

**RECYCLING TECHNICAL ASSISTANCE
PROJECT #502
MUNICIPALITY OF MT. LEBANON
ALLEGHENY COUNTY**

**Feasibility of a Monetary Incentivized
Collection Program
within a
Tax Based Rate Structure**

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Purpose of the Project

The Municipality of Mt. Lebanon, PA is mandated by the Municipal Waste Planning, Recycling and Waste Reduction Act, Act 101 to provide residential curbside collection of recyclables and leaf waste. Commercial, institutional and government establishments are also required to separate certain materials for recycling, including leaf waste.

This project was prompted by desires expressed by a segment of the Mount Lebanon community to examine what alternative waste and recycling service offerings could complement or improve the current system. In addition, the municipal officials wished to evaluate the operational practices, methodologies, and equipment utilized within its jurisdiction to determine if greater efficiencies and/or cost reductions could be made available.

The primary focus of the study was to determine the feasibility of introducing some type of Pay As You Throw (PAYT) mechanism into the residential collection program. Evaluating the impact of shifting a system currently funded via the real estate tax base to one potentially reliant on direct user fee mechanisms was a major objective. Finally, the project was to compare whether Mount Lebanon should enter into a standalone collection contract or whether PAYT requirements and enhanced recycling collection methods could be incorporated into the local SHACOG bid specifications. General topic areas of current ordinances, which would require revision to reflect any new residential requirements and to provide stronger enforcement mechanisms, would also be identified.

Approach and Methodology

To initiate the project a series of discussions occurred between Nestor Resources, Inc. and Mr. Tom Kelly, Mt. Lebanon's Public Works Director. The talks covered a host of issues including but not limited to current recycling performance, collection contract issues, physical layout, demographics, financial constraints, and prevailing attitudes.

To gain a better understanding of local conditions, the consultant made independent field observations throughout the municipality in order to become familiar with routing productivity, logistical limitations and constraints, and an overall assessment of alternative collection methodologies that could realistically be implemented with the community.

Mt. Lebanon is part of the SHACOG. As such, the municipality participates in the joint waste and recycling collection contract. Nestor Resources conducted a review of the most current waste and recycling collection contract specifications purely from the perspective of Mt. Lebanon's needs and expectations.

The consultant met with the Mt. Lebanon Environmental Sustainability Advisory Board (ESAB) to present and explain a variety of PAYT rate structures. To expedite an understanding of the terms and options that would be included in the discussions, the consultant distributed to the ESAB copies of the *PAYT Primer for PA Communities*, developed by Nestor Resources, Inc. Similarly, copies were provided to the Public Works Director for distribution to municipal officials.

ESAB discussions focused on the committee's perceptions of current recycling performance and resident participation. Programs implemented in Western Pennsylvania communities were compared to Mt. Lebanon's system. Those with exceptional performance and resident participation/ acceptance were discussed along with the elements that made the programs successful. Alternatively, program factors that produced lesser results in other communities were also reviewed. Programs that included one or more PAYT components, including pay by the bag, volume based or variable rate systems were reviewed with the committee and the Public Works Director. For each option, the risks and benefits were examined, including: performance issues with the contractor; costs to the resident; incentives for recovery; public acceptance; and related issues.

Significant portions of the discussions targeted existing views and expectations within the municipality. Willingness to pay, political will, tolerance for change, and overall awareness were reviewed. Operational conditions were taken into consideration. Issues entering into the discussions included the overall geographic layout of the community, utility lines, traffic patterns, property covenants, housing design and space constraints.

Findings

Following are results of the investigative efforts that illustrate those factors that are key to local conditions and circumstances.

Physical Conditions

Mt. Lebanon was built upon the rolling grades and steep inclines typical in Western Pennsylvania communities. Streets are winding, sometimes narrow, and do not follow a square grid system. Traffic patterns can be demanding and the flow intense. Because the municipality peaked before the popularity of large suburban lots, residential areas have a higher ratio of housing density per square mile than current planned residential developments. Therefore, space per lot is at a premium. Significant amounts of streets are lined with low hanging clusters of wires and mature trees. All of these conditions in one way or another affect the methods and costs attributable to waste and recycling collection.

Collection Criteria

Mt. Lebanon is one of thirteen communities represented in the SHACOG residential waste and recycling collection contract. Contracted employees and equipment are utilized for residential curbside collection services. Residential waste collection occurs on a weekly basis, however recycling collection is on a bi-weekly schedule.

Glass, plastics (1-7) and bi-metals are commingled for curbside pick-up along with newsprint cardboard, junk mail, catalogues etc. This single stream collection system was introduced in the last collection contract. Prior to that, residents had access to commingled recycling of bottles, cans and jugs at the curb. However, paper and cardboard materials were taken to a drop-off site.

An unlimited volume of waste material can be placed at the curb for collection provided it is contained in bags, or cans that meet the contract criteria. Similar allowances exist for recycling, but individual containers must weigh less than fifty pounds and an official recycling sticker,

available from the municipality, must be affixed to each container. Bags and boxes are not considered proper receptacles for recyclable materials.

Funding

Although Mt. Lebanon residents technically pay for the collection because it is funded by the real estate tax base, the majority perceive it as a “free” municipal service. Because the municipality pays a monthly lump sum to the contractor, there is a lesser focus on the per unit cost than seen in communities where residents are billed directly. Certainly, the average Mt. Lebanon resident has no idea what the monthly per unit service charge is. Therefore, there is no direct correlation between cost and the amount of material disposed, recycled, or the frequency at which collection occurs - key components of a PAYT type program. The misperception that services are currently free complicates what is always a formidable challenge to assess when making changes in any program...willingness to pay.

Participation

Local residential participation in recycling falls within the average to good range when compared to other Western Pennsylvania municipalities. Although no exact count has ever been taken, a visual field observation supports the notion that more than 65% of homes place recyclables at the curb on any given scheduled collection day.

Performance

The amount of recyclables collected in Mt. Lebanon falls short of what would be expected in a municipality of this size and demographic composition. Two specific conditions contribute to the subpar performance.

The single stream system is still relatively misunderstood. Many residents are not fully aware or do not grasp the spectrum of materials that are now accepted for recycling in the program. Complicating the situation is the lack of official recycling bins, a stalwart symbol of most community programs. Although residents can transform any receptacle into an “official” recycling container by affixing a Mt. Lebanon label, because of a manual collection system, each container has weight restrictions. To recycle the full potential volume of single stream materials allowable in a two-week cycle requires multiple containers. Residents often find it to be a challenge to carry a waste and a recycling container to the curb, let alone multiple recycling containers. Consequently, in addition to poor comprehension of the program, without the convenience of a single recycling container with sufficient storage capacity and easy maneuverability to the curb, many materials that could be recycled end up being disposed.

Past Attempts at Rewards/Incentives

In 2011, the ESAB took the lead at initiating an intermunicipal recycling competition among many of the communities represented in the SHACOG collection contract. The idea was to reward the community that increased its recycling performance the most based on previous benchmarks. Such competitions have proven successful in other locales because they create a sense of peer pressure to recycle. The published results of the program are not available past

2011, and therefore it is unclear if the program was abandoned and if it attained the intended results. Direct monetary incentives such as PAYT have never been attempted in Mt. Lebanon, or in any of the other municipalities within SHACOG. These types of programs are being successfully implemented by several member municipalities in the North Hills COG of Allegheny County. Recycling rates in those communities exceed local and, in some cases, national norms.

Conclusions

The scenario presented in Mt. Lebanon is atypical for communities considering a shift to PAYT. Municipalities that directly pay for disposal are often prompted to initiate a PAYT program, because the cost of disposal exceeds the revenue generated through the tax base or direct user fees. By incentivizing recycling based on a sliding rate for waste disposed, the resident and the municipality can realize an immediate costs savings thru recycling by disposing less. In this case, Mt. Lebanon pays a flat fee regardless of the volume of material that is disposed or recycled. In addition, based on the proximity to excess landfill capacity in the Greater Pittsburgh area, the cost of disposal is minimal when compared to the fixed costs of collection and transportation. Therefore, a program designed around the true costs of disposal might not deliver the same rewards in Mt. Lebanon than in areas where landfill-tipping fees are high.

Although Mt. Lebanon residents pay for the cost of waste and recycling services as part of their overall real estate taxes, there is no line item identifying these costs to the taxpayer. For property owners,(a.k.a. voters) who do not currently see a separate bill or line item for waste and recycling collection services, a direct user fee program would likely be perceived as a new tax, regardless of whether or not it was some form of PAYT. This would be particularly true if a tax reduction, commensurate with the cost of service per unit, was not realized by each property owner. Unfortunately, rather than a mechanism to save, PAYT could be seen as an increased cost with a negative outcome to those that are already avid recyclers. This is far from the original intent of the ESAB and probably beyond the comfort level of most municipal officials. Other incentives might provide the needed boost without the unintended consequences.

If a user fee based program were well received, the municipality would have to develop a mechanism to bill each individual residence or the municipality would have to alter its portion of the SHACOG contract to require the hauler to do such billing.

Regardless of whether Mt. Lebanon sticks with its current program or moves to a direct user fee based billing system, greater obstructions exist, which prevent the municipality from attaining higher diversion rates. The first is poorly communicated recycling guidelines. The second is the lack of a properly sized and maneuverable container to facilitate single stream recycling. The issue of bi-weekly collection versus weekly collection would be negligible given a container with sufficient storage capacity.

Some physical constraints exist in Mt. Lebanon that could preclude the use of recycling containers typically used in single stream collection programs to attain optimal recycling performance and maintain route productivity. However, the overall prevailing conditions should allow for a compromise solution.

Any of the options, improved communications, monetary incentives, direct billing and/or larger recycling containers, would add to the current costs. Some would have a greater cost impact, while others would likely be more noticeable from a political and/or community relations standpoint.

Recommendations

Although Nestor Resources reviewed with the ESAB and the Public Works Director, the options covered in the *PAYT Primer for Pennsylvania Communities*, they are too numerous to cover in this report. For convenience, only the recommended course of action is provided.

Monetary Incentives

Two options to incentivize recycling through monetary rewards seem to be feasible for Mt. Lebanon.

Modified PAYT Pilot

Nestor Resources finds that a full shift to a direct user fee and/or PAYT rate structure would be complicated for Mt. Lebanon and politically charged in the current economy. If the municipality had any inclination to experiment with such a system, Nestor Resources believes that it could be done on a small scale. The municipality could continue to participate in the SHACOG contract. It could continue to pay the hauler directly and generate revenue via the real estate tax base. However, as a PAYT trial, the community could require that all waste placed at the curb for collection must be contained in a bag sold by the municipality for a nominal fee (less than if the tax base were not covering the true costs). Conversely, the municipality could sell tags that could be affixed around the neck of any bag the resident opted to use. This eliminates the need for a complex billing system and it tests the residents' willingness to pay. It would require enforcement by the hauler to ensure that unofficial or untagged bags would not be collected.

Consumer Rewards

As consumers, we have been trained to expect points, rebates and other similar rewards for our purchases or other behaviors desired by advertisers and marketers. A recent trend in the waste industry is to reward residents that participate in recycling programs in a similar fashion. RecycleBank is the most publicized and widely known system; however, other forms of this rewards program are now available from local contractors. The premise of the system is that people receive points for the tons of recyclables collected. The points are redeemable discount coupons for retail purchases. Older programs were based on individual efforts, but recent versions provide rewards on a collective tonnage per route system, which divides the points among the residents on the route who place a tagged recycling container at the curb. While not as effective as a PAYT program, these rewards programs are an acceptable choice where infrastructure or rate structure changes are prohibitive. The costs of such a program vary but typically range from \$0.50 to \$1.50 per home per month depending on the number of participating households. This option is probably cheaper than a new billing system and it is likely to have greater public acceptance.

Container Capacity

Whatever rate structure is implemented by Mt. Lebanon, the recycling program should provide standardized recycling containers. To optimize a single stream program these containers should be wheeled and with a storage capacity of no less than 65 gallons. Due to the

physical/geographic constraints, Mt. Lebanon cannot require fully automated collection throughout the entire municipality; however, semi-automated service seems feasible. Therefore, the carts should be designed with universal service capabilities by full and semi automated vehicles.

Procurement Concerns

Providing carts requires a significant capital outlay. To facilitate the purchase without major impact on a single fiscal budget, municipalities often finance the purchase through a cart manufacturer. Alternatively, an easier way is to include the provision, deployment, and maintenance of carts in the collection contract. At the end of the contract, the carts belong to the municipality. The next collection contract continues to require maintenance, repair, and replacement of carts. This is the simplest and least demanding way to make such a transition to some type of automation. Carts cost approximately \$50 each depending on the size and quality. This translates into a per unit cost of approximately \$0.75 -\$1.25 per unit per month depending on the length of the collection contract.

Outreach and Communication

It goes without saying that Mt. Lebanon must enhance its recycling education. Collectively, residents and businesses are not fully informed of the mandate to recycle or of the array of recycling opportunities made available to assist them in complying. In addition, confusion prevails regarding materials accepted, preparation and collection requirements.

A multi media approach is recommended. Social media should be included, provided the information is timely and refreshed on a frequent basis. The web site needs to be updated and kept current. The municipality has received additional technical assistance to accomplish this task, which is not part of the scope of work in this project.

Because the ESAB is a small committee, it is difficult to gauge if the group represents a broad cross-section of the community. Focus groups, public forums, door-to-door interviews, and online surveys are useful in introducing new concepts and approaches and measuring public sentiment.

Outcome

If Mt. Lebanon implements one or more of the recommendations provided in this study an increase in diversion is inevitable. When launched as an integrated campaign, the end results could exceed expectations.