

WASTE & RECYCLING SERVICES

2016 MAY 30



Green Cart Program Summary of Council Direction



GREEN CART PROGRAM BACKGROUND

WRS has a long history with the Green Cart Program. In 2007, report UE2007-35 (80/20 by 2020 Strategy) clearly demonstrated that in order to achieve the Council approved diversion target of 80 per cent diversion of waste from city-owned landfills, a program to manage single-family food and yard waste was critical.

Figure 1 is a timeline of major Council decisions regarding the Green Cart Program over the last four business cycles. Details of the reports to Council are provided in this Attachment.

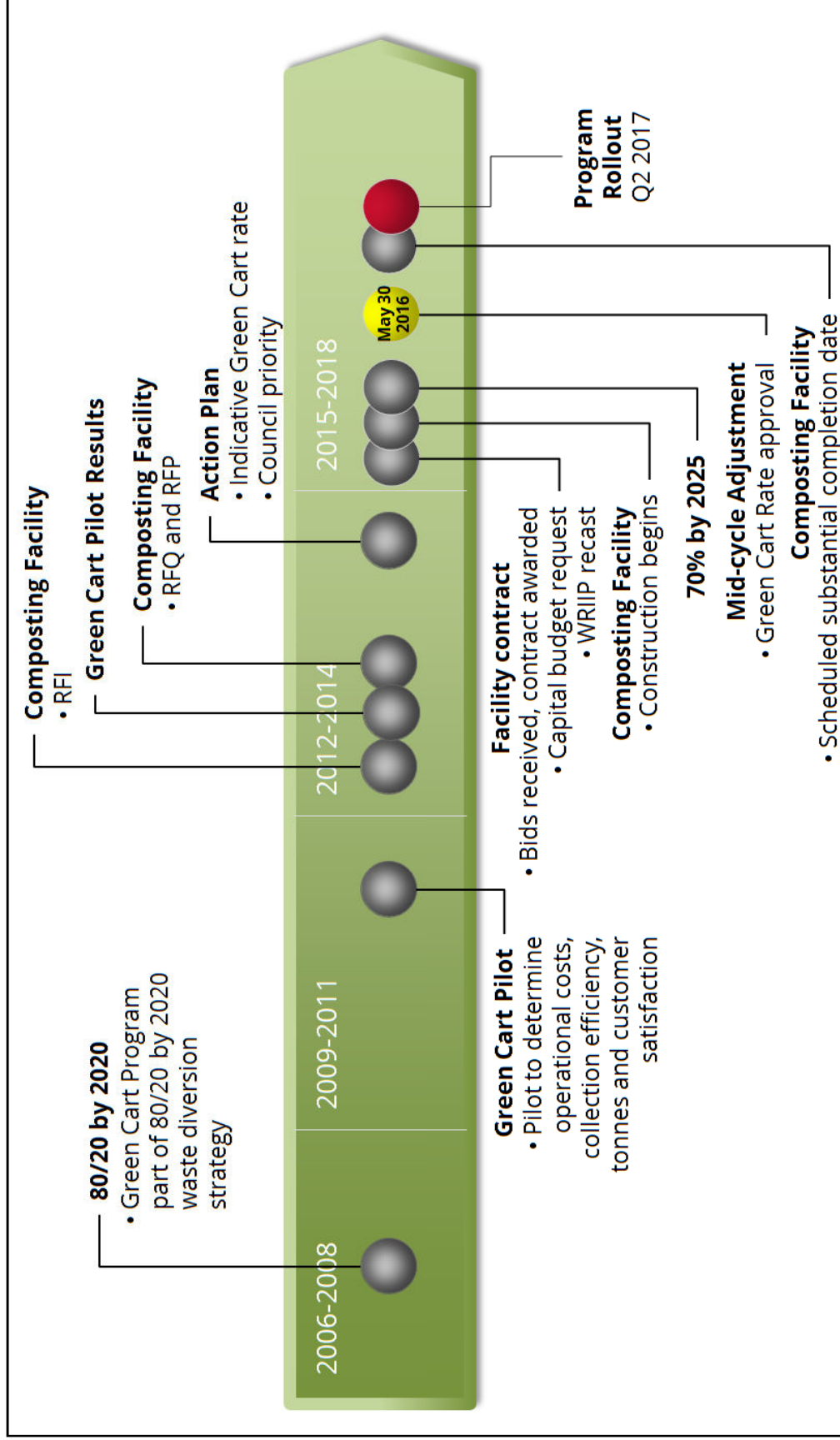


Figure 1: Green Cart Program – Council decisions and milestones



UE2007-35 – 80/20 BY 2020 STRATEGY

2007 November 26

Council approved WRS' 80/20 by 2020 waste diversion strategy, to achieve 80 per cent diversion of waste resources from landfills by the year 2020. The original strategy included a Green Cart Program in 2010. Council directed Administration to incorporate 80/20 by 2020 strategy into the 2009-2011 business plan and budget coordination process.

UE2011-05 – PROGRESS TOWARDS 80/20 BY 2020 IN THE RESIDENTIAL SECTOR

2011 March 7

Waste composition studies completed at the time indicated that food and yard waste were a significant portion of the remaining waste stream. Council directed Administration to:

1. Proceed with public engagement on food and yard waste diversion in 2011 and report back with results no later than 2011 October;
2. Pending Council direction in 2011 October, include in 2012-14 Business Plan an organics pilot in 2012;
3. Return to Council no later than 2013 March:
 - a. With recommendations, including full operating and capital budget impact, for an organics diversion program to be implemented commencing in 2015-2017 business cycle, and
 - b. With recommendations to proceed with an RFP in 2013 for design and build of the required composting facility to be operational in 2015-2017 business cycle; and
4. Direct Administration to include in its report to the 2011 May 25 Regular Meeting of the SPC on Utilities and Environment, on Construction and Demolition Industry (C&D) and Industrial/Commercial/Institutional (ICI) waste, a risk analysis and response to alternate concepts presented at the 2011 February 23 Regular Meeting of the SPC on Utilities and Environment for reaching 80/20 by 20/20.

UE2011-21 – RESIDENTIAL FOOD AND YARD WASTE DIVERSION UPDATE

2011 November 7

Council directed Administration to implement a residential food and yard waste diversion pilot to commence in 2012 and return no later than March 2013 with pilot results and recommendations for an organics diversion program aligned with previous Council direction (UE2011-05).

UCS2012-03 – ORGANICS DIVERSION PROGRAM SCOPE OF WORK

2012 February 29

This report outlined the major milestones toward a city-wide residential food and yard waste collection and composting program including a timetable on when Council will be informed and consulted on key decisions. The SPC on Utilities and Corporate Services received this report for information.

UCS2012-0227 – ORGANICS DIVERSION PROGRAM – COMPOSTING FACILITY SITE LOCATION

2012 July 16

This report outlined the process used to select a site for an organics composting facility such that Administration can move forward to initiate the development approval process. Selection of a site location is critical to the schedule for the implementation of a city wide organics collection program.

Council approved that, subject to Council approving a capital budget in 2013 Q1, a composting facility be located on City lands within the Shepard landfill, east of 68th Street SE and west of the Transportation and Utility Corridor. Council also directed Administration to proceed with appropriate applications to Alberta Environment and Sustainable Resource Development and that the development approval processes be initiated and carried out as soon as possible for the subject site.

UCS2012-0843 – ORGANICS DIVERSION PROGRAM COMPOSTING FACILITY OWNERSHIP AND CONTRACT DELIVERY METHODOLOGY

2013 April 15

This report was brought to Council on 2013 January 28 and was subsequently referred to the 2013 April 15 Strategic Planning Meeting of Council. The report outlined the investigation and analysis used to select an ownership and contract delivery methodology for delivering an organics composting facility. The recommended delivery method was Design-Build-Operate (DBO) in which The City owns the processing facility that the private sector designs, builds and operates.

UCS2013-0037 – RESIDENTIAL FOOD AND YARD WASTE PILOT RESULTS

2013 April 15

A residential food and yard waste pilot was launched in 2012 March to test the collection and customer experience of food and yard waste diversion. The pilot consisted of 7,500 residences in four communities that received weekly cart-based collection of food and yard waste. A key result from the pilot was that garbage from pilot communities was reduced by 40 per cent.

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.

Research conducted with pilot residents showed that 89 per cent were satisfied with the pilot program and 91 per cent support a city-wide program. Council received the report for information.

C2013-0246 – ORGANICS AND BIOSOLIDS COMPOSTING PROGRAM

2013 April 15

Through this report WRS was authorized to 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.

This report indicated to Council upcoming budget requests for the Shepard campus site development of a City-owned Design-Build-Operate composting facility to process residential organics and Biosolids. This was the first indication to Council regarding estimated Green Cart Program costs and estimated savings from black cart collection frequency changes. Estimated program costs were shown in both 2013 dollars and in 2017 dollars. Table 1 is 2017 dollars.

Estimated program costs in 2017\$	Total annual costs (Millions)	Equivalent cost per household per month
Green cart program costs	\$35	\$9.00
Black cart savings	(\$9)	(\$2.50)
Net increase in operating costs	\$26	\$6.50

Table: 1 Green Cart Program Estimated Program Cost – 2017 \$

Administration Recommendations 1, 2, 4 and 5 contained in the report were adopted as follows: That Council:

1. File the Recommendations contained in Report UCS2012-0843;
2. Direct Administration to 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;
4. Direct Administration to 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; and
5. Direct that Attachments 4 and 5, the in camera discussions and distributed documents remain confidential under Sections 16(1)(b), 24(1)(a), (b)(i), (c), 25 (1)(c) and 27(1) of the *Freedom of Information and Protection of Privacy Act* or until directed otherwise.

PFC2013-0409 – ORGANICS AND BIOSOLIDS COMPOSTING PROGRAM

CAPITAL BUDGET REQUEST

2013 May 27

This report outlines WRS' capital budget requirements for the Diversion Resource Recovery Campus at Shepard Waste Management Facility and the construction of an Organics and Biosolids composting facility on that site. It included a capital budget appropriation of \$133 million to implement a Public-Private-Partnership model through Design-Build-Operate procurement for the Organics and Biosolids Composting Facility. The estimates in this report were based on pre-engineering work completed in 2013.

This report also discussed the operating requirements for the composting facility that will inform Action Plan 2015-2018 business plans and budgets for both WRS and Utilities.

Council approved the recommendations that Council:

1. 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;
2. Subject to Council approving Administration's recommendations in 2014 regarding alternative operating budget funding options, as referred to in Recommendation 4 of report C2013-0246, direct Administration to issue a Request for Proposal for the composting facility referred to above;
3. 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 as detailed in Table 1;
4. 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 as detailed in Table 2; and
5. Direct that Attachment 4 remain confidential under Sections 16(1)(b), 24(1)(a) & (b)(i) and (c), 25(1)(c) and 27(1) of the *Freedom of Information and Protection of Privacy Act* until directed otherwise.

UCS2014-0024 – WASTE & RECYCLING SERVICES FINANCIAL PLAN 2015-2018

2014 March 17

This report outlines the net Green Cart Program costs of \$26 million and an indicative green cart rate of \$6.50 per household per month. This report presented three funding options for Council's consideration. This report was received for information at the 2014 February 26 meeting of SPC on Utilities and Corporate Services and forwarded to the 2014 March 17 Strategic Session of Council along with a report on the anticipated impact on rates.

In this report, the current estimate for the annual operating cost for the program was projected to be \$36 million, in 2018 dollars. Reducing black cart collection to once every two weeks was projected to save \$10 million in 2018 dollars, resulting in a net program cost of \$26 million.

Three options for financing the Green Cart Program were investigated:

Option 1: Recover the full program cost from each household through a monthly fee of \$9/household/month, and reduce the tax support required by WRS by \$10 million due changing black cart collection to once every two weeks.

Option 2: Reduce the monthly fee to residents from \$9/household/month to \$6.50/household/month by using the \$10 million in black cart savings to partially offset the green cart program cost. This was the option presented to Council on 2013 April 15.

Option 3: Fully tax supported funding for green cart, including the reinvestment of black cart savings. This would require an additional \$26 million net budget.



Option 2 was recommended.

Work between the Water Utility and WRS concluded that a joint composting facility would benefit The City of Calgary and its citizens with economies of scale and operational efficiencies. The Water Utility will pay about \$10 million per year to WRS for its share of the operations, maintenance and capital recovery for biosolids composting. The incremental cost to water 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 will be reflected in the Utilities' indicative rates.

The report was received for information.

UCS2014-0023 – WASTE & RECYCLING SERVICES INFRASTRUCTURE INVESTMENT

2014 March 17

This report outlined WRS' infrastructure investment planning for the next ten years. Included in that plan was \$133 million investment in an organics and biosolids composting facility. Council received the report for information.

C2014-0089 – 2015-2018 WASTE & RECYCLING SERVICE RATE SCENARIOS

2014 March 17

Building on the WRIP and the WRS Financial Plan, WRS has developed three funding options for the residential green cart composting program. These were:

Option 1 - Recover the full program cost from each household through a monthly fee of \$9 per household per month, and reduce the tax support required by WRS by \$10 million due to once every two weeks black cart collection.

Option 2 - Reduce the monthly fee to residents from \$9 per household per month to \$6.50 per household per month using the \$10 million in black cart savings to partially offset the green cart composting program fees (this was the option presented to Council 2013 April 15).

Option 3 - Fully tax supported funding for green cart, including the reinvestment of black cart savings. This would require an additional \$26.0 million net budget.

Option 2, using the savings from the reduction in black cart service to partially offset the monthly green cart fee to residents, was approved.

Council directed Administration to return to the proposed 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.

C2014-0102 – WASTE & RECYCLING SERVICES INDICATIVE RATES AND FEES

2014 May 5

This report details the 2015-2018 indicative rates and fees for Waste and Recycling Services. Council directed Administration to prepare the Waste & Recycling Services 2015–2018 Action Plan based on the Indicative Rates & Fees outlined in the report, which included an indicative green cart fee of \$6.50/household/month as residents are provided service in 2017 and 2018, with an additional \$2.50/household/month in tax support from black cart savings.

Council also directed Administration to incorporate a Cost of Service Study and an evaluation of financial policies for 2019-2022 in the 2015-2018 Action Plan.

C2014-0863 – ACTION PLAN 2015–2018 PROPOSED BUSINESS PLANS AND BUDGETS

2014 November 24

On 2014 November 24 Council approved Action Plan 2015-2018, including 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.

Action Plan 2015-2018 included the following actions related to the Green Cart Program in support of Council's priority of A Healthy and Green City:

- 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.

These actions are to be carried out while at the same time supporting Council's priority of A Well-Run City through the following:

- 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.

PFC2015-0322 – ORGANICS AND BIOSOLIDS COMPOSTING PROGRAM CAPITAL BUDGET REQUEST

2015 April 27

To award the Composting facility design-build-operate contract to the preferred proponent, an additional \$10 million in capital budget was required. Council approved the transfer of an additional \$10 million in capital budget appropriations (Gas Tax Funding grants) from Program 256 - Landfill/Treatment and Program 258 - Facilities & Equipment, to Program 257 – Diversion Infrastructure, for funding of the composting facility. This allowed WRS to accommodate the capital budget increase within the existing WRS Infrastructure Investment Plan (WRIIP).



PFC2015-0322 also indicated that cost estimates, at that time, demonstrated Green Cart Program costs of \$9.00 to \$9.50 per household month with a net program rate in the range of \$6.50 to \$7.00 per household per month.

UCS2015-0835 – WASTE DIVERSION TARGET UPDATE

2015 November 20

In this report Waste & Recycling Service (WRS) notes the importance of a city-wide Green Cart Program to achieve waste diversion targets in the single-family sector between 2015 and 2025. The total amount of organic material that could be captured in the Green Cart Program is 143,000 tonnes. Based on the pilot program and participation rates in similar programs in other municipalities, the Green Cart Program is expected to increase the sector diversion rate by an additional 34 per cent (85,000 tonnes) in 2020.

Council directed Administration to:

1. Adopt a revised target date for the waste diversion rate of 70 per cent across all waste sectors by 2025;
2. Revisit the Construction and Demolition sector strategy and return to Council in Q2 2016; and
3. Report back on the potential application of waste-to-energy (WtE) technology in Q1 2018.