

SMART LIVING

YORK REGION'S INTEGRATED WASTE MANAGEMENT MASTER PLAN



November 2013

Alternative Financing Strategy



Alternative Financing Strategy

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Contents

1.0	Introduction	1
2.0	Background	1
3.0	Trends	4
3.1	Division of Waste Management Responsibilities Between Region and Local Municipalities	4
3.2	Costs of Existing Solid Waste Management System	7
3.3	Regional Capital Requirements for the Solid Waste Management System.....	7
3.4	Regional Annual Solid Waste Management Operating Budget	13
3.5	Local Municipal Solid Waste Management Budgets.....	14
3.6	Trends in Alternative Financing by Other Communities	14
3.7	How Other Communities Allocate Costs Among Partners.....	19
3.8	Provisions for Alternative Financing under the <i>Municipal Act, 2001</i>	22
3.9	Use of Development Charges to Help Finance Solid Waste Management Infrastructure	23
4.0	Alternative Solid Waste Financing Strategy.....	23
4.1	Step 1 – Identify and Evaluate Options.....	23
4.2	Step 2 – Full Cost Accounting Study.....	24
4.3	Step 3 – Consultation with Local Municipalities	25
4.4	Step 4 - Explore Allocation Options and Impact on Local Municipalities	25
4.5	Step 5 – Business Plan For the New Solid Waste Utility (If Required)	26
4.6	Step 6 – Public Engagement Process	26
4.7	Step 7–Explore Moving Local Municipality Portion to Alternative Financing	26
5.0	Timing and Resources for Alternative Financing Strategy	27
6.0	Key Benefits of this Strategy.....	30

List of Figures

Figure 1: York Region 10-Year Capital Budget (in Millions) For Solid Waste Management 2014 to 2023 (\$176 Million)	10
Figure 2: Annual York Region Capital Budget (in Millions) for Solid Waste Management, 2003 to 2016	10
Figure 3: Breakdown of 2013 Capital Budget (in Millions) For Solid Waste Management in York Region	11
Figure 4: Financing of 2013 Capital Budget	12

List of Tables

Table 1 : Waste Management Responsibility Matrix in York Region	6
Table 2: Waste Management Services Provided to Multi-Residential Households in York Region	7
Table 3: Schedule for Capital Expenditures for Solid Waste by York Region, 2014 to 2023	9

Table 4: York Region Annual Operating Budget by Waste Management Activity, 2012-2014 13

Table 5: Consolidated Local Municipal Solid Waste Management Operating Costs, 2012..... 14

Table 6: Examples of Alternative Financing of Solid Waste Systems in the GTA, Canada and the USA 16

Table 7: Allocation of Regional Levy Among Nine Local Municipalities in York Region (2012) 19



	<p>Objectives:</p> <ul style="list-style-type: none"> To explore options for funding the large capital works required for higher diversion levels in the solid waste management system. Including the creation of significant capital expenditure for future facilities related to processing Green Bin materials. 	<p>Targets:</p> <ul style="list-style-type: none"> Identify ,Evaluate Options to Move Regional Portion of Waste Management Costs To A Rate Based Service. Full Cost Accounting Study For Regional Portion of Solid Waste Management. Allocation Options and Implications for Local Taxes. Consultation Program With Local Municipalities (Waste Management Staff, Treasurers and CAOs). Business Plan For New Utility. Public Engagement Process. Explore Moving Local Portion of Waste Management Costs To Alternative Financing
	<p>Benefits:</p> <ul style="list-style-type: none"> Supports council's commitment to a tax rate increase of 2% or lower. Moving solid waste management costs from the Regional Levy to a Regional Waste Charge is seen as a way to dis-entangle solid waste budget issues from other budget issues Separate financing of solid waste through user charges would eliminate cross-subsidy of residential waste management by IC&I sector taxes. Link to waste production and not property assessment value provides more incentive for waste reduction. Transparent financing system where the users pay the full cost of the system The strategy may identify innovative financing approaches for capital expenditures. 	

1.0 Introduction

The *Alternative Financing Strategy* is one component of York Region's first Integrated Waste Management Master Plan, also known as the SM4RT Living Plan which establishes the planning framework and strategic direction for waste management in York Region for the next 40 years. The Plan builds on the Region's position as a waste management leader, by focusing on driving waste reduction and reuse, while maximizing recycling and energy recovery from the materials that remain.

Primary objective of this strategy is to:

- Identify alternative funding mechanisms to provide greater stability and sustainability of the future waste management system

2.0 Background

The total costs to manage solid waste in the Region is approximately \$71 million annually. The Regional portion costs about \$41 million per year (\$60 million total costs with \$19 million revenues). The local portion of solid waste management costs is about \$30 million/year, mostly for collection services.

In York Region, financing for the solid waste management operating and capital budget for processing and disposal is collected from Regional households through the Regional tax levy (net tax levy requirement). The net cost of solid waste management (after other revenue sources) is combined with the net cost for other services (including police, transit, community and social services, roads) to determine the Region's tax levy. This does not include the cost of water and wastewater services that are recovered through the Region's water and wastewater user rates. The Region's tax levy including the cost for solid waste is apportioned to each local municipality based on its weighted current value assessment (i.e. the value of the properties within the municipality). Each local municipality includes their own portion of waste management costs (including curbside collection costs) within the local municipal tax portion of the property tax bill. The Regional Levy is collected from local property tax payers through local treasury departments and is remitted back to the Region.

There are a number of reasons why alternative financing of the solid waste management system was explored as part of the SM4RT LIVING PLAN:

1. The Region is at its debt limit and finding budget for the large capital works (eg. SSO facility) required for higher diversion levels in the solid waste management system is a challenge.

2. Regional Council has approved a tax rate increase of two per cent or lower. It will be exceedingly difficult in future years to maintain increases in the waste management budget at this level. The issue has been made worse due to primary debt incurred from the Durham York Energy Centre in Clarington, which has accrued and may result in the need to cancel some waste management programs if alternative financing options are not implemented.
3. Significant capital expenditure will be required for future facilities related to processing green bin organic materials in particular, but also for maintaining and expanding other waste management infrastructure.
4. Solid waste management does not have its own source of financing and does not currently qualify for funding through development charges; waste management reserves and debt financing are the only sources of capital.
5. User rate financing is seen as a potential model to address the lack of capital for Regional solid waste management needs, as well as provide funding required to properly resource SM4RT Living Plan, as well as other waste management functions.
6. Moving solid waste management costs from the Regional levy to a Regional waste charge is seen as a way to separate solid waste budget issues from other budget issues. Property tax-based financing of solid waste means it competes with all other services/programs provided in the Region at budget time and is often constrained in terms of investments in long-term planning and improvements. An independent self-financing cost centre could appropriately plan for future expenditures without the risk of funding being taken for other more urgent municipal needs.
7. The IC&I sector currently cross-subsidizes residential solid waste management to a small extent through the current property tax-based financing system. Separate financing of solid waste through user charges would eliminate cross-subsidy of residential waste management by IC&I sector taxes. This cross-subsidization is not as significant in the Region as in other municipalities, as IC&I taxes make up only 21 per cent¹ of revenues in the Region compared to 60 per cent or more in some other Ontario municipalities.
8. Over the longer term horizon of the SM4RT Living Plan, it is considered better to have a transparent financing system where the users pay the full cost of the system. Separate financing of solid waste management through a visible fee to households and system users provides transparency – users can see the value they receive for the money they are charged. Similar to the rate-based water and wastewater system, user pay may help to drive a reduction in waste generation at the source.

In Phase 1 of SM4RT Living Plan, approaches to alternative financing of solid waste management systems used in other municipalities in Canada and the US, along with possible options to explore were described in the Current and Innovative Practices document.

¹ Residential property taxes account for \$650.8 million of total budget of \$826.5 million. Report #4 of Finance and Administration Committee, Regional Council Meeting 19th April, 2012

In Phase 2 of the SM4RT LIVING PLAN, alternative methods of financing solid waste management were explored with the project team, which includes representatives from each of the local municipal partners.

The Region and the local municipalities are in a two-tier solid waste management system which is relatively unique in Ontario. Most other two-tier municipalities (e.g. Niagara, Peel, etc.) have moved management and operation of collection and processing/disposal services to the Regional level, and local municipalities pay their portion of the Regional solid waste management costs (which include all services – collection, processing and disposal) through a variety of mechanisms, some of which are property tax based, some are a separate levy, and some Regions/cities use a combination of both property taxes and levies.

Management of collection services is carried out at the local municipal level in the Region. The Regional level has no jurisdiction over curbside program delivery, adding to the level of complexity related to alternative financing. Many financing options promoting waste reduction and diversion require a charge at the point of collection to create behaviour change.

The project team decided the alternative financing approach should start with the Regional portion of the solid waste bill, and that if the change to the Regional financing component was successful, alternative financing approaches for the local municipal portion of the solid waste bill, which covers collection, could be explored at a future time.

The first step in alternative financing for the Regional portion of solid waste management charges would be to remove solid waste management related charges from the Regional assessment to a separate Regional waste management charge.

The possibility of local municipalities moving solid waste management collection service costs to a local waste management charge was not considered a near-term possibility that each local municipality may address separately in the future.

In several discussions and presentations, there has been agreement among the local municipal treasurers and project team members to collaborate with the Region to further explore alternative financing for the waste management system through data collection and analysis. A similar approach has been used to finance water and wastewater, and allows some flexibility to budget for resources dedicated to water and wastewater as well as to build reserves sufficient to finance capital improvements.

3.0 Trends

3.1 Division of Waste Management Responsibilities Between Region and Local Municipalities

The Region and the local municipalities together provide solid waste management services to more than one million residents and some small businesses in the nine local municipalities. Broadly speaking, the Region is responsible for processing and disposal, while local municipalities are responsible for collection services. Specific responsibilities of the local municipalities include:

- Curbside collection of:
 - Garbage (items not included in either blue box or green bin)
 - Blue box material
 - Leaf and yard waste
 - Bulky items and appliances
 - Green bin materials (source separated organics)
- Development of waste management policies and enforcement programs
- Promotion, education and customer service
- Advocacy for new policy, programs and initiatives
- Operation of recycling depots (four locations in Markham)
- Development of waste management policies and enforcement programs
- Promotion, education and customer service
- Advocacy for new policy, programs and initiatives
- Recycling in public spaces and provision of in-house and curbside equipment/materials, including recycling containers, composters, kitchen containers, green bins, blue boxes and additional garbage bag tags.

The Region is responsible for providing processing, recovery, marketing and disposal services as well as Regional promotion and education services. Specific responsibilities include:

- Transfer, processing and marketing of blue box materials
- Transfer and processing of leaf and yard waste
- Transfer and processing of green bin material
- Transfer, processing and disposal of garbage
- Operation of Community Environmental Centres, as well as collection, recycling, marketing and/or disposal of collected materials
- Development of waste management policies and enforcement programs
- Promotion, education and customer service
- Operation of Household Hazardous Waste depots
- Operation of residential electronics drop-off
- Submission of local municipal and Regional residential diversion data to Waste Diversion Ontario datacall process



- Advocacy for new policy, programs and initiatives
- Provision of composters, green bins, blue boxes and additional garbage bag tags at Community Environmental Centres

The overall division of solid waste management responsibilities between the Region and the local municipalities is presented below in Table 1.

Table 1 : Waste Management Responsibility Matrix in York Region

Waste Management Responsibility	Nine Local Municipalities	The Region
Collection		
Garbage	✓	Community Environmental Centre /Depot
Blue Box	✓	Community Environmental Centre /Depot
Green Bin	✓	
Leaf and Yard Waste	✓	
Bulky Waste	✓	Community Environmental Centre /Depot
Metals, Drywall, Renovation Waste, Waste Electrical and Electronic Equipment, Household Hazardous Waste, etc.	Four locations in Markham collect select materials Metals as part of large metal recovery programs	Community Environmental Centre /Depot
Processing	✓ (Recyclables from public space, drop-off depots [City of Markham], etc. managed outside the Regional system)	✓
Materials Recovery Facility		✓
Leaf and Yard Waste Composting		✓
Source Separated Organics Processing		✓
Community Environmental Centre /Depots	✓ (Markham – Depots only)	✓
Disposal		✓
Promotion and Education	✓	✓

Whereas most single family households in the local municipalities receive curbside waste management collection service from the local municipality, the service to multi-residential households varies by location as shown in Table 2.

Table 2: Waste Management Services Provided to Multi-Residential Households in York Region

Municipality	Municipal Collection Services		
	Residual Waste	Recycling	Source Separated Organics
Aurora	20 buildings	20 buildings	n/a
East Gwillimbury			n/a
Georgina	1 building and 705 units	1 building and 705 units	n/a
King			n/a
Newmarket	24 buildings	24 buildings	n/a
Whitchurch-Stouffville	5 buildings	5 buildings	n/a
Vaughan	53 buildings	53 buildings	n/a
Richmond Hill	82 buildings	82 buildings	35 buildings
Markham	61 buildings	49 buildings	12 buildings

3.2 Costs of Existing Solid Waste Management System

The Regional portion of the solid waste management budget is about \$60 million per year, with revenues of approximately \$19 million/year (2012 budget values) for a net Regional waste management cost of \$41 million per year. Budgets for the next three years shown later in this text average about \$45 million per year.

Local municipalities together spend about \$27.5 million annually on collection and other waste management services.

3.3 Regional Capital Requirements for the Solid Waste Management System

As shown in Section 2.1, the Region is responsible for components of the solid waste management system which require large capital investments. The 10-year capital forecast is about \$177 million and includes:

- Approximately \$65 million (or 37 per cent of the 10-year plan) for funding of a source separated organics processing facility
- \$30 million to increase diversion capacity
- \$20 million for expansion of the CEC network



- \$8 million to upgrade waste management facilities

Various facilities and the expenditure anticipated to 2021 are presented in Table 3. Additional facilities may be added to this projection as a result of the SM4RT Living Plan.

Table 3: Schedule for Capital Expenditures for Solid Waste by York Region, 2014 to 2023

Facility	Capital (\$ million)
Durham York Energy Centre	\$18.6
Waste Management Centre upgrades	\$5.8
Interpretive centre at waste management centre	\$0.1
Georgina Transfer Station renovation To Warden Avenue Community Environmental Centre	\$7.3
Addition of Municipal Hazardous and Special Waste Collection and scales at Elgin Mills Community Environmental Centre and to McCleary Court Community Environmental Centre	\$2.4
Allowance for new waste management initiatives from SM4RT Living Plan	\$0.4
Source separated organics processing facility	\$16.1
SM4RT Living Plan – completed in 2013 with updates every five years	\$1.0
Relocation of Markham HHW depot	\$5.0
Community Environmental Centre #4 (only if SM4RT Living Plan recommends)	\$12
Equipment upgrades/replacement public drop off	\$2.2
Solid waste asset management	\$0.8
Total	\$71.7

The breakout of the anticipated 10-year solid waste management related capital budget for York Region is presented in Figure 1. It should be noted that solid waste management related capital expenditures are a very small fraction of the overall York Region capital budget.

The history of annual capital budgets for solid waste management in York Region since 2003 (and projected to 2016) is presented in Figure 1. It shows that capital requirements for the Region have been modest for the most part, with the exception of construction of processing and disposal infrastructure. This is typical of waste management systems where substantive capital expenditures are required on an event basis to replace or expand existing infrastructure. Capital requirements were modest for many years, but are expected to rise significantly in the future. Financing this level of capital requirement is challenging under the existing Regional Levy-based approach, particularly given that solid waste reserves are at modest levels. Blue box

grants from Stewardship Ontario are split 50:50 between the Region and the local municipalities. The Region contributes all of the Stewardship Ontario annual grants to the solid waste reserve fund. Based on the most recently available data, the Region will receive about \$7.5 million in blue box funding in 2013. The Regional half of this total (approximately \$3.75 million) will be contributed to the solid waste management reserve.

Figure 1: York Region 10-Year Capital Budget (in Millions) For Solid Waste Management 2014 to 2023 (\$71.7 Million)

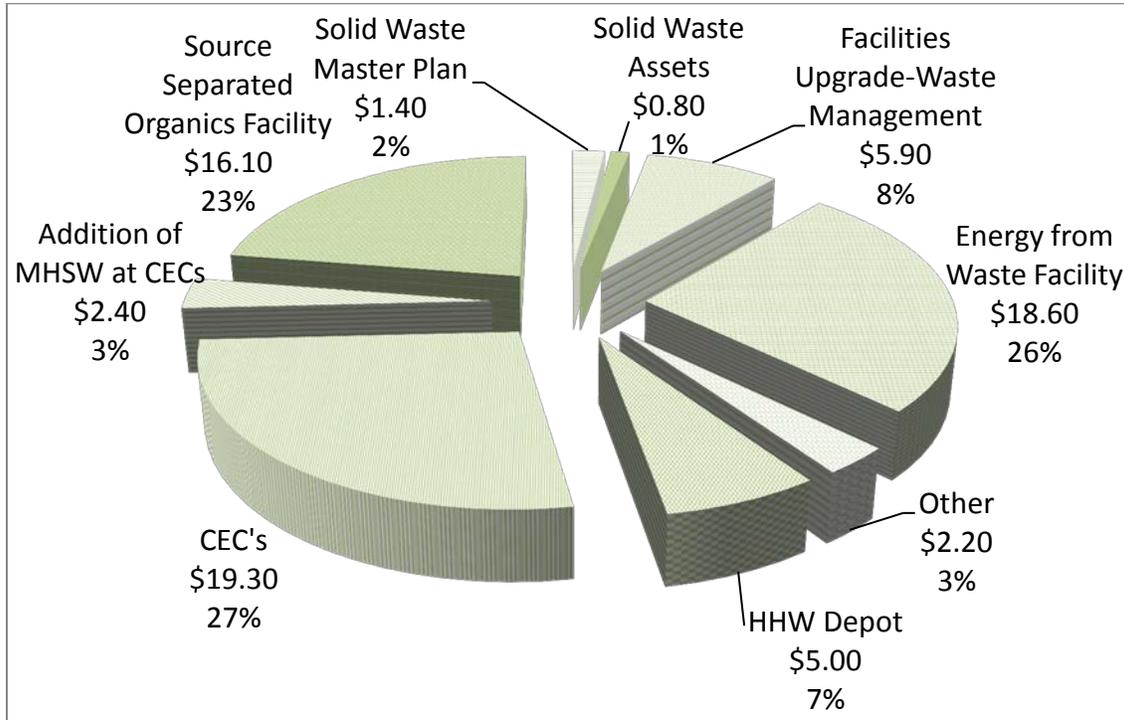
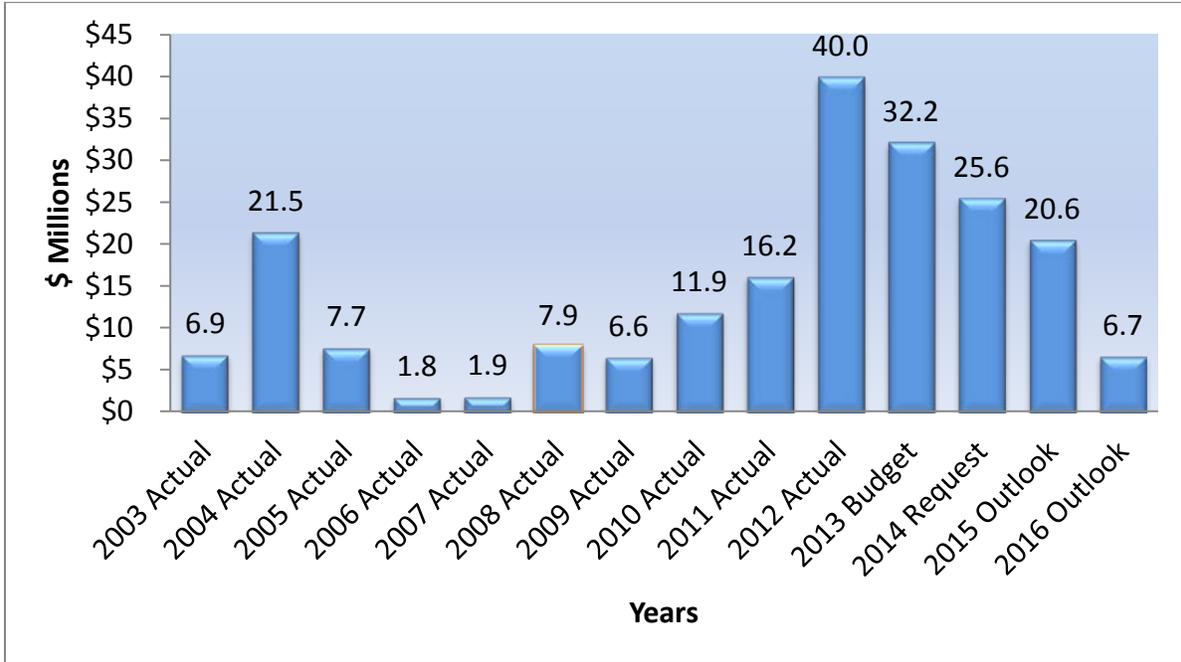


Figure 2: Annual York Region Capital Budget (in Millions) for Solid Waste Management, 2003 to 2016



The 2013 capital budget of \$32.2 million is presented in Figure 3, which shows more than 90 per cent of the 2013 capital is for the Durham York Energy Centre.

Figure 3: Breakdown of 2013 Capital Budget (in Millions) For Solid Waste Management in York Region

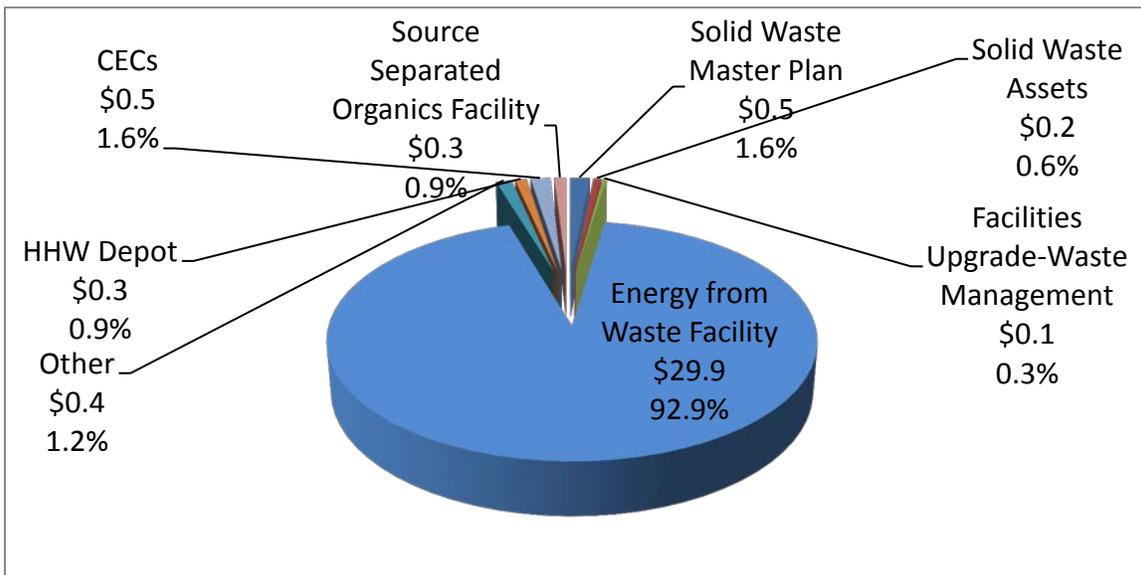
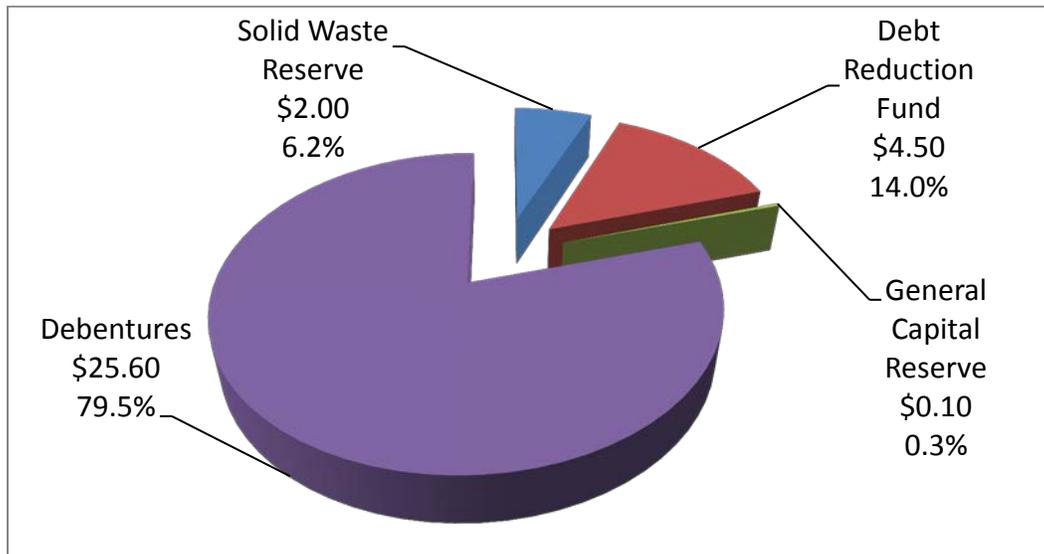


Figure 4 shows most of the capital budget for 2013 will be financed through debentures. As discussed elsewhere in this document, due to the lack of capital reserves dedicated to solid waste management, most capital requirements need to be financed through debentures,

causing challenges for the Region in terms of finding additional capital on a go-forward basis to finance larger solid waste management projects.

Figure 4: Financing of 2013 Capital Budget (in Millions)



The Province's Annual Repayment Limit (ARL) regulation limits a municipality's debt servicing and other financial obligations to a maximum of 25 per cent of its "own source" revenue. In June 2011, the Province amended the Annual Repayment Limit regulation under the *Municipal Act, 2001* to allow York Region to include 80 per cent of its average development charge collections over the last three years in its ARL calculation.

The Annual Repayment Limit Regulation has implications for capital budgeting for the Region, including adjusting the timing of some capital projects to stay within the ARL (e.g. timing of construction of the Central Services Centre was adjusted from 2014 to 2016).²

An analysis of growth-related ARL servicing and the annual debt presented to Regional Council on 15th November, 2012 indicated that the Region will remain near its Annual Repayment Limit (ARL) for at least the next four years. Debt levels for the Region are projected to rise for the next eight years until 2021, in line with the Region's capital construction program for all services. The Debt levels are projected to begin to fall after 2021.

The Finance Department is currently working on a longer term reserve management strategy.

The work plan for solid waste management financing identified in the SM4RT Living Plan includes various tasks related to identifying options to address the debt and debenture issue. Options for building up reserves for solid waste management are considered a critically important element of this evaluation within the work plan.

²Presentation to Regional Council by Bill Hughes, Commissioner of Finance on 2013 Budget, 15th November, 2013

Regional finance staff will be involved in future steps of the work plan to ensure that future financing options are designed to address the ARL issue and will provide mechanisms to grow solid waste reserves.

3.4 Regional Annual Solid Waste Management Operating Budget

The Region's Solid Waste Management operating budget of approximately \$45 million per year for 2012, 2013 and 2014 is presented in Table 4 along with the costs by program and the net cost per tonne for different solid waste management streams.

Table 4: York Region Annual Operating Budget by Waste Management Activity, 2012-2014

Budget Item	2012 Budget			2013 Budget			2014 Budget		
	Tonnes	Millions	\$/Tonne	Tonnes	Millions	\$/Tonne	Tonnes	Millions	\$/Tonne
Residual Waste	132,732	\$13.7	\$103	132,213	\$16.6	\$125	133,741	\$16.8	\$126
Net Blue Box (net of Market Revenue)	93,729	\$6.1	\$66	95,035	\$6.1	\$65	97,125	\$5.7	\$59
Yard Waste	34,273	\$2.5	\$74	35,709	\$2.6	\$74	44,075	\$3.0	\$69
Asian Long-horned Beetle	7,161	\$0.6	\$ 83	7,534	\$0.6	\$82	0	\$0.0	\$0
Household Hazardous Waste and Electronics (Net of Revenue)	3,530	\$1.3	\$382	3,664	\$0.7	\$198	3,949	\$0.6	\$157
Source Separated Organics	95,767	\$18.0	\$188	95,670	\$16.9	\$177	97,775	\$16.4	\$168
Other at Public Drop Off	8,730	\$1.7	\$198	14,880	\$2.3	\$152	15,412	\$2.3	\$152
TOTAL	375,923	\$44.0	\$117	384,704	\$45.9	\$116	392,076	\$45.0	\$115

3.5 Local Municipal Solid Waste Management Budgets

The nine local municipalities in the Region spent, in total, approximately \$28 million in 2012 related to solid waste management services and programs. Annual costs by local municipality have been shared confidentially with the SM4RT Living Plan consulting team under an agreement that the values (at the individual level) not be published in any public document. Most of the annual local municipal budgets are associated with collection activities. These are contracted out to private companies under long-term contracts therefore the annual operating budgets are expected to cost a similar amount per year for a number of years to come. A summary of consolidated costs by activity for the nine local municipalities is summarized in Table 5.

Table 5: Consolidated Local Municipal Solid Waste Management Operating Costs, 2012

Activity	Program Element	Total
Single Family Residential Collection Costs	Residual Waste	\$8,126,000
	Recycling	\$5,228,000
	Source Separated Organics	\$7,091,000
	Leaf and Yard Waste	\$3,386,000
Multi Family Collection Costs	Residual Waste	\$354,000
	Recycling	\$489,000
	Source Separated Organics	None reported
Other Collection (Large Metal and Bulky Waste; Collection from Parks and Recreation; Municipal Facilities and Public Spaces)	Large Metal	\$133,000
	Bulky Waste	None reported
	Parks and Rec	\$114,000
	Municipal Facilities	\$276,000
	Public Spaces	\$546,000
Promotion and Education		\$237,000
Material and Container Sales and Tag Fees Net		-\$151,000
Miscellaneous		\$83,000
Staff		\$1,585,000
Total		\$27,497,000

3.6 Trends in Alternative Financing by Other Communities

Ontario municipalities have traditionally financed solid waste management through the property tax base. There has been increased interest in moving solid waste management off the tax base for a number of years, for the following reasons:

- Make the cost of waste management more identifiable

- Eliminate any cross-subsidy of the residential waste management system by the IC&I sector
- Implement increases to cover solid waste management higher costs for improved diversion systems without competing for other scarce dollars when property taxes are being set each year

Municipalities in Western Canada and the US have financed solid waste systems through separate utilities or enterprise funds for many years. Seattle, Washington is a very successful example of one of the early US Enterprise Fund-financed solid waste management systems, where the system is fully financed through fees charged to households and other users. Solid waste management system fees can be set in a number of different ways (flat, variable, a combination of both). Some fee structures are designed to increase diversion behavior by rewarding those who produce smaller quantities of garbage with lower fees. Some cities provide all diversion services for free, and finance the full solid waste system on fees charged on the garbage container. Other cities (e.g. Vancouver, BC; Seattle, Washington, etc.) charge separate fees for garbage, leaf and yard waste, green bin and blue box services.

Municipalities across Ontario, including some in York Region, Canada and the United States have been exploring different ways of financing their solid waste management systems for a number of years, partly to increase waste diversion through economic incentives, and partly to find more sustainable funding which is not property tax based. Moving financing of solid waste management systems off the property tax base provides more flexibility in how the solid waste management system is operated and new diversion activities are implemented, as waste management no longer competes with other municipal demands (such as ambulance, police, roads etc.) at budget time.

There is a general trend towards charging residents a combination of flat and variable fees for solid waste management services. In some cases, the fee structure is designed to promote diversion, and many communities have significantly improved diversion through economic incentives aimed at households.

Table 6 presents examples of alternative financing approaches in place in other municipalities in the GTA, Canada and the US. Many of the alternative financing approaches are not directly applicable to York Region because of its unique two-tier structure, where the local municipalities are responsible for waste collection and the Region is responsible predominantly for processing and disposal. However, elements of particular financing approaches are directly applicable within the Region.

Table 6: Examples of Alternative Financing of Solid Waste Systems in the GTA, Canada and the USA

Alternative Financing Approach	Municipalities Which Use This Alternative Financing Approach	Description of Approach
<ul style="list-style-type: none"> ▪ Solid Waste Management fully self-financing through flat or variable fees. ▪ Solid Waste Department becomes a separate utility 	<ul style="list-style-type: none"> ▪ City of Toronto, ON ▪ City of Vancouver, BC ▪ City of Edmonton AB ▪ Seattle Washington and numerous US West Coast Communities. ▪ Well established west coast of Canada and the United States. 	<ul style="list-style-type: none"> ▪ Waste management department is established as a separate cost centre (sometimes referred to as a utility or Enterprise Fund) ▪ Separate cost centre or utility is financially self-reliant and does not receive funds from general revenue; property tax-based financing of solid waste is eliminated ▪ Industrial, Commercial and Institutional tax-related cross subsidy of residential waste collection and waste management is eliminated
<ul style="list-style-type: none"> ▪ Some Solid Waste Management services remain on the Property Tax Bill; some are removed from the Property Tax Bill and are financed separately through fees (flat or variable) 	<ul style="list-style-type: none"> ▪ City of Ottawa, ON (residual waste service is a flat fee, off the property tax; diversion remains funded by property taxes) ▪ City of Calgary, AB (recycling is financed by a fee to households, residual waste is financed by property taxes) Regina, SK 	<ul style="list-style-type: none"> ▪ Some waste management services are financed using a separate flat fee while other waste management services remain on the property taxes ▪ This approach been implemented in a few communities as a first step to removing waste management costs from the property tax base ▪ The City of Edmonton (which is now fully off the property tax base) started with a separate fee to cover the high capital costs of a new compost facility and MRF; over time, more of the costs moved to a separate utility ▪ The City of Ottawa moved residual waste activities to a separate fee and kept diversion on the tax bill (as a common good)



Alternative Financing Approach	Municipalities Which Use This Alternative Financing Approach	Description of Approach
		<ul style="list-style-type: none"> ▪ The City of Calgary charged a separate fee for their new curbside recycling program as the property tax was at its limit for solid waste management services
<ul style="list-style-type: none"> ▪ Full flat fee to cover all Waste Management Services 	<ul style="list-style-type: none"> ▪ City of Edmonton, AB (separate flat fees for single family and multi-family households) ▪ City of Lethbridge, AB ▪ Many communities in BC, Alberta and West Coast US ▪ Numerous United States cities and municipalities 	<ul style="list-style-type: none"> ▪ All waste management services are financed through a separate flat fee which is the same fee charged to all homeowners regardless of property value. ▪ The flat fee per year covers all waste management costs and typically includes a bag/container limit for residual waste (e.g. two bags) with the option to set out additional bags/containers for a fee (or in some cases no option to set out additional residual waste depending on the community)
<ul style="list-style-type: none"> ▪ Variable fees each Waste Management Service (Residual waste, recycling, leaf and yard waste and green bin) 	<ul style="list-style-type: none"> ▪ City of Vancouver, BC ▪ City of Seattle, WA ▪ A number of United States cities and municipalities 	<ul style="list-style-type: none"> ▪ Residents are charged variable rates for each service (garbage, leaf and yard waste, blue box) depending on the size of container chosen ▪ Generally easier to implement cart-based collection systems, but not impossible to implement with bag-based programs (e.g. St Albert, Alberta) ▪ Residual waste collection, recycling and yard waste are shown as separate fees
<ul style="list-style-type: none"> ▪ All Solid Waste Management Service financed using variable fees on residual waste 	<ul style="list-style-type: none"> ▪ City of Toronto, ON ▪ San Francisco, CA 	<ul style="list-style-type: none"> ▪ All waste management service costs are combined into one variable fee applied to different residual waste service levels (recycling and yard waste costs are covered through the revenues generated through garbage fees)



Alternative Financing Approach	Municipalities Which Use This Alternative Financing Approach	Description of Approach
containers only		<ul style="list-style-type: none"> ▪ Residential solid waste management services are financed through fees levied at the household; no property tax-based financing of residential solid waste management ▪ One benefit is that the fees can be set as an incentive to divert waste (e.g. many households will try to manage with the smallest bin size option available) ▪ Some risks in generating sufficient revenues to finance the total system; this is a particular problem for Enterprise Funds in the US which are not allowed to run a deficit

3.7 How Other Communities Allocate Costs Among Partners

York Region currently allocates costs incurred among the nine local partners using weighted assessment. As an example, the approximate allocation of the Regional levy, and the solid waste portion of the levy (at approximately five per cent) are shown in Table 7 for 2012.

Table 7: Allocation of Regional Levy Among Nine Local Municipalities in York Region (2012)

Municipality	Total 2012 Payments	Percentage of Total Levy	Waste Management Portion (based on a budget of \$44 million)
Aurora	\$39,827,397	4.83%	\$2,125,200
East Gwillimbury	\$15,934,302	1.93%	\$849,200
Georgina	\$23,172,631	2.81%	\$1,236,400
King	\$20,965,013	2.54%	\$1,117,600
Markham	\$226,824,005	27.53%	\$12,113,200
Newmarket	\$50,960,808	6.19%	\$2,723,600
Richmond Hill	\$144,375,371	17.52%	\$7,708,800
Vaughan	\$270,687,316	32.85%	\$14,454,000
Whitchurch-Stouffville	\$31,151,220	3.78%	\$1,663,200
Total	\$823,898,064	100.00%	\$44,000,000

One of the questions to be resolved, should the Region and the local municipalities decide to take solid waste management costs off the Regional levy into a separate utility or cost centre, would be how to allocate the annual budget among the municipal partners. Various allocation approaches are used by partners in solid waste management systems across Ontario to share the costs equitably:

- By assessment (this is currently the approach in York Region)
- By tonnes recycled by municipality (for the recycling component)
- By tonnes disposed (this is currently used by Essex Windsor Solid Waste Authority and was used by Niagara Region for the residual waste portion of shared costs until the new contract in 2011 eliminated municipal boundaries and the data required could not be collected)
- By household numbers or the proportion of households in each municipality (this is a fairly common approach as the number of households is an easy number to measure or obtain)

Some examples of collective groups in Ontario that share solid waste management services and how they share costs are presented below.

Essex Windsor Solid Waste Authority (EWSWA) owns and operates a landfill servicing number of local municipalities including: City of Windsor, County of Essex (Leamington, Essex, Kingsville, Lasalles, Tecumseth, Lakeshore and Amherstburg). EWSWA also provides recycling processing as well as promotion and education and Municipal Hazardous and Special Waste services to all member municipalities (the annual EWSWA budget is about \$12 million). EWSWA allocates costs for all services (recycling processing and landfill) to the area municipalities based on the tonnes of residual waste disposed by each area municipality at the EWSWA landfill. This system provides a financial incentive for municipalities to divert more waste from landfill to minimize their portion of the cost.

Quinte Recycling provides recycling and MHSW services to nine area municipalities (Bellville, Quinte West, Central Hastings, Marmora and Lake, Prince Edward County, Tweed, the Township of Tyandana, Stirling, Rodden and Madoc). It is run by a Joint Municipal Board and has a budget of about \$5 million/year gross. With WDO funding of approximately \$1.5 million and material revenues of approximately \$1.5 million, the net budget is \$2 million to \$3 million/year. The Joint Municipal Board has one member per municipality. Voting is by points (based on relative population but is generally one vote per member).

Quinte allocates all the net costs of their system (recycling, MHSW, etc) to the Quinte area municipality partners based on the tonnes recycled by each municipality. While they recognize this is a reverse incentive to diversion (the more you recycle, the more you pay), Quinte staff feel this is the simplest and most transparent approach for them. Quinte keeps track of tonnes recycled by recording the weight of each truck as it enters the MRF (material recycling facility). Most truck routes service one municipality only. Approximately 95 per cent of the truck routes stop at a municipal border. Where a truck crosses a municipal boundary, Quinte have developed "rules of thumb" on how to split the tonnage by municipality. They check that the tonnage percentage is approximately correct by carrying out periodic audits and truck weight exercises.

Quinte used to charge for collection and processing separately, using tonnage for one charge and putting the other on the tax base. They stopped allocating by assessment as this combined method was complicated and there were concerns regarding fairness.

Quinte has its own independent bank account and has established a number of reserves for equipment and small equipment, price fluctuations, etc. There is generally a small surplus each year. The Board decides what to do with the surplus³.

Ottawa Valley Waste Recovery Centre (OVWRC) provides recyclables processing, composting and landfilling services to the communities of Bonnechere Valley, North Wilberforce, City of Pembroke, Petawawa Township and Laurentian Valley. Their annual budget is approximately \$5 million gross. The net budget depends on recycling material revenues which have been very

³Interview with Rick Clow, Quinte Recycling, December, 2012

volatile in 2011 and 2012. Net costs are allocated to member municipalities using the average percentage share of population and the average percentage share of assessment.

The City of Hamilton had a budget of about \$32 million/year. The City operates an amalgamated waste management system; no cost allocations are involved. Waste management budgets are split 75 per cent to the residential assessment and 25 per cent to the commercial/industrial assessment based on a 2006 consultant's report.

The City of Ottawa moved to a flat fee to cover garbage collection and disposal costs, administered through the Solid Waste Utility established under a new bylaw in 2006. The 2012 fees of \$93 per single family household and \$38 per multi-family household were based on allocating the garbage collection and disposal budget to single family and multi-family users based on the relative tonnage disposed. Reliable tonnage data was available to calculate this split because multi-family collection is contracted separately from single family collection by the city and separate tonnage records are maintained.

Bluewater Recycling Association (BRA) provides service to 30,000 households in a number of municipalities in southwestern Ontario. The annual budget is approximately \$1.8 million. Bluewater allocates system costs by the number of households in each of the area municipalities who are partners in the program. Municipalities are billed four times per year. The per household charge covers any businesses which are collected as part of the collection route. Bluewater finds this is the easiest way to share costs because it is fair and household numbers are readily available. The approach does not require complicated measurement systems to record and allocate tonnes back to the partners.

Region of Peel has a budget of about \$74 million per year. Until 2009, the Region apportioned costs to the three area municipalities (Mississauga, Brampton, Caledon) based on the tonnes of garbage, recyclables, HHW, organics and other materials handled from each municipality, regardless of the type of material involved and the relative handling cost for the material. Tonnes were historically used for cost allocation by the Region, as collection used to be carried out by the area municipalities, with the Region only responsible for disposal and diversion, which was measured as tonnage. With the amalgamated service delivery, collection is also now carried out regionally. For 2009, the existing tonnage based method resulted in Mississauga being charged 58.8 per cent of the budget (\$46.8 million); Brampton was charged 35.4 per cent of the budget (\$28 million) and Caledon was charged 5.8 per cent of the budget (\$4 million). In the 2011 census, 55 per cent of the population of Peel lived in Mississauga (which contained 58.2 per cent of the occupied dwellings), Brampton accounted for 40.4 per cent of the population (37 per cent of the dwellings) and 4.6 per cent of the Peel population lived in Caledon (which accounted for 4.7 per cent of the dwellings). In 2009, regional staff contemplated moving to an apportionment method, which used number of households rather than tonnes, or possibly moving to an assessment method, which they consider better than allocating based on tonnage. The new collection contract uses the number of households which receive collection, and staff believe that number of households is a better apportionment method. There was a feeling that allocating costs to area municipalities by proportion of households is a better method to track growth rather than on tonnage.

The Region of Peel's cost for Waste Management services are now split by MPAC housing count and type of house (55 per cent)/multi-residential (five per cent)/ICI (40 per cent) with a percentage split (percentages are estimated). The allocation to reserves is separated into the following categories for each program in Peel:

- Working funds (surplus / deficit)
- Capital reserves
- Dedicated reserves (eg. development charges (DC) reserves – waste does not receive DC funding)

The reserves are earmarked for each program but funds are pooled for investment purposes to get the best rate of return⁴.

Relevance of Other Allocation Methodologies To York Region

The examples above outline a range of governance structures and allocation methodologies used by different municipalities and regions across Ontario to divide the costs of shared systems among partners. During the implementation of the SM4RT Living Plan, York Region will need to research and decide on the alternative financing structure which makes the most sense for the Region to address the critical need to build up solid waste reserves. When that decision has been made, methods to allocate costs to the local municipalities can then be explored. All of this research is included in the financing implementation work plan outlined at the end of this section.

3.8 Provisions for Alternative Financing under the *Municipal Act, 2001*

York Region finance staff have explored the legal requirements necessary to remove the solid waste management expenses from the Regional levy.

Regional staff confirmed there are no legal impediments to moving solid waste management financing from the Regional levy to a Regional charge; the *Municipal Act, 2001* does not limit in any way how funds are collected to finance solid waste management and other services. However consideration and approval of this matter by Regional Council is required to proceed with this change. Regional Council would require input from local municipalities, therefore engaging with local municipalities to gain their support is a necessary next step to any financing change.

Initial consultation was carried out with the project team in May and December, 2012 and with local municipal treasurers at a joint meeting in November, 2012 as part of the SM4RT Living Plan.

Significant consultation will be required as part of the Implementation of the SM4RT Living Plan as discussed later in this section.

⁴Personal communication with Tammy Prokop, Region of Peel, December, 2012

3.9 Use of Development Charges to Help Finance Solid Waste Management Infrastructure

Using development charges to finance solid waste management infrastructure is not possible under current legislation as development charges are governed by the *Development Charges Act, 1997 (DCA, 1997)* and solid waste management is one of the exclusions under the current Act.

Association of Municipalities of Ontario (AMO) has unsuccessfully lobbied the provincial government for a number of years to have solid waste management infrastructure included in development charges. The opinion of finance staff interviewed for the Phase 3 SM4RT Living Plan alternative financing research was that it is considered very unlikely that the province has any appetite to take on developers on this issue in the short to medium, or even the longer term.

Development charges are collected from developers to recover the growth-related capital costs associated with residential and non-residential development. Only growth-associated expenses are legitimate and no service enhancement related costs (e.g. green bin and need for composting infrastructure) would come under this category. Significant development charges are collected by the Region and the local municipalities and are used for many growth-related investments related to water and other Regional services, but they cannot be used for waste-related infrastructure development.

The majority of York Region's capital expenditures are growth related, and development charges are a major source of funding in the capital plan (14 per cent of total funding) for services such as roads and transit.

The general conclusion of the Phase 3 research on the potential use of development charges to finance solid waste management infrastructure was that advocacy (through AMO and others where appropriate) should continue for the inclusion of solid waste management infrastructure in development charges, but the likelihood of success in the short or medium term was considered very low. Therefore, planning for alternative financing should assume development charges will not be a source of financing for solid waste management infrastructure in the foreseeable future.

4.0 Alternative Solid Waste Financing Strategy

The elements of the alternative financing strategy are described in this section. Unlike other elements of the SM4RT living plan, the financing strategy elements are all work plan descriptions for the implementation phase. No pilot programs are required for the financing component of the strategy. Implementation of the strategy is described in Section 6.

4.1 Step 1 - Identify and Evaluate Options

Various alternative financing options for solid waste management were explored with the Project Team during the SM4RT LIVING PLAN. The recommendation based on support of the municipal treasurers, is a two-step process, with the Region first moving solid waste management off the Regional levy and into a solid waste charge. The second step would be for

local municipalities to explore moving their portion of solid waste management costs off local tax bills and onto separate waste management charges.

There are many elements to exploring the most appropriate way to move solid waste management off the Regional levy. These will require significant involvement of Regional finance staff and possibly the use of external consultants to carry out a number of different studies. Elements of the work plan include:

- Identify options for moving solid waste management off the Regional levy
- Carry out research on other jurisdictions to identify the options available
- Scope out how each option would be implemented in York Region
- Identify legal requirements to set up a separate waste utility
- Identify different governance structures, corporate structures and assess implications on taxation at the Regional and local level
- Identify the tax implications of moving to a Regional charge on local municipalities (a concern was raised that local municipalities would lose the IC&I subsidy)
- Consult with potentially interested stakeholders (e.g. Ministry of Municipal Affairs and Housing) on benefits and drawbacks or any barriers related to each option for York Region
- Identify options for governance structure of the new solid waste utility and its relationship to York Region
- Collect information on other services within York Region (e.g. housing, transit, water and wastewater) which have set up utilities or independent operating entities and identify how debt incurred by these entities counts towards the Regional debt ceiling (given that this is a key reason for exploring alternative financing for solid waste management), and lessons learned through these other processes that can be applied to the solid waste issue

4.2 Step 2 - Full Cost Accounting Study

The general and direct costs of solid waste management are well documented through the budget process and annual reconciliations. Allocations are made to the waste management department to cover the costs of common services such as legal, finance, corporate services, the Office of the CAO and others. A full cost accounting (FCA) study should be considered to ensure that a sufficient budget is set aside to cover all waste-related costs incurred by the Regional solid waste management branch, and confirm that the budget identified will be sufficient should solid waste services consider different financing approaches. The FCA study would confirm that all solid waste management system costs are fully accounted for as part of a financing strategy. Either an engineering, municipal or accounting company can be used as an outside consultant to carry out the FCA study.

As an example of the scope of the FCA, the City of Regina recently conducted the full financial modelling to help plan for development and implementation of an enhanced waste management (curbside recycling) system. The review involved a detailed current state financial review and analysis of the functions, activities, resources and obligations of waste management

services provided by the City. The financial model approach used by the consultant, Grant Thornton, identified the following inputs:

- Scope of existing operations and operational detailed performance levels for solid waste collection services and landfill disposal services
- Operating revenues and expenditures for solid waste collection, landfill operations, environmental engineering, waste reduction, waste administration and other support services
- Capital forecast projections
- Asset depletion schedule
- Landfill reserves, historic contributions and withdrawals and financial related policies
- Assets and liabilities

4.3 Step 3 - Consultation with Local Municipalities

- One of the elements of the Phase 3 SM4RT Living Plan was to initiate a process to engage in discussions with local municipal treasurers to discuss the concept of the Regional Waste Charge

Considerable discussion took place early in Phase 3 as to the most appropriate way to engage the local treasurers and CAOs. Separate meetings with each Treasurer (organized by and attended by the Project Team member from the local municipality as well as the consulting team) were considered, but it was eventually decided by the Project Team that a presentation to all Treasurers together was the most effective way to introduce the topic of alternative financing. The presentation occurred at the Treasurers Meeting in November, 2012.

The consultation process initiated in Phase 3 of the SM4RT LIVING PLAN will continue as part of the financing strategy implementation phase.

4.4 Step 4 - Explore Allocation Options and Impact on Local Municipalities

Costs of solid waste management in each of the local municipalities is made up of:

- The solid waste management portion of the Regional Levy, and
- Collection and program (Promotion and Education, Customer Service, Program development and Implementation, Planning, etc.) costs, which are included in local budgets and included in local tax bills (which also include the Regional levy).

The Regional Levy (which includes the solid waste portion of the Regional budget) is currently allocated to local municipalities through weighted assessment. The approximate share paid by each municipality in 2012 is presented in Table 7. The current allocation (as a percentage paid by each local municipality) remains reasonably constant from one year to another. When or if the solid waste management budget is separated from the Regional levy, there are many options on how it should be allocated to the local municipalities. These include:

- By assessment
- By tonnes recycled by municipality
- By tonnes disposed

- By household numbers or the proportion of households in each municipality

The detailed implications of each of these allocation methods on the amount paid by each local municipality needs to be identified. A second element of this assessment involves consulting with each local municipality (see below) on options they would consider for passing the regional waste charge on to local taxpayers. During consultation with area treasurers in November, 2012, concerns were raised about the lack of flexibility in existing tax billing systems to handle new charges which are shown separately on tax bills. These practical concerns need to be addressed during the implementation phase of the financing strategy and solutions found which will satisfy local municipalities.

Under the current financing system, taxes paid by both residential and non-residential (IC&I) property owners are used to finance the (mostly residential) solid waste management system. If the financing is changed to a system where residential users pay the full cost of the waste management system, with no contribution from IC&I tax payers, implications need to be addressed.

4.5 Step 5 - Business Plan For the New Solid Waste Utility (If Required)

If deemed acceptable, a business plan should be developed for the new solid waste utility outlining budgets, staffing levels and financing sources and cash flow projections for the first five years of operations and projections for Years 5-10 and beyond. As part of this step, a review of human resources requirements should be carried out to identify the number and qualifications of staff required.

4.6 Step 6 - Public Engagement Process

A public consultation process consistent with Regional and local municipality policies will be undertaken after the preliminary research and analysis in Steps 1 to 5 is complete. Appropriate approaches and elements of the public consultation process, including potential market research, need to be coordinated with other long term consultation processes on all aspects of solid waste management.

4.7 Step 7-Explore Moving Local Municipality Portion to Alternative Financing

The Regional Municipality of York and the local municipalities jointly operate a unique two-tier waste management system where the local municipalities are responsible for collection services. Other regional municipalities in Ontario have consolidated collection services at the Regional level. Because of this unique arrangement in the Region, moving to alternative financing mechanisms is more challenging than in other Regions, as it involves a two part process – addressing the Regional portion (processing and disposal) and the local portion (collection) as two separate systems, rather than one system as in other municipalities.

Many of the financing approaches most effective at incenting diversion behaviour through financial incentives and variable rate pricing (such as those in place in City of Toronto, City of Vancouver, and many US cities such as Seattle, San Francisco, etc.) are implemented at the

collection point. As moving the Regional portion of waste management costs from the tax levy is being considered first, any changes at the collection point will be considered in the future.

Various options for alternative financing were discussed with the Project Team in 2012. There has been agreement amongst the local municipal Treasurers and Project Team members to collaborate with the Region to further explore alternative financing for the waste management system through data collection and analysis. Lessons could be learned from the Regional shift to alternative financing, and if the move is successful each local municipality could decide whether they wanted to move forward with a non-tax based waste management financing approach in the future.

5.0 Timing and Resources for Alternative Financing Strategy

Table 8 presents the schedule, staff resources and expenses related to implementation of the Alternative Financing Strategy presented in the SM4RT LIVING PLAN.

Table 8: Timeline Budget and Staff Requirements for York Region Alternative Financing Strategy Implementation, 2013 to 2018

Alternative Financing Strategy Task #	Alternative Financing Strategy Implementation Task	Schedule
Step 1	Continue to identify and evaluate options to move Regional portion of waste management costs to a rate based service including: <ul style="list-style-type: none"> • Research • Lessons Learned • MMAH meetings • Governance, Legal, Financial, Debt Implications • Identify and Evaluate Benefits and Drawbacks of Each Option • Assess Implications of Each Option for Local Municipalities • Identify A Short List of Viable Options and Consult With Area Treasurers 	Q1 2014 – Q3 2014
Step 2	Full Cost Accounting Study For Regional Portion of Solid Waste <ul style="list-style-type: none"> • Data gathering and gap analysis • Impact of cross subsidy from ICI 	Scope of Work – Q2 2014 Develop RFP – Q4 2014 Release RFP – Q1 2015 Completed FCA Report and



Alternative Financing Strategy Task #	Alternative Financing Strategy Implementation Task	Schedule
		Consultation – Q4 2015
Step 3	Exploration of Allocation Options and Implications for Local Taxes based on outcomes from Full Cost Accounting study	Scope of Work – Q 1 2016 Release RFP – Q2 2016 Completed Allocation options report – Q 3-Q4 2016
Step 4	Next Steps dependent on outcomes from Full Cost Accounting study and Allocation options with Treasurers	2015 – 2016
Step 5	Business Plan For New Utility, if required	Q1/Q2, 20142017 +



Alternative Financing Strategy Task #	Alternative Financing Strategy Implementation Task	Schedule
Step 6	Public Engagement Process, if required	Earliest 2017
Step 7	Explore Moving Local Portion of Waste Management Costs To Alternative Financing, if applicable	2018 and beyond

6.0 Key Benefits of this Strategy

The following provides a summary of the key benefits of this strategy:

- Supports Regional Council's commitment to a tax rate increase of 2 per cent or lower
- Moving solid waste management costs from the Regional Levy to a Regional Waste Charge is seen as a way to dis-entangle solid waste budget issues from other budget issues and potential cross-subsidy
- Link to waste production and not property assessment value drives more/provides more incentive for waste reduction
- Transparent financing system where the users pay the full cost of the system
- Future large capital works required for higher diversion levels in the solid waste management system will require large capital infusions; the strategy may identify innovative financing approaches to assist in funding these capital costs.