

# CIF 617.3



## City of Cornwall *Increase Curbside Collection Capacity*



# Cornwall

Final Project Report, February 2015

City of Cornwall

CIF Project number 617.3

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*This Project has been delivered with the assistance of Waste Diversion  
Ontario's Continuous Improvement Fund, a fund financed by Ontario  
municipalities and stewards of blue box waste in Ontario.  
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# 1 Background

## 1.1 Municipal Information

Cornwall is one of Canada's oldest settlements, having been established in 1784 by United Empire Loyalists.

The City of Cornwall is a single-tier municipality located along the St. Lawrence River in eastern Ontario with a population of 46,340 (2011 Census). It is the focal point of a larger region, the United Counties of Stormont, Dundas and Glengarry. Together, the City and Counties have a population of 111,164. The First Nations community of Akwesasne is located immediately south of Cornwall and plays an integral part in Cornwall's culture, community and economy.



Cornwall's diversity is further enhanced by the presence of a large francophone population. In the 2011 Census, nearly 23 % of the population identified French as their mother tongue. This fact contributes to Cornwall's standing as a proud bilingual city.

The City currently has a contract with HGC Management Inc. for the collection and processing of recyclable materials, solid waste collection, operation of the Municipal Hazardous Waste Depot as well as leaf and yard waste collection. Blue box materials collected at the curb are taken to the City's Material Recycling Facility. The material is manually sorted into different marketable categories, baled and sold. The City pays for collection and processing by the tonnage and receives 100% of the revenue of marketed materials. In 2011, the City marketed a total of 2,710 tonnes at a net cost of \$481,326. This resulted in a cost of \$178 per marketed tonne. The City's blue box diversion rate was 26.00% in 2011 (WDO Datacall).

The City began a review of its current waste management strategies and programs in 2009 and released a Solid Waste Management Master Plan (SWMMP) in 2011. The SWMMP was developed to assist and guide the City's waste management programs for the next 20 years. One of its many recommendations was to increase curbside collection capacity by either providing larger blue boxes to residents, implement an automated cart system or promote the use of clear blue bags.

From 2005 to 2012, The City's recycling collection program was a bi-weekly two-stream process in which residents were required to sort their containers from the paper products. Containers (glass, plastics and metals) were placed in a blue box while paper products (newspaper, fine paper, boxboard, magazines etc.) were placed in a black box.

## 1.2 Project Description

On April 1, 2012, the City of Cornwall switched from a bi-weekly recycling collection schedule to a weekly, single-stream blue box collection program for all households in the municipality.

In an effort to assist residents capture more recyclable materials, with a focus on plastics and new material types added to the program, the City delivered new, larger 22-gallon blue box containers to all single family households at the end of March 2012, in time for the launching of the new collection process.

The switch to weekly single-stream blue box collection was well received by the community and lead to increased participation in the recycling program. From 2011 to 2013, the City experienced a 28 per cent increase in the amount of blue box materials processed.

To build on the improvements to the household recycling program, the City also introduced a multi-residential recycling program in the fall of 2012 to increase participation rates among multi-residential properties in the City.

The City of Cornwall encourages residents to participate in the blue box program and makes it easy for them to do so. New or additional blue boxes can be purchased at any time at City Hall at a cost of \$5.80 (tax included).

Table 1: Project Summary

City of Cornwall	
Amount of CIF 617.3 Grant	\$ 62,810
Number of 22 Gallon Blue Boxes approved	17,350
Number of Blue Boxes distributed	17,350
Dates delivered	March 20 - April 4, 2012
Increased annual tonnage attributed to new Blue Boxes	18% change

## 2 Implementation

### 2.1 Goals & Objectives

- 1) Increase blue box diversion rate from 24% to 29%, by increasing the available capacity at the curbside with large blue boxes.
- 2) Increase the participation rate by increasing the frequency of collection to weekly and by making it simpler to recycle by going to single stream.
- 3) Increase the capture rate of plastic packaging by an enhanced promotion and education campaign.
- 4) Increase the list of acceptable materials by including polycoat products (milk and juice carts, Tetra packs, gable top, frozen juice containers)
- 5) Decrease residential garbage sent to landfill by 7% (down to 13714 MT in 2012).

### 2.2 P&E – Key Messages

The City of Cornwall used an extensive promotion and public education campaign to inform residents of the delivery of the new larger blue box and the switch to a weekly, single-stream blue box collection program.

#### **“1 Green Cornwall”**

The campaign was built around *1 Green Cornwall*, an initiative to highlight the City of Cornwall's environmental programs and to encourage civic participation in the 3 R's - Reduce, Reuse and Recycle.

The key slogan was, “There’s one way to make Cornwall green. One program that covers waste, recycling and more. One place for information and answers. One way to participate to make our City a better place to live. *1 Green Cornwall*... It all starts with one... You.”

The *1 Green Cornwall* logo was hot stamped to the new blue boxes.



**1 Green Cornwall**  
**1 Cornwall vert**



### “The NEW Blue Box – One Stream Every Week!”

A graphic was created using the new blue box and an arrow with illustrations of the acceptable recycling material. This graphic was used in the Calendar, posters, as well as a refrigerator magnet. In addition to *1 Green Cornwall*, the graphic is easily identifiable to our program and the format is used for other programs (such as the Multi-Residential Recycling program). Other municipalities, such as the neighbouring Township of South Stormont, have also made use of it.

### “Plastic Is In!”

Under their approval, Stewardship Ontario’s “Plastic is in” ad was translated in French and added as full top page for the month of August in the 2012-2013 Waste and Recycling Collection Calendar. It was also used in the 2013-2014 Calendar.

Into the Blue
Out of the Blue

Remember, all rigid food, beverage and household containers can go into your blue box to be recycled into new products.

The products we can make from recycled plastics are becoming part of our everyday lives. Look for them the next time you shop and remember when you put plastic into your blue box or blue bag, you keep them out of our landfills and waterways. It's never too late to begin. Remember, plastic is in!

## Plastic Is In!

Le plastique dans la bonne voie

N'oubliez pas : tous les contenants rigides de provenance agroalimentaire ou domestique sont les bienvenus dans votre boîte bleue. Ils sont recyclables et pourront être transformés en

Les produits fabriqués à partir de plastiques recyclés font désormais partie de notre quotidien. Essayez de les repérer la prochaine fois que vous magasinez. Et n'oubliez pas que lorsque vous déposez du plastique dans votre boîte bleue ou dans votre sac bleu, vous contribuez à éviter qu'il se retrouve dans nos dépotoirs et cours d'eau. Il n'est jamais trop tard pour commencer. N'oubliez pas : dans la boîte bleue, le plastique est dans la bonne voie!

Je serai recyclé
J'ai été recyclé



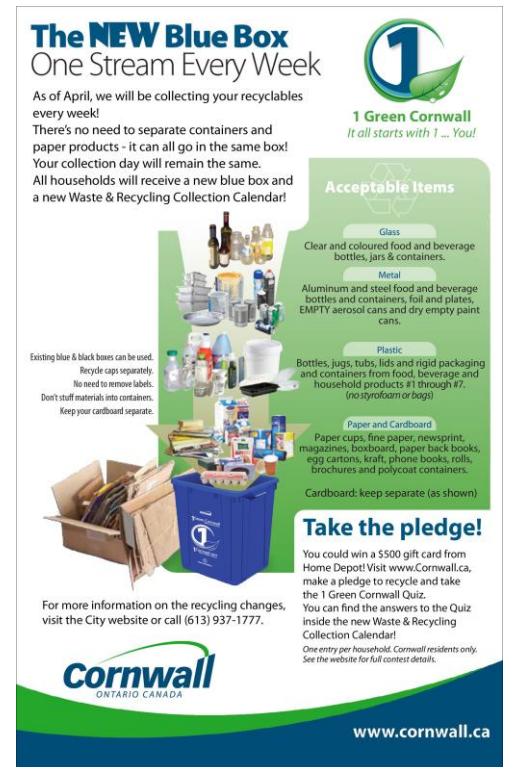
## 2.3 P&E Tactics

Under the *1 Green Cornwall* banner, the distribution of the new blue boxes and the new collection programs was promoted in a variety of ways:

- Media releases that were picked up by local media establishments highlighting the program changes.
- Paid advertisements in local print and radio outlets.
- Information included the City Hall Bulletin.
- An information segment produced for the local community cable TV station.
- Information booth at the Cornwall and Area Chamber of Commerce "Spring Home Show". New Blue Box was on placed on display with examples of acceptable recyclable materials. Staff was on hand through the weekend to hand out the new Waste & Recycling Collection Calendar and answer any questions.



- Posts on social media outlets such as Facebook and Twitter.
- Posters that were displayed in municipal buildings, Cornwall Transit buses and businesses throughout the community.
- Publication of a new Waste and Recycling Collection Calendar which contained information on the recycling program changes. The calendar was delivered to all households in the City.
- The Website was updated to include all media releases, and information on the new blue boxes as well as the online contest.
- An online contest where residents were encouraged to make a pledge to recycle and complete the *1 Green Cornwall* quiz. Answers to the quiz could be found in the calendar encouraging resident to browse through the calendar and become familiar with the recycling program. Approximately 400 residents participated and the winner received a \$500 gift card to the Home Depot.



These activities were undertaken during the months of March and April 2012, just prior to and shortly after the delivery of the new 22-gallon blue boxes and the introduction of the weekly single stream recycling program.

The department continued with the promotion of the new program throughout the year at various events:

- April 2012 - Spring Clean Up Day: Display booth and calendar distribution
- May 2012 - Bark & Compost Day
- September 2012 - Team Cornwall and City of Cornwall Golf Tournament: A putting contest was held for participants “Putt Into the Cup” with winners entering into a draw for Waste Diversion Kit (Blue box, Backyard Composter and Leaf & Yard waste bags).
- April 2013 – Chamber of Commerce Spring Home Show: A Fridge magnet was developed as a quick guide to the changes to the recycling program



## 2.4 Distribution Method

The new blue boxes were delivered door to door to each single family household by HGC Management Inc., the City’s waste and recycling collection contractor. Quotes for the delivery were received by two companies, with HGC Management Inc. being the lowest price received at \$0.89 per blue box. The boxes were delivered by HGC’s staff using a cube van over a two week long period.

Deliveries overall went well, although some challenges occurred with duplexes and other single family homes with basement apartments. In addition residents were anxiously awaiting their new blue box which prompted several calls enquiring about delivery timelines.

Should the corporation require distributing containers or carts for other projects, logistic contingencies will be incorporated in the distribution contract. This would save City staff time from dealing with missed drop offs and complaints.



## 2.5 Budget & Expenses

### Project Budget

Table 2: Project Budget

Project Task/Expenses	Estimated Total Cost	CIF Funding %	CIF Funding Maximum \$
Purchase 17350 – 22 gallon blue boxes with at least 60% PCR	\$90,220	50%	\$45,110
Delivery of Blue Boxes	\$30,400	50%	\$15,200
Promotion and Education material	\$5,000	50%	\$2,500
Final Report	Included		Included
Totals	\$125,620		\$62,810

### Project Expenses

Table 3: Actual Expenses

	Per Unit Cost	Quantity	Total
Blue Box	\$5.12	17350	\$88,832.00
Blue Box Artwork	\$250.00	1	\$250.00
Distribution	\$0.89	17350	\$15,441.50
P&E Cost	Printing of Calendar	25000	\$8,746.00
	Calendar Distribution	22847	\$3,996.75
	Radio Advertising - CJSS FM	50	\$750.00
	Variety Radio	50	\$950.00
	Posters	120 (some done in house)	\$55.50
	Newspaper advertising	OCNA/CAN funding	\$0.00
	Fridge Magnets Printing	1000	\$769.00
Total cost			\$119,790.75
Total cost + 1.76% HST			\$121,899.07
CIF Cost Share at 50%			\$60,949.53

### 3 Results

Comparing 2011, a full year prior the delivery of the larger blue boxes, to 2013, a full year after the implementation of the weekly single stream recycling program has demonstrated that both tonnage collected and participation rate has increase. The residual rate at the MRF increased slightly in the first year but has stabilized in 2013. Residents are encouraged to reduce contamination rate by a tag and leave system should they set out blue boxes with a high percentage of contaminants. Some modifications were also required to the MRF to accommodate single stream processing.

The City continues to promote acceptable materials with the annual calendar, updates on its websites, attending specials events and with enquiries.

It was City's desire to make participating in the Blue Box program as easy as possible. By providing a free larger blue box to each single family residence, changing the collection process to single stream and increasing the frequency of collection, the City has made great strides in helping its resident recycle.

The City continues to monitor and enhance its waste diversion programs and initiatives. In 2014, the City hired a consulting firm to conduct seasonal curbside waste audits. The results of the audits will not only provide additional data to evaluate the blue box program but also provide information needed to expand the waste diversion programs.

Table 4: Results

Tracking Methodology	Prior to Delivery 2011	2012 (Delivery April 1 <sup>st</sup> )	2013	% increase (2011-2013)	2014	% increase (2011-2014)
Blue Box Tonnes Collected	2526.53	2878.36	3065.11	21.31%	2944.38	16.54%
Marketed Tonnes	2470.98	2480.06	2861.25	15.79%	2818.42	14.06%
Plastics	231.56	219.32	597.87	158.19%	678.96	206.75%
Aluminum	26.41	42.12	36.23	37.19%	24.67	(2.27%)
Steel	142.49	126.79	141.27	(0.86%)	135.19	(0.74%)
Fibre	1868.91	1914.39	1866.70	(0.12%)	1812.08	1.43%
Glass	201.61	177.44	219.18	8.72%	167.51	(13.08%)
Residual at MRF	123.69	212.84	95.24	(23%)	118.77	(3.98)
Garbage Tonnage (curbside collected)	14824.67	13713.66	13943.23	(5.95%)	13551.85	(8.59%)

### 3.1 Tonnage Results

Table 5: Tonnes collected before & after delivery of Blue Boxes

	12 month period before Blue Boxes were delivered	12 month period after Blue Boxes were delivered
Tonnes	2534.47 tonnes	2998.40 tonnes
Residual	138.37 tonnes	212.05 tonnes
Kg/household/year	124.04 kg/hhld/yr	146.73 kg/hhld/yr
Residential Curbside Garbage Collection	14939.48 tonnes	13442.89 tonnes

Table 6: Tonnes (kilograms) collected before & after delivery of Blue Boxes

	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar*	Total
2011- 2012	209.43	237.62	216.01	192.29	226.67	223.98	208.96	221.12	227.56	198.13	172.58	200.12	2534.47
2012- 2013	256.99	293.85	245.69	238.26	247.71	234.84	265.16	263.59	261.44	254.84	204.70	231.33	2998.40
% Diff	22.7%	23.7%	13.7%	23.9%	9.3%	4.8%	26.9%	19.2%	14.9%	28.6%	18.6%	15.6%	18.3%
2013- 2014	277.41	295.01	259.04	262.44	246.37	252.39	265.31	256.05	260.22	234.47	192.77	214.61	3016.09
% Diff	32.5%	24.2%	19.9%	36.5%	8.7%	12.7%	27.0%	15.8%	14.4%	18.3%	11.7%	7.2%	19.0%

Table7: Residual at MRF before & after delivery of Blue Boxes

	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar*	Total
2011- 2012	14.53	11.96	10.75	11.19	10.95	11.61	11.07	8.41	12.89	9.87	14.42	10.71	138.36
2012- 2013	9.51	11.82	15.59	15.46	31.33	21.97	11.37	29.08	30.63	22.52	8.77	3.99	212.04
% Diff	(34.5%)	(1.2%)	45.0%	38.2%	186.1%	89.2%	2.7%	245.8%	137.6%	128.2%	(39.2%)	(62.7%)	53.3%
2013- 2014	10.54	3.73	7.41	6.23	8.76	7.66	7.4	4.79	4.37	12.77	4.86	4.05	82.63
% Diff	(27.5%)	(68.8%)	(31.1%)	(44.3%)	(20.0%)	(34.0%)	(33.2%)	(43.0%)	(66.1%)	29.4%	(66.3%)	(62.2%)	(40.3%)

## List of Appendices

### **1. Invoices**

- a) Blue Box Purchase
- b) Delivery
- c) Calendar Printing and Mailing
- d) Radio Advertising Campaign
- e) Posters
- f) Fridge Magnets

### **2. Promotion & Educational Material**

- a) 2012-2013 Waste & Recycling Calendar
- b) 2013-2014 Waste & Recycling Calendar
- c) Poster
- d) News Paper Advertisings
- e) Fridge Magnet
- f) Media Releases
- g) City Hall Bulletins