

## **Volume-based Fees for Residential Solid Waste Collection** a.k.a.

### **Pay As You Throw**

#### **Introduction**

Typically municipalities and other local jurisdictions provide curbside collection of solid waste. Often, these services include collection of household garbage, recyclables and yardtrash. Costs of these services are recouped through utility fees, direct billing, non-ad valorem assessments, or a combination of these payment plans. Historically, these fees have been imposed on a per unit basis, regardless of the volume of waste generated by the unit.

There are a number of advantages realized when using a flat rate per unit. Calculating the fee per unit is simple. Billing is straightforward. Administrative overhead is low. Very little enforcement of customer compliance is required.

There are two stark disadvantages. The first disadvantage is inherent inequity. A family of six, producing 96 gallons of waste per week pays the same as a retired couple producing 20 gallons a week. An environmentally conscience family of four that composts food waste, pays attention to packaging issues when making purchases and recycles as much as possible pays the same disposal rate as another family of four that ignores those practices. Pay as You Throw (PAYT) resolves this disparity by developing a fee structure based on the volume of waste generated.

The second disadvantage is a flat rate provides little incentive to reduce waste and recycle more. Jurisdictions that implement PAYT always experience a decrease in waste generation and a dramatic increase in recycling rates, even in communities that already enjoy a strong recycling ethic.

#### **How does PAYT work?**

There are several options for implementing PAYT. For each option, recycling is offered at a reduced rate or at no charge.

#### Pay Per Bag

Specially colored or marked garbage bags are made available to residents at government offices or through retail outlets. Residents are required to purchase the bags. Disposal costs are included in the price of the bags. A "bag" program can be labor intensive when rear-loaded packer collection vehicles are used. Knuckle boom trucks with open tops can be used to load the bags. These type trucks are not recommended because of litter, odor, and stormwater contamination issues. The "bag" option is not efficient for systems that utilize semi-automated or automated collection vehicles designed to lift garbage carts.

### Adhesive Tags

Adhesive "tags" are distributed to residents much like the bag program. Residents affix tags to their own bags. This option has the same issues associated with a "bag" program. Tags occupy a lot less space at distribution points. Adhesive tags can be easily stolen once placed at the curb.

Bag or Tag options are inexpensive to implement, have low overhead cost associated with them and require little code enforcement activity. These options are favorable to many cities that utilize manual labor or knuckle boom trucks to load collection vehicles.

### Pay by the Pound

This system requires collection vehicles equipped with automated collection arms. A single sized garbage cart is distributed to residences. The cart is weighed each time it is lifted by the automated collection arm. Scales on the collection arm are calibrated to deduct the tare weight of the cart. A bar code is affixed to the cart and read by the collection arm to facilitate billing. This technology is somewhat new. Scales on automated collection arms have proven to be less than 100% reliable. Consistent and accurate weights are a challenge. The fact that carts can be relocated from one residence to another presents additional billing problems. Administrative overhead with this system is high. This option requires utility type billing.

### Pay by the Volume

Various size garbage carts, such as 20 gallon, 35 gallon, 65 gallon and 96 gallon carts are distributed to residences. A normal size cart for a family of four might be 65 gallons. The fee for collection and disposal is based on the size of the cart. Fees can be collected through non ad-valorem assessments or monthly billings. Residents are allowed to change cart size once for free. A service fee is charged for additional cart size changes. Specially colored or marked bags can be purchased for those occasions when more than the normal amount of waste might be generated. This system works well with automated or semi-automated collection vehicles.

There are a couple of issues that must be addressed with this system. Residents will seek to have the smallest cart possible. To achieve that end, some residents will overstuff the cart to the point it cannot be emptied. Some may place bags beside or on top of the cart. These issues are addressed initially by leaving placards on the cart, describing corrective actions that are needed. Repeated offenses require some kind of enforcement action. Administrative overhead with this system is moderate to high, depending upon how stringent the enforcement of standards will be. Some jurisdictions choose to incorporate standards into their local Code and use code enforcement officers to enforce the standards.

**Public education**

Regardless of which option is chosen, a strong public education campaign will be required to successfully launch a PAYT program. The public education campaign should begin at least six months before scheduled implementation and continue at a scaled-back pace throughout the life of the program.

**Which option is best for Leon County?**

Because of the existing curbside collection method in unincorporated Leon County, a volume based fee structure with various sized garbage carts is the most viable option to pursue. The rest of this paper discusses the issues and ramifications associated with a volume based cart system.

## Implementing PAYT in Unincorporated Leon County

### Background

Curbside collection is provided on a subscription basis through an exclusive franchise with Waste Management, Inc (WMI). The service includes once per week collection of garbage, once per week recycling and once per week yardtrash collection. There are no limits on the amounts of waste that customers can put at the curb. There are about 23,000 households currently being served by WMI. Subscribers are billed quarterly for the cost of collection. The cost of disposal is paid directly by the County and is somewhat recouped through the non ad-valorem solid waste assessment. Non subscribers take their garbage and recycling to one of the five Rural Waste Service Centers (RWSC) located throughout the county. Approximately 10,000 households use the RWSCs. Some WMI subscribers also utilize the drop-off centers. The cost of operating the RWSCs, including disposal fees, is approximately \$1 million a year. The operation of the centers is funded with unincorporated general revenue dollars.

Each single family unit is assessed \$40 per year for disposal whether or not they subscribe with WMI. It is estimated that on average, each residence generates 1.47 tons of waste per year. Based on the average, the actual cost for disposal is about \$58 per household.

### What is the best approach?

A cost effective and operationally efficient approach for implementing a PAYT system requires county-wide mandatory collection. There are a number of significant advantages and some disadvantages associated with requiring all single family units in the unincorporated area to participate in the program.

### Advantages

- The basic infrastructure cost of the system is shared equally by all single family residences.
- The larger the number of households participating in the system, the smaller the cost per unit. It is anticipated that the cost per unit could be reduced as much as 15%, depending upon the billing method.
- A reduction in greenhouse gas emissions will be realized.
- An increase in conservation of natural resources will be realized.
- Illegal dumping will be reduced. Illegal dumping remains a significant problem in this community.
- The cost of operating the Rural Waste Service Centers can be eliminated.

Disadvantages

- Some citizens will feel that their right to manage their own waste collection has been unfairly taken away and they will vehemently object.
- Some citizens will see this step as another government intrusion into their lives.
- Much of the unincorporated area is rural in nature. Many residents have long, narrow private drives and will be opposed to having large garbage collection vehicles access their roads because of the damage that will occur.
- Some residents garner social value in utilization of the Rural Waste Service Centers.

**Is there an approach that implements PAYT and retains the RWSCs?**

Pay as you throw could be implemented in the more urban areas only by imposing mandatory collection in the Urban Services Area, the Urban Fringe, and those more densely populated subdivisions in the rural/ag area. This approach would enjoy some of the advantages of the county-wide mandatory system, without the benefit of eliminating the cost to operate the RWSCs.

**If the mandatory area was comprised of only the Urban Services Area, the Urban Fringe and densely populated subdivisions, could the Rural Waste Service Centers operate on a volume based system?**

Yes, citizens utilizing the RWSCs would pay a base amount for the cost of the infrastructure plus an amount for each unit of waste discarded. There would be a charge for each bag of garbage, each item of bulky waste and each load of yardtrash.

The following options for collecting variable rate fees from RWSC customers are designed to avoid requiring center attendants to collect money.

1. Recoup the cost of the base amount to operate the RWSCs through a non ad-valorem assessment on those residences outside the mandatory area.
2. A variable rate can be implemented by selling specially colored or marked bags at retail outlets. Only these bags would be accepted at the centers. Sell coupons or vouchers for bulky items and yardtrash.
3. Sell RWSC user cards loaded with pre-paid disposal amounts. The cards could be sold at the Tax Collector's Office, other County offices or retail locations. The center attendant would be equipped with a card reader that would register the number of bags and debit the card accordingly. The card could also be debited for bulky items and yardtrash. The user cards could be reloaded using the owner's debit card, credit card or cash at the outlets where the cards were purchased.

Recycling and limited household hazardous waste drop-off would be free.

The advantage of this approach is that the full cost of the RWSCs would be borne solely by those who use the centers. The disadvantage is a significant increase in illegal dumping can be expected if this full cost is imposed on the RWSC customers.

**Can variable rates be implemented without mandatory collection?**

A PAYT program cannot be successful in a subscription based collection system because of the ability for customers to cancel subscription service at any time and utilize the RWSCs. From EPA's web site on PAYT: "To establish a PAYT program, a solid waste agency typically needs the authority to establish an ordinance mandating that residents use the waste collection service.

**Developing a variable rate**

There are four components that should be considered in developing a variable rate.

1. A base cost associated with providing the collection service. This cost includes all administrative overhead and would be distributed equally across all users of the system
2. A collection cost associated with the volume of waste collected. In practice, there is little incremental difference in the collection cost between a 96 gallon cart and a 65 gallon cart or even a 35 gallon cart.
3. A disposal cost associated with the volume of waste generated.
4. A cost for future disposal capacity based on volume of waste generated.

Factors 3 and 4 constitute the greatest margin for variable rates.

Other considerations

- Yardtrash can remain unlimited or be restricted to certain volumes per week. Limiting the amount of yardtrash that can be placed at the curb each week is in keeping with the PAYT approach and encourages homeowners to reuse yard debris on site.
- Recycling should be offered as a free service, an additional incentive to reduce the amount of garbage generated.

**Billing considerations**

The most cost effective billing approach is to recover all costs associated with waste collection and disposal with a non ad-valorem solid waste assessment based upon the size of the garbage cart issued to the single family unit. The percentage of delinquencies is much lower than a monthly or quarterly billing system and the administrative overhead is less. The current franchise agreement with Waste Management contains consideration of a county-wide mandatory collection system and offers a discount of 15% per residence if fees are collected by the County through non ad-valorem assessments. In this scenario, the County would pay the franchise hauler a flat rate per unit for each unit collected.

If the franchisee were to collect the fees, increased delinquency is to be expected and rates will need to be increased to cover those losses. The current franchise agreement will need to be amended to include a volume based rate structure. An independent market analysis could validate a reasonable rate.

A bifurcated billing structure currently exists and could continue in a volume based program. The franchisee would bill for collection and the County would assess for disposal and future disposal capacity based upon the size garbage cart issued to the single-family unit. Specially colored garbage bags could still be purchased and used for those events that generate unusual disposal amounts.

**What about the City of Tallahassee?**

There would certainly be community wide parity if PAYT were implemented within both the incorporated and unincorporated county. If the City and County were to concurrently implement a volume based system, a combined public education campaign is envisioned. Should the County Commission wish to consider PAYT, it is recommended that the staff be authorized to discuss the issue with the City.