

2

SCHOMBERG BLUE BOX PILOT PROGRAM

The Solid Waste Management Committee recommends the following:

- 1. The presentation by Michael Birett, Manager, Solid Waste Management Branch, be received;**
- 2. The recommendation contained in the following report, August 17, 2006, from the Commissioner of Transportation and Works, be adopted; and**
- 3. Staff report back to a future meeting of the Committee with alternative suggestions on how to deal with the three types of plastic (Styrofoam, plastic film and plastic packaging).**

1. RECOMMENDATION

It is recommended that this report be received for information.

2. PURPOSE

The purpose of this report is to present the results of the enhanced blue box pilot conducted in the Town of Schomberg in cooperation with the Township of King and the recommendations stemming from the pilot.

3. BACKGROUND

In October, 2005, York Region, in cooperation with the Township of King, launched a blue box collection pilot in the community of Schomberg commencing November 1, 2005 and concluding on April 30, 2006. During the pilot, the blue box collection schedule for the community of Schomberg was changed from bi-weekly to weekly. Materials including Styrofoam (i.e. expanded polystyrene), blister packaging (e.g., the clear plastic packaging that compact fluorescent light bulbs are sold in) and polyethylene plastic bags and film were also added to blue box collection during the pilot.

4. ANALYSIS AND OPTIONS

4.1 Objectives of Study

The primary objectives of the study were to determine the extent to which residents would recycle the materials added to the blue box program and to evaluate the benefits of switching from bi-weekly to weekly blue box collection.

4.2 Waste Audits

The impact of the changes to the blue box collection program during the pilot were analyzed by conducting waste audits of 50 households within the pilot area. Audits of both the household garbage and blue box setouts prior to and during the pilot were completed.

4.2.1 Waste Audit Process

Within the sample area, 50 households were selected for the waste audit provided they had both garbage and blue box recyclable materials set out at the curb prior to the pilot. The same 50 households were sampled a second time during the pilot, whether or not both garbage and blue box recyclable materials were setout. All garbage and recyclable materials were sorted at the York Region Waste Management Centre.

The waste audit team utilized a standard audit methodology established by Waste Diversion Ontario (WDO) and Stewardship Ontario (SO). This methodology involved sorting the material into eight major material groups and then into 71 categories for garbage and blue box recyclable materials and recording the resulting weight of each category.

4.2.2 Waste Audit Results

Table 1 conveys the impact of increasing the frequency of blue box collection.

Table 1
Pre-Pilot and Pilot Blue Box Recovery Rates
(kg/hh/yr)

Material Category	Pre-Pilot % Recovered	Pilot % Recovered	% Increase
Papers	69	78	9
Paper Packaging	75	80	5
Plastics	63	64	1
Metals	60	75	15
Glass	84	88	4

Prior to the start of the pilot, the average household setout was 233 kg/hhld/year of blue box material. During the pilot, this amount increased 30 percent to 300 kg/hhld/year.

The number of blue boxes that were placed out for collection prior to the pilot increased from 1.8 per home every two weeks to 3.3 per home every two weeks during the pilot. This increase in recycling was accompanied by a commensurate decrease in the amount of garbage generated, from 1.98 bags of garbage set out every week in the pre-pilot to 1.68 bags during the pilot.

The findings from the waste audit show that overall, the amount of waste diverted during the pilot by weight increased from 24 percent prior to the start of the pilot to 31 percent. This represents a 7% increase in the pilot area's overall diversion rate.

Table 2 below summarizes the outcome of adding expanded polystyrene, plastic film (e.g. shopping bags) and plastic packaging (e.g. blister pack) to the blue box program.

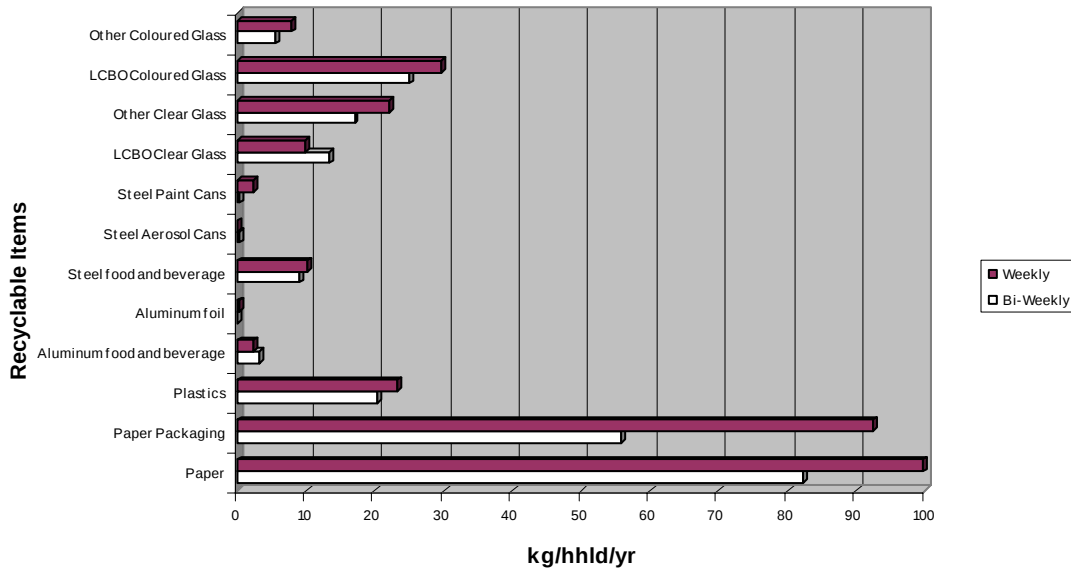
Table 2
Additional Plastic Material Categories Generation & Recovery
(kg/hh/yr)

Material Category	Pre-Pilot			Pilot		
	Recycled	Disposed	% Capture	Recycled	Disposed	% Capture
Polystyrene-Expanded	0.04	2.20	2	1.15	3.33	26
Polyethylene Film	0.35	23.84	1	1.73	12.77	12
Blister Packaging	0.31	0.77	29	0.45	0.83	35

The average capture rate of the three materials from the pilot was 24 percent. This rate is approximately half the average for other plastics currently included in the Region's blue box program. It is possible that the capture rates of the pilot materials would improve over time with more intensive promotion and education. However, even if their capture rate approached that of the other materials, their addition to the Region's blue box program would only increase the Region's overall diversion rate by less than one percent if implemented Region-wide.

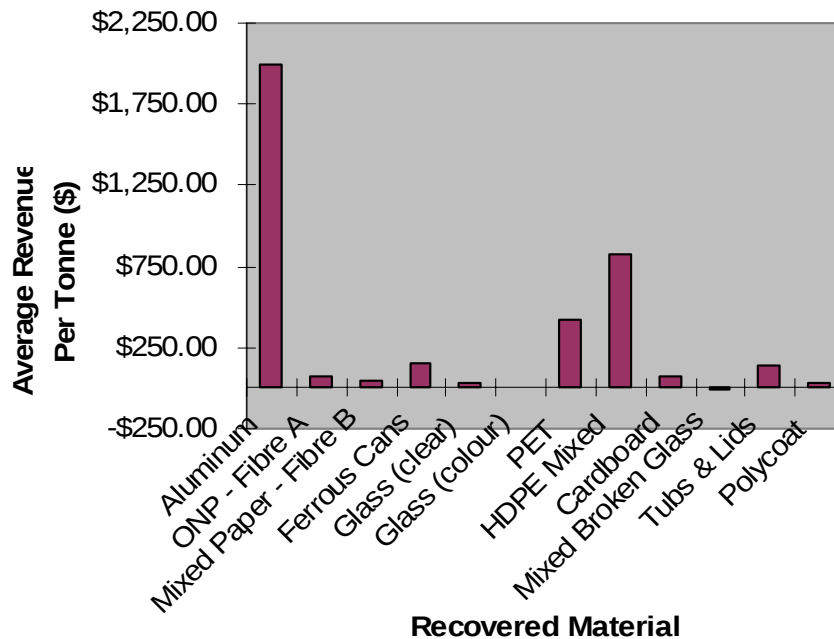
The results of the waste audits clearly demonstrated that switching to weekly from bi-weekly blue box collection can increase the quantity of recyclables diverted from landfill. Chart 1, below, outlines the differences in recovery rates by material as a result of switching from bi-weekly to weekly collection in the Township of King. Please note that some kg/hhld/year figures are smaller in the pilot area since only 37 households were audited during the pilot versus 50 households in the pre-pilot audit.

Chart 1
Comparison of Bi-weekly versus Weekly
Blue Box Collection



The value of recyclable materials has fluctuated over the past year with increases and decreases in market value. Chart 2, below, outlines the average revenue per tonne from the sale of recyclable materials for York Region during the pilot project (November, 2005 to April, 2006).

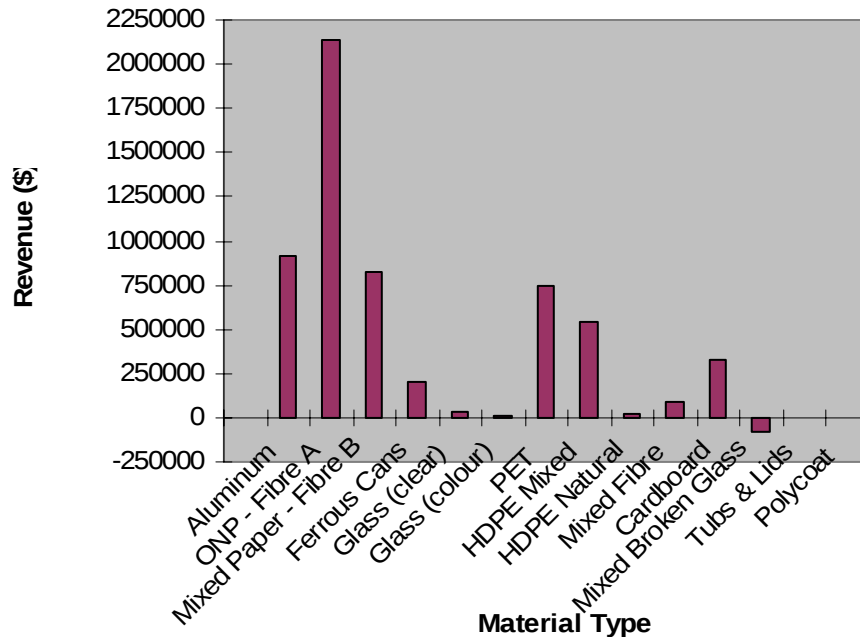
Chart 2
Average Per Tonne Revenue
Sale of Recyclable Materials
November, 2005 to April, 2006



Please note that the average revenue per tonne from the sale of coloured glass does not appear on the chart because its annual revenue is less than \$10 per tonne.

Chart 3 below, outlines the annual revenue received from the sale of blue box materials in 2005. For the first six months of 2006 the total revenue was approximately \$3,849,000 but the total operating cost was approximately \$4,494,000 resulting in a net tax levy requirement of \$645,000 to fund the program.

Chart 3
Gross Annual Revenue
Sale of Recyclable Materials, 2005



Please note that the annual revenue from the sale of tubs & lids and polycoat do not appear on the chart because their respective annual revenues are less than \$10,000.

4.2.3 Future Recycling Options

The Region and local municipalities are in the process of concluding a joint municipal Waste Diversion Strategy. One of the draft recommendations focuses on optimizing the blue box program. Previous work done in other jurisdictions in Ontario suggests that the capacity of the blue box limits participation, in that people stop recycling when their blue box is full. The Schomberg pilot has demonstrated that increased frequency of blue box service, can overcome this problem, resulting in significant improvements in diversion. Provision of larger containers to capture additional quantities of material may be an alternative approach.

The pilot also demonstrated that addition of expanded polystyrene, plastic film and blister packaging to the Region's blue box program has no significant impact on diversion. One future collection option for these materials may be through drop-off collection at the Community Environmental Centres currently under development by the Region.

5. FINANCIAL IMPLICATIONS

The Region's contribution to the Schomberg pilot included provision of auditing services and promotion and education. The total cost was approximately \$21,600.

Table 3
Regional Pilot Costs

Item	Cost
Audits	\$14,400
Promotion and Education	\$7,200
Total	\$21,600

The Region's facility operator, Miller Waste Systems, estimates that the addition of Styrofoam, plastic film and blister packaging to the Regional blue box program would necessitate the addition of 22 to 24 sorters to the current processing lines at the Region's Materials Recycling Facility. Expansion of the program to include these materials is expected to increase processing costs by approximately \$22 to \$24 per tonne. The Region anticipates processing approximately 80,000 tonnes of blue box recyclables in 2006. Therefore, the projected operating cost to expand the program to include the materials would be between \$1,760,000 and \$1,920,000 annually.

6. LOCAL MUNICIPAL IMPACT

As an outcome of the pilot, the Township of King has supported continuing weekly blue box collection in the Town of Schomberg. The Township also plans to move from bi-weekly to weekly blue box collection in the village core areas of Nobleton and King City in an effort to increase diversion of blue box recyclable materials.

A joint collection contract for the northern six municipalities (i.e., Towns of Aurora, East Gwillimbury, Georgina, Newmarket, Whitchurch-Stouffville and Township of King) has been made public to bidders. Once the contract is implemented, a change to weekly blue box collection in the rural areas, along with the introduction of source separated organics collection across the entire Township, will be implemented in the fall of 2007.

7. CONCLUSION

The Schomberg blue box collection pilot was designed to test the impacts of moving from bi-weekly to weekly collection and adding Styrofoam (i.e. expanded polystyrene), plastic film (e.g. shopping bags) and plastic packaging (e.g. blister pack) to the Region's blue box program. Increasing blue box collection frequency from bi-weekly to weekly has resulted in a 7% increase by weight in the pilot area's recycling rate. Conversely,

expanded polystyrene, plastic film (e.g. shopping bags) and plastic packaging (e.g. blister pack) had a negligible impact on waste diversion in the Township. The Region's cost to add these materials is estimated to be between \$22 and \$24 per tonne or between \$1,760,000 and \$1,920,000 annually. Therefore, the addition of these materials to the Region's blue box program is not recommended at this time. Regional staff will continue to explore alternatives for diverting these materials such as accepting them at Community Environmental Centres.

The Senior Management Group has reviewed this report.