

**Corporation of the United Townships of Head, Clara and Maria
Waste Recycling Strategy**

Prepared For:



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**Our Project No. 2106145A
June, 2011**

EXECUTIVE SUMMARY

The Corporation of the United Townships of Head, Clara and Maria is located within Renfrew County situated between the Ottawa River to the north and Algonquin Park to the south. The Municipality is characterized by a small population (< 5000 full-time residents), 339 single family homes, 205 of which are seasonal, with a full-time population of 228.

The Municipality is required by Waste Diversion Ontario (WDO) to submit an updated Waste Recycling Strategy (WRS) to ensure the current Blue Box program is in-line with the Municipality's Integrated Waste Management Strategy (IWMS) along with the Province of Ontario's goal of reaching 60% waste diversion. The following Waste Recycling Strategy and Integrated Waste Management Strategy analyzes the Municipality's current waste management program with focus on the blue box material recycling in the Municipality. The report outlines initiatives to be sought by the Municipality to ensure an effective and efficient blue box material recycling program is conducted in-line with WDO's Best Practice questions.

Waste Management Profile

The Townships of Head, Clara and Maria has two (2) operational waste disposal sites. These facilities are open to all seasonal and full time residents.

The Municipality's waste management program includes a variety of waste diversion activities. The program includes curbside collection of blue box material with additional materials collected for diversion at the Municipal Waste Disposal Sites. In February 2007 the Township implemented a curbside collection recycling program through a private contractor.

The existing waste diversion program includes:

- Blue Box Materials (See **Table 5**)
- Leaf and Yard Waste Organics (On site burning)
- Waste Electrical and Electronic Equipment
- Municipal Special and Hazardous Waste (once annually)
- Tire Stewardship
- Scrap Metal
- Call2Recycle battery and cell phone recycling

The Municipality is in the process of obtaining approval for a year round drop-off facility for Household Hazardous Waste at the Stonecliffe Waste Disposal Site. This would supplement the annual Hazardous Waste drop-off event allowing more convenience to municipal residents.

Waste Recycling Strategy

Through analysis of the Municipal WRS the Municipality has a comparatively low rate of program effectiveness and efficiency as determined by the WDO reported blue box capture rate in 2008 and 2009. In comparison to other municipalities of similar characteristics the current recycling program is less effective in terms of capture rate, and less efficient in terms of cost/tonne than the Rural Collection North average due to a sparse population density. Updates to the current recycling program should be directed towards improving the effectiveness

(capture rates) of the program while maintaining and improving the WRS program current efficiency.

The Priority Initiatives identified through this assessment include:

1. Public Education and Promotion Programs
2. User Pay Program
3. Training Key Program Staff

The Future Initiatives identified through this assessment include:

4. Multi-Municipal Collection and Processing
5. Standardized Service Levels and Collaborative Haulage Contracting
6. Optimization of Collection Operations
7. Tipping Fee Increase

The primary goal of the updated WRS is to increase the blue box material capture rate of recyclables in the waste stream by 20% over the next five (5) years. The goal will be sought through initiating a Promotion and Education (P & E) Program to inform municipal residents. Under the condition that the P & E plan does not reaching the aforementioned goal, additional priority initiatives should be implemented.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	i
1.0 INTRODUCTION	1
1.1 Purpose	1
1.2 Planning Process and Funding	1
2.0 MUNICIPAL WASTE DISPOSAL PROFILE	2
2.1 Bissett Creek Waste Disposal Site	2
2.1.1 Landfill Capacity	2
2.1.1 Summary of Waste Received and Transferred From the Site	2
2.2 Stonecliffe Waste Disposal Site	2
2.2.1 Landfill Capacity	3
2.2.2 Summary of Waste Received and Transferred From the Site	3
3.0 MUNICIPAL WASTE MANAGEMENT PROFILE.....	3
3.1 Blue Box Material Recycling Program	4
3.2 Waste Electrical and Electronic Equipment	7
3.3 Municipal Hazardous and Special Waste	8
3.4 Yard Waste and Organics	8
4.0 WRS INITIATIVES	8
4.1 Planned WRS Initiatives	8
4.2 Priority Initiative Assessment	9
4.2.1 Promotional and Educational Programs	9
4.2.2 User Pay Program	10
4.3 Enforcement Mechanisms	11
4.3.1 Curbside Collection Enforcement Mechanisms	11
4.3.2 Landfill Site Enforcement Mechanisms	11
4.4 Implementation Plan	11
5.0 BLUE BOX PROGRAM CONTINGENCIES	12
5.1 Promotional and Educational Contingencies	12
5.2 Legislative Implementation Contingencies	13
6.0 MONITORING AND REPORTING	14
7.0 CONCLUSION	15
Works Cited	16

Table of Contents (continued)

TABLES

Table 1	Townships of Head, Clara and Maria Demographics 2009	4
Table 2	Municipal Waste and Recycling Collection Services 2009	4
Table 3	Blue Box Program Cost Analysis 2009	5
Table 4	Blue Box Materials	6
Table 5	Blue Box Program Efficiency 2009 (Waste Diversion Ontario)	7
Table 6	2009 Blue Box Program P&E Costs.....	9
Table 7	P&E Priority Initiatives	10
Table 8	Promotional and Educational Contingencies	13
Table 9	Legislative Implementation Contingencies	14

LIST OF FIGURES

Figure 1	Site Location Map	End of Text
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APPENDICES

Appendix A	Meeting Minutes
Appendix B	WRS Initiative Assessment

1.0 INTRODUCTION

The Corporation of the Townships of Head, Clara and Maria is located within Renfrew County situated between the Ottawa River to the north and Algonquin Park to the south, the location of the Municipality is portrayed in **Figure 1**. The Municipality is characterized by a small population (< 5000 full-time residents), 339 single family homes 205 of which are seasonal with a full-time population of 228. In September of 2010 the Municipality decided to establish an Integrated Waste Management Strategy (IWMS) with primary focus on analytical review of the existing blue box material recycling program. Jp2g Consultants Inc. was retained by the Municipality to assist in establishing an IWMS with the inclusion of a blue box material Waste Recycling Strategy (WRS).

1.1 Purpose and Stated Problem

The Municipality is required by Waste Diversion Ontario (WDO) to submit an updated Waste Recycling Strategy (WRS) to ensure the current blue box material recycling program is in-line with the Municipality's Integrated Waste Management Strategy along with the Province of Ontario's goal of reaching 60% waste diversion. The following report establishes the Municipality's Integrated Waste Management Strategy and incorporates a Waste Recycling Plan to satisfy WDO data call requirements. The goals of this report are to:

- Quantify the existing solid waste diversion and disposal trends in the Municipality
- Address and improve the efficiency and effectiveness of the existing blue box program
- Develop feasible future Municipal Solid Waste diversion goals and targets

The following Integrated Waste Management Strategy analyzes the current waste management procedures undergone in the Municipality with primary focus on the existing blue box material recycling program in the Townships of Head, Clara and Maria. The following IWMS outlines steps to be taken by the Municipality to ensure an effective and efficient blue box material recycling program is undergone in-line with WDO's Best Practice questions. This report seeks to satisfy the WDO's requirements for; an updated Municipal Waste Recycling Strategy, establishment of performance measures, progression towards multi-municipal planning approaches, design of a comprehensive communications plan, and establish waste diversion legislation alternatives for the Townships of Head, Clara and Maria. The following report is structured in accordance with the *Guidebook for Creating a Municipal Waste Recycling Strategy* provided by the Continuous Improvement Fund (CIF).

1.2 Planning Process and Funding

The planning process utilized for developing the updated Integrated Waste Management Strategy and Waste Recycling Plan primarily involved Municipal Staff working together with Jp2g Consultants Inc through support from the CIF. The process involved an initial meeting between Municipal Staff and Jp2g Consultants Inc. in which the current and historical blue box material recycling program was discussed along with potential directions for an updated WRS. After the initial meeting a draft report was completed in which Waste Management details and WRS initiatives were evaluated. The first report was presented to Council on March 18, 2011, and a

final report was developed once input was received by municipal council. All meeting minutes are provided in **Appendix A**.

2.0 MUNICIPAL WASTE DISPOSAL PROFILE

The Townships of Head, Clara and Maria has two (2) operational waste disposal sites. These facilities are open to all seasonal and full time residents within the municipality. The following section outlines the total capacity and remaining lifespan of the existing disposal sites. Projections of remaining capacity were determined by a survey conducted in 2009 in combination with waste generation projections to reflect the site condition as of 2010.

2.1 Bissett Creek Waste Disposal Site

The Bissett Creek Waste Disposal Site is located on Lots 12 and 13, Concession 13, in the geographic Township of Maria. The waste disposal site operates under the Provisional Certificate of Approval A412406, dated March 27, 1980 as amended under Notice No. 1 dated November 19, 2001; amended November 27, 2003, Notice No. 2 dated October 15, 2004, and Notice No. 4 dated July 19, 2006. The Certificate recognizes a 0.6 ha landfill site within a 20.75 ha total site area. The Bissett Creek WDS is open from 12:30 – 3:30 PM on Tuesdays and 12:45 to 3:45 Saturdays.

2.1.1 Landfill Capacity

Based on a test pit investigation in July 2000 it was estimated that approximately 4790m³ of landfilled space had been utilized at the Bissett Creek Site. A total waste disposal volume of 18,443m³ is approved for the site. Based on an October 2009 survey, including waste generation estimations, the remaining capacity was approximately 8525m³. The remaining landfill life is approximately 17 years based on a landfilling rate of 500 m³/year.

2.1.2 Summary of Waste Received and Transferred From the Site

The Bissett Creek Waste Disposal Site accepts solid non-hazardous municipal waste, scrap metal, white goods, tires, scrap wood, brush, leaves, and other yard waste. Waste is landfilled, brush and clean wood is burnt, white goods, scrap metal and tires are removed as required by a licensed contractor.

2.2 Stonecliffe Waste Disposal Site

The Stonecliffe Waste Disposal Site is located in the north half of Lots 21 and 22, Concession XI of the geographic Township of Head. The site operates under the Provisional Certificate of Approval A412405 dated April 28, 2008. The site is approved for a 0.91 ha landfilling site and transfer station within an approximate 25 ha total site area. The Stonecliffe WDS is open from 12:30PM to 4:15PM Thursdays and 8:30AM to 12:00 PM Saturdays.

2.2.1 Landfill Capacity

Currently at the Stonecliffe waste disposal site approximately 17180m³ of landfilled space has been utilized. A total waste disposal volume of 26680m³ is approved for the site. Based on an October 2009 survey, including waste generation estimates the remaining capacity was approximately 9500m³. The remaining landfill life is approximately 9.5 years based on a landfilling rate of 1000 m³/year.

2.2.2 Summary of Waste Received and Transferred From the Site

The Stonecliffe Waste Disposal Site accepts solid non-hazardous municipal waste, scrap metal, white goods, tires, scrap wood, brush, leaves, and other yard waste. Waste is landfilled, brush and clean wood is burnt, white goods, scrap metal and tires are removed as required.

3.0 MUNICIPAL WASTE MANAGEMENT PROFILE

The Townships of Head, Clara and Maria currently diverts approximately 15% of all incoming municipal solid waste from their disposal sites (WDO Datacall 2009). The program includes curbside collection of blue box material with additional materials collected for diversion at the Municipal waste disposal sites and transfer stations. In February 2007 the Township implemented a curbside collection recycling program, it is currently being done through a private contractor (BAG Recycling).

The existing waste diversion program includes:

- Blue Box Materials (See **Table 5**)
- Leaf and Yard Waste Organics (controlled incinerating)
- Waste Electrical and Electronic Equipment
- Municipal Special and Hazardous Waste (once annually)
- Tire Stewardship
- Scrap Metal

Of the 406 tonnes of waste generated in 2009 approximately 60 tonnes of waste was diverted. The primary materials diverted were blue box materials and leaf and yard waste organics.

3.1 Blue Box Material Recycling Program

The Townships of Head, Clara and Maria provide curbside collection of waste and blue box materials along Highway 17 and select municipal roadways via municipal collection and private contracting (BAG Recycling). Municipal demographic and waste management statistics have been summarized in **Tables 1 – 6** below.

Table 1 – Townships of Head, Clara and Maria Demographics 2009

Total Population	Single Family Households (incl Seasonal)	Multi Family Households	Seasonal HHLDS	IC&I Establishments	HHLDS per Serviced Road km
228	339	0	205	few commercial establishments and campgrounds	1.88

Information from Statistics Canada 2006 Census and WDO Data Call Repots for Head, Clara Maria 2009

As indicated in **Table 1** there is a total population below the number of households in the Municipality. This is due to the high ratio of seasonal residents that come to the area primarily during the summer months. Additionally a large number of seasonal campers produce waste and recyclables within the Municipality. Curbside collection is offered to seasonal residents in designated locations.

Table 2 – Municipal Waste and Recycling Collection Services 2009

Curbside Collection	Public / Private	Restrictions	Residential	IC&I	Tonnes Collected
Garbage	Public	Bag Limit	Yes	Yes	200.33
Blue Box Recycling	Private	Transparent Bags	Yes	Yes	24.83 (Curbside) 33.68 (Total Blue Box Material)

The Municipality utilizes private collection services for the curbside retrieval of blue box materials, municipal staff are responsible for garbage collection. Collection of blue box material and garbage is provided for all residents residing on Trans Canada Highway 17 and Municipal Roadways on a weekly basis throughout the year. Collection frequency as a WRS initiative has been analyzed as a part of this report. Recycling pickup takes place from the driveways of Highway 17, at Mackey and Stonecliffe, and along Municipal Roads up to the snowplow turnarounds. Residents from private roads are required to bring their garbage and/or recyclables to the ends of their roads where they connect to the Municipal Roads. Collection of garbage material once retrieved is disposed of in one of the two Municipal landfill sites. Collection of blue box and other recyclable material is provided by BAG Recycling. Indicated in **Table 2**, in 2009 a total of 225.16 tonnes of material was retrieved via curbside collection 24.83 tonnes of which was blue box material.

Table 3 – Blue Box Program Cost Analysis 2009

Blue Box Activity	Cost/Tonne (\$)	Cost/Household (\$)	Total Cost (\$)
Collection	762.00	67.8	22 999.93
Promotion and Education	9.55	0.85	288.84
Administrative Costs	23.24	2.07	704.44
Total Program Cost	795.27	70.77	23 993.21

Table 3 portrays the cost of individual activities in the 2009 blue box material recycling program for the Municipality. The program currently in place in the Municipality does not include a processing facility. The primary costs of the program are associated with curbside collection. Curbside collection costs are relatively high due to the weekly collection of blue box materials along with a low population density in the Municipality. As reported in the Municipality's 2009 WDO data call submission for the Municipality there are 1.88 households per serviced road kilometer. Promotional and Educational (P&E) aspects of the program consist of approximately 1.2% of the total program costs. P&E programs typically cost 1\$ per household and increase diversion by 2 – 5% (CIF, 2010). Additional costs associated with the Municipal blue box material recycling program are attributed to administrative costs.

Ontario Regulation 101/94 outlines a list of mandatory blue box materials to be included in every blue box material recycling program for municipalities with a population over 5000 persons. **Table 4** compares O.Reg 101/94 with the materials included in Head, Clara and Maria Blue Box program.

Table 4 – Blue Box Materials

Recyclable Material	Required by O.Reg 101/94	Included in Head Clara Maria Blue Box Material Recycling Program
Newsprint	√	√
Other Printed Paper		√
Magazine/Catalogues		√
Phone Books		√
Corrugated cardboard		√
Boxboard		√
Gable Top Cartons		√
Tetrapak cartons		√
Aluminum Cans	√	√
Other Aluminum Packaging and Foil		√
Steel Cans	√	√
Empty Aerosol Cans		√
Empty Paint Cans		√
Clear Glass	√	√
Coloured Glass	√	√
PET Bottles (#1)	√	√
Other Bottles and Containers (#3, #5, #7)		√
LDPE/HDPE film (#2, #4)		√
HDPE containers (#2)		√
Polystyrene Foam (#6)		√
Polystyrene Crystal (#6)		√
Tubs & Lids (#2, #4, #5)		√
Thermoform PET (#1)		√

Outlined in **Table 4**, the current Municipal blue box material recycling program accommodates for collection of more materials than required by O. Reg 101/94. It should be noted that along with the required materials as stated by O.Reg 101/94 it is additionally required that two (2) supplementary materials be added to the blue box material recycling program. Through analysis of the blue box materials collected in the Municipality it is concluded that the current amount of material types collected exceed current provincial legislative requirements.

**Table 5 – Blue Box Program Efficiency 2009
(Waste Diversion Ontario)**

Study Area	Blue Box Material Capture Rate (%)	Blue Box Material Diversion Rate (%)	Total Waste Diversion Rate (%)	WDO E&E Factor	Program Cost/Tonne (\$)
Municipality of Head, Clara Maria	20 (blue box)	7	15	13.79	966.29
Provincial Average for Rural Collection North Municipal Groupings (WDO 2008)	46	20	24	29	535.25

Table 5 provides a comparison between the Townships of Head, Clara and Maria blue box material recycling efficiency and effectiveness statistics versus the Rural Collection North Municipal groupings in Ontario. As indicated in **Table 5** the blue box material capture rate is 26% lower in the Townships of Head, Clara and Maria in comparison to the Rural Collection North Ontario average. The cost/tonne of the program in Head, Clara and Maria is greater than the average for Rural Collection North municipal grouping, primarily due to the low amount of solid waste being produced by the Municipality. The blue box material diversion rate is below the Rural Collection North diversion average therefore improvements to the blue box program effectiveness should be considered in future waste diversion initiatives. Promotion and education programs could significantly increase capture rate through public awareness. In determining an updated WRS for the Municipality program effectiveness improvements should be considered if plausible changes to the program can be made that could decrease the program's cost per tonne. Furthermore program effectiveness modifications should be considered to improve the overall blue box diversion rate. Initiatives that decrease or maintain program costs and increase in total diversion rate should be pursued to reach a greater level of program efficiency and effectiveness. Program amendments in Legislation and P&E have been proven effective by other Ontario Municipalities and should be considered to improve the current program effectiveness and efficiency. A complete list of initiatives has been provided in **Appendix B**.

3.2 Waste Electrical and Electronic Equipment

The Municipality provides curbside collection of small appliances and electronics under the 'Spring Clean Up' program which occurs on select days advertised on the Municipal website. In addition to these select collection days, the Municipality accepts WEEE materials to be brought to the waste disposal sites where they are stockpiled and diverted off the site by BAG Recycling.

Recently the Municipality has adopted the call2recycle program whereby old cell phones and rechargeable batteries can be brought to the municipal office by ratepayers and diverted from the Municipality. In 2009 4.74 tonnes of WEEE material was diverted in the Municipality.

3.3 Municipal Hazardous and Special Waste

The disposal of municipal hazardous and special waste is currently prohibited in the Municipal Waste Disposal Sites. A household hazardous waste collection event is held in the Stonecliffe arena once annually. In 2009, 0.25 tonnes of hazardous waste was produced in the Municipality and 80% of all hazardous waste was diverted.

Municipal Council is pursuing the option of a year-round hazardous waste drop off at the Stonecliffe WDS which would allow more convenience to the public. The year-round hazardous waste drop off system was discussed with Municipal Council and Staff on March 18, 2011.

3.4 Yard Waste and Organics

Currently in the Municipality, yard waste and organics which are brought to the waste disposal sites are burned under controlled conditions which reduces the volume of waste from being disposed.

4.0 WRS INITIATIVES

Through analysis of the Municipal WRS the Townships of Head, Clara and Maria has a comparatively low rate of program capture rate and efficiency as determined by the WDO reported program cost/tonne in 2008 and 2009. Updates to the current recycling program should be directed towards improving the effectiveness of the program while continuing to maintain/improve the programs efficiency. An improvement of effectiveness of the program could be sought through attempting to reduce the 10% residue rate and increase the 20% capture rate of residential recyclables through public education over the next five (5) years. Future WRS updates should take into account effectiveness and efficiency for analysis and continuous improvement. The following section analyzes the priority and future initiatives that could be considered and included as part of the Municipality's WRS.

4.1 Planned WRS Initiatives

Planned WRS initiatives have been assessed as part of this study to determine Priority Initiatives and Future Initiatives for the Municipality. A Priority initiative is one which is best suited for the Municipality at the current time and should be considered in near future applications. A Future initiative is one which could be suited from the Municipality however should be further assessed in revisions of the Municipality's WRS. Criteria utilized for assessing each option is provided in **Appendix B**. The initiatives included as part of this assessment include:

- Promotional and Educational Programs;
- Training of Key Program Staff;
- Optimization of Collection Operations;
- User Pay Strategy;
- Enhancement of Collection Depots;

- Provision of Free Blue Boxes;
- Decrease Collection Frequency;
- Multi-Municipal Collection and Processing;
- Standardized Service Levels and Collaborative Haulage Contracting;
- Establishing an Intra-Municipal Committee;
- Maximization of Diversion Research;
- Tipping Fee Increase;
- Following Generally Accepted Principles for Effective Procurement and Contract Management.

Upon further review, since the March 14, 2011 evaluation the Priority Initiatives identified through this assessment include

1. Public Education and Promotion Programs
2. User Pay Program
3. Training Key Program Staff

Note: provision of blue box option not applicable as storage containers used at the end of private roads.

The Future Initiatives identified through this assessment include:

4. Multi-Municipal Collection and Processing
5. Standardized Service Levels and Collaborative Haulage Contracting
6. Optimization of Collection Operations
7. Tipping Fee Increase

4.2 Priority Initiative Assessment

4.2.1 Promotional and Educational Programs

P&E efforts are crucial mechanisms for increasing the set-out rate, public participation, capture and diversion rates, and decreasing residue rate of a Waste Recycling Strategy. Currently in the Townships of Head Clara Maria \$288.00 is allocated towards P&E efforts specifically regarding the Townships Blue Box Program. The P&E mechanisms currently utilized in the Municipality include the production of newsletters which are distributed to the municipal public and ads in the local newspaper and a page on the municipal website. **Table 6** summarizes the cost distribution associated with the current P & E program in the Municipality. Currently the Continuous Improvement Fund is offering a \$5000 grant for P&E for all Ontario Municipalities with a population below 30000 residents. The Municipality has applied for this grant.

Table 6 – 2009 Blue Box Program P & E Costs

P & E Mechanisms	Material Expense	Staff Expense	Total Cost
Newsletter	96.84	192.00	288.84

Under the condition amendments are made to the current blue box program legislation, a P & E program would ensure public awareness regarding updated WRS legislation. Furthermore increasing the level of effort associated with P & E could lead to an increase in public

participation and public understanding of the need to recycle. Grant considerations aside, a P&E Program typically costs \$1 per household annually and amounts to 2 - 5% increase of total diversion (CIF, 2010).

P & E mechanisms should be easily accessible by the public. Therefore in designing new legislative amendments accessibility to the information is of primary consideration. P & E mechanisms for a Waste Recycling Strategy would be effective if located at the municipal office (brochure/newsletter), at Municipal landfill sites (signage), and at home (newsletter and municipal website). It is proposed that the Townships of Head, Clara and Maria updates the current promotional and educational efforts utilizing one or more of the mechanisms outlined in **Table 7**.

Table 7 – P&E Priority Initiatives

P & E Mechanisms	Description
Option A Public P & E Program	Develop a Blue Box specific P & E Plan that could include materials such as: Landfill Signage Brochures Website Additions T Shirts/Hats
Option B Training of Key Program Staff	Ensure management program personnel are adequately trained on position-related competencies and responsibilities. Training provides the skills needed to develop, manage, monitor, document and promote the numerous and complex components of a successful recycling program. It is recommended that where possible training occur from a third party, ie. webinars, recycling expos/seminars.

Note: above described mechanisms are intended to be in addition to P&E mechanisms currently in place.

4.2.2 User Pay Program

Through analysis of the current blue box material diversion program in Head, Clara and Maria potential modifications to the current WRS have been considered to improve the programs efficiency and effectiveness. Due to relatively low current program efficiency, legislation regarding the increase of municipal revenue while achieving an increasing rate of diverted recyclable material is a Priority Initiative. As stated in the 2009 WDO data call submission the Municipality is considering adopting user-pay strategy to compliment the current bag limit legislation.

A partial user-pay system requires bag tags for curbside garbage disposal exceeding current municipal limit of two (2) bags of waste. The partial user pay system includes only curbside

collected materials. Additional bags exceeding the two (2) bag limit will require bag tags purchased from the Municipality for a charge of \$1.00 per additional garbage bag. Revenue generated from the partial user pay system should be allocated primarily towards P&E and a communication plan for the general public and municipal staff regarding program amendments and the benefits of recycling.

4.3 Enforcement Mechanisms

Enforcement mechanisms are required to ensure updated WRS legislation is upheld in the Townships of Head, Clara and Maria. There are two potential locations where the updated Waste Recycling Strategy would require enforcement. Enforcement mechanisms could be required for curbside collection and at the landfill site/transfer station collection. The following section summarizes enforcement mechanisms that could be utilized for the addition of a user-pay program.

4.3.1 Curbside Collection Enforcement Mechanisms

Collection of curbside garbage should be continued by the municipal staff. Bag tags will be required for any garbage bags additional to the two free bags per weekly collection. Enforcement mechanisms rely on municipal staff to omit pick up of any bags over the two bag limit and that do not have bag tags.

4.3.2 Landfill Site Enforcement Mechanisms

Enforcement of tipping fees at the landfill site will be the responsibility of the landfill site attendant. Training of the site attendant must be provided prior to the implementation of waste recycling initiatives.

4.4 Implementation Plan and Program Goals

The proposed modifications to the current legislation and P&E program are directed towards improving the Waste Recycling Strategy program effectiveness and efficiency. P & E for municipal staff and the public will be crucial for participation and understanding of the Municipality's WRS. It is projected that the updates to the program will result in improved program effectiveness through increasing capture rate without significantly increasing annual program costs. Indirectly, an increase in capture rate without corresponding increases in program costs leads to greater program efficiency (cost/tonne). A plausible capture rate from the updated Blue Box Waste Recycling Strategy program is increase 20% over 5 years (40% of total blue box material). The secondary goal of the Municipality should be to decrease the Residue Rate from 10% to 5 %. The P & E program will assist in reaching these goals. As previously discussed 405.88 tonnes of waste is generated in the Townships of Head, Clara and Maria annually. Representative waste audit data for municipalities in the Rural Collection North Municipal Grouping suggest 38% of all Municipal Solid Waste is blue box material (CIF, 2010). Therefore a projected 154 tonnes of blue box material is generated in the Municipality, establishing an eventual target of 62 tonnes of diverted blue box material.

The population of Head, Clara and Maria is decreasing at a rate of 0.8% per year based on the Statistics Canada Reporting of the population of the Municipality from 1988 to 2006. Although

the population of the Municipality is decreasing, a tonne of total annual waste is projected to undergo minimal fluctuation due to the high volume of seasonal residents and campers. Based on 38% Blue Box material in the total waste stream there is approximately 154 tonnes of Blue Box material available, of diverted blue box material.

5.0 BLUE BOX PROGRAM CONTINGENCIES

In commencing and conducting programs and amendments to the current WRS, projected contingencies must be outlined in order to prepare for foreseen and unforeseen program dilemmas, set backs, and inefficiencies. The updated WRS likely will focus on primarily P&E and legislative amendments. Contingencies with regards to these aspects of the blue box program are outlined below.

5.1 Promotional and Educational Contingencies

Foreseen promotional and educational contingencies are primarily with relation to staff availability, public education, and ability to enforce the proposed legislative amendments to the current program. A list of potential contingencies that may arise regarding the promotional and educational aspects of the WRS are listed and discussed in **Table 8**.

Table 8 – Promotional and Educational Contingencies

P&E Contingencies	Description and Solution
Public Access to Email or Municipal Drop Box	The programs general public feedback system is a crucial part of public communication and involvement in the program. It is anticipated that there may be select members of the community that do not have access to the internet or have the ability to travel to the Municipal office to provide feedback. For these select community members consideration of alternate feedback mechanisms should be undergone. (ie telephone, mail, etc.)
Staff Availability and Program Understanding	The WRS requires educated/trained municipal staff and collection staff to promote to and educate the general public regarding bag tag and landfill tipping fees when required.
Budget Requirements	The public feedback system in order to be effective must include screening and documenting of blue box program concerns and questions from the public. Staff expenses may need to be considered pending the level of public feedback. Application to the CIF grant for P&E should be sought to cover expenses of an updated P & E program
P & E effectiveness	The effectiveness of the blue box program and including P & E is to be evaluated every 5 years as described in Table 8 , should certain P & E mechanisms be determined inefficient an evaluation of alternate methods will be required.

5.2 Legislative Implementation Contingencies

Contingencies with respect to implementation of the proposed legislative amendments include public disapproval of the program and bag tag/user-pay limitations. A summary of the potential contingencies associated with implementing the proposed legislation is included in **Table 9**.

Table 9 – Legislative Implementation Contingencies

Legislative Implementation Contingencies	Description and Solution
Public disapproval of legislative amendments to the current program	The Townships of Head, Clara and Maria does not currently charge for the disposal of household waste. It is predicted that implementing a user-pay program to increase the effectiveness of the WRS may be met with some opposition. Promotion and education directed towards the need for Blue Box Recycling and the Municipal benefits of the program.
Public inability to pick up bag tags	It is anticipated that there may be select individuals in the Municipality that are unable to travel to the Municipal Office to pick up bag tags. Bag tags ordered VIA the Municipal website, or via mail, could be considered for select residents.
Collection Staff Program Understanding	The collection of household waste is provided by municipal staff. It must be ensured that bag tags are recognized, and enforcement is carried out as required. Therefore Training of Key Program Staff must compliment this initiative.

6.0 MONITORING AND REPORTING

Monitoring and reporting of the WRS must be conducted in order to evaluate the proposed program against baseline capture rate, diversion rate and public participation. The primary goal of the updated WRS is to increase the capture rate and decrease the residue rate of the current program therefore increasing the effectiveness of the current program. An evaluation of the effectiveness of the program should be conducted to ensure the program continues to improve. Baseline data utilized for monitoring should be taken from the Municipal Waste Diversion Profile described as part of this report. Monitoring of the proposed program should be conducted every five years to remain on track with the Municipality's Integrated Waste Management Plan. Monitoring is to include an assessment of annual WDO data call reports to ensure the WRS goals are being reached. Under the circumstances the program is not reaching projected targets, an evaluation of the proposed legislative and P&E mechanisms should be undertaken and modified accordingly. In addition to assessment and monitoring of the program continuous methods of program improvement should be considered to attempt greater levels of program effectiveness and efficiency. To ensure continuous improvement of the program, monitoring, assessment and reporting of the program should be undertaken every five (5) years and should take into account; capture rate and diversion rate goals, public input and participation, program costs, legislative mechanisms, technological advancements, multi-municipal planning approaches, and provincial legislation.

7.0 CONCLUSION

The Townships of Head, Clara and Maria is located within Renfrew County situated between the Ottawa River to the north and Algonquin Park to the south. The Municipality is characterized by a small population (< 5000 full-time residents), 339 single family homes 205 of which are seasonal with a full-time population of 228.

The Townships of Head, Clara and Maria is required by Waste Diversion Ontario (WDO) to submit an updated Waste Recycling Strategy (WRS) to ensure the current Blue Box program is in-line with the Municipality's Integrated Waste Management Strategy along with the Province of Ontario's goal of reaching 60% waste diversion. The above report satisfies the WDO Waste Recycling Strategy requirement and establishes the Municipality's Integrated Waste Management Strategy.

As part of the Municipality's IWMS Council has is in the process of obtaining approval for a year round Household Hazardous Waste collection facility at the Stonecliffe Waste Disposal Site, to increase the capture rate of the current annual collection event.

Through analysis of the Municipal WRS the Townships of Head, Clara and Maria has a comparatively low rate of blue box program effectiveness as compared against municipalities in the Rural Collection North Category. Future WRS updates should take into account effectiveness and efficiency for analysis and continuous improvement.

The priority initiatives identified through this assessment include:

1. Public Education and Promotion Programs
2. User Pay Program
3. Training Key Program Staff

The goals of the Municipality are concluded to be an increase in capture rate by 20% over the next five years carried out by the initiatives identified in this report. The Municipality shall commence with a Promotion and Education (P & E) plan. If the P and E plan does not suffice in achieving the determined goal additional Priority Initiatives should be implemented.

We trust that the contents of this report are satisfactory, please do not hesitate to contact the undersigned should you have any questions.

Yours truly,

Jp2g Consultants Inc.
Engineers & Planners & Project Managers

Patrick Judge
Environmental Technologist

Kevin Mooder, MCIP RPP
Vice President Environmental Services

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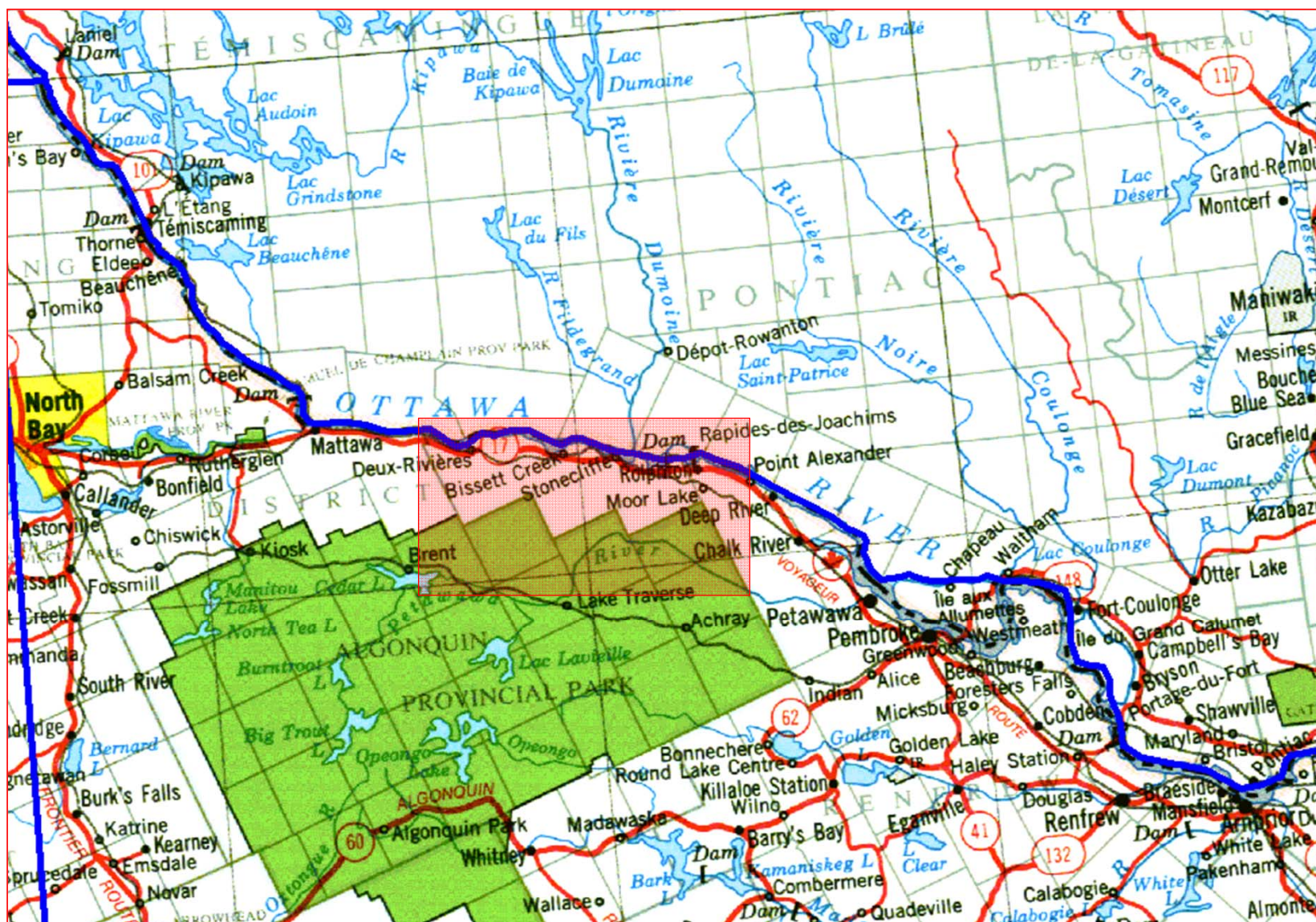
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FIGURE



Jp2g Consultants Inc.

ENGINEERS ■ PLANNERS ■ PROJECT MANAGERS

Study Area Municipality of Head, Clara and Maria

DRAWING TITLE	Study Area	SCALE	NTS
PROJECT NUMBER	2106145A	DRAWN BY	PJ
DATE	1-Mar-11	CHECKED BY	PJ
PLOT DATE	1-Mar-11	DRAWING NO.	Fig 1

APPENDIX A
MEETING MINUTES

**Corporation of the United Townships of
Head Clara & Maria
Waste Recycling Strategy Meeting**

Minutes: October 12, 2010 9:00 am

Present: Melinda Reith, Clerk
Kevin Mooder, Jp2g Consultants Inc.

1. Prior to the meeting there was an exchange of e-mail correspondence between M. Reith and P. Judge. The following documents were provided to Jp2g.
 - Data call information
 - P & E materials
2. At the meeting M. Reith provided paper copies of the following under a letter to P. Judge
 - Municipal By-Laws and policies
 - Contractor contact information
3. M. Reith provided an overview of the ten (10) points identified in her letter.
4. K. Mooder had several questions:
 - Q – What is permanent population?
 - A – 228
 - Q – Do all seasonal residents receive recycling pick-up?
 - A – Yes at the entrance to private roads
 - Q – What about commercial pick-up?
 - A – Morning Mist, Lakeview and maybe Anthers. Driftwood Provincial Park received service.
 - Q – Without detailed review of the contractors records, what is the refusal?
 - A – Remnant material from furniture after metal and wood recovered.
 - Q – Any concerns with the proposed work plan?
 - A – None
 - Q – Is a special Public Meeting required?
 - A – Probably not, a presentation to Council at a regular meeting should be satisfactory.

THE CORPORATION OF THE UNITED TOWNSHIPS OF HEAD, CLARA & MARIA

March 18, 2011

Minutes of a regular meeting of Council held on Friday, March 18, 2011 at 14:07 h. in Council Chambers.

1. CALL TO ORDER & MOMENT OF SILENCE

2. ROLL CALL

The following were present: Reeve Stewart; Councillors: Dave Foote, Jim Gibson and Robert Reid.

Absent/Excused: Ed Aiston

Also in attendance: Bill Donnelly, Patrick Judge and Kevin Mooder (Jp2g)

3. DISCLOSURE OF PECUNIARY INTEREST & GENERAL NATURE THEREOF – None

4. ADOPTION of MINUTES of PREVIOUS MEETINGS (INCLUDING COMMITTEES)

(Resolution Prepared)

i. Council Minutes

Resolution # 18/03/11/001

Moved by Councillor Reid and seconded by Councillor Foote

BE IT RESOLVED THAT the minutes of the regular meeting of Friday, February 18, 2011 be accepted as presented.

Carried

ii. Area Economic Development Committee Minutes – for information only

5. DEPUTATIONS/PRESENTATIONS – Patrick Judge and Kevin Mooder – Jp2g – Municipal Waste Management Strategy Presentation – Patrick and Kevin presented an overview of the report which will be finalized and provided within the next weeks. General discussion ensued however no decisions of Council were made. A copy of the presentation may be viewed upon request.

Patrick and Kevin left the meeting at 15:15. Council had a short break.

Meeting resumed at 15:25.

6. CORRESPONDENCE & PETITIONS – FYI only - documents not included

7. CORRESPONDENCE (Please advise if you feel any item warrants further consideration at a subsequent meeting.)

- i.** OVTA – re: Member to member benefits – request cards for Council members
- ii.** Town of Deep River – re: Joint Council – request that issues be added to the agenda: joint letter to CP Rail re: rail abandonment and rail clean up; auto-ex agreement and vehicle; Housing study and a need to move forward; County wide emergency Management exercise.
- iii.** EMO – re: Congratulations on meeting 2010 requirements - info
- iv.** MMAH – re: Financial Indicator Review - info
- v.** Town of Deep River – re: Charitable Gaming Information Session - info
- vi.** Family and Children's Services – Renfrew County – re: fund raising request – please post in office and on-line
- vii.** County of Renfrew – re: Newsletter - info
- viii.** City of Arnprior – re: White Pine Festival - info
- ix.** MNR – re: Annual Work Schedule - info
- x.** North Renfrew Family Services – re: ad for fundraiser – post in office

8. STAFF REPORTS (For information only)

- i.** Clerk's Report #18/03/11/801 - information

9. FINANCIAL REPORTS

- i.** Income Statement Report #18/03/11/901

Resolution # 18/03/11/002

Moved by Councillor Reid and Seconded by Councillor Gibson

BE IT RESOLVED THAT the Income Statement to March 15, 2011 be accepted as presented.

Carried

10. BY-LAWS

- i.** Budget By-law Report #18/03/11/1001

Resolution # 18/03/11/003

Moved by Councillor Gibson and Seconded by Councillor Foote

BE IT RESOLVED THAT By-Law 2011-07 being a by-law to adopt the 2011 municipal operating budget be read a first and second time.

Reeve Stewart made a request for a recorded vote: Gibson – Yes, Reid – No, Foote – Yes, Stewart – No. Motion Defeated

11. UNFINISHED BUSINESS

i. Report #18/03/11/1101 – Fundraising and Donation Policy Report

Resolution # 18/03/11/005

Moved by Councillor Reid and Seconded by Councillor Gibson

WHEREAS the Council of the United Townships of Head, Clara & Maria has approved in principal the use of fundraising and donation programs for the municipality to raise funds in conjunction with grants for recreation purposes;

AND WHEREAS a draft policy has been previously presented for consideration;

THEREFORE BE IT RESOLVED THAT the Council of the United Townships of Head, Clara & Maria does hereby adopt the Donations Policy P&G161.

Carried

ii. Report #18/03/11/1102 – Purchase of Trailer

Resolution # 18/03/11/006

Moved by Councillor Gibson and Seconded by Councillor Foote

WHEREAS the Road Super indicated in 2011 budget submissions that \$8,000 was required to purchase a utility trailer with an automatic dump mechanism for ease in loading and unloading the brush hog;

AND WHEREAS this was not an item that was planned for but appeared in the 2011 budget estimate resulting in questioning of the need and requiring a decision of Council;

THEREFORE BE IT RESOLVED THAT the Council of the United Townships of Head, Clara & Maria does hereby agree that the trailer is a necessity for the operation of the Roads Department and that up to \$8,000 be removed from reserves, Roads Capital to purchase this equipment;

Defeated

12. ADDENDUM (NEW BUSINESS) (reports and resolutions prepared)

i. Report #18/03/11/1201- Area Economic Development Committee and Terms of Reference

Resolution # 18/03/11/007

Moved by Councillor Gibson and Seconded by Councillor Reid

WHEREAS the Council of Head, Clara & Maria has been an active member in the Area Economic Development Committee with the Town of Laurentian Hills and the Town of Deep River for the past several years;

AND WHEREAS this Council has reviewed the Terms of Reference;

THEREFORE BE IT RESOLVED THAT the Council of the United Townships of Head, Clara & Maria does hereby agree to continued membership in the Area Economic Development Committee and accepts the attached Terms of Reference.

Resolution Amended

Resolution #18/03/11/007-B (to modify Resolution #18/03/11/007)

Moved by Councillor Foote and Seconded by Councillor Reid

BE IT RESOLVED THAT The sum of \$1,800 be allocated For ½ yr's payment for membership in the Area Economic Development Committee. Ending June 30, 2011

Carried

Action: Clerk to contact John Walden and provide notice that HCM will only continue participation in the Area Economic Development Committee until June 30 of 2011.

ii. Report #18/03/11/1202 – Ottawa River Heritage Designation

Resolution # 18/03/11/008

Moved by Councillor Foote and Seconded by Councillor Gibson

WHEREAS the Council of Head, Clara & Maria has in the past supported the County of Renfrew in its efforts to obtain the designation of the Ottawa River as a Heritage River in the Canadian Heritage Rivers System;

AND WHEREAS the designation process was stalled in late 2010 by circulation of misinformation and lack of support from our area MP;

NOW THEREFORE BE IT RESOLVED THAT the Council of the United Townships of Head, Clara & Maria does hereby join the County of Renfrew and its other neighbours in supporting the nomination of the Ottawa River as a Heritage River in the Canadian Heritage Rivers System in a push to finally completing this process.

Carried

iii. Northern Graphite Meeting Minutes – for information only

13. IN CAMERA OR CLOSED SESSION - none

14. QUESTIONS AND ANSWERS

- i. Councillor Reid – attended the Road Supervisor's meeting and advised of disagreement between AORS and OGRA and a growing rift between the two. Not sure that this directly affects HCM.
- ii. Reeve Stewart – comment about spending limits in the budget – was reminded that we do not have a budget – issue was dropped.
- iii. Councillor Gibson – request for clarification, on direction to staff re: budget – determined that the Clerk is to bring the original report detailing the budget working document and options as presented at the meeting of Friday, February 18, 2011 back to the Council table on Friday, April 1, 2011.

15. CONFIRMATION OF PROCEEDINGS

Resolution # 18/03/11/009

Moved by Councillor Gibson and Seconded by Councillor Foote

BE IT RESOLVED THAT By-Law 2011-08 being a by-law to confirm proceedings of the Council of the United Townships of Head, Clara & Maria at its meeting held on March 18, 2011 be read a first time short and passed.

Carried

16. ADJOURNMENT – (Resolution Prepared)

Resolution # 18/03/11/010

Moved by Councillor Reid and seconded by Councillor Gibson

BE IT RESOLVED THAT this meeting adjourn at 16:30 h to meet again Friday, April 1, 2011 at 14:00 h.

Carried

Reeve – Tammy Stewart

Melinda Reith – Clerk

APPENDIX B
WRS INITIATIVE ASSESSMENT

March 14, 2011

United Townships of Head, Clara & Maria
15 Township Hall Road
Stonecliffe, Ontario
K0J 2K0

Attention: Ms. Melinda Reith

**Re: Integrated Waste Management and Waste Recycling Plan
Waste Recycling Plan Initiatives and Assessment
Our Project No. 2106145A**

Further to your February 8, 2011 email review of the draft report we are pleased to provide the following initiative assessments and evaluations. We look forward to reviewing these initiatives with council on March 18, 2011.

Description of Initiatives:

Initiative descriptions have been summarized from the CIF Guidebook 2010.

Public Education and Promotion

To be effective, a municipal Blue Box program needs to be supported by a Promotion and Education (P&E) component that is appropriately designed and funded, and incorporates specific audience, defined messages and media, planned frequency of communication, and monitoring of results. A well-designed and implemented P&E program can have effects on virtually all other elements of the Blue Box system, including planning, collection, processing, marketing, and policy development. A P&E program could include; brochures, t-shirts, hats, development of a communications strategy, landfill signage, etc.

Training of Key Program Staff

Municipalities need to ensure that management program personnel are adequately trained on position-related competencies and responsibilities. Training provides the skills needed to develop, manage, monitor, document and promote the numerous and complex components of a successful recycling program. Regardless of the size or type of municipal program, training acts as an enabler of performance, facilitating the achievement of objectives in a cost effective manner. Equally important to training is ensuring these staff provides the public with knowledge obtained to promote recycling.

Optimization of Collection Operations

Optimization of Collection Operations is a process of critically assessing collection and processing functions and making changes that have a net positive effect on recovery rates and/or costs. Where collection and/or processing are outsourced, close collaboration with the contractor, sufficient flexibility in the use of contractor labour assets, and thorough understanding of cost drivers contribute to optimization of the system.

User Pay/Economic Incentives

The basic objective of User Pay/Economic Incentives, as relates to recycling programs, is to place a cost on disposing of waste at the curbside, which will cause system users to divert appropriate material to diversion programs. The intended result is a decrease in waste disposed and an increase in recycling volumes.

In general the 'user-pay' concept has the potential to recover part or all of waste management costs from system users. The current blue box material collection cost with Bag recycling is \$22 999.92 . Potential increases in net recycling costs may result in lower unit costs, while other aspects of the waste management system may benefit from reduced garbage collection costs, reduced disposal costs and increased landfill life expectancy.

Enhancement of Recycling Depots

To be effective considerations of safety, accessibility, location and organization all contribute to the overall success of a recycling depot. Currently there is a collection depot at the Bissett Creek and Stonecliffe sites. System users that do not have access to curbside collection must have a plausible alternative to recycle.

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 a blue box program, many municipalities offer free boxes to new residents or residents moving into new homes. Some municipalities also offer one extra free bin for residents each year. However in municipalities offering only basic recycling services, one blue box container may be sufficient.

Collection Frequency

Adjusting collection frequency is all about optimization – finding the best way to collect the most amount of material using the least amount of time and resources. Unfortunately, there is no 'catch all' solution, as ideal collection systems depend on the size of the municipality, the types of waste material being collected, and how that material is being processed. However, a collection system should have the following characteristics:

- Convenience for the operator and for residents;
- Consideration and integration with a municipality's existing waste management system (for example, evaluating opposite or co-collection opportunities with different waste streams);
- Adaptability to changes in the existing waste system, such as the inclusion of new materials in the recycling stream; and
- Supported by a P&E program.

Collection Frequency is a key component of any waste collection system. It can play a large role in affecting the cost of a collection system and diversion rates.

Multi Municipal Collection and Processing

A widely-recognized principle of business is that significant efficiencies and economies can be obtained from larger scale activities. The same principal applies to recycling programs. Therefore, it is considered a fundamental Best Practice for municipalities to explore a multi-municipal approach to planning recycling activities. Considerable amount of industry research and data analysis indicates nearly all municipalities can benefit from a co-operative approach to planning and/or providing recycling services. Due to Head, Clara Maria's current low- cost contract with BAG Recycling, multi municipal collection and processing may not be a beneficial alternative at this time. When the contract with Bag Recycling expires this option could be re-evaluated.

Standardized Service Levels and Collaborative Haulage Contracting

Collaborative haulage contracts for blue box materials can take advantage of increased purchasing power through municipal partnerships and ensures that the partner municipalities provide common levels of services to its residents. Standardizing collection programs among municipal partners being diverted from disposal, allows for

common education and promotion materials, increase collector efficiencies, and can potentially reduce overall costs.

Similar to the Multi Municipal Collection and Processing initiative, due to Head, Clara Maria's current low- cost contract with BAG Recycling, multi-municipal collection and processing may not be a beneficial alternative at this time. Under the circumstances multi-municipal collection and processing is sought standardized service levels should be evaluated.

Inter-municipal Committee

A committee comprised of representatives from local municipalities work towards 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.

Assess Tools and Methods to Maximize Diversion

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

Possible topics may include:

The types of waste diversion behaviours currently undertaken in each household;

Perceived barriers to participation in waste diversion programs

Willingness to participate in waste recycling programs;

The tools residents need to increase their participation in recycling programs.

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

Follow Generally Accepted Principals for Effective Procurement and Contract Management

A considerable number of municipalities in Ontario, including Head, Clara and Maria, contract out the collection and processing of recyclables. To ensure that municipalities obtain good value for money, Municipalities should follow generally accepted principals (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.

Description of Screening Criteria:

Evaluation Criteria have been provided by the CIF in the *Guidebook for Creating a Municipal Waste Recycling Strategy*. The criteria assist in evaluating which initiatives are best suited for the Municipalities Waste Recycling Strategy. Priority initiatives are those which score highly in the WRS assessment matrix and Future initiatives are those that score reasonably well and should be considered in future evaluations of the Municipalities WRS. The Evaluation Criteria are as follows:

% Waste Diverted – This refers to how much waste an option may potentially help to divert. Some options may divert more 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 tried and true, while others may be newer and less tested.

Reliable Market/End Use – Not included in this assessment as the Municipality does not process their diverted materials.

Economic Feasibility – 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.

Accessible 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 audience.

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.

	Description of Initiatives/Best Practices	Criteria (Score out of 5)					Total Criteria Score (%)
		% Waste Diverted	Proven Results	Economically Feasible	Accessible to Public	Ease of implementation	
Promotion and Outreach							
	Public Education and Promotion Program	4	5	4	5	4	88
	Training of Key Program Staff	3	5	3	5	4	80
Collection							
	Optimization of Collection Operations	1	3	5	3	5	68
	User Pay Strategy	5	4	5	3	3	80
	Enhancement of Recycling Depots	4	3	3	3	3	64
	Provision of Free Blue Boxes (P&E)	4	4	3	5	5	84
	Garbage Collection Frequency Decrease	4	2	5	2	4	68
	Curbside Collection for all Households	4	4	1	5	3	68
Transfer and Processing							
	Optimization of Processing Operations	Contractor Conducts Processing					
Partnerships							
	Multi-Municipal Collection and Processing of Recyclables	2	4	5	5	2	72
	Standardized Service Levels and Collaborative Haulage Contracting	2	4	5	5	2	72
	Intra-Municipal Committee	2	3	5	3	3	64
Additional Research							
	Assess Tools and Methods to Maximize Diversion	5	4	2	3	3	68
Administration							
	Following Generally Accepted Principles for Effective Procurement and Contract Management	3	5	4	2	4	72

Notes: Priority Initiatives = Total Score of 80+

Future Initiatives = Total Score 70-79