

NO: **R075**

COUNCIL DATE: **April 23, 2012**

REGULAR COUNCIL

TO: **Mayor & Council**

DATE: **April 18, 2012**

FROM: **General Manager, Engineering**

FILE: **2320-20 (Waste
Carts)**

SUBJECT: **Award of Contract for Waste Cart Assembly and Distribution and for Waste
Cart Management and Maintenance**

RECOMMENDATION

The Engineering Department recommends that Council:

1. Award a contract to Loubac Inc. for the assembly and distribution of waste collection carts as generally described in this report at a cost of \$836,640 including HST; and
2. Set the expenditure authorization limit for the cart assembly and distribution contract at \$1,105,440 including contingency and HST;
3. Award a contract to Loubac Inc. for the management and maintenance of waste carts as generally described in this report for a five-year term commencing May 1, 2012 and ending on April 30, 2017, with an option in favour of the City to extend the contract for up to an additional five years on the same terms and conditions and with the contract amount being \$217,788, including HST, in the first year and with the following price adjustments over time:
 - a) Harmonized Sales Tax (HST) will be payable until the Goods and Services Tax (GST) is reinstated, after which the GST will be payable;
 - b) Monthly adjustments to reflect growth in the customer base, which will reflect the number of waste carts to be serviced under the contract;
 - c) An annual adjustment to the unit rates based on the change in the Consumer Price Index during the immediately preceding 12-month period; and
 - d) Commencing in the third year, an annual fuel lump sum payment based on the change in the annual average fuel price (based on Natural Resources Canada - Vancouver Average Retail Price for Fuel) between the immediately preceding year and the prior year multiplied by the Contractor's total fuel consumption (in litres) in the immediately preceding year for providing services under the contract.

BACKGROUND

At its Regular meeting on March 12, 2012 Council approved the award of a contract for the procurement of approximately 300,000 waste carts that will be distributed for use by Surrey's 100,000 customers (at 3 carts per household) when the City's new cart-based waste collection program commences on October 1st, 2012. A copy of the Corporate Report that was considered by Council on March 12, 2012, titled "Award of Contract No. 1220-030-2012-004 for the Manufacture and Supply of Waste Carts" is attached as Appendix I.

In addition to initiating a procurement process for waste carts, earlier this year the Engineering Department released RFP No. 1220-030-2012-005 for Waste Cart Assembly, Distribution and Management.

The purpose of the RFP is to retain a contractor to perform the services that are described in the following sections of this report:

1. Initial Cart Assembly and Distribution

- a) Receive and assemble the (approximately 300,000) manufactured carts at a number of distribution points across Surrey;
- b) Distribute approximately 300,000 carts of various sizes to the City's customer base (100,000 households x 3 carts per household) by September 15th, 2012;
- c) Deliver educational/promotional material and a kitchen catcher to each household during cart delivery;
- d) Provide custom delivery reports and an electronic database for all carts associating the cart serial numbers along with the date and time of delivery to each specific customer address and other related information;
- e) Establish and operate a call centre to receive and respond to inquiries from residents relating to cart deliveries and other related matters; and
- f) Provide field repairs or replacement of carts that are damaged during delivery within five business days of receiving the initial request.

2. Ongoing Cart Management and Maintenance Services

- a) Operate a customer call centre to receive and respond to customer requests for new and/or replacement carts; manage customer complaints related to damaged carts; and to address any other customer concerns related to waste carts;
- b) Operate a maintenance facility in Surrey to support cart repairs and to store cart parts and cart inventory;
- c) Manage the database of all the City's waste cart inventory in service and in stock; and
- d) Provide custom reports to the City and update the database in relation to all work orders for cart repairs, replacement and/or exchange.

DISCUSSION

The City advertised the subject Request for Proposal (RFP) on the City's website and on the BC Bid website. A total of eight proposals compliant with the requirements of the RFP were received by the closing date of February 14, 2012. A ninth proposal was submitted after the deadline for receipt of proposals as specified in RFP and was therefore not accepted by the City.

The following companies submitted a proposal (in alphabetical order):

1. Delta Global Logistics Inc. (DGL)
2. Drader Manufacturing Industries Ltd. (Drader)
3. Ever Green Ecological Services (EGES)
4. Loubac Inc. (Loubac)
5. Rehrig Pacific Company (Rehrig)
6. Rollins Machinery Limited (Rollins)

- 7. Steel Container Systems (SCS)
- 8. Toter Inc. (Toter)

EVALUATION

Each proposal was assessed in accordance with the Evaluation Criteria specified in the RFP document. All proposals were fully compliant with the scope of services as identified in the RFP and each proponent was assessed as having the necessary experience and resources to carry out the work as specified in the RFP. As such, the evaluation of the proposals rested primarily on the rates that each proponent submitted in relation to the components of work associated with the contract.

1. Cart Assembly and Distribution

At the time that the subject RFP was issued, it had not yet been established as to when the cart manufacturer would deliver the carts to the City for assembly and distribution since the RFP related to cart manufacturing and supply had not yet closed. To this end, the RFP required proponents to reflect Assembly and Distribution Costs based on a number of commencement dates.

City Council has recently awarded the contract for manufacturing and delivering the waste carts to Toter who has subsequently advised staff that the carts will be delivered to Surrey by late June/early July 2012. As such the contract that is the subject of this report will commence on July 15th 2012.

Table 1 documents the annual rate that was included in the proposal from each respective proponent based on a July 15th, 2012 start date for the contract and also documents the annual rate from each proponent based on three alternative contract start dates.

Table 1: Proponent Assembly & Distribution Costs

Proponent	Assembly and Distribution			
	July 1 Start	July 15 Start	August 1 Start	August 15 Start
Loubac	\$687,000	\$747,000	\$837,000	\$987,000
DGL	\$780,000	\$780,000	\$780,000	\$780,000
EGES	\$735,000	\$780,000	\$822,000	\$909,000
Rehrig	\$1,050,000	\$1,050,000	\$1,050,000	\$1,050,000
Drader	\$1,326,000	\$1,248,000	\$1,344,000	\$1,428,000
Toter	\$1,185,000	\$1,380,000	\$1,605,000	\$1,908,000
SCS	\$1,494,000	\$1,554,000	No Price	No Price
Rollins	No Price	No Price	No Price	No Price

In any case, the RFP required that cart assembly and distribution be completed by mid-September 2012, two weeks ahead of the October 1st, 2012 commencement date for the new waste collection contract.

EGES required that the City secure (at the City’s cost) the necessary staging areas for assembly and distribution of carts. Each of the other proponents advised that they will secure their own staging areas and that the related costs are included within their submission.

Rollins did not provide pricing for assembly and distribution but rather restricted their proposal to pricing for cart management.

2. Cart Management and Maintenance Services

Following completion of the cart assembly and distribution, the City will require ongoing cart management and maintenance services as described in the “Background” section of this report.

Table 1 documents the annual rate that was included in the proposal from each respective proponent for cart management services.

Table 2: Cart Management Costs

Proponent	Cart Management Annual Cost
Loubac	\$194,400
DGL	\$288,000
Rehrig	\$324,000
Drader	\$504,000
SCS	\$576,000
Rollins	\$684,000
Toter	\$756,000
EGES	\$892,800

3. Results:

Loubac has proposed the lowest overall cost for each of assembly and distribution of waste carts (based on a July 15, 2012 commencement date) and on-going cart management and maintenance.

Loubac Inc. is a Quebec-based company that has been in the cart distribution and management industry since 1991 and is or has been involved in over 150 waste cart-related projects. They have completed multiple assembly and distribution contracts that involve between 35,000 to 200,000 carts for municipalities across Canada and are successfully delivering cart management programs involving over 600,000 carts. Enterprise BFI Canada, the City’s new waste contractor, has advised Engineering staff that their district office in Quebec has contracted Loubac Inc. for the delivery and ongoing management of 110,000 waste carts and that their experience has been positive.

Staff has completed reference checks with respect to Loubac with these checks verifying positive experiences with Loubac Inc.’s performance.

Based on Loubac’s lowest overall costs and favourable reference feedback, the Engineering Department has concluded that both components of the subject contract should be awarded to Loubac, Inc. Staff is recommending that the expenditure authorization for the assembly and distribution contract allow for late delivery of the carts, which is unlikely but will allow for expedient cart delivery should such an eventuality occur.

CONCLUSION

Based on the above discussion, it is recommended that Council:

1. Award a contract to Loubac Inc. for the assembly and distribution of waste collection carts as generally described in this report at a cost of \$836,640 including HST; and
2. Set the expenditure authorization limit for the cart assembly and distribution contract at \$1,105,440 including contingency and HST;
3. Award a contract to Loubac Inc. for the management and maintenance of waste carts as generally described in this report for a five-year term commencing May 1, 2012 and ending on April 30, 2017, with an option in favour of the City to extend the contract for up to an additional five years on the same terms and conditions and with the contract amount being \$217,788, including HST, in the first year and with the following price adjustments over time:
 - a) Harmonized Sales Tax (HST) will be payable until the Goods and Services Tax (GST) is reinstated, after which the GST will be payable;
 - b) Monthly adjustments to reflect growth in the customer base, which will reflect the number of waste carts to be serviced under the contract;
 - c) An annual adjustment to the unit rates based on the change in the Consumer Price Index during the immediately preceding 12-month period; and
 - d) Commencing in the third year, an annual fuel lump sum payment based on the change in the annual average fuel price (based on Natural Resources Canada - Vancouver Average Retail Price for Fuel) between the immediately preceding year and the prior year multiplied by the Contractor's total fuel consumption (in litres) in the immediately preceding year for providing services under the contract.

Vincent Lalonde, P.Eng.
General Manager, Engineering

VL/RAC:ajs/brb

Appendix I: Corporate Report No. R047; 2012, titled "Award of Contract No. 1220-030-2012-004 for the Manufacture and Supply of Waste Carts"

NO: **R047** COUNCIL DATE: **March 12, 2012**

REGULAR COUNCIL

TO: **Mayor & Council** DATE: **March 8, 2012**
FROM: **General Manager, Engineering** FILE: **2320-20(garbage)**
SUBJECT: **Award of Contract No. 1220-030-2012-004 for the Manufacture and Supply of Waste Carts**

RECOMMENDATION

The Engineering Department recommends that Council:

1. Award Contract No. 1220-030-2012-004 for the manufacture and supply of waste carts to Toter Inc. at the unit price for each cart size quoted in their proposal with the total amount of the contract to be determined based on the total number of carts in each size as selected by the City's waste collection customers; and
2. Set the expenditure authorization limit for Contract No. 1220-030-2012-004 at \$14,500,000, including HST.

BACKGROUND

At a meeting on December 12, 2011 Council approved the award of the contract for Curbside Waste Collection Services to BFI Canada Inc. with the contract to commence on October 1st, 2012. The approved waste collection services will be carried out by way of a cart-based collection system with organic waste being collected weekly and garbage and recyclables being collected on an alternating bi-weekly cycle. This model was selected based on the success of a pilot program, which was initiated in November 2010 and involved 2,000 households in neighbourhoods in various areas of the City. The efficacy of this model was reinforced by a 2010 survey where respondents strongly favoured this approach to waste collection.

Based on the results of the pilot program, this service model also achieves a high level of organics waste diversion and offers lower overall cost for waste collection services in comparison to the approach that the City has been using.

A copy of the Corporate Report that was considered by Council on December 12, 2011, titled "Award of Contract for Curbside Waste Collection Services", is attached as Appendix I.

Collectively, there are currently approximately 100,000 households from which waste is collected in Surrey as follows:

1.	68,500	Single Family Houses without a secondary suite
2.	17,000	Single Family Houses with a secondary suite
3.	<u>14,500</u>	Townhomes
	100,000	

Each household will require 3 separate carts; one for each of organics, garbage and recyclables. As such, a total of 300,000 carts will need to be manufactured and delivered in advance of October 1, 2012, the date on which the new contract commences.

DISCUSSION

In January 2012 Request for Proposals No. 1220-030-2012-004 (the "RFP") was issued for the Manufacturing and Supply of Waste Carts that are required for the new waste collection service model. The RFP closed on February 8, 2012. The City received a proposal from each of the following proponents (listed in alphabetical order):

1. Cascade Engineering (Cascade)
2. IPL Inc. (IPL)
3. Otto Environmental Systems North America, Inc. (Otto)
4. Rehrig Pacific Company (Rehrig)
5. Schaefer Systems International Ltd. (Schaefer)
6. Toter Inc. (Toter)

Proponents were required to provide samples and unit pricing for each of various cart sizes ranging from less than 120 litres in volume to 360 litres in volume all meeting certain defined specifications. A summary of an assessment of each cart size is provided in Appendix II.

RFP Results

Each of the proposals was reviewed for accuracy and completeness with no errors or omissions being found. The carts as proposed in each case were deemed to meet the City's technical specifications. The warranty period offered by each proponent was consistent at 10 years and each offered similar coverage. All of the proponents are deemed to be experienced and reputable with regard to the manufacturing and supply of waste carts.

EVALUATION

Each of the proponents was required to provide the City with sample carts representing the various sizes on which they bid. The samples allowed staff to better understand the design and scale of each cart. Images of the carts offered by each proponent are attached as Appendix III.

Surveys and Field Analysis for Size of Carts

A survey of households in the City's pilot waste collection program solicited information on the level of satisfaction customers experienced related to the cart provided in pilot program. In the pilot program 1,000 households were provided with 240 litre carts for each of organics, garbage and recycling. The survey results show that the 240 litre cart size was viewed as being satisfactory

for each of organics, recycling and garbage by a majority of owners. The following list summarizes the level of support that was shown for the 240 litre cart size:

1. 240 litre Organics cart size: 87% support;
2. 240 litre Recycling cart size: 83% support; and
3. 240 litre Garbage cart size: 86% support

The 240 litre volume was sufficient in the significant majority of households to receive the amount of organics, recycling and garbage produced during the weekly or bi-weekly collection cycle. A relatively low percentage of households were found to use additional waste receptacles due to having volumes of waste that exceeded the capacity of a 240 litre cart as follows:

1. 3% Organic waste overage (weekly collection)
2. 13% Recycling waste overage (biweekly collection)
3. 12% Garbage waste overage (biweekly collection)

It was estimated that 15% of the 1,000 pilot households contained a secondary suite, which contributed waste to the same carts as the principal dwelling and which likely caused the majority of weekly overages.

Recommended Cart Sizes

Using the information in the previous section of this report and based on a survey of the experiences of other municipalities who are already involved in cart-based collection waste services, staff developed a "recommended cart size" for each of the various types of households as summarized in Table 1 below.

Table 1: Recommended Cart Size

Customer Unit Type	No. of Customer Units	Cart Size & Total Number of Carts Required (at 3 Carts Per Unit)			
		360 litre	240 litre	180 litre	120 litre
Single Family Household (no suite)	68,500		205,500		
Single Family Household containing a secondary suite	17,000	34,000	17,000		
Multi-family dwelling	14,500		14,500	14,500	14,500
Totals:	100,000 households	34,000 carts	237,000 carts	14,500 carts	14,500 carts

In March 2012 the Engineering Department will canvass each household that receives waste collection service to determine the cart size that the occupants of each household prefers and will use the information in the above table to provide advice on the size that appears to be best suited for each particular type of household. Although the Engineering Department will recommend sizes for each type of household, residents will ultimately have a choice of size.

A communication plan is being developed that will explain to residents that the carts will be delivered during the summer months of 2012 and that will provide illustrations of the carts they will be receiving. In addition, a Questions & Answers section will be included that will cover a number of commonly asked questions. The communication forwarded to residents will also

advise that “sample carts” of each size will be made available for viewing at specified City recreation centres and libraries to assist them in selecting the appropriate cart size to meet their individual needs. Customers will be advised that they can inform the City of their selection by way of the City website or by standard mail. It is expected that the process may result in some variance in numbers for each cart size than the estimated numbers that are listed in Table 1 above.

RFP Evaluation

Cascade Engineering

The proposal from Cascade could not deliver the supply of the carts to meet the start-up deadline of October 1, 2012.

Staff has entered into an agreement BFI Canada that specifies an October 1st, 2012 contract start date and has given the City’s current waste collection contractor, Emterra Environmental, notice that their contract will terminate on September 30th, 2012. Staff has also announced to the public October 1st, 2012 as the start date for the new waste collection service start date and established a number of targets relating to this date.

Delaying the contract start date is outside the terms of the contract that has been executed with BFI.

Recommended Service Provider: Toter Inc.

Toter is the lowest bidder that has the capacity to manufacture the City’s required carts volumes and sizes within the specified delivery time frame.

Toter carts were used in the City’s pilot waste collection program and have been functioning without any significant issues. Toter is a leading supplier of wheeled carts used for curbside automated waste collection by cities and private waste haulers throughout North America. Locally, the cities of Vancouver and Burnaby use the Toter brand cart for their respective curbside collection programs.

Environmentally, the Toter carts are 100% recyclable, repairable if damaged, which avoids the need for replacement carts, and are manufactured using up to 50% recycled content.

Outcome of Evaluation

Based on the evaluation of the proposals, it is recommended that the City award the Manufacturing and Supply of Waste Cart Contract to Toter, Inc. Toter is the lowest bidder that has the capacity to manufacture the City’s required carts volumes and sizes within the specified delivery time frame. Toter’s carts also deliver the best on the overall preferred aesthetics and functionality.

Funding

The maximum total cost to purchase the Toter carts based on quantity and size is \$14,500,000 including HST.

The cart expenditure would be amortized over the 10-year warranty period of the cart. Using a 10-year straight-line amortization period, this translates to an annual maximum cost of \$14.50 per household/year (\$4.83 per cart per year), which is consistent with budgeted estimates.

RFP Related to Cart Assembly, Delivery and Managements

The Engineering Department has issued a separate RFP for the Assembly, Distribution and Management of the waste carts. The contractor awarded this contract will be responsible for receiving the manufactured carts; preparing each cart for delivery; delivering the requested size of carts to each household; and providing ongoing management of customer requests/complaints relating to the carts. These components of work were separated from the cart manufacturing and supply component since they represent a significantly different set of skills. Staff's objective is to procure the best value for the City's waste collection customers.

A separate report complete with recommendations will be forwarded to Council in due course in relation to this RFP process.

RFP for Marketing and Communications Assistance

The Engineering Department is also presently engaged in an RFP process for the purpose of retaining a Marketing and Communications firm to provide assistance in relation to informing the City's waste collection customers about the waste collection service changes that will occur at the start of the new contract on October 1, 2012.

A separate report complete with recommendations will be forwarded to Council in due course in relation to this RFP process.

Disposal of Existing Waste Receptacles

A question that is expected to arise pertains to what household owners should do with their existing waste receptacles. In this regard, staff will be advising all households that, at the option of the homeowner, the City will collect and recycle these receptacles at no charge. Residents will also be advised that they can use their existing receptacles for any overages of waste materials (i.e., amounts that exceed the cart capacity) that may occur from time to time.

CONCLUSION

Based on the above discussion, it is recommended that Council:

- Award Contract No. 1220-030-2012-004 for the manufacture and supply of waste carts to Toter Inc. at the unit price for each cart size quoted in their proposal with the total amount of the contract to be determined based on the total number of carts in each size as selected by the City's waste collection customers; and
- Set the expenditure authorization limit for Contract No. 1220-030-2012-004 at \$14,500,000, including HST.



Vincent Lalonde, P.Eng.
General Manager, Engineering

VL/RAC/brb

Appendix I: Corporate Report dated December 12, 2011, titled "Award of Contract for Curbside Waste Collection Services"

Appendix II: Comments on Carts of Varying Sizes

Appendix III: Proponent Carts - Appearance and Size

NO: COUNCIL DATE: **December 12, 2011**

TO: **Mayor & Council** DATE: **December 8, 2011**
FROM: **General Manager, Engineering** FILE: **2320-20(garbage)**
SUBJECT: **Award of Contract for Curbside Waste Collection Services**

RECOMMENDATION

The Engineering Department recommends that Council:

- 1) approve the award of the Curb-side Waste Collection Services Contract to BFI Canada, Inc., as recommended by the Evaluation Committee, in accordance with the terms included in the RFP, for a seven-year term commencing on October 1, 2012 and ending on September 30, 2019, with an option in favour of the City to extend the contract for up to an additional 3 years on the same terms and conditions, with the contract having an annual cost in the first year of \$9,505,923 and providing for the following price adjustments:
 - a) The Harmonized Sales Tax (HST) will be payable until the Goods and Services Tax (GST) is reinstated, after which the GST will be paid on the contract;
 - b) Monthly adjustments to reflect growth in the customer base that will be reflected in the ongoing increase to the number of waste carts to be serviced and waste tonnage collected and transported to waste facilities;
 - c) An inflation adjustment, which will be applied annually at the anniversary date of the contract, based on a blend of the changes in the following indices for the immediately preceding 12 month period:
 - (1) Vancouver Consumer Price Index;
 - (2) The percentage change as reported by Statistics Canada in the annual average price for commercial fuel natural gas for Vancouver; and
 - (3) The percentage change as reported by Statistics Canada for *Total Compensation per Hour Worked for Waste Management Services* for the most recently completed calendar year;
 - d) A transportation adjustment amount in the event of that the contractor is directed to off-load waste at an alternative waste disposal facility other than those reflected in the current contract for a prolonged period of time;
 - e) Monthly benefit payment or deduction based on the frequency of "missed collections";
 - f) Monthly Non-Performance Deductions; and
 - g) Quarterly Collaboration Payments or Deductions; and
- 2) authorize staff to make public this report and Council's resolution related to this report once all of the proponents have been informed by staff about the City's decision in relation to the award of the contract.

INTENT

This report provides an overview of a Request for Proposals (RFP) process that has been undertaken for the purpose of engaging a contractor for the provision of residential curbside waste collection services for a seven-year period commencing on October 1, 2012 and seeks to obtain Council approval for the award of such a contract with an option in favour of the City to extend the contract for a period of up to an additional three years.

BACKGROUND

Existing Service Provider

The City's current Curb-side Waste Collection Contractor is Emterra Environmental (Emterra). This contract includes weekly waste, recycling and yard waste collection for single-family residences and recycling collection for multi-family residences. The services include disposal of these materials at appropriate facilities located within the Region. The current collection services also include a Large Item Pick-Up (LIPU) program, which allows residents the opportunity to dispose of up to 4 large household items at curbside during each calendar year. The contract also includes the weekly collection of recyclables from City facilities.

The current contract with Emterra expires on September 30, 2012.

Objectives for Waste Collection Services

In early June 2011 an RFP was issued for Curbside Waste Collection Services. The objectives for these services as defined in the RFP document are as follows:

Surrey is interested in entering into a cooperative, mutually beneficial commercial relationship with a Proponent, or a number of Proponents if Surrey elects to divide the Services into more than one contract, to assist Surrey in achieving the following objectives relating to the Services:

- a. the performance of the Services in a cost effective manner, maximizing overall collection system value and optimizing capital, operation and maintenance costs;*
- b. the provision to customers of a high quality and reliable collection service which includes the flexibility to revise or replace the Services, in whole or in part, to deal with poor service performance;*
- c. the reduction of adverse environmental impacts from the performance of the Services, including where appropriate the adoption of clean technologies;*
- d. the increase of diversion of materials from traditional disposal sites such as landfills;*
- e. the minimizing of customer complaints, confusion and service disruptions, particularly during the initial implementation of the Services;*
- f. the provision of opportunities for contractor innovation and public/private partnership participation in the preparation of Proposals under this RFP, and in the performance of the Services during the term of the Contract; and*

- g. *the retention of flexibility during the term of the contract to allow for the introduction of new services desired by customers and for the modification of the Services during the term of the contract where appropriate.*

Organics Pilot Program

The Metro Vancouver (MV) Integrated Solid Waste and Resource Management Plan (ISWRMP) requires regional waste diversion to increase from 55% to 70% by 2015. Diversion of municipal residential curbside organic (food) waste is identified as one of the significant requirements of the ISWRMP. Accordingly, MV proposes a full organics waste ban at landfills by 2015.

In November 2010, the Engineering Department initiated a pilot cart-based organic waste collection program (food and yard waste collected in the same cart) to over 2,000 households across the City. The purpose of the pilot was to gauge the effectiveness of alternative waste collection approaches in diverting residential organics waste. The pilot program was also used to gauge customer acceptance of cart-based collections and service frequency options.

Under the pilot program 1,000 households were provided with new waste carts for each of garbage, recyclables and organics and continued on the standard weekly collection program receiving weekly garbage, recyclables and organics collection. A second group of 1,000 households were provided with new garbage carts and were provided with an alternative waste collections cycle. Under this alternative cycle, the households received weekly organics collection service and alternating bi-weekly garbage and recycling collection. For the purpose of the pilot program, and based on previous surveys carried out by the City regarding preferred cart sizes, both groups received 240 litre waste carts. Corporate Report No. R229; 2010, titled "Pilot Program - Curbside Residential Organics Collection" attached as Appendix I, describes the pilot program in more detail.

Organic Pilot Program Results

Waste Composition Study

In February 2011, 4 months following the initiation of the pilot cart-based organics collection program, the Engineering Department carried out a waste composition study to determine the level of organic waste present in the garbage stream. In July 2011, a similar study was conducted. The results of these waste composition studies are reflected in Table 1 below:

Table 1: Waste Composition Results: % of Organic Waste Present in the Garbage Stream				
2009/2010 Baseline Waste Composition Study	February 2011 Study		July 2011 Study	
No Organics Collection Current City Service: Weekly Garbage, Recycling and Yard Waste Collection	Pilot Group 1 Weekly Organics Cart, with Weekly Garbage & Recycling (no carts)	Pilot Group 2 Weekly Organics Cart, Alternating Biweekly Garbage & Recycling Carts	Pilot Group 1 Weekly Organics Cart, with Weekly Garbage & Recycling (no carts)	Pilot Group 2 Weekly Organics Cart, Alternating Biweekly Garbage & Recycling Carts
65%	32%	33%	32%	20%

Pilot households receiving weekly organics collection with biweekly garbage and recyclables collection service are achieving the highest level of organic waste diversion compared to other households that receive weekly collection of all waste streams. These results are consistent with similar studies carried out across a number of North American cities.

Customer Satisfaction Survey

Staff undertook a customer satisfaction survey in July 2011 with the 1,000 pilot households receiving weekly organics collection with biweekly garbage and recyclables service. Responses were received from 50% of these households, representing a 99% confidence level with a 4% margin of error.

The high level results of this survey are outlined in Table 2 below:

Table 2: Survey Questions		Average Response
1.	On a scale of 1 to 10, with 10 being the most convenient, how would you rate the convenience of the cart-based collection program?	8.3
2.	On a scale of 1 to 10, with 10 being the most supportive, how would you rate your supportiveness of the cart-based collection program?	9.0
3.	Are you still using your organics cart?	94% (yes)
4.	What are you using your organics cart for?	87% yard waste 88% kitchen waste
5.	Are you still using Kraft bags for your yard waste when your cart is full?	63% (yes)
6.	If given the option would you prefer a larger (364L) organics cart?	87% (no)
7.	Are you still using your City provided (in kitchen) kitchen catcher?	83% (yes)
8.	Are you finding that you have less garbage with the organics collection program?	76% (yes)
9.	How often do you place your garbage collection cart out?	96% biweekly

Survey results are documented in greater detail in Appendix II attached to this report.

Effectiveness of 240-litre Cart-Size

In the fall of 2011, Engineering staff carried out a study at the pilot households receiving weekly organics collection with biweekly garbage and recyclables service to determine if the 240 litre waste carts have sufficient capacity for this service frequency. The results of this analysis are documented in Table 3 below:

Table 3: Organics Pilot Program Cart Capacity: % of Waste Volume Present in Each Waste Cart at Curbside				
Collection Day	Week 1		Week 2	
	Organics Cart	Recycling Cart	Organics Cart	Garbage Cart
Monday	68%	82%	71%	63%
Tuesday	56%	89%	59%	78%
Wednesday	67%	81%	67%	74%
Thursday	51%	85%	48%	73%
Friday	37%	87%	41%	71%
City Average	56%	84%	57%	72%

The results of the study confirm that, on average, the 240-litre cart provides the necessary capacity for single-family households for the stated collection frequency. In instances where the collection cart was at full capacity, residents were placing overages in other waste receptacles alongside the full cart.

DISCUSSION

A Request for Proposals was issued in June 2011 for the provision of residential curbside waste collection services. The following is a synopsis of the Scope of Services as contained within the RFP:

CATEGORIES OF WASTE SERVICE REQUIREMENTS

The RFP described categories of services required by the City as follows:

1. Waste Collection Services

- a) Collection of garbage, recyclables and organics (kitchen and yard waste) from single-family dwellings including secondary suites;
- b) Collection of recyclables from multi-family complexes with a phase-in approach to including organics collection;
- c) Collection of recyclables from City facilities with a phase-in approach to including organics collection;
- d) Large Item Pick-up (LIPU) collection from single-family dwellings – up to 4 large items per residence per year as scheduled by residents; and
- e) Extra services including the provision of equipment and resources (via hourly rates).

2. Waste Disposal and Processing

Collected waste was to be delivered to drop off points as follows:

- a) Garbage: Garbage waste is to be delivered to the Surrey Transfer Station located in Port Kells. Billing of disposal costs will be managed between Metro Vancouver and the City, with Surrey providing payment directly to Metro Vancouver as per Surrey's existing practice;
- b) Organic Waste (Kitchen and Yard Waste): Proponents were instructed that organic waste would be delivered to City's existing yard waste processor, Fraser Richmond Soil & Fibre (FRSF), located in Richmond, BC. Proponents were also advised that the City is considering the development of an Organics Biofuel Processing facility in Port Kells to which organics waste may be diverted during the term of the contract.

As per the RFP, if the contractor is directed to transport organics to a facility other than the FRSF site, a Transportation Adjustment mechanism in the Contract will apply to the contract price. When applying the Transportation Adjustment, a diversion of organic waste to the proposed Surrey Organics Biofuel processing facility will reduce contract costs by approximately \$131,000 per year. (The Transportation Adjustment factor would also be applicable to all waste streams if the City were to redirect waste to alternative disposal facilities for periods beyond two weeks.)

- c) Recyclables: Proponents were required to demonstrate that the recyclables collected as part of the services would be delivered to a viable processor that will accept single-stream recyclables materials for the purpose of sorting and sale to commercial markets with the intent of maximizing revenues.

RFP BASE REQUIREMENTS AND SERVICE FREQUENCY VARIATIONS

The following outlines the base requirements and potential variations as identified in the RFP. Proponents were requested to provide proposals with pricing based on some or all of stated options. Proponents were also free to provide alternative options to any or all of the base service, price adjustment terms or technology requirements.

1. Seven Year Contract Term with Three Year Option Period

The Contract term is seven years, with an option in favour of the City for up to a three-year extension of the contract on the same terms and conditions as the original contract.

2. Option to Bid on City-wide Collection Services or Two sub-areas into which the City would be divided:

The RFP divided the City into 2 separate approximately equal sub-areas with each containing approximately 50,000 single-family households. Proponents could submit a proposal on one or both of the sub-areas.

3. CNG Fleet:

The RFP document required the waste collection fleet to be powered by Compressed Natural Gas (CNG) from the outset of the contract term. Given that CNG has a carbon emission factor that is 30% lower than diesel, this provides a reduced carbon footprint for the City consistent with the objectives of the City's Sustainability Charter. The development of an Organics Biofuel Processing Facility by the City could provide fuel for CNG-powered vehicles.

4. Cart-based Collection System:

The RFP requested proponents to provide prices reflecting a cart-based collection system. Cart-based collection systems generally improve aesthetics, reduce potential for scattered litter, reduce worker injuries and facilitate the introduction of modified waste collection schedules.

5. Service Frequency Options

The RFP allowed proponents to provide pricing for each or any of the following service frequency options:

- a) Collection of all materials on a weekly basis (i.e., each of organics, garbage and recyclables collected weekly);
- b) Weekly collection of organics and recyclables with bi-weekly collection of garbage; and
- c) Weekly collection of organics with alternating bi-weekly collection of garbage and recyclables.

In each case, Proponents were allowed to provide pricing under each of the above-referenced options for each of the following two scenarios:

- i. **Surrey-Supplied CNG Fuelling Facilities Option:** Under this option Surrey would build, operate, maintain and own a CNG fuelling facility and a truck parking lot for the CNG-powered trucks, both located on Surrey-owned land adjacent to the Surrey Transfer Station and Surrey would provide CNG fuel and use of the storage area at no cost to the Contractor.
- ii. **Contractor-Supplied CNG Facilities Option:** Under this option the Contractor would provide or obtain from a third party all the CNG facilities including the CNG fuelling facility and the truck parking facility. The Contractor would pay for all CNG fuel and related services.

6. Contract Deductions and Bonus Incentives

The RFP specifies a list of Performance Deductions that will be applied in the event of specific failures by the Contractor to provide the Services or otherwise comply with the Contract. The failures listed in Appendix III reflect Service deficiencies that would trigger a deduction from the price the City would pay for the Services and which would be applied on a month by month basis.

The RFP specified that on a monthly basis, the City will apply contract bonus or deduction payments separately based on the frequency of missed collections and repeat missed collections up to a maximum monthly bonus of \$20,050 (in the unlikely event of zero missed collection over the entire month).

The RFP provides that the Contractor will work collaboratively with the City to provide effective service delivery, self monitoring and timely and accurate communication. Each quarter the City will credit or deduct from the Contract payments up to \$3,000 for each of the following listed items in relation to the performance of the Contractor in each area:

- a) Monitoring, resolving and reporting all service discrepancies;
- b) Completing all electronic communications as described in the Contractor's contract plan;
- c) Performing all services in accordance with Service standards; and
- d) Other major components as agreed by the City and the Contractor.

As such, if the Contractor was to meet all of the above targets on a consistent and continuous basis, they would receive bonus payments of \$12,000 each quarter (\$48,000 annually).

7. Recyclables Reporting and Processing

The Contract will require the Contractor to select and enter into a commercial agreement with a reputable operator of a recyclables Materials Recovery Facility (MRF) for the disposal and processing of recyclables.

The Contractor will be required to provide the City with detailed records of the recyclables that are collected at curbside on a monthly basis. The Contract provides for fines or penalties for improper handling or delivery of curbside recyclables to the MFR and also makes the Contractor responsible for all recyclables residual disposal costs.

The Contract will also require the operator of the MRF to report to the City information regarding the end-use of the recyclables, including the location of any markets to which the recyclables are sold and any additional information relative to the processing of the recyclables as may be requested by the City. The frequency of these reports will be at the discretion of the City.

The operator of the MRF facility will be required to use reasonable commercial efforts to minimize residual disposals. To this end, the City will work with both the collection Contractor and the MRF operator to define targets for residuals or contamination of the various product streams in an effort to maximize diversion and the end value of the recyclables as a commodity. These requirements should meet the intent of EAC's recommendations to Council from its October 26, 2011, meeting.

WASTE RFP ANALYSIS AND RESULTS

The RFP closed on October 28, 2011. The City received a total of six Proposals from each of the following Proponents (in alphabetical order):

1. BFI Canada Inc. (BFI)
2. GFL Environmental East Corporation (GFL)
3. Halton Recycling Ltd. dba Emterra Environmental (Emterra)
4. Sierra Waste Services Ltd. (Sierra)
5. Smithrite Disposal Ltd. (Smithrite)
6. Waste Management of Canada Corporation (WM)

All of the Proposals were found compliant and were fully evaluated by the Evaluation Committee as required by the RFP.

EVALUATION OF PROPOSALS

Evaluation Committee

Under the RFP, an Evaluation Committee comprised the following members was identified as being responsible for evaluating all proposal:

- General Manager, Engineering
- Manager, Operations
- Deputy Manager, Operations
- Assistant City Solicitor
- John Gibson, External Consultant
- Ed Steyh, External Consultant

The non-City members of the Committee, Mr. Ed Steyh and Mr. John Gibson, are consultants and recognized experts in waste collection from Seattle, Washington.

For the past 25 years, Mr. Gibson has delivered expert consultation services to municipalities within the Puget Sound area with a specialty in utility economics and a major emphasis on municipal solid waste including development of rates, forecasting, program evaluation and planning, contract evaluation and negotiations.

Mr. Steyh is the former Seattle Public Utilities Solid Waste Contract Manager. Following his retirement from Seattle Public Utilities in 2003, he has provided consulting services, mainly in partnership with Mr. Gibson, in relation to municipal solid waste RFPs.

Both consultants have significant experience with Puget Sound area municipalities, including the City of Seattle, and have successfully assisted municipalities with the formulation of RFPs and the selection of waste collection services contractors.

EVALUATION COMMITTEE CONCLUSIONS & RECOMMENDATIONS

Overall, Sierra and Smithrite were evaluated as not meeting the same threshold for consideration as the other four Proponents.

While there are differences between the remaining four Proponents (BFI, Emterra, GFL and WM), all of them are experienced and are capable of performing the Contract. The price of the Services to be delivered under the Contract was identified as the determining factor that would be used to establish the preferred proponent.

The RFP states that:

The Evaluation Committee may apply the evaluation criteria on a comparative basis, evaluating the Proposals by comparing one Proponent's Proposal to another Proponent's Proposal. Specific weightings are not assigned to the individual evaluation criteria, but it is anticipated that the Proposal that offers the greatest value for money will be judged as most advantageous. (emphasis added).

Accordingly, using price as the final determinant is consistent with the RFP. The proposal from BFI is the least costly proposal under all service options.

Summary of Evaluation Results:

The Evaluation Committee has concluded the following:

1. Use of a Single Contractor to Service the Entire City is Recommended:

The RFP price submissions demonstrated that this option provides the lowest costs in relation to the delivery of the contract services.

2. A Proponent Supplied CNG Fuelling Facility is Recommended:

The RFP submissions demonstrate that there is no price advantage, in fact there is a price disadvantage, in relation to the City providing a CNG fuelling facility and related fuel to the Contractor.

3. The Service Option that Provides for Cart-based Weekly Organics Waste Collection with Alternating Bi-Weekly Cart-based Garbage & Recyclables Collection is Recommended:

Based on the City's pilot program weekly collection of organics with alternating bi-weekly garbage and recyclables collection is supported by residents. This service model also achieves

a high level of organics waste diversion and offers the lowest overall cost for waste collection services under the Contract.

RECOMMENDED PROPONENT – BFI CANADA, INC.

Based on the above, the Evaluation Committee has concluded that the proposal from BFI Canada, Inc. is most advantageous to the City.

With respect to the Evaluation Committee’s Recommended Service Options as noted in the immediately preceding section of this report, the prices offered by each of the Proponents are listed below:

<u>Proponent:</u>	<u>Annual Price:</u>
1. BFI	\$9,505,923
2. GFL	\$11,499,353
3. Emterra	\$12,192,761
4. WM	\$16,257,215
5. Sierra	\$33,561,217
6. Smithrite	No Price Offered

In addition to providing the lowest price for the recommended service option, BFI also submitted the lowest price bid in comparison to the proposals from the other proponents for all of the combination of services or service-delivery options articulated in the RFP.

In consideration of all service delivery options and alternatives proposed by the proponents to the RFP, the average premium relative to BFI’s proposed prices is documented below:

<u>Proponent:</u>	<u>Average Premium Compared to BFI’s Prices:</u>
1. BFI	
2. Emterra	16%
3. GFL	19%
4. WM	50%
5. Smithrite	111%
6. Sierra	202%

The City is currently paying \$12.3 million per year for waste collection services under a contract with Emterra. BFI’s proposal represents a savings to the City solid waste utility of approximately \$2.8 million per year for collection services.

BFI Canada, Inc. - Corporate Profile

BFI Canada, Inc. is the third largest non-hazardous solid waste management company in North America. They serve the needs of commercial, industrial and residential customers.

In the Lower Mainland, BFI cover the area from the North Shore to Harrison Hot Springs, with Commercial, Residential, and Industrial services for Garbage, Organics, and Recycling Services. In addition, BFI owns and operates a waste transfer station and a recycling facility located in Abbotsford (formally the Salish Waste Transfer Station).

BFI's offices and maintenance facilities are located in Abbotsford and Coquitlam. In Canada, BFI provides residential and commercial waste collection services across six provinces. In the US, BFI acquired IESI Corp. in 2005, adding operations in the US south and the US Northeast comprising 10 states. In 2010 BFI acquired Waste Services, Inc. (WSI) and added to its operations throughout Canada.

BFI Canada, IESI and WSI exist under the corporate name Progressive Waste Solutions, which is listed on the Toronto Stock Exchange and the New York Stock Exchange.

BFI Canada, Inc. - RFP Departures

BFI Canada did not reflect any departures to the RFP within their Proposal that were deemed to be material.

One of BFI's suggestions was that the City consider a Performance Bond in lieu of the RFP performance security requirement of a \$5 million dollar per year Letter of Credit (LOC). BFI did clarify that it would comply with the City's LOC's requirement if the Performance Bond was not deemed acceptable.

It is recommended that the City maintain its \$5 million LOC requirement for performance security at least at the outset (i.e. first year) of the contract based on the nature of this contract and the benefit that a LOC offers the City (immediately cashable) in the event of a service failure.

As noted previously in this report, BFI also suggested an alternative recyclables revenue sharing model. However, based on the Evaluation Committee's assessment, the Contract will adhere to the City's current revenue-risk sharing model for recyclables as was articulated within the RFP.

BFI Canada - Contract Commencement

BFI Canada has confirmed that they will be in position to commence service delivery on October 1st, 2012 provided that a contract award occurs in December 2011. Any delays to the award will require the new contract start date to be delayed for a similar period of time.

BFI have also confirmed that they have additional resources at their disposal to address any service delivery issues that may arise during the contract start-up/transition stage or for that matter during the term of the contract.

Monthly and Annual Contract Adjustments

The Contract will be subject to the following ongoing price adjustments:

1. The Harmonized Sales Tax (HST) will be payable until the Goods and Services Tax (GST) is reinstated, after which the GST will be paid on the contract;
2. Monthly adjustments to reflect growth in the customer base that will be reflected in the ongoing increase to the number of waste carts to be serviced and waste tonnage collected and transported to waste facilities;
3. An inflation adjustment, which will be applied annually at the anniversary date of the contract, based on a blend of the changes in the following indices for the immediately preceding 12 month period:

- i. Vancouver Consumer Price Index;
 - ii. The percentage change as reported by Statistics Canada in the annual average price for commercial fuel natural gas for Vancouver; and
 - iii. The percentage change as reported by Statistics Canada for *Total Compensation per Hour Worked for Waste Management Services* for the most recently completed calendar year;
4. A transportation adjustment amount in the event of that the contractor is directed to off-load waste at an alternative waste disposal facility other than those reflected in the current contract for a prolonged period of time;
5. Monthly benefit payment or deduction based on the frequency of "missed collections";
6. Monthly Non-Performance Deductions; and
7. Quarterly Collaboration Payments or Deductions.

CART PROCUREMENT AND DELIVERY

To ensure that carts are procured and delivered ahead of an October 1st, 2012 contract start date, the Engineering Department will immediately initiate a cart procurement process with a view to award this contract by mid-February 2012. This will provide the cart manufacturer the time required to manufacture the carts and for cart distribution to occur well in advance of the October 1st contract start date.

The City will be required to secure and deploy approximately 300,000 carts to its customer base (100,000 households x 3 carts per household).

Although 240-litre carts will be deployed, the Engineering Department will define a process for residents to opt for larger carts at a specified premium cost per cart.

For households containing secondary suites that are on the City's tax rolls, 3 larger 364-litre carts will be deployed per household for use by all residents within the household. Property owners may opt to purchase additional carts from the City if desired.

Smaller carts will be deployed at multi-family (townhouse) developments that have opted for door-to-door waste collection service from the City.

Cart Costs and Impacts to Annual Solid Waste Levy

It is estimated that the total cost for the purchase and distribution of waste carts will be in the order of \$15 million with an additional cost of approximately \$600,000 per year for cart management by way of an independent contractor.

The cart expenditure would be amortized over the warranty period of the cart, which has been identified as 10 years (industry-wide standard). Using a 10-year straight-line amortization period, this would translate to an annual cost of approximately \$1.5 million, or \$15 per household/year (\$5 per cart per year).

In recognition of the savings in cost of collection services that the City will achieve under the new Contract (i.e., \$11.6 million, comprising \$9.5 million from the collection services plus an estimated \$2.1 million for the amortization and maintenance of the carts in comparison to \$12.3 million per year under the current contract) staff will undertake a detailed review of the Solid Waste Utility financial position during 2012 with a view to recommending any appropriate rate adjustment for

2013 after taking into account such factors as actual cart costs, MV tipping fee adjustments and other relevant factors.

Communications Plan

Efforts need to be made to ensure that the City's solid waste customers are well informed of the new waste collection services and their responsibilities relative to cart placement at curbside. Given that the City in addition to introducing carts will be moving to a weekly organics collection service with alternate bi-weekly collection for garbage & recyclables, a well-developed comprehensive communications strategy is clearly necessary.

Staff will procure the services of a professional communications firm to formulate and carry out an appropriate communications plan to ensure that Surrey's solid waste customer base are properly informed of the changes in service, the benefits that can be expected and their responsibilities.

Communications will commence in May of 2012 and continue at least 3 months beyond the start date of the new contract.

Based on best similar deployments in other municipalities, customer inquiries from between 4% and 7% of the customer base are received immediately following delivery of carts to households. These calls are a combination of general inquiries and complaints. In Surrey's case, this would translate to 4,000 to 7,000 calls following cart deployment; however, inquiry levels generally fall significantly in the weeks following deployment with service and customer inquiry patterns returning to normal levels within 2 to 3 months. This is consistent with the Surrey experience in relation to the pilot program to which this report refers in an earlier section.

To ensure that customer inquiries are addressed promptly, the Engineering Department will be deploying additional call-taking staff in the first few months of the new Contract. In addition, staff will work with a team including the communications consultant, the cart manufacturer and the new waste collection contractor to minimize customer frustration related to the pending changes.

CONCLUSION

Based on the above discussion, it is recommended that Council:

- 1) approve the award of the Curb-side Waste Collection Services Contract to BFI Canada, Inc., for a seven-year term commencing on October 1, 2012 and ending on September 30, 2019, with an option in favour of the City to extend the contract for up to an additional 3 years on the same terms and conditions, with the contract having an annual cost in the first year of \$9,505,923 and providing for the following price adjustments:
 - a) The Harmonized Sales Tax (HST) will be payable until the Goods and Services Tax (GST) is reinstated, after which the GST will be paid on the contract;
 - b) Monthly adjustments to reflect growth in the customer base that will be reflected in the ongoing increase to the number of waste carts to be serviced and waste tonnage collected and transported to waste facilities;
 - c) An inflation adjustment, which will be applied annually at the anniversary date of the contract, based on a blend of the changes in the following indices for the immediately preceding 12 month period:
 - (1) Vancouver Consumer Price Index;
 - (2) The percentage change as reported by Statistics Canada in the annual average price for commercial fuel natural gas for Vancouver; and
 - (3) The percentage change as reported by Statistics Canada for *Total Compensation per Hour Worked for Waste Management Services* for the most recently completed calendar year;
 - d) A transportation adjustment amount in the event of that the contractor is directed to off-load waste at an alternative waste disposal facility other than those reflected in the current contract for a prolonged period of time;
 - e) Monthly benefit payment or deduction based on the frequency of "missed collections";
 - f) Monthly Non-Performance Deductions; and
 - g) Quarterly Collaboration Payments or Deductions; and
- 2) authorize staff to make public this report and Council's resolution related to this report once all of the proponents have been informed by staff about the City's decision in relation to the award of the contract.

[ORIGINAL SIGNED BY]

Vincent Lalonde, P.Eng.
General Manager, Engineering

VL/RAC/kd/brb

Appendix I: Corporate Report No. R229; 2010, titled "Pilot Program - Curbside Residential Organics Collection

Appendix II: Dillon Consulting Report – Summary of Follow-up Consultation for Residents In the City of Surrey Curbside Organics Pilot Program

Appendix III: List of Performance Deductions as per the Waste RFP

CORPORATE REPORT

NO: R229 COUNCIL DATE: Nov. 1, 2010

REGULAR COUNCIL

TO: Mayor & Council DATE: October 26, 2010
 FROM: General Manager, Engineering FILE: 2320-20 (Garbage & Recycling)
 SUBJECT: Pilot Program - Curbside Residential Organics Collection

RECOMMENDATION

The Engineering Department recommends that Council receive this report as information.

INTENT

The purpose of this report is to provide information to Council about a pilot program that is being implemented by the Engineering Department related to curbside organics collection.

BACKGROUND

During its Regular meeting on November 2, 2009, Council considered Corporate Report No. R201; 2009 that was titled, *Curbside Residential Organics Collection Service – Proposed Public Consultation and Pilot Collection Program*. A copy of that report is attached as Appendix III. Council adopted the recommendations of that report, including that staff initiate a public consultation process in 2010 with respect to curbside organics collection options with a view to implementing a pilot program in the latter part of 2010.

DISCUSSION

The Engineering Department has completed a public consultation process regarding the collection of curbside organics (kitchen waste with yard waste). The survey and public consultation sessions spanned a five-week period commencing in early June. The public consultation sessions were held at several venues and events throughout the City as follows:

City Facilities:	Special Events:	Shopping Centres:
North Surrey Recreation Centre	World's Ocean Day	Guildford Mall
Surrey Sports & Leisure Centre	Ocean Park Day	Central City Mall
Guildford Recreation Centre	Whalley Festival	
Cloverdale Recreation Centre	Canada Day	
South Surrey Recreation Centre		
Newton Library		
City Hall		

The public surveys included both website and telephone surveys.

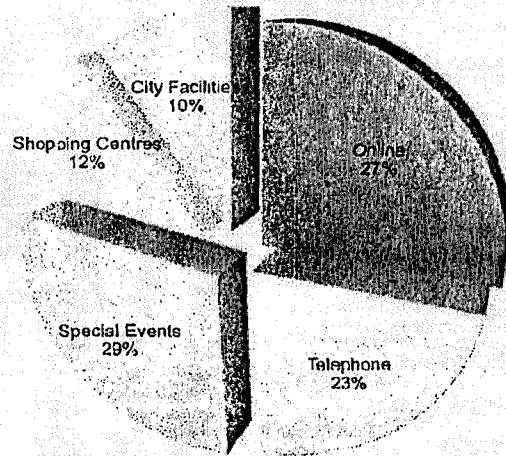
Details of the public consultation process and the survey responses are contained in the attached Appendix I titled *Curbside Organics Collection Service – Report of Findings*.

Summary of Survey Results

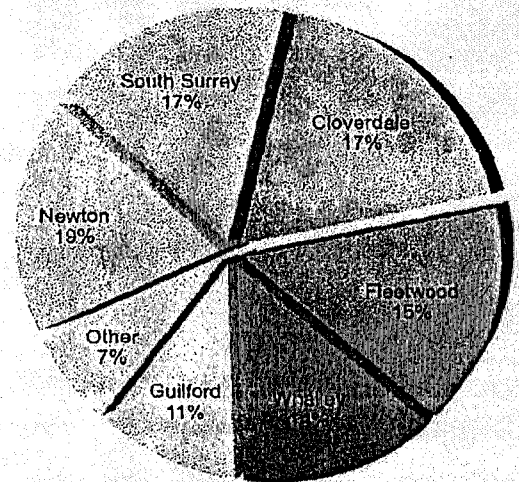
The following is a summary of the survey results.

A total of 1,356 survey responses were received. If it is assumed that the survey respondents are a statistically random sample of the City's residents, the results have a 95% confidence level with a 5.5% margin of error. The following charts provide information about the survey and the respondents:

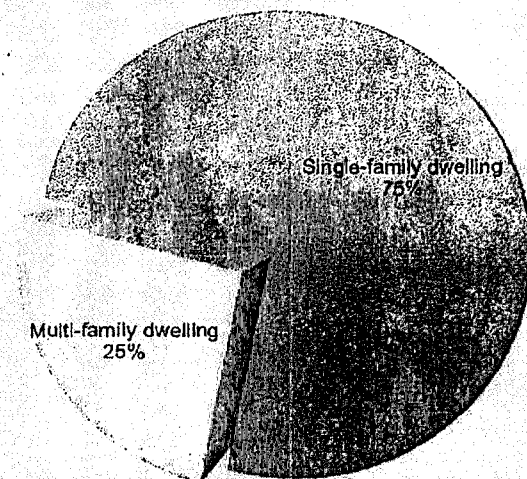
➤ *Where data was collected:*



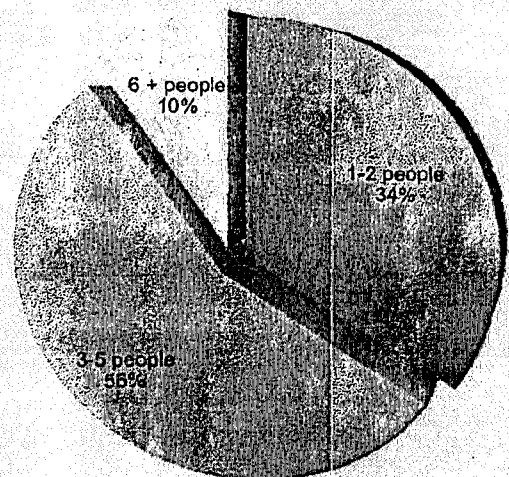
➤ *Where do respondents live?*



➤ *Type of living arrangement:*

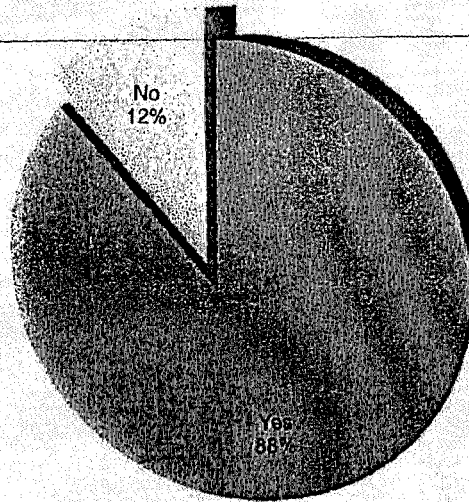


➤ *Number of people in household:*



Overall, the public consultation process demonstrated overwhelming support for an organics curbside collection program. The following chart illustrates the public sentiment regarding the City initiating a curbside organics collection program:

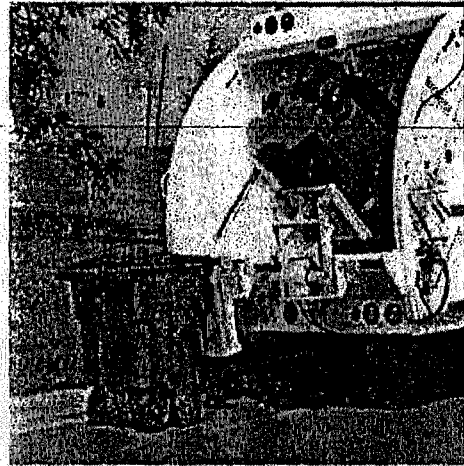
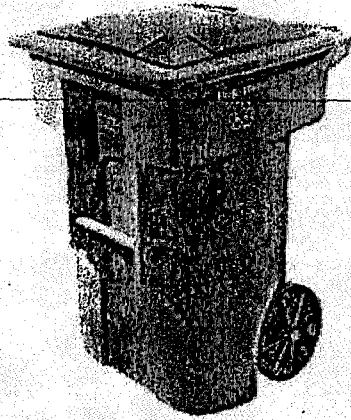
➤ *Would you support a weekly Organics Collection Program (kitchen with yard waste)?*



The primary goal of the consultation program was to assess the public's views on different organics collection options. It was recognized that the consultation process would bring considerable public awareness to the City's preferred approach to organics collection including a wheeled cart-based, semi-automated collection system, and a proposed "Weekly Organics Collection Cycle" coupled with a "Bi-weekly Garbage and Recycling Collection Cycle". The following is a summary of the merits of such an approach to garbage and organics collection:

- Residents will be motivated to ensure that their kitchen organic waste is collected on a weekly basis so as to avoid the nuisance odours that this waste stream produces if it is left in a garbage container for a two-week period. This would maximize organics diversion.
- A number of cities across North America and Europe have successfully introduced such a weekly/bi-weekly collection process. The City of Toronto implemented a program of this nature in 2004. In British Columbia, the community of Ladysmith introduced this collection system. Within a year, each of these Canadian municipalities reported an 80% diversion of the kitchen organic waste stream.
- More recently, the City of Port Coquitlam introduced the same collection system with positive results.
- If Surrey were to achieve the same results as Toronto, the City's annual residential waste diversion rate would be well beyond the Region's goal of 70% by 2015.
- The size of the waste collection fleet required to service the City would be reduced by one-third, given that only two waste streams would be serviced each day instead of three waste streams as is currently the practice.
- Semi-automated collection reduces worker injuries and worker fatigue.
- From a curbside waste management perspective, intrusion by animals and scattered litter is significantly reduced since the garbage and organics are contained within larger receptacles which have "flip lids" that keep any loose waste from blowing away. Blow away garbage is the greatest contributor to street-side litter in Surrey.

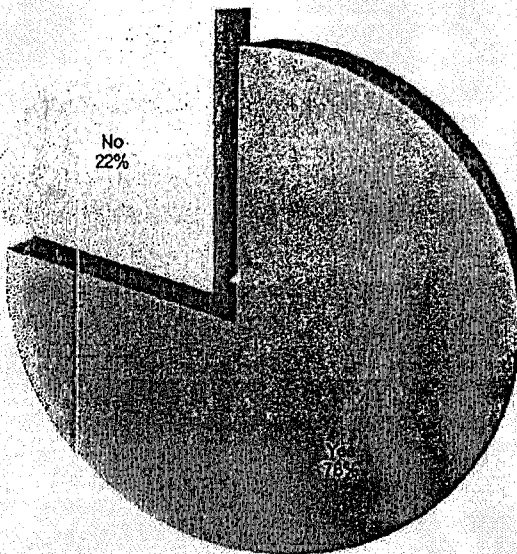
Semi-Automated Waste Collection Services Using Curbside Carts for Organics, Garbage and Single Stream Recyclables:



During the public consultation and survey processes, respondents were advised that the City's residential garbage stream is comprised of nearly 70% odorous organic waste (kitchen waste), all of which could be diverted away from landfills. It was also explained that the proposed weekly organics collection service combined with alternating bi-weekly garbage and recycling collection service was found in other jurisdictions to maximize organics waste diversion. To this end, the survey set out to establish the level of public receptivity to the proposed semi-automated cart-based weekly (organics)/alternating bi-weekly (garbage/recycling) service.

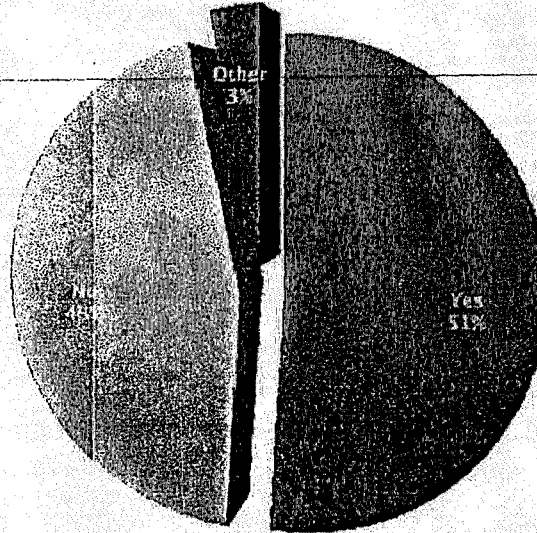
Residents were advised that they would be provided with three separate wheeled carts (one for each waste stream) which are significantly larger than typical current waste receptacles. These larger carts were identified as being either 240 or 364 litre in volume. The survey response to this approach for waste collection service was relatively positive as illustrated in the following chart:

- *Would you support a cart-based weekly Organics Collection Program with alternating bi-weekly Garbage & Recycling Collection:*



With respect to paying more for cart-based collection services, residents were nearly equally divided as illustrated on the following chart:

- Would you be willing to pay more for a cart-based waste collection program?



With the survey results in hand, the Engineering Department is focused on instituting a curbside collection program that maximizes waste diversion and waste collection efficiencies without significantly increasing costs.

The Engineering Department recognizes that the adoption of a new type of waste collection service will require a concerted and sustained public education process at the outset of the program to ensure that the public understands the operation of the program and their responsibilities.

Pilot Residential Organics Curbside Waste Collection program

A Pilot Residential Organics Curbside Waste Collection program has been developed to allow staff to review and compare the operation of a weekly/alternating bi-weekly waste collection service with the existing weekly collection service for all three waste streams. The pilot program will allow staff to analyze operational effectiveness, customer concerns, waste diversion percentages and costs. A decision on a preferred approach to recommend to Council will be based on the data derived from the pilot program. The City's next waste collection contract (that will commence in July 2012) will be based on the results of the pilot program.

The Pilot program will be focused on 2,000 households and will commence in early November 2010 and run through until the next City-wide collection contract commences in July 2012. The 2,000 households that are part of the pilot include 400 households that will receive collection services on each day of the work week, respectively. The households involved in the pilot program will be further segmented as follows:

Group A - Weekly organics collection with alternating bi-weekly garbage and recycling collection

- Number of residences in pilot program: **1,000 households per week** (or 200 households per day);
- Each household in Group A will be provided with three 240 litre wheeled carts (one for each waste stream [organics, recycling, garbage]) along with a ventilated "under-the-sink" kitchen waste receptacle that will be used to transport food waste to the organics cart; and
- If any residence requires a larger receptacle for any of the three waste streams, the City will upgrade the receptacle to a 364 litre wheeled cart. Alternatively, each residence can use their existing receptacles for any waste overage.

Group A residences will experience the following waste collection cycle (typical monthly collection schedule):

Week	Collection of Organics (kitchen and yard waste)	Collection of Garbage	Collection of Recyclables
1	√	√	no collection
2	√	no collection	√
3	√	√	no collection
4	√	no collection	√

Group B - Weekly collection of all three waste streams [organics, garbage, recycling]

- Number of residences in pilot program: **1,000 households per week** (or 200 households per day);
- Each household will be provided with one 240 litre cart (for organics only) along with a ventilated "under-the-sink" kitchen waste receptacle that will be used to transport food waste to the organics cart; and
- If residents require a larger receptacle for organics, the City will upgrade the organics cart to a 364 litre wheeled cart.

Group B residences will experience the following waste collection cycle the three waste streams

	Collection of Organics Cart	Garbage Collection residents use their existing garbage cans	Recyclables Collection residents use their existing Blue Box
Weekly Collection	√	√	√

Other Comments on the Pilot Program

Carrying out the pilot program on the two groups of residences as noted above will allow the Engineering Department to carefully assess both collection systems and determine more definitively the costs and service benefits/detriments of each system. The collection contractor will measure the daily organics tonnage derived from each group and provide the City with ongoing data so that a comparison between the two groups can be made.

Ultimately, the Engineering Department will use the information from the pilot to structure an effective program for the City's overall waste collection program, which will be used as the basis for calling for proposals in relation to a new waste collection contract that will commence on July 1st, 2012.

Educating the Households that are Involved in the Pilot Program

The Engineering Department produced educational materials for distribution to those households that are involved in the pilot program. These materials were disbursed door-to-door during the weekend of October 16th, 2010. During the week of October 18th, 2010, representatives of Dillon Consulting, on behalf of the City, visited all pilot households in the early evening hours to explain the program to residents of each household and answer any questions or concerns. During the week of October 25th, 2010, the Engineering Department arranged for the delivery of the wheeled waste carts to each of 2,000 households that are involved in the pilot.

The following processes will be followed to ensure minimal impacts to residents involved in the pilot program during the initial few weeks of the program:

- Residents have been provided with phone numbers to call if they experience any problems with waste collection;
- Residents can also contact the City through the City's website and by email;
- "Group A" households will be carefully monitored to ensure that these households are appropriately serviced to the maximum extent possible. A shadow vehicle will follow the waste collection trucks as observers. If there is any instance where a household has put out the wrong receptacle for collection, they will be alerted immediately to ensure that they do not miss any collection; and
- City staff will carefully monitor the program and react quickly to resident concerns.

The educational materials that were distributed to each of the residences in Groups A and B are attached to this report as Appendix II.

Organics Waste Diversion at City Hall

Commencing on December 1, 2010, an organics diversion program will be implemented at City Hall. All organic materials generated by City Hall operations will be diverted from the waste stream. Appropriate organic waste receptacles will be placed in each business unit. Educational materials will be disbursed to City Hall staff by way of the intranet and email. A "Lunch and Learn" session is also being organized to present the City's and Metro Vancouver Region's waste diversion goals and to explain the broader context of waste diversion including the sustainably benefits that will be derived as organics diversion is implemented.

Information about the Renewal of the City-wide Residential Waste Collection Services Contract

The Engineering Department plans on releasing a Request for Proposals (RFP) in early 2011 for a renewal of the City-wide residential waste collection contract. It is expected that the RFP process will lead to an award of a new contract by mid-year 2011. The new contract would commence on July 1st, 2012. ~~The time between the award date in the summer of 2011 and the contract start date of July 1st, 2012, will allow the successful proponent to properly prepare for the contract including procurement of equipment and recruitment of staffing.~~

Given the challenges that the City faced as a result of the transition between waste collection contractors the last time the residential waste collection contract was awarded, it was decided that the next contract should commence on July 1st rather than January 1st so as to assist in minimizing service impacts. Waste volumes are the lowest during the summer months and the weather is not problematic at that time of the year relative to waste collection. It is expected that City-wide organics waste collection services will be implemented as part of the next contract. This will probably require the delivery of wheeled waste carts to the City's residential waste customers. This process would be best handled during the summer months.

A further report will be provided to Council in advance of the issuance of an RFP for the next city-wide residential waste collection contract.

CONCLUSION

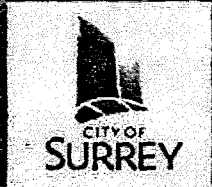
This report provides information about a pilot curbside organics waste collection program that is being initiated by the Engineering Department in November 2010 and that will remain in place on an on-going basis for the purposes of informing the Engineering Department about how best to implement curbside organics collection services on a city-wide basis. The results of this pilot will assist the Engineering Department in structuring and carrying out a Request for Proposals during 2011 in relation to the renewal of the City-wide Residential Waste Collection contract.



Vincent Lalonde, P.Eng.
General Manager, Engineering

RAC/brb

- Appendix I: Dillon Consulting Report: Curbside Organics Collection Service – Report of Findings
- Appendix II: Education Materials for Pilot Households
- Appendix III: Corporate Report R201: Curbside Residential Organics Collection Service – Proposed Public Consultation and Pilot Collection Program



THE FUTURE IS
GREEN

APPENDIX 1

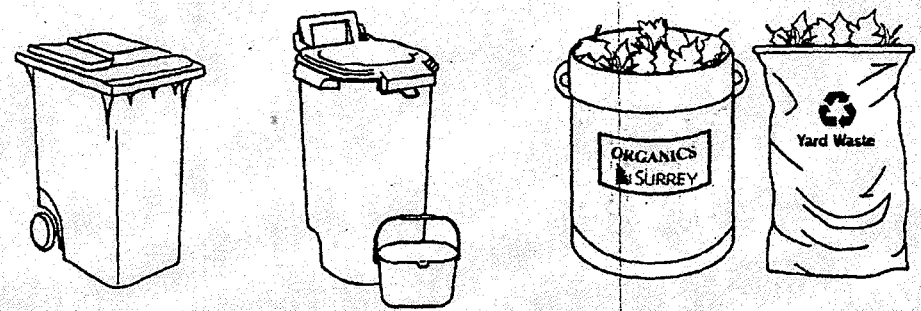
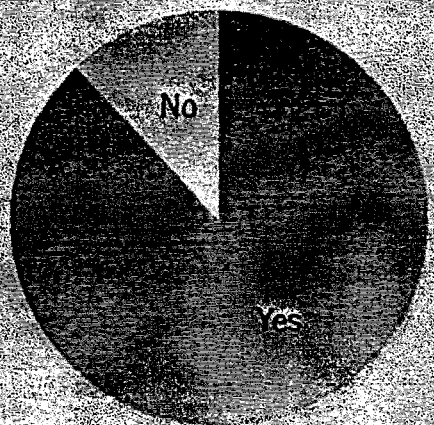
Report of Findings



CURBSIDE ORGANICS COLLECTION SERVICE

Public Consultation Program

**Would you Support a Weekly
Curbside Organics Collection Service?**





1.0 Introduction

There is growing public interest and support throughout the Lower Mainland, spurred on by Metro Vancouver's 70% diversion target, for sustainable solutions to municipal solid waste management. One solution - residential curbside organics collection - is gaining momentum with the recent implementation of new programs in a number of BC municipalities. Residential curbside organics collection is also being considered for implementation in the City of Surrey. The design of a Surrey-based program must carefully consider the balance between program logistics/economics and public expectations.

Dillon Consulting Limited (Dillon) was retained by the City's Engineering Operations Department (City) to develop and implement a public consultation program to gauge the level of interest, and solicit opinions, of Surrey residents regarding the proposed implementation of curbside organics collection service in the City. While the primary goal of the consultation program was to assess the public's relative acceptability of different organics collection options, it was recognized that the program would also bring considerable public awareness of the City's proposed plans for waste diversion.

2.0 Methodology

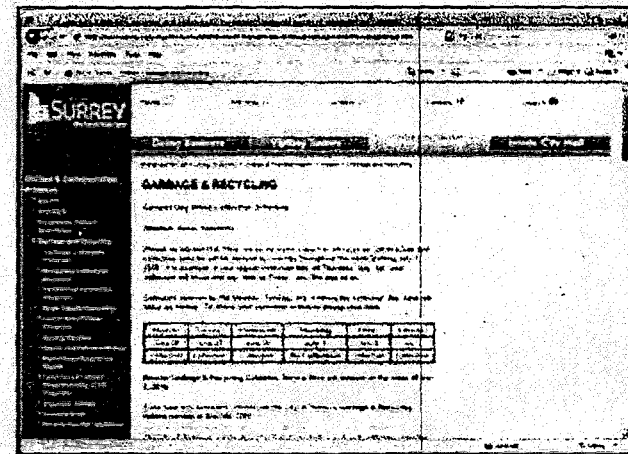
Dillon, in conjunction with the City, designed a comprehensive public consultation program to reach as many Surrey residents as possible. Both passive and active approaches to connecting with residents were employed and focused on raising public awareness through education and soliciting feedback on individual preferences/opinions. The three components of the consultation program were: 1) a webpage linked to the City of Surrey's website; 2) a telephone survey; and 3) informational/educational displays set up at public locations and community events. For each component, questionnaires were provided to document individual feedback. Details of each component follows.

1) Webpage: A curbside organics collection program webpage, linked to the City of Surrey's website and accessed directly from the website's home page title banner, was developed and launched on June 1st, 2010. The webpage detailed the purpose and benefits of the proposed curbside organics collection service and presented various options associated with its implementation. The webpage was displayed in English with hyperlinks to French and Punjabi versions.

An online questionnaire was created and linked to the curbside organics collection webpage. The questionnaire was offered in English, French and Punjabi and was accessible from June 3rd to July 5th, 2010.

2) Telephone Survey: A telephone survey was completed by the Vancouver-based telemarketing firm TSN Canadian Facts. The survey content was based on the online questionnaire associated with the City's website with minor amendments to ensure it was suitable for telephone participants. The telephone survey was conducted in English between June 14th and 17th, 2010. The survey was designed to solicit feedback from all Surrey neighbourhoods at a frequency that was roughly proportional to population distribution. The margin of error for the survey was $\pm 5.5\%$ at the 95% confidence level.

3) Informational/Educational Displays: Informational/educational displays were set up at a number of public locations and community events between June 9th and July 1st. These passive displays included Surrey recreation/community centres, libraries and Surrey City Hall and were almost exclusively manned by Surrey and Dillon staff. The displays included a series of presentation boards, examples of various-sized collection bins, kraft bags, etc.



A newspaper advertisement was created by the City for publishing in the three local Surrey newspapers – the Surrey Leader, Surrey Now, and Peace Arch News. The advertisement provided a brief overview of the proposed residential organics collection service program and invited readers to attend the information meetings and events that were scheduled throughout Surrey in June. A listing of the events and locations was provided. The advertisements were run in the local newspapers in late May and early June.



Public/Community Facilities: Seven public information drop-in sessions were held in recreation centres and other City facilities in all regions of Surrey throughout June. A manned display was set up in the main lobby of each location with Surrey and Dillon staff present to introduce the proposed organics collection service and discuss the benefits and options for its implementation. Fact sheets were distributed and engaged members of the public were encouraged to complete a questionnaire. For those not having enough time to fill out a questionnaire, they were directed to the City's website and on-line questionnaire.

Presentations were held at the following locations:

North Surrey Recreation Centre	June 9 th	Surrey Sports and Leisure Centre	June 24 th
Newton Library	June 10 th	South Surrey Recreation Centre	June 23 rd
Guildford Recreation Centre	June 16 th	Surrey City Hall	June 29 th
Cloverdale Recreation Centre	June 17 th		

Public/Community Events: Informational/educational displays were also set up at four public events around Surrey in June and early July. The same display materials were set up as those used at the public/community facilities. Dillon staff were on-hand at all events to discuss the proposed organics collection service program, to distribute fact sheets, and to encourage members of the public to complete a questionnaire.

The public/community events attended were:

World's Ocean Day	June 6 th
Ocean Park Day	June 19 th
Whalley Festival	June 19 th
Canada Day	July 1 st

A condensed version of the questionnaire was developed for the Canada Day Festival in anticipation of a large turnout and the expectation of only having the attention of respondents for a short period of time.



Shopping Malls: A manned display was set up at two Surrey malls on the weekend on June 12/13th and staffed by Dillon employees. Similar to the other public events, the objective of the mall displays was to raise awareness and educate the public on the proposed new organics collection service and different options considered for its implementation. Again, fact sheets were distributed and engaged members of the public were encouraged to complete a questionnaire on-site. Those not able to fill out the questionnaire at the mall were encouraged to visit the City website and complete the on-line questionnaire at their leisure.

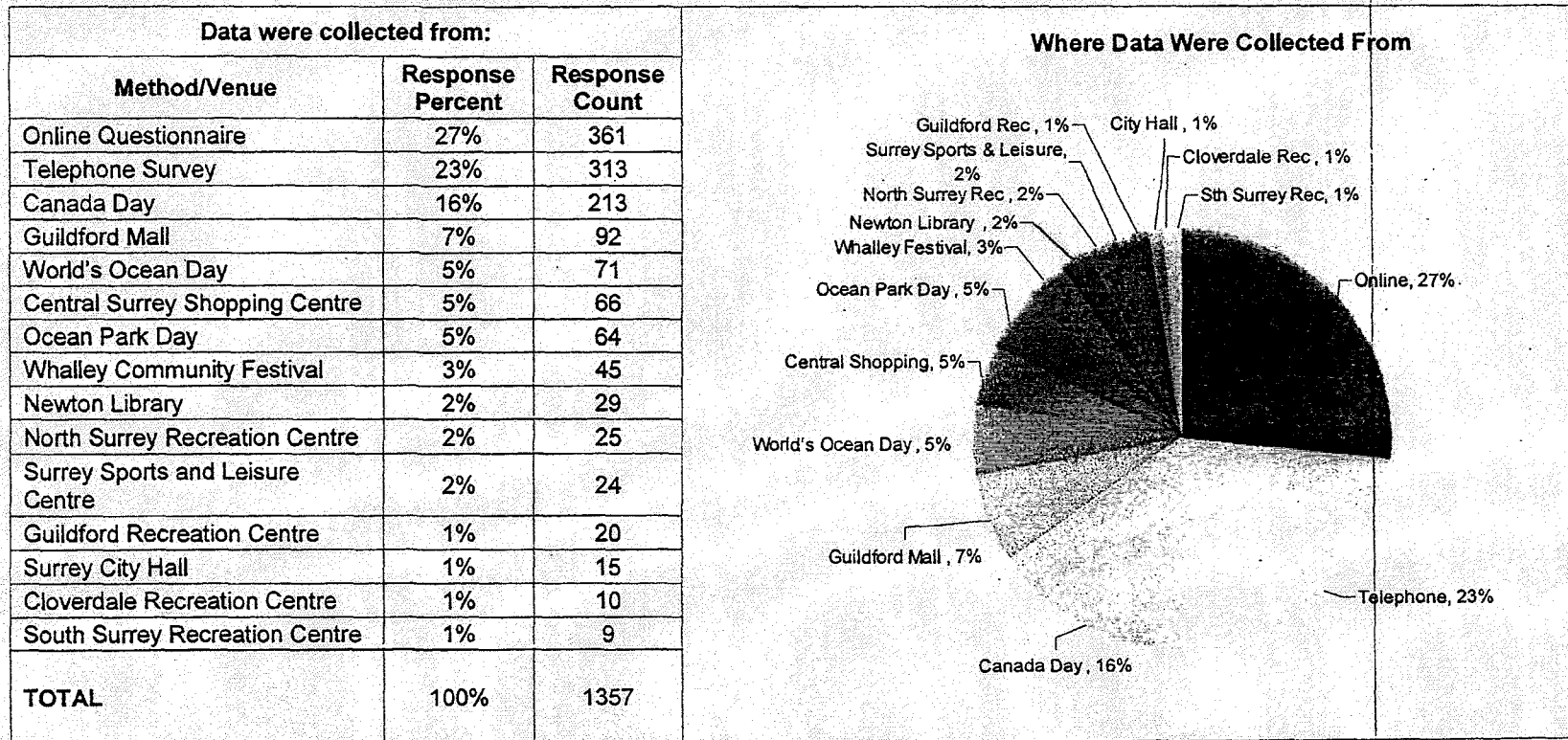
The malls attended were the Guildford Mall and Central City Shopping Centre.

City Hall Display: Program presentation boards were displayed at Surrey City Hall for a two week period between June 22nd and July 6th. The display was located in the main lobby of City Hall in an area of high traffic. No Surrey or Dillon staff attended the display during this period with the exception of one evening session held on June 29th. Fact sheets and questionnaires were available at the City Hall display for interested members of the public and City staff to take and fill out.



3.0 Results

The consultation program was initiated on June 1st with the launching of the program webpage and completed on July 6th with the removal of the display from City Hall. A total of 1357 responses were obtained from Surrey residents through the three consultation components during this time. The distribution of responses for the three consultation components was: webpage (on-line) questionnaire – 361; telephone survey – 313; and public/community facilities/events displays - 682. Respondents were asked to complete the entire questionnaire, however some chose not to answer all of the questions which is why the total response count varies for each question. Following are response summaries for each question. Details are presented as an appendix to this report.





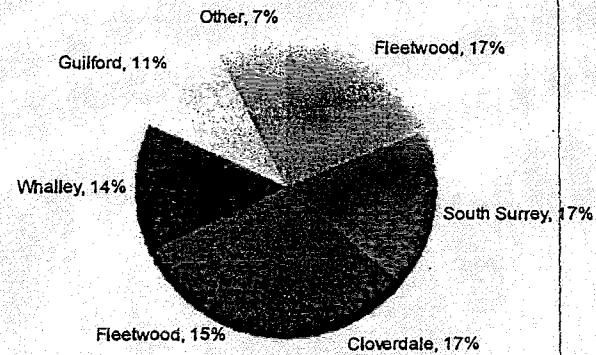
Responses were obtained from residents representing all Surrey regions and residing mainly in single-family homes (75%).

Respondents live in:		
Region	Response Percent	Response Count
Newton	19%	257
South Surrey	17%	234
Cloverdale	17%	234
Fleetwood	15%	199
Whalley	14%	189
Guilford	11%	143
Other	7%	100
TOTAL	100%	1356

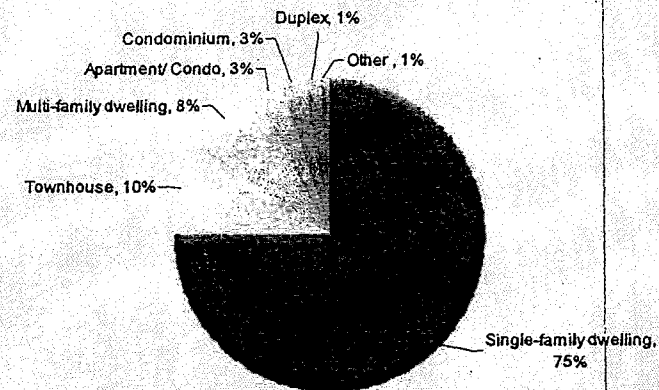
"Other" includes: Fraser Heights, Panorama Ridge and Sullivan Station

Respondents living arrangement:		
Type	Response Percent	Response Count
Single-family dwelling	75%	1010
Townhouse	10%	130
Multi-family dwelling	8%	103
Apartment/ Condo	3%	37
Condominium	3%	36
Duplex	1%	20
Fourplex	0%	5
Business/Commercial	0%	1
Triplex	0%	0
Other	1%	13
TOTAL	100%	1356

Where Do Respondents Live?



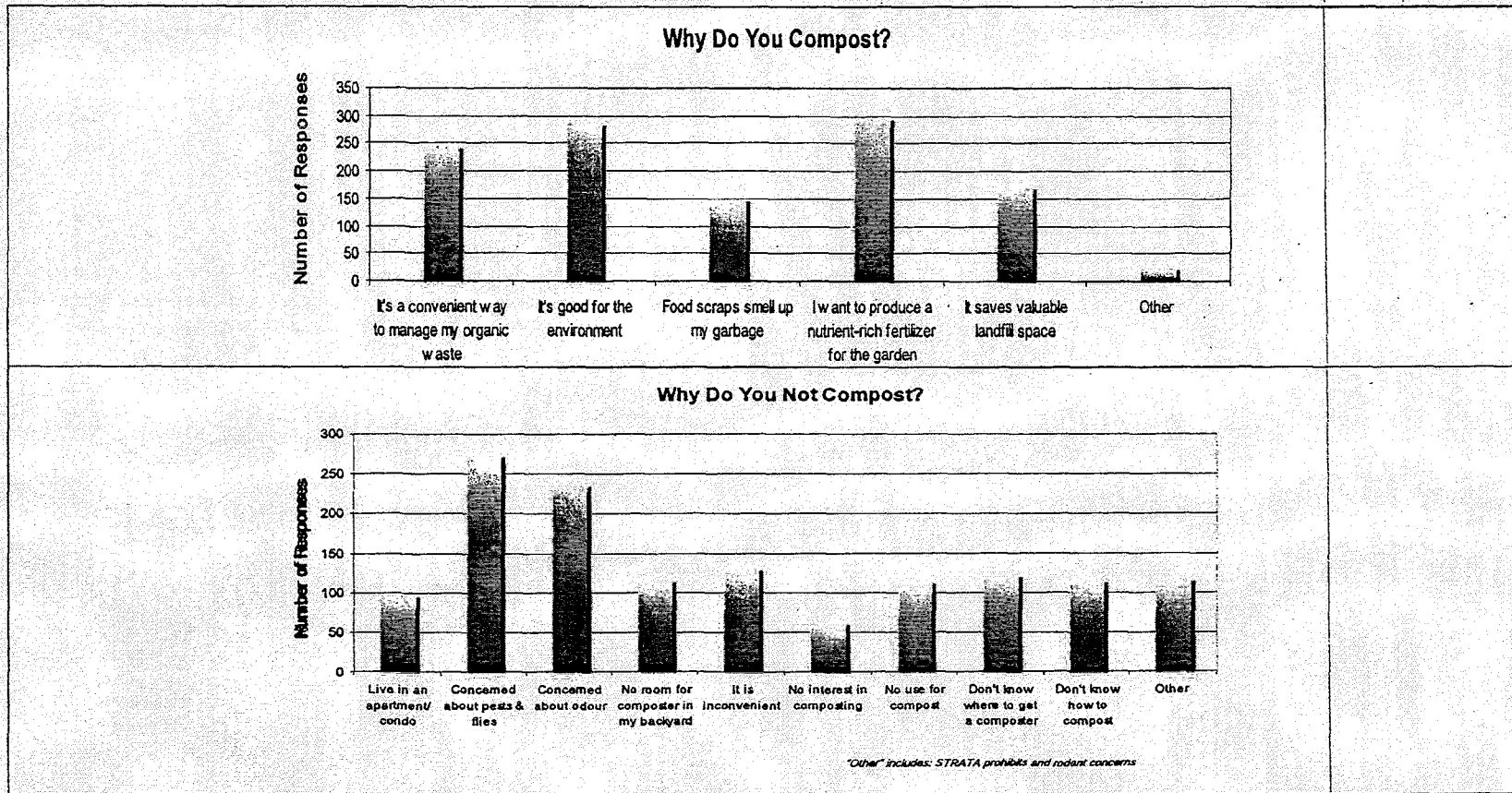
Type of Living Arrangement





Composting

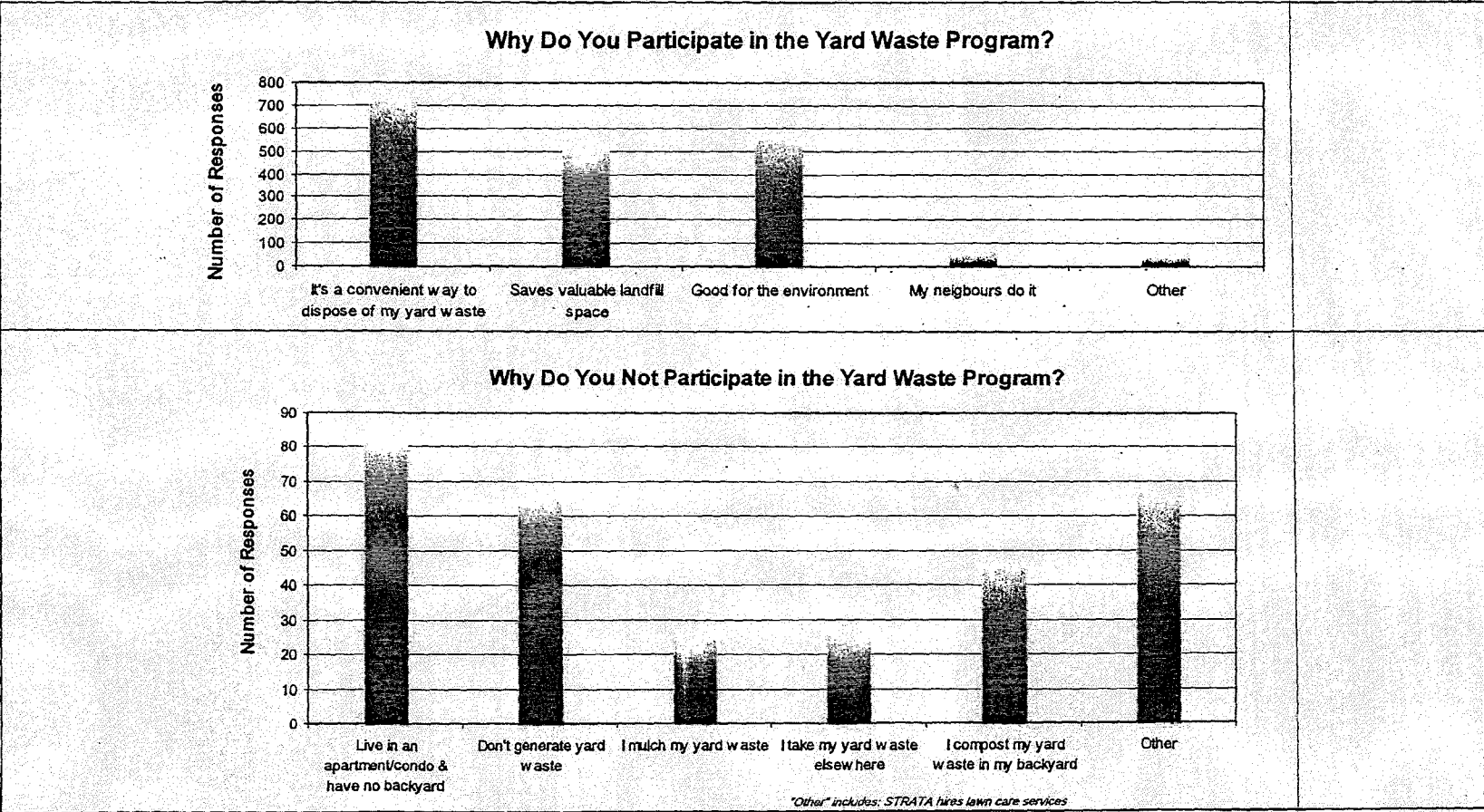
Approximately one third of Surrey residents currently compost their organic waste in their backyard (Yes = 36%, No = 64%). Those that already backyard compost seemed to be pleased to find an alternative to dispose of materials, such as meats, bones and soiled paper products, through the proposed program. Respondents were asked to detail the reasons why they did, or did not, compost. Multiple responses were allowed. The desire for nutrient-rich fertilizer was the main reason for composting, followed by environmental benefits, convenience, and reduced impact on the landfill. Concerns about pests, flies and odours were the primary reasons for not composting, followed by a lack of composting knowledge.





Yard Waste Collection Service

Surrey residents are taking advantage of the City's yard waste collection service with 78% of the total respondents indicating that they utilize this service. Respondents were asked to detail the reasons why they did, or did not, use the yard waste collection service. Multiple responses were allowed. Convenience and environmental benefits were the main reasons for use of the service, followed by reduced impact on the landfill. The main reasons for not using the yard waste collection service were that the respondents do not generate a lot of yard waste, did not have a backyard, or preferred to compost it themselves.





Combined Organics Collection Service

There was overwhelming support by respondents (88%) for the implementation of a residential curbside collection service for combined food and yard waste in the City of Surrey. Residents were also supportive of biweekly garbage and recyclables collection (Yes = 78%, No = 22%) if their food waste was going to be collected weekly. The main exception to this response was families with children in diapers who would not be comfortable waiting two weeks for garbage collection.

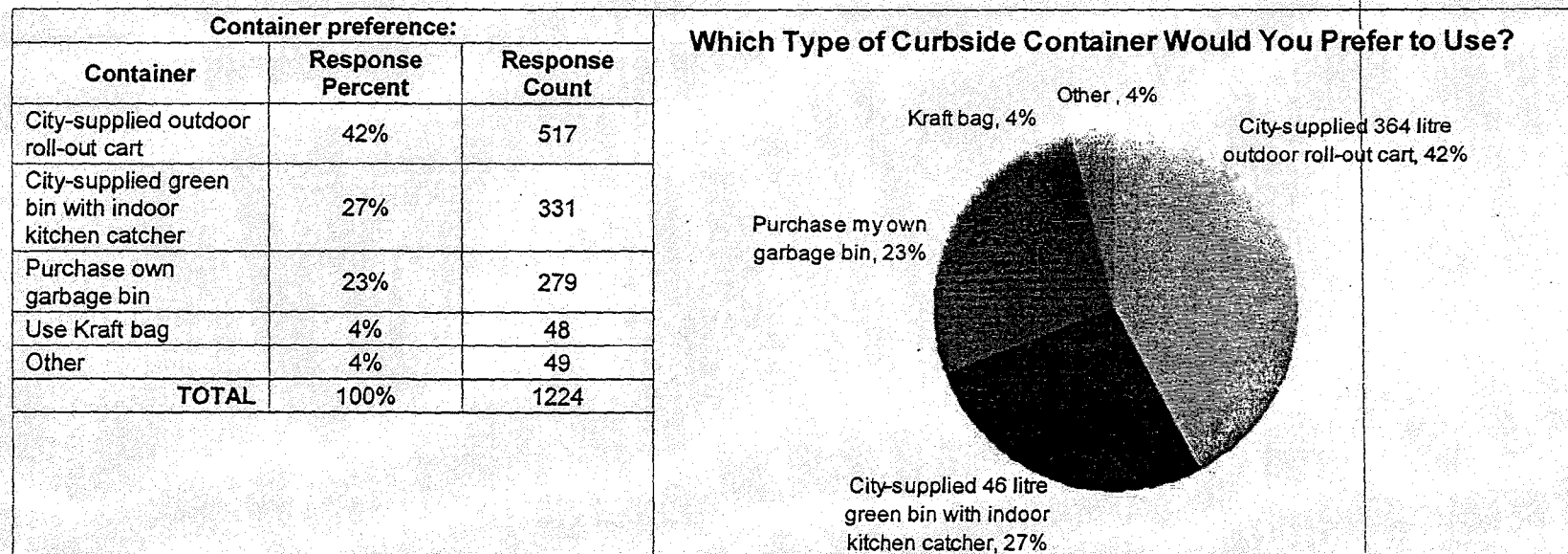
Support for the implementation of a curbside organics collection service:			Would you Support a Weekly Curbside Organics Collection Service?
Answer	Response Percent	Response Count	
Yes	88%	1158	<p>No, 12%</p> <p>Yes, 88%</p>
No	12%	159	
TOTAL	100%	1317	
Support for bi-weekly collection of garbage and recyclables:			Support Weekly Organics Collection and Bi-Weekly Recyclables and Garbage?
Answer	Response Percent	Response Count	<p>No, 22%</p> <p>Yes, 78%</p>
Yes	78%	958	
No	22%	267	
TOTAL	100%	1225	





Container Options

Different container options were presented to respondents with a brief outline of the benefits and pricing information for each option. Respondents showed a slight preference for large, city-supplied roll-out carts (42%) although the 46-litre green bin was also popular (27%). Those that supported the cart-based system also generally supported the idea of moving to a program using three separate carts (i.e., one each for garbage, recycling and composting) if they could select the size of cart that best suited their needs. Respondents also seemed to prefer to have the indoor kitchen catcher regardless of container size.

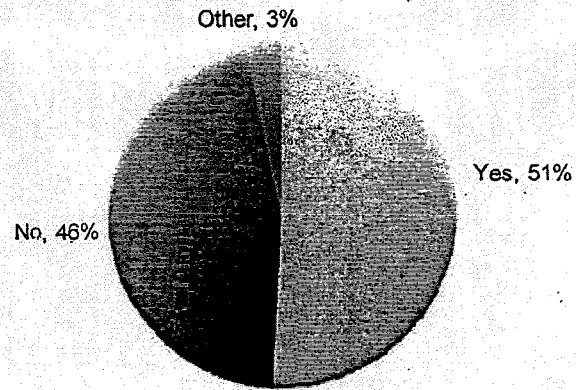




The advantages of moving to a curbside three-cart system to sort and collect waste were explained to respondents. Respondents were then asked about their willingness to pay more for such a service. Opinion of respondents was split almost 50/50 with 51% not willing and 46% willing to pay more for the service.

Willingness to pay for a cart-based curbside collection program		
Container	Response Percent	Response Count
Yes	51%	657
No	46%	590
Other	3%	42
TOTAL	100%	1289

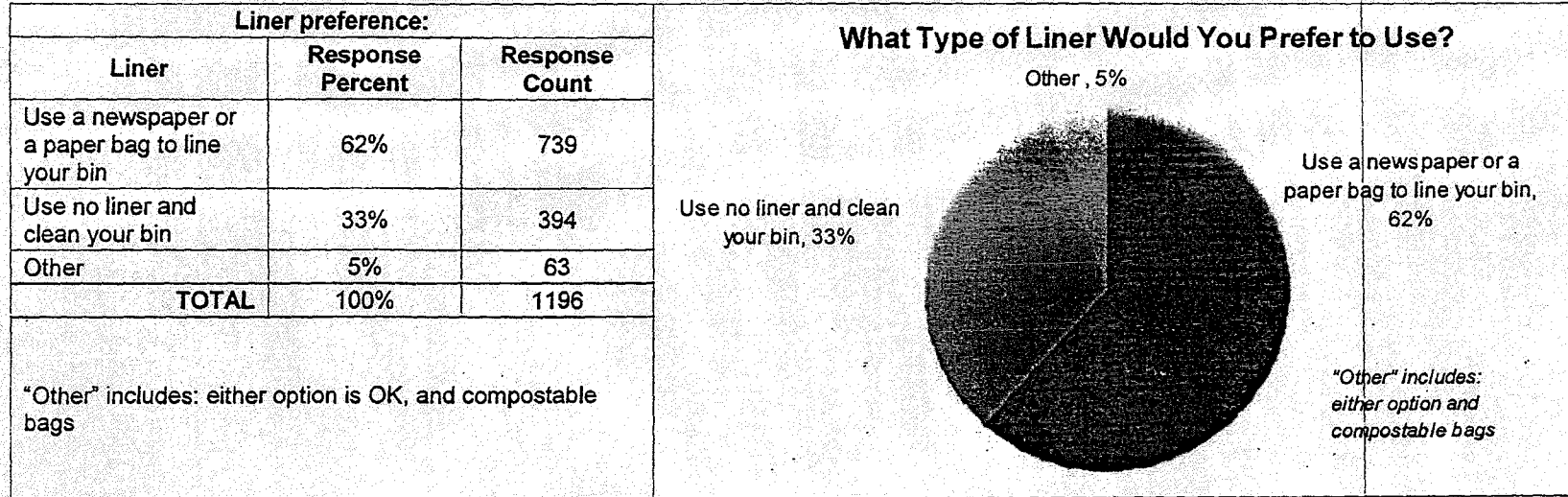
Would You Be Willing to Pay More for a Cart-Based Curbside Collection Program?



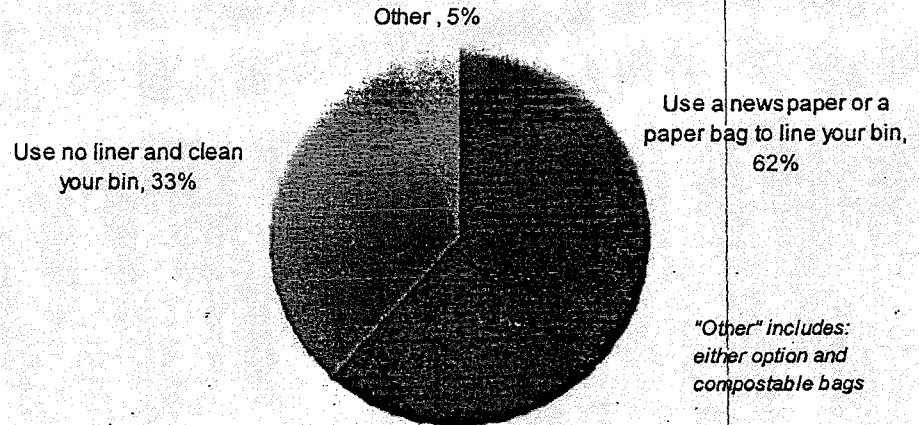


Liners

Respondents were informed that plastic and biodegradable bags would not be acceptable in the proposed organics collection system and were asked which type of liner they would prefer to use instead. Responses were mixed.



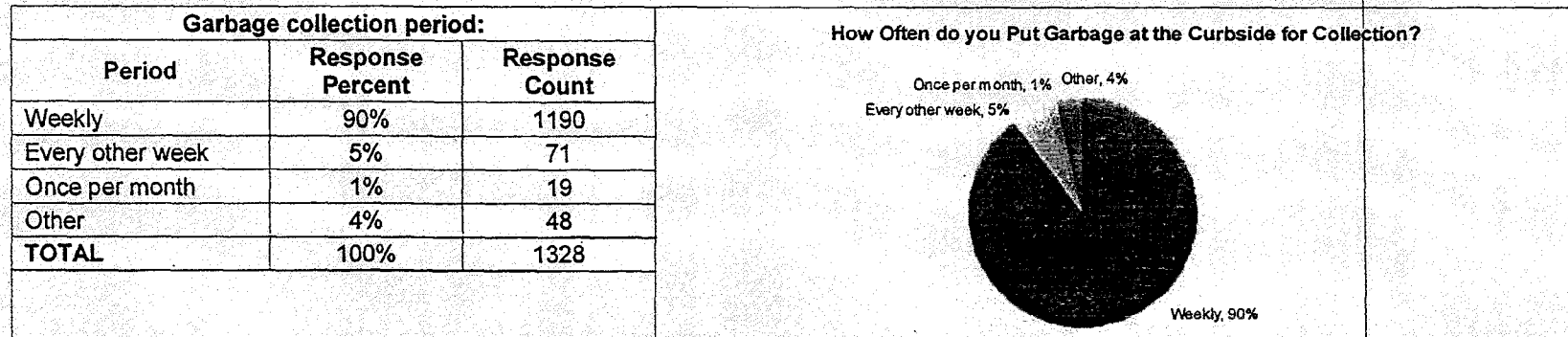
What Type of Liner Would You Prefer to Use?





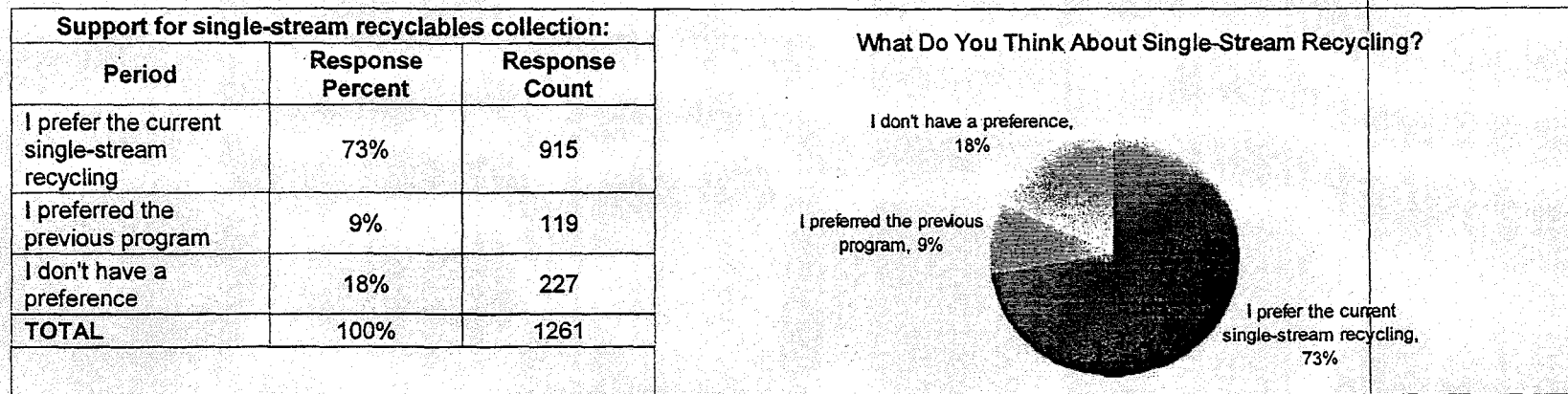
Garbage Collection

Most Surrey residents (90%) put their garbage on the curbside for collection each week.



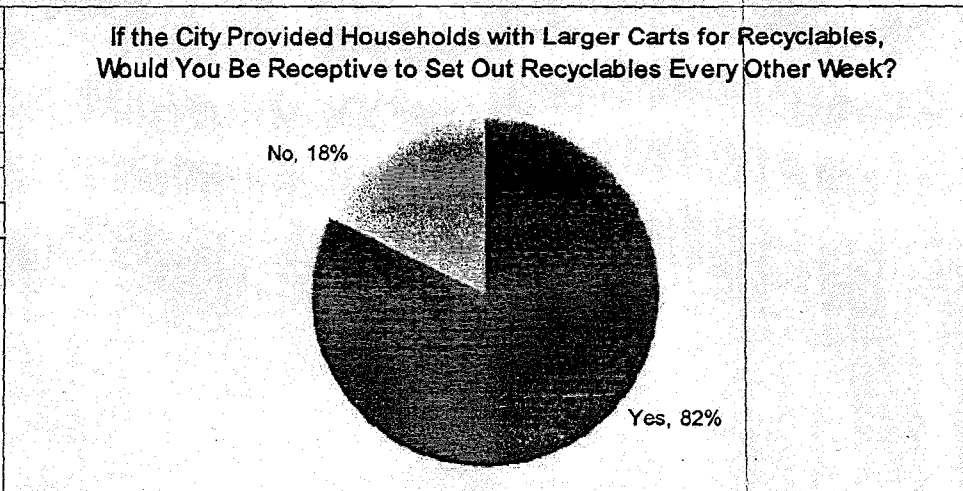
Recyclables Collection

Similar to garbage collection, the majority of Surrey residents (90%) also put their recyclables on the curbside for collection each week. There was solid support (73%) by respondents for the current single-stream recycling collection program over the previous process of separating recyclables.



82% of respondents would support the City's plan to have their recyclables collected once every two weeks if the City provided a large wheeled cart that could hold approximately four times the amount of recyclables than the current blue box.

Support for larger carts and bi-weekly collection of recyclables:		
Period	Response Percent	Response Count
Yes	82%	983
No	18%	211
TOTAL	100%	1194





4.0 Conclusions

The City's public consultation program was an effective approach to solicit and receive input from residents of Surrey on the proposed residential curbside organics collection program. Almost 1,400 responses were logged through the 3 components of the consultation program, and many more Surrey residents were made aware of the proposed plans for organics management through the program efforts. These responses should provide a solid foundation upon which the City can make informed decisions regarding the planning and initiation of a pilot program this fall. Overall, respondents were very supportive of the City's plan to implement curbside organics collection service with almost 90% of those surveyed supporting the program. The environmental benefits of the organics collection program were top of mind to those surveyed.

As expected, possible barriers to implementing this service are fear of attracting pests and flies, and concerns about odour. Similar to the approach taken for backyard composting, the City should consider the preparation of instructional kits for residents on how to avoid or minimize these potential concerns.

The majority of respondents supported the idea of moving to a collection program where organics are collected every week and garbage and recyclables are collected every other week (alternating between garbage and recyclables every week). Regarding existing waste management programs, most residents place recyclables and garbage out for collection on a weekly basis and a majority of respondents prefer the City's switch to single stream recycling.

Regarding container options, respondents exhibited a much broader range of preference that presumably reflected their specific needs and likings. Just over 40% of respondents supported a cart-based program, 27% preferred the 46-litre organics cart and only 23% supported purchasing their own container.

Respondents appeared to appreciate the fact that they were consulted prior to the program's implementation. Ongoing communication with the public (through the City's website and local newspaper) is recommended to ensure a smooth and effective transition to the implementation of a curbside organics collection service.

APPENDIX II

Organics Collection Pilot Program



What about composting?

The City of Surrey sells the Earth Machine backyard composter to residents for \$25. We encourage residents who are currently using backyard composting to continue to do so. For residents wishing to learn more about the City's backyard composter availability, please contact us 604-590-7289.

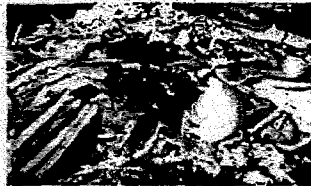
We believe that backyard composting is a cost-effective and environmentally-beneficial means of dealing with food waste. However, backyard composting cannot deal with many types of raw and cooked food waste, such as meats, poultry, fish, fats, rice, and pasta. All of these more volatile organic materials can

be placed at curbside to be processed at industrial facilities where they are composted into rich soil amendments, or, in Surrey's case, to be converted in the future into a carbon-neutral biofuel that will be used to fuel the trucks that pick up your waste.

Also, we acknowledge that backyard composting is not something that all residents wish to participate in, nor do all residents have a convenient outlet to manage the composted material.

There are no limitations to the types of food waste that you can place into your Organics waste cart.

In this regard, even if backyard composting were to be made a mandatory requirement, ensuring compliance would be a very difficult undertaking. Curbside organic diversion provides a simple and balanced outlet to ensure maximum participation.



For more information

Questions? Concerns? For the most current information about the Organics Collection Pilot Program:

- Call the Organics Collection Program Hotline at 604-551-1170
- Call the Garbage & Recycling Hotline at 604-590-7289
- Email us at EngOperations@surrey.ca
- Visit www.surrey.ca



Organics Collection Pilot Program

Nov. 1, 2010 - Oct. 31, 2011

Welcome to the program

The new City of Surrey curbside Organics Collection program is the key to reducing waste delivery to the landfill by 70%. Here's how you can help reach that goal.

In June of this year, the City engaged a month-long consultation and survey process with Surrey residents to discuss plans to collect kitchen waste at the curbside. The result was a strong 88% support of this new green initiative.

A big part of the new plan is finding a way to make use of the waste we collect. That's called waste diversion. The current recycling system goes a long way toward that goal, and the new Organics Collection plan will take another giant step forward. But the most progressive part of the plan is what we intend to do with the organic waste. Under the new system, we're planning to turn your kitchen leftovers and yard waste into a valuable resource. Using a new plant to

be built in Surrey, the organics picked up from your curb will be converted into an environmentally-friendly and carbon-neutral biofuel, which will be used to power the very trucks that pick it up at your home.

How things change

The Organics Collection program has been carefully planned to make it as simple as possible for Surrey households. We feel that a simplified approach will ensure maximum participation, which will successfully lead us to achieving our 70% waste diversion goal.

Essentially, there are just two changes—the first deals with separating organics in the kitchen, and the second deals with how you place them out for collection.

You will soon receive a set of three new carts from the City, colour-coded for each type of waste:

- The cart with the green-coloured lid is your new Organics cart.
- The cart with the blue lid is for your other Recyclables.
- The cart with the black lid is for the rest of your Garbage—the waste that is neither organics nor typical recycling.



The new Organics Collection program will help us reach our 70% waste diversion goal.

The other major change will be to your pickup schedule. Your pickup day will be the same as it's always been, but you'll only be putting two of the three carts at the curb each week. The green Organics cart will be placed out at curbside every week, but your Garbage and Recycling carts will alternate so that they're each picked up only once every two weeks.

For example, on week one, you'll put out the Organics cart with the green lid and the Recycling cart with the blue lid, but *not* the Garbage cart. Then on week two, you'll place out the Organics cart and the Garbage cart, but *not* the Recycling cart. (Please see the attached calendar for easy reference.)

CONTENTS

1. Welcome
How things change
2. What goes where?
Keep it fresh and clean
3. Now and then
Kitchen convenience
Need more collection space?
4. What about composting?
For more information

Organics Collection Pilot Program

2

What goes where?

Organics

The simplest way to describe what goes in the new Organics cart is that it includes anything you prepare for your meals at home, and anything that grows on your property. In other words, kitchen and yard waste.

Kitchen waste includes all food scraps including meats, vegetables, fats, bones, and cheese. Don't scrape plates or the garbage—scrape them into your Organics kitchen catcher and art. Kitchen waste also includes coffee grounds in their paper filters, tea leaves and bags, as well as used napkins, tissues and paper towels.

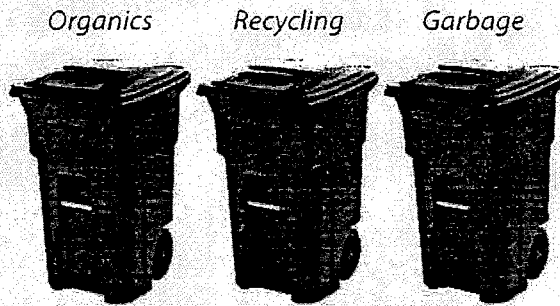
Yard waste includes your plant, flowers and grass cuttings, leaves, and branches.

Recycling

This category remains the same as in the existing City of Surrey program, and includes cardboard, cans, paper, and plastic bottles and containers. For a more detailed list of what can be placed in the Recycling cart, see page 15 of the *City of Surrey 2010 Waste Collection Program* calendar.

Garbage

Simply put, everything else that is allowed for curbside pickup, and which does not fit into the Recycling and Organics categories, goes into the Garbage cart (with the black lid).



Three new carts are being provided under the Pilot Program. The green-top Organics cart goes to the curb every week. The blue-top Recycling cart and black-top Garbage cart each go to the curb once every two weeks. See the enclosed calendar for a detailed pickup schedule.

Keep it fresh and clean

The biggest concerns many people have about kitchen waste pickup are potential odours, and the attraction of pests. Neither of these should be issues with the new Organics Collection program, since we are not altering the contents of the waste we are picking up. Your kitchen scraps are still going to be at the curb as they have always been—they'll just be in the new Organics cart instead of your garbage cans. There are, however, simple ways to minimize both concerns under any pickup plan.

About cart liners

If you want to line your Organics cart to help contain your waste, please use ONLY newspaper or compostable paper bags. NEVER use any form of plastic bags, even those labeled compostable.

- Place your Organics cart at the curb each and every pickup day—even if it's only partially filled that week.
- Keep the lids fully closed at all times—don't allow the carts to get so full that the lids are propped open.
- As much as possible, try to place kitchen scraps and yard waste in alternating layers in the cart, keeping drier yard waste on top of wetter kitchen waste.
- Between pickups, keep your carts in a shady area, away from direct sunlight.

3

Now & then

Under the present collection system, half of the household waste collected from Surrey homes goes to the landfill. Recycling accounts for 30%, and yard waste recovery makes up the other 20%. Our target is to double organics diversion to 40%—by removing kitchen waste from the garbage and adding it to the yard waste through the pilot program—in order to achieve the overall goal of 70% diversion from the landfill.



Kitchen convenience

To make it even easier for you to keep your kitchen waste separated out, we're also providing you with a smaller "kitchen catcher" collection pail for organics. Use this pail in your kitchen to discard your food waste throughout the day, then transfer it all to the green-lid Organics cart when it's convenient. Feel free to line the kitchen catcher with newspaper or paper towel, but please, NO plastics under any circumstances. Both your kitchen catcher and the larger Organics, Recycling, and Garbage carts can be cleaned out with mild soap and water when necessary.

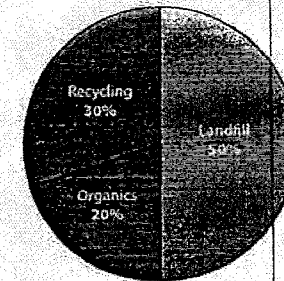
Need more collection space?

If you find you're exceeding the capacity of the new collection carts, here are some options for the overflow:

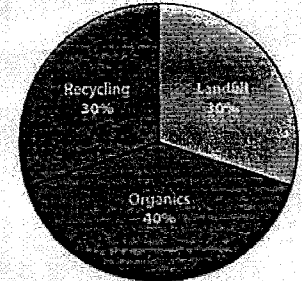
- Organics cart: Use Kraft bags or your existing yard waste cans and set them next to your Organics cart at the curb.
- Garbage cart: Use your existing garbage cans and place them next to your new Garbage cart.
- Recycling cart: Use your existing "blue box" and place it out with the new Recycling cart.
- Contact us at one of the information numbers on the next page and we will upgrade you to a larger cart or carts.



Current



Goal



Pilot program differences

The information in this newsletter is specific to your home and your immediate neighbours. Other areas of the City of Surrey that are participating in the Pilot Program will operate under slightly different rules, and the rest of the City will be continuing under the previous system of collection, for now.

Throughout the Pilot Program time span, we'll be evaluating how the collections are going from many standpoints—including costs, truck schedules and staffing, the new carts, and your feedback on how easy the plan is to follow. Once the Pilot Program ends, all of this information will be used to finalize the system and put it into operation throughout the City.

Organics Collection Pilot Program



What about composting?

The City of Surrey sells the Earth Machine backyard composter to residents for \$25. We encourage residents who are currently using backyard composting to continue to do so. For residents wishing to learn more about the City's backyard Composter availability, please contact us at 604-590-7289.

We believe that backyard composting is a cost-effective and environmentally-beneficial means of dealing with food waste. However, backyard composting cannot deal with many types of raw and cooked food waste, such as meats, poultry, fish, fats, rice, and pasta. All of these more volatile organic materials can

be placed at curbside to be processed at industrial facilities where they are composted into rich soil amendments, or, in Surrey's case, to be converted in the future into a carbon-neutral biofuel that will be used to fuel the trucks that pick up your waste.

Also, we acknowledge that backyard composting is not something that all residents wish to participate in, nor do all residents have a convenient outlet to manage the composted material.

There are no limitations to the types of food waste that you can place into your Organics waste cart.

In this regard, even if backyard composting were to be made a mandatory requirement, ensuring compliance would be a very difficult undertaking. Curbside organic diversion provides a simple and balanced outlet to ensure maximum participation.



For more information

Questions? Concerns? For the most current information about the Organics Collection Pilot Program:

- Call the Organics Collection Program Hotline at 604-551-1170
- Call the Garbage & Recycling Hotline at 604-590-7289
- Email us at EngOperations@surrey.ca
- Visit www.surrey.ca



Organics Collection Pilot Program

Nov. 1, 2010 - Oct. 31, 2011

Welcome to the program

The new City of Surrey curbside Organics Collection program is the key to reducing waste delivery to the landfill by 70%. Here's how you can help reach that goal.

In June of this year, the City engaged a month-long consultation and survey process with Surrey residents to discuss plans to collect kitchen waste at the curbside. The result was a strong 88% support of this new green initiative.

A big part of the new plan is finding a way to make use of the waste we collect. That's called waste diversion. The current recycling system goes a long way toward that goal, and the new Organics Collection plan will take another giant step forward. But the most progressive part of the plan is what we intend to do with the organic waste. Under the new system, we're planning to turn your kitchen leftovers and yard waste into a valuable resource. Using a new plant to be built in Surrey, the organics picked up from your curb will be converted into an environmentally-friendly and carbon-neutral biofuel, which will be used to power the very trucks that pick it up at your home.

How things change for you

The Organics Collection program has been carefully planned to make it as simple as possible for Surrey households. We feel that a simplified approach will ensure maximum participation, which will successfully lead us to achieving our 70% waste diversion goal.

Essentially, there are just two changes—the first deals with separating organics in the kitchen, and the second deals with how you place them out for collection.

You will soon receive a new Organics collection cart from the City, colour-coded with a green lid. This means you will now have three containers to place out for collection each week:

- The new Organics cart.
- The normal Recycling "blue box."
- Your normal Garbage can(s) for waste that is composed of neither organics nor typical recycling.



The new Organics Collection program will help us reach our 70% waste diversion goal.

CONTENTS

- | | |
|--------------------|------------------|
| 1 Welcome | 3 Now and then |
| How things change | Kitchen catcher |
| 2 What goes where? | Need more space? |
| Keep it clean | 4 Composting |
| | More information |

Organics Collection Pilot Program

2

What goes where?

Organics

The simplest way to describe what goes in the new Organics cart is that it includes anything you prepare for your meals at home, and anything that grows on your property. In other words, kitchen and yard waste.

Kitchen waste includes all food scraps including meats, vegetables, fats, bones, eggs, and cheese. Don't scrape plates to the garbage—scrape them into your Organics kitchen catcher and cart. Kitchen waste also includes coffee grounds in their paper filters, tea leaves and bags, as well as used napkins, tissues and paper towels.

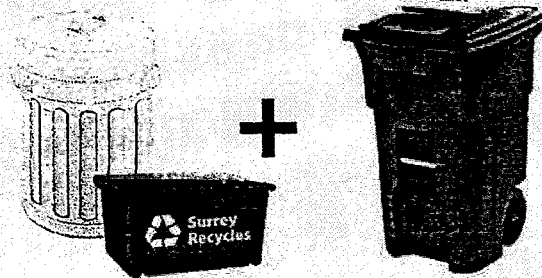
Yard waste includes your plant, flowers and grass cuttings, leaves, and branches.

Recycling

This category remains the same as in the existing City of Surrey program, and includes cardboard, cans, paper, and plastic bottles and containers. For a more detailed list of what can be placed in the recycling blue box, see page 15 of the *City of Surrey 2010 Waste Collection Program* calendar.

Garbage

Simply put, everything else that is allowed for curbside pickup, and which does not fit into the Recycling and Organics categories, goes into your regular garbage can(s).



The new Organics cart with the green lid is being provided for you under the Pilot Program. Simply wheel it out to the curb along with your normal recycling blue box and garbage cans, every week on your normal collection day.

Keep it fresh and clean

The biggest concerns many people have about kitchen waste pickup are potential odours, and the attraction of pests. Neither of these should be issues with the new Organics Collection program, since we are not altering the contents of the waste we are picking up. Your kitchen scraps are still going to be at the curb as they have always been—they'll just be in the new Organics cart instead of your garbage cans. There are, however, simple ways to minimize both concerns under any pickup plan.

- Place your Organics cart at the curb each and every pickup day—even if it's only partially filled that week.
- Keep the lid fully closed at all times—don't allow the cart to get so full that the lid is propped open.
- As much as possible, try to place kitchen scraps and yard waste in alternating layers in the cart, keeping drier yard waste on top of wetter kitchen waste.
- Between pickups, keep your cart in a shady area, away from direct sunlight.

About cart liners

If you want to line your Organics cart to help contain your waste, please use ONLY newspaper or compostable paper bags. NEVER use any form of plastic bags, even those labeled compostable.

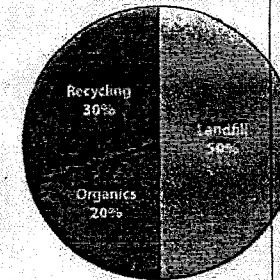
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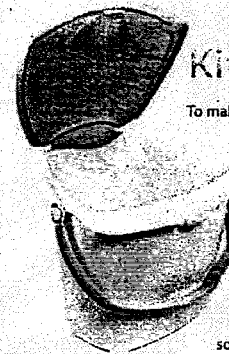
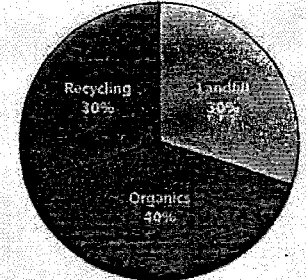
Now & then

Under the present collection system, half of the household waste collected from Surrey homes goes to the landfill. Recycling accounts for 30%, and yard waste recovery makes up the other 20%. Our target is to double organics diversion to 40%—by removing kitchen waste from the garbage and adding it to the yard waste through the pilot program—in order to achieve the overall goal of 70% diversion from the landfill.

Current



Goal



Kitchen convenience

To make it even easier for you to keep your kitchen waste separated out, we're also providing you with a smaller "kitchen catcher" collection pail for organics. Use this pail in your kitchen to discard your food waste throughout the day, then transfer it all to the green-lid Organics cart when it's convenient. Feel free to line the kitchen catcher with newspaper or paper towel, but please, NO plastics under any circumstances. Both your kitchen catcher and the larger Organics cart can be cleaned out with mild soap and water when necessary.

Pilot program differences

The information in this newsletter is specific to your home and your immediate neighbours. Other areas of the City of Surrey that are participating in the Pilot Program will operate under slightly different rules, and the rest of the City will be continuing under the previous system of collection, for now.

Throughout the Pilot Program time span, we'll be evaluating how the collections are going from many standpoints—including costs, truck schedules and staffing, the new carts, and your feedback on how easy the plan is to follow. Once the Pilot Program ends, all of this information will be used to finalize the system and put it into operation throughout the City.

Need more collection space?

If you find you're exceeding the capacity of the new Organics collection cart, here are two options for the overflow:

- Use Kraft bags or your existing yard waste cans and set them next to your Organics cart at the curb.
- Contact us at one of the information numbers on the next page and we will upgrade you to a larger cart.



Organics Collection Pilot Program

2011 curbside pickup calendar

JANUARY

S	M	T	W	T	F	S
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DECEMBER

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■ Organics + Garbage

■ Organics + Recycling



Yes!

Place all of these in your green-lid Organics cart for weekly pickup at curbside.



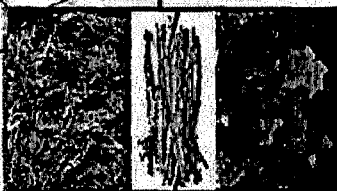
- All raw, cooked and leftover food, including meat, poultry, fish, seafood, eggs, dairy, vegetables, fruit, bread, pasta, and grains. Include all leftovers and plate scrapings, including the dressing on salads



- Coffee grounds in their used paper filters, tea leaves and tea bags



- Used paper towels, napkins, tissues, paper plates, and pizza delivery boxes



- Plants, flowers and grass cuttings, leaves, and branches



No!

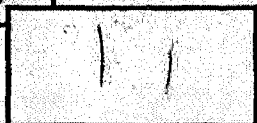
Do not place these in with your Organics—See page 15 of the City of Surrey 2010 Waste Collection Program calendar to see which items can be placed out with your recyclables.



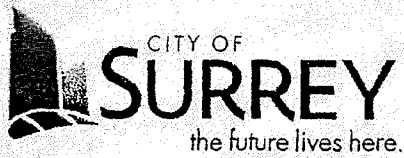
- Nothing made of glass or plastic—including biodegradable plastic—and no paper cartons or containers such as juice boxes, milk cartons, coffee cups, plastic wrappers or take-out containers.



- Nothing made of metals, including aluminum foil, cans, and twist ties



- Nothing made of paper unless it's specifically listed above as acceptable, including no toilet paper or magazines



Organics Collection Pilot Program (first three months)

NOVEMBER 2010

S	M	T	W	T	F	S
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DECEMBER 2010

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JANUARY 2011

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 Organics + Garbage

 Organics + Recycling

NO: R201 COUNCIL DATE: November 2, 2009

REGULAR COUNCIL

TO: Mayor & Council **DATE: October 29, 2009**

FROM: General Manager, Engineering **FILE: 2320-20 (Garbage & Recycling)**

SUBJECT: Curbside Residential Organics Collection Service - Proposed Public Consultation and Pilot Collection Program

RECOMMENDATION

The Engineering Department recommends that Council direct staff to initiate a public consultation process with respect to curbside organics collection options with a view to implementing a pilot program in the latter part of 2010.

INTENT

The purpose of this report is to outline options that are available to reduce solid waste in Surrey by way of an expansion of the City's residential curbside waste diversion program involving a residential organics collection service.

DISCUSSION

To achieve the 70 per cent waste diversion goal set out in the Regional Solid Waste Management Plan (SWMP) and to reduce green house gas emissions, Metro Vancouver (MV), in consultation with it's member municipalities, has decided that a Region-wide food waste (organics) diversion program should be established. Each of the Region's municipalities is in the process of developing a curbside organics diversion program.

Metro Vancouver recently awarded a contract to Fraser Richmond Soil and Fibre (FRSF), which will receive organics at its organics processing (composting) facility in Richmond. Member municipalities will be encouraged to transport curbside organics to this facility. The residential organics disposal rate at this facility has been established at \$40/tonne.

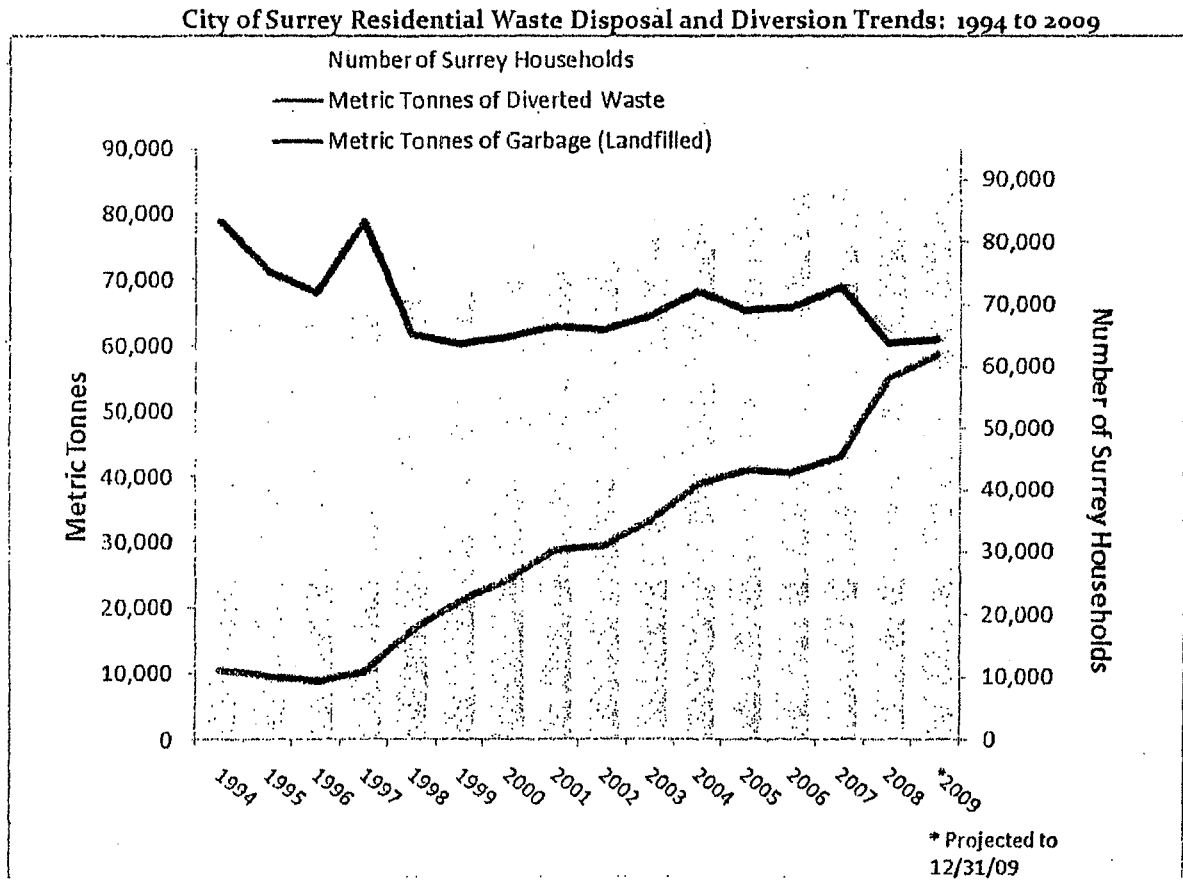
Several municipalities within the Region, including Surrey, were already disposing of their residential curbside yard waste at the FRSF facility. FRSF composts yard waste into nutrient-rich soil and sells this product to the public via various retail outlets throughout the Region, including four outlets in Surrey.

City of Surrey Curbside Waste Diversion Trends

For the past 15 years, the City has experienced a steady annual increase in diverted residential curbside waste tonnage per capita and a corresponding decline in regular waste tonnage per capita. These trends are also evident throughout the Region.

The following graph illustrates Surrey's residential waste volumes and trends since 1994.

Table One:



In 2007, Surrey diverted approximately 38 per cent of the 107,800 tonnes of residential curbside waste that was generated within the City. The diversion rate increased to 48 per cent in 2008 and is projected to increase to 49 per cent in 2009, which is slightly above the Regional average residential waste diversion rate. The increase in Surrey's diversion rate is mainly attributed to:

- the City's single stream recycling program;
- the 2008 Metro Vancouver ban on the receipt of household recyclables and yard waste at the Regional transfer stations; and
- various Provincial Extended Producer Recycling Stewardship programs.

City of Surrey Food Waste Diversion

For a four-week period, commencing in late July 2009, staff undertook a curbside waste composition analysis to determine the tonnage of organic waste material that could potentially be further diverted from the waste stream. The analysis included the collection of a random sample of curbside garbage from over 150 households across the City. Each sample was weighed and then its contents were separated into an organic waste (food waste) component and a non-divertible waste component. Each component was then weighed and compared to the total original weight of the sample. Through this study it was established that the average household in Surrey generates 16.3 kg of curbside garbage per week and that 67% is organic and the remainder is non-divertible as reflected in the following table:

**Table Two:
Garbage Composition for the Average Surrey Household per Week**

Average weekly weight of divertible organic material (kitchen waste) separated from the garbage:	10.9 kg	67%
Average weekly weight of non-divertible material separated from the garbage:	5.4 kg	33%
Total:	16.3 kg	100%

Based on the projected total residential waste tonnage of 61,000 tonnes for 2009 and based on the waste composition findings as documented in Table Two, it is estimated that the City will generate approximately 41,000 tonnes of divertible organic material per year and approximately 20,000 tonnes of residual (non-divertible) waste.

**Table Three:
Composition of Surrey's Annual Residential Garbage Stream**

2009 estimated divertible organic material (kitchen waste) derived from Surrey's residential waste stream:	41,000 tonnes	67%
2009 estimated non-divertible material derived from Surrey's residential waste stream:	20,000 tonnes	33%
Total:	61,000 tonnes	100%

Even if organics waste collection were put in place immediately, it would take a number of years to maximize the level of organics diversion. It is estimated that the City could realize a 60% organics diversion rate from a curbside organics collection program in the initial diversion year. This would divert approximately 24,400 tonnes of kitchen waste from the current garbage stream.

The following table documents the positive overall impact that organics diversion would have on Surrey's residential curbside waste stream:

**Table Four:
Potential City of Surrey Curbside Organics Diversion**

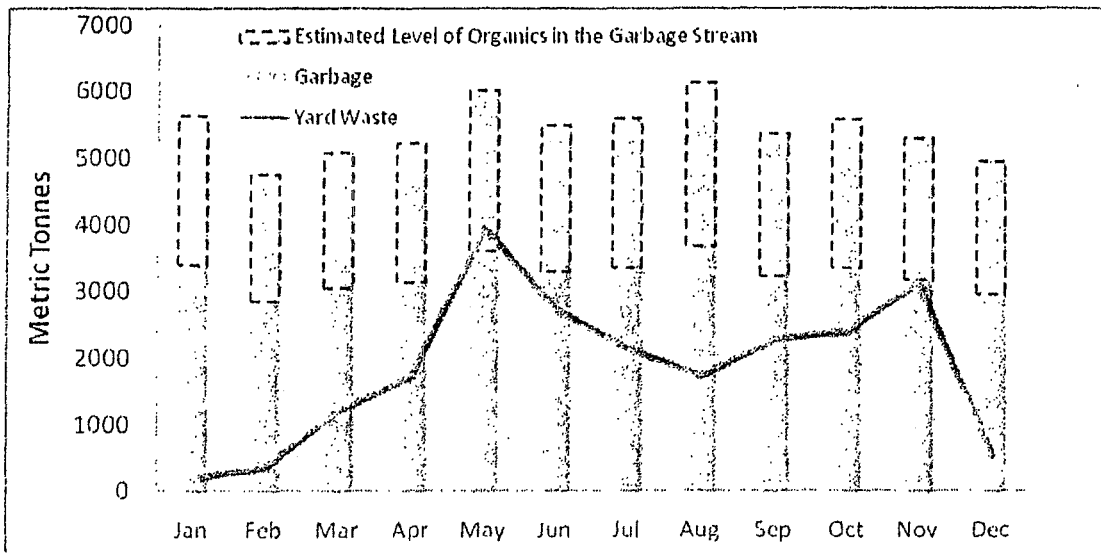
	Non-Diverted (Landfilled) Waste	Total Diverted Waste			Total Waste (Non-Diverted & Diverted)	Total Diverted Waste (%)
	Curbside Garbage	Recyclables	Curbside Yard Waste	Curbside Kitchen Waste		
Projected Tonnages with Organic Collection Program	36,600	34,200	24,500	24,400	119,700	69%
Status Quo (with no Organics Collection Program)	61,000	34,200	24,500	0	119,700	49%

Curbside Collection Service Requirements

Kitchen organic waste is generated at a relatively uniform rate throughout the year while organic yard waste fluctuates dramatically by season and is dependent on lot size, the amount of landscaping that is located on the lot, and the frequency of landscaping work done by the home owner.

Weekly regular garbage output is more uniform throughout the year. Kitchen waste content within the regular curbside garbage stream is one key factor that drives the frequency and consistency of residential curbside participation. Kitchen waste tends to decompose and create foul odours, which motivates homeowners to put out their garbage regularly. Table Five illustrates the relative uniformity of the regular garbage waste stream over the months of the year and the more dramatic fluctuations in the yard waste stream.

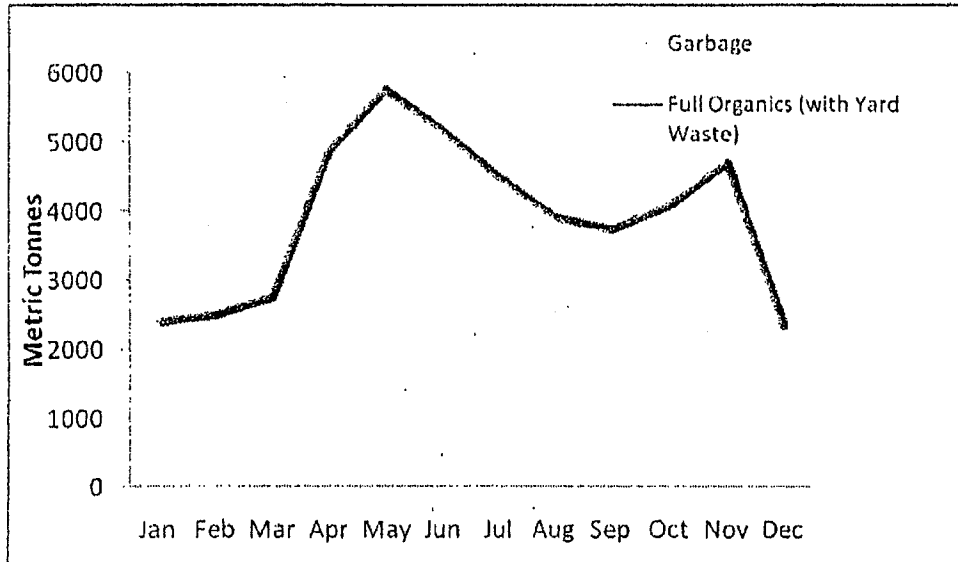
**Table Five:
Average Monthly Quantities of Curbside Yard Waste and Regular Garbage***



*based on 2005 to 2008 data (averaged)

Table Six illustrates the City's average month-by-month tonnage of yard and kitchen organics combined and regular garbage.

**Table Six:
Estimated Monthly Fluctuations to Waste Volumes with
Curbside Organics Diversion Program (based on 2009 projected tonnages)**



Given the results of the recent organic waste composition study for Surrey, a move to a full separate curbside organics collection program presents a significant opportunity in relation to the City's sustainability objectives and will significantly assist in reaching the waste diversion objectives of the Region's Solid Waste Management Plan.

Proposed Public Consultation Process

There is a growing interest by the public for sustainable solutions relating to municipal solid waste management. While moving towards a full curbside organics diversion program will fulfill the City's and region's diversion goals, the design of such a program must be carefully considered. Certain organics waste collection options are more economical than others but will yield lower diversion rates, while others are conducive to ensuring high diversion rates but at higher service costs. The key factors including ease of collection, service cost per unit and diversion effectiveness must be balanced with public expectations.

For example, an option that could be immediately implemented with the least service impact would be to require residents to simply place weekly organics in a separate receptacle (i.e., garbage can) that contains an "organics" label, or in a Kraft bag (similar model to the City's existing yard waste program). The difficulty with this type of service model is that organic waste is highly odorous and the use of a standard receptacle or kraft bag will very likely attract animals and pests. In addition, this type of service model typically yields low diversion rates from households that do not wish to dedicate additional waste receptacles or purchase additional kraft bags for this purpose.

Some major municipal jurisdictions are using a "semi-automated cart system" where households are provided with animal/odour resistant waste carts within which to discard their household

organics/yard waste, garbage and recyclables materials. Organic/yard waste is collected weekly while other garbage and recyclables are collected bi-weekly. While this model is conducive to driving higher levels of organic waste diversion and is generally appreciated by residents due to its simplicity and effectiveness, the cost for this service is higher than the traditional manual collection process due to the automation and the specialized waste carts. This model is explained in greater detail in Appendix I.

Given the size of the Surrey's waste collection customer base and the potential for significant change to the existing weekly services, staff intends to undertake a study of several viable options related to the collection of organic waste. These options will be presented to the public via a series of open public consultation sessions and surveys. The information that is presented will reflect the waste diversion potential for each option, the technology that each option will entail and the customer service costs.

The public consultation/survey process will be undertaken during the first half of 2010, with the goal of the consultation being to determine relative acceptability to the public of the different collection options. A side benefit of the process will be increased public awareness of efforts related to waste diversion by the City. The consultation process will assist staff in determining a "preferred approach" to organics collection. The results of the consultation process will be reported to Council.

Pilot Program for Kitchen Waste Organics

Subsequent to the public consultation process during the latter half of 2010, a pilot organics collection program will be established with a select number of households in the City, which allow staff to refine the "preferred" approach to organics waste collection so that it can be implemented more effectively across the City after the pilot. The pilot program will also allow for a more accurate determination of equipment requirements.

Contractor Engagement

The move towards a full curbside organics diversion program represents a major scope change to the current waste collection services contract with International Paper Industries, Ltd. (IPI). The City's contract with IPI runs to the end of 2012.

The proposed pilot program for organics diversion would conclude in 2011. Staff are intending to implement the full organics waste collection service as an element of the City's next waste collection contract, which will be awarded in 2012.

CONCLUSION

Based on the above discussion, it is recommended that Council direct staff to initiate a public consultation process with respect to curbside organics collection options with a view to implementing an organics collection pilot program in the latter part of 2010.

Vincent Lalonde, P.Eng.
General Manager, Engineering

VL/RAC/brb

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- Appendix I: Weekly Organic Collection and Alternating Bi-weekly Collection of Garbage and Recyclables
- Appendix II: Semi-Automated Waste Collection Services Using Curbside Carts for Organics, Garbage and Single Stream Recyclables

Considerations with Regard to Organics, Garbage and Recyclables Collection

Frequency of Collection

Given the dramatic drop in the volume of regular non-divertible garbage that would be realized from a full organics curbside collection program, the City is well positioned to introduce a weekly organics collection service combined with a bi-weekly garbage and recyclables collection service. This would be a significant change to the City's current practices with respect to waste collection but would be justified based on the relative volumes of the different waste collection streams.

The following table illustrates a typical monthly collection schedule based on weekly organics collection and bi-weekly collection of regular garbage and recyclables.

Week	Organics Collection	Garbage Collection	Recyclables Collection
1	✓	✓	✓
2	✓		
3	✓	✓	✓
4	✓		

Sustainability Benefits

By introducing bi-weekly regular garbage collection and weekly organics collection, residents would be motivated to ensure that their kitchen organic waste was collected on a weekly basis so as to avoid the nuisance odours that this waste stream produces if it is left in a garbage container for longer periods of time (i.e., 2 weeks).

A number of cities across North America and Europe have successfully introduced such a weekly/bi-weekly collection process. The City of Toronto implemented a program of this nature in 2004. In British Columbia, the community of Ladysmith introduced this collection system. Within a year, each of these Canadian municipalities reported an 80% diversion of the kitchen organic waste stream.

If Surrey were to achieve the same results as Toronto, the City's annual waste diversion rate would be well beyond the Region goal of 70% by the year 2015.

Service Benefits

Weekly Organics Collection:

A curbside organics collection program involves the collection of kitchen waste materials mixed with yard waste materials. This combination of organics is actually preferred by compost process operators since the nitrogen-rich kitchen waste provides a good balance with the carbon-rich yard waste, which accelerates the composting process and acts to minimize odours.

Semi-Automated Waste Collection

Staff has reviewed options with respect to how organics waste should be collected. A semi-automated curbside waste collection process would require that the City provide each household with standard wheeled waste receptacles. The receptacles are rolled out to curbside by the resident for the weekly collection to occur. The collection crew places the full cart at the back or side of the collection truck where specially designed hydraulic lifts known as "flippers" lift the cart and empty its contents into the waste collection vehicle. Photographs and a description of a typical collection cart and emptying procedure are contained in Appendix II.

Semi-automated collection reduces worker injuries and worker fatigue. The design of the typical organics receptacles, which contain tight-fitting "flip lids", minimizes the potential for intrusion of animals into the waste and for scattered litter.

The 364 litre cart is considered large enough to accommodate weekly volumes of kitchen and yard waste that would be generated by a typical household. However, at times some households may generate more weekly yard waste and/or kitchen waste than can be accommodated in the cart (i.e., in the fall when property owners are cleaning up leaves and branches). In these circumstances, residents would be required to place kitchen waste in the cart and place any overflow yard waste in separately marked yard waste cans or Kraft bags. Residents would also have the option of obtaining an additional organic waste cart for weekly collection subject to paying a higher service rate. For the vast majority of households, this would not be necessary.

Other Information about the Organics Waste Stream:

The following organic waste materials can be placed at curbside and processed at the FRFS Richmond facility:

- **Food Items:** Vegetables & fruits, corn cobs, meats, fish, bones, breads, dairy items, oily and fatty foods, coffee grinds, egg shells, etc.;
- **Non-food related items:** Food-soiled paper products including napkins, newspapers and cardboard; and
- **Untreated wood products** provided that they are bundled alongside curbside yard waste materials.

It is important to note that the FRFS organics processing facility does not accept plastic bags since plastic bags do not decompose in the composting process. This means that residents participating in a municipal curbside organics diversion program anywhere within the Region must either use biodegradable bags to line their kitchen waste containers or newspapers or choose not to use any liners and dispose of their kitchen waste directly into the curbside cart.

Bi-weekly Garbage Collection:

Once organics are removed from the regular garbage stream, that garbage stream would include mainly non-odorous materials such as textiles (clothing), treated wood products, furniture, leather goods, footwear, rubber, styrofoam and unrecyclable cardboard. Currently, a typical Surrey household produces approximately one and a half cans of garbage (including kitchen organics) each week. Once the kitchen organics are removed from this waste stream, it is anticipated that weekly garbage output will drop to less than one can per week for the typical household. On this basis, using a semi-automated pick up, a 242 litre cart (64 gallon) cart would

provide sufficient volume for regular garbage from a typical household if collection occurred on a bi-weekly basis.

Bi-Weekly Recyclables Collection:

With a semi-automated pick-up model, bi-weekly collections and based on the volume of recyclables generated by a typical household, a 242 litre (64 gallons) cart would accommodate single-streamed household recyclables in the two-week period between collections.

Estimated Collection Costs

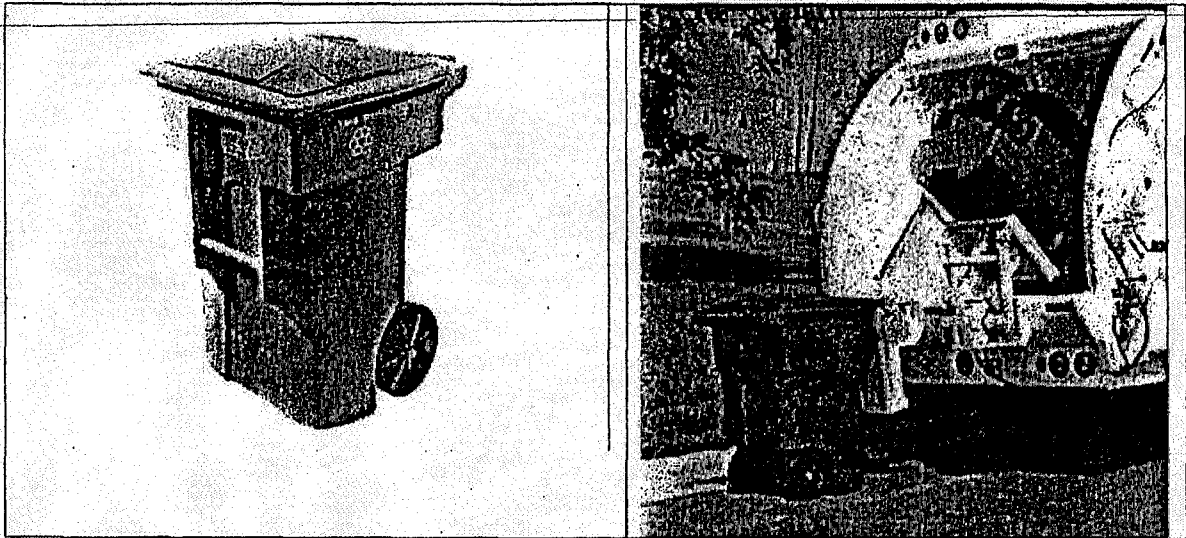
Semi-automated collection service is generally slower than manual collection due to the time required to engage and disengage the carts from the collection vehicle. Each semi-automated collection vehicle and related crew can handle 700 to 800 households daily while a vehicle and manual collection crew can handle up to 1,200 households daily. As such, more vehicles are required to implement semi-automated collection in comparison to manual collection for any given area. However, by converting from full weekly collection services to the weekly collection of organics and the bi-weekly collection of garbage and recyclables, the overall increase in costs is minimal.

Estimated Cart Costs

Waste receptacle carts range in price depending on size. A 264 litre (64 gallon) cart costs \$57 including delivery to the household. To supply each Surrey household with a cart for the organic waste stream would cost a total of \$5 million. If each household was provided with a cart for each of organics, garbage and recyclables (3 carts), it would cost a total of \$15 million.

Based on a simple straight-line amortization over a 10-year period, the carts would cost approximately \$0.5 million per year per waste stream which equates to approximately \$6/year/household/waste stream. This cost would be recovered through adjustments in the annual solid waste collections service levy.

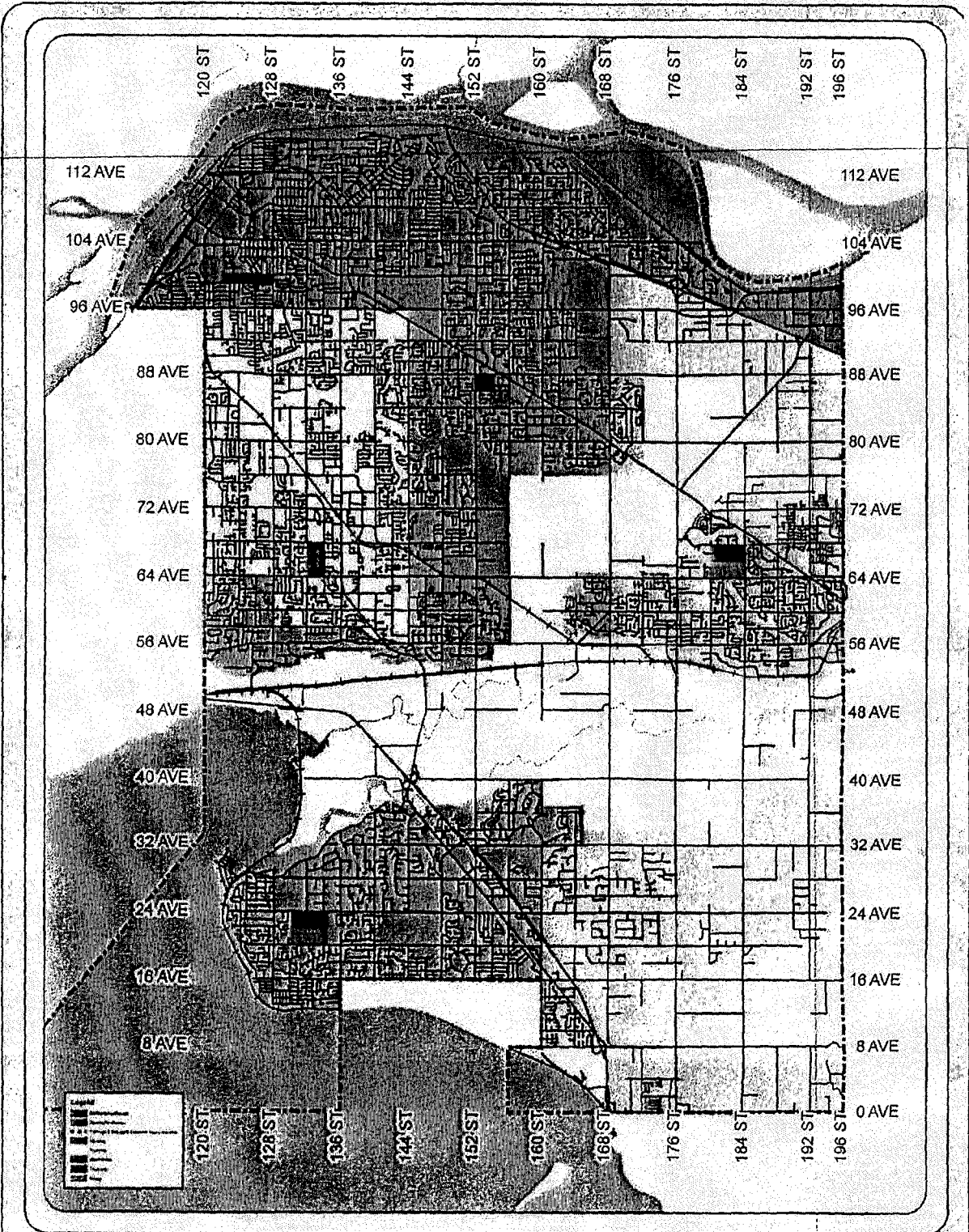
Semi-Automated Waste Collection Services Using Curbside Carts for Organics, Garbage and Single Stream Recyclables



WASTE CARTS (approximately \$60/each)

- Universal design fits all U.S. fully automated gripper arms and semi-automated Bar-Loc collection systems
- Vented rim allows air flow through cart contents
- Lower ventilation louvers provide ventilation for leachate evaporation and aeration of waste
- HDPE plastic grill features stainless steel hinges for leachate drainage and will not rust
- Reduces odors, inhibits anaerobic decomposition, and reduces volume and weight of contents
- Sealed lock bar design eliminates leakage in semi-automated operations
- The hinged, plastic grill swings open when dumped for complete emptying of materials
- Large opening for easy loading from grass baggers
- One-piece continuous handle molded into cart for easy maneuvering
- Smooth rolling wheels for easy handling on lawn
- Multiple bottom wear chimes for extended cart life and abrasion protection

Description	Dimensions (l x w x h)	Load Rating
364 litre Cart (96 Gallon)	90 cm x 75 cm x 120 cm (3 ft x 2.5 ft x 4 ft)	102 kg (224 lbs)
242 litre Cart (64 Gallon Cart)	76 cm x 70 cm x 101 cm (2.5 ft x 1 ft x 3.5 ft)	68 kg (150 lbs)



WASTE COLLECTION MAP

SURREY

City of Surrey
Eng. Dept.
Nov. 2004
By: 1041

MEMO



TO: Harry Janda
FROM: Alida Bishop
DATE: August 10, 2011
FILE NO.: 11-5061-5000
SUBJECT: Summary of Follow-Up Consultation for Residents in The City of Surrey
Curbside Organics Pilot Program

Suite 510
3820 Cessna Drive
Richmond
British Columbia
Canada
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Telephone
(604) 278-7847
Fax
(604) 278-7894

Between July 23 and 29, 2011, Dillon Consulting Limited (Dillon) staff targeted the approximately 950 households located in the five different neighbourhoods of Surrey involved in the 'bi-weekly' organics pilot program. The five neighbourhoods are located in areas with different collection days from Monday through Friday. Households were initially contacted door-to-door by Dillon staff to participate in a short survey and were provided with a letter from The City of Surrey (The City). The letter presented an update on the overall program and also provided households with a link to an online survey, making it convenient for residents who were unable to speak to Dillon staff during the door-to-door consultation. Following the door-to-door consultation, Dillon staff contacted households that were not home at the time, but who had previously provided their phone number to request their participation in the survey.

Dillon staff collected a total of 496 responses about the program from households based on a combination of door-to-door consultations, telephone calls and the online survey. Actual participation rates within each of the five neighbourhoods ranged from 46% to 58% of total households. An analysis of the survey data was completed and key findings are highlighted below under the following categories:

- Overall results on the 3-stream cart-based collection program;
- Recycling Collection Program;
- Organics Collection Program; and
- Garbage Collection Program.

Memorandum

The City of Surrey

Follow-Up Consultation: Organics Pilot Program

August 10, 2011

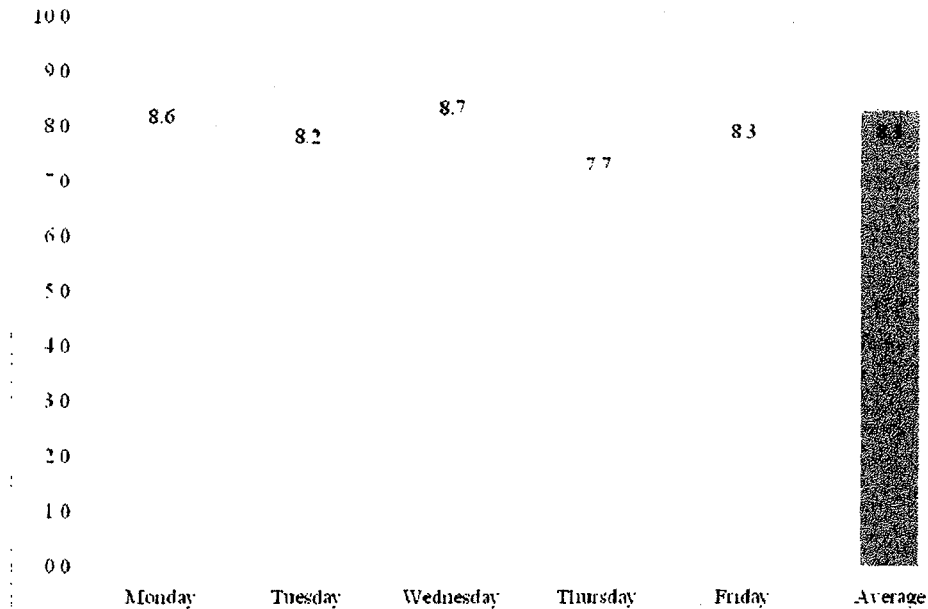
Overall Results

Convenience

Results indicated that when households were asked on a scale of one to ten, with ten being the highest, to rate the convenience of the cart-based collection program. The overall result for all households was an average of 8.3 (refer to Table 1, below). When analyzed specifically for each of the five neighbourhoods, the results ranged from 7.7 to 8.7 with Wednesday having the highest value followed by Monday (8.6), Friday (8.3), Tuesday (8.2) and Thursday (7.7).

Table 1: Convenience Results

On a scale of 1 to 10, 10 being the most convenient, how would you rate the convenience of the cart based collection program?



Memorandum

The City of Surrey

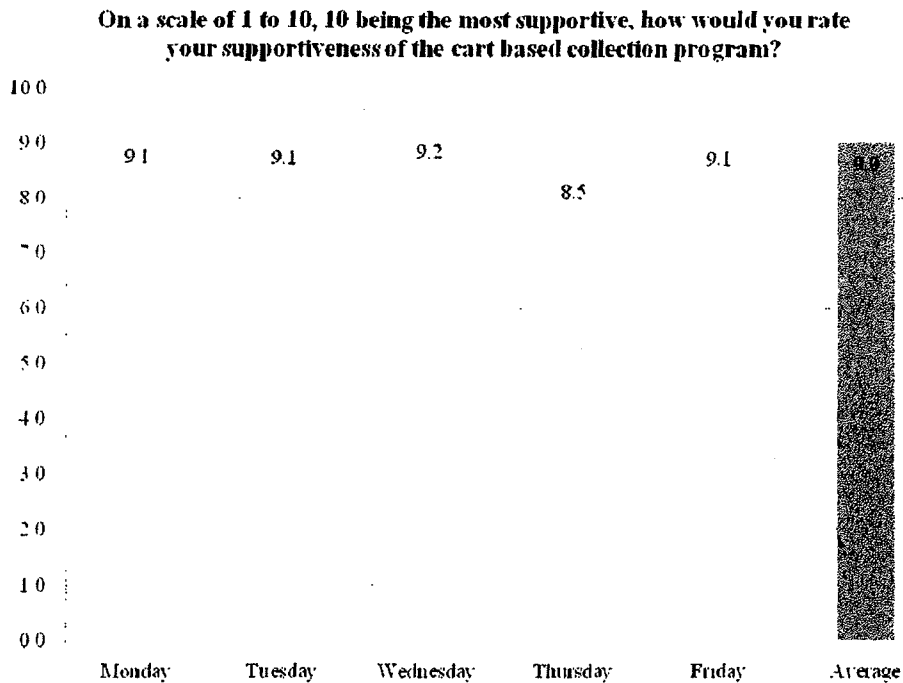
Follow-Up Consultation: Organics Pilot Program

August 10, 2011

Supportiveness

Households were also asked to rate, on a scale of one to ten, their supportiveness for the cart-based collection program. The overall result for all households was an average of 9.0 (refer to Table 2, below). When analyzed specifically for each of the five neighbourhoods, results ranged from 8.5 to 9.2. Wednesday had the highest value of 9.2. Monday, Tuesday and Friday all had the value of 9.1. Thursday had the lowest value of 8.5.

Table 2: Supportiveness Results



Recycling Collection Survey Results

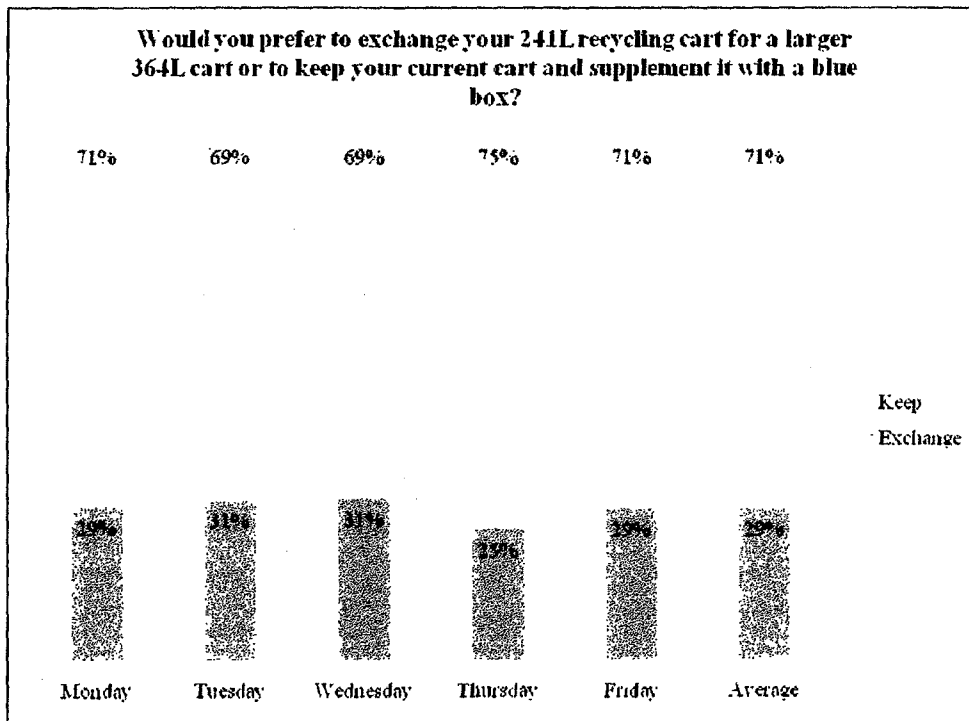
Recycling Cart Preferences

During the survey, households were provided with information on the results of a recently completed waste composition study indicating that there had been a slight increase of recyclables in the garbage stream. To ensure the maximum diversion of recyclables from disposal, residents were asked of their preference between two options for recycling cart(s). These options included:

1. Households keeping their 241L cart and supplementing it with a blue box when they had excess materials; or
2. Households exchanging their 241L cart for a larger 364L cart.

An overall average of 71% of households throughout the five neighbourhoods indicated that they would prefer to keep their 241L cart and supplement it with a blue box (*refer to Table 3, below 4*). This result was consistent when looking at the individual neighbourhood results, as the majority of neighbourhoods would prefer to keep their current cart and supplement with a blue box rather than exchange it for a larger one.

Table 3: Recycling Cart Preference Results



Memorandum

The City of Surrey

Follow-Up Consultation: Organics Pilot Program

August 10, 2011

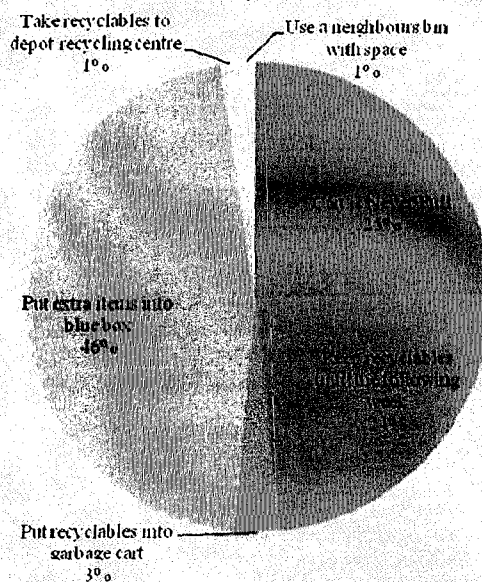
Excess Recyclables

Households were asked what they currently did with their recyclables when their recycling cart was full and there were still a few days until their collection day. On average, 25% of households indicated that their recycling cart was never full and therefore this was not an issue (refer to Figure 1, below). Of the remaining 75%, 46% indicated that they already supplemented their cart with a recycling bin, 24% kept their recyclables until the following week, 3% put their excess recyclables into the garbage cart, 1% took their recyclables to a depot or recycling centre and 1% indicated that they used one of their neighbours bins that had space in it on collection day.

When reviewing each of the five neighbourhoods, the results varied for each of the categories (refer to Table 4, on page 6). In the Friday collection area, the largest percentage of households indicated that they put their extra items into a blue box or a clear plastic bag (53%). The Monday, Wednesday and Thursday collection areas also had similar results (52%, 42% and 43%, respectively). For the Tuesday collection area, the largest percentage of households indicated that they kept their recyclables until the following week (43%). It should be noted that the Tuesday area also had the lowest percentage of households indicate that their cart was never full (12%).

Figure 1: Excess Recyclables Results

What do you do with your recyclables when your recycling cart is full and there are still a few days until your collection day?



Memorandum

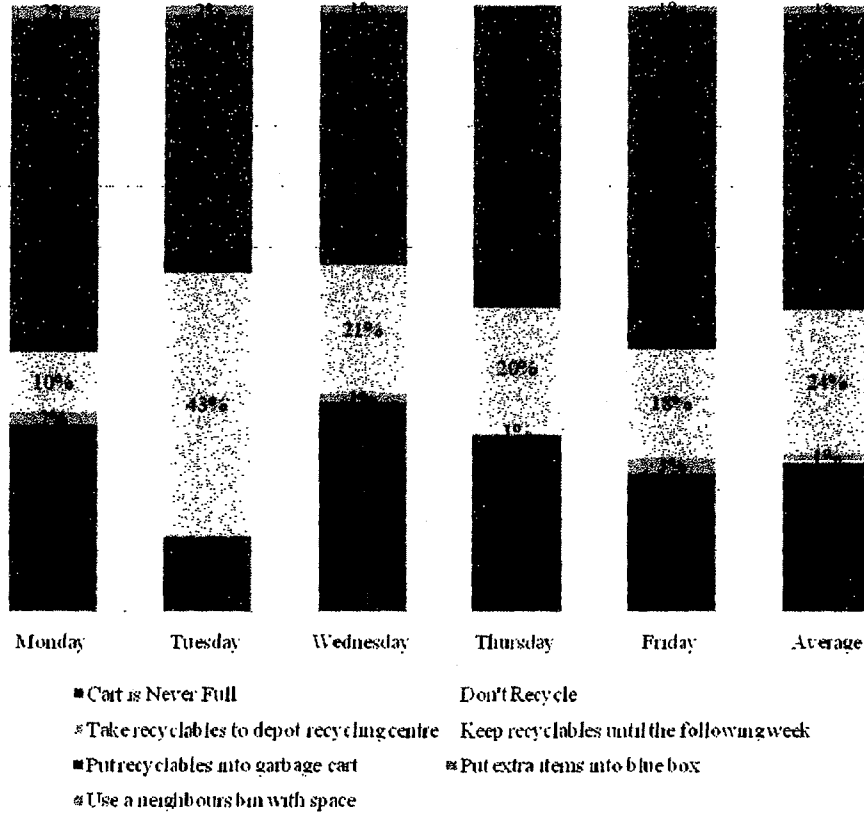
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Follow-Up Consultation: Organics Pilot Program

August 10, 2011

Table 4: Excess Recyclables Results

What do you do with your recyclables when your recycling cart is full and there are still a few days until your collection day?



Memorandum

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Follow-Up Consultation: Organics Pilot Program

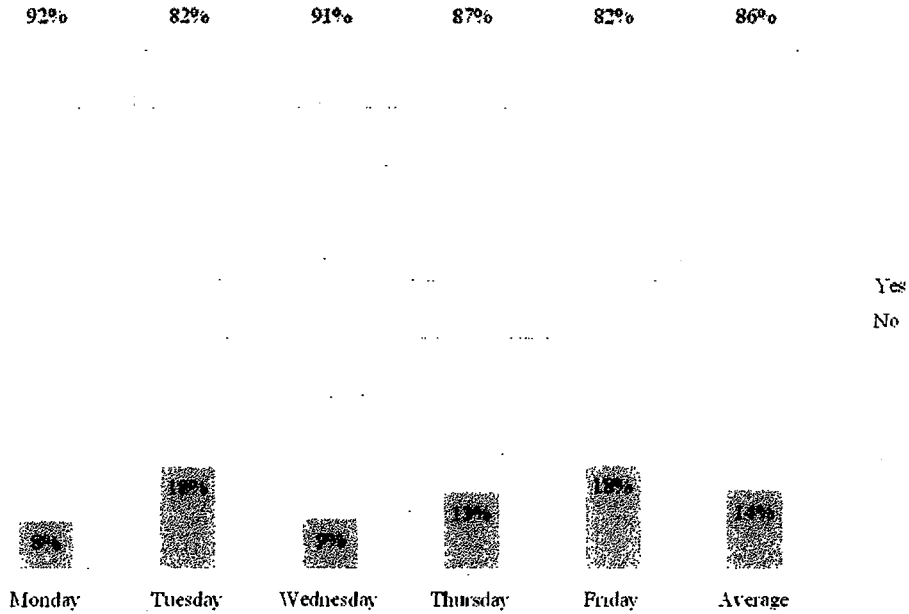
August 10, 2011

Recycling Awareness

Households were asked if they were aware of all of the recyclables that The City accepts as part of their recycling program and that recyclables are banned from garbage. Overall, an average of 86% of households indicated that they were aware of what is recyclable as well as the ban (refer to Table 5, below). Individual results for the five neighbourhoods were similar and ranged from 82% to 92%, with Monday having the highest result (92%), followed by Wednesday (91%) and Thursday (87%). Both Tuesday and Friday results indicated that 82% of households were aware of the recyclables that The City accepts and that recyclables are banned from garbage.

Table 5: Recycling Awareness Results

Are you aware of all the recyclables that Surrey accepts as part of their recycling program and that recyclables are banned from garbage?



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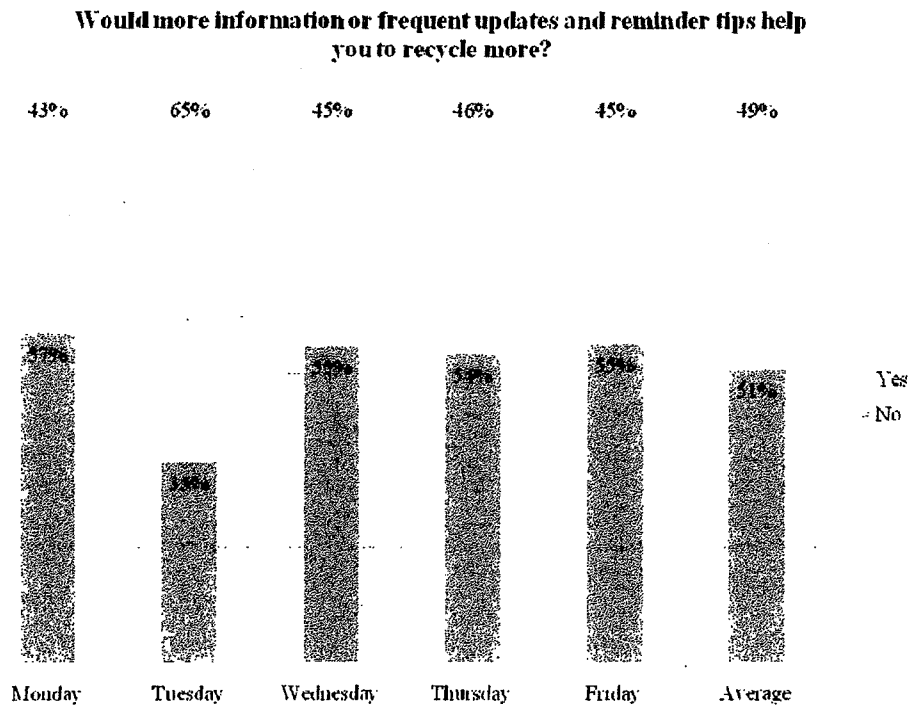
Follow-Up Consultation: Organics Pilot Program

August 10, 2011

Recycling Information

As part of the survey, households were also asked if more information, frequent updates and reminder tips would assist them in recycling more. Overall, 49% of all collection areas indicated that this would be beneficial for them (refer to Table 6, below). Monday, Wednesday, Thursday and Friday collection areas ranged from 43% to 46% in favour of receiving additional information (43, 45, 46 and 45%, respectively); however, 65% of the Tuesday collection area households indicated that they would prefer more information to assist them.

Table 6: Recycling Information Results



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Follow-Up Consultation: Organics Pilot Program

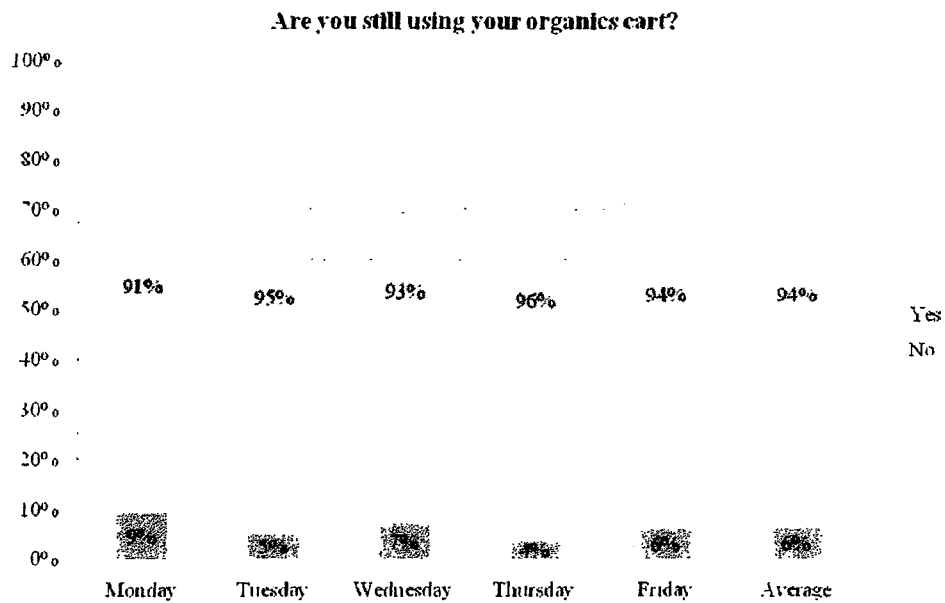
August 10, 2011

Organics Collection Survey Results

Organics Cart Use

Survey results indicated that, on average, 94% of households are still using their organics cart. Individual neighbourhood results were similar through all of the five collection areas and ranged from 91% to 96% of households (refer to Table 7, below). Households which indicated during the survey that they were not using their organics cart (approximately 6% of the respondents) were asked to provide feedback on why they were not using their cart. Results indicated that 25% of households felt that they did not have enough organic waste, 21% thought that separating organics was too much of a hassle, 11% did not have enough information about the program, 11% were concerned with cleaning the carts, 7% were concerned with rats or pests and 25% indicated other responses. Among the other responses were: residents had issues with odours or they already composted their organics in their backyard.

Table 7: Organics Cart Use Results



Memorandum

The City of Surrey

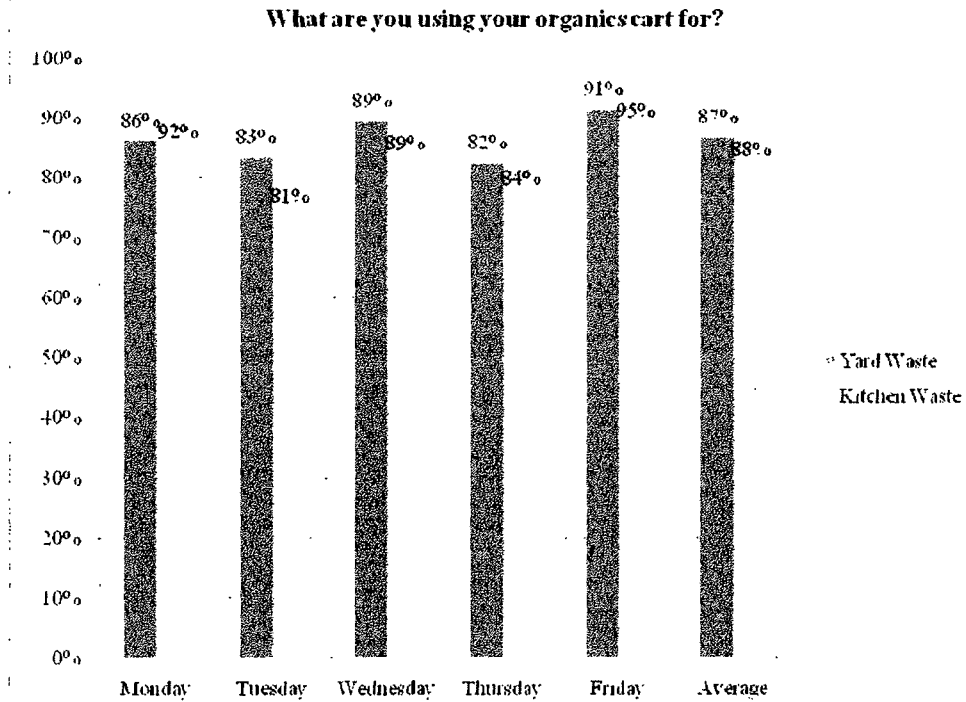
Follow-Up Consultation: Organics Pilot Program

August 10, 2011

Organics Cart Materials

Households that indicated they were still using the organics cart were also asked what they were using the cart for. On average, 87% of households put yard waste into their organic cart while 88% put kitchen waste into their organic cart (refer to Table 8, below). These results indicate that while some households are using their carts for both yard waste and kitchen waste, there are some households that are only using their cart for one type of organic waste.

Table 8: Organics Cart Materials Results



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Follow-Up Consultation: Organics Pilot Program

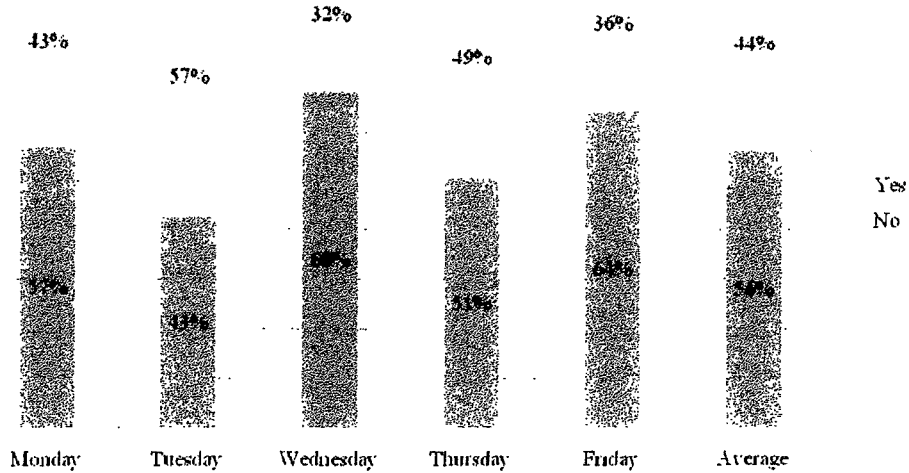
August 10, 2011

Organics Information

Similar to recycling collection, households were surveyed to determine if more information, frequent updates or reminder tips would raise their awareness on the organics program. On average, 44% of households indicated that this would assist them in increasing their organics diversion (refer to Table 9, below). Between 32% and 36% of the Wednesday and Friday collection area were in favour of receiving more information. Monday and Thursday collection area results were between 43 and 49%, and Tuesday collection area results indicated 57% were in favour.

Table 9: Organics Information Results

Would more information or frequent updates and reminder tips raise your awareness about the organics program resulting in an increase of your organics diversion?



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Follow-Up Consultation: Organics Pilot Program

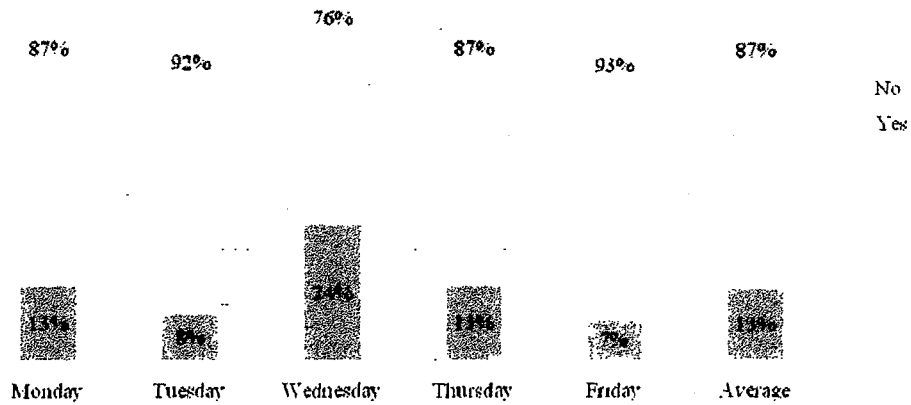
August 10, 2011

Organics Cart Preference

Survey results indicated that, on average, 87% of households preferred to keep their current 241L organics cart than to exchange it for a 364L cart (refer to Table 10, below). Actual results ranged from 76% to 93% for preference to keep their current cart, with 76% of the Wednesday collection area preferring to keep the current carts, Monday and Thursday at 87%, Tuesday at 92% and Friday at 93%.

Table 10: Organics Cart Preference Results

If given the option would you prefer a larger (364L) organics cart?

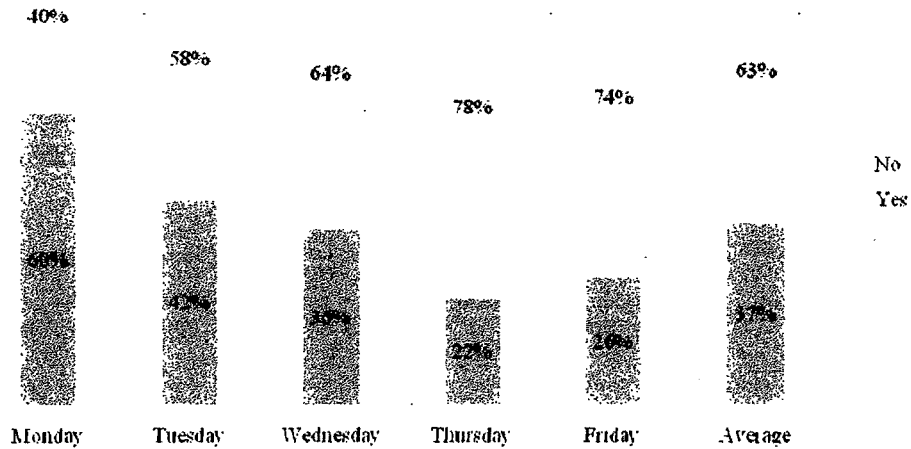


Kraft Paper Bag Usage

Households were also asked if they were still using Kraft paper bags for their yard waste materials when their cart was full. On average, 63% of households indicated that they did not currently use Kraft paper bags (refer to Table 11, below), with Thursday collection area households at 78%, Friday at 74%, Wednesday at 64% and Tuesday at 58%. In the Monday collection area, however, 60% indicated that they did continue to use Kraft paper bags for their yard waste materials when their cart was full.

Table 11: Kraft Paper Bag Usage Results

Are you still using Kraft paper bags for your yard waste materials when your cart is full?



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Follow-Up Consultation: Organics Pilot Program

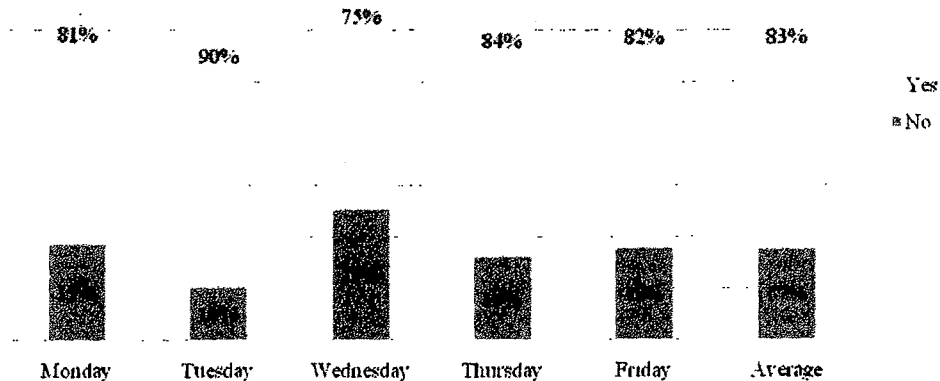
August 10, 2011

Kitchen Catcher Use

Overall, 83% of households indicated that they were using their kitchen catcher. Results ranged throughout the five neighbourhoods, with 75% to 90% of households indicating that they continued to use their kitchen catcher (refer to Table 12, below). Households who did not use their kitchen catcher (approximately 17% of the respondents) were asked to indicate why they chose not to. Of these, 16% indicated that they were concerned with cleaning the kitchen catcher, 14% felt that the kitchen catcher was inconvenient to use or too small, 12% used paper food waste bags instead, 11% didn't want to use it because of the odours from the organics and 11% mentioned that they did not receive the kitchen catcher. Other concerns were indicated as well: 6% of households did not want food waste in the house, 6% were concerned with rats or pests and 6% used another type of container. The remaining 15% of households indicated that they did not have enough information to begin using the kitchen catcher and tossed their organics directly into the organics cart or used a garborator instead.

Table 12: Kitchen Catcher Use Results

Are you still using your City provided kitchen catcher?



Memorandum

The City of Surrey

Follow-Up Consultation: Organics Pilot Program

August 10, 2011

Additional Organics Feedback

When asked if there were any specific issues that households had encountered with the organics pilot program, 54% of households indicated that there had not been any issues. Feedback indicated that odour was the most common issue that households encountered. Messiness and the difficulty of cleaning the organics cart were also common issues.

Memorandum

The City of Surrey

Follow-Up Consultation: Organics Pilot Program

August 10, 2011

Garbage Collection Survey Results

Garbage Cart Use

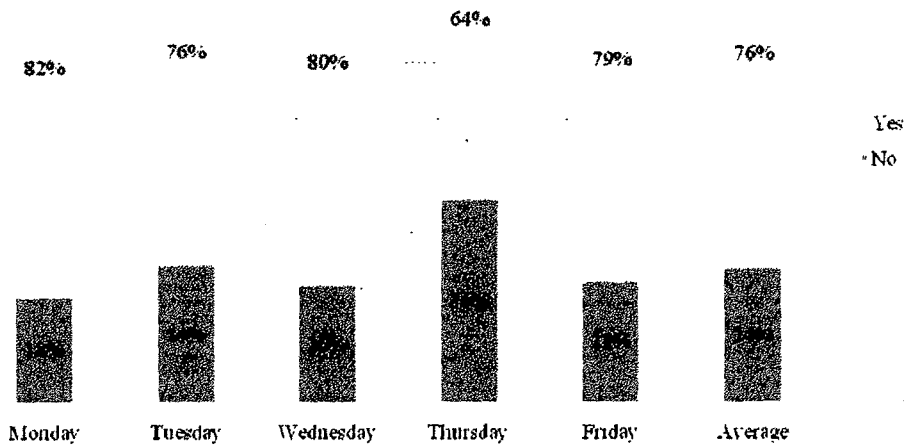
Of the 496 households that were surveyed, only one household indicated that they did not use The City-provided garbage cart. This household felt that the garbage cart was too large and used their own container for garbage instead.

Garbage Reduction

The survey results indicated that, overall, 76% of households found that they had less garbage with the organics collection program (refer to Table 13, below). Results throughout the five collection areas varied between 76% and 82% households indicating less garbage, with the exception of the Thursday collection area with 64% indicating such.

Table 13: Garbage Reduction Results

Are you finding that you have less garbage with the organics collection program?



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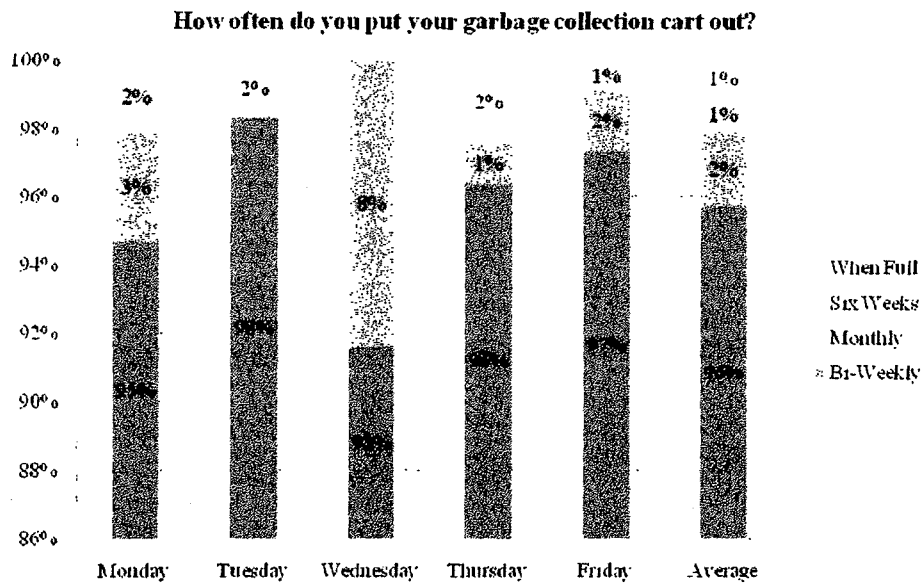
Follow-Up Consultation: Organics Pilot Program

August 10, 2011

Frequency of Placement of Garbage Curbside

In the survey, households were asked how often they placed their garbage out for collection. Results indicated that, overall, 96% placed it out on a bi-weekly basis, 2% on a monthly basis, 1% every six weeks and 1% when their cart was full (refer to Table 14, below). Results were similar for each of the five neighbourhoods, with the exception of the Wednesday collection area with 92% indicating placement at the curb on a bi-weekly basis and 8% on a monthly basis.

Table 14: Frequency of Placement of Garbage Curbside Results



Memorandum

The City of Surrey

Follow-Up Consultation: Organics Pilot Program

August 10, 2011

Fullness of Garbage Cart

Households were asked to indicate how full their garbage carts were on collection day. Feedback from households indicated that, overall, 12% of households' garbage carts were overflowing, 35% were just full, 21% were three-quarters full, 25% were half full and 7% were a quarter full (refer to Figure 2 below and Table 15 on page 19). Results for each of the collection areas varied. For all of the collection areas, except the Thursday area, results indicated that the majority of households had full carts on collection day.

Figure 2: Fullness of Garbage Cart Results

How full on average is your garbage cart on collection day?

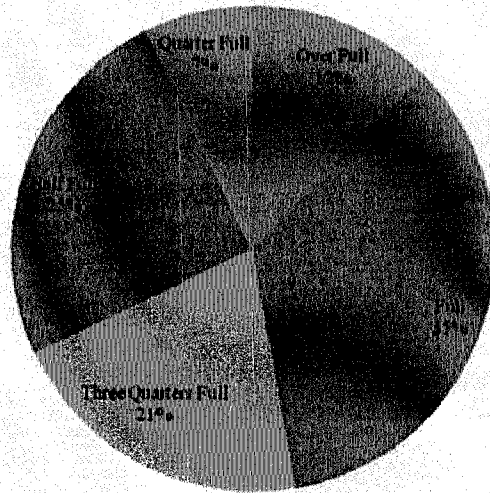
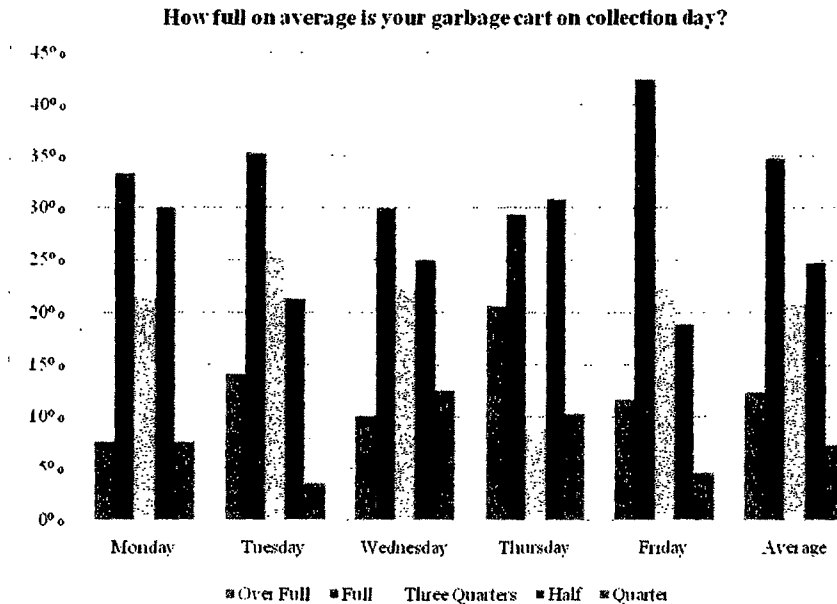


Table 15: Fullness of Garbage Cart Results



Additional Program Comments

When asked if households had any additional comments, the most common ones provided were that they loved the program (27%), wanted weekly collection again (22%), wanted a new collection schedule mailed out (7%) and that wanted more information on what materials go where (6%).

Summary

Overall, on a scale of one to ten, convenience of the program was ranked as 8.3 and support for the program was 9.0. Over 70% of households surveyed indicated that they would prefer to keep their current recycling cart and supplement it with a blue box when they had excess recyclables on their collection day. Currently 46% of households are already supplementing excess recyclables with a blue box. Survey results indicated that 86% of households were aware of all of the recyclables that The City accepts as part of their recycling program and that recyclables are banned from garbage; however, 49% of households indicated that more information, frequent updates and reminder tips would encourage them to recycle more.

Memorandum

The City of Surrey

Follow-Up Consultation: Organics Pilot Program

August 10, 2011

The analysis indicated that 94% of households are still using their organics cart, with 87% using it for yard waste and 88% for kitchen waste. Households who were not using their organics cart identified that they did not have enough organic waste or thought that separating organics was too much of a hassle. Similarly in regards to recycling collection, 44% of households indicated that more information, frequent updates or reminder tips would raise their awareness of the organics program. On average, 87% of households would prefer to keep their current organics collection cart than to exchange it for a larger 364L cart.

Feedback also indicated that 63% of households did not use Kraft paper pages for their yard waste materials when their cart was full. When surveyed, 83% of households indicated that they were continuing to use their kitchen catcher. The main reasons for not using the kitchen catcher included: concerns around cleaning it, that it was inconvenient or that a paper food waste bag was used instead.

When asked if there were any specific issues that households had encountered with the organics pilot program, 54% of households indicated that there had not been any. Feedback indicated that odour was the most common issue that households encountered. Messiness and the difficulty of cleaning the organics cart were also common issues.

Feedback indicated that 76% of households found that they had less garbage with the organics collection program. Survey results indicated that 96% of households placed out their garbage cart on a bi-weekly basis. Additionally, households reported that, on average, 53% of garbage carts were between a quarter full and three quarters full on collection day.

Households were also invited to provide any additional program comments during the survey. The most common comments provided were that households loved the program (27%), wanted weekly collection again (22%), wanted a new collection schedule mailed out (7%), and wanted more information on what materials go where (6%).

APPENDIX III

WASTE CONTRACT PERFORMANCE DEDUCTIONS

Without limiting in any way the City's rights under the Contract or otherwise, the following deductions will be applied to specific failures by the Contractor to provide the Services or otherwise comply with the Contract. The failures listed below reflect a lower quality of Service that the Contractor expressly agrees calls for a deduction from the price the City should be required to pay for the Services:

Item	Performance Requirement	Deduction
------	-------------------------	-----------

Collection Failure

1.	Failure to collect a (Missed Collection) in accordance with Section 12.8.	\$100 per Container
2.	Missed collection of an entire block (three or more houses on the same side of the street or lane between two streets) not expressly authorized by the Contract.	\$300 per block
3.	A third "miss" within one year of any particular service at a particular address.	\$500 per incident

Manner of Collection

4.	Performing collections outside of the hours as specified in Section 12.4.	\$250 per incident, to a maximum of \$1000 per truck per day
5.	Performing collections on a day contrary to Section 12.5.	\$100 per Customer Unit, to a maximum of \$1000 per truck per day
6.	Failure to inspect and correct hydraulic/oil fluid leaks daily	\$250 per incident
7.	Failure to provide and maintain vehicle identification numbers, company name and phone number on each side of all vehicles used in the performance of this Contract	\$250 per incident
8.	Failure to repair the City's or a resident's property that was damaged by the Contractor within 14 days of the occurrence of the damage	\$250 per incident
9.	Failure to provide follow-up written reports concerning complaints to the City by the close of the next working day of the event	\$250 per incident
10.	Failure to place Containers and/or lids back in original location or collect spillage in accordance with Section 11.6.	\$100 per incident \$1000 per route per day
11.	Using collection trucks exceeding weight limits set in accordance with Section 14.1.	\$250 each incident
12.	Unsatisfactory performance by Contractor after two notices to correct specific incidences involving the same address or collector in any six-month period, e.g., leaving gates or doors open, crossing planted areas, abusive language to customers, failure to return Containers to their original location after collection, failure to perform collections, or similar violations.	\$300 each incident

Item	Performance Requirement	Deduction
13.	Organics discarded into collection vehicle (during Garbage Collection).	\$1,000 for first failure, \$5000 for second failure. Driver and Swamper prohibited from performing work after third failure
14.	Damage to a Container caused by the Contractor	\$100 per incident

Significant Omissions

15.	Submitting false data, information or reports to the City.	\$5,000 per incident
16.	Not having the required number of collection vehicles at the Collection Commencement Date or failing to maintain an adequate inventory of collection vehicles during the Term.	\$10,000 per day
17.	Using a vehicle assigned to this Contract to service property, a firm or an establishment not part of the Services.	\$10,000 per vehicle per property, firm, or establishment
18.	Using a vehicle assigned to this Contract to service another municipality.	\$10,000 per vehicle per municipality

Comments on Carts of Varying Sizes

The information contained in this appendix is a summary of staff's assessment of the carts as proposed by those firms who responded to Request for Proposals No. 1220-030-2012-004.

360 Litre Cart

These carts are approximately 1.2 metres in height (just below 4 feet) and carry a footprint of approximately 0.56 m^2 (6 ft^2). Toter provides the shortest version of this cart standing at a height of 1.1 metres (3.6 feet) but with a larger footprint at 0.68 m^2 (7.3 ft^2).

Based on public consultation sessions hosted by the Engineering Department during the months of June and July 2010, the public's immediate impressions when viewing the 360 litre cart was that it was too large. Many residents cited a concern that they do not generate enough waste to justify the size of this cart. Another common concern was related to the ability to store this size of cart conveniently.

Based on the City's pilot waste collection program, the 360 litre cart appears to be necessary for garbage and recyclables for single family homes containing secondary suites based on the generation of waste from this category of households.

240 Litre Cart

All proponents offered similarly sized 240 litre carts that on average are approximately 1.06 metres in height (3.5 feet) and have a footprint of approximately 0.5 m^2 (5.3 ft^2). During public consultation sessions, residents favoured this cart size over the others. For this reason, this size of cart was used in the pilot collection program with generally positive results as noted in this report.

Smaller Cart Sizes

The City's pilot collection program included single family household without a secondary suite and single family households with a secondary suite. The pilot program was not extended to townhouses.

Based on to the scale of townhouses and the lower average number of occupants per townhouse unit in comparison to single family households, staff solicited pricing for cart sizes smaller than the 240 litre size. Proponents responded with pricing for cart sizes including 80 litres, 120 litres, 132 litres, and 180 litres.

Given that most townhome units do not generate yard waste, or will generate significantly less yard waste in comparison to a typical single-family household, it is expected that a cart size of 120 litre would be adequate for weekly organic waste collection for these customers. It is also estimated that a 180 litre cart for garbage and a 240 litre cart for recyclables would provide sufficient capacity for the alternating bi-weekly garbage and recyclables collection while recognizing storage constraints that usually exist in townhouse units.

Proponent Carts – Appearance and Sizes

1. Toter Inc. (Recommended Supplier)



2. Cascade Engineering



3. **RehRig Pacific Company**



4. **Otto Environment Systems North America, Inc.**



5. **Schaefer Systems International Ltd.**



6. **IPL Inc.**

