

Durham Region Additional Complimentary Blue Box: Increasing Recycling Compliance and Capture Initiative, CIF Project #189

Project goal: To increase residential Blue Box recycling rates and increase collection efficiency.

Anticipated impacts: Increase in program participation and capture of recyclable materials, decrease in non-compliant bin set outs, decrease in commingled bins and contamination.

Why this Project?

- * In 2008, Durham Regional Council set a waste diversion goal of 70%.
- * Durham has a two stream Blue Box program (fibre/containers) in which container recyclables are collected separately from fibre recyclables. Before this project, residents were provided with one complimentary 14 gallon blue box only and had to purchase any additional boxes.
- * A 2009 set out survey of 10,980 households determined **1.5** was the average number of boxes set out per household. 49% of households had <2 boxes, 39% had 2 boxes and 13% had >3 boxes. 18% of households were using non-compliant receptacles to set out their blue box recyclables.
- * KPMG study titled, "Blue Box Program Enhancement and Best Practices Assessment Project, 2007" indicated an increase in collection capacity at the curb as a best practice to increase recycling rates.

Project Details

This project tested the impact that the provision of one additional 22 gallon (83 litre) blue box for container recyclables to every single family residence would have on overall recycling rates in Durham Region.

The impact of this distribution on Durham's overall recycling program was measured by auditing the program before any advertising of the program, immediately after the distribution and again one year later. This methodology ensured that program advertising prior to the roll-out had no impact on resident behaviour and that any seasonal variations were accounted for.

The following are some highlight details of the program roll-out:

- * 190,000 box production order.
- * Production contract: Orbis/Norseman @ \$4.55 / box.
- * Delivery contract: Delta Global Logistics @ \$1.23 / delivery.
- * Boxes hot stamped as "Containers Only".
- * Distributed to 183,174 households from Sept. 27 to October 29, 2010. >99% successful deliveries.
- * Call Centre received 1,382 project related calls: 750 inquiry calls and 632 missed box delivery calls. 19 email inquiries.
- * CIF funded 47% of the project cost for a total of \$607,392.

Audit Results

AET Consultants performed a participation and composition study of 1,000 single-family households, comprising 100 random households in 10 neighbourhoods representative of Durham's urban and rural mix, over four 2 week periods before the roll-out - June 14-28, 2010 and immediately after the rollout - November 15-26, 2010. They audited the same households again one year later – June 13-24 & November 14-25, 2011.

A sub sample of 100 random households was used to conduct a residual waste composition study to measure the amount of recyclables lost to the residual waste stream.

Another sub sample of 250 random households was used to audit the composition of the container stream.

The final audit report is attached.

The results of the AET performance audit are summarized in Table 1.

Table 1.
Audit Results

Measured Item	Pre-rollout result	Post-rollout result	% Change
Average weight of containers stream per blue box	1.76 kg	2.14 kg	+21.6%
Average density of containers material per household	27 kg/m3	28 kg/m3	+3.7%
Participation rate	77.3%	78.6%	+1.7%
Set out rate	93.2%	90.2%	-3.2%
Number of households with co-mingled recycling	152	105	-30.9%
Number of non-compliant bins set out during study	308	146	-52.6%
Percentage of recyclable material in garbage stream	7.2%	8.6%	+19.4%
Percent contamination in container recycling stream	9.14%	10.69%	+16.9%
Average capacity of each bin/container set out for the containers stream	65.5 Litres	75.8 Litres	+15.7%

As can be seen above, the average weight of container stream blue boxes increased while the average density of the material did not. This indicates an overall increase in the number of containers residents were putting in their blue boxes.

Further, the set out rate dropped slightly because some residents set out blue boxes for collection only when full and, with larger capacity boxes, some residents held onto their blue boxes longer between collection periods.

Promotion and Education

The Region developed an extensive Promotion and Education campaign for a total cost of \$121,068, which included:

Media Relations

News releases were strategically issued prior to the launch and following all events or substantial developments to keep the media and other stakeholders informed. News releases were timed to promote public awareness of the blue box distribution exercise.

Story ideas were also pitched to Assignment Editors for feature stories and editorials in local community newspapers.

Advertising

Newspapers/Magazines:

Fifty-nine full colour recycling ads ran in local newspapers/magazines between August and November.

Outdoor Billboards:

Four billboards focused on the arrival of the new Blue Box were strategically placed throughout the Region.

Go Transit Advertising:

Poster style ads focused on the Region's two-stream recycling program were placed at the Oshawa, Whitby, Ajax and Pickering Go Transit stations.

Rogers TV:

A five minute interview segment focused on the Region's two-stream recycling program took place in September on Roger's TV

Compton Cable:

Still frame advertising of the Region two-stream recycling program ran for eight weeks (Aug. 23 to Oct. 15) on Compton Cable.

Durham Radio:

Radio ads on Durham Radio (KX 96, The Rock, CKDO) ran the weeks leading up to the launch date and afterwards as a reminder to the public of the recycling program.

DurhamRegion.com Leader board ad:

With 140,000 unique visitors per month and 2 million page views per month, this form of advertising acts like a gateway to the Region's website. Leader board space was utilized from August to October.

Durham Radio Leader board ad:

With 125,000 unique visitors per month and 1.7 million page views per month, this form of advertising acts like a gateway to the Region's website. Leader board space has been booked for August, September and October.

Municipal Links and community pages:

The Region requested links from all municipal websites to the Region's site www.durhamregionwaste.ca. The Region also requested the use of space for advertising on municipal community pages where available.

Cineplex:

An eight-week advertisement run (August and September) ran on thirty-one screens at Cineplex Ajax, Oshawa and Bowmanville.

Public Education Campaign

Staff used available space for articles and advertisements in Durham Works, an external newsletter produced by the Durham Region Works Department. Durham Works is distributed to all residents of Durham Region twice a year in the early spring and fall. Articles also appeared in the Region's internal newsletters, *In the Works* and *Connections*, promoting the second recycling box and the Region's two-stream program.

A recycling program display was created and set up at fairs and community events by Waste Management staff to increase public education and awareness.

Durham Region's website was updated regularly to include more information about the program as it became available. All promotional materials listed the website address for further information: www.durhamregionwaste.ca.

Durham Region's 2011 calendars included more information about the Region's two-stream recycling program.

Project Challenges

- Blue Box production size made sourcing enough post consumer recycling resin an issue and resulted in a five-week production delay.
- Residents using 83 litre (22 gal) box for fibre stream resulted in some overweight and oversize issues. However, this was a minor issue which was easily resolved through the use of the Region's promotion and education materials and friendly reminders from the Region's by-law officers.
- Minor push back from collection contractors who now have to sort recyclables from new deeper boxes.

What the Region Would do Differently

- * Launch in conjunction with new acceptable Blue Box materials. This would provide additional exposure to the launch of the larger Blue Box and provide a good opportunity to promote and educate residents on program changes.
- * Allow more lead time to help mitigate concerns regarding production delays.

Conclusions & Next Steps

- * Residents are recycling more.
- * Participation compliance has improved.
- * More efforts needed in capturing additional divertible material from waste stream
- * Continue ongoing promotion and education efforts to maintain or increase participation and capture and, to decrease contamination in the recycling stream
- * Increased contamination in container stream was due to increase in mixed plastics which will be addressed with the introduction of mixed plastics to Durham's blue box program
- * Utilize the additional capacity to expand Blue Box items to include mixed # 3-7 plastics and #1 Thermoform PET.