

SMART LIVING

YORK REGION'S INTEGRATED WASTE MANAGEMENT MASTER PLAN



January 2014

Industrial, Commercial and Institutional
Strategy





Industrial, Commercial and Institutional Strategy

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	<p>Objectives:</p> <ul style="list-style-type: none"> To support and facilitate improved waste diversion practices in the IC&I sector through education and partnerships. 	<p>Targets:</p> <ul style="list-style-type: none"> To properly evaluate each element of the IC&I strategy, a baseline of information needs to be identified in the first year of the program. Progress for each element of the strategy will be tracked against the baseline using key performance indicators (e.g. program participation, decrease in tonnes generated) that will vary by program.
	<p>Benefits:</p> <ul style="list-style-type: none"> A defined process to implement mandatory recycling and/or source separation requirements for the IC&I sectors regardless of receiving private or municipal collection in York Region . A recommendation to develop consistent development standards for IC&I facilities (cross-over with Multi-Residential and Mixed Use Strategies) Specifically identified IC&I material bans At CEC's (cross-over with CEC Strategy) Identification of pilot projects to support additional food waste diversion and reduction efforts A recommendation to establish a municipal green procurement process Identification of partnership opportunities to work with and support community partners in developing better waste management systems. Initiatives to increase advocacy efforts as well as increased data management, tracking and organizational involvement. 	

1.0 Introduction

The Industrial, Commercial and Institutional (IC&I) Strategy is one component of York Region's Integrated Waste Management Master Plan, also known as the SM4RT LIVING Plan. It establishes the planning framework and strategic direction for waste management in York Region for the next 40 years and builds on the Region's position as a waste management leader, by driving waste reduction and reuse while maximizing recycling and energy recovery from the materials that remain.

Primary objectives of this strategy are to:

- Encourage waste reduction and diversion in the ICI sector
- Provide tools to assist ICI waste producers in the Region by acquiring knowledge on purchasing and procuring goods and services

2.0 Background and Trends

2.1 Current Management of IC&I Waste in York Region

Collection of IC&I waste is carried out mostly by private haulers in York Region. These haulers bring collected waste and recyclables to a well-established network of transfer stations where some removal of recyclable material (mostly old corrugated cardboard, metal and wood) from residual waste takes place. A study completed for the Ontario Waste Management Association (OWMA) by Kelleher Environmental in 2007¹ included a survey of all large waste management companies in the province. These companies reported recycling three to 10 per cent of materials delivered to their transfer stations by manual removal of easily recyclable clean materials. The residual waste from the IC&I sector is disposed at landfills in southwestern Ontario, New York and Michigan. Economics of hauling and transfer costs, as well as strategic management of landfill capacity by large waste management companies inform the disposal location of IC&I waste from York Region at landfills either in Ontario or the United States.

2.2 IC&I Waste Management Services provided by York Region and its Local Municipal Partners

York Region provides drop-off service for garbage and materials which can be diverted by small IC&I generators at Community Environmental Centres (CECs).

. Local municipal partners provide waste, recycling and organics collection services to the residential sector, including single family households and multi-residential households depending on the municipality. Some limited services are provided to select IC&I waste generators (dependent on the local municipality), such as:

¹ <http://kelleherenvironmental.com/publications/the-mystery-kid-on-the-block/>

- Garbage and blue box collection services to some businesses primarily located in downtown Business Improvement Areas (BIA)
- Green bin (food waste organics) collection service to downtown businesses
- Recycling services to area schools
- Garbage and/or green bin service to schools
- Blue box and green bin service to churches

Table 1 summarizes collection services provided to small businesses and institutions by the local municipal partners in York Region.

Table 1: Waste Management Services Provided to IC&I Sector by Local Municipality

Municipality	Service Provided to Businesses & Institutions	Service details
Richmond Hill	Full service to businesses in Business Improvement Area (BIA) only	<ul style="list-style-type: none"> - Collect only from businesses in business improvement areas (BIA) (1 BIA - includes 30-50 businesses) - Do not provide service outside of BIA - BIA businesses receive residential level of service (three bags of garbage bi-weekly with weekly recycling and green bin) - If businesses cannot meet the bag limit then they must hire a private waste hauler
	Recycling to Separate schools	<ul style="list-style-type: none"> - Collect carts for recycling from Separate school board and charge a fee for collection to cover costs
	Curbside full service to churches	<ul style="list-style-type: none"> - Provide curbside garbage, recycling and green bin service to churches that can meet residential requirements
Markham	Full service to businesses in BIA only	<ul style="list-style-type: none"> - Collect from businesses in two BIA areas - BIA businesses receive residential level of service (weekly garbage - no bag limit but garbage set out must be within reason with weekly recycling and green bin) + extra old corrugated cardboard OCC collection once per week - If cannot meet curbside service level then must hire a private waste hauler - Collect from small business on residential route on

Municipality	Service Provided to Businesses & Institutions	Service details
		a case-by-case basis and must meet residential waste management requirements
	Recycling and green bin to all schools	<ul style="list-style-type: none"> - Promote zero waste in schools and provide recycling and organic collection to the separate school board and public school board
	Curbside full service to churches	<ul style="list-style-type: none"> - Provide curbside garbage, recycling and green bin service to churches
Vaughan	Full Service to businesses in BIA only	<ul style="list-style-type: none"> - Provide garbage and recycling services to several BIAs - Businesses must comply with residential service levels - home businesses on residential route that can comply with residential service will receive collection
	Curbside full service to a few churches	<ul style="list-style-type: none"> - Provide curbside garbage, recycling and green bin service to several churches
Newmarket	Full Service to businesses in BIA only	<ul style="list-style-type: none"> - Provide waste management service to commercial businesses on the main street (BIA) - Businesses receive garbage collection (six bag limit) twice a week and weekly recycling and green bin service
Aurora	Full service to small business	<ul style="list-style-type: none"> - Provide waste management service to small businesses that request it and can meet the Town's requirements – curbside collection, 10 bag garbage bi-weekly collection, weekly recyclables (using cart) and organic collection - If can't meet curbside requirements then must use private service
	Recycling service to Separate schools	<ul style="list-style-type: none"> - Collect carts for recycling from Separate school board

Municipality	Service Provided to Businesses & Institutions	Service details
East Gwillimbury	No service to businesses	- No municipal collection service is provided to commercial establishments, even in BIAs
	Recycling service to Separate schools	- Collect carts for recycling from Separate school board
Georgina	Full service to businesses, most in BIA areas	- Provide service to businesses in several BIA areas - curbside service bi-weekly garbage of one free bag + 20 with tags with weekly blue box) - Service businesses on residential routes but meet residential collection requirements(one free bag + four tag bags of garbage, recycling, green bin)
	Recycling service to Separate schools	- Collect carts for recycling from Separate school board
King	Provide collection to some IC&I locations	- No formal policy on IC&I - Does not service any 'private' IC&I - IC&I tonnage on routes is from municipal facilities only (i.e. libraries, municipal offices, etc.). (services include: garbage, blue box, leaf and yard waste, SSO and bulky) - As a result of a request from the local rate-payers association, they are currently investigating providing organics collection to local schools, and may begin to do so in the future.
Whitchurch-Stouffville	Full service to businesses, most in BIA areas	- Provide garbage and recycling to one BIA - Collect twice a week, three bag limit from the Main Street BIA . - Collect from small commercial businesses located on a residential route that can meet residential collection limits

Local municipal partners within York Region do not charge for waste management services provided to small retailers in BIAs or other permitted collection zones. Some communities offer

limited waste services to designated small generators, such as churches and schools, as a way to help them manage costs and provide them with waste diversion opportunities. The City of Markham provides free recycling and organic waste collection to public and Separate schools and churches throughout the city.

While some local municipalities (Vaughan and Richmond Hill) charge on a cost recovery basis for collection of recyclables from Separate schools, none of the municipalities compete with private haulers to provide garbage and recycling services to other IC&I customers throughout the Region.

2.3 Existing Policies to Promote Waste Diversion within York Region

Local municipal partners in York Region have policies in place which promote waste diversion.

The City of Markham has introduced two policies which ensure that new and expanding commercial establishments are constructed with sufficient space for recyclables, so that the physical infrastructure is not an impediment to increased waste diversion.

During the planning stage for a new commercial development, City staff review site plans to ensure the developer has provided adequate space for indoor garbage and recycling rooms. For a mixed-use development, two separate indoor rooms (for garbage and recycling) are required for each commercial and multi-residential component of the mixed-use building.

The City requires developers to provide a letter of credit that is held by the City for two years to ensure the establishment has an effective recycling program in place. The fee is based on the square footage of the establishment and typically ranges from \$5,000 to \$10,000.²

In February 2012, East Gwillimbury's Council passed the Thinking Green Developmental Standards and Site Plan Check List, establishing stringent waste diversion requirements and optional requests for new developments. The Thinking Green Development Standard and Site Plan Check List establish requirements imposed on new IC&I establishments as follows:

- Section 55 states that for non-residential buildings, handling and storage facilities for recyclable and organic materials (i.e. a three-stream waste system) must be provided
- Section 21 has an optional provision that building(s) incorporate a green roof covering at least 75 per cent of the roof area
- Section 29 states that within Commercial and Employment Areas, the plan facilitates shared service areas among adjoining or neighbouring buildings, which may include shared waste collection, recycling, shipping, receiving, parking and/or other services
- Section 35 states that non-residential or high density residential development achieves LEED (NC) Silver certification

The Town of Richmond Hill is embarking on an update of their Development Standard to address the provision of sufficient space for diversion in new and expanding buildings. This new

² Communications with Claudia Marsales, Manager, Waste & Environmental Management, City of Markham on October 30, 2012

Development Standard will incorporate best practices from other locations and may be a model adopted by the local municipal partners in the Region. Details regarding this initiative are provided in the Multi Residential Strategy.

2.4 Ontario's 3Rs Regulations

In 1994, the Ontario Ministry of the Environment enacted the 3Rs Regulations (Regulations 101/94 to 105/94) under the *Environmental Protection Act* to increase diversion of residential, Industrial, Commercial and Institutional (IC&I) and construction and demolition waste from disposal in Ontario and help Ontario meet its waste diversion targets.

The 3Rs Regulations that impact the IC&I sector include:

- Ontario Regulation 102/94: Waste Audits and Waste Reduction Work Plans
- Ontario Regulation 103/94: Industrial, Commercial and Institutional Source Separation Programs
- Ontario Regulation 104/94: Packaging Audits and Packaging Reduction Work Plans

The IC&I 3Rs regulation targets large establishments over a certain size or over designated revenue. These establishments are required to conduct waste audits and develop waste reduction work plans that must be made available for Ministry of the Environment (MOE) enforcement staff to review at any time. Depending on the sector, the MOE has designated which materials must be source separated for recycling. Sectors targeted and size of establishments required to meet the Regulations are presented in Table 2.

Table 2: Ontario 3Rs Regulations Requirements by IC&I Sector

IC&I Category	Requirements to Carry Out Source Separation and Develop Waste Reduction Plans Under Ontario 3Rs Regulations
Hospitals	Applies to any public hospital classified as group A, B or F. Does not apply to nursing homes or homes for the aged.
Hotels and motels	Applies to hotels or motels with more than 75 units and located in a local municipality that has a population of at least 5,000.
Office Buildings	Designated if it has at least 10,000 square metres of floor space for use as offices and located in a municipality that has a population of at least 5,000.
Multi-Residential Buildings	Applies to buildings with six or more units.
Restaurants	Designated if gross sales for all restaurants operated by the owner in Ontario were \$3 million or more in any of the two preceding calendar years. Applies to owner's restaurants in municipalities that have a population of at least 5,000. If the restaurant is in a designated retail

IC&I Category	Requirements to Carry Out Source Separation and Develop Waste Reduction Plans Under Ontario 3Rs Regulations
	shopping establishment or complex, office building, hotel or motel, hospital or campus the owner of the designated establishment is responsible for implementing a source separation program.
Retail Shopping Establishments	Designated if it has at least 10,000 square metres of floor space and located in a municipality that has a population of at least 5,000. For example a department store in a mall can ensure compliance by participating in the program operated by the owner of the mall.
Retail Shopping Complexes	Designated if it has at least 10,000 square metres of floor space of establishments (parking not included) and located in a municipality having a population of at least 5,000. The owner may allow tenants to implement their own program but it must meet the regulations.
Educational Institutions	Applies to operator of an educational institution with more than 350 persons enrolled.
Large Manufacturing Establishments	Does not apply if the owner is able to demonstrate that during the two preceding calendar years, there was no calendar month in which the hours worked by the persons employed at the site exceeded 16,000 hours.

Despite the intent of the Ontario 3Rs regulations to promote waste diversion, there has been poor compliance by the IC&I sectors affected by the regulations. Lack of awareness of the existence of and enforcement of 3Rs regulations by MOE are believed to be the two primary factors for poor compliance. This issue was raised by the Environmental Commissioner of Ontario in the 2005-2006 annual report³.

Any changes to the 3Rs Regulations will likely be part of a larger discussion on amendments or changes to the *Waste Diversion Act*. The introduction of Bill 91, the proposed Waste Reduction Act, in June 2013 is the beginning of potential changes to the 3Rs Regulations and the revocation of the *Waste Diversion Act*.

3.0 IC&I Waste Quantities, Composition and Diversion Opportunities

³ Neglecting Our Obligations - Environmental Commissioner of Ontario Annual Report, 2005-2006

3.1 Available Information on IC&I Waste Generation, Diversion and Disposal in Ontario

Statistics Canada reports that in 2008 (the most recent year for which data are available), 3.2 million tonnes of residential waste and 6.4 million tonnes of non-residential waste were disposed from Ontario sources. On this basis, up to 500,000 to 600,000 tonnes of non-residential waste could be disposed by generators within the boundaries of York Region. Although the Region no longer ships residential waste across the border, most of this non-residential waste (including IC&I and construction and demolition (C&D) waste) is handled by private contractors and disposed of at private landfills in southwestern Ontario, New York State and Michigan.

Unionville Businesses Support Waste Diversion

Unionville retailers, located in the Business Improvement Area, are cooperating in a program to promote waste diversion by agreeing to use only recyclable cups and take out packaging, which is accepted by the Big Blue Belly program. This program supports the introduction of solar powered Big Blue Belly recycling receptacles placed on the main street of Unionville.

Non-residential waste (from IC&I and C&D sources) makes up more than 50 per cent of the solid waste managed in many urban centres in Ontario and across Canada. However, in many cases, municipalities have a very limited role in how this waste is managed. This is also the case in York Region.

In its report – From Waste to Worth: the Role of Waste Diversion in the Green Economy (October 2009) - the Ontario Ministry of the Environment states “at our places of work and play, we only divert about 12 per cent (of waste), and that rate appears to be dropping instead of going up.”

Prior to the closure of GTA landfills in the 1990s, municipalities in the GTA had a more active role in IC&I waste management, as York, Toronto and Durham provided IC&I waste disposal capacity at landfills located within York, Peel or Durham for many years. The Region of Halton continues to own and operate its own landfill but disposal fees are so high that virtually no IC&I waste ends up there. IC&I waste is currently largely managed by private sector operators. The proposed Waste Reduction Act may change this outlook.

It is not likely that York Region will ever own or operate a landfill or any other facilities capable of managing all of the IC&I waste generated in the Region, therefore the most appropriate role for York Region is to facilitate increased diversion of IC&I waste through helping and promoting partnerships, sharing information on best practices, advocating for change in legislation and supporting green procurement initiatives.

Information is not currently collected on waste diversion by the IC&I sector in Ontario. The OWMA attempted to quantify current IC&I waste diversion activity in 2007 and determined the diversion rate to be at least 35 per cent or higher.

The OWMA study identified the significant data gap on IC&I waste diversion in Ontario and recommended that either the MOE or the OWMA establish a tracking system. Because there are 800,000 IC&I establishments in Ontario, tracking of IC&I waste diversion data is a significant endeavor. No progress has been made on this issue since the OWMA study was published⁴.

Wal-Mart has committed to long-term sustainability goals including a zero waste goal. In an effort to achieve zero waste, Walmart has established a food throwaway reduction goal to reduce food waste in market stores and clubs by 15 per cent and in other markets by 10 per cent by December 2013. Last year in Canada, Walmart stores donated 165,000 near "due date" perishables to food distribution charities and sent its food waste from stores to composting, where available. Walmart has introduced its Packaging Scorecard with a goal of achieving five per cent packaging reduction by 2013. One initiative involved changing shipping crates from cardboard to plastic, which allowed the shipping crates to be used approximately 60 times, resulting in \$4.5 million in cost saving and waste reduction of more than 1,400 tonnes.

Sources: Value Chain Management Centre Food Waste Forum, November 19th 2012 and Wal-Mart Canada unveils "green" shipping strategy July 25, 2007 Newswire

The City of Ottawa is the only community in Ontario which tracks IC&I waste diversion through agreements with companies that operate within city boundaries.

While most international corporations (such as Walmart, Unilever, Toyota, and Proctor and Gamble) have implemented, monitored and reported waste diversion programs, there is less available information on waste diversion efforts of smaller IC&I establishments and there is no central source of information available at the provincial level in Ontario. The City of Owen Sound implemented a bylaw requiring all 600 businesses to submit information on current waste diversion practices within their borders. The OWMA and MOE supported a study to analyze the results⁵. The study concluded that at least 50 per cent of the waste disposed was from small companies with less than 20 employees. The Owen Sound study included design of a database for IC&I waste diversion and disposal tracking by material and location. The database was never implemented, partly because of the significant amount of staff resources required to operate and maintain the data tracking system.

The lack of centralized information on IC&I waste generation, diversion and disposal by Ontario businesses has been identified as a barrier to developing and monitoring a co-ordinated IC&I

⁴ <http://www.solidwastemag.com/news/ic-i-waste-ic-i-waste-diversion-in-ontario/1000212424/>

⁵ <http://kelleherenvironmental.com/publications/ici-waste-the-mystery-part-ii/>

waste diversion strategy for many years, but little or no progress has been made on the issue despite many attempts by OWMA and the MOE.

3.2 Materials in the IC&I Waste Stream And Promising Target Sectors For IC&I Waste Diversion Initiatives

IC&I waste is different from residential waste in that different types of businesses in the IC&I sector (hospitals vs. factories vs. hotels etc.) produce very different types of waste materials and requiring different diversion approaches. Therefore, IC&I waste diversion strategy development is best done on a sector by sector basis.

York Region has more than 28,000 IC&I facilities, employing more than 527,000 staff. The retail, service and business sectors account for almost half the Region's employment. The majority of firms in York Region employ less than 20 staff (84 per cent) but large firms (>100 staff) were the largest growing segment of the ICI sector in 2012.

IC&I waste diversion studies carried out recently for City of Ottawa (2009) and City of Calgary (2011) used waste composition data modeled for each location based on its employment mix. These studies, as well as studies in other communities, have consistently found that aside from specific facilities where good diversion opportunities can be identified, four IC&I sectors offer the greatest opportunity in terms of waste diversion potential. These are:

- Restaurants and fast food services
- Grocery stores
- Small/medium retail
- Offices

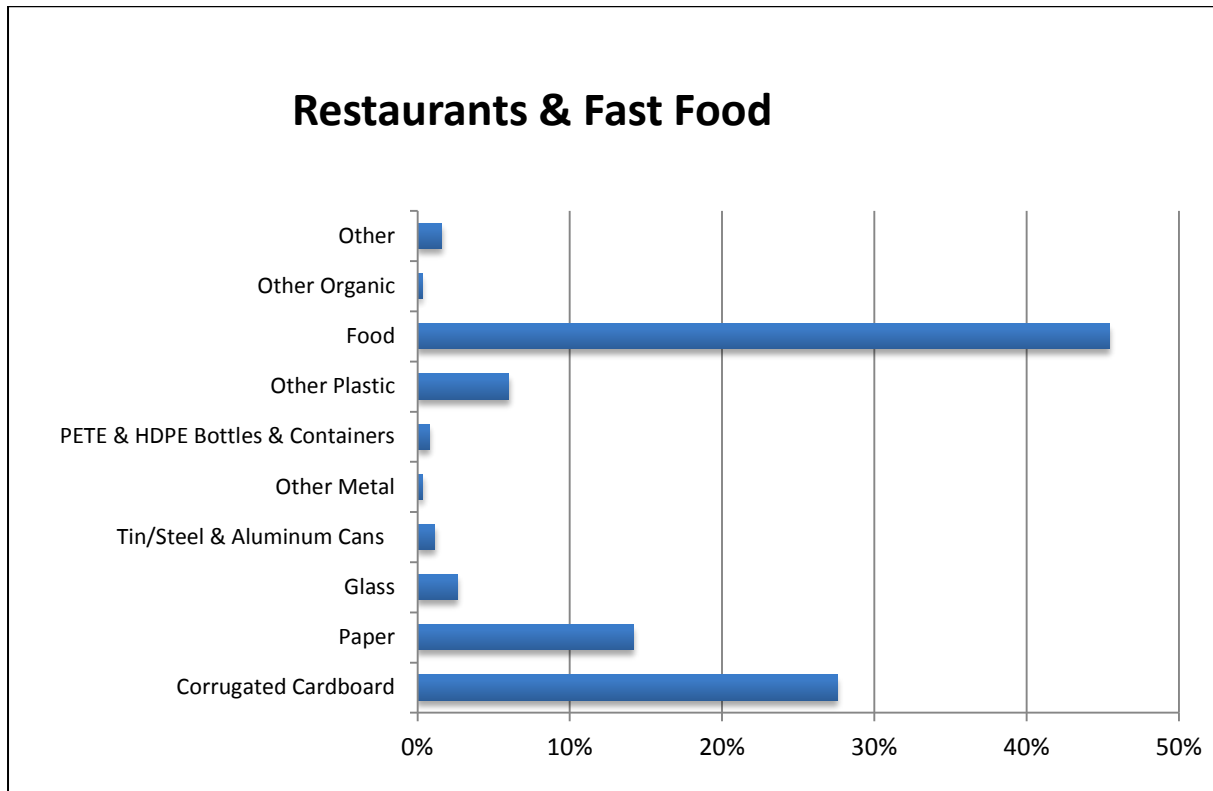
Figures 1 through 4 present the typical waste composition produced by these four sectors. The figures show that an estimated 70 per cent to 90 per cent of the material disposed by these four sectors is made up of three materials which can be easily diverted if they were separated at source and kept clean and uncontaminated:

- Paper
- Cardboard
- Food

One of the challenges of diversion in these sectors is that most of the time, the three materials are co-mingled and food contaminates the paper and cardboard, making these materials non-recyclable.

Education of facility managers on the importance of source separation to maintain material quality is a key component of any diversion strategy.

Figure 1: Typical Composition of Waste Produced By Restaurant and Fast Food Sector

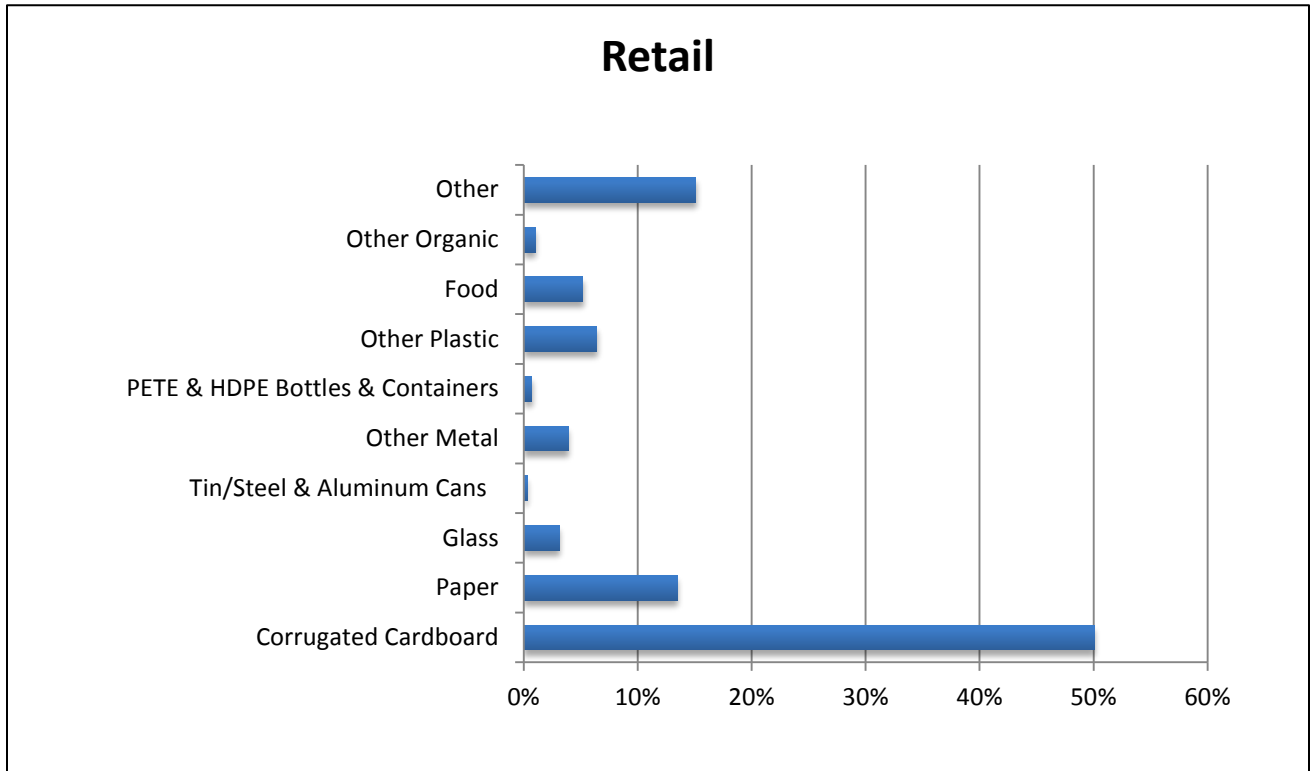


Source: City of Ottawa IC&I 3Rs Management Strategy Scoping Document, Final Appendices, 30 January 2007

Almost 90 per cent of the food services waste stream comprises of three categories of materials:

- Paper
- Food
- Cardboard

Figure 2: Typical Composition of Waste Produced By Retail Sector

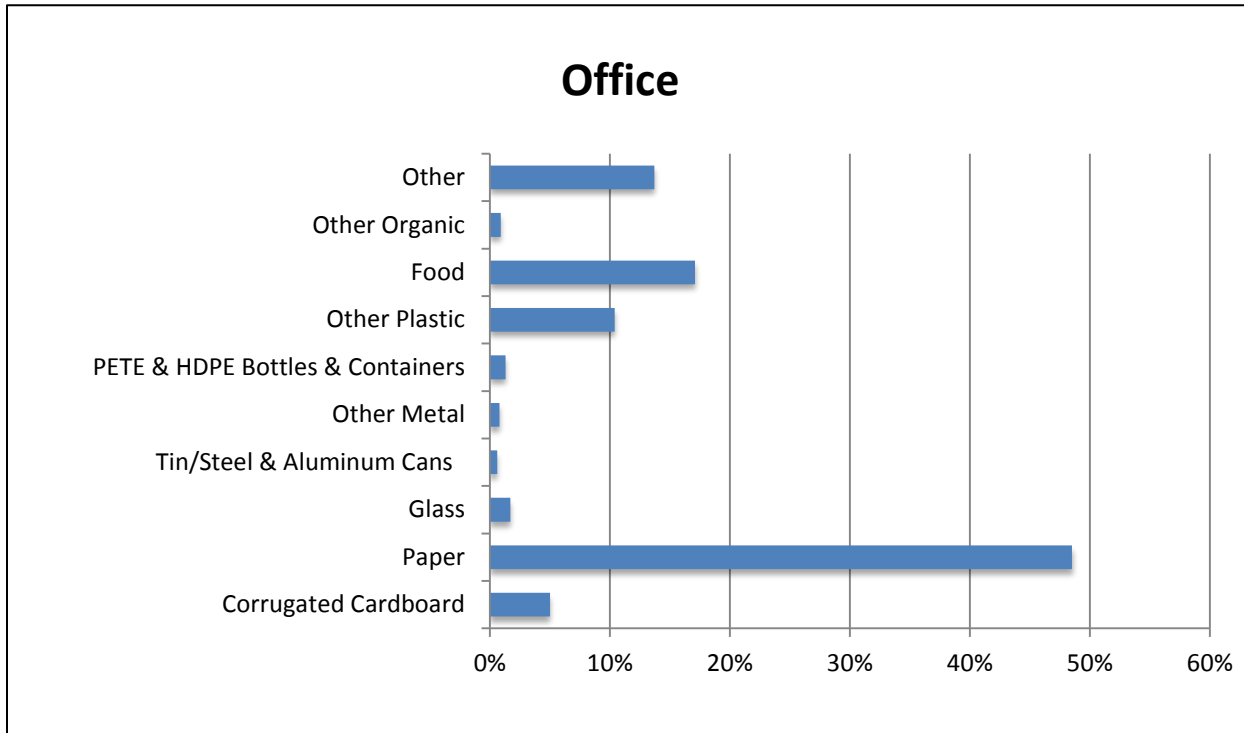


Source: City of Ottawa IC&I 3Rs Management Strategy Scoping Document, Final Appendices, 30 January 2007

Almost 70 per cent of the retail services waste stream comprises of three categories of materials:

- Paper
- Food
- Cardboard

Figure 3: Typical Composition of Waste Produced By Office Buildings

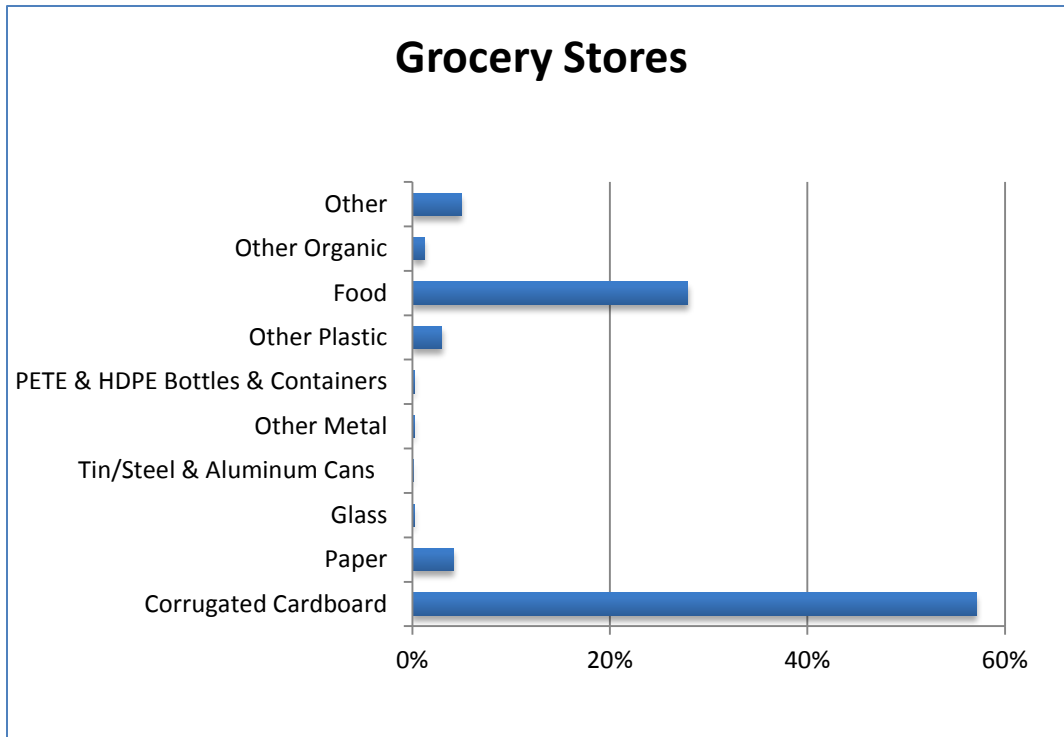


Source: City of Ottawa IC&I 3Rs Management Strategy Scoping Document, Final Appendices, 30 January 2007

Almost 71 per cent of the office waste stream comprises of three categories of materials:

- Paper
- Food
- Cardboard

Figure 4: Typical Composition of IC&I Waste Produced By Grocery Stores



Source: California Integrated Waste Management Board. Waste Disposal and Diversion Findings for Selected Industry Groups. June 2006. Prepared by Cascadia Consulting

89 per cent of the grocery store waste stream comprises of a few categories of materials:

- Cardboard
- Food
- Paper

These four sectors are generally targeted as the first focus of most IC&I waste diversion strategies, as they offer good opportunities for waste diversion.

4.0 IC&I Waste Diversion Strategy

York Region and its municipal partners have acknowledged IC&I waste as an issue requiring attention in various policy statements.

York Region's 2010 Official Plan - identifies a need to “encourage the industrial, commercial and institutional sectors to develop waste reduction programs and support York Region’s diversion goals.”⁶

The Joint Waste Diversion Strategy - stated that Industrial, Commercial, and Institutional waste was “an integral part of the wastes handled by the Region and local municipalities. Therefore, while the tonnages and diversion targets discussed in this document refer only to residential waste, it should be noted that some tonnages for Industrial, Commercial, and Institutional material are also included in the numbers. Industrial, Commercial, and Institutional material is managed through the Region's transfer stations; collected in Business Improvement Areas; and through the collection of some commercial multi-residential buildings”.⁷

Generally, the greatest opportunity for IC&I waste diversion occurs at the point of collection, where as much source separation as possible is required to ensure that materials remain clean and uncontaminated for subsequent diversion. The current level of IC&I collection service provided in York Region’s local municipal partners is generally limited to businesses on main streets and BIAs, with some collection for schools and churches. Ontario municipalities, for the most part, do not provide IC&I waste collection and management services to IC&I sector generators within their boundaries. A more significant service role in IC&I waste collection or management for the Region or the local municipal partners was not strongly supported as that service is already provided by private local companies as well as national companies working in the Region. There was little support for the imposition of stringent bylaws and mandatory source separation policies by the Region and the local municipal partners in the consultation carried out during Phase 2 and 3 of the SM4RT Living Plan, therefore a more supportive and facilitative role is envisaged for the IC&I Strategy, with service provision where it makes sense.

Markham endorses its zero waste commitment by offering full waste management services to organizations that typically do not qualify for municipal waste services with the following recent announcements:

- The City of Markham will commence providing recycling and green bin service to all schools (public and Catholic) in the City and will provide grants to 10 schools annually to purchase appropriate containers
- The City will work with community organizations, such as churches, to operate as collection sites for used electronics and, in turn, these organizations will earn money
- Markham will introduce a plastic bag ban in some retail stores

Source: Presentation by Claudia Marsales, City of Markham at SM4RT Living meeting, October 30th, 2012

Elements of the IC&I Strategy are described in the sections which follow

⁶ York Region Official Plan, 2010

⁷ York Region The Joint Waste Diversion Strategy, 2009

4.1 Mandatory Waste Diversion for IC&I Properties Receiving Municipal Collection

Mandatory recycling bylaws targeting the IC&I sector are in place in some locations including:

- Durham Region
- Owen Sound

Durham Region's Waste Management Bylaw stipulates IC&I establishments receiving Regional waste collection services must participate in the Region's recycling and organics program. A similar approach has been adopted by City of Toronto's Yellow Bag program – if businesses want municipal garbage pick-up, they must recycle. This approach would apply to the limited number of businesses currently receiving collection from local municipal partners. It could be accomplished through local bylaws stipulating mandatory source separation as a prerequisite to receiving municipal collection services. York Region should also consider implementation of a bylaw that allows each local municipality to require source separation of wastes regardless of whether it provides collection services.

Owen Sound, Ontario - In 2006, the City of Owen Sound implemented a bylaw requiring all commercial, industrial, institutional (ICI) and restaurant premises in the City of Owen Sound to implement recycling programs and divert designated materials identified by the bylaw. The City distributes recycling carts to the companies and provides extensive support materials on its website including an on-line audit form, an audit guide, sample recycling policy, and sample sign designs.

The City enacted the mandatory source separation bylaw as part of an agreement with the Province related to management of waste from the City Transfer Station (which is shipped to Michigan). It was a somewhat unique circumstance for Ontario, and not considered a realistic option for York Region because of limited ability to enforce such a bylaw.

4.2 IC&I Food Waste Diversion Support and Pilot Projects

An estimated four to 10 per cent of food purchased by the food services sector (i.e. restaurants, fast food, green grocers) is thrown out during food preparation in the kitchen and even more food is discarded from the uneaten portion of customer meals.⁸ Despite this, there is very little opportunity for these establishments to participate in food waste diversion programs within York Region. It is difficult to implement the logistics required for effective food waste diversion across all IC&I locations within the Region at the collection and facility level, as neither the Region nor the local municipal partners are widely involved in IC&I waste collection. A more appropriate role is for the Region to encourage targeted industries and businesses to develop a

⁸ LeanPath. Short Guide to Food Waste Management Best Practices. 2012.

food waste diversion strategy and link interested and motivated businesses to haulers who provide the service.

Identifying appropriate partners representing businesses interested in participating in the voluntary food waste diversion program would provide an excellent profile for food waste diversion. Potential partners for the Region and the local municipal partners in this initiative include: the Canadian Food Services Industry Association, Retail Council of Canada, Composting Council of Canada, Recycling Council of Ontario.

Facilitating and supporting an increase in food waste diversion from targeted IC&I sectors, such as restaurants, hotels, grocery stores, etc. is considered a promising target for a pilot program in the Region. It could be implemented as a partnership with the Region's Economic Development group and/or the York Region Food Network. These initiatives are explored more specifically in the Food Waste Strategy.

4.3 Technical, Facilitation and Educational Support for IC&I Facilities

Positive long-term impacts on IC&I waste diversion could be accomplished by increasing knowledge levels, awareness and interest of facility managers responsible for waste management in businesses throughout the Region. Network development supporting peer-to-peer learning among staff in different companies in similar sectors could increase the understanding of best practices for IC&I waste diversion.

4.3.1 Support for IC&I Waste Generators in York Region

Some municipalities provide incentives such as free consultation and technical assistance to help educate IC&I waste generators and industry groups about waste diversion. They assist in facilitating the sharing of best practices and in resolving logistical issues to increase waste diversion. Two examples are presented below:

Green Calgary – is a non-profit environmental organization, partially funded by the City of Calgary to provide technical assistance to local businesses to divert waste. The organization encourages waste diversion activities in the IC&I sector by offering a wide variety of services including environmental education, waste audit and reduction plans, technical assistance, and a waste exchange. As part of its assistance programs, Green Calgary offers:

- Wide variety of presentations through its “Lunch and Learn” program to businesses and employees to help businesses become green
- Conducting waste audits and developing waste reduction plans
- Consulting services to provide technical assistance to businesses to improve recycling, reduce the use of toxics, employ green procurement practices, and other environmental objectives
- Online recycling directory, offering an extensive list of recycling companies that recycle/reuse more than 20 kinds of products and packaging
- Online waste exchange providing companies with a convenient medium to list materials and products that are available or wanted for exchange

Vancouver's SmartSteps business program – The City of Vancouver has developed a technical assistance program, called *SmartSteps*, to help businesses develop more sustainable operations. The *SmartSteps* program provides cost-effective tips and information tailored for specific IC&I sectors to improve business eco-efficiency from a materials, energy and water-efficiency perspective. The program states it helps businesses cut operating costs and reduce corporate liability while improving their competitive edge.

SmartSteps provides technical assistance for specific needs of targeted sectors; for example, Sector Guides are provided for the following sectors:

- Automotive
- Educational facilities
- Food service/restaurants
- Health
- Hotels and motels
- Manufacturing
- Offices
- Recreation
- Retail
- Transportation/warehousing

Similarly to *SmartSteps*, York Region has recently developed a *Sustainable Products Policy* relating to the purchase of goods and services reflecting York Region's commitment to environmental, social, economic, and performance goals. The policy will support the Leadership in Energy and Environmental Design (LEED®) for Existing Buildings: Operations & Maintenance prerequisite requirements as described in the Sustainable Products Work Plan. These requirements include purchasing of sustainable ongoing consumables, durable goods, reduced mercury lamps, and facility alterations and additions. This policy applies to all Regional employees purchasing the applicable products for use at the York Region Administrative Centre, located at 17250 Yonge St, Newmarket. The Sustainable Products Policy (SPP) applies to all purchases and packaging for the following groups of products and services:

- Ongoing consumables including, but not limited to, paper, binders, toner cartridges, batteries and desk accessories
- Plug-in electric-powered equipment including, but not limited to, computers, printers, water coolers and refrigerators
- Furniture
- Mercury containing lamps
- Facility alterations and additions

Recycling Council of Ontario - In Ontario, the RCO (Recycling Council of Ontario) provides some support to businesses through its 3RCertified™ program. 3RCertified™ is a voluntary certification program for the IC&I sector, recognizing organizations taking a leadership position

in waste reduction and diversion. The program's criteria covers the various ways an organization manages its solid waste – from policies and waste audits through operations, procurement of products and services, management reviews and many other categories. The applicant organization earns a specified number of points for each criterion met, and certification is awarded at gold, silver or bronze levels based on the total number of points earned and a successful on-site third-party evaluation. Support was provided to the RCO from the Ministry of the Environment in the development of this program.

As part of the 3R Certified program, RCO has developed a Standard Waste Audit Methodology (SWAM) which 3Rs-certified applicants are required to use. RCO also provides Ontario Waste Auditor Training on a fee-for-service basis to train auditors on data analysis and accurate methods of measuring and reporting performance. An Accredited Waste Auditor program certifies auditor credentials⁹.

As of February, 2013, four companies have been certified under the 3RCertified™ program.

With an initiative similar to Green Calgary or *Smartsteps*, the Region could play a role in supporting increased diversion of IC&I waste in York Region without interference with existing arrangements between businesses and private sector haulers. Some type of partnership with the RCO should also be explored.

4.3.2 Establish and Support IC&I Working Groups to Facilitate Peer-to-Peer Learning

York Region has an opportunity to provide a supportive, facilitation role to individual IC&I sectors by bringing together managers in the key sectors to discuss waste diversion needs and opportunities. The retail sector, food services sector (restaurants, hotels, cafeterias, etc.), schools, health care services and tenants with shared facilities in shopping plazas are considered the most promising initial targets for this strategy as they produce large amounts of divertible materials. These working groups would provide a venue for peer-to-peer learning. The Region could provide meeting space for regular meetings and could provide some staff time for follow up on action items and to share best practice information. The peer-to-peer learning model is considered the best way to share best practices among interested businesses facing the same challenges (e.g. lack of space, lack of options for diversion service providers, etc.). Where a number of businesses in a particular area are interested in waste diversion but have not been able to locate a service provider, the Region could share information on companies who provide the service being sought. The issues faced by these groups would likely change over time, but a supportive group of peers who meet regularly is one pathway to increased diversion. There is an opportunity for partnership with other departments within York Region, such as Economic Development, to build on established relationships with the business community.

⁹ www.3RCertified.ca

4.3.3 Dedicated IC&I Section of Smart Living Website

York Region should establish a dedicated website to promote waste diversion activities in the commercial and institutional sectors. The website can provide information and links to programs, policies, regulations, green procurement opportunities and assistance programs offered by and within the Region.

4.3.4 Establish a Centre of Environmental Excellence

The Region could consider establishing a Centre of Excellence promoting waste diversion activities in the IC&I sector and offer information and technical assistance programs, such as informational services, educational and promotional materials, etc. This could be operated by a York Region funded local organization that would in time work towards becoming financial sustainable. Alternatively, the Region could partner with an organization such as the RCO which is already involved in similar activities and establish if some Regional funding could support an additional staff person, or part of a staff person, to support York Region-focused IC&I waste diversion activities exclusively. A business case would need to be developed to determine the viability of such a centre.

The technical assistance program could be modeled after other successful programs (e.g. Vancouver's *SmartSteps* program), providing useful information, case studies and tools for companies to use in adopting waste diversion, green procurement and other sustainable activities. The Region would need to develop a communication campaign and provide technical assistance and web-based education and learning tools, case studies and awards for the IC&I sector.

The Region should identify materials for which markets are not currently available and work with appropriate associations and groups to foster market development for these materials (most likely through green procurement specifications).

4.3.5 Hold an Annual IC&I Sustainability Conference

The Region could support an annual workshop or conference where IC&I best practices in waste management and other areas of sustainability are shared. Guest speakers would be identified through the working groups discussed above and make presentations on lessons learned and success stories from their own facilities and practical experience. Each year, the general topic could change (e.g. food waste diversion, green procurement, getting the best contract deal for recycling, etc.). The Region could provide meeting space and logistics and could advertise the workshop/conference on its IC&I website. The annual conference could be presented in partnership with the local municipal partners, haulers, local chambers of commerce and other business groups. Sponsorship could be requested from waste management companies and suppliers who gain profile to a large audience through the conference. Conference presentations would be available on the website with links to helpful information. Guest speakers could also be invited to address energy conservation as well as water conservation in

IC&I facilities. A water conservation speaker would link IC&I waste diversion to a broader environmental conservation theme already being promoted by the Region through SM4RT Living and the water conservation strategy.

The Strategic Economic Initiatives Office of York Region is pursuing opportunities to work with the Toronto and Region Conservation Authority (TRCA) to deliver some of their programs in the York Region IC&I community, such as the Waste Exchange Program as well promoting other IC&I tools they have, such as the Zero Waste Consortium, procurement tools and case studies.¹⁰ This initiative could be tied in with the workshop and Centre of Excellence programs.

4.4 Waste Diversion Strategies and Best Practices at Municipal Facilities

York Region and local municipal partners operate a wide range of facilities including administrative buildings, recreation facilities, community halls, works yards, long-term care facilities, social housing, public spaces, parks etc. In addition, York Region and local municipal partners host special events and festivals that need to be addressed.

Some key initiatives that help to drive waste diversion within municipal facilities involve development and implementation of:

- Green Teams at all facilities
- Green procurement policies and programs
- Waste audits (informal and/or formal)
- Review, revision and renegotiation of cleaning contracts emphasizing waste diversion and use of non-toxic cleaners (where feasible)
- Food waste reduction and diversion programs
- Review of existing waste diversion activities and available recycling/composting containers at all facilities
- Twinning of recycling bins with garbage bins and replacement of garbage bins with recycling bins at workspaces
- User-friendly signage at all waste diversion stations
- Promotion and education targeting employees and clients
- Monitoring and reporting programs
- Outreach and incentive programs

¹⁰ Communications with Chris Rickett, Manager, Strategic Economic Initiatives, Office of the Chief Administrative Officer, Economic Strategy, The Regional Municipality of York on February 15, 2013

During the development of its Corporate Zero Waste Strategy, the City of Burlington investigated zero waste strategies developed in several Ontario communities, including the City of Markham. In its report to Council, staff identified lessons learned from other municipalities.

Lessons learned: begin with those areas that you have control over, start with one facility and expand over time, and implement zero waste at all new facilities from the start. Ongoing education and awareness is necessary, as well as senior management support.

Source: City of Burlington, Toward a Zero Waste Strategy Report. December 9, 2009

The local municipal partners and the Region need to “lead by example” by developing a strategy followed by specific policies and programs to drive waste minimization (zero waste) at all facilities and events. Some municipal partners and York Region have already engaged in the development of policies and programs, which can be used as a template or starting place for others to develop their own. For example, the following environmentally friendly procurement strategies/policies have or are being developed:

- York Region’s Sustainable Purchasing policy (described in section 4.3.1)
- York Region also has a policy on “Green Power Procurement” which requires that York Region sources its green power exclusively from an EcoLogo® certified source, ensuring green power comes from clean, emission-free sources like wind power and low-impact water power instead of carbon-intensive sources like coal
- The City of Markham has introduced a Local Food Procurement Policy for its municipal food services
- The City of Markham has also included Green Procurement in its “Greenprint” Sustainability Plan
- The City of Vaughan is developing a Green and Ethical Procurement Policy
- The Town of Richmond Hill is in the process of developing a Green Procurement Policy
- East Gwillimbury is committed to a Green Procurement policy on all day-to-day activities and services as outlined in their “Thinking Green” Sustainability Strategy
- The Town of Aurora Corporate Environmental Action indicates that a green procurement policy will be sent to their council by 2015
- Newmarket has a Green Procurement Policy which “contributes to the reduction of waste, toxic or harmful emissions and substances and to increase the development and awareness of environmentally responsible procurement”

Further discussion about the establishment of a green procurement process is explored below under Sections 4.5 and 4.6

York Region and local partner municipalities need to decide if, collectively, they want to develop a standard for all to adopt or provide information and resources for each to develop

their own waste minimization (or zero waste) strategies, policies and programs. A working group should be established to help drive the process.

Local municipal partners and the Region need to showcase best practice examples of waste diversion at all of their facilities. The Region could develop an inventory of waste diversion programs at all municipal buildings within the Region (local and regional). This would help identify locations where new best practices could be piloted and established programs could be used as demonstration sites to share lessons learned. A process needs to be initiated to encourage the adoption of SM4RT Living principles at the various facilities under municipal control and more broadly across the Region.

4.5 Support Implementation of the Region's Sustainable Products Policy

Green procurement has been proven to be one of the most powerful tools to encourage waste diversion behavior through market mechanisms and economic instruments by requiring suppliers of goods and services to meet specific waste diversion criteria to win business and contracts. The Region and the local municipal partners have significant purchasing power which should be used to encourage reduction and reuse through vendor performance requirements (e.g. reusable packaging, recycled content paper, energy efficient and recyclable computers, etc.).

In recognition of the importance of green procurement, York Region adopted a Sustainable Products Policy in 2013, as described in section 4.3.1. This policy has been developed to provide direction to York Region personnel in the procurement of goods and services to meet the operational needs of the facility.

Now that a policy has been formulated, the IC&I strategy can focus on developing an approach to successfully implementing the policy among the Region and the local municipal partners by sharing examples, lessons learned, specifications underway or already developed, and identifying areas where combining buying power for joint purchases would make green procurement more practical and economical.

Green procurement is a complex policy to implement as it impacts on all departments across the Region and within the local municipal partner organizations, not just the waste and public works department, and requires a significant culture change for many departments, particularly the purchasing department. Education on the policy and what it involves may be best accomplished through a partnership with Economic Development and other interested departments. It is also to ensure that the green procurement policy is consistent with existing trade legislation.

4.6 Support an IC&I Green Procurement Working Group

One of the facilitative roles that York Region could play is to promote green procurement among the IC&I sector which together purchase many millions of dollars of goods and services each year. This effort should be combined with green procurement efforts by the Region and the local municipalities (listed above). The collective buying power of these two groups is

significant and could result in some positive market transformation. Examples of green procurement, particularly from Halton Region, are included in the best practices documents produced as part of Phase 1 of this project. The Region's role would include convening working group meetings, developing information on current procurement practices by the IC&I working group members, and identifying options which involve less packaging, more recycled content (e.g. paper and shipping containers, etc), higher reuse (e.g. in food service contracts) or which help develop markets for materials produced from the diversion programs (e.g. specifying finished municipal compost in construction projects, etc.). This process could be continuation or a logical evolution of the Stakeholder Advisory Committee (SAC) process. The Economic Development group at the Region could also be involved in this process.

4.7 Support Waste Diversion Best Practices in Schools

York Region's local municipal partners provide varying level of garbage and recycling services to publicly funded schools as described in Table 2.

In some communities such as the City of Markham and the Region of Halton, Council has decided to provide waste, recycling and green bin service to all schools within their boundaries, which ensures the communities access to staff and students and opportunities to drive waste minimization.

City of Markham - As part of its 'Roadmap to 80 per cent Diversion', the City of Markham announced in summer 2012 that it would adopt a Zero Waste program for all schools (public and private) and provide support to the schools to adopt Zero Waste practices. The Zero Waste School Challenge will promote a number of programs including student run waste audits, a waste-free lunch campaign, education and promotion activities and zero waste challenges. The City of Markham plans to have all classroom waste bins replaced with 'recycling stations' and will provide funding from the Markham Environmental Sustainability Fund (MESF) to help up to 10 schools per year invest in zero waste projects and activities. Up to \$5,000 funding will be available to schools whose administration has attended a Zero Waste workshop and signed an agreement to become a Zero Waste school.

Halton Region - Halton Region Waste Diversion Education staff offer a range of waste minimization activities to elementary, middle and secondary schools. Staff will conduct school workshops focusing on the 3Rs (reduce, reuse, and recycle) in which students learn how waste is recycled, composted and disposed, as well as how they can work towards waste-free lunches and identify ways to increase their class and home recycling efforts. Staff will help students conduct waste audits on their classroom and school waste and provide tours of Halton Region's waste facilities. Halton Region Waste Management Services sponsors the Halton Student Eco Celebration, which recognizes schools that have become certified—bronze, silver or gold—as an Ontario EcoSchool.

York Region could work with local school boards and local municipal partners to develop a Regional waste minimization/Zero Waste Program for schools. York Region can help develop promotion and educational materials and link in with the Ontario EcoSchool challenge. Best

practices (such as access to green bin composting) from other communities, such as Markham and Halton Region, should provide the basis to development of the program.

4.8 Pilot Projects to Increase Diversion in the IC&I Sector

Three pilot programs are considered valuable for demonstration purposes and as good data collection opportunities to support the IC&I Waste Diversion Strategy:

Pilot 1 – Demonstration Program of IC&I Waste Diversion Achieved at Model Location –

The Region should establish waste diversion programs at one or two locations in targeted IC&I sectors (total of five to ten locations), invest time and effort to resolve logistics around barriers to higher diversion, then track and showcase the IC&I diversion demonstration projects through the Region's IC&I technical assistance program.

Pilot 2 – Measure Impacts of Peer to Peer Learning in One Industry Sector – Establish a peer to peer learning group in one sector (e.g. restaurants). Measure and monitor the progress towards diversion within this sector over a two-year period. Showcase the pilot as a success story and take lessons learned on the engagement approaches that worked the best and apply these in an intensive way to additional groups.

Pilot 3 – Food Waste Diversion Pilot Program – Implement waste audits and food waste diversion pilots at volunteer locations in food services and food retail sectors (up to five locations) as described in the Food Waste strategy.

5.0 Implementation

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

5.1 Partnerships

Partnerships are needed with a wide range of stakeholders to successfully implement the IC&I strategy. The IC&I sector includes a broad range of different business operations. The Region will need to partner with associations which represent various players in the IC&I sector to identify the key local contacts to involve in the IC&I diversion strategy.

These include:

- Industry associations (e.g. Canadian Food Inspection Agency, Retail Council, Building Owners and Managers Association)
- Waste management and recycling associated industry groups (Ontario Waste Management Association, Composting Council of Canada, Recycling Council of Ontario)
- Economic Strategy office, York Region and Toronto and Region Conservation Authority
- Local Chambers of Commerce and other business focused groups
- Private sector IC&I establishments within the Region
- School boards
- Non-governmental organizations
- Local community groups

The Region needs to work with all of these groups to introduce the IC&I Waste Diversion Program to them as well as their members and to encourage their members to participate in the process and to notify members about the program's supporting tools.

5.2 Resources and Timeline

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 implementing this strategy is as follows:

York Region: Lead and/or Supporter

Local Municipalities: Lead and/or Supporter

Community Partners: Participant

Resources

Development of the IC&I strategy and managing pilots as well as peer to peer learning and other meetings requires one person full time for the first two years of the program. Should the Region decide to pursue a data collection effort to build a database of information on IC&I waste generators within the Region, an additional half-time position would be required, depending on the level of effort assigned to data collection. Details on the staffing and cost resources are highlighted in the summary table at the beginning of the strategy as well as Attachment A below.

Targets

Even though the Region does not directly manage IC&I waste, the Region along with the local municipal partners can impact the amount of IC&I waste diverted through the strategy presented in this section. This effort should be seen broadly as providing a service to IC&I generators in the Region. Exact tonnage of disposal avoided through the IC&I strategy will not be measurable without involvement at the provincial level to track and report waste diversion within the IC&I sector and establishment of a database of IC&I facility waste diversion activities at the Regional level.

To properly evaluate each element of the IC&I strategy, a baseline of information needs to be identified in the first year of the program. Future progress for each element of the strategy can be tracked against the baseline using key performance indicators that will vary by program. Progress on each program should be reported quarterly, semi-annually and annually.

Performance Measurement

For each new initiative, there are specific performance measurements identified (see Attachment A), however, there are several overarching metrics to measure the performance of the IC&I strategy as a whole, including:

- Decrease in kg/capita waste generated and/or waste disposed (generally via regular audits/monitoring) in participating IC&I facilities
- Decrease in waste volumes in participating facilities
- Participation (number of participants and continuity/duration) in pilots
- Number of participating organizations
- Percentage of green procurements that continue to be undertaken from year to year at participating locations

6.0 Key Benefits of this Strategy

The following provides a summary of the key benefits of this strategy:

- A defined process to implement mandatory recycling and/or source separation requirements for the IC&I sectors regardless of private or municipal collection in York Region
- A recommendation to develop consistent development standards for IC&I Facilities (cross-over with multi-residential and mixed-use strategies)
- Specifically identified IC&I material bans at CECs (cross-over with CEC Strategy)
- Identification of pilot projects to support additional food waste diversion and reduction efforts
- A recommendation to establish a municipal green procurement process
- Identification of partnership opportunities to work with and support community partners in developing better waste management systems
- Initiatives to increase advocacy efforts as well as increased data management, tracking and organizational involvement