



WASTE RECYCLING STRATEGY

**TOWNSHIP OF GREATER MADAWASKA
COUNTY OF RENFREW, ONTARIO**

Prepared for

THE CORPORATION OF THE TOWNSHIP OF GREATER MADAWASKA

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The Township of Greater Madawaska acknowledges the support of Waste Diversion Ontario's Continuous Improvement Fund for their technical and financial assistance in the development of this Waste Recycling Strategy.

While the Township has made every attempt to achieve accuracy in the initial stages of development of the various aspects of this Strategy, the Township states that this version of the Strategy is a foundational document for review and updating/improvement in the future.

It is the anticipated intent of the municipality to continue with the baseline work summarized in this version of the Strategy, for continuous improvement in the municipality's Blue Box recycling programs.

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1.0 INTRODUCTION

1.1 BACKGROUND

The Township of Greater Madawaska (Township) is situated in rural eastern Ontario, and its largest population base is centred in Calabogie, approximately twenty (20) kilometres (km) south of Renfrew and eighty (80) km west of Ottawa in the County of Renfrew (Figure 1). The Township is considered rural, and has been reporting annual Blue Box recycling statistics to Waste Diversion Ontario (WDO) since 2002 under program code 527.

Currently, the Township operates three (3) Blue Box recycling Depots within the Township at the Norway Lake waste disposal site (WDS), Griffith WDS and Mount St. Patrick WDS. Landfilling within the Township ceased in 2010, and at present all domestic waste (garbage) is transferred to Lafliche Environmental Inc. in Moose Creek, Ontario for disposal. Additionally, all Blue Box recycling is transferred from the Township to the Ottawa Valley Waste Recovery Centre (OVWRC) Material Recovery Facility (MRF) for processing. Organic Waste diversion is available to ratepayers at the Township's Depots as a means to increase waste diversion within the Township. The Norway Lake WDS and Griffith WDS are approved for the stockpiling of waste tires, leaf and yard waste, waste electrical and electronic equipment (WEEE), refrigerant appliances, and scrap metal. The Mount St. Patrick WDS is approved for the stockpiling of a similar suite of materials, in addition to construction and demolition (C&D) waste.

In the 2010 Waste Diversion Ontario (WDO) Datacall, the Township reported that 2,641 single family households and 52 multi-family households exist within the Township, for a total households of 2,693 units. Included in that total are 1,352 seasonal households that are used primarily between the months of June to September.

All Blue Box recycling tonnages, costs, and related data discussed in this Waste Recycling Strategy (WRS) are Residential only, unless otherwise stated.

The Township would like to thank WDO and the Continuous Improvement Fund (CIF) for the funding support and resource material made available to help with the formulation of this WRS.

1.2 PURPOSE AND SCOPE

This WRS was initiated by the Township to develop a plan to increase the efficiency and effectiveness of its Blue Box recycling program and maximize the amount of Blue Box material diverted from disposal. Specifically, the purpose of this WRS is to maximize waste diversion from disposal to the most feasible extent possible within the Township.

The Township intends to provide waste and Blue Box recycling services to all residents, property owners, and IC&I generators within the Township limits in the most cost-effective and efficient manner as possible, as part of the long-term sustainability and self-sufficiency of the Township.

The Township faces a number of waste management challenges, which this WRS will help address. In particular, the priority factors and drivers for the Township's development of a WRS are population growth, improving costs and service efficiencies, and increased public awareness of the importance of waste diversion.

This WRS was developed with support from the Council of the Township of Greater Madawaska, WDO, and CIF, using the CIF's *Guidebook for Creating a Municipal Waste Recycling Strategy (Guidebook)*.

2.0 OVERVIEW OF THE PLANNING PROCESS

2.1 WASTE RECYCLING STRATEGY PLANNING PARTICIPANTS

This WRS was prepared through the efforts of:

- Township of Greater Madawaska (Township).
- Greenview Environmental Management Limited (Consultant).
- Continuous Improvement Fund (CIF).
- Waste Diversion Ontario (WDO).

2.2 WASTE RECYCLING STRATEGY METHODOLOGY AND TIMELINE

The first step towards the formulation of a WRS for the Township began on May 4, 2010 where representatives of the Township attended the CIF Waste Recycling Strategy Working Session in Kingston, Ontario, which reviewed the need for municipal WRS as part of WDO's Best Practice questions and examined the CIF WRS templates and the *Guidebook*. Following this workshop, the Township recognized its own need for a WRS in order to maximize funding from WDO and as a means to promote increased diversion of Blue Box material within the municipality. Consequently, the Township included the preparation of a WRS as part of its 2011 waste management planning activities.

With funding assistance from the Canada-Ontario Municipal Rural Infrastructure Fund (COMRIF), the Township completed upgrades to each of the Depots at the Norway Lake WDS, Griffith WDS, and Mount St. Patrick WDS, inclusive of new roll-off containers for mixed containers (Containers) and mixed fibres (Fibres), and a compacting roll-off container for old corrugated cardboard (OCC). The Norway Lake WDS Depot began operation in November 2009, the Griffith WDS Depot in May 2010, and the Mount St. Patrick WDS Depot in August 2010, respectively.

On April 8, 2011, the Township was approved for funding by WDO and CIF for the formulation of a WRS, and discussions between the Township and Greenview Environmental Management Limited (Greenview) for the preparation of the WRS began in spring 2011 and continued through November 2011. From spring to late fall 2011, the WRS worksheets and WRS document were prepared, with the assistance of CIF's *Guidebook*. The Township was approved for funding for 75% of the cost of the WRS, up to \$15,000.

Also in April 2011, the Township submitted its annual 2010 Datacall to WDO, and which was subsequently amended by WDO at a later date. The final Residential Generally Accepted Principles (GAP) Diversion Rate for the Township in 2010, as calculated and amended by WDO, was reported as 13% (WDO, 2010).

Following a meeting between Greenview and representatives of the Township on July 27, 2011, which focused on a review of background information and the WRS Worksheets, the Township agreed to participate in a Multi-Municipal Group (Group) of neighbouring municipalities involved in the process of preparing a Multi-Municipal Recycling Request for Proposal (RFP). The goal of the Multi-Municipal Recycling RFP was to obtain contract security for the Group from a service provider(s) for Blue Box recyclables and Source-Separated Organics (SSO), in accordance with WDO Best Practices. The Group consists of the following municipalities:

- Township of Greater Madawaska.
- Township of Madawaska Valley.
- Township of Killaloe, Hagarty and Richards.
- Township of Brudenell, Lyndoch and Raglan.
- Township of Bonnechere Valley.
- Township of South Algonquin.

The Multi-Municipal Recycling RFP was released to potential service providers on October 7, 2011, the closing date for submissions was October 31, 2011, and the potential start date of the Group's new contract is February 1, 2012. The review process of the proposal submissions from potential service providers is currently on-going.

This WRS is considered a dynamic strategy, and revisions and updates to the WRS are anticipated by the Township as per the Township's commitment to continuous improvement.

The next steps in the WRS process may include, but are not limited to:

- Continued discussion, amendments, and implementation of the WRS.
- Review, consideration and/or implementation of Priority Initiatives.

3.0 STUDY AREA

The study area for this WRS includes the entire Township of Greater Madawaska (Figure 1), County of Renfrew, which encompasses a total land area of 1,011.67 square kilometres (km²) and a population density of 2.7 people per km² (Statistics Canada, 2006). The population in 2010 was reported by the Township to be 2,751, with an estimated seasonal population of 2,751, and estimated equivalent population of 3,668.

The Township is reported to have 2,641 single family households, 52 multi-family households, and 2,693 Total Households. Included in the Total Households are 1,352 seasonal dwellings. Based on information provided by the Township, the number of households per serviced road kilometre (hh/km) is 10.8 hh/km.

This WRS will address the Residential sector; however, the Township also provides waste (Garbage) and Blue Box recycling services to the IC&I sector, including small business, commercial, industrial, and institutional enterprises operating within the Township's limits. Any improvements with regards to waste diversion in the Township that are attained with this WRS are interpreted to benefit both the Residential and IC&I sectors, despite the focus being on Residential waste diversion.

All Residents and IC&I generators in the Township are permitted to bring waste (Garbage) and Blue Box recycling to the Township's upgraded Depots at the Norway Lake WDS, Griffith WDS, and Mount St. Patrick WDS. The Township's Black Donald WDS is currently closed for landfilling of domestic household waste and Blue Box recyclables transfer activities; however, the Black Donald WDS is now used for the stockpiling of Construction and Demolition (C&D) waste. The Township estimates that the Residential versus IC&I percentage (%) for waste (Garbage) is 70% versus 30%. A significant portion of the IC&I waste percentage is resultant of C&D waste associated with the demolition and disposal of homes within the Township.

Table 1 (below), indicates a conservative interpreted split between the Residential and IC&I Blue Box recycling percentages for Depot collection within the Township.

Table 1 Depot Collection Percentages of Total Blue Box Recycling

Depot Collection	
Residential	90%
IC&I	10%
Total	100%

4.0 PUBLIC CONSULTATION PROCESS

To date, the Township has not conducted any Public Consultation Events (PCE) specifically related to the formulation of the WRS.

The Township is committed to continuous improvement and the involvement of the public in municipal decision making. The role of future PCEs as part of the future development of the WRS will be discussed by the Council of the Township of Greater Madawaska in 2012. In the event that PCEs are used by the Township to determine public interest and/or involvement in future initiatives of the WRS, the communities of Calabogie, Dacre, and Griffith should be considered for potential PCE locations.

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 depend on a municipality's size, geographic location and population.

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

1. Population growth.
2. Improving costs and service efficiencies.
3. Increased public awareness.

6.0 GOALS AND OBJECTIVES

This WRS has identified a number of goals and objectives for the Township. These are presented below:

Table 2 Waste Recycling Goals and Objectives

Goals	Residential Objectives
To maximize diversion of Residential/IC&I solid waste through the Blue Box and bulk recycling programs.	<ul style="list-style-type: none"> • Attain a Residential GAP Diversion Rate of 50% by 2016 (WDO Datacall). • Attain a Residential Blue Box Diversion Rate of 37% by 2016 (Worksheet 7c).
To maximize the Capture Rate of Blue Box materials through existing and future programs.	<ul style="list-style-type: none"> • Attain a 50% Residential Capture Rate by 2016. • 2009 Capture Rate = 23% (WDO, 2010).
To improve the cost-effectiveness of recycling in our community.	<ul style="list-style-type: none"> • Reduce recycling costs per tonne by 5%.
To increase participation in the recycling program.	<ul style="list-style-type: none"> • Raise participation in Blue Box program to 90%.
To increase community knowledge/awareness of the current Blue Box recycling program.	<ul style="list-style-type: none"> • Increase Blue Box Promotion and Education (P&E) spending integrated with "Communications Plan" on a per project basis.

An additional aspect of the WRS may consider broader community goals and objectives. To date, this has not been reviewed in detail as part of the WRS development.

7.0 CURRENT SOLID WASTE MANAGEMENT PROGRAM

7.1 COMMUNITY CHARACTERISTICS

In 2010, the Township was reported to have a permanent population of 2,751. The municipality is home to 2,693 Total Households or dwellings. Of these, 2,641 are single-family households and 52 multi-family households. Included in the Total Households are 1,352 seasonal dwellings, which are generally occupied during the months of June to September. The Equivalent Population of the Township of Greater Madawaska, based on permanent and seasonal Residential populations, was estimated to be 3,668 in 2010.

7.2 CURRENT WASTE GENERATION AND DIVERSION – RESIDENTIAL

In 2010, the Township of Greater Madawaska generated approximately 1,818 tonnes of Residential solid waste per year. Of this, 176.49 tonnes, or 9.7% percent, was diverted through the Residential Blue Box program. In 2010, 62.42 tonnes of Containers, 46.23 tonnes of old corrugated cardboard (OCC), and 67.83 tonnes of Fibres were collected by the Township. IC&I solid waste and Blue Box recycling tonnages are not included in the reported data above.

Table 3 (below) summarizes the current waste generation and Blue Box Diversion Rates.

Table 3 Residential Solid Waste Generated and Diverted Through Blue Box (2010)

Residential Waste Stream/Blue Box Material (2010)	Tonnes	Percent of Total Waste
Total Waste Generated	1,817.68	100%
Fibres + OCC (ONP, OMG, OCC, OBB and fine papers)	114.07	6.3%
Containers	62.42	3.4%
Total Blue Box Material Currently Diverted (2010)	176.49	9.7%

As Table 4 (below) indicates, the Township's 2010 Blue Box Diversion Rate was below average for its WDO municipal grouping.

Table 4 Average Blue Box Diversion Rate (2010)

Location	Blue Box Diversion Rate (2010)
Township of Greater Madawaska	9.7%
Municipal Grouping: Rural Depot - South	21.3%

7.5 POTENTIAL WASTE DIVERSION

To determine the Township's 2010 waste composition, the composition of the Blue Box recycling stream was estimated using the approximations from the CIF *Guidebook*.

Based on the *Guidebook* and CIF worksheets, a total of approximately 816.05 tonnes of Blue Box recyclable materials were available for diversion in 2010, of which approximately 639.56 tonnes remained in the waste stream. Estimates of Blue Box material available for diversion are listed in

Table 5 (below).

Table 5 Current (2010) and Potential Diversion

Material	Total Available in Waste Stream (2010) (tonnes/year)	Currently Recycled (2010) (tonnes/year)	Potential Increase (tonnes/year)
Fibres + OCC (ONP, OMG, OCC, OBB and fine papers)	381.71	114.07	267.65
Containers	292.65	62.42	230.22
Total	674.36	176.49	497.87

Based on Table 4 and Table 5 (above), 27.4% of the Total Residential Waste Generated remains available for Blue Box recycling, which could raise the Town's Blue Box Diversion Rate to 37.1% (Appendix A; Worksheet 7c).

7.6 EXISTING PROGRAMS AND SERVICES

In 2010, the Township had the following policies and programs in place to manage Residential solid waste:

1. Tipping Fees
2. Mandatory Recycling (no Waste Management By-law)

For this WRS, Waste and Recycling Coverage is defined as the percentage of Total Households that are serviced by Depot collection. Depot collection services are provided to all 2,693 Total Households in the Township. Depot collection services for Residential waste (Garbage), Blue Box recycling, and Organic Waste is available for 100% of Total Households at all three (3) operating Depots within the Township.

Disposal and recycling services are paid for primarily through municipal property taxes and through User Fees at the Depots at the Norway Lake WDS, Griffith WDS, and Mount St. Patrick WDS. All Blue Box recyclables from the Township Depots are transported by the Township to OWRC MRF in Pembroke, Ontario.

Upcoming important collection-related milestones that may affect how collection services are administered are included in Table 6 (below).

Table 6 Collection Service Milestones

Material	Service Provider	Contract Start	Contract End
Blue Box Recycling Source-Separated Organics (MRF)	Ottawa Valley Waste Recovery Centre (OWRC)	No Contract	No Contract

In 2010, the total Net Annual Recycling costs for the Township were \$146,319.48. This amounts to \$829.05 per tonne, or \$39.89 per capita. As Table 7 (below) shows, net annual Blue Box recycling costs for the Township are above average for its WDO municipal grouping. The 2010 Blue Box recycling costs per tonne are interpreted to be elevated above normal, as costs associated with construction activities at the upgraded Township Depots were included in the 2010 Net Annual Recycling costs, including costs associated with the purchase of new roll-off containers, a new roll-off truck, and construction of new attendant's shelters. The Net Annual Recycling costs for the Township in 2011 are anticipated to be less than half (50%) of the costs reported in 2010. Therefore, the Blue Box recycling costs per tonne and Net Annual Recycling costs anticipated for 2011 for the Township are expected to better reflect yearly Blue Box recycling costs going forward.

Table 7 Net Recycling Cost (per tonne per year - 2010)

Location	Cost per Tonne (2009)
Township of Greater Madawaska	\$829.05
Rural Depot - South	\$597.56

7.7 ANTICIPATED FUTURE WASTE MANAGEMENT NEEDS

Solid waste generation rates in the Township of Greater Madawaska are expected to increase over the next 20 year planning period, based on a 20.1% increase in population in the Township from 2001 to 2006 (Statistics Canada, 2006). Table 8 (below) depicts the expected growth rates for solid waste generation and Blue Box material recovery (based on projected population growth rates).

Table 8 Anticipated Future Solid Waste Generation and Available Blue Box Material

	2010 (Current)	2015 (+5 Years)	2020 (+10 Years)
Equivalent Population	3,668	4,405	5,291
Total Waste (tonnes)	1,817.68	2,183.03	2,621.82
Blue Box Material Available (tonnes)	674.36	809.91	972.70

8.0 SELECTED INITIATIVES OF THE WASTE RECYCLING STRATEGY

8.1 OVERVIEW OF PLANNED INITIATIVES

The Township reviewed a number of options for consideration in the development of its WRS. The options were then scored based on a Priority Level:

Table 9 Planned Initiative Priority Levels

Priority Level	Description
5	High
4	Medium High
3	Medium
2	Medium Low
1	Low

A detailed overview of the options reviewed and their scoring are provided on Worksheet 8 in Appendix A, and a summary of the options are included in Worksheet 9 in Appendix A and Table 10 and Table 11 (below).

Once scored, the top ranking WRS options were organized into Priority Initiatives and Future Initiatives. The estimated cost for implementing the Priority and Future Initiatives are listed in Table 10 and Table 11 if available; however, if no cost is listed, the value is to be determined as part of the continuous improvement and evaluation of the WRS. An assessment of these initiatives and their steps for implementation are reviewed on the following pages.

Table 10 Priority Initiatives

Priority Initiatives	Priority Level	Approximate Total Costs	Anticipated Start Date	Anticipated Completion Date
Diversion Incentive Program	5	To be considered in 2012 Clear Bags Implementation = minimal cost; P&E Related	Potential for 2012	Potential for 2012
Public Education and Promotion Program (P&E)	4	General P&E Program = Blue Box Recycling (~ \$1 per person) Targeted P&E Program (Clear Bags) = ~ \$3,000 (To be considered in 2012)	2012	On-going
Provision of Free Blue Boxes	4	~ \$13,500 @ \$5 per unit ~ \$20,000 @ \$7.50 per unit (dependent on available funding)	Winter 2012 (if available funding)	Summer 2012 (if available funding)
Multi-Municipal Planning	4	Multi-Municipal Recycling RFP approximate cost = ~ \$1,000	October 2011	On-going
Following GAP for Effective Procurement and Contract Management	4	No Cost – Stewardship Ontario Model Tender Tool is free to use Stewardship Ontario Model Tender Tool was used to prepare Multi-Municipal Recycling RFP	Summer 2011	January 2012

Table 11 Future Initiatives

Future Initiatives	Priority Level	Approximate Total Costs	Anticipated Start Date	Anticipated Completion Date
Training of Key Program Staff	3	Variable; Course Specific	Next in 2014	On-going
Enhancement of Recycling Depots	1	n/a	Complete	Complete

8.2 PRIORITY INITIATIVES

The following is a review the Priority Initiatives identified during the formulation of the WRS, and as identified on Worksheets 8 and 9 in Appendix A. Each Priority Initiative is listed below, in order of Priority Level:

Initiative: Diversion Incentive Program (Priority Level = 5)

Overview:

- Encourage Residents towards increased diversion of Blue Box recyclables.

Implementation:

- Initiate discussion with Township on specific Diversion Incentive options.
- Discussion on the potential for implementation of Clear Bags policy planned for 2012.
- If Diversion Incentive Program is approved, include new Diversion Incentives in P&E Program, and on concepts/materials/tools.
- Conduct a Participation Rate Field Survey; potential for two (2) Participation Rate Field Surveys, one (1) before implementation of Clear Bag policy and one (1) after implementation. To be completed at Township Depots.

Initiative: Public Education and Promotion (P&E) Program (Priority Level = 4)

Overview:

- Increase Blue Box-specific P&E spending in Township (potential 2012 P&E Spending = \$3,000).

- Focus on Clear Bags policy, if implemented. Additionally, include information on Blue Box recycling in P&E Program.

Implementation:

- Develop budget and schedule for P&E Program.
- Determine P&E materials/concepts/tools to be utilized.
- Hire specialist(s) to assist with selected promotional aspects of P&E Program.
- Initiate P&E Program.

Initiative: Provision of Free Blue Boxes (Priority Level = 4)

Overview:

- By providing free large Blue Boxes (20+ Gallon) to residents, increases in Capture Rate, Blue Box Diversion Rate, and Participation Rate are anticipated.
- Helps to ensure residents have sufficient storage capacity for Blue Box Recyclables.
- Maximizes sorting at source.

Implementation:

- Research available funding opportunities for 2012.
- Initiate the tender process for the manufacture of large Blue Boxes.
- Integrate large Blue Box distribution into P&E Program.
- Distribute large Blue Boxes to all Households (Depot pickup/door-to-door delivery/other).

Initiative: Multi-Municipal Planning (Priority Level =4)

Overview:

- Multi-Municipal planning and collaboration can increase economies of scale and help reduce costs for smaller municipalities for their recycling programs.
- Township is currently engaged in Multi-Municipal Recycling RFP process with: Township of Madawaska Valley (TMV), Township of Killaloe, Hagarty and Richards (TKHR), Township of South Algonquin (TSA), Township of Greater Madawaska (TGM), Township of Bonnechere Valley (TBV), Township of Brudenell, Lyndoch and Raglan (TBLR).

Implementation:

- A Multi-Municipal Recycling RFP was released to potential service providers on October 7, 2011.
- The deadline for proposal submissions was October 31, 2011.
- The proposed start date of the Multi-Municipal Recycling contract is February 1, 2012.

Initiative: Following GAP for Effective Procurement and Contract Management (Priority Level = 4)

Overview:

- Stewardship Ontario Model Tender Tool available to all municipalities engaged in RFP development to ensure completeness and accuracy.

Implementation:

- The Stewardship Ontario Model Tender Tool was used to develop the Multi-Municipal Recycling RFP for the Group, as identified in "*Initiative: Multi-Municipal Planning*" (above).
- The Multi-Municipal Recycling RFP was reviewed and approved by CIF, in accordance with WDO Best Practices.

8.3 FUTURE INITIATIVES

The following is a review of the Future Initiatives identified during the formulation of the WRS, and as identified on Worksheets 8 and 9 in Appendix A. Each Future Initiative is listed below, in order of Priority Level:

Initiative: Training of Key Program Staff (Priority Level = 3)

Overview:

- As courses become available, Public Works Superintendent and Public Works Administrator are most appropriate candidates for additional training.
- Applicable associations/organizations for training: WDO, Municipal Waste Association (MWA), Association of Municipalities of Ontario (AMO), Stewardship Ontario (SO), and Solid Waste Association of Ontario (SWANA). A review of all courses available in a given year should be completed in order to determine the course's applicability to WDO Best Practices (ie. minimum four (4) day course, etc.).
- Training of Key Program Staff required every three (3) years by a minimum of one (1) staff member.

Implementation:

- Include potential training program costs in municipal budget.
- Monitor training programs available each year and evaluate applicability/benefit to Township Blue Box recycling program.
- The next year that training is required is 2014, in accordance with WDO Best Practices.

Initiative: Enhancement of Recycling Depots (Priority Level = 1)

Overview:

- In comparison to Curbside collection, Blue Box recycling Depots provide an inexpensive means to divert Blue Box recycling from disposal.
- A clean, well maintained, and visually communicative Depot improves site effectiveness.

Implementation:

- Enhancement of Recycling Depots is not a priority initiative for the Township, as the municipality completed significant upgrades to all three (3) operational Depots in 2010.
- Potential for future upgrades to Depot to include "Visual" signage.
- Review option of enhancing site conditions (landscaping, general cleanliness, maintenance).

8.4 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 minimal impact or delay. Table 12 (below) identifies a set of contingencies for possible planning delays.

Table 12 Waste Recycling Strategy Contingencies

Risk	Contingency
Insufficient funding	<ul style="list-style-type: none"> • Explore and apply for other funding sources. • Delay lower-priority initiatives. • Increase proportion of municipal budget to solid waste management. • Raise/implement user fees.
Public opposition to planned recycling initiatives	<ul style="list-style-type: none"> • Improve public communications. • Engage community/stakeholders to discuss initiatives/recycling plan.
Lack of available staff	<ul style="list-style-type: none"> • Prioritize department/municipal goals and initiatives. • Hire summer students to help with planning (may be available funding). • Co-op programs with local educational institutions?
Public apathy and non-compliance	<ul style="list-style-type: none"> • Increase P&E spending. • Create reward structure for compliance/participation. • Increase enforcement – Fines.
Enforcement of recycling policies	<ul style="list-style-type: none"> • Establish and enforce a Waste Management By-Law.

9.0 MONITORING AND REPORTING

The monitoring and reporting of the Township'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, they will be reported to Council and the public.

The approach for monitoring the Township's WRS is outlined in Table 13 (below).

Table 13 Waste Recycling Strategy Monitoring

Monitoring Topic	Monitoring Tool	Frequency
Diversion Rates Achieved (by type and by weight)	<u>Residential Blue Box Diversion Rate:</u> <ul style="list-style-type: none"> (Blue Box materials + Total Waste Generated) * 100% <u>Residential GAP Diversion Rate:</u> <ul style="list-style-type: none"> Calculated by WDO in annual Datacall [(All Diversion) + Total Waste Generated] * 100% 	<ul style="list-style-type: none"> Annually Annually
Program and Depot Participation	<ul style="list-style-type: none"> Ratepayer surveys (ie. by mail in tax mailings) Monitoring Depot Set-out (Participation) Rates MRF Tonnages Tracking – spreadsheets/graphs Waste Site Records (record book) 	<ul style="list-style-type: none"> Every five (5) years On-going Annually (minimum) Daily
Ratepayer Satisfaction / Opportunities for Improvement	<ul style="list-style-type: none"> Ratepayer survey (by mail in tax mailings) Tracking calls/complaints received to the municipal office/Depot sites 	<ul style="list-style-type: none"> Every 1 to 3 years On-going
Planning Activities	<ul style="list-style-type: none"> Prepare "Annual Waste Diversion Monitoring Report" 	<ul style="list-style-type: none"> Annually (Winter)
Review of WRS	<ul style="list-style-type: none"> A periodic review of the WRS to ensure that the selected initiatives are being implemented and to move forward with continuous improvement. 	<ul style="list-style-type: none"> Annually
Waste Disposed (Garbage)	<ul style="list-style-type: none"> Tracking of waste (garbage) transferred to Lafleche Environmental Inc. (by tonnes) 	<ul style="list-style-type: none"> Monthly / Annually

10.0 CONCLUSIONS AND RECOMMENDATIONS

This WRS was initiated by the Township to develop a plan to increase the efficiency and effectiveness of its Blue Box recycling program and maximize the amount of Blue Box material diverted from disposal. Specifically, the purpose of this WRS is to maximize Blue Box diversion from disposal to the most feasible extent possible within the Township. The WRS was prepared with assistance from CIF using the *Guidebook* and Worksheets made available by CIF to municipalities in order to facilitate continuous improvement of municipal Blue Box recycling programs in accordance with the Best Practices identified by WDO.

Currently, the Township provides Depot waste (garbage) and Blue Box recycling services to all Residents and IC&I generators within the Township. The Priority Factors/Drivers that led to the development of the WRS were population growth, improving costs and service efficiencies, and increased public awareness within the Township.

In 2010, the Township was determined by WDO to have a Residential GAP Diversion Rate of 13% (WDO, 2011), and using Worksheet 7b (Appendix A) was determined to have a Residential Blue Box Diversion Rate of 9.7%. A WDO-calculated Capture Rate of 23% was identified in the 2010 WDO Datacall for the Township for the 2009 calendar year (WDO, 2011); a 2010 Capture Rate will be available following completion of the 2011 Datacall in April 2012.

The Township has identified that the main areas of improvement for the Blue Box recycling program include:

- Increasing Blue Box-specific P&E spending.
- Discussion on the implementation of a municipal Waste Management By-law, including provision for mandatory Blue Box recycling.
- Negotiating a new Blue Box recycling MRF contract and expanded materials list, in association with a Multi-Municipal group in western Renfrew County.
- Investigating the potential for a Clear Bag program within the Township to further promote Blue Box recycling diversion.
- Potential for stakeholder outreach focusing on organics (SSO) diversion.
- Increasing Blue Box and Residential GAP Diversion Rates within the Township.
- Increasing Capture Rate within the Township.

In order to achieve improvement in the Blue Box recycling program, the Township has indentified Priority Initiatives as a means to achieve their diversion goals including:

- Diversion Incentive Program.
- Public Education and Promotion (P&E) Program.
- Provision of Free Blue Boxes (funding-dependant).
- Multi-municipal Planning.
- Following GAP for Effective Procurement and Contract Management.

Future Initiatives will be reviewed consistent with continuous improvement activities and review of the WRS on an on-going basis. The Township intends to develop a detailed work plan in order to meet the goals of the Priority Initiatives of the WRS.

11.0 CLOSING

Greenview has prepared this *Waste Recycling Strategy* in accordance with Blue Box Best Practice Activities, Section 3.4 of the 2010 WDO Municipal Datacall for the Township of Greater Madawaska.

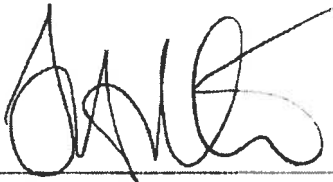
This report is governed by the attached Statement of Service Conditions and Limitations (Appendix B).

All respectfully submitted by,

GREENVIEW ENVIRONMENTAL MANAGEMENT LIMITED



Dan Hagan, B.Sc.
Project Geologist



Tyler H. Peters, P.Eng.
Project Manager

12.0 REFERENCES

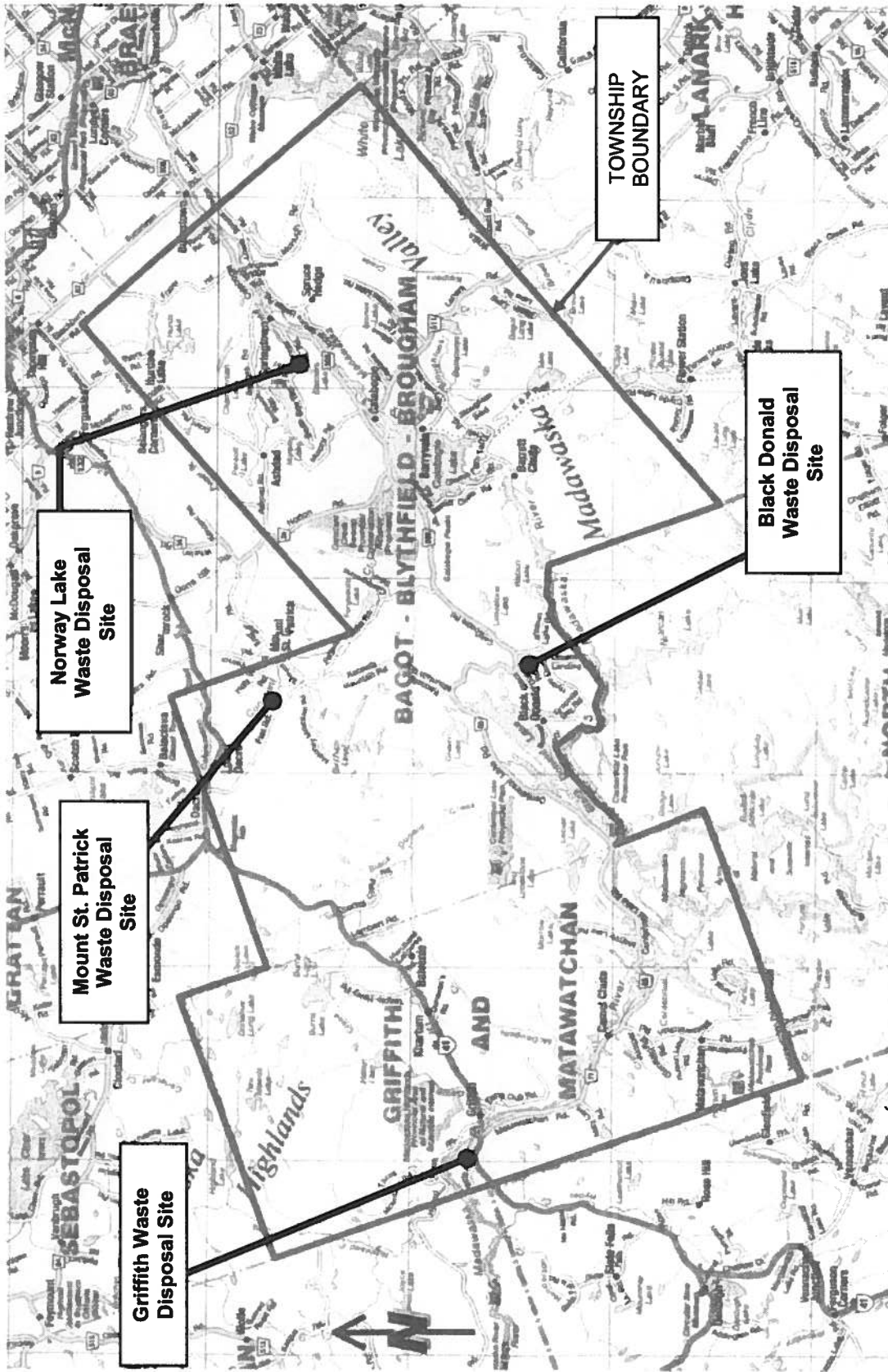
County of Renfrew, 2011. <http://www.CountyofRenfrew.on.ca>.


Statistics Canada, 2006. <http://www.statcan.gc.ca/>.

Trow Associates Inc., 2010. *Continuous Improvement Fund (CIF) - Guidebook for Creating a Municipal Waste Recycling Strategy*. March 2010.

Waste Diversion Ontario, 2011. *2010 Waste Diversion Ontario Municipal Datacall Summary Report (Revised)* – Township of Greater Madawaska. July 27, 2011.

FIGURES



 Greenview ENVIRONMENTAL MANAGEMENT Greenview Environmental Management Limited 69 Clask Avenue, P.O. Box 100 Bancroft, Ontario K0L 1C0 tel: (613) 332-0057 fax: (613) 332-1767 email: solutions@greenview-environmental.ca	CREATED BY: DMH		CLIENT:	TOWNSHIP OF GREATER MADAWASKA	PROJECT NO.: 102.11.010
	CHECKED BY: THP				
	DATE: DECEMBER 2011		TITLE:	REGIONAL LOCATION PLAN	FIGURE: 1
	SCALE: NTS				

APPENDIX A

Continuous Improvement Fund Waste Recycling Strategy Worksheets



Worksheet 1
Introduction Summary
Municipal Waste Recycling Strategy
Township of Greater Madawaska

Introduction Elements	
Municipalities Involved	Township of Greater Madawaska County of Renfrew, Ontario.
Description of municipal obligation for managing municipal waste	The Township of Greater Madawaska intends to continue to provide waste and recycling services to all residents, property owners and IC&I generators within the township limits, further to the Waste Diversion Act (as amended), in the most cost-effective and efficient manner as possible, as part of the long-term sustainability of the township.
Purpose and goals of Waste Recycling Plan	To maximize waste diversion from disposal to the most feasible extent possible within the Township of Greater Madawaska.
Reasons for developing Waste Recycling Strategy (summarize from worksheet 5)	The priority factors/drivers for the Township of Greater Madawaska to formulate a Waste Recycling Strategy (WRS) are population growth, improving costs and service efficiencies, and public awareness.
Support received to prepare the plan	<p>The Council of the Township of Greater Madawaska.</p> <ul style="list-style-type: none"> Resolution of Council = #310-10 (November 18, 2010). <p>Continuous Improvement Fund (CIF).</p> <ul style="list-style-type: none"> Funding approval received from CIF.

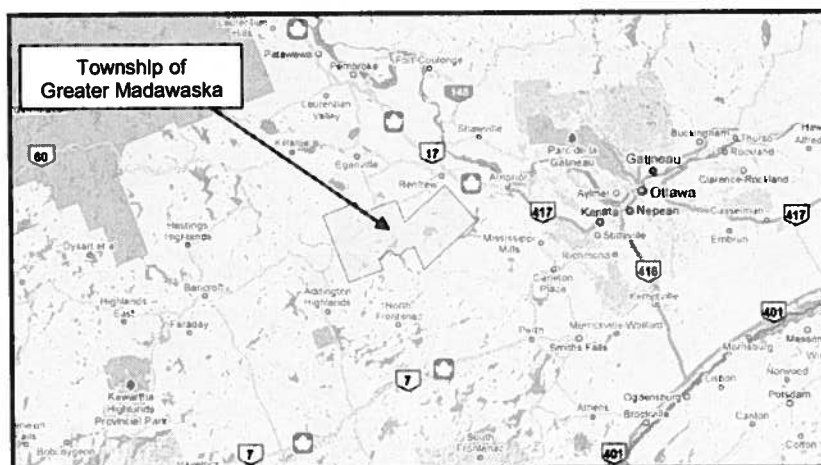
Worksheet 2
Planning Process
Municipal Waste Recycling Strategy
Township of Greater Madawaska

Planning Process	
Plan Development Participants	<ul style="list-style-type: none"> • Township of Greater Madawaska (Municipality). • Greenview Environmental Management Limited (Consultant). • Continuous Improvement Fund (CIF). • Waste Diversion Ontario (WDO).
Completed Steps	<ul style="list-style-type: none"> • Secured funding for WRS development (CIF Project #: 654.11). • Preliminary WRS Worksheets. • Meetings with Township Staff/Council to Discuss Scope of Work, Implementation. • Finalize WRS Worksheets. • Version 1.0 of the WRS.
Next Steps	<ul style="list-style-type: none"> • Meetings with Township Staff to Discuss Implementation and amendments.
Public Engagement (may include information from worksheet 4)	<ul style="list-style-type: none"> • Public and/or Stakeholders consultation to be considered for 2012, with a focus on Source Separated Organics (SSO) diversion.



Worksheet 3
Study Area
Municipal Waste Recycling Strategy
Township of Greater Madawaska

Study Area Characteristics	
<p>Our study area includes the following municipality:</p>	<p>Township of Greater Madawaska County of Renfrew</p> <p><u>Land Area</u> = 1,011.67 km² (Statistics Canada, 2006). <u>Population Density</u> = 2.7 per km² (Statistics Canada, 2006). <u>Population (2010)</u> = 2,751 (Statistics Canada, 2006). <u>Total Households (2010)</u> = 2,641 Single Family (Min. of Municipal Affairs). = 52 Multi-Family (Min. of Municipal Affairs). <u>Seasonal Households (2010)</u> = 1,352 (Min. of Municipal Affairs). (included in Total Households)</p>
<p>Our Waste Recycling Strategy will consider the following sectors:</p>	<p>Residential Single Family/Multi-family. IC&I – small business, institutional, commercial. <u>Township Data</u> (http://www.countyofrenfrew.on.ca). Services = 25 Commercial = 22 Tourism = 25 Manufacturing = 10 Social Organizations = 10</p>



Source: www.countyofrenfrew.on.ca (Google Maps)



Worksheet 4
Public Consultation Options
Municipal Waste Recycling Strategy
Township of Greater Madawaska

Applicable? Y/N	Public Consultation Options	Comments
Yes	Stakeholder Outreach	<p>Interview key local stakeholders (e.g., resident associations, community groups, small business associations or leaders, etc) to identify key issues, concerns, and opportunities.</p> <ul style="list-style-type: none"> • Focus on Organics (SSO) in IC&I sector. <p>The Township of Greater Madawaska is considering the installation of IC&I SSO MOLOK units across the municipality within next five (5) years.</p>
Yes	Public Consultation Events/Meetings	<p>Public Consultation Events (PCE) are excellent ways to update the public on your planning activities and to obtain their feedback.</p> <ul style="list-style-type: none"> • Diversion. • Best Practices (WDO). • Promotion and Education (P&E). <p>PCEs to be considered following the launch of Version 1.0 of WRS in the communities of Calabogie, Dacre, and Griffith.</p>
Yes	Website Feedback (Town Website)	<p>Township of Greater Madawaska Website: www.townshipofgreatermadawaska.com</p> <p>The Township website is used to publish important information regarding waste management activities and can be used to promote the WRS and disseminate information to the public.</p> <p>Please see the above link for available information.</p>
Yes	Newspaper Notices and Mail-outs	<p>Newspaper notices can be used to disseminate important information to ratepayers of the Township of Greater Madawaska. Local newspapers include:</p> <ul style="list-style-type: none"> • Renfrew Mercury. • Eganville Leader. <p>Mail-outs are regularly sent to residents in tax mailings, and could be used as part of the WRS to inform the public on diversion-related subjects.</p>



THE TOWNSHIP OF GREATER MADAWASKA

Worksheet 5 Waste Diversion Factors and Drivers Municipal Waste Recycling Strategy Township of Greater Madawaska

Relevant in our case? Yes/No	Factor/Driver	Comments
Yes	WDO Requirements	WDO requires municipalities to have a Waste Recycling Strategy (WRS) in place (Best Practice Funding).
Yes	Population Growth	Population growth can lead to increases in waste generated. Potential population growth is anticipated to increase consistent with the Statistics Canada's reported 20.1% Increase (2001 to 2006) over the next 5 year period in the Township of Greater Madawaska. Increases in seasonal and transient population can lead to increases in waste generated.
Yes	Council Direction	Council Resolution Number = 310-10 (November 18, 2010).
Yes	Public Awareness	Increased environmental awareness, municipal service demands, and population growth.
Yes	Improving cost/service efficiencies	Decreasing costs and improving efficiencies of Depot Collection is important for the sustainability of the Township.
Yes	Restricting factors (e.g., Local MRFs)	Local MRFs/Service Providers include: <ul style="list-style-type: none"> Ottawa Valley Waste Recovery Centre Pembroke, ON. Beaumen Waste Management Systems Ltd. Renfrew, ON. Tomlinson Environmental Services Ottawa, ON. Lafleche Environmental Township of Beckwith, ON
Yes	Ageing Population	Based on 2006 Statistics Canada data, 51% of the population in the Township of Greater Madawaska was over 50 years of age. It is anticipated that the percentage of the population over 50 years of age will increase going forward. The largest percentage of the population is expected to be: <ul style="list-style-type: none"> Not as mobile. Not as liable to travel to Waste Transfer Sites

Priority Factors / Drivers

1. Population Growth.
2. Improving Costs and Service Efficiencies.
3. Public Awareness.

Worksheet 6
Waste Recycling Goals and Objectives
Municipal Waste Recycling Strategy
Township of Greater Madawaska

Recycling Specific Goals and Objectives			
Relevant? Yes / No	Goals	Objectives	Comments
Yes	To maximize diversion of residential/municipal solid waste through the Blue Box recycling program.	<p>Attain a Residential GAP Diversion Rate of 50% within the Township by 2016.</p> <p>Attain a Blue Box Diversion Rate of 37% by 2016 (Worksheet 7c).</p>	<p><u>2010 Residential GAP Diversion Rate</u> = 13%.</p> <p><u>2010 Blue Box Diversion Rate</u> = 9.7% (Worksheet 7c).</p>
Yes	To maximize capture rates of Blue Box materials through existing and future programs.	<p>Attain a 50% Capture Rate within the Township by 2016.</p> <p>2009 Capture Rate = 23%.</p>	<p>A 50% Capture Rate within the Township appears to be an achievable target</p> <ul style="list-style-type: none"> Increased P&E as part of a Communications (P&E) Plan. Implementation of a Waste Management By-Law? Yearly monitoring of Capture Rate (WDO Datacall).
Yes	To improve the cost-effectiveness of recycling in our community.	<ul style="list-style-type: none"> Reduce recycling costs per tonne by 5%. 	<ul style="list-style-type: none"> New MRF Contract? Decrease Residual content of recycling materials? Multi-Municipal Group?
Yes	To increase participation in the recycling program.	<ul style="list-style-type: none"> Raise participation in Blue Box program to 90%. 	<ul style="list-style-type: none"> Additional P&E Campaigns. Schools, etc – demonstrations, education. Free Blue Boxes? (CIF/other). Penalties/Rewards (Waste Management By-Law?). Participation Rate Field Survey? Public Space Recycling.
No	To expand the lifespan of our landfill.	<ul style="list-style-type: none"> N/A. 	<ul style="list-style-type: none"> No further landfilling of Domestic Waste in TGM (transferred to Lafleche).
No	To manage our waste in our community or as close to home as possible.	<ul style="list-style-type: none"> N/A. 	<ul style="list-style-type: none"> No further landfilling of Domestic Waste in TGM (transferred to Lafleche).
Yes	To increase community knowledge/awareness of current Blue Box Recycling programs.	<ul style="list-style-type: none"> Increase BB P&E spending as part of a "Communications Plan". 	<ul style="list-style-type: none"> Blue Box Recycling P&E spending to be considered on a per project basis.

Table 7a
Community Characteristics (for municipalities working individually)
Municipal Waste Recycling Strategy
Township of Greater Madawaska

Characteristic	Value
Permenant Population (2010) ¹	2,751
Seasonal Population ²	2,751
Equivalent Population	3,668
Total Households/ Dwellings	2,693
Single-Family Households	2,641
Multi-Family Households	52
Total Seasonal Dwellings (included in Total Households)	1,352
Months of Seasonal Increase	June to September
Municipal Grouping	Rural Depot - South

Notes:

1. From Ministry of Municipal Affairs (used in 2010 WDO Datacall - Township of Greater Madawaska)
2. Based on Seasonal Population being 100% of Current Population.

Table 7b
Waste Generated and Blue Box Materials Diverted (for municipalities working individually)
Municipal Waste Recycling Strategy
Township of Greater Madawaska

Residential Waste Stream - TOTALS		
Residential Waste Stream/ Blue Box Material	Tonnes Currently Diverted	Percent of Total Waste
Total Waste Generated ¹	1,817.68	-
Papers (ONP, OMG, OCC, OBB and fine papers)	114.07	6.3%
Containers - commingle (aluminum, steel, mixed metal, plastic, glass)	62.42	3.4%
Total Blue Box material diverted	176.49	9.7%

Residential - TOTAL; amended (tonnes)	
Papers (ONP, OMG, OCC, OBB and fine papers)	114.07
Containers - commingle (aluminum, steel, mixed metal, plastic)	62.42

Residential - TOTAL (tonnes)		
OCC ²	46.23	176.49
Fibres ²	67.83	
Containers (commingle) ²	62.42	

Notes

- 1 From 2010 Waste Diversion Ontario Municipal Datacall Summary Report - Township of Greater Madawaska - Section 7 at 70% Residential
2 From 2010 Waste Diversion Ontario Municipal Datacall Summary Report - Township of Greater Madawaska - Section 8.1 at 90% Residential
* All tonnages are Residential only

Table 7c
Calculating Material Available for Recycling (for municipalities working individually)
Municipal Waste Recycling Strategy
Township of Greater Madawaska

Table 1: Reasonable Blue Box Diversion Goals		
Municipal Grouping	Capture Rate Target for Blue Box Materials	Net Cost Target (\$/tonne)
Rural Depot – South	70%	\$390.00

Potential Future Blue Box Diversion Rate - TOTAL								
Waste/Resource Material	Composition (%) (from local or sample audit)	Total Residential Waste Generated (tonnes)	Total Blue Box Material in Waste Stream (tonnes)	Target Blue Box Capture Rate (%) (see Table 1, above)	Blue Box Material Available for Diversion (tonnes)	Blue Box Material Currently Diverted (tonnes)	Blue Box Material Remaining in Waste Stream (tonnes)	Material Remaining In Waste Stream for Diversion (% of total waste stream)
Mixed Fibres (ONP, OMG, OCC, OBB and fine papers)	30.00%	1,817.68	545.30	70%	381.71	114.07	267.65	14.7%
Containers -commingle (aluminum, steel, mixed metal, plastic, glass)	23.00%		418.07		292.65	62.42	230.22	12.7%
Total Blue Box Materials	53.00%		963.37		674.36	176.49	497.87	27.4%
Current Blue Box Diversion Rate						9.7%		
Additional Blue Box Diversion Rate								27.4%
Potential Future Blue Box Diversion Rate								37.1%

Notes:
* All tonnages are Residential only.



Worksheet 7d
Existing Programs and Services
Municipal Waste Recycling Strategy
Township of Greater Madawaska

What policies or programs are currently in place at the local or regional level for managing residential solid waste in your area?			
<input type="radio"/> User Pay <input checked="" type="radio"/> Tipping fees <input type="radio"/> Bag limits ____/week		<input checked="" type="radio"/> Mandatory recycling <input type="radio"/> Solid Waste utility <input type="radio"/> Take backs	
How are waste and recycling collection services provided to the residential sector?			
Collection Service	Waste Coverage (%)	Recycling Coverage (%)	Upcoming Milestones (e.g., contracts, etc)
Drop-off (at depot) Mount St. Patrick WDS, Norway Lake WDS, Griffith WDS	100%	100%	<ul style="list-style-type: none"> Ottawa Valley Waste Recovery Centre (OVWRC). Contract Status = No Contract.
How are waste and recycling services financed?			
	Waste	Recycling	
Payment Type (fixed or variable user fees, tax base, a mix of above, etc)	Tax Base User Fees	Tax Base	
Where are recyclable materials taken after collection at the Depots?			
<input checked="" type="radio"/> Directly to Materials Recycling Facility (Ottawa Valley Waste Recovery Centre - OVWRC).			

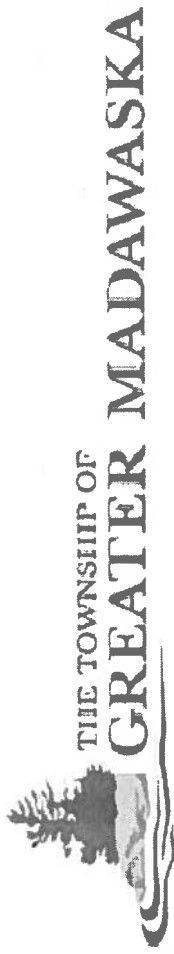


Table 7e
Program Costs (for municipalities working individually)
Municipal Waste Recycling Strategy
Township of Greater Madawaska

Blue Box Recycling Costs	\$/Year
Total Net Residential Recycling Costs ¹	\$146,319.48
Net Residential Recycling Costs per tonne	\$829.05
Net Residential Recycling Costs per capita	\$39.89
Net Residential Recycling Costs per household	\$54.33

Notes:

1. From 2010 Waste Diversion Ontario Municipal Datacall Summary Report - Township of Greater Madawaska - Section 6.2 at 90% Residential.

* All tonnages are Residential only.

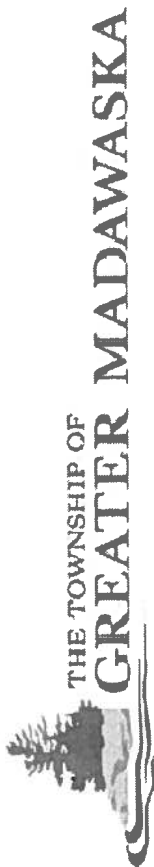


Table 7f
Anticipated Future Waste Management Needs (for municipalities working individually)
Municipal Waste Recycling Strategy
Township of Greater Madawaska

	Current Equivalent Population	Total Waste Generated (tonnes)	Waste per Person (kg/person/year)
Solid Waste Generated per Capita (kg/person/year)	3,668	1,817.68	495.55

	Current Equivalent Population	Blue Box Material Available (tonnes)	Blue Box Material per Person (kg/person/year)
Blue Box Material Available per Capita (kg/person/year)	3,668	674.36	183.85

	Current Year	Current Year + 5	Current Year + 10
Equivalent Population ¹	3,668	4,405	5,291
Total Waste (tonnes) ²	1,817.68	2,183.03	2,621.82
Blue Box Material Available (tonnes) ³	674.36	809.91	972.70

Notes:

- Population increased based on 20.1% increase from 2001 to 2006 in Township of Greater Madawaska (Statistics Canada)
 - Total Waste (tonnes) - Current Year +5/+10 calculated using ("Equivalent Population" x "Waste per Person" / 1000)
 - Blue Box Material Available (tonnes) - Current Year +5/+10 calculated using ("Equivalent Population" x "Blue Box Material per Person"/1000)
- * All tonnages are Residential only

Worksheet 8
Overview of Recycling Plan Options
Municipal Waste Recycling Strategy
Township of Greater Madawaska

Suitable? Y/N	Description of Options/Best Practices	Priority Level	Estimated Costs	Schedule for Completion		
				Anticipated Start Date	Anticipated Completion Date	Actual Completion Date
Yes	<p>Public Education and Promotion (P&E) Program</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&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">• Greater participation levels and community involvement.• Higher diversion rates.• Less contamination in recovered materials, potentially leading to higher revenues.• Lower residue rates at recycling facilities. <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 (http://vdbiz.com/stewardship/welcome.asp).</p> <p>Note: Targeted P&E Program related to Clear Bags to be considered for 2012.</p>	4	2010 P&E = \$25.00 (Blue Box-specific)	On-going	On-going	
Yes	<p>Training of Key Program Staff</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 (www.wdo.ca/ciforw.html). 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> <ul style="list-style-type: none">• Public Works Superintendent / Public Works Administrator.	3	Increases to P&E budget to be considered on a individual project basis (Project-driven).	Clear Bags P&E Campaign = To be considered for 2012	To be considered for 2012	
			Variable • Course Specific	Every three (3) years Next in 2014	On-going	

Suitable? Y/N	Description of Options/Best Practices	Priority Level 5 – High 4 – Medium High 3 – Medium 2 – Medium Low 1 – Low	Estimated Costs	Schedule for Completion		
				Anticipated Start Date	Anticipated Completion Date	Actual Completion Date
Yes	<p>Diversion Incentive Program</p> <p>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.</p> <p>Clear Bags can help with determining Capture Rate/Blue Box recycling in waste stream.</p> <ul style="list-style-type: none"> • Bag Limits, Bag Tags and/or Clear Bags? • Determine Participation Rate of Township of Greater Madawaska. • Ratepayer surveys? • Reward programs for blue box recycling? <p>Note: Implementation of a Clear Bag policy within the municipality to be considered for 2012.</p>	5	Advertising Only _____ Included in P&E Program	To be considered for 2012	To be considered for 2012	
Yes	<p>Enhancement of Recycling Depots</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"> • 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, visual signage (<u>Current = Written Signage</u>). • Providing additional part-time staff to address seasonal fluctuations and visiting traffic. • Supplemental staffing - Co-op Program with local Educational Institutions (High School/College/University)? <p>Note: The Township of Greater Madawaska has already completed Waste Transfer Site enhancements/upgrades at all operating Depots.</p>	1	Completed	Completed	Completed	Fall 2010



Worksheet 8
Overview of Recycling Plan Options
Municipal Waste Recycling Strategy
Township of Greater Madawaska

Suitable? Y/N	Description of Options/Best Practices	Priority Level 5 – High 4 – Medium High 3 – Medium 2 – Medium Low 1 – Low	Estimated Costs	Schedule for Completion		
				Anticipated Start Date	Anticipated Completion Date	Actual Completion Date
Yes	<p>Provision of Free Blue Boxes</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> <ul style="list-style-type: none"> • Available funding options to be reviewed in 2012. • 20+ Gallon Blue Boxes are a requirement of program. 	4	<p>~ \$13,500 @ \$5 per unit</p> <p>~ \$20,000 @ \$7.50 per unit</p> <p>Available funding to be reviewed in 2012</p>	Early 2012 (if available)	Summer 2012 (if available)	
Yes	<p>Multi-Municipal Planning</p> <p>Small and medium-sized municipalities often face considerable cost and capital challenges when looking to collect and transfer 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> <p>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 other's waste diversion programs.</p> <p>Note: Multi-Municipal Recycling Request for Proposal was released to potential service providers on October 7, 2011. Potential new Multi-Municipal contract start date = February 1, 2012.</p> <p>Multi-Municipal Partners include the Townships of: Greater Madawaska, Madawaska Valley, Brudenell, Lyndoch and Raglan, Bonnechere Valley, Killaloe, Hagarly and Richards, and South Algonquin.</p>	4	<p>Multi-Municipal RFP development cost for TGM = ~ \$1000</p>	October 7, 2011	January 31, 2012	

Worksheet 8
Overview of Recycling Plan Options
Municipal Waste Recycling Strategy
Township of Greater Madawaska

Suitable? Y/N	Description of Options/Best Practices	Priority Level 5 – High 4 – Medium High 3 – Medium 2 – Medium Low 1 – Low	Estimated Costs	Schedule for Completion		
				Anticipated Start Date	Anticipated Completion Date	Actual Completion Date
Yes	<p>Following Generally Accepted Principles for Effective Procurement and Contract Management</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> <ul style="list-style-type: none"> All future tenders/RFPs should use the <u>Stewardship Ontario Model Tender Tool</u> (Best Practice Questions WDO Dalacall). No existing Blue Box recycling contract. <p>Note: Multi-Municipal Recycling Request for Proposal was released to potential service providers on October 7, 2011.</p> <p>Potential new Multi-Municipal contract start date = February 1, 2012.</p>	4	No Cost – Stewardship Ontario Model Tender Tool is free to use by all municipalities	October 7, 2011	January 31, 2012	



THE TOWNSHIP OF GREATER MADAWASKA

Worksheet 9 Summary of Priority and Future Initiatives Municipal Waste Recycling Strategy Township of Greater Madawaska

Priority Initiatives	Score	Description and Approximate Total Cost
Diversion Incentive Program	5	<ul style="list-style-type: none"> Implementation of Clear Bag policy to be considered in 2012. Costs interpreted to be minimal, as most of the cost is associated/included with P&E Program.
Public Education and Promotion (P&E) Program	4	<ul style="list-style-type: none"> Targeted P&E Program to focus on Clear Bags to be considered for 2012. Approximate cost for 2012 P&E Program = \$3,000. Increases to P&E budget to be considered on an individual project basis (project-driven).
Provision of Free Blue Boxes	4	<ul style="list-style-type: none"> Large (20+) gallon Blue Boxes. Approximate costs estimated at \$13,500 at \$5.00 per unit and \$20,000 at \$7.50 per unit. Funding options to be reviewed in 2012.
Multi-Municipal Planning	4	<ul style="list-style-type: none"> TGM is a member of a Multi-Municipal Group that issued a Multi-Municipal Recycling RFP on October 7, 2011. A new Blue Box and SSO recycling contract is anticipated to begin on February 1, 2012. Approximate cost for the Multi-Municipal RFP for Township = ~ \$1000.
Following Generally Accepted Principals (GAP) for Effective Procurement and Contract Management	4	<ul style="list-style-type: none"> No cost – Stewardship Ontario Model Tender Tool is free to use by municipalities, and was used to formulate the Multi-Municipal Recycling Request for Proposal (RFP) as issued on October 7, 2011. Costs included in Multi-Municipal Planning (above).
Future Initiatives	Score	Approximate Total Cost
Training of Key Program Staff	3	<ul style="list-style-type: none"> Variable; course specific. Next in 2014.
Enhancement of Recycling Depots	1	<ul style="list-style-type: none"> Not a priority, as TGM has already completed Waste Transfer Site enhancements to all three (3) operating Depots within the municipality.

Worksheet 10
Contingencies
Municipal Waste Recycling Strategy
Township of Greater Madawaska

Risk	Contingency
Insufficient Funding	Explore and apply for other funding sources.
	Delay lower-priority initiatives.
	Increase proportion of municipal budget to solid waste management.
	Raise/implement user fees.
Public Opposition to Planned Recycling Initiatives	Improve public communications.
	Engage community/stakeholders to discuss initiatives/recycling strategy.
Lack of Available Staff	Prioritize department/municipal goals and initiatives.
	Hire contract staff (students) to help with planning (may be available funding).
	Co-op students from local educational institutions?
Permitting and Approval Requirements	Identify permit requirements early on in process.
	Establish a "permit requirements" checklist.
Public Apathy/Non-compliance	Additional Promotion and Education (P&E).
	Create reward structure for compliance/participation.
Enforcement of Recycling Policies	Establish a Waste Management By-Law for Township.

Worksheet 11
Monitoring and Reporting Program Outline
Municipal Waste Recycling Strategy
Township of Greater Madawaska

Monitoring Item / Criteria	Monitoring Tools	Frequency
Diversion Rates Achieved (by type and by weight)	<u>Residential Blue Box Diversion Rate:</u> <ul style="list-style-type: none"> (Blue Box Materials + Total Waste Generated) X 100%. <u>Residential GAP Diversion Rate:</u> <ul style="list-style-type: none"> Calculated by WDO in annual Datacall. [(All Diversion) + Total Waste Generated] X 100%. 	<ul style="list-style-type: none"> Annually Annually
Program Participation	<ul style="list-style-type: none"> Ratepayer survey (e.g., by mail in tax mailings). Monitoring Depot set-out rates. MRF Tonnages Tracking – using spreadsheets/graphs. 	<ul style="list-style-type: none"> Every 5 years Annually Annually (minimum)
Ratepayer Satisfaction / Opportunities for Improvement	<ul style="list-style-type: none"> Customer survey (e.g., by mail in tax mailings). Tracking calls/complaints received to the municipal office / Depot sites. 	<ul style="list-style-type: none"> Every 1 to 3 years On-going
Planning activities	<ul style="list-style-type: none"> Prepare an "Annual Waste Diversion Monitoring Report" for Township. 	<ul style="list-style-type: none"> Annually (January)
Review of Waste Recycling Strategy (WRS)	<ul style="list-style-type: none"> A periodic review of the WRS to monitor and report on progress, to ensure that the selected initiatives are being implemented, and to move forward with continuous improvement. 	<ul style="list-style-type: none"> Annually
Waste Disposed (garbage)	<ul style="list-style-type: none"> Capacity Surveys (integral for determining Total Waste Generated). Periodic Weighing of Waste Trucks. 	<ul style="list-style-type: none"> Annually Monthly / Random
Depot Participation	<ul style="list-style-type: none"> Waste Site Records (record book). Depot Set-out rates. 	<ul style="list-style-type: none"> Daily On-going

APPENDIX B

Statement of Service Conditions and Limitations



GREENVIEW ENVIRONMENTAL MANAGEMENT LIMITED - STATEMENT OF SERVICE CONDITIONS AND LIMITATIONS

Provision of Services and Payment

Upon documented acceptance of Greenview's proposed services, costs and associated terms by the client, Greenview may commence work on the proposed services directly. Upon retention of Greenview's services related to this project, the client agrees to remit payment for the services rendered for the specified period within (30) days of receipt as invoiced by Greenview on a typical monthly basis, unless otherwise arranged between the client and Greenview. In the event of non-payment by the client, Greenview reserves the right, without external influence or expense, to discontinue services and retain any documentation, data, reports, or other project information until such time as payment is received by Greenview.

Warranty, Limitations, and Reliance

Greenview relies on background and historical information from the client to determine the appropriate scope of services to meet the client's objectives, in accordance with applicable legislation, guidelines, industry practices, and accepted methodologies.

Greenview provides its services under the specific terms and conditions of a specific proposal (and where necessary formal contract), in accordance with the above requirements and the *Limitations Act 2002*, only.

The hypotheses, results, conclusions, and recommendations presented in documentation authored by Greenview are founded on the information provided by the client to Greenview in preparation for the work. Facts, conditions, and circumstances discovered by Greenview during the performance of the work requested by the client are assumed by Greenview to be part of preparatory information provided by the client as part of the proposal stage of the project. Greenview assumes that, until notified or discovered otherwise, that the information provided by, or obtained by Greenview from, the client is factual, accurate, and represents a true depiction of the circumstances that exist related to the time of the work.

Greenview relies on its clients to inform Greenview if there are changes to any related information to the work. Greenview does not review, analyze or attempt to verify the accuracy or completeness of the information or materials provided, or circumstances encountered, other than in accordance with applicable accepted industry practice. Greenview will not be responsible for matters arising from incomplete, incorrect or misleading information or from facts or circumstances that are not fully disclosed to or that are concealed from Greenview during the period that services, work, or documentation preparation was performed by Greenview.

Facts, conditions, information and circumstances may vary with time and locations and Greenview's work is based on a review of such matters as they existed at the particular time and location indicated in its documentation. No assurance is made by Greenview that the facts, conditions, information, circumstances or any underlying assumptions made by Greenview in connection with the work performed will not change after the work is completed and documentation is submitted. If any such changes occur or additional information is obtained, Greenview should be advised and requested to consider if the changes or additional information affect its findings or results.

When preparing documentation, Greenview considers applicable legislation, regulations, governmental guidelines and policies to the extent they are within its knowledge, but Greenview is not qualified to advise with respect to legal matters. The presentation of information regarding applicable legislation, regulations,

governmental guidelines, and policies is for information only and is not intended to and should not be interpreted as constituting a legal opinion concerning the work completed or conditions outlined in a report. All legal matters should be reviewed and considered by an appropriately qualified legal practitioner.

Greenview's services, work and reports are provided solely for the exclusive use of the client which has retained the services of Greenview and to which its reports are addressed. Greenview is not responsible for the use of its services, work or reports by any other party, or for the reliance on, or for any decision which is made by any party using the services or work performed by or a report prepared by Greenview without Greenview's express written consent. Any party that uses, relies on, or makes a decision based on services or work performed by Greenview or a report prepared by Greenview without Greenview's express written consent, does so at its own risk. Except as set out herein, Greenview specifically disclaims any liability or responsibility to any third party for any loss, damage, expense, fine, penalty or other such thing which may arise or result from the use of, reliance on or decision based on any information, recommendation or other matter arising from the services, work or reports provided by Greenview.

Site Assessments

A site assessment is created using data and information collected during the investigation of a site and based on conditions encountered at the time and particular locations at which fieldwork is conducted. The information, sample results and data collected represent the conditions only at the specific times at which and at those specific locations from which the information, samples and data were obtained and the information, sample results and data may vary at other locations and times. To the extent that Greenview's work or report considers any locations or times other than those from which information, sample results and data were specifically received, the work or report is based on a reasonable extrapolation from such information, sample results and data but the actual conditions encountered may vary from those based on extrapolations.

Only conditions, and substances, at the site and locations chosen for study by the client are evaluated; no adjacent or other properties are evaluated unless specifically requested by the client. Any physical or other aspects of the site that were not chosen for study by the client, or any other matter not specifically addressed in a report prepared by Greenview, are beyond the scope of the work performed by Greenview and such matters have not been investigated or addressed.

Confidentiality

Greenview provides proposals, reports, assessments, designs, and any other work for the sole party identified as the client or potential client in the case of proposals.

For proposals specifically, the information contained therein is confidential, proprietary information, and shall not be reproduced or disclosed to any other party than to that of the addressee of the original proposal submission, without prior written permission of Greenview.