

Waste Recycling Strategy

**Municipality of East Ferris,
Municipality of Powassan and
Township of Chisholm**

**R.J. Burnside & Associates Limited
17345 Leslie Street, Suite 200
Newmarket ON L3Y 0A4 CANADA**

**Prepared with Assistance from
Waste Diversion Ontario
and Antoine Boucher, P.Eng.
Municipality of East Ferris**

**March 12, 2015
MNO020354.2015**

Waste Recycling Strategy
March 12, 2015

Record of Revisions

Revision	Date	Description
0	February 23, 2015	Draft Submission to Council and CIF for Review
0.1	March 2, 2015	Second Draft for CIF Review
1	March 12, 2015	Final Report Submission

R.J. Burnside & Associates Limited

Report Prepared By:



Kent Hunter, P.Eng.
Senior Project Engineer – Solid Waste
KH:js

Report Reviewed By:



James R. Hollingsworth, P.Eng.
Technical Leader, Solid Waste

Table of Contents

1.0	Introduction	1
2.0	Overview of the Planning Process.....	1
3.0	Study Area	2
4.0	Public Consultation Process.....	2
5.0	Stated Problem	3
6.0	Goals and Objectives	4
7.0	Current Solid Waste Trends, Practices and System and Future Needs.....	4
7.1	Community Characteristics	4
7.2	Current Waste Generation and Diversion	5
7.3	Potential Waste Diversion	6
7.4	Existing Programs and Services	7
7.5	Program Costs	9
7.6	Anticipated Future Waste Management Needs	10
8.0	Recommendations	11
8.1	Priority 1 - Internal Assessment to Determine Validity of Synchronizing Contracts.....	11
8.2	Priority 2 – High Priority - Policy Initiatives.....	11
8.2.1	Clear Bags (not applicable in Chisholm)	12
8.2.2	Curbside Bans.....	12
8.2.3	Disposal Bans (Cardboard)	13
8.2.4	Lower Bin/Bag Limits.....	13
8.3	Priority 3 - Front Line Landfill Staff Training.....	14
8.4	Priority 4 - Public Education and Promotion.....	15
8.4.1	Public Education Initiative	15
8.4.2	Future Public Education Initiatives	17
8.5	Priority 5 – Training of Oversight Staff	19
8.6	Priority 6 - Sharing Resources	20
8.7	Low Priority – Policy Initiatives.....	20
8.7.1	Bi-Weekly Garbage Pickup (East Ferris and Powassan)	20
8.8	Contingencies	20
9.0	Monitoring and Reporting.....	21
10.0	Estimated Costs	23
11.0	Timeline for Implementation.....	24
12.0	Summary by Community	25
12.1	Recommendations for Township of Chisholm.....	25
12.2	Recommendations for Municipality of East Ferris.....	26
12.3	Recommendations for Municipality of Powassan.....	27
12.3.1	Policy Initiatives.....	27
13.0	Conclusion.....	28

Waste Recycling Strategy
March 12, 2015

Tables

Table 6-1: Waste Recycling Goals and Objectives	4
Table 7-1: Community Characteristics	5
Table 7-2: Waste Generation and Diversion	5
Table 7-3: Residential Solid Waste Generated & Diverted through Blue Box (2012)	6
Table 7-4: Average Blue Box Diversion Rate (2012)	6
Table 7-5: Estimate of Residual Blue Bin Material (2013 data).....	7
Table 7-6: Total Costs – Processing and Collection	9
Table 7-7: Total Costs – Processing Only (2013)	9
Table 7-8: Total Costs – Collection only	10
Table 7-9: Anticipated Future Solid Waste Generation & Available Blue Box Material..	10
Table 8-1: Waste Recycling Strategy Contingencies	21
Table 9-1: Recycling System Monitoring.....	22
Table 10-1: Costs and Priorities.....	23
Table 10-2: Payback on Investment.....	24
Table 11-1: Gantt Chart	24
Table 12-1: Priority and Future Initiatives – Chisholm.....	25
Table 12-2: Priority and Future Initiatives – East Ferris	26
Table 12-3: Priority and Future Initiatives – Powassan	27

Figures

Figure 1 Location of Communities

Figure 2 Community Plan

Appendices

Appendix A Public Presentation Boards

Appendix B Sign In Sheets

Appendix C Waste Recycling Flier and Newsletter (Chisholm)

Appendix D Waste Calendar (East Ferris)

Appendix E MyWaste App Information

Waste Recycling Strategy
March 12, 2015

Disclaimer

This document contains proprietary and confidential information. As such, it is for the sole use of the addressee and R.J. Burnside & Associates Limited, and proprietary information shall not be disclosed, in any manner, to a third party except by the express written permission of R.J. Burnside & Associates Limited. This document is deemed to be the intellectual property of R.J. Burnside & Associates Limited in accordance with Canadian copyright law.

1.0 Introduction

This Waste Recycling Strategy was initiated by the Municipalities of East Ferris and Powassan and the Township of Chisholm (the Communities). The purpose of this Waste Recycling Strategy is to:

- Increase the efficiency and effectiveness of the recycling program and maximize the amount of blue box material diverted from disposal.
- Identify cost effective options to maximize Blue Box diversion for the Communities.

The Communities are each responsible for managing their residential solid waste and operate a full range of waste management services. Existing programs and services are explained in Section 7.4.

This Waste Recycling Strategy was developed with support from Waste Diversion Ontario's Continuous Improvement Fund and using the Continuous Investment Fund's *Guidebook for Creating a Municipal Waste Recycling Strategy*, as well as using recommendations from other municipalities with similar population and collection policies.

2.0 Overview of the Planning Process

This Waste Recycling Strategy was prepared through the efforts of municipal employees from the Communities, as well as input from the general public and council. R.J. Burnside and Associates Limited (Burnside) facilitated the meetings and assisted with the development of the plan.

In preparation of this Waste Recycling Strategy, municipal staff met to discuss key issues with the current recycling program, the recycling system processes, and upcoming milestones. The 2013 Waste Diversion Ontario (WDO) datacall for the Communities was used to assess the recycling system, including current costs, effectiveness of current diversion and future needs. At the time of the study, the 2013 GAP analysis was not available, so the 2012 analysis was used. This information was also compared against published WDO datacall information for other municipalities within the municipal grouping that includes East Ferris, Powassan and Chisholm.

To ensure the public and local stakeholders were able to participate in the preparation of this Waste Recycling Strategy, two open houses were undertaken. In addition, municipal staff and Burnside presented the findings of this process to the Councils of the Communities. For more details on our public consultation process, see Section 4.

3.0 Study Area

The study area for this Waste Recycling Strategy includes the Municipalities of East Ferris and Powassan and the Township of Chisholm (the Communities). The location of these Communities is shown on Figure 1. A Community plan, showing the main place names, is included as Figure 2.

This Waste Recycling Strategy addresses blue box recyclables only. However, some of the recommendations, such as public education will assist with improving efficiency in all solid waste management and MHSW fields.

4.0 Public Consultation Process

On January 28 and 29, 2015, open houses were held to present the Waste Recycling Strategy and its' proposed options to the public. The first open house (January 28) was held in Corbeil at the Corbeil Park Hall and was scheduled to run from 4:00 to 7:00 p.m., with stakeholder meetings occurring between 7:00 and 8:00 p.m. The second open house (January 29) was held at the Powassan Municipal Building in Powassan and was scheduled from 4:00 to 7:00 p.m., but actually ended closer to 8:00 p.m.

The open house format included a series of display boards presenting an overview of the waste recycling strategy. Members of the public were provided with sticky adhesive dots and they were requested to place the dots on the boards to express preference for diversion targets, objectives and initiative plans. Municipal staff and the waste management consultant were also available to answer questions from the public. Appendix A includes copies of the boards with dots reproduced reflecting those placed by the public.

Although the turnout was not high (Appendix B includes the sign in sheets), there was meaningful input from those who attended. Key points discussed included:

- Members of the public who attended were supportive of efforts to increase the diversion rates in the Communities.
- It was agreed that better education was needed. Some of the residents that attended were not aware of the proper procedures for Blue Bin Recycling.
- The recycling collection contractor estimates that between 60 and 75% of residents participate in the Blue Box program. When informed of this, attendees indicated that efforts should be made to improve participation. Attendees were supportive of policies to increase diversion, including clear bags, bag limits, disposal bans and curbside bans.
- No attendees were supportive of bag tags.

Waste Recycling Strategy
March 12, 2015

- It was recognized that there was inconsistency across the communities in terms of policies. It was felt that it may be easier to implement policies by explaining to the residents that we are striving for consistency.
- The mayor of Chisholm questioned why the cost per tonne in his Township was higher than the other Municipalities. It was agreed that Burnside would investigate and report on this issue separately.
- There is a large population of Amish in the community of Chisholm. It was felt data used to generate some of the metrics may not be reflective of their consumer habits. For instance, Amish tend to purchase fewer consumer goods and by extension, generate less Blue Box material.

Stakeholder groups included in this consultation included:

- The garbage collection and landfill contractor (Boyer)
- The recycling contractor (R&D Recycling of North Bay)
- Miller Waste (managing hazardous waste from the Communities)
- Mayors and Councilors

Efforts were made to contact other stakeholders. It should be noted that there are no significant industries in the Communities, which are generating waste for disposal.

5.0 Stated Problem

Management of municipal solid waste, including the diversion of blue box materials, is a key responsibility for municipal governments in Ontario. The factors that encourage or hinder municipal blue box recycling endeavors can vary greatly and depends on a municipality's size, geographic location and population.

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

- A desire by the Councils and the public to reduce Municipal costs while improving overall efficiency.
- It was felt that blue box participation rates could be improved.
- The Communities recognize that preserving landfill capacity through diversion extends site life and reduces the cost of finding new capacity.
- It is recognized that many programs, such as Organics collection and processing and Waste from Energy are not viable in the communities and therefore there is incentive to optimize the programs which are viable (blue box).
- WDO requirements for a Waste Recycling Strategy in order to receive maximum funding.

6.0 Goals and Objectives

Through consultation with the community and council, we have identified a number of goals and objectives for the Communities, which are presented below.

Table 6-1: Waste Recycling Goals and Objectives

Goals	Objectives
To maximize diversion of residential/municipal solid waste through the blue box/recycling program	An increase in diversion by 10% within 3 years based on datacall submissions. This would give the following target numbers: Chisholm – 112 tonnes (currently 102 tonnes) East Ferris – 483 tonnes (currently 439 tonnes) Powassan – 439 tonnes (currently 399 tonnes)
To improve the cost-effectiveness of recycling in our community	Average cost for 3 Municipalities to remain below \$300 per tonne with improved diversion
To increase participation	To have 90% of the households participate in the blue box recycling program within 3 years as estimated by the Collection Contractor.

The communities also identified extending the landfill life as a goal in the program. It was recognized that the community landfills are valuable assets that must be preserved. There would be high costs associated with expanding these sites or to find new disposal options. This is a soft objective of the program. The communities should be assured that by increasing diversion, the landfill life will be extended. It has not been included as a hard objective, because it is currently immeasurable given the infrastructure in place (no scale, or accurate way to assess life).

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

7.1 Community Characteristics

The Communities have a combined population of 9,344. Community characteristics are summarized below:

Table 7-1: Community Characteristics

	Population	Total Households/ Dwellings	% Rural*	Single- Family Households	Multi-Family Households	Total Seasonal Dwellings**
Chisholm	1,208	746	100%	635	0	111
East Ferris	4,766	2,360	83%	2,029	52	279
Powassan	3,370	1,398	55%	1,342	20	36
Combined Total	9,344	4,504	77%	4,006	72	426

* Based on a search using MPAC property codes.

** Seasonal is 6 months

The communities are largely rural. The WDO municipal grouping is 6 for all communities.

7.2 Current Waste Generation and Diversion

Currently, the communities generate approximately 3,215 tonnes of residential solid waste per year. Of this, 940 tonnes, or 29%, was diverted through the blue box program in 2013. Currently, the most common material recycled is paper, while the least recycled material is glass. This is summarized on Table 7.2:

Table 7-2: Waste Generation and Diversion

	Generated ¹	Diverted through Blue Box ²	Percentage
Chisholm	403	102	25%
East Ferris	1,616	439	27%
Powassan	1,196	399	33%
Combined Total	3,215	940	29%

¹ Tonnage generated is based on 2012 GAP data² Tonnage diverted is based on 2013 Datacall submissions

At the time of this study, GAP data for 2013 was not available. The actual percentage may vary by a small amount. However, it is likely still within the same range of numbers.

The table below summarizes the current waste generation and blue box diversion rates based on 2012 GAP data.

Table 7-3: Residential Solid Waste Generated & Diverted through Blue Box (2012)

Residential Waste Stream/Blue Box Material	Chisholm		East Ferris		Powassan		Combined	
	Tonnes	% Total Waste	Tonnes	% Total Waste	Tonnes	% Total Waste	Tonnes	% Total Waste
Total waste generated	403	-	1,616	-	1,196	-	3,215	-
Papers	41	10%	191	12%	174	15%	405	13%
Plastics	14	3%	57	4%	54	5%	125	4%
Metals	20	5%	62	4%	50	4%	132	4%
Glass	10	3%	38	2%	50	4%	98	3%
Total Blue Box material currently diverted	84	21%	347	21%	329	28%	760	24%

Papers: ONP, OMG, OCC, OBB and fine papers

Metals: aluminum, steel, mixed metal

Plastics: containers, film, tubs and lids

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

Table 7-4: Average Blue Box Diversion Rate (2012)

Combined	29%
Chisholm	25%
East Ferris	27%
Powassan	33%
WDO Municipal Grouping: 6	27%

7.3 Potential Waste Diversion

Currently, the communities have no waste audit data available for their residential waste. To estimate the waste composition, West Nipissing's current waste audit data was used as a proxy. Although West Nipissing is close in proximity and is a Category 6 Municipality, it also has significant differences. It is larger than the combined study area (7,100 households) and uses 2-stream recycling. Processing is done by both R&D and the Municipality, and collection is completed entirely by the Municipality. It is felt that because of farming and home preserving, the local communities use a lot more cans than West Nipissing.

In 2012, the Communities had a combined waste generation of 3,215 tonnes. The West Nipissing waste composition study indicates that 38 percent of their waste should be

recyclable. On this basis, it is estimated that approximately 1,222 tonnes of blue box recyclable materials are available for diversion in the Communities. However, only 940 tonnes of material is diverted through blue box programs in the Communities. Therefore, approximately 282 tonnes is being disposed of as waste. It should be noted that the quantity of metal being recycled is higher than the quantity which would be generated using the West Nipissing percentages number. Therefore, if we exclude the metal, the quantity in the waste stream may be closer to 354 tonnes. Estimates of blue box material available for diversion are listed in the table below.

Table 7-5: Estimate of Residual Blue Bin Material (2013 data)

Waste/Resource Material	Composition (%) (from West Nipissing audit)	Total Blue Box Material in Waste Stream (tonnes)	Blue Box Material Currently Diverted (tonnes)	Blue Box Material Remaining in Waste Stream (tonnes)
Papers	23	739	496	243
Metals	3	96	169	0 ¹
Plastics	8	257	161	96
Glass	4	129	114	15
Total Blue Box Materials	38	1,222	940	282/354²

¹ The quantity of metal remaining cannot be negative, and therefore we have assumed there is no metal remaining in the waste stream

² Using the bottom row, which contains the metal deficit there may be 282 (1,222-940) tonnes in the waste stream. Using the rightmost column, which does not include the metal deficit, there may be 354 (243+96+15) tonnes in the waste stream.

7.4 Existing Programs and Services

The Communities are responsible for managing their residential solid waste and operate a full range of waste management services including:

- Every-other week recycling curbside collection, using a common contractor. Although there is a common contractor, each Municipality operates under separate contract. It is noted that all Communities have a different structure for payment and a different processing fee for the recyclable material. There is no charge for residual from the MRF, based on the contracts reviewed. We understand the Powassan residents are asked to sort their recyclables prior to placing on the curb, although curbside sorting is not a requirement of the receiver and does not result in any efficiency or cost savings.
- Weekly garbage curbside collection for East Ferris and Powassan. Powassan collection is done by Municipal staff. Chisholm residents drop off waste at their landfill site or approximately 100 residents get their wastes picked up by a private

Waste Recycling Strategy
March 12, 2015

hauler. We understand from comments made at the Open House that the attendants are enforcing the clear bag policy at Chisholm.

- Maintaining and operating waste disposal (landfill) sites.
- Free electronic equipment drop-off at landfill sites – registered in the Ontario Electronic Stewardship Program.
- Free tire disposal at landfill sites – registered in the Ontario Tire Stewardship Program.
- Access to the North Bay Hazardous Waste Depot at a fee of \$2 per household per year.

Regarding the contracts, we note the following:

- In 2014, Chisholm entered into a 10 year contract with R&D which takes them to 2024. The contract can be terminated by either party with a 6 month notification. There is not a garbage collection contract.
- In East Ferris, the contract with R&D is coming up for renewal later this year. The garbage collection contract is coming up at the same time.
- In Powassan, the contract with R&D is up for renewal in 2017. The contract can be terminated by either party with a 3 month notification. Collection in Powassan is done in-house (Municipal employees).

Although the Communities are using a common recycling contractor and are performing a joint study, there are already several differences in the policies and services offered by the communities. The following policies are in place:

- A requirement for recyclables to be placed in clear bags (Chisholm only)
- Two bag limit for garbage (Powassan and Chisholm)
- Recyclable ban at landfill (Chisholm only)

Educational efforts also vary between communities. These are summarized below:

- Chisholm produces a monthly newsletter containing waste related information which is mailed out to all residents. A copy of the newsletter and flyer are included as Appendix C.
- East Ferris produces a calendar for the residents showing recycling days. This is included in Appendix D.
- East Ferris has a free page advertisement in the local paper each year.

7.5 Program Costs

In 2013, the total net annual recycling costs for the communities was \$224,443. This amounts to \$239 per tonne, or \$56 per household. As the table below shows, net annual recycling costs for all communities are lower than the average from the WDO municipal grouping.

Table 7-6: Total Costs – Processing and Collection

Community	Households	Recycling		Cost*	Cost per household	Gross Costs Per Tonne
		Rate (%)	Tonnes			
Chisholm	746	25%	102	\$34,880	\$46.76	\$342
East Ferris	2,360	27%	439	\$100,992	\$42.79	\$230
Powassan	1,398	33%	399	\$88,571	\$63.36	\$222
Total	4,504	29%	940	\$224,443	\$49.83	\$239
Municipality of West Nipissing ¹						\$408
Municipal grouping: Rural Collection North (Average of 27% Recycled)						\$473

* Cost is based on 2013 data call submission.

The processing costs are as follows:

Table 7-7: Total Costs – Processing Only (2013)

Community	Households	Recycling		Processing Cost	Cost per household	Quoted Cost Per Tonne*	Actual Costs Per Tonne
		Rate (%)	Tonnes				
Chisholm	746	25%	102	\$6,630	\$11.90	\$75	\$87
East Ferris	2,360	27%	439	\$28,535	\$13.63	\$65	\$73
Powassan	1,398	33%	399	\$25,935	\$14.86	\$70	\$52**
Total	4,504	29%	940	\$61,100	\$13.73	\$70	\$66

* The quoted cost per tonne is based on the contract. This cost varies slightly from the actual cost per tonne, because there are fuel surcharges and costs associated with weighing the material.

** It is currently not clear why the actual cost per tonne at Powassan is significantly less than the quoted cost per tonne. It is likely because the Contract was not signed until early 2013, and some months may have not been fully accounted for in the data call submission.

¹ West Nipissing is included in the tables at the request of the Chisholm Councilors.

Table 7-8: Total Costs – Collection only

Community	Households	Recycling		Collection Cost*	Cost per household	Gross Costs Per Tonne
		Rate (%)	Tonnes			
Chisholm	746	25%	\$255	\$26,000	\$34.85	\$255
East Ferris	2,360	27%	\$157	\$68,820	\$29.16	\$157
Powassan	1,398	33%	\$170	\$67,800	\$48.50	\$170
Total	4,504	29%	940	\$162,620	\$36.11	\$173

*Collection costs are based on Contract values.

The differences in communities are a function of many factors. The travel distance between houses is greater in Chisholm and the amount recycled per household is lower in Chisholm than the other communities.

7.6 Anticipated Future Waste Management Needs

Solid waste generated rates in the Communities are expected to be variable over the next 10-year planning period due to population increases, new housing developments and changing attitudes towards waste generation. The Table below depicts the expected growth rates for solid waste generation and blue box material recovery (based on projected population growth rates).

Table 7-9: Anticipated Future Solid Waste Generation & Available Blue Box Material

Community	Parameter	2012	2015	2020	2025
Chisholm	Population	1,208	1,232	1,256	1,281
	Total Waste	403	411	419	427
	Blue Box Material Available	153.14	156	159	162
East Ferris	Population	4,766	4,956	5,154	5,360
	Total Waste	1,616	1,680	1,747	1,816
	Blue Box Material Available	614.08	638	663	689
Powassan	Population	3,370	3,403	3,437	3,471
	Total Waste	1,196	1,207	1,219	1,231
	Blue Box Material Available	454.48	459	463	467
Combined	Population	9,344	9,591	9,847	10,112
	Total Waste	3,215	3,298	3,385	3,474
	Blue Box Material Available	1221.7	1,253	1,285	1,318

8.0 Recommendations

The Communities reviewed a number of options for consideration in its Waste Recycling Strategy. A review of these initiatives and their steps for implementation is presented on the following pages.

8.1 Priority 1 - Internal Assessment to Determine Validity of Synchronizing Contracts

Currently, all Communities have agreements with R&D Recycling to provide collection and processing (by 3rd party) of blue box material. It is noted that collection and processing price varies among the contracts for each Municipality.

Best practices involve synchronization of contracts when they come for renewal, as generally there is considerable economics of scale. An external consultant could be retained to develop a competitive joint RFP which could go to tender for the collection and processing of the recyclable materials. However, it was commented by Council that the communities are already receiving a competitive price from the Contractor, and this is confirmed by the overall costs compared to other Category 6 Municipalities (see Table 7-8). It is currently unknown whether there could be an overall cost savings realized through this process. Furthermore, council has expressed an interest in maintaining independence. An internal analysis is recommended before synchronizing the contracts to determine if it is worthwhile from a financial and implementation standpoint.

The internal analysis is considered the first priority and should begin in summer 2015 by oversight staff from the 3 communities. After this internal analysis, it can be determined if there are benefits from synchronizing the contracts, and when this should be implemented (opt out of current contracts, or wait till they come up for renewal). The costs to assess the benefits of synchronization would be small, because this would be done by internal staff. Ideally, this would be accomplished prior to the East Ferris contract coming up for renewal at the end of 2015.

8.2 Priority 2 – High Priority - Policy Initiatives

During the public meeting and the council meeting, it was agreed that new policies should be adopted to promote recycling. The communities would then inform the residents of these new by-laws through the advertising campaign.

Based on discussion with Dufferin County, approximately 1 year may be required to implement new policies. This would involve:

- Going through Committee of the Whole and passing at Council
- Drafting or amending the by-law
- Public Promotion and Education

Waste Recycling Strategy
March 12, 2015

- Visiting or discussing with retailers to ensure that materials (i.e., clear bags) are available for purchase
- Revising the RFP for waste collection (East Ferris only)

Therefore, to make this process easier, all policy changes should be implemented at the same time. Residents tend to resist when changes are drawn out over time.

The recommended policies are discussed below:

8.2.1 Clear Bags (not applicable in Chisholm)

Implementing a clear bag policy is consistent with Best Management Practices as recommended by WDO. It has been established that this increases diversion. The community of Chisholm already has a clear bag policy for waste. They have indicated that after the initial public opposition, the program has been effective. It is recommended that East Ferris and Powassan also implement clear bags. Clear bags provide the waste collection contractor the ability to observe the contents of the waste and reject the waste if recyclable products are present. Furthermore, it has been shown that residents are less likely to place recyclables in the garbage bags if neighbours can see the waste.

Stickers or tags would be placed on the bag and the Contractor would leave the bag at the curb if it was observed to contain recyclable material. It was expressed by the Waste Contractors that the residents must be informed that the Contractor has the authority to do this. Clear bags should be implemented in conjunction with a ban, so that there is no unambiguity when bags are not collected.

Introduction of a clear bag policy usually results in some public opposition. Some argue that it is an invasion of privacy. In the study area, there is a unique advantage in that clear bags are already policy in Chisholm. The residents should have some comfort in knowing it has been implemented in a neighbouring community without significant issues or effects and is a widely accepted practice in Ontario and Canada.

This along with some of the other policy initiatives is considered the second priority and implementation should begin in 2015 with final target date for full implementation of 2016. Implementation would comprise passing a by-law in Council and then advertising to inform the residents of the change. Advertising costs are presented under section 8.4.1. We believe that these policies alone should allow East Ferris and Powassan to reach their diversion targets.

8.2.2 Curbside Bans

The waste by-laws of the Communities were developed prior to the Blue Bin program. It is currently not against the by-law to dispose of recyclable material in the garbage. It

has been demonstrated that a curbside ban, done in conjunction with other policies, such as a clear garbage bag by-law, improves diversion of blue bin material. This could be implemented in Powassan and East Ferris. As Chisholm does not have collection, and have banned the materials from the landfill, this recommendation is not applicable.

This along with some of the other policy initiatives is considered the second priority and implementation should begin in 2015 with final target date for full implementation of 2016. Implementation would comprise passing a by-law in Council and then advertising to inform the residents of the change. Advertising costs are presented under section 8.4.2. We believe that these policies alone should allow East Ferris and Powassan to reach their diversion targets.

8.2.3 Disposal Bans (Cardboard)

Through discussions with landfill operators, we understand that a lot of cardboard is brought into the East Ferris landfill. Although other communities do not have the same issue at the landfill with their cardboard, providing the operator with additional support in the form of a policy may assist the operator in their job.

It is recommended that if a ban is placed on the cardboard, a phase in period is introduced where a bin is present at the landfill sites to accept the cardboard.

To reduce costs to the Communities, weekly removal of cardboard from this bin would not be required. Instead the landfill operator would monitor the bin and phone for pick up when necessary. We believe that these policies alone should allow the communities to reach their diversion targets.

This increases the cost for the Communities in that there would be extra haulage from the landfill (periodic trips for the recycling contractor) and the cost of the bin. At East Ferris, the additional costs may be up to \$3,000 per year. However, the material collected would help to increase diversion rates in the Communities.

Additional information on managing cardboard is included in Section 8.3.

This along with some of the other policy initiatives is considered the second priority and implementation should begin in 2015 with final target date for full implementation of 2016. Implementation would comprise passing a by-law in Council and then advertising to inform the residents of the change. Advertising costs are presented under section 8.4.2. We believe that these policies alone should allow East Ferris and Powassan to reach their diversion targets.

8.2.4 Lower Bin/Bag Limits

It has been shown that a reduction in limit of garbage bags residents can place on the curb tends to increase the capture rate of recyclables. Residents are more inclined to

Waste Recycling Strategy
March 12, 2015

dispose of items through the recycling program instead of paying for additional garbage beyond the container limit. Powassan and Chisholm currently have a 2 bag limit, while East Ferris has a 3 bin/bag limit. East Ferris should implement a 2 bin/bag limit within the next 1 to 2 years, with notification that limits will be further reduced to 1 bin/bag within 2 years. Powassan and Chisholm could consider a 1 to 1.5 bin/bag limit beginning within the next 1 to 2 years. In all cases, residents should be allowed to purchase or apply for additional bags if needed (i.e., large families, families with babies, medical needs, etc.).

This along with some of the other policy initiatives is considered the second priority for East Ferris and implementation should begin in 2015 with final target date for full implementation of 2016. Implementation would comprise passing a by-law in Council and then advertising to inform the residents of the change. Advertising costs are presented under section 8.4.1. We believe that these policies alone should allow the communities to reach their diversion targets.

8.3 Priority 3 - Front Line Landfill Staff Training

Although the public did not comment on training of key staff at the open house, Burnside recommends staff training as a valuable component of the overall strategy. Training ensures that staff does their work efficiently and consistently. Knowledgeable staff will enhance the experience of the residents and therefore make recycling a more favourable decision. Furthermore, attendance at workshops allows staff an opportunity to meet with other municipal workers undertaking similar roles and discuss options that have been successful, as well as initiatives that have been ineffective in other communities.

Recognizing Recyclable Materials: The community of Chisholm has policies consistent with best management practices (i.e., clear bags, bag limits) and yet the statistics for diversion from the Chisholm community are considerably lower than other communities elsewhere which also have similar policies. We suggest that some training of front line staff at the landfill may be helpful to ensure that the staff are aware of how to screen the material. Although this training is recommended especially for Chisholm, we believe it would be beneficial for all Communities. It is likely that the training could be conducted by the Recycling Contractor. The Contractor could come out to the site for a few days and observe the materials which are being accepted and rejected and make suggestions on how this can be optimized. It may also be possible to work with the waste processor to develop a program specific for the front line staff.

This along with some of the other front line staff training is considered the third priority and implementation should begin in 2015. We believe that Contractor costs and staff costs for this should be negligible. We are hopeful that this training alone will help Chisholm to reach their diversion targets, and assist in identifying why the targets are not being reached.

Cardboard Management: It was expressed by stakeholders that a lot of cardboard arrives at the East Ferris landfill site. A stopgap solution is provided above by making a policy change so that cardboard is no longer accepted at the landfill as waste and by providing a bin at the landfill to collect the material. However, we recognize that this may be expensive for the Municipality and does not solve the underlying problem of why the material is ending up on curbside for pickup. Front line staff should be trained to deal with cardboard arrival in a more direct manner. This would involve:

- Training staff to speak to the user when they arrive with a large quantity of cardboard. Tracking where the cardboard is coming from and ensuring that landfill disposal is appropriate.
- Educating people that the cardboard can be bundled and placed on the curb (does not need to be placed in the bins).
- If cardboard is coming from the ICI sector, implementing policies to charge them for the material.

As above, training may be performed by the Contractor or by the oversight manager.

This along with some of the other front line staff training is considered the third priority and implementation should begin in 2015. We believe that staff costs for this should be negligible. Although this will not assist East Ferris in meeting the diversion targets (cardboard is being banned as a policy objective), it will assist East Ferris in minimizing costs and maintaining the cost objective expressed above.

8.4 Priority 4 - Public Education and Promotion

Public education and promotion was supported at the open house and by each Council. Literature produced by the WDO has indicated that a modest public education campaign may increase diversion rates by up to 5 percentage points. It has been documented that the cost vs. benefits of public education is very good.

8.4.1 Public Education Initiative

As a priority initiative, the Communities should undertake modest public education and promotion. Priority educational opportunities the Communities should consider include:

- Introducing the new policies to the Community and the benefits associated with these. This is considered a high priority.
- Using the OCNA/CNA lineage, keep residents informed of the new policies, and the changes which are in the works. Refer to:
<http://www.wdo.ca/partners/municipalities/advertising-program/cna-ocna-advertising-program/>

Waste Recycling Strategy
March 12, 2015

- Ensuring that the public knows how to place materials out for recycling. At Powassan, it was noted that many residents believe they must sort before placing the material at the curb, whereas that is not a requirement of the collection contractor. At East Ferris, there was a homeowner who thought that cardboard had to be placed in bags to keep it dry.
- Providing information on the Community's recycling programs to new residents.
- Focus on some of the issues already identified to date:
 - Ensuring that the residents understand that cardboard should be bailed and placed at the curb
 - Encouraging the benefits of participation
- Providing a booth operated by volunteers at special events such as the:
 - Horseshoe Tournament (Chisholm)
 - Tradeshow (East Ferris)
 - Maple Syrup Festival (Powassan)

Staff operating the booth would be knowledgeable in the blue box program including the new policies which are being proposed and would provide direction to the residents on the blue bin program in a fun and interactive way. Tailoring the solid waste newsletter produced by Chisholm Township to more clearly explain the blue bin program and the benefits of using the program (i.e., extending the landfill life).

- Setting up a recycling kiosk in public areas such as the arena, Municipal center and halls (East Ferris and Powassan).
- Updating the website to present not just the baseline information, but additional information on the importance of recycling.

Many councilors supported a focused education campaign. This would involve having students travel with the recycling contractor over several collection events, and documenting which residents are not using the blue box program. Alternatively, the students could do a "drive by" on separate occasions and identify which houses are placing blue boxes and which are not. Then, the selected residents would be visited or a letter or notice could be sent and asked why they are not participating. Although this may minimize costs, Burnside does not recommend this approach, as it may be considered invasive or "Big Brother²-like" to some. A less direct approach would be to simply ask residents if they recycle in a door-to-door survey, but provide the same information to everybody. It should be noted that even active participants in the recycling program can benefit from additional education and everyone will be more informed.

² Big Brother refers to George Orwell's novel *Nineteen Eighty-Four* in which every citizen is under constant surveillance by the authorities.

Slogans and logos are extremely effective ways to reach the community and keep the message community focused and relevant. Some communities have used contests to assist in developing a slogan or logo. Schools (East Ferris and Powassan) should be encouraged to enter the contest. The Communities are small and may not get the response typically received in larger Municipalities however; it may provide a framework for moving forward. Suggested prizes may include a family pass at the arena.

Certain elements (notifying residents of new policies) are considered the fourth priority and therefore should be implemented in 2015 with a full promotion and education campaign proceeding prior to roll out of new policies. Using OCNA/CNA lineage and existing sources (websites) should reduce costs. A student or part time worker could be hired for the summer and shared across the 3 communities to implement some of these educational strategies. The costs would be around \$9,000.

8.4.2 Future Public Education Initiatives

Future initiatives the Communities should consider include:

- Production of a focused brochure/pamphlet or promotion material for the communities:
 - Focusing on improving the areas that require improvement in the community, as identified during the door-to-door campaign, such as overall participation and proper use of services.
 - While all of the benefits of recycling should be discussed, particular focus can be placed on extending landfill life, as this is an item that could have direct financial benefits for the residents.
 - Vivid, catchy and distributed in a manner so that it is actually picked up and read (some suggest brightly coloured door hangers are more effective than flyers or inserts).
 - Geared towards a target audience.
 - Contain a well-crafted and clear message, which is easy to understand, but not condescending. Positive messages are usually better received than negative messages. Although mentioning the negative should be included (i.e., ensure the resident is informed of what they may lose by not listening to the message).
- Proceeding with a door-to-door Community-Based Social Marketing (CBSM) Campaign (one example of a CBSM program is the door-to-door distribution of the new brochure and fridge magnet). It was expressed by Councilors (East Ferris, although likely applicable to all communities) that the need to extend the landfill life should be explained to the residents. The cost to develop/expand a landfill site or to export to North Bay would be extremely high for the Communities and would have an impact on taxes. Diversion of waste from the landfill is likely to be embraced by residents wanting to limit tax increases.

Waste Recycling Strategy
March 12, 2015

- Depending on the complexity of the message, the community may wish for some pre-testing to ensure that the message is resonating with the residents, and modify as required.
- Personalized distribution of the completed product to residents.
- Sending volunteers into the schools (East Ferris and Powassan) during appropriate events and discussing the importance of recycling through interactive games.
- Meetings with the North Bay, Callandar or Nipissing First Nation may be beneficial for the purpose of discussing shared promotion and educational material (i.e., radio, newspaper ads, etc.).
- Utilization of Mywaste app to keep the residences informed of the recycling dates and progress. A proposal for the Mywaste app is included as Appendix E.

The inclination may be to get the message out in the first year and then assume that the public education portion of the project is complete. However, public education must be ongoing. Continued monitoring for effectiveness and modification is also an ongoing component of the campaign.

It should be noted that additional recommendations in this report contain new policies or initiatives that the Communities should consider implementing. It is important that the public education campaign is consistent and developed in conjunction with informing the residents of these new initiatives, so that the residents do not feel that they are getting conflicting messages.

There are a variety of documents available for download, which provide a good framework for setting up both the priority and future initiatives. Recommended documents include:

- Information on CIF's promotion and education training can be found at this link: <http://sqiz.mobi/s3/f960dffe9458>
- WDO provides direction for utilizing CNA/OCNA lineage
<http://wdo.ca/partners/municipalities/advertising-program/>
- The Recycling Program, Promotion And Education Workbook (2007), currently available at: <http://www.stewardshipontario.ca/download/recycling-pe-workbook/>
- The KPMG review on best practices in Blue Box programming
http://www.stewardshipontario.ca/wp-content/uploads/2013/03/KPMG_final_report_vol1.pdf

This is considered a moderate priority. It should be placed in the 2016 budget and implementation should begin in 2016. We suggest a thousand dollars per year be set aside for additional educational items.

8.5 Priority 5 – Training of Oversight Staff

It is recommended that oversight staff remain apprised of workshops or conferences and on an annual basis attend in person or by webcast at least one event. Workshops and Conferences attended should focus on contract management and changes which can improve efficiency and promotion and education opportunities. Webinars and webcasts can provide opportunities for training while avoiding the need for travel. Some suggestions for consideration are as follows:

- Continuous Improvement Fund Ontario Recycler Workshops (this includes a webcast option, which would reduce cost but limits networking opportunities). Additional information can currently be found at <http://cif.wdo.ca/events/orw/index.htm>
- Development of in-house training session for front line staff (including customer service representatives and personnel operating the recycling booths)
- The Municipal Waste Association has a number of workshops and conferences. They can be currently found at http://www.municipalwaste.ca/events_conferences_workshop.cfm
- Another source for information on conferences and workshop is the Ontario Waste Management Association Website, <http://www.owma.org/Events.aspx>

Burnside also periodically offers training to Municipalities that may be relevant. We will inform the communities directly when these programs are offered.

This is considered the fifth priority. It should be placed in the 2016 budget and implementation should begin in 2016. We understand that budgets are tight for these communities and therefore the focus should be on lower cost programs. However, by the end of the conference, with travel and lodging a typical training session attended by staff would cost about \$1,500 per attendee (assume 1 per community). Webinars are often free, or minimal costs (<\$100).

In-House Training: After a conference is attended, the participants should actively disseminate the applicable information to appropriate staff. This can take the form of lunch-and-learn presentations, or a meeting and discussion.

In addition, an in-house training program should be prepared for staff dealing directly with the public. This includes volunteers who operate the booth at festivals and events. If a summer student is hired for a summertime communications campaign, he or she could also assist with the training program's development and delivery. The focus is on ensuring that staff are knowledgeable and consistent.

This is considered a moderate priority. It should be placed in the 2016 budget and implementation should begin in 2016.

As with public education, training is an ongoing activity and should be budgeted and undertaken on an ongoing, annual basis.

For budgetary consideration, it may be appropriate to attend conferences every 2 or 3 years, and in off years, the information is obtained through webcast and websites.

8.6 Priority 6 - Sharing Resources

Recommendations in this report involve purchase of some resources, which include:

- A kiosk or booth for shows and community events
- Promotional material and advertising, using OCNA/CNA lineage to reduce the costs. Refer to <http://www.wdo.ca/partners/municipalities/advertising-program/cna-ocna-advertising-program/>
- Training programs and lunch-and-learn events
- In house training, if available.

We recommend that a joint program be put together for the purchase of certain items above, as well as for new equipment such as blue boxes. CIF has a program where Municipalities can purchase blue boxes at a reduced cost (approximately \$5 per box). This recommendation can be implemented immediately.

8.7 Low Priority – Policy Initiatives

8.7.1 Bi-Weekly Garbage Pickup (East Ferris and Powassan)

Best management practice is to equal service levels between garbage and recycling. Consideration should be given to bi-weekly garbage pickup (alternating between recycling and garbage pickup). If communities align their Collection Contracts for these materials, the contract price could be lower as the truck utilization may be optimized, assuming a common contractor and vehicles can be optimized.

This was discussed at Council meetings and Community meetings. There was not a lot of support for this option, as those in attendance felt that odours from the waste would become a problem with bi-weekly pickup. It should be considered for the communities, but is not being carried forward as a hard recommendation. This is not considered a priority.

8.8 Contingencies

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

Table 8-1: Waste Recycling Strategy Contingencies

Risk	Contingency
Insufficient funding	<ul style="list-style-type: none"> • Explore and apply for other funding sources. The following website by CIF outlines additional funding opportunities http://cif.wdo.ca/news/reoi.html • Delay lower-priority initiatives • Increase proportion of municipal budget to solid waste management
Public opposition to planned recycling initiatives	<ul style="list-style-type: none"> • Reminder to residents that we are striving to equalize programs across the Municipalities • 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 student to help with planning (may be available funding) • Initiate a student volunteer program at the high schools (East Ferris and Powassan), with continuity between volunteer sessions (i.e., current volunteers training the next volunteers, using consistent training materials) • Rely on volunteers to operate booths and distribute flyers to homes

9.0 Monitoring and Reporting

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

The approach for monitoring the Communities' Waste Recycling Strategy is outlined in the table below.

Waste Recycling Strategy
March 12, 2015

Table 9-1: Recycling System Monitoring

Monitoring Topic	Monitoring Tool	Frequency
Diversion rates Progress	Records from Recycling Contractor	Quarterly
	Tabulate data as Datacall records are submitted and compare against previous years data	Annually
Cost efficiency	Tabulate data as Datacall records are submitted and determine cost per tonne	Annually
Participation	Regular discussions with Collection Contractor to see if there is notable improvements	Quarterly
Customer satisfaction	Survey at kiosk at public events	Twice annually, minimum
Opportunities for improvement	Survey at kiosk at public events	Twice annually
Planning activities	Describe what initiatives, as outlined in this report, have been fully or partially implemented, what will be done in the future	Annually
Review of Recycling Strategy	A periodic review of the Waste Recycling Strategy to monitor and report on progress, to ensure that the selected initiatives are being implemented, and to move forward with continuous improvement	Every 3 to 5 years

10.0 Estimated Costs

The Table below summarizes the Priority Initiatives and their estimated costs.

Table 10-1: Costs and Priorities

PRIORITY	Initiatives	Chisholm		East Ferris		Powassan		Combined	
		Implementation Costs (\$)	Operation Costs (\$)	Implementation Costs (\$)	Operation Costs (\$)	Implementation Costs (\$)	Operation Costs (\$)	Implementation Costs (\$)	Operation Costs (\$)
1	Internal Assessment to Determine validity of Synchronizing Contracts	0	0	0	0	0	0	0	0
2	Policy Initiatives ¹	0	0	0	\$3,000 ²	0	0	0	\$3,000
3	Training of Frontline Staff	\$250	0	\$250	0	0	0	\$500	
4	Public Education and Promotion	\$3,000	1,000	3,000	1,000	3,000	1,000	\$9,000	3,000
5	Training of Oversight staff	\$1,500	\$100	\$1,500	\$100	\$1,500	\$100	4,500	300
6	Multi-Municipal Approach Sharing Resources	0	0	0	0	0	0	0	0
	Estimated Total Cost (Priority Initiatives)	\$4,750	\$1,100	\$4,750	\$4,100	\$4,500	\$1,100	\$14,000	\$6,300

¹ Costs for policy initiatives are covered under Public Education and Promotion

² Costs associated with cardboard removal for landfill. It is assumed that this cost can be phased out over time.

The payback is a reduction in costs (per tonne) of about 9%, as shown on the attached table:

Waste Recycling Strategy
March 12, 2015

Table 10-2: Payback on Investment

	Pre-Cost per tonne	Post-Cost per tonne
Chisholm	\$342	\$311
East Ferris	\$230	\$209
Powassan	\$222	\$202
Combined	\$239	\$217

It should be noted that the cost is still greater than the existing system, however, the cost per tonne has decreased.

11.0 Timeline for Implementation

The following are the key points in the timeline for planning purposes:

Table 11-1: Gantt Chart

	2015				2016				2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Internal Assessment to Determine validity of Synchronizing Contracts												
Synchronize contracts if applicable												
Policy Initiatives												
Undertake process to implement policy changes												
Policy changes implemented												
Training of Key Staff												
Front Line Landfill Staff Training												
Workshop Attendance												
Public Education and Promotion												
Training on new policies												
Ongoing Training												
Multi-Municipal Approach												
Sharing Resources												

Black – firm implementation date

Grey – ongoing/variable implementation date

12.0 Summary by Community

12.1 Recommendations for Township of Chisholm

- Priority One: An internal review should be undertaken to determine whether it is worthwhile to synchronize contracts. Depending on the outcome of this research, the contracts may be synchronized.
- Priority Two: Not applicable to Chisholm. Chisholm Township generally has adopted most of applicable Best Management Practices policies as developed by WDO. The Township may wish to consider lowering the bag limit below an average of 2 per week (e.g., between 52 and 78 annually) per household.
- Priority Three: Front line Staff Training – How to recognize recyclable materials. This is a small amount of work which may have a large return on the investment. For this reason, it should also be implemented immediately.
- Priority Four: Public education associated with improving participation should be rolled out immediately and followed through after the policies come into effect.
- Priority Five: The oversight staff should consider attendance at regular conferences, either in person or online.
- Priority Six: The benefits of sharing resources should be assessed and if it can be determined that it is cost effective, sharing should commence.

The overall cost estimate for the Chisholm community is as follows:

Table 12-1: Priority and Future Initiatives – Chisholm

PRIORITY	Initiatives	Chisholm	
		Implementation Costs (\$)	Operation Costs (\$)
2	Training of Frontline Staff	\$250	0
3	Public Education and Promotion	\$3,000	1,000
4	Internal Assessment to Determine validity of Synchronizing Contracts	0	0
5	Workshop attendance	\$1,500	\$100
6	Multi-Municipal Approach Sharing Resources	0	0
	Estimated Total Cost (Priority Initiatives)	\$4,750	\$1,100

12.2 Recommendations for Municipality of East Ferris

- Priority One: An internal review should be undertaken to determine whether it is worthwhile to synchronize contracts. Depending on the outcome of this research, the contracts may be synchronized.
- Priority Two: Activities should begin immediately to implement the following new policies
 - Lower Bin/Bag Limits
 - Curbside bans
 - Clear Bags
 - Disposal bans (cardboard) from the landfill site
- Priority Three: Front line Staff Training – This relates to cardboard management at the landfill. This is a small amount of work which may have a large return on the investment. For this reason, it should also be implemented immediately.
- Priority Four: Public education associated with these campaigns should be rolled out immediately and followed through after the policies come into effect.
- Priority Five: The oversight staff should consider attendance at regular conferences, either in person or online.
- Priority Six: The benefits of sharing resources should be assessed and if it can be determined that it is cost effective, sharing should commence.

The overall cost estimate for the East Ferris community is as follows:

Table 12-2: Priority and Future Initiatives – East Ferris

PRIORITY	Initiatives	East Ferris	
		Implementation Costs (\$)	Operation Costs (\$)
1	Policy Initiatives	0	3,000 ²
2	Training of Frontline Staff	\$250	0
3	Public Education and Promotion ¹	3,000	1,000
4	Internal Assessment to Determine validity of Synchronizing Contracts	0	0
5	Workshop attendance	\$1,500	\$100
6	Multi-Municipal Approach Sharing Resources	0	0
	Estimated Total Cost (Priority Initiatives)	\$4,750	\$4,100

¹ Costs for policy initiatives are covered under Public Education and Promotion

² Costs associated with cardboard removal for landfill. It is assumed that this cost can be phased out over time.

12.3 Recommendations for Municipality of Powassan

12.3.1 Policy Initiatives

- Priority One: An internal review should be undertaken to determine whether it is worthwhile to synchronize contracts. Depending on the outcome of this research, the contracts may be synchronized.
- Priority Two: Activities should begin immediately to implement the following new policies
 - Curbside bans
 - Clear Bags
 - Disposal bans (cardboard)
 - The Municipality may wish to consider lowering the bag limit below an average of 2 per week (e.g., between 52 and 78 annually) per household.
- Priority Three: Not applicable in Powassan
- Priority Four: Public education associated with these campaigns should be rolled out immediately and followed through after the policies come into effect.
- Priority Five: The oversight staff should consider attendance at regular conferences, either in person or online.
- Priority Six: The benefits of sharing resources should be assessed and if it can be determined that it is cost effective, sharing should commence.

The overall cost estimate for the Powassan community is as follows:

Table 12-3: Priority and Future Initiatives – Powassan

PRIORITY	Initiatives	Powassan	
		Implementation Costs (\$)	Operation Costs (\$)
1	Policy Initiatives ¹	0	0
2	Training of Frontline Staff	0	0
3	Public Education and Promotion	3,000	1,000
4	Internal Assessment to Determine validity of Synchronizing Contracts	0	0
5	Workshop attendance	\$1,500	\$100
6	Multi-Municipal Approach Sharing Resources	0	0
	Estimated Total Cost (Priority Initiatives)	\$4,500	\$1,100

¹ Costs for policy initiatives are covered under Public Education and Promotion

13.0 Conclusion

The Communities have set goals of increasing diversion while maintaining costs for the purposes of extending landfill life. The extension of landfill life is viewed as extremely important in the community and has direct financial benefits for the residents. By implementing the initiatives in this report, the communities should be able to achieve their goals.



BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]



Figures



Map Title

SITE LOCATION

Client

MUNICIPALITY OF EAST FERRIS,
MUNICIPALITY OF POWASSAN AND
TOWNSHIP OF CHISOLM

Drawn

S.K.

Scale

1:2,000,000

Checked

K.H.

Date

2015/02/19

Project No.

MNO020354.2015

Figure No.

1



BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]



Appendix A

Public Presentation Boards


BURNSIDE

Welcome to the Public Information Session

Preparation of a Municipal Waste Recycling Strategy for the East Ferris and Powassan and Chisholm

January 28 to 29, 2015







R.J. Burnside & Associates Limited

Why are we here?

Why are the Municipalities Developing a Municipal Waste Recycling Strategy (WRS)?

- A WRS will
 - Decrease reliance on landfilling
 - Extend landfill life
 - Reduce Municipal costs
 - Improve overall efficiency
 - Results in a more environmentally friendly community
 - Is a WDO requirement

Why the open house?

- We are interested in your opinions
- What goals would you like your community to set?
- What new systems would you like to see implemented to meet these goals?

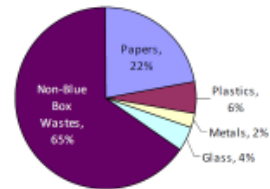

BURNSIDE

What is currently Recycled?

Currently Recycled in Community –Combined*

Material	Tonnage [†]		Percent Recycled
	Generated	Recycled	
Paper	700	405	58%
Plastic	192	125	65%
Metal [‡]	65	132	--
Glass	128	98	77%
Total	1085	760	70%

Ontario (Small Urban and Rural)



* Combined means East Ferris, Powassan and Chisholm

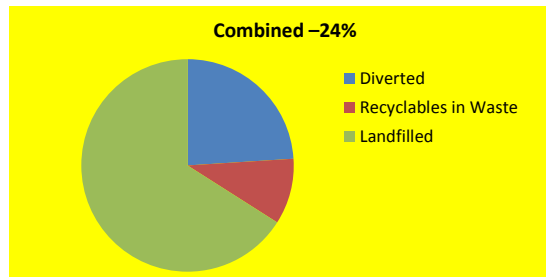
† 1 Tonne = 1,000 kg = 2,205 pounds

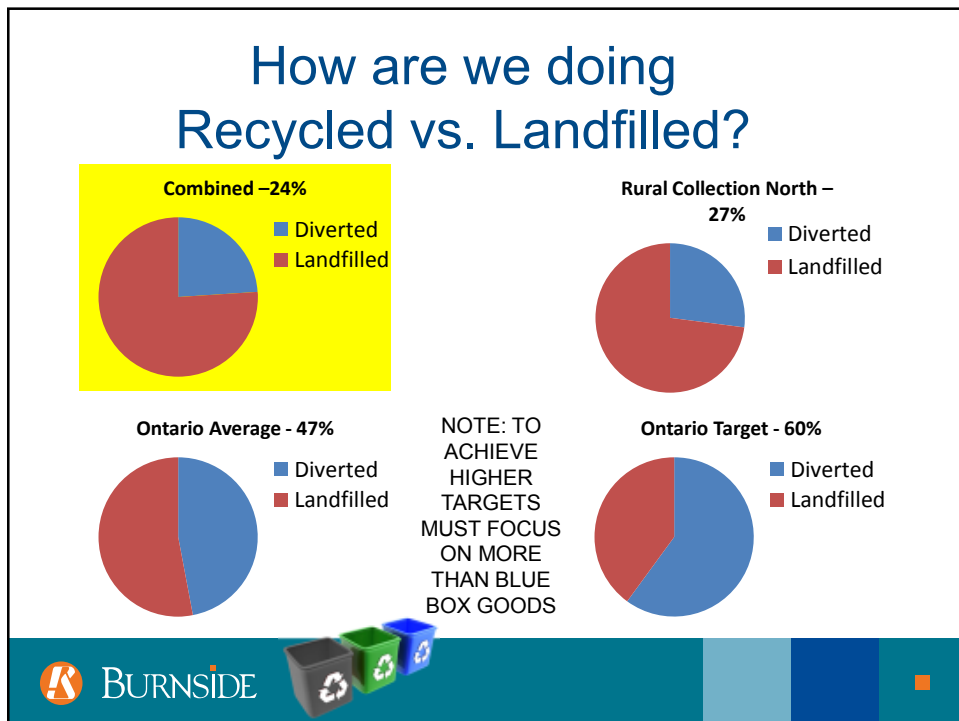
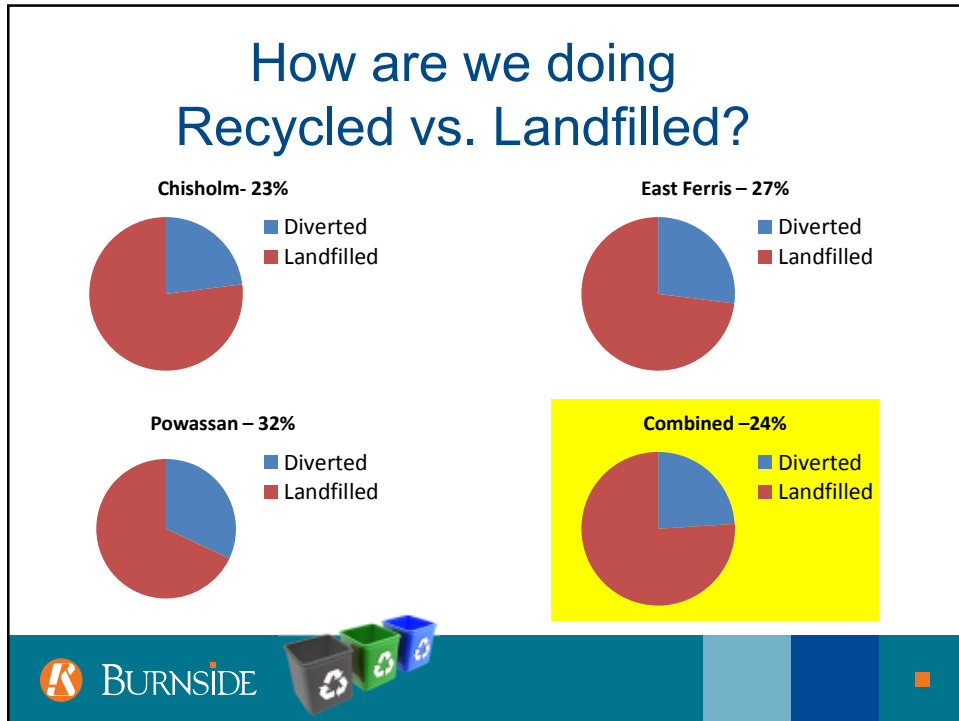
‡ Amount to be confirmed



How are we doing Recycled vs. Landfilled?

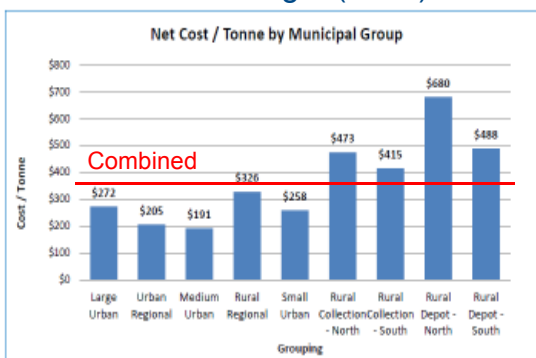
- Total Waste Generated – 3215 tonnes
- Total Waste Which Could be Diverted – 1085 tonnes
- Total Waste Diverted – 760 tonnes
- Diverting 70% of blue bin waste
- Total Diverted = 24%



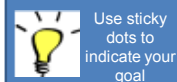


How are we doing Cost per Tonne to Recycle?

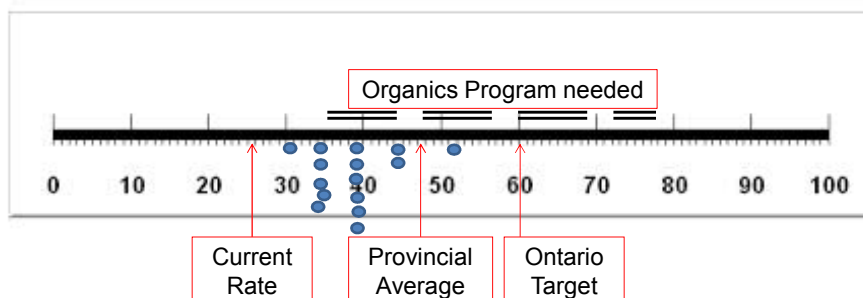
- Chisholm – \$400
- East Ferris - \$262
- Powassan - \$278
- **Combined – \$365**
- Rural Collection North – \$473
- Ontario Average (2012)- \$268



Questionnaire



- What would you like to see as a goal for your community?

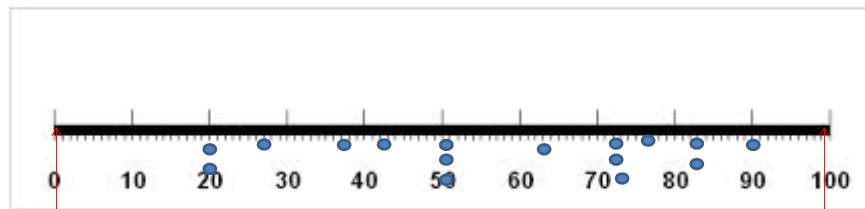


Questionnaire



Use sticky dots to indicate your goal

- How significant is the cost of the program?



Lower cost possible to achieve our mandated requirements

Highest diversion possible to save landfill life and be create a green environment



Consider a Waste Audit



Use sticky dots to identify items you like.

- Sorting and characterization of the waste as it arrives in the landfill
- Determine the composition of recyclables and other waste going to landfills • • • •
- Done over several weeks and different times of the year
- Allows you to understand the waste stream



Broad Options



Use sticky dots to identify items you like.

- Public Education and Communications
- Training of Key Program Staff
- Waste Diversion Policies
- Collection Frequency
- Optimizing Collection and Processing Operations
- Multi-Municipal Planning
- Ensuring Generally Accepted Principles
- IC&I Diversion
- Monitoring and Continuous Improvement



BURNSIDE



Public Education and Communications



Use sticky dots to identify items you like.

Why

- Less blue bin material into the waste
- Lower contamination of blue bin materials
- Higher diversion overall
- Establish better behaviors ●●●
- Increase community involvement ●●●●●

How

- Print ●
- Ads ●
- Radio ●●●
- Visibility at events ●●●●



BURNSIDE



Training of Key Program Staff



Use sticky dots to identify items you like.

Why

- Improved efficiency
- Improved service



How

- • • • Recycling conferences and workshops
- Internal programs
- E-learning • •
- Memberships



Waste Diversion Policies

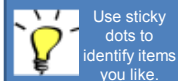


Use sticky dots to identify items you like.

- User Pay (tags)
- Lower Bag Limits • • • • •
 - (<3 or <2) • • •
- Clear Bags • • • • •
- Curb side bans • • •
- Disposal bans • • • • •
- Provision of Larger Blue Boxes •
- Open Space Recycling •



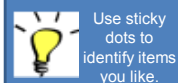
Waste Collection Frequency



- With increased diversion, less frequent waste collection may be warranted •
- Makes diversion more desirable
- Reduces waste management costs
- Can be in conjunction with organics collection and processing



Look at Efficiency of Current System



- Is there:
 - Double handling ••••
 - Redundancy
 - Integrated approach •
- Ensuring collection matches processing
- Optimized collection routes •
- Monitoring and Continuous Improvement ••



Multi-Municipal Planning



Use sticky dots to identify items you like.

Why

- Economics of Scale
- Optimized funding
- Reduced supervision
- Shared risk



How

- Synchronize Contract Renewal Dates ••
- Shared staff/equipment ••
- Synchronize purchases (blue boxes) •••
- Consolidate programs ••••
- Share education items •••••



BURNSIDE



BURNSIDE

Thank you for your participation

Questions or Inquires:

Antoine C. Boucher, P.Eng.
Director of Public Works and Engineering
Municipality of East Ferris
(705) 752-2740 x 229
antoine.boucher@eastferris.ca

Kent Hunter, P.Eng.
Senior Project Engineer,
Solid Waste
R.J. Burnside & Associates
(289) 730-1018
kent.hunter@rjburnside.com



The Municipality of
Powassan
The Heart of Good Living

R.J. Burnside & Associates Limited



BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]

Appendix B

Sign In Sheets

Meeting Sign-In Sheet

Date: Jan 28 / 2015

Project Name: WRS

Project Number: MOXO 020354

Location: Corbeil

Name	Community / Organization	Title	Phone	Email
Louis B. Lodeau	CORBEIL FOWL SEASONS CLUB	FEDS LICE PRESIDENT	705-498-5860	lou b gone@HOT MAIL.COM
Dan Boyer	Garbage Contractor	Owner	705-471-3536	
Jeff Boyer	Garbage Contractor	Co - owner	705-497-4267	
MITCHEL CHISHOLM	SENIORS VILLAGE	PRESIDENT	750-752-4658	
Owner/Magistrate	EAST FERRIS RESIDENT	OWNER OF HOME IN CORBEIL	705 752-1409	
Denise Gauthier			705 477-5158	
Peter Taylor			705 493 3636	
ELISHA SLOAN-KEAS	RESIDENT EAST FERRIS		705-494-0823	

Meeting Sign-In Sheet

Date: Jun 29/2015

Project Name: WRS

Project Number: MNO 020354

Location: Powassan

Name	Community / Organization	Title	Phone	Email
Bob Griesler	Powassan	Deputy Treasurer	705-724-2813	rgriesler@Powassan.on.ca
Nuzio Scarfone	CHISHOLM	Councillor	705-724-3681	n.scarfone@chisholm.ca
Ted Weiler	Trout Creek	Councillor	705-491-1120	tweiler@powassan.net
Leo Jabir	Chisholm	Mayor	705-724-5841	ljabir@chisholm.ca
Chris Jull	Chisholm	Councillor	705-724-5295	choisjull@outlook.com
SHIRLEY-ANN APPLEBY	EAST FERRIS	RESIDENT / EMPLOYEE	705-471-6774	sappleby@millergrp.ca
Fleur Pigeon	Powassan	resident	705-724-3852	michaelandfleur@sympatico.ca



BURNSIDE



The Municipality of
Powassan
The Heart of Good Living



BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]

Appendix C

Waste Recycling Flier and Newsletter (Chisholm)



As of May 1st, 2013 the Clear Bag Policy will be implemented in the Township of Chisholm. According to By-law 2013-10, "Household garbage will only be accepted when placed in clear or tinted bags, with the exception of one privacy bag, not larger than 20" x 22" in size, allowed in each large garbage bag." Please remember as well that recyclable items and hazardous waste material will **not** be accepted at the landfill site.

RECYCLE

The Township offers curbside recycling every second Thursday. We ask that you have your blue boxes out at the curb by 7:00 a.m.

- Make sure containers are relatively clean and free of food debris.
- Leave labels on containers.
- Flatten/tie/stack your cardboard together and separate from all other paper products.

	<u>ACCEPTED ITEMS</u>	<u>REFUSED ITEMS</u>
Household Paper	<ul style="list-style-type: none"> • Magazines, catalogues, telephone books • Writing paper, envelopes, shredded paper • Newspapers, junk mail, flyers and inserts • Books (hardcover & softcover) 	<ul style="list-style-type: none"> • Paper towels and tissue paper • Coffee filters • Wallpaper
Aluminum	<ul style="list-style-type: none"> • Aluminum and steel cans (pop cans) • Aluminum foil • Aluminum plates and trays 	<ul style="list-style-type: none"> • Potato chip bags • Paper-backed lids (lids from takeout) • Any soiled foil items
Plastic	<ul style="list-style-type: none"> • Bottles and containers with the triangle recycling symbols #1 to 7 (yogurt, ice cream, margarine, etc. and any lids) • Plastic film, clear plastic bags, cereal and cracker bags 	<ul style="list-style-type: none"> • Items without the recycling symbols • Soiled plastic film • Coloured plastic bags (milk bags, frozen fruit or vegetable bags, feed bags, wood pellet bags)
Cans	<ul style="list-style-type: none"> • All food and beverage cans • Empty dry paint cans 	
Glass	<ul style="list-style-type: none"> • All food and beverage containers • Wine and pop bottles • Clear or coloured glass 	<ul style="list-style-type: none"> • Broken glass • Light bulbs • Mirrors
Cardboard	<ul style="list-style-type: none"> • Tissue and detergent boxes • Cereal boxes, pizza boxes • Shoe or packing boxes • Egg cartons and drink trays • Corrugated cardboard (<i>Must be flattened and bundled!</i>) 	
Styrofoam	<ul style="list-style-type: none"> • Clean meat trays • Foam cups • Packaging foam 	<ul style="list-style-type: none"> • Packing peanuts • Insulating foam

Need a replacement or an additional Blue Box? The Township Office has some for sale.

RE-USE

Donate any useable clothes, furniture and appliances to charitable organizations and second hand stores in the area. (Grace House in Powassan, Salvation Army, Family Life Centres, etc.)

Should you have questions or require further information, please do not hesitate to call the office at (705)724-3526.

HOUSEHOLD HAZARDOUS WASTE

Residents should take all their household hazardous waste, free of charge, to the Household Hazardous Waste Depot – 112 Patton Street in North Bay, as this material is not accepted at the landfill site. Their hours of operation are from 8:00 a.m. to 6:00 p.m., Wednesday through Saturday.

Examples of Household Hazardous Waste:

Aerosol cans	Antifreeze	Asphalt tar	Automatic transmission fluid	Batteries/ Battery Acid	Brake fluid
Car wax & polish	Degreasers	Disinfectant	Drain cleaner	Engine flushes	Flea collars
Floor strippers & polishes	Gasoline	Glues	Grease	Heating oil	Herbicides
Household cleansers	Insecticides	Kerosene	Laundry stain remover	Lighter fluid	Lubes
Motor oil and waste oils	Nail polish	Oil filters	Oven cleaner	Paint	Paint & brush cleaner
Paint & lacquer thinners	Paint & varnish removers	Pesticides	Photo chemicals	Poisons	Propane tanks (big & small)
Radiator flushes	Roofing tar	Rust-proofers	Solvents	Spot remover/ cleaning fluid	Stain
Swimming pool chlorine	Syringe	Turpentine	Varnish	Wood Preservative	

- All materials should be left in the original container to allow easy identification of the contents.
- Wastes should be sealed & labeled and not mixed.
- Bring all hazardous waste in a cardboard box or rigid container.

Not accepted at the Household Hazardous Waste Depot:

- PCB's
- Pathological Waste
- Explosives
- Ammunition
- Unidentified Products
- Radioactive Waste

If not sure or would like more information, please contact The Waste Line at (705)474-0400, ext. 2333.

RECYCLE YOUR ELECTRONICS

With newer, more hi-tech electronics continuously becoming available to fit our lifestyles, we are replacing older models at rapid rates. As a result, electronics are becoming one of the fastest growing portions of trash. Electronic equipment is now being accepted at the Chisholm Landfill Site, so giving new life to your dated electronics is easier than you think!

Items collected:

- Amplifiers
- Cameras
- Cell phones
- Computer peripherals
- Copies/ Printers
- Fax machines
- Monitors and TVs
- Pagers and PDAs
- Portable audio players
- Portable computers
- Speakers
- Stereo systems
- Telephones and answering machines
- Tuners
- Turntables
- Vehicle audio and vehicle devices
- VHS, Beta and DVD players
- Video projectors

This is a free service that encourages waste diversion. The Environmental Handling Fee (EHF) you likely paid on purchasing new electronics covers collection, transportation and processing of electronic waste, as well as research and educational programs to promote responsible management of end-of-life electronics.

USED TIRES

Don't forget! You can now dispose of tires at no charge at the Chisholm Landfill Site as per Ontario Tire Stewardship Standards.

CHISHOLM NEWSLETTER

*Published by the Corporation of the Township of Chisholm
2847 Chiswick Line, RR #4, Powassan, ON P0H 1Z0
(705) 724-3526 Fax: (705) 724-5099 Email: info@chisholm.ca*

February 2014

No. 237

The Newsletter is now mailed out at the beginning of each month. If you wish to have a notice or ad published in the next Newsletter, please have it forwarded to the office by the third Thursday of the month.

COUNCIL/COMMITTEE MEETINGS

February

General Government Committee	Feb 4 th	7:00 p.m.
Landfill Education Committee	Feb 6 th	10:00 a.m.
Council	Feb 11 th	7:00 p.m.
Finance Committee	Feb 13 th	6:30 p.m.
Public Works Council	Feb 20 th	7:00 p.m.
	Feb 25 th	7:00 p.m.

All meetings are open to the public!

Agenda & Minutes are on the website www.chisholm.ca



RECYCLING DATES: February 6th, 20th, and March 6th, and 20th.

Have your blue box at the curb by 7:00 a.m.

MESSAGE FROM COUNCIL

Please take note that it is unlawful to move snow on the road from one side of the cleared road allowance to the other side of the road allowance. Therefore, when snowplowing, please be careful not to leave pilings on the road as they can create a hazard to the motoring public and could result in charges.

It is unlawful to leave unattended vehicles parked on township roadways during the winter months. Unattended vehicles will be towed away at the owner's expense. If in an emergency situation you must leave your vehicle unattended, please ensure it is well marked with flashing lights and/or flares.

The Public Works crew will continue to perform winter maintenance operations early in the morning, where possible, before traffic gets on roadways.

Have a safe and happy winter!

SUNDAY CARD GAMES

"Sunday Card Games" are every other Sunday during the winter months. The next "Sunday Card Games" will be on February 9th, 2014. Everyone is welcome to come out and play a hand or two while enjoying the company of your community neighbours! Games are from 1:30 to 4:00 p.m. at the Township Office in Council Chambers.

Notice of Public Meeting

To consider the
2014 MUNICIPAL BUDGET

Take notice that the Council of the Corporation of the Township of Chisholm will hold a Public Meeting at 6:30 p.m. on **Thursday, February 13th, 2014** in the Council Chambers located at 2847 Chiswick Line. Council invites all interested members of the public to attend and express their views.

INFORMATION relating to the proposed budget will be available for inspection at the Township Office during regular office hours, or on the Township Website, as of Friday, February 7, 2014.

Notice of a Public Information Session

with Municipal Property Assessment Corporation (MPAC) Representative, Laura Voltti,
re: Assessment and Taxation Matters.

This meeting to be held
Thursday, February 6th, 2014 at 7:00 p.m.
at the Chisholm United Church,
1469 Chiswick Line.

PLEASE NOTE: The Municipal office will be closed all day, Monday February 17th, 2014, to allow staff to celebrate Family Day.

Recognizing Youth Creative Writing!

Are you under the age of 18 and have a talent for creative writing? The Community Service Committee wants to see your writing skills. It could be a short story, poem, comic strip, or illustrated pictures. All of the submissions we receive will be posted in the Newsletter for all residents of Chisholm to enjoy. Please submit your work to the Township Office at 2847 Chiswick Line, or email info@chisholm.ca

Big Plans for Public Beach

The Community Service Committee would like to hear from the residents of Chisholm. If you have any suggestions on what can be improved at the public beach we want to hear from you. Please send your ideas to the Township Office at 2847 Chiswick Line, or info@chisholm.ca.

SPAY/NEUTER PROGRAM

Please remember to have your pets spayed or neutered! As a Chisholm resident, if you have purchased a dog tag for the current year, you may qualify for a \$30 discount for these services at the Callander Animal Clinic. For more information, or to pick up a voucher for this service, please visit the Township Office.

2014 DOG TAGS

According to By-law 2010-06, all dog owners must purchase a dog tag for each dog they possess on or before March 31st, 2014. **Dog License fees are as follows:**

		<i>After March 31st</i>
1 dog	\$10.00	\$30.00
2 dogs	\$25.00	\$45.00
3 dogs	\$50.00	\$70.00

Please use the form on the next page to pay by mail. Dog tags can also be purchased at the office.

Please Note: *Maximum three (3) dogs per household as per by-law 2010-06.*

PLACE YOUR AD in our monthly newsletter. The cost is \$10.00 for a single ad or \$50.00 for six ads. *Please support your local sponsors!*

My Barber



Professional hair cutting for over 20 yrs
Call me, Kiri and I'll come to you
724-3825 for in home hair cuts
Weekend and evening appointments
available



STREICHER SISTER'S CUSTOM HOUSE PAINTING INDOOR OR OUTDOOR



**WALLS, FENCES AND MORE
YOU SUPPLY THE PAINT, WE'LL PROVIDE THE LABOUR.**

**PLEASE CALL
705-724-1836**

**413 PIONEER ROAD
POWASSAN, ONT.
P0H 1Z0**

DUNNIE'S

GENERAL HOUSEHOLD REPAIRS AND MAINTENANCE & SMALL ENGINE REPAIR

Plumbing

Yard Maintenance

Electrical

Decks

Exterior Finishes

Window Cleaning and Repair

Waste and Junk Removal

Senior Living Modifications

CALL 724-5757 OR 471-4869

Join your community at
CHISHOLM UNITED CHURCH,
1469 Chiswick Line.

Worship Service & Church School
every Sunday at 9:30 a.m.

Reverend Teresa Jones

Church Office: 724-2815

E-mail: pow.chis.uc@gmail.com

You are always welcome!



Triple H Lumber (Canada)

616 Pioneer Rd. Powassan, ON. P0H 1Z0

For Sale – Cut-off Firewood Blocks

\$40.00 for Half Ton load

– 1x12 full inch white pine boards

\$0.75 / foot

– 2''x 4' x 8' R-10 High Density

Foam Board \$44.00 each.

Call for inquiries (705) 724-1955

IN LOVE WITH WEDDINGS

Floral Design

Linda Ellery

Owner / Designer

Powassan, ON

705-724-6192

weddings and special events

inlovewithweddingsfloraldesign@gmail.com



HOUSEHOLD HAZARDOUS WASTE

Residents should take all their household hazardous waste, free of charge, to the Household Hazardous Waste Depot – 112 Patton Street in North Bay, as this material is not accepted at the Landfill Site. Their hours of operation are from 8:00 a.m. to 6:00 p.m., Wednesday through Saturday.

Examples of Household Hazardous Waste:

Aerosol cans	Antifreeze	Asphalt tar	Automatic transmission fluid	Batteries/Battery Acid	Brake Fluid
Car wax & polishes	Degreasers	Disinfectant	Drain Cleaner	Engine flushes	Flea collars
Floor strippers & polishes	Gasoline	Glues	Grease	Heating oil	Herbicides
Household cleansers	Insecticides	Kerosene	Laundry stain remover	Lighter fluid	Lubes
Motor oil and waste oils	Nail polish	Oil filters	Oven cleaner	Paint	Paint & brush cleaner
Paint & lacquer thinners	Paint & varnish removers	Pesticides	Photo chemicals	Poisons	Propane tanks (big & small)
Radiator flushes	Roofing tar	Rust-proofers	Solvents	Spot remover/ Cleaning fluid	Stain
Swimming pool chlorine	Syringe	Turpentine	Varnish	Wood preservatives	

- All materials should be left in the original container to allow easy identification of the contents.
- Wastes should be sealed & labeled and not mixed.
- Bring all hazardous waste in a cardboard box or rigid container.

Not accepted at the Household Hazardous Waste Depot:

- **PCB's**
- **Pathological Waste**
- **Explosives**
- **Ammunition**
- **Unidentified Products**
- **Radioactive Waste**

If not sure or would like more information, please contact The Waste Line at (705)474-0400, ext. 2333.

CHISHOLM TOWNSHIP

Dog Tags 2014

Name: _____

Address: _____

Telephone: _____ Tag: _____

	1 st Dog	2 nd Dog	3 rd Dog
Name			
Breed			
Colour			
Age			
Sex			



BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]

Appendix D

Waste Calendar (East Ferris)

Municipality of East Ferris Recycling Schedule 2015

JANUARY						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

FEBRUARY						
S	M	T	W	T	F	S
			4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

MARCH						
S	M	T	W	T	F	S
			4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

APRIL						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

MAY						
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

JUNE						
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

JULY						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

AUGUST						
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

SEPTEMBER						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

OCTOBER						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

NOVEMBER						
S	M	T	W	T	F	S
			4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

DECEMBER						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Route #1 – Wednesday – Center

Corbeil Road, East area, Quae-Quae Road, Guillemette Road, Big Moose Road and Bertha Road.

Route #2 – Friday – South





Astorville Area, Southshore Road and Lake Nosbonsing Road.

Route #3 – Wednesday – North

Hwy 17 & Trout Lake, Centennial Crescent, MacPherson Drive, Johnson Road and Dube Road.

Route #4 – Thursday – Center

Corbeil Village, Hwy 94, Derland Road, Scottsfield Road and Mountain Road.

LEGEND	
	Route #1
	Route #2
	Route #3
	Route #4



BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]

Appendix E

MyWaste App Information



Proposal to

Kent Hunter

R.J. Burnside & Associates

Date: March 6, 2015

Prepared by: Creighton Hooper

1 | About us


The **my-waste**® pledge

When you choose **my-waste**®, it's about a long term relationship with a team of inspired people who believe they are making a difference. Our pledge is to reward your trust in us with new ideas that shift perceptions about what is possible, and that's not just talk.

We started five years ago with the world's first mobile app for municipal solid waste and then quickly expanded to the more versatile **my-waste**® **plug-in**. Since then our clients have benefited from a steady stream of innovations:


- A revised website plug-in that makes searching for specific information 8X faster
- The world's most advanced collection reminder system
- The world's most robust 'What Goes Where' search tool
- A real time notification system
- Report-a-Problem capability

my-waste® Technical Solutions is rooted in more than 15 years of experience developing promotional and educational (P&E) tools for solid waste management outreach. So you can trust that the attention to detail you'll see in **my-waste**® is because it has been designed by people who understand and work in your world every day.



When it comes right down to it, we are solid waste educators first.

You can be confident that we care as much about P&E outcomes as you do. From the moment you look at **my-waste**® you'll see the difference. **my-waste**® is about more than informing, it's about combining educational best practices and innovation to constantly add features that engage and motivate users, from underperforming millennials to complacent older generations.



Choosing a software partner is about more than a decision made "today".



Successful business partnerships are built on trust, confidence and exemplary customer service

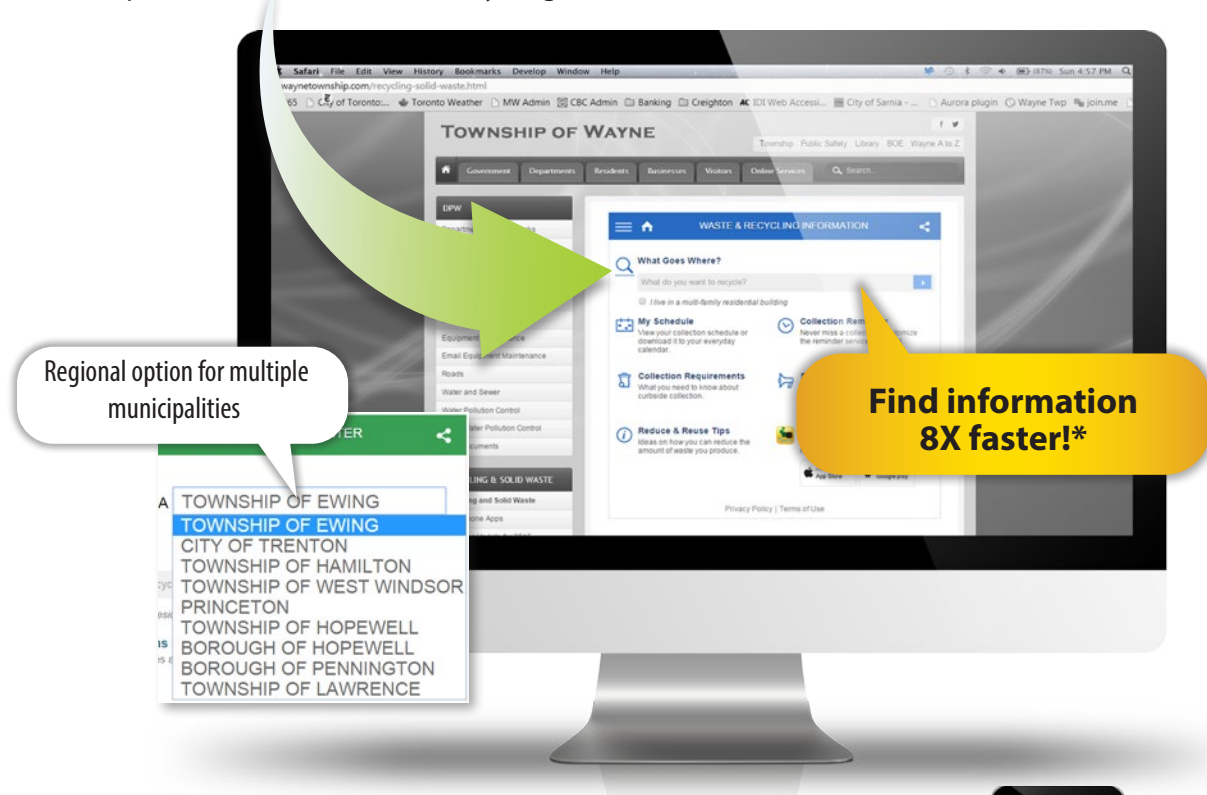
2 | Technology formats

We've got your back

Using current and new technologies, the **my-waste®** team uses passion, innovation and attention to detail to inform and engage residents in ways that fit their lifestyle.

→ **my-waste® plug-in**

Easy-to-install **my-waste® plug-in** is customized to meet your branding needs **and** dramatically improves residents' access to recycling information*.



→ **Apps**

- Listing in the **my-waste®** mobile app
- **#1 Worldwide**
- Free download



Can we get our own app?

Yes, of course, although most clients as a rule try to avoid self-branded software solutions because of potential blowback from poor vendor performance and legacy issues if later on they decide to move in a different direction as technology changes.

Free integration with popular apps, or ask us how we can supply data to your own city app!



*2014 poll in which testers were asked to find recycling information about specific materials on 10 websites, one of which contained the 'my-waste' plug-in. Average search time on the municipal website with the **my-waste® plug-in** was nine seconds. Average search time on the other nine municipal websites was 69 seconds (41% of searches were aborted after two minutes).

3 | Collection & event schedules

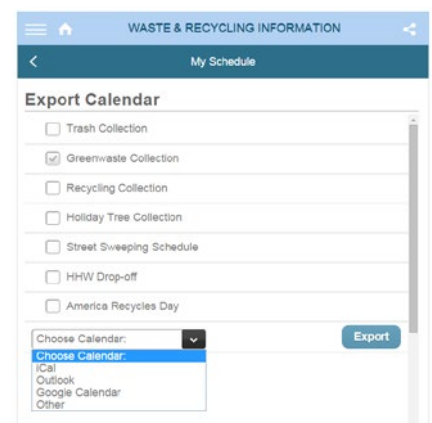
Maximize choice for residents, minimize phone calls

my-waste® does this better than any other software option.
We don't cut corners when it comes to resident satisfaction.

**Most Features,
Lowest Fees!**



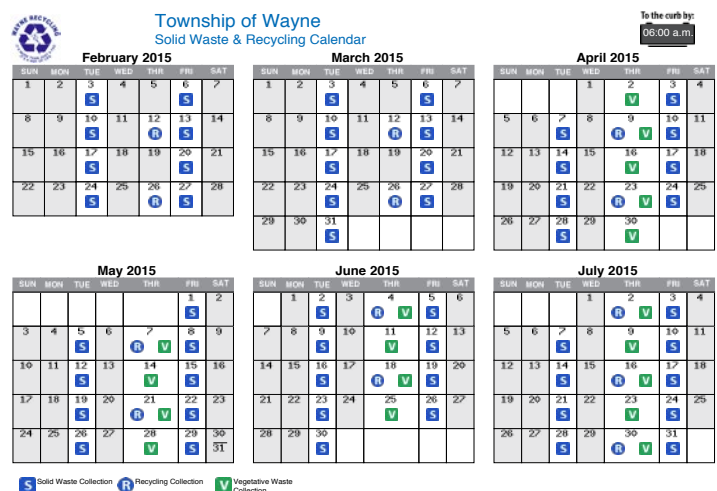
Personalized calendars are created using an address database, map or zone listing you provide. Address database integration with your GIS system is recommended.



Exclusive!

Our approach is to engage residents by providing options they find useful; not fill up their everyday calendar with information they don't want. We're not surprised that 73% of **my-waste®** users export only one or two collections/events to their everyday calendar.

**Printable
PDF that can be read
by software for the
visually impaired**



4 | Reminders

Treat residents with respect

Allow them to choose the reminders they want to get



Exclusive!

'All-or-none' weekly reminder messages are generally ignored, and sometimes even viewed as SPAM. Best practice is to let residents choose which collection or events **they** want to be reminded about.

Resident can select when the reminder would be most helpful to **them**; they can even get multiple reminders.

Exclusive!

Residents LOVE this option, because it's **what they want**.

Allow your resident to choose the message option that fits their communication lifestyle.



WASTE & RECYCLING INFORMATION

My Schedule

← Recycling Collection

Reminder:

1 week in advance.	On
48 hours in advance.	Off
24 hours in advance.	Off
12 hours in advance.	On
1 hour in advance.	Off

Remind Me:

☒ Every time

☐ Only when there are holiday changes

Exclusive!

Residents get **two** holiday reminders!

The first alerts them that there is no collection on their regular day, the second reminds them about the rescheduled collection.

5 | Collection requirements

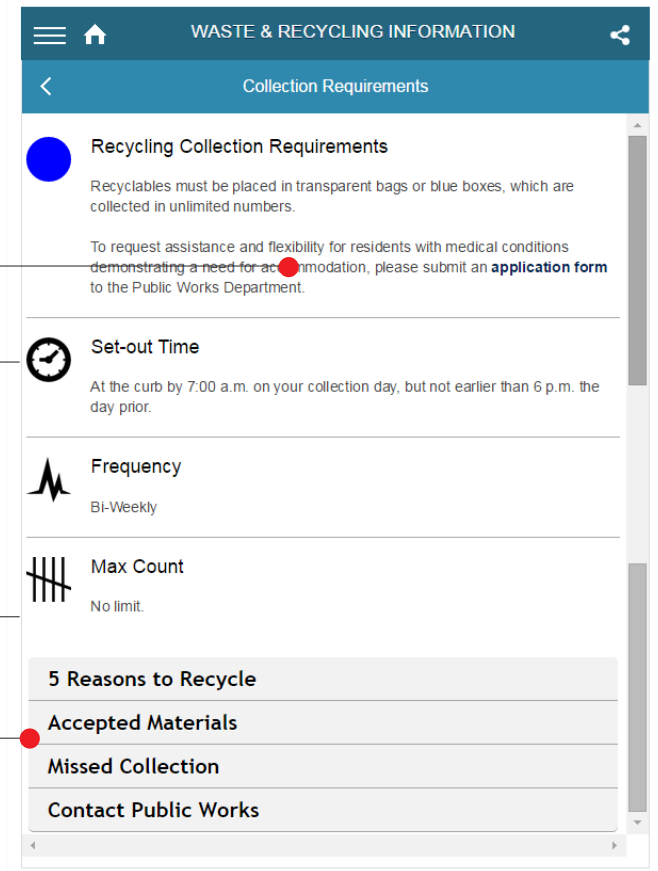
Easy = Compliance

Make something easy for people to understand, and more of them will do it. Seems like common sense to us. It's why we make the extra effort that others don't.

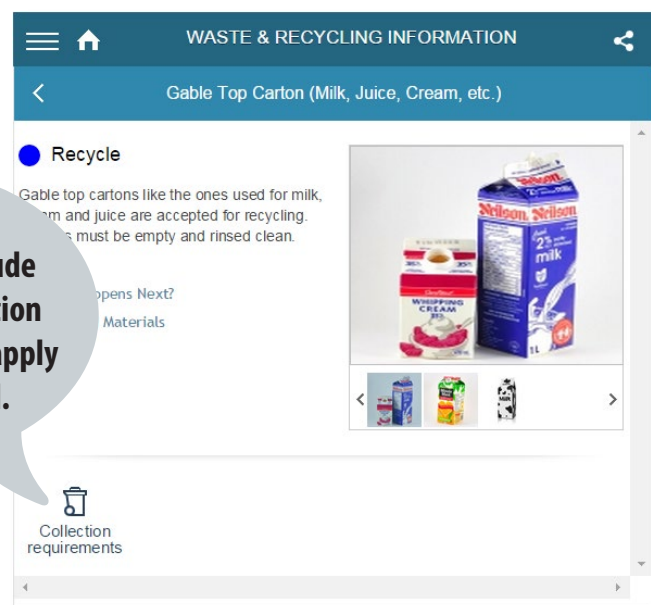
Customized with local terminology residents are accustomed to

Makes important information easy to understand

Easy links to related information



All material search results include a link to the Collection Requirements that apply for that material.



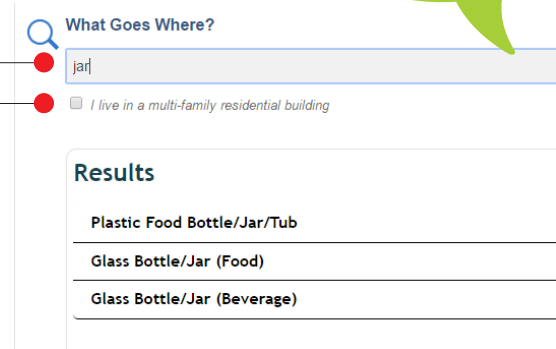
6 | What goes where?

Easy access to specific information

The world's most advanced **'What Goes Where'** search tool gets better every year!
Our clients get all upgrades automatically.

Database
contains over 3,000
search terms, including
alternate words and
common mis-spellings.

- Residents can get the information they need – FAST
- Relevant information for residents in multi-family dwellings

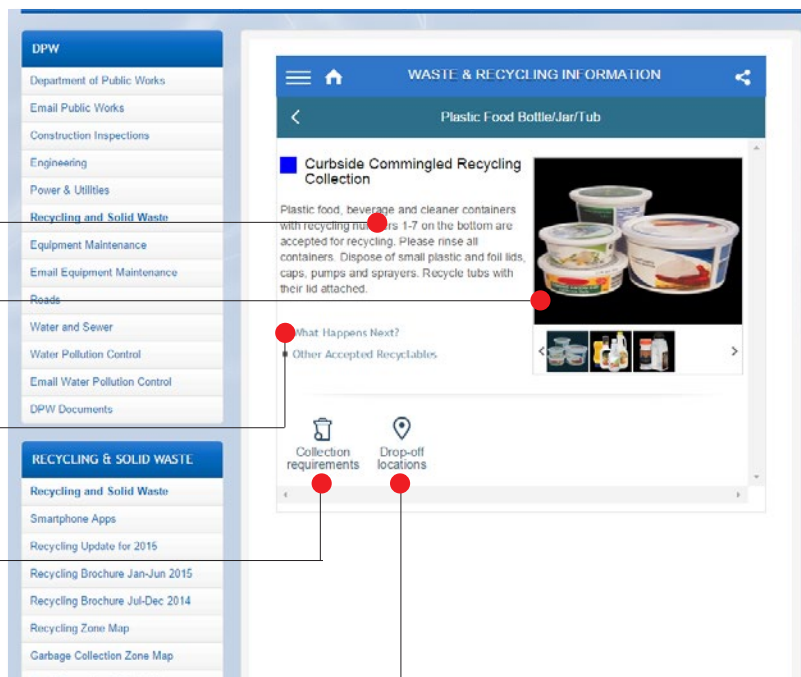


- Item specific descriptions improve understanding
- Combining text and photos is a key best practice that increases comprehension by over 80%

- Provides information about how items are recycled

- Easy access to curbside collection information

- Links to the specific depots and events that accept this material, including driving directions, hours of operation and more.



7 | Engaging residents

Challenge #1

Adults who believe they are good recyclers, and have become complacent



Challenge #2

Busy millennials (18-34) with demanding communication/social needs



Engaging residents in recycling is a challenge for us all.

We believe that by making the investment to better understand the psyche of residents, the more able we are to help them become better recyclers.

Convenience plays a huge role in recycling participation, so first and foremost our technology addresses the need to provide instant access to key information. But that's just the beginning – here are some of the other things we believe are important:

- Providing ancillary information, such as 'What Happens Next?' and reuse suggestions
- Allowing residents to contribute to photo and knowledge databases, and receive feedback about their contributions
- Using social media to reach residents who would not normally visit your website or mobile app by developing content that is **worth sharing**:
 - 'Recycle or Not' game (a fun way to educate and break through complacency)
 - **Top 10** search list (focuses attention on most challenging materials)
 - Resident recycling suggestions and photo contributions

8 | Send messages

Resident **sign-up** is critical

We don't have the *only* system to send emergency and non-emergency messages directly to residents, but we do have *the best one!* Here's why:

CHOICE is our obsession

The choice we've made is one to encourage maximum usage of our technology by providing residents (and our clients) with as many options as possible. Wherever we can. We don't cut corners.

1. More residents **actually sign up for it** because they can **pick and choose** the types of messages they're willing to receive. Sign-up is encouraged when they:
 - Register for reminders
 - Submit photos or user suggestions
 - Access selected information (Contact Us, Weather-related Collection Delays, etc.)

2. It's **not** an 'all-or-none' approach – **YOU** decide the target audience for each message:

- Residents in specific collection zones
- Single family homes and/or multi-family dwellings
- Only selected delivery channels (e.g., 'News' page, Twitter, email, etc.)

Residents can receive messages in the format that best suits their personal habits:



Brush Collection Days

The brush routes in Grapevine were almost completed. However, due to the amount of leaves and brush that was excessively heavier than normal brush days, there were a few areas that will have to be completed on Friday. The following areas are as listed:
The section west of Park Blvd from McPherson up to Dove Rd is all down. (Rt. 3-849)
The section west of Dove Rd off of Panhandle up to Kimball is down. (Rt. 3-849)
The section up north by the lake known as Lonesome Dove. (Rt. 3-849)
The small section off of Pool Rd and Old Mill Run is still down (about 5 streets left).
Plans are in place to finish those areas on Friday.

Collection Changes Due to Weather

MUNICIPALITY OF CLARE RESIDENTS: Waste collection for today has been cancelled due to inclement weather—will be picked up Friday, January 30th instead.

Bag Limit Reduction Reminder

The Waste and Recycling Services Department would like to remind all curbside residents that the residential garbage collection bag limit will be reduced to three bags/items per dwelling unit effective January 19, 2015.
Please also note that all electronic waste items and used tires will no longer be picked up at the curb effective January 1, 2015.

9 | Report-a-Problem (optional)

Designed to put **you** in control

Report A Problem

Missed Recycling C...

67 W. Bay St, Toronto

My recycling bin was scheduled to be collected this morning but was not picked up.

Contact Info:

nwalters@gmail.com

N.Walters

416-455-2211

Report

A resident completes the request form, through either the **my-waste®** app or the **my-waste® plug-in** on your website. For each problem type, you choose whether or not their contact information and a photo are necessary.

Report A Problem

Type of Problem

- App - Wrong Information
- Damaged Container
- Illegal Dumping
- Missed Green/Food Collection
- Missed Recycling Collection**
- Missed Trash Collection
- Overflowing Public Container

You choose what types of problems you'd like residents to report

Subject: Report

Date: Fri, 20 Feb 2015 07:21:35 -0800

To: cs@cityhall.com

Subject: Report

From: no-reply@my-waste.com

The following issue has been reported:

Date & Time: 2015, Feb 20, 10:15 am

Issue Type: Missed Collection

Description: My recycling bin was scheduled to be collected this morning but was not picked up.

Photo: see attachment

Location: 67 W. Bay St, Toronto, ON

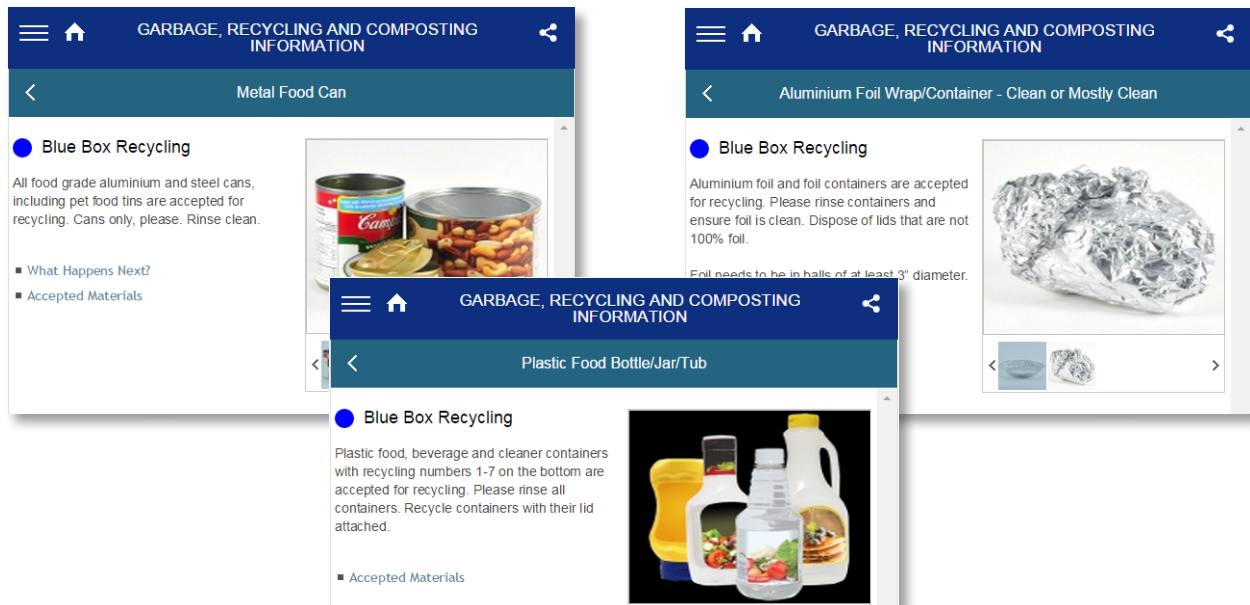
A problem report is sent to one or more email addresses that you provide; different problem types can be sent to different email addresses. Reports can also be accessed through the Admin Console.

10 | Initial set-up

We don't take shortcuts

We've been communicating local programs for a long time, so we know the types of program nuances to watch for. We use **your terminology** and look for the things that are *unique*.

What's the point of having a searchable material database with the same instructions for all recyclables?



FAQ's

How long does set-up take?

2-4 weeks is normal.

How much IT involvement is required?

Your IT department must provide an address database, unless you plan to use an alternative method for residents to select their zone (e.g., map). Your webmaster inserts the **my-waste® plug-in** code on your waste and recycling home page.

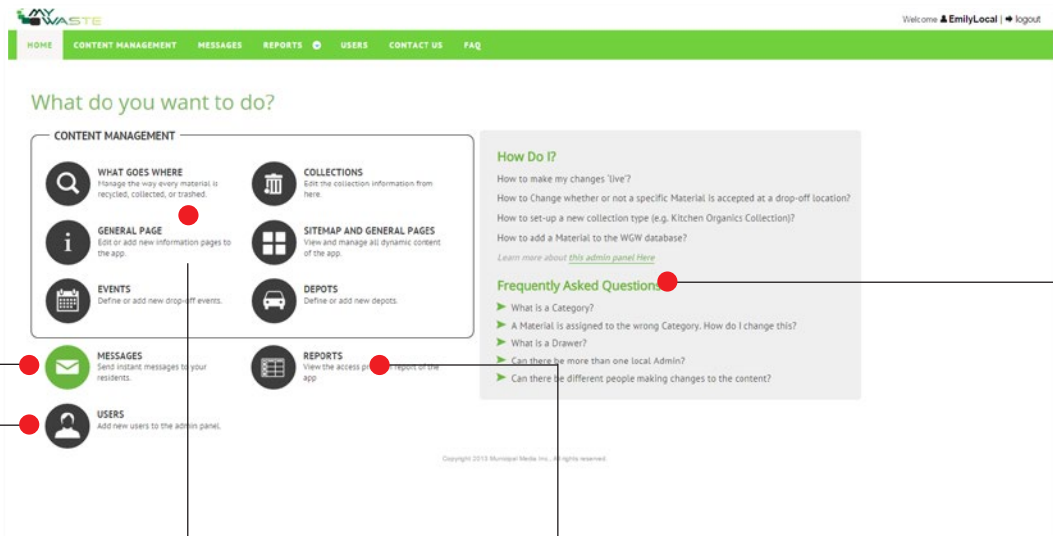
What do we have to do?

Provide your logo and a map or address database with zone information.....	1-3 hours
Confirm accuracy of collection requirements, depots and events.....	1-3 hours
Participate in a telephone call so we can ask questions about information we can not find.....	30 minutes
Review the 'What Goes Where' information to confirm its accuracy.....	4-8 hours
Rework your waste and recycling home page and add the my-waste® plug-in link we provide	1 hour

11 | Ongoing maintenance & support

Updates are easy!

Our sophisticated reminder system requires annual collection schedules to be maintained by our staff; everything else you can do yourself in **real time!**



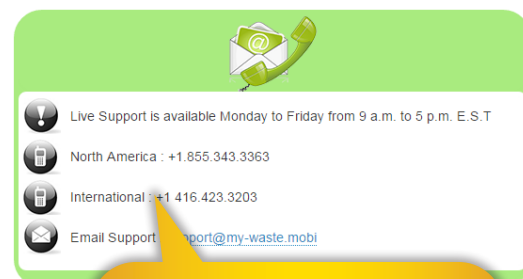
Management console lets you add or edit content like events, depots and collection requirements. Instantly update 'What Goes Where' search details; even add new items yourself.

We provide you with the ability to add **additional users**; you decide the permissions each has (to view, edit and push content live).

Send emergency messages, recycling tips and more in real time or schedule them in advance. You can even target specific collection zones and/or single/multi-family residents.

View/download **analytics-type reports** to see what residents are searching for, what pages they are viewing, how many downloaded the app and much more.

FAQ list changes, depending on the section you choose.



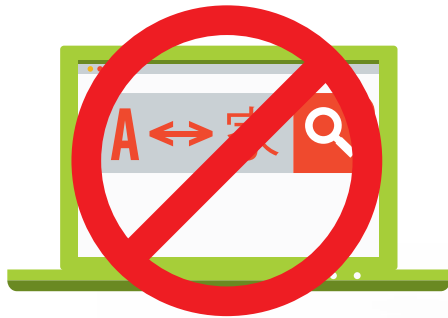
*The **my-waste**® interface is intuitive and allows me “one-stop shopping” for electronic communication with residents. Being responsible for all aspects of the solid waste program, the ease of use and small learning curve is greatly appreciated. Well done!*
Chris Wood, City of Brockville



12 | Languages

Human translations

Just another reason why **my-waste®** technology is right for you. We go the extra mile. All your database content is translated into the languages you select, **by professional (human) translators.**



No Machine Translations!

If you want residents to understand your program details, doesn't it make sense to explain them clearly?



FAQ's

What gets translated?

All content gets translated, except for text contributed by residents (user suggestions, photo comments, etc.) and messages (page 7).

What about ongoing changes you make to the English text?

Every 30 days we analyze the English text and record any changes you made. A system-wide list for each language is created and sent to our translation team. The translations are created and automatically uploaded back to where they originated.

13 | Pricing

Price Proposal

Based on a population of under 10K (3 municipalities)

	Section Ref #	Inform Package	Engage Package	Inform + Engage
Collection & event schedules	3	✓	–	✓
Reminders	4	✓	–	✓
Collection requirements	5	✓	✓	✓
'What Goes Where' search tool	6	–	✓	✓
'What Goes Where' engagement features	7	–	✓	✓
Send messages	8	✓	✓	✓
Report-a-Problem	9	✓	✓	✓
Technology formats	2	✓	✓	✓
Ongoing maintenance & support	11	✓	✓	✓
Annual Fee (i.e. per year)	–	\$1,200	\$2,500	\$3,200
Initial Set-up	10	incl.	incl.	incl.

Additional Options

Additional languages (cost per language)	<input type="checkbox"/>	12	\$150/yr.	\$500/yr.	\$500/yr.
Network fees that allow residents to receive reminders and messages by text message or phone call	<input type="checkbox"/>	4, 8	\$100/yr.	\$100/yr.	\$100/yr.
Allowable messages/phone calls (per year)			7,500	7,500	7,500
Fee for overage			1.2¢/msg	1.2¢/msg	1.2¢/msg

Signing Authority for Municipality:

Name:

Title:

Date:

Municipal Media Inc.



Creighton Hooper
President