



CIF Project # 221

Multi-residential Recycling: Implementing Best Practices *City of St. Thomas*



December 2014

Acknowledgement:

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1. Executive summary

This is the final report of a project implemented by the City of St. Thomas. The project goal was to increase recycling rates by implementing best practices in the municipal multi-residential recycling program. The Continuous Improvement Fund provided financial and technical assistance in completing the project. This project is part of the City's goal to increase our solid waste diversion rate to 50% by January 2014. One of the key recommendations to achieve this goal was to reinvigorate the multi-residential program. It is believed that multi-residential properties are an untapped source for diversion in our community as there has been little focus on this sector.

The City of St. Thomas currently provides blue box recycling to approximately 16,000 households, including 3250 households in multi-residential buildings. While recycling collection was available for multi-residential properties only 10 of the 105 buildings were participating. The number of multi-residential buildings provided with municipal recycling service increased from 10 to 54 during this project. This represents a corresponding increase in terms of residential units from 359 to 2075. The best practices that were implemented during this project included: creating a database of multi-residential properties, evaluating the recycling performance of individual buildings and estimating the overall program recycling rate, increasing the number of recycling containers at buildings and distributing new promotion and education materials to residential and building staff. Additional work included in this project was: providing in-unit containers to each unit participating in the program.

The following project deliverables were achieved:

- Increased recycling capacity: added 290 95 gallon carts to achieve the recommended best practice ratio of 1 cart for every 7 units (50.3 litre/unit as of Dec 2014)
- In unit containers: door-to-door distribution of 1,868 in unit recycling bags to:
 1. Promote recycling
 2. Increase in-unit storage capacity
 3. Make recycling more convenient to the resident.
- Promotion and Education: created resident flyers, posters and superintendent hand books delivered to residents and building owners/operators.

The cost to complete the project was \$ 43,429. The City of St. Thomas was approved up to \$27,000 from the Continuous Improvement Fund but only utilized 60% of the funds due to multi-municipal cooperative purchases of the carts. It was estimated that annually an increase of 100 tonnes of blue box materials can be attributed to the multi-residential sector as a result of this initiative.

For more information on this project, please contact Michelle Shannon, Waste Management Coordinator for the City of St. Thomas at mshannon@stthomas.ca or 519-631-1680 ext. 4258

2. Introduction

In 2010, the City of St. Thomas initiated an integrated waste management master plan. A key recommendation of the plan to increase the capture rate of blue box material was to increase the multi-residential recycling participation rate. To facilitate the implementation of this master plan recommendation the City applied for Best Practice implementation funding from the Continuous Improvement Fund.

The project outcomes were:

- Production and provision of promotion and educational material
- Increased convenience for the resident by providing in-unit recycling bags
- Creation of a searchable database for future interaction with the properties
- Increased capacity for the buildings by providing new and additional carts.

Additional benefits of this project are the creation of a detailed database of all multi-residential properties which including contact information for owners and superintendents. By making contact with the properties it was discovered that many were unaware that they were able to participate in the curbside recycling program at no cost.

The City distributed in-unit recycling bags that contained a brochure to every unit in the participating buildings at start up. Additionally, posters were put up in key locations in the building such as elevators and entry ways as well as in the garbage collection areas.

Extra bags and materials were left with the superintendents or property managers for distribution to new residents as needed.

3. Background: multi-residential recycling program overview

There are 105 multi-residential buildings with a total of 3,250 households in the City of St. Thomas. Multi-residential units make up 19% of the households in the City.

Table 3.1: Number of households in municipality

	Households	Percent
Curbside	12966	80%
Multi-res	3250	20%
Total	15874	100%

Table 3.2: Multi-residential recycling before and after project

	Before project	After project
Buildings with recycling	10	54
Units with recycling	359	2075
Unit/building	36	38

The collection frequency for all the serviced multi-residential locations is a once per week collection schedule for recycling and waste.

4. The project scope

The project scope included four main phases:

- Phase 1: Develop and maintain a database of buildings
- Phase 2: Benchmark recycling performance
- Phase 3: Increase recycling container capacity
- Phase 4: Provide promotion & education materials

Each of the phases is discussed in the following sections.

4.1 Phase 1: Develop and maintain a database of buildings

Creating and maintaining a database of all multi-residential properties is an important step towards implementing best practices. To obtain the list of multi-residential properties, our primary resource was Municipal departments such as planning and treasury and MPAC

4.1.1 Sources & collection methodology

While some preliminary data can be collected by the methods discussed above, in-person site visits to each building were completed to collect detailed information such as how well the recycling program is currently working, building characteristics that may create recycling challenges or opportunities (e.g., room for recycling bins), contact information for the on-site representative (e.g. superintendent) and the role that the on-site staff play in managing the building's recycling program. Site visits were performed by City staff and on the day prior to

collection. Detailed notes were reported on each building. Each site was rated on their performance level and recycling area.

The following information was collected at the site visit:

- Number and type of carts
- Cart fullness
- Location of recycling area
- Capacity
- Accessibility
- Carts well labels
- Clear easy to understand signage

Visiting all of the locations was time consuming and challenging with respect to coordinating a meeting with building staff however, since there were few buildings participating initially the information baseline data gathering was relatively easy.

4.1.2 Database and completeness of data

Initially an Excel spreadsheet was used to compile the data collected from the site visits and then transferred to the Multi-residential database provided by the Continuous Improvement Fund

4.1.3 Data maintenance

After the initial investment to create an up-to-date database has been it is important to protect this investment by maintaining the database and ensuring a process of keeping it up-to-date. Visual spot checks will continue to be conducted to ensure adequate capacity and that the carts are kept in a good state of repair.

4.1.4 Summary and recommendation:

After a detailed database of the multi-residential properties was completed, it is important to stay committed to the maintenance of the database and utilize it to maintain contact with the properties.

Recommendation 1: update the database regularly

Recommendation 2: site visits and inspections should occur on at least an annual basis

4.2 Phase 2: Benchmarking recycling performance

A key step in implementing program improvements is to benchmark current performance so that future recycling targets can be established and program improvements can be tangibly measured as you move towards meeting these desired targets.

Evaluating performance is a quantitative assessment that measures the following:

- 1) How much each building is recycling (kg/unit), and
- 2) How much is being recycled by all the buildings collectively.

Performance indicators such as container fullness and contamination were monitored during site visits. Performance data completed during site visits is an estimate only as it is not based on precise weights. However, if done consistently research suggests that performance data has been found to be within 10-15% accuracy of actual weights. Obtaining this information from each building was instructive both for flagging low performing buildings and for highlighting top performers. Low performers were flagged for follow-up strategies and top performers provided useful model buildings. Estimating how much is being recycled helps us to understand how much the buildings are diverting from landfills. This also provided a baseline measurement against which future recycling improvements can be compared.

4.2.1 Procedure for estimating recycling rates

Baseline recycling rates were estimated for all multi-residential properties that received municipal curbside collection. Additional follow up visits were performed after the additional carts were delivered.

As site visits were completed, staff estimated recycling rates in each building by:

- Taking an inventory of the number of carts/containers
- Estimating the fullness of the carts/containers
- Estimating contamination levels

Estimates were based on a visual inspection and only represent a small snapshot of each building at the time of the visit.

4.2.2 Recycling rate estimates

No measured waste audits were conducted during this project. Measured results were obtained from monthly contractor invoicing.

Table 4.1: Tonnes of recyclable material collected from St Thomas Multi-Residential buildings

	2011	2012	2013
Tonnes	34.25	97.79	141.13

4.2.3 Barriers to Recycling

Barriers to recycling negatively impact the recycling rate considerably; therefore it is essential to eliminate as many barriers as possible.

After the site visits were completed the main barriers to recycling were limited capacity and no signage. The capacity has been increased at all building as well as the frequency of collection has been increase to once a week instead of the historical every other week. As well, new signage and cart labels were produced in an effort to reduce contamination at the bins.

Overall, many of the buildings were pleased and welcomed the increased capacity and frequency of collection.

4.3 Phase 3: Increase recycling container capacity

Having enough storage space for recyclables is one of the most critical factors in a successful recycling program and it is important to address this first before other program improvements are put in place. During Phase 1 site visits the baseline container quantities were recorded and information was collected about where containers could be relocated within the building to provide more convenience to residents. Site visits also provided the opportunity to determine if additional containers are required and where additional containers would be stored and ultimately used.

4.3.1 Type of recycling containers

Multi-residential buildings participating in the municipal blue box collection are supplied with 360 litre carts (95 gallon). All existing properties on the program were provided with more carts to increase their capacity and bring them up the Best Practice of 1 cart per 7 units. 290 carts were distributed during the term of the project.

4.3.2 Container Capacity

Based on the provincial target of recycling 70% of all recyclables it is recommended that each residential unit be provided with a minimum of 50 litres of storage capacity. This is equivalent

in size to a standard 14 gallon blue box. In terms of multi-residential containers, the following guidelines are recommended by CIF and are considered best practices:

- 360 litre carts – one cart for every 7 residential units
- Bulk bins - one cubic meter for every 15 residential units (eg, a 4-yard bin for 60 units)

Continuous Improvement Funding is provided on the basis that municipalities implement these best practice ratios. The guidelines represent average requirements and it is assumed that at the building level there will be ranges depending on the demographics.

4.4 Phase 4: Provide promotion & education materials

4.4.1 Print materials

A project goal was to distribute new print materials to promote recycling and educate building residents and staff about what can and cannot be recycled. The City of St. Thomas had access to print templates (resident flyers, posters and signs for buildings, container labels and a guidebook for superintendents, property managers and building owners) through the CIF website. The template materials were customized with municipal specific information.

The *CIF Best Practice Guidelines* recommends strategies for distribution of print materials which include that municipalities take responsibility for:

- Distributing print materials directly to residents,
- Distributing and displaying posters at multi-residential properties, and
- Applying labels to recycling containers.

Promotion and education materials are paramount to any successful program. As part of this project, the following items were distributed.

- A collection pamphlet was produced to educate the resident on acceptable materials and correct bins for disposal.
- Posters were created to be hung in the lobby, elevator and hallways as well as garbage room signage specific to bin and material types
- Container labels were affixed in several locations on the carts prior to distribution.

4.4.2 Promotional Materials

In-unit recycling bags were produced for the residents in all of multi-residential buildings. The bags have bright colourful graphics illustrating acceptable materials. The intention of the bags was to provide the resident with a convenient way to store and transport their recycling. The

cost of these bags were not covered under the CIF agreement and funding solely by the municipality.

4.4.3 Timing of Promotion & Education campaign

The promotion and education campaign was completed over the course of the project.

5. Project budget and schedule

Table 5.1 Project budget, planned and actual

	Quantity	Total Cost	CIF Funding	City Cost
Site Visit benchmarking	105	\$7,350	\$3,675	\$3,675
95 gallon Cart Purchase	415	\$21,673	\$10,836	\$10,836
Cart labels		\$4,520	\$0	\$4,520
Posters & Brochures production		\$1,972	\$0	\$1,972
In unit recycling bags	5000	\$9,158	\$0	\$9,158
Final report	1	\$4,000	\$2,000	\$2,000
Total		\$48,673	\$16,511	\$32,161

6. Concluding comments

The overall goal of this project was to improve the recycling participation rate of multi-residential properties within the City of St. Thomas. By implementing the Multi-Residential Best Practices diversion was increased, there was a decrease in contamination and an overall increase in capture rates.

The next steps for the city are to continue to monitor and engage the participating buildings as well as continue to make inroads with those that are currently not participating in the program.

Appendix #1: Database

SUMMARY OF MULTI-RESIDENTIAL PROPERTIES (≥ 7 UNITS)																											
Database - last update																											
February 99																											
Building Information		Contact Information										Garbage					Recycling					Organics			Site Visit		
MN	Street	Number of Units	Number of Floors	Property Type	Building Owner	Address	City	Postal Code	Contact Information	On-site Staff	Property Manager/Supervisor	Contact Information	Collection Date	Residue Municipality	Garbage Bin - Color	Garbage Details	Cost	Recycling Collection on Day	Residue Municipality	Recycling Cart - Color	Recycling Cart - Details	Recycling Location	Residue Municipality	Organic Cart - Color	Organic Cart - Details	Last Contact	Site Visit Comments
5	Aven Road	69	7	Rental Building	Sebastian Investments Ltd	442 CONCORD AVE	TORONTO ON	M4H 3P6	416-537-5694	Y	Tony Bendel	516-205-2623	Friday	N	2	6 yd			N	2			N				lots of room for truck turnaround
5	Montez Drive	30	2	Rental Building	Elgin St Housing Corp.	399 KEELE AVE UNIT 3	ST THOMAS ON	N5R 3Y3	519-634-4580	N	Bill Hudson	519-634-4580	Friday	N	1	4 yd			Monday B	N	2			Y	2		
12	Holland Street	18	3	Rental Building	Amadeo Estates	18 HOLLAND ST	ST THOMAS ON	N5R 4S2	519-634-6275	Y	Alan Borosenko	519-634-6275	Friday	N	1	4 yd				N							
14	Holland Street	18	3	Rental Building	Vernon Martin	360 GERRARD ST W TORONTO ONT	LONDON ON	M5C 1S4	519-634-4580	N	Bill Hudson	519-634-4580	Thursday B	N	1	4 yd				N							
16	Celestine Street	28	2	Rental Building	Elgin St Housing Corp.	399 KEELE AVE UNIT 3	ST THOMAS ON	N5R 3Y3	519-634-4580	N	Bill Hudson	519-634-4580	Tuesday	N	1	4 yd			Tuesday	Y	2			Y	1		
16	Holland Street	18	3	Rental Building	Amadeo Estates	18 HOLLAND ST	ST THOMAS ON	N5R 4S2	519-634-6275	Y	Alan Borosenko	519-634-6275	Tues/Fri	N	1	4 yd				N							
17	Holland Street	25	N/A	Rental Townhouse	Spring Meadows Inc.	17 Holland St	ST THOMAS ON	N5R 4S2	519-634-7870				Thursday B	N					Monday	Y	6			Y	3		3
17	Montez Drive	40	2	Rental Building	EPIC Non-Profit Housing	40 MONTREUIL ST	ST THOMAS ON	N5P 4S6	519-633-5375	N	N/A	N/A		N	1	4 yd				N					Y		
18	Holland Street	18	3	Rental Building	Amadeo Estates	18 HOLLAND ST	ST THOMAS ON	N5R 4S2	519-634-6275	Y	Alan Borosenko	519-634-6275	Tues/Fri	N	1	4 yd				N							
19	Dunkirk Drive	40	5	Rental Building	Milne Place Assoc.	40 DUNKIRK DR	ST THOMAS ON	N5P 4B1	519-637-8686	Y	Lina	519-637-7684	Friday	N	1	3 yd			Friday	Y	5						
20	Holland Street	12	3	Rental Building	Vague Voloshuk	24 VANDERBILT ST	ST THOMAS ON	N5P 4M6	519-633-803	Y	Clare & Vague Voloshuk	519-633-803	Friday	N	1	2 yd			Thursday B	Y	2					15-Apr-06	Visits a lot remove but doesn't want a/c service. Doesn't like turnaround
25	Scott Street	27	3	Rental Building	Nic Onizko	32 Norman Terrace	ST THOMAS ON	N5P 4H4	519-495-4467					N	1	4 yd				N							
26	Wentworth Street	12	2	Rental Building	Elizabeth Tosh	12 Wentworth St	ST THOMAS ON	N5P 4A2	519-642-2562	Y	Fred	Owner does not want to give	Friday	N	1	3 yd				N							
29	Elgin	50		Rental Building	Nic Onizko	32 Norman Terrace	ST THOMAS ON	N5P 4H4	519-495-4467					N													
31	Parkside Drive	32	3	Rental Building	Maximo Dovers	489 TALBOT ST	LONDON ON	N6A 2S4	519-679-0863	Y	Bonnie Payer	519-633-5573	Tues/Fri	N	1	6 yd				N/A							
37	Manitoba Street	16	3	Rental Building	Valley Group & Sons	16 MANITOBA ST	ST THOMAS ON	N5P 4S6	519-633-5746	N	N/A	N/A	Tuesday	N	1	3 yd			Tuesday	Y	3			Indie	Y	2	
39	Jackson Street	16	3	Rental Building	DHR Holdings Inc. (Mgt. Brian)	1600 GERRARD ST E UNIT 7	ST THOMAS ON	N5P 3T2	519-637-3898	N	John Aeger	519-637-7249	Tuesday A	Y	bagged	Curbide			Tuesday A	Y	2			Y	1		
39	Village Green Street	11	3	Rental Building	Sebastian Investments Ltd	442 CONCORD AVE	TORONTO ON	M4H 3P6	416-537-5694				Tuesday B	Y	bagged	Curbide			Tuesday B	N	1						
41	Manitoba Street	7		Rental Building	Barbara Milne	360 Queens Ave W Unit 7	TORONTO ON	M5C 1S4	519-634-4580	N	N/A	N/A	Tuesday B	Y	bagged	Curbide			Tuesday B	Y	N/A			Blue Boxes			
41	Parkside Drive	32	3	Rental Building	Maximo Dovers	489 TALBOT ST	LONDON ON	N6A 2S4	519-679-0863	Y	Bonnie Payer	519-633-5573	Tues/Fri	N		share with 31				N/A							
42	Parkside Drive	16	3	Rental Building	Ed Perle Holdings	1600 GERRARD ST E UNIT 7	BELMONT ON	M1L 8D1	519-672-5633	Y	Brenda Clunas	519-633-8730	Friday	N	1	4 yd				N							
42	Pearl Street	7	2	Rental - Houses	Vague Slaght	4 VANDERBILT LANE	ST THOMAS ON	N5R 6C5	519-633-5395				Tuesday A	Y	bagged	Curbide			Tuesday A	Y	n/a			Blue boxes	Y		
44	Jackson Street	23	3	Rental Building	Michael Hufrey	15 QUEENSWAY ON	BRANTFORD ON	N5R 4V3		N	John Aeger	519-637-7249	Tuesday A	Y	bagged	Curbide			Tuesday A	Y							
45	St. Anne's Place	38	2	Rental Building	Elgin St Housing Corp.	399 KEELE AVE UNIT 3	ST THOMAS ON	N5R 3Y3	519-634-4580	Y	Bill Hudson	519-634-4580	Tuesday	N	1	4 yd			Tuesday	Y	2			Indie	Y	2	
51	Parkside Drive	32	3	Rental Building	Ed Perle Holdings	1600 GERRARD ST E UNIT 7	BELMONT ON	M1L 8D1	519-672-5633	Y	Brenda Clunas	519-633-8730	Friday	N	1	4 yd			Monday	N	4			Outside - Parking Lot Circle - Parking Lot	N		
51	Hawthorn Street	12	3	Rental Building	Andrew McCann and	71 TILSON AVE	OH	N4G 3A2					Tuesday A	N	1	6 yd			Tuesday A	Y	2			Y	1		
52	Parkside Drive	32	3	Rental Building	Ed Perle Holdings	1600 GERRARD ST E UNIT 7	BELMONT ON	M1L 8D1	519-672-5633	Y	Brenda Clunas	519-633-8730	Friday	N		share with 42				N							
60	Stokes Road	12	3	Rental Building	J.P. Acoustic & Detail	888 Longworth Road	LONDON ON	N6K 0B6	519-471-4504	N	N/A	N/A	Thursday A	N	1	4 yd				N	0				N	0	N/A
62	Parkside Drive	24	3	Rental Building	Ed Perle Holdings	1600 GERRARD ST E UNIT 7	BELMONT ON	M1L 8D1	519-672-5633	Y	Brenda Clunas	519-633-8730	Friday	N	1	6 yd			Monday	N	4			Blue Boxes	N		
65	Curtis Street	8	2	Rental - Houses	Spiral Group	81 CURTIS ST	LONDON ON	N6A 1A1	519-472-4632				Tuesday A	Y	bagged	Curbide			N/A	Y				Blue Boxes	N		
79	Stokes Road	12	3	Rental Building	Carl Scharf	81 CURTIS ST	LONDON ON	N6A 1A1	519-471-3666	Y	Carl	519-471-3666	Thursday A	N	bagged	Curbide			Thursday	Y	2 bags			sheds parking	N/A	0	

Appendix#2: Promotion & Education materials

Bin Labels

Paper Products



Newspapers, flyers



Magazines, catalogues, books
(remove hard covers)



Boxes, egg cartons, tubes
(flatten)



Household paper



Cardboard boxes
(stack between carts,
bundle large quantities
1m x 1m x 0.5m max size)



Glass, Cans & Plastics



Steel & aluminum cans,
aluminum foil and pie plates



Plastics
bottles, tubs, jugs



Glass
Bottles & jars



Brochure

Do not recycle

PLASTIC
Toys
Makeup jars
Caulking tubes
Plastic egg cartons
Plastic food wrap
Garden products bags
Drinking cups
Molded bakery food trays
Motor oil jugs
Plant trays and flower pots
Styrofoam® cups
Dishes and egg cartons (polystyrene or Styrofoam®)

GLASS
Drinking glasses, dishes, cups, crystal
Window glass
Light bulbs
Mirrors
Pottery
Pots and pans
Makeup containers

METAL
Food contaminated foil
Coat hangers
Pots
Batteries
PAPER/TIMBER
Tissues
Waxed paper
Foil gift wrap
Waxed cardboard
Foil wrapping paper
Ice cream cartons
Chip bags

DROP EVERYTHING!

All that stuff that isn't garbage, and doesn't go in your blue recycling bin, can now be dropped off at convenient collection depots, for reuse, recycling or responsible disposal.

- Leftover paint and solvents, empty oil containers and used oil filters, antifreeze, propane tanks, fertilizers and pesticides, non-rechargeable batteries, televisions, computers and peripherals, fax machines and printers.

Do your bit to keep our communities livable. Learn more at the website hosted by Stewardship Ontario and Ontario Electronic Stewardship:

dowhatyoucan.ca



RECYCLING MOMENTS: THE Rendezvous



RECYCLE MORE

St. Thomas Recycles

Take a moment to sort and recycle. Every time you place materials in your blue box you accomplish at least three good deeds for the day. First, you are diverting waste from the landfill, and thus extending its life. Second, you are ensuring materials such as aluminum and paper that have many lives, can be used and reused to their fullest. And third, you are helping to save money. In the last eight years the sale of recyclable materials has provided close to \$53 million in revenue to the City of St. Thomas.




This project has been delivered with the assistance of Waste Diversions Ontario's Continuous Improvement Fund, financed by Ontario municipalities and stewards of blue box waste in Ontario.



DO WHAT YOU CAN



Help reduce the amount of waste that goes to our landfills.
For more information on apartment recycling, please visit our website at www.blueboxnorm.ca

Printed on 100% recycled paper.

Your Guide To Recycling.



St. Thomas' Recycling Guide.

Stream 1: Paper Products

- Boxboard (cracker, cereal boxes)
- Envelopes
- Telephone Books

Cardboard (flattened and bundled no larger than 18" x 18"). Bundles placed on top, beside or placed loose into a separate blue box.



Stream 2: Containers

- Glass Jars and Bottles
- Rigid Plastic Containers (#1 & #2)

Place rinsed and loose into blue box. Please remember to remove caps and lids.



Need More Information?

Call Customer service at 519-631-1680 Ext. 4258 or visit www.city-st-thomas.on.ca

In-Unit Bag

