



# Toronto 2016 BUDGET

## CAPITAL BUDGET NOTES



## Solid Waste Management Services

### 2016 – 2025 CAPITAL BUDGET AND PLAN OVERVIEW

Solid Waste Management Services (SWMS) is responsible for maintaining infrastructure valued at \$569 million excluding landfills, comprised of 7 transfer stations, 2 organics processing facilities, 5 collection yards and approximately of 1.6 million organics, recycling and waste bins. Landfills include the active Green Lane Landfill and 160 closed landfills.

The 2016-2025 Recommended Capital Plan totaling \$1.048 billion focuses on funding major diversion facilities to advance the City's goal of 70% Waste Diversion by investing in facilities and systems necessary to achieve this target as well as to continue Collection Yard and Transfer Station Asset Management and Perpetual Care of closed landfills. The year 2025 includes a preliminary estimate of \$404.6 million for funding to implement the Long Term Waste Management Strategy (Waste Strategy), which will include recommendations to reduce, reuse, recycle and recover and dispose of the City's waste over the next 30 to 50 years. These funding estimates will be revised as part of the 2017 Budget process following Council's approval of the Waste Strategy.

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### Highlights

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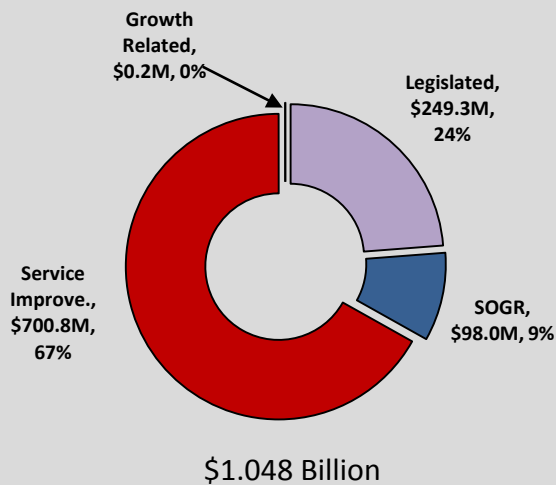
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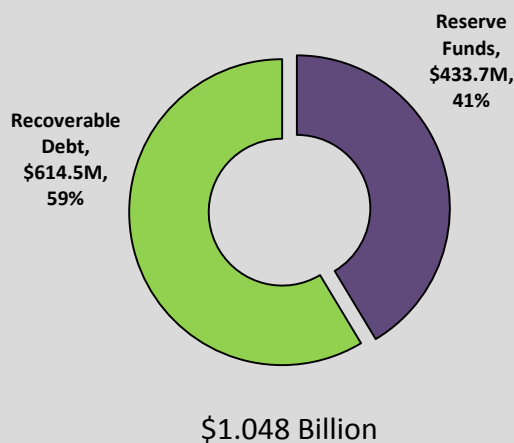
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### Capital Spending and Financing

#### 2016-2025 Capital Budget and Plan by Expenditures Category



#### 2016-2025 Capital Budget and Plan by Funding Source



### Where does the money go?

The 2016–2025 Recommended Capital Budget and Plan totalling \$1.048 billion provides funding to address waste diversion and recycling, including:

- Service Improvement projects that include the expansion of the Green Bin organics program to include apartments and condominiums, life-cycle replacement of all bins as well as building additional organics processing capacity.
- Legislated projects include ongoing development of the Green Lane Landfill and perpetual care of closed landfills, as well as strategic studies and investments in facilities and technologies as determined by the Waste Strategy.
- State of Good Repair (SOGR) projects including improving and maintaining transfer station, collection yard and diversion facilities capacity and effectiveness.

### Where does the money come from?

The 10-Year Capital Plan is funded by two major sources:

- Recoverable debt funding of \$614.475 million comprises 58.6% of SWMS 10-year capital funding. The City initially funds this debt; SWMS then repays the debt servicing costs over its term through the collection of user fees in their Operating Budget.
- Capital financing of \$433.696 million or 41.4% will be provided primarily from the Waste Management Reserve Fund, with annual contributions to the reserve generated from user fee (rate) revenue in the Operating Budget.

### State of Good Repair Backlog

The Solid Waste Management Program does not currently have a backlog of State of Good Repair (SOGR). The funding allocated in the 10-Year Capital Plan for SWMS for SOGR projects for 2016 and future years is deemed appropriate to maintain the assets in a state of good repair. The Program is undertaking an asset condition assessment and will report any changes to their SOGR backlog during future Capital Budget processes.

**Key Issues & Priority Actions**

**70% Waste Diversion** - The SWMS' capital program is driven primarily by the City's objective to achieve the 70% waste diversion target.

- ✓ SWMS is developing a Waste Strategy that will guide how the City's waste will be managed over the next 30 – 50 years.
- ✓ The 2016 – 2025 Capital Budget and Plan includes funding of \$2.9 million for a study for the Waste Strategy as well as \$497.0 million to ultimately implement the strategy, once approved by Council.

**Long-Term Capital Funding** - To ensure generated rate revenue is adequate to support SWMS' 10-year capital needs as well as allow for the continued transition to a fully sustainable utility model, reducing the application of recoverable debt when appropriate.

- ✓ The 2016 Recommended Operating Budget for SWMS includes a 3% rate increase with anticipated 3% annual rate increases over the next 10 years to ensure sufficient capital funding for future diversion programs and facilities that maximize the lifespan of the Green Lane landfill beyond 2029, as well as ensure effective solid waste management and disposal.
- ✓ This multi-year fee/rate strategy will be adjusted in the 2017 Budget Process upon approval of the Waste Strategy in 2016 with the longer term goal to fund the SWMS 10-Year Capital Plan primarily through reserve funds, supported by annual operating contributions funded from user fees revenue.

**2016 Capital Budget Highlights**

The 2016 Recommended Capital Budget for SWMS of \$89.167 million, excluding carry forward funding, will:

- Continue improving Diversion Systems with multi-unit organics & recycling containers and single family next generation Green Bin organics containers & waste / recycling containers (\$14.2 million);
- Continue building organics processing capacity at the Dufferin & Disco facilities (\$19 million);
- Continue improving and maintaining Transfer Stations and Collection Yards and Diversion Facilities (\$20.3 million);
- Continue developing the Green Lane Landfill (\$14 million) with Gas Utilization projects (\$3.8 million) and providing perpetual care of closed landfills (\$9.4 million);
- Begin implementation of approved Waste Strategy options (\$2.9 million).



## Recommendations

The City Manager and Chief Financial Officer recommend that:

1. City Council approve the 2016 Recommended Capital Budget for Solid Waste Management Services with a total project cost of \$83.671 million, and 2016 cash flow of \$96.512 million and future year commitments of \$264.325 million comprised of the following:
  - a) New Cash Flow Funds for:
    - i. 52 new / change in scope sub-projects with a 2016 total project cost of \$83.671 million that requires cash flow of \$(36.226) million in 2016 and future year cash flow commitments of \$72.403 million for 2017; \$16.583 million for 2018; \$21.451 million for 2019; and \$9.460 million for 2020;
    - ii. 41 previously approved sub-projects with a 2016 cash flow of \$117.584 million; and future year cash flow commitments of \$47.863 million for 2017; \$32.232 million for 2018; \$15.411 million for 2019; \$17.782 million for 2020; \$13.451 million for 2021; \$15.174 million for 2022 and \$2.515 million for 2023;
    - iii. 10 previously approved sub-projects with carry forward funding from 2014 and prior years requiring 2016 cash flow of \$7.809 million that requires Council to reaffirm its commitment; and
  - b) 2015 approved cash flow for 7 previously approved sub-projects with carry forward funding from 2015 into 2016 totalling \$7.345 million.
2. City Council approve the 2017 - 2025 Recommended Capital Plan for Solid Waste Management Services totalling \$694.679 million in project estimates, comprised of \$10.502 million in 2017; \$27.720 million for 2018; \$25.096 million for 2019; \$33.337 million for 2020; \$31.163 million for 2021; \$33.609 million for 2022; \$44.496 million for 2023; \$50.501 million for 2024; and \$438.255 million in 2025.
3. City Council approve the new debt service costs (savings) of \$(164.7) million in 2016 and incremental debt of \$(1.086) million in 2017, \$0.935 million for 2018; \$(0.600) million for 2019; \$(1.179) million for 2020 and \$0.732 million for 2021; resulting from the approval of the 2016 Recommended Capital Budget, to be included in the 2016 and future year operating budgets.
4. City Council consider the operating costs (savings) of \$0.074 million net in 2016; \$0.048 million net in 2017; \$(0.736) million net in 2018; \$(6.269) million net in 2019; \$(1.242) million net in 2020; \$(0.548) million net in 2021; \$(1.507) million net in 2022; \$(0.602) million net in 2023; \$(1.615) million net in 2024 and \$(0.764) million net in 2025 resulting from the approval of the 2016 Recommended Capital Budget for inclusion in the 2016 and future year operating budgets.
5. City Council approve 10 new temporary capital positions for the delivery of 2016 capital projects and that the duration for each temporary position not exceed the life and funding of its respective projects / sub-projects.
6. This report be considered concurrently with the Recommended 2016 Solid Waste Rates report (November 2015) from the Deputy City Manager and Chief Financial Officer and Acting General Manager for Solid Waste Management Services.

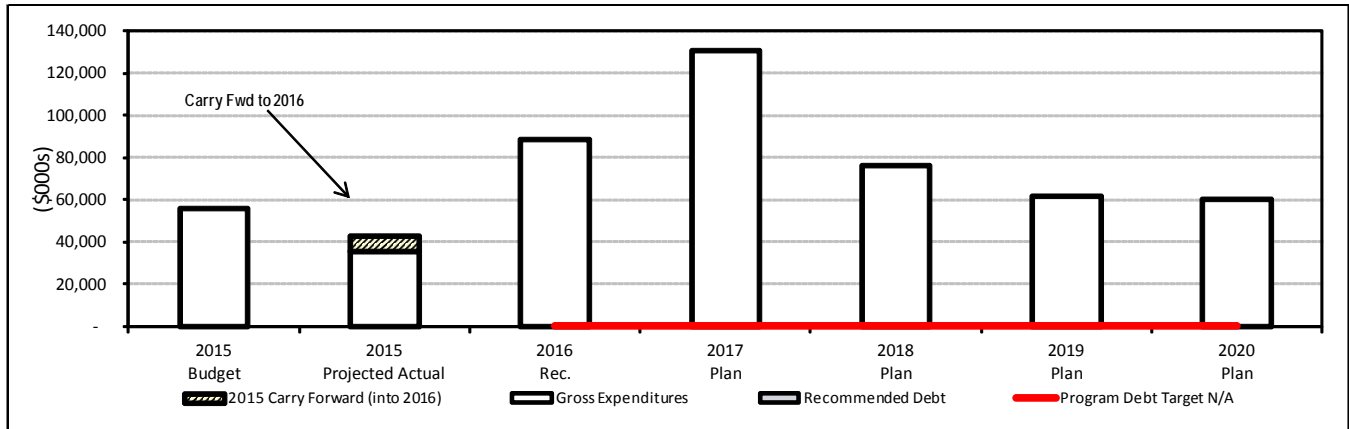


## **Part I:**

### 10-Year Capital Plan

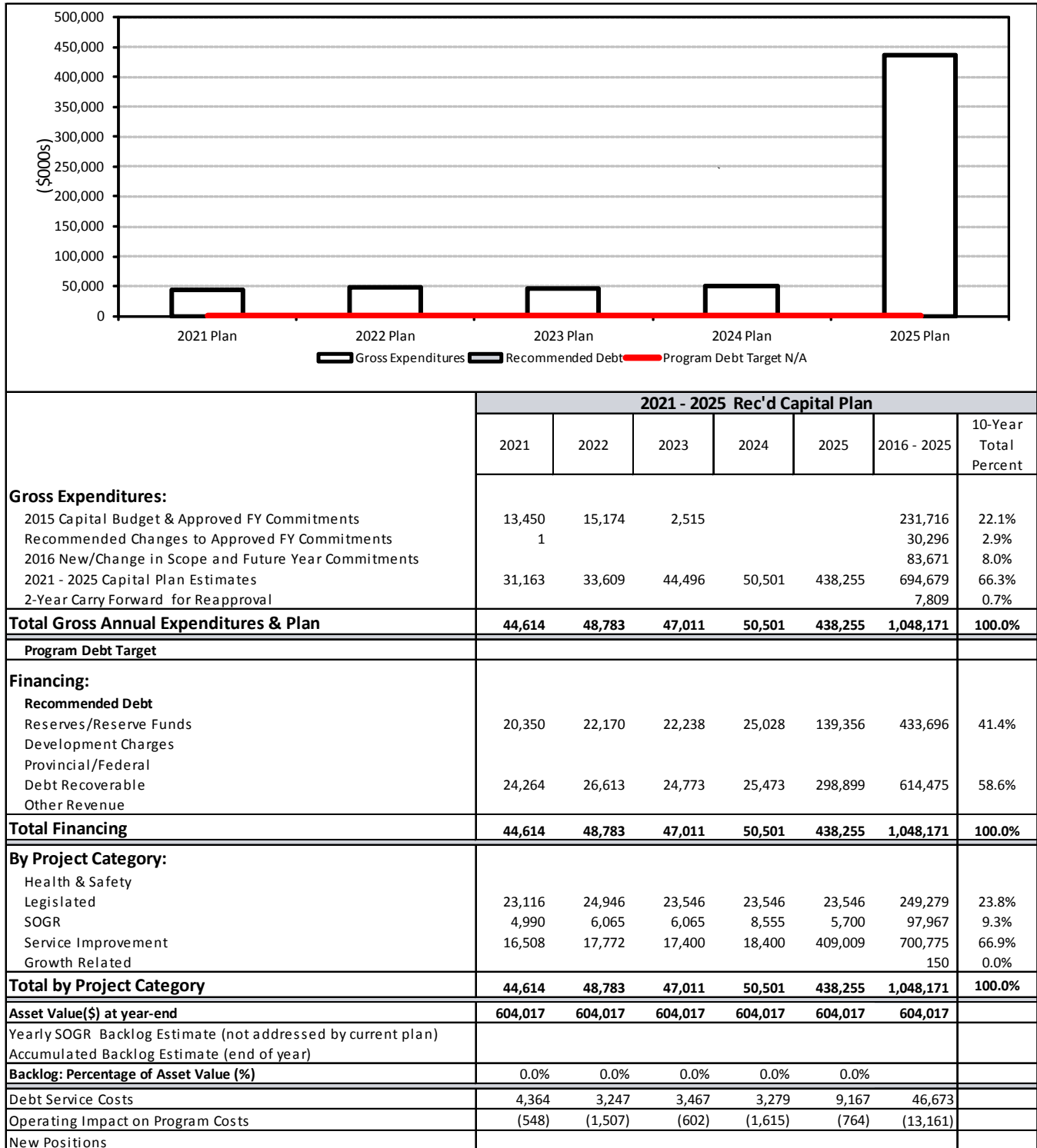
10 Year Capital Plan

**Table 1a**  
**2016 Recommended Budget, 2017-2020 Recommended Capital Plan**



		2016 Rec'd Capital Budget and 2017 - 2020 Rec'd Capital Plan								
		2015		2016	2017	2018	2019	2020	2016 - 2020	5-Year Total Percent
		Budget	Projected Actual							
<b>Gross Expenditures:</b>										
2015 Capital Budget & Approved FY Commitments		56,054	35,727	87,292	47,863	32,231	15,410	17,781	200,577	47.9%
Recommended Changes to Approved FY Commitments				30,292		1	1	1	30,295	7.2%
2016 New/Change in Scope and Future Year Commitments				(36,226)	72,403	16,583	21,451	9,460	83,671	20.0%
2017 - 2020 Capital Plan Estimates					10,502	27,720	25,096	33,337	96,655	23.1%
2-Year Carry Forward for Reapproval									7,809	1.9%
1-Year Carry Forward to 2016			7,345							
<b>Total Gross Annual Expenditures &amp; Plan</b>		<b>56,054</b>	<b>35,727</b>	<b>89,167</b>	<b>130,768</b>	<b>76,535</b>	<b>61,958</b>	<b>60,579</b>	<b>419,007</b>	<b>100.0%</b>
<b>Program Debt Target</b>										
<b>Financing:</b>										
<b>Recommended Debt</b>										
Reserves/Reserve Funds				26,749	78,831	45,384	27,830	25,760	204,554	48.8%
Development Charges										
Provincial/Federal										
Debt Recoverable				62,418	51,937	31,150	34,128	34,819	214,453	51.2%
Other Revenue										
<b>Total Financing</b>										
				<b>89,167</b>	<b>130,768</b>	<b>76,535</b>	<b>61,958</b>	<b>60,579</b>	<b>419,007</b>	<b>100.0%</b>
<b>By Project Category:</b>										
Health & Safety										
Legislated				23,448	27,559	27,498	24,728	27,346	130,579	31.2%
SOGR				17,720	13,166	20,247	8,555	6,905	66,592	15.9%
Service Improvement				47,848	90,044	28,791	28,675	26,328	221,686	52.9%
Growth Related				150					150	0.0%
<b>Total by Project Category</b>										
				<b>89,167</b>	<b>130,768</b>	<b>76,535</b>	<b>61,958</b>	<b>60,579</b>	<b>419,007</b>	<b>100.0%</b>
<b>Asset Value (\$) at year-end</b>		<b>497,679</b>								
Yearly SOGR Backlog Estimate (not addressed by current plan)										
Accumulated Backlog Estimate (end of year)										
<b>Backlog: Percentage of Asset Value (%)</b>		0.0%								
				0.0%	0.0%	0.0%	0.0%	0.0%		
Debt Service Costs				827	7,372	6,272	4,168	4,511	23,150	
Operating Impact on Program Costs				74	48	(736)	(6,269)	(1,242)	(8,125)	
New Positions										

**Table 1b**  
**2021 - 2025 Recommended Capital Plan**

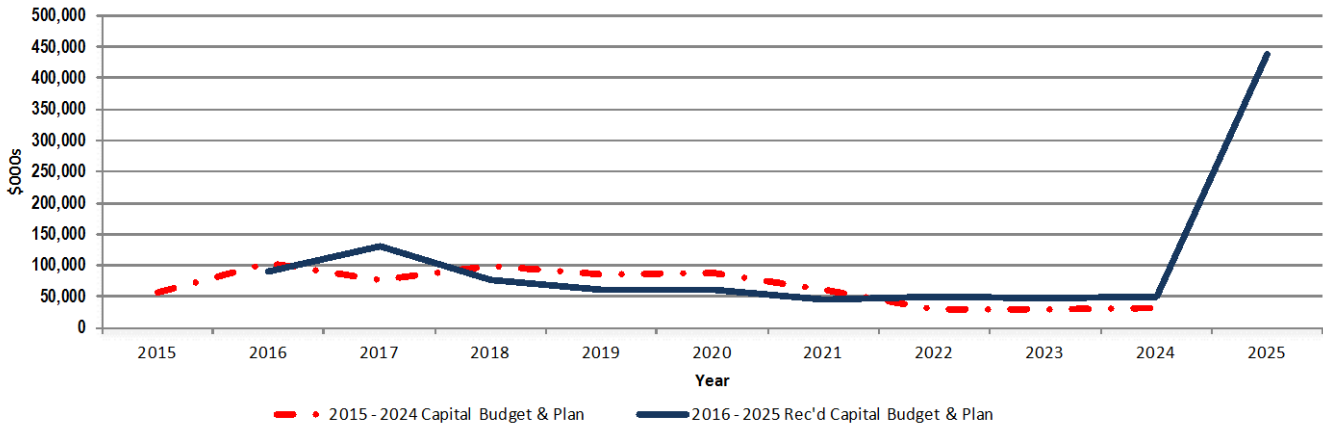


**Key Changes to the 2015 - 2024 Approved Capital Plan**

The 2016 Recommended Capital Budget and the 2017 - 2025 Recommended Capital Plan reflects an increase of \$388.286 million in capital funding from the 2015 - 2024 Approved Capital Plan.

The table and chart below provide a breakdown of the \$388.286 million or 58.8% increase in the Capital Program on an annual basis from 2015 to 2025.

**Chart 1  
Changes to the 2015 -2024 Approved Capital Plan (In \$000s)**



(\$000s)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	10-Year Total
2015 - 2024 Capital Budget & Plan	56,054	103,277	75,843	100,144	85,269	86,897	61,838	30,455	29,289	30,819		659,885
2016 - 2025 Rec'd Capital Budget & Plan		89,167	130,768	76,535	61,958	60,579	44,614	48,783	47,011	50,501	438,255	1,048,171
Change %		(13.7%)	72.4%	(23.6%)	(27.3%)	(30.3%)	(27.9%)	60.2%	60.5%	63.9%		58.8%
Change \$		(14,110)	54,925	(23,609)	(23,311)	(26,318)	(17,224)	18,328	17,722	19,682		388,286

As made evident in the chart above, the \$388.286 million increase in the Capital Program reflects changes made to 2017 and 2025. In 2017 there is additional funding for the Dufferin organics processing facility expansion and a preliminary estimate for the implementation of the Waste Strategy have been added in 2025.

As reflected in Table 2 on the following page, changes to the 2015 – 2024 Approved Capital Plan, specifically over the nine common years of the Capital Plans (2016 – 2024) total \$6.086 million and arise from the reprioritization of Solid Waste Management Services' capital projects based on the following factors:

- A requirement to invest in Transfer Station Asset Management in the short term to ensure facilities are maintained in a state of good repair.
- Additional cost for the Dufferin organics processing facility as well as a revised project schedule.
- On-going revision to the estimates for the Waste Strategy with the majority of funding being moved to the year 2025.



A summary of project changes for the years 2016 to 2024 totalling \$6.086 million are provided in Table 2 below:

**Table 2  
Summary of Project Changes (In \$000s)**

\$000s	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2016 - 2024 Total
2015 - 2024 Capital Budget & Plan	56,054	103,277	75,843	100,144	85,269	86,897	61,838	30,455	29,289	30,819		603,831
2016 - 2025 Rec'd Capital Budget & Plan		89,167	130,768	76,535	61,958	60,579	44,614	48,783	47,011	50,501	438,255	609,916
<b>Capital Budget &amp; Plan Changes (2016 - 2024)</b>		<b>(14,110)</b>	<b>54,925</b>	<b>(23,609)</b>	<b>(23,311)</b>	<b>(26,318)</b>	<b>(17,224)</b>	<b>18,328</b>	<b>17,722</b>	<b>19,682</b>		<b>6,085</b>

	Total Project Cost	2016	2017	2018	2019	2020	2021	2022	2023	2024	2016 - 2024	2025	Revised Total Project
<b>Previously Approved</b>													
Transfer Stn Asset Mgmt		8,060	8,016	14,152	510	200	(1,715)	2,820	2,250	3,250	37,543	4,000	
Collection Yard Asset Mgmt		(200)	(200)	(200)	(200)	(200)	(200)	(200)	(200)	(200)	(1,800)	200	
Diversion Facilities Asset Mgmt		602									602	1,500	
Diversion Systems		(8,028)	17,373	1,326	1,290	1,255	1,190	1,208	1,171	1,131	17,916	2,900	
Landfill Development		46	1	1	0				1	1	50	14,815	
Perpetual Care of Landfills		150									150	8,731	
Dufferin SSRM Facility	4,427	(1,450)	50	50							(1,350)		3,077
Dufferin SSO Facility	54,272	(14,074)	37,241	7,449	59						30,675		74,943
Disco SSO Facility	87,506	1,000	4,405								5,405		87,506
Biogas Utilization	12,000	(724)	475	(2,010)	3,960						1,701		11,182
Reuse Centre-Future Site	10,484	(1,000)	(3,500)								(4,500)		5,984
Landfill Gas Utilization	20,000	(1,505)	(8,800)	(8,970)	9,460	9,460					(355)		19,645
Long Term Strategy Plan Ph 1	3,798	1,104									1,104		4,902
Long Term Strategy Study Ph 2	192,000	(1,104)	(2,000)	(40,000)	(40,000)	(38,000)	(18,000)	13,000	13,000	14,000	(99,104)	404,609	497,505
SWM IT Application Initiatives	9,877	(307)	(1,071)	1,986	109	(533)					184		10,061
IT Corporate Initiatives	8,501	217	1,440	1,108							2,765		11,266
<b>Total Previously Approved</b>		<b>(17,213)</b>	<b>53,429</b>	<b>(25,108)</b>	<b>(24,811)</b>	<b>(27,818)</b>	<b>(18,725)</b>	<b>16,828</b>	<b>16,222</b>	<b>18,182</b>	<b>(9,014)</b>	<b>436,755</b>	<b>726,072</b>
<b>New</b>													
Engineering Planning Studies		1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	13,500	1,500	15,000
CNG Refuel Station Installations (Collection Yard Asset Mgmt)		1,100									1,100		1,100
Renewable Natural Gas Fleet Fuel From Biogas		500									500		500
<b>Total New</b>		<b>3,100</b>	<b>1,500</b>	<b>1,500</b>	<b>1,500</b>	<b>1,500</b>	<b>1,500</b>	<b>1,500</b>	<b>1,500</b>	<b>1,500</b>	<b>15,100</b>	<b>1,500</b>	<b>16,600</b>
<b>Total Changes</b>		<b>(14,113)</b>	<b>54,929</b>	<b>(23,608)</b>	<b>(23,311)</b>	<b>(26,318)</b>	<b>(17,225)</b>	<b>18,328</b>	<b>17,722</b>	<b>19,682</b>	<b>6,086</b>	<b>438,255</b>	<b>742,672</b>

**Significant Capital Project Changes in Solid Waste Management Services:**

Cash flow funding for the following previously approved capital projects have been adjusted based on historical spending rates, capacity and expected progress and completion of the projects, as outlined below:

- **Transfer Station Asset Management:** The overall project cost has increased by \$37.5 million over the period 2016 to 2024 due to increased requirements to maintain the SOGR (State of Good Repair) of transfer station facilities particularly at *Dufferin and Bermondsey*. This increase will fund repair work for various projects such as roofing, paving, drainage systems, sprinkler systems and repairs to tipping floors.
- **Diversion Systems:** The recommended increase of \$17.9 million over the period 2016 to 2024 is primarily driven by the *Replacement Residential Bins project*. A POA was approved for the contract to add additional funds in 2014. The added service has enhanced customer service and operational efficiencies. Additional funds are required due to an increase in the overall demand from residents for bin-related service requests due to campaigns to upsize recycle bins or downsize garbage bins to increase participation in diversion programs.

- **Dufferin SSRM Facility:** The project cost for the *Dufferin SSRM (Single Stream Recyclable Materials) Facility* was reduced by \$30 million over the previous two budget processes and is now being reduced further by \$1.350 million to \$3.077 million. It had been determined that the Dufferin operating contract will not be renewed with a study to determine alternate uses for the facility. Current planned spending only includes a provisional \$50 thousand per year to 2018.
- **Dufferin Organics Processing Facilities:** The project cost estimates for the *Dufferin organics processing Facilities* have increased by \$30.7 million over the period 2016 to 2019. This is due to greater than anticipated costs associated with the preliminary design phase now being completed. An RFP has been awarded to a contractor to design-build-commission and operate the expanded facility to process 55,000 tonnes of organics per year. Facility expansion and project completion are expected by 2019. The operating contract is for 3 years with a 2-year option to extend.
- **Landfill Gas Utilization:** A new engineering assessment has determined that the overall project cost for biogas utilization at the Green Lane Landfill should be reduced by \$14 million from \$35 million to approximately \$20 million. The main driver behind this change is a lower estimate of landfill gas volume flow creating a lower estimated power output thereby reducing the cost of associated infrastructure. The cash flows have been deferred to reflect current estimated spending requirements now ending in 2020.
- **Waste Strategy Study Phase 2:** This project for the second phase of the *Waste Strategy* is being increased by \$306 million. Estimated cash flows per year for future diversion and waste management programs and facilities have been deferred and extended from the period 2016 to 2021 to now encompass the period 2016 to 2025. A final estimate of \$404.6 million is planned for 2025. Planned funding is 30% reserve funds, 70% recoverable debt and is accommodated as shown in the reserve fund appendix of these Budget Notes. SWMS is planning to report on the *Waste Strategy* in June 2016. Cost estimates will be revised following Council approval of the *Waste Strategy*.

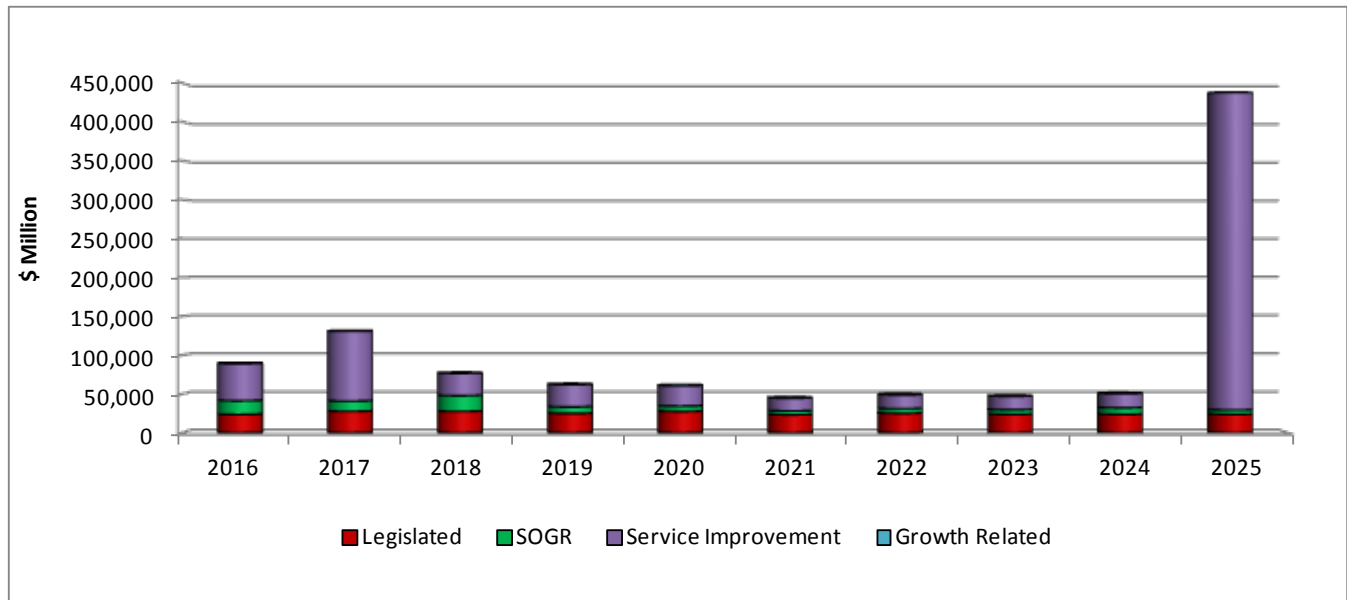
Recommended new projects totalling \$16.6 million have been added to the 2016 – 2025 Approved Capital Plan, including:

- **Renewable Natural Gas Fleet Fuel From Biogas:** Recognizing that the SWMS has available approximately 7.15M m<sup>3</sup>/yr. of biogas, where the current practice is flaring where this gas is burned-off, this project will look at developing infrastructure to clean and convert the biogas to RNG (Renewable Natural Gas) that will significantly reduce the Division's reliance on external energy sources, lower its energy consumption, increase energy efficiency and reduce greenhouse gases. The biogas will be used to displace the electrical loads at Disco and Dufferin sites, including neighbouring City owned properties. The project is undertaken to generate revenue, cost savings and environmental benefits. The project cost for 2016 is \$0.5 million.
- **CNG Refuel Station Installations:** As part of the project for Collection Yard Asset Management, the sub-project for CNG (Compressed Natural Gas) Refuel Station Installations will retrofit and upgrade at Garage Facilities with a project cost of \$1.1 million. Two CNG refuel stations will be installed at the Ellesmere (1050 Ellesmere Rd) and Bermondsey (25 Old Eglinton Ave) yards.

- **Engineering Planning Studies:** This project enables the Program to undertake planning, engineering and feasibility studies as required to support the initiation of new SWMS projects. Identification and evaluation of solutions, assessment of cost/benefits, planning of work programs, budget cash flow and resource needs for new projects.
  - The project will also enhance project planning to improve project delivery, in accordance with the City's Strategic Direction of Good Governance and SWMS Strategic Direction of Operational Excellence and Sustainable Utility. The additional project cost is \$15 million over the 10-year Capital Plan allocated at \$1.5 million per year.

**2016 – 2025 Recommended Capital Plan**

**Chart 2**  
**2016 – 2025 Capital Plan by Project Category (In \$000s)**



As illustrated in the chart above, the 10-Year Recommended Capital Plan for SWMS of \$1.048 billion allocates 66.9% of funding for priority Service Improvement projects and 23.8% to Legislative projects. The balance of funding is allocated to State of Good Repair (SOGR) projects (9.3%) and one Growth Related project over the 10-year period.

- Service Improvement projects account for \$700.777 million and comprise all bin purchases, major organics processing facilities, gas utilization projects, IT projects and waste diversion programs and facilities resulting from an approved Waste Strategy.
- Legislated projects account for \$249.277 million and include on-going landfill projects at the Green Lane landfill and the perpetual care of closed landfill sites.
- Cash flow funding of \$97.967 million is dedicated to State of Good Repair projects for Transfer Stations, Collection Yards and Diversion Facilities and is relatively constant over the 10-year plan with more emphasis on the short term to complete required repairs.

- The Growth Related project is budgeted in 2016 as a provisional estimate of \$0.150 million to complete outstanding items for the Pan Am Aquatic Centre site remediation project

The following table provides details by project category within the 2016 – 2025 Recommended Capital Budget and Plan for SWMS:

**Table 3  
Summary of Capital Projects by Category (In \$000s)**

	Total App'd Cash Flows to Date *	2016 Budget	2017 Plan	2018 Plan	2019 Plan	2020 Plan	2021 Plan	2022 Plan	2023 Plan	2024 Plan	2025 Plan	2016 - 2025 Total	Rec'd Total Project Cost
<b>Total Expenditures by Category</b>													
<b>Legislated</b>													
<i>Perpetual Care of Landfills</i>	*	9,249	9,942	8,425	8,144	8,064	8,165	8,272	8,731	8,731	8,731	<b>86,454</b>	
<i>Landfill Development</i>	*	14,198	17,617	19,073	16,584	19,282	14,950	16,674	14,815	14,815	14,815	<b>162,823</b>	
<b>Sub-Total</b>		<b>23,447</b>	<b>27,559</b>	<b>27,498</b>	<b>24,728</b>	<b>27,346</b>	<b>23,115</b>	<b>24,946</b>	<b>23,546</b>	<b>23,546</b>	<b>23,546</b>	<b>249,277</b>	
<b>State of Good Repair</b>													
<i>Transfer Stn Asset Mgmt</i>	*	16,167	11,966	18,547	6,855	5,205	3,290	4,365	4,365	6,855	4,000	<b>81,615</b>	
<i>Collection Yard Asset Mgmt</i>	*	200	200	200	200	200	200	200	200	200	200	<b>2,000</b>	
<i>Diversion Facilities Asset Mgmt</i>	*	1,352	1,000	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	<b>14,352</b>	
<b>Sub-Total</b>		<b>17,719</b>	<b>13,166</b>	<b>20,247</b>	<b>8,555</b>	<b>6,905</b>	<b>4,990</b>	<b>6,065</b>	<b>6,065</b>	<b>8,555</b>	<b>5,700</b>	<b>97,967</b>	
<b>Service Improvements</b>													
<i>Diversion Systems</i>	*	14,200	19,670	2,900	2,900	2,900	2,900	2,900	2,900	2,900	2,900	<b>57,070</b>	
<i>Green Lane: Landfill Gas Utilization</i>	20,000	(155)	200	30	9,460	9,460						<b>18,995</b>	19,645
<i>Biogas Utilization</i>	12,000	3,276	2,775	490	3,960							<b>10,501</b>	11,182
<i>Renewable Natural Gas Fleet Fuel</i>	n/a	500	-									<b>500</b>	500
<i>CNG Refuel Station Installations</i>	n/a	1,100										<b>1,100</b>	1,100
<i>Dufferin SSRM Facility</i>	4,427	50	50	50								<b>150</b>	3,077
<i>Dufferin SSO Facility</i>	54,272	18,000	47,506	7,604	214							<b>73,324</b>	74,943
<i>Disco SSO Facility</i>	87,506	1,000	4,405									<b>5,405</b>	87,506
<i>Engineering Planning Studies</i>	n/a	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	<b>15,000</b>	15,000
<i>SWM IT Application Initiatives</i>	9,877	2,449	1,934	3,227	434	120	108	372				<b>8,644</b>	10,061
<i>IT Corporate Initiatives</i>	8,501	3,037	4,007	2,990	207	348						<b>10,589</b>	11,266
<i>Long Term Waste Mgmt Strategy</i>	3,798	2,891	8,000	10,000	10,000	12,000	12,000	13,000	13,000	14,000	404,609	<b>499,499</b>	502,407
<b>Sub-Total</b>	<b>200,382</b>	<b>47,850</b>	<b>90,045</b>	<b>28,790</b>	<b>28,675</b>	<b>26,328</b>	<b>16,508</b>	<b>17,772</b>	<b>17,400</b>	<b>18,400</b>	<b>409,009</b>	<b>700,777</b>	<b>736,688</b>
<b>Growth Related</b>													
<i>PAAC Site Remediation</i>	*	150										<b>150</b>	
<b>Sub-Total</b>		<b>150</b>	<b>-</b>									<b>150</b>	
<b>Total Expenditures by Category (excluding carry forward)</b>	<b>200,382</b>	<b>89,167</b>	<b>130,769</b>	<b>76,535</b>	<b>61,958</b>	<b>60,579</b>	<b>44,613</b>	<b>48,783</b>	<b>47,011</b>	<b>50,501</b>	<b>438,255</b>	<b>1,048,171</b>	<b>736,688</b>

\* Life to Date approved cash flows are provided for multi-year capital projects with cash flow approvals prior to 2016 and exclude ongoing capital projects (e.g. Perpetual Care or Transfer Station Asset Mgmt)

**2016 – 2025 Recommended Capital Projects**

The 10-Year Capital Plan for SWMS is primarily comprised of Service Improvement projects for facilities; SOGR and Legislated projects for facility and landfill development and on-going asset management. Dufferin organics facility expansion / renovation and implementation of the Waste Strategy have been included in the 10-Year Capital Plan to progress toward achieving the waste diversion target of 70%.

*Service Improvements*

- Service Improvement projects account for \$700.777 million or 66.9% of the total 10-Year Recommended Capital Plan.
  - *Diversion Systems (\$57.070 million)* – Funding is provided for implementing and replacing garbage, recycling, and organics containers for single family residential and multi-residential buildings as well as recycling upgrades for multi-residential buildings.

- *Dufferin Organics Facility (\$73.324 million)* – Construction of this facility that began in 2012 and will increase organics processing capacity from 25,000 to approximately 55,000 tonnes per year to expand the receiving area and to install a system to treat wastewater before discharge to the sanitary sewer.
- *Landfill Gas Utilization and Biogas Utilization (\$29.496 million)* –The Landfill Gas project with cash flows that total \$19 million over the 10-Year plan is located at Green Lane; the Biogas project (\$10.5 million) will address requirements at the Dufferin/Disco organics processing facilities. The project funding will provide infrastructure whereby gas produced by decomposition of waste will be converted to heat and electricity.
- *Waste Strategy: Phases 1 & 2 (\$499.5 million)* – This project has a total project cost of approximately \$0.5 billion with most cash flow funding planned in the last year of the 10-Year Capital Plan period. Funding is for professional technical services to assist with the study, securing any Provincially mandated environmental approvals and permits, Request for Proposal (RFP) and construction service efforts required for a vendor procurement process.
- *SWM IT Application Initiatives (\$8.643 million)* – Funding is provided in order to implement various technology solutions in SWMS, including transfer station efficiencies, asset management, RFID/GPS systems, revenue forecasting, eService delivery performance measurement, contract management and business process improvements.
- *IT Corporate Initiatives (\$10.589 million)* – This project is primarily comprised of the Work Management System which is the multi-year project to procure and implement a common new Work Management System that will be utilized by Toronto Water, Transportation Services, Parks Forestry & Recreation and SWMS.

#### *Legislated*

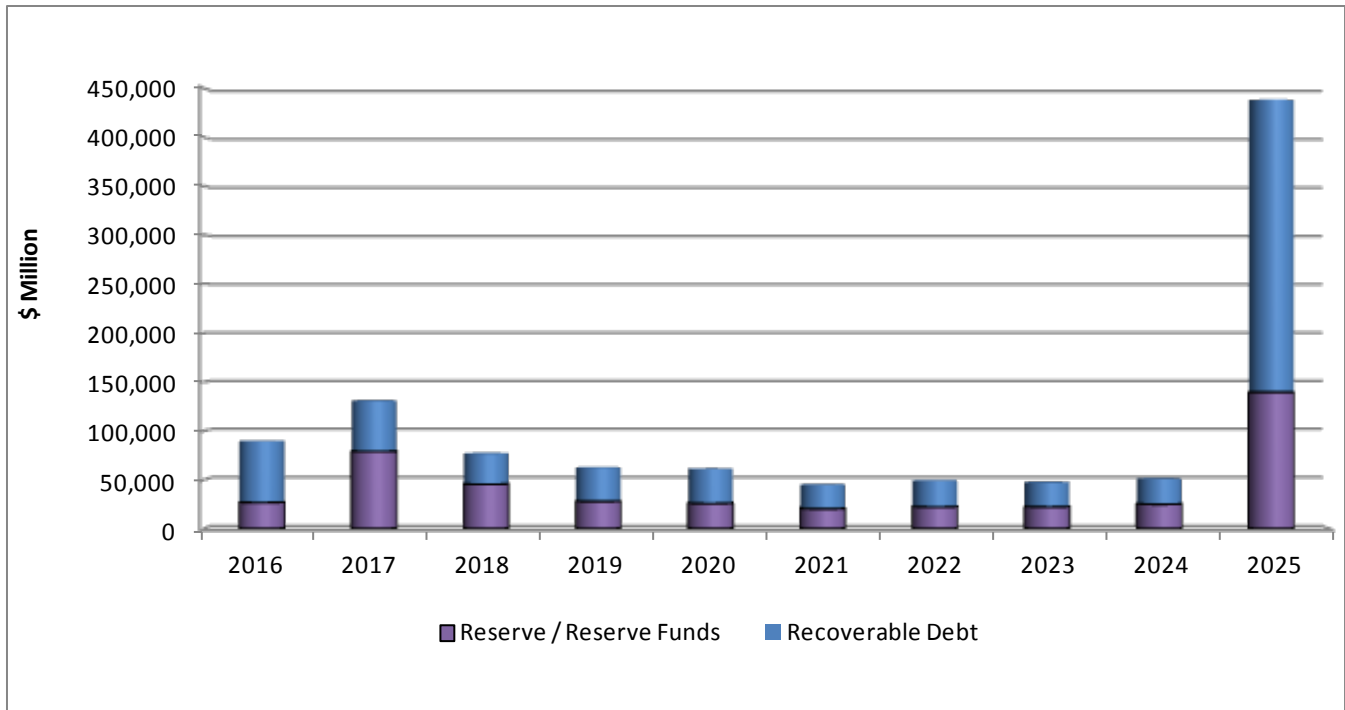
- Legislated projects include cash flow funding of \$249.279 or 23.8% of the total 10-Year Recommended Capital Plan funding.
  - *Green Lane Landfill Cell Development, Systems & Acquisition (\$162.823 million)* – The 10-Year Recommended Capital Plan provides annual funding for cell development at the Green Lane Landfill site including new waste cell excavation and construction, landfill systems and buffer land acquisition. Landfill Systems projects include leachate and gas control systems as well as final cover/storm control/site services and engineering and monitoring capability.
  - *Perpetual Care (\$86.454 million)* – Capital works necessary for the ongoing maintenance of closed environmentally sound landfill sites after primary operations have ended. Cash flow funding estimates allow for an average of \$8.7 million annually for ongoing control system requirements.

#### *State of Good Repair (SOGR)*

- SOGR projects account for \$97.967 million or 9.3% of the total 10-Year Recommended Capital Plan.

- *Transfer Station, Collection Yard & Diversion Facility Asset Management (\$97.967 million) –* Projects that provide funding to build various improvements to these facilities that are required to meet health and safety, operational and environmental requirements.

**Chart 3**  
**2016 – 2025 Capital Plan by Funding Source (In \$000s)**



Most projects with the 10-Year Recommended Capital Plan are funded using a mix of recoverable debt and reserve funding except for the Transfer Station & Diversion Facility Asset Management and Perpetual Care projects which are 100% financed by reserve funds. 10-Year total cash flow funding of \$1.048 billion will be financed by the following sources:

- Recoverable Debt accounts for \$614.475 million or 58.6% of the financing over the 10-year period.
  - With the anticipated completion of all major diversion facilities by 2021, required funding is relatively lower until 2024. In 2025, funding reflects preliminary estimates for future requirements which will be dependent on the outcome of the Waste Strategy.
  - City debt guidelines are not issued for SWMS, as debt is recoverable from user fees with repayment of the debt servicing costs funded in SWMS annual Operating Budget.
- Reserve Funds constitute \$433.696 million or 41.4% of required funding over 10 years.
  - Compared to previous Capital Plans, reserve funding has gradually increased as the intention is to fund a greater percentage of projects with this funding source as SWMS moves closer to a self-sustaining utility model. Reliance on recoverable debt will reduce as the Program continues to fund more projects from the Waste Management Reserve Fund. This reserve fund is dependent on on-going operating contributions.

- Following completion and Council approval of the Waste Strategy, rate modeling will determine the future required SWMS rate increases that will be necessary to continue the transition towards a fully sustainable utility, reducing the application of recoverable debt where appropriate.

**State of Good Repair (SOGR) Backlog**

- Solid Waste Management Services has not currently identified a backlog of State of Good Repair projects. At this time, the funding allocated in the 10-Year Capital Plan for SWMS for State of Good Repair projects is deemed appropriate to maintain the assets in a steady state of good repair.
- It was recommended in 2014 that a thorough review of the state of good repair of capital assets be initiated. This process is still ongoing and will now be addressed as part of the 2017 Capital Budget process.
- Consultants have been hired and are currently developing an Asset Management Framework together with an implementation plan to address business gaps. The implementation plan will be executed in 2016-2017 and will generate asset management plans for different asset classes. The asset management plans will provide projected capital and maintenance spending budgets for SOGR based on asset conditions while ensuring specific levels of service.

**10-Year Capital Plan: Net Operating Budget Impact**

**Table 5  
Net Operating Impact Summary (In \$000s)**

Projects	2016 Rec'd Budget		2017 Plan		2018 Plan		2019 Plan		2020 Plan		2016 - 2020		2016 - 2025	
	\$000s	Positions	\$000s	Positions	\$000s	Positions	\$000s	Positions	\$000s	Positions	\$000s	Positions	\$000s	Positions
<b>Previously Approved</b>														
Green Lane - Landfill Gas Utilization							(5,436)		(109)		(5,545)		(6,123)	
Biogas Utilization - Dufferin and Disco SSO			(218)		(1,163)		(1,300)		(1,300)		(3,981)		(8,489)	
Disco SSO Processing Facilities	(43)		(44)		(44)						(131)		(131)	
IT Short Term App Improvements - 2014	117										117		117	
IT Stakeholder-Cust Relation Mgmt-2014							74				74		74	
IT Transfer Station Efficiencies-2014			224		90						314		314	
IT Electronic Doc & Records Mgmt -2015					52						52		52	
IT Work Mgmt System Implementation			86		86		180				352		352	
<b>New Projects - 2016</b>														
IT Mobile Assessment & Solution - Change					34						34		34	
IT KPI Reporting and Measuring - Change					209						209		209	
<b>New Projects - Future Years</b>														
IT Contract Management -2015							46				46		46	
IT Asset Management Solution (AMS)							117				117		117	
IT Business Systems Integration									117		117		117	
IT SWMS eService Delivery											-		50	
IT Time & Attendance Management Solution							50				50		50	
IT Learning Management Solution (LMS)									50		50		50	
<b>Total Recommended (Net)</b>	<b>74</b>		<b>48</b>		<b>(736)</b>		<b>(6,269)</b>		<b>(1,242)</b>		<b>(8,125)</b>		<b>(13,161)</b>	

The 10-Year Recommended Capital Plan will decrease future year Operating Budgets by a total of \$13.161 million net over the 2016 – 2025 period, as shown in the table above.

This is mainly comprised of operating impacts from the following major projects once completed:

- *Green Lane Landfill Gas Utilization* – The City's Green Lane Landfill generates combustible landfill gas and has a system to collect and flare this gas in accordance with the requirements of the permit

issued under the Environmental Protection Act. The landfill gas can be utilized as a source of renewable energy to provide an economic benefit to the City.

- The sale of the upgraded gas will achieve a favourable return on the initial capital investment of \$20 million and will generate a revenue stream over a 20 to 30 year period that will help offset the cost of developing and operating the landfill. By 2025, the estimated incremental operating cost of \$1.4 million will be offset by estimated revenue of \$7.5 million resulting in net operating revenue of \$6.1 million.
- *Biogas Utilization* – The City's organics processing facilities at the Dufferin Facility and Disco Road transfer station generate combustible biogas through anaerobic digestion. The biogas can be similarly utilized as a source of renewable energy (electricity or renewable natural gas) to provide an economic benefit to the City.
  - The sale of the renewable energy product will achieve a favourable return on the initial capital investment of \$13.8 million and will generate a revenue stream over a 20 year period. By 2025, the estimated incremental net operating revenue is \$7 million.

These future operating impacts will be reviewed each year as part of the annual Operating Budget process.

**Table 6  
Capital Project Delivery: Temporary Positions**

Position Title	CAPTOR Project Number	# of Positions	Project Delivery		Salary and Benefits \$ Amount( \$000s)						
			Start Date	End Date	2016	2017	2018	2019	2020	2021 - 2025	
Chief Booth Attendant	SOL000065-72	(9.5)	01/01/2009	12/31/2015	(478.0)						
Chief Booth Attendant	SOL000065-110	4.0	01/01/2016	12/31/2017	243.6	(243.6)					
Systems Integrator	SOL907919-23	2.0	06/09/2014	03/01/2017	167.7	(167.7)					
Project Lead	SOL907919-27	1.0	09/08/2017	04/12/2019		37.0	37.0	(74.1)			
Sr. Systems Integrator	SOL907956-6	1.0	05/01/2017	12/31/2018		92.9	23.2	(116.1)			
Project Lead	SOL907956-8	2.0	05/01/2013	12/31/2018	208.5			(208.5)			
<b>Total</b>		<b>0.5</b>			<b>141.8</b>	<b>(281.4)</b>	<b>60.3</b>	<b>(398.7)</b>			

Approval of the 2016 – 2025 Recommended Capital Budget and Plan will result in a requirement for 10 new temporary capital project delivery positions to implement the following projects:

- *SSO Multi-Residential Container Implementation* – Implementation of organics collection in apartments commenced in 2009. The program was to be rolled out over a period of years. The plan included a requirement for 9.5 temporary capital positions to deliver the capital project for organic Multi-Residential Container Implementation. Temporary Chief Booth Attendants were required for bin distribution activities. Originally, after implementation, there is to be a corresponding operating cost reduction of \$0.478 million in 2016. However, four temporary staff are now projected to be required until 2017.
- *SWMS and Corporate IT Initiatives* – Various technology projects such as the SWMS Information Model, Stakeholder-Customer Relationship Management, Time and Attendance Management and the Work Management System will require 10 temporary staff including System Integrators and Project Leads from 2016 through 2018.



- It is recommended that Council approve these 10 temporary capital positions for the delivery of the above capital projects / sub-projects and that the duration for each temporary position not exceed the life of the funding of its respective capital projects / sub-projects.

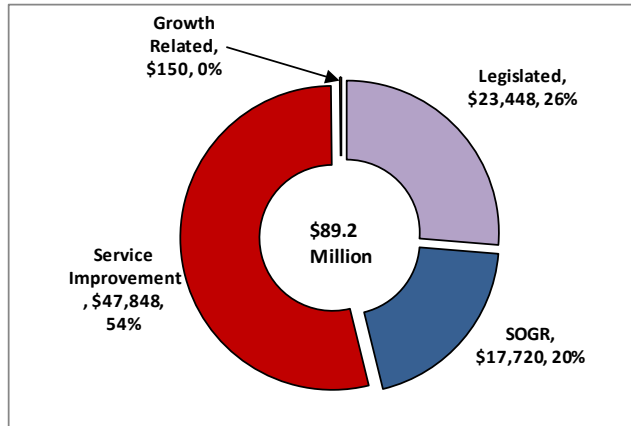


## **Part II:** 2016 Capital Budget

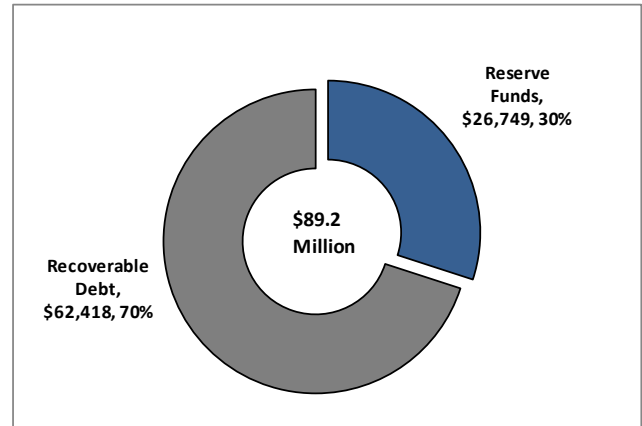
2016 Recommended Capital Budget

2016 Capital Budget by Project Category and Funding Source

2016 Capital Budget by Project Category  
(in \$000s)



2016 Capital Budget by Funding Source  
(in \$000s)



The 2016 Recommended Capital Budget, excluding funding carried forward from 2015 to 2016, requires cash flow funding of \$89.167 million.

The 2016 Capital Budget expenditures are allocated to the following project categories:

- *Legislated (\$23.448 million, 26.3%)*
  - Funding is allocated for Green Lane Landfill Development and Perpetual Care of closed landfills
- *SOGR (\$17.720 million, 19.9%)*
  - Funding for required asset management activity for transfer stations, collection yards and diversion facilities.
- *Service Improvement (\$47.848 million, 53.7%)*
  - Funding is mainly required for the Dufferin organics facility, replacement of single-family Green Bin organics containers, continuation of gas utilization projects, Waste Strategy Study, Engineering Planning Studies and various IT related projects.
- *Growth (\$0.150 million, 0.2%)*
  - Provision for Pan Am Aquatic Centre site remediation requirements.

The 2016 Recommended Capital Budget is financed primarily by:

- *Recoverable Debt (\$62.418 million, 70%)*
  - Debt is recoverable from the Operating budget through payment of debt charges funded by revenue generated from user fees charged for garbage bins for single and multi-residential customers.
- *Reserve/Reserve Funds (\$26.749 million, 30%)*
  - Reserve funding drawn primarily from the Waste Management Reserve Fund has been maximized in 2016 and each year of the Plan in order to provide non-debt funding while maintaining a sustainable reserve fund balance for potential operations stabilization as well as future capital requirements. Other reserve funds utilized include the Perpetual Care reserve fund and the Green Lane Landfill reserve fund.

**Table 7**  
**2016 Recommended Cash Flow & Future Year Commitments (In \$000s)**

	2014 and Prior Year Carry Forwards	2015 Carry Forwards	2016 Rec'd Cash Flow	Total 2016 Cash Flow (Incl C/Fwd)	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total 2016 Rec'd Cash Flow & FY Commits
<b>Expenditures</b>														
Previously Approved	7,809	7,345	117,584	132,738	47,863	32,232	15,411	17,782	13,451	15,174	2,515			277,166
Change in Scope			(44,603)	(44,603)	62,287	10,537	21,451	9,460						59,132
New			6,041	6,041										6,041
New w/Future Year			2,336	2,336	10,116	6,046								18,498
<b>Total Expenditure</b>	<b>7,809</b>	<b>7,345</b>	<b>81,358</b>	<b>96,512</b>	<b>120,266</b>	<b>48,815</b>	<b>36,862</b>	<b>27,242</b>	<b>13,451</b>	<b>15,174</b>	<b>2,515</b>			<b>360,837</b>
<b>Financing</b>														
Debt														
Debt Recoverable	4,472	5,142	57,946	67,560	44,852	17,319	22,324	21,737	11,433	12,898	2,138			200,261
Other														
Reserves/Res Funds	3,336	2,203	23,413	28,952	75,414	31,496	14,538	5,505	2,018	2,276	377			160,576
Development Charges Provincial/Federal														
<b>Total Financing (including carry forward funding)</b>	<b>7,809</b>	<b>7,345</b>	<b>81,358</b>	<b>96,512</b>	<b>120,266</b>	<b>48,815</b>	<b>36,862</b>	<b>27,242</b>	<b>13,451</b>	<b>15,174</b>	<b>2,515</b>			<b>360,837</b>

Approval of the 2016 Recommended Capital Budget of \$96.512 million will result in the following:

- \$7.345 million in 2015 cash flow funding that will be carried forward into 2016 to continue the following projects:
  - Next Generation Green Bin Organics Replacement;
  - Landfill Gas Utilization; and
  - Waste Strategy Study.
- \$125.393 million for previously approved capital projects and 2014 and prior year carry forwards will fund requirements for Next Generation Green Bin Organics Replacement, Green Lane Landfill development, Dufferin & Disco Organics processing facilities, Biogas Utilization, on-going IT projects and Transfer Station Asset Management.
- The 2016 Recommended Capital Budget provides funding of \$144.428 million for previously approved projects that are already underway with future year commitments primarily for:
  - Green Lane Landfill Development;
  - Dufferin organics processing facility;
  - Biogas Utilization project;
  - IT project for the Work Management System Implementation; and
  - Transfer Station Asset Management at Dufferin.
- The change in scope funding decrease of \$59.132 million has been included in the 2016 capital Budget in order to reduce, augment or reschedule cash flows for various projects including Perpetual Care, Gas Utilization projects, Dufferin & Disco Organics processing facilities and Green Bin Organics Replacement.
- Recommended new and multi-year funding of \$18.498 million will require future year commitments for the Transfer Station Asset Management project in 2017/18, the Waste Strategy Study in 2016/17 and 2016 fleet projects using compressed natural gas.

## 2015 Recommended Capital Project Highlights

**Table 8**  
**2016 Recommended Capital Project Commitment Highlights by Category (in \$000s)**

Project	Total Project Cost	2016	2017	2018	2019	2020	2016 - 2020	2021	2022	2023	2024	2025	2016 - 2025 Total
<b>Legislated:</b>													
<i>Perpetual Care of Landfills</i>		9,249	9,942	8,425	8,144		35,760						35,760
<i>Landfill Development</i>		14,198	16,117	17,573	15,084	17,782	80,754	13,450	15,174	2,515			111,893
<b>Sub-Total</b>		23,447	26,059	25,998	23,228	17,782	116,514	13,450	15,174	2,515			147,653
<b>State of Good Repair:</b>													
<i>Transfer Stn Asset Mgmt</i>		16,167	11,964	11,965			40,096						40,096
<i>Collection Yard Asset Mgmt</i>		200					200						200
<i>Diversion Facilities Asset Mgmt</i>		1,352	500				1,852						1,852
<b>Sub-Total</b>		17,719	12,464	11,965			42,148						42,148
<b>Service Improvements:</b>													
<i>Diversion Systems</i>		14,200	19,570				33,770						33,770
<i>Green Lane: Landfill Gas Utilization</i>	19,645	(155)	200	30	9,460	9,460	18,995						18,995
<i>Biogas Utilization</i>	11,182	3,276	2,775	490	3,960		10,501						10,501
<i>Renewable Natural Gas Fleet Fuel From Biogas</i>	500	500					500						500
<i>CNG Refuel Station Installations</i>	1,100	1,100					1,100						1,100
<i>Dufferin SSRM Facility</i>	3,077	50					50						50
<i>Dufferin SSO Facility</i>	74,943	18,000	47,506	7,604	214		73,324						73,324
<i>Disco SSO Facility</i>	87,506	1,000	4,405				5,405						5,405
<i>Engineering Planning Studies</i>	15,000	1,500					1,500						1,500
<i>SWM IT Application Initiatives</i>	10,061	2,449	456				2,905						2,905
<i>IT Corporate Initiatives</i>	11,266	3,037	3,835	2,729			9,601						9,601
<i>Long Term Waste Mgmt Strategy</i>	502,407	2,891	3,000				5,891						5,891
<b>Sub-Total</b>		47,850	81,744	10,853	13,634	9,460	163,541						163,541
<b>Growth Related:</b>													
<i>PAAC Site Remediation</i>		150					150						150
<b>Sub-Total</b>		150					150						150
<b>Total (excluding carry forward funding)</b>		89,167	120,266	48,816	36,862	27,242	322,353	13,450	15,174	2,515			353,492

The 2016 Recommended Capital Budget provides funding (excluding carry forwards) of \$89.167 million to:

- Continue developing the Green Lane Landfill including building waste cells and gas and leachate environmental control systems (\$14.2 million) and providing perpetual care of closed landfills including monitoring and control systems (\$9.3 million);
- Continue improving Diversion Systems such as acquiring the latest multi-unit residential organics containers and recycling upgrades, replacement of single family organics, garbage and recycling containers (\$14.2 million);
- Continue Transfer Station, Diversion Facility and Collection Yard Asset Management to keep these facilities in a state of good repair (\$17.7 million);
- Move forward with building Organics processing capacity at the Dufferin Organics Facility with contract awarded (\$18 million);
- Continue projects for SWM IT Application Initiatives and IT Corporate Initiatives to improve business systems to enhance the Program's ability to manage resources to deliver projects and services to the public (\$5.5 million); and,
- Continue working on revenue generating projects for Landfill Gas, Biogas Utilization and CNG fleet projects (\$4.7 million); and
- Continue with the Waste Strategy (\$2.9 million).



## **Part III:**

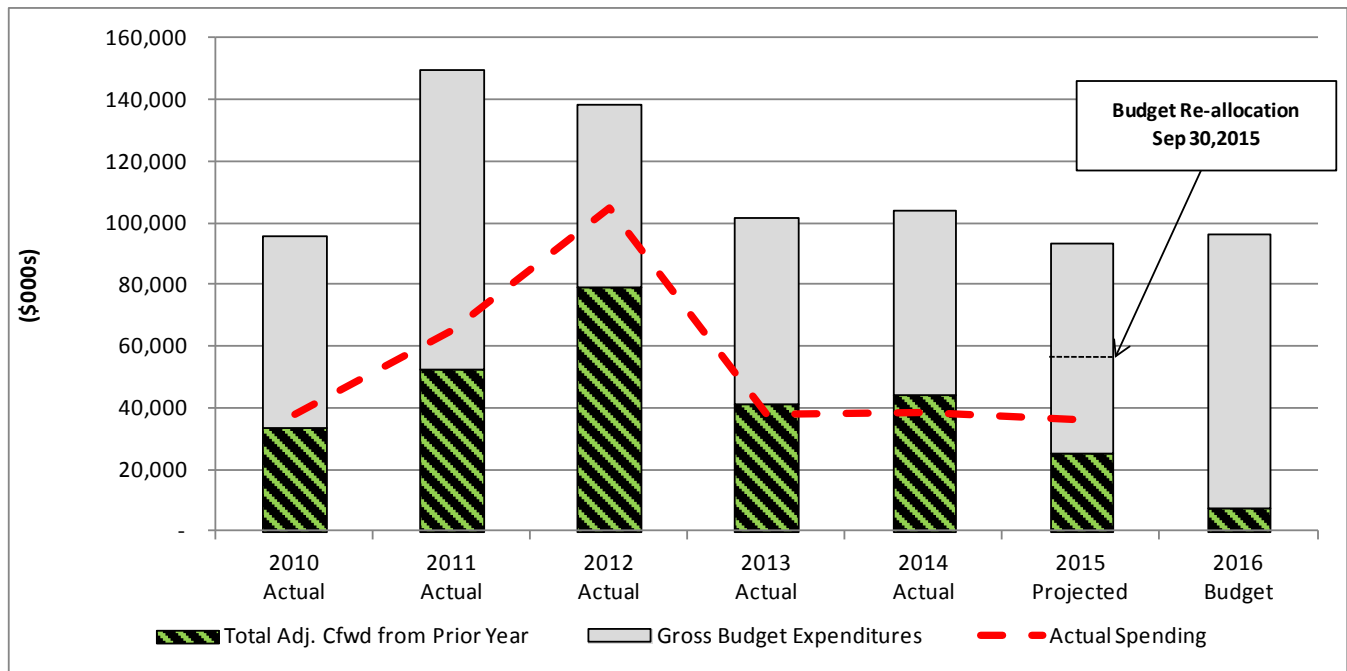
Issues for Discussion

## Issues for Discussion

### Issues Impacting the 2016 Capital Budget

#### *Program Spending Capacity and Readiness to Proceed with Capital Projects*

- The chart below shows the spending trend of the total capital program for SWMS since 2010. The budget bars are split between new cash flows and funding carried forward from prior years.



- While the 2013 cash flow was adjusted downward based on capacity to spend and readiness to proceed; actuals to year-end for both 2013 and 2014 resulted in under-spending of 62.7% and 63.3% respectively. The average annual under-spending over the past 11 years including 2015 is projected to be 43.8%.
- In an effort to address the level of underspending in preparation of the 2016 Capital Budget, the following actions have been taken:
  - ✓ In September 2015, SWMS requested and Council approved a deferral of cash flow funding of \$35.251 million from 2015 to 2016 as well as a project cost reduction of \$2.047 million. The reduced total budget level is indicated by the dotted line on the chart above.
  - ✓ The 2016 Recommended Capital Budget also includes a recommended \$44.603 million cash flow reduction arising from scope changes to reflect adjustments in a combination of project costs and cash flow funding deferrals based on a review of each capital project's readiness to proceed in 2016 and the capacity to spend in each capital program area.
  - ✓ The 2016 Recommended Capital Budget and Plan recommends \$128.274 million in future year cash flows commitments that will allow the Program to initiate multi-year capital work that will ultimately result in greater spending and delivery rates in future years.

- SWMS in consultation with the Financial Planning Division, will continue to monitor spending in 2016, report capital spending quarterly through the City's variance reports and report on any future adjustments as required, as part of the 2017 Budget process.

## Issues Impacting the 10-Year Capital Plan

### *Achieving the 70% Diversion Target & the Long Term Waste Management Strategy*

- The Solid Waste Management Services' capital program is driven primarily by the City's objective to achieve the 70% diversion target and it is therefore on that basis that the 2016 Capital Budget and 2017-2025 Capital Plan has been established.
- The 10-Year Capital Plan will continue to fund on-going activities and major expansion of diversion activities during this timeframe, by:
  - Expanding the Green Bin organics program to include apartments & condominiums and future replacement of organics in-unit containers.
  - Replacing existing organics, garbage & recycling bins for single family residential.
  - Implementing next generation single family residential organics bins that will facilitate automated pick-up/collection.
  - Investing in on-going asset management and state of good repair for transfer stations, collection yards and diversion facilities and perpetual care of closed landfills;
  - Building additional organics processing that will provide long term stability for the Green Bin organics programs.
  - Building landfill gas and biogas utilization facilities in order to provide a viable source of renewable energy and offset operating costs.
  - Developing Green Lane Landfill to its maximum efficiency to properly dispose of residual waste.
  - Implementing Waste Strategy diversion and waste management programs that will manage diversion capacity to contribute to attaining the 70% diversion target.
- Costs move moderately downward in the period 2017 to 2024 then peak in 2025 when \$405 million in funding is required for diversion and waste management programs and facilities yet to be determined. Third party funding is uncertain at this time. As with all capital projects, maximization of reserve funding will be an ongoing planning objective.
- Staff had been exploring if outcomes of the Waste Strategy could qualify for P3 Canada Fund financing. Until a decision is made on what constitutes the Waste Strategy for waste management and whether to proceed with construction of any facilities through a partnership with a 3rd party provider or 100% (solely) through City funding or 100% through a 3rd party provider, the current funding estimates will exclude a potential 25% federal subsidy.



- The Capital Program for SWMS will be adjusted (as required) through future budget processes to reflect the Waste Strategy implementation once completed and approved by Council. The report is scheduled to go to Committee in May/June and Council by July 2016.

***Long-Term Capital Program Reserve Funding***

- The 2016-2025 Capital Plan for SWMS is 58.6% funded through recoverable debt. The City advances debt funding annually required for Solid Waste Managements' capital work and the Program repays the annual debt servicing costs (interest and principal) in the Program's Operating Budget funded by the volume based user fees collected.
- SWMS also utilizes the Waste Management Reserve Fund, which is maintained annually through contributions from SWMS' Operating Budget. The reserve fund then provides annual funding for the Program's capital requirements that are not funded through recoverable debt, this reserve fund also acts as a rate stabilization reserve. The projected 2015 year-end balance of the reserve fund is \$94.352 million.
- An analysis of SWMS capital needs was undertaken to determine reserve contribution requirements to fund the SWMS 10-Year Capital plan. The analysis determined that an annual rate increase of 3% will be required to ensure an adequate annual contribution to the reserve fund from the SWMS Operating Budget, ensuring the reserve funds has a positive balance from 2016 to 2024, with the balance in 2025 being subject to the Waste Strategy and timing of implementation.
- The 10-Year Capital Plan and associated rate modelling will be adjusted as part of the 2017 Budget process, making the necessary changes to future rate estimates to reflect the approval of the Waste Strategy in 2016; any resulting adjustments to annual diversion and tonnage estimates; as well as the impact of funding scenarios/options that will continue to decrease the application of recoverable debt, where appropriate.



# **Appendices**

## Appendix 1

### 2015 Performance

#### 2015 Key Accomplishments

In 2015, Solid Waste Management Services capital works supported moving towards 70% overall waste diversion by accomplishing the following:

- ✓ Waste Strategy progress which included:
  - Completed Phase 2 Public Consultation
  - City Council Approval of Vision and Guiding Principles, Evaluation Criteria and Waste Strategy Options
  - Hosting of 4 Wast(ED) Speakers Series: Topics included Community, Clothing, Food and National Zero Waste Satellite Event: Visions for a Circular Economy
  - Continued Stakeholder Advisory Group Meetings
- ✓ Contract Awards issued for:
  - Dufferin organics facility expansion – Design, Build, Operate, and Maintain
  - Next Generation Green Bin
  - Asset Management Framework
- ✓ The 2015 residential diversion rates expected to be achieved by year end are:
  - Overall residential diversion – increase from 53% to 55%
  - Single-family residential – increase from 66% to 68%
  - Multi-residential – increase from 26% to 29%.
- ✓ Continued Waste Diversion Efforts
  - Roll-out of Front end organics containers to all City-serviced multi-residential buildings  
Toronto Community Housing Corporation Diversion
  - Addition of Plastic Film to Blue Bin recycling program
- ✓ Increased collection services to address continued expansion of public space litter / recycle bins along streetscapes and in parks
- ✓ Disco Road Biogas Utilization
  - Preliminary Design Completed
  - Renewable Energy Approval continues to be reviewed by the MOECC

2015 Financial Performance

**Table 9**  
**2015 Budget Variance Analysis (In \$000's)**

2015 Approved	As of Sept. 30, 2015		Projected Actuals at Year End		Unspent Balance	
	\$	% Spent	\$	% Spent	\$ Unspent	% Unspent
56,054	10,449	18.6%	35,727	63.7%	20,327	36.3%

\* Based on 2015 Third Quarter Capital Variance Report

2015 Experience

For details of variance explanations and year-end projections for Solid Waste Management Services, please refer to the 2015 Capital Variance Report for the nine months ended September 30, 2015 which has been submitted for the Budget Committee meeting of November 13, 2015.

Impact of the 2015 Capital Variance on the 2016 Recommended Budget

- As a result of the delays in the capital projects, as described in the 2015 Q3 Capital Variance Report, funding of \$15.154 million (including 2-year carry forwards) is being carried forward to the 2016 Recommended Capital Budget to continue the capital work. This amount will be subject to revision in the first quarter of 2016.
- A detailed review of the 2016 – 2025 Recommended Capital Budget and Plan has been conducted and the necessary adjustments has been made to the timing of cash flow funding for unique and major capital projects such as the Dufferin and Disco organics facilities, the implementation of the Next Generation Green Bin and Transfer Station Asset Management which are the major contributors to annual under expenditures. By deferring the cash flow funding to future years, the 2016 Recommended Capital Budget reflects readiness to proceed and will lead to a higher rate of spending.

Appendix 2

**Table 10**  
**2016 Rec'd Capital Budget; 2017 to 2025 Rec'd Capital Plan (\$000s)**

Project	Total Project Cost	Prior Year Carry Forward	2016	2017	2018	2019	2020	2016 - 2020	2021	2022	2023	2024	2025	2016 - 2025 Total
<b>Legislated:</b>														
<i>Perpetual Care of Landfills</i>			9,249	9,942	8,425	8,144	8,064	<b>43,824</b>	8,165	8,272	8,731	8,731	8,731	<b>86,454</b>
<i>Landfill Development</i>			14,198	17,617	19,073	16,584	19,282	<b>86,754</b>	14,950	16,674	14,815	14,815	14,815	<b>162,823</b>
<b>Sub-Total</b>			<b>23,447</b>	<b>27,559</b>	<b>27,498</b>	<b>24,728</b>	<b>27,346</b>	<b>130,578</b>	<b>23,115</b>	<b>24,946</b>	<b>23,546</b>	<b>23,546</b>	<b>23,546</b>	<b>249,277</b>
<b>State of Good Repair:</b>														
<i>Transfer Stn Asset Mgmt</i>			16,167	11,966	18,547	6,855	5,205	<b>58,740</b>	3,290	4,365	4,365	6,855	4,000	<b>81,615</b>
<i>Collection Yard Asset Mgmt</i>			200	200	200	200	200	<b>1,000</b>	200	200	200	200	200	<b>2,000</b>
<i>Diversion Facilities Asset Mgmt</i>			1,352	1,000	1,500	1,500	1,500	<b>6,852</b>	1,500	1,500	1,500	1,500	1,500	<b>14,352</b>
<b>Sub-Total</b>			<b>17,719</b>	<b>13,166</b>	<b>20,247</b>	<b>8,555</b>	<b>6,905</b>	<b>66,592</b>	<b>4,990</b>	<b>6,065</b>	<b>6,065</b>	<b>8,555</b>	<b>5,700</b>	<b>97,967</b>
<b>Service Improvements:</b>														
<i>Diversion Systems</i>		4,015	14,200	19,670	2,900	2,900	2,900	<b>46,585</b>	2,900	2,900	2,900	2,900	2,900	<b>61,085</b>
<i>Green Lane: Landfill Gas Utilization</i>	19,645	356	(155)	200	30	9,460	9,460	<b>19,351</b>						<b>19,351</b>
<i>Biogas Utilization</i>	11,182		3,276	2,775	490	3,960		<b>10,501</b>						<b>10,501</b>
<i>Renewable Natural Gas Fleet Fuel</i>	500		500					<b>500</b>						<b>500</b>
<i>CNG Refuel Station Installations</i>	1,100		1,100					<b>1,100</b>						<b>1,100</b>
<i>Dufferin SSRM Facility</i>	3,077		50	50	50			<b>150</b>						<b>150</b>
<i>Dufferin SSO Facility</i>	74,943		18,000	47,506	7,604	214		<b>73,324</b>						<b>73,324</b>
<i>Disco SSO Facility</i>	87,506		1,000	4,405				<b>5,405</b>						<b>5,405</b>
<i>Engineering Planning Studies</i>	15,000		1,500	1,500	1,500	1,500	1,500	<b>7,500</b>	1,500	1,500	1,500	1,500	1,500	<b>15,000</b>
<i>SWM IT Application Initiatives</i>	10,061	135	2,449	1,934	3,227	434	120	<b>8,299</b>	108	372				<b>8,779</b>
<i>IT Corporate Initiatives</i>	11,266	104	3,037	4,007	2,990	207	348	<b>10,693</b>						<b>10,693</b>
<i>Two-Way Radio Replacement</i>	2,235	2,235						<b>2,235</b>						<b>2,235</b>
<i>Long Term Waste Mgmt Strategy</i>	502,407	500	2,891	8,000	10,000	10,000	12,000	<b>43,390</b>	12,000	13,000	13,000	14,000	404,609	<b>499,999</b>
<b>Sub-Total</b>		<b>7,345</b>	<b>47,850</b>	<b>90,045</b>	<b>28,790</b>	<b>28,675</b>	<b>26,328</b>	<b>229,033</b>	<b>16,508</b>	<b>17,772</b>	<b>17,400</b>	<b>18,400</b>	<b>409,009</b>	<b>708,122</b>
<b>Growth Related:</b>														
<i>PAAC Site Remediation</i>			150					<b>150</b>						<b>150</b>
<b>Sub-Total</b>			<b>150</b>					<b>150</b>						<b>150</b>
<b>Total</b>		<b>7,345</b>	<b>89,167</b>	<b>130,769</b>	<b>76,535</b>	<b>61,958</b>	<b>60,579</b>	<b>426,353</b>	<b>44,613</b>	<b>48,783</b>	<b>47,011</b>	<b>50,501</b>	<b>438,255</b>	<b>1,055,516</b>

## Appendix 3

### 2016 Rec'd Capital Budget; 2017 to 2025 Rec'd Capital Plan

**CITY OF TORONTO**

**Gross Expenditures (\$000's)**

**Appendix 3: 2016 Recommended Capital Budget; 2017 to 2025 Recommended Capital Plan**

**Solid Waste Management**

Sub- Project No. Project Name PrioritySubProj No. Sub-project Name Ward Stat. Cat.						Current and Future Year Cash Flow Commitments						Current and Future Year Cash Flow Commitments Financed By													
						2016	2017	2018	2019	2020	Total 2016-2020	Total 2021-2025	Total 2016-2025	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt - Recoverable Debt	Total Financing		
<u>SOL000065 Diversion Systems</u>																									
0	72	SSO In-Unit Kitchen Containers	CW	S2	04	336	0	0	0	0	336	0	336	0	0	0	0	101	0	0	0	0	235	336	
0	102	Replacement Waste Bins Single-Family	CW	S2	04	2,000	2,000	0	0	0	4,000	0	4,000	0	0	0	0	1,200	0	0	0	0	2,800	4,000	
0	105	TCHC Organic Implementation Program	CW	S2	04	500	0	0	0	0	500	0	500	0	0	0	0	150	0	0	0	0	350	500	
0	107	2nd Generation Green Bin Replacement	CW	S2	04	26,000	0	0	0	0	26,000	0	26,000	0	0	0	0	7,800	0	0	0	0	18,200	26,000	
0	108	Recycling Upgrades for Multi-Units	CW	S2	04	200	0	0	0	0	200	0	200	0	0	0	0	60	0	0	0	0	140	200	
0	109	SSO Containers Single-Family (1st Gen)	CW	S2	04	785	0	0	0	0	785	0	785	0	0	0	0	236	0	0	0	0	550	785	
0	110	2nd Generation Green Bin Implementation	CW	S5	04	690	570	0	0	0	1,260	0	1,260	0	0	0	0	378	0	0	0	0	882	1,260	
0	111	Online Sale of Garbage Bag Tags	CW	S4	04	100	0	0	0	0	100	0	100	0	0	0	0	30	0	0	0	0	70	100	
0	112	SSO In-Unit Kitchen Containers - Change	CW	S3	04	-236	0	0	0	0	-236	0	-236	0	0	0	0	-70	0	0	0	0	-165	-235	
0	113	SSO In-Unit Kitchen Containers - Future Years	CW	S6	04	0	100	100	100	100	400	500	900	0	0	0	0	270	0	0	0	0	630	900	
0	114	Replacement Waste Bins Single Family - Change	CW	S3	04	500	500	0	0	0	1,000	0	1,000	0	0	0	0	300	0	0	0	0	700	1,000	
0	115	Replacement Waste Bins Single Family - Future Year	CW	S6	04	0	0	0	2,500	2,500	5,000	12,500	17,500	0	0	0	0	5,250	0	0	0	0	12,250	17,500	
0	116	TCHC Organic Implementation Program 2016	CW	S4	04	600	0	0	0	0	600	0	600	0	0	0	0	180	0	0	0	0	420	600	
0	117	Recycling Upgrades for Multi-Units - Change	CW	S3	04	-175	0	0	0	0	-175	0	-175	0	0	0	0	-53	0	0	0	0	-122	-175	
0	118	SSO Containers Single Family - Change	CW	S3	04	-600	0	0	0	0	-600	0	-600	0	0	0	0	-180	0	0	0	0	-420	-600	
0	119	Replacement Waste Bins Single Family	CW	S5	04	0	0	2,500	0	0	2,500	0	2,500	0	0	0	0	750	0	0	0	0	1,750	2,500	
0	120	2nd Generation Green Bin Replacement - Change	CW	S3	04	-16,500	16,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0	121	2nd Generation Green Bin Replacement - Future Year	CW	S6	04	0	0	300	300	300	900	1,500	2,400	0	0	0	0	720	0	0	0	0	1,680	2,400	
Sub-total						14,200	19,670	2,900	2,900	2,900	42,570	14,500	57,070	0	0	0	0	17,121	0	0	0	0	39,950	57,071	
<u>SOL906419 Perpetual Care of Landfills</u>																									
0	9	Perpetual Care of Landfills Future Years	CW	S5	02	0	0	0	0	8,064	8,064	42,630	50,694	0	0	0	0	50,694	0	0	0	0	0	50,694	
0	12	Perpetual Care of Landfills	CW	S2	02	799	642	425	172	0	2,038	0	2,038	0	0	0	0	2,038	0	0	0	0	0	2,038	
0	13	Perpetual Care of Landfills - Change	CW	S3	02	8,450	9,300	8,000	7,972	0	33,722	0	33,722	0	0	0	0	33,722	0	0	0	0	0	33,722	

**CITY OF TORONTO**

**Gross Expenditures (\$000's)**

**Appendix 3: 2016 Recommended Capital Budget; 2017 to 2025 Recommended Capital Plan**

**Solid Waste Management**

Sub- Project No. Project Name PrioritySubProj No. Sub-project Name Ward Stat. Cat.						Current and Future Year Cash Flow Commitments							Current and Future Year Cash Flow Commitments Financed By											
						2016	2017	2018	2019	2020	Total 2016-2020	Total 2021-2025	Total 2016-2025	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt - Recoverable Debt	Total Financing	
<u>SOL906419 Perpetual Care of Landfills</u>																								
0	14	PAAC Site Remediation	CW	S2	05	150	0	0	0	0	150	0	150	0	0	0	0	150	0	0	0	0	0	150
Sub-total						9,399	9,942	8,425	8,144	8,064	43,974	42,630	86,604	0	0	0	0	86,604	0	0	0	0	0	86,604
<u>SOL906580 Collection Yard Asset Management</u>																								
0	46	Collection Yards Asset Management	CW	S5	03	200	0	0	0	0	200	0	200	0	0	0	0	200	0	0	0	0	0	200
0	47	CNG Refuel Station Installations	CW	S4	04	1,100	0	0	0	0	1,100	0	1,100	0	0	0	0	330	0	0	0	0	770	1,100
0	49	Collection Yard Asset Management - Future Years	CW	S6	03	0	200	200	200	200	800	1,000	1,800	0	0	0	0	1,800	0	0	0	0	0	1,800
Sub-total						1,300	200	200	200	200	2,100	1,000	3,100	0	0	0	0	2,330	0	0	0	0	770	3,100
<u>SOL907246 Green Lane Landfill Development</u>																								
0	21	Buffer Land	CW	S2	02	1,500	0	0	0	0	1,500	0	1,500	0	0	0	0	225	0	0	0	0	1,275	1,500
0	27	Landfill Gas Control System	CW	S2	02	2,107	4,276	2,346	2,483	5,661	16,872	7,710	24,582	0	0	0	0	3,687	0	0	0	0	20,894	24,582
0	28	Leachate Control System	CW	S2	02	1,837	1,948	2,156	2,483	3,117	11,541	3,834	15,375	0	0	0	0	2,306	0	0	0	0	13,069	15,375
0	33	Buffer Land - Future Years	CW	S6	02	0	0	1,500	1,500	1,500	4,500	7,500	12,000	0	0	0	0	1,800	0	0	0	0	10,200	12,000
0	35	Engineering and Monitoring Future Years	CW	S5	02	0	0	0	0	0	0	375	375	0	0	0	0	57	0	0	0	0	318	375
0	36	Cell Excavation & Base Construction - Future Years	CW	S5	02	0	0	0	0	0	0	23,955	23,955	0	0	0	0	3,593	0	0	0	0	20,362	23,955
0	38	Site Services/Final Cover/Storm Future Years	CW	S6	02	0	0	0	0	0	0	3,684	3,684	0	0	0	0	552	0	0	0	0	3,132	3,684
0	39	Leachate Control System - Future Years	CW	S6	02	0	0	0	0	0	0	4,386	4,386	0	0	0	0	657	0	0	0	0	3,729	4,386
0	40	Landfill Gas Control System - Future Years	CW	S5	02	0	0	0	0	0	0	5,030	5,030	0	0	0	0	754	0	0	0	0	4,276	5,030
0	41	Landfill Gas Control System Change	CW	S3	02	-499	0	0	0	0	-499	0	-499	0	0	0	0	-75	0	0	0	0	-424	-499
0	42	Landfill Gas Utilization	02	S2	04	1,350	9,000	9,000	0	0	19,350	0	19,350	0	0	0	0	5,805	0	0	0	0	13,545	19,350
0	44	Cell Excavation & Base Construction	CW	S2	02	6,984	8,024	11,000	7,998	6,926	40,933	15,108	56,041	0	0	0	0	8,406	0	0	0	0	47,635	56,041
0	45	Engineering & Monitoring	CW	S2	02	105	108	111	247	118	690	246	936	0	0	0	0	140	0	0	0	0	796	937
0	46	Site Services/Final Cover/Storm Control	CW	S2	02	1,619	1,760	1,960	1,873	1,961	9,173	4,242	13,414	0	0	0	0	2,012	0	0	0	0	11,402	13,414
0	47	Leachate Control System Change	CW	S3	02	276	0	0	0	0	276	0	276	0	0	0	0	41	0	0	0	0	235	276
0	48	Site Services/Final Covers/Storm - Change	CW	S3	02	-362	0	0	0	0	-362	0	-362	0	0	0	0	-54	0	0	0	0	-308	-362



**CITY OF TORONTO**

**Gross Expenditures (\$000's)**

**Appendix 3: 2016 Recommended Capital Budget; 2017 to 2025 Recommended Capital Plan**

**Solid Waste Management**

Sub- Project No. Project Name PrioritySubProj No. Sub-project Name Ward Stat. Cat.						Current and Future Year Cash Flow Commitments						Current and Future Year Cash Flow Commitments Financed By													
						2016	2017	2018	2019	2020	Total 2016-2020	Total 2021-2025	Total 2016-2025	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt - Recoverable Debt	Total Financing		
<u>SOL907246 Green Lane Landfill Development</u>																									
0	49	Cell Excavation & Base Construction - Change	CW	S3	02	267	0	0	0	0	267	0	267	0	0	0	0	40	0	0	0	0	227	267	
0	50	Engineering & Monitoring - Change	CW	S3	02	363	0	0	0	0	363	0	363	0	0	0	0	54	0	0	0	0	309	363	
0	51	Landfill Gas Utilization - Change	CW	S3	04	-1,505	-8,800	-8,970	9,460	9,460	-355	0	-355	0	0	0	0	-106	0	0	0	0	-248	-354	
0	52	Buffer Land	CW	S5	02	0	1,500	0	0	0	1,500	0	1,500	0	0	0	0	225	0	0	0	0	1,275	1,500	
Sub-total						14,043	17,817	19,103	26,044	28,742	105,748	76,069	181,818	0	0	0	0	30,121	0	0	0	0	0	151,699	181,819
<u>SOL907557 Renewable Natural Gas Fleet Fuel From Biogas</u>																									
0	1	Renewable Natural Gas Fleet Fuel From Biogas	CW	S4	04	500	0	0	0	0	500	0	500	0	0	0	0	150	0	0	0	0	350	500	
Sub-total						500	0	0	0	0	500	0	500	0	0	0	0	150	0	0	0	0	0	350	500
<u>SOL907626 Reuse Centre - Future Site</u>																									
0	5	Reuse Centre Future Site	CW	S2	04	1,000	3,500	0	0	0	4,500	0	4,500	0	0	0	0	1,350	0	0	0	0	3,150	4,500	
0	6	Reuse Centre Future Sites - Change	CW	S3	04	-1,000	-3,500	0	0	0	-4,500	0	-4,500	0	0	0	0	-1,350	0	0	0	0	-3,150	-4,500	
Sub-total						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<u>SOL907628 Dufferin Single Stream Recycling Facility</u>																									
0	12	Dufferin SSRM Facility	CW	S2	04	1,500	0	0	0	0	1,500	0	1,500	0	0	0	0	450	0	0	0	0	1,050	1,500	
0	13	Dufferin SSRM Facility - Change	CW	S3	04	-1,450	0	0	0	0	-1,450	0	-1,450	0	0	0	0	-435	0	0	0	0	-1,015	-1,450	
0	14	Dufferin SSRM Facility - Future Years	CW	S5	04	0	50	50	0	0	100	0	100	0	0	0	0	30	0	0	0	0	70	100	
Sub-total						50	50	50	0	0	150	0	150	0	0	0	0	45	0	0	0	0	0	105	150
<u>SOL907630 Dufferin SSO Facility</u>																									
0	3	Dufferin SSO Facility Expansion	CW	S2	04	42,077	10,266	155	155	0	52,653	0	52,653	0	0	0	0	15,796	0	0	0	0	36,857	52,653	
0	4	Dufferin SSO Facility - Change	CW	S3	04	-24,077	37,240	7,449	59	0	20,671	0	20,671	0	0	0	0	20,671	0	0	0	0	0	20,671	
Sub-total						18,000	47,506	7,604	214	0	73,324	0	73,324	0	0	0	0	36,467	0	0	0	0	36,857	73,324	
<u>SOL907631 Disco SSO Facility</u>																									
0	1	Disco SSO Facility	CW	S2	04	1,610	0	0	0	0	1,610	0	1,610	0	0	0	0	483	0	0	0	0	1,127	1,610	
0	2	Site Remediation	CW	S2	04	340	0	0	0	0	340	0	340	0	0	0	0	102	0	0	0	0	238	340	
0	5	Disco SSO Facility Project Mgt	CW	S2	04	3,455	0	0	0	0	3,455	0	3,455	0	0	0	0	1,037	0	0	0	0	2,419	3,455	

**CITY OF TORONTO**

**Gross Expenditures (\$000's)**

**Appendix 3: 2016 Recommended Capital Budget; 2017 to 2025 Recommended Capital Plan**

**Solid Waste Management**

Sub-Project No.	Project Name	Ward	Stat.	Cat.	Current and Future Year Cash Flow Commitments									Current and Future Year Cash Flow Commitments Financed By									
					2016	2017	2018	2019	2020	Total 2016-2020	Total 2021-2025	Total 2016-2025	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt - Recoverable	Total Financing	
<b>SOL907631 Disco SSO Facility</b>																							
0 6	Disco SSO Facility - Change	CW	S3	04	-4,405	4,405	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Sub-total					1,000	4,405	0	0	0	5,405	0	5,405	0	0	0	0	1,621	0	0	0	0	3,783	5,405
<b>SOL907632 Long Term Waste Management Strategy</b>																							
0 6	SWM Long Term Strategy Plan Study	CW	S2	04	1,995	0	0	0	0	1,995	0	1,995	0	0	0	599	0	0	0	0	1,397	1,995	
0 7	Long Term Strategy Study - Phase 2	CW	S6	04	0	5,000	10,000	10,000	12,000	37,000	456,609	493,609	0	0	0	148,083	0	0	0	0	345,526	493,609	
0 9	Long Term Strategy Study - Phase 2 Change	CW	S5	04	896	3,000	0	0	0	3,896	0	3,896	0	0	0	1,169	0	0	0	0	2,727	3,896	
Sub-total					2,891	8,000	10,000	10,000	12,000	42,891	456,609	499,500	0	0	0	0	149,851	0	0	0	0	349,650	499,500
<b>SOL907863 Biogas Utilization</b>																							
0 3	Construction of Biogas Utilization - Disco	CW	S2	04	6,519	2,300	2,500	0	0	11,319	0	11,319	0	0	0	3,396	0	0	0	0	7,923	11,319	
0 6	Construction of Biogas Utilization - Dufferin	CW	S3	04	150	100	490	3,960	0	4,700	0	4,700	0	0	0	1,410	0	0	0	0	3,290	4,700	
0 7	Construction of Biogas Utilization - Disco -Change	CW	S3	04	-3,393	375	-2,500	0	0	-5,518	0	-5,518	0	0	0	-1,656	0	0	0	0	-3,863	-5,519	
Sub-total					3,276	2,775	490	3,960	0	10,501	0	10,501	0	0	0	3,150	0	0	0	0	7,350	10,500	
<b>SOL907919 SWM IT Application Initiatives</b>																							
0 4	RFID Integration	CW	S2	04	592	50	50	0	0	692	0	692	0	0	0	208	0	0	0	0	484	692	
0 8	Business Systems Integration	CW	S6	04	0	0	0	107	120	227	0	227	0	0	0	68	0	0	0	0	159	227	
0 11	Contract Management (Contract Monitoring)	CW	S6	04	0	141	387	141	0	669	0	669	0	0	0	200	0	0	0	0	469	669	
0 13	Asset Management Solution (AMS)	CW	S6	04	0	140	1,112	0	0	1,252	0	1,252	0	0	0	376	0	0	0	0	876	1,252	
0 14	Mobile Assessment & Solution	CW	S6	04	0	564	207	0	0	771	0	771	0	0	0	231	0	0	0	0	540	771	
0 19	KPI Reporting and Measuring - Future Years	CW	S6	04	0	633	714	0	0	1,347	0	1,347	0	0	0	404	0	0	0	0	943	1,347	
0 21	SWMS eService Delivery	CW	S6	04	0	0	0	0	0	0	480	480	0	0	0	144	0	0	0	0	336	480	
0 22	Short Term Application Improvements	CW	S2	04	337	0	0	0	0	337	0	337	0	0	0	101	0	0	0	0	236	337	
0 23	SWMS Information Model	CW	S2	04	21	0	0	0	0	21	0	21	0	0	0	6	0	0	0	0	15	21	
0 24	Business Process Analysis & Improvement	CW	S2	04	220	0	0	0	0	220	0	220	0	0	0	66	0	0	0	0	154	220	
0 26	Transfer Station Efficiencies	CW	S2	04	209	408	408	0	0	1,024	0	1,024	0	0	0	307	0	0	0	0	717	1,024	
0 27	Stakeholder-Customer Relationship Mgmt	CW	S2	04	807	186	0	0	0	993	0	993	0	0	0	298	0	0	0	0	695	993	





**CITY OF TORONTO**

Gross Expenditures (\$000's)

**Appendix 3: 2016 Recommended Capital Budget; 2017 to 2025 Recommended Capital Plan**

**Solid Waste Management**

Sub- Project No. Project Name PrioritySubProj No. Sub-project Name Ward Stat. Cat.						Current and Future Year Cash Flow Commitments						Current and Future Year Cash Flow Commitments Financed By												
						2016	2017	2018	2019	2020	Total 2016-2020	Total 2021-2025	Total 2016-2025	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt - Recoverable Debt	Total Financing	
<u>SOL907957 Transfer Station Asset Management</u>																								
0	39	Commissioners St. T.S - 2017	CW	S5	03	0	882	882	0	0	1,764	0	1,764	0	0	0	0	1,764	0	0	0	0	0	1,764
0	40	Building Amenities & Upgrades - 2017	CW	S5	03	0	505	505	0	0	1,009	0	1,009	0	0	0	0	1,009	0	0	0	0	0	1,009
Sub-total						16,167	11,966	18,547	6,855	5,205	58,740	22,875	81,615	0	0	0	0	81,615	0	0	0	0	0	81,615
<u>SOL908082 Diversion Facilities Asset Management</u>																								
0	1	Diversion Facilities Asset Management	CW	S5	03	750	1,000	1,500	1,500	1,500	6,250	7,500	13,750	0	0	0	0	13,750	0	0	0	0	0	13,750
0	2	Diversion Facility Asset Management - 2014	CW	S2	03	152	0	0	0	0	152	0	152	0	0	0	0	152	0	0	0	0	0	152
0	3	Diversion Facilities Asset Management	CW	S2	03	450	0	0	0	0	450	0	450	0	0	0	0	450	0	0	0	0	0	450
Sub-total						1,352	1,000	1,500	1,500	1,500	6,852	7,500	14,352	0	0	0	0	14,352	0	0	0	0	0	14,352
<u>SOL908171 Engineering Planning Studies</u>																								
0	1	Engineering Planning Studies	CW	S5	04	1,500	1,500	1,500	1,500	1,500	7,500	7,500	15,000	0	0	0	0	4,500	0	0	0	0	10,500	15,000
Sub-total						1,500	1,500	1,500	1,500	1,500	7,500	7,500	15,000	0	0	0	0	4,500	0	0	0	0	10,500	15,000
<b>Total Program Expenditure</b>						89,163	130,771	76,536	61,958	60,579	419,007	629,163	1,048,170	0	0	0	0	433,695	0	0	0	0	614,476	1,048,171

**CITY OF TORONTO**

**Gross Expenditures (\$000's)**

**Appendix 3: 2016 Recommended Capital Budget; 2017 to 2025 Recommended Capital Plan**

**Solid Waste Management**

						Current and Future Year Cash Flow Commitments and Estimates						Current and Future Year Cash Flow Commitments and Estimates Financed By												
						2016	2017	2018	2019	2020	Total 2016-2020	Total 2021-2025	Total 2016-2025	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserve Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt - Recoverable Debt	Total Financing	
Sub- Priority	Project No. SubProj No.	Project Name Sub-project Name	Ward	Stat.	Cat.																			
Financed By:																								
		Reserve Funds (Ind."XR" Ref.)				26,749	78,831	45,384	27,830	25,760	204,554	229,141	433,695	0	0	0	0	433,695	0	0	0	0	0	433,695
		Debt - Recoverable				62,418	51,937	31,150	34,128	34,819	214,453	400,023	614,476	0	0	0	0	0	0	0	0	0	614,476	614,476
<b>Total Program Financing</b>						<b>89,167</b>	<b>130,768</b>	<b>76,535</b>	<b>61,958</b>	<b>60,579</b>	<b>419,007</b>	<b>629,164</b>	<b>1,048,171</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>433,695</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>614,476</b>	<b>1,048,171</b>

- Status Code Description**  
 S2 S2 Prior Year (With 2016 and/or Future Year Cashflow)  
 S3 S3 Prior Year - Change of Scope 2016 and/or Future Year Cost/Cashflow  
 S4 S4 New - Stand-Alone Project (Current Year Only)  
 S5 S5 New (On-going or Phased Projects)  
 S6 S6 New - Future Year (Commencing in 2017 & Beyond)
- Category Code Description**  
 01 Health and Safety C01  
 02 Legislated C02  
 03 State of Good Repair C03  
 04 Service Improvement and Enhancement C04  
 05 Growth Related C05  
 06 Reserved Category 1 C06  
 07 Reserved Category 2 C07

## Appendix 4

### 2016 Recommended Cash Flow and Future Year Commitments







**CITY OF TORONTO**

**Gross Expenditures (\$000's)**

**Appendix 4: 2016 Recommended Cash Flow and Future Year Commitments**

**Solid Waste Management**

Sub- Project No. Project Name PrioritySubProj No. Sub-project Name Ward Stat. Cat.						Current and Future Year Cash Flow Commitments							Current and Future Year Cash Flow Commitments Financed By												
						2016	2017	2018	2019	2020	Total 2016-2020	Total 2021-2025	Total 2016-2025	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt - Recoverable Debt	Total Financing		
<u>SOL907630 Dufferin SSO Facility</u>																									
0	3	Dufferin SSO Facility Expansion	CW	S2	04	42,077	10,266	155	155	0	52,653	0	52,653	0	0	0	0	15,796	0	0	0	0	36,857	52,653	
0	4	Dufferin SSO Facility - Change	CW	S3	04	-24,077	37,240	7,449	59	0	20,671	0	20,671	0	0	0	0	20,671	0	0	0	0	0	20,671	
Sub-total						18,000	47,506	7,604	214	0	73,324	0	73,324	0	0	0	0	36,467	0	0	0	0	36,857	73,324	
<u>SOL907631 Disco SSO Facility</u>																									
0	1	Disco SSO Facility	CW	S2	04	1,610	0	0	0	0	1,610	0	1,610	0	0	0	0	483	0	0	0	0	1,127	1,610	
0	2	Site Remediation	CW	S2	04	340	0	0	0	0	340	0	340	0	0	0	0	102	0	0	0	0	238	340	
0	5	Disco SSO Facility Project Mgt	CW	S2	04	3,455	0	0	0	0	3,455	0	3,455	0	0	0	0	1,037	0	0	0	0	2,419	3,455	
0	6	Disco SSO Facility - Change	CW	S3	04	-4,405	4,405	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sub-total						1,000	4,405	0	0	0	5,405	0	5,405	0	0	0	0	1,621	0	0	0	0	3,783	5,405	
<u>SOL907632 Long Term Waste Management Strategy</u>																									
0	6	SWM Long Term Strategy Plan Study	CW	S2	04	2,495	0	0	0	0	2,495	0	2,495	0	0	0	0	749	0	0	0	0	1,747	2,495	
0	9	Long Term Strategy Study - Phase 2 Change	CW	S5	04	896	3,000	0	0	0	3,896	0	3,896	0	0	0	0	1,169	0	0	0	0	2,727	3,896	
Sub-total						3,391	3,000	0	0	0	6,391	0	6,391	0	0	0	0	1,918	0	0	0	0	4,474	6,391	
<u>SOL907863 Biogas Utilization</u>																									
0	3	Construction of Biogas Utilization - Disco	CW	S2	04	6,519	2,300	2,500	0	0	11,319	0	11,319	0	0	0	0	3,396	0	0	0	0	7,923	11,319	
0	6	Construction of Biogas Utilization - Dufferin	CW	S3	04	150	100	490	3,960	0	4,700	0	4,700	0	0	0	0	1,410	0	0	0	0	3,290	4,700	
0	7	Construction of Biogas Utilization - Disco -Change	CW	S3	04	-3,393	375	-2,500	0	0	-5,518	0	-5,518	0	0	0	0	-1,656	0	0	0	0	-3,863	-5,519	
Sub-total						3,276	2,775	490	3,960	0	10,501	0	10,501	0	0	0	0	3,150	0	0	0	0	7,350	10,500	
<u>SOL907919 SWM IT Application Initiatives</u>																									
0	4	RFID Integration	CW	S2	04	592	50	50	0	0	692	0	692	0	0	0	0	208	0	0	0	0	484	692	
0	22	Short Term Application Improvements	CW	S2	04	472	0	0	0	0	472	0	472	0	0	0	0	142	0	0	0	0	331	472	
0	23	SWMS Information Model	CW	S2	04	21	0	0	0	0	21	0	21	0	0	0	0	6	0	0	0	0	15	21	
0	24	Business Process Analysis & Improvement	CW	S2	04	220	0	0	0	0	220	0	220	0	0	0	0	66	0	0	0	0	154	220	
0	26	Transfer Station Efficiencies	CW	S2	04	209	408	408	0	0	1,024	0	1,024	0	0	0	0	307	0	0	0	0	717	1,024	
0	27	Stakeholder-Customer Relationship Mgmt	CW	S2	04	807	186	0	0	0	993	0	993	0	0	0	0	298	0	0	0	0	695	993	





**CITY OF TORONTO**

Gross Expenditures (\$000's)

**Appendix 4: 2016 Recommended Cash Flow and Future Year Commitments**

**Solid Waste Management**

Sub- Project No. Project Name PrioritySubProj No. Sub-project Name Ward Stat. Cat.						Current and Future Year Cash Flow Commitments						Current and Future Year Cash Flow Commitments Financed By												
						2016	2017	2018	2019	2020	Total 2016-2020	Total 2021-2025	Total 2016-2025	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserve Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt - Recoverable Debt	Total Financing	
<u>SOL908171 Engineering Planning Studies</u>																								
0	1	Engineering Planning Studies	CW	S5	04	1,500	0	0	0	0	1,500	0	1,500	0	0	0	0	450	0	0	0	0	1,050	1,500
Sub-total						1,500	0	0	0	0	1,500	0	1,500	0	0	0	0	450	0	0	0	0	1,050	1,500
<b>Total Program Expenditure</b>						96,507	120,269	48,816	36,862	27,242	329,696	31,139	360,835	0	0	0	0	160,576	0	0	0	0	200,260	360,836

**CITY OF TORONTO**

**Gross Expenditures (\$000's)**

**Appendix 4: 2016 Recommended Cash Flow and Future Year Commitments**

**Solid Waste Management**

		Current and Future Year Cash Flow Commitments and Estimates									Current and Future Year Cash Flow Commitments and Estimates Financed By										
		2016	2017	2018	2019	2020	Total 2016-2020	Total 2021-2025	Total 2016-2025	Provincial Grants and Subsidies	Federal Subsidy	Development Charges	Reserve Reserves	Reserve Funds	Capital from Current	Other 1	Other2	Debt - Recoverable Debt	Total Financing		
Sub- Priority	Project No. SubProj No.	Project Name Sub-project Name	Ward	Stat.	Cat.																
Financed By:																					
		Reserve Funds (Ind."XR" Ref.)				28,952	75,414	31,496	14,538	5,505	155,905	4,671	160,576	0	0	0	0	0	0	160,576	
		Debt - Recoverable				67,560	44,852	17,319	22,324	21,737	173,791	26,469	200,260	0	0	0	0	0	0	200,260	
<b>Total Program Financing</b>						<b>96,511</b>	<b>120,266</b>	<b>48,815</b>	<b>36,862</b>	<b>27,242</b>	<b>329,696</b>	<b>31,140</b>	<b>360,836</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>200,260</b>	<b>360,836</b>

**Status Code Description**  
 S2 S2 Prior Year (With 2016 and/or Future Year Cashflow)  
 S3 S3 Prior Year - Change of Scope 2016 and/or Future Year Cost/Cashflow  
 S4 S4 New - Stand-Alone Project (Current Year Only)  
 S5 S5 New (On-going or Phased Projects)

**Category Code Description**  
 01 Health and Safety C01  
 02 Legislated C02  
 03 State of Good Repair C03  
 04 Service Improvement and Enhancement C04  
 05 Growth Related C05  
 06 Reserved Category 1 C06  
 07 Reserved Category 2 C07

## Appendix 5

### 2016 Recommended Capital Budget with Financing Detail

(Phase 2) 17-Solid Waste Management

Sub-Project Category: 01,02,03,04,05,06,07

Type: B Sub-Project Status: S2

Type: C Sub-Project Status: S2,S3,S4,S5



## CITY OF TORONTO

## Appendix 5: 2016 Recommended Capital Budget with Financing Detail

## Solid Waste Management

## Sub-Project Summary

Project/Financing Priority Project	Project Name	Start Date	Completion Date	2016	Financing									
				Cash Flow	Provincial Grants Subsidies	Federal Subsidy	Developmt Charges	Reserves	Reserve Funds	Capital From Current	Other 1	Other 2	Debt	Debt - Recoverable
<b>0</b>	<b><u>SOL906419</u></b>	<b><u>Perpetual Care of Landfills</u></b>												
0	12 Perpetual Care of Landfills	06/18/2014	12/31/2025	799	0	0	0	0	799	0	0	0	0	0
0	13 Perpetual Care of Landfills - Change	01/01/2025	12/31/2025	8,450	0	0	0	0	8,450	0	0	0	0	0
0	14 PAAC Site Remediation	01/01/2011	12/31/2016	150	0	0	0	0	150	0	0	0	0	0
	<b>Project Sub-total:</b>			<b>9,399</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9,399</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>0</b>	<b><u>SOL906580</u></b>	<b><u>Collection Yard Asset Management</u></b>												
0	46 Collection Yards Asset Management	01/01/2014	12/31/2025	200	0	0	0	0	200	0	0	0	0	0
0	47 CNG Refuel Station Installations	01/01/2016	12/31/2016	1,100	0	0	0	0	330	0	0	0	0	770
	<b>Project Sub-total:</b>			<b>1,300</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>530</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>770</b>
<b>0</b>	<b><u>SOL907246</u></b>	<b><u>Green Lane Landfill Development</u></b>												
0	21 Buffer Land	01/01/2016	12/31/2016	1,500	0	0	0	0	225	0	0	0	0	1,275
0	27 Landfill Gas Control System	01/01/2011	12/31/2025	2,107	0	0	0	0	316	0	0	0	0	1,791
0	28 Leachate Control System	01/01/2016	12/31/2016	1,837	0	0	0	0	276	0	0	0	0	1,562
0	41 Landfill Gas Control System Change	01/01/2016	12/31/2016	-499	0	0	0	0	-75	0	0	0	0	-424
0	42 Landfill Gas Utilization	01/01/2015	12/31/2017	1,706	0	0	0	0	512	0	0	0	0	1,194
0	44 Cell Excavation & Base Construction	01/01/2012	12/31/2025	6,984	0	0	0	0	1,048	0	0	0	0	5,937
0	45 Engineering & Monitoring	01/01/2013	12/31/2025	105	0	0	0	0	16	0	0	0	0	90
0	46 Site Services/Final Cover/Storm Control	01/01/2012	12/31/2025	1,619	0	0	0	0	243	0	0	0	0	1,376
0	47 Leachate Control System Change	01/01/2016	12/31/2016	276	0	0	0	0	41	0	0	0	0	235
0	48 Site Services/Final Covers/Storm - Change	01/01/2016	12/31/2016	-362	0	0	0	0	-54	0	0	0	0	-308
0	49 Cell Excavation & Base Construction - Change	01/01/2016	12/31/2016	267	0	0	0	0	40	0	0	0	0	227
0	50 Engineering & Monitoring - Change	01/01/2016	12/31/2016	363	0	0	0	0	54	0	0	0	0	309
0	51 Landfill Gas Utilization - Change	01/01/2016	12/31/2020	-1,504	0	0	0	0	-451	0	0	0	0	-1,053
	<b>Project Sub-total:</b>			<b>14,400</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,190</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12,210</b>
<b>0</b>	<b><u>SOL907557</u></b>	<b><u>Renewable Natural Gas Fleet Fuel From Biogas</u></b>												
0	1 Renewable Natural Gas Fleet Fuel From Biogas	01/01/2016	12/31/2016	500	0	0	0	0	150	0	0	0	0	350
	<b>Project Sub-total:</b>			<b>500</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>150</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>350</b>
<b>0</b>	<b><u>SOL907626</u></b>	<b><u>Reuse Centre - Future Site</u></b>												
0	5 Reuse Centre Future Site	01/01/2015	12/31/2015	1,000	0	0	0	0	300	0	0	0	0	700
0	6 Reuse Centre Future Sites - Change	01/01/2016	12/31/2016	-1,000	0	0	0	0	-300	0	0	0	0	-700
	<b>Project Sub-total:</b>			<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>0</b>	<b><u>SOL907628</u></b>	<b><u>Dufferin Single Stream Recycling Facility</u></b>												
0	12 Dufferin SSRM Facility	01/01/2016	12/31/2018	1,500	0	0	0	0	450	0	0	0	0	1,050





## CITY OF TORONTO

## Appendix 5: 2016 Recommended Capital Budget with Financing Detail

## Solid Waste Management

## Sub-Project Summary

Project/Financing				2016	Financing										
Priority	Project	Project Name	Start Date	Completion Date	Cash Flow	Provincial Grants Subsidies	Federal Subsidy	Developmt Charges	Reserves	Reserve Funds	Capital From Current	Other 1	Other 2	Debt	Debt - Recoverable
<b>0</b>	<b><u>SOL907628</u></b>	<b><u>Dufferin Single Stream Recycling Facility</u></b>													
0	13	Dufferin SSRM Facility - Change	01/01/2016	12/31/2018	-1,450	0	0	0	0	-435	0	0	0	0	-1,015
		<b>Project Sub-total:</b>			50	0	0	0	0	15	0	0	0	0	35
<b>0</b>	<b><u>SOL907630</u></b>	<b><u>Dufferin SSO Facility</u></b>													
0	3	Dufferin SSO Facility Expansion	01/01/2016	12/31/2018	42,077	0	0	0	0	12,623	0	0	0	0	29,454
0	4	Dufferin SSO Facility - Change	01/01/2016	12/31/2018	-24,077	0	0	0	0	-24,077	0	0	0	0	0
		<b>Project Sub-total:</b>			18,000	0	0	0	0	-11,454	0	0	0	0	29,454
<b>0</b>	<b><u>SOL907631</u></b>	<b><u>Disco SSO Facility</u></b>													
0	1	Disco SSO Facility	01/08/2010	10/08/2012	1,610	0	0	0	0	483	0	0	0	0	1,127
0	2	Site Remediation	01/01/2010	12/31/2016	340	0	0	0	0	102	0	0	0	0	238
0	5	Disco SSO Facility Project Mgt	01/01/2010	12/31/2016	3,455	0	0	0	0	1,037	0	0	0	0	2,419
0	6	Disco SSO Facility - Change	01/01/2016	12/31/2017	-4,405	0	0	0	0	-1,321	0	0	0	0	-3,084
		<b>Project Sub-total:</b>			1,000	0	0	0	0	300	0	0	0	0	699
<b>0</b>	<b><u>SOL907632</u></b>	<b><u>Long Term Waste Management Strategy</u></b>													
0	6	SWM Long Term Strategy Plan Study	01/01/2014	12/31/2016	2,495	0	0	0	0	749	0	0	0	0	1,747
0	9	Long Term Strategy Study - Phase 2 Change	01/01/2016	12/31/2019	896	0	0	0	0	269	0	0	0	0	627
		<b>Project Sub-total:</b>			3,391	0	0	0	0	1,018	0	0	0	0	2,374
<b>0</b>	<b><u>SOL907863</u></b>	<b><u>Biogas Utilization</u></b>													
0	3	Construction of Biogas Utilization - Disco	01/01/2015	12/31/2017	6,519	0	0	0	0	1,956	0	0	0	0	4,563
0	6	Construction of Biogas Utilization - Dufferin	01/01/2016	12/31/2019	150	0	0	0	0	45	0	0	0	0	105
0	7	Construction of Biogas Utilization - Disco -Change	01/01/2016	12/31/2017	-3,393	0	0	0	0	-1,018	0	0	0	0	-2,375
		<b>Project Sub-total:</b>			3,276	0	0	0	0	983	0	0	0	0	2,293
<b>0</b>	<b><u>SOL907919</u></b>	<b><u>SWM IT Application Initiatives</u></b>													
0	4	RFID Integration	01/01/2012	12/31/2016	592	0	0	0	0	178	0	0	0	0	414
0	22	Short Term Application Improvements	01/01/2014	12/31/2016	472	0	0	0	0	142	0	0	0	0	331
0	23	SWMS Information Model	01/01/2015	12/31/2017	21	0	0	0	0	6	0	0	0	0	15
0	24	Business Process Analysis & Improvement	01/01/2014	12/31/2017	220	0	0	0	0	66	0	0	0	0	154
0	26	Transfer Station Efficiencies	01/01/2014	12/31/2017	209	0	0	0	0	63	0	0	0	0	146
0	27	Stakeholder-Customer Relationship Mgmt	09/08/2017	04/09/2019	807	0	0	0	0	242	0	0	0	0	565
0	30	RFID Integration - Change	01/01/2016	12/31/2016	-391	0	0	0	0	-117	0	0	0	0	-274
0	31	Mobile Assessment & Solution - Change	01/01/2016	12/31/2018	117	0	0	0	0	35	0	0	0	0	82
0	32	KPI Reporting and Measuring - Change	01/01/2016	12/31/2016	177	0	0	0	0	53	0	0	0	0	124
0	33	SWMS Information Model - Change	01/01/2016	12/31/2017	396	0	0	0	0	119	0	0	0	0	277
0	34	Business Process Analysis & Improvement - Change	01/10/2016	12/31/2017	-20	0	0	0	0	-6	0	0	0	0	-14



(Phase 2) 17-Solid Waste Management Sub-Project Category: 01,02,03,04,05,06,07 Type: B Sub-Project Status: S2 Type: C Sub-Project Status: S2,S3,S4,S5



**CITY OF TORONTO**  
**Appendix 5: 2016 Recommended Capital Budget with Financing Detail**  
**Solid Waste Management**  
**Sub-Project Summary**

Project/Financing Priority Project	Project Name	Start Date	Completion Date	2016	Financing											
				Cash Flow	Provincial Grants Subsidies	Federal Subsidy	Developmt Charges	Reserves	Reserve Funds	Capital From Current	Other 1	Other 2	Debt	Debt - Recoverable		
<b>0</b>	<b><u>SOL908086</u></b>	<b><u>Two-Way Radio Replacement</u></b>														
0	1 Two-Way Radio Replacement	01/01/2015	12/31/2015	2,235	0	0	0	0	671	0	0	0	0	0	0	1,565
	<b>Project Sub-total:</b>			2,235	0	0	0	0	671	0	0	0	0	0	0	1,565
<b>0</b>	<b><u>SOL908171</u></b>	<b><u>Engineering Planning Studies</u></b>														
0	1 Engineering Planning Studies	01/01/2016	12/31/2025	1,500	0	0	0	0	450	0	0	0	0	0	0	1,050
	<b>Project Sub-total:</b>			1,500	0	0	0	0	450	0	0	0	0	0	0	1,050
<b>3</b>	<b><u>SOL000065</u></b>	<b><u>Diversion Systems</u></b>														
0	72 SSO In-Unit Kitchen Containers	08/07/2009	12/31/2025	336	0	0	0	0	101	0	0	0	0	0	0	235
0	102 Replacement Waste Bins Single-Family	01/01/2013	12/31/2025	2,000	0	0	0	0	600	0	0	0	0	0	0	1,400
0	105 TCHC Organic Implementation Program	01/01/2014	12/31/2016	500	0	0	0	0	150	0	0	0	0	0	0	350
0	107 2nd Generation Green Bin Replacement	01/01/2014	12/31/2016	30,000	0	0	0	0	9,000	0	0	0	0	0	0	21,000
0	108 Recycling Upgrades for Multi-Units	01/01/2009	12/31/2016	200	0	0	0	0	60	0	0	0	0	0	0	140
0	109 SSO Containers Single-Family (1st Gen)	01/01/2016	12/31/2016	800	0	0	0	0	240	0	0	0	0	0	0	560
0	110 2nd Generation Green Bin Implementation	01/01/2016	12/31/2017	690	0	0	0	0	207	0	0	0	0	0	0	483
0	111 Online Sale of Garbage Bag Tags	01/01/2016	12/31/2016	100	0	0	0	0	30	0	0	0	0	0	0	70
0	112 SSO In-Unit Kitchen Containers - Change	01/01/2016	12/31/2016	-235	0	0	0	0	-70	0	0	0	0	0	0	-165
0	114 Replacement Waste Bins Single Family - Change	01/01/2016	12/31/2017	500	0	0	0	0	150	0	0	0	0	0	0	350
0	116 TCHC Organic Implementation Program 2016	01/01/2016	12/31/2016	600	0	0	0	0	180	0	0	0	0	0	0	420
0	117 Recycling Upgrades for Multi-Units - Change	01/01/2016	12/31/2016	-175	0	0	0	0	-53	0	0	0	0	0	0	-122
0	118 SSO Containers Single Family - Change	01/01/2016	12/31/2016	-600	0	0	0	0	-180	0	0	0	0	0	0	-420
0	120 2nd Generation Green Bin Replacement - Change	01/01/2016	12/31/2016	-16,500	0	0	0	0	-4,950	0	0	0	0	0	0	-11,550
	<b>Project Sub-total:</b>			18,216	0	0	0	0	5,465	0	0	0	0	0	0	12,751
<b>Program Total:</b>				96,511	0	0	0	0	28,952	0	0	0	0	0	0	67,560

**Status Code Description**  
 S2 S2 Prior Year (With 2016 and/or Future Year Cashflow)  
 S3 S3 Prior Year - Change of Scope 2016 and/or Future Year Cost(Cashflow)  
 S4 S4 New - Stand-Alone Project (Current Year Only)  
 S5 S5 New (On-going or Phased Projects)

**Category Code Description**  
 01 Health and Safety C01  
 02 Legislated C02  
 03 State of Good Repair C03  
 04 Service Improvement and Enhancement C04  
 05 Growth Related C05  
 06 Reserved Category 1 C06  
 07 Reserved Category 2 C07

Appendix 6

Reserve / Reserve Fund Review

Table 11: Reserve / Reserve Fund – Program Specific (\$000s)

Reserve / Reserve Fund Name	Project / SubProject Name and Number	Balance as of December 31, 2015	Contributions / (Withdrawals) \$000s										2016 - 2025 Total
			2016 Plan	2017 Plan	2018 Plan	2019 Plan	2020 Plan	2021 Plan	2022 Plan	2023 Plan	2024 Plan	2025 Plan	
XR1013 Perpetual Care of Landfill Reserve Fund	Beginning Balance (Jan. 1)	24,783	24,476	21,211	20,601	21,505	21,589	21,673	21,758	21,842	21,928	22,013	24,476
	Estimated Interest Earned	194	135	83	80	84	84	85	85	85	86	86	892
	Contributions (Operating)	8,000	9,249	9,249	9,249	8,144	8,064	8,165	8,272	8,731	8,731	8,731	86,585
	Morningside Landfill Remediation	(450)	(3,400)										(3,400)
	Basic Perpetual Care	(5,367)	(6,166)	(6,628)	(5,617)	(5,429)	(5,376)	(5,443)	(5,515)	(5,821)	(5,821)	(5,821)	(57,635)
	New Control Systems	(2,683)	(3,083)	(3,314)	(2,808)	(2,715)	(2,688)	(2,722)	(2,757)	(2,910)	(2,910)	(2,910)	(28,819)
	Subtotal Perpetual Care Ptroject	(8,050)	(9,249)	(9,942)	(8,425)	(8,144)	(8,064)	(8,165)	(8,272)	(8,731)	(8,731)	(8,731)	(86,454)
Total Proposed Net Contributions/(Withdrawals)	(306)	(3,265)	(610)	904	84	84	85	85	85	86	86	(2,377)	
<b>TOTAL RESERVE FUND BALANCE AT YEAR-END</b>		<b>24,476</b>	<b>21,211</b>	<b>20,601</b>	<b>21,505</b>	<b>21,589</b>	<b>21,673</b>	<b>21,758</b>	<b>21,842</b>	<b>21,928</b>	<b>22,013</b>	<b>22,099</b>	<b>22,099</b>

Reserve / Reserve Fund Name	Project / SubProject Name and Number	Balance as of December 31, 2015	Contributions / (Withdrawals) \$000s										2016 - 2025 Total	
			2016 Plan	2017 Plan	2018 Plan	2019 Plan	2020 Plan	2021 Plan	2022 Plan	2023 Plan	2024 Plan	2025 Plan		
XR1404 Waste Management Reserve Fund	Beginning Balance (Jan. 1)	94,352	113,801	102,252	82,707	74,173	78,080	84,356	95,518	105,269	115,170	122,319	113,801	
	Estimated Interest Earned	790	626	399	323	289	305	329	373	411	449	477	3,979	
	Contributions (Withdrawals)													
	Operating	13,170	20,775	20,775	20,775	20,775	20,775	20,775	20,775	20,775	20,775	20,775	20,775	207,752
	Prior Y/E Operating Surplus	15,044												
	Funding of Landfill Gas Utilization	(5)	47	(60)	(9)	(2,838)	(2,838)							(5,699)
	Funding of Transfer Station Capital	(5,334)	(16,167)	(11,966)	(18,547)	(6,855)	(5,205)	(3,290)	(4,365)	(4,365)	(6,855)	(4,000)		(81,615)
	Funding of Collection Yard Capital	(942)	(533)	(200)	(200)	(200)	(200)	(200)	(200)	(200)	(200)	(200)		(2,333)
	Funding of Diversion Facilities Asset Mgmt.	(271)	(1,352)	(1,000)	(1,500)	(1,500)	(1,500)	(1,500)	(1,500)	(1,500)	(1,500)	(1,500)		(14,352)
	Funding of Disco SSO Facility	(60)	(300)	(1,322)										
	Funding of Dufferin SSRM Facility	(18)	(15)	(15)	(15)									(45)
	Funding of Dufferin SSO Facility	(150)	(5,400)	(14,252)	(2,281)	(64)								(21,997)
	Funding of Biogas Utilization	(15)	(983)	(833)	(147)	(1,188)								(3,150)
	Funding of Long Term Waste Mgmt Strategy	(394)	(867)	(2,400)	(3,000)	(3,000)	(3,600)	(3,600)	(3,900)	(3,900)	(4,200)	(121,383)		(149,850)
	Funding of Diversion Systems.	(1,457)	(4,260)	(5,901)	(870)	(870)	(870)	(870)	(870)	(870)	(870)	(870)		(17,121)
	Funding of SWM IT Application Initiatives	(471)	(735)	(580)	(968)	(130)	(36)	(32)	(112)					(2,593)
	Funding of IT Corporate Initiatives	(391)	(911)	(1,202)	(897)	(62)	(104)							(3,177)
	Fund Revenue Services Billing System	(48)	(203)	(539)	(747)									(1,489)
	Funding of Two-way Radios		(671)											(671)
	Funding of Renewable Natural Gas Fleet Fuel From Biogas		(150)											(150)
	Funding of Engineering Planning Studies		(450)	(450)	(450)	(450)	(450)	(450)	(450)	(450)	(450)	(450)		(4,500)
	Net Total Proposed Contributions (Withdrawals)	19,449	(11,549)	(19,545)	(8,534)	3,907	6,276	11,162	9,751	9,901	7,149	(107,150)		(98,632)
Total Project Funding Withdrawals	(9,555)	(32,950)	(40,719)	(29,631)	(17,158)	(14,803)	(9,942)	(11,397)	(11,285)	(14,075)	(128,403)		(310,364)	
<b>TOTAL RESERVE FUND BALANCE AT YEAR-END</b>		<b>113,801</b>	<b>102,252</b>	<b>82,707</b>	<b>74,173</b>	<b>78,080</b>	<b>84,356</b>	<b>95,518</b>	<b>105,269</b>	<b>115,170</b>	<b>122,319</b>	<b>15,169</b>	<b>15,169</b>	

Reserve / Reserve Fund Name	Project / SubProject Name and Number	Balance as of December 31, 2015	Proposed Cash Flows \$000s										2016 - 2025 Total
			2016 Plan	2017 Plan	2018 Plan	2019 Plan	2020 Plan	2021 Plan	2022 Plan	2023 Plan	2024 Plan	2025 Plan	
XR1408 Green Lane Reserve Fund	Beginning Balance (Jan. 1)	14,972	14,026	12,876	11,340	9,594	8,231	6,473	5,381	4,048	3,012	1,996	14,026
	Contributions / (Withdrawals)	759	903	1,056	1,071	1,087	1,103	1,125	1,148	1,171	1,194	1,218	11,078
	Estimated Interest Earned	131	76	50	44	37	32	25	21	15	11	7	318
	Buffer Land	(11)	(225)	(225)	(225)	(225)	(225)	(225)	(225)	(225)	(225)	(225)	(2,250)
	Cell Excavation and Base Const.	(934)	(1,088)	(1,204)	(1,650)	(1,200)	(1,039)	(1,009)	(1,257)	(1,198)	(1,198)	(1,198)	(12,039)
	Engineering and Monitoring	(8)	(70)	(16)	(17)	(37)	(18)	(18)	(19)	(19)	(19)	(19)	(251)
	Leachate Control System	(262)	(317)	(292)	(323)	(372)	(468)	(284)	(291)	(219)	(219)	(219)	(3,006)
	Landfill Gas Control System	(411)	(241)	(641)	(352)	(372)	(849)	(421)	(359)	(377)	(377)	(377)	(4,367)
	Site Services/Final Cover/Storm Control	(210)	(189)	(264)	(294)	(281)	(294)	(286)	(351)	(184)	(184)	(184)	(2,510)
	Total Proposed Contributions / (Withdrawals)	(946)	(1,150)	(1,537)	(1,746)	(1,363)	(1,757)	(1,092)	(1,333)	(1,036)	(1,017)	(997)	(13,027)
<b>TOTAL RESERVE FUND BALANCE AT YEAR-END</b>		<b>14,026</b>	<b>12,876</b>	<b>11,340</b>	<b>9,594</b>	<b>8,231</b>	<b>6,473</b>	<b>5,381</b>	<b>4,048</b>	<b>3,012</b>	<b>1,996</b>	<b>999</b>	<b>999</b>