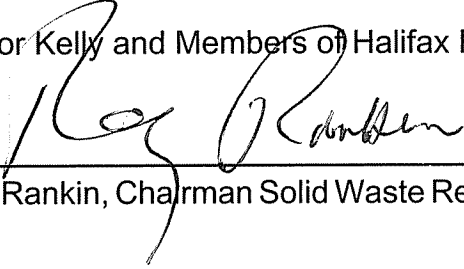


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Halifax Regional Council  
June 11, 2002

TO: Mayor Kelly and Members of Halifax Regional Council

SUBMITTED BY:   
Reg Rankin, Chairman Solid Waste Resources Advisory Committee

DATE: May 29, 2002

SUBJECT: Biodegradable Bags

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**SUPPLEMENTARY REPORT**

**ORIGIN**

- Regional Council January 8, 2002
- Solid Waste Resource Advisory Committee March 28, 2002
- Regional Council April 9, 2002
- Solid Waste Resource Advisory Committee May 16, 2002

**RECOMMENDATION**

1. That biodegradable bags not be used in HRM's residential organics system subject to staff continuing to monitor the development and testing of the product.
2. That the 2003-08 Waste Collection Tenders include an optional price for weekly green cart collection during July and August.

## **BACKGROUND**

At the March 28, 2002 meeting of SWRAC Mr. Alan Schnare, Atlantic Compostable Products, Mr. George South, Miller Waste and Mr. Gerald Tibbo, New Era Farms each made a presentation on the use of biodegradable bags in the HRM organics green cart system. Staff prepared a summary report and recommendation for consideration of SWRAC on May 16, 2002 and reporting back to Council. SWRAC approved the two recommendations on Page 1, and asked for more information under Budget Implications as part of the report for Council.

At the April 9, 2002 meeting of Regional Council, Mr. George Hepworth, Bedford, noted his dissatisfaction that biodegradable plastic bags are not accepted in the residential organics green cart program. As the issues raised by Mr. Hepworth relate to the same issue, this report provides a response to his presentation as well.

## **DISCUSSION**

### **Proposal for HRM to Permit Use of Biodegradable Bags**

Mr. Alan Schnare, Atlantic Compostable Products, has proposed that;

- 1) The HRM establish a standard for compostable bags used in the solid waste composting system, and that;
- 2) Compostable (i.e., biodegradable) bags that meet the standard should be allowed in the composting process.

### **Potential Issues Associated with The Use of Biodegradable Bags**

Issues identified by Miller Composting, New Era Farms, and HRM are summarized below:

#### **The Green Cart system**

Both Miller Composting and New Era Farms financed, designed and constructed their facilities based upon the use of a 240-litre green cart collected on a bi- weekly schedule. This system has generally served the residents of the HRM well, although there are seasonal problems for some residents during the summer.

#### **Comments from Compost Facility Operators**

Both facility owners have advised that the use of a biodegradable bag would be a significant deviation from the original arrangement with HRM. The type of processing equipment and their operations, including staff complements, would have to be adjusted. Any costs resulting in the use of biodegradable bags would be passed along to HRM:

a) *Failure of Bags to Decompose*

Some biodegradable bags decompose as claimed, others do not. A recent failure of a reputable biodegradable bag manufacturer has necessitated additional screening prior to the compost being marketable. Any plastic type bag causes additional maintenance of processing equipment including bearings in the shredder, paddle wheel and screeners. All bags are removed from the processing line by hand, resulting in less productivity.

b) *Modification of Compost Facilities*

The introduction of biodegradable bags would necessitate the installation of a bag breaker, and upgraded screening equipment. Automatic bag breakers are often not effective and are expensive, in the range of \$250,000 to \$300,000. Additional sorting staff would be required.

c) *Increase in Contamination Rates*

Non-compostable items such as plastic, glass, etc. can be hidden in a bag. A waste characterization study in 2001 of residential green cart organics, determined that approximately 13% of material is undesired items, including plastic bags, newspaper, corrugated cardboard, clothing, etc. The introduction of biodegradable bags would result in an increase in the rate of contamination. Items such as metal hidden in a bag can damage processing equipment.

d) *Occupational Health and Safety*

Objects such as broken glass, knives, needles, etc. cannot be detected inside a bag and therefore is a risk to processing staff when they open the bags to remove the contents.

e) *Marketability of Compost*

The introduction of biodegradable bags would result in poorer quality compost and decreased marketability. The compost facility operator would have to remove the contaminants at additional cost.

*Additional HRM Staff Comments*

The following outlines staff's main concerns:

a) *Public Education*

The success of the current program is dependent upon clear, concise and extensive public education. Successfully communicating to residents of HRM that a standard for a biodegradable bag has been approved, would be difficult to achieve and

enforce. Rival manufacturers may continue to supply their product to retail outlets resulting in bags not meeting the specifications being received at the compost facilities.

b) *Residential Green Cart Collection/Inspection*

The operator of a residential collection vehicle tips between 500 and 800 green carts daily. The collectors inspect each green cart for contaminants. When contaminants are noted, a sticker is applied, the address recorded, and HRM staff follows up with the property owner.

If biodegradable bags were permitted, there would be a risk that residents of HRM would put more biodegradable bags not meeting the standard, as well as, regular plastic bags in the green carts. If the collector can identify that the bag inside the green cart is not acceptable, the cart would be stickered and not emptied. This would result in an increase in complaints from residents of HRM.

c) *Biodegradable Bags Issues in Other Communities*

Mr. Schnare has provided information to staff from other communities where biodegradable bags are used:

**1) Island Waste Management, PEI**

Island Waste Management is presently testing a biodegradable bag. Currently a specific biodegradable bag is accepted in their open windrow composting system in small quantities. The test will determine if the bag can be included at their new enclosed compost facility scheduled to open this summer. The bags have been sent to Pembroke, Ontario and Island Waste will determine later this summer if biodegradable bags will be permitted in the future.

**2) Municipality of the District of Lunenburg**

Although the District of Lunenburg has accepted biodegradable bags in the past, the recent failure of a reputable brand to decompose, has resulted in a new policy of not accepting any type of biodegradable bag in their green cart system.

**3) European Cities**

From the information provided by Mr. Schnare, staff has learned that several cities in Europe accept biodegradable bags in their organic collection system. Several European cities accepting biodegradable bags utilize a 6 litre bucket for kitchen food waste collected weekly, as opposed to a 240 litre aerated organics green cart system in the HRM. Staff did not have the opportunity to learn of the technology of the receiving composting facilities.

### **BUDGET IMPLICATIONS**

Processing of organic wastes for HRM currently costs about \$3.6 million per year, or about \$2.5 million net of revenues received for processing commercial organic. Neither Miller Waste nor New Era Farms have provided pricing for accepting biodegradable bags in large quantities, as they have expressed strong opposition to the concept. Given the present technology for the decomposition of biodegradable bags, each plant would have to be equipped with bag breaking (opening) equipment initially, and then there would be higher sorting and equipment maintenance costs for receiving, sorting and processing the bags. These higher costs would be part of the agreed per tonne processing fees for HRM. Revenues from compost sales, which are still at low levels due to market demand for the compost, might also be impacted if visible plastics could not be removed successfully from the final product.

### **ALTERNATIVES**

HRM's Solid Waste Resource Communications and Education program specifically addresses the issue of managing odours and flies during the summer months. This campaign includes Green Cart Tips on television, HRM's web page, the Corporate Call Centre, and the June edition of Naturally Green delivered to every household. As residents become more familiar with green cart use, reported problems are reduced. Private sector opportunities, i.e. local paper bag and boxboard liners for the mini bins, and local companies that provide the service of washing green carts, all have assisted the implementation of the system.

The most common reason given for the use of biodegradable bags is to reduce or eliminate odours, particularly during the summer months. During the 2002/03 budget approval process, staff was directed to include in the preparation of the tender for the residential collection services for the next five year period (from July, 2003) the costing of weekly organics collection during the months of July and August.

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.

Report Prepared by:

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