



The Regional Municipality of Durham
To: The Works Committee
From: Commissioner of Works
Report: 2009-WR-12
Date: June 10, 2009

SUBJECT:

Results of Clear Bags Pilot Study in the Municipality of Clarington and the City of Pickering

RECOMMENDATION:

THAT the Works Committee recommends to Regional Council that this report be received for information, and further, the diversion and financial implications in this study be considered further as part of the seventy percent (70%) diversion strategy in the 2010 Waste Management Servicing and Financing Study.

REPORT:

Attachment No. 1: Consultant's Report - Region of Durham Clear Bag Pilot Study Final Report (provided on a CD)

1. BACKGROUND

On January 23, 2008, Regional Council directed:

- d) "THAT the Region of Durham agrees to continue to support an aggressive residual waste diversion and recycling program in order to achieve and/or exceed on or before December 2010, a seventy percent (70 %) diversion recycling rate for the entire Region and that such aggressive programs shall continue beyond 2010."

On February 27, 2008, Joint Works and Finance and Administration Committee Report 2008-J-4, entitled "The Annual Solid Waste Management Servicing and Financing Study and the Proposed 2008 Business Plans, Budgets and Related Financing", contained, among other things, recommendation 6 (ii), which reads as follows:

"Further, in support of increasing the Region's diversion rate to 70% by the end of 2010, develop an implementation plan, including any promotional and communication strategies, and in consultation with local

municipalities, that will facilitate the commencement of a Region-wide policy requiring residents to use clear bags for garbage set out and collection, effective October 1, 2008.”

Staff's recommendation was tabled by Regional Council, and Regional staff was directed to further investigate the issue and report back at a later date.

On June 18, 2008, Regional Council approved Works Committee Report 2008-WR-20 regarding the implementation of a three (3) month clear bag pilot study for garbage collection on one (1) route each in the City of Pickering (Pickering) and the Municipality of Clarington (Clarington). Subsequent Works Committee Reports 2008-WR-35 and 2008-WR-38 discussed the objectives and communications plan for the study.

The Clear Bags Pilot Study involved two (2) collection routes, consisting of 607 homes in Pickering and 774 homes in Courtice, within Clarington. It ran for three (3) months from the week of January 12 to March 25, 2009 in Clarington and until April 9, 2009 in Pickering. Due to the difference in service levels at that time, between the Pickering and Clarington pilot areas, the Pickering data was utilized to extrapolate Region wide results.

The pilot study had two (2) objectives:

- 1) To assess the effect of using clear bags on diversion rate.
- 2) To assess the effect of using clear bags on participation in the recycling and composting programs.

The clear bags pilot project was divided into three (3) specific phases or time periods to enable staff to collect and segregate data under differing enforcement level scenarios, as follows:

- **Phase One (1) – Voluntary:** Residential participation was voluntary and no additional direct interaction or correspondence beyond initial launch package was provided to residents.
- **Phase Two (2) – Voluntary with Encouragement:** Residential participation remained voluntary. However, non-participating homes were left door hangers to assist in educating the residents on how to comply with the program.
- **Phase Three (3) – Mandatory with Enforcement:** Non-compliant bags of garbage placed curbside were tagged and left behind. There was no contact with waste collection staff or residents during this period to evaluate decisions made on their part.

Three (3) levels of data were collected during the clear bags pilot: macro route tonnages, micro household audits and control household audits. The macro

data was the most statistically significant and the most appropriate for extrapolation Region-wide. The micro household audits provided an insight into the specific effects on each waste stream. The control audits were available to assist in the explanation of potential unforeseen variability. In addition, a survey was sent to the participating residents to gauge the level of acceptability and obtain comments on potential issues.

2. **DISCUSSION**

The seventy percent (70%) diversion strategy, currently under development, identifies two (2) programs to increase the capture of recyclable and organics materials from the residual waste stream:

- Increasing waste diversion in the existing system
- Implementing new waste diversion opportunities

Improving the capture rate of recyclables and organics should be achieved through increased promotion and education, improved services and enhanced compliance with diversion programs. The utilization of clear bags is a potential tool to facilitate the curbside compliance with the existing diversion programs.

2.1 **Assessment of Objectives**

The Clear Bags Pilot Study, completed by VisionQuest Environmental Strategies Corp., concluded that based on a comparison to the 2008 waste tonnage data, implementation of a clear bag program could increase the waste diversion rate within the Region by three percent (3%). This increased diversion represents about 4,700 tonnes of Blue Box materials and Green Bin kitchen waste.

The use of clear bag did not significantly influence the level of participation in the recycling program but did increase the participation in the Green Bin kitchen waste program by an average of fourteen percent (14%) when compared to seasonal variations. The Clear Bags program could therefore be a useful tool to further enhance residents' participation in the Green Bin kitchen waste program.

The use of clear bags is a tool to facilitate curbside compliance with diversion programs undertaken by the collection contractor. The collector must therefore be able to visually assess the contents within the clear bag and determine if there are sufficient recyclables or Green Bin kitchen waste to justify withholding collection. The observation during the collection inspections indicated that a significant amount of plastic film within the clear bags hindered the visual inspection of the clear bags.

Due to the downturn in the economy, most municipalities have observed overall waste generation rates decreasing. Therefore, due to the timing of the Clear Bags Pilot Study, the tonnage and diversion rate results from this pilot may not represent typical conditions.

2.2 Promotion and Education

The effects of the increased promotion and education could not be separated from the results of clear bag utilization. Therefore, to implement a Region-wide clear bag program and achieve increases in diversion and participation rates, a comparable promotion and education program would be required.

An extensive public education and promotional strategy was implemented by Regional staff to ensure that all Clear Bags Pilot Study area households were well informed of the intent of the Clear Bags Pilot Study as well as standard recycling and composting information. This included several door-to-door information sessions, public information centres, multi-media advertising and roadside signage. In addition, the collection staff required training to understand the intent of the curbside compliance efforts. The wide-ranging public education and promotional strategy was estimated to cost \$35 per household.

2.3 Voluntary versus Mandatory

The Clear Bags Pilot Study evaluated the diversion performance during the voluntary and mandatory phases.

There were no clear advantages observed as a result of mandatory clear bags usage.

2.4 Potential Costs

The attached report (Attachment No. 1) provides a preliminary assessment of potential savings based on landfill cost avoidance. Further financial analysis will accompany the 70% diversion strategy business case report. These results will be included in the 2010 Waste Management Servicing and Financing Study.

Several issues were raised during the Clear Bags Pilot Study which may also impact the business case. Residents in the pilot areas that were previously not using Blue Boxes and Green Bins requested that they be given a new supply. Also, increased collector training and time on-route could trigger additional contract costs.

Considering that clear plastic bags sold retail are comparable in price to opaque plastic bags, the simple transition from an opaque to clear bag should result in minimal cost increases to residents.

2.5 Satisfaction Surveys

A total of 1,381 surveys were circulated to all households within both pilot areas. Approximately 540 surveys were completed and returned representing a response rate of approximately 39%. A slight majority of respondents (53%) expressed support towards the use of a clear bag policy for garbage bags,

including a decrease in the garbage bag limit if it helped to increase waste diversion. The majority of respondents (53%) believed that they would recycle more material as a result of their participation in the Clear Bags Pilot Study.

2.6 Timeframe

A lead time of one (1) to two (2) years would be required to notify all stakeholders prior to the program launch. This would take into account notifying residents of the program, time for them to use their current supply of opaque bags, and time for merchants to stock clear bags. Experience from other municipalities has shown that having an adequate supply of clear bags is a very important component to ensuring a successful roll-out.

3. CONCLUSION

The prioritization of the 70% diversion strategy based on business case principles will determine the implementation schedule for the various diversion projects. Furthermore, the implementation of clear bags should only occur following a successful plastic film diversion program. Finally, a lead time of one (1) to two (2) years would be required to notify all stakeholders and to accommodate a resident and retailer transition to clear bags prior to the program launch.

A clear bag program for garbage within the Regional Municipality of Durham could increase the waste diversion rate by three percent (3%) and Green Bin kitchen waste program participation rates by fourteen percent (14%).

The effects of the economic downturn and significant promotion and education conducted during this pilot could have influenced the data and analysis.

The enforcement of mandatory clear bag use produced mixed results. If a clear bags program is implemented, voluntary participation could evolve into mandatory participation in the future.

Implementation of the clear bags program may increase operational costs. A financial evaluation and implementation priority will be included in the 2010 Waste Management Servicing and Financing Study.

Pilot area participation rates reached ninety-eight percent (98%). The survey results indicated that a slight majority of fifty-three percent (53%) supported the use of clear bags for garbage.

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Commissioner of Works

Recommended for Presentation to Committee

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