

**Elliot Lake Multi-Residential Service
E&E Number 241**

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1.0 Executive summary

The City of Elliot Lake implemented a multi-residential recycling program at its three largest building complexes in August 2007. Prior to this, residents that wanted to recycle were required to take their materials to a depot located some distance away. A fourth complex was added in December, 2007. The program has resulted in the diversion of 67 tonnes in the one year since inception, at a total cost of \$122.81 per tonne (capital and operating). The increased tonnage, however, has resulted in an overall decrease in per tonne cost in the recycling contract, compared with previous years.

2.0 Background

The City of Elliot Lake (population 11,500, with approximately 6,000 households) operates a curbside blue box program for its single family households. Prior to this project, those living in multi-residential dwellings did not receive collection service for their recyclable items. Their access to recycling was at a city-operated recycling depot located at some distance from some parts of the community. The majority of the residents in the multi-residential buildings are older and many do not have access to transportation to participate in the depot recycling option.

Funding was secured from the Canada-Ontario Municipal Rural Infrastructure Fund (COMRIF) and Stewardship Ontario's Effectiveness and Efficiency (E&E) fund to augment funds provided by the city to install recycling bins at three multi-residential sites. Collection by the city's waste contractor, Municipal Waste Recycling Consultants, began in August, 2007. The goal of the project was to increase the city's blue box diversion by providing a greater level of service to the multi-residential sector.

The materials currently accepted in Elliot Lake's recycling program are glass, commingled plastic and metal food/beverage containers (aluminum and steel food and beverage, and 1 and 2 plastics), corrugated cardboard and boxboard, and all paper (newspaper, magazines, books, fine paper). Tubs are being considered as a future addition.

3.0 Multi-residential Program Implementation

Collection depots were installed at three multi-residential sites prior to program launch in August, 2007. These buildings were selected as they are the largest in the city and majority of the residents are seniors who cannot easily get to the City's recycling depot. Table 3.1 presents a summary of bin distribution at these sites.

Each collection depot consists of four bins (each complex was provided with the same number and size of bins):

1. One 8 cubic yard bin for corrugated cardboard and boxboard
2. One 6 cubic yard bin for commingle (plastic and metal food/beverage containers (aluminum and steel food and beverage, and 1 and 2 plastics)
3. One 4 cubic yard bin for paper
4. One 4 cubic yard bin for glass

Bins are located adjacent to the parking lots at each site. Refer to Appendix 1 for pictures of the collection depots.

Table 3.1 Summary of bin distribution at multi-residential sites

Site	# of buildings	Total # of units	Total bin capacity (cubic yards)	Units/cubic yard
Warsaw Complex	2 buildings	258 units	22	12
Washington Complex	2 buildings	352 units	22	16
27 Mississauga	1 building	94 units	22	4
A fourth site was added to the program in December, 2007:				
Pine Road	1 building	81 units	22	4

Apartments				
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As of December, 2007, there were 785 multi-residential units in the program.

4.0 Multi-residential Program Launch

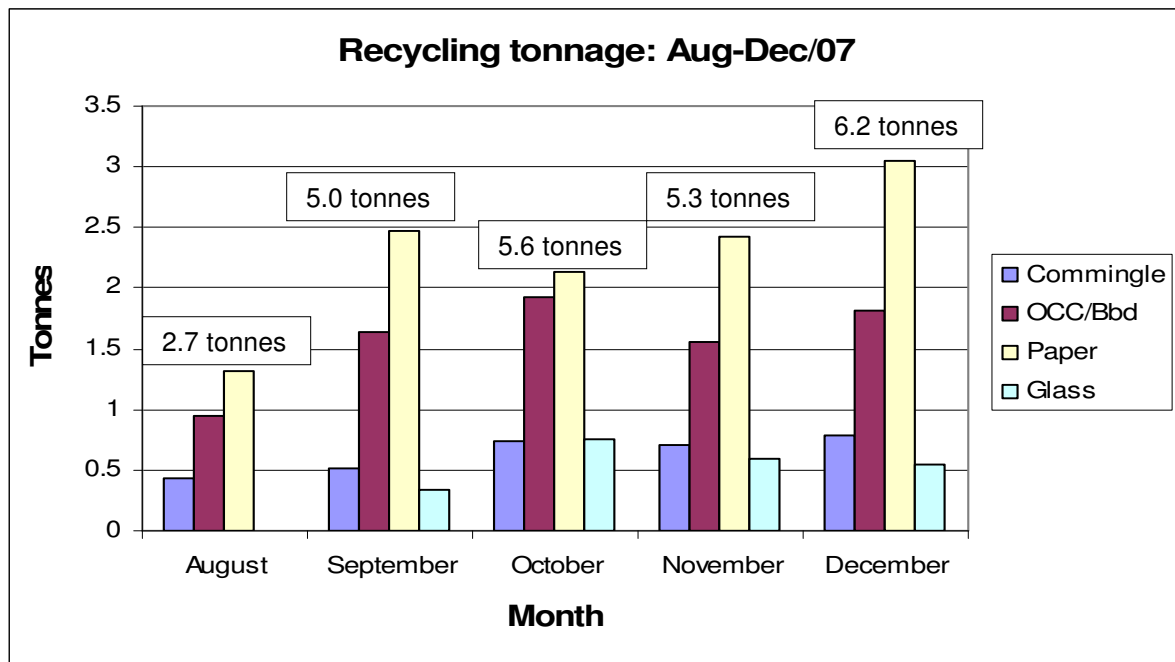
Prior to the first (weekly) recycling collection in August, information sessions were held in the common rooms of each multi-residential site. The City's Director of Operations, the contractor and the property manager/landlord provided background on the program. In particular, the contractor reviewed the list of acceptable materials to help familiarize residents with do's and don't's for each material stream.

Following the meetings, packages consisting of an in-unit collection bag, letter from the Director of Operations (Appendix 2), program flyer (Appendix 3) and fridge magnet (Appendix 4) were delivered to each unit.

5.0 Results

In the first five months of the multi-residential recycling program (August through December, 2007), 24.7 tonnes were collected from the four multi-residential sites.¹ Figure 5.1 illustrates the relatively steady increase in tonnage of the four material streams month over month, although some of December's tonnage increase would be attributable to the addition of the fourth building to the program.

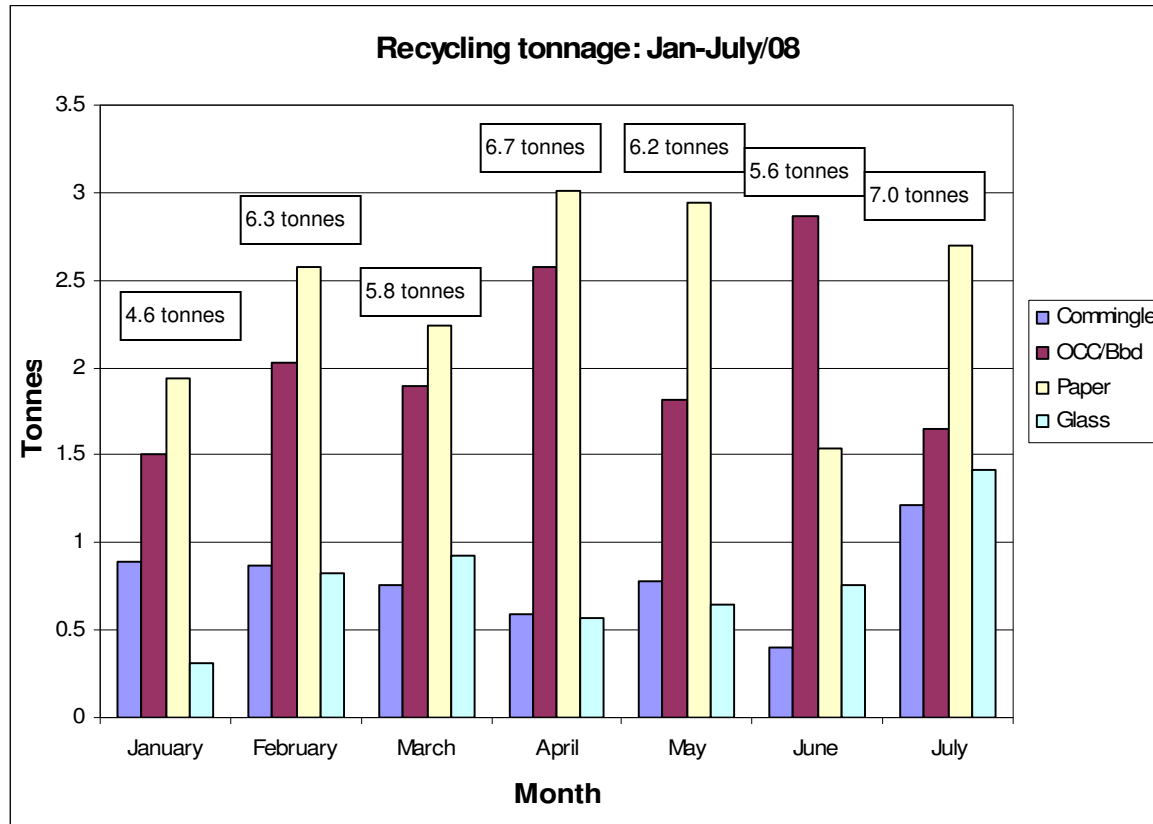
Figure 5.1 Multi-residential recycling tonnage: 2007



¹ A fourth site (81 units) was added to the program in December/07

For the first seven months of 2008, total recycling tonnage from the four buildings was 42.2 tonnes. Figure 5.2 illustrates the monthly tonnages through 2008.

Figure 5.2: Multi-residential recycling tonnage: 2008



Thus, for the one year period (August 2007 through July 2008), a total of 67 tonnes was diverted through the multi-residential recycling program. This is an average of 5.6 tonnes per month or 85.4 kilograms per unit per year.

Table 5.1 Year one results

Year One Results	Total Multi-residential Recycling Tonnage	Average Tonnes/month	Average Kg/unit/year
August/07-July/08	67	5.6	85.4

Waste and recycling tonnage for the past three years indicates that diversion attributable to blue box recycling has increased steadily in the city, as illustrated in Table 5.2

Table 5.2 Diversion Trends

	2006	2007	2008 (year to date)
Blue Box Diversion rate	15%	25%	30%
Blue box tonnage	615.4	745.2	562.4

Initially some building residents expressed concern that the location of the recycling bins (outside, across a potentially icy parking area) might limit their participation in the winter months. They were advised not to put their health at risk should this situation arise. To date there have been no complaints received about the bins being outside. The city has received a few requests from residents who wanted extra in unit bags, and some residents have even purchased blue boxes as they were finding their in unit bags were filling up too quickly.

The contractor has been very positive about the quality of the material in the bins: there have been no complaints about contamination. Apparently, the in unit containers have eliminated the problem found in many other multi-residential recycling programs where residents use plastic bags to bring their recyclables to the bins and fail to remove the bags before placing material into the bins.

6.0 Multi-residential Program Costs

The itemised and incremental costs for implementing the recycling program at the four buildings are detailed in Table 6.1. The addition of the four multi-residential sites increased the overall cost of the city's collection contract by \$5,760.00/year. With the additional capital cost for bins and promotion/education, the total annual cost is \$8,229.08.

Table 6.1 Multi-residential program costs

Item	Total	Amortised	Per Year	Per tonne	Per unit/year
Bins	\$15,228.07	\$1,522.81 ²	\$1,522.81	\$22.72	\$1.94
Promotion and education: in-unit containers, magnets, flyers	\$4,371.37	\$946.27 ³	\$946.27	\$14.12	\$1.21
Subtotal: Capital	\$19,599.44	\$2,469.08	\$2,469.08	\$36.84	\$3.15
Collection			\$5,760.00	\$85.97	\$7.34
Total			\$8,229.08	\$122.81	\$10.49

However, the increased tonnage has led to a decline in total per tonne cost for the city's overall recycling program, as illustrated in Table 6.2.

Table 6.2 Year over year comparison of recycling program costs

Item	2006	2007	2008 (Jan-July)
Recycling contract cost	\$85,493.06	\$82,300.08	\$49,968.38
Recycling tonnage	615.35	745.24	562.41
Per tonne cost	\$138.93	\$110.43	\$88.85

7.0 Conclusion

The multi-residential recycling program has been enthusiastically received by residents at each of the four buildings and points the way for expanding the program to the city's remaining buildings. The program has contributed significantly to the year over year increase in the city's recycling tonnages. While there has been an initial increase in the recycling contract cost, the per tonne cost has declined. The multi-residential recycling program has proven to be a cost effective method to increase the city's capture of recyclables.

² 10 year amortisation

³ 5 year

APPENDIX 1: MULTI-RESIDENTIAL BUILDINGS AND RECYCLING DEPOTS



APPENDIX 2 – LETTER TO TENANTS/RESIDENTS**DIRECTOR OF OPERATIONS**

September 6, 2007

Dear Sir or Madam:

RE: RECYCLING PROGRAM

As a follow up to the information session held on August 1, 2007, with regard to the initiation of the multi-residential recycling program, it is my pleasure to provide you with an apartment style recycling bag as well as an information package (including a fridge magnet) as to the do's and don'ts of recycling.

The implementation of this program was made possible through the financial assistance of COMRIF* and Stewardship Ontario. The successful launch of this program was achieved with the cooperation of Elliot Lake Retirement Living and in particular Mr. Richard Quinn who took the time from his busy schedule to help select depot sites and arrange the information sessions. Thank you Richard.









The main objective of this program is to expand recycling opportunities where possible, and to make it easier for all residents and particularly our senior citizens to take part in waste diversion (recycling).

Of course the success of the program will rely on your willingness to participate. Last year the City of Elliot Lake diverted approximately 600 tonnes of waste from the landfill through our curbside/depot program. This year our goal will be to break the 1,000 tonne mark. Please pitch in and help us achieve this goal.

Yours truly,

Rob deBortoli
Director of Operations

APPENDIX 3: MULTI-RESIDENTIAL RECYCLING PROGRAM FLYER

<p>The Don'ts</p> <p>Many items are labeled with the familiar recycling symbol, however, this does not mean that it is recyclable in our blue box program. The recycling symbol often means that the item has been made out of recycled material but is not recyclable in our program.</p> <p style="text-align: center;"></p> <p>If you turn your plastic containers upside down, you will usually find the plastic identified by a number inside the recycling symbol. If there is a #1 or #2 inside the symbol and/or the letters PETE or HDPE underneath it you can recycle it in our program.</p> <p>Some exceptions to the #2 plastic that we can not accept into our program includes:</p> <ul style="list-style-type: none"> ◆ Motor Oil Bottles ◆ Pesticide & Herbicide containers ◆ Wide mouth containers (tubs). e.g. Margarine, Yogurt and 20 litre pails <p>Please do not deposit:</p> <ul style="list-style-type: none"> • Tissues or paper towels • Drinking glasses • Window pane glass, ceramics & china • Light bulbs • Plastics other than #1 PETE or #2 HDPE • Coat hangers (plastic or metal) <hr/> <p style="text-align: center;">Municipal Waste & Recycling Consultants 1-800-430-7778 356-4118</p>	<p style="text-align: center;">“Recycling” Our Gift to Earth</p> <p style="text-align: center;"></p> <hr/> <p style="text-align: center;">Municipal Waste & Recycling Consultants 1-800-430-7778 356-4118</p>	<p style="text-align: right;">MW RC Municipal Waste & Recycling Consultants</p> <p style="text-align: center;">Recycling Program</p> <p style="text-align: center;"></p> <p style="text-align: center;"></p> <p style="text-align: right;">Municipal Waste & Recycling Consultants 9 Industrial Road P.O. Box 968 Blind River, ON P0R 1B0</p> <p style="text-align: right;">Toll: (800) 430-7778 Tel: (705) 356-4118 Fax: (705) 356-0315</p>
<p style="text-align: center;">Glass Bottles & Jars</p> <p>In our program we collect only glass bottles and jars.</p> <p>When other glass items, such as window pane glass, drinking glasses, light bulbs, ceramics, & china are mixed in with the bottles and jars, our load of glass becomes contaminated and thus not saleable. If we can not sell the materials, then we have defeated the purpose of recycling.</p> <ul style="list-style-type: none"> • Please rinse the bottles and jars to remove any food or residue left in the container. • Please remove lids from bottles and jars • You do not have to remove labels from glass containers. <p>Please contact Municipal Waste & Recycling Consultants should you have any questions on this recycling program.</p> <p>1-800-430-7778 356-4118</p> <p style="text-align: center;"></p> <hr/> <p style="text-align: center;">Municipal Waste & Recycling Consultants 1-800-430-7778 356-4118</p>	<p style="text-align: center;">Commingled Plastic & Metal Food & Beverage Containers</p> <p>In our program we collect the following “commingled” materials.</p> <p>This “commingled” category includes:</p> <ul style="list-style-type: none"> • Steel (tin) food & beverage cans. • Aluminum food and beverage cans. • Aluminum trays and foil (must be clean) • #1 PETE and #2 HDPE Plastic food and beverage containers <p>These materials are all deposited in the same depot bin.</p> <ul style="list-style-type: none"> • Please Remove the caps and lids from all plastic bottles. For metal cans, push the lid inside after rinsing and squeeze the top of the can slightly to keep the lid in. • Please rinse the cans and containers to remove any food or residue left in the container. • You do not have to remove labels from the containers. <p style="text-align: center;"></p> <hr/> <p style="text-align: center;">Municipal Waste & Recycling Consultants 1-800-430-7778 356-4118</p>	<p style="text-align: center;">Cardboard & Boxboard ONLY</p> <ul style="list-style-type: none"> • Please No plastic or wax board • Please flatten all boxes <p style="text-align: center;"></p> <p style="text-align: center;">Newsprint</p> <ul style="list-style-type: none"> • Newspaper & Flyers • Magazines & Catalogues • Telephone books • Paper/Hard Cover books • Writing paper & envelopes <p style="text-align: center;"></p> <hr/> <p style="text-align: center;">Municipal Waste & Recycling Consultants 1-800-430-7778 356-4118</p>

APPENDIX 4 FRIDGE MAGNET



**MUNICIPAL WASTE & RECYCLING
CONSULTANTS RECYCLING PROGRAM**

PHONE (705) 356-4118 • 800-430-7778

GLASS BOTTLES & JARS

Glass bottles & jars ONLY - Clear & Coloured

NEWSPAPERS

Newspapers & flyers • Magazines & catalogues
Telephone books • Paper/hard cover books
Writing paper & envelopes

**COMMINGLED PLASTIC & METAL FOOD
& BEVERAGE CONTAINERS**

Steel (tin) food & beverage cans
Aluminum food & beverage cans
Aluminum trays & foil (must be clean)
#1 PETE and #2 HDPE plastic food
and beverage containers

**THESE PRODUCTS ARE ALL DEPOSITED IN
THE SAME DEPOT BIN**

CARDBOARD & BOX BOARD

Please flatten all boxes - No plastic or wax board

**FOR QUESTIONS OR CONCERNS
PLEASE CALL RECYCLING HOTLINE
(705) 356-4118 OR 800-430-7778**