

Waste & Recycling Services Collection Service Review – Option Analysis

20 March 2015

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1.0 INTRODUCTION

In 2013, Waste & Recycling Services (WRS) commissioned CH2M HILL to undertake a review of WRS' residential collection services and to provide input on alternative service delivery models that could include participation from the private sector.

The review involved a comparison of collection service delivery models in other municipalities. CH2M HILL recognized that waste and recycling services involve many different service components and how they are provided. Details of these varied elements were summarized for Calgary and nine peer municipalities including: Edmonton, Halifax, Ottawa, Peel Region, San Francisco, Toronto, Vancouver, Victoria, and Winnipeg. The service method, frequencies and types of materials managed, vary significantly from community to community.

The key findings in the CH2M HILL report (UCS2014-0262 [Waste & Recycling Services Collection Service Delivery Review](#)) include:

- CH2M HILL does not have a particular recommendation about whether The City of Calgary should remain with public sector collection or change to private sector collection. Both public and private sector collection models can perform well depending on how they are managed and implemented.
- In the long-run, cost savings from switching to private sector collection is less certain, experience in other jurisdictions has found initial savings can be difficult to sustain over many years.
- If The City wants to move toward some type of private sector residential collection, CH2M HILL recommends that it use a mixed service rather than going completely to private sector service delivery.
- The City should avoid having multiple entities deliver services to the same customer. Having each customer served by only one collector will ensure sole accountability for service.

In this report, WRS completed further analysis on two service delivery options that were outlined in the CH2M HILL report. The first option is called "mixed service" whereby 1/3 of the city is serviced by a private contractor and 2/3 serviced by The City. The second option is a continuation of the current service with the entire city being collected by The City.

This analysis included:

- An overview of the current Waste & Recycling Services' delivery model;
- The customer service experience;
- Evaluation of enabling services;
- Other Municipal Experiences; and
- Financial analysis, including local market conditions and ongoing contract management costs.

2.0 SERVICE DELIVERY OPTIONS

In order to develop recommendations on alternative service delivery for WRS' single-family, residential collection services, two primary options were considered:

- Option 1 – Mixed Service: Contracting residential black, blue and green cart collection in one geographical area of the city. WRS would provide service to the remainder of the city. *This service delivery option is in keeping with advice of CH2M HILL referred to as a mixed service model;* and
- Option 2 – Public Residential Collection Service: The public sector service delivery model includes The City providing residential black, blue and green cart collection.

The following service standards are applicable to both options:

- Customer service conducted by The City via 311.
- Customer Care & Billing by The City (via Enmax).
- Collection of the black, blue and green carts (weekly blue and green cart collection and every other week black cart collection) by one provider in each geographical area.
- Collected materials, garbage, recycling and residential organics would be directed to The City's waste management facilities, contracted Materials Recovery Facility and contracted Shepard Organics Composting Facility.

These two options ensure that all residential customers receive all of their collection services from a single service provider.

In both cases, WRS will continue to provide the education and communication for the black and blue carts; and the implementation of the green cart. The cost of this has been incorporated into WRS' budget.

2.1 Option 1: Mixed Service

In the mixed service model, 1/3 of the city is serviced by a private contractor and 2/3 serviced by The City.

To analyse this service delivery model, the following assumptions were made:

- A private contractor provide: black, blue and green cart service for 1/3 of WRS' current residential base, approximately 110,000 households.
- All services (black, blue and green) would be collected by a single contractor.
- The remaining 2/3 of the city would be collected by WRS.
- A minimum contract term of six years, with two one year extension options.
- WRS would not enter in to a Managed Competition process for this work as there needs to be a clear signal of The City's intent on pursuing a private sector service provider.

As noted by CH2M HILL, and through a number of discussions with other Canadian Municipalities who have had significant experience in developing and utilizing private sector

service providers; considerable effort in contract development and contractor management would be necessary to ensure the success of this alternative. Additionally it was noted, this option represents a scope of work that should be attractive to a variety of contractors to bid on the work.

2.2 Option 2: Public Residential Collection Service

In a public sector service model, The City would continue to provide residential collection service to the entire city.

This service delivery model would have WRS:

- Deliver city-wide collection of the black, blue and green carts
 - Weekly blue and green cart collection and
 - Every other week black cart collection.

3.0 OVERVIEW OF CURRENT SERVICE DELIVERY MODEL

In order to develop an assessment of the two options, it is important to provide a brief description and key service attributes of the programs that currently serve the residents of Calgary.

3.1 Black Cart Garbage Collection

Black cart, automated garbage collection was rolled out in 2010 and completed in 2011. The service consists of weekly black cart automated collection and excess bags of garbage that are placed beside the cart for collection. The city-wide conversion to automated garbage collection resulted in a reduction of 66 full time positions over the two year implementation.

CH2M HILL identified that Calgary was only one of two municipalities surveyed that allowed unlimited excess garbage to be placed outside the black cart for collection and did not assess any additional fee. Where municipalities do allow a tolerance for extra bags, residents must apply official stickers or tags that must be purchased. These are referred to as “tag-a-bag” systems. Allowing residents to place additional garbage for collection with no specified limits, and no additional charge, remains in effect currently in Calgary.

Residents responded positively to automated, cart-based garbage collection, indicating that their communities were cleaner because the waste was mostly contained for storage between collection days and the collection process itself resulted in cleaner streets and alleys on collection days. They also observed that the system represented a safer means of collection for staff.

3.2 Blue Cart Program

Blue Cart recycling collection services were implemented city-wide in Calgary in 2009. Residents were provided a blue cart that allowed for a broader range of materials that required no sorting, referred to as ‘single-stream’ recycling.

The introduction of the Blue Cart residential recycling program represented the first user fee model for financing a single-family collection program in Calgary. All aspects, including the cost and maintenance of the carts, collection vehicles and service staff, and processing and marketing are covered under a monthly fee through the residents' monthly utility bill. The fee also accounts for the revenue achieved from the sale of the materials.

In 2012, efficiencies in the blue cart program saw rates to residents reduced from \$8.75 in 2011 to \$7.10 in 2012. Impacts of growth are absorbed as new residents pay the user fee when they begin receiving blue cart service.

3.3 Green Cart Program

Increasingly, citizens recognize the environmental imperatives of shifting from what was simply "garbage" collection to broader environmental management systems where materials are recognized as valuable resources that can be separated and re-processed.

In 2012, WRS designed and successfully implemented a pilot program to allow residents in four communities to separate their household and yard organics for composting through the Green Cart Program.

Residents in these communities were able to reduce garbage volumes by an additional 40 per cent with the Green Cart Program. Importantly, from the outset, they were successful in managing a shift from weekly to once every other week collection of their black cart.

3.5 PRIVATE SECTOR SERVICES IN CALGARY

A broad range of waste management services are provided by the private sector in Calgary. In some cases, WRS has direct, contractual relationships and, in other circumstances, WRS counts on the private sector to supply their services directly to a very broad set of customers throughout the community.

Direct contractual relationships include:

- WRS utilizes contractors to supply almost all of its heavy equipment needs for the development and operation of its landfills. This involves a variety of types of specialized, heavy equipment and is provided through both short term and long term (multi-year) contract mechanisms.
- Processing and marketing of blue cart and Community Recycling Depot recyclable materials performed through a multi-year contract.
- Organics and Biosolids Composting Facility will be delivered through The City's first Public/Private/Partnership (P3) agreement involving the design, construction and operation of the composting facility.

The delivery of all of the various material stewardship programs is performed by private sector collectors and processors. These include:

- Paint processing and recycling;

- Electronics collection and recycling;
- Tire collection and processing;
- Household Hazardous Waste processing and recycling; and
- Beverage container collection and processing.

WRS has shaped key strategic diversion strategies based on the direct involvement of private sector service providers including:

- Construction and Demolition material management and reprocessing;
- Multi-Family recycling collection and processing; and
- Industrial/Commercial/Institutional collection and recycling.

4.0 CUSTOMER SERVICE

Delivering high quality service is key to the success of The City of Calgary's waste management program. Providing consistent, reliable and responsive services are the hallmarks that will fundamentally determine the value that residents place on their waste management services. WRS provides service to over 310,000 customers 52 weeks of the year for two service elements—black cart garbage collection and blue cart recyclables collection.

There are a number of important service attributes that shape Calgary's service levels:

- Calgary is one of only two municipalities surveyed that does not impose volume limits on the amount of waste that residents can set out for collection each week. Residents are asked to fill their black cart first and then extra materials can be bagged and placed out for collection along with their cart. There is no extra charge applied to additional material.
- WRS provides a fixed, same-day-each-week, service schedule. This is not used by all municipalities and was brought into effect in Calgary in 2002. Implementing the change was an instant, customer service delivery success and WRS gained operational performance efficiencies.
- WRS utilizes GIS-based route design software that is vital to route planning for the effective deployment of staff and equipment. This tool was essential to the introduction of the fee-for-service, Blue Cart Program as it provides the addressing and billing mechanism used by ENMAX to bill the customer. From a customer service perspective, it allows WRS to deliver information directly to any customer should their collection schedule change for any reasons.
- WRS has implemented city-wide collection redesigns to improve efficiencies and to extend services to newly developing neighbourhoods.
- The implementation of the 311 system has been critical to enhancing the customer service experience. From both an information request about the various services and when service questions arise prompting a Service Request to be issued. 311 provides a timely and direct link to WRS' service staff.

4.1 Citizen Satisfaction Survey

Unique to The City of Calgary is the annual Citizen Satisfaction Survey. CH2M HILL identified that none of the other municipalities conducted routine citizen satisfaction surveys. This tracks Calgarians' input on garbage collection services and recyclables collection services. The Blue Cart Program and the Black Cart Program are both rated as "Primary Strengths" in Citizen Satisfaction Surveys.

Citizen satisfaction with waste and recycling services is consistently highly valued and scored by our residents. In 2014, 96 per cent of citizens were satisfied with residential garbage collection, and 92 per cent of citizens were satisfied with City-operated recycling programs.

4.2 Green Cart Pilot Program Survey

WRS commissioned a separate survey of the residents in the four pilot communities in 2012. Overall satisfaction with the pilot program was 89 per cent, with more than six-in-ten of pilot residents indicating they were very satisfied. As participants had time to adapt their behaviours and integrate the practices into their day-to-day household routines, most said that it had become second nature to how their home operates.

As participants experienced the pilot program, support for a city-wide rollout increased significantly to 91 per cent.

5.0 SERVICE ENHANCEMENTS 2015-2018

Council's approved Action Plan 2015-2018 includes the implementation of the Green Cart Program and actions to implement the multi-family recycling strategy, and reduce Industrial Commercial and Institutional (ICI) waste from our landfills.

- Action H1.1 Implement a residential Green Cart Program.
- Action W2.5 Change residential garbage collection frequency from weekly to every two weeks with the introduction of green cart collection.

The implementation of the city-wide Green Cart Program beginning in 2017, completed in 2018, will have support in refining the operational and financial performance of residential collection services. The resulting reduction in garbage volumes will support the implementation of every other week garbage collection. Similar to what was experienced after the city-wide implementation of the blue cart recycling program, WRS will need to optimize the collection operations for all materials once the green cart implementation is complete.

WRS' experience in the city-wide implementation of blue cart recycling and conversion to black cart automated garbage collection was a very demanding process requiring significant service flexibility and customer engagement throughout. Consideration of introducing a new service provider to implement a large scale program change would represent a significant risk to both The City and any potential private sector service provider. In addition, it would pose a fundamental challenge in developing clearly defined service requirements for a potential

contractor. The cost of this risk would ultimately be borne by The City whether or not the requirements were set too high or too low. If service requirements were set too low, customer service could suffer and if they were too high, unnecessarily high bids would result.

The change in service levels that will be achieved beyond the implementation of the Green Cart Program, offers an opportunity to impose volume restrictions on garbage. Either through a tag-a-bag program and/or a Pay-As-You-Throw system (including the use of variable size carts and associated fee differential), additional collection efficiencies would be achieved.

6.0 ENABLING SERVICES

WRS draws support from The City's enabling and partner Business Units. Each business unit is involved in WRS' development and implementation of upcoming strategies and program development.

6.1 Fleet Services:

Fleet Services continue to develop opportunities to optimize the WRS' fleet resource from procurement, maintenance, contractor and supplier support throughout the lifecycle of the truck fleet. A change to reduce the level of involvement of WRS in collection services will require a planned reduction of vehicles and staff support supplied by Fleet Services. In any given year, WRS' fleet has a mix of trucks that are at different stages of their lifecycle. A planned reduction of vehicles will be necessary in order to mitigate any 'stranded' capital investment for units that have not reached their full lifecycle.

WRS will continue to advance efficiency opportunities through Action Plan 2015-2018. WRS will be returning to Standing Policy Committee on Utilities and Corporate Services in 2015 June with a status update on operational performance and fleet management opportunities identified by CH2M HILL

6.2 Human Resources:

Introducing a contracted service provider would require extensive Human Resources' support for WRS with loss of staff as a result of reducing WRS' service area. This would have an impact on Labour Relations and WRS would need support in developing and implementing an effective transition and support system for displaced staff.

Pursuit of Option 1 would affect staff from: Exempt, CUPE Locals, 38, 709, 37 and Amalgamated Transit Union 583 who are employed with Fleet Services for vehicle maintenance responsibilities. WRS would draw on HR to provide guidance throughout any transition period immediately following any decision to change the current service delivery model.

6.3 Communication Services:

Communication Services provides support for customer-facing services and programs, educational materials and community engagement. 311 is critical to WRS' customer care.

It is not anticipated that the introduction of a contracted service provider would introduce a fundamental change for WRS' demands for support from Communication Services.

In discussions with other municipalities who have a 311 service center, there were different approaches that were utilized to address customer service requests. In some cases, the customer was advised to contact the contractor directly. In other cases, customers were referred directly to the municipality's waste management administration and they served as the link between the contractor and customer to ensure the issue was addressed. Where this chain of customer interface was utilized, it also served as a performance check on the contractor. In either case, the ultimate responsibility of resolution rests with the municipality regardless of the service provider.

6.4 Law/Supply/Finance/Environmental and Safety Management:

Law, Supply, Finance and ESM would be needed to provide critical support in the development of a Request for Proposal or Tender that would derive from a decision to pursue a contracted service provider. Contract administration and performance management, would be necessary to sustain a successful contract. Discussions with other cities have highlighted the need to define clear terms of contractual responsibilities for the successful delivery of service to the customer and to ensure that the contractor and The City is protected by well defined performance expectations.

Law was consulted with respect to any changes that would be required to the Waste Bylaw in order to facilitate a change in service provider and has indicated that the current bylaw would not need to be changed.

6.5 Information Technology (IT):

With respect to collection services provided by WRS, IT provides development and sustainment support for collection route design and customer data. The customer data is fundamental to the customer interface with 311 and customer billing through ENMAX. IT also provides support to the Common Fleet Operating System (CFOS) which is a GPS, vehicle tracking and Onboard Vehicle Diagnostics data transfer system. The latter is used by Fleet Services to monitor vehicle system performance that aids in vehicle maintenance. WRS has successfully adopted this technology and will continue to leverage its benefits.

IT support would continue to be needed for both applications. It was found that other municipalities required their contractors to use, onboard GPS tracking as a means of performance tracking.

It is not expected that having a contractor provide collection services to a geographic area of the city would result in significant additional demands on IT beyond those that are already used to support WRS.

7.0 OTHER MUNICIPAL EXPERIENCES

The residential collection services review performed by CH2M HILL included research from nine peer jurisdictions and the information was presented in UCS2014-026 Waste & Recycling Services Collection Service Delivery Review Report.

The information was used to present comparisons of the variety of services that are provided to their residents, and benchmarking service and performance wherever possible. This included comparisons involving both public and private sector service delivery which are used to varying degrees in these jurisdictions.

WRS undertook additional discussions with municipal staff in Edmonton, Winnipeg, Hamilton, Peel Region, Ottawa and Toronto as they have incorporated a level of private sector involvement in their service delivery. APPENDIX 1 provides a summary of information from both CH2M HILL's and WRS' interviews with these municipalities.

8.0 FINANCIAL ANALYSIS

A financial comparison between a mixed service delivery model and the current public service model was conducted as part of the analysis.

The following elements have the most direct impact on the cost of collection services and were a primary focus of the analysis:

- Salary & Wages (Labour): cost of collection staff, foremen, direct administrative staff and includes fully loaded benefits.
- Fleet: lease, maintenance, fuel and oil.
- Service Efficiency.
- Contract Administration Costs
- Other Business Expenses: insurance and security, communications, materials and commodities, and facilities.

Details of this analysis can be found in APPENDIX 2 (ISC: *confidential*, Attachment 2).

9.0 CONCLUSION

Calgarians place high importance on City-provided garbage and black cart recycling services and consistently rate them as one of the highest ranked services provided by The City. Both services are considered to be "primary strengths" for The City of Calgary in the annual Citizen Satisfaction Survey.

The consulting team of CH2M HILL acknowledged the increase in efficiencies that WRS has achieved and offered a number of insights and recommendations to assist WRS in its ongoing pursuit of operational efficiencies; thereby delivering good value for money for the services

provided to Calgarians. The consulting team has noted that either model can work well depending on how well they are managed and implemented.

The financial analysis found that potential private contracting savings due to lower employee benefits and fleet costs would be offset by additional contract management costs and private sector profit. In addition, there was no evidence that the private sector collection would be more efficient than public sector collection. Accordingly, there would be no clear financial benefit realized by adopting a mixed service model at this time.

Developing clearly defined service requirements for a potential contractor at this time presents a challenge. The city-wide implementation of the Green Cart program will result in a major change in service levels. Consideration of introducing a new service provider to implement a large scale program change would represent a significant risk to The City.

Additionally, The City currently does not impose volume limits on the amount of waste that residents can set out for collection each week. Once the Green Cart program is implemented, WRS will be in a position to recommend pay as you throw options for garbage which will help to clearly define service collection requirements and more accurate waste volumes. This clarity is essential in order to provide a clear service expectation for all private sector bidders.

WRS will continue to advance efficiency opportunities through Action Plan 2015-2018. WRS will be returning to Standing Policy Committee on Utilities and Corporate Services in 2015 June with a status update on operational performance and fleet management opportunities identified by CH2M HILL.

In addition, WRS will be reviewing their Financial Model and conducting a Cost of Service Review as part of Action Plan 2015-2018 with a view to presenting a sustainable business model in the 2019-2022 business cycle, which will include reconsideration of private residential collection service.

10.0 RECOMMENDATIONS

That the Standing Policy Committee on Utilities and Corporate Services recommends that:

1. Council direct Administration to provide city-wide black, blue and green cart residential collection services through a public service delivery model for the remainder of the 2015-2018 business cycle ;
2. Council direct Administration to consider alternative service delivery models in alignment with the 2019-2022 business cycle;
3. This report be forwarded to the 2015 March 30 Regular Council Meeting; and
4. Direct that Appendix 2 (Attachment 2), be heard In Camera under Section 23(1)(b), of the *Freedom of Information and Protection of Privacy Act*, that the verbal discussions, and presentation remain confidential under 24(1)(c)&(d) and 25(1)(b)&(c), until this matter is resolved.

APPENDIX 1: Other Municipal Experiences

The following sections provide a high level summary of information from both CH2M HILL'S and WRS' interviews with six of these municipalities including Edmonton, Winnipeg, Hamilton, Peel Region, Ottawa and Toronto.

Drivers for Service Delivery Models:

All of the municipalities have had some level of private sector involvement for many years. In the case of the Ontario municipalities, provincial requirements led to the amalgamation of smaller jurisdictions, many of which had lengthy histories of services provided by the private sector. The resulting larger jurisdictional authority resulted in the need to harmonize consistent service delivery for residents within the amalgamated areas. Different models for the use of private and public sector service providers have evolved and continue to evolve as a result.

In the case of two of the communities, changes in service delivery were influenced in varying degrees by internal labour issues that were not supportive of opportunities to realize cost savings.

Key Findings:

- Communities have simply retained their historical service delivery models.
- Service delivery models changed in order to harmonize service standards across an entire community.
- Some communities were able to achieve savings from changing service standards and service providers.
- Failure to meet acceptable service standards (public or private), resulted in changes to the service delivery model.

Service Delivery Models:

All of the municipalities have defined geographic zones to divide the work between contractors and/or municipal service providers. In almost all cases, one service provider had responsibility for the collection of all of the materials including garbage, recyclables and organics.

The municipalities use varying formulations of mixed service, mixed service with managed competition and fully contracted service provision. None of the municipalities used one private service provider to serve the entire municipality.

Key Findings:

- All communities used geographic zones.
- One service provider (public or private) was responsible for all services within a zone.

Collection Methods and Diverted Materials:

There are strikingly different combinations of service delivery methods used by each one of the municipalities including: manual/hand collection, automated cart collection and semi-automated cart collection. The method of collection is mandated by all municipalities in order to provide the same service format for all residents. Interestingly, all of the municipalities went as far as specifying collection frequencies of materials across all of the different zones. This included the frequency of collection of the various materials (recyclables, garbage and organics) and the actual days of collection.

As noted previously, all of the municipalities (with the exception of Edmonton) imposed a variety of volume limits on garbage and every other week collection of garbage has become common since the implementation of dedicated collection of organics. Diversion of recyclables and organics is common to all of the municipalities however, the method of collection varies in the way in which residents participate. Carts, recycling boxes, bags and customer-supplied containers are all used in various combinations. Roadway/laneway layouts, parking and housing type, all combine to determine the collection methods. In Ontario, laned residential areas are rare to non-existent, on-street parking is significantly restricted and, in Toronto's case, collection services include up to 8-unit residences where others limit residential collection to four-plex development.

Key Findings:

- The municipalities specified the methods of collection: manual, cart-based, automated/semi-automated.
- There were very significant differences in the methods of collection between all of the municipalities.
- Collection frequencies of specific materials were determined by the municipality.
- Collection of recyclables and organics was required by all communities although there was some variability of what could be included in each category.
- Residents were restricted to a maximum volume of garbage that would be collected.

Contract Management:

All of these municipalities have had significant history in their use of private service delivery. This is reflected in very mature contracts and methods of contract management. While details vary, they all incorporate very extensive service requirements and conditions. This has been done to ensure that their residents receive consistent service and customer care. It was also expressed that this was necessary to ensure that service levels and costs between public and private services could be compared where both were used within a municipality.

It is worth noting that all six of the municipalities extend their control of collection services to include all multi-family residences. Similar to single-family collection, actual provision of the service varies between public and private delivery. While WRS does offer collection to Calgary's condominium sector, multi-family service is not controlled by The City of Calgary.

Key Findings:

- Service contracts were very detailed including extensive lists of "liquidated damages" to address service problems.
- Municipalities applied a variety of means to ensure compliance and quality of customer service.
- Municipalities used a variety of service measures including: tonnage, households served and quality of recyclable materials and organics collected.
- Responsibility for customer service and customer care is ultimately borne by the municipality.
- Municipalities that used mixed services indicated that differences in costs diminished when they achieved consistent levels of service from both the public and private service provider.

Funding for Collection Services:

Funding mechanisms for collection is as varied as the form of collection across all of the municipalities. Varying combinations of tax support, fee for service, flat-rate user fees are all utilized. Tag-a-bag systems are frequently used to limit and charge for extra volumes of garbage and, increasingly, Pay-As-You-Throw financing mechanisms are being implemented. Toronto, for example, charges different rates for four different size garbage carts. In addition to the fee they charge, the rate is also subsidized by tax support. All recyclable and organic collection service is included in the garbage fee.

It is worth noting that municipalities in Manitoba and throughout Ontario receive financial subsidies for recycling through their respective provincial, material stewardship programs.

Key Findings:

- While municipalities still use a variety of tax support and user fees, there is increasing application of Tag-a-Bag and Pay-As-You-Throw financing mechanisms.
- Municipalities in Manitoba and Ontario receive financial support for recycling services from their respective Stewardship Programs.

APPENDIX 2: Financial Analysis

Appendix 2 can be found as UCS2015-0220 Attachment 2.

Under the Freedom of Information and Protection of Privacy Act, Appendix 2 (UCS2015-0220, Attachment 2) remains confidential under 24(1)(c)&(d) and 25(1)(b)&(c).