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BLUE BOX MIXED RIGID PLASTICS MARKETING

The Environmental Services Committee recommends the adoption of the recommendation contained in the following report dated August 18, 2011, from the Commissioner of Environmental Services.

1. RECOMMENDATION

It is recommended that:

1. Council endorse the execution of a Memoranda of Understanding with EFS-Plastics Inc. and Entropex to market mixed rigid plastics with each of these two companies taking 50 percent of the annual quantity of this material for the next three years at market value in accordance with principles in the report.

2. PURPOSE

The purpose of this report is to establish Memoranda of Understanding to market mixed rigid plastics from York Region's blue box program with both EFS-Plastics Inc. and Entropex with a 50/50 material split in keeping with the blue box program guiding principles. Marketing of the mixed plastics material by these two companies will support the growth and development of two end markets within Ontario.

3. BACKGROUND

Blue Box Guiding Principles established to provide consistent decision-making framework

On November 17, 2005, Council adopted the recommendations from Report No. 6 of the Solid Waste Management Committee that established guiding principles for the blue box program. The guiding principles were developed to ensure a consistent methodology for changes to the blue box program, including the addition of new materials into the stream.

The principles have been adopted as follows:

- A reasonable expectation to divert material from landfill (or the materials must not pass through the diversion process only to be landfilled as residue)
- Availability of two or more domestic markets, or a market with a stable operational history and financial security
- Completion of a "due diligence" review of the proposed market outlet

Domestic markets promote greater level of sustainability in blue box program

The use of domestic markets for recycling the materials collected in the blue box program improves the ecological footprint of the program by decreasing greenhouse gas emissions associated with shipping materials long distances to end markets. Supporting local markets also promotes the generation of jobs closer to our community and has the potential to reduce shipping costs for moving material to end markets. In the past year, the Ontario market has lost a number of key end markets for blue box materials including the closure of the Atlantic Packaging fibre mill in Whitby, reduced fibre processing by AbitibiBowater in Thorold, and the closure of the Canadian Polystyrene Recycling Alliance in Mississauga.

4. ANALYSIS AND OPTIONS

Marketing of mixed rigid plastics is challenging for municipalities

Mixed rigid plastics include diverse items such as, yogurt tubs and lids, bakery and produce clamshells. Any rigid plastics that have contained food or household cleaning products are acceptable in York Region's blue box program. Historically, the marketing of mixed rigid plastics has been challenging for municipalities looking for stable, local solutions. In the absence of local markets, the bulk of the materials were historically shipped overseas, particularly to Asia. In recent years, the volatility of the Asian market has forced some municipalities to stockpile materials in the short term with no definitive outlet. Miller Waste Systems, under contract to York Region has been able to successfully market the Region's mixed rigid plastics without stockpiling. The use of domestic markets is in keeping with the principles of long-term program sustainability.

Local markets have been developing with support from Stewardship Ontario and the Continuous Improvement Fund

The Continuous Improvement Fund (CIF) was created to help Ontario municipalities undertake best practices initiatives to improve the effectiveness and efficiency of blue box recycling programs. Program funding is derived by setting aside a percentage of the fees that companies contribute to municipalities as their share of the cost of operating Ontario's blue box programs.

Stewardship Ontario and the Continuous Improvement Fund has been fostering local market development for the processing of municipal mixed rigid plastics. Through a competitive funding application process, EFS-Plastics Inc. (Elmira, Ontario) and Entropex (Sarnia, Ontario) were selected as processors for municipal mixed rigid plastics.

EFS-Plastics Inc. located in Elmira, Ontario has been in operation since 2007

EFS-Plastics Inc. processes post-consumer mixed rigid plastics and film plastics. They currently process approximately 3000 tonnes per year of film plastics and 3500 tonnes per year of mixed rigid plastics. EFS has initiated an expansion scheduled for completion in 2012. This expansion will add another processing line and bring EFS's processing capacity to approximately 14,000 tonnes per year.

The combined recovery rate of the process is approximately 68 per cent reprocessed and 32 per cent residue. Process residue materials are disposed of through landfill or incineration.

Plastics are manufactured into a pellet form and sold to companies for incorporation into items such as tool boxes, garbage bins, garbage bags, plastic film, pipe, and automotive products. EFS markets 70 percent of its resin within Canada to injection molding and extrusion companies in Ontario and the remaining 30 percent to the United States.

Between July 2008 and July 2011, York Region held a Memorandum of Understanding to supply EFS with mixed rigid plastics from the blue box program. During this time, 2,176 tonnes of mixed rigid plastics were marketed to EFS.

Entropex located in Sarnia, Ontario has been processing industrial plastics since 1978

Entropex is a privately owned Canadian company involved in the reprocessing of post industrial and post consumer plastics. Since 1978, Entropex has been involved in the development of market specific recycled polyethylene and polypropylene for a variety of consumer and industrial applications. Entropex is currently ranked the 8th largest post consumer recycler and the 18th largest Plastic Recycler in North America. It has a 180,000 square foot plastic recovery facility and warehouse complex located in Sarnia, Ontario.

In 2010, Entropex began a post-consumer recycling pilot with funding from organizations like Stewardship Ontario and the Sustainable Development Technology Canada Fund. Currently, Entropex processes 12,500 tonnes per year of mixed rigid plastics from Ontario, Quebec and the United States. An expansion is underway that will take the facility up to a throughput of 30,000 tonnes per year and is expected to be completed in September 2011.

Entropex recovers approximately 85 to 90 per cent of the material and a process residue rate of approximately 10 to 15 per cent. Where available, residue is marketed to other domestic processors and the remaining material is landfilled. Over the past two years, approximately 218 tonnes of mixed rigid plastics has been marketed to Entropex.

Entropex currently markets all material to domestic markets within North America.

EFS-Plastics Inc. and Entropex supply material to local manufacturer Gracious Living Corporation in Vaughan providing local economic benefits

Both EFS-Plastics Inc. and Entropex supply local manufacturer, Gracious Living Corporation, with processed post-consumer material. Gracious Living Corporation is a Canadian manufacturer and importer of resin/metal furniture, outdoor accessories, storage solutions, and many other resin products. The headquarters for Gracious Living Corporation is located in the City of Vaughan.

Gracious Living Corporation has developed a line of products that contains a portion of post-consumer material. A line of storage solutions has been developed with Canadian Tire Corporation (under the Canadian Tire Corporation 'Blue Planet' label) that contains between 30 to 70 per cent post-consumer material and is available for direct purchase by consumers.

Gracious Living also manufactures curbside municipal blue boxes, designed to Waste Diversion Ontario specifications, with approximately 70 per cent post-consumer material. The use of post-consumer material from blue box programs across the province provides a good example of a 'closed-loop' system, putting material generated by the community back into a beneficial use.

A Memorandum of Understanding is required to continue to support a sustainable domestic market place

The expired Memorandum of Understanding with EFS plastics priced the material at 25% less than current market conditions in an effort to support the development of the domestic market. Staff recommend that the new Memorandum of Understanding be established for the next three years in keeping with the terms of the previous memorandum, with the material priced within +/- 10% of market value as outlined in the monthly StewardEdge price sheet. The 10% variance is intended to allow for market fluctuations that occur in the later half of the month, as the StewardEdge report is published mid month. Supporting two domestic markets equally with York Region's material assists in the development of a more sustainable recycling market within Ontario. The Memorandum of Understanding will guide Miller Waste Systems, under contract to York Region, in distributing this material between the two developing recyclers.

5. FINANCIAL IMPLICATIONS

Municipal funds are invested in EFS-Plastics Inc. and Entropex through Continuous Improvement Fund grants and Stewardship Ontario

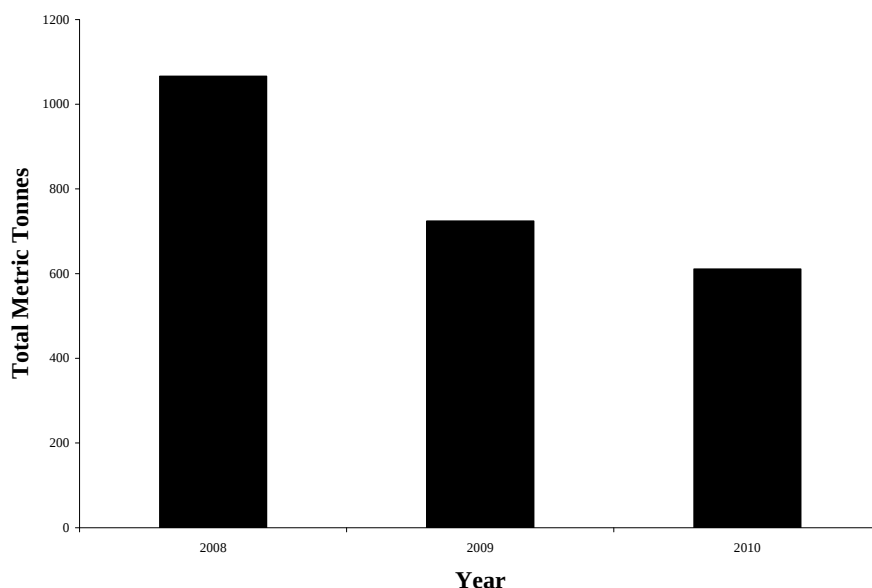
In 2010, the Continuous Improvement Fund and Stewardship Ontario partnered to support local plastics processing technology. EFS and Entropex were selected for support through a competitive process and received a combined \$3 million for their respective companies.

Mixed rigid plastics make up less than 1 per cent of tonnes and revenue in York Region's blue box program

Mixed rigid plastics with resin codes #3 through 7 were added to the blue box stream on June 24, 2004 (Report Number 6 of the Solid Waste Management Committee) because of the increasing volume of material available in the consumer marketplace. The decision to add these materials into the stream placed York Region's program as one of the most inclusive blue box programs in Ontario.

Since 2008, total York Region blue box tonnes have been increasing but the total amount of mixed rigid plastics has declined significantly (Figure 1). Mixed rigid plastics present an interesting trend in the blue box stream. They make up a large portion of material by volume but are under-represented in tonnage figures because of their lightweight nature. A Region wide promotion and education campaign targeting this material type in the blue box is planned for later this year to encourage residents to place more mixed rigid plastics in their blue box.

Figure 1
York Region Mixed Rigid Plastics Marketed from 2008 to 2010 (Tonnes)



Consistently, mixed rigid plastics have made up approximately 1 per cent in total tonnes and less than 1 per cent of the total basket of goods price in York Region's blue box program. In 2010, 611 tonnes of mixed rigid plastics were marketed at approximately \$12 per tonne resulting in approximately \$7,300 in annual revenue.

6. LOCAL MUNICIPAL IMPACT

Development of the blue box guiding principles and the decision to support local markets provides York Region residents the opportunity to participate in the development of a 'closed loop' blue box program. Materials placed into the blue box are being processed and reused within our own communities.

7. CONCLUSION

York Region is a leader in waste diversion in Ontario. The blue box program is one of the most inclusive in the province and one of the first to accept mixed rigid plastics.

In 2004, the blue box guiding principles were developed to help inform decisions for including materials and developing sustainable local markets.

EFS-Plastics Inc. and Entropex are Ontario-based companies that process post-consumer mixed rigid plastics from municipal blue box programs. Both companies are seeking material from York Region to process in their operations.

Staff recommend that Regional Council endorse the execution of a Memoranda of Understanding with both EFS-Plastics Inc. and Entropex for the marketing mixed rigid plastics with each company taking 50 per cent of the annual quantity of this type of mixed plastic material. The combination of these two agreements will provide York Region with a stable, domestic market for mixed rigid plastics and provide confidence that our material is managed appropriately from both an environmental and social perspective.

For more information on this report, please contact Laura McDowell, Director Environmental Promotion and Protection at 905-830-4444 Ext. 5077.

The Senior Management Group has reviewed this report.