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THE USE OF COMPOSTABLE BAGS IN THE REGION'S SOURCE SEPARATED ORGANICS PROGRAM

The Environmental Services Committee recommends the adoption of the recommendations contained in the following report dated November 6, 2009, from the Commissioner of Environmental Services.

1. RECOMMENDATIONS

It is recommended that:

1. Council endorse mandatory use of certified compostable bags in York Region's Source Separated Organics (SSO) program commencing May 1, 2011.
2. Council approve the costs associated with continuing the promotion and education program for compostable bags in 2010 and beyond as outlined in this report.
3. Council circulate this report to the local municipalities and request amendments to the local waste collection by-laws to support mandatory use of compostable bags in the Source Separated Organics program.

2. PURPOSE

The purpose of this report is to provide Council with results of the compostable bag promotional campaign and recommend next steps for the use of certified compostable bags in the SSO program.

3. BACKGROUND

In December 2008, Solid Waste Management Committee discussed the issue of plastic bags in the Region's source separated organics program. Council endorsed a recommendation for staff to develop a strategy for the elimination of plastic bags.

On March 26, 2009, Council endorsed Report No. 2 of the Solid Waste Management Committee which directed staff to implement a program to promote the use of certified compostable bag liners in the SSO program.

Success of York Region's SSO program is attributable to innovation, flexibility and convenience for our residents

The Source Separated Organics program has run Region wide for over 2 years and results in curbside collection of approximately 86,000 tonnes per year of source separated organics. During the initial development of York's SSO program, a decision was made to have an innovative and flexible program that made it convenient for residents to participate. As a result, York's SSO program is one of the most successful programs in Ontario.

At the time, SSO processors in Ontario had little experience dealing with a feedstock containing plastic bags, diapers, pet waste and sanitary products. The program decisions made by York and Toronto were focused on maximizing recovery and recycling of organics wastes and motivated some processors to look at new technology innovations. Today, York Region's SSO processors have largely overcome the technical challenges associated with plastic bags, diapers, pet wastes and sanitary products to create a compost product that complies with the Ontario Ministry of the Environment's unrestricted use standards, applicable to all SSO derived compost. Both SSO processors continue to make processing improvements to overcome the challenges associated with odours generated by processing organics. *Attachment 1* includes photos taken by staff on November 6, 2009 while visiting both Universal Resource Recovery Inc. (URRI) and Orgaworld SSO facilities.

From the beginning, the decision to provide an innovative and flexible program sets York and Toronto's SSO programs apart from others across the province with the inclusion of plastic bag liners, diapers, pet waste and sanitary products. Inclusion of these materials not only contributes to a higher service level offered by the SSO program, but also increases diversion. Use of plastic bags as liners in the SSO program has promoted ease of use for York's residents resulting in high participation rates.

York Region's Green Bin collects more material per household than any other Region in the Greater Toronto Area resulting in one of the most successful SSO programs in Ontario

Residents across the Region have responded enthusiastically to the SSO program. The foundation of York's SSO program was built upon flexibility and convenience, resulting in high participation rates and high diversion. With the exception of Toronto, most municipal source separated organics programs exclude pet waste, diapers and sanitary products and consequently do not require or permit plastic bag liners in their programs. Comparing data across the Greater Toronto Area (GTA) indicates that in 2008, York Region's SSO program was the most successful program in terms of public participation and the amount of material set out by each household. Table 1 illustrates a comparison of York's participation in the SSO program and other Regions in the GTA.

Table 1
2008 Comparison of Participation in Source Separated Organics Programs in the
Greater Toronto Area

Municipality	Acceptable Liners	Acceptable Material Distinctions	SSO collected curbside/ Household Serviced (Kg)
York Region	Plastic or compostable bags	Includes diapers, pet waste and sanitary products	299
City of Toronto	Plastic bags	Includes diapers, pet waste and sanitary products	185
Durham Region	Compostable bags only	Excludes diapers, pet waste and sanitary products	142
Peel Region	Compostable bags only	Excludes diapers, pet waste and sanitary products	123

**A Region-wide campaign was initiated to educate residents about the
environmental benefits of compostable bags**

To determine the effect certified compostable bags may have on the SSO program, York Region initiated a campaign in late August 2009, to promote the benefits and encourage the use of certified compostable bags in the SSO program. The promotional campaign included the following elements.

Region-wide mail-out

During the week of August 31, 2009, packages containing four certified compostable liner bags were delivered via Canada Post to all York Region households that receive curbside SSO collection. Included with the bag samples was an educational piece outlining benefits of using compostable bags in the SSO program. The following are the educational graphics included in the compostable bag distribution.



York Region is encouraging you to make the switch from plastic bags to compostable or paper bags to line your Green Bin or kitchen container.

Enclosed are four free samples of compostable liners for your kitchen container. Plastic bags are still currently accepted but using compostable bags in your Green Bin makes doing a great thing for the environment even better!

Here's why:

- Compostable bags break down completely into compost during the composting process
- Plastic bags do not break down and are screened from the final compost and landfilled
- Compostable bags are made from natural, plant-based materials
- Plastic bags are petroleum-based and require 400 to 1,000 years to break down
- Compostable bags support a more sustainable, environmentally friendly process

Compostable bags are available at most grocery and hardware stores throughout York Region. Many different brands are available, but be sure to look for certified compostable bags with this logo:

Please place full compostable bags inside your Green Bin.

For more information, please visit www.york.ca/waste or call 1-866-665-6752

York Region

Do your part for the environment
by bringing together the perfect pair!

This section contains text about compostable bags, a list of reasons why they are better than plastic bags, and a logo for compostable bags. The logo is a circular emblem with a leaf and the word 'COMPOSTABLE'. Below the logo, it says 'Biodegradable Plastic Liners' and 'US 800 221 1111'. The York Region logo is at the bottom left. The text 'Do your part for the environment by bringing together the perfect pair!' is at the bottom right.

Visit www.york.ca/waste and complete our online survey for a chance to win great prizes!

Advertisements

A series of local newspaper advertisements were circulated during the period from late August to mid October 2009. Public Service Announcements were also distributed to local media outlets to encourage coverage of the campaign.

the perfect pair

**a green bin and a compostable bag
... one growing relationship.**

York Region is encouraging you to make the switch from plastic bags to compostable bags to line your Green Bin or kitchen container.

* Samples will be delivered to households with Green Bin curbside collection.

**Do your part for the environment
by bringing together the perfect pair!**

free samples*
coming soon to a mailbox near you!

York Region

For more information visit www.york.ca/waste or call 1-866-665-6752.

Mobile Signs

Thirty-seven mobile signs were placed throughout York Region to promote the use of compostable bags in the SSO program. These signs appeared throughout the Region the week of September 7, 2009 and were present for 4 weeks. All mobile signs displayed the following wording:

**DISCOVER THE
PERFECT PAIR
A GREEN BIN &
COMPOSTABLE BAG
WWW.YORK.CA**

Website

A dedicated webpage to the compostable bag promotion was created. This page provided access to detailed information about compostable bags including frequently asked questions. This site also included an online survey.

Newmarket Call Centre

To handle the anticipated large volume of resident inquiries, York Region staff partnered with the Newmarket Call Centre. Staff at the call centre tracked the nature and volume of inquiries related to the campaign. During the promotion period 355 calls were received by the Newmarket Call Centre related to the compostable bag campaign.

4. ANALYSIS AND OPTIONS

Results of the promotional campaign indicate that residents are willing to try compostable bags

During the promotion period, 893 respondents out of approx. 500,000 adult residents completed the on-line survey intended to gauge public attitude towards switching to compostable bags. This survey was advertised in the Region-wide mail-out sent to all households receiving curbside SSO collection, and newspaper advertisements. In October, Region staff conducted 200 in-person surveys at the Real Canadian Superstores in Aurora and Newmarket and at the Fortinos location in Vaughan.

Table 2 provides an overview of the results of the promotional campaign.

Table 2
Results of the Compostable Bag Promotional Campaign

Issue	Newmarket Call Centre (355 calls)	Online Survey (893 participants)	Shopper Survey (200 surveys)
Cost of Compostable Bags	10% were concerned about cost (11 callers indicated that the cost of compostable bags may prevent them from participating in the SSO program).	40% were very unsatisfied or unsatisfied with the cost (143 participants made written comments expressing concern regarding the cost of compostable bags).	N/A
Current Participation	N/A	82% use plastic bags to line their Green Bins and 23% use compostable bags.	54% have purchased compostable bags since receiving the sample.
Proposed Participation if Made Mandatory	N/A	91% will continue to use the Green Bin if compostable bags become mandatory.	96% will continue to use the Green Bin if compostable bags become mandatory.
Where to Purchase Compostable Bags	27% sought information about where to purchase compostable bags.	N/A	N/A
Other	31% made general inquiries regarding SSO collection	54% were unaware of the differences between compostable and biodegradable bags.	N/A

Although some respondents indicated that cost could be a factor in future decision making they also indicated a strong willingness to continue using the green bin with compostable bags.

Source Separated Organics Audit

Audits of the Region's SSO material are completed on a regular basis. The majority of container liners found in the 2007, 2008 and 2009 SSO audits were plastic. Plastic bags account for 6% of the SSO stream by weight.

There is a strong market trend towards elimination of plastic bags in the retail environment

Several initiatives are currently targeting reduction of plastic bag usage across North America. These include bans, encouraging the use of reusable bags, charging a fee per bag, and education measures. Municipal and provincial governments, retailers and non-governmental organizations are undertaking these actions either on their own or working collaboratively.

In San Francisco, Los Angeles and Chicago, retailers have been banned from distributing single-use plastic bags to customers. As of June 1, 2009, retailers in Toronto were required to charge a five-cent fee for disposable shopping bags. As a result of the fee imposed upon retailers in the City of Toronto, many major retailers across the province, including some in York Region, began charging the same fee to customers in an effort to encourage the use of reusable bags.

The use of bag liners in the SSO program has promoted ease of use for York Region residents and is important to address the health and safety concerns associated with the acceptance of pet waste, feminine hygiene products and diapers. Given the voluntary move by most York Region retailers to charge for plastic shopping bags, there are fewer "free" plastic bags available for use in the SSO program. Survey results indicate that this fee prompted 42% of respondents to try compostable bags as an alternative to plastic shopping bag liners.

The Source Separated Organics program in Ontario is still in its infancy

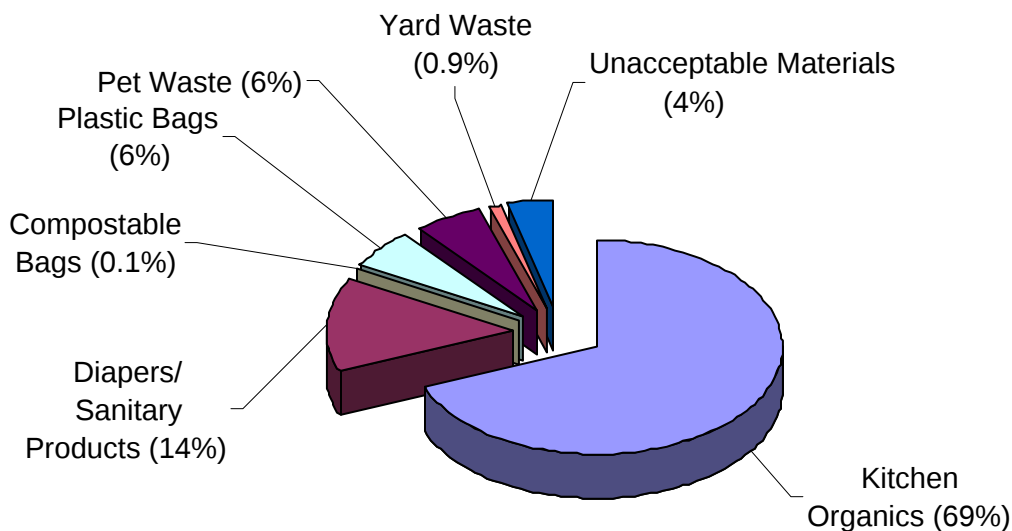
Source Separated Organics (SSO) collection programs are relatively new in Ontario. Over the past two or three years, SSO processors have learned how to better handle Ontario's organic material and the associated plastic bag liners. Many SSO processors continue to face significant operational challenges that impact their ability to produce compost. These challenges, coupled with high demand for additional processing capacity have resulted in many jurisdictions disposing of unprocessed material. If plastic bags were omitted from York Region's SSO program, the number of processing facilities available to York Region would not increase because there continues to be a significant shortage of available SSO processing capacity. Over time, it is anticipated the processing industry will expand to increase processing capacity. Operational costs for processing York Region's SSO are not expected to change if plastic bags are no longer permitted in the program.

York Region is currently working to develop its own SSO processing facility in partnership with Dufferin County. The York/Dufferin Source Separated Organics Request for Proposals is scheduled to be released in early 2010. This new facility will be equipped to handle the composition of York Region's current SSO stream. A separate Council report on this capital project is scheduled for Spring 2010.

Diapers, sanitary products and pet waste represent 20% of the tonnage in the SSO program

Figure 1 shows a breakdown of materials found on average in York's SSO stream. Audit results indicate the majority (69%) of material found in the SSO stream is kitchen organics. 14% is diapers and sanitary products and 6% is pet waste. Almost a quarter of the organics tonnage diverted from landfill through this program is from pet waste, diapers and sanitary products. Overall, the SSO program accounts for nearly one third of the Region's total diversion tonnage.

Figure 1
Composition of York Region's SSO Material



Alternative options represents trade-offs between participation and residue rates

Three options have been prepared for consideration of alternative approaches to the use of compostable bags in the Region's SSO program. All three options include continued acceptance of pet waste, diapers and sanitary products. Due to the lack of available SSO processing capacity within the province of Ontario, the proposed program options will currently have little to no impact on expanding access to other existing processing facilities.

Option 1: Continue to encourage voluntary use of certified compostable bags in the SSO program

Option 1 encourages residents to continue to use certified compostable bags on a voluntary basis. Under this option, staff would continue to promote the benefits and encourage the use of compostable bags through a social marketing education campaign that will include:

- Retail displays
- Newspaper advertisements
- Radio and television announcements

Option 2 - RECOMMENDED: Phased shift to mandatory use of certified compostable bags in the SSO program

Option 2 involves implementing a full ban on the use of plastic bags as liners in the SSO program and making certified compostable bags as liners mandatory. To coordinate a ban on plastic bags in the SSO program, Region staff would need to work in conjunction with local municipal staff to develop a phased implementation plan. This plan would take the following into consideration:

- Collection contract adjustments
- Mechanisms to enforce the ban on plastic bags
- Regional and local municipal waste by-law revisions.

Under a mandatory program, enforcement of the use of compostable bags would be required. Enforcement activities at the curb would need to be coordinated with and delivered by local municipal staff. This would require policy decisions and By-Law charges by the local municipalities. Under a mandatory use program, SSO material placed on the curb for collection in plastic bags would be tagged for non-compliance, and left at the curb. This form of curbside education is common practice in other jurisdictions with the blue box program. Residents not complying with the ban would be directed to re-bag their organic material into certified compostable liners for the next scheduled collection.

It is widely acknowledged that many people are resistant to change. In the Region's own recent waste management experience, initially there was resistance by some residents to the change from plastic to paper bags for leaf and yard waste. Following a phase-in period including a promotion and education campaign, there has been a general acceptance of this change.

With the initial implementation of a mandatory switch to compostable bags there will likely be some residents who choose to abandon participation in the voluntary Green Bin program. During this stage, if the tonnage impact of those who abandon the program

exceeds the gains of residue reduction the Region would experience a drop in its diversion rate. Eventually as residents begin to accept the change, it is expected that participation levels will begin to increase. Finally, as acceptance levels grow it would be expected that participation rates and diversion would rebound.

It is unknown how long it will take for residents to accept the program change and the magnitude of the overall impact on the Region's diversion rate. With the introduction of a new program, experience demonstrates that a phased approach is easier to accept by program participants. It is possible that a gradual phase-in may overcome some of program abandonment and to some degree, mitigate lower diversion.

A promotion and education program would be initiated during the voluntary phase of the program during 2010. It is anticipated that transition to a mandatory program would begin in January 2011, with enforcement commencing May 1, 2011. Staff will require at least nine months of preparatory time in advance of a plastic bag ban to coordinate this mandatory program change to the collection programs with the local municipalities and to ensure that the program change is effectively communicated to the public. This time would be used to develop a social marketing campaign and associated materials, focus group testing of campaign materials, and production of the campaign elements. The proposed campaign for Option 2 would include the use of the following methods of communication:

- Retail displays
- Newspaper advertisements
- Radio and television announcements

The distribution of additional sample packs and/or discount coupons are optional actions to be considered. This would involve coordinating a direct mail of compostable bags to all households in the Region that receive curb side SSO collection. Coupons for compostable bags would also be included in the sample pack.

To ensure adequate staffing to manage resident inquiries regarding compostable bags, the services of a Call Centre would continue to be retained.

Option 3: Status Quo

Option 3 involves no changes to the existing program. Given the success of the current program, this is a viable option that poses no additional costs. Under this option, residents would be permitted to continue to use plastic bags, compostable bags, paper bags or biodegradable bags as liners for their SSO material. Staff would inform residents about this program decision to avoid further confusion related to the use of certified compostable bags in the SSO program. A media release would be issued, and changes to the Region's website would be made to inform residents of this program decision. Table 3 summarizes the benefits and risks associated with each option.

Table 3
Benefits and Risks of Program Options

Option	Benefits	Risk
Option 1: Continue to encourage voluntary use of compostable bags	Nominal improvement on diversion expected Participation is preserved Reflects current consumer driven momentum away from plastic bags Preserves program flexibility	Does not maximize SSO process residue reduction May not be viewed as proactive leadership Market drivers may change
Option 2: Phased transition to mandatory use of compostable bags RECOMMENDED	Maximizes reduction of SSO processing residues Aligns York's program closer to most other Ontario programs Demonstrates environmental leadership	Initial participation rates will likely decline May lower diversion rate Enforcement challenges Messaging confusion for residents routinely exposed to Toronto program promotions Organic material may end up in the residual waste stream, or placed in plastic bags when residents run out of compostable bags in order to comply with the mandatory requirement
Option 3: Status Quo- Maintain current program	Continuation of current high participation Does not reduce diversion No additional cost Preserves program flexibility	Not likely to be viewed as progressive Does not increase diversion

Relative comparison of options with respect to diversion rates

While respondents to call-ins and surveys indicated strong support for switching to compostable bags, because of the very small sample size it is not possible to accurately extrapolate or predict widespread public response to this proposed program change.

To explore the magnitude and sensitivity of potential changes to diversion, the following analysis was prepared to compare the trade-offs between participation rate impacts versus residue reduction benefits. This analysis is based on consideration of a number of possible response scenarios that can be anticipated for the options being considered.

The information in Table 4 presents five scenarios to explore the potential impact that the program variables of participation rate and residue reduction might have on the Region's overall diversion rate. The program variables are not dependent on each other. For discussion purposes, they represent potential impacts of the proposed program changes. For example, under scenario D a phased transition to a mandatory use program, the Region could potentially see a decrease in participation of 5% and a reduction in processing residue of 6% by weight. Under scenario D, changes in the identified program variables would equate to a 0.3% increase in the Region's overall diversion rate.

Table 4
Trade-offs in Participation Rate and SSO Process Residue Reduction
Potential Change in Regional Diversion Rate

Potential Program Scenarios	A	B	C	D	E
Program Variables					
<i>Participation Rate Impact (%)</i>	0	0	-5	-5	-10
<i>Residue Reduction (%)</i>	6	3	3	6	6
Diversion Rate Impacts					
Option 1: Voluntary Program	N/A	+0.8%	N/A	N/A	N/A
Option 2: Phased Transition to Mandatory	+1.6%	+0.8%	-0.5%	+0.3%	-1.0%

Notes:

1. Participation rate impacts are nominal assumed values.
 2. Maximum SSO processing residue reduction achievable is 6%.
 3. Based on 2008 tonnage profile as typical.
- N/A = Not Applicable.

This illustrates that the primary benefit of diversion through the Green Bin Program has been realized. Additional program refinements, such as switching to compostable bags are expected to yield relatively small changes to the Region's overall diversion rate.

In summary, three program options have been outlined. Option 1 involves continued encouragement of the voluntary use of compostable bags. Option 2 represents a phased shift to the mandatory use of compostable bags beginning May 1, 2011. Option 3 involves making no changes to the current SSO program. Option 2, phased transition to mandatory, is recommended to allow for promotion and education to encourage sustained use of the program and to ultimately drive towards an increase in diversion.

5. FINANCIAL IMPLICATIONS

The mandatory option poses greater risks to the success of the Region's SSO program than the voluntary option and therefore requires a substantial program investment including increased expenditures for promotion and education, enforcement, and quality assurance. Initial cost estimates for using compostable bags are as high as three times the current cost for program users. Through quality assurance and enforcement and working with local municipalities, we anticipate an increased demand on availability of compostable bags which may result in a drop in retail pricing for this product.

Table 5 provides a budget for Voluntary and Mandatory options for promotion and education. Early analysis demonstrates the costs for the mandatory option will be higher than those for the voluntary option due program investments for promotion and education to ensure compliance and maintain participation rates.

Table 5		
Promotion and Education Investments for Voluntary and Mandatory Options		
Item	Estimated Cost for Option 1 Voluntary Use	Estimated Cost for Option 2 Mandatory Use
Program Planning and Development	\$145, 000	\$245,000
Promotion Education and Awareness	\$192,000	\$357,000
<i>Optional</i>		
Sample Packs and Coupons	\$175,000	\$175,000
Total	\$337,000	\$602,000
<i>Total with Sample Packs and Coupons</i>	<i>\$512,000</i>	<i>\$777,000</i>

Sufficient funding is included in the 2010 budget to cover the costs of the promotion and education programs outlined Table 5.

Operational costs for processing York Region's SSO are not expected to change if plastic bags are no longer permitted in the program. Costs presented in the table above do not include annual budget impacts for enforcement, quality assurance, or unanticipated increases to municipal curb-side pick-up programs.

6. LOCAL MUNICIPAL IMPACT

In discussions with Region staff, local municipal staff have dissenting views about the adoption of a mandatory use of compostable bags in the SSO program. Concerns regarding a mandatory program relate to a number of areas of impact including public acceptance, participation rates, costs and challenges associated with enforcement and the absence of financial benefit to the local municipalities. Local municipalities will need to amend local waste collection by-laws to enforce a mandatory program.

7. CONCLUSION

When the SSO program was first introduced to residents, York Region chose to permit the use of plastic bag liners to encourage public acceptance and participation in the program and to facilitate the diversion of as much of the organics stream as possible. Convenience and flexibility of this comprehensive program have been the drivers of York's successful diversion rate. Today, the majority of retailers in York Region are charging a fee for plastic bags. This market change has reduced the quantity of plastic bags in the market place prompting many residents to consider alternatives for lining their Green Bin.

While the vast majority of survey participants indicate they will continue to use the SSO program, initially we may see a resistance to mandatory compostable bags, resulting in lower participation rates, impacting on diversion. However, through promotion, education and compliance monitoring, these impacts can be mitigated to eventually result in an increase in York Region's diversion. These impacts can be mitigated to reduce waste residue in the SSO waste stream from 6% to virtually nil.

As with any program change that requires behavioural change, a gradual phase in to a mandatory condition is beneficial to identify, understand, and overcome program participation challenges. It is recommended Council endorse voluntary use of compostable bags in 2010 with a strong focus on promotion and education, followed by mandatory implementation on May 1, 2011. This will provide program users with an opportunity to become familiar with the program change, sustain program usage and reduce plastic residue.

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

The Senior Management Group has reviewed this report.

(The attachment referred to in this clause is attached to this report).



URRI – In-bound SSO



URRI – Post-composting, pre-screening



URRI – Post-composting, following first pass screening



URRI – Post-composting, following second pass screening (i.e. final product)



Orgaworld – Post shredding, pre-composting, pre-screening



Orgaworld – Post-screening (i.e. final product)