

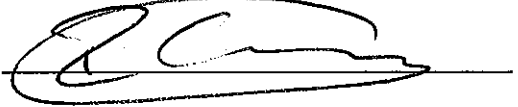




To: Public Works and Transportation Committee **Date:** October 14, 2010
From: Tom Stewart, ASCT.
Director, Public Works Operations **File:** 10-6370-10-05/2009-
Vol 01
Re: **Organics Collection - Proposed Pilot Program for Townhomes**

Staff Recommendation

1. That a 'Green Cart' pilot program for yard trimmings and food scraps/organics collection from approximately 3,200 townhome units, as outlined in Option 2 of the staff report from the Manager, Fleet & Environmental Programs, be approved.
2. That the total estimated cost of \$450,000 be funded from the sanitation and recycling provision account.
3. That the Chief Administrative Officer and General Manager, Engineering & Public Works be authorized to negotiate and execute an amendment to Contract T.2988, Residential Garbage and Recycling Collection Services, to give effect to this program at an additional one-time cost of approximately \$410,000, plus applicable taxes for the following:
 - a) Provision of carts and lifting attachments for servicing. Cart acquisition to include all required artwork/labelling, assembly, preparation, temporary storage and delivery to individual townhome units, and
 - b) Weekly collection of yard trimmings and food scraps/organics at the unit rates quoted from City-defined pilot program townhome units based on door-to-door or similar collection service, during the period April 4, 2011 through December 30, 2011; and
 - c) Delivery of collected materials to the designated composting facility.

Tom Stewart, ASCT.
Director, Public Works Operations
(604-233-3301)
Att. 1

| FOR ORIGINATING DEPARTMENT USE ONLY | | | |
|---|---|--|--|
| ROUTED TO: Budgets Law | CONCURRENCE | | CONCURRENCE OF GENERAL MANAGER |
| | Y <input checked="" type="checkbox"/> N <input type="checkbox"/> | Y <input checked="" type="checkbox"/> N <input type="checkbox"/> |  |
| REVIEWED BY TAG | YES <input checked="" type="checkbox"/>  | NO <input type="checkbox"/> | REVIEWED BY CAO YES <input checked="" type="checkbox"/>  NO <input type="checkbox"/> |

Staff Report

Origin

During consideration of the 'Draft Integrated Solid Waste and Resource Management Plan' on May 25, 2010, Council directed that staff investigate waste reduction and recycling strategies for multi-family complexes in Richmond.

This report responds to this request by recommending a pilot program for collection of yard trimmings and organics from townhome units. This report supports Council term goal 7, "Initiatives to reduce garbage, solid waste and liquid waste".

Analysis

Background

The City currently provides recycling services to all residents in Richmond, including single-family homes, townhomes and apartments. Services are provided via blue box collection (single-family and multi-family townhomes) and through centralized or 'cart' collection (multi-family apartments). Materials collected include newspaper, other paper products, limited amounts of cardboard, glass food and beverage containers, tin and aluminium containers and specified plastic bottles (plastic bottles and containers with codes 1, 2, 4 and 5).

Through this program, over 10,000 tonnes of recyclables are generally collected each year, with approximately 74% of the total collected being from single-family, 10% from townhomes and 16% from apartments. Recycling volumes were notably reduced in 2009, by approximately 7%, likely due to economic conditions.

The City also provides a comprehensive Recycling Depot, which is available to all residents and small quantity commercial businesses. Residents (only) may also drop off unlimited quantities of yard trimmings at the Ecowaste Landfill.

In addition to the above, the City collects yard trimmings curbside weekly from single-family homes. This program was expanded in April, 2010 to include food scraps/organic waste. Early indications since this program started are that combined trimmings/food scraps are increased by just over 5%, while garbage volumes are reduced by more than 8% over the prior year. We have also seen a 25% increase in the volume of trimmings received at the Recycling Depot.

The next most logical step to expand recycling strategies for multi-family residents is to provide food scraps/organics collection. Yard trimmings collection can also be a component of this program. The initial focus of the expanded program as outlined in this report is for multi-family townhomes (and not apartments) as additional research is required relating to strategies involving organics collection from apartments.

This report presents three options for Council's consideration of different approaches to advance yard trimmings/food scraps/organics collection service to townhomes.

Collection Options

Option 1 - Implement Green Can Program for all Townhomes *(all who currently receive Blue Box Collection Service)*

This option would provide yard trimmings and food scraps/organics collection to townhomes in Richmond under the same program currently provided to residents in single-family homes, i.e. the "Green Can" program. The service would be provided to those townhome units currently serviced with the City's blue box collection program in a similar manner (door-to-door or similar). Service would be provided to approximately 10,200 units at 366 sites. Residents would provide their own "Green Can/s" and/or paper bags for trimmings and the existing recycling service contractor would provide weekly collection services under the same terms and conditions as the existing service provided to single-family homes. This would require an amendment to the scope of the existing contract agreement, and run through December 31, 2014 – the end of the current contract term. An amendment to the City's Solid Waste & Recycling Regulation Bylaw 6803 would be required to enact the program.

If this option is selected, the program could commence the week of April 4th, 2011. The estimated annual cost of this program is \$620,000, including collection, estimated processing fees (will vary depending on actual volumes received), program education and an additional customer service support representative to address on-going enquiries. One time start up costs are estimated at \$50,000 (education, delivery of labels, etc.). Based on an April 1, 2011 start date, costs in the first year only would be approximately \$465,000 operating plus \$50,000 start up costs for a total of \$515,000, plus taxes. This program would result in an additional annual cost to townhome residents of \$65.00-\$70.00 per unit (consistent to that for single-family residents).

The principal advantage of this option is that it mirrors the current program for single-family households at the same cost per unit. It also provides consistency in the level of service provided to residents. The disadvantage of this program is that diversion of yard trimmings is expected to be low given the make-up of the landscaping areas of complexes and typical service arrangements where trimmings are disposed separately by landscape contractors. In addition, the volume of food scraps recycled from townhomes can only be estimated at this time but is not expected to be significant in light of early indications from the Green Can program -- food scraps diversion is currently approximately 3% of garbage disposed from single-family homes. This could, therefore, represent a significant program to divert an unknown quantity of materials. Another challenge with recycling food scraps and trimmings in Green Cans is that due to the weight of these items, there have been issues with cans not being collected due to the fact they exceed maximum weights that collectors may service. Therefore, an alternative collection methodology may be more effective in diverting a higher percentage of waste.

Option 2 – Implement a Green Cart Pilot Program with a Limited Number of Townhomes *(Recommended) (a portion of those who currently receive Blue Box Collection Service)*

Under this option, a 9 month pilot program would be undertaken starting the week of April 4th through December 30, 2011 for 3,190 units involving 84 sites with door-to-door or similar service provided. Residents would be provided with one rodent-resistant cart (80-120 litres in

size) in which to place food scraps (along with any yard trimmings). In addition, residents could recycle additional trimmings (if any) in paper yard waste bags. The carts would be emptied with an automated cart tipping device, therefore, there would be no weight restrictions on the carts. Weight restrictions would continue to apply for any additional paper yard waste bags (i.e. 20 kg or 44 lbs). Given that a rodent-resistant cart is provided, participation in food scraps diversion is expected to be higher than with the Green Can program. This program would require a temporary agreement to expand the scope of the existing contract with the City's existing service provider for the duration of the pilot program.

Based on an annual program cost of \$330,000, the cost for the 9-month pilot program would be approximately \$250,000 (including collection and estimated processing). In addition, there would be a capital cost to provide the carts (including assembly, preparation, delivery, etc.) of approximately \$200,000 for a total cost of \$450,000, plus taxes, in 2011. If this option were selected, staff would recommend that residents participating in the pilot program not be assessed the associated costs since the purpose of the pilot is to gain information about participation levels, contamination levels, volumes diverted, feedback on the cart system, etc. In addition to staff measuring diversion from this program, residents would be surveyed about the program to obtain important feedback for potential future development of cart-based collection programs. Staff would suggest that the pilot program costs be funded from the sanitation and recycling provision account.

The advantage of this option is that it allows the City to gain insights into cart-based collection systems for organic waste and measure public response to the program. This can be done under a short-term arrangement with no contractual commitments to continue the program at its conclusion. The results of this program can then be used to compare cart-based collection vs. can-based collection for future direction of organics delivery programs.

Potential disadvantages of this program could be the service variation between single-family and townhome residents (can vs. cart collection). Further, the pilot program would be provided to slightly less than 1/3 of townhome residents who could be impacted should the program be decommissioned at the conclusion of the pilot. It is noteworthy that cart-based collection programs are typically more costly than can-based programs (estimated \$105/household annually vs. \$65-\$70/household annually) due to the additional time associated with cycling of the automated tipping devices.

This option is recommended by staff as it allows the opportunity to collect important information necessary for the future development of cart-based organics collection programs for multi-family residents under a limited and specified contract term. The program may be discontinued at the conclusion of the pilot without the requirement for an ongoing contract or financial commitment.

Option 3 – Implement Green Cart Program for all Townhomes
(who currently receive Blue Box Collection Service)

This option is similar to Option 2, except with trimmings/food scraps and organic service provide to all townhomes who currently receive blue box collection services – approximately 10,200 units involving 366 sites – using City-provided carts. The program parameters and provisions would be the same as Option 2, except that the program would be fully implemented

as opposed to undertaken on a pilot basis. The program would be tied into the current service agreement to the end of the contract term or to December 31, 2014. The agreement would need to be amended in order to expand the scope of the existing contract. This option would also require an amendment to Solid Waste and Recycling Regulation Bylaw 6803 to provide authority to put the program into effect.

The estimated annual operating cost for full implementation of the Green Cart program to all 10,200 townhome units would be approximately \$1,050,000, including cart collection, estimated processing fees, program education, and an additional customer service support representative to address on-going enquiries. Given an April, 2011 commencement date, 2011 operating costs would be approximately \$800,000 plus approximately \$550,000 in capital costs for the purchase/delivery/distribution of carts, etc., for a total of \$1,350,000 in 2011.

If this option is selected, staff would propose that the capital costs be funded from the sanitation and recycling provision account. The operating costs would be charged via charges to program participants, at approximately \$105.00/household/year.

While this option may represent the future of collection programs in Richmond and elsewhere, it is not recommended at this time. Preference would be to obtain insights from the pilot program proposed under Option 2 prior to proceeding with a full cart-based program. This will allow costs and program parameters to potentially be re-tooled to result in greater collection and cost efficiencies.

Alternative to Above Options

An alternative to the above three options would be to establish a program based on either Green Can or Green Cart collection for townhomes and issue a tender to the marketplace to assess costs. The costs for Green Can collection under Option 1 are based on the current pricing structure for single-family homes. As such, staff are confident the cost is competitive. The costs for Green Cart collection under either Option 2 or 3 were negotiated with the current service provider. As cart-based collection programs are new to the region, there are no comparable private sector programs to compare to at this time. However, given our positive experience with the current service provider on past issues relating to costs, staff are confident that the costs for cart-based collection are comparable or better than that which would be achieved through tendering.

A summary of Options 1 – 3 is provided in Attachment 1.

Financial Impact

Costs to provide organics collection under the proposed pilot program, Option 2, is \$450,000 for 2011. This includes approximately \$410,000 for contract/collection fees, cart acquisition, labelling/artwork and cart delivery. A further \$40,000 is for the estimated organics processing fees, plus program education launch materials.

Funding has not been provided in the budget for this program. It is recommended that funding be from the sanitation and recycling provision account in 2011. Should Council determine to

continue and/or expand the program in 2012, the associated costs would be recovered from those receiving the service.

Staff note that the per tonne processing fees used in estimating the program costs are based on a higher rate than that outlined in the agreement for single-family Green Can materials currently being formulated with Fraser Richmond Soil & Fibre Ltd. (the location where materials collected under this program would be taken for composting). This is because the processing fees for multi-family materials are higher at Fraser Richmond due to the potential for higher contamination levels from this sector vs. single-family residences.

Conclusion

Expansion of organics collection to multi-family residents is the next progression in Richmond's already very successful recycling program. To ensure a well-planned program is ultimately delivered to multi-family residents, it is recommended that a 9-month pilot program be conducted during April-December, 2011 for approximately 1/3 of townhome residents using a cart-based collection program, i.e. "Green Cart".

Information from the pilot program will be invaluable in helping to shape future organics programs. The program proposed in Option 2 will provide a weekly door-to-door or similar style of collection service to approximately 3,200 townhome units. These units were selected to ensure even distribution of units over the 4-days of collection each week (Monday-Thursday). In addition, townhome units were selected based on interest expressed by residents at the early stages of implementation of the Green Can program to single-family residents.

Staff will report back to Council with results from the pilot program with recommendations for going forward with a more comprehensive program for yard trimmings and organics collection service for all multi-family residents.

This program supports the Integrated Solid Waste and Resource Management Plan for the Metro Vancouver region through additional waste diversion initiatives.



Suzanne Bycraft
Manager, Fleet & Environmental Programs
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SJB:

Attachment 1

| Option | Level of Service (Townhomes currently served with Blue Box Collection Program) | Diversion (tonnes) | Total Estimated Annual Operating Cost | 2011 Operating Cost (Assuming April start up) | One Time/ Capital Costs | Total Estimated 2011 Cost | Estimated Annual Cost per Unit | Added Resource Required | Added Contract Provisions |
|--------|---|-----------------------|---|--|-------------------------------|---------------------------------|---|-------------------------------|--|
| 1 | Green Can Program: Weekly organics collection in labelled cans/paper bags for approximately 10,200 units. Year round collection service. | ~ 1,000 | \$620,000 | \$465,000 | \$50,000 | \$515,000 | ~\$65-\$70 | 1 FTE | Expanded program scope to December 31, 2014 |
| 2 | Pilot Green Cart Program from April, 2011 – December, 2011: Weekly organics collection in City-provided carts plus collection of paper yard waste bags for 3,190 units. | ~ 350 | \$330,000 | \$250,000 | \$200,000 | \$450,000 | ~\$105 ¹ | N/A | Temporary agreement for program scope expansion from April 4, 2011 through December 30, 2011 |
| 3 | Green Cart Program: Weekly organics collection in City-provided carts for approximately 10,200 units. Year round collection service. | ~ 1,500 | \$1,050,000 | \$800,000 | \$550,000 | \$1,350,000 | ~\$105 | 1 FTE | Expanded program scope to December 31, 2014 |

¹ Cost is provided for information purposes. It is not recommended to charge pilot program participants this cost.