

A Waste Recycling Strategy for The Town of Plympton-Wyoming

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Prepared by:



Paul van der Werf Tel:1-877-801-7733; 519-645-7733,
email: paulv@2cg.ca

Prepared with assistance from
Waste Diversion Ontario

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1.0 Introduction

This Waste Recycling Strategy (Strategy) was initiated by the Town of Plympton-Wyoming (Town) to develop a plan to increase the efficiency and effectiveness of its recycling program and maximize the amount of Blue Box material diverted from disposal. This plan will be updated at least every five years.

Specifically, the purpose of this Strategy is to:

- Maximize Best Practices funding;
- Identify and demonstrate continuous improvements toward Best Practices;
- Clarify long term Blue Box diversion goals; and
- Identify cost effective solutions to maximize Blue Box diversion.

The Town's obligations for managing municipal waste include the curbside collection of waste and Blue Box. Both of these services are contracted out.

The Town faces a number of waste management challenges that this Strategy can address including:

- Relatively low capture rate;
- Relatively high recycling cost;
- No incentives to recycle; and
- No limits on amount of waste that can be disposed.

This Strategy was developed with financial support from the Continuous Improvement Fund (CIF). The CIF's *Guidebook for Creating a Municipal Waste Recycling Strategy* was used to help develop this Strategy.

2.0 Overview of the Planning Process

This Strategy was prepared by environmental consulting firm 2cg Inc and municipal staff.

The development of the Strategy included the following steps:

- Gather relevant data from municipality;
- Meet with municipality to review data and walk through Strategy format;
- Gather and compile additional information from municipality to prepare draft Strategy;
- Meet with Council to seek input;
- Public consultation; and
- Prepare final Strategy.



The next steps include:

- Council endorsement of this Waste Recycling Strategy;
- Council decision on which initiatives to implement; and
- Develop and issue tender to collect and process recyclables.

3.0 Study Area

The study area for this Strategy is the Town. The geographic area of the Town is depicted in Figure 1.

This Waste Recycling Plan addressed the following sectors:

- Residential single family (3,312 households)
- Seasonal residents (312 residents)
- IC&I sector (Town collects from about 50 businesses)

4.0 Public and Stakeholder Consultation Process

Stakeholder groups included in this consultation included:

- Municipal staff;
- Contractor staff;
- General public; and
- Municipal council.

The public and stakeholder consultation process followed in the development of this Strategy consisted of the following activities:

- Notification of Strategy on web-site with opportunity for public feedback;
- Meetings with staff and municipal council to discuss current situation and receive input/guidance into possible enhancements to recycling program; and
- Interview collection contractor.

The response from the general public included the following:

- Focus on education to promote additional recycling;
- Expand the types of plastics that can be recycled;
- Consider establishing a bag limit; and
- Consider a review and re-write of current relevant by-laws.



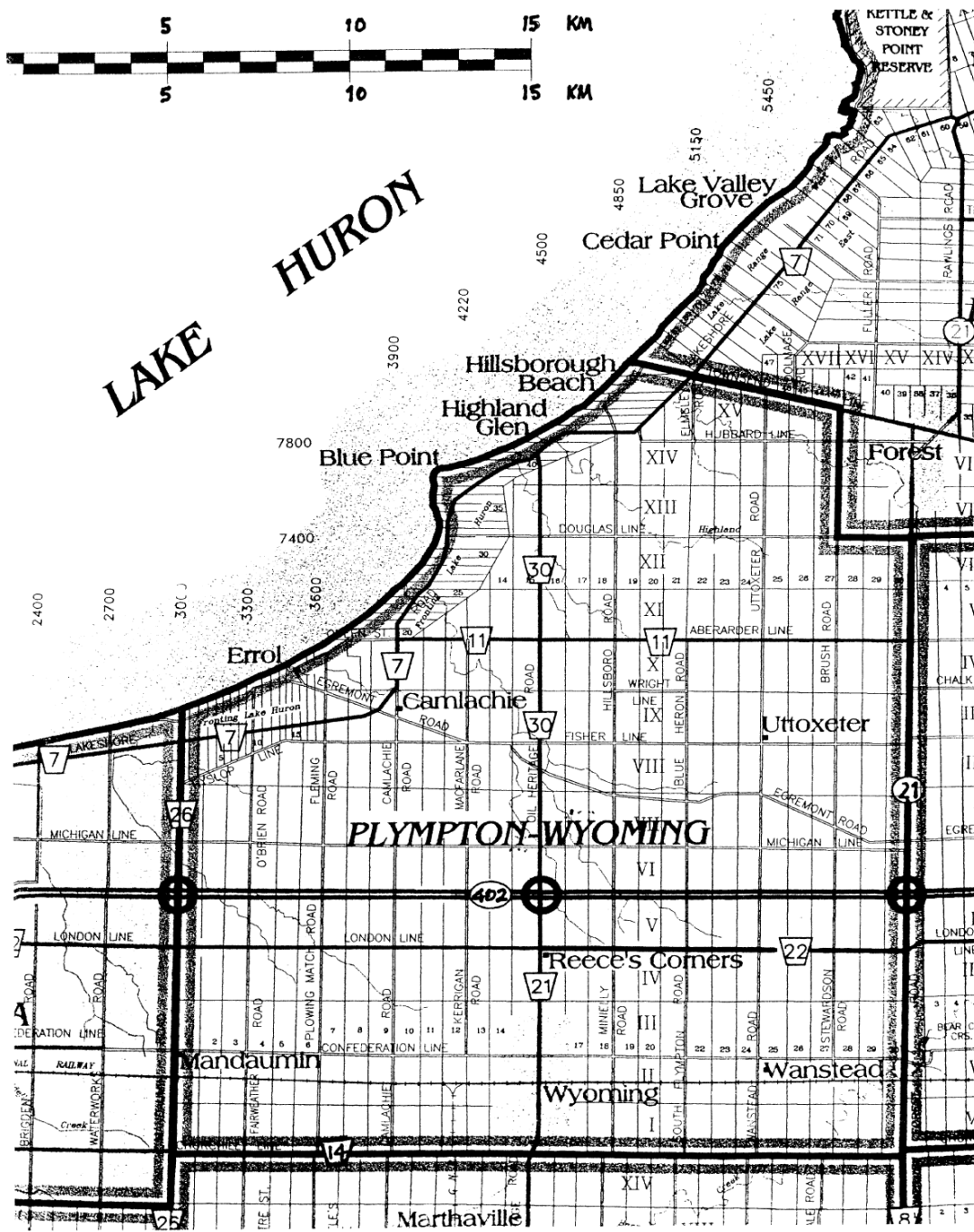


Figure 1. Map of the Town of Plympton-Wyoming

The Town's recycling contractor indicated that 70-80% of residents set out Blue Box recyclables on any given collection day. There are some challenges with presentation of recyclables at the curb including not breaking down cardboard and contaminated wastes (i.e. cans not cleaned out; cardboard contaminated with pizza).

The contractor indicated that they were limited in the breadth of material that they could collect from the curb due to limitations imposed by receiving material recovery facilities (e.g. receiving facility does not accept glossy paper such as magazines)

The response from the contractor about improving recycling performance included:

- Consider mandating Blue Box Recycling; and
- Provide additional educational materials to residents

5.0 Stated Problem

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

The current Blue Box program consists of alternating week collection of paper fibres (newspaper and cardboard only) and glass containers one week and all other containers (#1, #2 Plastics, yoghurt containers and plastic grocery bags) on the following week. Residents use a combination of Blue Boxes and Carts (Totes) for recycling. Overall the types of recyclables allowed in the Blue Box are limited, relative to other communities. Photos 1-3 depict recyclables collection containers and the collection vehicle.



Photo 1 Blue Box



Photo 2 Recycling Cart



Photo 3 Blue Box Collection Vehicle

For instance, allowable paper fibre does not appear to include boxboard (i.e. cereal, detergent, cracker and tissue boxes); catalogues, magazines, phone books, egg cartons and miscellaneous paper products such as flyers, envelopes and writing paper. For instance containers does not appear to include a full suite of plastics, milk & juice cartons, drink boxes, empty paint cans, and aluminum foil and pie plates.

Overall the program appears to work fairly well. However, the limited types of items that can be recycled and lack of recycling incentives mean that a considerable portion of recyclables are not captured in the Blue Box program.



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

- Maximize Best Practices funding; and
- Recycling tender due in 2011.

6.0 Goals and Objectives

This Strategy development process identified a number of goals and objectives for the Town. These are presented below.

Waste Recycling Goals and Objectives	
Goals	Objectives
To maximize diversion of residential/municipal solid waste through the blue box/recycling program	In 2010 and 2011 aim to divert 15% of municipal solid waste through the Blue Box program through implementation of simple measures (priority initiatives) Beyond 2011 <u>consider</u> setting target to divert 25% of municipal solid waste through the Blue Box program through the implementation of more comprehensive measures (future initiatives).
To improve the cost-effectiveness of recycling in our community	In 2010 and 2011 aim to reduce current per tonne costs by 25% through implementation of simple measures (priority initiatives) Beyond 2011 <u>consider</u> aiming to reduce per tonne costs by 50% of municipal solid waste through the Blue Box program through the implementation of more comprehensive measures (future initiatives)
To increase participation in the recycling program	To monitor current participation rate and aim to ensure that participation in Blue Box program is at least 90%

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

Community Characteristics

In 2009, Plympton-Wyoming had a population of 7,551. The municipality is home to 3,312 total households. Of these 3,312 households, all represent single-family households with no formal multi-family households. There are also an additional 312 seasonal dwellings, which are generally occupied during the months of May to October.

Currently, the Town does not have the following policies and programs in place to manage residential solid waste:

- Bag limits;
- User Pay; and
- Mandatory recycling.

The Town does provide free Blue Boxes to its residents as required.

Existing Programs and Services

Wastes and recyclables are collected by Marcotte Disposal Inc. (of Sarnia, Ontario). They are operating on a five year contract which ends in June 2011. The Town does not operate a recycling depot. The Town does arrange for the collection of leaf and yard waste from the Village of Wyoming. Residents of the Town can have bulky items collected by the contractor and can take municipal household special waste (MHSW) to a monthly depot operated by Lambton County.

Residents are charged a flat fee of \$152/household in the Plympton area and \$133/household in the Wyoming area for waste collection and processing/disposal. This is added to their tax bill. Private sector companies may also opt in and have waste and recycling collected through this contract.

Blue Box material goes to the Petrolia Materials Recovery Facility and the marketing of Blue Box materials is the responsibility of the contractor. The Town receives no revenue from the contractor for Blue Box materials.

Upcoming important collection-related milestones that may affect how collection services are administered include:

- Waste and Recycling collection and processing contract comes due in June 2011



Current Waste Generation and Diversion

Currently, Plympton-Wyoming generates approximately 3,052 tonnes of residential solid waste per year. Of this, 321 tonnes, or 10.5% percent, is diverted through the Blue Box. Currently about 60% of what is collected in the Blue Box is paper fibre with the remaining 40% consisting of containers (metal, plastic and glass).

The table below summarizes the current waste generation and Blue Box diversion rates.

Residential Solid Waste Generated and Diverted through Blue Box		
Residential Waste Stream/ Blue Box Material	Tonnes	Percent of Total Waste
Total Waste Generated	3,051.5	-
Papers (ONP, OMG, OCC, OBB and fine papers)	191.9	6.3%
Metals (aluminum, steel, mixed metal)	37.2	1.2%
Plastics (containers, film, tubs and lids)	37.2	1.2%
Glass	54.9	1.8%
Total Blue Box material diverted	321.1	10.5%

Note: Metals and plastics weight combined in Datacall submission. This total weight diverted was divided total in two to approximate annual capture.

As the table below indicates, the Town's current diversion rate is well **below average** for its WDO municipal grouping.

Average Blue Box Diversion Rate (2009)	
Plympton-Wyoming	10.5%
Municipal Grouping: Rural Collection South	21.37%

In 2009, the total net annual recycling cost for the Town was \$197,184. This amounts to \$614 per tonne, or \$26 per capita. As the table below shows, net annual recycling costs for the Town are well **above average** for its WDO municipal grouping.

Net Recycling Cost (per tonne per year)	
Town of Plympton Wyoming	\$614
Municipal Grouping: Rural Collection-South	\$420



Potential Waste Diversion

The Town's current waste composition was using data from the CIF Waste Recycling Strategy Guidebook (i.e. Rural Collection-South).

An estimated total of approximately 1,132 tonnes of Blue Box recyclable materials are available for diversion (using the 70% capture rate target for Rural Collection-South), of which approximately 811 tonnes are still currently in the waste stream. Estimates of Blue Box material available for diversion are listed in the table below.

Current and Potential Diversion			
Waste/Resource Material	Total Available in Waste Stream (tonnes/year)	Currently Recycled (tonnes)	Potential Increase (tonnes/year)
Papers (ONP, OMG, OCC, OBB and fine papers)	640.8	191.9	448.9
Metals (aluminum, steel, mixed metal)	64.1	37.2	26.9
Plastics (containers, film, tubs and lids)	170.9	37.2	133.7
Glass	256.3	54.9	201.4
Total Blue Box Materials	1132.1	321.1	811.0

Capturing 70% of Blue Box material (i.e. an additional 811 tonnes/year) in the Town's waste stream would raise its waste diversion rate by about 27 percentage points to 37% (i.e. from the current 10.5%).

It should be noted that the waste audit data used (Town of the Blue Mountains) in this assessment had the highest quantity of Blue Box materials as part of its waste stream when compared other municipalities. The Town of the Blue Mountains was used because it was also in the *Rural Collection-South* category. As such it is possible that the amount of additional Blue Box material available in the garbage stream is overestimated.

Anticipated Future Waste Management Needs

Solid waste generated rates in the Town are expected to grow slowly (ca. 1% per year) over the next 10 year planning period. The Table below depicts the expected growth rates for solid waste generation and Blue Box material recovery (based on projected population growth rates).



Anticipated Future Solid Waste and Blue Box Recovery Rates			
	Current Year	Current Year + 5	Current Year + 10
Population	7,459.0	7,839.5	8,239.4
Total Waste	3,051.5	3,207.2	3,370.8
Blue Box Material Available	1,132.1	1,189.9	1,250.6

8.0 Planned Recycling System

8.1 Possible Strategy to Increase Recycling

The Town presently diverts approximately **10.5%** of its wastes through its Blue Box program. The average for municipalities of its type is approximately **21%**.

Given the current low capture and high costs of the Blue Box program a phased approach is proposed. This will ensure that program costs and results can be closely monitored.

It should be possible to increase the capture rate of the Blue Box program within the context and costs of the current program. This would be done by encouraging residents to recycle more of their wastes using the existing program.

A reasonable preliminary goal would be to increase capture rate to achieve a **15%** diversion rate as a result of the Blue Box program.

A second and aspirational future goal would be to achieve a **25%** diversion rate as a result of the Blue Box program. The minimum future goal would be to at least reach the average **21%** diversion rate.

The following table highlights the estimated number of tonnes that would need to be captured to attain 15% and 25% diversion rates. It includes consideration of the impact of population growth in the Town (1% growth rate).

Capture Rates to Meet Waste Diversion Goals			
	% Waste Diversion		
	Current (10.5)	15	25
	tonnes captured/year		
2010	321	458	763
2015	338	481	802
2020	355	506	843

It may be possible to capture additional Blue Box materials with the existing program. The following table highlights attaining a 15% diversion rate as a result of the Blue Box.

Meeting 15% Diversion Rate		
Current Capture (10.5%)	tonnes/year	321
15% Capture	tonnes/year	458
15% Capture (additional tonnes)	tonnes/year	137
Per household	kg/year	41.6
Per household	kg/week	0.8
Collection routes	#	4
Per route	tonnes/year	34
Per route	tonnes/week	0.7
Current program costs	\$/year	\$197,184
Current program costs	\$/tonne	\$614
New program costs	\$/tonne	\$431

On average this would amount to each household recycling an additional 43 kg/year or 0.8kg/week (1.75 pounds).

The focus should be to collect additional paper fibre. Currently paper fibre accounts for about 60% of Blue Box materials captured. Typically paper fibre accounts for about 75% of the Blue Box materials captured.

This would drive the current cost/tonne for recycling close to the average for other similar municipalities.

The path to approaching or attaining a 25% diversion rate from Blue Box would need to be evaluated during the upcoming (late 2010) waste and Blue Box collection/processing tender process.

If the costs of avoided landfilling and possible cost efficiencies through maximizing capture rate are fully considered it may be possible to approach or attain this diversion rate.

Furthermore, during the tender process it will be prudent to seek out contractors that can handle a wider array of recyclables that will ultimately boost what residents can place at the curb and therefore potentially increase overall capture rate. For instance, both Bluewater Recycling Association and the City of London have or will have considerable new processing capacity available.

8.2 Overview of Planned Initiatives

The Town must re-tender its waste and blue box collection/processing contract in late 2010.



The best approach for increasing the capture rate and decreasing costs was to stage possible changes to the current Blue Box program and try to develop improvements in the next collection/processing contract.

With that in mind a number of options were reviewed and scored based on a series of criteria, which included:

- Estimate of waste diverted (%);
- Proven Results;
- Reliable Market/End Use;
- Accessible to Public; and
- Ease of Implementation.

A summary of the options reviewed and their scoring are provided in Appendix 2.

From there a refined list of options were summarized and presented to Council for discussion (26 May 2010 meeting). These potential initiatives, including Council feedback, are attached with a Council presentation in Appendix 3.

Based on discussions with Council and staff and taking into account comments from the public a list of priority and possible future initiatives was developed (see below).

It was recognized that the actual implementation of initiatives would be a function of the results of the next Blue Box collection tender and costs.

Possible Priority Initiatives				
Initiative	Estimated Implementation Cost	Estimated Annual Operating Cost	Implementation Time Line	Comments
Public Education and Promotion (P&E) Program	\$3,000	\$3,500	2010	Intent to better publicize program and capture more blue box materials
Provision of Free Blue Boxes	Staff time	Current costs of \$2,000/year	Ongoing	Current program that provides low cost blue box capacity CIF funds available to defray these costs.
Training of Key Program Staff	Staff time	Free training is available \$1,000/year in travel costs	2010	Better educated staff will be able to develop waste and blue box collection tender and better manage overall program
Following Generally Accepted Principles for Effective Procurement and Contract Management	Staff time	No cost	2010	Free templates for developing tender available on-line In general it is prudent to develop a tender that will result in reply from a variety of contractors

The cost to implement priority initiatives would be approximately \$3,000 plus staff time with ongoing annual operating costs of about \$6,500.



Possible Future Initiatives

Initiative	Estimated Implementation Cost	Estimated Annual Operating Cost	Implementation	Comments
Broaden materials categories for Blue Box	Staff time	Could result in increased cost Determine through tendering process	Consider as part of tendering process in 2010-2011	Current fibre collected is narrow. Broadening these categories could result in considerable increased capture. Would require P&E
Bag Limits	Staff time	Could result in increased cost Determine through tendering process	Consider as part of tendering process in 2010-2011	This would reduce waste collection capacity. Little current incentive for Town to reduce amount of waste going to County landfill. This would require discussions with County regarding landfilling of wastes. Would require P&E
Multi-Municipal Collection and Processing of Recyclables		Could result in decreased cost	Consider as part of tendering process in 2010-2011	This would require discussions with local municipalities



Possible Future Initiatives				
Initiative	Estimated Implementation Cost	Estimated Annual Operating Cost	Implementation	Comments
				regarding collection and process of blue box materials Would require P&E
Standardized Service Levels and Collaborative Haulage Contracting		Could result in decreased cost	Consider as part of tendering process in 2010-2011	This would require discussions with local municipalities regarding collection and process of blue box materials Would require P&E

The cost to implement future initiatives will be determined during the tendering process.

The implementation of priority initiatives would take place in 2010 and 2011. The consideration of future initiatives would be undertaken during the waste collection and blue box tender process, expected in late 2010-early 2011.

It is recognized that the actual implementation of future initiatives will be a function of the results of the next blue box collection tender and costs. It may be that none of these initiatives is implemented. Alternately a selection could be implemented with actual implementation timing decided during the tender process.



8.3 Contingencies

The priority initiatives can be impacted if there is no municipal funding available.

The future initiatives will be decided as an outcome of the waste and Blue Box material collection/processing tender. If no future initiatives are implemented then the Town will revert to priority initiatives.

9.0 Monitoring and Reporting

The monitoring and reporting of the Town's recycling program is considered a Blue Box program fundamental best practice and will be a key component of this Waste Recycling Strategy.

Once implementation of the strategy begins, the performance of the Waste Recycling Strategy will be monitored by staff 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 Town's Strategy is outlined in the table below.

Recycling System Monitoring		
Monitoring Topic	Monitoring Tool	Frequency
Measurement of Blue Box materials captured by type	Total weight data and estimated material weight data (from contractor)	Monthly Annual summary
Diversion rate (Blue Box)	Formula: (Blue box materials diversion) ÷ Total waste generated * 100%	Monthly Annual summary
Program participation	Customer survey (e.g., telephone); monitoring set-out rates	Every 3 years
Customer satisfaction	Customer survey (e.g., telephone); tracking calls/complaints received to the municipal office	Every 3 years
Opportunities for improvement	Customer survey (e.g., telephone); tracking calls/complaints received to the municipal office	On-going
Planning activities	Describe what initiatives have been fully or partially implemented, what will be done in the future	Annually
Review of Recycling Strategy	A periodic review of the Recycling Plan to monitor and report on progress, to ensure that the selected initiatives are being implemented, and to move forward with continuous improvement	Annual for current initiatives Every 5 years to re-evaluate and refine list of initiatives



10.0 Conclusion

The Town currently has a relatively low Blue Box waste diversion rate (10.5%) and pays a relatively high rate (i.e. \$614/tonne) for its Blue Box recycling program.

A staged process to increase capture rate and reduce per tonne cost was **recommended**. Firstly (2010-2011) it was **recommended** to aim for a waste diversion rate of 15% from the Blue Box (currently 10.5%) and eventually aim for the more aspirational 25%.

There are some fairly low cost priority initiatives that can be implemented to help boost the capture rate within the context of the current program.

There are a number of future initiatives that could be implemented. These will be a function of the upcoming waste and Blue Box material recycling tender.

It is **recommended** that the Town obtain up to date and ongoing data on its Blue Box program so that it can better gauge program effectiveness. It is recommended that the Town annually monitor its progress against this Strategy and update this Strategy as it sees fit. It is **recommended** that this Strategy be fully updated in 2015.

Appendix 1

Recycling Calendar

Town of Plympton-Wyoming - For the former Plympton Township
 Recycling Calendar for Blue Boxes

**ALTERNATE WEEK RECYCLING WILL BE DONE ON YOUR REGULAR DAY
 PLEASE HAVE RECYCLE OUT FOR ** 7:00AM ****

JUNE 2009						
Sun	Mon	Tues	Wed	Thurs	Fri	Sat
	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				

DECEMBER 2009						
Sun	Mon	Tues	Wed	Thurs	Fri	Sat
		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		

JULY 2009						
Sun	Mon	Tues	Wed	Thurs	Fri	Sat
			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	

JANUARY 2010						
Sun	Mon	Tues	Wed	Thurs	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24/31	25	26	27	28	29	30

AUGUST 2009						
Sun	Mon	Tues	Wed	Thurs	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23/30	24/31	25	26	27	28	29

FEBRUARY 2010						
Sun	Mon	Tues	Wed	Thurs	Fri	Sat
	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						

SEPTEMBER 2009						
Sun	Mon	Tues	Wed	Thurs	Fri	Sat
	31	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			

MARCH 2010						
Sun	Mon	Tues	Wed	Thurs	Fri	Sat
	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			

OCTOBER 2009 - COMPOST						
Sun	Mon	Tues	Wed	Thurs	Fri	Sat
				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

APRIL 2010						
Sun	Mon	Tues	Wed	Thurs	Fri	Sat
				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	

NOVEMBER 2009 - COMPOST						
Sun	Mon	Tues	Wed	Thurs	Fri	Sat
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 2010						
Sun	Mon	Tues	Wed	Thurs	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23/30	24/31	25	26	27	28	29

ALTERNATE WEEK RECYCLING PLEASE FOLLOW COLOURS AND PUT OUT ONLY THE PRODUCT THAT CORRESPONDS TO EACH COLOUR, EACH WEEK

BLUE BOX
CANS & PLASTICS
 #1 OR #2 Plastics ONLY
 Jugs are also a #1 or #2
 Blueboxes can be used on the tote week for
CANS & PLASTIC BOTTLES ONLY!!
**** NEW*** We can now take Yogurt Containers & Plastic Grocery Bags for Recycling!! Please put out in Bluebox on Cans and Plastic week.*

BLUE BOX
NEWSPAPER & GLASS ONLY IN BLUEBOX
CARDBOARD TIED & BUNDLED 2'x2'x18"
BESIDE BLUEBOX
 NO Pizza boxes.
 NO shiny magazines or flyers.

We appreciate your efforts in helping us make the recycling process more successful and efficient.
 Thanks Plympton Area!

QUESTIONS? CALL MARCOTTE 519-339-9988 Renovating?? We have dumpsters available - call for a price or email: tracey@marcottedisposal.com

Appendix 2
Waste Recycling Option Scores

Appendix 3
Council Presentation and Feedback

Development of a Waste Recycling Strategy for The Town of Plympton-Wyoming Presentation to Council 26 May 2010

- Funding from Continuous Improvement Fund to undertake this Waste Recycling Strategy
- Completing this Strategy has a positive impact on future funding for Blue Box
- Current situation:

Residential Solid Waste Generated and Diverted through Blue Box		
Residential Waste Stream/ Blue Box Material	Tonnes	Percent of Total Waste
Total Waste Generated	3,051.5	-
Papers (ONP, OMG, OCC, OBB and fine papers)	191.9	6.3%
Metals (aluminum, steel, mixed metal)	37.2	1.2%
Plastics (containers, film, tubs and lids)	37.2	1.2%
Glass	54.9	1.8%
Total Blue Box material diverted	321.1	10.5%

Average Blue Box Diversion Rate (2009)	
Plympton-Wyoming	10.5%
Municipal Grouping: Rural Collection South	21.37%

Net Recycling Cost (per tonne per year)	
Town of Plympton Wyoming	\$614
Municipal Grouping: Rural Collection-South	\$420

- Recycling rate is low and costs are high relative to other similar municipalities
- Should aim for diversion of 20-25% from Blue Box and costs of \$420/tonne
- Opportunities for Blue Box waste diversion include (see last column)



Current and Potential Diversion			
Waste/Resource Material	Total Available in Waste Stream (tonnes/year)	Currently Recycled (tonnes)	Potential Increase (tonnes/year)
Papers (ONP, OMG, OCC, OBB and fine papers)	640.8	191.9	448.9
Metals (aluminum, steel, mixed metal)	64.1	37.2	26.9
Plastics (containers, film, tubs and lids)	170.9	37.2	133.7
Glass	256.3	54.9	201.4
Total Blue Box Materials	1132.1	321.1	811.0

- To achieve a **20%** (current average for similar municipalities) waste diversion rate through the Blue Box requires a total of **650 tonnes/year**
- To achieve a **25%** (target for similar municipalities) waste diversion rate through the Blue Box requires a total of **810 tonnes**
- Using the present system and present costs another **150 tonnes/year** would need to be diverted to achieve average costs.
- Possible initiatives to increase Blue Box waste diversion included on following pages
- Key is to select initiatives to help meet waste diversion target and budget.

Summary of Initiatives and Council Feedback

Description of Options/Best Practices	Comments	Feedback/Comments
<i>Promotion and Outreach</i>		
Public Education and Promotion Program	<ul style="list-style-type: none"> • Relatively low cost • Modest impact on diversion 	Positive feedback.
Training of Key Program Staff	<ul style="list-style-type: none"> • Relatively low cost • Modest impact on diversion 	Positive feedback.
<i>Collection</i>		
Broaden materials categories for Blue Box	<ul style="list-style-type: none"> • Limited paper and plastic categories • Moderate to high impact on diversion 	Positive feedback. Cannot add to costs.
Bag Limits	<ul style="list-style-type: none"> • Relatively low cost • May meet with resistance • Moderate to high impact on diversion 	Neutral feedback. Would require considerable deliberation
Provision of Free Blue Boxes	<ul style="list-style-type: none"> • Already being done • Increases capacity • Modest impact on diversion 	Positive feedback.
<i>Partnerships</i>		
Multi-Municipal Collection and Processing of Recyclables	<ul style="list-style-type: none"> • Teaming with municipal neighbours could create cost efficiencies • No impact on diversion • Possible impact on cost 	Neutral feedback. Unsure of impact on capture rate and costs

Description of Options/Best Practices	Comments	Feedback/Comments
Standardized Service Levels and Collaborative Haulage Contracting	<ul style="list-style-type: none"> • Teaming with municipal neighbours could create cost efficiencies • No impact on diversion unless municipal neighbours collect a broader range of blue Box materials • Possible impact on cost 	Neutral feedback. Unsure of impact on capture rate and costs
<i>Administration</i>		
Following Generally Accepted Principles for Effective Procurement and Contract Management	<ul style="list-style-type: none"> • Relatively low cost • Ensure a contract that maximizes collection of Blue Box materials • Focus on cost containment 	Positive feedback.