

1

**ALTERNATIVE BLUE BOX CONTAINER STUDY RESULTS IN KING AND
RICHMOND HILL**

(Regional Council at its meeting on September 18, 2008 adopted this Clause with the addition of the following Clause:

- 2. *Additional studies and analysis be postponed until staff is in place to undertake such studies.)***

The Solid Waste Management Committee recommends the adoption of the recommendation contained in the following report, August 12, 2008, from the Commissioner of Environmental Services:

1. RECOMMENDATION

It is recommended that:

1. This report be received for information.

2. PURPOSE

This report summarizes findings from the alternative blue box container study conducted in partnership with the Township of King and the Town of Richmond Hill during the months of February and March of 2008 and proposes the next steps.

3. BACKGROUND

Council approved the following recommendation set out in Clause 4, Report No. 8 of the Solid Waste Management Committee in September 2007:

“Council approve the following pilot programs... The Town of Richmond Hill and the Township of King pilot to examine opportunities to optimize the Region’s blue box program in the first quarter of 2008.”

Staff implemented the Alternative Blue Box Container Study during the winter of 2008.

4. ANALYSIS AND OPTIONS

Consistent with the recommendations of the Joint Waste Diversion Strategy, the Alternative Blue Box Container Study was initiated to investigate alternate methods of collecting blue box materials. The study explored ways to increase capture of recyclables and reduce neighbourhood collection related litter by utilizing larger containers with lids and disposable bags. The study was conducted as two pilots. The first pilot involved distribution and use of wheeled containers with lids for collection of recyclables. The second pilot explored the use of clear blue plastic bags for managing “overflow” quantities of blue box recyclables. Both pilots were conducted at different times in a single, designated area in the Township of King and Town of Richmond Hill in order to assess potential differences between rural and urban responses (see Table 1).

Table 1
Pilot Study Schedule

Pilots	King Township 200 Households	Town of Richmond Hill 225 Households
Reusable Container Pilot <i>Mandatory Participation</i>	February 4th – 29th, 2008	February 4th – 29th, 2008
Bags for Overflow Pilot <i>Voluntary Participation</i>	March 3rd – 28th, 2008	March 3rd – 28th, 2008

The container pilot was conducted during the month of February. The wheeled containers were grey, and each resident was given a sticker labelled “Recyclables” to be placed on the container. Residents were instructed to use the reusable container with the sticker on it as a replacement for their blue box (see Figure 1). Residents were given the option of using their blue boxes to help manage any overflow if they had more recyclables than the grey container could hold.



Figure 1: Set Out with Reusable Container

The second pilot involving the use of clear blue plastic bags for was conducted during the month of March (see Figure 2).



Figure 2: Set Out with Clear Bags for Recyclables Overflow

The following sections summarize the results from both the reusable container pilot and the clear bags for overflow pilot. The attached study was jointly authored by the Township of King, Town of Richmond Hill, and York Region and contains further details regarding the study findings.

The Set Out Study was conducted to observe waste set out characteristics

- Staff collected set out characteristics for residual waste and recyclables in both study areas such as the number of garbage bags, number of recyclable receptacles (i.e. blue box, reusable container, bags for overflow) and visible litter near the collection points.
- Approximately 74% of residents in the designated sample area in both King and Richmond Hill used the reusable container during the container pilot.
- Less than 20% of residents in the designated sample area in both King and Richmond Hill set out clear plastic bags for overflow during the bag for overflow pilot.
- Less than 3% of the reusable containers were recorded with litter beside or near the container; no litter was observed during the bag for overflow pilot.

Waste Audits were conducted to observe capture rates and contamination rates

- Staff retained consultants to conduct two waste audits on recyclable material and residual waste for both pilots during the study to look for recyclables in residual waste stream (recycling loss rate) and contamination in the recyclable stream.
- Differences in recycling loss rates and recycling contamination rates between the reusable container pilot and the bags for overflow pilot were generally small (less than 3.5%)

Door-to-Door Survey Cards were sent to solicit feedback on current challenges

- A postage paid door-to-door survey card was sent to every household after the study was completed resulting in a high response rate for both study areas.
- Participants were asked what their challenges/issues are with the current program, their preferred collection method, and if they noticed any improvements with litter.
- The number one challenge/issue residents have with the current blue box program is that the blue box is too small to fit all recycling.
- Approximately 65% of residents preferred the reusable container in both King and Richmond Hill and 10% preferred the bags for overflow.
- 47% of Richmond Hill residents and 58% of King residents claimed they noticed a reduction in recycling related litter during the pilot study.

The Focus Group Sessions were conducted – one in each sample area

- A focus group was conducted in each sample area.
- Every member of both focus groups liked the reusable container supplied for the pilot as they found it easy to use, largely due to the wheels.
- Alternatively, the overwhelming majority of participants at both focus groups opposed the use of the plastic bags.

A Collection Contractor Questionnaire was issued to gain feedback on collection issues

- A questionnaire was developed for the collection contractors to explore their perspectives on the different methods of collecting recyclables.
- Collection staff for both municipalities preferred the clear bags.
- All drivers found it difficult to detect contamination within the container.

Next Steps include completing a cost-benefit analysis

Results of the two pilots indicate a strong preference for wheeled carts by the residents and an understandable preference for bags by collection staff. Moreover, the waste audit results indicate little difference in contamination rates and capture rates of recyclable material between the two types of collection vessel. The small differences revealed through the waste audit may be attributed to the short duration of the study as each collection method was tested over a four week period. Future research is recommended to gather data from similar programs in other jurisdictions to take a closer look at capture rates and contamination rates from programs of longer duration. Staff recommend conducting a cost-benefit analysis on reusable containers and bags to analyse the full costs and benefits achieved by using either collection method across York Region. The analysis will include obtaining information of similar programs in other jurisdictions such as the City of Toronto that recently implemented the recycling cart program and the City of Edmonton that uses plastics bags for collection of recyclable material. Results of this analysis will determine the capital and operating impacts of making system enhancements to the recycling program for York Region and its local municipalities.

5. FINANCIAL IMPLICATIONS

The cost to retain a consultant to conduct the cost benefit analyses is approximately \$45,000. Funds are available in the 2008 Solid Waste Management Branch operating budget.

6. LOCAL MUNICIPAL IMPACT

Optimizing the recycling program by introducing reusable containers or bags will impact the local municipalities' collection systems and contracts. Information gathered through this study will be shared with the local municipalities so the local municipalities and the Region have a clear understanding of how any proposed changes would impact the complete blue box recycling process. Regional staff will continue to work with staff from the Township of King and the Town of Richmond Hill for the remainder of this study and will continue to actively seek input from other local municipalities on future enhancements.

7. CONCLUSION

The Alternative Blue Box Container Study revealed valuable information on the potential application of reusable containers and bags to improve the Region and local municipal diversion efforts. Both, the reusable container pilot and the bags for overflow pilot showed little differences in recycling loss rates (i.e. recyclables found in residual waste stream) and contamination rates (i.e. residual waste found in the recyclable stream). In

addition, participants indicated a strong preference for a wheeled, reusable cart as a recycling receptacle. Staff recommends retaining a consultant to conduct a cost-benefit analysis of the capital and operating implications to the Region and local municipalities of introducing wheeled carts or disposable bags for blue box collection.

For more information on this report, please contact Lindsay Milne at Ext. 5714.

The Senior Management Group has reviewed this report.

(The attachment referred to in this clause is attached to this report.)