



The Big Blue: increasing container capacity and controlling litter


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INTRODUCTION

The City of Greater Sudbury (CGS) has been operating a Blue Box Recycling Program since 1991. The City provides unlimited weekly blue box curbside collection to residents within the City of Greater Sudbury boundaries. Recyclable materials are only collected from “traditional” square Blue Box containers which are provided to residents at no charge.

The City of Greater Sudbury currently accepts the following recyclable products:

- Corrugated Cardboard
- Boxboard
- Newspapers, Books, Magazines and Catalogues
- Household Paper
- Plastic Bottles, Jugs, Tubs, Pails, Trays & Foam Packaging 
- Plastic Bags
- Clear and Coloured Glass Bottles and Jars
- Aseptic and Polycoat containers
- Aluminum Foil, Pie Plates and Trays
- Aluminum and Steel Cans
- Empty Paint Cans and Aerosol Cans
- Cardboard Cans

The City of Greater Sudbury Recycling Centre operates a single stream system collection and processing system (since 2006), enabling residents to combine all of their recyclables into one container without sorting. The items are later sorted both mechanically and manually at the processing plant. The current system for processing recyclables does not allow for the use of plastic bags as containers for the packaging of mixed recyclable materials. The only option for curbside collection at this time is the traditional square Blue Box. With the abundance of recyclable materials accepted in the City’s Blue Box program, many households currently use multiple Blue Boxes and tend to over pack them causing items to fall out and create litter. For these reasons, the City has received requests from residents for a larger capacity container and containers with lids.

During the winter season blue box replacement requests were often received, as the traditional boxes often would disappear into the snowbanks during adverse weather, resulting in plow damage, snow buried boxes and destroyed boxes.

Many municipalities with a single stream system are implementing automated recycling and waste management collection systems with the corresponding large automated collection carts. At this time, the City of Greater Sudbury is without the option of automated cart collection without making a significant investment in collection vehicles (an option that is not suitable with 7 years left in collection contracts). Automated collection can also be problematic as it may increase contamination and it requires that all residents have large containers regardless of the ability to store these containers in their homes/on their property or the willingness to pay for costly replacement containers. For these reasons, any product used would have to be manageable by the manual curbside collection staff.

The City of Greater Sudbury is proactive in its waste diversion and litter prevention efforts, and it was determined that improvements could be made to increase diversion rates, decrease litter and make it more convenient for its residents to maximize their diversion efforts. As part of the City of Greater Sudbury's continuous improvement efforts, best practices initiatives were undertaken to improve the effectiveness and efficiency of the existing blue box recycling program.

A variety of large capacity recycling containers with lids are produced which hold the equivalent volume of 3 traditional square blue boxes. Over the period of one year, the City piloted a small number of large capacity container to ensure that the containers would be durable throughout the seasonal weather variation extremes and that there would be no negative effects on curbside collection. The City chose a durable pliable LLDPE 32 gallon container with molded handles and removable lid. It was incorporated into the City's Blue Box program and named "Big Blue".



The City began selling the containers to residents at cost (\$34). Due to the high cost of the containers, residents were reluctant to purchase them. Most residents chose to continue using their free traditional Blue Boxes.

To make the Big Blue more affordable for residents and therefore encourage their use, the City made an application to the Continuous Improvement Fund. The funding would be used to reduce the cost of the containers by 50% making the Big Blue available to residents at a total cost of \$17. The containers would be sold during a one day truckload sale event.

PROJECT ROLL-OUT

The City generated an RFP to produce 2000 Big Blue containers and deliver them at a central location. The successful bidder was also required to attend the Big Blue sale to unload the containers from the trucks and assist staff in distributing them to residents.

To advertise the Big Blue program, staff instituted a multi-media advertising campaign including newspaper, radio, website, posters in libraries and Citizen Service Centres and direct information to residents when they called in.



Saturday May 29, 2010
1825 Frobisher St.,
Sudbury
8 a.m. - 4 p.m.
(or until supplies last)

ONLY
\$17.00
*We will be accepting
cash or cheque only.*

BIG BLUE **Recycling
Container
Truckload
Sale!**

Limit of two per household.
These large, City-approved recycling containers are ideal for residents
who generate large quantities of blue box recyclables.

Big Blue Poster and Newspaper Ad

Staff developed a registration survey for residents purchasing Big Blues to track the distribution and establish contact information for follow-up. The survey also allowed staff to gather current residential recycling practices and satisfaction with the existing traditional square Blue Box.

On May 29, 2010 the City of Greater Sudbury held its first “Big Blue Truck Load Sale Event” to allow residents eligible for curbside collection an opportunity to purchase a Big Blue at a reduced price of \$17. The event was conducted at the City’s Recycling Centre located at 1825 Frobisher Street in Sudbury. Big Blues were sold between 8:00 a.m. and 4:00 p.m. with a limit of 2 containers per household.



The Big Blue supplier provided for transportation of the product to the distribution location, as well as staff to unload and distribute the containers throughout the day. CGS staff handled sales, administration of the registration survey and public relations.

Any resident wishing to purchase a container at a reduced price had to complete the Big Blue Registration Survey (see Appendix I).

During the Big Blue Truck Load Sale Event 1,466 Big Blues were sold to Greater Sudbury residents. The remaining 534 unsold Big Blues sold from the City's Environmental Services office. Residents purchasing the containers were still required to fill out a survey in order to receive the subsidized pricing.

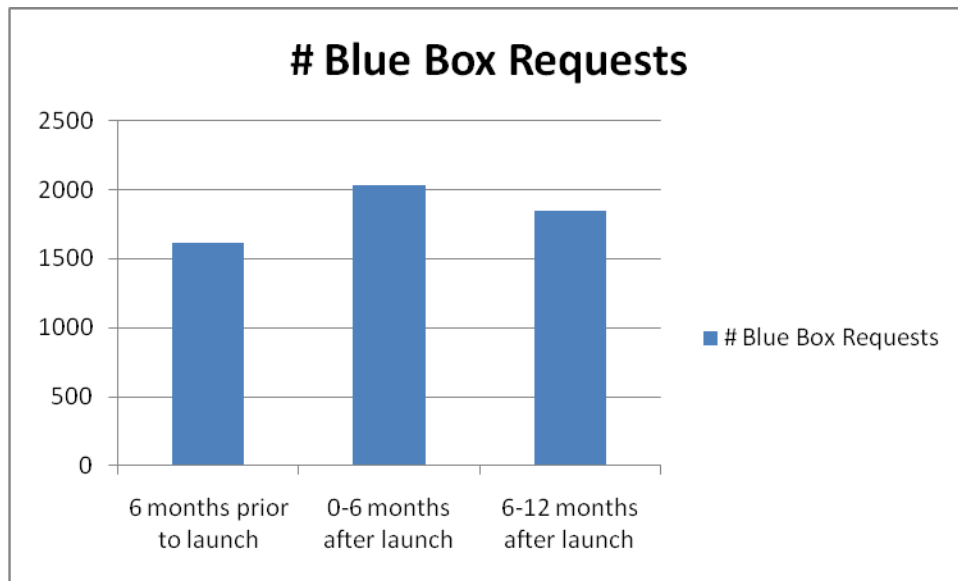
PROJECT MONITORING AND FOLLOW-UP

Requests for new Blue Boxes:

Residential requests for Blue Boxes were tracked using the City's internal call centre system (ACR) allowing the City to determine if less requests for additional blue boxes were received after the introduction and initial distribution of the Big Blue. It was expected that the number of blue box requests received would decrease due to the implementation of the Big Blue. Data tracking from the ACR system showed that this was not the case (see Table 1). The data does show that the number of requests decreased 6-12 months after the roll-out compared to the requests prior to the Big Blue's introduction (6 months previous). One of the factors negatively impacting the anticipated result may have been the City's enforcement of not collecting mixed

recyclables in bags. It is very likely that the enforcement of this policy could have driven the rise in Blue Box orders.

Table 1: Total Blue Box Requests



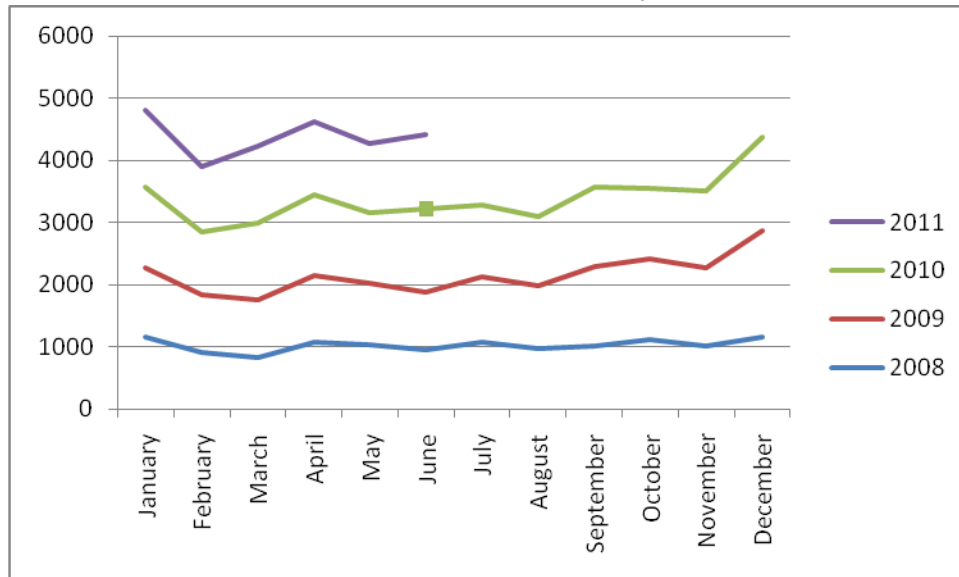
As there have been historical issues with snow plows and the traditional blue boxes being destroyed or buried in the snow, it is important to note that no such complaints were received during the Winter 2010-2011 season regarding Big Blues being destroyed or damaged in this way.

Tonnage Results:

Staff expected the volume of residential inbound recycling material would increase following the Big Blue introduction, since the overflow that may have otherwise gone into the waste stream would now be captured. Total Residential Tonnage logs were maintained to observe trends (see Table 2).

Although the data showed an increase in tonnage, it would appear that this increase is due to existing annual trends and not due specifically to the introduction of the Big Blue. Increases in processing costs for a higher volume of residential inbound material received would therefore not be attributed to the Big Blue introduction.

Table 2: Total Residential Recyclables



The roll-out date of the Big Blue Program is indicated on the chart 

Follow-up Survey Results:

Using the addresses provided in the registration Survey, Staff mailed a follow-up survey to each resident that had purchased a Blue. The follow-up Survey had the purpose of determining satisfaction with the new Big Blue recycling bin and if users of the container had increased their recycling efforts.

Unlike the Registration Survey, participation in the Follow-up Survey was not mandatory. At the time that this report was written, the City had sold 1872 to 1187 residents who responded to the Follow-up Survey. Residents' enthusiasm for the new Big Blue containers was apparent with this 90% response rate.

The full results of the survey can be viewed in Appendix II however, there are some notable results and comparisons to highlight.

The majority of residents who purchased big blues, were currently using between 2 and 4 blue boxes (78%) and placing them at the curb on a weekly basis. Using the Big Blue did not affect the frequency at which residents placed recycling to the curb.

The majority of registration survey respondents were unsatisfied with their traditional square Blue Box (71%) and claimed to have more recyclables than could fit in their traditional square Blue Boxes (84%). There were 13% of residents who said that they placed their extra recyclables in the garbage stream either via curbside collection or delivery to the landfill site. In addition, 8% of residents responded that they place extra recyclable in clear bags at the curb contrary to City collection policy. Residents using the Big Blue and responding to the follow-up survey were satisfied with the large capacity container (95%), felt that it made recycling easier (95%), claimed to recycle more (54%) and felt that it helped reduce windblown litter (94%). Even though 33% of respondents said that they still did not have enough space for all their

recyclable material, only 4% said that they placed their extra recyclables in the garbage stream either via curbside collection or delivery to the landfill site. Respondents using the Big Blue dealt with extra recyclable material by placing them in their traditional square blue box (73%) or in a cardboard box (8%). Furthermore, 97% of Big Blue users stated that they had not ordered any new traditional square Blue Boxes since purchasing their Big Blue. The amount of residents placing mixed recyclables in bags decreased to 2%.

CONCLUSION

The Big Blue Truckload Sale encouraged residents to use the Big Blue and made it more accessible due to reduced pricing. The Big Blue increased container satisfaction, encouraged residents to recycle more, discouraged residents from placing recyclables in the garbage stream or in plastic bags and helped to prevent windblown litter. Records indicate that Big Blues avoided damage by plows and heavy snowfall. Those using Big Blues did not have to order more traditional Blue Boxes but the results indicate that the traditional Blue Box is still used to deal with additional recyclables that will not fit in the Big Blue. Although an increase in tonnage could not be associated with the Big Blue Truckload sale, most residents felt that they were recycling more with their Big Blue.

Due to the high level of resident satisfaction and the ease of collection, the City has continued to stock and sell the Big Blue containers. The Big Blue is now an official part of the City's residential recycling program. Since the Big Blue holds approximately the same amount of blue box material that can be contained by 3 traditional square Blue Boxes that are provided at no cost to residents, the City continues to sell the containers at a discounted price (\$17) in order to encourage residents to use the Big Blue.

APPENDIX I – REGISTRATION SURVEY RESULTS

How often do you place Blue Box at curb for collection?	Weekly	97.71 %
	Bi-Weekly	2.04 %
	Monthly	0.17 %
	Other	0.08 %
Do you have extra recyclable material that cannot fit into current Blue Box?	Yes	84.20 %
	No	58.86 %
Are you satisfied with current Blue Box container?	Yes	29.43 %
	No	70.57 %
Number of Blue Boxes currently used	No response	5.7%
	1	9.4%
	2	33.6%
	3	25.7%
	4	18.3%
	5	3.5%
	6	2.2%
	>6	1.4%
What do you do with extra recyclable materials?		
Put in the garbage	11.35 %	
Save for the following week	44.28 %	
Place at the curb in cardboard box	27.07 %	
Bring to Recycling Center	3.93 %	
Bring to Landfill	1.92 %	
Use recyclable bags	7.69 %	
Use old Blue Box	2.45 %	
Other	1.31 %	
Why do you want to use a Big Blue?		
Prevent Litter	21.59 %	
Capture more Recyclables	35.62 %	
Able to place BB at curb less	5.13 %	
Durable & last longer	10.44 %	
Make Recycling Easier	20.45 %	
Has a lid – recyclables not affected by the elements	2.5 %	
Keep animals, bugs & birds out	1.01 %	
Current recycling container is illegal	0.61 %	
Keep it outside – Clean & Organized – Generally easier – Less trips	1.62 %	
More capacity	1.32 %	
Other	0.7 %	

APPENDIX II – FOLLOW-UP SURVEY

How often do you place Blue Box at curb for collection?	Weekly	91.92 %
	Bi-Weekly	4.75 %
	Monthly	0.70 %
	Other	2.64 %
Do you place your Big Blue at the curb less frequently than your Blue Box?	Yes	9.88 %
	No	90.12 %
Can you fit all of your Recyclables in your Big Blue?	Yes	67.08 %
	No	32.92 %
Do you recycle more now that you have a Big Blue?	Yes	53.63 %
	No	46.37 %
Are you satisfied with your Big Blue?	Yes	95.05 %
	No	4.95 %
Do you think your Big Blue helps prevent litter?	Yes	94.48 %
	No	5.52 %
Do you find the Big Blue more durable than your previous BB?	Yes	88.10 %
	No	11.90 %
Do you think the Big Blue makes recycling easier?	Yes	95.02 %
	No	4.98 %
Have you ordered a traditional BB since purchasing the Big Blue?	Yes	2.65 %
	No	97.35 %
What do you do with extra recyclable materials?		
Put in the garbage	3.51	%
Save for the following week	7.89	%
Place at the curb in OCC	11.40	%
Bring to Recycling Center	0.44	%
Bring to Landfill	0.88	%
Use recyclable bags	2.19	%
Use old Blue Box	72.81	%
Other	0.88	%