The City of Calgary

Multi-Family Recycling Strategy Engagement & Analysis

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1. PURPOSE

Citizens living in multi-family residences are asking for more convenient on-site recycling. The recommended strategy will ensure that all multi-family buildings have on-site recycling facilities for residents' use.

In the 80/20 by 2020 waste diversion strategy, single family homes, were targeted first with the implementation of blue cart recycling and Council approval for food and yard waste recycling. The City is now working to address waste diversion in the much more complex multi-family (MF) sector. The MF sector is more challenging due to the variety of stakeholders, building types and a greater diversity of customer needs.

This report outlines the engagement and analysis conducted in response to Council's direction to recommend a multi-family recycling strategy. The recommended strategy proposes that multi-family buildings provide on-site recycling with private industry providing collection, hauling and processing services. The City will support the program through communication, education, ongoing monitoring, stakeholder engagement and enforcement.

2. PREVIOUS COUNCIL DIRECTION

On 2011 March 07, Council directed Administration (UE2011-06) to:

- Continue with the current multi-family strategy which is an optional program serviced predominantly by private recyclers;
- Proceed with next steps as outlined in UE2011-06 (Multi-Family Recycling Next Steps), including the development of a full cost of service multi-family recycling strategy during 2012-2014, based on industry and multi-family stakeholder engagement; and,
- Report back through SPC on Utilities and Environment no later than 2014
 February with recommendations for a multi-family recycling program that considers
 partnerships with the private sector to be implemented in 2015-2017.

The 2013 May 1 report to SPC on Utilities and Corporate Services (UCS2013-0035) updated the committee on the results of engagement activities undertaken with the multifamily sector and planned next steps. This report builds on the outcomes of the 2013 May report presented to Committee.

3. THE CURRENT STATE OF THE MULTI-FAMILY SECTOR

The multi-family sector is the smallest of the four waste sectors in Calgary. It produces approximately 13 per cent of the waste sent to Calgary landfills, or about 78,000 tonnes of garbage in 2012, as shown in Figure 1. This waste is generated by 163,000 dwellings that are classified as multi-family. These units are in buildings with five units or more. For comparison, there are 296,000 single family residences currently receiving automated blue cart recycling service. Residences are considered multi-family if they have more than four units and require

Waste Disposed in City Landfills 2012

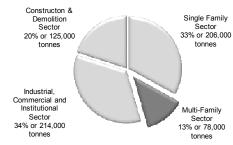
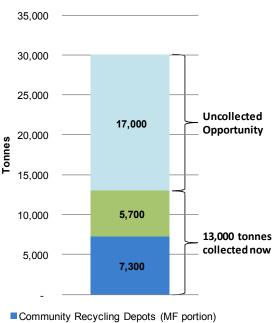


Figure 1: Waste disposed by sector

more specialized collection.

The collection of recyclables from multi-family buildings is more complex than the single family sector. Housing types range from high density apartments to lower density structures. One multi-family building may have five units in a townhouse style development while another may consist of 300 units in a 20-30 storey high rise. This difference in building structures complicates the collection of recyclables as each one may have different ways of storing materials and differently sized storage spaces.

Current Activity in Multi-Family Recycling



- Private Industry Collection (estimate)
- Remaining in waste to landfill (approx.)

Figure 2: Recyclables diverted and wasted

This diversity also affects how services are arranged and managed across a range of ownership styles including townhomes. condominiums, condominium rentals and apartments.

The Calgary Municipal Development Plan encourages higher density growth within the city leading to an increasing number of multi-family homes in Calgary over the next 30 years.

These factors show that any multi-family recycling strategy needs to be flexible to address this complex sector.

Figure 2 shows the current state of recyclable volumes. It's estimated that 35 per cent of multi-family buildings currently receive some form of recycling service from the private sector. In addition to private industry collection, diversion options include the network of Community Recycling Depots currently provided by The City.

From hauling to processing, private industry is already operating in the Calgary marketplace. In hauling alone, close to 30

organizations currently serve the multi-family sector. These organizations are an important part of Calgary's business community and provide the varied services demanded by the 35 per cent of multi-family complexes that currently have recycling. For this reason, Council has directed administration to recommend a "...multi-family

recycling program that considers partnerships with the private sector..."

There are two objectives in delivering the multi-family strategy:

1. Diverting additional recycling tonnage to move closer to Council's approved waste diversion goal of 80/20 by 2020. Figure 3 demonstrates that, in 2012, approximately 22 per cent of multi-family garbage, or 17,000 tonnes, consisted of recyclables that went to landfill. Based on other municipalities' experiences, it is estimated that 9,000 to 12,000 tonnes could be diverted with the **Multi-Family Waste** Composition

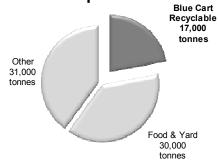


Figure 3 Recyclables as a portion of all multi-family garbage

addition of more convenient on-site recycling.

2. Responding to a gap in citizen's expectations for service. An additional opportunity exists to respond to citizen demand creating consistent opportunities to divert waste. Citizens have made it clear throughout the engagement process that a gap exists in recycling options available to them. Private industry already serves more than one third of all multi-family dwellings; an opportunity exists to bring service to the remaining 110,000 dwellings.

Acting on these two opportunities is an important element of ensuring citizens are provided the best service while achieving the 80/20 by 2020 waste diversion goal.

4. STRATEGIC OPTIONS

The complexities of the multi-family sector means there is no "one size fits all" solution. This is different than the blue cart program offered in the single family sector, which has standardized automated collection. Any recommended strategy must consider a variety of factors including citizen input, industry input and an analysis of practical program elements.

The steps taken to gather insight into each of these factors is shown below:



4.1 STRATEGIC OPTIONS EVALUATED

Input from the initial stages of this engagement and analysis project shaped the activities that followed. Waste & Recycling Services (WRS) worked with Stantec Consulting Ltd. (Stantec) to develop several initial strategic options.

Analysis of each option included research into the practices of other municipalities, engagement of internal stakeholders and program design considerations.

Five options were developed based on research of best practices with a Calgary-specific context. These options ranged from a fully City-operated program to maintaining the status quo, which is the current model based on voluntary recycling adoption and private sector service. These options are outlined in Table 1.

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Table 1: Initial Strategic Options

Control Option Description		Description	
Less City Control		Status Quo	Recycling in multi-family buildings is voluntary, serviced by the private industry with fees for service paid directly to the private contractors.
		A	Mandated on-site recycling through a bylaw, serviced by private industry, supported by The City through education, monitoring and enforcement. Fees for service are paid directly to the private contractors.
В		В	Mandated on-site recycling through a bylaw, mix of City of Calgary AND private collections contracted by The City with a mandated fee. Program fully administered by The City including fee collection, vendor management, monitoring, education and enforcement.
		С	Mandated on-site recycling through a bylaw, City contracts out all collections to private industry and a mandated fee. Program fully administered by The City including fee collection, vendor management, monitoring, education and enforcement.
More City operates related to multi-family recycling including		The City would provide all collection and administration related to multi-family recycling including fee collection, monitoring, education and enforcement.	

5. STAKEHOLDER ENGAGEMENT PROCESS & RESULTS

Five groups of stakeholders were identified as critical to the engagement process: residents, owners, service providers, markets and environmental non-governmental organizations (eNGOs). For ease of reference, the owners, service providers, markets and eNGOs will be collectively referred to as industry stakeholders.

A comprehensive engagement program was designed with Stantec, Ipsos Reid, The City's engage! team and W&RS. A summary of engagement activities is provided in Table 2.

Table 2: Summary of Engagement Activities

	Timeline	Technique & Purpose	Participants
_	Fall 2011	Ipsos Reid telephone survey to determine current behaviors and attitudes towards recycling and organics management	500 randomly selected multi-family residents
Direction	Fall 2011	Survey to ask how stakeholders want to be engaged	Industry stakeholders
	2012	Engage Stantec to develop an engagement plan and research comparative practices in other municipalities.	
General	July 2012	Stakeholder focus groups to gather ideas and initiate discussion	30 industry stakeholders
	August – November 2012	Online survey to gather ideas and create awareness	1,374 public responses

	October 2012	Invited stakeholder workshop to refine ideas and generate preliminary recommendations	20 industry stakeholders
	May 1, 2013	Progress report on engagement conducted to date to Council (via SPC on UCS)	Council / Committee
	April – May 2013	Online and in-person open houses to present strategic options and gather feedback	Public (Fort Calgary & Sunalta Community Hall)
Options	End-May 2013	Invited stakeholder workshop to present options and gather feedback	Industry stakeholders
Specific C	September – December 2013	Ipsos Reid telephone survey and focus groups to clarify previous results and gather data on specific program elements	Telephone survey of 500 multi-family residents and 2 focus groups
	January 2014	Prepare and present final report recommendations for presentation to Council (via SPC on UCS)	Council / Committee

5.1 INITIAL RESIDENT FEEDBACK

Below is a summary of the key messages identified by Stantec early in the consultation process:

- A strong majority of residents supported the implementation of a city-wide, multifamily recycling program.
- Less than half of residents surveyed were satisfied with current recycling programs aimed at multi-family residents.
- Multi-family households recognized the importance of waste diversion and expressed desire for programs that will help them recycle.
- A strong majority of multi-family residents in dwellings said that they recycle today and that the key barrier to doing more is the availability of options/programming.
- The minority of residents living in multi-family dwellings reported broad recycling initiatives within their buildings, with most saying that they visited local community recycling depots or bottle depots on an individual basis.

5.2 PROGRAM STRATEGY FEEDBACK

Input from the initial stages of engagement and analysis shaped the activities that followed. Initial analysis indicated that two of the five options were unlikely to meet program goals and Council direction, while another option received low stakeholder support. These three options were removed from further analysis. These options and the reasons for not continuing to evaluate them are provided in Table 3.

Table 3: Eliminated options

Lowest Supported Options	City Operates all Aspects	Status Quo (voluntary)	Private-only service with full City administration (Option C)
Input Received & Analysis	 Private industry best suited to collection complexities that require flexible and specialized collections Eliminates existing private industry business and limits future growth. Note: Private industry already services 35 per cent of buildings effectively Council direction to recommend a program "that considers partnerships with the private sector" (UE2011-06) 	 Citizen demand for more convenient onsite service. Voluntary recycling makes it challenging to divert waste as building management must be convinced. Note: Majority of multi-family dwellings remain without recycling Council direction to "[develop] a full cost of service multi-family recycling strategy" (UE2011-06) 	 Lowest support received amongst remaining options from residents and industry Industry service providers concerned competition will be limited Building owners and condo boards concerned about loss of control over service contracts and increased collection costs Does not provide adequate balance of City involvement (resident desire) and a competitive, open marketplace (industry desire)

5.3 PROGRAM STRATEGY FEEDBACK

Options A (City mandated with private industry service) and B (City managed with a mix of public and private collection) were the highest rated when residents and industry were asked to vote on the option they preferred. Stakeholder feedback is summarized in Table 4.

Table 4: Preferred options

Stakeholder Feedback on Options A & B			
	Option A – City Mandated with Private Industry Collection	Option B – City Managed with a Mix of Public and Private Collection	
Industry	 Most practical and flexible City's role should be promotion, education, listing qualified service providers, bylaw and enforcement, possibly provide incentives/subsidies to help with space and storage issues Interested in servicing all sites, no restrictions 	 Processing capacity should be negotiated with Cascades, which owns the sorting facility, if collection of comingled material is mandated Challenges may arise over existing contracts Contracting process must be transparent and fair to haulers of all sizes Billing seen as a challenge given the variation in building types 	

Residents

- Prefer flexibility in choosing a service provider
- Ability to tailor services in terms of frequency of collection and method of sorting in collaboration with a selected hauler is a benefit. This also allows residents to match needs with costs.
- City must play an oversight role while also educating and enforcing a standard
- Support City involvement as an overseer and market stabilizing force – residents trust The City
- Building owners and condo boards concerned about loss of control over service contracts and increased collection costs

Ipsos Reid conducted a final telephone survey of residents in 2013 November. This engagement confirmed and clarified that the primary concern of residents was the cost of the service followed by a desire to have The City monitor the program.

Most private service providers said they needed between 12-18 months to ramp-up their operations.

5.3.1 Consultant recommendation

Stantec assisted WRS through engagement with residents and industry to provide strategic guidance on multi-family recycling. As part of this work, Stantec produced a final summary report including a recommended option.

Stantec recommended that Option A be adopted.

Reasons for this recommendation included: no loss of business in the private sector; maintaining the competitive market; requirement to motivate through a bylaw; and the importance of The City maintaining a role in communication, education and monitoring for the program.

6. ADVANTAGES OF OPTION A

Both Options A and B could satisfy the requirement for city-wide recycling – both start with a bylaw that ensures that all buildings must provide on-site recycling. However, the options are different in how they are designed to enable residents, building owners and private industry to meet the bylaw.

Residents and industry stakeholders preferred a program that would be flexible and practical in accommodating diverse building needs, with tailored services at an affordable rate. They preferred that The City focus on monitoring, education and enforcement. It was found that a City-administrated service would be less feasible and not meet resident and industry needs.

The main advantages of Option A are:

- Oversight A City bylaw will mandate that a minimum level of service is provided.
 This will include: on-site storage, separate from garbage and including specified recyclables, with communication, education, ongoing monitoring, stakeholder engagement and enforcement by The City.
- Value for Money The strategy will support the existing private recyclers and

allow for customization to meet the unique needs of the marketplace. This will avoid large administrative costs by The City related to billing and contract management. It is estimated that a private recycling service will cost one third the cost of other options. Program costs must be balanced against the estimated additional recycling tonnage that can be captured – approximately 9,000 to 12,000 tonnes.

- Flexibility This strategy provides a more flexible platform for customized service. This allows residents and building management to select service providers based on their specific needs and recycling goals.
- Diverse Marketplace The strategy does not place a limit on the number or type
 of service providers operating in the multi-family market. It is estimated that 30
 different providers currently service this market in varying ways.
- Lower Complexity Allowing the private recyclers to work directly with the multifamily building owners will drive efficiency. Private industry has demonstrated its ability to function effectively. Multi-family unit owners will be able to choose the private company that delivers the best value for their unique situation.

Research showed that residents currently using private collection value the ability to manage their own recycling program themselves. The City's involvement will be focused on monitoring, education and enforcement.

6.1 ESTIMATED COSTS OF EACH OPTION

Administrative costs are different between the two options based on the level of City involvement. Several aspects of Option B make it more costly from both a capital and operating point of view. This is due to the need for administering vendor selection and management, billing process, and providing enhanced processing options. The differences in estimated costs are outlined below:

	Option A	Option B
Cost Activities	Intensive communication and education during rollout. Ongoing costs include maintaining the role of communication and education in the community.	Intensive communication and education during rollout. Portion of ongoing costs include maintaining the role of communication and education in the community.
		Upfront capital outlay to set up a billing function (e.g. client management system, enable ENMAX billing). Access to sorting plant may need to be facilitated due to comingled requirement – ongoing administration costs for contract management, material auditing and additional sorting resources.
Capital*	\$0	\$2.0 million
Operating*	\$700,000 for rollout \$350,000 ongoing	\$600,000 for rollout \$1.0 million ongoing

^{*}approximate values

The difference in capital and operating costs related to Option B are much higher than A. For example, ongoing costs related to Option B are *threefold* that of Option A. The additional tonnage – approximately 9,000 to 12,000 tonnes – expected to be captured by this program must be considered against this cost. By comparision, The City collects approximately 57,000 tonnes of recyclables from blue carts and 11,000 tonnes from Community Recycling Depots (CRDs). Given that any strategy put forward must include a full-cost approach, it is important to note that any additional charge will be paid by residents.

6.2 OPTIONAL SAVINGS THROUGH COMMUNITY RECYCLING DEPOTS

Multi-family residents currently drop off an estimated 6,200 tonnes of recyclables a year at Community Recycling Depots (CRDs). This tonnage is expected to decline with the implementation of the multi-family strategy. Since small businesses and single family residents remain the majority users of the depots, it will be important to evaluate the CRD program once multi-family recycling is implemented and volumes at the CRDs can be measured. Factors used to evaluate the potential closure of depots will include location and accessibility of CRD sites, density and use, and proximity to other sites. The savings from closing depots due to lower use could be used towards program costs of Option A.

6.3 ESTABLISHING A MULTI-FAMILY RECYCLING BYLAW

The bylaw approach, according to research, is by far the most effective in terms of achieving widespread program acceptance. The goal of Calgary's bylaw will be to ensure that every resident of the City of Calgary, regardless of housing type, has access to recycling options. The key elements proposed for Calgary's Option A bylaw include:

- On-site Recycling Ensure that every building provides adequate recycling options on the premises to make recycling accessible and convenient.
- **Program Materials** Multi-family recycling must include the same materials as the current Blue Cart program to bring equity to all citizens.
- Adequate Storage Adequate storage must be provided to allow residents to use the program and not be limited by the size of containers or bins.

Notable features considered that will not be included in an Option A bylaw are:

- Comingled vs. Source Separated The mandate for Option A will not specify source-separated versus comingled (mixed recyclables in one bin) collection which will allow buildings to balance cost and the level of service desired.
- Specified Collection Frequency Frequency of collection would not be
 mandated to allow buildings to tailor collection schedules around challenges such
 as limited storage space for materials. This would also provide additional "cost
 flexibility" as buildings can choose to have certain lower volume recyclables
 collected only on an as needed basis.

Bylaw development and approval is an important next step after strategy approval. Upon Council approval of a strategy, a bylaw will be written and presented to Council for approval no later than 2014 September. Once a bylaw is in place, W&RS will begin a communication and education program during an 18-24 month transition period.

6.4 COMMUNICATION, EDUCATION & ENFORCEMENT

An effective communication, education and enforcement program is vital to program success and a good public experience. Communication creates overall awareness with

residents and industry. Issues and complaints are then dealt with on an education-first basis. Enforcement is only used as a last resort.

Communication for the multi-family recycling program will be modeled after experiences in the Blue Cart rollout and the recent Green Cart pilot. Education will include a dual role of expanding on the communications messages and managing complaints. Examples of education materials include documents outlining best practices to consider when entering into a recycling service contract and information to assist boards in introducing new programs. Once a strategy is approved, a dedicated multi-family education resource will support residents and the program.



6.5 LEARNINGS FROM OTHER CITIES

Stantec conducted comprehensive research to understand the state of multi-family recycling in Canada and North America. Information gathered was incorporated into all aspects of program design. Several key themes appeared in other successful programs, these included:

- Mandating recycling through a bylaw is essential to widespread program
 adoption. If the program is voluntary it's less likely that onsite recycling is made
 available and the amount of materials collected is lower. This is also consistent
 with the Calgary experience.
- Flexibility is essential to respond to the complexity of the multi-family sector
 including differences in ownership styles and building structures. Flexibility most
 commonly refers to collection style, collection frequency and billing arrangements.
- Communication and Education are vital to creating awareness of a program and achieving ongoing participation. Reporting and enforcement functions are more successfully managed with effective communication and education.

Key learnings from the research were adapted to the Calgary context. Each city has different features that must be accounted for in their specific programs. No "cookie-cutter" approach exists.

6.6 PROCESSING

Industry stakeholders were clear that adequate processing capacity currently exists to service all multi-family dwellings. They indicated that access to the Cascades Material Recycling Facility (MRF), currently under contract to The City, would be an option but is not required. Private haulers may still negotiate their own contract with this privately owned and operated facility.

The City is evaluating the opportunity for an enhanced transfer station, if required, and examining opportunities for MRF access for appropriate private vehicles under The

City's contract. There are risks involved in allowing access to the Cascades sorting plant under The City's contract. These include: contamination, safety, and potential cost increases to the Blue Cart contract. Option A does not include City-facilitated access at this time. The special conditions in The City's contract with Cascades such as unloading time, truck types and the additional City administration to facilitate additional haulers make this a higher cost option for many private operations.

Option B is more complex. Mandated comingled collection would be required to ensure equitable service for a flat fee charged by The City. Currently, processing capacity is designed to handle two collection styles: sorted material and comingled material. Requiring that all material be collected as comingled would likely place a strain on Calgary's private comingled processing options. Because of this, it would be important for The City to support the bylaw through its contract with Cascades, if no viable alternative became available by the end of the transition period. Access could be provided to vendors who demonstrate that they meet the requirements outlined by Cascades. The City would have to take on all risk for the quality of these materials; the current contract with Cascades holds The City responsible for contamination in Blue Cart recyclables. Additional contamination brought to the facility from third-party collectors could potentially violate the terms of the Cascades contract and result in additional costs to The City.

6.7 TARGET AND MEASUREMENT

The estimated *additional* tonnage, over and above current recycling options, captured in the multi-family sector by implementing Options A or B is expected to be between 9,000 and 12,000 tonnes. The estimated tonnage is expected to be consistent between both options.

W&RS will measure multi-family diversion as part of regularly scheduled waste composition studies. The most recent waste composition studies found that 22 per cent of multi-family garbage is recyclable.

Stakeholder satisfaction is another key metric. The City will continue to engage with residents, building owners and industry through the program implementation and will make adjustments where needed and possible. Ongoing resident feedback and citizen satisfaction surveys will also provide this information. It is expected that all buildings in the city would have an on-site recycling option available to residents by the end of the 18-24 month transition period

6.8 BLUE CART EXPANSION

Approximately 5,000 dwellings are in lower density multi-family buildings including row housing and detached housing units that are condominiums. Some of these buildings currently receive Black Cart waste collection service from The City but not Blue Cart recycling. There are advantages of this service model, including existing service standard (Black Cart), collection routing and accessibility that would make these buildings eligible to receive Blue Cart. However, under the proposed strategy these buildings may choose a private recycling service.

6.9 IMPLEMENTATION TIMELINE

Pending approval, W&RS would bring a draft multi-family recycling bylaw to Council no later than 2014 September. A transition period would then follow to provide industry the opportunity to ramp-up operations and building owners the time to arrange bylaw compliance in 2016.

Option A – Would require 12-18 months from bylaw approval.

Option B – Would require 18-36 months from bylaw approval. The additional time would be required to create collection zones, issue RFPs, select vendors, set up administration with every building and phase in collections.

7. CONCLUSIONS

W&RS recommends that the SPC on U&CS and Council direct administration to design a multi-family recycling program, as outlined in the Multi-Family Recycling Strategy for implementation in 2016.

The primary factors behind this recommendation are:

- **Lower Administrative Cost** between the two programs. Option B is the higher cost alternative without the benefit of additional diversion.
- **Flexibility** to both the resident and industry is greater:
 - Residents Keep control of costs and service level and adjust balance of the two based on specific needs. This can be achieved by choosing comingled collection vs. source separated, selecting collection frequency based on building limitations, expanding materials recycled beyond minimum mandate and the ability to switch providers.
 - Industry Provides a business opportunity to service the 65 per cent of buildings without on-site recycling in an open and competitive manner.
 Provides building owners and management companies with the ability to create customized and economical solutions based on need.
- Maintains and promotes the recycling market. Does not threaten existing
 contracts held by private industry. Maintaining and building on current success
 also helps build a stronger foundation for future diversion activities that will rely on
 the private sector.
- **Complexity reduced** due to allowing the private recyclers to work directly with the multi-family building owners. Multi-family owners will be able to choose the private sector that delivers the best value for their unique situation.
- **Implementation sooner** due to shorter timeline. City administrative preparation activities regarding collection are not required. Option B would require RFP development, RFP issuing, vendor selection and vendor management. Private industry already operates in the multi-family market with systems available to manage billing and administration.

A comprehensive bylaw is the key to achieving adoption of city-wide multi-family recycling. After that, the most meaningful activity that determines success is communication and education. In either option presented, The City's most important role is to maintain a strong connection to residents and industry. Bylaw enforcement and outreach can be implemented in similar ways between Options A and B, although Option A does not require the same administrative intervention as Option B.

The multi-family strategy will be monitored throughout implementation and on an ongoing basis to ensure residents' satisfaction and service levels.

Recommended Strategy

The strategic framework includes:

GOAL: 80/20 by 2020

STRATEGY: Multi-family residents have access to mandated on-site recycling with private collection.

TARGET: Capture up to 70 per cent of all recyclable materials within the multi-family residential sector

INDICATORS: % recyclable material in waste stream; citizen satisfaction; % of sector serviced

ACTION: Develop a mandated multi-family recycling strategy where the owner of a multi-family dwelling unit/complex must: provide on-site storage; store recyclables in adequate container(s); provide separate containers (from waste) for recyclables and; include materials referenced in Schedule "C" of the Waste and Recycling Bylaw (20M2001).

Elements of the program would include:

- Amending the Waste & Recycling Bylaw, ensuring that specified recyclable materials are collected on-site and adequate storage capacity is available. Draft bylaw amendments will be prepared no later than 2014 September for program implementation in 2016.
- Facilitating revisions to development standards within the land use bylaw to accommodate multi-family recycling
- Developing an education and communication plan with residents, building management and industry
- Developing a Community Recycling Depot reduction plan with savings used to fund program costs
- Ensuring program facilitation, monitoring and implementation by The City

Roles

In accordance with previous Council direction (UE2011-06), this strategy includes a clear role for the private sector. The roles of the private sector, The City, building owners and residents are outlined below:

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Private Industry Role	City Role	Building Owner / Resident Role
 Provide material handling and hauling service to residents Deliver materials to private material recyclers 	 Create awareness amongst private industry and residents regarding bylaw compliance Educate and provide residents with the information and tools needed to create an effective program. Monitor and evaluate program effectiveness Enforce the bylaw 	 Arrange for on-site recycling in compliance with the bylaw Ensure that building residents are informed of new program with support from The City.

8. NEXT STEPS TO IMPLEMENT STRATEGY

The bylaw development and detailed program design phase for Option A would be complete no later than 2014 September. A transition period of 12-18 months is then proposed with bylaw implementation starting in 2016. This will provide an opportunity to ensure that residents are knowledgeable, building owners have time to comply and industry has the opportunity to ramp up operations. Elements of these phases are:

Bylaw approval 2014 September

- Draft bylaw and present for approval and adoption
- Prepare communication and education roll out

Post-bylaw approval ("transition period") – 6-18 months from now

- Execute communication and education plan
- Private industry to ramp up operational capability
- Building owners and managers to evaluate service methods and bids from private industry, if required

Bylaw Implementation (2016)

- Monitor uptake and compliance and respond to complaints with education
- Make any program adjustments necessary
- Report on program progress
- Monitor city-wide processing capability
- Evaluate and implement plan to optimize Community Recycling Depots
- Re-engage industry on current state, effectiveness and ongoing input
- Re-engage citizens to ensure citizen satisfaction, program uptake and monitor progress