

**WASTE RECYCLING STRATEGY  
CIF No. 293**

**prepared for:**

**THE MUNICIPALITY OF  
NORTHERN BRUCE PENINSULA**

Our File: 210268  
April 2012

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## 1.0 INTRODUCTION

This Waste Recycling Strategy (WRS) was initiated by the Municipality of Northern Bruce Peninsula (Municipality) to develop a plan to increase the efficiency and effectiveness of the current recycling programs and maximize the amount of blue box material diverted from disposal. Specifically, the purpose of this recycling plan is to improve service, use and cost efficiency, and increase the site life of the municipal landfills through adoption of 'Best Practices'. This plan will help build upon the Municipality's commitment to the environment and create the opportunity to receive increased funding from Waste Diversion Ontario (WDO), as funding distribution is increasingly dependent on the performance of the Municipality's recycling program and adoption of 'Best Practice' initiatives.

It is the responsibility of the Municipality to manage their own residential solid waste through offering and maintaining a range of waste management services which currently include:

- Weekly curbside pick-up and dumpster service for household waste,
- Five recycling depot locations,
- Three municipal waste disposal sites, and
- Free drop-off of tires and electronics at the municipal landfills.

The Municipality faces a number of waste management challenges, which this WRS will help address. In particular these challenges include, a low population density, limited accessibility to residents due to the geography, high seasonal and transient population, and lack of neighbouring municipalities.

This WRS was developed with funding support from the Continuous Improvement Fund (CIF) and using the CIF's *Guidebook for Creating a Municipal Waste Recycling Strategy* (March 2010). This WRS generally follows the format structure of the template provided within the CIF Guidebook.

## 2.0 OVERVIEW OF THE PLANNING PROCESS

This WRS was prepared by Gamsby and Mannerow Ltd. in consultation with the Municipality.

In developing the WRS the following steps were completed:

- A review and an evaluation of the current system.
- Estimating the amount of material available for recycling and capture rates.
- Assess current trends, practices, and future needs.
- Develop a preferred inventory of potential alternative recycling diversion options.

To ensure the public and local stakeholders were able to participate in the preparation of this WRS, stakeholder interviews including circulation of a survey to residents and business owners were completed. For more details on our public consultation process, see Section 4.

### **3.0 STUDY AREA**

The study area for this WRS includes the Municipality of Northern Bruce Peninsula.

This WRS will address the following sectors:

- fulltime residents,
- seasonal residents,
- campgrounds and parks, and
- small businesses.

### **4.0 PUBLIC CONSULTATION PROCESS**

The public consultation process followed in the development of this WRS consisted of the following activities:

- interviews with stakeholders,
- survey advertisement in local paper,
- internet survey, and
- mail-out and hand-out survey.

The following stakeholder groups were included in this consultation process:

- The Waste Diversion Group,
- the public,
- private camp grounds,
- Parks Canada, and
- small businesses.

The response from the public and stakeholders included:

- Adding more recycling depot locations.
- Ensure recycling depots were clearly labeled and tidy.
- Provide curbside recycling pick-up service.
- Impose bag limits/user pay.
- Discontinue dumpster service.
- Circulate a newsletter of which items can be recycled.
- Provide residence with a recycling bin to store and transport recyclables.
- Impose a by-law that enables the municipality to fine those who don't recycle.
- Adopting a new collection technology in the parks and campgrounds.

A complete list of public and business responses are provided in the survey report enclosed in Appendix B.

## 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 endeavours can vary greatly and depends on a municipality's size, geographic location and population.

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

- Shrinking landfill capacity
- Opportunity to improve recycling service and convenience for residents and visitors
- Opportunity to increase service efficiency and minimize costs
- Increase funding through optimizing the recycling program and adopting 'Best Practice' initiatives
- Opportunity to conserve landfill space and avoid expensive disposal alternatives
- Environmental conservation

## 6.0 GOALS AND OBJECTIVES

The goals and objectives identified as part of the WRS are presented in the following table:

**Table 1: Waste Recycling Goals and Objectives**

<b>Goals</b>	<b>Objectives</b>
To maximize diversion of municipal solid waste through the recycling program	<ul style="list-style-type: none"><li>• Divert 20% of municipal solid waste through the blue box program by 2016</li></ul>
To maximize capture rates of blue box materials through existing and future programs	<ul style="list-style-type: none"><li>• Meet WDO capture rate of 70% of available recyclables through the blue box program by 2025</li></ul>
To minimize costs of recycling in our community	<ul style="list-style-type: none"><li>• Maintain recycling costs at or below the provincial average</li></ul>
To expand the lifetime of our landfill	<ul style="list-style-type: none"><li>• Add 2 years to the lifespan of the remaining approved landfill capacity by increasing blue box diversion</li></ul>

## 7.0 CURRENT SOLID WASTE TRENDS, PRACTICES, AND SYSTEM AND FUTURE NEEDS

### 7.1 COMMUNITY CHARACTERISTICS

In 2010, the Municipality of Northern Bruce Peninsula reported a permanent population of 3,850. Total households or dwellings reported for the Municipality is 4,870. All of which, are considered single-family households. Of these households only 1,738 are occupied by permanent residents with the remaining 3,132 being occupied by seasonal residents. These seasonal households are estimated to account for an equivalent permanent population of 1,305. This is based on an average of 2.5 people per household and the estimation that 6 seasonal households would generate the equivalent annual volume of refuse as 1 permanent household. Considering the seasonal residential component, the population is more accurately estimated to be 5,155 with regard to residents serviced by the municipal waste disposal program.

### 7.2 CURRENT WASTE GENERATION AND DIVERSION

For the purpose of this report, data on waste generation and blue box diversion rates from 2006 through 2010 for the Municipality have been included within this report to determine “existing” waste disposal practices, or benchmark values. Data from the last five years has been included due to variations in reported waste generation and diversion rates to obtain an overall average.

From 2006 to 2010, the Municipality has generated an average of 2,570 tonnes of residential solid waste per year. Of this, an average of 312 tonnes, or 12 percent, of waste has been diverted through the blue box program.

**Table 2: Blue Box Diversion Rates**

Year	Total Waste Generated	Papers	Metals	Plastics	Glass	Diverted Blue Box Materials	Proportion of Total Waste
2006	3,982	193	20	27	0	239	6%
2007	1,732	233	28	37	0	298	17%
2008	1,788	275	31	41	0	347	19%
2009	2,317	256	34	56	0	335	14%
2010	3,033	263	32	43	0	339	11%
Average	2,570	244	29	41	0	312	12%

Notes:

- (1) Values reported in tonnes unless otherwise stated.
- (2) Metals and plastics for 2006 to 2008 and 2010 were estimated using 43% and 57%, respectively, of total reported plastics and commingled blue box recyclables for metals and plastics. These percentages are derived from the ratio of metals and plastics reported for 2009.

As shown in the table below, paper based material such as boxboard, cardboard, news print, etc. accounts for almost 80% of blue box material recycled. Metals and plastics account for 9% and 13%, respectively with glass at 0%. Although glass is reported to be 0%, it should be noted that the Municipality does collect the material through their blue box program. However, in recent years, no glass from the Municipality has been recycled due to market conditions.

**Table 3: Average Diversion Rates of Blue Box Materials (2006 – 2010)**

Blue Box Material	Proportion of Total Waste Generated	Proportion of Diverted Blue Box Materials
Papers	9%	78%
Metals	1%	9%
Plastics	2%	13%
Glass	0%	0%

### 7.3 MUNICIPAL PERFORMANCE

To complete an evaluation of the Municipality’s performance, the diversion rates of the Municipality are compared to the Municipality’s grouping (*Rural Depot – South*), the municipal grouping of *Rural Collection – South* and the provincial average. The diversion data used for performance comparison is published by WDO.

**Table 4: Municipal Blue Box Diversion Performance Comparison**

Grouping	Diversion Average
Municipality of Northern Bruce Peninsula (2006 – 2010)	12%
Municipal Grouping: Rural Depot – South (2010)	17%
Municipal Grouping: Rural Collection – South (2010)	18%
Provincial (2010)	19%

Notes:

- (1) The municipal grouping of *Rural Depot – South* is a group of municipalities as developed by WDO with similar characteristics that includes the Municipality of Northern Bruce Peninsula.
- (2) Township of Augusta was not included in the calculation of the diversion average for the *Rural Depot – South* municipal due to a reporting error within the WDO municipal datacall.

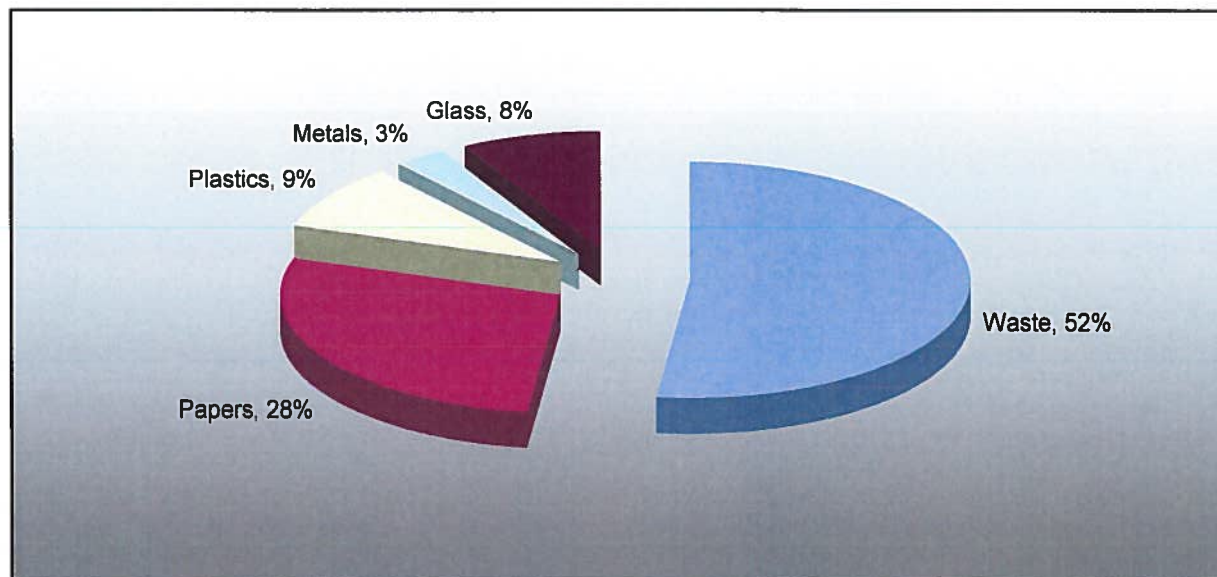
As shown in the table above, the Municipality’s diversion rate is below that of their municipal grouping, the *Rural Collection – South* municipal grouping, and provincial average. It should be noted that a higher diversion rate of blue box recyclables, is expected for the *Rural Collection – South* municipal grouping and the province due the curbside collection programs. However, comparing the municipal grouping average provides a good indicator of the Municipality’s performance relative to similar municipalities with similar programs.

### 7.4 POTENTIAL WASTE DIVERSION

To estimate the composition of the Municipality’s waste, approximations for the composition of waste for the District Municipality of Muskoka were used. These approximations are taken from the *CIF Guidebook for Creating a Municipal Waste Recycling Strategy* (Guidebook). The Guidebook contains waste composition approximations for several municipalities which are based on single-family waste audit data collected from the Stewardship Ontario’s Waste Audit program. The waste composition approximations for the District Municipality of Muskoka were used due to the similarities of the two municipalities, most notably; the high proportion of seasonal residents and the same list of residential blue box materials collected by each municipality.



**Figure 1: Residential Composition of Waste**



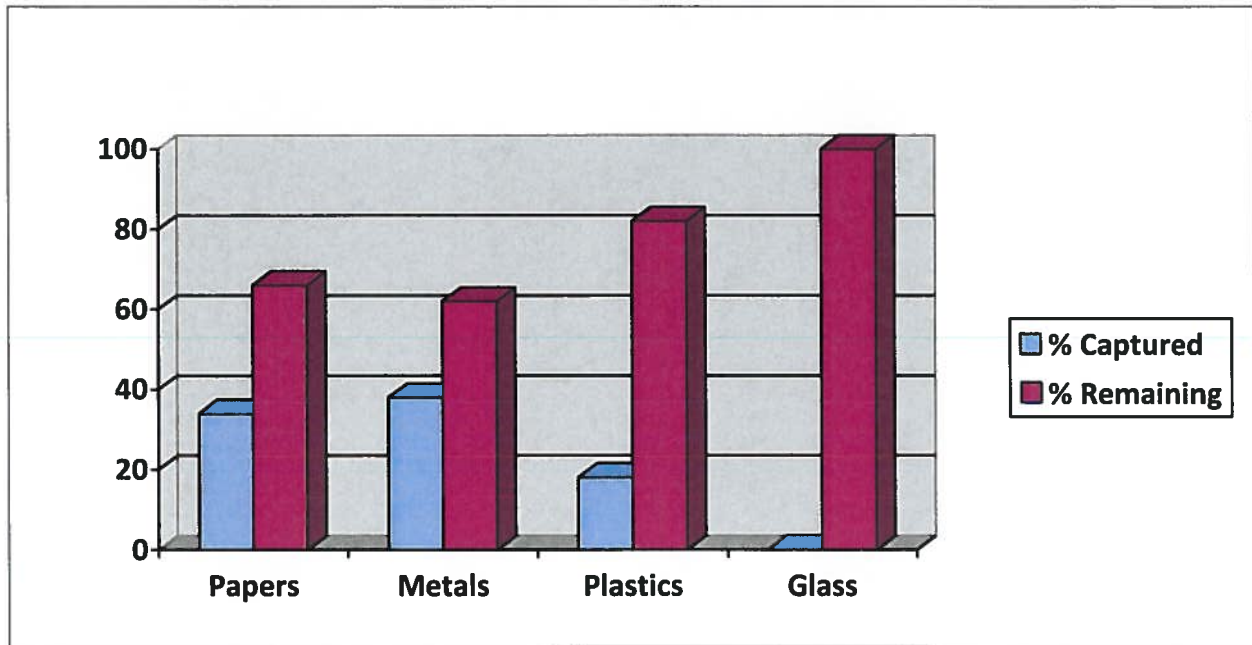
Assuming the same composition of waste for the Municipality of Northern Bruce Peninsula as for the District Municipality of Muskoka, a total of 1234 tonnes (48% of 2,570 tonnes of total waste generation) of blue box recyclable materials are available for diversion. From 2006 to 2010 an average of 312 tonnes per year has been recycled. Assuming a waste composition of 48% blue box recyclables, approximately 900 tonnes of recyclables remain in the waste stream. Estimates of blue box material available for diversion are listed in the following table.

**Table 5: Current and Potential Diversion**

Material	Total Available in Waste Stream (tonnes/year)	Available Recyclables Captured		Recyclables Remaining in Waste Stream	
		Tonnes	%	Tonnes	%
Papers	720	244	34%	476	66%
Metals	77	29	38%	48	62%
Plastics	231	41	18%	190	82%
Glass	206	0	0%	206	100%
<b>Total</b>	<b>1234</b>	<b>312</b>	<b>25%</b>	<b>922</b>	<b>75%</b>

From 2006 to 2010, the Municipality's average capture rate of available recyclables in the waste stream is 25%. This is below that of the provincial WDO target of 70% that was set for the end of 2011. Relative to the provincial target, the Municipality's capture rate is considered low. However, it is noted that most if not all Municipality's in Ontario have not met this target. As illustrated in the graph below, the Municipality is achieving greatest capture rates with paper and metals, and its poorest capture rates with plastics. It should be noted that glass is collected by the Municipality, but is not marketed due to economic reasons. As a result, the amount of glass captured is not recorded.

**Figure 2: Estimated Available Recyclables Captured/Remaining in Waste Stream**



### 7.5 EXISTING PROGRAMS AND SERVICES

Collection services of regular waste are provided to the residents using contracted curbside service and drop-off at dumpsters and landfills. At present, approximately two thirds of residents are serviced by curbside collection and the remaining one third are serviced by dumpsters. Residents using curbside collection are limited to 2 bags/week and can dispose of 2 free bags before tipping fees apply at the landfills. There are currently no limitations or enforcements in place at the dumpster drop-off locations.

There is currently no blue box curbside collection service. A total of five depot locations are available to residents. These include the three landfills and two depot locations located along Highway 6. Recyclable materials are collected at the depots by Miller Waste Systems and are taken to the Miller Waste Transfer Station located in Owen Sound.

The current list of recyclable items accepted at the depots is included in the following table.

**Table 6: Recyclable Blue Box Materials**

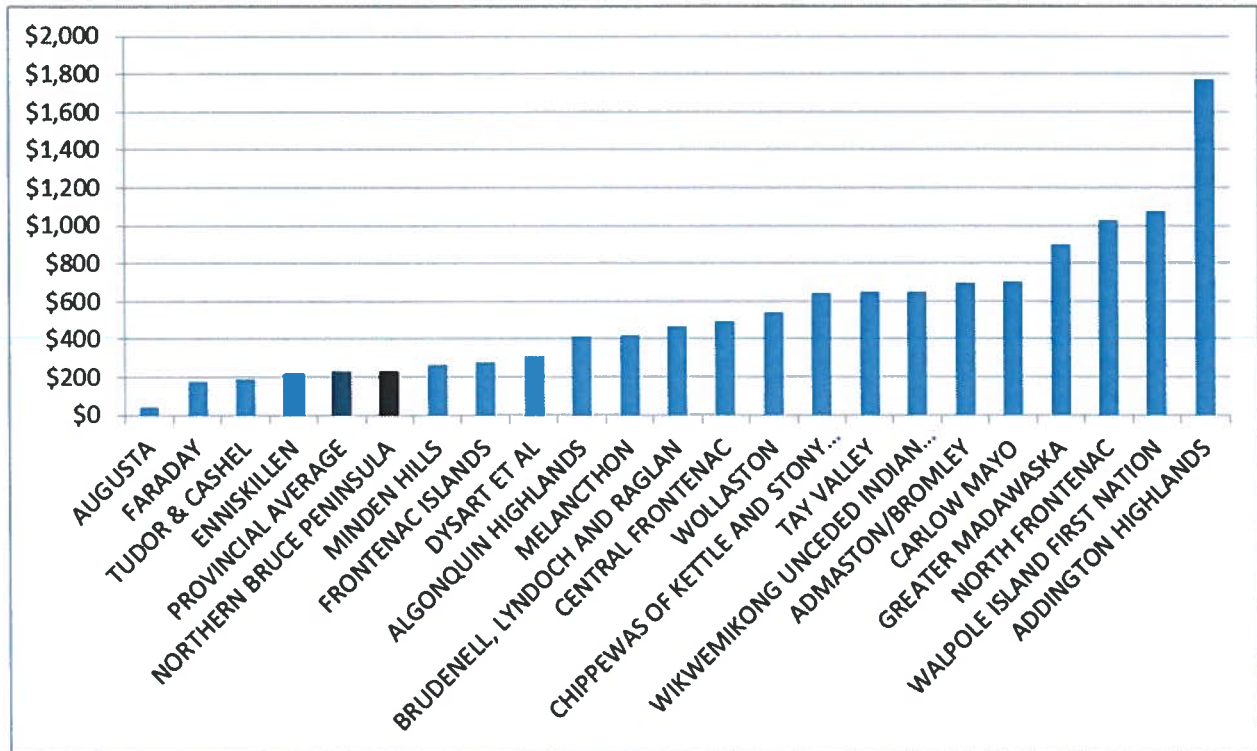
<b>Metal</b>	
<ul style="list-style-type: none"> <li>• Food tins and pop cans</li> <li>• Steel paint cans</li> <li>• Aluminum foil and pie pans</li> </ul>	
<b>Plastic</b>	
<ul style="list-style-type: none"> <li>• # 1 PETE plastic containers &amp; trays</li> <li>• # 2 HDPE screw-top plastic bottles (excluding motor oil bottles)</li> <li>• # 3 V or PVC plastic bottles</li> <li>• # 4 LDPE plastic bottles</li> <li>• # 5 PP plastic bottles, tubs, lids and bottle caps</li> <li>• # 7 OTHER plastic bottles</li> <li>• Tupperware</li> </ul>	
<b>Glass</b>	
<ul style="list-style-type: none"> <li>• Bottles and jars</li> </ul>	
<b>Paper</b>	
<ul style="list-style-type: none"> <li>• Newspapers and inserts</li> <li>• Magazines</li> <li>• Catalogues</li> <li>• Office paper</li> <li>• Construction paper</li> <li>• Envelopes (with the plastic windows removed)</li> <li>• Paperback books</li> <li>• Telephone books</li> <li>• Gable top cartons (milk and juice cartons)</li> </ul>	<ul style="list-style-type: none"> <li>• Tetra Pak cartons (juice, wine, soup boxes, etc.)</li> <li>• Wax &amp; plastic coated paper cups</li> <li>• Paper bags</li> <li>• Box board (cereal, frozen food, tissue boxes, etc.)</li> <li>• Paper egg cartons</li> <li>• Greeting cards</li> <li>• Gift wrap</li> </ul>

Disposal and recycling services are paid for primarily through the tax base, tipping fees, scrap metal revenue, and grants. Revenue from marketed blue box recyclables revenue is not received by the Municipality. Revenue from recyclables is factored into the contractor costs.

Collection contracts for regular waste and blue box recyclables are renewed on an annual basis.

In 2010 the blue box recycling program cost the Municipality approximately \$78,000 to operate. This equates to approximately \$230 per tonne and \$16 per household. These recycling costs are well below the Municipal average and are similar to the provincial average. The following figure shows the Municipality's recycling costs compared to the provincial average and to those municipalities within the *Rural Depot – South* municipal grouping.

**Figure 3: Net Recycling Costs per Tonnes**



**7.6 ANTICIPATED FUTURE WASTE MANAGEMENT NEEDS**

Based on historic trends, it is anticipated that the population will increase slightly while residential solid waste generation, on a per capita basis, will remain similar over the next 10 years. Therefore, overall waste generation is expected to increase proportionally to the population.

**7.6.1 Projected Population**

The census data reports a municipal population of 3,850 permanent residents in 2006, 3,599 in 2001 and 3,500 in 1996. This represents an increase in permanent residents of approximately 1% per year on average. By applying this growth rate and using the linear regression model, the projected permanent population to the year 2021 has been estimated. The calculated seasonal component based on the number of seasonal homes, as noted in Section 7.1, has also been applied to estimate the total contributing population. For more detail regarding the seasonal to permanent population equivalent refer to Section 7.1.

**Table 7: Population Projection**

Year	Permanent Population	Seasonal Permanent Equivalent Population	Total Contributing Population
2006	3,850	1,305	5,155
2011	4,046	1,372	5,418
2016	4,253	1,442	5,694
2021	4,470	1,515	5,985

(1) Contributing Population = permanent population + seasonal permanent equivalent population (1 seasonal household = 1/6 regular household (2.5 people per regular household))

(2) Future population is extrapolated using a 1 % increase per year

### 7.6.2 Projected Waste Generation Rates

Based on the population growth model and the maintenance of the current per capita residential waste disposal rate (499 kg per capita), it is anticipated that annual solid waste generation will be approximately 3,000 tonnes per year by 2021. The table below summarizes the projected solid waste generation rates and estimated available blue box materials.

**Table 8: Projected Solid Waste Generation Rates and Available Blue Box Material**

	2011	2016	2021
<b>Population</b>	5,418	5,694	5,985
<b>Total Waste (tonnes)</b>	2,570	2841	2,987
<b>Blue Box Material Available (tonnes)</b>	1,234	1,364	1,434
<b>WDO Target of 70% Capture Rate</b>	864	955	1,004

(1) Available blue box material = 48% of total waste based on waste audit data for the District Municipality of Muskoka.

## 8.0 RECOMMENDED DIVERSION OPTIONS

A number of diversion options were reviewed for consideration in the recycling plan for the Municipality. Each diversion option was scored based on a number of criteria which included the following:

- **Waste Diversion Potential** – This refers to how much waste an option may potentially help to divert. Some options may divert more waste than others, while other options may not directly divert waste but instead support other programs or initiatives that do.
- **Proven Results** – Some options are considered proven, while others may be newer with less documentation regarding their efficacy.
- **Economically Feasible** – This refers to whether an option is economically feasible for the municipality considering it. Municipalities will need to weigh the cost of the option against their ability to afford it and the resulting benefit.
- **Accessibility to Public** – This considers if the option will be easy or difficult for the public to access or use. This will depend in large part on how the option interfaces with the target user.
- **Ease of Implementation** – Some options are less costly and easier logistically and politically to implement than others. This criterion considers the level of cost and effort involved in implementing the option.

A summary of the diversion options and their scoring is provided in Appendix A.

Based on the scores, the diversion options were divided into two categories; Priority Initiatives and Future Initiatives. Diversion options scoring of 80 and above are considered Priority Initiatives and diversion options scoring 79 and below are considered Future Initiatives. The Priority and Future Initiatives are presented in the following Sections.

## **8.1 PRIORITY INITIATIVES**

### **8.1.1 Promotion and Public Education Program**

Promotion and public education (P&E) 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 promotion and public education programs include:

- Greater participation levels and community involvement
- Higher diversion rates
- Less contamination in recovered materials
- Lower residue rates at recycling facilities

Stewardship Ontario has prepared a Recycling Program Promotion and Education Workbook and other materials. These are available on Stewardship Ontario's Recyclers' Knowledge Network ([http://www.stewardshipontario.ca/service\\_providers](http://www.stewardshipontario.ca/service_providers)).

### **8.1.2 Training of Key Program Staff**

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 Municipal Waste Association (MWA), Waste Diversion Ontario (WDO), the association of Municipalities of Ontario (AMO), Stewardship Ontario and the Solid Waste Association of Ontario (SWANA) are good sources of information guides, workshops, or training on recycling or solid waste management.

### **8.1.3 Bag Limits/User Pay**

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.

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.

#### **8.1.4 Enhancement of Recycling Depots**

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:

- Providing satellite depots to improve public access and convenience;
- Enhancing the conditions at the landfill depot (e.g., landscaping, general cleanliness, maintenance);
- Incorporating friendly, easy-to-read signage;
- Providing additional part-time staff to address seasonal fluctuations and visiting traffic.

#### **8.1.5 Provision of Free Blue Boxes**

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.

#### **8.1.6 Expansion of Recyclable Blue Box Materials**

For maximum diversion a wide variety of recyclable materials is required. Deciding on which recyclable materials to include in the blue box program typically depend on the availability, collection costs, and market viability for the respective material. Markets are constantly changing; therefore, it is important for municipalities to stay abreast of material markets. In the short-term, a recyclable material that the Municipality could consider adding to the blue box program is polystyrene packing material. The recycling polystyrene may be particularly advantageous to the Municipality due to the low density and bulkiness of the material. The physical properties of the material do not allow it to compact well; therefore, taking up more landfill space.

#### **8.1.7 IC&I Outreach and Collaboration**

Although the Municipality is not responsible for the management of IC&I waste, the majority of IC&I waste generated within the Municipality is disposed of in the municipal landfills. A collaboration between the Municipality and local businesses, including but not limited to local campgrounds, the transportation ferry and hotels, creates the opportunity to divert more waste from the landfill through recycling while still meeting the needs of the businesses. For example, the Municipality could consider providing local businesses with more accessible recycling opportunities. It is recognized that certain businesses can generate a relatively high volume of recyclables, and by providing the added convenience, there is the potential to increase capture rates and diversion.

### **9.0 FUTURE INITIATIVES**

#### **9.1 CURBSIDE COLLECTION**

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.



**Table 9: Recommended Diversion Options and Implementation Plan**

Diversion Option	Steps
<b>Priority Initiatives</b>	
Promotion and Public Education Program	<ul style="list-style-type: none"> <li>• Establish the level of financial resources available (an effective P&amp;E program typically requires a budget of \$1 per household)</li> <li>• Identify the target audience and messaging</li> <li>• Determine the type of media to be used (e.g., calendars; brochures; newsletters; newspaper; postings at depots, landfills, visitor centres, municipal website, etc.)</li> <li>• Develop and distribute communications materials</li> </ul>
Training of Key Program Staff	<ul style="list-style-type: none"> <li>• Keep program staff current with emerging technologies</li> <li>• Communicate end goals and purpose of programs</li> <li>• Cross training of staff that rotate positions</li> <li>• Continue annual refresher training</li> </ul>
Bag Limits/User Pay	<ul style="list-style-type: none"> <li>• Determine bag limits and user pay fees</li> <li>• Remove dumpsters/expand garbage collection routes</li> <li>• Notify the public of bag limit/user pay system</li> <li>• Design and develop bag tags</li> <li>• Establish retail outlets to distribute bag tags</li> </ul>
Enhancement of Recycling Depots	<ul style="list-style-type: none"> <li>• Establish financial resources available</li> <li>• Determine enhancement options (e.g., landscaping, provide satellite depots, improved signage, etc.)</li> <li>• Carry out enhancement options</li> </ul>
Provision of Free Blue Boxes	<ul style="list-style-type: none"> <li>• Purchase recycling boxes and make available at municipal office</li> <li>• Notify public of availability</li> </ul>
Expansion of Recyclable Blue Box Materials (Polystyrene)	<ul style="list-style-type: none"> <li>• Determine market viability</li> <li>• Determine collection option (e.g., additional bin at depots)</li> <li>• Establish shipping and processing contract</li> <li>• Notify users of recyclables expansion and collection option</li> </ul>
IC&I Outreach and Collaboration	<ul style="list-style-type: none"> <li>• Determine which businesses to focus on first and prepare meetings</li> <li>• Identify current barriers to recycling for the businesses</li> <li>• Identify and evaluate potential diversion options (e.g., provision of cardboard recycling bins)</li> <li>• Implement and monitor diversion initiatives</li> </ul>
<b>Future Initiatives</b>	
Curbside Collection	<ul style="list-style-type: none"> <li>• Assess collection options and costs</li> <li>• Determine a collection option and make recommendation to council</li> <li>• Obtain necessary equipment and/or contracts</li> <li>• Notify users of recycling service changes</li> </ul>
Multi-Municipal Collection and Processing of Recyclables	<ul style="list-style-type: none"> <li>• Identify potential municipal partnerships</li> <li>• Identify service needs and goals of co-operative municipalities</li> <li>• Implement communication and working protocols</li> <li>• Establish a task group</li> <li>• Determine and document how the program will be funded</li> <li>• Identify a governance strategy for accountability, monitoring and decision making</li> <li>• Estimate costs and cost saving of the co-operative program</li> <li>• Implement strategies with least risk and build upon them</li> </ul>



**Table 11: Waste Recycling Strategy Contingencies**

<b>Risk</b>	<b>Contingency</b>
Insufficient funding	<ul style="list-style-type: none"> <li>• Explore and apply for other funding sources</li> <li>• Delay lower-priority initiatives</li> <li>• Raise/implement user fees</li> </ul>
Public opposition to planned recycling initiatives	<ul style="list-style-type: none"> <li>• Improve public communications</li> <li>• Engage community/stakeholders to discuss initiatives/recycling plan</li> </ul>
Lack of available staff	<ul style="list-style-type: none"> <li>• Prioritize department/municipal goals and initiatives</li> <li>• Hire summer student to help with planning (may be available funding)</li> </ul>

## 12.0 MONITORING AND REPORTING

The monitoring and reporting of the Municipality's recycling program is considered a Blue Box program fundamental 'best practice' and will be a key component of this WRS. Once implementation of the strategy begins, the performance of the WRS will be monitored and measured against the baseline established for the current system. Once the results are measured, it is recommended that they be reported to Council and the public.

The approach for monitoring the Municipality's waste recycling program is outlined in the table below.

**Table 12: Recycling System Monitoring**

<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 disposal site/depots (e.g., weigh scale records)	Each load
Total waste landfilled	Monitoring landfill elevations through topographic surveys	Annually
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	Customer survey (e.g., telephone); monitoring recycling habits	Every 1 to 3 years
Customer satisfaction	Customer survey (e.g., telephone); tracking calls/complaints received to the municipal office	Every 1 to 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	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

Suitable? Y/N	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> )	Criteria (Score out of 5)					Total Criteria Score	Total Criteria Score (out of 100)
		Waste Diversion Potential	Proven Results	Economically Feasible	Accessibility to the Public	Ease of Implementation		
<b>Promotion and Outreach</b>								
Y	Public Education and Promotion Program	4	5	5	4	5	23/25	92
Y	Training of Key Program Staff	3	5	5	n/a	5	18/20	90
<b>Collection</b>								
N	Optimization of Collection Operations	n/a						
Y	Bag Limits/User Pay	5	5	5	4	2	21/25	84
Y	Enhancement of Recycling Depots	4	5	5	3	5	18/25	88
Y	Provision of Free Blue Boxes	3	4	4	5	5	21/25	84
Y	Curbside Collection	5	5	2	5	2	19/25	76
Y	Expansion of Recyclable Blue Box Materials (Polystyrene)	3	5	3	5	5	21/25	84
<b>Transfer and Processing</b>								
N	Optimization of Processing Operations	n/a						
<b>Partnerships</b>								
Y	Multi-Municipal Collection and Processing of Recyclables	3	3	4	n/a	1	11/20	55
N	Standardized Service Levels and Collaborative Haulage Contracting	n/a						
Y	Outreach and Collaboration with the IC&I Sector	4	4	4	n/a	3	15/20	80
<b>Additional Research</b>								
Y	Assess Tools and Methods to Maximize Diversion	Currently being done as part of the WRS						
<b>Administration</b>								
N	Following Generally Accepted Principles for Effective Procurement and Contract Management	n/a						

Value	Count	Percent %	Statistics	
Eastnor Landfill & Recycling Facility on West Road	9	8.9%	Total	101
Eastnor Recycling Depot on Highway 6 in Ferndale	59	58.4%	Responses	
Lindsay Landfill & Recycling Facility on Ira Lake Road South of Miller Lake	9	8.9%		
St. Edmunds Recycling Depot on Highway 6 just south of Tobermory	22	21.8%		
St. Edmunds Landfill & Recycling Facility on McArthur Road southwest of Tobermory	2	2%		

**Beyond the 5 basic recyclable materials (Newsprint/paper, Glass, Aluminum Cans, Steel Cans, and #1 Plastics (e.g., water bottles)), please indicate which of the following items you recycle?**

Value	Count	Percent %	Statistics	
Aluminum packaging and foil	40	35.7%	Total	112
Empty paint cans	33	29.5%	Responses	
Plastic containers (e.g., yogurt and margarine containers)	91	81.3%		
Paper coffee cups	32	28.6%		
Corrugated cardboard	97	86.6%		
Boxboard (e.g., cereal and cracker boxes)	90	80.4%		
Milk and juice containers	59	52.7%		
None of the above	7	6.3%		

**How long does it take you to drive to the recycling depot you use most often?**

Value	Count	Percent %	Statistics	
less than 5 min	20	18%	Total	111
5 to 10 min	50	45%	Responses	
10 to 15 min	29	26.1%	Sum	540.0
more than 15 min	12	10.8%	Average	6.8
			StdDev	2.41
			Max	10.0

**Do you store and transport your recyclables in a blue box?**

Statistics	
Total	110
Responses	

Value	Count	Percent %
Yes	44	40%
No	66	60%

### What do you think would help you recycle more?

Item	Total Score <sup>1</sup>	Overall Rank
Curbside collection for recyclables	208	1
Were more informed about which materials could be recycled	181	2
Were provided with a blue box to store and transport recyclables	164	3
Additional drop-off locations for recyclables	139	4

Total Respondents: 92

<sup>1</sup> Score is a weighted calculation. Items ranked first are valued higher than the following ranks, the score is the sum of all weighted rank counts.

### Do you use a backyard composter for your plant based organic kitchen waste?

Value	Count	Percent %	Statistics	
Always	36	32.1%	Total Responses	112
Usually	11	9.8%		
Sometimes	7	6.3%		
Never	58	51.8%		

### How many bags of garbage does your household produce in a typical week?

Value	Count	Percent %	Statistics	
less than 1	49	43.4%	Total Responses	113
1 to 2	54	47.8%	Sum	93.0
3 to 4	8	7.1%	Average	1.4
5 or more	3	2.7%	StdDev	1.02
			Max	5.0

### How many people reside in your household?

Value	Count	Percent %	Statistics	
1 to 2	79	71.2%	Total Responses	111
3 to 4	26	23.4%	Sum	189.0
5 to 6	5	4.5%		

Value	Count	Percent %	Statistics	
7 or more	1	0.9%	Average	1.7
			StdDev	1.22
			Max	7.0

### Where do you dispose of your household garbage?

Value	Count	Percent %	Statistics	
Curbside collection	76	66.7%	Total Responses	114
Dumpsters	34	29.8%		
Landfill	46	40.4%		
Other	4	3.5%		

### Which of the following disposal methods do you prefer?

Value	Count	Percent %	Statistics	
Dumpsters	30	26.5%	Total Responses	113
Curbside collection	74	65.5%		
Drop off at landfill	21	18.6%		

### What type of residency do you have in the Municipality of Northern Bruce Peninsula?

Value	Count	Percent %	Statistics	
Fulltime	85	75.9%	Total Responses	112
Seasonal	29	25.9%		
Visitor	1	0.9%		

### What area do you reside in?

Value	Count	Percent %	Statistics	
Barrow Bay	7	6.3%	Total Responses	111
Bradley Harbour	3	2.7%		
Cape Chin	3	2.7%		
Dorcas Bay - Johnsons Harbour	11	9.9%		
Dyers Bay	4	3.6%		
Ferndale	8	7.2%		
Hope Bay	2	1.8%		
Lion's Head	26	23.4%		
Miller Lake	9	8.1%		

Value	Count	Percent %
Pike Bay	12	10.8%
Stokes Bay	7	6.3%
Tobermory	19	17.1%

Do you have any suggestions on how the municipality can improve its diversion rate?

Count	Response
1	-the dumpsters need to be gone -clear bags -bag tags
1	Dumpsters for tourists and cottagers.
1	Empty containers at recycling depot more often. Most times they are full.
1	Focus on recycle and get rid of dumpsters.
1	For a fee! Offer road and ditch clean up for people as fill.
1	Have a dumpster in one location for cottagers.
1	Have all recycle bins accessible 24/7.
1	Keep cottagers from bringing their garbage here to dispose of it.
1	More recycling
1	Recycling depot in Lion's Head would be more convenient than Ferndale.
1	Reduce waste at source.
1	Send out list of all recyclables.
1	The implementation of a green bin programme.
1	There needs to be more drop off sites or more bins at Ferndale.
1	To be able to recycle a wider variety of goods.
1	Twice a year disposal of electronics/paint cans as near to Lion's Head community as possible.
1	What is diversion rate?
1	a recycle depot in the Dorca Bay area.
1	bag tags
1	clear bags - charge people who don't recycle.
1	curbside collection of recyclables.
1	curbside pick up
1	curbside pick-up!
1	curbside service or more dropoffs.
1	limit # of garbage bags, sell tags, more awareness
1	more information
1	more recycle bins at Ferndale
1	offer curbside pickup and blue boxes.
1	pick up recycling in summer months
1	take more kinds of items
1	For visitors who create household garbage in rental and campsites, dumpsters at certain locations along Highway 6 would make disposal easy.

## Count

## Response

- 
- 1 Show people how a dump makes property look. Tree huggers would go nuts. We have limited property to use as a dump so why not recycle. Show people the profits if any from selling recycles.
  - 1 I wish more people would recycle. I was trained to recycle at Kitchener Ont (Laidlaw) when I finished my training, they sent me to Mississauga to run the setup for the whole area.
  - 1 Please add recycling dumpsters adjacent to the garbage dumpsters. This will dramatically reduce the amount of recyclable material going into the landfill.
  - 1 Have recycling facility in Lion's Head. Name me a town that does not have recycle other than Lion's Head.
  - 1 Would be great if EVERYBODY would recycle - it's simple and painless! Then trucks to pick recyclables wouldn't be needed of course, backyard composter makes sense (but occasionally a bear visits us!!)
  - 1 Anything that makes recycling more convenient would probably help, but no, we are a garbage culture and that's not likely to change. Support any program that will help reduce packaging of consumer goods.
  - 1 By allowing 1 bag and changing for more a week a place to break down old frig, stoves, washers, tines for road mix roads like some municipalities do. Get tougher on people who don't even try to recycle even tourists with their forgotten water bottles on the sides of the roads and so called eco snacks on road.
  - 1 Recycle more things as in other communities and offer more hazardous waste days & depots for electronic waste etc.
  - 1 -clearly label dumpster at recycle drop-off sites with what should go in them ie: where do we put milk containers?(in the paper or cardboard bins) -the proposed recycle/reuse/share facility being built on West Road dump site is a GREAT idea!! -I don't believe an outdoor composter is a good idea because of the wildlife it could attract.
  - 1 Be much more strict about what goes into the dumpsters at the landfill sites. Only accept clear plastic bags. -Significantly raise tipping fees for clearly identifiable garbage such as cardboard, newspaper, plastic, & food containers that can easily be recycled. -I visit Eastnor Landfill 2-3 time/week and it angers me how lazy some of our neighbours are in their recycling habits!
  - 1 Curbside pick-up of recyclables would be appreciated. I indicated I sometimes do recycle - about 95% of the time. If I only have 3 or 4 cans then I won't stop at the drop-off station and will dispose of them with garbage. Perhaps offer recycling at the dumpsters would help too.
  - 1 awareness/advertising campaign with positive reinforcement messages tied to the Biosphere/preservation/beauty of the natural environment and individual/collective responsibility for both residents and visitors/tourists
  - 1 Commercial coomposting programme that is open to residents also. Many people are reluctant to do back-yard composting for fear of bears.
  - 1 Curbside collection in major areas (i.e. Lion's Head and Tobermory) would be very beneficial. For those in the less dense areas, better recycling depot locations may help divert some of the waste. More promotion of composting.
  - 1 -add a 2nd dumpster at each site - so, 1 for garbage & 1 for mixed recyclables. -more free blue boxes to encurge homeowners to recycle in their homes.
  - 1 Tidier recycling depot at Ferndale! It is pathetic at present! Routine emptying (especially during peak times), and then individuals would not feel the need to leave things BESIDE the bins!

## Count

## Response

- 1 more effective and engineered recycling depot. The current depots are not user friendly. It needs more upkeep in summer. Use the "covered" area at Ferndale. Bigger space - weather protected (wind) drive in and dump recycle.
- 1 If you aren't going to have curbside collection of recyclables than make sure the collection centres are emptied a little more regular and keep the parking lot clear of broken glass and garbage.
- 1 I do...in Europe they send out, or deliver, to each home a list of "what goes where" as well as a list of what cannot be recycled. Also they promote these yellow bags for all plastics. In Germany...the garbage dumps are really incredible...clean...efficient. I think part of the problem here and for us...is that we are a rural community and we have these cottagers who break rules. I also think you should send out letters to inform each householder what to do and whom to call when we see folks leaving things at the Dumpsters that they know full well they shouldn't be leaving there. Thanks for the opportunity to give feedback. Hoffmann-Taylor
- 1 At our winter home compostable material is collected with our recyclables. This greatly reduces the amount going to landfill. We refrain from composting in Lion's Head because of bear issues.
- 1 1)Rather than only once a year, have hazardous waste days say semi-annually 2)Establish an electronics recycling depot in the area, possibly in partnership with South Bruce Peninsula.
- 1 Curbside recycling would be nice - we find that people are abusing the drop off centres, contaminating the recycling....and we all know what happens to contaminated recycling! If it were curbside, those who want to recycle would, doing it correctly. Rather than a tourist just dumping their garbage wherever they can find a spot (including our business dumpsters)
- 1 By curbside collection of recyclables and better information of what is recyclable and more things that can be recycled
- 1 I like the Scouts Beer & wine bottle collection depot which I feel helps support the youth activities in the area.
- 1 -3 bag system (compost, recyclables, garbage) -then get rid of composters, so people don't have an option not to follow system.
- 1 \* more frequent emptying of bins at recycle depots \* encourage residents to compact their recyclables such as boxboard, pop cans, large plastic containers \* Lindsay landfill & recycling needs to be open both Sat. & Sun. during summer
- 1 Our hesitation re: backyard composting is a fear of attracting bears. Is this a problem? Is it worth collecting organic kitchen waste in a central location?
- 1 -steady communication: with every tax bill "commercial recycling enforce" -ferry, comm. businesses, Federal, Prov, campgrounds -Trailer parks "everyone" including tourists
- 1 Dump the dumpsters! When we lived in Miller Lake, with only curbside pick-up, there were no problems. The dumpsters are just being abused!
- 1 At present some rates are very high, I'm not saying don't charge but people should be rewarded for bringing garbage and debris to the landfill. Some rates are more like a penalty for having waste. Some waste can't be helped. Some of our dumpsites around may not be so dumpy if it didn't cost so much.
- 1 Yes. Clearer, larger signage on dumpsters. More warnings re fines for dumping illegal wastes. Reminders that we are in an ecologically sensitive area which needs respect. Pare down exorbitant fees for disposing of things like mattresses at the municipal waste sites for residents who have difficulty with these fees. Clearer communication with the municipality and tax payers re decision making. (i.e. How do people know about this survey?) Why was a consultant necessary?



Count

Response

- 
- 1 We would like to see a basic cover (roof) for any article you dipose of, that someone else could use. no charge. Drop off and pickup by residents four times a year advertize clean out and dispose rest in landfill.
  - 1 1. Offer curbside recycling to those who currently have curbside garbage collection. 2. Actively engage public in challenge of increasing diversion rates - newsletters, better info and easier access on municipal website, articles in newspaper, info at landfills, etc. 3. Have stricter garbage bag limits -- for both curbside and dumpster collection. 4. Bylaw that prohibits putting recyclable materials into garbage.
  - 1 Educate the public. Have supervision at recycling depots at least for a while. Provide a place to leave items someone else could use.
  - 1 We are pleased with the recycle separation possible now. We would like to be able to compost but don't want to attract animals - racoons and bears. I would like to see a sheet provided that clearly states what items can be recycled.
  - 1 Similar to Owen Sound. Provide biweekly or monthly recycle pick up. You will need a special truck, but it will cut down the amount that is going into the general pickup.