Pay as You Throw Recommendation

Evaluation Process

After significant research and public consultation, Administration utilized an objective decision making process to develop the most appropriate recommendation for an expanded solid waste utility, also called pay as you throw (PAYT), in Saskatoon. Choosing by Advantages (CBA) is a systematic method for evaluating the value proposition and importance of the advantages each alternative design element provides to an overall program.

Recommended Service

Administration recommends expanding the solid waste utility by introducing variable cart sizes and pricing, paid through utility fees. Residents will have a choice of cart sizes (e.g. 130 L, 240 L & 360 L) for year round pick up which would then be charged on the City of Saskatoon utility bill every month. Variable fees can then be charged based on quantity (variable size) of garbage, to give the citizen control of their costs and provides an incentive for reducing or diverting more waste from the landfill. How other waste management services appear on the utility bill will be discussed in a future report.

Program Considerations

Key program considerations of the recommended service include the following:

Waste Diversion Potential

It is anticipated that a variable cart waste utility will be easily understood by residents and therefore, adopted as a way to control costs by reducing the amount of waste they generate. Residents can gauge their cart size requirements and save on costs if their household produces less waste and/or uses organics and recycling. Citizens pay directly for the services they use, resulting in increased awareness and responsibility for the quantity and types of waste they are generating. Research shows that PAYT models result in increased waste diversion.

Variable cart size has been evaluated to be an intuitive waste utility method for citizens (least complex). There is some customizability and control over cart size, which is easier to understand and comply with, compared to variable price options based on frequency of collections or schedule.

Affordability

This option allows for cost differentials to be optimized during the rate setting process. Cost differentials between different container sizes provide the levers for incentivizing waste diversion. Research suggests that a 50-80% cost differential between container sizes is recommended.

Future changes to the waste utility may result in a higher overall cost to the average residential property due to the transfer of funding contributions from commercial to residential properties, even after the cost of waste management is removed from property taxes. However, accountability is improved when the user fee is clear to those required to pay for the service. Increased transparency is achieved as residents have access to information on how the price or charge is set and how expenditures are made.

Fees would show up on the City of Saskatoon Utility Bill each month. Utility fees are independent of property value, they are based on waste generated, which allows lower income residents to control their fees through a reduction in the amount and type of waste generated. Further study into affordability considerations is ongoing.

Implementation

The recommended option can be readily integrated with current waste and recycling cart services. Initial implementation will require existing carts to be swapped for different (smaller) sizes with customers.

This option fits with current waste management capabilities (i.e. ability to procure what is needed, ability to utilize existing resources, timing considerations, etc.). A service review will be required to update the current billing model to set up utility fees, consolidate existing information, and set up confirmation systems for verifying service (such as ensuring current RFID tags ‘speak’ to the billing software). However, this is a significantly lower effort than creating a variable schedule or establishing systems to support charging per tip. Each of these require significant changes to routes and schedules, as well as a more robust use of RFID tracking technology in order to ensure accurate billing.

The proposed cart sizes will work with existing fleet equipment after modifications to the collection arms. Surveys and cart audits can be used to help determine needs for different cart sizes.

In order to ensure success, communications and engagement will be required to guide implementation and to help residents understand and adopt the changes.

Climate Change Implications

Greenhouse gas (GHG) emission reduction is directly correlated with the source reduction/diversion potential of waste and the success of the program.

A waste utility service model will contribute positively to climate change mitigation and align with the City’s Performance Target for greenhouse gas reduction.

Evaluation of Costs in Decision Making

For the PAYT decisions, the costs were evaluated for each option. A key point to note is that when the cost models were created, the focus was on looking for cost differences between the different alternatives. The PAYT decisions also considered price ranges offing in other North American jurisdictions for similar programs. Variable cart size was evaluated as the lowest cost implication for the PAYT decision. Non-selected options had higher costs.

How Considerations Responds to Value Statements

This option supports the Strategic Goal of Environmental Leadership, including the four-year priority to promote and facilitate city-wide organics and recycling programs, and the long-term strategy to eliminate the need for a new landfill. It also supports the Strategic Goal of Asset and Financial Sustainability by reducing reliance on residential property taxes and setting long term sustainable rates.

The recommended program option aligns with the values adopted by the City for making changes to Waste Management.

- Environmental – GHG emissions: Greenhouse gas emissions will be reduced by the introduction of a PAYT option. This billing method creates an incentive for waste diversion through smaller cart sizing with implications to greenhouse gas reduction. The program that captures the greatest reduction in waste, contributes most positively to climate change mitigation.
- Environmental – Impact on landfill life: By removing material from the landfill each year, a waste utility program is a significant step in approaching our waste diversion targets and extending the life of the landfill. The specific impact on landfill life will be reported in future reporting.
- Environmental – Projected impact on groundwater: Reduction of waste and specifically organics, are anticipated to have long term positive impacts.
- Environmental – Waste diversion rate and waste generation per capita: The current 2017 waste diversion rate is 22.8%. Research indicates that introducing PAYT can have a significant positive benefit by both reducing waste generation and increasing diversion.
- Financial – Cost per user and cost per tonne: Pricing incentives in the form of variable user rates can support higher levels of waste diversion and benefits equity and accountability. Detailed financial information (rates) will be forthcoming in future reports.
- Financial – Capital cost to implement, operating cost to implement: Implementation of a new program will have up-front costs, and resource plans will need to be developed. Capital and replacement costs of assets such as carts, trucks and other equipment, need to be considered and weighed against other alternatives such as partnerships with commercial industry when making decisions.
- Financial – Susceptibility to inflation and price shocks (market vulnerability): A waste utility program ensures the long-term financial stability of waste management

services by ensuring ongoing funding is available. Market vulnerability considerations, along with opportunities for mitigation will be outlined in future reports where rates are considered.

- Social – Alignment with environmental regulations: Facilities will continue to meet Ministry of Environment standards for regulatory and environmental compliance.
- Social – Public image/perception: The expanded waste utility will help increase public awareness of waste costs and help increase user accountability (Cost awareness influencing waste reduction). Citizens expressed support for a PAYT system as demonstrated in the results of community surveying (random and statistically representative) and engagement (voluntary). Equity is achieved when those who use public services pay for them.
- Social – Risk to employee and public safety: Increased risk of slips/trips and collisions were evaluated based on implementing adding collection vehicles on the road and deploying carts in the field. The implementation plan will ensure all safety risks are identified and minimized/mitigated.
- Social – Regionalization potential: No analysis of regional implications has yet been completed.
- Social – Responsiveness to affordability challenges (ability to pay): A separate report will address ability to pay considerations in more detail.
- Social – Time, travel, complexity (measures of convenience): Community engagement activities identify that PAYT and variable size cart options are attractive to residents.

How the Program Responds to Themes Identified through Community Engagement

A small majority of residents who participated in engagement activities demonstrated support for a PAYT approach. A vocal minority (about 30%) expressed strong opposition, while a third group were uncertain or had further questions.

Supportive residents were interested in PAYT for three main reasons: the diversion incentive, opportunity for individual cost control, and higher standard of accountability for all residents.

We did not specifically ask residents what kind of variable pricing they preferred. Nevertheless, many residents told us they were excited about choosing a cart size that was sized to their needs. Others suggested that they preferred charging by frequency or a combined approach. There were several residents who preferred charging by weight. Administration notes this is not an option available to us in Canada.

Residents (both supportive and opposed) were highly concerned about neighbours and others dumping garbage in their bins and in the alleys, ditches, and surrounding areas. The second highest concern was that a utility would be “double-dipping” or a “tax grab” on top of property taxes. Other frequently cited concerns included: affordability, fairness (larger families, medical waste, secondary suites, tenants), variable waste volumes, contamination risk, and preference for waste to be funded through property taxes.

Overview of Research

Research conducted by the US Environmental Protection Agency (2013) of waste programs in Canada and the United States, found that waste utility models may improve waste diversion rates by between 6% and 40% (depending on the recovery rate for recyclables in the community prior to implementing the pricing model). In addition, communities reported a reduction in the amount of waste disposed of between 8% and 38%. A discussion paper prepared by the Administration was presented in the Standing Policy Committee on Environment, Utilities and Corporate Services meeting on June 12, 2017, in the Expanding the Waste Services Utility – Key Considerations report (Attachment 1). Research indicated that those jurisdictions that implemented fees (especially variable rate fees) for solid waste collection, generally had much higher diversion rates.

Waste utility programs in other Canadian cities were presented in the Standing Policy Committee on Environment, Utilities and Corporate Services meeting on August 15, 2017, in the Waste Utility Design Options report (Attachment 1). Municipalities which apply utility charges based on variable cart size for waste services include the City of Toronto, City of Burnaby and the City of Lethbridge.

Options to the Recommendation

Alternative variable PAYT options (i.e. variable schedule, variable tips, hybrid)

Administration studied the implications of introducing pricing variability based on:

- Maintaining an established garbage collection schedule and allowing residents to choose when to place their cart out, charging only for the tips made.
- Allowing residents to choose their collection frequency annually, and developing garbage collection schedules based on these choices.
- Hybrid combinations including variable cart sizes and variable collection frequencies.

Barriers to the variable schedule approach include a number of complications regarding schedule (verifying collection days), operational constraints (complicated routing) and the complexity involved for residents (who may not be able to predict their future waste collection needs). There are significant bylaw enforcement and fraud (free tips) risks. A second service employee in the truck (navigator) may be needed to address compliance and help with changing routes (as residents change their frequency selections).

Barriers to a variable tip approach include operational constraints (much higher RFID verification and audit trail procedures required, as well as challenges associated with back lane collection) and the complex routing (inefficiency of trucks that must be designed to collect at every location but may encounter less than 50% of the carts on any given collection day). The risk to customer satisfaction was also noted and this

approach has the highest potential for incentivizing illegal dumping into carts owned by others and the highest risk that collections activities and billing might be misaligned.

A fixed rate program

Administration also analyzed the introduction of a fixed rate whereby waste management costs are made more visible to residents through their utility bill, and revenues are more stable and predictable. The largest barrier to a fixed rate system is in regards to diversion potential, it has no additional incentive for waste diversion in comparison with other options. This option is advantageous in simplicity to current operations and residents.