

CIF 419 & 534.3

City of Brantford

New Containers to Capture New Materials



Final Project Report, June 20 2014

City of Brantford

CIF Project number 419 & 534.3

Acknowledgement:

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1 BACKGROUND INFORMATION

1.1 Municipal Information

Brantford has a population of 94,586 of which, there are approximately 25,000 single family homes and 12,600 multi-family homes. Currently, the curbside materials from the City's two sort program are collected and processed by one Contractor although, the collection and processing contracts are separate entities. Materials are collected curbside, then taken to the transfer station, located at the City's landfill site. The materials are then loaded into a trailer with a walking floor, which the Contractor picks up and transports to their processing facility, located just outside the City. The City pays a base rate for the collection of recyclables up to 350 tonnes and an additional rate for any tonnage over this amount. For processing, the City pays a predetermined rate per tonne. Presently, the City of Brantford, a medium sized urban community, has a blue box diversion rate of 34%. In 2012, the City marketed a total of 6,397 tonnes at a net cost of \$1,389,092. This resulted in a cost of \$217.14 per marketed tonne.

In an effort to improve the diversion rate, and possibly reduce the cost per marketed tonne, using recommendations in the 2008 Long Term Sustainability Solid Waste Plan, along with funding provided by the Continuous Improvement Fund (CIF project 534.3), the City decided to expand the collection program by providing residents with a new larger 22 gallon blue box to facilitate the additional materials being added to the program and to encourage residents to recycle more. The new large curbside containers (LCCs) were to be used for recyclable containers including the newly added #3, #4, #6, #7 plastics as well as spiral wound. The smaller 16 gallon blue box, which residents already had, was to be used for fibre materials only (ONP, OCC, & OBB).

The City hoped the new LCCs and the addition of more materials would result in an increased diversion of blue box materials from landfill. To promote and educate the residents on the changes, the City used their yearly P&E budget of approximately \$30,000 along with additional monies from both C.I.F. (CIF project 419) and Stewardship Ontario to promote the two principal messages: A new bigger blue box for recyclables and the addition of more plastics.



1.2 Project Description

In 2012, the City of Brantford launched the enhanced program by having Delta Logistics distribute approximately 25,000-22 gallon blue boxes to single family homes. The new LCCs were not delivered to townhouse style condominiums, duplexes, triplexes and fourplexes, but were made available upon request. Prior to delivery of the LCCs, residents had 16 gallon blue boxes which were often not large enough for many families, as observed by the many overflowing boxes and the continued request for additional 16 gallon blue boxes from residents. The distribution of the larger blue box was an important key to achieve many of the recommendations identified in Brantford's Long Term Sustainability Plan and Waste Recycling Strategy. It allowed the City to readdress the concept of recycling to the residents of Brantford. It allowed the City to reintroduce the blue box program and increase people's awareness of how the blue box program works. It also provided additional storage space for the new recyclable materials being added.

To ensure the residents were aware and understood the changes to the enhanced blue box program, the City developed and implemented a number of promotion and education initiatives, using various media sources. Radio, bus signs, bench signs, flyers and newspaper ads were all incorporated into the advertising campaign with the two principal messages focusing on the "New Bigger Blue Box," and "Plastic Is In."

To promote the enhanced program prior to delivery, a blue box launch was held at City Hall, with invitations going to the local media and the local politicians. At the launch, each of the attendees was given a package explaining the new blue box program. Following this was a press release in the local papers and on the local radio station. As well, prior to the launch, the City had been putting ads in the local papers and on the local radio station notifying residents of the upcoming blue box deliveries. In addition to this, each new blue box contained a flyer, explaining the changes to the program and the additional recyclables being added to the box. Once the deliveries began, ads were placed on the radio, in the local papers, on billboards, in the yearly calendar, and on buses notifying residents about the new larger box or about the additional plastics being added, with the two key messages being, "New Bigger Blue Box," and "Plastic Is In." (See attached table for breakdown of advertising media and associated costs).



Delivery of the LCCs began November 5, 2012 and was completed by November 13, 2012. In total 25,695 LCCs were delivered to residents by the contractor. The cost for delivery was \$1.15/LCC.

Table 1: Project Summary

City of Brantford	
Amount of CIF Grants - Total	\$ 108,400
419 – P&E and Delivery of LCCs	\$37,800
534.3 - Purchase of LCCs	\$70,600
Number of Blue Boxes distributed	25,695
Dates LCCs were delivered to residents	November 5 – 13 2012
Increased annual tonnage attributed to LCCs	14%

2 IMPLEMENTATION

2.1 Goals & Objectives

- 1) Increase blue box diversion rate from the present 34% to 39%, by increasing the amount of recyclable materials collected curbside.
- 2) Increase the capture of plastic containers by 10% (800 MT annually) by expanding the program to include additional plastic containers. Prior to the launch, the City of Brantford collected plastics #1, #2, and #5.
- 3) Increase the Blue Box participation rate to 80%. In 2012 the participation rate was 70%, based on the streets audited between January and December.
- 4) Increase Blue Box set out rate to 70%. In 2012, the set out rate was 66.60%.
- 5) Decrease garbage tonnages sent to landfill by 5% (down to 18,500 MT annually).



2.2 P&E - Key Messages

The following key messages were utilized across the P&E materials utilized to promote the addition of LCCs and newly targeted materials

“Plastic Is In!”

“New Bigger Blue Box!”

2.3 P&E Tactics

Radio

A series of radio advertisements were broadcast on Jewel 92, the local radio station, from Oct 29 –Nov 16 2012. There were three different messages that were 30 seconds in duration. The first ad ran from Oct 29 to Nov 4, and focused on the upcoming delivery of the “New Bigger Blue Box” and how to use it. The second ad ran from Nov 5 to Nov 16 and focused on the arrival of the box and how to use it. The third ad ran from Nov 1 to Nov 16 and consisted of messaging provided by Stewardship Ontario’s “Plastic Is In!” campaign.

Bus signs

Bus signs, in the form of partial wraps, were placed on two city buses. One of the wraps used the “Plastic Is In” message while the other

wrap used the “New, Bigger Blue Box,” message. The City purchased advertising space for the month of November 2012 however, to date (Aug 2013), the wraps wereare still on the buses. Good value for the money!



Calendar

Two full page ads were placed in the 2013 Environmental Calendar. A “New, Bigger Blue Box,” ad was placed adjacent to the month of January and the “Plastic Is In,” ad was placed adjacent to the month of November. As well, a half page ad was placed in the calendar with all the general information, on the second page. This ad contained information on the additional materials and how to sort them.

Flyers

A “New Bigger Blue Box,” flyer was placed in each of the blue boxes before they were delivered. The flyer contained information on the new box and what to put in it.

Newspaper Ads

Ads for both the “Plastic Is In,” message and the “New Bigger Blue Box,” message were placed in the local newspapers from November 1 to December 1.

Bench Sign

A bench sign was purchased in 2013, to promote the message, “Recycle More,” and had pictures of the different plastics going into the larger box.

Webpage

The City’s webpage was updated prior to the delivery of the new bigger blue box to include all the changes to the recycling program including the larger box, the additional materials, and how to sort properly.



2.4 Budget

The City of Brantford budgeted approximately \$206,000 for the purchase, delivery, and distribution of the LCCs in addition to the P&E campaigns to promote the inclusion of the expanded materials list and proper sorting behaviours. For a full breakdown of the P&E expenses incurred under this programming, please see appendix A.

Table 2: Project Budget

	Per unit cost	Quantity	Total
Blue Box	\$5.85	25695	\$152,885.00
Distribution	\$1.15	25695	\$25,549.25
P&E Costs	--	--	\$27,381.15
Total	--	--	\$205,815.40

3. RESULTS

3.1 Tracking Goals and Objectives

Prior to the delivery of the blue boxes (January to December 2012):

Over the course of a year, two streets and 25 houses from each street were selected each day, Monday to Friday, to be audited. The streets were changed every 4 months thus providing the City with information from a total of 40 streets and approximately 1000 different households, over the year.

After the delivery of the 22 gallon blue boxes (January to December 2013):

After the larger 22-gallon boxes were delivered, the same houses were audited again to determine how things had changed and how many of the objectives were met.

Table 3: Results

Tracking Methodology	Prior to Delivery 2012	After Delivery 2013	Goal (2015)	%
Participation Rate	70%	82%	85%	12%
Set Out Rate	66%	68%	70%	2%
Marketed Tonnes - Blue Box	6,600	7,550	10%	14.4%
Plastic Containers	768	862	806	12.2%
Aluminum Containers	129	210	--	63%
Steel Containers	180	287	--	59%
Residual at MRF	3.9%	7.2%	3.5%	3.3%
Tonnages (Garbage)	19,377	19,345	-5%	-0.2%

3.2 Analysis of Results

Based on the results to date, most objectives are being met, though there is definite room for improvement in the amount of contamination collected curbside and the volume of residual at the MRF. The greatest improvement can be seen in the participation rate, which we think is driving the increase in overall blue box tonnage and the capture of specific materials. The City was surprised to see that the amount of curbside garbage collected remained relatively constant between sample years and are unsure how this is possible given that an extra 1,000 metric tonnes of recyclables are being diverted from landfill.

Staff are pleased with the increased recovery of high value commodities like aluminum and steel containers. Staff attributes the increased capture of these materials curbside, in part, to the increased rate of participation, but also to improved recycling behaviours in the community.

Interestingly, as the number of materials being recycled increased so did the tonnages of contamination curbside and thereafter residual at the MRF. This implies that residents have bought in to participating in the Blue Box program, but their recycling behaviours are not up to par. This is one area that will require further study by City staff so that further curbside separation and acceptable materials P&E can be developed and provided to residents.

Providing the LCCs to residents was meant to provide an easy way for residents to sort materials for the City's 2-stream collection program. In order to evaluate whether residents were using both containers, the set-out survey gathered data for Table 4. Clearly, the majority of residents are using both of their blue boxes for sorting materials. This method of assessing proper sorting behaviours was cost effective, though the accuracy of a waste audit would be much greater but it was cost prohibitive at this time.

Table 4: Residential Curbside Setouts

Blue Box - Curbside Containers	Percent of residents setting out
1 large Box, 1 Small Box	53.8%
2 large, 1 small	0.4%
1 large, only	20.5%
1 small, only	21.8%
1 large, 2 small	3.6%

3.3 Conclusions

Overall, City of Brantford staff are extremely pleased with the rollout of the new LCCs, the expanded materials list, and the P&E campaigns. Results are looking good and staff are optimistic that issues with contamination & residual can be reduced with well thought out P&E through the City's next campaign.

The distribution of the LCCs to residents went smoothly. Staff had wisely incorporated logistic contingencies in the distribution agreement, which meant that contractor staff handled missed drop-offs and resident complaints, saving city staff time and resources. City staff highly recommend that municipalities looking to deliver containers to residents invest in well-structured RFPs & agreements that place the onus on the contractor for dealing with logistical bumps in the road.

APPENDIX A: P&E Expenses

Company	Details	Schedule	Cost	HST	Total
Increase Plastics Promotion – Plastics focused					
Municipal Media	Calendar Ad	2013 Calendar ad (November, 2013)	1,125.00	146.25	1,271.25
Brantford Expositor-Vibrant Magazine	Magazine that is put in the paper once a month	01-Dec-12	750.00	97.50	847.50
Brantford Expositor	Newspaper Ad	24-Nov-12	507.81	66.02	573.83
Brantford Expositor	Newspaper Ad	08-Dec-12	507.81	66.02	573.83
Brant News	Newspaper Ad	15-Nov-12	1,218.18	158.36	1,376.54
Sun Media	Ad in Brantford Smart Shopper	16-Nov-12	1,000.00	130.00	1,130.00
Streetseen	Partial Mural on Bus	November 2012-?*	3,000.00	390.00	3,390.00
Jewel 92	CKPC-FM Radio Ads-39 Radio Spots X \$59.00	October 29 – November 16, 2012	2301.00	299.13	2600.13
		Total	10409.8	1353.27	11763.07
*No removal date, it is still on the bus					
Larger Blue Box Promotion – Participation, Capture					
Brantford Expositor	Newspaper Ad	November 3/12	507.81	66.01	573.82
Brantford Expositor	Newspaper Ad	November 5/12	507.81	66.01	573.82
Brantford Expositor	Newspaper Ad	November 17/12	507.81	66.01	573.82
Brantford Smart Shopper	Newspaper Ad	November 9/12	1,000.00	130.00	1,130.00
Brantford Smart Shopper	Newspaper Ad	November 2/12	500.00	65.00	565.00
Streetseen	2 Partial Bus Murals	November 7/12	3000.00	390.00	3390.00
Jewel 92	Recycle More 1- Radio Ads	Oct 29 through to Nov 16/12	1652.00	214.76	1866.76
Jewel 92	Recycle 2	Oct 29 through to Nov 16/12	2006.00	260.78	2266.78
Brant News	Newspaper Ad	November 8/12	1218.18	158.36	1376.54
Brant News	Newspaper Ad	November 15/12	1218.18	158.36	1376.54
Municipal Media	Calendar Ad	2013	1125.00	146.25	1271.25
Municipal Media	Calendar Ad	2013	575.00	74.75	649.75
		Total	13817.79	1796.29	15614.08