

Funding Models and Contamination Risk

Administration has provided various options on how waste management, including a new organics program, could be funded. These options include funding through a utility fee, through property taxes, or a combination where one program (for example organics) is funded through property taxes, and other programs (for example recycling and garbage) are funded through a utility fee. Council has requested that additional information about the impacts that these different funding models, especially as they may affect contamination, might have on future programs.

Utility Funding vs Property Tax Funding

The costs for disposing municipal solid waste could be funded through a utility and implemented either as a flat rate, or based on a variable-pricing model, commonly referred to as Pay-As-You-Throw (PAYT). Variable fees arise when users are charged a rate based on how much waste they present for collection to the municipality. For the purposes of the proposed program, the amount of waste presented is determined by the size of cart selected. A utility funding approach has been recommended based on the potential to reduce waste and increase diversion. According to Canada's Ecofiscal commission report, this model has been shown to decrease household waste disposal by 10-50%, mostly through increased use of recycling and composting¹.

Concerns have been raised that using a visible utility fee for garbage may result in increased contamination of whichever waste stream is perceived to cost less. This perception was originally brought up as a concern for a potential impact on recycling by Loraas Recycle; they continue to have this concern. Contamination rates for recycling are increasing, from a running average contamination rate of 4% for the first three years of the program, to 6% in 2016, and 10% in 2018.

Administration looked for linkages between funding models (PAYT, flat utility fees, and property tax funded) and were unable to find any obvious correlation between how waste services are paid for and the contamination rate. The City of Calgary did a scan of eight North American municipalities currently using variable utility fees based on cart sizes in their waste management program for a committee report in June 2018². The scan found that with the implementation of PAYT, one municipality (Toronto) saw an increase in recycling contamination, which was speculated to be a result of residents placing excess garbage into their recycling carts. The report also mentioned the Region of Peel's program having seen an increase in contamination; however, this program is funded through property taxes, and does not have variable pricing (and therefore is technically not PAYT). A recent study by York University has suggested that rising contamination rates in recycling can be linked to switching from a bag-based system to a cart system³, which the Region of Peel had done at the same time as implementing variable waste cart sizes.

¹ <https://ecofiscal.ca/wp-content/uploads/2018/10/Ecofiscal-Commission-Solid-Waste-Report-Cutting-the-Waste-October-16-2018.pdf>

² <https://pub-calgary.escribemeetings.com/filestream.ashx?DocumentId=51686>

³ <https://resource-recycling.com/recycling/wp-content/uploads/sites/3/2018/06/York-University-Beyond-the-Box-Study-final-1.pdf>

Through the Administration’s own research conducted on municipalities having organics programs, it was found that each program is fairly unique, as are the Key Performance Indicators (KPIs) that are being reported. Due to the individuality of every municipality studied, it is challenging to use this research to estimate risks associated with Saskatoon’s own unique program proposal. Importantly, only one municipality studied (Burnaby) split their waste management costs between property taxes and a utility rate. All other municipalities utilize one funding approach for all services. The following information should therefore be received with this context in mind. A summary including those centres having co-mingled organics programs (similar to what is expected in Saskatoon) is included in the table below.

Municipality	PAYT?	Organics Collection Frequency, Winter	Waste Collection Frequency	Bag Type	Accepts Diapers?	Accepts Pet Waste?	Diversion Rate	Participation rate	Capture Rate	Contamination Rate
St. Albert, AB	Yes	Bi-weekly	Bi-Weekly	Compostable	No	No	67%			
Burnaby, BC	Yes	Weekly	Bi-Weekly	Kraft	No	No	59%	41%		3%
Port Moody, BC	Yes	Weekly	Bi-Weekly	Kraft	No	No	75%			3%
Richmond, BC	Yes	Weekly	Bi-Weekly	Kraft	No	No	74%	54%	77%	3%
Surrey, BC	Yes	Weekly	Bi-Weekly	Kraft	No	No	50%			
Vancouver, BC	Yes	Weekly	Bi-Weekly	Kraft	No	No	62%			3%
Alameda County, CA, USA	Yes	Weekly	Weekly	Compostable	No	No		37%		
Portland, OR, USA	Yes	Weekly	Bi-Weekly	Compostable	No	No	60%	78%	35%	
King County, WA, USA	Yes	Weekly	Weekly	Compostable	No	No	56%	72%	48%	2%
Seattle, WA, USA	Yes	Weekly	Weekly	Compostable	No	No	59%			
Average PAYT							62%	56%	51%	3%
Calgary, AB	No	Bi-weekly	Bi-Weekly	Compostable	No	Yes	46%	75%		5%
Halifax, NS	No	Bi-weekly	Bi-Weekly	Kraft	No	No	52%	70%	56%	7%
Guelph, ON	No	Weekly	Bi-Weekly	Compostable	No	Yes	61%		56%	
Ottawa, ON	No	Weekly	Bi-Weekly	Kraft	No	Yes	44%	50%	41%	2%
York Region, ON	No	Weekly	Bi-Weekly	Compostable	Yes	Yes	63%			17%
Lloydminster, SK/AB	No	Bi-Weekly	Weekly	Biodegradable	No	Yes			76%	13%
Average Flat Fee or Mill Rate							53%	65%	57%	9%

Addressing and Mitigating the Risk of Contamination

Anecdotal evidence and other secondary research conducted by Administration does not show any clear findings that contamination risk goes up if the waste diversion programs are funded by property taxes while waste is funded by a utility. The concern for increased contamination stems from the hypothesis that residents may choose a smaller cart for financial reasons, but would then put excess garbage in the green or blue carts. However, if residents are encouraged and educated to use recycling and organics carts correctly, excess waste is likely to be minimal to non-existent, even with choosing the smallest black cart. According to the 2017 waste awareness and behaviour survey, 62% of residents state their black garbage cart to be less than ¾ full during bi-weekly service⁴. City usage data indicates that at the current level of service, even without an organics program in place, over half of the residents could already downsize their cart. The added green cart will provide further capacity for residents and their organic waste, which has been reported to be 58% of what is in the black cart (by weight)⁵.

⁴ https://www.saskatoon.ca/sites/default/files/documents/corporate-performance/environmental-corporate-initiatives/waste-minimization/city_of_saskatoon_2017_waste_survey.pdf

⁵ https://www.saskatoon.ca/sites/default/files/documents/corporate-performance/environmental-corporate-initiatives/waste-minimization/waste_diversion_opportunities_report_-_final.pdf

While a smaller cart size may be appropriate for most collections, there may be occasions where a household generates more waste than normal. Most PAYT programs have a program to deal with excess waste – usually extra bag tags that can be purchased for collections alongside the cart service. Part of the next steps for redesigning Saskatoon's curbside residential waste management programs is to consider a bulky items and excess waste program (for instance an extra bag collection program). Recommendations for these complementary programs will be brought forward in 2019; further research on operational logistics are required to determine costs and feasibility.

If residents are indeed more inclined to put waste in whichever cart is perceived to cost less, the method by which costs for waste programs are presented to residents may also impact contamination. If all waste programs are embedded into one fee, the cost of each individual program is less visible, and residents will feel empowered to put waste in the correct cart, instead of whatever is perceived to be the least expensive. Having an embedded fee also delivers a clear message that recycling, organics, and garbage are intrinsically part of what the city provides for curbside waste management services, instead of individual programs that can be opted out of.

The Organics Processing RFP addresses the financial risk of increased processing costs due to contamination through its embedded contract that stipulates an acceptable contamination rate threshold by which processing costs do not change. Meaning, the price for processing will remain as negotiated provided the contamination rate remains below the agreed-upon threshold. Proponents can negotiate this threshold; the Administration will ensure the rate is conservative and fair when compared to experienced contamination rates of programs that accept similar materials (i.e. no diapers or biodegradable/plastic bags).