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THREE-STREAM WASTE DIVERSION PILOT IN NEWMARKET PARKS

The Solid Waste Management Committee recommends that Council adopt the recommendations contained in the following report, November 12, 2008, from the Commissioner of Environmental Services, subject to the following additional recommendations:

- 4. The three-stream waste diversion pilot in Newmarket parks be continued for an additional year; and**
- 5. Staff report back on an expanded public education and promotion program for public space waste diversion, the implications of offering processing to local municipalities and the associated budget.**

1. RECOMMENDATIONS

It is recommended that:

1. A quality control protocol and policy be developed for receiving public space material from local municipalities.
2. A follow up public space pilot be conducted for 2009 to better assess indoor public space waste diversion.
3. Staff recommends offering processing to local municipalities for three stream waste diversion initiatives in public spaces.

2. PURPOSE

This report summarizes the results of the three stream public space waste diversion pilot project conducted in the town of Newmarket in the summer of 2008.

3. BACKGROUND

The Joint Municipal Waste Diversion Strategy, adopted by Regional Council in 2006, outlined a number of recommendations to help York Region and its local municipalities achieve 65% waste diversion by 2010. Recommendations included expanding source separated organics and optimizing Blue Box recycling programs. Public spaces were also highlighted as an area of potential to increase diversion for the Region.

Public Space Waste Diversion Supports Region's Waste Diversion Goals

Public Space three stream waste collection studies conducted in the GTA have estimated that 28% (by weight) of public parks waste is recyclable and 33% (by weight) is organic waste. (Ducharme et. al. *2006 Parks Waste Audit – Final Report*, City of Toronto, 2006). In 2006, local municipalities in York Region reported collecting an estimated 7,200 tonnes of waste from outdoor public spaces within York Region (as reported by local municipalities Works Departments, 2006), translating to almost 4,000 tonnes of potential diversion. While these quantities are small in comparison to the >200,000 tonnes diverted from residential programs, implementing public space waste diversion helps to support the Region's diversion goals by promoting waste diversion in the community.

In the fall of 2007, York Region's council authorized the three-stream waste diversion pilot study to be conducted in two outdoor parks in the Town of Newmarket. The objective of the pilot was to assess level of contamination in new containers, assess effectiveness of collection container messaging, and identify operational challenges with collecting and processing materials collected in public spaces.

Many of the local municipalities in the Region offer some level of public space recycling in parks. In 2008 the Town of Markham and the Town of Newmarket offered three stream collection, including recycling and organics, in some of their public spaces. To further encourage other local municipalities to implement public space diversion initiatives, it is recommended that the Region agree to process public space waste from local municipalities that offer three stream collection.

Town of Newmarket and York Region Conducted Pilot from June to September 2008

Two different outdoor public space environments were selected within the Town of Newmarket for the pilot: the Tom Taylor Trail, and the Ray Twinney Recreation Complex. Different container types were tested along the 11km Tom Taylor Trail to analyse variances in container design and assess if container type affected the level of participation in three stream waste separation. In total, 105 containers were set out for the study which ran from June to September 2008. A detailed summary of the container types tested can be found on page 7 of the attached report.

4. ANALYSIS AND OPTIONS

PARK PILOT AUDIT AND SURVEY RESULTS

Waste audits were conducted to determine contamination levels

Five waste audits were conducted throughout the duration of the pilot. A total of 174 audit samples were collected across the three streams: 59 recycling, 57 garbage and 58 organics. Waste audit results found that recycling and source separated organics containers had 23% and 11% contamination rates respectively. Although contamination levels found were higher than desired, public space still offers the potential to increase waste diversion. Tables 1, 2 and 3 summarize results of the waste audits.

Table 1
Recycling Stream

Recycling Stream		
	Weight (kg)	% of total
Recycling	63.8	55%
Garbage	14.1	12%
Organics	12.4	11%
Liquid from Beverage containers	13.7	12%
Residual liquid in bag/Rain water	11.7	10%
HHW	0.3	0%
Illegal Dumping	0.2	0%
TOTAL	116.2	100%

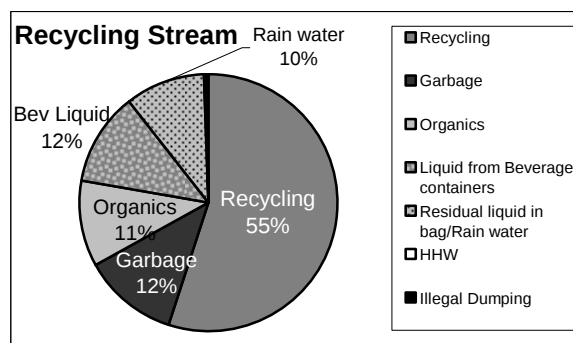


Table 2
Garbage Stream

Garbage Stream		
	Weight (kg)	% of total
Recycling	13.03	11%
Garbage	48.52	40%
Organics	26.9	22%
Liquid from Beverage containers	2.41	2%
Residual liquid in bag/Rain water	5.58	5%
HHW	0.02	0%
Illegal Dumping	24.49	20%
TOTAL	120.95	100%

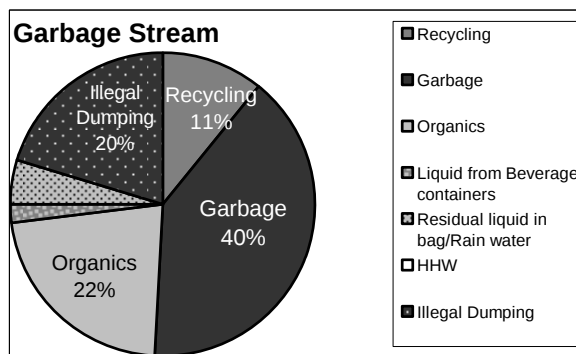
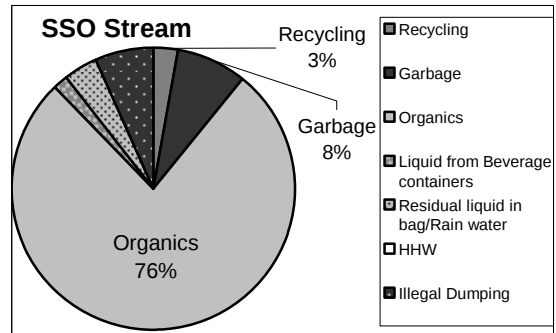


Table 3

Source Separated Organics Stream

SSO Stream

	Weight (kg)	% of total
Recycling	6.28	3%
Garbage	18.65	8%
Organics	176.8	77%
Liquid from Beverage containers	4.03	2%
Residual liquid in bag/Rain water	8.95	4%
HHW	0	0%
Illegal Dumping	15.44	7%
TOTAL	230.15	100%



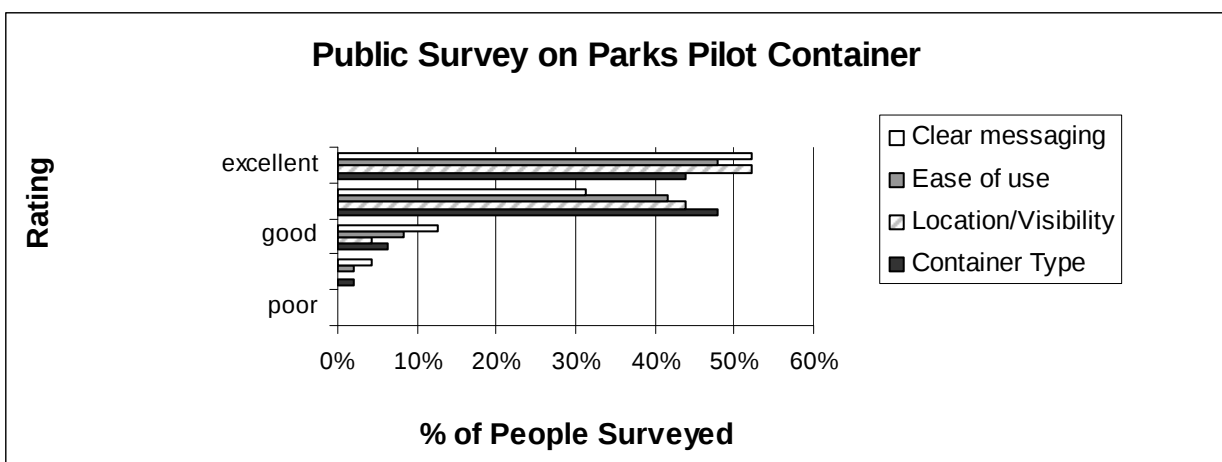
Contamination levels are higher than desired however acceptable for processing at this time

Waste audit results revealed that public space contamination levels in recycling and source separated organics are higher than typical residential contamination levels. Parks material is currently considered acceptable at the Region's processing facility due to the relatively small quantities received in comparison to residential material.

Positive feedback from public surveys were received

Three surveys were conducted throughout the summer to evaluate public perception and attitude towards public spaces three stream waste collection. Results indicate an overall positive reception from the public for three stream waste diversion in outdoor public parks (Table 4). Operations staff also surveyed for feedback on preferred container attributes and challenges experienced throughout the pilot. A detailed summary can be found in section 4 of the attached report.

Table 4
Public Survey Results



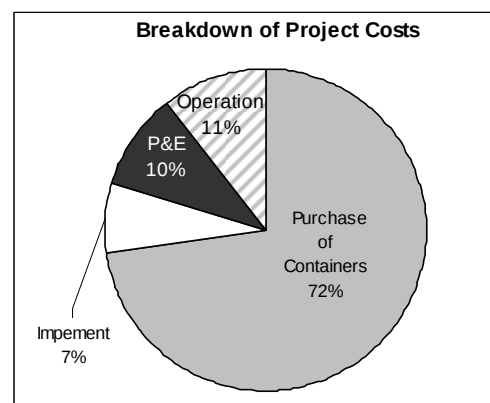
5. FINANCIAL IMPLICATIONS

Majority of project budget went to implementation and capital

Containers tested in the pilot ranged in price from \$90 per unit to \$2,500 per unit. A total cost break down of the project is summarized in Table 5. A large portion of the budget went toward purchasing of the necessary containers for the pilot. Promotion and education costs were approximately 10% of the total project cost and yielded a good return on investment in encouraging participation. The dollars spent in promotion and education resulted in quality marketing materials that can be leveraged by all municipalities in York Region. Rollout of public space three stream programs in future will require minimal rework.

Table 5
Breakdown of Project Costs

	Cost (\$)	% of Total
Purchase of Containers	\$ 77,180.00	73%
Implementation Costs	\$ 7,378.67	7%
Promotion and Education Work	\$ 10,406.39	10%
Operation Costs	\$ 11,200.00	11%
Total	\$ 106,165.06	



As more municipalities include public space waste collection as part of their diversion programs, York Region will need to carefully monitor the quality of material received for undesirable contaminants. York Region's processing contract for both recycling and organics prohibits contaminants greater than 10% and can reject and add penalty costs to management of these materials. For this reason staff recommends quality control protocol and policy be developed for receiving public space material from local municipalities.

6. LOCAL MUNICIPAL IMPACT

Offering three stream waste diversion in public spaces is one way a municipality can promote 'green initiatives' in a proactive way. Residential participation rates for the Blue Box and Green Bin are currently at an all time high and can be leveraged in public space settings to also contribute toward reaching our ambitious waste diversion targets

7. CONCLUSION

The objective of the Newmarket public space waste diversion pilot project was to assess level of contamination in outdoor parks and recreational facilities when recycling and organics receptacles were introduced into two different parks settings. Waste audits conducted throughout the summer found that recycling containers contained approximately 23% contamination and organics containers contained 11% contamination (by weight). Although contamination levels found were higher than desired, public space still offers the potential to promote waste diversion goals for the Region in an active way throughout the community.

Staff recommend that:

- Protocol and policy be developed on quality control for receiving public space material from local municipalities.
- Follow up public space pilot be conducted for 2009 to better assess indoor public space waste diversion.

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

The Senior Management Group has reviewed this report.

(The attachment referred to in this clause was included with the December 10, 2008 Solid Waste Management Committee agenda.)