

Final Report

CIF #801.5

City of Barrie Large Curbside Containers



Acknowledgement:

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Executive Summary

This is the final report of a Blue Box initiative completed by the City of Barrie (the City). The project goals were to distribute new larger blue boxes to residents to support an expanded list of materials collected in the container stream, increase the tonnes of material diverted through the Blue Box program, and increase participation rates. Financial and technical assistance was provided by the Continuous Improvement Fund (CIF) in completing the project.

The City has an approximate population of 146,000, comprised of 47,257 single family and 11,400 multi-residential households. One of the first priority initiatives of the City's Solid Waste Management Strategy was to implement a curbside recycling program for additional materials such as plastic film, empty paint cans, and empty aerosol containers. To facilitate the new materials in the program, the City opted to provide larger 22 gallon blue boxes to residents. The new blue boxes were provided to residents through pickup at the City's Environmental Centre and community centres. The availability of the new blue boxes was incorporated into ongoing campaigns, which included the introduction of new blue box materials in April 2014 and an ongoing Rethink Waste campaign that was used to promote the upcoming switch to every other week garbage collection in 2015. Over 8,600 new larger blue boxes have been distributed to residents since April, 2014.

There were two primary objectives in this project work: One, increase the tonnes of Blue Box material diverted by 10% and two, increase the participation rate in the curbside Blue Box program by 4%. In monitoring the first objective, City Staff compared the first six month period of 2014 versus the same period in 2015. Staff have identified that there was a 6% increase in the Blue Box tonnes, as 355 more tonnes were recycled in 2015 than 2014. Annually, Staff complete a participation study during the summer months in representative areas to monitor program performance. The participation rate in 2014 was 76% and City Staff have set the goal of 80%. Staff observed a 1% increase in this rate, up to 77% during the 2015 study.

The results of this project work are positive. Participation in the Blue Box program and tonnes diverted from landfill are both increasing. The distribution of the blue boxes through the Environmental Centre and community centres was successful and a low cost alternative to mass distribution.

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1 BACKGROUND INFORMATION

1.1 Municipal Information

The City of Barrie has an approximate population of 146,000, comprised of 47,257 single family and 11,400 multi-residential households. Waste management services within the City include waste collection, disposal, and diversion programs (composting, dual-stream recycling, and re-use programs). Currently, blue box materials are collected and processed by the City's waste collection contractor at their Material Recovery Facility in Bracebridge, Ontario. Barrie is a medium sized urban community and has a current diversion rate of 47%. In 2014, the City collected a total of 12,393.97 tonnes of blue box materials curbside.

The City of Barrie Solid Waste Management Strategy was adopted in 2012 and provides an action plan for efficient and responsible changes to our waste collection, diversion, and disposal systems over the next 20 years. One of the first priority initiatives of the Strategy was to implement a curbside recycling program for additional materials such as plastic film, empty paint cans, and empty aerosol containers. With the expansion of the blue box recycling program, the City opted to provide larger 22 gallon blue boxes to accommodate the extra materials. The 16 gallon grey boxes would still be provided for paper and fibre materials.

By providing the larger capacity bins in conjunction with accepting additional blue box materials, the City hoped to see an increased blue box diversion rate. The larger bins also helped to mitigate litter and blowing materials that would often be the result of an overflowing blue box. Additionally, in 2014 the City began preparing for a switch to every other week garbage collection in January of 2015. An increase in demand for more recycling boxes was anticipated during this time period.

1.2 Project Description

The City chose not to mass-distribute the 22 gallon blue boxes throughout the City. The 22 gallon boxes were stored at the Environmental Centre located at the Barrie Landfill, and were provided to residents with the intention to allow a greater capacity to capture extra blue box materials. They were also supplied to new residents upon request. In September of 2014, the City decided to begin distributing blue boxes to the Community Centres so that bin pick up was more convenient for residents who were unable to pick up bins during operating hours at the Environmental Centre. This helped to increase the total amount of 22 gallon bins that were being picked up by residents.

Table 1: Project Summary

City of Barrie	
801.5 - Amount of CIF Grants	\$25,400
Purchase of 22 gallon boxes	\$47,188
Number of boxes handed out to residents	8,352

2 IMPLEMENTATION

2.1 Goals & Objectives

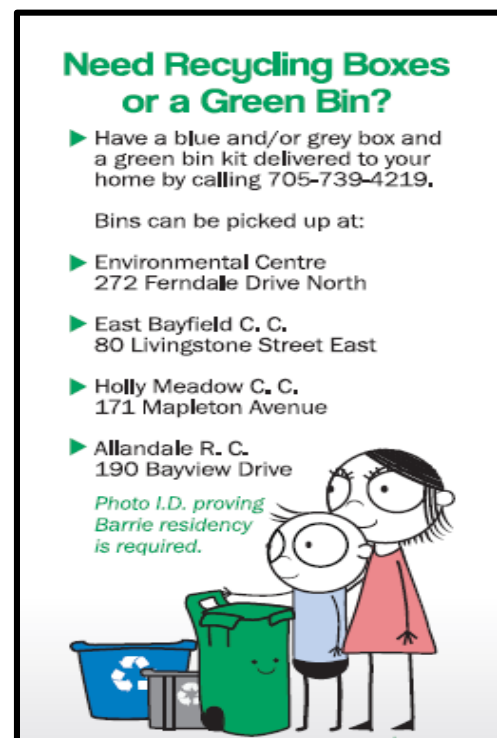
- 1) Increase the total tonnage of blue box materials collected curbside by 10% with the addition of new recyclable materials. Six months of data will be monitored pre and post distribution of the new larger blue boxes to evaluate the impact on blue box tonnages.
- 2) Increase the blue box participation rate from 76% in 2014 to 80% for 2015. City staff complete a participation study annually in the Summer. The 2015 data will be compared to the 2014 data to evaluate the impact from distributing the new larger containers. The number of new boxes in the study area will also be tracked to demonstrate that the new bins are being utilized by residents.

2.2 Promotion and Education

Rather than launching a direct promotion and education campaign, the City decided to incorporate the new larger 22 gallon blue boxes into ongoing campaigns, which included the introduction of new blue box materials in April 2014 and an ongoing Rethink Waste campaign that was used to promote the upcoming switch to every other week garbage collection in 2015. It was anticipated that there would be an increased demand for recycling boxes as these changes were intended to encourage residents to recycle more.

Bookmark

The Bookmark was designed to promote new locations that residents were able to pick up recycling bins. It also depicted a larger box beside the 'Rethink Waste' characters, indicating that we now offered the larger blue bin size. The bookmark was also incorporated into New Resident kits that we developed and handed out to new residents of Barrie. It was also given out at Special Events and to groups that toured the Barrie Landfill.



'Now Available' Recycling Bin Poster

The 'Now Available' poster was displayed at the Environmental Centre as well as all main City recreational facilities where residents could pick up recycling bins:

"Due to the increase in volume & the larger capacity containers in the blue box recycling stream, the City of Barrie is now supplying 22-gallon blue recycling bins for container recyclables.

The regular 16-gallon grey bins will continue to be provided for household paper & cardboard recyclables.

There will be no city-wide distribution of the 22-gallon bins but they will be available at the landfill site for pick-up, & by delivery to replace lost, stolen, or damaged blue boxes".



2.3 Budget

The City of Barrie spent approximately \$47,000 for the purchase of the large 22 gallon boxes. The bins were not mass distributed so there were no delivery or distribution costs. Promotion and education of the new boxes were combined with ongoing campaigns; therefore the City did not incur any additional P&E costs.

Table 2: Project Cost

	Per unit cost	Quantity	Total
22 gallon Blue Box	\$5.65	8,352	\$47,188.80

3 RESULTS

3.1 Tracking Goals and Objectives

3.1.1 Balanced Score Card

The City uses a Balanced Score Card to measure and track blue box performance. Throughout the year, collected curbside blue box tonnages are recorded from contractor invoices and inputted into a table so that staff can analyze diversion performance and compare results to previous years. We compared blue box tonnages from the first 6 months of 2014 (pre-distribution of bins) to the first 6 months of 2015 post bin distribution and saw an increase of 6% or 355.4 tonnes of blue box materials.

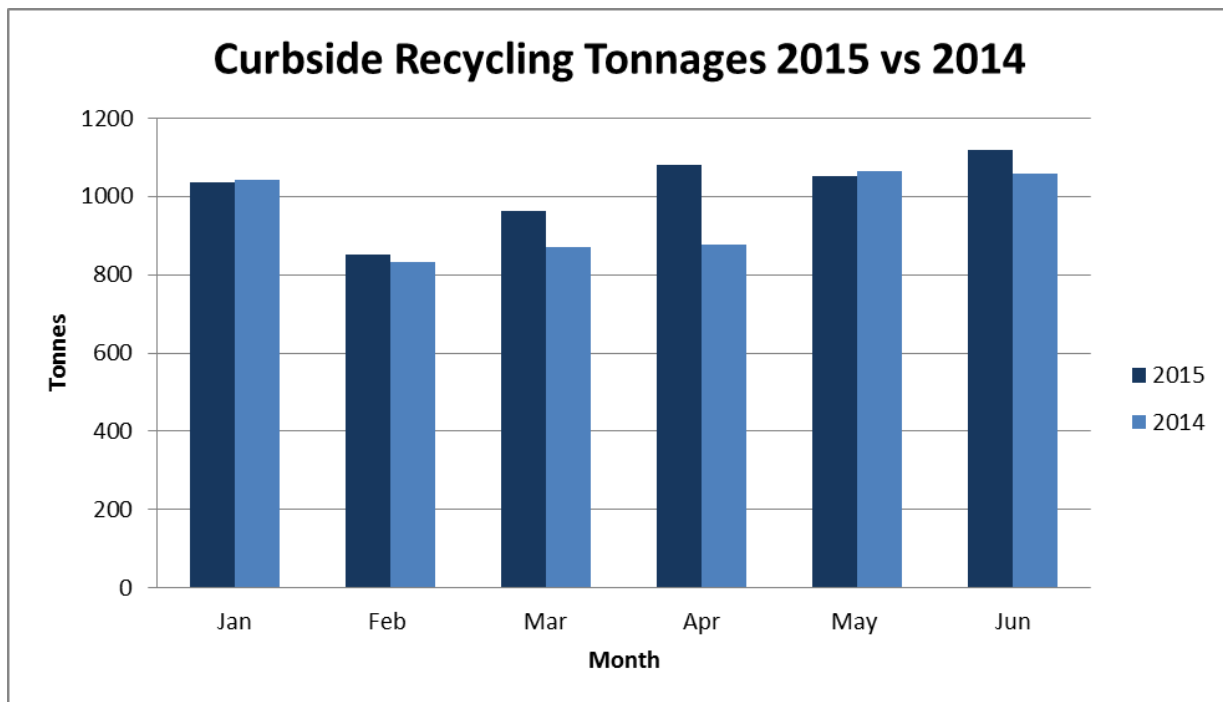


Figure 1: Curbside Recycling Tonnages

3.1.2 Participation Study

Each year the City conducts a two week recycling participation study using households from previous years to allow for a continuation of data. Streets are selected from each collection area and are tracked based on participation in each of the City’s waste and recycling streams. In 2014, the City reported a blue box participation rate of 76%. In 2015, blue box participation rose to 77%.

Table 3: Participation statistics

	2014	2015	GOAL
Participation	76%	77%	80%

3.1.3 Blue Box Pick-up

Blue box delivery and pick-ups were tracked through various methods at Community Centres, the Environmental Centre, and through delivery requests received by City and Contractor staff.

Table 4: Blue Box pick up

Location	Amount
Environmental Centre	6,447
Community Centre's	1,490
Blue Box Deliveries	676
Total bins distributed	8,613

3.2 Analysis of Results

Based on the results to date, The City has seen a 6% increase, or 355.4 tones in blue box material collected at the curb over the 6 month comparison period. This was slightly lower than our goal of a 10% increase; however this could be attributed to changes in product packaging resulting in manufacturers using lighter plastic materials.

The City also saw an improvement in the blue box participation rate, which rose from 76% in 2014 to 77% for 2015. This result was also slightly under our goal of 80%; however due to the nature of every other week garbage collection, it is possible that some residents may only place their recycling out during the week of their garbage collection for convenience, rather than every week. This habit was noted during the participation study; during the weeks that residents had garbage collection, there were more households participating in recycling. Overall, the increase in recycling participation indicates that the new larger containers have had a positive impact on the recycling habits of residents in Barrie.

Blue box pick-up and delivery was significantly higher in the first 6 months of 2015 than in the same time period in 2014. This could be attributed to the addition of the City's Community Centres as bin pick-up locations. The City has received positive feedback on this new service as it makes the process easier and more convenient for residents. It was also expected that we would distribute a significantly higher number of recycling boxes to residents as they prepared for future garbage collection changes, which is reflected in the results.

3.3 Conclusion

Overall, the 22 gallon blue boxes have proved to be popular among residents. The City was able to save costs by combining promotion and education campaigns and by choosing not to distribute the bins city wide. Staff are pleased with the results of the 2015 participation study and predict an even larger increase in blue box participation for the remainder of 2015 as Barrie residents transition to every other week garbage collection while recycling continues to be picked up weekly.