



REPORT FOR ACTION WITH CONFIDENTIAL ATTACHMENT

State of Toronto's Blue Bin Recycling Program

Date: March 22, 2018

To: Public Works and Infrastructure Committee

From: General Manager, Solid Waste Management Services

Wards: All

REASON FOR CONFIDENTIAL INFORMATION

This report includes commercial or financial information that belongs to the City and has potential monetary impacts.

In addition, it involves a position, plan, procedure, criteria or instruction to be applied to any negotiation carried on or to be carried on by or on behalf of the City or local Board.

SUMMARY

The City of Toronto operates one of the most sophisticated integrated waste management systems in North America. It manages materials from single family and multi-residential homes as well as some non-residential customers. A component of this system includes the Blue Bin Recycling Program. This program accepts an extensive list of printed-paper and packaging products to meet Provincial Regulations and support the City's efforts to drive waste diversion from landfill. The City currently manages approximately 200,000 tonnes of recyclables annually through its Blue Bin Recycling Program. It is one of the largest and most successful municipal recycling programs in North America.

The purpose of this Report is to provide an update on the evolution of the Blue Bin Recycling Program. This includes an overview of new challenges regarding contamination (garbage in the recycling), developments in international markets, as well as an update on the move towards full extended producer responsibility.

Contamination in the Blue Bin Recycling Program has been increasing over time, despite best efforts from the Solid Waste Management Services Division to mitigate against this. A more recent compounding factor is that the People's Republic of China - one of the world's largest importers of recyclable materials - has imposed bans and restrictions on the acceptance of recyclable materials. This has resulted in additional

pressure to mitigate contamination, as well as explore alternate markets for processed materials.

The ongoing challenges with contamination in the Blue Bin Recycling Program, along with the new international market conditions, could potentially result in an approximately \$9.2 million pressure to the Solid Waste Management Services Division by the end of 2018, should things continue as they are today.

In addition to the above challenges with regards to contamination and international markets, staff from Solid Waste Management Services are actively involved in negotiations for an amended Blue Box Program Plan. This process is being led by Stewardship Ontario and the Resource Productivity and Recovery Authority. The purpose of these negotiations is to secure a process for the transition of Ontario's recycling programs to a full extended producer responsibility model. As of the writing of this Report, there is no clear timeline for transitioning the Blue Box Recycling Program to a full extended producer responsibility model, introducing uncertainty on how best to address some of these issues over the short and long term.

While there is a confluence of risk factors, insofar as ongoing contamination, challenges with international markets, and delays in moving towards an extended producer responsibility model, there are a number of mitigating actions available as well. These include additional monitoring and enforcement of contaminated recycling bins, the exploration of alternate markets for recyclable material, and continued participation in Blue Box Transition negotiations.

The recommendations listed below ask for delegated authority for the General Manager, Solid Waste Management Services, in regards to negotiating and amending agreements with regards to processing Blue Bin materials. In addition, staff are seeking authority for the ability to conduct product/material tests to determine whether or not new materials can be added to the Blue Bin Recycling Program or alternative processing options that may be available. Providing these delegated authorities will allow Solid Waste Management Services to continue to address contamination, react quickly to changing market dynamics, and provide a strong platform from which to engage in negotiations with Stewardship Ontario and private service providers on the transition to an extended producer responsibility model.

RECOMMENDATIONS

The General Manager, Solid Waste Management Services, recommends that:

1. City Council authorize the General Manager, Solid Waste Management Services and/or designate to negotiate and enter into any amending agreements (including but not limited to amending agreements to receive external funding) necessary for the City's continued waste diversion operations throughout the transition period under the Waste Diversion Transition Act, 2016, based in part on the recommendations on pricing set out in Confidential Attachment 1, and on terms satisfactory to the General Manager, Solid Waste Management Services and each in a form satisfactory to the City Solicitor.

2. City Council authorize the General Manager, Solid Waste Management Services and/or designate to negotiate and enter into any agreements or amending agreements necessary to test the feasibility of delivering new or enhanced waste diversion initiatives and/or processing contaminated recycling based in part on the recommendations on pricing set out in Confidential Attachment 1, and on terms satisfactory to the General Manager, Solid Waste Management Services, the Chief Financial Officer, and each in a form satisfactory to the City Solicitor.
3. City Council adopt the recommendations in Confidential Attachment 1 attached to this report.
4. City Council direct that the recommendations in Confidential Attachment 1 to this report remain confidential as they relate to commercial or financial information that belongs to the City and has potential monetary value.

FINANCIAL IMPACT

The financial impact from managing increased contamination in the Blue Bin Recycling Program in 2018 is estimated at approximately \$4 million assuming current conditions and forecasts. The financial impact of decreasing revenues from the sale of recyclables is estimated at approximately \$5.2 million assuming current conditions and forecasts. Combined, these additional costs and lost revenue results in an estimated \$9.2 million pressure in 2018 if the current conditions persist. Any budget variances will be adjusted and reported through an in-year budget variance report as additional information becomes available. It is also important to note that under the current extended producer responsibility program in Ontario, up to 50 per cent of the eligible cost could be funded by producers (manufacturers, brand owners, and retailers). Unfortunately there will be a 2 year delay in payment to receive this funding.

The Acting Chief Financial Officer has reviewed this report and agrees with the financial impact information.

DECISION HISTORY

At its meeting of September 19, 2017, the Public Works and Infrastructure Committee adopted item PW23.6, entitled "Municipal Principles to Guide Transition of the Blue Bin Program". This report committed staff to update Committee and City Council regarding progress toward developing an amended Blue Box Program Plan under the *Waste Diversion Transition Act, 2016*; the final amended Blue Box Program Plan submitted to the Minister of Environment and Climate Change for the transition period under the *Waste Diversion Transition Act, 2016*; and when the Province issues regulations or policy statements focusing on designated material and new diversion Program Plans under the *Resource Recovery and Circular Economy Act, 2016*.

The Public Works and Infrastructure Committee Decision document can be viewed at: <http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2017.PW23.6>

At Its meeting of July 4, 5, 6, and 7, 2017, City Council adopted Item PW22.4 entitled "New Provincial Waste Management Framework Legislation - Bill 151: Waste-Free Ontario Act, 2016 - Update" and requested that the General Manager, Solid Waste Management Services report back to the September 19, 2017, Public Works and Infrastructure Committee, on a list of proposed principles that will guide the discussions and negotiations between the City and producers of designated materials collected in the City's waste diversion programs. City Council authorized the General Manager, Solid Waste Management Services to renew and extend until 2022, the authorization for the General Manager, Solid Waste Management Services and/or designate to negotiate and enter into any agreements (including but not limited to agreements to receive external funding) necessary for the City's continued waste diversion operations throughout the transition period under the *Waste Diversion Transition Act, 2016*, based in part on the updated pricing information presented in the Confidential Attachment 1 to the report (May 24, 2017) from the General Manager, Solid Waste Management Services, on terms satisfactory to the General Manager, Solid Waste Management Services and each in a form satisfactory to the City Solicitor and in accordance with the Confidential Attachment 1.

The City Council Decision document can be viewed at:

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2017.PW22.4>

At its meeting on April 26, 27, and 28, 2017, City Council considered item PW20.4 entitled "Result of Negotiations with Canada Fibers Limited and Amendments to Contracts No. 47017448 and No. 47018726 for Single Stream Recyclable Materials Processing Services and Request to enter into a Contract for Auditor Oversight Services" and adopted the following:

1. City Council adopt the confidential recommendations in Confidential Attachment 1 to the report (March 29, 2017) from the City Solicitor, the General Manager, Solid Waste Management Services, the Chief Purchasing Officer and Director of Purchasing and Materials Management and the Deputy City Manager and Chief Financial Officer.

The Decision document can be viewed at:

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2017.PW20.4>

At its meeting of July 12, 13, 14, and 15, 2016, City Council adopted Item PW14.2 entitled "Final Long Term Waste Management Strategy", and adopted the recommended options and implementation plan, as presented in Attachment 1 to the report (June 2, 2016) from the General Manager, Solid Waste Management Services.

The City Council Decision document can be viewed at:

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2016.PW14.2>

At its meeting held on June 10, 11, and 12, 2015, City Council adopted Item PW5.4 entitled "Authority to Negotiate and Enter into Agreements for Waste Diversion Processing Capacity, Initiatives and Funding". City Council authorize the General Manager, Solid Waste Management Services, to negotiate and enter into any and all agreements and amending agreements necessary to initiate, continue and/or enhance

arrangements for the receipt of external funding for waste diversion operations with respect to waste products and waste streams indicated in Chapters 841, 844 and 846 of the Code including all schedules thereto, each such agreement being for a term of years not to surpass December 31, 2020 on terms and conditions satisfactory to the General Manager, Solid Waste Management Services, Deputy City Manager and Chief Financial Officer and in a form satisfactory to the City Solicitor.

The City Council Decision can be viewed at:

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2015.PW5.4>

COMMENTS

ISSUE BACKGROUND

Overview of Challenges for the Blue Bin Recycling Program

Contamination in Toronto's Blue Bin Recycling Program

The City of Toronto's Blue Bin Recycling Program has evolved over a number of years with regards to the expansion of accepted recyclable materials. This expansion was necessitated because of the introduction of new types of packaging and product materials, the creation of new recyclable markets, legislative requirements and many other factors. More importantly, the expansion of recyclable materials in the Blue Bin Recycling Program ensures less material ultimately ends up in landfill and is consistent with the City's waste diversion targets.

Since inception, Solid Waste Management Services has always aimed to reduce contamination in the Blue Bin Recycling Program. This was done through education, enforcement, and the general promotion of more recycling friendly habits. Contamination occurs when garbage or organic material finds its way into the City's Blue Bin recycling stream. Contamination in the Blue Bin Recycling Program has increased over time due to a number of factors, including confusion regarding proper waste disposal practices as new materials are introduced into the market (sometimes with conflicting messaging), differences between municipalities and what products they accept in their recycling stream, problematic packaging such as multilayered plastics, and a lack of awareness of the implications of improper disposal of non-recyclable items.

Common contaminants found in the Blue Bin are primarily organic wastes, garbage and oversized materials. Other contaminants include textiles, material in black plastic garbage bags and black plastic, and items such as hot beverage containers and single-serve coffee pods.

Waste Audit results indicate that contamination in the Blue Bin Recycling Program has been increasing year over year since 2013, at both single family and multi-residential locations. In fact, approximately 25% of all the material placed in the Blue Bin in 2017, was non-recyclable (i.e.: contamination). This number is trending higher for 2018, and at current forecasts may increase beyond 27% by year-end. As the contamination rate

surpasses 27%, the payment schedule in the City's contract with Canada Fibers Ltd. changes, and could cost the City an additional \$4 million in processing fees in 2018.

It is also important to note that the definition of contamination is directly tied to the market in which recyclable materials are being sent. Therefore, in some cases, contamination is rising in the City, not because residents are doing a worse job at sorting their recyclables, but because the markets are demanding better quality materials. What was acceptable last year in the Blue Bin Recycling Program (e.g. a piece of paper with a coffee stain) is no longer acceptable at market due to stricter quality requirements.

Stricter Quality Requirements in International Recycling Markets

In July 2017, the Ministry of Environmental Protection of the People's Republic of China (China) notified the World Trade Organization of its intent to ban the import of 24 types of wastes and impose strict contamination limits on other materials. More recently, in November 2017, China proposed an allowable limit of 0.5% contamination for most recyclables that are not named specifically in the ban. A standard of 0.5% contamination for recovered materials is not an economically feasible threshold without significant process and infrastructure changes, thereby resulting in both increased processing costs and a reduction in revenues from processed material.

Many North American and European municipalities have been challenged by this decision and the rapidly changing market for recyclable material. In regards to Toronto, Canada Fibers Ltd. purchases paper fiber from the City at a price that is linked to a North American Recovered Paper Price Index. This index price is directly impacted by China's decision to severely restrict incoming recyclable material. Along with these restrictions, the current level of contamination in the Blue Bin Recycling Program mentioned before, results in a confluence of factors that result in added financial pressures.

The following Table illustrates the reduction in pricing received from the four most affected materials from January 2017 to 2018, and the potential revenue loss associated with the price per tonne decrease.

Table 1: Change in Unit Price Per Tonne and Associated Revenue Loss

Material	Change in Unit Price (per tonne) for January 2017 to 2018	Potential Revenue Loss
Mixed Paper*	-53%	\$(4.2) million
Old Corrugated Cardboard* at Material Recovery Facility	-13%	\$(0.7) million
Polycoat**	-65%	\$(0.17) million

Material	Change in Unit Price (per tonne) for January 2017 to 2018	Potential Revenue Loss
Film Plastic**	-80%	\$(0.10) million
Total		\$(5.2) million

* Materials marketed by the City's contractor.

** Materials marketed by the City.

In an effort to mitigate the impacts of China's decision, the Solid Waste Association of North America and many other waste industry associations, trade organizations, and the federal government have submitted comments on the new restrictions to China and the World Trade Organization. These submissions ask that China delay implementation of the restrictions, they seek clarification on contamination standards, and offer technical assistance on waste and recycling-related matters. Despite these submissions, the recyclables ban came into effect January 1, 2018, and the new import restrictions came into effect on March 1, 2018.

During the summer of 2017, the City's contractor, Canada Fibers Ltd., shut down their facility for a two-week period to install additional sorting equipment to help mitigate contamination and increase the quality of paper bales from materials recovered through the City's Blue Bin Recycling Program. The new equipment has improved the overall quality of processed paper fibers and has allowed Canada Fibers Ltd. to create a marketable product. However, as the paper fiber market continues to react to the new restrictions from China, and the resulting domestic implications, this issue will continue to evolve.

Finally, in addition to infrastructure and process upgrades designed to attempt to meet new Chinese recycling restrictions, Canadian municipalities are also searching for new buyers for paper and plastic to keep recyclables out of landfills. While the recovery and marketing of paper fiber materials from Toronto's Blue Bin Recycling Program is currently the responsibility of Canada Fibers Ltd, the City does sell non-paper fiber materials, such as polycoat/aseptic containers and film plastic, directly to markets. Whereas the City often sold these products to China, staff are now actively seeking out new markets to try and ensure these materials stay out of landfill.

Seeking delegated authority for the General Manager, Solid Waste Management Services, to amend processing contracts, provides a necessary next step to adapt quickly to the situation in China, and its impact on global recycling markets.

Delays in Adopting an Extended Producer Responsibility Model

As reported to City Council in September 2017, the Association of Municipalities of Ontario, Municipal Waste Association, Regional Public Works Commissioners of Ontario and the City of Toronto formed the Municipal Resource Recovery and Research Collaborative (the Collaborative) in February 2017. The Collaborative was established to advocate for a smooth and timely transition to full producer responsibility for paper

products and packaging (i.e. Blue Bin recycling materials) and to ensure key municipal priorities are protected. This group was responsible for developing a joint letter with Stewardship Ontario, outlining principles to guide the transition of the Blue Box program to a new program under the *Resource Recovery and Circular Economy Act, 2016*. A letter delineating this accord was submitted to the Minister of Environment and Climate Change (the Minister) on July 7, 2017. The Minister subsequently issued a Program Request Letter on August 14, 2017, requesting that Stewardship Ontario and the Resource Productivity and Recovery Authority (the Authority) consult on and develop an amended Blue Box Program Plan (the Amended Plan) based on these shared principles.

The Minister's stated expectation in his letter was that this proposal would outline the first phase for the transition for the Blue Box under the *Waste Diversion Transition Act, 2016*, and would set the stage for a second phase of transition that will result in individual producer responsibility under the *Resource Recovery and Circular Economy Act, 2016*. The Minister indicated that:

"[it] is in the public interest that the proposal for an amended plan will ensure a seamless transition of the Blue Box program, specifically that it will not negatively affect Ontarians' experience with and access to Blue Box Services, incorporate clear rules to support residents participation (e.g. standardized materials and services), and improve program performance ... It is also critical that the proposal for an amended plan will provide for continuous improvement of environmental outcomes. This would be achieved by expanding and harmonizing the list of materials in the existing Blue Box Program that are accepted from Ontario residents ... and developing methods to support waste reduction."

The Minister's Program Request Letter provided further detailed guidelines for developing the proposal and set out specific requirements to be included in the Amended Plan. The Minister's Program Request Letter asked that a proposed Amended Plan be presented for his consideration on or before February 15, 2018.

Solid Waste Management Services staff have actively participated in all consultation sessions held by Stewardship Ontario and the Authority, and have collaborated, to the extent possible, in the development of an Amended Plan. However, as of February 15, 2018, Stewardship Ontario and the Authority have determined that more time is needed to address the comments received on the draft amended Blue Box Program Plan. Stewardship Ontario and the Authority sent independent updates out to stakeholders on February 15, 2018, indicating that the parties are committed to engaging in a collaborative process to develop an Amended Plan that is consistent with the Minister's direction.

This delay in advancing towards a full extended producer responsibility model increases the need for the City to protect its interests and requirements with regards to the sale of recyclable materials. Accordingly, recommendations No. 1 and 2 provide the required delegated authority to amend existing processing contracts and grant new authorities to test new materials for incorporation in the Blue Bin.

Combined Impacts from Contamination and International Markets

The combined financial impacts from increased contamination and the decrease in revenue from the sale of recyclables to China, is currently estimated at \$9.2 million in 2018 if the current conditions persist. If left unmitigated, this would represent an approximate 3% required increase to the Solid Waste Management Services' Rate Budget just to address this pressure alone. This is further compounded by the fact that delays in moving towards an extended producer responsibility model result in the City bearing the majority of the risks of these market dynamics.

Overview of Options to Mitigate Risk with the Blue Bin Recycling Program

Reduce Contamination

The Long Term Waste Management Strategy (Waste Strategy) adopted by City Council in July 2016, includes recommendations regarding monitoring, ongoing education and engagement with residents for existing programs, and reviews of services and By-laws to improve system performance. The Waste Strategy also included recommendations on staffing to support programs related to reducing the contamination rate.

A key tool in reducing contamination is the ongoing education of proper waste disposal techniques. Solid Waste Management Services offers a selection of educational resources in a variety of accessible media. Examples include Blue Bin recycling and Green Bin organics guides published in 18 different languages, annual recycling calendars, posters, brochures and bin stickers. An example of this is the City's "Waste Wizard," an online tool that allows users to search over 2,000 different waste products and provides information on appropriate disposal techniques.

Moreover, since the introduction of the Blue Bin Recycling Program in Toronto, there have been numerous public education campaigns and outreach initiatives to educate residents on what items do, and do not, go in the Blue Bin. These public education efforts are ongoing and are updated when new materials are added to the Blue Bin Recycling Program or to target specific unwanted items that contaminate the recycling stream. In 2016, in response to increasing contamination in the Blue Bin Recycling Program, Solid Waste Management Services embarked on a large-scale campaign titled "Recycle Right" that focused on problematic items such as textiles and food, and highlighted the consequences of contamination. This multi-faceted campaign included TV ads (in multiple languages), movie theatre ads, newspaper ads (in multiple languages), transit shelters, social media, embedded video ads, news interviews, a dedicated URL (toronto.ca/recycleright) and custom web content.

Another key tool in reducing contamination is increasing monitoring and enforcement related activities. A good example of this occurred in 2016, when Solid Waste Management Services staff implemented proactive inspections at all multi-residential customers with front-end collection. Letters were sent to owners and managers of multi-residential buildings notifying them that recycling bins would be monitored for excessive contamination. If excessive contamination was found, staff provided various educational material to encourage proper recycling behavior, and the contaminated Bins are collected as Garbage. In 2017, approximately 24,000 site visits to multi-residential locations were completed, of which roughly 16% were found to have contaminated Blue Bins. Another possible solution is to segregate perpetual sources of contamination from

standard recycling sources through operational modifications, thereby reducing the chances of cross-contamination.

In addition to enforcement and monitoring at multi-residential locations, in 2017, Solid Waste Management Services further expanded enhanced monitoring and enforcement efforts through a pilot program for Single Family homes. Staff visually inspected curbside Blue Bins on collection day to identify excessive contamination. When excessive contamination in residential Blue Bins is observed, the bin is tagged with a notice, moved back from the curb, and not collected. The notice provides instructions on how to remove the contaminated items and additional educational material is provided. A follow up visit is conducted on the next collection day (two weeks later) to verify that the contamination has been removed. In 2017, all Single Family homes were visited once during Blue Bin collection (approximately 460,000 addresses), of which roughly 3% had contaminated Blue Bins. However, upon further investigation, it was observed that much of the contamination was buried deeper in the bin, with contamination estimated to be closer to 25%. Some addresses that were visited a second time showed significant improvement after a refusal to collect and as a result, this pilot program for Single Family homes will continue through 2018.

Despite the efforts of Solid Waste Management Services to engage with and educate residents and customers on proper participation in waste diversion programs, contamination in the Blue Bin Recycling Program remains a persistent issue. Staff are considering additional opportunities to recover costs associated with operating waste diversion programs. Future reports to Committee or City Council will address available options for cost recovery of new materials added to the City's waste diversion programs should this next step be required.

Exploring Additional/Alternative Recycling Markets and Contracts

In addition to reducing contamination, Solid Waste Management Services Staff are also looking at various options regarding the market for recyclables. For instance, the ability to enter into longer term contracts with processors and buyers of recyclable material may help mitigate against the recent Chinese restrictions. Longer term contracts provide more stability to processors and purchasers of recyclable material, insofar as they are able to create their own economies of scale.

While we currently have a number of longer term contracts for materials that are directly affected by the new Chinese restrictions, it is anticipated that the market for these materials will remain depressed beyond the expiry of these contracts. This means that regardless of any mitigating options taken, the City will eventually experience revenue losses as these markets will remain in a high-supply / low-demand environment, thus allowing processors and buyers of recyclable materials to be very selective in regards to the recyclable material they accept.

In the meantime, Solid Waste Management Services staff will continue to explore and reach out to markets for the affected products as our current contracts expire. There are a handful of local companies with whom we remain in close contact with, and as new companies appear we will expand our outreach. Fortunately, many of our plastic

materials remain localized and are not yet directly affected, however as mentioned before, we do expect to see lower prices going forward.

Overall Impacts to the Blue Bin Recycling Program

As indicated above, there is no further information available on the timelines for transitioning the City towards a full extended producer responsibility model where 100% of the cost of recycling will be borne by the Producers. Currently, the City has two recycling processing contracts with Canada Fibers Ltd. that will expire in 2021 and 2022, inclusive of option years. In the absence of clear information on transition timelines, the City must take steps to ensure that processing capacity needs are met to continue to deliver uninterrupted Blue Bin recycling services to its residents and ratepayers. In addition, the City faces challenges from ongoing contamination and the recent recycling restrictions from China, all of which increase the City's risk in managing the Blue Bin Recycling Program and ability to receive revenue from sale of recyclables.

Next Steps

To manage the risk of global recycling markets and uncertainty around timelines for the transition to a full extended producer responsibility model, staff are seeking authority, as outlined in Recommendation No. 1, to secure cost-competitive services and maintain the uninterrupted delivery of the City's Blue Bin Recycling Program and sale of recyclable materials.

Staff are also recommending the authorization to negotiate agreements to test processing of waste materials to recover additional recyclables in Recommendation No. 2, to further reduce risks associated with managing increased contamination in the Blue Bin recycling stream.

Confidential Attachment 1 contains commercially confidential pricing information related to Recommendation No. 1 and 2.

The Recommendations proposed in this Report provide Solid Waste Management Services the flexibility to amend/renew processing contracts in an effort to address ongoing contamination and provide the necessary flexibility to evaluate new processing alternatives and alternative material markets. Finally, the recommendations provide a strong platform from which to continue negotiations with Stewardship Ontario, ensuring the interests of municipalities and taxpayers are protected, until the transition to an extended producer responsibility occurs.

Should circumstances continue to degrade, requiring additional mitigation measures, staff will report back to Committee and City Council.

CONTACT

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SIGNATURE

Jim McKay
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Solid Waste Management Services

ATTACHMENTS

Confidential Attachment 1 - This attachment provides confidential pricing information related to Recommendations 1 and 2 of this Report.