

Multi Residential Service Standardization Initiative- Quinte Waste Solutions
CIF Project No: 864

Final Report
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Prepare for:
Waste Diversion Ontario
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Prepared by:
Jackie Brown



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1. Summary

This is the final report of project #864 implemented by Quinte Waste Solutions between October 2014 to April 2016. The project goal was to increase waste diversion, reduce cross contamination, increase participation and reduce residue. The Quinte Waste Solutions' initiative served also to standardize multi-residential collection within its service area.

Quinte Waste Solutions is a municipal service board that serves nine member municipalities in Hastings and Prince Edward Counties, in central eastern Ontario and currently provides blue box recycling to 64,000 households, including 5000 households in multi-residential buildings.

Our strategy for this project was to focus on four high rise multi-residential buildings. Each of the four buildings was provided with a wide array of Promotion & Education (P&E) materials to educate residents about proper set out practices.

Upon completion of our project the goals to increase waste diversion, reduce cross contamination, increase participation and reduce residue have been advanced.

2. Introduction and Background

As residue costs were increasing, loads coming out of the trucks were examined and the source of contamination was traced to its source. The majority of the contamination was coming from the rural depots and apartment buildings. There were items that were not recyclable and a lot of cross contamination inside the carts.

Our strategy for this project was to focus on four high-rise multi-residential buildings. Quinte Waste Solutions gave each unit a reusable bag with a divider and sort card printed directly on the bag to assist in the efforts of sorting and reduce the volume of plastic bags being used with cross contaminated materials. Posters were added to mail, laundry and garbage chute rooms. A newly designed sort card was delivered with each reusable bag, new picture labels were added to all carts in the depot/recycle center. Grey lids were added to all the fibre carts to aid in separation of paper products from container products.

Upon completion of our project we have learned that our goals to increase waste diversion, reduce cross contamination, increase participation and reduce residue have yielded an improvement.

Table 1.1 shows a tonnage change over the years. There has been a slight decline due to the increased promotion of the the Take it Back initiative as well was a tonnage decrease due to contamination found in the carts at the multi-residential buildings forcing our drivers to reject the materials on site.

Table 1.1 Annual Tonnage (kgs) collected from multi-residential

	2014	2015	2016 (Jan – Apr 20)
Tonnes Collected	547.53	519.85 MT	40.71
Kg/unit/year	110	104	.010

3. Pre-Audit

Table 2.1 displays the results from the pre-audit at the four study buildings. The pre-audit results showed the main contaminants included hot beverage coffee cups, which are not part of QWS' program, non-recyclable low grade plastic, mixed recycling tied up in grocery bags. The audit also revealed cross contamination - paper products mixed in the container carts and cans and hard plastics mixed in with the fibre carts.

Table 2.1 Tonnage (kgs) collected from the four study buildings for the pre-audit

Location	Fibre Carts	Fibre Carts Contamination	Container Carts	Container Carts Contamination
180 Haig Rd.	35.5	25.5	40	20
165 Herchimer Ave.	26.5	12	10	6
179 Palmer Rd.	67	5.5	12.5	2.1
191 Palmer Rd.	19	7	12	8

After the pre-audits were completed, the blue lids on all the fibre carts were changed to grey lids, and new labels were affixed to all the carts including the corrugated cardboard bin. A detailed picture with divider reusable bag and sort card was delivered to each unit in each of the four buildings for residents to carry their recyclables down to the recycling station in hopes that would help aid them in sorting the recyclables into the proper carts and to also cut back on how many cross contaminated bags would end up in the carts. A post audit was scheduled for the Spring (April).

4. Post-Audit

Table 3.1 shows the tonnages from the post audit. The results showed improvement. Education on what is recyclable, and why it's important not to comingle is plastic bags increased our capture rate and decreased our residue.

Table 3.1 Tonnage (kgs) collected from the 4 study buildings for the post audit

Location	Fibre Carts	Fibre Carts Contamination	Percentile difference	Container Carts	Container Carts Contamination	Percentile Difference
180 Haig Rd.	25.5	3	63pts	28	5	34pts
165 Herchimer Ave.	52	15	21pts	28	13	13pts
179 Palmer Rd.	20.5	2	.8pts	14.5	7.5	-35pts
191 Palmer Rd.	25	8.75	6pts	10	3.5	36pts

5. Contamination

Figures 1 to 4 show the types of contamination commonly found in the carts that are either non-recyclable or cross contaminated between carts.



Figure 1



Figure 2.



Figure 3



Figure 4

6. Concluding Comments

The P&E materials used helped the residents better separate paper and containers. Using the re-usable bags did not stop people from also using plastic bags, therefore it is recommend that future work address this issue.

There was an increase in waste diversion, a reduction in contamination and cross contamination.

Continued monitoring of the buildings is needed to see how many people are still using the new bag and we will continue to survey residents from time to time.

The idea of having an ambassador program would be beneficial and to create a committee with building owners in our service area would also be beneficial.

7. Project Costs

Description	Qty.	Actual Cost	CIF Funded	QWS Cost
Reusable Bags	5,000	\$5942.67	\$2826.38	\$3116.29
Grey Cart Lids	15	\$559.68	\$279.84	\$279.84
Labour, Sort Cards & Labels		\$3797.00	\$1898.50	\$1898.50
TOTAL		\$10,299.35	\$5,004.72	\$5,294.63

For further information contact Quinte Waste Solutions office at 613-394-6266

Email: Jackie@quinterecycling.org