

**A**  
**Waste Recycling Strategy**  
**for the**



November 2010

Prepared with assistance from  
**Waste Diversion Ontario**

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## 1.0 Introduction

This Waste Recycling Strategy (WRS) was initiated by the Bluewater Recycling Association (Association) to develop a plan to increase the efficiency and effectiveness of its recycling programs and maximize the amount of blue box material diverted from disposal. Specifically, the purpose of this recycling plan is to:

- Maintain or increase the blue box diversion rate above the average as identified by Waste Diversion Ontario (WDO) for the relevant municipal groupings;
- Maximize capture rates of blue box materials through existing and future waste diversion programs;
- Improve the cost-effectiveness of recycling in our communities; and
- Increase waste diversion in the local Industrial, Commercial and Institutional (ICI) sector.

The Association is responsible for managing the waste diversion programs in the municipalities it services.

The Association faces a number of waste management challenges, which this Waste Recycling Strategy will help address. In particular, this strategy will help the municipalities conform to WDO's requirement of Ontario municipalities to have a waste diversion strategy in place, and also to help the local municipalities maximize Blue Box program funding through the adoption of Blue Box best practices. The strategy will also help to explore opportunities that will reduce waste management program costs.

This Waste Recycling Strategy was developed with support from Continuous Investment Fund (CIF) and using the Continuous Investment Fund's *Guidebook for Creating a Municipal Waste Recycling Strategy*.

## **2.0 Overview of the Planning Process**

This Waste Recycling Strategy was prepared through the efforts of the following individuals:

### **2.1 Board of Directors**

Chairman	George Robertson, South Huron
Vice-Chairman	Meredith Schneider, North Perth
Director	Ray Hurd, Goderich
Director	Emery Huszka, Dawn-Euphemia
Director	John Russell, Lambton Shores
Director	Lucy Hendrikx, North Middlesex
Director	Brad Richards, Strathroy Caradoc
Director	Barb MacLean, West Perth

### **2.2 Management**

President	Francis Veilleux
Vice President	Mathew Keeley

A temporary employee was retained to assist the Association with the development of this Waste Recycling Strategy. Information on the solid waste generation and recycling programs were obtained from the WDO datacall and from the Association's records.

This Waste Recycling Strategy was distributed to the board of directors representing each municipality for review. Comments received during the meeting were incorporated into the final Waste Recycling Strategy, which will then be resubmitted to the Member Municipalities for public consultation.

The next steps in this process include:

- This Waste Recycling Strategy will be distributed to the solid waste managers of each municipality for review.
- Confirm, as a group, which recommended options the group intends to proceed with first;
- Obtain input from the public on how best to proceed with implementation of the WRS and if there are other improvements to the recycling program the public would like to see;
- Confirm the availability of funding, both from outside sources and from organizational budget (either current or in following year);
- Prepare a project workplan (which may consist of a study, pilot project, development of materials, etc, depending on the option being implemented);
- Prepare a detailed implementation plan for each project initiative; and
- Carry out the project.

### **3.0 Study Area**

The study area for this Waste Recycling Plan includes:

#### **3.1 Huron County**

- Town of Goderich
- Municipality of Huron East
- Municipality of South Huron
- Municipality of Bluewater
- Municipality of Central Huron
- Township of Morris Turnberry

#### **3.2 Lambton County**

- Township of Dawn/Euphemia
- Municipality of Lambton Shores
- Township of Warwick
- Village of Oil Springs
- Township of Brooke Alvinston

#### **3.3 Middlesex County**

- Township of Lucan-Biddulph
- Township of Adelaide Metcalfe
- Township of Strathroy-Caradoc
- Township of Southwest Middlesex
- Municipality of Middlesex Centre
- Municipality of North Middlesex

#### **3.4 Perth County**

- Town of St. Marys
- Township of Perth South
- Municipality of North Perth
- Municipality of West Perth
- Municipality of Perth East

And any part or whole municipalities the Association may service from time to time during the life of this plan.

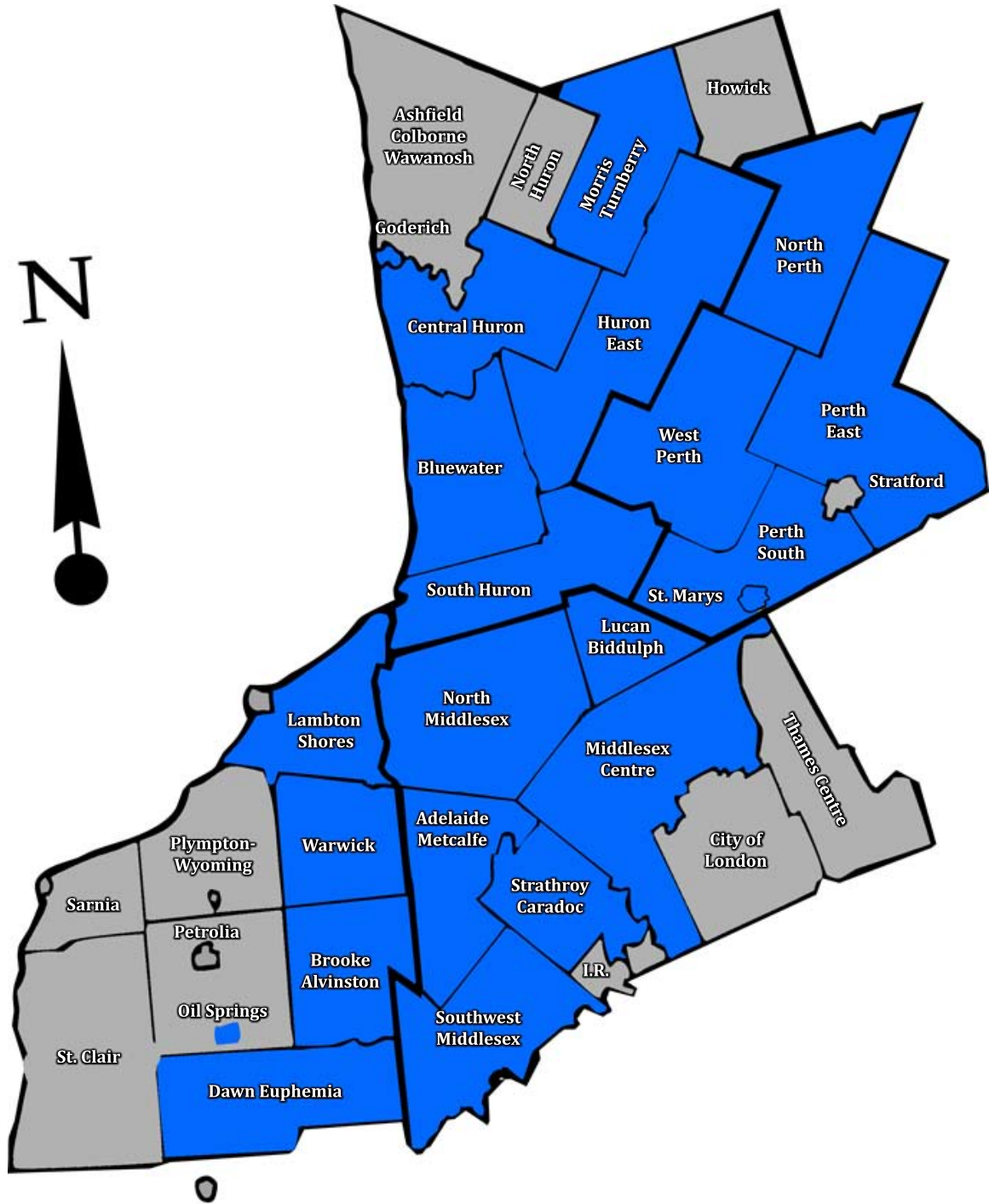
### **3.5 Sectors**

This Waste Recycling Plan will address the following sectors:

- Residential single-family;
- Residential multi-family, such as apartment buildings or condominiums;
- Waste generated by municipal operations;
- Small businesses, such as in downtown areas; or
- Small institutions, for example schools or small community centres.

This plan will not focus on materials generated within the industrial, commercial and institutional sector (IC&I) since they independently manage their own collection and disposal of solid waste, typically by using private haulers. This does not preclude their participation in our program offerings.

### 3.6 Map of Study Area





## 4.0 Public Consultation Process

The public will be advised of this Waste Recycling Strategy and input sought both on the strategy's implementation and suggestions for other improvements to the recycling program. Opportunities for promoting the Waste Recycling Strategy and for requesting input include:

- Holding an open house;
- Association website;
- Association newsletters or other notices;
- Regular municipal mailings;
- Mass media (radio, local newspaper, local cable, etc); and
- Posters in public areas, such as libraries or municipal centres.

## 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 key drivers for the development of this waste recycling strategy are primarily to lower costs and make operations more efficient. Specifically, the key driver is WDO's requirement for municipalities to have a waste recycling strategy in place and WDO's plan to increasingly tie available funding to the adoption of blue box program best practices. Other drivers include:

- Identifying opportunities for waste management system efficiencies and cost savings;
- Expanding the useable lifespan of local landfills;
- Improving the diversion rate and recovering more recyclables (in particular, higher-value materials);
- Improving cost/service efficiencies;
- Reducing the amount of contamination in the recyclables waste stream; and
- Securing markets for additional recyclable materials.

## 6.0 Goals and Objectives

This Waste Recycling Strategy has identified a number of goals and objectives for the Association’s member municipalities. These are presented below.

<b>Waste Recycling Goals and Objectives</b>	
<b>Goals</b>	<b>Objectives</b>
To maximize diversion of residential/municipal solid waste through the blue box/recycling program	<ul style="list-style-type: none"> <li>• Divert 45% of municipal solid waste through the blue box program</li> </ul>
To maximize capture rates of blue box materials through existing and future programs	<ul style="list-style-type: none"> <li>• Increase capture of blue box municipal solid waste to 90% within 5 years</li> </ul>
To improve the cost-effectiveness of recycling in our community	<ul style="list-style-type: none"> <li>• Reduce recycling costs per tonne by 10%</li> </ul>

This Waste Recycling Strategy has also identified a series of broader community goals to which it can contribute. These broader community goals are presented below.

- To increase the sustainability of our community
- To make our community a cleaner, greener place to live
- To increase employment
- To encourage a green economy
- To reduce our emissions and carbon footprint
- To enhance service/value for our taxpayers

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

### 7.1 Program Characteristics

In 2008, the municipalities participating in the Association’s programs had a population of 159,536. The Association is home to 72,383 total households or dwellings. Of these, 56,590 are urban, mostly single-family households and 10,524 rural single-family households. There are also an additional 5,269 seasonal dwellings, which are generally occupied during the months of May through October.

### 7.2 Current Waste Generation and Diversion

Currently, the municipalities participating in the Association’s programs generate approximately 28,169 tonnes of residential solid waste per year. Of this, 11,758 tonnes, or 42% percent, is diverted through the blue box program. Currently, the most common material recycled is paper.

The table below summarizes the current waste generation and blue box diversion rates.

<b>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	28,169.14	-
Papers (ONP, OMG, OCC, OBB and fine papers)	7,892.70	67.12%
Metals (aluminum, steel, mixed metal)	1,009.58	8.59%
Plastics (containers, film, tubs and lids)	1,055.35	8.98%
Glass	1,800.82	15.32%
Total Blue Box material currently diverted	11,758.45	41.74%

As the table below indicates, the Association’s current diversion rate is above average for its WDO municipal grouping.

<b>Average Blue Box Diversion Rate (year)</b>	
Bluewater Recycling Association	41.74%
Municipal Grouping: Rural Collection – South	22.58%

### 7.3 Potential Waste Diversion

To estimate the Association’s current waste composition, the Association relied on a waste composition audit performed in 2008 in one of its member municipalities.

A total of approximately 13,330.43 tonnes of blue box recyclable materials are available for diversion, of which approximately 1,571.98 tonnes are still currently in the waste stream. Estimates of blue box material available for diversion are listed in the table below.

<b>Current and Potential Diversion</b>			
<b>Material</b>	<b>Total Available in Waste Stream (tonnes/year)</b>	<b>Currently Recycled (tonnes/year)</b>	<b>Potential Increase (tonnes/year)</b>
Papers (ONP, OMG, OCC, OBB and fine papers)	8,769.48	7,892.70	876.78
Metals (aluminum, steel, mixed metal)	1,194.62	1,009.58	185.04
Plastics (containers, film, tubs and lids)	1,457.10	1,055.35	401.75
Glass	1,909.23	1,800.82	108.41
<i>Total</i>	13,330.43	11,758.45	1,571.98

Diverting the blue box material remaining in the Association’s waste stream could raise its waste diversion rate to 47.33% (up 5.49%).

### 7.4 Existing Programs and Services

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

- Mandatory recycling
- User pay in most communities
- Some also have bag limits
- Some also require clear bags for waste

Collection services of regular waste are provided to the residents using a variety of methods including the Association, contractors, municipal forces, or simply no service, while recycling services are provided primarily by the Association. Disposal and recycling services are paid for primarily through individual locally operated user pay systems with support from the general tax fund. Once recyclable materials have been collected, they are taken to the Association’s Material Recovery Facility in Huron Park.

In 2008, the total net annual recycling costs for the Association was \$3,457,351. This amounts to \$297.93 per tonne, or \$47.76 per household. As the table below shows, net annual recycling costs for the Association are below average for its WDO municipal grouping.

<b>Net Recycling Cost (per tonne per year)</b>	
Bluewater Recycling Association	\$297.93
Municipal Grouping: Rural Collection – South	\$419.64

### ***7.5 Anticipated Future Waste Management Needs***

Solid waste generated rates in the Association are expected to grow over the next 10 year planning period. The Table below depicts the expected growth rates for solid waste generation and blue box material recovery (based on projected population growth rates).

<b>Anticipated Future Solid Waste Generation Rates and Available Blue Box Material</b>			
	<b>Current Year</b>	<b>2015</b>	<b>2020</b>
<b>Population</b>	159,536	162,234	164,932
<b>Total Waste (tonnes)</b>	28,169.14	28,645.51	29,121.89
<b>Blue Box Material Available (tonnes)</b>	13,330.42	13,555.85	13,781.28

## 8.0 Planned Recycling System

### 8.1 Evaluation of Waste Recycling Best Practices

The Association reviewed a number of options for consideration in its Waste Recycling Strategy based on proven Best Practices. A summary of the options reviewed are provided below:

Status	Description of Options/Best Practices  (For more information: <i>More information: Blue Box Program Enhancement and Best Practices Assessment Project Final Report, Volume 1</i> )	Warrants Additional Attention?
<b>Promotion and Outreach</b>		
Currently in use	<p><b>Public Education and Promotion Program</b></p> <p>Public education and promotion programs are crucial for ensuring the success of local recycling programs. Well-designed and implemented education and promotion programs can have impacts throughout the municipal recycling program, including participation, collection, processing, and marketing of materials. Furthermore, having a P&amp;E plan contributes toward the amount of WDO funding a municipality receives as identified in best practice section of the WDO municipal datacall. For example, benefits of public education and promotion programs include:</p> <ul style="list-style-type: none"> <li>• Greater participation levels and community involvement</li> <li>• Higher diversion rates</li> <li>• Less contamination in recovered materials, potentially leading to higher revenues</li> <li>• Lower residue rates at recycling facilities</li> </ul> <p>Stewardship Ontario has prepared a Recycling Program Promotion and Education Workbook and other materials, which are available on Stewardship Ontario's Recyclers' Knowledge Network (<a href="http://vubiz.com/stewardship/Welcome.asp">http://vubiz.com/stewardship/Welcome.asp</a>).</p>	Yes. Consider formal plan.
Currently in use	<p><b>Training of Key Program Staff</b></p> <p>A well-trained staff can lead to greater cost and time efficiencies and improved customer service. Knowledgeable staff (including both front line staff and policy makers) have a greater understanding of their municipal programs and can perform their responsibilities more effectively. There are a number of low-cost training options available. The CIF holds periodic Ontario Recycler Workshops that discuss recycling program updates (<a href="http://www.wdo.ca/cif/orw.html">www.wdo.ca/cif/orw.html</a>). The MWA, Waste Diversion Ontario (WDO), the association of Municipalities of Ontario (AMO), Stewardship Ontario and the Solid Waste Association of Ontario (SWANA) can also be sources of information guides, workshops, or training on recycling or solid waste management.</p>	No

Status	Description of Options/Best Practices  (For more information: <i>More information: Blue Box Program Enhancement and Best Practices Assessment Project Final Report, Volume 1</i> )	Warrants Additional Attention?
<b>Collection</b>		
Currently in use	<p><b>Optimization of Collection Operations</b></p> <p>The purpose of optimizing collection operations is to collect more recyclables using fewer financial, capital and human resources. This requires critically assessing both collection and processing operations (as the two are closely linked) and making changes that reduce costs while at the same time increases capture of blue box materials. The relevant options for optimization vary according to the size, composition and location of municipalities, as well as their available processing options.</p>	Yes, with automated collection.
Currently in use	<p><b>Established and Enforced Policies that Induce Waste Diversion</b></p> <p>Non monetary incentives like bag limits restrict the number of bags of garbage a resident can dispose of per collection. This encourages residents to divert more recyclable materials in order to not exceed the bag limit. Monetary incentive like user pay provides an economics incentive to recycle. Clear bags facilitate enforcement initiatives</p> <p>Bag limits can also be used in conjunction with bag tags (e.g., user fees). For example, some municipalities allow residents to dispose of a number of bags for free, with additional bags requiring a purchased bag tag.</p>	No
Currently partially used.	<p><b>Enhancement of Recycling Depots</b></p> <p>Where curbside collection programs are not feasible, recycling depots provide an inexpensive means for municipalities to divert recyclable materials from disposal. Enhancements to recycling depots may include (but are not limited to):</p> <ul style="list-style-type: none"> <li>• Providing satellite depots to improve public access and convenience;</li> <li>• Enhancing the conditions at the landfill depot (e.g., landscaping, general cleanliness, maintenance);</li> <li>• Incorporating friendly, easy-to-read signage;</li> </ul> <p>Providing additional part-time staff to address seasonal fluctuations and visiting traffic.</p>	Yes.
Currently in use	<p><b>Provision of Free Blue Boxes</b></p> <p>Providing free blue boxes helps to ensure that residents have sufficient storage capacity for recyclables. While this is initially done at the roll-out of the blue box program, many municipalities offer free boxes to new residents or residents moving into new homes. Some municipalities also offer one extra free box or bin for residents per year. However, in municipalities offering only basic recycling services, one blue box container may be sufficient.</p>	No

Status	Description of Options/Best Practices  (For more information: <i>More information: Blue Box Program Enhancement and Best Practices Assessment Project Final Report, Volume 1</i> )	Warrants Additional Attention?
Currently partially used.	<p><b>Collection Frequency</b> The efficiency of curbside collection of recyclables is dependent on a number of factors, including the rural nature of the community, the types of recyclable materials included in the recycling program, the type of equipment used to collect the recyclables, among other things. In some circumstances, bi-weekly collection of recyclables can be more cost-effective than weekly collection, assuming that collected tonnages remain the same overall and residents have enough storage capacity to accommodate storing their blue box materials for two weeks.</p>	Yes, with automated collection.
<b>Transfer and Processing</b>		
Currently in use	<p><b>Optimization of Processing Operations</b> Similar to the optimization of collection operations, the purpose of optimizing processing operations is to process more blue box materials for less cost. Processing operations may be optimized either through upgrading or maximizing the use of existing processing equipment, or by partnering or contracting with processing facilities in other communities. Because processing and collection are directly linked, examination of one must be reviewed with the other.</p>	No
<b>Partnerships</b>		
Currently in use	<p><b>Multi-Municipal Collection and Processing of Recyclables</b> Small and medium-sized municipalities often face considerable cost and capital challenges when looking to collect and process recyclables from its residents. However, working collaboratively with other municipalities to provide these services can increase economies of scale and allow for the sharing of resources.</p>	No
Currently in use	<p><b>Standardized Service Levels and Collaborative Haulage Contracting</b> Collaborative haulage contracts for blue box materials can take advantage of increased purchasing power through municipal partnerships and ensures that the partner municipalities provide common levels of services to its residents. Standardizing collection programs among municipal partners increases the amount of materials being diverted from disposal, allows for common education and promotion materials, increases collector efficiencies, and can potentially reduce overall costs.</p>	No
Currently in use	<p><b>Intra-Municipal Committee</b> A committee comprised of representatives from local municipalities can help municipalities work toward common regional goals. Committee members can identify opportunities for beneficial collaborations between municipalities and can provide support and feedback on each others waste diversion programs.</p>	No



Status	Description of Options/Best Practices  (For more information: <i>More information: Blue Box Program Enhancement and Best Practices Assessment Project Final Report, Volume 1</i> )	Warrants Additional Attention?
<b>Additional Research</b>		
Limited Use	<p><b>Assess Tools and Methods to Maximize Diversion</b></p> <p>Waste recycling programs fail or succeed based on their ability to overcome public barriers to participation. Additional research on the appropriate tools and methods can help how best to maximize opportunities to divert Blue Box materials from the waste stream and reduce waste going to disposal. Possible topics may include:</p> <ul style="list-style-type: none"> <li>• The types of waste diversion behaviours currently undertaken in each household;</li> <li>• Perceived barriers to participation in waste diversion programs;</li> <li>• Willingness to participate in waste recycling programs;</li> <li>• How residents receive information or learn about local waste recycling programs;</li> <li>• The tools residents need to increase their participation in recycling programs.</li> </ul> <p>This information can be collected through telephone surveys and focus groups. Methods and tools identified through the survey can be tested for performance using focus groups or through a pilot project.</p>	Yes
<b>Administration</b>		
Currently in use	<p><b>Following Generally Accepted Principles for Effective Procurement and Contract Management</b></p> <p>A considerable number of municipalities in Ontario contract out the collection and processing of recyclables. To ensure that municipalities obtain good value for money, Municipalities should follow generally accepted principles (GAP) for effective procurement and contract management. Key aspects of GAP include planning the procurement well in advance, issuing clear RFPs, obtaining competitive bids, and including performance-based incentives.</p>	No

## 8.2 Overview of Planned Initiatives

The following priority initiatives are recommended to improve Blue Box diversion:

- **Optimization of Collection Operations:** Convert the majority of households serviced to automated collection for optimizing the collection of recyclables.
- **Enhancement of Recycling Depots:** Establish convenience depots throughout the communities serviced to capture additional materials.
- **Collection Frequency:** Where feasible, change the current number of collections to 26 for set outs at curbside.

The following option was identified as a future initiative:

- **Promotion and Education:** Enhance the existing solid waste communications program, beginning with the preparation of a communications strategy.
- **Assess Tools and Methods to Maximize Diversion:** Conduct additional research to identify barriers to increasing waste diversion (e.g., physical or perceived barriers to participation in recycling programs) and the tools and methods required to address them.

The priority and future initiatives are described in more detail below, including steps for implementation.

## 8.3 Priority Initiatives

### Initiative: Optimization of Collection Operations

#### Overview

Collection efficiency means getting more for less—picking up more recyclables using fewer trucks, fewer staff and/or less time. Optimized curbside collection operations maximize the quantity of target materials set out at each stop on collection day and minimize the amount of time required to collect that material, thereby minimizing the unit costs involved.

With access to single stream collection of recyclables – the recyclables can then be collected using standard single compartment collection vehicles, in some instances, with automated loading capabilities. The use of larger capacity containers encourages consideration of a reduction in collection frequency (from weekly to every other week) with resulting cost savings. The use of a large container also allows for the collection of additional recyclable materials (such as a full range of fibres and rigid plastic containers). It also provides convenience and ease of use to the resident and/or business.

Single stream automated recycling has the following benefits:

- Easier and more convenient for residents
- Increased recyclable capture rates due to the ability to collect more types and volumes of materials
- Reduction in scavenging

- Less wind scatter and litter
- Protection of paper from rain if carts are used
- Ability to use high capacity collection vehicles, including automated collection vehicles in some areas
- Improved collection efficiencies (reduced seconds per stop, more materials per stop)
- Reduced fatigue and risks to workers

### **Implementation**

- Assess current collection system.
- Evaluate options for optimization (e.g., automated collection, frequency, etc).
- Plan conversion activities.

### **Initiative: Enhancement of Recycling Depots**

#### **Overview**

Drop-off depots for overflow materials make recycling available at locations and facilities where public traffic is present. Recycling receptacles are an opportunity to collect material without curb side collection costs, adding material to the revenue stream without the same level of cost for collection.

#### **Implementation**

- Assess current collection system access.
- Evaluate options for service (e.g., type of container, location, etc).
- Plan implementation activities

### **Initiative: Collection Frequency**

#### **Overview**

Selection of collection frequency needs to be made with consideration to the variety and volume of recyclables recovered, the type, number, and volume of household containers supplied to the resident, the type of collection equipment available for use, and how recyclables collection is integrated with other solid waste collection services.

Bi-weekly collection of recyclables on its own can be more cost-effective than weekly collection, provided there is no appreciable loss of tonnage, and provided that householders are given sufficient container capacity to meet or exceed their two-week material storage requirements. The conversion to automated collection facilitates this change.

#### **Implementation**

- To be reviewed with automated collection implementation above.

## **8.4 Future Initiatives**

### **Initiative: Promotion and Education**

#### **Overview**

Public education and promotion programs are crucial for ensuring the success of local recycling programs. Well-designed and implemented education and promotion programs can have impacts throughout the municipal recycling program, including participation, collection, processing, and marketing of materials. Furthermore, having a P&E plan contributes toward the amount of WDO funding a municipality receives as identified in best practice section of the WDO municipal datacall. For example, benefits of public education and promotion programs include:

- Greater participation levels and community involvement
- Higher diversion rates
- Less contamination in recovered materials, potentially leading to higher revenues
- Lower residue rates at recycling facility

Stewardship Ontario has prepared a Recycling Program Promotion and Education Workbook and other materials, which are available on Stewardship Ontario's Recyclers' Knowledge Network (<http://vubiz.com/stewardship/Welcome.asp>).

Examples of possible promotion and education opportunities include:

- Providing a booth or distributing information at local events;
- Posting comprehensive information about the recycling program on the website;
- Develop information tools for distribution to Schools;
- Articles and notices in municipal newsletters;
- Direct mailings;
- Collection calendar; and
- Articles in the local newspaper, among other things.

#### **Implementation**

- Prepare communication strategy, including target audience, key messages, message mediums (e.g., brochure, website, workshops, etc), distribution plan.
- Identify opportunities for school board involvement and for students to achieve their Ontario "Community Involvement Activities" school requirement by participating in recycling outreach activities.
- Prepare budget.
- Draft copy, prepare graphic design and roll-out communications.

## **Initiative: Assess Tools and Methods to Maximize Diversion**

### **Overview**

Waste recycling programs fail or succeed based on their ability to overcome public barriers to participation. Additional research on the appropriate tools and methods can help how best to maximize opportunities to divert Blue Box materials from the waste stream and reduce waste going to disposal. Possible topics may include:

- The types of waste diversion behaviours currently undertaken in each household;
- Perceived barriers to participation in waste diversion programs;
- Willingness to participate in waste recycling programs;
- How residents receive information or learn about local waste recycling programs;
- The tools residents need to increase their participation in recycling programs.

This information can be collected through telephone surveys and focus groups. Methods and tools identified through the survey can be tested for performance using focus groups or through a pilot project.

### **Implementation**

- Identify opportunities for improvements requiring research
- Conduct barrier research.
- Develop public engagement strategy.

## 8.5 Costs of Recommended Options

Once reviewed, the available Waste Recycling Strategy options were organized into Priority Initiatives and Future Initiatives. The estimated cost for implementing the priority initiatives is estimated to be approximately \$4,962,000, while implementation of the future initiatives is estimated at \$50,000. The Table below presents the Priority Initiatives and Future Initiatives and their estimated costs. A review of these initiatives and their steps for implementation are reviewed on the following pages.

<b>Priority and Future Initiatives</b>		
<b>Initiatives</b>	<b>Implementation Costs</b>	<b>Operation Costs</b>
<b>Priority Initiatives</b>		
Optimization of Collection Operations • Convert most areas from Manual to Automated Collection	\$4,299,500	Annual Savings of up to \$1,000,000
Enhancement of Recycling Depots • Establish Convenience Depots throughout service area	\$662,500	\$156,000
Collection Frequency • Reduce collection frequency to biweekly for recycling when converted to automated	Minimal	Minimal
<b>Estimated Total Cost (Priority Initiatives)</b>	<b>\$4,962,000</b>	Up to (\$844,000)
<b>Future Initiatives</b>		
Public Education and Promotion Program • Design formal plan	\$25,000	Variable
Assess Tools and Methods to Maximize Diversion • Conduct focus groups to study barriers to additional diversion	\$25,000	Variable
<b>Estimated Total Cost (Future Initiatives)</b>	<b>\$50,000</b>	Variable

## 8.6 Contingencies

Even the best planning can be delayed by a variety of foreseen and unforeseen circumstances. Predicting and including contingencies can help to ensure that these risks are managed for minimum delay. The table below identifies contingencies for possible planning delays.

<b>Waste Recycling strategy Contingencies</b>	
<b>Risk</b>	<b>Contingency</b>
Insufficient funding	Raise/implement user fees
	Explore and apply for other funding sources
	Delay lower-priority initiatives
	Increase proportion of municipal budget to solid waste management
Public opposition to planned recycling initiatives	Improve public communications
	Engage community/stakeholders to discuss initiatives/recycling plan
Lack of available staff	Prioritize department/municipal goals and initiatives
	Hire summer student to help with planning (may be available funding)
Permit requirements	Identify permit requirements early on in process
	Establish a “permit requirements” checklist

## 9.0 Monitoring and Reporting

The monitoring and reporting of the Association’s 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 Waste Recycling System will be monitored and measured against the baseline established for the current system. Once the results are measured, they will be reported to the member municipalities and the public.

The approach for monitoring the Association’s waste recycling program is outlined in the table below.

<b>Recycling System Monitoring</b>		
<b>Monitoring Topic</b>	<b>Monitoring Tool</b>	<b>Frequency</b>
Total waste generated (by type and by weight)	Measuring of wastes and recyclables at transfer station/disposal site i.(e.g., weigh scale records)	Each load
Diversion rates achieved (by type and by weight)	Formula: (Blue box materials + other diversion) ÷ Total waste generated * 100%	Monthly
Waste disposed (by type and by weight)	Reconciliation of weigh scale tickets	Monthly
Program participation	Monitoring set-out rates	Every 1 to 3 years
Customer satisfaction	Tracking calls/complaints received to the municipal office	On-going
Opportunities for improvement	Tracking calls/complaints received to the 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 Plan	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	Every 3 to 5 years



## **10.0 Conclusion**

This Waste Recycling Strategy provides a path forward for improving the recycling programs of the Association and establishing a common system that could help improve program cost-efficiencies. The review of the waste recycling system for the Association shows that, recycling costs are generally lower than other similarly-sized programs in Ontario, and diversion levels are generally higher. By continuing to work together and capitalizing on regional economies of scale and regionally consistent waste management communications, the Association hopes to continue to achieve more effective waste diversion while maintaining efficient operating costs.