough (Jan. - June and July - December). Indicate: 1. Total weight and/or volume. 2. Name of each processing and/or disposal facility; and total weight and/or volume of each type of municipal waste delivered to each facility during each month of the reporting period. 3. Any other info. determined to be necessary during the development and implementation of Program.
ENFORCEMENT	Borough.	Township.	Borough.
PENALTIES	1. Fines not more than $300. 2. Imprisonment up to 30 days. 3. Suspend/revoke license. 4. Injunction.	1. Fines up to $1,000. 2. Imprisonment up to 90 days. 3. Suspend/revoke license. 4. Injunction.	1. Fines up to $300. 2. Imprisonment up to 30 days. 3. Suspend/revoke license.
TEMPORARY LICENSES	No.	No.	No.
DESIGNATED DISPOSAL SITES	Must dispose at Borough designated site.	Must dispose at township designated sites.	Must dispose at Borough designated sites.

APPENDIX B

LICENSING STUDY

SOUTHEASTERN PENNSYLVANIA

COUNTIES

LICENSING STUDY: SOUTHEASTERN PENNSYLVANIA
COUNTIES
APPENDIX B

	BUCKS	CHESTER	DELAWARE	MONTGOMERY	PHILADELPHIA
WHO REGULATIONS APPLY TO	All municipal solid waste haulers except: private individuals transporting HH waste, self-generators of agricultural or organic waste.	All municipal waste haulers except: self-generators, employment with a person holding a license, disposal of less than 1 ton/year.	All persons collecting or transporting acceptable waste within the county.	All municipal solid waste haulers.	Private sector waste haulers.
TYPE OF WASTE REGULATED	Municipal waste.	Municipal waste.	Acceptable waste (normal municipal solid waste).	Municipal solid waste.	Municipal waste.
REGISTRATION REQUIREMENTS	Notarized license application and fee.	Application, certificate of insurance, fees.	Application and application fee, stickers fee, including: proof of vehicle registration and certificate of insurance.	Notarized application, security deposit, fees, certificate of insurance, vehicle information.	Application to the Department of Licenses and Inspections, certificate of title, motor vehicle registration and insurance
LICENSING PERIOD	Annual, calendar year. Renewal application must be submitted at least 45 days before expiration date of existing license.	Annual, calendar year. Previously issued licenses will be automatically renewed provided collector has maintained that license in good standing. Issued by county.	Valid from January 1st to December 31 each year.	Annual, calendar year (issued each December).	Annual calendar year.
FEES	License fee not to exceed $100 per waste hauling company/year, to be set by municipalities.	Initial application fee: $250. Annual license identification decal fee for each vehicle and container: $25.	Application: $150 Stickers: M & C - $50; S - $100; R - $20. Commercial waste: $62/ton to dispose.	Primary: $300 Additional: $100 Entire County(3 licenses): $500 Per vehicle: $30 Disposal fees for each service area and transfer stations. Security Deposit.	$50 per vehicle.
STICKER DISPLAY	No. However, must bear signs identifying name and business address of vehicle owner at least 6" high.	Yes, identification decal (issued by county) must be displayed on each side of the vehicle.	Yes. 2 stickers displayed on both sides of vehicle cab: 1. license number 2. vehicle license plate number. Types: M=residential, C=commercial, S=specialized commercial, R=roll-off and lugger container. Also, collector's name and address and tare weight of vehicle shall be painted on both sides of cab with letters not less than 6" high.	Yes, issued by the W.S.A., displayed on each side of vehicle or container.	Sticker must be permanently affixed to the left side of the truck. License plate number must also be painted on the right side of the truck.

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REPORTING REQUIREMENTS	1. Must report any significant changes. 2. Maintain current records. 3. Bucks County Municipal Waste Documentation Program: Includes origin and destination of waste; Semi-annual report to be submitted to municipality and county (Jan. -June and July - December). Indicate: 1. Total weight and/or volume. 2. Name of each processing and/or disposal facility; and total weight and/or volume of each type of municipal waste delivered to each facility during each month of the reporting period. 3. Any other info. determined to be necessary during the development and implementation of the Program.	1. Each vehicle must be accompanied by a completed Manifest (provided by county). 2. Manifests must be given to the weigh master...prior to discharging load.	1. Maintain accurate records open to inspection by Solid Waste Department. 2. On or before Jan. 30th of each calendar year each solid waste transporter that transports to non-designated facilities are required to report to the Solid Waste Management Department of the County of Delaware: 1. Persons waste originated from; 2. type and amount of waste from each person; 3. Identification of all persons and facilities where solid waste disposed; 4. any change to registration information; 5. other information required by county.	1. Waste origin forms. 2. Annual survey of generators and collectors,transporters, processors conducted by Waste Authority.	Under new Commercial Regulations, haulers will report to city amount of material collected from generators in city and the destinations of the collected materials; and report to the generator the aggregate tonnage of materials collected from each collection point and the tonnage of recyclables contained therein.
ENFORCEMENT	Municipality.	County, DER officials.	Inspection by Director of Solid Waste Management Department and designees, code enforcement officers of Solid Waste Mgmt. Dept., law enforcement officials.	Waste System Authority (there are 3) or county, with the cooperation of municipalities.	No enforcement officers.
PENALTIES	1. Fines ($100-$1000). 2. Imprisonment up to 10 days. 3. Suspend/revoke license. 4. Injunction.	1. Fines ($100-$1000) 2. Imprisonment up to 30 days 3. Subject to provisions of Act 101, chapter 17. 4. Revoke/suspend license.	1. Suspension. 2. Fines. 3. Revoke license. 4. Imprisonment.	1. Fines ($500-$1000). 2. Imprisonment up to 30 days. 3. Revoke/deny license. 4. Injunction.	
TEMPORARY LICENSES	No.	Interim licensing: subject to compliance with the provisions of the Ordinance, etc. required by the County.	No.	Interim period: all haulers deemed licensed from effective date of rules and regulations to Dec 31/90.	No.
DESIGNATED DISPOSAL SITES	Each municipality shall designate one or more specific municipal waste processing and/or disposal facility(ies) from the list of designated facilities in the county plan....	Yes. Municipal waste generated within a specified service area may be disposed of only at the designated facility provided for that service area.	Yes. All acceptable waste generated in county shall be collected, transported and delivered to county designated facilities.	Yes. Designated by county or waste authority.	No.

VEHICLE REQUIREMENTS	1. Comply with requirements of Act 97 & 101, including Title 25 PA code chapter 285 subchapter B. 2. Watertight. 3. Enclosed/covered.	Identification decal must be prominently displayed.	1. Enclosed/covered. 2. Loading only at top, side, or rear, and capable of unloading automatically. 3. Waste only carried in the enclosed body. 4. Leak-proof, spill-proof, dust-proof, and odor-proof.	Watertight, enclosed/covered, maintained in good repair.	Totally and permanently enclosed with a means of loading at the top, side or rear. Constructed so that, once loaded, waste cannot be removed except by dumping. Waste must only be carried in body.
BACKGROUND CHECKS	No. Minimal background information is given on application form.	No. Minimal background information given on application form.	No. Minimal background information on application form, inspections of site and records.	No. Minimal background information given on application form.	No.
DISCLOSURE STATEMENTS	No.	No.	No.	No.	No.
INSURANCE REQUIREMENTS	Yes. 1. Liability. 2. Automobile 3. Workmen's compensation.	Yes. 1. Workers Compensation. 2. Comprehensive General Liability at a minimum limit of $1,000,000/occurrence and $1,000,000 in the aggregate annually. 3. Comprehensive Automobile Liability Insurance not less than $1,000,000/occurrence.	Yes. Liability coverage for not less than $1 million.	Yes. 1. Workers Compensation and Employer's liability. 2. Comprehensive general liability. 3. Comprehensive auto liability.	Yes. 1. Public liability and property damage. 2. Insurance company approved by the state insurance Department.
PERFORMANCE BONDS	No.	No.	No.	Yes: security deposit: options - 1. cash in amount of 8 weeks estimated tonnage multiplied times the applicable authority's charge per ton. 2. letter of credit for 13 weeks est. tonnage multiplied times the applicable auth.'s charge/ton. 3. payment bond for 13 weeks est. tonnage multiplied times the applicable auth.'s charge/ton.	No.