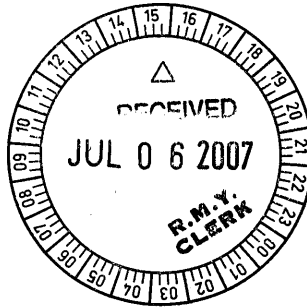




June 27, 2007

Mr. Denis Kelly
Regional Clerk
The Regional Municipality of York
17250 Yonge Street
Newmarket, ON L3Y 6Z1



REGION OF YORK
CLERK'S OFFICE

FILE No. - 127

**RE: YORK DURHAM EA UPDATE AND WASTE
DIVERSION OPPORTUNITIES (5.7)**

Dear Mr. Kelly:

This will confirm that at the meeting of Council held on June 26, 2007, Clause 16 of Report No. 39, was approved as follows:

"That the report titled, "Waste Diversion Opportunities and York Durham EA Information" be received,

And that staff be directed to investigate and report back on the diversion initiatives outlined in this report,

And that the Markham's Waste Management staff work with the Purchasing and Asset Management Departments to investigate and report back on a Zero Waste procurement policy for all purchasing activities within the Town, including financial implications,

And that a copy of this Report be forwarded to York Region, Durham Region, and each of the Area Municipalities in the Regions of York and Durham;

And that staff bring forward a report to provide comprehensive details on the implementation and communication of a Zero Waste philosophy as well as additional waste diversion opportunities to a fall meeting of the General Committee;

And further that this report include a recommendation suggesting that the Region of York reconsider accepting blue bags for overflow recycling waste."

Yours sincerely,


Sheila Birrell
Town Clerk

Report to: General Committee -
Community Services and Environment

Report Date: May 28, 2007

SUBJECT: Waste Diversion Opportunities and York Durham EA
Information
PREPARED BY: Claudia Marsales, Manager, Waste Management, Ext. 3560

RECOMMENDATION:

THAT the report titled, "Waste Diversion Opportunities and York Durham EA Information" be received,

AND THAT staff be directed to investigate and report back on the diversion initiatives outlined in this report,

AND THAT the Markham's Waste Management staff work with the Purchasing and Asset Management Departments to investigate and report back on a Zero Waste procurement policy for all purchasing activities within the Town, including financial implications,

AND THAT a copy of this Report be forwarded to York Region, Durham Region, and each of the Area Municipalities in the Regions of York and Durham.

EXECUTIVE SUMMARY:

The maximum diversion of recyclables and other non renewable resources out of the waste stream should be paramount to any EA waste management planning process.

The diversion opportunities proposed in this report, in conjunction with a comprehensive educational program, can increase Markham's diversion to 80% without significant financial impact. Achieving an 80% diversion rate would result in a disposal requirement for about 5,300 tonnes per year of residual waste.

Given that there are 50 million tonnes of new landfill capacity in Ontario and that developments in waste diversion programs will continue to decrease the amount of waste requiring disposal, staff continue to support the preparation of a detailed financial analysis containing cost comparisons of all waste management options prior to York Region finalizing any commitment to its proposed incinerator.

PURPOSE:

To provide additional information on strategies to maximize waste diversion and facility ownership models for the proposed York/Durham incinerator.

BACKGROUND:

The maximum diversion of recyclables and other non renewable resources out of the waste stream should be paramount to any EA waste management planning process.

At its meeting of May 28, the General Committee requested staff to on the implications of adopting a 75% waste diversion strategy, the Region of York's financial model for its proposed incinerator, and other relative matters relating to the proposal, including financial considerations.

In 2004, Markham Council established a target of 70% diversion by 2007. Markham's diversion programs were successful in diverting 69% of the Town's waste from landfill in 2006.

Markham's diversion success has generated interest from Toronto, Montreal and several Quebec municipalities, and as far away as Winnipeg, Las Vegas Nevada, and Boulder Colorado.

Staff is developing two pilot projects that will increase diversion to 75%. These pilot projects are outlined in a separate staff report titled, "2006 Mission Green Update and Proposed 2007 Pilot Projects," being considered by General Committee at its meeting on June 11, 1007.

Input from recent focus group discussions conducted in Markham indicated that residents are proud of their diversion achievements and are willing to 'reduce, reuse and recycle' even more if provided the tools and opportunity.

Diversion targets to date have placed emphasis on residential curbside diversion. For Markham to maximize the amount of waste it diverts from landfill, it will also have to address diversion opportunities for 'non-residential' waste such as commercial and small businesses, government operations and services such as Libraries, Parks, Community Centers, Fire, Police, Administration, Works, Transit and Social Services (housing). Adopting a Zero Waste approach to all purchasing decisions will further increase Markham's diversion rate.

Audits of Residue Highlight Diversion Opportunities

Two detailed waste audits have been performed on Markham's curbside residue garbage. The first was completed by AET Consultants Inc. following the implementation of the green bin program. A second waste audit was conducted in December 2006 by the consulting firm of Jacques Whitford Ltd. for the York/Durham EA Study. Both audits had similar results.

The audits determined that two thirds of the waste Markham currently sends to landfill is made of recyclable material such as textiles, clothing, plastic bags, organics, polystyrene, junk mail and other reusable items.

Similar audits of waste from municipal facilities have indicated recycling opportunities for paper, cardboard, organics, plastics and electronics.

This combination represents a maximum potential to divert an additional 18,000 tonnes of material resulting in a maximum increase in Markham's diversion rate to 90%. It must be noted that the maximum potential is achievable only with 100% compliance and participation. As this is not likely, this report outlines a strategy that will ultimately target 80% diversion. Achieving 75-80% diversion would place Markham as a world leader in waste diversion including user pay communities.

POTENTIAL OPPORTUNITIES TO INCREASE DIVERSION

Adopting a "Zero Waste" Philosophy

"Zero Waste" is a concept that attempts to prevent waste from being created. It is a philosophy that is often misinterpreted as a goal of 100% waste diversion from landfill.

Basically, Zero Waste puts the responsibility for waste back to the manufacturer. This thinking is causing many companies and municipalities to re-think their purchasing policies and to implement new policies that avoid waste creation. Items that initially appear cheaper to purchase may not be a bargain when the cost of disposal is considered.

This year Wal-Mart announced its goal of Zero Waste by 2025 in all Wal-Mart and Sam's Club stores. Wal-Mart believes that they can conduct business in such a way that they generate no net waste. They are moving toward their goal by recycling more materials, by refining their production and distribution systems so that they create less garbage, and by selecting packaging that creates minimal waste.

Wal-Mart has realized that the waste they pay to dispose of is often the result of bad product design and that garbage is made up of resources going in the wrong direction. An example of this in action was the replacement of the non-recyclable wax coated boxes used for their rotisserie chickens. By moving to cardboard boxes, Wal-Mart sent 3 million less boxes to landfill and the new boxes are now sold to a cardboard recycler for revenue.

To help Wal-Mart achieve its goals, suppliers are asked to consider the seven "R's" when it comes to their packaging:

- **Remove Packaging:** Eliminate unnecessary packaging, extra boxes or layers.
- **Reduce Packaging:** "Right-Size" packages and optimize material strength.
- **Reuse Packaging:** Pallets and reusable plastic containers
- **Renewable Packaging:** Use materials made of renewable resources; select biodegradable or compostable materials.
- **Recyclable Packaging:** Use materials made of highest recycled content without compromising quality.
- **Revenue:** Achieve all above principles at cost parity or cost savings.
- **Read:** Get educated on sustainability and how we can all support it.

One important step to increase Markham's diversion is to look at adopting a similar Zero Waste purchasing philosophy for all municipal purchases and a goal of Zero Waste from all municipal buildings, facilities, and activities.

POTENTIAL OPPORTUNITIES TO INCREASE DIVERSION AT THE CURB

The next opportunity is to maximize diversion opportunities for the residential residual waste stream.

Transparent Bags for Residue

Dark green/black garbage bags make it easy for people to hide 'over flow' recyclables and organics. Eliminating the opportunity to hide recyclables in the residue would encourage residents to better utilize the blue box, recycling depots, and the green bin to boost diversion and target residents that do not participate in Markham's diversion programs. Staff is developing a 3 month pilot project to commence in the fall of 2007 which will assess the impact on diversion and public acceptability. The pilot is outlined in the staff report titled, "2006 Mission Green Update and Proposed 2007 Pilot Projects," being considered by General Committee at its meeting on June 11, 2007.

Overflow Recyclables in Plastic Bags

Markham's "Bag It!" pilot project in 2002 determined that introducing blue bag recycling can increase the capture of recyclables by up to 50%. Markham's previous research has shown that residents dispose of overflow recyclables when their boxes are full. In addition, the only option to expand recycling into parks, special events and small businesses is to collect recyclables in plastic bags.

Curbside Collection of Polystyrene and Plastic Bags

The waste audits determined that about 2.2% of the residue going to landfill is made up of plastic film and polystyrene. Currently the Region does not accept these items at the recycling facility.

Reduce number of No Tag Days

Markham currently offers two weeks in the year, one in the spring and one in the fall, during which residents can place out an unlimited amount of residue. Much of this material is reusable furniture and household items. Increasing re-use opportunities would significantly reduce the need for No Tag Days to one week per year with the possibility of a 'Goodwill' collection day for large items. All large items whether reusable or not now go to landfill.

POTENTIAL OPPORTUNITIES TO INCREASE DIVERSION FROM MULTI-RESIDENTIAL AND BUSINESS SECTORS

Implementing Organics Collection at Multi-residential Sector

Markham expanded its multi-residential recycling program in October 2006. A waste audit conducted prior to the program expansion determined that about 35% of Markham's

multi-residential waste is made up of organic materials. This represents about 1,053 additional tonnes of material that could be composted. Staff is currently implementing multi-residential organics collection.

Mandatory recycling in the BIA

Business in the BIA area has access to municipal collection but many do not fully participate in the Town's recycling program. Requiring BIA businesses receiving municipal collection to recycle would contribute to increased diversion.

POTENTIAL TO INCREASE DIVERSION FROM DEPOTS**Open Recycling Depot in North East Markham**

Markham's recycling depots provide an opportunity to recycle materials that the Region does not accept. Recycling depot expansion has been identified in the Town's long term capital budget projections. In 2006, Markham's recycling depots diverted 2,211 tonnes of recyclables including tires, fluorescent tubes, polystyrene, plastic bags, and toner cartridges, over sized cardboard and shredded paper.

Expanding Markham's recycling depots would not only further increase the convenience of recycling but would allow Markham to increase the materials it recycles to include electronic and electric items currently not accepted at the Region's electronics recycling depot. Any new municipal facility being planned in east Markham should be investigated as a potential location for a new recycling depot.

Expansion of Goodwill Reuse Model

Expanding re-use programs for Markham residents is an important factor to reducing waste. The success of the Goodwill Community Reuse Centre at the Thornhill Recycling Depot and the overwhelming public acceptance of it warrant the installation of an additional Goodwill Community Reuse Centre in east Markham. This expansion is the subject of a Staff report titled, "Community Reuse Donation Centre Program Expansion," being considered by General Committee at its meeting on June 11, 1007.

Establishment of reuse for renovation materials

The waste audits calculated that 3.3% of Markham's residual waste stream is made up of renovation material and wood. The majority of renovation material is reusable. The establishment of a renovation re-use centre in Markham, such as Habitat for Humanity, would capture a significant amount of these reusable items.

The diversion opportunities proposed in this report, in conjunction with a comprehensive educational program, can increase Markham's diversion to 80% without significant financial impact. Achieving an 80% diversion rate would result in a disposal requirement for about 5,300 tonnes per year of residual waste.

Details of the proposed initiatives will be the subject of future reports.

INCINERATION: TONNAGE, OWNERSHIP AND SERVICE DELIVERY MODEL

The York/Durham EA study is now at the stage where the Regions of York and Durham need to decide on the committed tonnages, ownership, governance model, and financing for the proposed incinerator.

The ownership and service delivery model is a significant decision and impacts each Region's fiscal and capital plans.

As the construction of the facility is scheduled to begin in 2009, funds will need to be included in the appropriate future year capital and operating budgets following authorization of Regional Council in 2008. The estimated construction costs for a 250,000 tonnes/year processing facility are between \$225,000,000 and \$250,000,000.

At the April 19, 2007, meeting of York Regional Council, a resolution was adopted to consider up to 49% private sector ownership of the facility. Durham Region is proposing 100% public ownership.

At the June 6, 2007 meeting of the Regional Solid Waste Committee, a resolution was approved to share the construction costs for the facility based on tonnage commitments and to reduce committed tonnage from 50,000 tonnes to 20,000 tonnes per year.

This represents a 12% equity position in the facility, for \$30 million capital cost investment for 20,000 tonnes of residue.

Should the York/Durham EA study result in an incinerator facility in either York or Durham, it will not be able to process the entire residual waste stream because not all residue is suitable for incineration. Waste that cannot be incinerated includes glass and ceramics, and items that are too large to fit into the inlet hoppers of incinerators, such as furniture, mattresses and other large bulky items. York Region will have to dispose of this residue tonnage and the ash generated at the incinerator in landfill.

Given that there are 50 million tonnes of new landfill capacity in Ontario, staff continue to support the preparation of a detailed financial analysis containing cost comparisons of all waste management options prior to finalizing any commitment to the proposed incinerator.

FINANCIAL CONSIDERATIONS AND TEMPLATE: (external link)

Not Applicable

ENVIRONMENTAL CONSIDERATIONS:

Establishing a Zero Waste goal for Markham is consistent with the Town of Markham's corporate goal of "Environmental Focus" and Council's 2007 priorities.

ACCESSIBILITY CONSIDERATIONS:

None

ENGAGE 21ST CONSIDERATIONS:

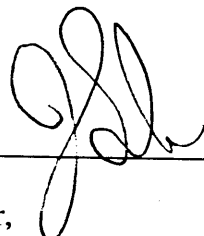
None

BUSINESS UNITS CONSULTED AND AFFECTED:

None

**RECOMMENDED
BY:**


Peter Loukes, P.Eng
Director, Operations


Jim Sales
Commissioner,
Community & Fire Services

ATTACHMENTS:

None

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