A Waste Recycling Strategy for The City of Stratford
FINAL

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Prepared with assistance from
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1.0 Introduction

This Waste Recycling Strategy (Strategy) was initiated by the City of Stratford (City) to develop a plan to increase the efficiency and effectiveness of its Blue Box program. The Strategy focus is on residential **Blue Box** diversion and capture rates. References made to diversion rates and capture rates are specific to Blue Box recyclables and does not include overall waste diversion rates from other sources (leaf and yard/bulky waste program, Municipal Household Hazardous Waste (MHSW) diversion, etc.).

This Strategy uses 2009 Waste Diversion Ontario (WDO) Datacall information and sections of this Strategy can be updated by the City on an annual basis to reflect each Datacall year. A full update of the program should be conducted at least every five years.

Specifically, the purpose of this Strategy is to:

- Maximize Best Practices funding;
- Identify and demonstrate continuous improvements toward Best Practices;
- Clarify long term Blue Box diversion goals; and
- Identify cost effective options to maximize Blue Box diversion for the City.

Blue Box programs in Ontario are partly funded by WDO. In return the City must report to WDO (i.e. Datacall for the 2010 WDO reporting year with submissions due April 2011) on its current recycling program, including Blue Box diversion/capture rates and Blue Box program costs. Each municipality has been put into a grouping by WDO for comparison purposes. The City is in the Small Urban Municipal Grouping.

The Blue Box Performance Factor (previously Efficiency and Effectiveness Factor) plays a significant role in determining funding that a municipality will receive, relative to other members within the Small Urban Municipal Grouping, from the WDO to fund their Blue Box programs. This factor is based on costs to operate a Blue Box program and the diversion/capture rate of Blue Box materials.

Funding is also impacted by adherence to Blue Box Best Practices. The amount of funding related to Best Practices is increasing, from 5% (2010) to 25% (2012). The City can maintain and possibly increase the level of WDO funding by implementing Best Practices. Preparing a Strategy that includes defined performance measures including targets, monitoring and a continuous improvement program represents a considerable part of the Best Practices score (and therefore contribute to maximizing funding). Actual performance improvements (i.e. through greater diversion/capture and reduced costs) as a result of implementing Best Practices have the potential to improve the Performance Factor and also positively impact funding.

Table 1.0 depicts Performance Factors calculated for programs in the Small Urban Municipal Grouping. The 2011 Performance factor was calculated using 2009 Datacall information. The City's Blue Box Performance Factor is 67%.

Table 1.0 Small Urban Performance Factors (2011 WDO)

Program Name-Small Urban	Blue Box Tonnes Marketed[1]	Net Costs	Recycling Rate[3]	Net Costs per Tonne[2]	Performance Factor within Group
ARNPRIOR, TOWN OF	601 T	$145,376	63.7%	$242.07	67%
AYLMER, TOWN OF	289 T	$109,345	36.9%	$378.99	40%
BROCKVILLE, CITY OF	1,445 T	$190,036	54.2%	$131.51	80%
CARLETON PLACE, TOWN OF	581 T	$226,487	54.0%	$390.03	40%
CASSELMAN, VILLAGE OF	256 T	$74,577	70.8%	$291.61	64%
CORNWALL, CITY OF	3,080 T	$806,532	55.4%	$261.84	57%
DESERONTO, TOWN OF	111 T	$25,907	52.2%	$233.13	60%
GANANOQUE, TOWN OF	458 T	$79,681	70.5%	$174.11	80%
HANOVER, TOWN OF	543 T	$116,650	66.3%	$215.01	73%
MATTAWA, TOWN OF	159 T	$59,167	61.1%	$371.85	46%
ORANGEVILLE, TOWN OF	2,942 T	$499,064	90.0%	$169.66	84%
ORILLIA, CITY OF	2,516 T	$365,220	74.3%	$145.16	83%
OWEN SOUND, CITY OF	2,214 T	$425,922	90.0%	$192.36	82%
PARRY SOUND, TOWN OF	421 T	$183,449	54.7%	$435.82	40%
PERTH, TOWN OF	477 T	$195,558	71.2%	$410.24	48%
PETROLIA, TOWN OF	356 T	$20,055	60.3%	$56.31	88%
PRESCOTT,TOWN OF	212 T	$64,767	36.3%	$306.12	40%
RENFREW, TOWN OF	631 T	$186,068	62.2%	$294.82	57%
SHELBURNE, TOWN OF	489 T	$103,066	87.9%	$210.69	81%
SMITHS FALLS, TOWN OF	620 T	$157,242	64.0%	$253.44	66%
ST. THOMAS, CITY OF	1,863 T	$363,997	46.4%	$195.35	63%
STRATFORD, CITY OF	2,291 T	$588,714	67.1%	$256.97	67%
SUNDRIDGE, VILLAGE OF	66 T	$24,015	48.4%	$364.65	40%

This Strategy was developed with financial support from the Continuous Improvement Fund (CIF). The CIF's *Guidebook for Creating a Municipal Waste Recycling Strategy* (March, 2010) (CIF Guidebook) was used to help develop this Strategy.

2.0 Overview of the Planning Process

This Strategy was prepared by environmental consulting firm 2cg Inc and City staff.

The development of the Strategy included the following steps:

- Gather relevant data from the City;
- Meet with City staff to review data and walk through Strategy format;
- Gather and compile additional information from the City to prepare draft Strategy;
- Seek Public comment via the City's Website;
- Present Draft report to Energy and Environment Committee to seek input; and
- Prepare final Strategy.

The next steps include:

- Council endorsement of this Waste Recycling Strategy;
- Council decision on which initiatives to implement; and
- Develop and issue tender for Blue Box collection.

3.0 Study Area

The study area for this Strategy is the City of Stratford, located in the County of Perth in southwestern Ontario (former Huron and Wellington District) approximately 1.5 hours (150 km) south west of Toronto.

The geographic area of the City in relation to proximity of other urban centres is depicted in Figure 1.

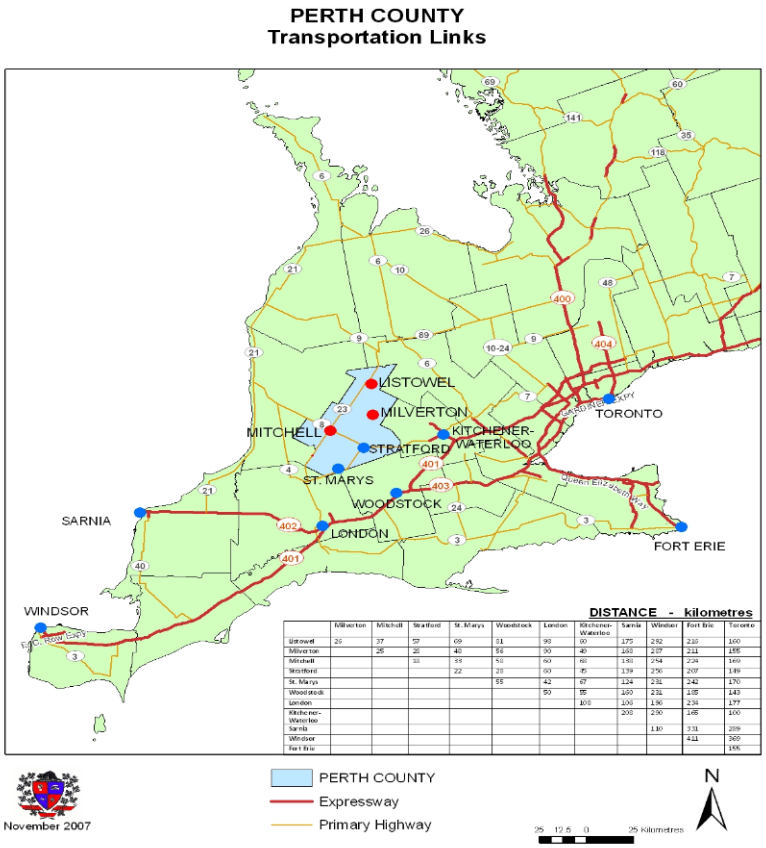

Figure 1 Area Map

This Strategy addressed the following sectors:

- Residential single family;
- Multi-Family residents;
- Downtown small businesses; and
- Industrial, Commercial and Institutional (IC&I) (collect select materials from this sector).

4.0 Public and Stakeholder Consultation Process

Stakeholder groups as part of this consultation include:

- City staff;
- Energy and Environment Committee;
- Residents; and
- City council.

The public and stakeholder consultation process followed the development of this Strategy and consisted of the following activities:

- Notification of Strategy on web-site with opportunity for public feedback;
- Meetings with staff and review of Draft by Energy and Environment Committee;
- Stratford staff were invited to speak on a local radio station about the Strategy and encouraged residents to send comments to the Town; and
- Posting of Final Report on the City website and submission of Final Report to City council to adopt.

About 12 residents provided comments on the Town's current recycling program and other aspects the Town's waste management system.
There were a number of common comments:

1. Include more items in the Blue Box

The most common items mentioned were polystyrene (i.e. Styrofoam), plastic film and shredded paper.

2. Eliminate separation of Blue Box items into different streams

Some residents advocated going to a recycling cart for the collection of Blue Box items. Others suggested going to a 1 or 2 stream system.

In general the comment was that the program is unnecessarily complicated.

3. Weekly collection of the Blue Box

A number of residents indicated that bi-weekly collection of the Blue Box was not frequent enough. Some indicated they placed overflow Blue Box items with their garbage.

4. Other Comments

Although beyond the scope of this Strategy a number of comments were made about implementing a green bin program and more regular access to municipal household special waste (MHSW) recycling.

5.0 Stated Problem

Management of municipal solid waste, including the diversion of Blue Box materials, is a key responsibility for all municipal governments in Ontario. The factors that encourage or hinder municipal blue box recycling endeavors can vary greatly and depends on a municipality's size, geographic location and population.

The City faces a few waste management challenges that this Strategy can address including:

- Currently pay on a per tonne basis (i.e. more tonnes diverted costs more money);
- Possible change to collection system (i.e. shift from 5 stream to 1 or 2 stream; change from bi-weekly to weekly collection);
- Upcoming collection tender;
- Timing of new London materials recovery facility (MRF) in relation to the City's upcoming tender; and
- Potential increase in costs with new system (additional P&E and additional Blue Box tonnages managed).

The key drivers that led to the development of this Waste Recycling Strategy include:

- Maximize Best Practices funding;
- Update information on Blue Box Program; and
- Upcoming curbside recycling tender.

6.0 Goals and Objectives

This Strategy development process identified a number of goals and objectives for the City. These are presented in Table 6.1.

Table 6.1 City's Recycling Goals and Objectives

Waste Recycling Goals and Objectives	
Goals	**Objectives**
To maximize diversion of residential Blue Box program	Aim to increase Blue Box diversion rate to 30% in the near future (2011-2012) and 35% thereafter.
To increase capture rate in the Blue Box program	Possible opportunity to streamline and simplifying collection by reducing the number of curbside sorts and/or increasing frequency of service as a result of a new processing contract in the future.

7.0 Current Solid Waste Trends, Practices and System and Future Needs

Community Characteristics and Existing Recycling Programs and Services

The reported population for the City of Stratford is about 32,000.

The City is home to 10,131 single family households and 3,452 multi-family residents.

The City's obligations for managing municipal waste include the following:

- Promotion and Education;
- Weekly curbside collection of waste (User Pay);
- Twice weekly collection of downtown core wastes;
- Bi-weekly curbside collection of Blue Box (5 stream);
- Multi-residential collection of Blue Box;
- Weekly collection of downtown core Blue Box;
- City owned waste disposal/Blue Box Depot site;
- Seasonal Leaf and Yard Waste Collection and Backyard Composting Program;
- Bulky waste collection; and
- MHSW, Freon Removal, Scrap Metal and WEEE services.

Currently, the City has the following policies and programs in place to manage residential solid waste:

- Full User Pay $2.30/standard size bag/container (max 128 litres) (2 tags up to 240 litres and 3 tags up to 360 litres);
- Tag and leave policy for contaminated Blue Box Material;
- Landfill bans for recyclables;
- Multi-residential collection (campaign launched 2009); and,
- Tipping fees at landfill site ($72/tonne)

Currently, the user fees collected from bag tags and tipping fees cover the cost of the City's diversion programs (Blue Box, Leaf and Yard diversion, MHSW, etc.).

The City offers bi-weekly collection of Blue Box (5 stream) material to the residential sector for same side of street collection. The City collects an expanded range of Blue Box material which includes the following:

Containers	Fibres
• Glass bottles and jars	• Newspaper, flyers, magazines, inserts
• Metal food and beverage containers & foil	• Office paper, fine paper, envelopes
• Empty aerosols	• Non-metallic wrapping materials, greeting cards
• Plastic containers (1-7) excluding	• Boxboard, corrugated cardboard, brown paper bags • Molded Pulp
• No film or expanded polystyrene	• Soft cover books, Polycoat and Tetra Paks

Residents are asked to bundle/bag their fibre material and place items beside their Blue Box. All container material is to be placed inside the Blue Box. Typically, residents are using two or more boxes to set out their container material.

Photos 1-2 depict Blue Box set outs.

Photo 1 Average Blue Box set out

Photo 2 Residents Use a Minimum of Two Blue Boxes (per Collection Week)

As part of the City's mandate to provide Blue Box accessibility to its ratepayers, a Blue Box depot is located at the City landfill site (777 Romeo Street). The Depot is accessible Monday to Saturday and accepts shredded office paper in addition to the residential Blue Box material.

Photos 3-5 depict the Recycling Depot system at the City's landfill site.

Photo 3 Recycling Depot

Photos 4 & 5 Signage at Recycling Depot

Curbside wastes and Blue Box (and depot) are collected by Brian Leyser Recycling Inc. They are operating on a 3 year contract with 2 additional one year renewal term ending December 2011. They sort the materials at the curb.

Blue Box material is processed and marketed by Brian Leyser Recycling Inc at their facility in Stratford. The City does not receive revenue rebates as part of this arrangement. The contract is structured on a cost per tonne basis. **Any increases to tonnes collected directly impact collection costs.**

Important considerations that could provide additional options to the City for the processing of Blue Box material include:

1. Opening of the City of London's Two Stream MRF in 2011; and
2. Close Proximity and increase in capacity of the Bluewater Single Stream MRF.

Current Waste Generation and Diversion

Table 7.1 depicts total waste residential quantities managed by the City in 2009.

Table 7.1 2009 Total Waste Quantities (Residential)

Waste Material (2009)	Quantities (Tonnes)
Municipal Waste Collection	3,201
Drop Off Residential Waste	2,229
Municipal Blue Box Collection	2,243
Drop Off Residential Blue Box Depot	216
MHSW	47
Curbside Yard Wastes	994
Christmas Trees	18
Scrap Metal	252
Clean Rubble	70
White Goods	9
Electronics	118
Total	**9,399**

In 2009, the City managed 9,399 tonnes of residential waste. Of this 2,460 tonnes (26%) is diverted through the Blue Box program. Table 7.2 summarizes the current waste generation and **Blue Box** diversion rates reflecting tonnage data recorded in the 2009 Datacall.

Table 7.2 City's Residential Blue Box Diversion Rate (2009)

Residential Solid Waste Generated and Diverted Through Blue Box		
Residential Waste Stream/ Blue Box Material	**Tonnes**	**Percent of Total Waste**
Total Waste Generated	9,399	-
Papers (ONP, OMG, OCC, OBB and fine papers)	1,891	20.1%
Metals (aluminum, steel, mixed metal)	136	1.5%
Plastics (containers, film, tubs and lids)	195	2.1%
Glass	239	2.5%
Total Blue Box material diverted	**2,460**	**26.2%**

Table 7.3 shows that the City's current Blue Box diversion rate is above average for the Small Urban Municipal Grouping.

Table 7.3 Residential Blue Box Diversion Rate Comparison to Small Urban Municipal Group Rate (WDO Datacall 2009)

Average Blue Box Diversion Rate (WDO-2009)	
City of Stratford	26.2%
Small Urban Municipal Grouping:	21.9%

In 2009, the overall recycling cost for the City was $591,872. This represents all costs associated with the Blue Box program inclusive of curbside and depot contract costs, processing fees, Blue Box transfer station operating costs (fuel, maintenance, and taxes), City Call Centre costs, and a portion of salaries from the depot attendants, waste management staff and clerical staff.

This amounts to a net residential Blue Box program cost of $240 per tonne ($591,872/2,460 tonnes); $18 per capita ($591,872/31,898 residents); or $47 per household ($591,872/12,489 households).

As Table 7.4 shows, the net annual recycling costs for the City are slightly **below average** for the Small Urban Municipal Grouping for net Blue Box program costs. For planning purposes, the CIF Guidebook has a recommended a **target of $210/tonne** for municipalities within the Small Urban Municipal Grouping.

Table 7.4 City's Residential Blue Box Costs vs. Small Urban Municipal Group Program Costs (2009)

Recycling Cost (per tonne per year)	
City of Stratford (Net Costs)	$ 240
Municipal Grouping: Small Urban (Net Program Costs)	**$ 260**

Potential Waste Diversion

The City's waste composition was estimated using the "Small Urban" waste audit sample, as referenced in the CIF Guidebook, with an increased composition for paper of 30% (to reflect other local municipalities such as London and Essex-Windsor). This was used to estimate Blue Box materials in the waste stream and the current Blue Box capture rate.

Table 7.5 depicts details of potential Blue Box material available in the City's waste stream. There is an estimated 3,948 tonnes of Blue Box materials in the waste stream.

Table 7.5 Potential Available Blue Box Material

Current and Potential Diversion			
Waste/Resource Material	Composition (%) (from Small Urban sample audit)	Total Residential Waste Generated (tonnes)	Total Blue Box Material in Waste Stream (tonnes)
Papers (ONP, OMG, OCC, OBB and fine papers)	30	9,399	2,820
Metals (aluminum, steel, mixed metal)	2		188
Plastics (containers, film, tubs and lids)	6		564
Glass	4		376
Total Blue Box Materials	**42**	**9,399**	**3,948**

Table 7.6 presents an estimate of total available Blue Box materials by material type and compares it to the amount of materials currently captured. The current capture rate of Blue Box materials is about 62% (2,460 captured tonnes/3,948 total tonnes).

The recommended target capture rate for municipalities in the Small Urban Municipal Grouping is 80%. As noted in Table 7.6 to achieve this capture rate the City would need to capture an additional 698 tonnes of Blue Box material annually.

Capturing 80% of Blue Box material from the City's residential waste stream would raise the City's Blue Box diversion rate to about 34% (i.e. (2,460 + 698)/ 9,399 total residential wastes).

Table7.6 Capturing 80% of Available Blue Box Material from City's Residential Waste Stream

Current and Potential Blue Box Diversion			
Waste/Resource Material	Total Available in Waste Stream (tonnes/year)	Currently Recycled (tonnes)	Potential Increase (tonnes/year)
Papers (ONP, OMG, OCC, OBB and fine papers)	2,256	1,891	365
Metals (aluminum, steel, mixed metal)	150	136	14
Plastics (containers, film, tubs and lids)	451	195	257
Glass	301	239	62
Total Blue Box Materials	3,158	2,460	698

Anticipated Future Waste Management Needs

The City's growth rate is approximately 1% per annum over the next 10 year planning period. Table 7.7 depicts the expected growth rates for solid waste generation and Blue Box material recovery (based on a projected population growth rate of 1% and 80% Blue Box capture rate).

Table 7.7 Forecasting 80% Capture of Blue Box Material from City's Residential Waste Stream

Anticipated Future Solid Waste and Blue Box Recovery Rates			
	Current Year	Current Year + 5	Current Year + 10
Population	31,898	33,525	35,235
Total Waste	9,399	9,879	10,382
Blue Box Material Available	3,158	3,319	3,489

8.0 Planning a Recycling System

The following sections summarize a Strategy to allow the City to capture more recyclable waste and work to reduce its costs.

The City has noted that Blue Box tonnages are lower than previous years due to thin walling of plastic bottles, the L.C.B.O return program and electronic communication reducing newspaper sales. Conversely, material volume has been steadily increasing with plastic containers that are prematurely filling up Blue Boxes and collection vehicles. The City collects a growing number of bulk plastic jugs/containers as well as single serving water bottles.

When planning for the future, it is understood that tonnage data is the current method of monitoring Blue Box programs within the province and this method will be used by the City. As a point of forward planning, the City will ensure that residents are kept informed of the increasing volume of Blue Box material and the continued success the City experiences through the Blue Box program.

8.1 Possible Strategy to Increase Recycling

A phased approach is proposed. This will ensure that program costs and results can be closely monitored by City staff.

A reasonable preliminary goal (2011-2012) would be to increase tonnages to achieve a minimum **30%** Blue Box diversion rate.

A reasonable future goal (2015) would be to achieve a **35%** diversion rate as a result of the Blue Box program and exceed the recommended target of 80% Blue Box capture rate from this waste stream. The minimum future goal would be to at least reach an average **30%** Blue Box diversion rate and work towards increasing this rate over time.

Table 8.1 highlights the estimated number of tonnes that would need to be captured to attain 30% and 35% diversion rates of Blue Box material from the waste stream. It includes consideration of the impact of population growth in the City (1%).

Table 8.1 Forecasting Diversion Rates

Capture Rates to Meet Waste Diversion Goals			
	% Waste Diversion		
	Current (26.2)	30	35
	tonnes captured/year		
2009 Datacall	2,460	2,820	3,290
2015	2,586	2,964	3,458
2020	2,718	3,115	3,634

It is anticipated that it should be possible to capture additional Blue Box materials within the City's existing program. Currently, the challenge facing the City is the cost per tonne contract structure. Any increase to the Blue Box tonnages would result in an increase of Blue Box costs.

If the contract were structured on a flat rate or a cost per household, increases in tonnages would not impact overall program costs. As an example, Table 8.2 depicts a 30% Blue Box diversion rate (359 additional tonnes) and a hypothetical reduction in program costs, if the future contract were structured on a flat rate or cost per unit. The increase in tonnage has the potential to drive the cost/tonne for recycling even lower than the current costs. Specific costing would be verified with future tendering of services, supported by enhanced processing services.

Table 8.2 Forecasting 30% Blue Box Diversion Rate

Meeting 30% Blue Box Diversion Rate		
Current Capture (30%)	tonnes/year	2,460
30% Capture	tonnes/year	2,820
30% Capture (additional tonnes)	tonnes/year	359
Per household	kg/year	35.5
Per household	kg/week	0.7
Collection routes	#	5
Per route	tonnes/year	72
Per route	tonnes/week	1.4
Current program costs	$/year	$591,872
Current program costs	$/tonne	$241
New program costs	$/tonne	$210

On average this would amount to each household recycling an additional 35kg/year or 0.7kg/week.

If the City improves on the capture of additional plastic material, existing curbside Blue Boxes and truck capacity decreases and becomes an issue with handling and transportation costs. If the City enhances promotion specific to capture of fibre material, there is less of an impact on available collection capacity.

The path to approaching or attaining a 35% diversion rate through the Blue Box can be evaluated during the upcoming Blue Box collection tender process.

It will be prudent to consider a longer term collection contract because it has the potential to reduce overall recycling costs. Best practices recommend a minimum 7 year contract period to allow sufficient time for the contractor to cover the capital costs.

In addition for re-costing of the current Blue Box collection and processing program the tender should also seek costing for the following options:

- Option of a weekly Blue Box collection service;
- Option to reduce extent of sorting (i.e. 5 stream) at the curb; and
- Provision of a cost per unit or household.

Any changes to the Blue Box collection and processing program will require a P&E program to explain these changes to residents.

8.2 Overview of Planned Initiatives

As noted the best approach for increasing the capture rate and decreasing costs is to phase possible changes to the current Blue Box program and try to develop improvements in the next collection/processing contract.

With that in mind a number of options were reviewed and scored based on a series of criteria, which included:

- Estimate of waste diverted (%);
- Proven Results;
- Reliable Processing facilities/End Use;
- Accessible to Public; and
- Ease of Implementation.

A summary of the options reviewed with City staff and their scoring are provided in Appendix 1.

Using the Waste Recycling Options (which lists various Best Practices options) from the CIF Guidebook, 2cg Inc. and City staff reviewed and ranked these various options and used it to help develop possible initiatives. **This exercise does not commit to a final decision but acts as a guide to assist with making future decisions.**

From there a refined list of options have been summarized into two tables:

- Possible Priority Initiatives (Table 8.3); and
- Possible Future Initiatives (Table 8.4).

The implementation of priority initiatives could begin in 2011-2012. The consideration of future initiatives could be phased in from 2012 onwards.

It is recognized that the actual implementation of future initiatives and cost saving initiatives will be a function of the results of the next Blue Box collection tender and costs. It may be that none of these initiatives are implemented. Alternately, a selection could be implemented with actual implementation timing decided during the tender process.

Table 8.3 outlines possible **priority initiatives** to improve Blue Box diversion and capture rates.

Table 8.3 Priority Initiatives (2011-12)

Possible Priority Initiatives (2011-2012)				
Initiative	**Estimated Implementation Cost**	**Estimated Annual Operating Cost**	**Implementation Time Line**	**Comments**
Enhance Existing Public Education and Promotion (P&E) Program	$10,000 CIF Funding Available	$2,000 to maintain new enhancement	2011	Intent to better publicize program & capture more Blue Box materials- possible user fees, reduction in curbside sorts or weekly blue box service.
Following Generally Accepted Principles for Effective Procurement and Contract Management	Staff time to develop a tender outline. Low to Moderate costs-use of third party contractor to peer review document (~$5,000)	-	2011	Free templates for developing tender available on-line at CIF/WDO website. In general it is prudent to develop a tender that will result in reply from a variety of contractors

Possible Priority Initiatives (2011-2012)				
Processing Tender for Recyclables	Staff time and peer review by third party contractor (~$3,500)	Cost out during upcoming collection tender.	2011	Potential to reduce processing costs through receipt of revenue
Training of Staff	$2,500	$1,000/year	Ongoing	Apply for CIF funding and attend free workshops.

Table 8.4 outlines possible **future initiatives** to take into consideration to improve Blue Box diversion and capture rates.

Table 8.4 Future Initiatives (2012 onwards)

Possible Future Initiatives (2012 onwards)				
Initiative	**Estimated Implementation Cost**	**Estimated Annual Operating Cost**	**Implementation**	**Comments**
Implement Revised Blue Box Collection and Processing Options (see below)	Will be determined through tender process	Will be determined through tender process	2012	Could result in a reduction of costs
Weekly Blue Box Collection	Staff time and possible increase in curbside collection costs	Cost out during upcoming collection tender.	2012	Potential to increase capture rate to 80% and Blue Box diversion rate to 35%.
Reduce Sorting at the Curb to 2 stream or single stream	Staff time to implement	Cost out during upcoming collection tender.	2012	Simplifies for resident
New Signage At Depot	CIF funds 50% of costs.	None	2012	Consider applying for funding from CIF in 2011 for visual graphics on depots bins and depot signs. Increases awareness and reduces

Depot Improvements

Some additional detail on possible depot improvements is provided.

The drop off depot at the City's landfill site has poor signage. The signage is limited to small text on the side of the bins which are faded and difficult to read. The accessibility to the depot bins is somewhat awkward for residents and debris collected alongside of the depot may detract residents from using the bin.

A report commissioned by WDO through the Effectiveness and Efficiency Fund entitled; Best Practices for Rural Depot Recycling (2006), outlines the following key factors for effective rural recycling depots:

- **Depot Accessibility** – clean, easy to load depot containers with sufficient turning radius for vehicular traffic and an area separate from congestion of waste disposal traffic;
- **Supportive infrastructure to reduce contamination and increase participation**- including provisions of Blue Boxes to seasonal residents to segregate recyclables at the cottage, illegal dumping and mandatory recycling by-laws, the use of clear bags and bag limits for waste;
- **Entrance signage at the depot site and simple messaging** on the depot container -using graphics and minimal text for easy reading; and
- **Depot attendant actively involved in monitoring recycling depot** –hand out literature to new residents, sell Blue Boxes at the depot site for residents.

City staff outlined there is a very limited budget available to the recycling program. As a result, consideration to phasing in depot enhancements for future initiatives could be implemented. During this process, the City could apply for public education funding for depot signage and flyers for attendants to hand out to residents.

Photos 6 and 7 depict new graphics used by the County of Peterborough for their rural depot bins to increase participation and reduce contamination.

Photos 6 and 7 County of Peterborough Depot Graphics- 2009

8.3 Contingencies

The priority initiatives can be impacted if there is no municipal funding available.

The future initiatives will be decided as an outcome of the waste and Blue Box material collection/processing tender. If no future initiatives are implemented then the City will revert to priority initiatives.

9.0 Monitoring and Reporting

The monitoring and reporting of the City's recycling program is considered a Blue Box program fundamental best practice and will be a key component of this Strategy.

Once implementation of the Strategy begins, the performance will be monitored and measured against the baseline established for the current system. Once the results are measured, they will be reported to Council and the public.

The recommended approach for monitoring the City's Strategy is outlined in Table 9.1.

10.0 Conclusion

The City currently has a good Blue Box waste diversion rate (26%); Blue Box capture rate (62%) and reasonable program costs ($240/tonne).

A phased process to increase diversion and capture rates and reduce costs is recommended.

There are a number of priority and future initiatives that could be implemented. These will largely be a function of the upcoming waste and Blue Box material recycling tender.

It is recommended that the City annually monitor its progress against this Strategy and update this Strategy as it sees fit.

It is **recommended** that this Strategy be fully updated in 2015.

Table 9.1 Blue Box Monitoring Strategy

Recycling System Monitoring		
Monitoring Topic	**Monitoring Tool**	**Frequency**
Measurement of Blue Box materials captured.	Documented total weight data as outlined in this Strategy and compare it to target capture rates (80%)	Annual summary
Diversion rate (Blue Box)	Document BB Diversion Rate Formula: (Blue box materials diversion) ÷ Total waste generated * 100%	Annual summary
Program participation	Documented Curbside Set-out Studies or Curbside Participation Studies to determine frequency of curbside set out, number of boxes, fullness of boxes, and type of boxes used.	Once every 1-2 years.
Program Cost	Document Blue Box Program Costs to reflect each cost area to determine overall cost composition. Incorporate a revenue column to depict annual revenues from Blue Box program.	Once every 1 year.
Customer satisfaction	Customer survey (e.g., telephone); tracking calls/complaints received to the City office	Every 3 years
Opportunities for improvement	Customer survey (e.g., telephone); tracking calls/complaints received to the City office	On-going
Planning activities	Describe what initiatives have been fully or partially implemented, what will be done in the future	Annually
Review of Recycling Strategy	A periodic review of the Recycling Plan to monitor and report on progress, to ensure that the selected initiatives are being implemented, and to move forward with continuous improvement	Annual for current initiatives Every 5 years to re-evaluate and refine list of initiatives

Appendix 1
Waste Recycling Option Scores

Waste Recycling Option Scores:

Suitable? Y/N	Description of Options/Best Practices (For more information: *More information: Blue Box Program Enhancement and Best Practices Assessment Project Final Report, Volume 1)*	Criteria (Score out of 5)						Total Criteria Score	Score x/100
		% Waste Diverted	Proven Results	Reliable Market/ End Use	Economically Feasible	Accessible to Public	Ease of implementation		
Promotion and Outreach									
	Public Education and Promotion Program	1-3%	5	5	3	5	3	21	**84 %**
	Training of Key Program Staff	1-3%	4	4	4	5	4	21	**84%**
Collection									
	Optimization of Collection Operations (New contract) (possible weekly collection; reduce residential sorting)	0%	5	5	3	5	3	21	**84%**
	Bag Limits-	3-5%							
	Enhancement of Recycling Depots	3-5%	4	3	3	5	5	20	**80%**
	Provision of Free Blue Boxes	1-3%	-	3	1	5	1	10	40%
	Collection Frequency	3-5%	5	4	4	5	5	23	**92%**
	Broaden materials categories for Blue Box	1-3%	5	5	3	5	4	22	**88%**
Transfer and Processing									
	Optimization of Processing Operations (new contract)	0%	5	5	4	5	5	24	**96%**

Suitable? Y/N	Description of Options/Best Practices (For more information: *More information: Blue Box Program Enhancement and Best Practices Assessment Project Final Report, Volume 1)*	Criteria (Score out of 5)						Total Criteria Score	Score x/100
		% Waste Diverted	Proven Results	Reliable Market/ End Use	Economically Feasible	Accessible to Public	Ease of implementation		
Partnerships									
	Multi-Municipal Collection and Processing of Recyclables	3-5%							na
	Standardized Service Levels and Collaborative Haulage Contracting	3-5%							na
	Intra-Municipal Committee	0%	n/a		na				na
Additional Research									
	Assess Tools and Methods to Maximize Diversion	1-3%							na
Administration									
	Following Generally Accepted Principles for Effective Procurement and Contract Management	0%	5	5	5	5	5	25	100
Other Options									