

# SM4RT LIVING

YORK REGION'S INTEGRATED WASTE MANAGEMENT MASTER PLAN



November 2013

Multi-Residential Strategy





# Multi-Residential Strategy

---

**The Regional Municipality of York**  
Environmental Services Department  
17250 Yonge Street,  
Newmarket, ON L3Y 6Z1  
[www.york.ca](http://www.york.ca)  
[www.SM4RTLIVING.ca](http://www.SM4RTLIVING.ca)

Accessible formats or communication supports are available upon request  
Contact: [EnvironmentalServices@york.ca](mailto:EnvironmentalServices@york.ca) or call 905-830-4444 Ext. 73000



**Contents**

**1.0 INTRODUCTION ..... 1**

**2.0 BACKGROUND AND TRENDS ..... 1**

    2.1 BACKGROUND .....1

    2.2 CHALLENGES .....3

    2.3 THE CURRENT SITUATION .....5

    2.4 IMPACT OF POPULATION GROWTH .....9

    2.5 TRENDS .....11

    2.6 NEW MULTI-RESIDENTIAL BUILDINGS .....11

    2.7 OLDER MULTI-RESIDENTIAL BUILDINGS .....13

    2.8 HIRING DEDICATED STAFF .....14

    2.9 EDUCATION, OUTREACH AND FEEDBACK FOR RESIDENTS .....14

    2.10 EDUCATION, OUTREACH AND FEEDBACK FOR PROPERTY MANAGEMENT AND SUPERINTENDENTS .....16

    2.11 MANDATORY REQUIREMENTS .....17

    2.12 FINANCIAL INCENTIVES/DISINCENTIVES .....21

**3.0 MULTI-RESIDENTIAL WASTE DIVERSION STRATEGY ..... 23**

    3.1 INITIATIVES .....23

    3.2 PILOTS TO PROMOTE WASTE DIVERSION WITHIN MULTI-RESIDENTIAL BUILDINGS .....27

**4.0 IMPLEMENTATION ..... 28**

    4.1 PARTNERSHIPS .....28

    4.2 RESOURCES, TIMELINE AND TARGETS .....30

**5.0 KEY BENEFITS OF THIS STRATEGY ..... 31**

**List of Figures**

Figure 1: Projected Multi-Residential Growth in York Region Municipalities to 2031 ..... 10

**List of Tables**

Table 1: Comparison of Single-Family and Multi-Family Waste Audit Results .....2

Table 2: Current Multi-Residential Waste Management Practices by Municipality .....6

Table 3: Multi-residential Building Size in York Region Northern Municipalities .....9

Table 4: Mandatory Requirements to Promote Waste Diversion in North American Cities .....19



*Multi-Residential Strategy*

	<p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>• To promote increased diversion in multi-residential units and provide additional opportunities for reduction and reuse initiatives.</li> <li>• To develop consistent guidelines and regulations for the entire Region regarding multi-residential waste.</li> <li>• Allow for greater education and awareness of multi-residential waste and best practices.</li> </ul>	<p><b>Targets:</b></p> <ul style="list-style-type: none"> <li>• With an implementation date in 2014, the Region should aim for local municipalities to achieve the same level of multi-residential waste diversion as Richmond Hill and Markham by the year 2020 after which, all municipalities should achieve incremental increase in waste diversion of 3-5% increase every five years thereafter.</li> </ul>
	<p><b>Benefits:</b></p> <ul style="list-style-type: none"> <li>• Increased diversion in multi-residential units and additional opportunities for reduction and reuse initiatives.</li> <li>• Consistent guidelines and regulations for the entire Region regarding multi-residential waste that will facilitate both development of new facilities and oversight of existing facilities.</li> <li>• Greater education and awareness of multi-residential waste best practices.</li> <li>• Greater opportunity to track the performance of multi-residential buildings in the Region and identify opportunities for improvement</li> </ul>	

## 1.0 Introduction

The multi-residential strategy is one component of York Region's first Integrated Waste Management Master Plan (IWMMP), also known as the SM4RT LIVING Plan. The SM4RT Living Plan establishes the planning framework and strategic direction in York Region for the next 40 years. It builds on the Region's position as a waste management leader, by focusing on driving waste reduction and reuse, while maximizing recycling and energy recovery from the materials that remain.

### Primary objectives of this strategy are:

- To promote increased diversion in multi-residential units and provide additional opportunities for reduction and reuse initiatives.
- To develop consistent guidelines and regulations for the entire Region regarding multi-residential waste.
- To allow for greater education and awareness of multi-residential waste and best

Over the past decade, municipalities have recognized the benefits of providing waste management services to the multi-residential sector. Provision of these services to the multi-residential sector enables the municipality to establish better control over the level of involvement by the sector in waste diversion. With the exception of York Region, all regions comprising the Greater Toronto Area offer garbage and waste diversion services to all multi-residential buildings within their jurisdiction, including Halton, Peel, Toronto and Durham. Other Ontario urban centres providing waste management services to the multi-residential sector include: Hamilton, Ottawa, Sudbury, and Kingston. Other municipalities such as London, Essex-Windsor and Niagara region provide waste diversion services only.

## 2.0 Background and Trends

### 2.1 Background

In the past, municipal governments have focused much of their energy and resources tackling how to provide and promote waste diversion in the single-family sector. While single-family households presented their own set of challenges in developing effective and efficient waste diversion programs and infrastructure, municipalities were able to target individual households with information and programs to motivate householders to participate in the diversion services offered to them. Consequently, many municipalities have established successful waste diversion programs that achieve 50 per cent-plus waste diversion in the single-family sector. Table 1 provides generation and diversion rates achieved in the GTA municipalities for single-family sector.

The multi-residential sector presents a new set of challenges for municipal staff involved in implementing waste diversion programs in multi-residential buildings, not only from a logistical

perspective but, more importantly, from a motivational perspective. Multi-residential households tend to generate less waste than single-family households. Comparison of waste stream composition indicates that multi-residential households generate less paper and paper packaging, and overall, multi-residential households generate less of everything (see Table 1). Further comparison of recycling rates demonstrates the challenges in motivating residents living in multi-residential buildings to participate in recycling programs. These challenges are discussed below.

**Table 1: Comparison of Single-Family and Multi-Family Waste Audit Results**

Material Category	Multi-Residential			Single-Family		
	Toronto 2010/11 Four Season Audit	Peel 2010/11 Four Season Audit	Halton 2007/08 Four Season Audit	York Region 2011 One Season Audit	Toronto 2010 One Season Audit	Halton 2007/08 Four Season Audit
Total Paper	24%	24%	28%	32%	28%	33%
Total Plastics	12%	13%	9%	11%	9%	8%
Total Metals	3%	3%	3%	3%	3%	2%
Total Glass	3%	4%	4%	5%	4%	5%
Total Household Special Waste	<1%	<1%	<1%	<1%	<1%	<1%
Total Organics	42%	37%	40%	35%	42%	40%
Total Other Materials	16%	19%	16%	14%	13%	13%
<b>GRAND TOTAL</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
Total Generation (kg/HH/year)	653.81	685.13	474.44	685.85	890.11	790.62
% Diversion (Blue Box only)	17%	13%	21%	40%	32%	31%
% Diversion with Green Bin	n.a.	n.a.	n.a.	53%	67%	n.a.

n.a. = not applicable

## 2.2 Challenges

Multi-Residential waste diversion is historically a challenging program. Some of the key challenges facing successful implementation and participation in waste diversion programs include:

- **Provincial definition** – The Province of Ontario defines multi-residential housing as a form of Industrial, Commercial and Institutional (IC&I) property and therefore municipalities do not have a legal obligation to manage waste from these facilities. This creates a significant issue with respect to ensuring proper waste management systems are in place and operating effectively. The ability to enforce waste diversion requirements in these facilities also lies with the province through Ontario Regulation 102/94 and 103/94, however, actual enforcement of these regulations has historically been limited. Further, these regulations have not been updated to include organics diversion through green bin programs leaving a significant amount of waste not diverted.
- **Community barriers** – Multi-residential buildings often represent a smaller population, with multiple cultures and languages living under one roof. Program designs and communication need to address these different cultural and language characteristics and encourage community engagement. Typical social norms encouraging participation in waste diversion (e.g. placing a blue box out for collection, engaging in conversations with neighbours) may be lacking in a multi-residential setting, which may be further compounded by a lack of community connection and pride with the program.
- **Frequency of tenant turnover** – Residency in multi-residential buildings (especially apartment buildings compared with condominiums) is characterized by higher turnover rates making communications and participation in waste diversion programs harder to achieve.
- **Lack of ownership** – Garbage disposal is communal in most multi-residential buildings, which means that no one is accountable for the quantity and quality of waste generated. This situation makes it easier for tenants to overlook their personal responsibility towards reducing waste generation and participating in diversion programs. In most single family developments, neighbours can observe their neighbours' participation in curbside diversion programs, which provides added motivation for diversion. A similar 'peer pressure' mechanism does not exist in most multi-residential buildings, where disposal through a chute system is relatively anonymous.
- **Program inconvenience** – While most multi-residential buildings provide a convenient garbage disposal system with access to garbage chutes on every floor, the same convenience is not afforded to residents for waste diversion programs. The majority of buildings require residents to take their recyclable materials to a less convenient centralized location situated in the building. To achieve the same diversion rates as in a

single family home, more effort is required by the multi-residential tenant. The lack of adequate storage space within the majority of apartment units also poses a problem.

- **Lack of support by building management** – A successful multi-residential recycling program requires significant effort from the superintendent and property management. Providing on-site staff with sufficient time and resources to implement waste diversion is integral to their long term success. Owners and property managers are less inclined to invest staff and resources in waste diversion programs without financial or other incentives.
- **Infrastructural challenges** – Many multi-residential buildings do not have adequate space to provide for convenient collection programs, such as a multi-chute retrofit or recycling container collection on each floor. Some of these challenges are aggravated by building fire codes and concerns over vandalism and vermin.

From a municipal perspective some key challenges identified by York Region local municipal representatives were as follows:

- The building superintendent is the “gatekeeper” – it is essential for the superintendent to be interested and engaged in waste diversion
- No legislative requirement for municipalities to provide collection to buildings with more than six units
- Providing different levels of service to single family and multi-residential households is seen as unfair – this leads to an equity concern where multi-residential households complain about less recycling service
- Potential differences in purchasing habits between multi-residential building dwellers and single family building dwellers is not clearly understood
- Available education materials focus primarily on waste from single family homes and don’t address how best to manage waste in a multi-residential setting

As a result of the varying characteristics and layout of multi-residential buildings, there is no “one size fits all” solution to waste diversion program implementation in multi-residential buildings. Waste diversion programs must be flexible and accommodate different needs of each building. “Variations in building size, layout, resident characteristics, landscaping, and trash disposal systems require unique arrangements to suit specific sites. A great deal of effort and resources are required on an on-going basis to make lasting gains in recycling collection at multi-family dwellings.”<sup>1</sup>

<sup>1</sup> Alameda County’s Stopwaste.org. Multi-family Recycling Evaluation Report. December 2008

## 2.3 The Current Situation

Multi-residential buildings are typically defined as residences with five to seven or more units (e.g. Richmond Hill defines multi-residential as having seven or more units whereas East Gwillimbury defines an apartment building as having five or more units). Generally, multi-residential buildings include apartments, condominiums and in some cases townhouses (where the street is too narrow to accommodate a regular collection vehicle or where the configuration of the townhouses does not facilitate a 'curb-side' set out from each unit). Waste management services are typically provided through containerized collection (front end bins or automated 360-litre carts) for the removal of garbage and recyclables (and in some cases source separated organics).

Provision of waste collection and diversion services to multi-residential buildings is a choice, not a requirement, for Ontario municipalities as a result of the Ontario 3R Regulation (O. Reg 103/94) which designates the multi-residential sector as part of the industrial, commercial and institutional (IC&I) sector, rather than the residential sector. While the regulation requires that recycling programs be provided in multi-residential buildings of six units or more, the onus is placed on the building owner, not the municipality, to provide the service. This definition has resulted in some municipalities choosing to opt out of providing waste management service to the multi-residential sector, as a result of wanting to remain at arm's length with IC&I waste management issues. In York Region, some local municipalities provide municipal collection and some do not.

In York Region, the local municipal partners are responsible for making decisions regarding the level of garbage and waste diversion service provided to the multi-residential sector. Markham and Richmond Hill are currently the only municipalities in York Region that provide three-stream municipal collection (residual waste, recycling and organics) to their multi-residential buildings. Some of the remaining local municipalities (Aurora, Georgina, Newmarket, Whitchurch-Stouffville and Vaughan) provide two-stream (residual waste and recycling) to multi-residential buildings at varying degrees. The status of waste management services and requirements for multi-residential buildings is provided in Table 2.

**Table 2: Current Multi-Residential Waste Management Practices by Municipality**

Best Practice	Markham	Richmond Hill	Vaughan	East Gwillimbury & King Township	Aurora Newmarket Georgina Whitchurch-Stouffville
<b>Provision of municipal waste management services</b>	garbage, recycling, organics	garbage, recycling, organics	Existing buildings (garbage and recycling) New construction responsible for providing service <sup>2</sup>	No collection for multi-residential buildings	garbage and recycling – mostly low rise (< five storeys)
<b>Property owner/management required to have a demonstrated recycling program</b>	Site Planning Policy – applies to new construction	Bylaw 159-07 Collection and Disposal of Household Waste <sup>3</sup>	Waste Collection Design Standard Policy – applies to new construction	N/A	N/A
<b>Diversion programs must be as convenient as garbage collection</b>	Yes	Yes	Waste Collection Design Standard Policy – applies to new construction	N/A	N/A

<sup>2</sup> On January 31, 2012 City staff were directed by Council to conduct a Solid Waste Program Review. This four phased undertaking commenced Q2 of 2012 and is to conclude Q4 of 2013. During this Program Review, a number of issues will be reviewed and evaluated through cost benefit analysis. These issues include: collection method and frequency; payment structure (and options thereunder); municipal collection service eligibility; and, consolidation of City waste collection services.

<sup>3</sup> Richmond Hill will be submitting a proposal to amend this bylaw in 2013.



Best Practice	Markham	Richmond Hill	Vaughan	East Gwillimbury & King Township	Aurora Newmarket Georgina Whitchurch-Stouffville
<b>Property owner/management must educate new residents about recycling program</b>	Site Planning Policy – applies to new construction	N/A	N/A	N/A	N/A
<b>Property owner/management must distribute recycling information annually to each resident</b>	Site Planning Policy – applies to new construction	Bylaw 159-07 Collection and Disposal of Household Waste	N/A	N/A	N/A
<b>Property owner/management must have available recycling educational information</b>	Site Planning Policy– applies to new construction	N/A	N/A	N/A	N/A

Best Practice	Markham	Richmond Hill	Vaughan	East Gwillimbury & King Township	Aurora Newmarket Georgina Whitchurch-Stouffville
<b>Adequate space must be provided for waste recycling/diversion containers</b>	Site Planning Policy and Bylaw 32-95 Collection and Disposal of Refuse—applies to new construction	Bylaw 159-07 Collection and Disposal of Household Waste, current waste management guidelines	Waste Collection Design Standard Policy—applies to new construction	N/A	Georgina – Bylaw 2007 – 0050 (PWO1)  Aurora – Bylaw 4931-07.E  Newmarket – Bylaw 2007-77  Whitchurch-Stouffville – Bylaw 2007-144-GA; 2010-130-GA
<b>New buildings required to make recycling and other waste diversion as convenient as garbage collection</b>	Site Planning Policy—applies to new construction	Guideline, Waste Management Standard—applies to new construction	Waste Collection Design Standard Policy—applies to new construction	Bylaw 20120-073 Collection and Disposal of Garbage, Yard and Blue Box and Organics	N/A

The municipalities of Markham, Richmond Hill and Vaughan report diversion rates of 23 per cent, 24 per cent and 12 per cent respectively in their multi-residential sector, with an average of 20 per cent for all three. Based on the 2011 Census community profile summaries, many of the multi-residential buildings in the northern municipalities are characterized as low rise (<five storeys – see Table 3) and therefore, may receive curbside collection services, in which case the diversion from these buildings would be factored into the single-family rates.

**Table 3: Multi-residential Building Size in York Region Northern Municipalities**

Municipality	# Units in apartment buildings having fewer than five storeys (total units)	# Units in apartment buildings having five or more storeys (total units)
<b>Aurora</b>	1,115	695
<b>East Gwillimbury</b>	240	0
<b>Georgina</b>	970	0
<b>King</b>	225	0
<b>Newmarket</b>	2,515	1,385
<b>Whitchurch-Stouffville</b>	725	5

## 2.4 Impact of Population Growth

Over the next 20 years, York Region will experience a surge in population growth. With the Ontario government’s introduction of measures to curb urban sprawl, York Region will experience pressure to build up and compact – called intensification.

Published in 2006, the Ontario government’s *Places to Grow: Growth Plan for the Greater Golden Horseshoe* identifies that by 2015, a minimum of 40 per cent of all residential development within upper and single tier municipalities must be within the built up areas and that growth within designated municipalities (Markham Centre, Newmarket Centre, Richmond Hill/Langstaff Gateway, Vaughan Corporate Centre) will be planned to achieve, by 2031 or earlier, a minimum gross density target of 200 residents and jobs combined per hectare.

2011 GTA New Home and Condo Market Study conducted by RealNet states that:

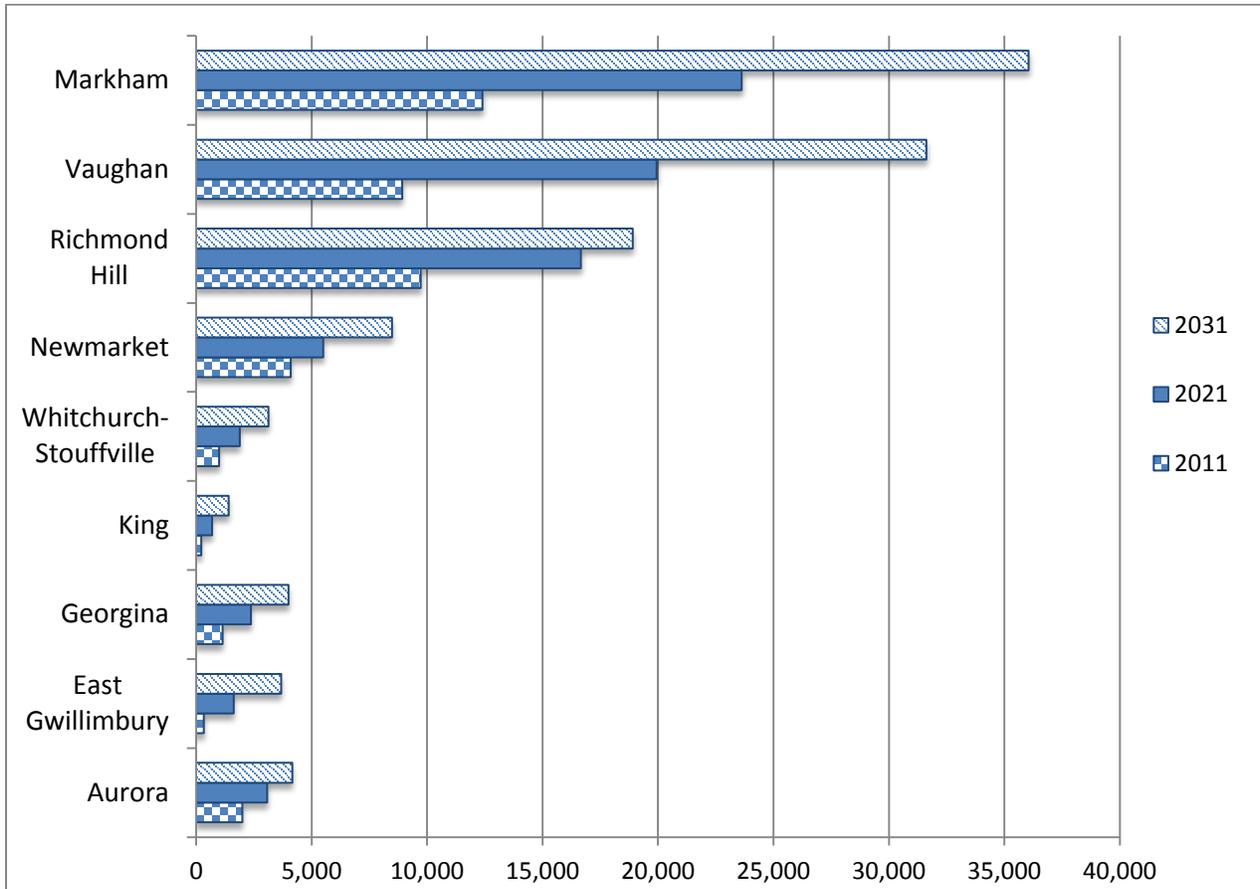
“The provincial growth plan introduced between 2003 and 2005 called for growth through intensification and put in place the framework for the new home market shift to high rise.”

The Ontario government’s plan to mandate intensification coupled with York Region’s population surge will mean that the Region should experience an exponential growth in the construction of multi-residential buildings (medium and high rise) in the southern three local municipalities and more modest growth in the northern six local municipalities (see Figure 1).

On average, York Region is expected to experience a 180 per cent increase in the number of multi-residential households over the next 20 years (2011 – 2031). Although the greatest percentage increase will occur in East Gwillimbury, which is expected to experience more than 1,000 per cent increase in the number of multi-residential households between 2011 and 2031, the projected increase in total number of units in East Gwillimbury and the other northern municipalities will pale in comparison to the expected increases occurring in Richmond Hill,

Vaughan and Markham, which are expected to grow to approximately 19,000 units, 32,000 units and 36,000 units, respectively, as shown in Figure 1.

Figure 1: Projected Multi-Residential Growth in York Region Municipalities to 2031



Data Source: York Region Planning Department

Over the next 20 years, York Region expects to experience an approximate threefold increase in the growth of the multi-residential sector. This growth rate surpasses the projected growth rate for the single-family sector. According to the York Region study *Housing Matters* (2012), "It is anticipated this diversification of the housing supply will continue to 2031 when it is forecast that 40 per cent of the total supply will be rows, duplexes and apartments."<sup>4</sup>

Increasingly, the face of the housing market will change from one dominated by single family housing to one that is increasingly focused on multi-residential housing. York Region is in an advantageous situation to have the time to develop an effective strategy to ensure adequate

<sup>4</sup> Housing Matters: A Review of the Housing Market in York Region. 2012. York Region

waste management services are provided to the multi-residential sector and to address the waste diversion challenges inherent in this sector.

## 2.5 Trends

The manner in which municipalities are promoting waste diversion in the multi-residential sector has evolved over the years. Municipalities are finding more opportunity to direct waste diversion activities in new multi-residential buildings than older buildings by addressing the waste diversion infrastructure needs during the planning and design stages of development.

## 2.6 New Multi-Residential Buildings

As part of the Regional Official Plan, strategies have been set forth to focus on the management of Regional waste through policies directed at waste diversion. The Regional Official Plan includes a policy directed at multi-residential waste which “requires all new multi-unit residential buildings incorporate three-stream waste collection capabilities.”

In June 2010, the York Region’s Planning and Economic Development Committee recommended three-stream waste management be considered a best practice for internal building design, and that it be required by local municipalities by January 2011. In response, Markham, Richmond Hill and Vaughan, the three largest municipalities, have mandated three-stream waste management requirements for new buildings.

Progressive municipalities have started requiring that buildings under construction establish three-stream collection methods in their buildings, ensuring that waste diversion services are as convenient and effective as garbage services. Under this requirement, builders can choose to implement a three-stream collection system using any one of the following methods (see Appendix A for further detail):

- Tri-sorter technology
- Three chute systems
- Three-stream sort systems on each floor
- Other approaches that ensure that access to recycling and source separated organics diversion remains as convenient as residual waste disposal

This mandatory approach tackles one of the key challenges associated with promoting waste diversion in multi-residential buildings – convenience. Residents will be more inclined to participate in recycling and organics diversion if the method of diversion remains as convenient as the means of garbage disposal.

The Town of East Gwillimbury has incorporated into its waste management bylaw that new multi-residential developments must provide three-stream collection services:

*“All new development of properties ... Apartment Buildings as defined shall be required to submit to the Town for approval a Waste Management Plan which utilizes a three-stream*

*waste management model which processes the Collected Materials in the same manner as the Town”.*<sup>5</sup>

Local municipalities are currently reviewing their development standards to determine how to incorporate the three-stream provision. Municipalities are also paying more attention to access routes to ensure adequate access room and safe vehicle functioning is achieved in the site plans. In its Waste Collection Design Standard Policy, the City of Vaughan requires:

*“COLLECTION ACCESS ROUTE*

*4.2.1 Ingress/Egress & Turnaround*

*The access route and loading platform must be designed in such a way to allow a collection vehicle to enter the site, collect the garbage & recycling and exit the site in a forward motion. Collection vehicles will not be permitted to backup onto a public road access.*

The City of Markham also requires that owners of new multi-residential buildings provide adequate educational information and containers to residents. An excerpt from the Town of Markham Three-Stream Waste Management Requirements through Site Plan reads,

*“The Owner covenants and agrees to purchase from the Town one (1) in unit recycling container and one (1) organics kitchen collector unit per dwelling unit so that each resident may participate in the Town’s 3-Stream program. Furthermore, the Owner shall ensure that the in unit recycling containers, kitchen collectors and educational materials are deposited in each dwelling unit on or before the date of closing of the first sale or new tenant occupancy from time to time.*

*The Owner agrees to contact the Town at least four weeks prior to unit occupancy to arrange an appointment time at which the in unit recycling containers, kitchen collectors, and educational materials are to be collected by the Owner from the Town at a location determined by the Town.”*<sup>6</sup>

Richmond Hill currently has waste management standards for new developments that set out the developer’s responsibility with respect to building appropriately for waste management purposes. This document has been used as a guideline for a number of years, but it is not embedded into the planning process so that it automatically becomes part of the documentation of requirements that a developer would receive from the Town when looking to make an application. Richmond Hill is currently pursuing a project to revise this Waste Management Development Standard featuring incorporation of best practice design standards to promote waste diversion activities and construction considerations to ensure that design

---

<sup>5</sup> Corporation of the Town of East Gwillimbury Bylaw NO. 20120-073. Establish and Maintain a System for the Collection, Removal and Disposal of Garbage, Other Reuse, Yard Waste Materials Including Blue Box Materials and Source Separated Organics

<sup>6</sup> Report No. 5 of the Planning and Economic Development Committee Regional Council Meeting of June 24, 2010

standards are achieved and waste diversion activities are incorporated during construction. The updated development standard would help to:

- Provide clarity and rationale for the approach to separate and manage three-streams of materials at new developments
- Reflect best practices including letter of credit requirements to ensure that developments are built in accordance with design and that the program delivery remains in effect

Once the convenience problem has been addressed in the design and construction of new multi-residential buildings, there still remains a need to provide adequate on-going promotion and education and other incentives to ensure that residents continue to participate in the programs.

Through York Region's "Sustainable Development through LEED" program, multi-residential buildings are rewarded for incorporating sustainability aspects to waste management components. For example, to qualify for LEED status the building must include a three stream waste management system that makes the recycling program (blue box recyclables and organics) as convenient as the garbage collection program. Some of the requirements include having either three separate chutes on each floor or single chute with a tri-sorter (preferred). The program also requires that a comprehensive education plan detailing how the recycling program will be promoted to building residents be submitted. The requirements for LEED would be a good starting place for the Region to look for adopting standards or practices as several buildings will have already implemented such standards.

## **2.7 Older Multi-Residential Buildings**

The main challenge facing older multi-residential buildings is the lack of infrastructure to make waste diversion as convenient as garbage collection. Most older high rise buildings have garbage chutes on every floor to accommodate easy disposal of garbage. Waste diversion, on the other hand, is typically relegated to an area in the basement, parking area or outside.

While the other challenges associated with waste diversion (such as resident and property management/superintendent apathy, language and cultural barriers, non-existent social norms, etc.) impact all multi-residential buildings, they may be more pronounced in older buildings where the inconvenient set up of the waste diversion program sends a signal that it is less important than garbage disposal.

Alameda County in California argues to put money and effort where it is most likely to pay off - “By prioritizing buildings for outreach, recycling co-ordinators can achieve the greatest increases in diversion for an investment of time and money. High priorities include: large buildings, multi-family dwellings with engaged on-site property managers, owner-occupied buildings, or those where residents pay for garbage service.”

Source: Alameda County's Stopwaste.org. Multi-family Recycling Evaluation Report. December 2008

Some best practice measures adopted by municipalities include:

- Hiring dedicated multi-residential staff
- Education, outreach and feedback for tenants
- Education, outreach and feedback for property management and superintendents
- Mandatory requirements
- Financial incentives/disincentives

## 2.8 Hiring Dedicated Staff

Increasingly, municipalities are hiring dedicated staff to manage multi-residential programs more strategically rather than taking a piecemeal approach by sharing the file among non-dedicated staff members. This enables staff to focus on programs and policies directly involving multi-residential waste diversion. It also provides a consistent contact for stakeholders who need information. Some municipalities with dedicated multi-residential recycling co-ordinators include the Region of Peel, Region of Waterloo, Halton Region and the City of Toronto.

Halifax Regional District (HRM) has hired five staff for enforcement purposes and four educators who work with the enforcers to help multi-residential building owners experiencing problems with their waste diversion programs.

Source: Communications with Laurie Lewis, Halifax Regional Municipality, September 2011.

## 2.9 Education, Outreach and Feedback for Residents

Informing and engaging tenants about the benefits of waste diversion helps to ensure a successful program. Overcoming some of the challenges mentioned earlier requires a greater commitment to providing regular reminders to residents about the program. Some municipalities force the property management company to assume responsibility for maintaining all communications with residents while others will combine the responsibility by assisting property management to maintain communications.

As part of an outreach demonstration program, residents at a multi-residential building in Metro Vancouver were asked to sign a pledge to recycle and put a “We Recycle!” sticker on their apartment door for their neighbours to see – a social norm tactic. The demonstration achieved a very high participation rate with 66 per cent of tenants signing the pledge and placing “We Recycle!” stickers on their doors. Using this tactic coupled with other initiatives, recycling rates in buildings improved.

Source: Multi-Family Waste Reduction Pilot Results and Next Steps. Waste Management Committee Meeting September 30, 2010

Some best practices include:

- In buildings that do not have closed door policies, hire students to go door-to-door to provide recycling kits and talk with residents about the recycling program benefits and answer questions (Hamilton, ON)
- Ask residents to sign pledges/commitments to recycle (pilot in Metro Vancouver, BC)
- Get residents to sign an agreement to recycle as part of lease agreement (Minto Group; Burlington Housing Authority, VT; Seattle Social Housing, WA)
- Place stickers on doors showing commitment to recycle (pilot in Metro Vancouver, BC)
- Reward program to encourage adults and children to participate in recycling (demonstration in Toronto, ON)
- Ambassador programs in which a resident agrees to champion waste diversion in the building (Seattle, WA; Toronto, ON)
- Waste diversion program feedback (pilot in Port Coquitlam, BC)

The Burlington Housing Authority, Vermont has introduced mandatory recycling into its Tenant Agreement, which reads as follows:

**Mandatory Recycling.**

In jurisdictions like Burlington, where recycling is mandatory, tenants shall comply with the applicable ordinances and regulations on mandatory recycling. Tenant shall sort and separate recyclable materials from all other solid waste and place recyclables in proper recycling containers provided. If the local jurisdiction finds that Tenant has violated any provisions of the recycling laws, Tenant shall pay all costs, expenses, fines, penalties or other damages imposed upon Owner or Tenant by reason of Tenant's failure to comply with the law. Tenant agrees to indemnify the Owner accordingly.

In the case of Burlington Housing Authority, when signing the lease agreement staff go over the recycling clause and provide an in-unit recycling container to the new tenant. Signs and communications are posted throughout the buildings promoting recycling. Staff encourages tenants to call if they have questions. Inspectors monitor recycling containers on a regular basis to ensure that tenants are participating in the program. The program is considered successful.

Source: Burlington Housing Authority Tenant Agreement  
Communications with Janet Dion, Director of Property Management, Burlington Housing Authority, January 25, 2013.

## **2.10 Education, Outreach and Feedback for Property Management and Superintendents**

One of the most important indicators of a successful waste diversion program in a multi-residential building is the level of commitment and support provided by the building's property management and superintendent staff. A proactive building management and superintendent are essential to a well-operated and effective program.

Alameda County, California recommends that its local municipalities contact multi-residential property managers twice a year, which will serve to remind them of their obligations to provide recycling and to provide assistance in troubleshooting any problems being encountered. The County encourages face-to-face contact but acknowledges this may be a problem for smaller communities with stretched resources, in which case contact can be made through mailings and email.

Source: Alameda County's Stopwaste.org. Multi-family Recycling Evaluation Report. December 2008

To help property management and superintendents develop and maintain a successful waste diversion program, it is necessary to provide them with tools and support, beginning with help in setting up a program that best addresses the limitations of the property layout and meets

the needs of the residents. Staff from New York City's Sanitation Department suggest that when setting up and maintaining a recycling program "solutions should be simple and a business case is often required that will provide justification for the time and effort expended by building staff to implement and maintain recycling programs."<sup>7</sup>

Eureka Recycling, a non-profit organization, provides multi-family recycling services at all buildings with 11 units or more in the City of St. Paul, Minnesota. The organization has been tracking recycling performance in the buildings for more than 20 years, including contact and program histories, information demographics and tonnage collected. During each collection, the collection crew records the number of carts collected and their fullness. This information is later converted to tonnes of material diverted. Each year the organization sends a mailing to property owners describing the amount of materials diverted in their buildings (number of tonnes diverted) and compares it with previous years. The letter congratulates the building for its recycling efforts and provides the tonnages recycled as well as recycling calculator information to show them the environmental impacts of their diversion efforts (e.g. number of trees or energy saved per tonne of material). The mailing includes a survey asking property owners about their recycling needs and to update contact information.

Source: Eureka Recycling. Exploring Multi-Family Recycling – Tools for the Voyage. 2004

Providing assistance and feedback to property management and superintendents are important steps in program development and maintenance. Site visits can help troubleshoot potential problems with program layout and convenience. Simple strategies, such as ensuring the bins are placed in well-lit, high traffic areas and the location has adequate, easy to understand information help to ensure better participation in the program. At the same time, providing regular feedback to property managers and superintendents (who can in turn pass it on to residents) acts as a reminder about the program and provides an opportunity for building management to get further assistance from staff to resolve problems and improve participation.

## 2.11 Mandatory Requirements

To establish a level playing field for multi-residential building owners and property managers, municipalities have begun to introduce mandatory requirements in the form of specific bylaws and ordinances requiring buildings to provide waste diversion services to residents along with regular education and promotional efforts. Not only does this measure provide an impetus for

---

<sup>7</sup> Toronto's Tower Renewal Program. Maximizing Residential Waste Diversion in Connection with the Mayor's Tower Renewal Pilot Feasibility Study. May 2010.

property management to provide waste diversion programs, it gives the community powers to take action if the requirements are not met.

Municipalities have introduced a wide range of requirements under multi-residential waste diversion bylaws and ordinances as presented in the table below.



**Table 4: Mandatory Requirements to Promote Waste Diversion in North American Cities**

Location	Waste Diversion Requirements	Enforcement & Results
<p><b>Portland, Oregon</b></p>	<ul style="list-style-type: none"> <li>- Applies to building with more than five units</li> <li>- Building management must provide recycling services to residents adequate for the number of households in the building</li> <li>- Recycling collection must be as convenient as garbage collection</li> <li>- Recycling information must be provided to new residents within 30 days of moving in and on an annual basis to all residents</li> </ul>	<ul style="list-style-type: none"> <li>- The City has never taken enforcement action against a multi-residential building</li> <li>- Staff will write letter apprising landlords of their responsibility and talk with haulers</li> </ul>
<p><b>Seattle, Washington</b> <b>(communications with Liz Kain, City of Seattle)</b></p>	<ul style="list-style-type: none"> <li>- Applies to building with more than four units</li> <li>- All properties must provide recycling and source separated organics collection services to residents</li> <li>- Building owners with garbage dumpsters containing more than 10 per cent recyclables can have an \$50 charge added to their waste utility bill</li> <li>- Building owners must distribute a letter (developed by the city) to tenants explaining the recycling program</li> <li>- To receive services from the city, landlords must sign an agreement to provide waste diversion services</li> </ul>	<ul style="list-style-type: none"> <li>- Three inspectors check garbage bins at buildings</li> <li>- If more than 10 per cent recyclables in bin, then property receives a notice and container is tagged – take photos</li> <li>- After two offences, the City charges \$50 fine on garbage bill</li> <li>- Majority of buildings in compliance</li> <li>- Staff report that mandatory requirements absolutely improved performance of the recycling programs</li> </ul>



*Multi-Residential Strategy*

Location	Waste Diversion Requirements	Enforcement & Results
<p><b>Toronto, Ontario</b> (communications with Renee Dello, Toronto)</p>	<ul style="list-style-type: none"> <li>- Applies to building with more than five units</li> <li>- Recycling is mandatory for all residential properties</li> <li>- Use to require building management to complete and submit an online recycling plan but dropped after less than 10 per cent received over a couple of years</li> <li>- Toronto incorporates cost for waste diversion service in the garbage collection fee</li> </ul>	<ul style="list-style-type: none"> <li>- City has five waste enforcement staff dedicated to multi-residential buildings</li> <li>- The city will terminate collection services if not participating in the recycling program</li> <li>- While most buildings are compliant, recycling rates remain relatively low and contamination rates high</li> </ul>
<p><b>Halifax, Nova Scotia</b> (communications with Laurie Lewis, Halifax Regional District)</p>	<ul style="list-style-type: none"> <li>- Applies to building with more than six units – must arrange private sector collection services</li> <li>- Must provide adequate containers and space for waste diversion</li> <li>- Failure to implement a waste diversion program can result in a fine to the building owner</li> <li>- Building owners must provide recycling and organics source separation</li> </ul>	<ul style="list-style-type: none"> <li>- City staff state that 95 per cent of buildings are in compliance</li> <li>- Staff inspect loads at transfer station to identify problem buildings and then contact the building</li> <li>- The municipality also has three compliance officers who investigate multi-residential and commercial locations and will identify buildings that need further help</li> <li>- City has issued fines for non-compliance</li> </ul>
<p><b>Chicago, Illinois</b> (report from Chicago Recycling Coalition)</p>	<ul style="list-style-type: none"> <li>- Applies to all multi-residential buildings</li> <li>- Building must arrange private sector service</li> <li>- Building management must provide recycling services to residents</li> <li>- All residents must be told what to recycle and how to recycle; the landlord must distribute information or post signs in common areas</li> <li>- A written recycling plan must be made available to tenants</li> </ul>	<ul style="list-style-type: none"> <li>- Legislation not actively enforced by the city</li> <li>- Many buildings do not provide recycling services</li> </ul>

In York Region, Richmond Hill's Household Waste System Bylaw requires that,

*“the owner of a multi-family residential property distribute information related to collection and diversion programs to all dwelling units within that multi-family residential property”<sup>8</sup>*

Mandatory requirements can also apply to the amount of garbage that can be placed out for disposal on a per unit basis. Augmented with a financial incentive/disincentive (see below), this approach can provide a strong impetus for property owners/management to put more emphasis on waste diversion than waste disposal.

In a study prepared for Ontario's Municipal-Industry Program Committee (MIPC), it was observed in focus groups conducted with superintendents that, “although superintendents identified the need and repeatedly requested their property management supply more recycling bins, this minimal investment request was refused. Unless the building was going to incur additional garbage charges for excess quantities, they did not see the financial benefit to their business. If there were maximum garbage limits and minimum recycling limits, they would be more likely to comply with obtaining the appropriate number of bins.”<sup>9</sup>

The City of Vancouver in British Columbia charges for each three stream collection service – garbage, recycling, and organics collection. The rates are based on collection for different sized cart with garbage collection costing more than organics and recycling collection. The annual rate for City collection service for a 240L cart is as follows:

- Garbage - \$133
- Organics - \$105
- Recycling - \$32

The Waste Management Department operates on a cost recovery basis. None of the waste management services are charged on property taxes.

## 2.12 Financial Incentives/Disincentives

Financial incentives/disincentives can be designed to encourage participation in waste diversion programs. Financial incentive programs can target the point where waste disposal occurs by charging a fee based on volume or weight of garbage requiring disposal or programs can reward activity and behaviour resulting in waste diversion.

Programs based on the polluter pay principle provide a financial incentive that is tied to changing the unwanted behaviour, in this case excessive waste disposal. In the United States,

<sup>8</sup> Chapter 715 Household Waste System, Richmond Hill Bylaw, 2008, S. 5

<sup>9</sup> KPMG Blue Box Program Enhancement and Best Practices. July 31, 2007 Prepared for the MIPC Steering Committee

many cities charge multi-residential building owners for every cubic yard of waste requiring disposal, just as a commercial property is charged by the cubic yard or bin size. This system is called pay-as-you-go.

In Canada, municipalities that provide waste management collection services to multi-residential buildings typically provide a service that is paid through property taxes, rather than by volume disposed. This approach provides little incentive to the property owner or manager to promote waste diversion in order to reduce waste disposal and associated fees.

Some municipalities, such as the City of Toronto, have moved to a user pays approach by implementing a volume-based fee for waste disposed. In the case of Toronto, the city provides garbage and waste diversion services to the multi-residential sector and charges a fee of \$13.27/yd<sup>3</sup> for un-compacted garbage and \$26.55/yd<sup>3</sup> for compacted garbage back to the property owner/management. To date, Toronto is the only municipality in Ontario to impose a volume-based fee for multi-residential waste.

One building owner, Capreit, has made the link between Toronto's garbage levy program and the need to promote recycling in one of its multi-residential building as a way to reduce garbage fees; consequently, it has initiated several innovative practices to encourage participation in the recycling program.

- The company has introduced recycling on every floor, thereby making recycling as convenient as garbage disposal.
- In addition, the building owner has introduced an innovative reward program targeting the children living in the building. Each child receives a card and when the child brings a bag of recyclables to the office, the card is stamped. When five stamps are received, the child gets a prize. When 10 stamps are received, thus completing the card, the child's name is entered in a draw for an iPod,
- The incentive system is extended to building staff as well. The property management, Capreit, recognizes cost saving initiatives by sharing the savings with the building by investing in upgrades and improvements. It also supports direct incentives, such as tickets to Raptor's games, for superintendents and staff.

The building has managed to reduce its garbage by half and is estimated to be achieving a 51 per cent diversion rate.

Source: Toronto's Tower Renewal Program. Maximizing Residential Waste Diversion in Connection with the Mayor's Tower Renewal Pilot Feasibility Study. May 2010.

The volume-based fee approach provides a financial incentive for property owners and management to become engaged in waste diversion and to invest in the necessary equipment and education tools to effectively promote waste diversion programs within their buildings. Other incentives can be introduced to reward superintendents and residents for actively participating in the waste diversion programs. These rewards may involve financial bonuses,

gift certificates, tickets to sporting events, sponsored community events (such as barbecues) or new infrastructure (such as playgrounds).

### 3.0 Multi-Residential Waste Diversion Strategy

A number of initiatives have been considered to address the challenges of increasing diversion in the multi-residential sector, based on best practices in the Region and in other jurisdictions. These initiatives present reasonable approaches to addressing multi-residential diversion, considering the roles and responsibilities held by the Region and the local municipalities.

The Region does not have authority regarding the waste collection services provided to residents, either single family or multi-residential but it could encourage waste diversion through its authority over disposal and processing. However, the mechanism of exerting this authority, through material bans or other means, would be difficult to execute. Mechanisms employed elsewhere, including rejection of loads or surcharges, would be difficult to apply given the role of the local municipalities in contracting service and the limited ability of the private hauler to trace loads containing ‘banned’ materials back to their source.

For that reason, the initiatives below focus on the concept that York Region can provide a supportive role (e.g. through promotion and education and funding demonstration projects) in promoting waste diversion in the multi-residential sector. The following strategy presents a range of initiatives that York Region could pursue to assist local municipalities in promoting waste diversion within the multi-residential sector.

#### 3.1 Initiatives

Continuous Improvement Fund (CIF) has introduced the following guidelines for multi-residential recycling storage:

- One 95-litre cart for every seven multi-residential units
- One four yard bin for every 60 multi-residential units

With the caveat that “these guidelines represent average requirements and will vary depending on the building population demographics,” these minimal limits help to ensure that buildings are adequately equipped with recycling bins.

Source: Continuous Improvement Fund. Guidelines for Implementing Best Practices in Municipal Multi-residential Recycling Programs. November 2009

Currently, in York Region, each partner municipality takes a varied approach addressing waste management in the multi-residential sector. With an almost threefold projected increase in multi-residential housing in the Region over the next 20 years, it is important to establish a consistent and effective approach to drive waste diversion within the sector. The initiatives identified below (and presented in Attachment B in greater detail), build a consistent and

strengthened approach to waste management to ensure the multi-residential sector receives the same level of service and expectations for performance as the single-family sector.

- 1. Advocate for Ontario 3R Regulations definition changes.** The Ontario 3Rs Regulations designate the multi-residential sector as commercial, rather than residential, and do not require municipalities to provide collection service to the multi-residential sector in the same way that recycling collection service to the single family sector is stipulated. York Region could consider advocating for the Ontario Government to remove the multi-residential sector from the industry, commercial and institutional (IC&I) classification and place it into the residential classification. This will reduce any ambiguity by local municipalities as to whether or not a municipality is responsible for provision of waste management services. See Advocacy Strategy for additional detail.
- 2. Develop a model bylaw for waste diversion in multi-residential buildings.** Bylaws help to set the requirements for acceptable behaviour among the targeted audience, in this case, multi-residential building owners and property management. Since the nature of multi-residential living reduces the ability for a municipality to place responsibility for waste diversion at the individual level, the onus must be placed at the property owner and management level to ensure that an effective waste diversion infrastructure is in place for residents to use.

York Region could work with local municipalities to develop a model bylaw pertaining to multi-residential garbage and waste diversion. A model bylaw should be based on best practices promoting waste diversion that have been adopted by York Region municipalities and other jurisdictions. Issues that could be addressed include, but are not limited to:

- Mandatory recycling for all multi-residential buildings
- Termination of service for failing to provide adequate recycling
- Requirements to provide educational materials to new residents and annually to all residents
- Incorporate mandatory recycling clause in leases
- Requirements to provide adequate waste diversion collection (e.g. identify minimum number of carts /front load bins required per number of units)
- Standardize multi-residential garbage disposal limits with single family disposal limits

The bylaw will target building owners and property management to ensure that mechanisms are in place to enable residents to participate in waste diversion activities within the building

- 3. Encourage adoption of consistent Waste Management Development Standards.** The Town of Richmond Hill is developing Waste Management Development Standards addressing the infrastructure and programming needed for successful three-stream diversion. The standards ensure new multi-residential buildings have infrastructure in place that makes waste diversion as convenient as waste disposal. Monitoring and

reporting requirements are also identified, to ensure ongoing compliance with the three-stream program as outlined in the approved site plan. Once completed, York Region could encourage all local municipalities to adopt at a minimum, the facility design requirements of the development standard and, in the meantime, York Region could encourage the remaining northern municipalities to adopt three-stream waste management for new multi-residential building design and site plan policies and have all municipalities incorporate the requirement into their waste management bylaws. It would be reasonable to ensure that the standards incorporate Markham's subdivision and multi-residential/mixed use recycling container fee program (see Mixed Use Strategy for further detail).

- 4. Regional multi-residential database** – York Region could consider developing and maintaining a multi-residential database that can be accessed by local municipalities (particularly the northern six municipalities) to share information about planning policies, infrastructure strategies, pilot programs and educational materials among other items. The database could help to fill in voids about multi-residential buildings using private waste hauling services and help to direct the development of standardized educational materials that could be accessed by all local municipalities.

The database should provide information about the multi-residential buildings, how they are being serviced, number of units, and other characteristics. At the same time, the database could provide information on estimated waste generation rates and diversion rates, based on waste audits performed in local partner municipalities for monitoring purposes.

- 5. Website for tenants and property management/superintendents** – Residents could be empowered to help promote and maintain a waste diversion program within their multi-residential building with information and support provided by the Region. The Region could establish a webpage on York.ca that would be available for residents and property management/superintendents to access information about setting up building liaisons (ambassadors), download and order educational materials, establish friendly competitions, etc. The website could also provide online chat assistance with staff and arrange for onsite assistance. The website could showcase successful programs and pilots as well as unsuccessful efforts and lessons learned. The webpage could provide links to discussion forums, a dedicated Facebook page and other social media outlets to make information and support more accessible. This initiative could lead to the development of a Centre of Excellence that would offer a 'York Region' version of the GTAA Superintendent Training and Placement Program and the CIF training courses under one roof. The centre could also promote other waste diversion activities, such as technical assistance, hotline information services, educational and promotional materials, etc. This centre could also provide waste diversion support to institutions and businesses (as further discussed in the IC&I and C&D strategies).

The Greater Toronto Apartment Association (GTAA) operates the Superintendent Training and Placement program, working with the Institute of Building Management Training, which provides the training manuals and materials. This 12-week course trains students on topics of administration duties, customer service, maintenance and repair and environmental issues, including recycling. The demand for the training has increased over the years with typically 60-70 applicants competing for 18 spots in the course.

Source: GTAA Building Blocks newsletter October 2011.

6. **Stakeholder Working Group** – York Region could establish a Stakeholder Working Group, which could meet regularly to enable local municipal partners, property management companies and community groups to share information and develop strategies to increase waste diversion from multi-residential buildings, among other things. The group could explore topics such as chute closure measures, friendly competitions, training needs, overcoming community educational challenges, etc. The Stakeholder Advisory Committee developed as part of the SM4RT Living Plan could be used in the future for this purpose with an expanded membership. This initiative is identified in a number of the SM4RT Living Plan strategies and therefore has not been duplicated in Attachment B.
7. **Assess Volume Based Fees** – York Region could assess a volume-based billing system for multi-residential buildings in a host municipality that would monitor, record and charge a fee for each standardized volume of garbage collected. The assessment would need to explore the technological and infrastructure requirements associated with setting up to record the volumes of waste collected at each building as well as a fee schedule and billing system. The system could be piloted in the host municipality and the results used to develop a template for implementing similar programs across other municipalities in the Region.

Currently, Markham staff have started working on a system to monitor waste management and diversion activity in its multi-residential sector using radio frequency identification tags to differentiate waste bins from each building. This puts Markham in an advantageous position to partner with York Region to explore a volume-based fee system.

8. **Training Sessions**- York Region could consider working with the CIF (Continuous Improvement Fund) to train Regional and local staff to host training sessions for superintendents and property management to help them develop successful waste diversion programs in their multi-residential buildings. Richmond Hill already has a similar program.

At the same time, York Region could work with the Greater Toronto Apartment Association to review and fine-tune the waste diversion training as part of its Superintendent Training & Placement Program and work with The Institute of Building Management Training (IBMT) to ensure related waste management and diversion issues are addressed in all the training manuals and materials. York Region might want to consider partnering with the organization and hosting the training and placement program in York Region (currently the program is provided in Toronto only).

See Attachment A for additional details with respect to these initiatives.

### **3.2 Pilots to Promote Waste Diversion within Multi-Residential Buildings**

York Region could work with local municipal partners to implement a series of pilot programs to test different approaches encouraging residents and superintendents to participate in waste diversion activities (e.g. testing incentives, rewards, education and social norms). The programs would help showcase activities that are successful in encouraging positive waste diversion behaviour change as well as activities that were less successful and lessons learned from the experience. The information gleaned from the pilot programs should be shared with stakeholder groups (municipal partners, property owners and management, superintendents, tenants, NGOs) to help direct future pilot programs, engagement and communications.

The Region should consider the socioeconomic and demographic characteristics of the multi-residential communities, market research into barriers, motivators and values of the residents and input from local staff and condo boards/property managers when matching pilot projects to candidate sites. Some multi-residential pilots that York Region could consider are as follows:

**Pilot 1** - Ask residents in select buildings to sign a pledge promising to recycle and have them put a sticker on their door demonstrating their support for and participation in recycling. Survey residents before and after and measure waste and recycling efforts before and after<sup>10</sup>.

**Pilot 2** - Hire students to go door-to-door delivering recycling reminder prompts and discuss recycling with residents. At the same time, provide residents with a recycling handbook and fridge magnet reminding them to recycle and showing them the benefits of recycling. Create a recycling handbook, which relies on graphical communication instead of English text for multi-residential buildings with high cultural diversity.

**Pilot 3** - Introduce a challenge among multi-residential buildings or within the community to increase recycling or waste diversion rates. Information tools, such as barometers, can be installed in high traffic areas to raise awareness of the 'competition' and plot the building's success in meeting the goal. The top building that achieves

---

<sup>10</sup> Note: For many of these pilots, the use of surveys to solicit feedback pre and post pilot will be an important consideration.

highest diversion levels, and/or achieves the greatest increase in diversion rate wins a prize (e.g. a barbeque for the residents, gift cards, etc.).

**Pilot 4** - Engage children in select buildings to participate in recycling by issuing a challenge. Every time a child brings a bag of recyclables to a designated point of receipt they receive a stamp in a card and when the card is filled with a certain number of stamps (e.g. five) it is placed in a draw box. At the end of two months a name is drawn from the box and prize (such as an iPod touch) is awarded to the drawn name.

**Pilot 6** - Engage superintendents in select buildings by providing gift cards or other prizes (e.g. tickets to sporting events) for achieving targeted increases in recycling rates for the building.

**Pilot 7** – Establish community garden and backyard composting demonstrations in select buildings. This demonstration approach is further explored in the Food Waste Reduction Strategy.

**Pilot 8** - Establish a room in multi-residential buildings where tenants can share goods or donate them to a charity (e.g. textile boxes as discussed in the Reuse Strategy) and divert special waste, such as electronic waste, paints, and batteries. Over time, this could be established as a full-scale 'permanent' activity within the building.

## 4.0 Implementation

The following provides an overview of the approach to implementation of this strategy.

### 4.1 Partnerships

As addressed previously, York Region has no jurisdiction over garbage, recycling and organics collection services, which remain the responsibility of local municipalities. The Region must work closely with local municipal partners in pursuing any of the initiatives and pilots to promote waste diversion in its multi-residential sector. While the northern six municipalities currently lack a large multi-residential population, this is expected to change in the future. Most northern municipalities can expect to see between two and nine times the increase in multi-residential units over the next two decades. Many of these municipalities lack the resources to effectively tackle waste diversion in this burgeoning sector. Partnerships formed with the Region will help to alleviate the strain associated with promoting waste diversion in the multi-residential sector.

In the southern three local municipalities, Markham and Richmond Hill are well on their way to responding to the waste diversion needs of their multi-residential sector. The City of Vaughan provides some waste management services to its multi-residential sector and continues to observe service expansion in Markham and Richmond Hill while they complete an internal service review. The Region can provide beneficial services to the southern municipalities in the form of training sessions, handbooks and toolkits and funding pilot projects to test a variety of promotional approaches.

The Region could consider partnering with the Continuous Improvement Fund to establish training sessions for staff and explore other useful services. The Region could also work with the Greater Toronto Apartment Association to explore partnerships in fine-tuning superintendent training courses to better meet the expectations and needs of waste diversion programs in York Region. The Region could partner with other organizations and partner municipalities to establish a Centre of Excellence that would offer a 'York Region' version of the GTAA Superintendent Training and Placement Program and the CIF training courses under one roof.

There are a number of opportunities for internal partnerships to support implementation of this strategy. York Region's Transportation and Community Planning Department operates the Sustainable Development through LEED® program – a voluntary incentive program that promotes green development in the multi-unit residential sector in York Region. The Sustainable Development through LEED® program offers servicing allocation credits to new high-rise residential developments that meet the Region's water-efficiency, waste management and transit-oriented development objectives. Low impact development and inflow and infiltration reduction measures will be added to the revised program in 2014. The program currently requires applicants to provide a three-stream waste management system as part of their development; opportunities to incorporate other waste management best practices into the program could be explored.

The Region's Long Term Water Conservation Strategy includes recommendations for improving water efficiency in new and existing multi-residential developments. Opportunities for co-promotion of programs and training should be explored to make efficient use of resources and reduce duplication in outreach efforts.

York Housing owns and manages numerous multi-residential properties in the Region. A partnership could allow the Region to showcase new technologies and pilot approaches to tenant engagement. York Housing staff should also be included in the stakeholder working group proposed as part of this strategy.

The Region will need to work with local municipalities, charities and Industry Funded Organizations (IFO) (Ontario Electronic Stewardship, Stewardship Ontario) to establish specialized waste diversion services provided to multi-residential buildings. Once the logistics have been explored within pilot programs, the most viable services/approaches can be rolled out across the Region.

York Region Food Network has helped open community gardens in Markham, Newmarket and Aurora. York Region could work with the York Region Food Network to pilot community gardens and community composting at a number of multi-residential buildings. This would be an extension of the community garden initiatives identified in the Food Waste Reduction Strategy.

## 4.2 Resources, Timeline and Targets

The following provides an outline of the resources (staff and financial) required as well as a preliminary timeline for implementation, performance targets and monitoring.

### Roles and Responsibilities

The proposed arrangement for the implementation of this strategy is as follows:

<b>York Region:</b>	Lead and/or Supporter Depending on Initiative/Pilot
<b>Local Municipalities:</b>	Lead and/or Supporter Depending on Initiative/Pilot
<b>Community Partner:</b>	Stakeholder and/or Participant
<b>Other:</b>	Stakeholder and/or Participant

### Resources

Other jurisdictions have designated staff responsible for supporting multi-residential diversion programs. York Region should consider hiring a dedicated staff position within its Environmental Services Department to oversee the development and implementation of the multi-residential strategy both at the Regional level and to support its local municipal partners. As need for more assistance arises, such as providing on-site technical assistance to multi-residential buildings in the northern municipalities, more staff may be required. This position could be established as a contract position, with a review at an appropriate point regarding the need to make the positions permanent. While the need for resourcing is noted below as being a relatively urgent item required to initiate the multi-residential strategy, it is recognized that approval for additional staff complement may not be forthcoming for 2014, and other 'support' services may be required to provide resources for this initiative. Details on resources and staffing can be found in the summary table at the beginning of this strategy as well in Attachment A.

### Targets

Implementing the Multi-Residential Waste Diversion Strategy should help York Region set new standards in waste diversion in multi-residential buildings. Currently, Markham and Richmond Hill are achieving 23 and 27 per cent waste diversion respectively with their multi-residential sectors; they are also leaders in developing and implementing waste diversion programs in their multi-residential sectors. With an implementation date in 2014, the Region should aim for local municipalities achieve the same level of multi-residential waste diversion as Richmond Hill and Markham by the year 2020 after which, all municipalities should achieve incremental increase in waste diversion of three to five per cent increase every five years thereafter.

### Performance Measurement

For each new initiative there are specific performance measurements identified (see Attachment B), however, there are several overarching metrics to measure the performance of the multi-residential strategy as a whole, including:

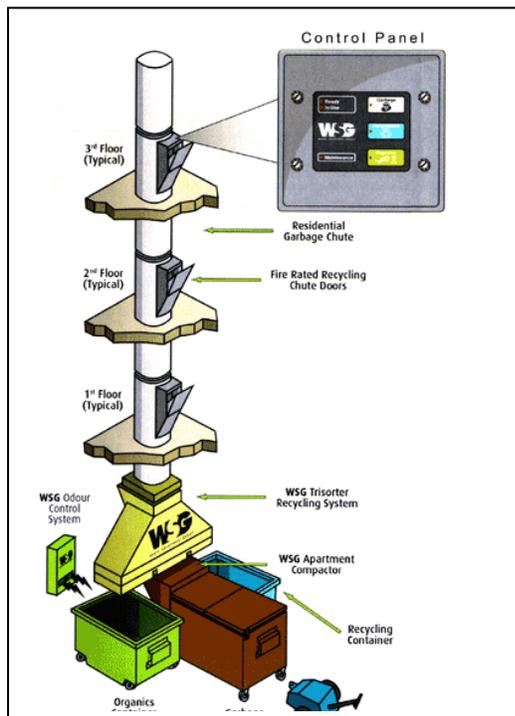
- Number of local municipalities that adopt a model bylaw
- Decrease in kg/capita (or kg/unit) waste generated and/or waste disposed (generally via regular audits/monitoring)
- Participation in training sessions (number of annual participants)
- Increase in diversion in buildings in which superintendents and/or property management have participated in training sessions

## 5.0 Key Benefits of this Strategy

The multi-residential strategy presented herein provides the following key benefits:

- Increased diversion in multi-residential units and additional opportunities for reduction and reuse initiatives
- Consistent guidelines and regulations for the entire Region regarding multi-residential waste that will facilitate both development of new facilities and oversight of existing facilities
- Greater education and awareness of multi-residential waste and best practices
- Greater opportunity to track the performance of multi-residential buildings in the Region and identify opportunities for improvement

**ATTACHMENT A – THREE-STREAM SYSTEMS**



Source: Waste Solutions Group at <http://www.ellipsecondo.ca/condo-rules/wsg-trisorter-recycling-garbage.html>

**Tri-Sorter Technology**

The single chute – button sorting technology (i.e. Tri Sorter technology) is an innovative system that uses a control panel attached to each chute on every floor of a multi-residential building which diverts different waste streams (recyclables, garbage and organics) into designated bins in the garbage room.

Each chute room is equipped with a control panel connected to a carousel unit in the main garbage room. Each control panel contains a number of buttons, each corresponding with a specific type of material (i.e. one button for garbage, one for recyclables and one for organics). Each chute room also is equipped with a locking mechanism for the chute hopper. When the chute is being used by someone on another floor, the system automatically locks all other chute doors to prevent two different types of material from falling into the same container.

The carousel and collection bins, located in the main floor garbage room, are situated under the opening of the chute. The carousel is a round steel plate that can rotate. By rotating the carousel, the chute is placed over a different bin corresponding to the material being diverted. The carousel's rotation mechanism is activated when a resident pushes a button on the respective control panel.

### Three Chute System



Source: <http://www.hellotrade.com/suppliers?ss=gabage+chutes>

The three chute source separation system offers a great opportunity to maximize waste diversion using a convenient and easy-to-use approach. In essence, residents are permitted to dispose of their waste, recyclables and organics in one of three designated chutes located on each floor of the buildings. Each chute should be colour coded to improve diversion through a colour recognition system (green for organics, blue for recyclables and black for garbage).

### Three-stream Sort Systems

This approach makes a three-stream waste management system available on every floor of the multi-residential building, thus making waste diversion as convenient as waste disposal. This system can have waste diversion stations situated within the chute room, in the halls or in special designated areas. Fire safety regulations may impact the type of system employed.



Image source: Waste Reduction Overview presented by Doug King, November 2009



Image source: Waste Reduction Overview presented at the Ontario Non Profit Housing Organization conference by Doug King of Metro Group, November 2009