

A Waste Recycling Strategy for  
The City of Barrie  
Final

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Prepared by:



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## Table of Contents

1.0	Introduction.....	1
2.0	Overview of the Planning Process .....	1
3.0	Study Area.....	2
4.0	Public and Stakeholder Consultation Process .....	2
5.0	Stated Problem .....	3
6.0	Goals and Objectives .....	3
7.0	Current Solid Waste Trends, Practices and System and Future Needs.....	4
8.0	Planned Recycling System.....	4
8.1	Possible Strategy to Increase Recycling .....	11
8.2	Overview of Planned Initiatives .....	12
8.3	Contingencies .....	15
9.0	Monitoring and Reporting.....	15
10.0	Conclusion .....	17

### Appendix 1 Waste Recycling Option Scores



## 1.0 Introduction

This Waste Recycling Strategy (Strategy) was initiated by the City of Barrie (City or Barrie), to develop a plan to increase the efficiency and effectiveness of its Blue Box recycling program, maximize the amount of Blue Box material diverted from disposal and to help maximize Blue Box funding provided by the stewards (i.e. producers) of packaging waste (i.e. materials that end up in the Blue Box), as managed by Waste Diversion Ontario (WDO). This Strategy will be updated at least every five years.

The City is currently preparing a Sustainable Waste Management Strategy. This Waste Recycling Strategy is a complementary standalone document that functions as an extension of the Sustainable Waste Management Strategy.

This Strategy uses the most recent WDO Datacall data (2010 reporting year) as its starting point. It should be noted from the outset that all reference to diversion rates is specific to residential Blue Box diversion rates and does not incorporate overall waste diversion rates.

The implementation of Best Practices, as defined by WDO can help maximize Blue Box funding. The development of a Strategy is considered to be a Best Practice. Waste Diversion Ontario, through its Continuous Improvement Fund (CIF), provided 75% of the costs to complete this Strategy. As well the CIF's *Guidebook for Creating a Municipal Waste Recycling Strategy* (March 2010) was used to help develop this Strategy.

Specifically, the purpose of this Strategy is to:

- Help City maximize WDO Blue Box funding;
- Act as a high level strategic roadmap and planning document to assist the City with future decision making specific to the Blue Box program;
- Assess current performance of the Blue Box program that can be used as a baseline to assess future performance (2012-2017);
- Set long-term Blue Box diversion goals and cost targets;
- Identify and implement Best Practice initiatives to help improve future performance; and
- Complement the City's Sustainable Waste Management Strategy.

## 2.0 Overview of the Planning Process

This Strategy was prepared by environmental consulting firm 2cg Inc in conjunction with Golder Associates Inc. and municipal staff.



The development of the Strategy included the following steps:

- Gather relevant data from the City;
- Meet with City to discuss and score various waste recycling options;
- Prepare Draft Strategy;
- Meet with the City to review the Draft Strategy; and
- Prepare draft Strategy.

The next steps include:

- Incorporate public consultation feedback;
- Council endorsement of this Strategy; and
- Council decision on which Blue Box supporting initiatives to implement.

### **3.0 Study Area**

The study area for this Strategy is the City of Barrie, located 90 km north of Toronto, surrounding the West End of Lake Simcoe along the shores of Kempenfelt Bay.

This Strategy addressed the following sectors:

- Residential single family; and
- Multi-residential sector.

### **4.0 Public and Stakeholder Consultation Process**

Public and stakeholder groups included in this consultation included:

- Residents;
- Municipal staff; and
- Council.

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

- Notification of Barrie's Sustainable Waste Management Strategy (BSWMS) development (which includes the Blue Box) on web-site with opportunities for public feedback;
- Meetings with staff to gather background information, discuss the current situation and receive input/guidance into possible enhancements to recycling program;
- Public Open Houses and workshops;
- Review of Draft Strategy with staff; and
- Posting of Final Report on the municipal website.



## 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 and a mandatory requirement for municipalities over 5,000 population (Reg. 101/94). 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 some Blue Box recycling challenges that this Strategy can address including:

- Upcoming tender for collection and processing of recyclables;
- Rapid population growth;
- Under captured multi-residential Blue Box materials; and
- Declining disposal capacity.

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

- Maximize Best Practices funding for the Blue Box program;
- Maximize lifespan of the existing landfill site; and
- Increase overall Blue Box capture rate in a cost effective manner.

## 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 maintain the cost-effectiveness	Aim to maintain current lower costs but allocate some budget to implement some new initiatives.

To maximize capture and diversion of residential Blue Box	<p>In 2012-13 aim to divert <b>26.5%</b> and capture <b>85%</b> of municipal solid waste through the Blue Box program and staff complement.</p> <p>Beyond 2013 <u>consider</u> setting target to divert <b>28%</b> and capture <b>90%</b> of municipal solid waste through the Blue Box program.</p>
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## 7.0 Current Solid Waste Trends, Practices and System and Future Needs

### *Community Characteristics*

The City has a population of about 140,000. It has about 54,000 households which includes about 44,000 single family households and 10,000 multi-residential households.

### *Existing Waste Management Services*

The City provides waste management services including collection, diversion and disposal to single family, multi-residential and a portion of the IC&I sectors.

Barrie provides the following:

- Collection and disposal of residential residual garbage (first bag/container free; \$2 bag tag for additional bags);
- Disposal of some multi-residential (2 bag limit) and IC&I residual garbage (10 bag limit);
- Collection and processing of two stream Blue Box (used to collectively describe Barrie's Blue/Gray Box recycling program) recyclables (containers and fibres);
- Collection and composting of source separated organic waste (SSO) from single family households;
- Collection and composting of leaf and yard waste;
- Collection and reuse of bulky items through a municipal pilot partnership with Habitat for Humanity;
- Collection and disposal/recycling from public spaces and recycling from special events;
- Operation of a landfill at the Barrie Environmental Centre (BEC) at 272 Ferndale Drive North;
- Operation of a public drop-off depot at the BEC for the collection of Municipal Hazardous and Special Waste (MHSW);
- Operation of a public drop-off area at the BEC for the collection of:
  - Waste Electrical and Electronic Equipment (WEEE) (through Ontario Electronic Stewardship (OES));



- Scrap tires (through Ontario Tire Stewardship (OTS));
- Scrap metal depot at BEC;
- Drop off Depot at BEC for excess and/or over-sized recyclables (e.g. corrugated cardboard, paper fibre materials, comingled containers); and
- Yard waste.
- Support of “at home” waste diversion programs, such as backyard composting with the provision of subsidized backyard composters, education and promotion of waste reduction programs; and
- Long term planning for waste management.

Single family households divide their waste between four different waste streams for curbside collection, while multi-residential units have access to three different waste streams.

All wastes (garbage, recyclables and SSO) are collected by BFI. Their current contract expires June 30, 2012. Garbage and SSO waste are co-collected weekly. Garbage is disposed at the City’s landfill located at 272 Ferndale Drive North. Source Separated Organics are taken to a private transfer station (BFI) and then hauled to All Treat Farms composting facility in Arthur, ON. Yard waste is dropped off at Barrie’s yard waste composting facility located at 272 Ferndale Drive North and composted by Barrie staff.

All Blue Box materials are processed and marketed by BFI. The Municipality collects an expanded range of Blue Box material which includes the following:

Containers (Blue)	Fibres (Gray)
<ul style="list-style-type: none"> <li>● Glass bottles and jars</li> </ul>	<ul style="list-style-type: none"> <li>● Newspaper, flyers, magazines, inserts and office paper.</li> </ul>
<ul style="list-style-type: none"> <li>● Metal food and beverage containers &amp; foil/pie plates</li> </ul>	<ul style="list-style-type: none"> <li>● Boxboard, corrugated cardboard, brown paper bags</li> </ul>
<ul style="list-style-type: none"> <li>● Plastic containers (1-7) inclusive of expanded polystyrene and styrene trays but exclusive of plastic bags and wrap</li> </ul>	<ul style="list-style-type: none"> <li>● Aseptic Containers</li> <li>● Polycoat</li> </ul>

The City offers its single family residents 16 gallon boxes; Blue (for containers) and Gray (for paper) at no charge.

The City offers its multi-residential buildings recycling carts (95 gallon) and in-apartment recycling containers.

Photo 1 depicts the proper set out of recyclables, SSO, leaf and yard waste and garbage.







**Photo 1: Set out of Recyclables and Garbage**

The BEC drop-off depot (Photo 2) permits residents to drop-off recyclables such as corrugated cardboard and boxboard as well as other Blue Box items.



**Photo 2: BEC Drop-off Depot**

Upcoming important Blue Box-related milestones that may affect how collection services are administered within the City include:

- Collection/processing contract expiry in 2012 with extension to 2013.

#### *Current Waste Generation and Diversion*

Table 7.1 depicts total waste quantities managed by the City in 2009 and 2010 as gathered from the City's Datacall submissions. This table does not include any information on self management of wastes by residents (e.g. backyard composting, deposit return).



**Table 7.1 2009 and 2010 Residential Waste Quantities**

<b>Waste Material</b>	<b>Tonnes 2009</b>	<b>Tonnes 2010</b>
Garbage Collection	17,918	19,784
Garbage Depot	9,108	8,700
Blue Box Collection	12,396	12,887
Blue Box Depot	275	219
Yard Waste Collected	6,027	5,651
Yard Waste Depot	886	504
Bulky Yard Waste	154	60
SSO	2,731	2,941
Scrap Metal	628	641
Tires	35	56
MSHW	213	237
WEEE	90	102
<b>Total</b>	<b>50,461</b>	<b>51,782</b>

In 2009 and 2010, the City managed a total of 50,500 and 52,000 tonnes of residential waste (garbage and waste diversion) respectively. It is anticipated that small quantities of downtown commercial waste are blended with the residential garbage as part of the residential collection program.

In both 2009 and 2010, the City diverted close to 23,500 tonnes/year of residential waste of which close to 13,000 tonnes/year was Blue Box waste.

For the purposes of this Strategy, the 2010 residential Blue Box diversion rate was about 25.3% (i.e.  $(12,887+219)/51,782$ ).

Table 7.2 summarizes the current waste generation and the **Blue Box** diversion rate.

Table 7.2 City's Residential Blue Box Diversion Rate (2010)

<b>2010 Residential Solid Waste Generated and Diverted through Blue Box</b>		
<b>Residential Waste Stream/ Blue Box Material</b>	<b>Tonnes</b>	<b>Percent of Total Waste</b>
Total Waste Generated	51,782	-
Papers (ONP, OMG, OCC, OBB and fine papers)	9,359	18.1%
Metals (aluminum, steel, mixed metal)	797	1.5%
Plastics (containers, film, tubs and lids)	1,443	2.8%
Glass	1,507	2.9%
<b>Total Blue Box material diverted</b>	<b>13,106</b>	<b>25.3%</b>

The City's recovery rate for Blue Box materials is about 243 kg/hhld as compared to the Provincial average of about 177 kg/hhld.

Waste Diversion Ontario divides municipalities into a number of municipal groupings for comparison purposes. The City is included in the Medium Urban grouping with six other municipalities. Table 7.3 shows that the City's current Blue Box diversion rate is **above average** for its grouping.

Table 7.3 Residential Blue Box Diversion Rate Comparison to Medium Urban Rate

<b>Average Blue Box Diversion Rate (2010)</b>	
Municipality of Barrie (2010)	25.3%
Municipal Grouping: Medium Urban (2009)	20.4%

In 2010 the cost to manage the Blue Box program was approximately \$1,700,000. This amounts to \$130 per tonne collected, \$12 per capita or \$31 per household. The City did not receive revenue rebate from the sale of Blue Box material.

As Table 7.4 shows, 2010 net annual recycling costs for the City are well **below the proposed reasonable average** depicted for its grouping.



**Table 7.4 Municipality's Blue Box Costs vs. Medium Urban Costs**

<b>Recycling Cost (per tonne)</b>	
Barrie (2010)	\$ 130
Average Net Costs for Medium Urban (2009)	\$ 230
Proposed Reasonable Average for Medium Urban (2009)	\$ 170

*Potential Waste Diversion*

The City's current waste composition was estimated using 2010 waste audit data generated by the City. This included an assessment of separate recycling audits (4) and one garbage stream audit. The resulting estimate of waste composition was similar to that noted in the *Guidebook for Creating a Municipal Waste Recycling Strategy* (March 2010) for small and large urban municipalities.

On this basis it is estimated, as depicted in Table 7.5, that approximately 16,156 tonnes of Blue Box materials are available in the waste stream.

**Table 7.5 Potential Available Blue Box Material from the City of Barrie**

<b>Current and Potential Diversion</b>			
<b>Waste/Resource Material</b>	<b>Composition (%)</b> (from City of Barrie Waste Audit Sampling March 2010)	<b>Total Residential Waste Generated (tonnes)</b>	<b>Total Blue Box Material in Waste Stream (tonnes)</b>
Papers (ONP, OMG, OCC, OBB, fine papers, gable)	22	51,782	11,133
Metals (aluminum, steel, mixed metal)	2		1,087
Plastics (containers, film, tubs and lids)	4		2,227
Glass	3		1,709
<b>Total Blue Box Materials</b>	<b>31</b>	<b>51,782</b>	<b>16,156</b>

The current capture rate of Blue Box materials is about 81% (i.e. 13,106 /16,156). It is estimated that there are approximately 3,050 tonnes of Blue Box materials remaining in the City's waste stream.

As depicted in Table 7.6 Medium Urban municipalities have a recommended target

capture rate of 85% of the Blue Box material from the residential waste stream or 13,733 tonnes. The City would need to capture an additional 627 tonnes of additional Blue Box material to achieve this target (i.e. 13,733-13,106=627).

**Table 7.6 Capturing 85% of Available Blue Box Material from Barrie Residential Waste Stream**

<b>Current and Potential Diversion</b>					
<b>Waste/Resource Material</b>	<b>Composition (%)</b> (calculated from City of Barrie waste audits)	<b>Total Residential Waste Generated (tonnes)</b>	<b>Total Blue Box Material in Waste Stream (tonnes)</b>	<b>Target Blue Box Capture Rate (%)</b>	<b>Blue Box Material Available for Diversion</b>
Papers (ONP, OMG, OCC, OBB, fine papers, gable)	22	51,782	11,133	85	9,463
Metals (aluminum, steel, mixed metal)	2		1,087		924
Plastics (containers, film, tubs and lids)	4		2,227		1,893
Glass	3		1,709		1,452
<b>Total Blue Box Materials</b>	<b>31.2</b>	<b>51,782</b>	<b>16,156</b>	<b>85</b>	<b>13,733</b>

Capturing 85% of Blue Box material from the City’s residential waste stream would raise its Blue Box diversion rate to close to 26.5% (i.e. (13,106 + 627)/ 51,782 tonnes). The 627 new tonnes would increase Blue Box diversion by about 1.2 percentage points. It will be important to focus on minimizing the residual rate (i.e. contamination) in the collected tonnes to maintain an accurate representation of Blue Box diversion rates.

*Anticipated Future Waste Management Needs*

It is estimated that the City’s average growth rate will be approximately 1.8% per annum over the next 10 years based on the City’s Growth Management Plan.

Table 7.7 depicts the expected growth rates for solid waste generation and Blue Box material recovery (referencing unit weights in tonnes and based on a projected population growth rate of 1.8% and 85% Blue Box capture rate).



Table 7.7 Forecasting 85% Capture of Blue Box Material from Residential Waste Stream

<b>Anticipated Future Solid Waste and Blue Box Generation Rates</b>			
	<b>Current Year</b>	<b>Current Year + 5</b>	<b>Current Year + 10</b>
<b>Population</b>	140,000	153,062	167,342
<b>Total Waste</b>	51,782	56,613	61,895
<b>Blue Box Material Available</b>	13,733	15,014	16,415
<b>85% Capture Rate</b>	<b>11,673</b>	<b>12,762</b>	<b>13,952</b>

## 8.0 Planned Recycling System

The following section outlines some possible initiatives that could be implemented from 2012-2017 to help increase Blue Box diversion, capture and reduce costs.

The City has a high performing Blue Box program. Improving performance further will focus on maximizing the capture of recyclables using current program elements and then adding some new initiatives to the exist program to spur further capture of recyclables.

In general Priority initiatives could include improvements to:

- Staff training;
- Multi-residential recycling capture;
- Bag limits;
- Blue Box capacity at households; and
- Using Generally Accepted Principles (GAP) for Waste Management Tender Preparation.

In general Future initiatives could include:

- Add plastic film to the Blue Box;
- Enhance Public Space recycling; and
- Strengthen current Waste Management By-law.

### 8.1 Possible Strategy to Increase Recycling

The City presently diverts approximately **25.3%** of its wastes through its Blue Box program with a capture rate of about **81%**. This is very close to the target capture rate of **85%**.

A reasonable preliminary goal (2012-2013) would be a **26.5 %** waste diversion rate from Blue Box collection (i.e. about 1 percentage point more than current rate). This

would result in meeting the target capture rate of **85%**. It is expected that this could be accomplished within the context of the current program.

A second and aspirational future goal (2014-15) would be to achieve a **28%** diversion rate as a result of the Blue Box program. This would result in a capture rate of about **90%**. It is expected that this would require new initiatives in addition to the current program.

The path to approaching or attaining a **28%** diversion rate through the Blue Box would need to be evaluated during the upcoming waste and Blue Box collection tender process.

Table 8.1 highlights the estimated number of tonnes that would need to be captured to attain **25.3%** (current) and **26.5%** and **28%** diversion rates of Blue Box material from the waste stream. It includes consideration of the impact of population growth in the City (1.8% growth rate).

**Table 8.1 Forecasting Diversion Rates**

<b>Waste Diversion and Capture of Blue Box Materials</b>			
	<b>Diversion Rate %</b>		
	<b>Current (25.3)</b>	<b>26.5</b>	<b>28.0</b>
	<b>Capture Rate %</b>		
	<b>81</b>	<b>85</b>	<b>90</b>
	<b>tonnes captured/year</b>		
<b>2010</b>	<b>13,106</b>	<b>13,733</b>	<b>14,499</b>
<b>2015</b>	<b>14,329</b>	<b>15,002</b>	<b>15,852</b>
<b>2020</b>	<b>15,666</b>	<b>16,402</b>	<b>17,331</b>

Table 8.2 highlights the impact of attaining a 26.5% and 28% Blue Box diversion rate in terms of additional tonnes diverted and the impact on household recycling (divided across all households).

**Table 8.2 Forecasting Diversion Rates**

<b>Impact of Meeting 26.5% and 28% Diversion Rate</b>				
		<b>Current (25.3)</b>	<b>26.5</b>	<b>28.0</b>
<b>Capture</b>	tonnes/year	13,106	13,733	14,499
<b>Additional tonnes/year</b>	tonnes/year	0	627	1,393
<b>Per household</b>	kg/year	0	11.6	25.8
<b>Per household</b>	kg/week	0	0.2	0.5

## 8.2 Overview of Planned Initiatives

A number of waste recycling options and Best Practices that could be implemented and/or expanded were reviewed with Barrie staff 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 scores is provided in Appendix 1.

**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 were summarized into two tables:

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

These options can be considered by staff and Council as part of this Strategy.

**Table 8.3 Priority Initiatives (2012-2013)**

<b>Possible Priority Initiatives (Immediate Future 2012-2013)</b>				
<b>Initiative</b>	<b>Estimated Implementation Cost</b>	<b>Estimated Annual Operating Cost</b>	<b>Implementation Time Line</b>	<b>Comments</b>
<b>Training of Key Program Staff</b>	Staff time	Free training is available from CIF (CIF Blue Box Recycler Training Courses).  Estimate \$3,000-5,000/year in travel costs.	Ongoing	Better educated staff will be able to develop a high quality waste and Blue Box collection tender and better manage the overall program.
<b>Continue with Multi-residential Campaign</b>	City has applied for funding from CIF for purchase of carts, in-apartment bins, development of a database and P&E.	Incremental cost for additional collection of recyclables.	Ongoing	Work with collection contractor and CIF to maximize program.
<b>Optimization of Collection Operations</b>	Staff time	Not applicable	2012	Review current Blue Box collection (e.g. routing, methods of collection) to determine if there are ways to improve efficiency.





**Possible Priority Initiatives (Immediate Future 2012-2013)**

Initiative	Estimated Implementation Cost	Estimated Annual Operating Cost	Implementation Time Line	Comments
				Test the marketplace in the upcoming tender to determine if potential changes can result in additional capture and/or reduced costs.
<b>Investigate Reduction of Bag Limits and Collection Frequency</b>	Staff time	None	2012-2013	Test the marketplace in the upcoming tender to determine impact of reduced bag limits and collection frequency, additional capture and/or reduced costs.  Discuss with public during Public Consultation for LRSWMS
<b>Following Generally Accepted Principles (GAP) for Effective Procurement and Contract Management</b>	Staff time	None	2012-2013	Use free tender templates for developing tender. Available on-line at CIF/WDO website.
<b>Provide Residents with larger capacity Blue Boxes (22 gal.) upon request</b>	Funding available  CIF priority area=50% funding in 2011 Approx. \$2.50-3.50/Blue Box (with funding)	Staff time to distribute boxes.	2012-2013	Can be used to provide additional Blue Boxes for residents.  Support program with updated flyers handed out with new Blue Boxes.
<b>Promotion and Education</b>	Within cost of current program	Within cost of current program	Ongoing	Focus on "Call to Action" to get to 85% and then 90% capture of Blue Box materials.  Ensure that new residents are quickly and well educated on the City's recycling program.



Table 8.4 Future Initiatives (2014-2015)

<b>Possible Future Initiatives (2014-2015)</b>				
<b>Initiative</b>	<b>Estimated Implementation Cost</b>	<b>Estimated Annual Operating Cost</b>	<b>Implementation</b>	<b>Comments</b>
<b>Broaden material categories for Blue Box</b>	Need to include in upcoming tender to understand cost	Not applicable	2014	Consider adding plastic film.  Explore cost implications in upcoming tender.
<b>Updated Waste By-Law (includes mandatory recycling and diversion)</b>	Staff time	Not applicable	2014	Develop new by-law to include mandatory requirement to divert Blue Box wastes.
<b>Public Space Recycling</b>	Estimated \$20,000-\$30,000 for additional recycling bins  CIF Funding support is available	Explore in upcoming tender	2014	Work to expand current program.  Place additional recycling bins in high foot traffic areas.  Reinforces importance of Blue Box recycling to residents and businesses.

### 8.3 Contingencies

The Priority initiatives can be impacted if there is no City funding available. However, there is CIF funding available so at least some of the initiatives should be able to be implemented.

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 recycling program is considered a Blue Box program fundamental Best Practice and will be a key component of this Waste Recycling Strategy.

Once implementation of the Strategy begins, the performance of the Strategy 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. Some suggested approaches for monitoring the City's Strategy is outlined in Table 9.1.



**Table 9.1 Blue Box Monitoring Strategy**

<b>Recycling System Monitoring</b>		
<b>Monitoring Topic</b>	<b>Monitoring Tool</b>	<b>Frequency</b>
Meet regularly with collection contractor	Meet with collection contractor to identify any problems with Blue Box collection(e.g. contamination).	Monthly
Measurement of Blue Box materials captured	Documented total weight data as outlined in this Strategy and compare it to target capture rates (85%).	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. Consider ongoing curbside waste audits to verify program composition.	Once every 1-2 years.
Program Accuracy	Segregate residential Blue Box material tonnage from Commercial tonnage.	Annual summary
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.	Annual summary
Customer satisfaction	Customer survey (e.g., telephone); tracking calls/complaints received to the municipal office.	Once every 3 years.
Opportunities for improvement	Customer survey (e.g., telephone); tracking calls/complaints received to the municipal office	On-going
Planning activities	Describe what initiatives have been fully or partially implemented, what will be done in the future	Annual summary
Review of Strategy	A periodic review of the Strategy to monitor and report on progress, to ensure that the selected initiatives are being implemented, and to move forward with continuous improvement	Annual summary  Update Strategy every 5 years



## 10.0 Conclusion

The City currently has a good Blue Box waste diversion rate (25%), high capture rate (81%) and a low program cost for its Blue Box recycling program.

A phased process to increase the capture rate and maintain, if not reduce, costs is **recommended**.

There are some fairly low cost priority initiatives that can be implemented to help boost the capture rate within the context of the current program. There are a number of low cost future initiatives that could be implemented.

It is recommended that the initiatives be reviewed annually and implemented as budget allows.

It is **recommended** that this Strategy be fully updated in 2017.

**Appendix 1**  
**Waste Recycling Option Scores**

## Waste Recycling Options Summary of Scores-City of Barrie

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		
<b>Promotion and Outreach</b>									
Yes	Public Education and Promotion Program	4	2.5	N/A	4	4	3	17.5	70
Yes	Training of Key Program Staff (Administration and depot attendants)	3	4	N/A	5	N/A	3	15	75
<b>Collection</b>									
Yes	Optimization of Collection Operations	3	3	N/A	2	4	2.5	14.5	75
Yes	Bag Limits (for waste)	4.5	4.5	N/A	4	3	2	18	72
Yes	Enhancement of Recycling Depots (new signs, new bins, traffic flow, etc)	4	4	N/A	4	2.5	4	18.5	74
Yes	Provision of Free Blue Boxes	4	2	N/A	2.5	4	4.5	17	68
Yes	Collection Frequency	5	4	N/A	4	3	2	18	72
Yes	Broaden materials categories for Blue Box	3	4	3	2.5	5	5	22.5	75
<b>Transfer and Processing</b>									
No	Optimization of Processing Operations	4	4	4	2	N/A	3	17	68
<b>Partnerships</b>									
Yes	Multi-Municipal Collection and Processing of Recyclables	4	4	4	4	4	1	21	70
Yes	Standardized Service Levels and Collaborative Haulage Contracting	3	3	N/A	4	5	2	17	68
No	Intra-Municipal Committee	2.5	2.5	N/A	4	N/A	3	12	60
<b>Additional Research</b>									
No	Assess Tools and Methods to Maximize Diversion	4	2	N/A	3	3	3	15	60
<b>Administration</b>									
Yes	Following Generally Accepted Principles for Effective Procurement and Contract Management	2	4	N/A	5	N/A	3	14	70
<b>Other Options</b>									
Yes	Updated Waste By-Law (Includes mandatory recycling and diversion)	4.5	4.5	N/A	5	4	1	19.0	76