

## **WASTE & RECYCLING SERVICES GREEN CART PROGRAM 2017-2018 INDICATIVE RATE**

### **EXECUTIVE SUMMARY**

The largest remaining opportunity in the residential sector to achieve progress on Council's 70 per cent by 2025 waste diversion goal is to collect and compost residential food and yard waste. With the success of the Blue Cart Recycling Program, almost 60 per cent of remaining residential waste is now compostable food and yard waste. As such, a key area of focus for Waste & Recycling Services (WRS) in the past five years has been the design and implementation of a residential Green Cart Program.

WRS will seek approval for the Green Cart Program Rate as part of Action Plan 2015-2018 Mid-Cycle Adjustment process. This report details the 2017 and 2018 indicative rates for the Green Cart Program that starts mid-2017.

This indicative rate for the Green Cart Program is based on full program costs, offset by the reinvestment of savings realized from changing black cart garbage collection from weekly to once every two weeks. WRS will allocate additional Gas Tax Funding to the composting facility from other WRS capital projects during the 2016 Capital Recast process.

WRS' prioritization of financial resources, including operating, capital and reserves, has maintained the indicative user fee rate of \$6.50 per household per month, as committed to in C2014-0089 - 2015-2018 Waste & Recycling Services Rate Scenarios. Given a mid-year rollout in 2017, the indicative rate for the Green Cart Program will remain \$6.50 per household per month in 2018.

### **ADMINISTRATION RECOMMENDATIONS**

That Council direct Administration to:

1. Include a Green Cart Program Rate of \$6.50 per household per month for 2017 and 2018 as part of Action Plan 2015-2018 Mid-Cycle Adjustment process; and
2. Return to Council with amendments to the Waste & Recycling Bylaw (20M2001) Schedule B as part of Action Plan 2015-2018 Mid-Cycle Adjustment process.

### **PREVIOUS COUNCIL DIRECTION / POLICY**

On 2013 April 15 Council adopted report C2013-0246 (Organics and Biosolids Composting Program) and directed Administration to:

- a) Proceed with preparation of Request for Qualifications (RFQ) and Request for Proposal (RFP) documents for a City-owned, private sector Design-Build-Operate Composting Facility, to be located at the Shepard landfill site;
- b) Return to Council through the 2013 May 29 SPC on Utilities and Corporate Services, with capital budget requests for up to \$25 million for Shepard campus site development, and up to \$133 million, to fund a City owned Design-Build-Operate composting facility to process residential organics and Biosolids; and
- c) Report back to Council in 2014 with alternative funding options including indicative rates and fees, for the W&RS 2015-2018 Operating Budget, to accommodate an anticipated net increase to W&RS' annual operating costs of approximately \$26 million due to the implementation of a city wide food and yard waste diversion program in 2017.

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On 2013 May 27 Council approved PFC2013-0409 – Organics and Biosolids Composting Program Capital Budget Request:

- a) Direct Administration to commence a public private partnership Design-Build-Operate (DBO) procurement by issuing a Request for Qualifications for the composting facility referred to in Recommendation 2 of report C2013-0246 with an operating agreement term of up to 10 years;
- b) Approve a capital budget appropriation of \$133.0 million to Program 257 – Diversion Infrastructure funded from self-supported debt (\$129.7 million) and revenue/reserve (\$3.3 million) for the construction of a composting facility for processing residential food and yard waste and biosolids;
- c) Approve a capital budget appropriation of \$25.0 million to Program 257 – Diversion Infrastructure funded from self-supported debt for the site servicing requirements for the Diversion Resource Recovery Campus at Shepard landfill; and
- d) Direct Administration to prepare Borrowing Bylaws 6B2013, 7B2013 and 8B2013 to maximum amount of \$154.7 million in self-supported debt, such bylaws to be brought forward to Council's 2013 May 27 meeting to give first reading to the Borrowing Bylaws.

All estimates for PFC2013-0409 were based on pre-engineering work completed in 2013.

On 2014 February 24, WRS outlined the net Green Cart Program costs of \$26 million and an indicative green cart rate of \$6.50 per household per month to Council as part of report UCS2014-0024 (Waste & Recycling Services Financial Plan 2015-2018). This report was received for information and forwarded to the 2014 March 17 Strategic Session of Council along with C2014-0089 (2015-2018 Waste & Recycling Services Rate Scenarios). Council directed Administration to return to the 2014 May 5 Strategic Planning meeting of Council with indicative rates for the 2015-2018 Action Plan based on:

- a) The operating and capital requirements provided in this report and;
- b) Including a fee for the residential green cart composting program reinvesting the savings from reduced black cart garbage collection to partially offset the program fee.

On 2014 November 24 Council approved Action Plan 2015-2018: WRS' operating budget which included the funding proposed to implement a Green Cart Program in 2017 and the capital budget of \$133.0 million to award the Organics and Biosolids Composting Facility contract.

To award the Composting facility design-build-operate contract to the preferred proponent an additional \$10 million in capital budget was required. On 2015 April 27 (PFC2015-0322 – Organics and Biosolids Composting Program Capital Budget Request), Council approved the transfer of \$10.0 million in capital budget appropriations and gas tax funding, \$2.225 million from Program 256 - Landfill/Treatment and \$7.775 million from Program 258 - Facilities & Equipment, to Program 257 – Diversion Infrastructure, to Program 257 – Diversion Infrastructure. This allowed WRS to accommodate the capital budget increase within the existing WRS Infrastructure Investment Plan (WRIIP). This report also included cost estimates for Green Cart Program costs of \$9.00 to \$9.50 per household per month with a net program rate in the range of \$6.50 to \$7.00 per household per month.

Attachment 1 is summary of Council direction regarding the Green Cart Program.

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### **BACKGROUND**

A residential Green Cart Program has been piloted since 2012 March for 7500 residences in four distinct communities: Brentwood, Abbeydale, Southwood and Cougar Ridge. The pilot has provided important information on operational costs, collection efficiency, amount and type of material collected and the customer experience. The pilot consisted of weekly collection of a green cart, weekly collection of the blue cart and a change to once every two weeks collection of the black cart. The change to every other week collection for the black cart was important to maximize diversion in both the green and blue carts.

In mid-2017, WRS will roll out a city-wide residential Green Cart Program based on the pilot, which includes weekly cart-based collection of food and yard waste.

The diversion of food and yard waste from The City's three waste management facilities (WMF) is a critical step in achieving Council's waste diversion goal of reducing waste by 70 per cent by 2025. Based on pilot results, the Green Cart Program is expected to divert 40 per cent of the single-family residential waste from the WMFs to the green cart for composting.

As identified in the Organics and Biosolids Master Plan and subsequent work between WRS and Water Services/Water Resource (WS/WR), a joint co-composting facility that processes both food and yard waste and biosolid materials would benefit The City of Calgary and its citizens with economics of scale and significant operational efficiencies. As such, the composting facility has been sized to accommodate both these feedstocks.

### **INVESTIGATION: ALTERNATIVES AND ANALYSIS**

WRS' operating budget approved in Action Plan includes the revenues and expenditures required for the Green Cart Program commencing mid-2017. Previous Council direction is that the program will be funded through a program user fee net of savings realized in residential black cart garbage collection switch to once every two weeks.

The full Green Cart Program costs include: collection, debt servicing, composting facility operations, green cart purchase, education, communication and marketing of finished compost net of revenues received from the sale of compost.

The composting facility will be funded from a combination of self supported debt, revenue/reserve and Gas Tax Funding grant. The self supported debt funding will be used for the construction of infrastructure, facilities and the purchase of equipment. The borrowing terms of the debt will reflect the useful life of infrastructure and equipment.

As the composting facility will process materials from both WRS and WS/WR, the Water Utility will pay about \$10 million per year to WRS for its share of the operations, maintenance and capital recovery for composting of biosolids. The expected incremental cost to Water Utilities is \$7.2 million per year, as the composting facility will reduce third party contracting costs to handle biosolids by \$2.8 million. These costs are reflected in the Utilities' indicative rates.

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The service level change of black cart garbage collection has a budgeted tax savings of \$4.8 million in 2017 (partial year rollout) and \$10.1 million in 2018 for a full-year change in collection frequency.

The completion of the facility contract negotiations has resulted in increased projections for operating and capital costs for the Green Cart Program. In PFC2015-0322, WRS indicated that cost estimates at that time indicated a Green Cart program Rate in the range of \$6.50 to \$7.00 per household per month.

Refinement of program costs continued throughout 2015 and 2016. WRS' prioritization of financial resources, including operating, capital and reserves, has maintained the indicative user fee rate of \$6.50 per household per month as committed to in Action Plan 2015-2018, and first identified in 2013. Given a mid-year rollout in 2017, the indicative rate for the Green Cart Program will remain at \$6.50 per household per month in 2018. WRS will bring the Green Cart Program fee to Council in 2016 November as part of The City's Mid-Cycle Adjustment process.

Attachment 2 includes information on the Green Cart Program, operating budget and Green Cart Program Rate and property tax impacts.

### **Stakeholder Engagement, Research and Communication**

WRS has engaged 7,500 residents in four Calgary communities as part of a full operational test of a residential green cart composting program. The pilot program was first implemented in 2012 and has led to an operational model that will be expanded to a city-wide implementation beginning in 2017. Ninety-one per cent of the residents in the pilot communities expressed their support for a city-wide program (Ipsos-Reid, 2012).

Recent city-wide engagement of single-family households show that 89 per cent support the implementation of the Green Cart program (74 per cent strongly support the implementation). As well, 89 per cent are likely to use the green cart once the program begins. (Ipsos, 2016)

### **Strategic Alignment**

Implementation of the Green Cart Program is critical for achieving both WRS' Council approved waste diversion target of 70 per cent by 2025 and Action Plan deliverables. WRS Action Plan 2015-2018 includes supporting Council's priority of A Healthy and Green City through Business Unit Actions:

- H1.1 – Implement a residential Green Cart Program; and
- H1.2 – Design and construct a residential organics and biosolids composting facility to support 2017 implementation of a Green Cart Program.

While at the same time focusing on Strategic Action W2 – Be as efficient and effective as possible, reducing costs and focusing on value-for-money and related Business Unit Actions:

- W2.1 – Continually improve on plans and practices to manage financial health;
- W2.5 – Change residential garbage collection frequency from weekly to every two weeks with the introduction of green cart collection; and
- W3.1 – Implement the public-private-partnership (P3) model for delivery and operation of organics and biosolids composting facility.

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The indicative rates recommended in this report will contribute to strategically align WRS' financial future to The City's long-term vision and planning documents by ensuring a source of funding for the residential Green Cart Program.

### **Social, Environmental, Economic (External)**

#### *Social*

Diverting food and yard waste from landfill requires changes in behaviour by Calgary residents. Shifting behaviours towards waste reduction and diversion improves the quality of life for Calgarians and their communities.

Implementation of waste diversion programs will make Calgary a more attractive place to live and increase Calgary's reputation as an environmentally-friendly city.

An educational area is being constructed at the composting facility that will be utilized by WRS for both educational and vocational training purposes.

#### *Environmental*

Reducing and diverting organic waste from Waste Management Facilities is a significant component of reducing Calgary's impact on land, air and water.

Composting reduces greenhouse gas emissions, redirects natural resources back into the economy through the production of a high quality valuable end product, reduces future contamination and environmental liability, and increases the life of landfills.

The implementation of a residential Green Cart Program will help to increase diversion rates and move Calgary towards the waste diversion target of 70 per cent by 2025.

#### *Economic (External)*

Construction of a composting facility for the Green Cart Program will provide positive benefits in the form of employment opportunities. Employment opportunities at the composting facility will be in the order of 25 to 30 permanent staff.

Large quantities of high quality compost will create new business opportunities and markets for the finished material.

### **Financial Capacity**

#### **Current and Future Operating Budget:**

Identified in C2013-0246 (Organics and Biosolids Composting Program) and included in Action Plan were increases to WRS' operating budget in both 2017 and 2018 to implement the Green Cart Program starting mid-2017. Recently completed financial analysis and facility contract negotiations, including updates to the capital servicing and contract rates for facility operations, indicate program requirements for a net annual operating budget of \$24.2 million in 2017 and \$30.6 million in 2018. WRS will request any required changes to the operating budget as part of the Mid-Cycle Adjustment process.

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### **Current and Future Capital Budget:**

An original capital project estimate of \$133 million was approved at Council on 2013 May 27 and was included in Action Plan 2015-2018 for the Organics and Biosolids Composting Facility. In 2015 April 27, Council approved the transfer of \$10 million in Gas Tax Funding from other WRS capital projects to the Organics and Biosolids Composting Facility. The reprioritization of WRS' ten-year capital plan ensured that additional required funds for the final contract were available within the existing capital budget.

As part of the 2016 Capital Recast process, WRS will propose that additional Gas Tax Funding is reassigned to the composting facility from current WRS capital projects.

Debt servicing for the capital portion of the Green Cart Program is included in total program costs and the associated Green Cart Program Rate.

### **Risk Assessment**

WRS is still completing negotiations for the purchase of the green carts. Estimated costs are included as part of current total program costs. There is a risk that carts could be more expensive than current estimate. Also, as several of the potential suppliers would be paid in United States dollars there is an exchange rate risk. Finance and WRS will work on mitigation as required.

There are several risks with respect to a new source of funding for the Green Cart Program.

#### Funding Stability

Stable long-term sources of funding are required to support the achievement of diversion goals that require large supporting infrastructure. The use of a user fee to fund the Green Cart Program creates a stable source of revenue for the program, independent of external economic challenges. The use of a green cart user fee ensures that the timing of required revenues is aligned with the increase in costs for servicing new households.

#### Reliance on Property Tax Funding

In Action Plan 2015-2018, WRS relies on property taxes to fund black cart garbage collection. With the addition of the Green Cart Program and the switch to every other week collection for Black cart garbage collection, WRS will effectively transfer property tax support to an additional program. However these two operations are both serviced based, yet part or all of their budgets are established based on forecasts. Typically there is a variance between projected and actual household growth. That timing difference can create funding gaps if growth is not consistently and adequately budgeted. The completion of WRS' Financial Model Review project in order to implement a new model for the 2019-2022 business cycle will be important to offset this risk.

### **REASON(S) FOR RECOMMENDATION(S):**

The recommendations will enable Waste & Recycling Services (WRS) to fund the Green Cart Program and establish the new service level for residential Black Cart garbage collection as committed to in Action Plan 2015-2018.

### **ATTACHMENTS**

1. Green Cart Program – Summary of Council Direction
2. Green Cart Program Indicative Rate Overview