

SOLID WASTE MANAGEMENT COMMITTEE

**Wednesday, March 19, 2003
9:00 a.m.
Committee Room "A"**





*Office of the Regional Clerk
Corporate and Legal Services Department*

NOTICE OF MEETING

SOLID WASTE MANAGEMENT COMMITTEE

A meeting of the Solid Waste Management Committee will be held on **Wednesday, March 19, 2003**, in **Committee Room "A"**, York Region Administrative Centre, 17250 Yonge Street, in the Town of Newmarket, commencing at **9:00 a.m.**

Members of the Committee and staff are requested to bring the attached Agenda and accompanying material to the meeting. Please retain your attachments to reports for reference purposes as they are not reprinted as part of the subsequent Council Agenda.

A handwritten signature in black ink, appearing to read "Denis Kelly".

for DENIS KELLY
REGIONAL CLERK

Karin Price
March 13, 2003

Attach.

COMMITTEE MEMBERS

Regional Councillor G. Landon, Chair
Mayor Wm. F. Bell, Vice-Chair
Regional Councillor B. Hogg
Mayor W. Emmerson
Regional Councillor D. Humeniuk
Regional Councillor G. Rosati
Regional Councillor D. Wheeler
Mayor T. Taylor
Regional Chair B. Fisch, ex officio

**Office of the Regional Clerk
CORPORATE AND LEGAL SERVICES DEPARTMENT**

A G E N D A

SOLID WASTE MANAGEMENT COMMITTEE

**Committee Room "A"
Administrative Centre
17250 Yonge Street
Newmarket, Ontario**

March 19, 2003

9:00 a.m.

ELECTION OF CHAIR FOR 2003

ELECTION OF VICE-CHAIR FOR 2003

REGULAR MEETING

DISCLOSURE OF INTEREST

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COMMUNICATIONS

- | | | |
|----|--|---|
| 1. | Sheila Birrell, Town Clerk, Town of Markham, January 15, 2003, regarding Region of York - Waste Collection Responsibility Review. | 1 |
| 2. | Anne L. Mathews, Interim Executive Director, Waste Diversion Ontario and Chris Layton, Media Relations, LCBO, dated January 14 th , 2003 regarding a Media Release, LCBO Assists Municipalities with Recycling Costs. | 3 |
| 3. | Sheila Birrell, Town Clerk, Town of Markham, February 26, 2003, regarding Region of York Assumption of Waste Disposal and Processing Costs. | 9 |

**REPORTS SUBMITTED BY THE
COMMISSIONER OF TRANSPORTATION AND WORKS**

- | | | |
|----|------------------------------------|----|
| 4. | Waste Management Planning Overview | 11 |
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February 18, 2003, recommending that:

1. The following report be received for information by Committee and Regional Council.

5. Markham Household Organics Waste Pilot

17

March 11, 2003, recommending that:

1. The Region implement household organic waste processing for material collected in the Town of Markham effective September 2003.
2. The Region sole source Canada Composting Inc. for a period of two years for the processing of household organic waste at a cost of \$75.00 / tonne for 2003.
3. Funding in the amount of \$39,000 for 2003 be approved for this household organic waste processing, funded from the 2003 Solid Waste Management capital budget.
4. Regional Council requests the Town of Markham to include staff from the Region as a full participant in Markham's "Three-stream Implementation Project Team".

6. Solid Waste Strategy Update

35

March 12, 2003, recommending that:

1. Staff work in co-operation with the City of Toronto and other GTA municipalities to investigate new waste management technologies and report back to Committee and Council.
2. Staff investigate a co-ordinated system wide approach toward household organic waste and yard waste processing with the GTA municipalities and the County of Simcoe, including the technology solutions inherent to this review and report back to Committee and Council in June.
3. Staff report back to Committee regarding the work plan for the Solid Waste Strategy Update and the associated resource requirements.

OTHER BUSINESS

**MOTION TO RESOLVE INTO PRIVATE SESSION TO
CONSIDER A LEGAL MATTER**

ADJOURNMENT

Note: There may be additional items considered that do not appear on this Agenda. Please refer to the Committee Report to Council for all items considered at this meeting.

COMMUNICATIONS

January 15, 2003

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

RE: **REGION OF YORK - WASTE COLLECTION
RESPONSIBILITY REVIEW (5.1)**

Dear Mr. Kelly:

This will confirm that at the meeting of Council held on January 14, 2003, Clause 5 of Report No. 4, was approved as follows:

"That the Region of York letter and attachments, dated November 25, 2002, and the City of Vaughan letter and attachments, dated November 29, 2002, with respect to local municipalities participating in a waste management service level consolidation and governance review, be received;

And that staff be directed to take part in the review of waste management service level consolidation and governance review proposed by the Region of York;

And that staff review the Region's report entitled 'Waste Collection Responsibility Review', concerning waste collection responsibilities, and report back to the Community Services & Environment Committee as soon as possible on the issues to be considered in the review;

And that staff report back monthly to the Community Services & Environment Committee on the progress of the issues and potential implications for the Town of Markham."

Yours sincerely,



Sheila Birrell
Town Clerk

Copy to: Jim Sales, Commissioner of Community and Fire Services
Stan Bertoia, Director of Environmental Services
Andrew Campbell, Director, Solid Waste Management, York Region
Judy Kee, Committee Clerk
Town of Markham - Anthony Roman Centre 101 Town Centre Boulevard, Markham, Ontario L3R 9W3
(905) 477-7000 • Fax (905) 479-7771 • Website: www.city.markham.on.ca

Please Deliver To: The Regional Municipality of York



REGIONAL MUNICIPALITY OF YORK
FILE NO. - 127
Media Release

3

Box 113, Maple
Ontario, L6A 1R6
t. 905.303.0979
f. 905.303.2347

January 14, 2003

LCBO Assists Municipalities with Recycling Costs

Toronto, (Ont.)- For the fifth consecutive year, the Liquor Control Board of Ontario has provided Ontario municipalities that recycle glass beverage alcohol containers with a financial contribution to their recycling costs.

LCBO contributed four million dollars, which was divided on a per tonne basis amongst 169 municipal Blue Box programs. The tonnage was derived from the annual Data Call, during which municipalities submit their recycling tonnages and costs to a central data repository. The year 2001 data was the basis for this year's remittances that were sent to municipalities during the past six weeks.

"Environmental protection remains a key priority for the government and the work of Waste Diversion Ontario (WDO) will play an important role in meeting our waste reduction goals," said Environment Minister Chris Stockwell. "When I announced the WDO board, I asked it to move quickly to provide funding from the LCBO to municipalities and I'm happy to see that has happened."

"The LCBO is pleased to continue to do its part to promote recycling and waste diversion by supporting the Blue Box system," said LCBO Chair and CEO Andrew S. Brandt. "This funding helps Ontario communities meet their waste diversion targets in a way that is practical and convenient for the consumer, as well as cost-effective for the taxpayer and municipalities."

Waste Diversion Ontario, a non-share capital corporation created under Ministerial regulation on June 27, 2002 has been established to provide a mechanism to support municipal costs for all materials collected in residential recycling programs. LCBO is a member of the industry funding organization, Stewardship Ontario, that will implement and operate the Blue Box Program Plan for Waste Diversion Ontario, and next year's contributions to municipal recycling costs will be provided through this program.

Since 1998, the LCBO has contributed \$20 million to municipalities to help cover the cost of recycling beverage alcohol containers in municipal Blue Box programs. The LCBO will continue this funding commitment by contributing a further \$5 million for this purpose in each of the next five years, through Waste Diversion Ontario.

For further information

Contact:

Anne L. Mathewson
Interim Executive Director
Waste Diversion Ontario
Phone: (905) 303-0979
Fax: (905) 303-2347

Chris Layton
Media Relations
LCBO
Phone: (416) 864-6772
Fax: (416) 864-6850

BACKGROUNDER TO LCBO ANNOUNCEMENT- January 14, 2003**LCBO PROVIDES FUNDING FOR MUNICIPAL GLASS RECYCLING**

Toronto, Ontario- Waste Diversion Ontario today mailed 169 cheques to Ontario municipalities that are recycling glass containers in their Blue Box program. The LCBO once again this year contributed 4 million dollars to assist with the cost of recycling glass containers. This is the fifth year of the program, but the first year that the cheques were sent out by Waste Diversion Ontario, the new corporation created by the Ontario Minister of the Environment to develop, implement and operate waste diversion programs in Ontario.

The following is a listing of municipalities that received funds from the LCBO:

The Township of Addington Highlands
The Township of Admaston/Bromley
The Township of Alfred and Plantagenet
The Township of Algonquin Highlands
Almaguin Recycling Initiative
The Township of Amaranth
The Township of Armour
The Town of Arnprior
The Municipality of Arran-Elderslie
The Township of Ashfield-Colborne-West Wawanosh
The Township of Augusta
The Town of Aurora
The Town of Aylmer
The City of Barrie
The Township of Bathurst Burgess Sherbrooke
The Municipality of Bayham
The Township of Beckwith
The Township of Blandford-Blenheim (Oxford County Program)
The Town of Blind River
Bluewater Recycling Association
The Township of Bonnechere Valley
The City of Brant County
The City of Brantford
The Municipality of Brockton
The City of Brockville
Bruce Area Solid Waste Recycling Association
The Township of Brudenell, Lynoch and Raglan
The Township of Burpee and Mills
The Town of Carleton Place
The Township of Carling
The Township of Casey
The Municipality of Central Elgin
The Township of Central Frontenac
The Municipality of Central Huron
Centre & South Hastings Recycling Board

The Municipality of Chatham-Kent
The Township of Chatsworth
The City of Clarence-Rockland
Cochrane Timiskaming Waste Management Board
The City of Cornwall
The Township of Drummond-North Elmsley
The Regional Municipality of Durham
The Municipality of Dutton-Dunwich
The Township of Dysart et al
The Township of East Garafraxa
The Town of East Gwillimbury
The Township of East Luther Grand Valley
The Township of East Zorra-Tavistock (Oxford County Program)
The Township of Edwardsburgh/Cardinal
The Township of Elizabethtown-Kitley
The City of Elliot Lake
The Township of Enniskillen
The Town of Espanola
Essex-Windsor Solid Waste Authority
The Township of Front of Yonge
The Township of Frontenac Islands
The Separated Town of Gananoque
The Township of Georgian Bluffs
The Town of Georgina
The Township of Greater Madawaska
The Town of Greater Napanee
The City of Greater Sudbury
The Municipality of Grey Highlands
The County of Haldimand
The Regional Municipality of Halton
The City of Hamilton
The Town of Hanover
The Municipality of Hastings Highlands
Hawkesbury Joint Recycling Committee c/o The Township of Champlain
The Municipality of Highlands East
The Township of Horton
The Township of Howick
The Township of Hudson
The Township of Huron-Kinloss
The Town of Ingersoll (Oxford County Program)
The City of Kawartha Lakes
The Township of Kerns
The Township of Killaloe, Hagarty, and Richards
The Township of King
The City of Kingston
The Town of Kirkland Lake
The Township of Lanark Highlands
The Town of Laurentian Hills

Backgrounder –3

The Township of Leeds and the Thousand Islands
The City of London
The Township of Madawaska Valley
The Town of Markham
The Town of Mattawa
The Township of Mattawan
The Municipality of McDougall
The Township of McKellar
The Township of McMurrich-Montieth
The Township of McNab-Braeside
The Municipality of Meaford
The Village of Merrickville-Wolford
The Township of Minden Mills
The Town of Mississippi Mills
The Town of Mono
The Township of Montague
The Municipality of Morris-Turnberry
The Township of Mulmur
The District Municipality of Muskoka
The Town of Newmarket
The Regional Municipality of Niagara
The County of Norfolk
The Township of North Algona-Wilberforce
The City of North Bay
The Township of North Dundas
The Township of North Glengarry
The Township of North Grenville
The Township of North Huron
The Township of North Stormont
The County of Northumberland
The Township of Norwich (Oxford County Program)
The Town of Orangeville
The City of Orillia
The City of Ottawa
The City of Owen Sound
The Town of Parry Sound
The Regional Municipality of Peel
Pembroke And Area Recycling Board
The Town of Perth
The City of Peterborough
The County of Peterborough
The Town of Petrolia
The Town of Plympton-Wyoming
The Separated Town of Prescott
The City of Prince Edward County
The Township of Prince
The Town of Richmond Hill
The Township of Russell
The Township of Sables-Spanish Rivers

The City of Sarnia
The Town of Saugeen Shores (Bruce Area Program)
The City of Sault Ste. Marie
The Township of Seguin
The Town of Shelburne
The County of Simcoe
The Separated Town of Smiths Falls
The Municipality of South Bruce
The Township of South Dundas
The Township of South Frontenac
The Township of South Glengarry
The Township of South Stormont
The Township of South-West Oxford (Oxford County Program)
The Township of St. Clair
The City of St. Thomas
The City of Stratford
The Township of Strathroy-Caradoc
The Municipality of Thames Centre
The Township of The Archipelago
The Town of The Blue Mountains
The Municipality of The Nation
The City of Thunder Bay
The Town of Tillsonburg (Oxford County Program)
The City of Timmins
The City of Toronto
Tri-Neighbours
The City of Vaughan
The Township of Warwick
The Regional Municipality of Waterloo
Wellington County Recycling
The Municipality of West Elgin
The Township of West Grey
The Municipality of West Perth
The Village of Westport
The Town of Whitechurch-Stouffville
The Township of Whitewater Region
The City of Woodstock (Oxford County Program)

For information contact:

Anne Mathewson
Interim Executive Director
Waste Diversion Ontario
(905) 303-0979

Chris Layton
Corporate Communications
LCBO
(416) 864-6772

February 26, 2003

REGION OF YORK
CLERK'S OFFICE

FILE No. - P27

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

RE: **REGION OF YORK ASSUMPTION OF WASTE
DISPOSAL AND PROCESSING COSTS (5.1)**

Dear Mr. Kelly:

This will confirm that at the meeting of Council held on February 25, 2003, Clause 1 of Report No. 13, was approved as follows:

"That the Report "Region of York Assumption of Waste Disposal and Processing Costs" be received;

And that the Commissioner of Community and Fire Services be authorized to enter into discussions with the Region of York regarding the sharing of future recycling revenues and Waste Diversion Ontario funding and report to Council."

Yours sincerely,



Sheila Birrell
Town Clerk

Copy to: Stan Bertoia, Construction and Utilities
Peter Veiga, Waste Management Coordinator

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REPORTS

THE REGIONAL MUNICIPALITY OF YORK

Solid Waste Management Committee

March 19, 2003

Report of the

Commissioner of Transportation and Works

WASTE MANAGEMENT PLANNING OVERVIEW

1. RECOMMENDATION

It is recommended that:

1. The following report be received for information by Committee and Regional Council.

2. PURPOSE

The purpose of the report is to outline the waste management planning process that the Region has undertaken over the past few years in developing the Three-stream Waste System.

3. BACKGROUND

At the January 8, 2003 Transportation and Works Committee, staff was requested to summarize the Region's actions and timelines with respect to the development and implementation of its waste management strategy.

4. ANALYSIS AND OPTIONS

The development of the waste management strategy started in 1997. To find a long-term solution, the Region sought proposals from the private sector on how to reach a minimum 50% diversion of waste from landfill. The process allowed consideration of new technologies, composting, landfills, and energy from waste solutions. In addition, the Region had to construct infrastructure to transfer wastes, and deal with household hazardous waste collection. Tables 1 and 2 shows a chronological list of the initiatives and projects that have been undertaken by the Region and those planned for the next few years.

During the last few years, there have been many new and promising technologies entering the marketplace. It has been difficult for staff to consider such options, as these proposals were not part of the Request for Information and Request for Proposal processes that the Region undertook in 1999 and 2000 respectively. Some of the companies who have been reviewed with varying degrees of effort are listed in Table 3.

Table 1
1997 to 2001 Initiatives and Projects

Dates	Initiatives
October 1997	Solid Waste Management Disposal/Diversion Strategy adopted by Council. A 50% diversion of waste from landfill target is established.
October 1997	Solid Waste Management Task Force established
May 1998	Markham Household Hazardous Waste Depot commenced operation.
1998	Four public information centres were held to receive public input regarding the waste management strategy.
January 1998	Georgina Transfer Station commenced operation.
June 1999	Regional Council identifies the Bales Drive property in East Gwillimbury as a potential site for the proposed integrated waste management facility.
June 1999	East Gwillimbury Household Hazardous Waste and Recycling Depot commenced operation.
December 1999	RFI for a new Integrated Material Recovery Facility, Composter and Transfer Station. Thirteen responses were received and four consortia were short-listed. The process was open to consider new technologies, energy from waste, and landfill as solutions.
December 1999	Participation in the RFI with the City of Toronto's Integrated Solid Waste Resource Management (TIRM) process.
May 2000	Region funded \$15,000 toward Markham's "Bag-It!" bag based Pilot Project.
August 2000	Four consortia were invited to submit proposals for the Integrated Waste Management Facility. Miller Waste Systems was the only submission.
August 2000	Request for Proposal (RFP) closed for the disposal of residual residential waste. Proposals evaluated in conjunction with the Toronto TIRM process. Proposals to use an energy from waste facility and a landfill were received.
September 2000	Council adopted in principle the Rail Cycle North proposal for the use of the Adam's Mine Landfill Site.
November 2000	The Rail Cycle North option for long-term waste disposal was cancelled, as Toronto did not enter into a contract.
April 2001	Region funded 50% of Markham's "On a Roll" Part based Pilot Project.
April 2001	Three-stream Waste Diversion and Collection System adopted by Council.
June 2001	Republic Services retained as one of the long-term disposal sites for residual waste.
September 2001	Six-month "Divert It" Expanded Blue Box Pilot Project started in Newmarket.
October 2001	Twelve-month Electronic Recycling Pilot Project started at three HHW facilities in the Region.

Table 2
2002 to 2003 Initiatives and Projects

Dates	Initiatives
2002	Region organized and participated in a variety of environmental events (e.g. Earth Week and Clean Up Green Up Day in April, Children's Water Festival in May and Windfall Eco-Festival in June).
February 2002	Miller Waste Systems (Miller) proposal for a transfer station and MRF on Bales Drive in East Gwillimbury and a transfer station in the Highway 7 corridor accepted. Regional Council considered partnering with Toronto for the use of its MRF and transfer stations.
June 2002	Canada Composting negotiations ended unsuccessfully. Council requested Miller to submit an organic waste proposal. If the Miller proposal was unacceptable, Council approved the issuance of a new RFP.
June 2002	Onyx Arbor Hills Landfill and Green Lane Landfill retained as long-term residual waste disposal sites.
August 2002	Expropriation of the Bales Drive property in East Gwillimbury.
December 2002	Council adopted a policy that "blue bags" would not be processed in the new MRF to reduce capital and operating costs.
January 2003	Small Vehicle Transfer Station and HHW Depot commenced operation.
January 2003	Region assumed all costs for waste transfer and disposal as well as waste diversion processing.
Planned for 2003	Construction of the new facilities on Bales Drive in East Gwillimbury. Enter into contracts for the processing of household organic waste. Initiate and complete a waste management master plan. Pilot a "re-use" centre at the Georgina Transfer Station. Commence the development of a public education program for the Three-Stream Collection Program.

Table 3
New Technologies Reviewed

Company	Services
International Bio Recovery	Anaerobic digestion of food waste
Canadian Natural Power Inc.	Energy from waste
Super Blue Box Recycling Corp.	100% recycling and SUBBOR technology
Sandworks	Glass recycling
Pearl Earth Sciences, Corp.	Startech plasma converter system
Terra Organica	Annelidic conversion of food waste
erthXX International	Energy from waste
Ebara System	Aerobic composting
DRANCO technology	Dry anaerobic composting of food waste
Royal Ecoproducts	Conversion of residual waste into filler for plastic
Canada Composting	Anaerobic digestion of food waste

5. FINANCIAL IMPLICATIONS

The solid waste diversion strategy and dealing with the closure of the Keele Valley Landfill Site have, and will increase costs as more waste is diverted from landfill. The contracts related to the long-term disposal of waste and processing of waste diversion material is in excess of \$400 million dollars over the next 20 years. Capital construction costs for new facilities identified to date are approximately \$40 million. Given the significant expenditures involved, all of the RFP and contract negotiation processes have taken considerably more time than originally planned. Although there have been delays, the Region has been able to significantly reduce its costs as a result of the extended negotiations.

6. LOCAL MUNICIPAL IMPACT

The local municipalities played a significant role in the development of the waste management strategy and the evaluation of future options. It was important that each of the nine municipalities received approval from their councils as they were paying for the services. Starting this year, the Region is fully funding the costs for disposal and waste diversion processing, and is reviewing its responsibilities and accountabilities under the new Municipal Act. The decision making process for future waste management planning and policy is the core of this review.

7. CONCLUSION

The Region and local municipalities have spent a considerable amount of effort in creating and implementing a waste management strategy that will reduce the amount of waste going to final disposal. The future costs will be significant and therefore contract negotiations have been lengthy.

The approval of the Three-stream Waste System and the construction of the related infrastructure will establish a foundation for future waste diversion initiatives. Implementation of the household organic waste collection and processing system is a priority for staff this year.

There is an ongoing need to reduce the amount of waste being disposed of. The Region needs to continue to seek ways to implement new technologies and options to reduce the amount of residual waste in a cost-effective manner.

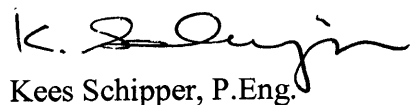
The Senior Management Group has reviewed this report.

Prepared by:



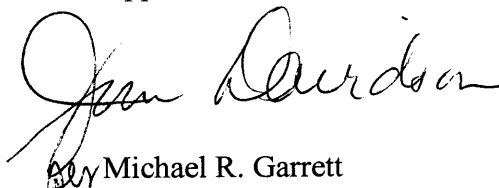
Andrew Campbell, P.Eng.
Director, Solid Waste Management

Recommended by:



Kees Schipper, P.Eng.
Commissioner of Transportation and Works

Approved for Submission:



Michael R. Garrett
Chief Administrative Officer

February 18, 2003

AC/tp

File: P27/2003 Reports/March 19/Waste Management Planning Review.doc

Version 3-2002-9-26

THE REGIONAL MUNICIPALITY OF YORK

Solid Waste Management Committee

March 19, 2003

Report of the

Commissioner of Transportation and Works

MARKHAM HOUSEHOLD ORGANIC WASTE PILOT

1. RECOMMENDATIONS

It is recommended that:

1. The Region implement household organic waste processing for material collected in the Town of Markham effective September 2003.
2. The Region sole source Canada Composting Inc. for a period of two years for the processing of household organic waste at a cost of \$75.00 / tonne for 2003.
3. Funding in the amount of \$39,000 for 2003 be approved for this household organic waste processing, funded from the 2003 Solid Waste Management capital budget.
4. Regional Council requests the Town of Markham to include staff from the Region as a full participant in Markham's "Three-stream Implementation Project Team".

2. PURPOSE

This report is a response to the Town of Markham on its request to implement a town wide household organic waste collection program. Staff are also seeking approval to fund and implement the pilot.

3. BACKGROUND

Clause 5 of Report No. 4 of the Transportation and Works Committee in April 2001 authorized the future implementation of the three-stream waste system. Household organic waste collection was one of the three-streams and could be collected once contracts for the appropriate facilities were finalized. In June 2002, Council adopted Clause 1 of Report No. 4 of the Solid Waste Management Committee which recommended terminating the contract negotiations with Canada Composting Inc. (CCI) for household organic waste processing as CCI was unable to provide sufficient financial securities for a long-term contract. As a result, the Region had to seek another service provider. The procurement process to find an organic waste service provider has added a twelve-month delay to the implementation schedule of a Region-wide program.

4. ANALYSIS AND OPTIONS

The three-stream waste collection program included separating household organic waste, blue box and residual waste. It is necessary that the diversion of household organic waste be implemented for the Region to increase its waste diversion from 26% to over 50%. It was intended that this system be introduced Region-wide once the appropriate facilities were either constructed and/or contracted, which is expected in 2005.

The Town of Markham has requested that the Region implement household organic waste diversion for material collected in Markham in the fall of 2003.

4.1 Municipal Act

The Municipal Act gives the Region exclusive jurisdiction for waste management except for collection, which is the responsibility of the lower tier. As such, the Region is responsible for identifying, implementing and paying for all waste reduction activities (except for collection). The Region needs to approve Markham's organic waste collection and processing pilot for it to proceed.

4.2 Town of Markham Request

At its meeting on January 14, 2003, Markham Council adopted a series of recommendations related to a pilot project for household organic waste collection (*see Attachments 1 and 2*).

The Town of Markham currently has a diversion rate of 35%. To meet its goal of at least 50% diversion, the introduction of household organic waste collection is required. Markham understands that the Region is not prepared to introduce the program Region-wide yet and is therefore asking that a Markham implementation be considered a pilot project. The Town is asking the Region to provide organic waste processing at this time.

Over the last few years, Markham has been testing bag and cart-based systems to determine the effectiveness of different types of collection, as well as the costs. For household organic waste collection, they are proposing to use small 35 to 50 litre kitchen organics containers similar to that used in Toronto's and Durham Regions' programs. These containers are sized for food waste only and not for yard waste. The residents would also receive a small container to use in the home. Markham has estimated that the containers would cost \$20 per household. Markham staff are not asking that the Region pay for the containers.

The Town is planning to have a comprehensive promotion and education program as part of the implementation. It is estimated the cost would be \$2 per household. The Town would pay for the promotion and education program.

A Three-stream Implementation Project Team will also be established including a public consultation process. It is proposed that Regional Council ask Markham to include a Regional staff member on the implementation team as a full participant in the program development.

4.3 Advantages of the Markham Pilot

The implementation of a pilot in Markham involves 47,600 households. Although this is a large number of homes, it represents only 24% of the total number of households in the Region. Implementation of the organic waste collection in the Region on a phased basis provides the following benefits:

- Markham Councillors and residents have been leaders in waste reduction and will be excellent champions to ensure that the program is successful.
- Region-wide promotion and education is expensive and introducing it on a smaller scale allows it to be modified and improved to ensure it is effective before a full-scale rollout.
- Collection contractors who service other municipalities in the Region will be able to learn from the Markham experience to reduce problems and complaints at the curbside.
- Implementing in one municipality shows progress and leadership in waste reduction while waiting for long-term processing facilities to become operational.
- The purchase of containers for all of the household in the Region may cost \$4.5 million. Markham's experience with its cart / container type will allow future purchases to be improved, if necessary, to ensure customer satisfaction.

The Town of Markham has requested that the Region allow it to divert household organic waste this fall. It is proposed that the Region allow Markham's project to proceed and secure processing capacity. Currently, there are only a few organic waste processing facilities in Ontario. The Region though does not have the ability to transfer organic waste from curbside trucks to highway trailers until planned new transfer stations are built at the Bales Drive site and in the southern part of the Region. Miller's Markham transfer station is used for waste collected in Markham and other municipalities but this transfer station is not able to transfer household organics. Therefore, a household organic waste processing facility must be within a reasonable driving distance for the curbside trucks. There are two facilities in York Region that are licensed to handle organic waste; Canada Composting Inc. (CCI) and Miller Waste's Bloomington site. These facilities use different processing technology and are able to handle different streams of waste. A comparison of the two facilities is in Table 1.

Table 1
Household Organic Waste Processing Facilities

Facility	Pros	Cons
Miller Waste's Bloomington Site	• Can process yard waste and small amounts of food waste • \$70 /tonne • Close to Markham	• Open windrow aerobic composting • Unable to capture and control adverse odours • Unable to separate plastics and other contamination • Unable to reduce greenhouse gas emissions
Canada Composting in Newmarket	• Designed to process food and other household organic waste • \$75 / tonne without bonding • \$105 / tonne with bonding (i.e. a \$30/tonne premium) • In-vessel anaerobic digestion • Ability to contain adverse odour • Ability to separate plastics and other contamination • Ability to de-bag material • Reduction in greenhouse gas emissions due to production of electricity	• 10 minute additional travel time to the site compared to Miller • Additional costs for contract securities / bonding • Not a long-term service provider to the Region due to CCI's financial problems

For the purposes of the Markham pilot, it is proposed that the Region use CCI. Previous contract negotiations between the Region and CCI failed, as CCI's receiver would not provide adequate long-term financial guarantees (bonding). CCI is now in a position to provide such guarantees for a short-term contract but at a \$30/tonne premium. Staff do not recommend paying the premium for bonding due to the short contract term and small volume of household organic waste that would be processed in the pilot. It is recommended that the Region pay the \$75 / tonne price and only require the normal insurance requirements that would be expected of other service providers. It is noted that should the processing of material at CCI fail for any reason, the only reasonable course of action would be to dispose of the material.

Two advantages of using CCI are that it is able to handle any contamination in the household organic waste stream and reduce greenhouse gas emissions. During the operation of the pilot program, it is likely that there will be contamination problems as residents adjust to the new collection program. In Toronto's organic program, residents

use a lot of plastic bags to handle the material in the house to deal with the “yuk” factor. These bags need to be removed before the material is composted otherwise the compost is of very poor quality. CCI’s technology has the ability to remove the plastics from the waste in its manual and mechanical sorting process. The Miller facility has no sorting or de-bagging operation. The Region and Markham can evaluate the acceptance of the program by the residents during the pilot and adjust its promotion and education program to deal with contamination problems, but by using CCI the problems will not affect the processing of the organic waste material.

It is proposed that the Region sole source CCI for a period of two years. By the end of that time, the Region will have contracted with its long-term service provider. Markham staff expect that the Town will divert 1,700 tonnes of waste this year starting in September. At \$75 / tonne, it will cost the Region \$127,500 for 2003 to process the material. Staff believes that this price is at an appropriate rate for processing household organic waste material. For the first 12 months, it is expected that 5,000 tonnes of material will be collected resulting in an annual cost of \$375,000.

There will be offsetting savings of \$64 / tonne as the waste will not have to be transferred and landfilled. The net increase in costs is \$11 / tonne resulting in a total net cost increase of \$18,700 for 2003 and \$55,000 for 2004.

5. FINANCIAL IMPLICATIONS

The costs for this project are dependent on the tonnage of waste processed by Canada Composting at \$75.00 per tonne (plus GST). The Town of Markham estimates that it will collect 1,700 tonnes in 2003 and 5,000 tonnes in 2004 of household organic waste. The resulting processing cost at CCI is therefore \$127,500 and \$375,000 for 2003 and 2004 respectively. There will be an offsetting reduction in disposal costs of \$64 / tonne as the material will not have to be transferred and disposed. The net increase in costs is therefore \$18,700 and \$55,000 for 2003 and 2004. An additional \$20,000 is proposed to cover direct costs for staff participation in promotion and education (\$10,000) and legal fees (\$10,000).

The request for this pilot was received after the 2003 budget was finalized and therefore there were no provisions in the budget approved by Council on February 20, 2003. It is proposed that a budget of \$39,000 be established for 2003 and funded from the Waste Management capital budget under new waste management initiatives. For 2004 and beyond, this program should be financed through the tax levy as part of the annual business plan and budget.

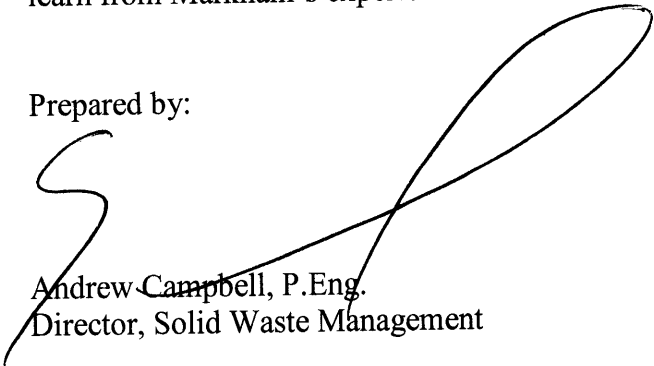
6. LOCAL MUNICIPAL IMPACT

The Region is moving forward with its three-stream program and it is advantageous to the Region and the Town of Markham to initiate the pilot in 2003. If approved, the pilot will help the Region and the local municipalities develop an effective Region-wide program in preparation for the long-term organic waste program. The implementation in Markham will also provide a good foundation for the other local municipalities to learn from and emulate.

7. CONCLUSION

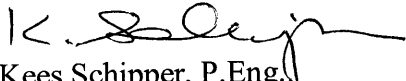
The implementation of household organic waste collection in the Town of Markham as a pilot project in the Region will move the Region forward in its waste diversion goals. The Region and the local municipalities will have an excellent opportunity to observe and learn from Markham's experience before introducing the program Region-wide.

Prepared by:



Andrew Campbell, P.Eng.
Director, Solid Waste Management

Recommended by:



Kees Schipper, P.Eng.
Commissioner of Transportation and Works

Approved for Submission:



Michael R. Garrett
Chief Administrative Officer

March 11, 2003
Attachments - 2

AC/tp
File: P27/2003 Reports/Mar 19/Markham Household Organic.doc

Version 3-2002-9-26



January 16, 2003

FILE NO. - P27

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

RE: **PILOT PROJECT ANALYSIS AND 3-STREAM
COLLECTION IMPLEMENTATION PLAN (5.1)**

Dear Mr. Kelly:

This will confirm that at the meeting of Council held on January 14, 2003, Clause 4 of Report No. 4, was approved as follows:

"That the Report 'Pilot Project Analysis and 3-Stream Collection Implementation Plan' be received;

And that approval be deferred to phase in a Town-wide 3-Stream Collection system with Phase I being the curbside collection of kitchen organics starting in 2003; and Phase 2 being the curbside collection of co-mingled recyclables starting in 2004;

And that such action be pending staff reporting back to Community Services & Environment Committee as soon as possible regarding the confirmation of, among other items, organics and yard waste disposal (to be either combined or separated), the ability of the Region of York to provide interim organic processing in 2003, and the Region of York being requested to provide comments on the staff report this date, entitled "Pilot Project Analysis and 3-Stream Collection Implementation Plan";

And that waste management staff investigate and report back to Council with an organics diversion implementation plan, including the acquisition, distribution and collection costs for a kitchen organic curbside container and funding options;

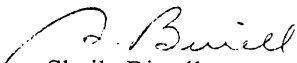
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And that the Director of Environmental Services be authorized to establish a 3-Stream Implementation Project Team, with representation from Town of Markham Council members and Waste Management Department Staff to prepare plans for the implementation of Town wide 3-Stream collection including a public consultation process.

And that the following Members of Council be appointed to the "3-Stream Implementation Project Team":

- Regional Councillor F. Scarpitti
- Regional Councillor T. Wong
- Councillor S. Daurio
- Councillor J. Heath

Yours sincerely,



Sheila Birrell
Town Clerk

Copy to: Stan Bertoia, Director of Environmental Services
Claudia Marsales, Manager, Waste Management



REPORT TO COMMUNITY SERVICES AND ENVIRONMENT COMMITTEE

TO: Mayor and Members of Council

FROM: Stan Bertoia, P.Eng., Director of Environmental Services

PREPARED BY: Claudia Marsales, Manager, Waste Management

DATE OF MEETING: December 9, 2002

SUBJECT: Pilot Project Analysis and 3-Stream Collection Implementation Plan

RECOMMENDATION:

THAT the Report 'Pilot Project Analysis and 3-Stream Collection Implementation Plan' be received;

AND THAT approval be granted to phase in a Town-wide 3-Stream Collection system with Phase I being the curbside collection of kitchen organics starting in 2003; and Phase 2 being the curbside collection of co-mingled recyclables starting in 2004;

AND THAT waste management staff investigate and report back to Council with a Phase 1 implementation plan including the acquisition, distribution and collection costs for a kitchen organic curbside container and funding options;

AND THAT the Region of York be requested to provide the Town of Markham with transitional processing capacity for kitchen organic material starting in 2003;

AND THAT the Director of Environmental Services be authorized to establish a '3-Stream Implementation Project Team, with representation from Town of Markham Council members and Waste Management Department Staff to direct the implementation of Town wide 3-Stream collection including a public consultation process.

PURPOSE:

This report analyses Markham's cart and bag pilot project results and requests approval to phase in a Town-wide 3-Stream collection system starting with the curbside collection of kitchen organics.

BACKGROUND:

The Town of Markham and the Region of York have set a goal to divert 50% of the residential waste stream. Markham's current overall diversion rate is 35%.

In order to achieve and surpass 50% waste diversion, a separate collection system for kitchen organics needs to be implemented, and additional recyclable material captured at the curb such as cardboard and plastics. Kitchen organic waste includes meat, fish, bones, dairy, grease, diapers, paper tissue and paper towels and represents approximately 15-20% of the waste stream not currently being diverted. An additional 5% diversion could be gained by increasing the amount of material captured in the blue box recycling program.

In March 2000, Council approved two pilot projects to study the social, operational, and financial aspects of bag- based and cart- based material collection. The 'Bag-It!' pilot tested the manual collection of organics and recyclables in plastic bags. Residents were allowed to use blue plastic bags instead of blue boxes for their recyclables. All plastic bags were provided for free.

The 'Markham's on a Roll!' pilot tested an automated cart collection system. Residents were provided with two carts: a split cart for garbage and recyclables, and a cart for kitchen and leaf and yard waste. Table #1 provides an overview of both pilot projects.

TABLE #1
Overview of Pilot Projects

MEASUREMENT	'Bag-It!'	'MARKHAM'S ON A ROLL!'
Households	513	588
Demographics	Single family homes, Single family semi-attached homes	Single family homes
Test	Costs, diversion potential, and social acceptability of plastic bags for organics and recyclables	Costs, diversion potential, and social acceptability of carts for organics, recyclables, garbage
Curbside Container	Blue Bags for recyclables Green clear bags for organics+	Split Cart – 417 litre ½ waste/ ½ co-mingled recyclables +Organic Cart 242 litre
Vehicle type	First pass: Garbage/Organics Second pass: Recycling	First pass: Garbage/Recycling Second pass: Organics
Frequency of Collection	Weekly (Additional seasonal leaf and yard waste pick-up)	Weekly (additional seasonal leaf and yard waste pick-up)
Participation	Blue Bag – 82% Bagged organics – 33%	Split cart – 97% * Organics Cart – 87%
Diversion achieved	57%	61%

* Split cart contained garbage for collection.

For the pilot projects, blue box material was collected fully co-mingled (fiber/glass/containers) in either blue bags or in the split cart, and taken to Miller's material recycling facility in Markham and sorted by hand. The mixed organics were taken to Miller's composting facility on Bloomington Road in Richmond Hill.

While the material recycling facility was able to handle the small quantity of co-mingled materials collected from the pilot projects, both Miller and Regional staff has indicated that current facilities do not have the capacity or the technology to accept large quantities of co-mingled recyclables or large quantities of kitchen organics generated from a Town-wide collection system at this time.

In order to provide long-term processing capacity for the area municipalities, the Region of York is in the process of developing a new co-mingled recycling facility tentatively scheduled to open in June 2004. The composting technology, and facility location for organics processing has yet to be finalized by the Region. The third stream, garbage, is to be transported to Miller's Markham transfer facility and on to private landfill sites starting January 2003.

COMPARISON OF PILOT PROJECT RESULTS:

Low participation from residents using bags for kitchen organics

The 'Bag-It!' pilot project data clearly indicated that residents did not like placing plastic bags of kitchen organics at the curb for collection. The average monthly participation for bagged kitchen organics was low at 33%. Residents reported that birds and animals frequently broke open the bags and scattered the contents. During the winter, small plastic bags got lost in the snow.

Pilot project data did indicate a higher public acceptance for using plastic bags for recyclables. On average, 82% of the households used blue bags for recycling when given the option.

A survey of the 'Bag-It!' participants found:

- Some residents were concerned about the number of plastic bags being used, thinking that these were adding to the waste going to landfill.
- Many residents were repulsed by the "yuk" factor - the perception that the storage of leftover, decaying food in the house is unsanitary and unhealthy. These people quickly concluded that the collection of kitchen food organics was impractical.
- The residents who admitted in surveys that they did not participate in the curbside organics collection system:
 - 33% said it competed with backyard composting
 - 25% stopped because of the odour or messy appearance
 - 25% stopped because they perceived the process to be too complicated
 - 15% said they didn't produce enough organic waste, and
 - 10% said the 11-litre kitchen container was too large for their kitchen

The major reasons for preferring blue bags for recycling were:

- Convenience, added capacity, easy to store, light weight
- One way trip to the curb (especially valuable when the householders weren't going to be returning home immediately)
- Less litter from blowing debris

High participation from residents using cart for kitchen organics

Survey responses from 310 of the 588 homes indicated a high approval rate for the use of carts for organics. On a scale of one to five, with five being the most positive, survey respondents rated the cart system at 4.64. Residents that responded to the survey indicated they preferred carts as they kept the neighbourhood clean, found them easy to take to the curb, and thought the carts reduced the amount of materials going to landfill.

Average monthly participation using the split cart was high at 97%. This can be attributed to the fact that half the cart held the garbage stream and residents are accustomed to placing their garbage out weekly. Participation using the organics cart ranged from a high of 87% in June and a low of 57% in February when yard waste is not generated.

Audit results as outlined below indicate high diversion of organics was achieved with the 'Markham's on a Roll' type system. This high diversion rate is a result of residents mixing kitchen organics with leaf and yard waste trimmings in the large organic cart. The recycling diversion was similar for both pilots.

While the Region of York permitted the mixing of the two organic streams for the duration of the pilots, regional waste management staff has indicated the area municipalities should design a collection system that collects kitchen organics as a separate stream from leaf and yard waste. Table #2 provides the audit results of both pilot projects.

TABLE #2
Audit Results of Pilot Projects

<i>Stream</i>	<i>'Bag-It!' Recovery Rates (kg/hh/yr)</i>	<i>'Markham's on a Roll!' Recovery Rates (kg/hh/yr)</i>
Kitchen Organics	71.9	104.0
Leaf & Yardwaste	81.57	242.2
Recycling	400.4	408.6
Garbage	418.11	514.1

The automated co-collection system tested was less efficient than manual co-collection

The automated co-collection system used in the 'Markham's on a Roll' pilot proved to be less efficient than manual co-collection. The automated co-collection using the split-truck averaged only 57 stops per hour. By comparison, the manual co-collection system used in the 'Bag-It' pilot averaged 93 stops per hour for bagged organics and garbage.

The automated collection of the organics cart averaged only 53 stops per hour compared to 145 stops per hour for regular manual garbage collection.

The slower productivity of the automated cart tipping system was due in part to the slower cycle time, the inefficiency of the operator having to continually exit the vehicle to manually handle overflow material left outside the cart, and the improper positioning of carts for collection.

Collection of bagged recyclables averaged 105 stops per hour, considerably faster than the current blue box system at 70 stops per hour. The increased productivity of the blue bag system was due to the elimination of the need for the operator to sort material at the curb. Table #3 below illustrates the collection efficiencies of the pilot projects.

TABLE #3
Collection efficiencies

MATERIAL	CURRENT COLLECTION	BAG-IT MANUAL COLLECTION	CART AUTOMATED COLLECTION
Garbage	145 stops/hour		
Recyclables	70 stops/hour	105 stops/hour	
Yard Waste	70 stops/hour		
Organics in Cart			53 stops/hour
Co-collection bagged Organics/Garbage		93 stops /hour	
Co-collection Recycling/Garbage in carts			57 stops/hour

'Markham's on a Roll' type collection system more costly than 'Bag-It' system

At the conclusion of the pilot projects, all collection data was input into a financial model to compare productivity and operating cost data, capital costs, labour rates, travel time, volume and frequency of service. The collection model indicated that a Town-wide 'Markham's on a Roll!' type system would require a total of 36 vehicles: 21 - 2 compartment vehicles, 12 organic vehicles, and 3 extra leaf and yard waste vehicles. A 'Bag-It!' system would require a total of 29 vehicles: 14 - 2 compartment vehicles, 11 organic vehicles and 4 extra leaf and yard waste vehicles.

The financial model indicates on a cost per household basis, the 'Markham's on a Roll' style automated collection system would cost more than a 'Bag-It' style manual collection system. In addition, automated collection systems have challenges such as enforcement and off-street parking issues. Tables #4 and #5 compare the collection costs extrapolated Town-wide for both pilots.

TABLE #4
Bag system costs

	Bag Costs Per Year*	Collection Costs Per Year	Total Costs Per Year	Cost Per House Per Year
47,600 households	\$1,211,336	\$4,351,874	\$5,563,211	\$116.87
Collection Costs (without Bag* Costs)			\$4,351,874	\$91.43
2001 Collection Budget (for comparison)			\$4,916,364	\$103.28

* Based on survey of average cost of bags in Markham retail outlets. Payable by residents

TABLE #5
2-Cart system costs

	Cart Costs Per Year	Collection Costs Per Year	Total Costs Per Year	Cost Per House Per Year
47,600 households	*\$943,329	\$5,406,881	\$6,350,210	\$133.41
Collection Costs (Without Cart Costs)			\$5,406,881	\$113.59
2001 Collection Costs (For comparison)			\$4,916,364	\$103.28

*The cost estimate for carts based on \$100/split cart and \$50/organics cart amortized at 5% over 10 years is \$19.43/hh/yr. Payable by municipality.

PILOT PROJECTS – GENERAL OBSERVATIONS AND CONCLUSIONS

Markham's pilot projects provided valuable information for implementing a Town-wide 3-Stream collection system. The following observations and conclusions from the pilot projects should be used to design the Town's future kitchen organics collection program:

1. At the conclusion of the pilot projects, residents in the pilot areas expressed a strong desire to continue diverting kitchen organic material.
2. There was a significant difference in the amount of organics recovered in the pilot projects. Waste audit data and surveys indicated that the use of a rigid container with a lid contributed to the increased diversion of kitchen organics from the waste stream.

3. The Region has indicated that in the future, kitchen organics will not be received for processing mixed with leaf and yard waste. This is because kitchen organics require a higher level of processing than leaf and yard waste. As a consequence, kitchen organics will require a separate curbside collection system. The pilot project audit indicates that each household generates approximately 13kg of kitchen organics per week. A small curbside container 35-50 litre in size would provide sufficient capacity for weekly kitchen organics collection.
4. Due to the nature of the material, kitchen organics should be collected weekly throughout the year. Leaf and yard waste should remain a seasonal, separate collection.
5. There was a significant difference in the number of collection vehicles that would be required to implement automated collection vs. manual collection. A manual type collection system requires less trucks and drivers and appears to be the most cost effective collection method for kitchen organics.
6. Co-collection of the organic materials with either recyclables or waste may be the most cost effective method of implementing weekly organic collection. The cost of implementing a co-collection system should form part of the negotiations with Miller Waste Systems.
7. Data from the 'Bag-It' pilot indicates that high participation was achieved using blue bags for recycling. The issue of recycling collection methods should be addressed as part of the implementation of Phase 2.
8. Some compost facilities accept organic material in plastic bags. The issue of allowing residents to use plastic bags for containing kitchen organics inside of the curbside container will be addressed after the Region finalizes the location and acceptance criteria of the interim organics processing facility.

Based on the above conclusions and observations, staff are recommending that a small curbside container that can be manually co-collected on a weekly basis would provide the maximum diversion of kitchen organics at the lowest cost.

Staff recommends phasing in Town wide 3-Stream collection starting in 2003

Staff recommends implementing 3-Stream collection in two phases:

- Phase 1 will be the distribution of a small curbside container and in-home container for kitchen organics. Curbside collection of kitchen organics would commence in the fall of 2003.

- Phase 2 will be the implementation of a co-mingled recycling collection in 2004 in conjunction with the opening of the Region's proposed recycling facility.

Table #6 below profiles the proposed 3-stream collection system implementation

TABLE #6
Markham's Proposed 3-Stream Collection System

Stream	Destination	Date for Regional Facility	Date for Implementation in Markham
One	Residual garbage to landfill	2003	2003
Two	Organics – kitchen organics to Region's proposed compost facility(s)	2005*	2003
Three	Co-mingled recyclables to Region's proposed MRF on Bales Rd. in Newmarket	2004	2004

* A request from the Town to the Region of York to secure interim processing capability for 2003 and 2004 is required.

Small curbside kitchen organics container has many benefits

The benefit of using a small curbside organics container is its suitability town wide. All neighbourhoods, including high-density housing and rear laneways, could store a small container. In addition, a small container that can be manually collected will provide collection efficiencies. The preferred curbside container cart would be:

- 35-50 litres in capacity
- Lid with hinge
- Weight of container when collected should not exceed 18 kg residential by-law limit for manual collection
- Have multi-year warranty

Convenience is key to overcoming the 'yuk' factor and to increasing diversion. To this end, a small in-home kitchen storage container should be provided to all residents receiving curbside organics collection services.

Education and promotion paramount to behaviour change

A comprehensive education program will be required to successfully implement the curbside collection of kitchen organics. Based on information from waste management staff at the City of Halifax and City of Toronto, both of which have implemented large-scale organics collection programs, a budget of \$2.00 per person is the minimum expenditure to limit the amount of contamination in the organics stream and ensure residents understand the new program.

The Town's communication program would include such initiatives as newspaper ads and articles, local television coverage, ads on OMG bins, newsletters, web site, and other community outreach activities.

Region requested to provide interim processing facility

The Region of York has responsibility for providing disposal and processing facilities for the materials collected by the area municipalities. While the Region has finalized contracts for garbage disposal, they have not yet finalized plans for the new recycling facility on Bales Road, or for the future kitchen organics processing facility.

Regional staff has indicated that the organics processing facility for the area municipalities will not be available until 2005. In order to begin organics collection in 2003, interim organics processing capability needs to be secured. The City of Toronto's Dufferin Facility does not have any additional capacity at this time. Canada Compost's facility in Newmarket, and the City of Guelph's facility, have excess capacity and would be able to process the Town's kitchen organics. A request from the Town to the Region of York requesting that they secure interim processing capability for kitchen organics for 2003 and 2004 is required.

Renegotiation of collection contract required

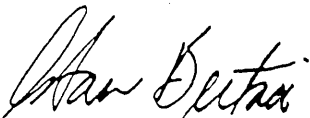
The Town's current collection contract does not expire until November 2005. Implementation of organics collection in 2003, will require successful re-negotiation of the current collection contract with Miller Waste Systems.

FINANCIAL CONSIDERATIONS:

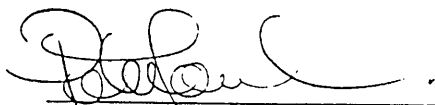
Funding options for implementing 3-Stream collection and specifically Phase 1 organics collection will be reviewed by the Waste Management and Finance Departments and included in a further report to Council.

BUSINESS UNITS CONSULTED AND AFFECTED:

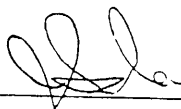
There are no interdepartmental implications of this report.



Stan Bertoia, P.Eng.
Director, Environmental Services



Peter Loukes, P.Eng.
Director, Operations and Asset Management



Jim Sales
Commissioner of Community and Fire
Services

THE REGIONAL MUNICIPALITY OF YORK

Solid Waste Management Committee

March 19, 2003

Report of the

Commissioner of Transportation and Works

SOLID WASTE STRATEGY UPDATE

1. RECOMMENDATIONS

It is recommended that:

1. Staff work in co-operation with the City of Toronto and other GTA municipalities to investigate new waste management technologies and report back to Committee and Council.
2. Staff investigate a co-ordinated system wide approach toward household organic waste and yard waste processing with the GTA municipalities and the County of Simcoe, including the technology solutions inherent to this review and report back to Committee and Council in June.
3. Staff report back to Committee regarding the work plan for the Solid Waste Strategy Update and the associated resource requirements.

2. PURPOSE

This report outlines the program priorities that staff are working on in 2003 as an update to the Solid Waste Management Strategy. New initiatives are also discussed that have arisen as a result of the change in the allocation of waste management responsibilities with the local municipalities.

3. BACKGROUND

At its meeting on November 21, 2002, Regional Council adopted a resolution transferring all disposal and diversion costs to the Region from the local municipalities. This transfer was consistent with the requirements under the Municipal Act. In addition to the financial responsibility, the Region is also responsible and accountable for all waste management except for curbside collection under the Municipal Act.

4. ANALYSIS AND OPTIONS

The Solid Waste Management Strategy was developed in 1997. The goal was to divert 50% of the waste stream from landfill by 2000. Implementation has proceeded and the Region has adopted a three-stream waste collection program and established its long-term waste disposal contracts. Significant delays have occurred in the land acquisition, tendering and procurement process for the required new material recovery facility and southern transfer station. A vendor for processing of household organic waste has not been selected. As a result, it will be at least 2006 before all of these facilities are in operation. Therefore it will be at least 2006 before the Region is diverting 50% of its waste.

Disposing of the residual wastes in landfills in Michigan and Southern Ontario have also caused some concerns by municipalities along the truck routes and neighbours to the landfills. The Onyx landfill in Michigan currently accepts 110,000 tonnes per year (52%) of our waste and the contract ends at the end of 2007. The Region could send this volume of waste to the Republic and Green Lane landfills under our current contracts, or alternatively the Region could potentially use other processing technology to replace this contract. The use of new technology or additional waste reduction initiatives are required if the volume of waste is to be reduced from landfill.

Under the Municipal Act, the Region is responsible for waste management and waste reduction (except for collection), and is now paying for the costs. The Region is now in a position to build on success and ensure that the diversion targets are effectively phased and met. To do this, the Region must take a leadership role and build the policy, program and team committed to waste reduction. The following sections outline staff priorities.

4.1 Bales Drive Facilities

Operating and construction contracts for the MRF and transfer station are being negotiated and finalized with Miller Waste Systems. Once approved by Council, construction should start this fall.

4.2 Building Community Partnerships

The development of new programs and the effective delivery of promotion and education programs are enhanced when government works in partnership with community groups. The Ontario Centre for Municipal Best Practices in waste management has recently published a case study on building partnerships. In the case study, the community set policy to engage community groups on an ongoing basis. The result was lower promotion and education costs and increased waste reduction.

The Region's Waste Management Branch has engaged the public in the past for the Strategy review and a public liaison committee has reported on an ongoing basis to the Solid Waste Management Committee. The best practice partnership concept is at a more grass roots level working with church groups, charities, community associations and

other agencies such as food banks and Habitat for Humanity. Effort is required to build these relationships and the outcome in other communities has been significant.

4.3 Organic Waste Contracts

It is proposed that the Region consider its requirements for household organic waste processing in two streams: immediate and long-term needs. In the short-term, the Town of Markham wants to implement a town wide pilot in 2003. Staff support this request and a separate report to Committee has been prepared to discuss this issue. The long-term approach acknowledges that it will take significant capital and time to construct a facility, whether in York Region or elsewhere.

It is evident given the proposals that the Region has received in regard to Organic Waste Processing that the Region will enjoy lower costs if the volume of organic waste processed is increased through partnering with other municipalities. York Region requires 40,000 tonnes of capacity while Toronto and Durham require 100,000 and 25,000 tonnes of annual capacity respectively. If yard waste were included the total would increase by at least 50,000 tonnes per year. The processing capacity for household organic waste and yard waste must be developed in the next two to four years to meet the expectations of each municipality. Staff in Durham and Toronto believes that there may be significant advantages to developing and sharing processing facilities. It is therefore recommended that staff look at handling organics using a system wide approach including the other GTA municipalities and possibly Simcoe County. The system options may require different types of processing or multiple processing facilities and may reduce overall program costs. Staff will provide a status report to Committee and Council on their findings in June.

4.4 Promotion and Education

The introduction of the new three-stream waste system will require significant promotion and education efforts to ensure effective implementation. This will be the largest waste reduction program since the introduction of the blue box project. The challenge in the program is to educate residents how to divert household organic waste from the garbage and to overcome the related “yuk” factor. The program will require the development of print, radio and classroom material. Staff will work in conjunction with the Town of Markham on its proposed household organic waste collection pilot to develop a complimentary education program.

4.5 Evaluation of New Technologies

Over the past few years, there have been many new developments in waste management technology that deal with reducing the amount of residual waste needing final disposal. The Region has not dealt with the many proposals as none of them were able to be in operation starting in January 2003 when the Keele Valley Landfill Site closed.

The Region now has the opportunity to investigate these technologies should it choose to find alternatives to landfilling. The Onyx landfill contract ends in five years (2007) and the Republic and Green Lane contracts have a renewal option in five years (2007). Now is the appropriate time to engage new contractors and technologies so that the Region will be ready at the end of 2007. The City of Toronto and the Regions of Durham and Peel are in a similar situation as they also ship waste to Michigan. It may be appropriate that the GTA municipalities work co-operatively and share the costs to find a solution given the risk and expense of a facility utilizing new technology. It is proposed that the Region work with the City of Toronto and the Regions of Durham and Peel to investigate new waste management technologies and consider participation in any RFP process that is issued to secure new residual waste processing capacity. Staff will report back to Committee and Council on this issue in the fall of 2003.

4.6 Stop Litter Campaign

Litter is a growing problem and an increasing disturbing social behaviour. The Region has previously not dealt with litter on a program basis. It is proposed that a baseline audit be undertaken this summer to statistically measure the problem and identify the types of material and typical commercial sources. From this data, the Region can address the issue with identified product “stewards” such as fast food chains, coffee shops and cigarette manufacturers. Promotion and education programs can also be developed to bring the issue to the public and attempt to change social behaviour.

Staff has been working with the Regions of Peel and Durham as well as the Cities of Toronto and Hamilton on this issue. Our objective is to develop a consistent measurement program and then be able to share our data to develop promotion and education programs. Dealing with the product “stewards” is also easier if a GTA approach is taken. It is proposed that the audit commence in July. Costs for this have been included in the 2003 budget.

4.7 Effective Contract Management

The Region is using six new contractors to dispose of the waste including transfer, haulage and disposal now that the Keele Valley Landfill Site has closed. The management of these contracts has taken a considerable amount of staff resources. It is expected that performance management of these contracts will take ongoing staff resources throughout 2003.

4.8 Continuing the Development of Best Practices

The Region has been actively participating in the Ontario Centre for Municipal Best Practices and with the Ontario Municipal Benchmarking Initiative (OMBI) program.

Andy Campbell, Director of Solid Waste Management, is the Chair for both of these groups for waste management. Both of these initiatives involve performance measurement, tracking and comparisons with other municipalities across Ontario. The OMBI group was also responsible for collecting the data that determined the amount of funding that municipalities would receive from Waste Diversion Ontario (WDO). The Region will continue to work with all of these organizations in 2003.

4.9 Long-term Planning

The Region's current waste management strategy will be completed with the introduction of the three-stream waste collection, the construction of the transfer station and material recovery facility, and the disposal of residual waste. The objective of this strategy was to achieve 50 % diversion from landfill.

The new waste management facilities at Bales Drive in East Gwillimbury were also part of the strategy and are being funded from the Region's waste management reserve. Funding for other facilities such as public drop-offs, household hazardous waste depots, recycling depots or other facilities that the Region may wish to construct in the future would also be funded from the reserve. The reserve was fully funded from Keele Valley royalty payments from the City of Toronto. These payments came to an end with the closure of Keele Valley.

What are the community's and the Region's future requirements for waste facilities? What will be the cash flow requirements for the reserve fund over the next ten or twenty years and how will it be funded? The change in the Municipal Act also sets out that the Region is exclusively responsible for waste management other than collection. Does the Region need different waste management policies, operations or enforcement? Should the Region implement bag limits and / or user fees to increase diversion?

Staff will spend time in 2003 to deal with the questions raised in this section. Staff will build on the ideas and report to Committee and Council later in 2003.

4.10 Ontario Smart Growth Panel

The Ontario Smart Growth Panel recently issued a discussion paper "Shape the Future". The panel's Rethinking Waste sub-panel, chaired by Regional Chair Bill Fisch, developed nine directions for discussion on waste management in Central Ontario. These directions were:

- Implement a diverse portfolio of options to management waste that include reduction at source, recycling, composting, landfill, deriving energy from waste, thermal treatment and new waste management technologies.
- reduce our dependence on the export of municipal waste to the United States over the next 10 years. The panel also recognizes that we need to reduce our dependence on landfill.
- Improve access to private landfill sites to reduce our dependence on exporting waste. This is a short-term measure that will need to be implemented while the withdrawal from U.S. landfill sites takes place.

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- Set targets for municipalities on the amount of waste that must be diverted from disposal sites through recycling and composting. These targets should be phased in over the next 30 years.
- Regulate the composting of organic (kitchen and yard) waste to eventually prohibit the disposal of organic matter in landfill sites. This type of matter accounts for 40 per cent of municipal waste. Reducing its quantity in household garbage would significantly reduce our dependence on landfill sites.
- Encourage municipalities to implement user-fee programs as incentives for households to reduce their production of waste.
- Encourage municipalities to collaborate on waste reduction, diversion and disposal efforts for residential, industrial, commercial and institutional waste.
- Assess industry standards for packaging to reduce waste at its source.
- Explore and invest in (where appropriate) new waste management technologies.

These ideas are consistent with the direction that York Region is moving and staff will need to participate in any initiatives that result from the Smart Growth Panel's work.

5. FINANCIAL IMPLICATIONS

There are no direct financial implications resulting from this report. Staff will report back with respect to implication of specific initiatives following a full analysis.

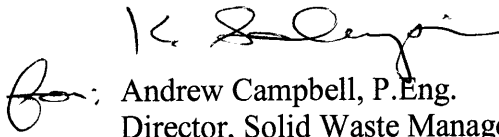
6. LOCAL MUNICIPAL IMPACT

Staff from the local municipalities need to be included in the planning process and program delivery that impacts waste collection.

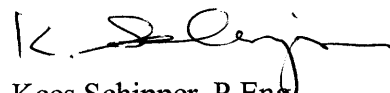
7. CONCLUSION

There are many significant projects that the Region needs to under take in 2003 to deal with the implementation of the Region's Waste Management Strategy, its new waste responsibilities, new technology and determining how to move waste diversion beyond 50%. Staff will be working closely with other GTA municipalities to determine if there are any effective composting or new disposal technologies to minimize the amount of waste being landfilled.

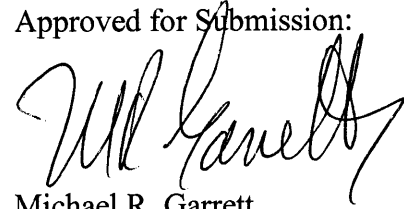
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