

1

SOURCE SEPARATED ORGANIC IMPLEMENTATION IN MARKHAM

1. RECOMMENDATIONS

It is recommended that:

1. The Region support the September 2004 implementation of the household source separated organic waste and commingled blue box program in Markham as a Regional pilot for the introduction of the new three-stream waste collection system.
2. Markham pay 50% (estimated to be \$245,000) of the Region's additional costs to transfer and process commingled blue box material until the Region's new material recovery facility on Bales Drive in East Gwillimbury is operational in July 2005.
3. Staff have discussions with the City of Toronto to negotiate a lower tipping fee for handling and processing of commingled blue box material.

2. PURPOSE

This report presents the Town of Markham's implementation plans for the household source separated organic waste (SSO) program and the cost impact on the Region's blue box program.

3. BACKGROUND

The Region adopted a recommendation in 2001 to implement a three-stream waste collection system (commingled blue box, source separated organics (SSO) and residual waste) to increase waste diversion and reduce the amount of waste requiring landfilling in Michigan. The Region needs to have new blue box and SSO processing facilities, as well as waste transfer station capacity as part of this strategy. A new material recovery facility (MRF) is under construction on Bales Drive in East Gwillimbury to process the commingled blue box material and is expected to be in operation in July 2005. Council has also approved contracts with Miller Waste Systems to transfer waste material at its existing Markham transfer station until December 2006, and for a long-term transfer station to be built in the southern part of the Region starting in 2007.

Council recently adopted Report No. 2 of the Solid Waste Management Committee on January 22, 2004 to enter into a contract with Halton Recycling to process SSO starting in September 2004. This report also requested each local municipality to report to the Region by May 2004 its timing and implementation plans for SSO and the resulting waste collection program.

4. ANALYSIS AND OPTIONS

The Region's new three-stream system includes SSO and a fully commingled blue box program in which the blue box material is not sorted at the curbside. Currently the blue box material is sorted into five material types (paper, cardboard, containers, clear glass and coloured glass) at the curb by the recycling truck driver. The commingled blue box material will be processed at the Region's new material recovery facility on Bales Drive in East Gwillimbury. It is the Region's expectation that the collection systems in the local municipalities would change once the new MRF is operational in July 2005 to collect the commingled blue box material and SSO.

Staff from the Town of Markham have been discussing how the SSO program could be implemented in September 2004 in advance of the Region's plans. The Town would like to change its collection program for 15,000 households to include collecting the blue box material in a commingled stream instead of separating it at the curbside. It is estimated that the Town would collect 2,000 tonnes of SSO and 5,000 tonnes of commingled blue box material from September 2004 and July 2005. The balance of the Town may be phased in over the following two years.

As a result of Markham's request, the Region would need to transfer the commingled blue box material to the City of Toronto as our current contracts and facilities cannot process the material. This report presents a base case (Option 1) where Markham only collects SSO and a second case (Option 2) where Markham collects SSO and commingled blue box material.

4.1 Option 1 – Only Implement Source Separated Organics

The Region has budgeted in 2004 and 2005 to transfer and process SSO material from Markham at Miller's transfer station in Markham and at Halton Recycling Ltd. in Newmarket. The associated costs are in Table 1 and include the cost and revenue for the blue box program. Markham has not provided the Region with its collection costs and therefore the total system costs cannot be calculated. It is expected that the blue box collection costs would be significantly lower when materials are commingled rather than hand sorted at the curb. The Region's cost, if only the SSO program is implemented, is \$154,000 for the tonnages stated in Table 1. Approximately 2,000 tonnes of waste will be diverted from landfill at a gross cost of \$127 per tonne or \$63 per tonne more than landfill.

4.2 Option 2 – Implement SSO and Commingled Blue Box

The Town believes that it will be able to minimize disruption to its residents as well as its collection costs if the commingled blue box is implemented at the same time as SSO. This change requires the transfer and processing of the commingled blue box material at a MRF outside of York Region until the Region's new MRF is operational in July 2005. Therefore, the Region will incur additional costs for blue box material transfer and

processing. The closest facility is privately owned and operated by Metro Waste Paper in Scarborough and is under contract with the City of Toronto. The City of Guelph also owns and operates a MRF that would be able to process the material. Staff have had discussions with the City of Toronto as it is closest and would provide the lowest transportation costs.

The Metro Waste facility is located near Morningside Road and Sheppard Avenue in Scarborough. This facility has the capacity to handle the quantity of material that will be collected by the Town of Markham until the Region's new MRF opens mid 2005. Toronto Council has approved a tipping fee of \$50 per tonne for customers to use this facility. The fee includes material transfer from a Toronto transfer station, haulage to the Metro Waste facility, processing and the revenue from the sale of the blue box material. The market value of the processed blue box material has been increasing in 2004 and it is proposed that staff be authorized to negotiate a lower tipping fee, if possible, with Toronto. Toronto requires that customers using this MRF transfer material through one of its transfer stations due to contractual arrangements and Ministry of the Environment's Certificate of Approval for the facility. Markham's material would be delivered to the Scarborough Transfer Station either directly using the curbside collection vehicles or by transferring from a transfer station in Markham. Markham staff have stated that they prefer routing the curbside collection vehicles to Miller Waste's existing transfer station or MRF on Woodbine Avenue.

Staff requested a transfer price from Miller as requested by the Town as the Region's current transfer contract with Miller at its existing transfer station in Markham allows for the transfer of residual waste and SSO only. The Region's long-term contract with Miller for the long-term transfer station includes transferring blue box material but, the facility will not be constructed and operational until 2007. Miller has offered to transfer blue box material from its existing MRF facility if it can obtain the required approvals from the Ministry of the Environment. The cost will be \$27.67 /tonne and Miller will increase the costs to process the remaining tonnage at its MRF if Markham implements the program in the balance of the Town before the new Bales Drive MRF opens.

Staff from Markham and some of the other local municipalities have also requested that the Region obtain transfer facilities for blue box material in the Highway 7 corridor for the period of time after the Region's new MRF opens in July 2005 and before Miller's new transfer station opens in 2007. The Region has requested that the local municipalities inform the Region of their implementation and collection plans for SSO by May 2004. The Region will have sufficient time thereafter to deal with common implementation issues and contract with an existing transfer station for additional transfer services if necessary.

The estimated cost to process SSO and commingled blue box is \$644,000 (Table 1). This represents a \$490,000 increase to the Region's budgeted costs as the Region has not contemplated processing a commingled blue box stream before the new Bales MRF opens. It is estimated that an additional 2,500 tonnes waste will be diverted from landfill

with this option. This diversion has a gross cost of \$260 per tonne which is \$186 per tonne more than landfilling.

Table 1
Markham September 2004 Program Implementation Cost Estimates
(September 2004 to July 2005)

Item	Tonnes	Option 1 SSO Implementation Only	Option 2 SSO and Commingled Blue Box Implementation
• Transfer/haul SSO to Halton Recycling	2,000	\$54,000	\$54,000
• Processing SSO	2,000	\$200,000	\$200,000
SSO Processing Sub-total		\$254,000	\$254,000
• Transfer/haul commingled blue box material to Toronto	5,000	n.a.	\$140,000
• Processing commingled blue box material at Toronto's MRF (net of revenue)	5,000	n.a.	\$250,000
• Process curb side sorted material at Region's MRF (Gross cost)	5,000	\$350,000	n.a.
• Less revenue from material sales	5,000	(\$450,000)	Included in the processing cost
Blue Box Processing Sub-total		(\$100,000)	\$390,000
• Markham's collection cost		Not Available	Not Available
Estimated Net Cost		\$154,000	\$644,000
Net Regional Cost Impact of Commingled Blue Box Processing			\$490,000

4.3 Summary

The Region currently plans to have the required processing facilities operational in September 2004 and July 2005 for SSO and the commingled blue box respectively. Typically, the most cost effective time to implement program changes is when the collection contracts are tendered. A new contract allows the capital costs for the trucks to be fully amortized over a seven year time frame and allows for route changes to balance the daily collection workload. Six of the nine municipal collection contracts end in 2004

and it is expected that these contracts will be extended into 2005 until the new Regional MRF opens so that the commingled blue box program can be implemented at the same time as SSO. The SSO program (Option 1) can be implemented on its own and the collection fleet can be configured so that there is no impact on the current blue box collection program of sorting material at the curbside. This would provide the lowest operational costs for material transfer and processing for the Region. There may be collection cost increases but the Region is unable to calculate the impact of collection savings or increases as the Town has not provided the information. Markham's current collection contract with Miller expires in November 2005 and making changes this late in the contract could be difficult or expensive. We understand that Markham Council will be dealing with this issue in April 2004.

The September 2004 start of the SSO program in Markham will be a benefit to the Region and the other local municipalities as implementation issues are overcome and could be considered a pilot for the implementation of SSO. The Region will be developing a comprehensive promotion and education program for the new three-stream program and the development of that program will also benefit from the experience learned by the early introduction of the three-stream program in Markham.

It is therefore proposed that the Region support the September 2004 introduction of the SSO program in Markham. Further, it is proposed that the Region share the costs for Markham's plans to introduce the commingled blue box program. As Markham is requesting the collection change prior to the Region's planned date of July 2005, it is proposed that the Town pay 50% (\$245,000) of the Region's increased costs. The Town's portion of the costs will be offset if they achieve collection savings. The Region will pay 100% of the transfer and processing costs as planned once the new MRF opens in 2005.

5. FINANCIAL IMPLICATIONS

The early introduction of the three-stream waste processing system in Markham (Option 2) will increase the Region's operating costs by \$490,000. It is proposed that the Region pay for the costs associated with the transfer and processing of SSO (\$254,000) and 50% (\$245,000) of the increased blue box processing costs as the Region can use the Markham implementation as a pilot. The Region's share of the cost would be \$194,000 in 2004 and \$305,000 in 2005 for a total of \$499,000. The 2004 operating budget had an allowance of \$400,000 for SSO implementation in Markham. Table 2 presents the estimated costs for 2004 and 2005

Table 2
Estimated Costs for 2004 and 2005

Item	2004	2005
• SSO Transfer and Processing	\$99,000	\$155,000
• Commingled Blue Box Transfer and Processing	\$152,000	\$238,000
Sub Total	\$251,000	\$393,000
• Less 50% contribution from Markham	(\$96,000)	(\$149,000)
Net Regional Cost	\$155,000	\$244,000

6. LOCAL MUNICIPAL IMPACT

It is proposed that the Region support Markham's SSO implementation. If Markham wishes to implement the full three-stream system including commingling of blue box material in 2004 prior to the Region's plans for 2005, then it is proposed that the Town pay 50% of the Region's additional transfer and processing costs for commingled blue box material prior to the opening of the Region's new MRF in July 2005.

7. CONCLUSION

The implementation of the three-stream waste management system in York Region will significantly increase our diversion rate to at least 50%. There are additional costs associated with this increase in diversion as processing SSO and more blue box material is more expensive than landfilling waste but there should be decreases in collection costs. Markham's request to implement the SSO program in 2004 is fully supported by the Region but it is proposed that Markham pay 50% of the Region's increases for blue box material transfer and processing until the Region's new MRF opens in 2005 as these costs are in excess of the Region's current budget. The introduction of the new collection system in Markham in September 2004 is an excellent opportunity to pilot to three-stream collection system from a Regional perspective.

The Senior Management Group has reviewed this report.