REGIONAL MUNICIPALITY OF OTTAWA-CARLETON REPORT
MUNICIPALITÉ RÉGIONALE D'OTTAWA-CARLETON RAPPORT

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DATE 9 May 1997

TO/DEST. Co-ordinator
Planning and Environment Committee

FROM/EXP. Environment and Transportation Commissioner

SUBJECT/OBJET **RESPONSE TO OUTSTANDING MOTION NO. P & E -12 BEVERAGE CONTAINERS**

DEPARTMENTAL RECOMMENDATION

That the Planning and Environment Committee receive this report for information.

BACKGROUND

At the Planning and Environment Committee meeting of 25 February 1997, presentations were received from Beverage Recovery in Canada (BrinC), Toronto Environmental Alliance (TEA) and Brewers Retail regarding deposit/return systems for beverage containers. The Committee subsequently directed:

> That staff prepare a report on a deposit/return system for beverage containers, to include more detailed information on glass, aluminium, and plastic beverage containers (including containers for wine, liquor, natural spring water, etc., as well as for soft drinks), for a Planning and Environment meeting in May, 1997.

DISCUSSION

In 1996, some 225,000 tonnes of residential solid waste were generated in the RMOC. This figure is comprised of garbage (169,000 tonnes), recyclables (35,000 tonnes) and leaf and yard waste (21,000 tonnes).

The estimated composition of recyclable materials is 67 percent paper products and 33 percent container recyclables which can be split into beverage and non-beverage items (for the purposes of considering deposit legislation). Beverage containers account for an estimated 37 percent of all container recyclables recovered in the Region's 1996 Blue Box Program.

The Solid Waste Division conducted three waste sorts in 1996. This work provides the basis for: (i) estimating the total quantity of recyclables available in the garbage stream and (ii) comparing that with the amount of material which was actually recovered. These data and other municipal waste composition information have been used to evaluate what the impact would be on the Blue Box Program if certain beverage containers were removed by a deposit/return-to-vendor system.

Current Blue Box Program Performance

With regard to the impact of deposit legislation, there are two container types and four material categories to consider: (i) beverage and non-beverage containers and (ii) glass, aluminium, ferrous and PETE (milk containers are excluded throughout this discussion). The Blue Box Program targets all of these items. Under deposits, only beverage containers are typically recovered.

In 1996, the quantity of beverage containers generated by the residential sector is estimated to be 12,600 tonnes. Of that, about 7,200 tonnes were recovered via the Blue Box Program. The beverage container recovery rate was, therefore, 57 percent. In comparison, the quantity of non-beverage (i.e., food and other) container waste generated was 11,200 tonnes of which 3,900 tonnes were recovered.

The following analysis assesses the impact of possible changes during the current collection contract:

Deposit/Return System

Deposits could be applied at three different levels: (i) soft drink containers, (ii) soft drink and LCBO beverage containers, or (iii) all beverage containers.

Deposit/return systems typically have higher material specific recovery rates than multi-material curbside recycling programs. Soft drink container deposit systems in other provinces recover about 75 percent, however, deposit materials also turn up in the blue box. In a recent waste and blue box sort in Winnipeg, it was discovered that 2.5 percent of the blue box contents which are now on the deposit system were still in the blue box.

The cost analysis presented below considers two factors: (i) revenues earned from materials sales and (ii) the cost of collecting and processing recyclables.

1. Soft Drink Containers

   With the Blue Box Program, the net revenue derived from the collection, processing and marketing of soft drink (SD) containers in 1996 is estimated to be $552,700. With the introduction of a return-to-vendor deposit system, the same net revenue figure would have been $13,500. The proposed change would have resulted in a loss to the Region of $539,200.

   In effect, the cost of collecting and processing SD containers in the blue box was much less than the revenue that is gained (primarily because of the aluminium cans). However, although

less revenue would have been earned by the Regional Municipality of Ottawa- Carleton (RMOC), the chief benefit of a deposit on SD containers is that recovery would have increased from about 30 percent to more than 75 percent.

2. Soft Drink and LCBO Containers

If SD and LCBO containers are considered together, the proportion of glass material increases enormously. Since glass has a relatively low market value, the increased cost of collecting and processing this material mix is greater than the increase in revenues. However, SD and LCBO containers recovered via the blue box still generate more revenue than costs: net revenue in 1996 was $125,600 and the container recovery rate was about 54 percent.

If a deposit on SD and LCBO containers had been in place in 1996, it is estimated that blue box net revenues for these two material types would have been $3,200 (from deposit containers in the blue box): The net result would have been a $122,400 loss in Regional revenues. As under the preceding scenario, the return-to-vendor recovery rate for SD and LCBO containers would have increased to more than 75 percent.

3. All Beverage Containers

The cost to collect and process the 7,200 tonnes of beverage container recyclables recovered in 1996 exceeded estimated revenues by $150,500.

If all beverage containers were placed on deposit, it is estimated that recovery of this container material would increase to around 75 percent of what is available. The cost of processing beverage containers that still ended up in the blue box would fall to $3,800, a savings of about $146,700. These numbers are all based on 1996 data.

Two circumstances could increase potential savings further: (i) less material collected at the curb would mean that less trucks are required to service the same number of households; and (ii) with less material in the blue box, collection frequency could be reduced to once every two weeks. Only another contract tender process would indicate whether these savings are possible.

CONCLUSIONS

Based on available data, a deposit/return system makes financial sense if it is applied to all beverage containers. However, from a cost/benefit perspective and under the Region's current collection contract, a deposit/return system for soft drink containers alone would result in an estimated net blue box revenue loss of $539,200 per year.

In trying to assess the impact of removing beverage containers from the Blue Box Program, it is important to consider that all households in the RMOC still have to be served and a mixed recyclables stream such as glass, aluminium, and PETE still has to be processed as these materials exist in the form of non-beverage containers. In other words, diminishing returns are realized as certain recyclable materials are removed from the Blue Box Program. Since the best way of

recovering recyclable materials should also be the most cost effective, the Solid Waste Division is considering methods to optimize the current Blue Box Program in the next contract. From the analysis above, it is apparent that deposit systems "skim" revenue from curbside recycling programs but also reduce the cost of collecting and processing remaining recyclables. This trade-off needs to be reassessed in more detail once the existing Blue Box Program has been improved.

Regardless of how packaging waste is recovered, the Region should continue to support the development of a product stewardship model where both packaging (glass, aluminium, PETE, cardboard, etc.) and non-packaging materials (newspapers, tires, other durable goods, etc.) are addressed in a comprehensive fashion.

Since municipalities are presently responsible for managing and financing solid waste systems, clear direction, leadership and support is required from provincial and federal governments. Isolated and uncoordinated municipal programs will only result in confusion among the public, increased burden and costs to brand owners, wholesalers and retailers, increased waste management cost, and diminish Canada's competitive position. Resolving waste management costs and responsibilities is not an issue that can be effectively resolved at the municipal level.

Approved by D. Brousseau
on behalf of M.J.E. Sheflin, P.Eng.

RS/cp