



City of London  
London Regional MRF Study

Stewardship Ontario  
Federation of Canadian Municipalities  
Benchmarking and Best Practices  
Study #63  
Final Report

Submitted to:

City of London  
300 Dufferin Avenue  
London, ON  
N6A 4L9

Attn: Mr. Wes Abbott

Submitted by:



GENIVAR Ontario Inc.  
600 Cochrane Drive, Suite 500  
Markham, ON L3R 5K3

**24 March 2008**

## Table of Contents

<b>1. Introduction.....</b>	<b>1</b>
<b>2. London MRF Cost Estimate.....</b>	<b>2</b>
2.1 40,000 tpy MRF.....	3
2.2 75,000 tpy MRF.....	3
<b>3. Cost Comparison Methodology.....</b>	<b>4</b>
<b>4. Cost Comparison Results.....</b>	<b>5</b>
4.1 Rest of Oxford County.....	5
4.2 City of St. Thomas.....	6
4.3 City of Sarnia.....	7
4.4 Town of Woodstock.....	8
4.5 City of Stratford.....	9
4.6 Norfolk County.....	9
4.7 Other Potential Partners.....	11
4.8 Potential Environmental Benefits.....	13
<b>5. Potential Ownership Structure.....</b>	<b>13</b>
5.1 London Ownership Options.....	14
5.2 Barriers to Implementation.....	15
<b>6. Cost-benefit Opportunities - Conclusions.....</b>	<b>15</b>
6.1 London RFQ/RFP Process.....	15
6.2 Stewardship Ontario Funding.....	16
6.2.1 Project Update – RFP Process.....	16

### List of Tables

Table 1-1: Municipal Groups/Municipalities in the Analysis.....	2
Table 4-1: Analysis: Rest of Oxford County.....	5
Table 4-2: Analysis: City of St. Thomas.....	6
Table 4-3: Analysis: City of Sarnia.....	7
Table 4-4: Analysis – Town of Woodstock.....	8
Table 4-5: Analysis – City of Stratford.....	10
Table 4-6: Analysis – Norfolk County.....	11
Table 4-7: Small Municipalities – Current Estimate of Processing Costs.....	12
Table 4-8: Analysis – Other Municipalities.....	12

*Copyright © 2008,*

*All rights reserved. No part of this publication may be reproduced, recorded or transmitted in any form or by any means, electronic, mechanical, photographic, sound, magnetic or other, without advance written permission from the owner.*

*This Project has been delivered with the assistance of Stewardship Ontario's Effectiveness and Efficiency Fund, a Fund financed by Ontario municipalities and stewards of blue box waste in Ontario. Notwithstanding this support, the views expressed are the views of the author(s), and the Association of Municipalities of Ontario and Stewardship Ontario accept no responsibility for these views.*

## 1. Introduction

The focus of the study is an examination of the potential economic and environmental benefits of a new regional Materials Recovery Facility (MRF) to process recyclables from the City of London and surrounding municipalities. This report was undertaken as part of a joint funding initiative under Stewardship Ontario's Effectiveness and Efficiency Fund Project 63 and the Federation of Canadian Municipalities Project 7119. This project is one of the four parts of the study that identifies/implements best practices in recycling. Along with the Recyclage Alexandria Recycling Equipe (RARE) project (another of the four parts), MRF regionalization and rationalization is considered of critical importance in increasing the efficiency of recycling programs in the province. The Project 63 purposely set up two projects on MRF regionalization with the focus of one on the rural environment and one on the urban environment. The purpose of each was to identify if and how regionalizing operations around a larger central facility could potentially reduce program costs even recognizing that some municipalities may require transfer stations to be set up to get the materials to the larger regional plant.

The City of London agreed to be the lead agency for the urban-based study. The study included the following tasks:

- A complete analysis of the data under various collection and transfer options to determine the potential cost benefit of different approaches;
- Determination of a preferred collection system, incorporating direct haul and transfer options for each of the major (>1,000 tpy) municipalities that could send materials to a regional MRF;
- Identification of the costs for a 40,000 tpy and 75,000 tpy two stream MRF;
- Identification of potential municipalities that could send materials to a regional facility, based on economic costs; and
- Examination of the potential environmental benefits of the regionalization approach.

The initial findings report examined the cost implications of incorporating the materials from the surrounding municipalities into a regional MRF in London. The nine groups of municipalities and the respective tonnes of materials that were included in the analysis are outlined in Table 1-1.

**Table 1-1: Municipal Groups/Municipalities in the Analysis**

<b>Municipal Group</b>	<b>Municipalities in Group</b>	<b>Households/ Tonnes Managed</b>
Halton Recycling – London	London; Oxford County; Sarnia; Thames Centre; South-West Middlesex; St. Clair; Dutton-Dunwich	218,618 HHs 32,681 te
Bluewater Recycling Association	Goderich; South Huron; Bluewater; Central Huron; Huron East; North Huron; Morris-Turnberry; North Perth; Perth East; Perth South; West Perth; St. Mary's; North Middlesex; Lucan Biddulph; Middlesex Centre; Adeliadie Metcalfe; Strathroy Caradoc; Lambton Shores; Warwick; Brooke Alvinston; Oil Springs; Dawn Euphemia; Dresden	64,202 HHs 11,378 te
Green Lane – London	St. Thomas; Central Elgin; Aylmer; Malahide; West Elgin; Southwold	28,976 HHs 3,346 te
South Buxton Recycling	Chatham-Kent; Newbury	45,505 HHs 3,771 te
Woodstock	Woodstock	14,292 HHs 2,490 te
Stratford	Stratford	12,881 HHs 2,347 te
Norfolk County	Norfolk County	24,554 HHs 3,723 te
WMI – Petrolia	Plympton-Wyoming; Enniskillen	4,023 HHs 535 te
Guelph	Ashfield-Colborne-Wawanosh; Howick	4,180 HHs 455 te
South-West Oxford – Mount Elgin	South-West Oxford	2,703 HHs 360 te
Genor Recycling	Bayham	2,399 HHs 263 te
<b>TOTAL</b>		<b>422,223 HHs</b> <b>61,351 te</b>

## 2. London MRF Cost Estimate

The only way to determine the capital and operating cost for a new MRF for the City of London for either 40,000 or 75,000 tpy is to go to the marketplace with a competitive Request for Proposals process.<sup>1</sup> However, in light of the timing of the study, this is not possible. Therefore,

<sup>1</sup> The cost comparisons for the purposes of determining potential savings to the surrounding municipalities were based on a Regional MRF of 60,000 tpy as set by the City at the time of completing the cost comparison analysis rather than the 75,000 tpy that the City is now considering. For the purposes of this study, the savings would not be less than that shown and could be slightly more, although 75,000 tpy may not see much more of a savings than 60,000 tpy because of throughput rates and the potential need for a partial shift. Therefore, for the purposes of this study, the costs as presented in Chapter 3 are sufficient.

the estimates for the costs for the new MRFs have been developed from first principles. Outlined below are the costs and major pieces of equipment for the two facilities.

## 2.1 40,000 tpy MRF

Overall, there are not a lot of differences between the two facilities other than their overall physical size and the overall size of the equipment being used. The 40,000 tpy facility would be approximately 50,000 ft<sup>2</sup> in size and would have two sorting lines – one for fibres and one for containers. After the pre-sort, an Old Corrugated Containers (OCC) screen would be used. The remaining fibres, primarily newspaper, would be beneficiated manually to remove any remaining OCC, boxboard (OBB) and any extraneous non-fibre and residue materials.

The containers line would use a glass fines screen after the pre-sort. That would be followed by a steel magnet to pull off the steel cans and then by an air classifier to separate the glass from all the plastics, aluminum, polycoat and aseptic containers. With the advances in optical sorting and the much lower costs associated with the equipment, it would be recommended that an optical sorting unit be installed to separate PET and HDPE from the remaining materials. The other plastics (tubs and lids), polycoat and aseptic would be manually sorted from the line. The aluminum cans would be removed using an eddy current separator.

Overall, the facility would be set up such that it would process the required tonnage over two shifts. This would maximize the value of the capital in the facility. It is estimated that a 40,000 tpy facility would have a capital cost of \$10,000,000 - \$5,000,000 for the building and \$5,000,000 for equipment, installed. The annualised capital cost per tonne would be approximately \$30.<sup>2</sup> The operating cost for the facility is estimated at \$60 per tonne. Combined, a 40,000 tpy facility would have a capital and operating cost of \$90 per tonne.

## 2.2 75,000 tpy MRF

There is little difference between the 40,000 tpy and the 75,000 tpy facility. Overall the 75,000 tpy facility would be 75,000 ft<sup>2</sup> in size. It would have the same configuration on the fibres line. A very similar configuration would be used on the containers line with the only major exception being the addition of a second optical sorting machine for polycoat/aseptics and tubs and lids. The additional capital costs would be offset by lower operating costs associated with fewer sorters.

Overall, the facility would be set up such that it would process the required tonnage over two shifts. This would maximize the value of the capital in the facility. It is estimated that a 75,000 tpy facility would have a capital cost of \$15,000,000 - \$7,500,000 for the building and \$7,500,000 for equipment, installed. The annualised capital cost per tonne would be approximately \$25.<sup>3</sup> The operating cost for the facility is estimated at \$55 per tonne. Combined, a 75,000 tpy facility would have a capital and operating cost of \$80 per tonne.

---

<sup>2</sup> Assumes 10 year amortization at 6.5% for the equipment and 20 years at 6.5% for the building.

<sup>3</sup> Assumes 10 year amortization at 6.5% for the equipment and 20 years at 6.5% for the building.

These costs are very conservative, however, for the purposes of this study, it was determined by the project team that the costs should be conservatively high and not over-estimate potential savings. The actual savings will be determined through the RFP process (See Chapter 5).

### 3. Cost Comparison Methodology

To complete the analysis, the required information was obtained from both the data provided by the City of London staff and financial information available in the 2004 WDO Datacall. This information was used in conjunction with a transfer model, developed by MacViro, which derives from first principles and calculates the collection, processing, and transfer costs associated with combining the processing of two (or more) recycling programs.

For the purposes of this report, the following assumptions were made:

- The City of London's material only, i.e., 22,743 tonnes, is assumed to be the baseline MRF size;
- The rest of the materials from the Halton Recycling Group – London are included as a separate group for the purposes of the analysis;
- All materials are assumed to be collected in two streams, with no co-collection with any other material;
- The collection frequency for the municipal group was assigned on the basis of the collection frequency for the majority of the households in the group;
- The costs for collection and processing were, wherever possible, identified through the municipal datacall information from WDO; and
- Costs for the transfer station and transfer-hauling are based on first principles analysis completed for various assignments, including the Interim WDO MRF Regionalization project;
- Processing costs for the regional MRF are based on a combination of first principles analysis completed for various assignments, including the Interim WDO MRF Regionalization project, and costs for other similarly sized and scoped programs.

For the purposes of moving forward initially with a determination if there is a possibility that the approach is cost-beneficial, the analyses were focussed on the following larger programs:

- Rest of Oxford County
- St. Thomas
- Sarnia
- Stratford
- Woodstock
- Norfolk County

The other five individual municipalities or municipality groups have very small quantities of recyclables which will have very little impact positively or negatively on the potential for regionalization in the London area.

## 4. Cost Comparison Results

Outlined in Tables 4-1 through 4-6 below are the initial findings from the study for the five largest municipalities/groups of municipalities. Note that the processing costs for the smaller BRA facility are lower than for the 40,000 tpy facility in London. The costs for BRA are based on an older facility with more fully monetized costs, which makes direct comparisons more difficult. Overall, typically the larger the facility, the lower the costs. Very conservative assumptions have been made for the two London facilities at this time.

### 4.1 Rest of Oxford County

For Oxford County, taking their materials to a new MRF in the City of London is cost beneficial under a direct hauling approach (Table 4-1). It is estimated that the program could save between \$23 and \$33 per tonne by direct hauling to the larger regional facility. These savings accrue as a result of the regional MRF being much more cost effective (i.e., economies of scale are realized at a regional facility that cannot be achieved in the small facility in Oxford County).

**Table 4-1: Analysis: Rest of Oxford County**

**Municipality: Rest of Oxford County (minus Woodstock and SW Oxford)**

<b>Description of Existing System</b>	<i>Two stream; three collection vehicles</i>
<b>Tonnes Managed</b>	<i>3,845 te - 2,831 te fibres; 1,014 te containers (est.)</i>
<b>Operating Structure</b>	<i>Private sector contract; 50% share of revenues</i>
<b>Existing Gross Costs (est.)</b>	<i>\$585,000 - collection; \$435,000 processing; \$1,020,000 gross cost; \$265/te</i>
<b>Revenues and Net Cost</b>	<i>\$307,600; \$80/te; net cost of \$185/te; WDO Revenues 2004 - \$ 82,600</i>
<b>Cost Impact of Regional MRF</b>	<i>No collection cost savings or increase; Potentially lower processing costs through processing at regional MRF</i>

Description	Collection	Haul/Transfer	Processing	Total Gross Cost	Revenues	WDO Revenues	Net Cost (incl. WDO Revenue)	Net Savings/(Loss)
	Total Cost	Total Cost	Total Cost		Total Cost	Total Cost		
	\$/tonne	\$/tonne	\$/tonne		\$/tonne	\$/tonne		
Existing System	\$ 585,000	\$ -	\$ 435,000	\$ 1,020,000	\$ 307,600	\$ 82,600	\$ 629,800	\$ -
	\$ 152	\$ -	\$ 113	\$ 265	\$ 80	\$ 21	\$ 164	\$ -
Two Stream - Direct Haul (worst case); 40,000tpy MRF	\$ 585,000	\$ -	\$ 346,000	\$ 931,000	\$ 307,600	\$ 82,600	\$ 540,800	\$ 89,000
	\$ 152	\$ -	\$ 90	\$ 242	\$ 80	\$ 21	\$ 141	\$ 23
Two Stream - Direct Haul (best case); 75,000tpy MRF	\$ 585,000	\$ -	\$ 308,000	\$ 893,000	\$ 307,600	\$ 82,600	\$ 502,800	\$ 127,000
	\$ 152	\$ -	\$ 80	\$ 232	\$ 80	\$ 21	\$ 131	\$ 33
Two Stream - Transfer Haul (worst case); 40,000tpy MRF	\$ 585,000	\$ 125,000	\$ 346,000	\$ 1,056,000	\$ 307,600	\$ 82,600	\$ 665,800	\$ (36,000)
	\$ 152	\$ 33	\$ 90	\$ 275	\$ 80	\$ 21	\$ 173	\$ (9)
Two Stream - Transfer Haul (best case); 75,000tpy MRF	\$ 585,000	\$ 125,000	\$ 308,000	\$ 1,018,000	\$ 307,600	\$ 82,600	\$ 627,800	\$ 2,000
	\$ 152	\$ 33	\$ 80	\$ 265	\$ 80	\$ 21	\$ 163	\$ 1
Two Stream - Direct Haul (worst case); 12,000tpy BRA MRF	\$ 685,000	\$ -	\$ 435,000	\$ 1,120,000	\$ 307,600	\$ 82,600	\$ 729,800	\$ (100,000)
	\$ 178	\$ -	\$ 104	\$ 291	\$ 80	\$ 21	\$ 190	\$ (26)
Two Stream - Direct Haul (best case); 25,000tpy BRA MRF	\$ 685,000	\$ -	\$ 335,000	\$ 1,020,000	\$ 307,600	\$ 82,600	\$ 629,800	\$ -
	\$ 178	\$ -	\$ 87	\$ 265	\$ 80	\$ 21	\$ 164	\$ -

- Preferred Option
- Second Best Option

**Assumptions:**

Existing costs estimated from costs as provided on WDO website for 2004  
Additional collection costs assume additional distance (30km) to get to BRA MRF resulting in another 0.5 trucks being required per day to service Oxford County  
Because "value" of revenues relative to costs not known, i.e., revenues are shared with contractor, assumption here is that all scenarios are revenue neutral

Transfer hauling materials to a regional MRF would only realize a savings to Oxford County if the larger MRF were processing 75,000 tonnes of material per year thereby having an even lower throughput operating cost per tonne. However, this scenario, at a \$1 per tonne savings, is still not as cost advantageous as either of the two direct haul options.

Taking the materials to the Bluewater facility would increase the collection costs significantly. Therefore, even with the decreased processing costs, the overall costs would increase or would remain static.

## 4.2 City of St. Thomas

For the City of St. Thomas, taking their materials to a new MRF in the City of London is only cost beneficial under a direct hauling approach (Table 4-2). It is estimated that the program could save between \$8 and \$18 per tonne by direct hauling to the larger regional facility. These savings accrue as a result of the regional MRF being much more cost effective (i.e., economies of scale are realized at a regional facility that cannot be achieved in the small facility in St. Thomas).

**Table 4-2: Analysis: City of St. Thomas**

**Municipality: St. Thomas**

<b>Description of Existing System</b>	<i>Two stream; est. three collection vehicles</i>
<b>Tonnes Managed</b>	<i>3,346 te - 2,342 te fibres; 1,004 te containers (est.)</i>
<b>Operating Structure</b>	<i>Private sector contract; 0% share of revenues</i>
<b>Existing Gross Costs (est.)</b>	<i>\$482,000 - collection; \$348,000 processing; \$817,000 gross cost; \$244/te</i>
<b>Revenues and Net Cost</b>	<i>\$335,000; \$100/te; net cost of \$144/te; WDO Revenues 2004 - \$ 85,700</i>
<b>Cost Impact of Regional MRF</b>	<i>Slight collection cost increase; Potentially lower processing costs through processing at regional MRF</i>

Description	Collection	Haul/Transfer	Processing	Total Gross	Revenues	WDO Revenues	Net Cost (incl.	Net
	Total Cost	Total Cost	Total Cost	Cost	Total Cost	Total Cost	WDO Revenue)	Savings/(Loss)
	\$/tonne	\$/tonne	\$/tonne	\$/tonne	\$/tonne	\$/tonne	\$/tonne	\$/tonne
Existing System	\$ 482,000	\$ -	\$ 334,600	\$ 816,600	\$ 334,600	\$ 85,700	\$ 396,300	\$ -
	\$ 144	\$ -	\$ 100	\$ 244	\$ 100	\$ 26	\$ 118	\$ -
Two Stream - Direct Haul (worst case); 40,000tpy MRF	\$ 489,000	\$ -	\$ 301,000	\$ 790,000	\$ 334,600	\$ 85,700	\$ 369,700	\$ 26,600
	\$ 146	\$ -	\$ 90	\$ 236	\$ 100	\$ 26	\$ 110	\$ 8
Two Stream - Direct Haul (best case); 75,000tpy MRF	\$ 489,000	\$ -	\$ 268,000	\$ 757,000	\$ 334,600	\$ 85,700	\$ 336,700	\$ 59,600
	\$ 146	\$ -	\$ 80	\$ 226	\$ 100	\$ 26	\$ 101	\$ 18
Two Stream - Transfer Haul (worst case); 40,000tpy MRF	\$ 482,000	\$ 108,700	\$ 301,000	\$ 891,700	\$ 334,600	\$ 85,700	\$ 471,400	\$ (75,100)
	\$ 144	\$ 33	\$ 90	\$ 266	\$ 100	\$ 26	\$ 141	\$ (22)
Two Stream - Transfer Haul (best case); 75,000tpy MRF	\$ 482,000	\$ 108,700	\$ 268,000	\$ 858,700	\$ 334,600	\$ 85,700	\$ 438,400	\$ (42,100)
	\$ 144	\$ 33	\$ 80	\$ 257	\$ 100	\$ 26	\$ 131	\$ (13)
Two Stream - Direct Haul (worst case); 12,000tpy BRA MRF	\$ 582,000	\$ -	\$ 435,000	\$ 1,017,000	\$ 334,600	\$ 85,700	\$ 596,700	\$ (200,400)
	\$ 174	\$ -	\$ 104	\$ 304	\$ 100	\$ 26	\$ 178	\$ (60)
Two Stream - Direct Haul (best case); 25,000tpy BRA MRF	\$ 582,000	\$ -	\$ 291,000	\$ 873,000	\$ 334,600	\$ 85,700	\$ 452,700	\$ (56,400)
	\$ 174	\$ -	\$ 87	\$ 261	\$ 100	\$ 26	\$ 135	\$ (17)

- Preferred Option  
- Second Best Option

**Assumptions:**

Existing costs estimated from costs as provided on WDO website for 2004  
 Additional collection costs under direct haul to London Regional MRF assume additional distance (10km) to get to MRF resulting in another 0.03 trucks being required per day to service St. Thomas.  
 Additional collection costs assume additional distance (30km) to get to BRA MRF resulting in another 0.5 trucks being required per day to service St. Thomas  
 Because "value" of revenues relative to costs not known, i.e., revenues are shared with contractor, assumption here is that all scenarios are revenue neutral

Transfer hauling materials to a regional MRF would not realize any savings to the City of St. Thomas. Taking the materials to the Bluewater facility would increase the collection costs significantly. Therefore, even with the decreased processing costs, the overall costs would increase.

### 4.3 City of Sarnia

For the City of Sarnia, most alternative scenarios showed some cost benefit relative to the current approach used by the City (Table 4-3). The most cost effective approaches were for the City to take their materials to a new MRF in the City of London where savings could be between \$23 and \$33 per tonne. It should be noted that there are savings of upwards of \$26 per tonne associated with the option of directly hauling their materials to the Bluewater Recycling Association (BRA) MRF.<sup>4</sup> Irrespective of which of these options chosen, these savings accrue as a result of the regional MRF being much more cost effective.

**Table 4-3: Analysis: City of Sarnia**

**Municipality: Sarnia**

<b>Description of Existing System</b>	<i>Two stream; four collection vehicles</i>
<b>Tonnes Managed</b>	<i>3,903 te - 2,732 te fibres; 1,171 te containers (est.)</i>
<b>Operating Structure</b>	<i>Private sector contract; 100% share of revenues to municipality</i>
<b>Existing Gross Costs (est.)</b>	<i>\$604,000 - collection; \$441,000 processing; \$1,045,000 gross cost; \$268/te</i>
<b>Revenues and Net Cost</b>	<i>\$247,000; \$118/te; net cost of \$185/te; WDO Revenues 2004 - \$ 247,000</i>
<b>Cost Impact of Regional MRF</b>	<i>No collection cost savings or increase; Potentially lower processing costs through processing at regional MRF</i>

Description	Collection	Haul/Transfer	Processing	Total Gross	Revenues	WDO Revenues	Net Cost (incl.	Net
	Total Cost	Total Cost	Total Cost	Cost	Total Cost	Total Cost	WDO Revenue)	Savings/(Loss)
	\$/tonne	\$/tonne	\$/tonne	\$/tonne	\$/tonne	\$/tonne	\$/tonne	\$/tonne
Existing System	\$ 604,000	\$ -	\$ 441,000	\$ 1,045,000	\$ 585,450	\$ 247,000	\$ 212,550	\$ -
	\$ 155	\$ -	\$ 113	\$ 268	\$ 150	\$ 63	\$ 54	\$ -
Two Stream - Direct Haul (worst case); 40,000tpy MRF	\$ 604,000	\$ -	\$ 351,000	\$ 955,000	\$ 585,450	\$ 247,000	\$ 122,550	\$ 90,000
	\$ 155	\$ -	\$ 90	\$ 245	\$ 150	\$ 63	\$ 31	\$ 23
Two Stream - Direct Haul (best case); 75,000tpy MRF	\$ 604,000	\$ -	\$ 312,000	\$ 916,000	\$ 585,450	\$ 247,000	\$ 83,550	\$ 129,000
	\$ 155	\$ -	\$ 80	\$ 235	\$ 150	\$ 63	\$ 21	\$ 33
Two Stream - Transfer Haul (worst case); 40,000tpy MRF	\$ 604,000	\$ 126,800	\$ 351,000	\$ 1,081,800	\$ 585,450	\$ 247,000	\$ 249,350	\$ (36,800)
	\$ 155	\$ 33	\$ 90	\$ 277	\$ 150	\$ 63	\$ 64	\$ (9)
Two Stream - Transfer Haul (best case); 75,000tpy MRF	\$ 604,000	\$ 126,800	\$ 312,000	\$ 1,042,800	\$ 585,450	\$ 247,000	\$ 210,350	\$ 2,200
	\$ 155	\$ 33	\$ 80	\$ 267	\$ 150	\$ 63	\$ 54	\$ 1
Two Stream - Direct Haul (worst case); 12,000tpy BRA MRF	\$ 604,000	\$ -	\$ 435,000	\$ 1,039,000	\$ 585,450	\$ 247,000	\$ 206,550	\$ 6,000
	\$ 155	\$ -	\$ 104	\$ 266	\$ 150	\$ 63	\$ 53	\$ 2
Two Stream - Direct Haul (best case); 25,000tpy BRA MRF	\$ 604,000	\$ -	\$ 340,000	\$ 944,000	\$ 585,450	\$ 247,000	\$ 111,550	\$ 101,000
	\$ 155	\$ -	\$ 87	\$ 242	\$ 150	\$ 63	\$ 29	\$ 26

- Preferred Option
- Second Best Option

**Assumptions:**

Existing Costs estimated from costs as provided on WDO website for 2004  
 Distance to current MRF and London Regional MRF similar therefore no additional collection costs.  
 Distance to BRA MRF is slightly lower than to London Regional MRF, but would be at a slower average speed; considered the same. Therefore no savings or cost increase.  
 Because all revenues are accrued to the City, it is assumed herein that the same arrangement would have to be made with the City or BRA.

<sup>4</sup> Note that the processing costs for the smaller BRA facility are lower than for the 40,000 tpy facility in London. The costs for BRA are based on an older facility with more fully monetized costs, which makes direct comparisons more difficult. Overall, typically the larger the facility, the lower the costs. Very conservative assumptions have been made for the two London facilities at this time.

Transfer hauling materials to a regional MRF would only realize a savings to the City of Sarnia if the larger MRF were processing 75,000 tonnes of material per year thereby having an even lower throughput operating cost per tonne. However, this scenario, at a \$1 per tonne savings, is still not as cost advantageous as either of the two direct haul options to London or the direct haul to a large scale BRA facility.

#### 4.4 Town of Woodstock

For the Town of Woodstock, any of the alternatives that would see the Town use the regional MRF in London would realize a savings (Table 4-4). The most cost effective approaches were for the Town to take their materials to a new MRF in the City of London. Even though the collection costs for Woodstock would increase by \$16 per tonne under the direct haul option, the processing costs would decrease between \$30 and \$43 per tonne, providing an overall net cost savings.

**Table 4-4: Analysis – Town of Woodstock**

**Municipality: Woodstock**

<b>Description of Existing System</b>	<i>Multiple streams; five collection vehicles</i>
<b>Tonnes Managed</b>	<i>2,490 te - 1,743 te fibres; 747 te containers (est.)</i>
<b>Operating Structure</b>	<i>Public sector contract; 50% share of revenues</i>
<b>Existing Gross Costs (est.)</b>	<i>\$380,000 - collection; \$281,000 processing; \$661,000 gross cost; \$265/te</i>
<b>Revenues and Net Cost</b>	<i>\$199,000; \$80/te; net cost of \$185/te; WDO Revenues 2004 - \$ 54,000</i>
<b>Cost Impact of Regional MRF</b>	<i>Collection cost increase; Potentially lower processing costs through processing at regional MRF</i>

Description	Collection	Haul/Transfer	Processing	Total Gross	Revenues	WDO Revenues	Net Cost (incl.	Net
	Total Cost	Total Cost	Total Cost	Cost	Total Cost	Total Cost	WDO Revenue)	Savings/(Loss)
	\$/tonne	\$/tonne	\$/tonne	\$/tonne	\$/tonne	\$/tonne	\$/tonne	\$/tonne
Existing System	\$ 380,000	\$ -	\$ 281,000	\$ 661,000	\$ 199,200	\$ 54,000	\$ 407,800	\$ -
	\$ 153	\$ -	\$ 113	\$ 265	\$ 80	\$ 22	\$ 164	\$ -
Two Stream - Direct Haul (worst case); 40,000tpy MRF	\$ 421,000	\$ -	\$ 224,000	\$ 645,000	\$ 259,000	\$ 54,000	\$ 332,000	\$ 75,800
	\$ 169	\$ -	\$ 90	\$ 259	\$ 104	\$ 22	\$ 133	\$ 30
Two Stream - Direct Haul (best case); 75,000tpy MRF	\$ 421,000	\$ -	\$ 199,000	\$ 620,000	\$ 259,000	\$ 54,000	\$ 307,000	\$ 100,800
	\$ 169	\$ -	\$ 80	\$ 249	\$ 104	\$ 22	\$ 123	\$ 40
Two Stream - Transfer Haul (worst case); 40,000tpy MRF	\$ 380,000	\$ 80,900	\$ 224,000	\$ 684,900	\$ 258,960	\$ 54,000	\$ 371,940	\$ 35,860
	\$ 153	\$ 33	\$ 90	\$ 275	\$ 104	\$ 22	\$ 149	\$ 14
Two Stream - Transfer Haul (best case); 75,000tpy MRF	\$ 380,000	\$ 80,900	\$ 199,000	\$ 659,900	\$ 258,960	\$ 54,000	\$ 346,940	\$ 60,860
	\$ 153	\$ 33	\$ 80	\$ 265	\$ 104	\$ 22	\$ 139	\$ 24
Two Stream - Direct Haul (worst case); 12,000tpy BRA MRF	\$ 551,000	\$ -	\$ 435,000	\$ 986,000	\$ 258,960	\$ 54,000	\$ 673,040	\$ (265,240)
	\$ 221	\$ -	\$ 104	\$ 396	\$ 104	\$ 22	\$ 270	\$ (107)
Two Stream - Direct Haul (best case); 25,000tpy BRA MRF	\$ 551,000	\$ -	\$ 217,000	\$ 768,000	\$ 258,960	\$ 54,000	\$ 455,040	\$ (47,240)
	\$ 221	\$ -	\$ 87	\$ 308	\$ 104	\$ 22	\$ 183	\$ (19)

- Preferred Option
- Second Best Option

**Assumptions:**

Existing costs extrapolated from costs for Oxford County as provided on WDO website for 2004  
 Additional collection costs under direct haul to London Regional MRF assume additional distance (50km) to get to MRF resulting in another 0.5 trucks being required per day to service Woodstock. However, moving to a two stream truck could potentially save three vehicles. It is necessary that the exact cost per collection vehicle be determined before actual savings from a change in the collection system could be accurately calculated.  
 Additional collection costs assume additional distance (30km) to get to BRA MRF resulting in another 2 trucks being required per day to service St. Thomas  
 Because "value" of revenues relative to costs not known, i.e., revenues are shared with contractor, assumption here is that all scenarios are revenue neutral

Alternatively, under a transfer haul option, the Town could realize between a \$14 and \$24 per tonne savings. This may be of interest should the Town wish to establish a multi-purpose transfer station that handled more than just recyclables where the fixed costs could be monetized over more tonnes, making it even more cost beneficial. Irrespective of which of these options

chosen, the savings accrue as a result of the London Regional MRF being much more cost effective.

Taking the materials to the Bluewater facility would increase the collection costs significantly. Therefore, even with the decreased processing costs, the overall costs would increase.

## **4.5 City of Stratford**

For the City of Stratford, only under a scenario where materials are transfer-hauled from Stratford to the City of London would there be a benefit (Table 4-5). The most cost effective approaches were for the Town to take their materials to a new MRF in the City of London. Collection costs would decrease by an estimated \$23 per tonne. However, the cost for the transfer station and transfer hauling would result in total collection-haul costs of \$198 per tonne or \$10 per tonne higher than current costs. The overall savings would accrue through the lower processing costs of the London Regional MRF where costs could be lowered between \$1 and \$11 per tonne.

## **4.6 Norfolk County**

For Norfolk County, only under a scenario where materials are transfer-hauled from Norfolk to the City of London would there be a benefit (Table 4-6).

Under the direct haul options, because it is 100km each way to London and each truck would require two trips per day to London, collection costs increase significantly making direct haul not a feasible option. However, under the transfer-haul option, the cost for the transfer station and transfer hauling would result in total collection-haul costs of \$219 per tonne or \$33 per tonne higher than current costs. It should be noted that this assumes that Norfolk convert their existing MRF into a transfer station.

**Table 4-5: Analysis – City of Stratford**

**Municipality: Stratford**

**Description of Existing System** Six compartments; est. five collection vehicles  
**Tonnes Managed** 2,347 te - 1,643 te fibres; 704 te containers (est.)  
**Operating Structure** Private sector contract; 0% share of revenues  
**Existing Gross Costs (est.)** \$482,000 - collection; \$348,000 processing (est.); \$685,000 gross cost; \$292/te  
**Revenues and Net Cost** \$235,000; \$100/te; net cost of \$192/te; WDO Revenues 2004 - \$ 141,000  
**Cost Impact of Regional MRF** Significant collection cost increase with current collection approach; Savings with move to 2 stream collection possible; Potentially lower processing costs through processing at regional MRF

Description	Collection	Haul/Transfer	Processing	Total Gross	Revenues	WDO Revenues	Net Cost (incl.	Net
	Total Cost	Total Cost	Total Cost	Cost	Total Cost	Total Cost	WDO Revenue)	Savings/(Loss)
	\$/tonne	\$/tonne	\$/tonne	\$/tonne	\$/tonne	\$/tonne	\$/tonne	\$/tonne
Existing System	\$ 442,000	\$ -	\$ 234,700	\$ 676,700	\$ 234,700	\$ 141,000	\$ 301,000	\$ -
	\$ 188	\$ -	\$ 100	\$ 288	\$ 100	\$ 60	\$ 128	\$ -
Two Stream - Direct Haul (worst case); 40,000tpy MRF; same collection system	\$ 540,000	\$ -	\$ 211,000	\$ 751,000	\$ 234,700	\$ 141,000	\$ 375,300	\$ (74,300)
	\$ 230	\$ -	\$ 90	\$ 320	\$ 100	\$ 60	\$ 160	\$ (32)
Two Stream - Direct Haul (best case); 75,000tpy MRF; same collection system	\$ 540,000	\$ -	\$ 188,000	\$ 728,000	\$ 234,700	\$ 141,000	\$ 352,300	\$ (51,300)
	\$ 230	\$ -	\$ 80	\$ 310	\$ 100	\$ 60	\$ 150	\$ (22)
Two Stream - Transfer Haul (worst case); 40,000tpy MRF; same collection system	\$ 442,000	\$ 76,300	\$ 211,000	\$ 729,300	\$ 234,700	\$ 141,000	\$ 353,600	\$ (52,600)
	\$ 188	\$ 33	\$ 90	\$ 311	\$ 100	\$ 60	\$ 151	\$ (22)
Two Stream - Transfer Haul (best case); 75,000tpy MRF; same collection system	\$ 442,000	\$ 76,300	\$ 188,000	\$ 706,300	\$ 234,700	\$ 141,000	\$ 330,600	\$ (29,600)
	\$ 188	\$ 33	\$ 80	\$ 301	\$ 100	\$ 60	\$ 141	\$ (13)
Two Stream - Direct Haul (worst case); 40,000tpy MRF; 2 stream collection system (est.)	\$ 496,000	\$ -	\$ 211,000	\$ 707,000	\$ 234,700	\$ 141,000	\$ 331,300	\$ (30,300)
	\$ 211	\$ -	\$ 90	\$ 301	\$ 100	\$ 60	\$ 141	\$ (13)
Two Stream - Direct Haul (best case); 75,000tpy MRF; 2 stream collection system (est.)	\$ 496,000	\$ -	\$ 188,000	\$ 684,000	\$ 234,700	\$ 141,000	\$ 308,300	\$ (7,300)
	\$ 211	\$ -	\$ 80	\$ 291	\$ 100	\$ 60	\$ 131	\$ (3)
Two Stream - Transfer Haul (worst case); 40,000tpy MRF; 2 stream collection system (est.)	\$ 387,000	\$ 76,300	\$ 211,000	\$ 674,300	\$ 234,700	\$ 141,000	\$ 298,600	\$ 2,400
	\$ 165	\$ 33	\$ 90	\$ 287	\$ 100	\$ 60	\$ 127	\$ 1
Two Stream - Transfer Haul (best case); 75,000tpy MRF; 2 stream collection system (est.)	\$ 387,000	\$ 76,300	\$ 188,000	\$ 651,300	\$ 234,700	\$ 141,000	\$ 275,600	\$ 25,400
	\$ 165	\$ 33	\$ 80	\$ 278	\$ 100	\$ 60	\$ 117	\$ 11
Two Stream - Direct Haul (worst case); 12,000tpy BRA MRF	\$ 485,000	\$ -	\$ 435,000	\$ 920,000	\$ 234,700	\$ 141,000	\$ 544,300	\$ (243,300)
	\$ 207	\$ -	\$ 104	\$ 392	\$ 100	\$ 60	\$ 232	\$ (104)
Two Stream - Direct Haul (best case); 25,000tpy BRA MRF	\$ 485,000	\$ -	\$ 204,000	\$ 689,000	\$ 234,700	\$ 141,000	\$ 313,300	\$ (12,300)
	\$ 207	\$ -	\$ 87	\$ 294	\$ 100	\$ 60	\$ 133	\$ (5)

- Preferred Option  
 - Second Best Option

**Assumptions:**

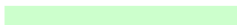

Existing costs estimated from costs as provided on WDO website for 2004  
 Additional collection costs under direct haul to London Regional MRF assume additional distance (70km) to get to MRF resulting in another 1.1 trucks being required per day to service Stratford.  
 Additional collection costs assume additional distance (40km) to get to BRA MRF resulting in another 0.6 trucks being required per day to service St. Thomas  
 There is an opportunity to save even more money by moving Stratford to a two stream collection system. However to accurately determine the savings, the exact cost associated with the current collection system must be first determined.  
 Because "value" of revenues relative to costs not known, i.e., revenues are shared with contractor, assumption here is that all scenarios are revenue neutral

**Table 4-6: Analysis – Norfolk County**

**Municipality: Norfolk**

**Description of Existing System** Multiple streams; seven collection vehicles  
**Tonnes Managed** 3,723 te - 2,452 te fibres; 1,352 te containers (est.)  
**Operating Structure** Public ownership; Private sector operating contract; 100% share of revenues  
**Existing Gross Costs (est.)** \$692,500 - collection; \$447,000 processing; \$1,219,000 gross cost; \$328/te (incl. \$14/te administration)  
**Revenues and Net Cost** \$480,300; \$129/te; net cost of \$199/te; WDO Revenues 2004 - \$259,300 est.  
**Cost Impact of Regional MRF** Collection cost increase; Potentially lower processing costs through processing at regional MRF

Description	Collection	Haul/Transfer	Processing	Total Gross Cost	Revenues	WDO Revenues	Net Cost (incl. WDO Revenue)	Net Savings/(Loss)
	Total Cost	Total Cost	Total Cost		Total Cost	Total Cost		
	\$/tonne	\$/tonne	\$/tonne		\$/tonne	\$/tonne		
Existing System	\$ 692,000	\$ -	\$ 447,000	\$ 1,139,000	\$ 480,300	\$ 259,300	\$ 399,400	\$ -
	\$ 186	\$ -	\$ 120	\$ 306	\$ 129	\$ 70	\$ 107	\$ -
Two Stream - Direct Haul (worst case); 40,000tpy MRF	\$ 1,285,000	\$ -	\$ 335,000	\$ 1,620,000	\$ 480,301	\$ 259,300	\$ 880,399	\$ (480,999)
	\$ 345	\$ -	\$ 90	\$ 435	\$ 129	\$ 70	\$ 236	\$ (129)
Two Stream - Direct Haul (best case); 75,000tpy MRF	\$ 1,285,000	\$ -	\$ 298,000	\$ 1,583,000	\$ 480,302	\$ 259,300	\$ 843,398	\$ (443,998)
	\$ 345	\$ -	\$ 80	\$ 425	\$ 129	\$ 70	\$ 227	\$ (119)
Two Stream - Transfer Haul (worst case); 40,000tpy MRF	\$ 692,000	\$ 121,000	\$ 335,000	\$ 1,148,000	\$ 480,303	\$ 259,300	\$ 408,397	\$ (6,997)
	\$ 186	\$ 33	\$ 90	\$ 308	\$ 129	\$ 70	\$ 110	\$ (2)
Two Stream - Transfer Haul (best case); 75,000tpy MRF	\$ 692,000	\$ 121,000	\$ 298,000	\$ 1,111,000	\$ 480,304	\$ 259,300	\$ 371,396	\$ 28,004
	\$ 186	\$ 33	\$ 80	\$ 298	\$ 129	\$ 70	\$ 100	\$ 8
Two Stream - Direct Haul (worst case); 12,000tpy BRA MRF	\$ 1,384,000	\$ -	\$ 435,000	\$ 1,819,000	\$ 480,305	\$ 259,300	\$ 1,079,395	\$ (679,995)
	\$ 372	\$ -	\$ 104	\$ 489	\$ 129	\$ 70	\$ 290	\$ (183)
Two Stream - Direct Haul (best case); 25,000tpy BRA MRF	\$ 1,384,000	\$ -	\$ 324,000	\$ 1,708,000	\$ 480,306	\$ 259,300	\$ 968,394	\$ (568,994)
	\$ 372	\$ -	\$ 87	\$ 459	\$ 129	\$ 70	\$ 260	\$ (153)
Two Stream - Transfer Haul (worst case); 12,000tpy BRA	\$ 692,000	\$ 134,000	\$ 435,000	\$ 1,261,000	\$ 480,307	\$ 259,300	\$ 521,393	\$ (121,993)
	\$ 186	\$ 36	\$ 104	\$ 339	\$ 129	\$ 70	\$ 140	\$ (33)
Two Stream - Transfer Haul (best case); 25,000tpy BRA	\$ 692,000	\$ 134,000	\$ 324,000	\$ 1,150,000	\$ 480,308	\$ 259,300	\$ 410,392	\$ (10,992)
	\$ 186	\$ 36	\$ 87	\$ 309	\$ 129	\$ 70	\$ 110	\$ (3)

 - Preferred Option  
 - Second Best Option

**Assumptions:**

Existing costs extrapolated from costs for Oxford County as provided on WDO website for 2004  
 Additional collection costs under direct haul to London Regional MRF assume additional distance (50km) to get to MRF resulting in another 0.5 trucks being required per day to service Woodstock. However, moving to a two stream truck could potentially save three vehicles. It is necessary that the exact cost per collection vehicle be determined before actual savings from a change in the collection system could be accurately calculated.  
 Additional collection costs assume additional distance (30km) to get to BRA MRF resulting in another 2 trucks being required per day to service St. Thomas  
 Because "value" of revenues relative to costs not known, i.e., revenues are shared with contractor, assumption here is that all scenarios are revenue neutral

Where the overall savings would be realized is through the processing cost savings of \$40 per tonne for the large regional London MRF. Overall, assuming the processing costs end up as defined in Table 3-6 for the London MRF, the County could potentially save \$8 per tonne.

## 4.7 Other Potential Partners

There are a number of other potential partners to the London Regional MRF, all with a small number of tonnes. They are shown in Table 4-7.

**Table 4-7: Small Municipalities – Current Estimate of Processing Costs**

Municipal Group	Municipalities in Group	Households/ Tonnes Managed	Processing Cost/te
Petrolia	Plympton-Wyoming; Enniskillen	4,023 HHs 535 te	\$113 (1)
Guelph	Ashfield-Colborne- Wawanosh; Howick	4,180 HHs 455 te	\$269
South-West Oxford – Mount Elgin	South-West Oxford	2,703 HHs 360 te	\$113
Genor Recycling	Bayham	2,399 HHs 263 te	\$120 (2)
<b>TOTAL</b>		<b>13,305 HHs 1,613 te</b>	

(1) No estimate available; represents average of areas surrounding Petrolia.

(2) Combined collection and processing cost of \$318; estimate of processing costs.

None of the municipalities on their own, or even in combination would be able to affect the potential processing cost for a London Regional MRF. Therefore, for these municipalities to realize any cost savings, London would have to establish its regional MRF with other surrounding municipalities.

Looking at the processing costs for these municipalities however, there is potentially an opportunity to reduce their overall costs through a regional MRF (Table 4-8).

**Table 4-8: Analysis – Other Municipalities**

**Municipality: Other Municipalities**

Description	Quantity	Current Processing	London Regional MRF Costs	Potential Savings	Costs Available for Transfer/ Transfer-Haul
	Managed	Total Cost	Total Cost	Total Cost	
	tonnes	\$/tonne	\$/tonne	\$/tonne	
Petrolia (Plympton-Wyoming; Enniskillen)	535	\$ 60,455	\$ 42,800	\$ 17,655	
		\$ 113	\$ 80	\$ 33	\$ 33
Guelph Area (Ashfield-Colborne- Wawanosh; Howick)	455	\$ 122,395	\$ 36,400	\$ 85,995	
		\$ 269	\$ 80	\$ 189	\$ 189
SW Oxford - Mount Elgin	360	\$ 40,680	\$ 28,800	\$ 11,880	
		\$ 113	\$ 80	\$ 33	\$ 33
Genor Recycling (Bayham)	263	\$ 31,560	\$ 21,040	\$ 10,520	
		\$ 120	\$ 80	\$ 40	\$ 40

The costs for processing range from a low of \$113 per tonne in Petrolia and SW Oxford to a high of \$269 per tonne for the Guelph area municipalities. Considering that a London Regional MRF processing 60,000 tonnes per year would have processing costs estimated at approximately \$80 per tonne, the potential savings to these smaller municipalities is in the order of \$33 to \$189 per tonne. These cost savings would be offset for all but SW Oxford, who would be able to directly haul their materials to London, incurring minimal additional collection costs, by the costs for the transfer station and transfer-haul costs to get materials from their respective municipalities.

Because of the small quantities of materials involved, transfer-haul costs of \$35-\$45 per tonne would not be unreasonable. Therefore, only SW Oxford and the Guelph area municipalities would likely benefit (assuming the current processing cost estimates are correct), from taking materials to a London Regional MRF.

## 4.8 Potential Environmental Benefits

The potential environmental benefits associated with the regionalization of the recycling programs around the City of London will arise from reducing the number of operating hours of recycling facilities in the Region. This occurs because the larger facility is capable of operating at much higher throughput rates per hour, thus the total number of operating hours for the equivalent number of tonnes is significantly reduced. For example, most small recycling facilities (less than 5,000 tonnes per year) have throughput rates of less than five tonnes per hour (with some even less than that). This compares to a larger regional facility as is proposed for the City of London, which would operate at a throughput rate of 20-25 tonnes per hour. Instead of operating a plant for an entire year to process 5,000 tonnes of material over eight hours per shift, the London plant will be able to process that same quantity of material in just one quarter of that time. It should be recognized however that the London plant would have more moving parts, i.e., more conveyors, which will require more electricity. However, overall, the savings in energy consumption are expected to be significant as the overall plant is so much more efficient at moving and sorting materials.

These savings would be offset by the increased transportation and transfer-hauling distances which would increase by an estimated 60,000 litres of additional fuel consumed to transfer the materials from surrounding municipalities to the London Regional MRF (for the largest six groups compared to current transportation patterns).<sup>5</sup> Overall, because there are limited data available on the energy consumed by recycling facilities, it is not readily clear as to whether or not there would be any direct environmental savings.

## 5. Potential Ownership Structure

One of the key issues initially surrounding the development of the new recycling facility was ownership; specifically who would own the new facility. The City of London hosted a meeting where representatives from the surrounding municipalities met to discuss the idea of a London regional MRF.

The idea of a joint ownership arrangement between London and the municipalities agreeing to participate in the contract was discussed at length. However, the municipalities unanimously agreed that they would prefer that London own the facility and that they participate only through an operations/services contract arrangement. The municipalities felt that it would make the agreement for services too complicated and unnecessarily slow down the timing of the project.

---

<sup>5</sup> More than 80% of this increased quantity is from the transfer of materials from Norfolk County as it is 100km from Simcoe to London and would require more than 370 transfer trips per year.

## 5.1 London Ownership Options

The City of London considered public ownership/private operation and fully private ownership and operation. There are strengths and weaknesses associated with each of these two options:

Public Ownership/Private Operation		Private Ownership/Private Operation	
Advantages	Disadvantages	Advantages	Disadvantages
<ul style="list-style-type: none"> <li>• More control over planning, implementation and changes to program</li> <li>• Workable asset at the end of the operating contract</li> <li>• Should result in lower prices over a longer timeframe as not paying for private sector cost of capital</li> <li>• Provides a physical example of the City's efforts on diversion – excellent educational opportunity</li> </ul>	<ul style="list-style-type: none"> <li>• Opportunity cost associated with upfront capital of the facility</li> <li>• Contract administration of the operator still required</li> <li>• Dispute resolution over operations still required</li> <li>• Liability risk over ownership of the facility</li> </ul>	<ul style="list-style-type: none"> <li>• Lower liability risk</li> <li>• Lower contract administration requirements</li> <li>• Operator responsible for all decisions on operations/ equipment purchases</li> <li>• Allows use of capital funds on other projects</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of control</li> <li>• Can be more difficult to add/remove materials from the program</li> <li>• Can be higher cost (depending on term of contract)</li> <li>• Asset reverts back to contractor at the end of the operating contract</li> </ul>

Overall, in Ontario, the move has been back to public ownership and private operation of MRFs with the following recent examples:

- City of Toronto Dufferin MRF
- Region of York MRF
- Region of Peel MRF
- Durham Region MRF
- Niagara Region MRF
- Essex-Windsor Fibres and Containers MRFs
- City/County of Peterborough MRF
- Waterloo retaining ownership after retrofit of its MRF

The Region of Halton and the City of Toronto Scarborough facilities are two examples of contracts awarded on the basis of private ownership/private operation.

Overall, after reviewing the options and in consideration of the City of London's current ownership and operation structure for its recycling program, the City determined that its

preferred option was for public ownership and private operation. However, the City is allowing the short list of vendors to offer a private sector owned and operated alternative once they have passed on the base bid.

## 5.2 Barriers to Implementation

The City of London has reviewed the implementation requirements associated with the development of the facility and has identified only minimum barriers to implementation. Because the City is requesting bids for both a London-only 40,000 tpy facility and a 75,000 London-regional facility, should the parties under this study determine, after reviewing the costs for the processing at the regional facility, that it is not beneficial, the City can revert to building a MRF specifically to manage only London's materials.

An implementation issue that may arise is what would happen if only a few of the surrounding municipalities decided to participate and the quantity managed per year resulted in a facility of neither 40,000 tpy or 75,000 tpy in size thus complicating the costing structure and possibly delaying the decision on the size of the facility to be built.

Another barrier to implementation is the final decision on the site. Currently the facility is proposed for the property immediately to the east of the W12A landfill off Wellington Street south of Highway 401. The City investigated one other side off Wellington Street north of Highway 401 at a former works yard. However, currently, the land next to the landfill is the preferred alternative outlined in the RFP document. There is a limiting factor on the site in that there is not enough water available. The City needs to bring in a larger water line to service the site. This is not a barrier as much as a potential for delay in building the facility. However, this issue is being addressed at the time of completing this report.

## 6. Cost-benefit Opportunities - Conclusions

The results of the analyses were taken to the municipalities involved in the study for their consideration. Overall, each of the municipalities was interested enough to consider continuing with the process. Each expressed a need to see firmer costs for the regional MRF.

### 6.1 London RFQ/RFP Process

The City of London is going to embark on an RFQ and RFP process to identify the costs for two sizes of facilities:

- 40,000 tpy
- 75,000 tpy

Through an evaluation of the benefits of collection and processing combined, the City has determined that they will be examining two stream processing only. Each of the municipalities in this process indicated that upon seeing the results of the RFP process, in which they are not directly involved, they will determine if they are willing to send materials to the Regional MRF.

The RFQ process is being completed in March 2007 and the RFP process will be completed by September 2007.

## **6.2 Stewardship Ontario Funding**

The City of London is pursuing Stewardship Ontario funding support for the regional MRF option. If successful, the City has agreed to offer the net capital savings to the surrounding municipalities to help them offset additional collection and/or transfer costs, recognizing that the City will benefit from the lower overall processing costs associated with the larger facility.

### **6.2.1 Project Update – RFP Process**

In mid-2007, the City of London released an RFQ looking for qualified vendors to bid on a new 40,000 or 75,000 tpy facility. After short-listing a number of the teams, a peer review committee was struck by Stewardship Ontario and the City of London to develop, in conjunction with their consultant, an RFP document. The peer review committee was comprised of representatives from the City of London, the Region of York, Stewardship Ontario, the consulting team and a private sector lead.

The committee received the draft RFP document in late summer 2007 and met to review the documents and to discuss the various issues surrounding the document. The committee's comments were incorporated into the document and it was sent back to the City of London.

The primary purpose of the review committee was to review the document with the focus being to try to develop a model RFP that could be used by other municipalities as a base upon which to build their RFP. The peer review process was extremely useful in that it provided feedback from a broad knowledge base representing various parties, all with different experiences in developing RFP documents and implementing recycling programs. One of the recommendations out of the peer review process is that it should be repeated for other municipalities as a means of helping ensure a better product that will garner the most and most cost-effective responses.

The RFP document was released to the short-listed vendors in February 2008 and is expected to close in June 2008.