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REGIONAL MUNICIPALITY

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Halifax Regional Council
January 22, 2002

TO: Mayor Kelly and Members of Halifax Regional Council

SUBMITTED BY: Brian T. Smith, Director of Solid Waste Resources

DATE: January 16, 2002

SUBJECT: **GREEN CARTS BIODEGRADABLE PLASTIC BAGS**

INFORMATION REPORT

ORIGIN

At the January 8 meeting of Council, Councillor Len Goucher asked for a staff report on green carts biodegradable plastic bags, and why these are not acceptable in our HRM solid waste resource strategy.

BACKGROUND

Councillor Goucher summarized the rationale for using biodegradable bags in green carts, in providing context for his request for a staff report:

"Numerous residential complaints have been received regarding the use of "plastic compost bags". These are sold as biodegradable and residents are being advised by green cart inspectors that they are not acceptable. It seems that this type of bag reduces, if not eliminates, the hot weather problem associated with green carts. I would appreciate a staff report as to why these bags are NOT acceptable in our waste management strategy. The bags are will marked and cannot be confused with other plastic products."

DISCUSSION

Residents of HRM have been generally very supportive of our "source separated" waste resource management system. In adapting to the cart-based organics collection, they have used a variety of containers and approaches to supplement the cart and mini-bin supplied by the municipality. Some of the recommended examples of this include:

-using cereal or pasta boxes to contain wet or greasy items;
-lining the mini-bin with a paper bag or boxboard liner and emptying the contents into the cart;
-using small quantities of newspaper to wrap wet items;
-putting fruit and vegetable peelings into a backyard composter instead of the green cart.

Unfortunately some people have used plastic bags as an aid to composting, not realizing the problems this can create for the cart-based collection system. Plastic liners are not recommended by HRM, but they could still be used if the contents are then emptied into the green cart. The plastic bag (biodegradable or other) and the metal tie cannot be composted and would have to be treated as refuse, or washed out for recycling.

Enclosed with this report is a photo of the typical pre-sort areas within our two compost plants, which provides some indication of the problems created by non-compostable materials like plastics, newspapers and cardboard. HRM, the compost plant operators and our waste haulers have worked hard to reduce the quantity of non-compostable material in the green carts to improve the efficiency of our system and the quality of the product that results. Plastics are one of the most troublesome contaminants for a number of reasons discussed below, and this applies even to those bags advertised as biodegradable or compostable.

The private sector has responded positively to compliment our HRM green cart system in a number of ways, by introducing cart cleaning services, paper mini-bin liners, boxboard liners, and the like. The municipality does not have a mechanism to regulate what services or products are introduced as green cart friendly. Unfortunately, the biodegradable bags fall into this category, because they do not degrade before they reach our processing facility, may have metal ties left on them, and may not even degrade fully in the composting process.

This issue has arisen occasionally since the start of the green cart system, and the following points summarize why biodegradable bags, or bags of any kind cannot be composted:

1) Compost plant workers sort contaminants, blend compost from various sources, and then shred materials before composting. It is not possible to break open small bags, the material needs to be as homogeneous as possible to be mixed, and plastic bags clog up processing equipment, requiring the shut down of the processing line to remove bags from the shredder.
2) Sealed bags in a green cart defeat the design of the cart itself which allows the contents to dry out, in part to reduce odours and other nuisances in hot weather.
3) Sealed small bags are generally cast off as garbage in compost plants, meaning the resident's efforts to source separate their garbage are wasted.

In preparing this report, staff have obtained samples of the bags being sold as "biodegradable" or "compostable", and some of the paper products sold as bin liners. While the paper products could be accepted in reasonable quantities, and unsealed, the plastic bags available locally would not break down before reaching the plant. They would also defeat the many air circulation provisions designed into our green carts (see enclosed sketch). These carts are designed to begin the "aerobic" breakdown of organics, and that sealed bags result in "anaerobic" conditions and additional weight to be collected. One final point on the bags available locally is that our information suggests that the Bio-corp example is not sold here, and that the company appears to have ceased operations.

Solid Waste Resources staff have recently conducted a thorough analysis of green cart contents and our residents are achieving better than 85% compostable materials on average green cart collections. We still have substantial volumes of newspapers, cardboard and plastics which slow down the compost process, hamper plant efficiency, or show up as plastic scraps to be removed at the end of the process. We have conducted a series of focus groups with residents in early December, to guide our future communications efforts. As part of that communications program, we will try to provide more information about ways to make green cart use more convenient, and why some products are not acceptable.

ATTACHMENTS

Photo of compost plant pre-sort activities, sketch of green cart.

Additional copies of this report, and information on its status, can be obtained by contacting the Office of the Municipal Clerk at 490-4210, or Fax 490-4208.

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