



CITY OF KINGSTON
INFORMATION REPORT TO COUNCIL

Report No.: 12-114

TO: Mayor and Members of Council
FROM: Jim Keech, President and CEO, Utilities Kingston
RESOURCE STAFF: John Giles, Manager, Solid Waste Division
DATE OF MEETING: April 3, 2012
SUBJECT: Waste Recycling Strategy 2010-2013 update

EXECUTIVE SUMMARY:

As part of the *Waste Recycling Strategy 2010-2013* approved by City Council in December 2010, a yearly report is to be produced which outlines the achievements and initiatives undertaken in the previous year and the initiatives to be implemented in the coming year.

For this report, the achievements and initiatives undertaken in the year 2011 and the initiatives to be implemented in 2012 are outlined. The attached exhibit provides details on the goals, objectives, initiatives and monitoring for year 2011 of the strategy, while also providing the refined goals and objectives, and newly defined initiatives for year 2012.

The *Waste Recycling Strategy 2010-2013* is a multi-year living document, the purpose of which is to increase the capture rate of recyclables and increase the overall waste diversion rate for the City of Kingston, moving towards the City's goal of 65% waste diversion from landfill.

RECOMMENDATION:

This report is provided for information only.

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AUTHORIZING SIGNATURES:

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ORIGINAL SIGNED BY CHIEF ADMINISTRATIVE OFFICER Gerard Hunt, Chief Administrative Officer

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Cynthia Beach, <i>Sustainability & Growth</i>	N/R
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(N/R indicates consultation not required)

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OPTIONS/DISCUSSION:

In December 2010, City Council approved the *Waste Recycling Strategy 2010-2013*, a document that creates a multi-year strategy for increasing the capture rate of recyclable material in the City of Kingston. The strategy set goals and objectives for increasing the capture rate of recyclables, as well as initiatives designed to achieve those goals and objectives. Monitoring tools that would measure the effectiveness of initiatives in meeting the goals and objectives of the strategy were also described.

In the document's introduction, it was stated that the *Waste Recycling Strategy 2010-2013* would be a living document that would undergo continuous refinement throughout its lifetime. A report would be produced at the conclusion of each year in the strategy; this report would include progress updates on the goals and objectives outlined in the strategy and measurements of the effectiveness of defined initiatives in reaching those goals and objectives. The update would also include a strategy for the coming year, which would see the refinement of goals and objectives and the creation of new initiatives.

This information report will act as an update on the accomplishments of the year 2011 of the strategy, as well as an outline of the goals, objectives and initiatives set for the year 2012. Attached to this report is a document entitled *Waste Recycling Strategy 2010-2013 Volume II* which provides a detailed recount of the activities of 2011 and the strategy for 2012.

In the year 2011, two specific goals were outlined for the Waste Recycling Strategy: 1) To maximize the capture rate of recyclable material through existing programs and targeted promotion and education at specific materials; and 2) To increase participation in the recycling program.

While all targeted recyclable materials did experience an increase in capture rates, only one material (mixed fine paper) achieved the goal outlined in the strategy (other targeted materials include boxboard, # 1 PET plastic bottles & jars and # 2 HDPE bottles & jugs). The overall recycling capture rate did increase from 73% to 75%, with the strategy's objective being 76% capture rate. The participation rate in the recycling program experienced no change, staying level at 92%, with the objective being 93% participation.

Initiatives that were implemented in 2011 included a dedicated promotion and education campaign targeted at specific recyclable materials, the creation of a reward and recognition program for households exhibiting exemplary waste diversion practices (the Remarkable Recycler program), the re-design of curbside messaging tags and most importantly, the expansion of the Blue Box program to include all plastic food and beverage containers and rigid plastic packaging for recycling.

For the year 2012, the goals of the Waste Recycling Strategy remain the same as they were in 2011; those specific recyclable materials that did not achieve their target capture rates will be targeted again, with two new target materials (aluminum and mixed plastic food & beverage containers) being added. The objective for overall capture rate of recyclable material has been

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increased to 77% and the objective for participation in the recycling program has been increased to 94%.

Initiatives that will be implemented to reach these objectives include: a promotion and education campaign targeted at specific recyclable items, the implementation of the one free garbage container limit (which will include a promotion and education component that will advise residents how they can reduce their garbage, which will include a large component on recycling), the distribution of additional Blue Boxes, the continuation of the Remarkable Recycler program and the investigating the creation of a Solid Waste program smartphone application.

EXISTING POLICY/BY LAW: n/a

NOTICE PROVISIONS:

There are no notice requirements concerning this report.

ACCESSIBILITY CONSIDERATIONS: n/a

FINANCIAL CONSIDERATIONS: n/a

CONTACTS: n/a

OTHER CITY OF KINGSTON STAFF CONSULTED:

Derek Ochej, Public Education & Promotion Coordinator- Public Works Services

EXHIBITS ATTACHED:

Exhibit A: Waste Recycling Strategy 2010-2013 Volume II

Waste Recycling Strategy 2010-2013

Volume II

April 3, 2012



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1. Introduction

In 2010, Kingston City Council approved the *Waste Recycling Strategy 2010-2013*. This update, entitled *Waste Recycling Strategy 2010-2013 Volume II* builds upon the original Strategy; please refer to the original Waste Recycling Strategy for background information on the three-year plan. The Waste Recycling Strategy is a living document, updated yearly with renewed goals, objectives and initiatives.

The purpose of the strategy is to increase the capture rate of recyclables and increase the overall waste diversion rate for the City of Kingston, moving towards the City's goal of 65% waste diversion in 2012. Contained within the strategy are goals and objectives focused on increasing the capture rate of specific recyclable materials as well as increasing overall capture rate and participation rate in the recycling program. Updates on these goals and objectives can be found in Section 3 of the document.

Six specific initiatives were outlined in the Strategy for implementation during 2011. Updates on these initiatives and their effectiveness can be found in Section 4 of this document.

Finally included in this document are new and updated objectives and initiatives to help further the overall purpose of increasing the capture rate of recyclables and the waste diversion rate in Kingston. Strategies and objectives that were outlined in the *2010-2013 Waste Recycling Strategy* have been updated based on recycling data from 2011.

2. Current situation

Table # 1 illustrates the results of a household waste audit conducted for the City of Kingston by AET Consultants in November 2011. A similar audit was conducted in October 2010 (also by AET Consultants) and data collected from the audit was used for planning the first year of the Waste Recycling Strategy. The data represents the total weight in recyclable material placed at the curb (in either the recycling or garbage streams) for one hundred homes in Kingston (ten homes in ten different neighbourhoods) over a 14-day period.

The capture rates in Table # 1 represent the percentage of recyclables that Kingston is collecting through the recycling program as a percentage of the total recyclables available in the recycling and garbage streams combined.

Capture rate = $\text{Weight of recyclable material in recycling stream} / (\text{Weight of recyclable material in the recycling stream} + \text{Weight of recyclables in the garbage stream}) \times 100$

Table 1: Kingston recycling capture rates for 2011

Recyclable material	Total in garbage stream over 14 day study period (kgs)	Total in recycling stream over 14 day study period (kgs)	Capture rate (%)
Clear LCBO glass	0.39	6.81	95
Coloured glass- other	0.20	3.38	94
Newspaper	35.09	313.47	90
Corrugated cardboard	12.27	70.00	85
Clear glass- other	9.72	37.22	79
Other mixed recyclable paper (magazines & catalogues, telephone books & books)	28.70	101.60	78
Aluminum	3.89	10.27	73
# 1 PET (clear plastic bottles & jars)	9.69	25.43	73
# 2 HDPE (coloured plastic bottles & jugs)	6.48	13.92	68
Boxboard & molded pulp	34.78	70.70	67
Steel	14.28	27.32	66
# 1 PET (clear plastic containers)	3.65	6.22	63
Mixed fine paper	34.43	53.60	61
# 4 LDPE & # 5 PP (plastic tubs & lids)	5.68	8.32	59
Polycoat (gable top & aseptic containers) & paper cups	12.07	14.05	54
Coloured LCBO glass	8.04	9.16	53
# 2- # 7 plastics (other rigid recyclable plastics)	10.06	10.40	51
# 6 PS rigid (plastic containers)	3.64	2.01	36
# 6 PS expanded (Styrofoam)	3.20	1.74	35

Recyclable material	Total in garbage stream over 14 day study period (kgs)	Total in recycling stream over 14 day study period (kgs)	Capture rate (%)
Film plastic	24.94	8.10	25
Total recyclables capture rate	261.2	793.72	75

For a full comparison of weights and capture rates from the 2010 and 2011 waste audits, please refer to Appendix A.

3. 2011 Goals and Objectives update

The Waste Recycling Strategy outlined two specific goals for the year 2011:

- To maximize the capture rates of recyclable material through existing programs and targeted promotion and education at specific materials.
- To increase participation in the recycling program.

Table 2 highlights the specific objectives for the year 2011 as well as the actual results achieved.

Table 2: Waste Recycling Goals and Objectives 2011	
Year 2011 objective	Result
To increase capture rate of mixed fine paper to 58% from 47%.	Capture rate increased to 70%
To increase capture rate of boxboard to 69% from 64%.	Capture rate increased to 67%
To increase capture rate of # 1 PET to 81% from 65%.	Capture rate increased to 72%
To increase capture rate of # 2 HDPE to 79% from 50%	Capture rate increased to 68%
To increase overall recyclable capture rate to 76% from 73%	Capture rate increased to 75%
To increase participation in the recycling program to 93% from 92%.	Participation rate remained at 92%

While only one of the materials reached its targeted capture rate (mixed fine paper), all of the materials did experience an increase in capture rate, some rather significant. For the targeted plastic items (# 1 PET bottles & jars and # 2 HDPE bottles & jugs), the increase in capture rate can be attributed to a spin off effect from the promotion and education campaign for ‘all plastics’. Solid Waste staff understood that by making plastics recycling simpler, not only would an increase in capture rate for the new recyclable plastics be seen, but also an increase in overall plastics recycling. There was also the benefit of increased attention to the recycling of all plastic food and beverage containers and rigid plastic packaging through the introduction of ‘all plastics’ recycling (details on the addition of ‘all plastics’ recycling can be found on page 9).

The increase in capture rate for targeted paper items (mixed fine paper and boxboard), can be attributed to dedicated newspaper advertisements that were aimed at those specific items.

The overall recycling capture rate experienced an increase from 73% to 75%, falling just short of the goal of 76% capture. The increase in overall recycling capture rate can be partially attributed to the addition of ‘all plastics’ recycling, as well as increased resident awareness as a result of the dedicated promotion and education plan which ran throughout the year.

It is important to note that there are limitations to using capture rates as a measure of a recycling program’s effectiveness. Capture rate data is based on a small sample size (100 homes) over a short period of time (14 days) and can be skewed by even a handful of homes that set out atypical amounts of recycling or garbage.

The participation rate in the recycling program did not experience an increase or decline; it remained at 92% (the goal was to increase participation to 93%). Solid Waste staff understood that it would be difficult to achieve this goal since the participation rate was already high.

The community and corporate objectives listed in Table 3 do not require any modification as they are long term goals of the *Waste Recycling Strategy 2010-2013*. Any modifications or updates will be made to those goals when the Waste Recycling Strategy is reviewed in 2014.

Table 3: Community and Corporate Objective Update	
Year 2011 objective	Result
To increase the capture rate of recyclable materials that is being placed in the garbage	Capture rate of recyclable material increased from 73% to 75%
To increase the diversion of waste from landfill	Waste diversion rate for 2010 was 55%.
To increase resident knowledge of recyclable items through a dedicated promotion and education plan	A promotion and education plan spanning from May to November across several different mediums was undertaken

4. 2011 Strategies and Initiatives Update

Below is an update for the six individual initiatives listed for 2011 in the *2010-2013 Waste Recycling Strategy*:

Initiative #1: Promotion and education campaign targeted at specific recyclable materials

Originally the promotion and education campaign was to be targeted at four specific recyclable materials (mixed fine paper, boxboard, # 1 PET bottles & jars and # 2 HDPE bottles & jugs) with a goal of increasing their capture rates to an industry recognized 'good' level. With the introduction of 'all plastics' recycling in the spring, the messaging for promotion and education plan was altered in order to promote the addition of 'all plastics' to Kingston's recycling program. Between May and June, heavy advertising space was given to 'all plastics' radio and print advertising, as well as press releases, website and social media updates, one-on-one public education with residents and the re-design of information brochures and pamphlets to reflect the addition of 'all plastics'.

Focus shifted to mixed fine paper and boxboard advertising between July and November, with some continued messaging concerning 'all plastics' taking place in that timeframe as well. The campaign for mixed fine paper and boxboard saw advertising taking place on the City website and in local print media and well as one-on-one public education with residents.

Decals were also created and placed on the side of Solid Waste collection vehicles. Twenty-seven decals in total were created, with fourteen decals reading "Plastic Containers Are Not Garbage" and thirteen decals reading "Paper & Boxboard Are Not Garbage". Decals also included a link to the City's Online Waste Sorting Lookup Tool. Please see Appendix B for pictures of the decals.

Effectiveness: All targeted materials experienced an increase in capture rate. Mixed fine paper was the one target material to reach its objective capture rate of 58% (actual capture rate for 2011 is 70%). Full capture rate results can be found in Table 2.

Initiative #2: Reducing the garbage container limit to one container per household

On November 1, 2011, City Council passed a recommendation from the EITP committee that the City of Kingston lower its free garbage container limit to one container per week. At this current time, staff is working to consolidate the Solid Waste By-law to reflect this change in the container limit. It is anticipated that the new by-law will be presented to City Council in 2012.

Effectiveness: The bag limit was not implemented during 2011, so there was no direct impact on the goals and objectives of the *Waste Recycling Strategy 2010-2013*.

Initiative #3: Reward and recognition program for households exhibiting exemplary waste diversion practices

In early September, the Remarkable Recycler program was announced to the public. The voluntary program saw residents register their households for a chance to have their waste audited by Solid Waste staff. Five households were chosen at random to participate, with households that diverted more than 75% of their waste being awarded prizes, including special marked recycling boxes and a private tour of the Kingston Area Recycling Centre. The five participating households all achieved an over 75% recycling capture rate, with Sara Babcock being recognized as the City's first Remarkable Recycler with a 100% recycling capture rate and 96% waste diversion rate.

The program was promoted through radio and newspaper advertisements, a press release, social media and a dedicated page on the City of Kingston website.

One cycle of the Remarkable Recycler program was carried out in October, although the *Waste Recycling Strategy 2010-2013* specified that two cycles would be carried out (one in April and one in October). The April cycle was cancelled to allow staff time to focus attention on the promotion and education of 'all plastics', and so as to not lose potential media coverage due to the new plastics recycling.

Effectiveness: The Remarkable Recycler program achieved its goal of recognizing the exceptional recycling habits of residents of the City of Kingston. Over seventy households entered the draw to participate in the program, indicating there is a definite interest in the program and that there are many more potential Remarkable Recyclers in Kingston.

The first Remarkable Recycler contest also drew significant media attention, with the first Remarkable Recycler, Sara Babcock, receiving several interview requests from television, radio and print media. With the positive response from the media, the Remarkable Recycler program achieved its goal of recognizing that Kingston's Remarkable Recyclers and demonstrating that all residents can become excellent recyclers.

Initiative #4: Re-design of curbside messaging tags

Through consultation with Solid Waste staff (including management, supervisors and collectors) and the City's recycling contractor, BFI, it was determined that two separate tags would be produced, one for the Blue Box and one for the Grey Box. The previous tag was two-sided, with Blue Box information printed on one side and Grey Box information printed on the reverse side. The two-sided tags often lead to resident confusion, as residents were unaware that the tags

were two-sided and may have thought they were issued a Blue Box tag for a problem with their Grey Box and vice versa.

The new separate tags (see Appendix B & C) for Blue and Grey Boxes are two-sided, with a list of reasons that a residents' recycling box or items may have not been collected on the front, and information on what is accepted in Kingston's recycling program on the back. The purpose of these new tags is not only to inform residents on why certain items were not collected, but also to educate residents on how to properly participate in the recycling program. The tags are much clearer and easier to read than the previous tags and are no longer a long list of infractions with little constructive information.

Effectiveness: The new tags were printed in December 2011 and were in distribution in early 2012. Effectiveness of the new tags will be measured in 2012.

Initiative # 5: Allow residents to pick up a third recycling box for free at no charge. Currently residents are given two free recycling boxes (one blue and one grey) if they do not already have them.

As indicated in the *Waste Recycling Strategy 2010-2013*, Solid Waste staff was to include in their 2012 budget the cost of allowing residents to take an extra recycling box in addition to the one free Blue Box and one free Grey Box to which they are currently entitled. Money has been set aside for the distribution of extra recycling boxes in 2012 as part of the Solid Waste capital budget. Details on how residents will be able to pick up their additional recycling box can be found in Section 6.

Effectiveness: Funds for the purchase of additional recycling boxes were included as part of the 2012 Solid Waste budget.

Initiative # 6: Exploring the potential for recycling 'all plastics'

As outlined in the *Waste Recycling Strategy 2010-2013*, Solid Waste staff was to 'conduct research....to determine the feasibility of add all plastics recycling to the Kingston recycling program.' On May 4, 2011, staff surpassed the timeframe for implementation of this initiative as Kingston expanded its recycling program to include 'all plastics' in its Blue Box recycling program. With assistance from Waste Diversion Ontario's Continuous Improvement Fund, the City entered into a purchase agreement with EFS Plastics (based in Elmira, ON) for mixed plastic food and beverage containers and rigid plastic packaging.

Once announced publicly, residents of Kingston were able to recycle any plastic food and beverage containers and rigid plastic packaging as part of Blue Box program. Below is a list of the most common items that would be considered a part of the new 'all plastics' program:

- # 1 PET plastic containers (e.g. plastic egg cartons, plastic berry containers, plastic produce containers)
- # 3 PVC plastic containers (e.g. some dish soap and shampoo bottles)
- # 7 Other plastic containers (e.g. some ketchup bottles and other food containers)
- Plastic containers with a combination of plastics (e.g. # 2 & # 7 Tropicana juice containers, plastic chip containers)
- Plastic containers with no numbers
- Rigid plastic packaging (e.g. blister and security packaging)

Mentioned in the *Waste Recycling Strategy 2010-2013* was a concern for finding a stable market for the sale and processing of 'all plastics'. Kingston has entered into a two-year purchase agreement with EFS Plastics from Elmira, Ontario for the purchase of Kingston's 'all plastics'. Entropex, based out of Sarnia, Ontario also purchases surplus 'all plastics' from Kingston; at the time of writing, there are emerging companies interested in the purchase of 'all plastics'.

Effectiveness: The capture rate for 'all plastics' material was determined to be 54%, with a total 269 tonnes of 'all plastics' material having been diverted from landfill.

5. 2012 Goals and Objectives

Using results from the 2011 waste audit, the goals and objectives for 2012 as found in the *Waste Recycling Strategy 2010-2013* have been updated to reflect changes in Kingston's recycling program. In some cases, 2012 goals have been clarified, while others have been completely changed as their objectives were already reached in the year 2011.

In the case of objectives # 1, 2 and 3 found in Table 4, the original 2012 objective has been replaced with the three unmet objectives from 2011. The reasoning is that the three target recyclables items from 2011 (boxboard, # 1 PET bottles and jars and # 2 HDPE bottles and jugs) are heavier materials, which will result in a greater increase in waste diversion, and are a more valuable material in terms of overall revenue, than the originally targeted items (Styrofoam, film plastic and LCBO glass).

In the case of objective # 5, tubs & lids are no longer sorted as a separate recyclable item; they are included in the mix for 'all plastics'. As a result, a new objective for increasing the capture rate of 'all plastics' has been established, and will be measured against the capture rate for 'all plastics' determined in 2011.

Table 4: (2012) Goals and Objectives	
Original 2012 objective as found in <i>Waste Recycling Strategy 2010-2013</i>	Updated 2012 objective
1. To increase capture of # 6 PS Styrofoam to 50%	1. To increase capture of boxboard to 69% from 67%
2. To increase capture rate of film plastic to 33%	2. To increase capture of # 1 PET bottles and jars to 81% from 73%
3. To decrease the percentage of LCBO glass in the garbage to 30%	3. To increase capture of # 2 HDPE bottles and jugs to 79% from 68%.
4. To increase capture of aluminum to 76%	Objective remains unchanged
5. To increase capture of tubs & lids to 49%	5. To increase capture of mixed plastics ('all plastics') to 65% from 54%
6. To increase the overall recyclable material capture rate to 77%	6. Objective remains unchanged
7. To increase participation in the recycling program to 94%	7. Objective remains unchanged

6. 2012 Strategies and Initiatives

Staff reviewed a number of options when considering initiatives for inclusion in the *Waste Recycling Strategy 2010-2013 Volume II*. When staff considered the initiatives, several questions were asked, including:

- Will the initiative increase the capture rate of recyclable material?
- Is the initiative an industry-recognized best practice?
- Is the initiative cost-effective?

- Will the initiative be accepted & understood by the public?
- Can the initiative be easily implemented with existing programs?

Taking into a balance all of the above questions, the seven initiatives below were determined to be have the greatest potential impact on the goals and objectives of the Waste Recycling Strategy.

Initiative # 1: Promotion and education campaign targeted at specific recyclable items

Overview: Similar to the promotion and education campaign in the *Waste Recycling Strategy 2010-2013*, specific recyclable items are the focus of promotion and education efforts. Some of these items (boxboard, # 1 PET bottles & jars and # 2 HDPE bottles & jugs) were a part of the dedicated promotion and education plan in 2011, but did not achieve the desired capture rate. Due to the high value of these items and their relatively low capture rate (below the good capture rate identified by Stewardship Ontario referenced in the *Waste Recycling Strategy 2010-2013*) they will be targeted again along with a new target recyclable, aluminum.

A separate promotional plan for mixed plastic containers (# 1 - # 7) will be executed as a part of Stewardship Ontario's *My Plastic Is In* campaign. A memorandum of understanding was approved by Council in late 2011 that will see Stewardship Ontario provide the City of Kingston up to \$ 12 000 for the creation and purchase of rink board, billboard and newspaper advertisements. These advertisements will focus on 'all plastics' materials that were added to the City's Blue Box program in the spring of 2011.

Implementation: The promotion and education efforts will be ongoing throughout the year in 2012 for boxboard, # 1 PET bottles & jars, # 2 HDPE bottles & jugs and aluminum. The promotional plan for mixed plastic containers (# 1 - # 7) will take place between February and April.

Cost: \$ 15 000 has been included for the promotion and education campaign as part of the 2012 Solid Waste Division budget.

The total cost of the promotion campaign for mixed plastic containers will be covered by Stewardship Ontario through its memorandum of understanding with the City of Kingston.

Monitoring: A curbside waste audit will be conducted in late 2012 to determine the latest capture rates for the target recyclable items.

Initiative # 2: Implementation of the one free garbage container limit

Overview: As passed by Kingston City Council on November 1, 2011, the City of Kingston will be reducing its free garbage container limit from two containers to one. Information gathered from municipalities that have recently lowered their garbage container limits has shown that a lowered limit can lead to an increase in participation in recycling programs, and an increase in the capture rate of recyclables. The theory is that the financial disincentive of having to purchase bag tags for additional bags of garbage will drive residents to maximize their use of waste diversion programs such as recycling.

Implementation: It is planned that the one container limit will come into effect sometime in 2012. Staff first needs to re-write the Solid Waste by-law and then provide adequate time for promotion and education on the one container limit before enforcement begins.

Cost: Staff time only

Monitoring: The impact of the one container limit on recycling can be measured through analyzing monthly and yearly tonnages of recyclables captured, as well as examining annual waste audit results.

Initiative # 3: One container limit public education campaign

Overview: As part of the implementation of the one container limit, Solid Waste staff will be implementing a public education campaign entitled “Getting Down to One.” The focus of this campaign will be educating residents on five simple methods that can be used to help their household divert more waste and reduce the amount of garbage they produce. Included in these five methods will be a focus on the Blue and Grey Box programs, highlighting common recyclable items that end up in the garbage (Styrofoam, rigid plastic packaging, plastic clamshell containers, plastic bags and junk mail as examples)

Implementation: The public education campaign will be focused on public event attendance and presentations to community groups. Staff will attend public events (e.g. Kingston Home Show, Leisure Showcases) to engage residents in discussion about waste diversion and reduction. Staff will also be contacting community groups (e.g. neighbourhood associations, senior’s groups) and offering to speak to their members about waste reduction. The goal is to attend twelve public events and facilitate fifteen community presentations throughout the year.

Cost: \$ 2 500 has been budgeted for event registration fees and display developments.

Monitoring: Through discussions and feedback, Solid Waste staff will obtain information on the waste reduction questions or concerns of residents; that information will then be used to help formulate current and future public education efforts.

Initiative # 4: Distribution of additional Blue Boxes

Overview: As listed in the *Waste Recycling Strategy 2010-2013*, the Solid Waste Division has budgeted for the purchase of additional Blue Boxes for residents. By providing residents with one additional Blue Box at no charge, the City will be increasing the capacity for residents to recycle Blue Box materials. Increasing the capacity to recycle has become a priority due to the addition of 'all plastics'. Best practices have shown that by increasing residents' capacity for recycling, there will be a corresponding increase in recyclable material captured. Currently residents are charged \$ 6.50 for additional Blue Boxes above and beyond one free box.

Implementation: Through an RFP process staff will be purchasing 10 000 Blue Boxes to be distributed to residents. A communications plan will be developed to inform residents of the additional Blue Box giveaway, as well as the manner in which they may acquire their one additional Blue Box (there will be a limit of one additional Blue Box per residential unit).

It will be advertised to residents that they can acquire one additional Blue Box on their own from either City Hall or the Kingston Area Recycling Centre, the two current locations where residents can acquire Blue and Grey Boxes. Staff will also explore the potential to have a delivery service established where residents can register to have their one additional Blue Box delivered to their home.

Once the initial 10 000 Blue Boxes have been distributed, it will become standard policy for staff to make available to residents one additional Blue Box above and beyond the one Blue Box and one Grey Box that are currently distributed to new residents.

Cost: \$ 100 000 has been budgeted for the purchase of the Blue Boxes, the communications plan to advise residents of the availability of one additional Blue Box per residential unit and to cover the costs of a potential delivery service.

Monitoring: Staff will track the number of additional Blue Boxes distributed to residents throughout the distribution period. As previously stated, it is anticipated that by increasing the capacity for residents to recycle there will be an increased capture rate of recyclable material, which can be monitored through the annual curbside waste audit.

Initiative # 5: Continuation of Remarkable Recycler program

Overview: Following the success of the first cycle of the Remarkable Recycler program (held in October 2011), two additional cycles will be held during 2012. Further details on the Remarkable Recycler program can be found on page eight.

Implementation: Due to the overwhelming success of the first cycle of the program, the number of selected participants will be increased to ten households per cycle. The first cycle will take place in late March/early April 2012 and the second cycle in late September/early October 2012.

Cost: \$ 4 500 has been budgeted for advertising and promotion of the Remarkable Recycler program. No costs will be incurred for participants' rewards as they were purchased in 2011.

Monitoring: Success will be measured through the number of households that enter the draw for the program, as well as surveying of participants. Information gathered from participants will be used to make modifications to the program, if necessary.

Initiative # 6: Investigation of Solid Waste smart phone applications

Overview: Several municipalities have released specialized applications that allow residents to access municipal Solid Waste information via their smartphones or tablet PCs. Information typically available via these applications include customizable collection calendars, with reminders of collection dates and other associated waste events (e.g. hazardous waste drop off dates), information regarding acceptable items in the recycling, organics and garbage streams (among others) and the operating hours of facilities.

By releasing a smartphone application for Solid Waste information, the City would be utilizing an emerging public education tool, one that particularly targets the younger demographic who are increasingly shunning traditional education mediums (including the Internet) for newer, interactive models.

Implementation: Staff will investigate partnerships with application development companies, with a focus on both the cost effectiveness and design of any possible application.

Cost: Investigation of the suitability of the Solid Waste Division developing a smartphone application in partnership with a development company with require staff time only. Monetary costs will only be incurred if staff chooses to enter into a partnership with a development company for the creation of an application.

Monitoring: Solid Waste staff will speak with other municipalities who currently utilize or are considering utilizing smartphone applications.

Initiative # 7: Purchase and placement of additional public space recycling units

Overview: In 2011, the Solid Waste Division purchased fifteen public space recycling units for placement in downtown Kingston. In partnership with other City departments and Downtown Kingston!, the units were placed in areas deemed to be the most appropriate from accessibility, collection and public use standpoints. The purpose of purchasing the units was to provide Kingston residents and visitors with the ability to recycle paper, plastic, metal and glass when in public, and to reinforce positive recycling behaviour in the home. Best practices have shown that when residents have an opportunity to recycle in public, that action reinforces the positive behavior of recycling in the home and vice versa.

Signage was developed for the front side of the units, illustrating in both text and visual images the material that is accepted in the units, as well as how recyclable material is to be separated. On the back side of the units, generic recycling advertising was created to reinforce the City's current recycling program.

Implementation: In 2012, additional units will be purchased. The placement of the units will be determined internally by City staff.

Cost: \$ 10 000 has been budgeted in 2012 for the purchase of public space recycling units.

Monitoring: Staff will monitor bins for the amount of recyclable material being captured.

7. Conclusion

As the City of Kingston embarks upon the second year of its *Waste Recycling Strategy 2010-2013*, the corporate goals of becoming Canada's most sustainable City and increasing overall waste diversion remain the main drivers behind the Waste Recycling Strategy.

Through the comparison of annual data from curbside waste audits, tonnage summaries and reports, public consultation and internal staff meetings, objectives for 2012 have been defined. In some cases objectives have been refined from previous objectives, and in other cases completely new objectives have been created due to changes in Kingston's recycling system.

In order to achieve these objectives, several initiatives were evaluated and those deemed to have the greatest likelihood of aiding the achievement of those outlined objectives will be carried out. Included in these objectives are dedicated promotion and public education campaigns, the continuity and expansion of a successful reward and recognition program and the distribution of additional Blue Boxes to residents.

As this Waste Recycling Strategy is a living document, monitoring and reporting of the implementation tools listed above will be ongoing throughout the life of the document. The evaluation tools include conducting curbside waste audits, monthly monitoring of tonnage reports for recyclables being shipped from the Material Recovery Facility and the monitoring of inquiries to the City's Client Services Division.

Through the creation of this Waste Recycling Strategy, the Solid Waste Division has committed itself to a process of continuous improvement in order to perform our role as stewards to the environment and improve service to the residents of Kingston.

Appendix A: Kingston residential recycling capture rates 2010 & 2011


Recyclable material	2010 Total in garbage stream (kgs)	2011 Total in garbage stream (kgs)	2010 Total in recycling stream (kgs)	2011 Total in recycling stream (kgs)	2010 capture rate (%)	2011 capture rate (%)
Clear LCBO glass	1.15	0.39	12.59	6.81	91.6	94.6
Coloured glass- other	0.13	0.20	9.80	3.38	98.7	94.4
Newspaper	23.64	35.09	324.78	313.47	93.2	90
Corrugated cardboard	9.25	12.27	91.51	70.00	90.8	85.2
Clear glass- other	13.82	9.72	36.18	37.22	72.4	79.4
Other mixed recyclable paper (magazines & catalogues, telephone books & books)	25.13	28.70	63.47	101.60	71.6	78.1
Aluminum	4.83	3.89	9.68	10.27	69	72.6
# 1 PET (clear plastic bottles & jars)	15.26	9.69	28.70	25.43	65.3	72.5
# 2 HDPE (coloured plastic bottles & jugs)	10.33	6.48	10.33	13.92	50	68.4
Boxboard & molded pulp	39.95	34.78	70.3	70.30	63.8	67.1
Steel	7.66	14.28	23.39	27.32	75.3	65.8
# 1 PET (clear plastic containers)	N/A	3.65	N/A	6.22	N/A	63.1
Mixed fine paper	37.43	34.43	33.06	53.60	46.9	61

Recyclable material	2010 Total in garbage stream (kgs)	2011 Total in garbage stream (kgs)	2010 Total in recycling stream (kgs)	2011 Total in recycling stream (kgs)	2010 capture rate (%)	2011 capture rate (%)
# 4 LDPE & # 5 PP (plastic tubs & lids)	5.36	5.68	4.78	8.32	47.1	59.6
Polycoat (gable top & aseptic containers) & paper cups	7.54	12.07	11.00	14.05	59.3	53.9
Coloured LCBO glass	12.06	8.04	9.52	9.16	44.1	53.4
# 2- # 7 plastics (other rigid recyclable plastics)	N/A	10.06	N/A	10.40	N/A	51
# 6 PS rigid (plastic containers)	6.41	3.64	1.92	2.01	23	35.7
# 6 PS expanded (Styrofoam)	8.37	3.20	4.19	1.74	33.4	35.3
Film plastic	39.99	24.94	8.08	8.08	16.8	24.6
Total recyclables capture rate	284.61	130.60	760.40	396.86	73	75.3

Appendix B- Pictures of Solid Waste collection trucks decals



Appendix C- Updated Curbside Messaging Tags




Below is a list of items that are accepted for recycling in your Blue Box:

- Plastic food & beverage containers including:
 - Bottles
 - Jars
 - Jugs
 - Tubs & lids
 - Cartons
 - Trays
 - Clamshell containers
- Rigid plastic packaging (the hard plastic packaging around toys and electronics).
- Aluminum & steel food and beverage containers
- Glass food & beverage jars and bottles (no broken glass please). Broken glass is to be placed in a cardboard box and labeled 'broken glass' and is put with your garbage.
- Styrofoam trays and blocks
- Paper cans with metal ends

Please do not include in your Blue Box large plastic items such as plastic furniture, laundry baskets, storage containers, tool cases or toys. These belong in the garbage.

If items are left behind in your recycling box or if you are not sure if an item is recyclable, use our Online Lookup Tool at www.cityofkingston.ca/wastelookup or call Customer Service at 613-546-0000 for proper disposal methods.



Some or all of your Blue Box items were not picked up today because:

- ◊ This is the wrong week for your Grey Box materials. Find your schedule at www.cityofkingston.ca/waste.
- ◊ Do not bag blue box items. Place them loosely in your Blue Box and put plastic bags in your Grey Box.
- ◊ Rinse clean containers.
- ◊ Styrofoam: Pieces no larger than 3 feet x 2 feet x 8 inches.
- ◊ Items left behind are not recyclable. Please place in your garbage. Non-recyclable items may include:
 - Window glass & light bulbs
 - Plastic laundry baskets
 - Plastic pails over 10 litres
 - Toys
 - Metal coat hangers
 - Drinking glasses, mugs & mirrors
 - Motor oil containers (take to hazardous waste facility @ KARC)
- ◊ This is not a regulation recycling box. Blue and grey boxes are available at:
KARC – 196 Lapan's Lane
City Hall – 216 Ontario Street

Your first boxes are free. Broken or lost boxes are replaced at no cost to you.

Bring damaged boxes to KARC for recycling.

Customer Service: 613-546-0000

www.cityofkingston.ca/waste



Some or all of your Grey Box items were not picked up today because:

- ◇ This is the wrong week for your Blue Box materials. Find your schedule at www.cityofkingston.ca/waste
- ◇ **Cardboard**
Flatten, bundle & tie (with string) no larger than 3 feet x 2 feet x 8 inches. Limit of 6 bundles per pickup.
- ◇ **Boxboard** (e.g. cereal & cracker boxes)
Remove liners (place in garbage), flatten and place in a plastic bag or another box.
- ◇ **Plastic bags**
Place clean plastic bags in another plastic bag and tie shut. If a bag stretches when pulled, it is recyclable. If it doesn't stretch or tears, it is garbage.
- ◇ Rinse and flatten milk and juice cartons.
- ◇ Items left behind are not recyclable. Please place in your garbage. These may include:
 - Wrapping paper
 - Bubble wrap
 - Pet food bags
 - Plastic food wrap
 - Non-stretchy plastic bags (such as chip bags or pasta bags)
 - Pizza boxes & waxed cardboard (belong in your Green Bin)

◇ This is not a regular recycling box. Blue and grey boxes are available at:

KARC – 196 Lapan's Lane
City Hall – 216 Ontario Street

Your first boxes are free. Broken or lost boxes replaced at no cost. Bring broken boxes to KARC recycling.

Customer Service: 613-546-0000

www.cityofkingston.ca/waste



Below is a list of items that are accepted for recycling in your Grey Box:

- Fine paper including
 - Newspaper
 - White paper
 - Flyers & junk mail
 - Envelopes
 - Magazines
 - Phone books
 - Books (with hard cover removed)
 - Greeting cards

Placing your fine paper in untied plastic bags or stacking vertically in your box helps prevent blowing litter.

- Boxboard (things such as cereal and cracker boxes)

Place flattened boxboard inside a larger box. This helps to prevent blowing litter and speeds up sorting at the recycling plant.

- Paper milk and juice cartons. This includes Tetra-Pak brand cartons and small juice boxes
- Corrugated cardboard (which has the wafer between the two layers). Cardboard needs to be cut to 3 feet x 2 feet x 8 inches and bundled in order to fit into the recycling truck.
- Plastic bags
 - Shopping bags
 - Frozen vegetable bags
 - Dry cleaner bags
 - Produce and bread bags
 - Milk bags (rinsed clean)
- Paper coffee cups (plastic lid removed and placed in Blue Box)

If items are left behind in your recycling box or if you are not sure if an item is recyclable, use our Online Lookup Tool at www.cityofkingston.ca/wastalookup or call Customer Service at 613-546-0000 for proper disposal methods.