



City of Scranton PAYT Analysis Project #601

Prepared for:

City of Scranton

340 North Washington Avenue
Scranton, PA 18503
(570) 348-4118

Sponsored by:

Pennsylvania Department of Environmental Protection

400 Market Street
Harrisburg, Pennsylvania 17101
(717) 787-8685
www.depweb.state.pa.us

Prepared by:

SCS ENGINEERS

11260 Roger Bacon Drive
Suite 300
Reston, Virginia
(703) 471-6150

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1 PROJECT DESCRIPTION

The City of Scranton is located in Northeast Pennsylvania and is the sixth largest city in the state with a population of just over 77,000¹. City officials estimate that about 29,000 households receive solid waste management services over a 26 square mile area. The city owns its own equipment and utilizes their own staff to collect waste and recyclable materials from homes in the city.

The city is a Pennsylvania Act 101 mandated community for recycling. The city requested support from the Pennsylvania Department of Environmental Protection (DEP) Recycling Technical Assistance Program to explore the possibility of implementing an incentive-based or pay-as-you-throw program to encourage increased recycling. City officials are also concerned about the disparity of waste generated among the city’s population. The quantities of waste generated by households varies significantly. It is believed that elderly residents produce far less waste than younger residents do, yet everyone pays the same flat fee for solid waste services. The city assesses an annual solid waste fee of \$300 per household regardless of how much waste is generated by the household. This system provides little incentive to recycle and is not an equitable way to charge for solid waste services. Implementing a pay-as-you-throw type program is typically more equitable for residents as the cost of waste management services is shifted to residents who use more service.



Commingled curbside recycling in the City of Scranton

This project provides information on the different types of incentive-based programs that may be implemented by the city. It provides some guidance as to what program may make the most sense should the city decide to implement a pay-as-you-throw program.

¹ U.S. Census Bureau, www.census.org

2 SUMMARY OF WORK PERFORMED

This section summarizes the work activities performed as part of this recycling technical assistance project.

Task #1: Obtain Data and Conduct Site Visit

SCS met with city officials and staff to discuss the city’s current solid waste and recycling program. Information on the types and quantities of recyclable materials collected in the city was obtained along with copies of the public education brochure the city uses to promote recycling. While visiting Scranton, SCS observed solid waste collection crews servicing residential containers on city streets.



Trash and recyclables set out for collection in Scranton

Task #2: Evaluate Pay-As-You-Throw Project Types

This report contains details on various incentive-based programs that the city could implement to reduce the amount of refuse discarded by residents and encourage more recycling. Programs that use carts, stickers, bags, weight-based systems, and a hybrid approach were examined in light of the city’s existing solid waste management program. SCS assessed the ease of implementation of various program types as well as provided tables summarizing the challenges and benefits of each program type.

Task #3: Recommend Pay-As-You-Throw Education and Promotion Methods

This report also provides recommended methods to educate the city’s residents on the transition to a pay-as-you-throw program as well as methods to encourage residents to continue to reduce waste and increase waste diversion.

Task #4: Final Report

This report represents the final task of this project and summarizes our findings and recommendations.

3 RESULTS/FINDINGS

The purpose of this report is to discuss the types of pay-as-you-throw (PAYT) programs available to the City of Scranton, the advantages and disadvantages of each, and the applicability of a PAYT program to the city’s solid waste management system. PAYT is an approach to municipal solid waste services whereby residents are billed based in part on how much waste they dispose. The PAYT approach is in contrast to the more conventional flat rate fee used currently by the city where the total costs for solid waste collection, disposal, and recycling are apportioned uniformly among households regardless of the amount of waste disposed or recycled.

CURRENT PROGRAM

Revenues and expenses for operating the city’s solid waste program are accounted for in the general budget of the city. Pennsylvania DEP grant money is received in a separate special city grant fund that is used to pay some expenses for solid waste and recycling, including printing and postage for public education materials, recycling bins, and some equipment.



City of Scranton refuse collection vehicle

The city utilizes their own equipment and staff to collect municipal solid waste, bulky waste, yard waste, and recyclable materials from residents. The city utilizes rear-loaders to collect solid waste curbside from residents weekly. Collection crews typically include three individuals, one who is responsible for driving the waste collection vehicle and two individuals that manually collect solid waste and recyclables and place the materials in the back of the vehicle.

Property owners in the city are responsible for paying a fee to cover waste collection and disposal costs for each dwelling unit owned. This fee, which is established by city ordinance, is \$300 annually, which includes the following services:

- Weekly trash collection – unlimited quantities allowed;
- Weekly recyclable material collection – unlimited quantities allowed (commingled containers and paper materials are collected separately on alternating weeks);
- Weekly collection of yard waste in brown paper bags – unlimited quantities allowed;
- Weekly collection of bulky waste materials with regular trash collection.

Residents provide their own containers for placement of trash at the curb. The city provides the following types of recycling containers for residents to use. Residents may obtain multiple containers as needed.

- 20 gallon blue container for commingled containers;
- 14 gallon red container for paper materials.

The city’s residential recycling program is a dual stream program whereby commingled containers and paper materials are collected separately on alternating weeks. **Table 1** lists the materials accepted as part of the city’s recycling program:

Table 1. Materials Accepted in Scranton’s Recycling Program

Commingled Containers	Paper Materials
Glass Bottles and Jars	Newspaper
Aluminum and Steel Food and Beverage Containers	Magazines
Plastic Jars and Tubs	Catalogs/Phonebooks
	Office Paper
	Corrugated Cardboard

Table 2 provides the annual quantities of paper and commingled containers collected as part of the city’s residential curbside recycling program for the last six years. The total tonnage of recyclable materials collected curbside from city residents has remained consistent over this time-period at about 3,000 tons annually.

Table 2. Residential Recyclable Material Tonnages

Year	Paper (Tons)	Commingled Material (Tons)	TOTAL TONS
2012	1,519	1,429	2,948
2013	1,574	1,455	3,029
2014	1,509	1,485	2,994
2015	1,436	1,457	2,893
2016	1,523	1,492	3,015
2017	1,472	1,502	2,974
TOTAL	9,033	8,820	17,853

PAYT PROGRAM OPTIONS

PAYT programs commonly utilize variable rates to bill households for collection and disposal based on the amount of municipal solid waste they generate. The United States Environmental Protection Agency (US EPA) reported in 2006 that nearly 7,100 U.S. communities use PAYT

programs. In Pennsylvania alone, 253 PAYT communities were identified that represent 18 percent of the communities in the State².

The primary goals of a PAYT program typically include:

- Provide for more equitable allocation of disposal costs (i.e., those who dispose more, pay more);
- Reduce the quantity of solid waste requiring disposal either in a landfill or other disposal facility;
- Encourage behaviors that facilitate reduction in waste generation, and increase material reuse and recycling versus disposal.

The PAYT approach is similar to that used by private commercial haulers that service businesses and multi-family residences in the city. Private commercial haulers establish a fee schedule based on the size of the container provided and the frequency of collection. Business establishments that generate less, pay less for the overall collection and disposal services based on smaller container sizes and less frequent pickups, or pay more if they require larger containers and increased collections. Municipal PAYT programs typically are structured similarly in that residents are billed as a function of the container size (multi-cart system) or directly based on the amount of waste disposed (bag or sticker system or direct weighing systems on collection vehicles). Collection frequency is typically established for most municipal residential collection systems.

Benefits

PAYT programs have been successfully implemented in large communities, small communities and every size in between. Such programs adopt a user-pay principle similar to what local governments use to charge residents for water, electricity, and other services. These programs promote a myriad of important solid waste practices that improve the environment and public health including reducing waste, increasing recycling, organics diversion, and source reduction. Research has shown that PAYT programs reduce residential trash disposal by about 17 percent. Further analysis has shown that one third is attributed to increased recycling, one third to increased composting, and one third is source reduction or avoided waste generation³. PAYT provides a critical link between behavior and what people must pay to support that behavior.

Additional potential benefits of implementing a PAYT program include an equitable allocation of costs based on system usage, reduced solid waste disposal quantities and costs, and extension of the service life of the disposal facility. **Table 3** illustrates the range of potential diversion rates and disposal cost savings that could be achieved for the City of Scranton depending on the level of PAYT program success, assuming a maximum 15 percent diversion.

2 U.S. EPA Pay-As-You-Throw, <https://archive.epa.gov/wastes/conservation/tools/payt/web/html/06comm.html>.

3 Skumatz, L.; Freeman, J. (2006); PAYT in the US: 2006 Update and Analyses

Table 3. Potential Diversion and Disposal Cost Savings with PAYT Program Implementation

2017 Tons Landfilled	Diversion Scenarios	Avoided Disposal from PAYT (tons)				Annual Cost Savings*
		Source Reduction	Increased Recycling	Increased Organics Diversion	Total	
28,262	5%	471	471	471	1,413	\$66,764
	10%	942	942	942	2,826	\$133,529
	15%	1,413	1,413	1,413	4,239	\$200,293

*Assumes landfill tipping fee of \$47.25 per ton

In addition to avoided disposal costs, increased diversion of materials through the implementation of a PAYT program could impact the funding the city receives from Pennsylvania’s 904 Performance Grant Program. Since the grant amount awarded is based on the tonnage of recyclables diverted additional money could be made available.

Drawbacks

PAYT does have some potential drawbacks as well. These programs can require increased complexity of billing and collection system administration since not all residents are billed the same amount. PAYT also requires more diligence of collection workers at the curb to pay attention to the number and types of containers set out by residents. Increased illegal dumping is also a concern when PAYT programs are implemented; however, PAYT communities have generally not experienced this problem. The key to overcoming many of the drawbacks of a PAYT program is to implement a comprehensive public education and outreach program.

PAYT Approaches

PAYT programs can be categorized as volume or weight based. Volume based programs typically use special bags and tags/stickers, or variable container sizes to allocate costs for disposal. For bag and tag/sticker systems, residents are required to purchase specially supplied or marked bags that are set out for collection. The price of the bag or tag includes the unit cost of the bag or tag, the respective disposal cost of the waste, and in some cases, the waste’s collection costs. In many cases, collection costs, which are often fixed for cities, are paid for under a separate fee (i.e. taxes or a solid waste charge on the utility bill) to minimize risk to the city in recovering their fixed collection costs. Alternatively, volume based systems can use variable container sizes, where residents are billed for disposal depending on the size of the container (e.g., 32 gallon, 64 gallon, or 96 gallon, or combination thereof). In this system, a local government typically issues the containers after residents select which container size suits their needs.

Weight based programs rely on actual measurement of the weight of the solid waste collected at each residence. Weight based programs are considered the most equitable approach, because users pay for what they dispose based on actual measurements versus assumed weight categories and distributions as in the multiple cart approach. Weight based systems require automated collection trucks with on-board scale systems to weigh each cart and GPS locational or bar code systems to associate the weight reading with the residential unit.

Pricing

Pricing options include the following:

- **Full-unit pricing:** Users pay for all the garbage they want collected in advance by purchasing a tag, custom bag, or selected size container.
- **Partial-unit pricing:** The local authority or municipality decides on a maximum number of bags or containers of garbage (usually one or two), with collection paid for by an assessed fee. Additional bags or containers are available for purchase should the user exceed the permitted amount.

Benefits and Challenges of Different Systems

The benefits and challenges of the volumetric, weight-based, and hybrid PAYT approaches are summarized in **Table 4** through **Table 8**.

Table 4. Benefits and Challenges of a PAYT Bag Program

Benefits	Challenges
Compatible with the City's existing solid waste collection system	Greater revenue uncertainty, with revenue fluctuations based on bag sales
Relatively easy to understand	Additional labor and administrative expense to sell bags
Promotes a stronger incentive to reduce waste generation because fees are based on smaller waste increments	Customers may perceive bags as an inconvenience
Lower accounting and management cost as no billing system is needed	Bags are more expensive than stickers or tags
Typically, lower distribution, storage, and inventory costs than with carts	Can be incompatible with automated and semi-automated collection systems
Bags can be used for bulky waste, white goods, and other items by attaching bags to the item for collection	Bags are more susceptible to damage and tearing
Additional potential revenue possible through allowing advertising on the bags	Bags add to disposal volume
Relatively quick to implement	Bags are subject to overstuffing which causes tears, handling problems, and injury issues for collection staff

Table 5. Benefits and Challenges of a PAYT Tag/ Sticker Program

Benefits	Challenges
Compatible with the City's existing solid waste collection system	Greater revenue uncertainty, with revenue fluctuations based on tag/sticker sales

Table 5. Benefits and Challenges of a PAYT Tag/ Sticker Program

Benefits	Challenges
Easy to understand and less expensive to implement than bag or container programs	Additional labor and administrative expense to sell and distribute tags/stickers
Promote a stronger reduction incentive as fees are based on smaller waste increments	Customers may perceive tags/stickers as an inconvenience
Lower accounting and management cost as no billing system is needed	Tags/stickers are subject to weather impacts (e.g., adherence problems)
Typically, lower distribution, storage, and inventory cost than bags programs	With a choice of container size, clear limits and rules for disposal (i.e., size, weight) must be established and enforced
Customers can choose to tag/sticker their container of choice (i.e., bag or can), although permanence of stickers on containers would have to be demonstrated	Collections are potentially slowed by checking for tags/stickers and managing enforcement
Tags/stickers can be used to accommodate payment for bulky waste, white goods, etc. by attaching tag/sticker to the item for collection	Tags/stickers are susceptible to vandalism and theft.
Relatively quick to implement	Tags/stickers are not as noticeable as other PAYT methods

Table 6. Benefits and Challenges of PAYT Variable Container Program

Benefits	Challenges
Variable container approach generally easy to understand.	Less compatible with the City's current solid waste collection program
Program revenues are relatively stable and easier to forecast.	Higher implementation costs if providing containers/cans, although the City's current policy is for residents to purchase containers
Containers could be labeled, tagged, or installed with RFID chips for tracking, inventory, billing, and enforcement.	Less incentive to reduce waste disposal
Containers often have a more polished/professional look	Potential risk for revenue shortfall if assumptions on distribution of container sizes and associated weights are incorrect
	Billing and tracking systems are relatively more complex to manage various container sizes
	Storage space and inventory systems and infrastructure are necessary to manage containers
	Container programs do not transition as easily to manage bulky waste and white goods; need another system to manage those wastes

Table 6. Benefits and Challenges of PAYT Variable Container Program

Benefits	Challenges
	Customers may have difficulty selecting an appropriate subscription level
	Challenges with the number of containers a customer may use and set-out for collection
	Requires a certain degree of field auditing to verify that billing is consistent with the level of service being provided

Table 7. Benefits and Challenges of PAYT Weight Based Program

Benefits	Challenges
More equitable in that customers pay for what they dispose (weight-based)	Higher implementation costs associated with purchasing containers/carts and technology for weighing/billing needs (i.e. GPS or RFID)
Provides increased incentive to reduce, reuse, or recycle as much waste as possible	Billing and tracking systems would be more complex in order to manage the dynamic, real time monitoring of weights and physical locations
	Increased complexity of administration, including dispute resolution, integration of data, and resolution of inaccuracies in field collection data
	Increased vehicle maintenance costs for load cells and locational monitoring systems

Hybrid

There are both fixed and variable costs in solid waste management. Fixed costs include collection and administrative expenses that are the same no matter how much waste is generated. There are staff that manage the program and their salaries, benefits, and other compensation must be paid. Collection vehicles must make the same trips and routes throughout a community no matter how much waste is set out for collection. Disposal costs are typically variable depending on how much solid waste is collected and subsequently must be disposed.

In a hybrid PAYT program, different rate structures are blended together to make certain fixed program costs are covered no matter how much waste is produced (typically referred to as the base rate). Variable costs such as disposal fees are paid for by program elements that fluctuate depending on solid waste generation and include the number of bags or stickers sold (typically referred to as the unit rate). Communities that separate these fees to residents are designated as having a hybrid PAYT program. In many communities where a hybrid PAYT approach is used,

the base rate includes the costs of recyclable material and yard waste collection, transportation, and tipping and/or processing costs. This provides additional incentives for residents to reduce waste through recycling and composting since they are paying for the service through the base fee. More variable in these types of programs is if the base rate includes a defined number of containers or bags of refuse for disposal (blending of the full-unit and partial-unit pricing structures). **Table 8** summarizes the advantages and disadvantages of the PAYT hybrid program.

Table 8. Benefits and Challenges of PAYT Hybrid Program

Advantages	Disadvantages
Reduces revenue risk by obtaining fixed program costs through fixed base rate	Residents may not understand why they have to pay two fees for solid waste management (base rate and unit rate)
Facilitates transition from current city fixed fee system to a variable rate one	May be perceived as a reduction in service
Allows for flexibility and provides opportunity for residents to familiarize themselves with the program	Full costs of solid waste management are not clear to residents as the two costs
Allows time for the city to obtain data and plan future solid waste management program changes	

Currently, all costs of the city’s solid waste management program are paid for by the fixed annual fee for solid waste services assessed to all households in the city. This provides little incentive to encourage recycling and composting of organic materials since residents pay the same amount no matter how much trash they produce. If the city were to implement a hybrid PAYT system it would provide some stability to guarantee fixed costs are paid and would incentivize waste reduction, recycling, and composting by requiring residents to purchase bags or stickers for the disposal of the waste they generate. This is the model that the City of Wilkes Barre uses with their PAYT blue bag program that has been in operation for a number of years.

One way the City can do this is by assessing a base rate fee to households that pay for the City’s fixed costs for collection and administration. In addition, this fee should also pay for the costs of recyclable and yard waste collection and may include a designated number of bags or tagged containers of refuse.

PAYT Applicability to City

If the city were to consider implementing a PAYT program, a hybrid bag or tag/sticker program would likely be the most suitable for the following reasons:

- The use of specially marked bags or tags/stickers would be compatible with the city’s current solid waste system where residents use their own containers for the placement of solid waste. Bags or tags/stickers are relatively easy to implement and have lower costs. With the primary goal of the city to encourage more recycling, bags and tags/stickers provide increased incentives to reduce waste because bags or tags/stickers are typically based on smaller waste increments.

- Utilizing variable container sizes would be more challenging and costly to the city. Although residents may use containers for placement of waste, the varied size and design of containers would make it difficult to establish size restrictions and communicate with residents what is allowable under a PAYT program. Purchasing varied-sized carts or containers and distributing them to residents would be expensive. Containers also work best in automated or semi-automated collection systems, which the city does not currently utilize. The city would need to establish a new billing system for customers to account for the different sizes of containers and costs associated with each one. The system would need to be kept up-to-date further increasing accounting and management costs for the city.
- The use of a weight-based system would require the city to retrofit its vehicles with load cells and positional monitoring systems, purchase carts outfitted with radio frequency ID tags (RFID) weighing system, and establish a billing system to accommodate variable weight-based billing. This would result in increased costs, maintenance, and administrative complexity. On-board load cell technology for the relatively low-weight household containers is not perfected and can lead to misleading weight information. In addition, the accuracy of GPS data and the variability of container set out locations (e.g., not always in front of residence, or placed on opposite side of street for ease of collection), could result in erroneous data collection and billing challenges.

Program Structure and Rates

Should the city implement a hybrid PAYT program that includes both a per-household base fee plus a per-bag or sticker fee, the city will need to make decisions on whether the base rate should include “free” bags or containers of refuse, and if so, how many and what extra bags or containers should cost. The per-bag or per-container/sticker fee should include the cost of the bag or sticker, the cost of distributing the bags or stickers (including any royalty paid to local stores that sell bags or stickers on behalf of the city), and the portion of the overall solid waste system cost not covered by the base fee. **Table 9** provides two hybrid PAYT scenarios to illustrate to city officials how different prices and program options can be used to balance the need to generate revenue and make costs for solid waste services equitable among residents who use the service to varying degrees.

Table 9. Hybrid PAYT Scenarios

Scenario		Annual Household Base Fee	Bag or Sticker Fee	Estimated Annual Revenue
1	<p>Base Fee Includes 2 “Free” Bags/Week</p> <ul style="list-style-type: none"> Allows two 30-gallon bags or containers of waste for “free” Recycling and yard waste curbside collection is free Additional waste quantities must be in approved bags or have sticker affixed 	\$250	\$2.00 ¹	Base Rate: \$7,250,000 Bag Fee: \$754,000 Total: \$8,004,000
2	<p>Base Fee Includes No “Free” Waste</p> <ul style="list-style-type: none"> No “free” waste collected ALL waste must be in approved bags or have sticker affixed Recycling and yard waste curbside collection is free 	\$175	\$1.00 ²	Base Rate: \$5,075,000 Bag Fee: \$3,016,000 Total: \$8,091,000

¹ Assumes 25 percent of households purchase one additional bag/sticker per week

² Assumes 25 percent of households purchase 1 bag per week; 50 percent of households purchase 2 bags per week; and 25% of households purchase 3 bags per week

Note that revenue for Section 904 Recycling Performance Grants is not included in these scenarios. SCS understands that grant money the city receives goes to special accounts to pay for recycling program needs and would not be used to subsidize the refuse collection program.

Establishing Program Parameters

Establishing requirements for a hybrid PAYT program require the city to conduct some analysis on set out rates by residents. Understanding the set out rate is useful for the following reasons:

- Assessing the number of bags/containers that will be covered by the base fee.
- Gauging the number of households that will need to purchase bags or stickers under the PAYT program and how many bags or stickers will be needed to meet demand.
- Establishing the bag/sticker price so that disposal costs are covered by the bag/sticker fee.

Set out rates can be estimated by the having city refuse collection drivers make notes on how many bags or containers are in front of each household when the waste materials are collected. Refuse collection drivers will likely be able to identify which day(s) of the week or which neighborhoods have greater quantities of refuse set out for collection. If a PAYT program works correctly, it should reduce refuse set outs and increase recycling setouts.

PAYT Implementation Considerations

Most communities indicate that the first challenge to implementing PAYT was garnering support from elected officials and the second, but greatest challenge, was educating the public about the

PAYT program. To assist in public outreach and education, the City may wish to collaborate with local schools such as the University of Scranton or Lackawanna College to recruit college interns to help promote the program. Interns could be used to update social media and other communication tools used by the City to promote the program or follow city collection vehicles on garbage routes to tag or provide information to residents that are not participating correctly.

Other important considerations for the City include:

- Setup a call center or 311-city service number for residents to get answers to their questions, especially the first few months of the program.
- Make sure there is a program to educate new residents about PAYT that includes a number of different media (i.e. newsletters, social media, presentations, community displays, etc.).
- Give adequate time to implement PAYT. Consider a phased in approach. It may take time to fully implement and operate a PAYT program. The City may decide to collect all waste at the curb for a period of time before leaving materials that are not appropriately bagged or tagged.
- Include Homeowners Associations or private home developments from the beginning. If the City does not collect waste from these residents, contracts with private haulers may need to be amended to provide for PAYT.

PAYT EDUCATION

The single most important task to facilitate success of a PAYT program is education and outreach to residents. The simple adage of “educate early and often” should apply to inform residents early before the city begins implementing a PAYT program. People need time to process this change and think through what it means for them before such a program is rolled-out to the community. Although the characteristics and requirements of the new PAYT program will be familiar to city staff, they will not be for residents and there should be frequent communications about the new program and importance of participating correctly. The city would do best to use a variety of media to inform residents of the change, including:

Newspaper advertisements	Post cards	Website	Social media
Newsletters	Inserts in utility bills	Presentations	Community displays
Hotline	Door hangers	Mayor announcement	T.V./radio sound-bytes

Education and outreach initiatives can encompass the following areas:

- **Build Consensus** – Modifying the city’s existing solid waste program is likely to create resistance among residents. It is important that once the city decides to implement a PAYT program that residents should be informed of the decision and given the opportunity to ask questions and provide feedback on the best program for the community. This will help build consensus within the community and get early feedback on what characteristics of a PAYT program are of most interest to residents. The feedback and ideas obtained should be used as the foundation for designing the program. Questions and concerns about the program should be answered and thoroughly evaluated and researched. Answers to questions, research on concerns, and access to other information should be made available to the community to be transparent with residents about the development of the program. This can be done by establishing a special website to provide the latest updates on the program. The city may even wish to establish a committee made up of residents to advise the city as decisions are made on the development of the program.
- **Obtain Feedback** – Once key characteristics of the program have been established, the city can solicit feedback from residents on important considerations of the program. For example, should the city implement a bag or sticker program, education and outreach initiatives can be used to obtain feedback on the design or color of the bags or stickers used in the program. This will build rapport with residents and give them the opportunity to shape or influence the program that will continue to build support for the new program.
- **Provide Information** – Once all the PAYT program characteristics have been set, the city needs to communicate with residents about the program’s rationale and structure as well as how to participate. This information-sharing phase should begin at least six months prior to the roll out of the program, but the city may decide to start this process earlier. Information that should be communicated to residents include:
 - Why the city is implementing PAYT;
 - Types and costs of services provided, including services offered for “free”;
 - Limitations on waste set out for collection;
 - Fee amounts and means of collection;
 - Enforcement and penalties for noncompliance with new requirements.

The U.S. Environmental Protection Agency (EPA) has established a number of resources, including educational materials that the city may find helpful as they explore implementing a PAYT program in their community. This information is available on the EPA’s website at <https://archive.epa.gov/wastes/conservation/tools/payt/web/html/index.html>.

4 RECOMMENDATIONS

The following steps are recommended if the city decides to proceed further evaluating PAYT for solid waste management:

- **Dialogue with Residents** – The implementation of a PAYT program has the potential to change the way solid waste is managed in the city in a significant way. Such a change is likely to be met with opposition and skepticism, at least initially. If the city were to consider PAYT, it is recommended that the city hold informational meetings and discussions with residents to introduce the possibility of a program change and why it is being considered. The city should solicit feedback from residents on their initial thoughts and concerns about such a program. This could be done through electronic surveys.
- **Modification of City Ordinance** – The city must identify changes or additions to the city’s ordinance to address the requirements of a PAYT program. The ordinance would need to be amended to authorize the new system and specify language that sets the fees and the amount of refuse that households may set out for the base fee, and that additional refuse that exceeds the limit will not be collected without a specified bag or sticker.
- **Conduct Set Out Rate Study** – Understanding set out rates for solid waste and recyclable materials is important for designing a fair and effective PAYT program. This information will allow the city to decide what waste quantities (if any) should be included as part of the base rate for residents. Such a study can also help estimate the number of households that will need to purchase bags or stickers under a PAYT program and what price should be charged to residents for bags or stickers.
- **Further Evaluate PAYT Program Types** – This study serves as an important starting point in exploring whether or not PAYT can be an effective program. The city should conduct a more extensive study that evaluates each of the program types (i.e. containers, bags, tags/stickers, weight-based) in light of the city’s current solid waste management program and compatibility with the city’s long-term solid waste management plans.
- **Consider a Pilot PAYT Program** – An effective way to obtain valuable data on PAYT is to conduct a pilot project. This would involve selecting an existing route or neighborhood for a trial PAYT program. The pilot project should last at least six months and the city should obtain and assess data on waste and recyclable quantities set out for collection, set-out rates, recyclable material contamination levels, and bags or sticker sales throughout the pilot project. The amount of waste and recyclables generated in the selected pilot project area should also be tracked for some time prior to implementation of the pilot project to compare how waste and recyclable generated tonnages change under PAYT. Residents in the pilot project area should be solicited for feedback and ideas on how the program can be improved. Before the program is expanded, major issues or logistical problems in the pilot project area should be addressed.

- **Set Rates and Develop Program Structure** – The city would need to set the base rate and the unit rate for bags or stickers to be used in the city’s PAYT program. Determining if the program will include “free” waste as part of the base rate will be important for setting the rates. The city will need to develop a plan for the distribution of bags or stickers to be used as part of the program and work with local businesses and stores to stock the items. The city may wish to provide a select number of free bags or stickers to residents to ensure everyone can fully participate in the program when it is implemented.
- **Public Education and Outreach** - Implement public education and outreach program in advance of pilot and/or full program development, and during program implementation. This should include using media listed in the PAYT Education section of this report. A variety of educational media is recommended to facilitate communication with all resident demographics in the city.

5 CONCLUSION

Implementation of a PAYT program in the City of Scranton has the potential to reduce waste, increase recyclable material diversion, and provide for a more equitable cost structure for residents. However, implementation of a program will require significant and careful planning by the city and involvement of residents at all stages of the process. SCS recommends that should the city wish to further explore PAYT that the items in the “Recommendations” section be carried out. The results of these recommendations will provide the city with further clarification on whether or not PAYT is the appropriate next step for the city.