City Budget 2013

Toronto Water Capital Budget Analyst Notes

The City of Toronto's budget is presented by program and service, in Analyst Note format. The City's Capital Budget funds major infrastructure.

2013 - 2022 Capital Program

2013 CAPITAL BUDGET ANALYST BRIEFING NOTES

BUDGET COMMITTEE NOVEMBER 7, 2012

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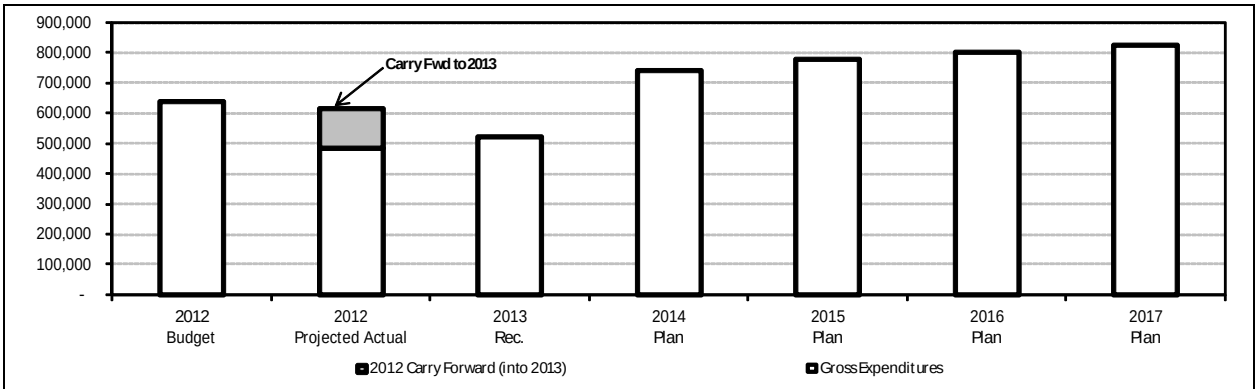
PART I: RECOMMENDATIONS

The City Manager and Acting Chief Financial Officer recommend that:

1. Council approve the 2013 Recommended Capital Budget for Toronto Water with a total project cost of $708.782 million, and 2013 cash flow of $657.266 million and future year commitments of $2.059 billion comprised of the following:
   a) New Cash Flow Funding for:
      i) 109 new / change in scope sub-projects with a 2013 total project cost of $708.782 million that requires cash flow of ($1.966 million) in 2013 and a future year cash flow commitment of $242.619 million in 2014; $131.968 million in 2015, $95.697 million in 2016, $93.550 million in 2017, ($20.057 million) in 2018, ($1.509 million) in 2019; $55.292 million in 2020, $42.308 million in 2021, and $70.880 million in 2022;
      ii) 76 previously approved sub-projects with a 2013 cash flow of $527.842 million; and a future year cash flow commitment of $386.809 million in 2014; $334.712 million in 2015, $206.080 million in 2016, $115.026 million in 2017, $123.831 million in 2018, $102.395 million in 2019; $45.303 million in 2020, and $33.932 million in 2021; and
   b) 2012 approved cash flow for 83 previously approved sub-projects with carry forward funding from 2012 into 2013 totaling $131.390 million.
2. Council approve the 2014-2022 Recommended Capital Plan for Toronto Water totaling $5.601 billion in project estimates, comprised of $113.152 million in 2014; $316.637 million in 2015; $501.763 million in 2016; $618.179 million in 2017; $723.361 million in 2018; $777.748 million in 2019; $817.309 million in 2020; $880.760 million in 2021; and $851.607 million in 2022; and
3. Council consider operating costs of $5.675 million net in 2013, $2.432 million net in 2014; $0.347 million net in 2015; $0.247 million net in 2016; $5.372 million net in 2017; $5.530 million net in 2018; and $0.053 million net in 2019; emanating from the approval of the 2013 Recommended Capital Budget for inclusion in the 2013 and future year operating budgets.
4. This report be considered concurrently with the 2013 Water and Wastewater Rate Report from the Deputy City Manager and Acting Chief Financial Officer and General Manager for Toronto Water.

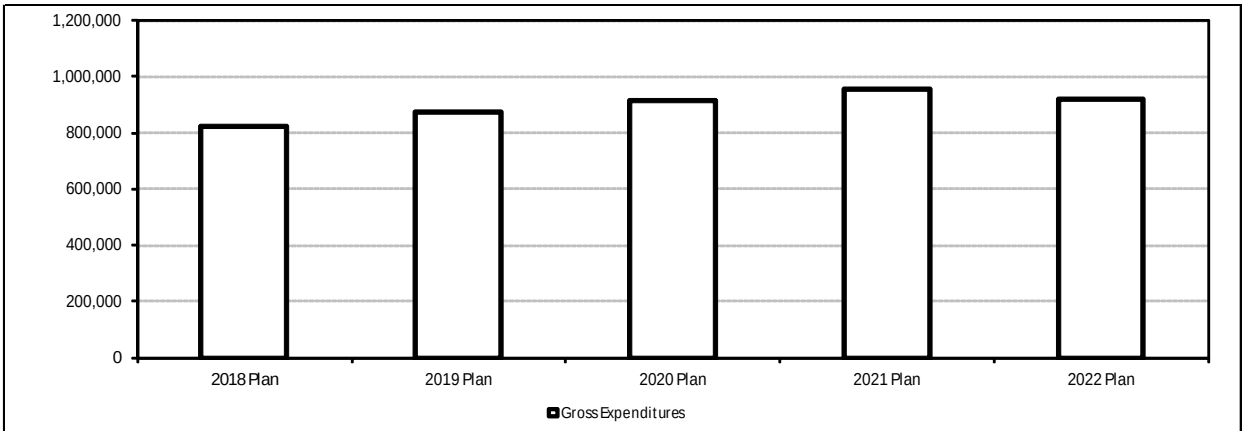
PART II: 2013 – 2022 CAPITAL PROGRAM

10-Year Capital Plan
2013 Recommended Budget, 2014 - 2017 Recommended Plan
(In $000s)



	2012		2013 Rec. Budget and 2014-2017 Plan						
	Budget	Projected Actual	2013	2014	2015	2016	2017	2013-2017	5-Year Total Percent
Gross Expenditures:									
2012 Capital Budget & Approved FY Commitment	642,716	486,337	527,842	386,809	334,712	206,080	115,026	1,570,469	42.7%
Recommended Changes to Approved FY Commitments									0.0%
2013 New/Change in Scope and Future Year Commitments			(1,966)	242,619	131,968	95,697	93,550	561,868	15.3%
2014- 2017 Capital Plan Estimates				113,152	316,637	501,763	618,179	1,549,731	42.1%
2-Year Carry Forward for Reapproval								-	0.0%
Table 1 - 1-Year Carry Forward to 2013		131,390	→						
Total Gross Annual Expenditures & Plan	**642,716**	**486,337**	**525,876**	**742,580**	**783,317**	**803,540**	**826,755**	3,682,068	**100.0%**
Financing:									
Recommended Debt									**0.0%**
Reserves/Reserve Funds			493,601	703,937	748,884	781,806	798,028	3,526,256	95.8%
Development Charges			11,652	16,933	17,515	17,628	23,278	87,006	2.4%
Other Revenue			20,623	21,710	16,918	4,106	5,449	68,806	1.9%
Total Financing	-		**525,876**	**742,580**	**783,317**	**803,540**	**826,755**	3,682,068	**100.0%**
By Project Category:									
Health & Safety			7,603	15,223	11,132	4,750	2,000	40,708	1.1%
Legislated			17,115	67,076	77,159	93,165	106,623	361,138	9.8%
SOGR			333,783	426,300	457,269	454,009	470,070	2,141,431	58.2%
Service Improvement			145,680	195,149	184,207	194,987	167,932	887,955	24.1%
Growth Related			21,695	38,832	53,550	56,629	80,130	250,836	6.8%
Total by Project Category	-		**525,876**	**742,580**	**783,317**	**803,540**	**826,755**	3,682,068	**100.0%**
Asset Value ($) at year-end		28,044,200	28,206,700	28,336,200	28,391,200	28,523,700	28,648,700	28,648,700	
Yearly SOGR Backlog Estimate (addressed by current plan)			136,373	148,023	172,395	164,219	145,488		
Accumulated Backlog Estimate (end of year)		1,635,837	1,499,464	1,351,441	1,179,046	1,014,827	869,339		
Backlog: Percentage of Asset Value (%)		5.8%	5.3%	4.8%	4.2%	3.6%	3.0%		
Debt Service Costs									
Operating Impact on Program Costs			5,675	2,432	347	247	5,320	14,021	
New Positions			2		4	1	1	8	

10-Year Capital Plan
2018-2022 Recommended Plan
(In $000s)



	2018-2022 Capital Plan						
	2018	2019	2020	2021	2022	2013-2022	10-Year Total Percent
Gross Expenditures:							
2012 Capital Budget & Approved FY Commitments	123,831	102,395	45,303	33,932		1,875,930	22.9%
Recommended Changes to Approved FY Commitments							0.0%
2013 New/Change in Scope and Future Year Commitments	(20,057)	(1,509)	55,292	42,308	70,880	708,782	8.7%
2018 - 2022 Capital Plan Estimates	723,361	777,748	817,309	880,760	851,607	5,600,516	68.4%
Total Gross Annual Expenditures & Plan	**827,135**	**878,634**	**917,904**	**957,000**	**922,487**	**8,185,228**	**100.0%**
Financing:							
Recommended Debt							0.0%
Reserves/Reserve Funds	801,047	836,957	858,758	895,435	876,341	7,794,794	95.2%
Development Charges	19,104	18,265	20,534	23,723	17,595	186,227	2.3%
Other Revenue	6,984	23,412	38,612	37,842	28,551	204,207	2.5%
Total Financing	**827,135**	**878,634**	**917,904**	**957,000**	**922,487**	**8,185,228**	**100.0%**
By Project Category:							
Health & Safety	2,700	2,200	1,700	700	700	48,708	0.6%
Legislated	88,909	72,040	40,259	39,663	34,383	636,392	7.8%
SOGR	465,543	488,269	513,417	519,073	557,311	4,685,044	57.2%
Service Improvement	199,351	230,587	254,773	280,074	213,186	2,065,926	25.2%
Growth Related	70,632	85,538	107,755	117,490	116,907	749,158	9.2%
Total by Project Category	**827,135**	**878,634**	**917,904**	**957,000**	**922,487**	**8,185,228**	**100.0%**
Asset Value($) at year-end 28,648,700	28,802,700	29,063,200	29,143,200	29,682,200	29,737,200		
Yearly SOGR Backlog Estimate (addressed by current plan)	119,086	123,073	127,596	132,298	169,574		
Accumulated Backlog Estimate (end of year)	750,253	627,180	499,584	367,286	197,712		
Backlog: Percentage of Asset Value (%)	2.6%	2.2%	1.7%	1.2%	0.7%		
Debt Service Costs							
Operating Impact on Program Costs	5,530	53				19,604	
New Positions						8	

10-Year Capital Plan Overview

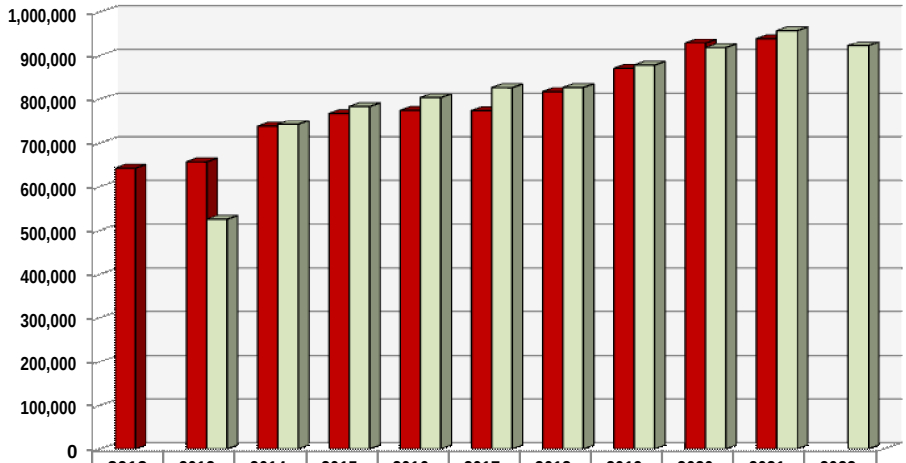
- Toronto Water is responsible for water treatment and supply; wastewater collection and treatment; and stormwater management across the City.
  - Water treatment and supply is provided using 4 water filtration plants; 10 reservoirs and 4 elevated storage tanks; 5,427 km of distribution watermains and 528 km of trunk watermains; 60,933 valves and 40,817 hydrants; 470,202 water service connections and 18 water pumping stations. Toronto Water also supplies water to York Region, serving an estimated population of 600,000.
  - Wastewater collection and treatment, and stormwater management is provided using 4 wastewater treatment plants; 5 storage and detention tanks; 4,397 km of sanitary, 1,453 km of combined and 396 km of trunk sewers; 4,937 km of storm sewers and 546 km of roadside ditches; 463,300 sewer service connections; 82 wastewater pumping stations; 371 km of water courses; 88 stormwater management ponds; 2,300 outfalls and 165,662 catchbasins.
- The estimated replacement value of Toronto Water's inventory of capital assets is $28.044 billion. Toronto Water maintains two categories of capital assets, linear infrastructure and facilities/plant assets.
- Funding for the 2013 Recommended Capital Budget and 2014-2022 Recommended Capital Plan balances infrastructure renewal needs for state of good repair and new service improvement projects, while ensuring the delivery of water supply and wastewater treatment within an increasingly stringent regulatory framework. In addition, funding is also provided to ensure that increases in system capacity keep pace with population growth.
- The 2013–2022 Recommended Capital Budget and Plan totals $8.185 billion, excluding funding carried forward from 2012 to 2013 of $131.390 million, of which $3.682 billion or 45% is projected for the first 5 years, with the final 5 years requiring funding of $4.503 billion or 55%.
- While State of Good Repair (SOGR) projects remain a priority, given the significant backlog in infrastructure renewal, considerable funding ($2.815 billion) is still provided to support the implementation of the Wet Weather Flow Master Plan, Basement flooding projects and Growth Related projects, some of which are partially recovered from Development Charges.
- Over the 10-year planning horizon, Toronto Water continues to be 100% self-sustaining with no debenture financing and with no impact on the municipal property tax levy.
- The 2013 Recommended Capital Budget and 2014-2022 Recommended Capital Plan is funded primarily from the Program's reserves, which account for approximately 95% of financing sources or $7.795 billion. Development charges provide funding of approximately 2% or $186.227 million. Revenues for capital cost sharing with York Region provide the remaining 3% or $204.207 million in funding for the Program.
- Toronto Water currently has a significant infrastructure rehabilitation backlog, estimated at $1.636 billion or 6% of Toronto Water's total asset value by year-end. This backlog is more

than any other major Canadian urban centre, reflecting the age and condition of assets that have been constructed throughout the City's history of growth over more than 100 years.

- The 2013 Recommended Capital Budget and 2014-2022 Recommended Capital Plan allocates $4.685 billion for SOGR projects thus ensuring the reduction of Toronto Water's infrastructure renewal backlog from $1.636 billion to $197.712 million or 0.7% of Toronto Water's total asset value by 2022, if SOGR funding is not reduced over the next 10 years.
- Operating Budget impacts arising from approval of the 10-Year Capital Plan total $19.604 million net and an increase of 8 positions arising from the expansion of the FJ Horgan Water Treatment Plant, Highland Creek Treatment Plant Biosolids Treatment Upgrades Implementation and Construction project, construction projects at the Ashbridges Bay Treatment Plant, Basement Flooding Relief and Stormwater and Combined Sewer Overflow End of Pipe Facilities.

Key Changes to the 2012 - 2021 Approved Capital Plan

Changes to the 2012 -2021 Approved Capital Plan
(In $000s)



	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
2012 -2021 Approved Capital Plan	642,716	656,798	737,980	767,612	774,577	774,048	818,020	871,471	929,095	939,047	
2013-2022 Rec'd Capital Budget & Plan		525,876	742,580	783,317	803,540	826,755	827,135	878,634	917,904	957,000	922,487

The 2013 Recommended Capital Budget and the 2014 - 2022 Recommended Capital Plan reflects a decrease of $5.907 million in capital funding from the 2012 to 2021 Approved Capital Plan. Although the total funding required did not change significantly, there were adjustments to individual project costs resulting in changes to annual cashflows.

The following chart details the key project cash flow changes to the 2012 – 2021 Approved Capital Plan.

Summary of Project Changes
(In $000s)

Key Projects	Total Project Cost	2013	2014	2015	2016	2017	2018	2019	2020	2021	2013 - 2021	Revised Total Project Cost
Previously Approved											-	
Ashbridges Bay WWTF	1,086,831	(6,318)	(12,331)	8,286	18,787	29,377	20,551	(1,686)	(3,440)	(6,580)	46,646	1,133,477
Sewer Renewal (Rehab & Replacement)	687,190	12,547	10,212	5,954	2,213	(1,188)	(1,300)	2,000	3,500	5,045	38,983	726,173
Watermain Renewal (Replacement & Rehab)	1,069,226	27,309	3,017	3,071	4,702	4,837	4,976	3,119	2,267	7,419	60,717	1,129,943
Basement Flooding	683,198	13,300	13,918	12,353	12,624	13,296	19,262	24,494	9,734	9,981	128,962	812,160
New Sewer Construction	9,000	(299)		6,000	11,000	11,000	11,000	11,000	13,000	13,000	75,701	84,701
Highland Creek WWTF	457,014	(20,513)	(15,285)	(9,767)	4,417	(1,102)	(11,092)	(3,787)	(282)	3,118	(54,293)	402,721
Don & Waterfront Trunk CSO	334,400	(550)	(10,700)	(30,500)	(500)	4,800	(9,200)	3,800	13,800	12,400	(16,650)	317,750
North Toronto WTP Upgrades	28,750	212	(350)	(150)	(200)	(350)	(550)	(3,450)	(10,250)	(10,250)	(25,338)	3,412
Linear Engineering & Support	597,473	(27,699)	(6,233)	(5,117)	(1,972)	(1,383)	153	(2,423)	(5,211)	(7,664)	(57,549)	539,924
Wet Weather Flow Master Plan	82,289	1,754	(951)	(2,256)	(5,048)	(6,383)	(3,875)	(3,000)	(3,000)	(3,000)	(25,759)	56,530
Net Other Changes		(130,798)	23,303	21,360	(20,414)	(18,275)	(22,937)	(26,435)	(31,309)	(5,516)	(211,021)	(211,021)
Total Previously Approved	**5,035,371**	**(131,055)**	**4,600**	**9,234**	**25,609**	**34,629**	**6,988**	**3,632**	**(11,191)**	**17,953**	**(39,601)**	**4,995,770**
New												
Lawrence Allan Revitalisation Plan (Phase 1)		133		6,471	3,354	18,078	2,127	3,531			33,694	33,694
Total New		**133**		**6,471**	**3,354**	**18,078**	**2,127**	**3,531**			**33,694**	**33,694**
Total Changes	**5,035,371**	**(130,922)**	**4,600**	**15,705**	**28,963**	**52,707**	**9,115**	**7,163**	**(11,191)**	**17,953**	**(5,907)**	**5,029,464**

Significant Increases in Toronto Water Capital Projects

The following Toronto Water capital projects have been allocated increased funding to address key priorities outlined below:

- The Ashbridges Bay Wastewater Treatment Plant project has been increased by $46.646 million from $1.087 billion, representing a 4% increase in total project costs primarily to incorporate increased costs of a new pumping station for combined sewer flows.
- Recommended funding for Sewer Renewal (Rehab and Replacement) projects have increased by $38.983 million or 6% from $687.190 million, to address deficiencies found by sewer inspection and to promote use of trenchless technologies to renew sewer infrastructure at an accelerated pace.
- The allocation for Watermain Renewal (Rehab and Replacement) has increased by $60.717 million or 5% from $1.096 billion, to align funding requirements with Toronto Water's service replacement policy and to increase the extent of renewal being undertaken through trenchless technologies such as structural lining.
- Increased funding for the Basement Flooding project in 2013 of $13.300 million is recommended to add a road restoration component and to address the increasing trend by homeowners to proactively protect their property as well as accelerated construction from 2018 to 2022, for a total increase of $128.962 million or 19%, compared to $683.198 million funded by the current 2012-2021 Approved Capital Plan.

- New Sewer Construction projects have been increased by $75.701 million from $9.000 million within the current 2012-2021 Capital Plan to address growth projects that require new servicing, including upgrades in growth corridors, the waterfront and external upgrades to service Downsview lands. These requirements are partially funded through Development Charges.

Major Reductions in Toronto Water Capital Projects:

Significant reductions in capital expenditures have been made to the following projects:

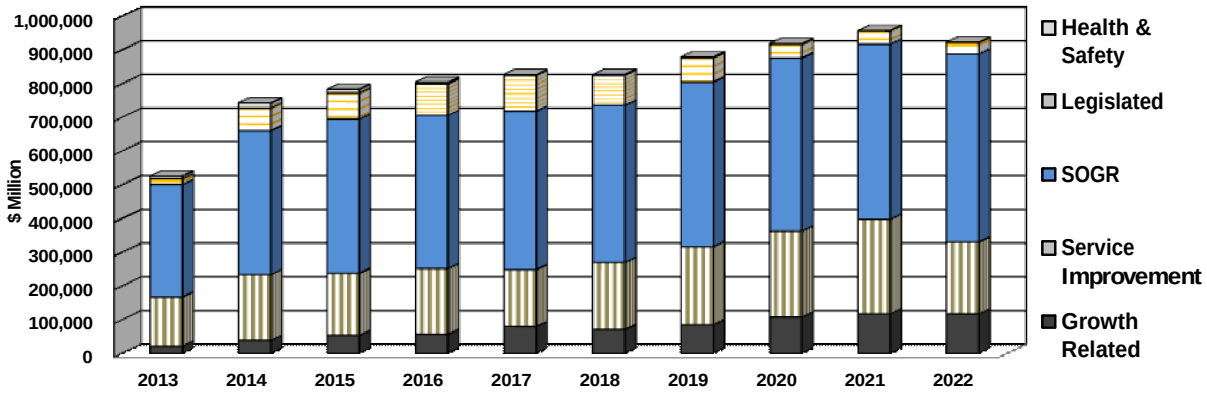
- The Highland Creek Waste Water Treatment Plant projects have been reduced by a total of $54.293 million ($20.513 million in 2013) or 11.9%, from $457.014 million provided in the 2012-2021 Approved Capital Plan, reflecting changed schedules in project construction. For example, the WAS Thickening project construction advanced ahead of schedule in 2012 resulting in lower cashflow requirements.
- The Don and Waterfront Trunk CSO project has been reduced by $16.650 million ($0.550 million in 2013) or 5%, from $334.400 million included in the 2012-2021 Approved Capital Plan.
- The North Toronto Water Treatment Upgrades project has been reduced by a total of $25.338 million from $28.750 million included in the 2012-2021 Approved Capital Plan, pending a study to review the condition of the plant infrastructure and processes, and an assessment of future capacity requirements.
- Linear Engineering and Support projects have been decreased by a total of $57.549 million or 10% from $597.453, reflecting a restructuring of capital accounts to align permanent road cut restoration services with the various asset renewal programs.
- Over the 2012-2021 planning period, there are cashflow realignments for a variety of other projects, which reflect more updated schedules for implementation and incorporate additional projects deemed necessary. These include a watermain renewal at Markham /Sheppard location ($0.100 million), yard and building renovation projects ($0.380 million), as well as the addition of transmission optimizers ($0.600 million).
- Additionally, to accommodate funding for projects that will not be completed in 2012, which need funds of $131.390 million to be carried forward from 2012 to 2013. Toronto Water reduced its previously approved cashflow for 2013, which accounts for a net decrease of $105.640 million in 2013.

New Projects: Lawrence Heights Redevelopment

- In July 2012, a comprehensive package of recommendations that provided "a new vision for the redevelopment of Lawrence Heights" was adopted by Council.
- Based on cost estimates provided by the Toronto Community Housing Corporation an amount of $33.694 million representing Toronto Water's share for the Phase 1 costs, is included in the 2013-2022 Recommended Capital Plan and will be funded from the Water Capital Financing Reserves. Future phases of this redevelopment are still subject to cost refinement and funding availability and have not been included in the 10-Year Recommended Capital Plan.

2013 – 2022 Recommended Capital Plan

2013–2022 Capital Plan by Project Category
(In $000s)



The 10-Year Recommended Capital Plan of $8.185 billion provides funding for Health and Safety projects of $48.708 million; Legislated projects of $636.392 million; State of Good Repair (SOGR) projects of $4.685 billion; Service Improvement projects of $2.066 billion, and Growth Related projects of $749.158 million.

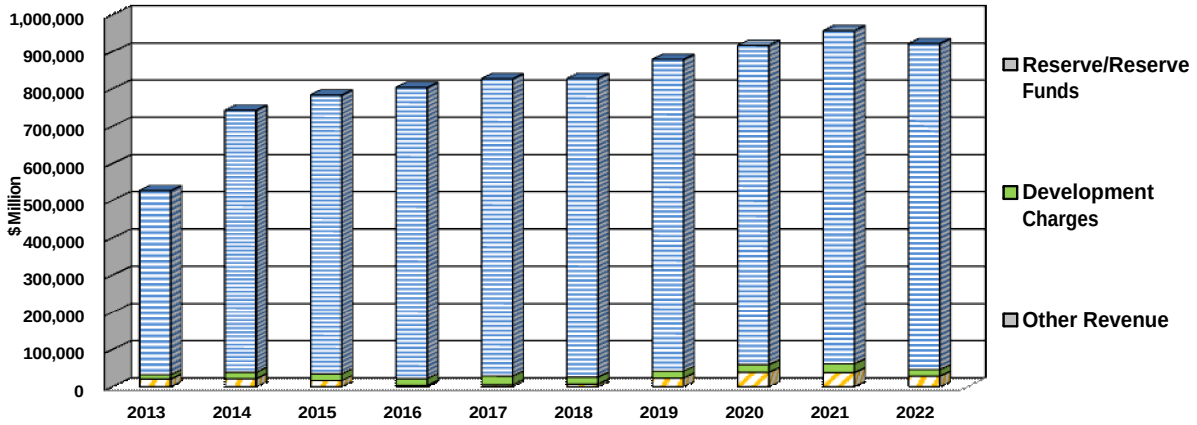
- Health and Safety projects represent approximately 1% or $48.708 million ($40.708 million over the first five years) of total funding in the 10-Year Recommended Capital Plan.
  - Capital funding for these projects is allocated primarily within the first 5 years of the 10-Year Capital Plan period in order to improve the safety of chemical storage and upgrade electrical systems at wastewater treatment plants.
  - Funding for Health and Safety projects is minimal in the second 5 years of the 10-Year Capital Plan reflecting the anticipated completion of 5 of the 6 Toronto Water Health and Safety projects by 2016.
- Legislated projects account for $636.392 million or 8% of total funding ($361.138 million over the first five years). Approximately 17% or $115.535 million of the total funding is allocated for the Ashbridges Bay Effluent System projects.
  - Legislated projects are required to comply with existing and emerging provincial legislation, including Bill 195 -Safe Drinking Water Act, Bill 81- Nutrient Management Act and Bill 72 – Water Opportunities and Water Conservation Act. These projects are also required to comply with the Federal government's Environmental Protection Act. Examples of legislated projects are Sewage Pumping Station upgrades and District Water Service Repair projects.
  - Funding for Legislative projects is expected to increase in future years as regulations governing water supply and wastewater treatment continue to become more stringent.
- State of Good Repair (SOGR) projects continue to drive Toronto Water's capital program.

- $2.141 billion in funding is for infrastructure renewal projects from 2013 to 2017, representing 46% of the 10-Year Capital Plan funding allocated to SOGR projects. Total SOGR funding will amount to $4.685 billion by 2022, representing 57% of total funding for Toronto Water's 10-Year Capital Plan.
- SOGR funding increases in 2014 to $426.300 million from $333.783 million in 2012 and averages approximately $452 million per year from 2014 to 2017.
- SOGR funding continues to increase over the next five year period averaging $509 million per year. SOGR funding trends ensure the continued reduction of Toronto Water's infrastructure renewal backlog from $1.636 billion in 2012 to $197.712 million by 2022.

- Service Improvement projects represent approximately 25% or $2.066 billion ($887.955 million over the first five years) of total funding in the 10-Year Capital Plan.
  - Capital funding for these projects increases consistently over the 10 year period, from $145.680 million in 2013 to $213.186 million in 2022, with annual funding above the average funding of $207 million in 2019, 2020 and 2021.
  - Funding for Service Improvement is primarily required for Basement Flooding, the addition of a second phase odour control project at the Ashbridges Bay Treatment Plant, and Storm Water Management projects with increases in funding levels aligning to the objective of reducing the impact of extreme weather events.
- Growth projects represent approximately 9% or $749.158 million ($250.836 million over the first five years) of total funding in the 10-Year Capital Plan.
  - Funding for anticipated growth projects such as new and enhanced watermains and service connections is consistent over the 10-Year Capital Plan period, averaging $33.543 million per year, however funding for planned significant stand alone projects will vary from year to year based on growth requirements. For example, a new service improvement project, Lawrence Allan Revitalization, Phase 1, totaling $33.694 million, was added to the 2013-2022 Recommended Capital Plan.
  - During the first 5 years of the 2013 – 2022 Capital Plan period, annual funding for growth projects range from $21.695 million in 2013 to $80.130 million in 2017.
  - Further increases in funding for growth projects continue over the 2018-2022 period, due to the planned upgrades of transmission of watermains at the East Mall, Victoria, Ellesmere and Mount Pleasant.

2013–2022 Capital Plan by Funding Source

(In $000s)



Over the 10-year planning horizon, Toronto Water continues to be 100% self-sustaining with no debenture financing.

- The 2013 Recommended Capital Budget and 2014-2022 Recommended Capital Plan is funded primarily from the Program's reserves, representing approximately 95% or $7.795 billion of total capital financing.
- Capital funding from Toronto Water reserves increases from $493.601 million in 2013 to $703.937 million in 2014. This increase in reserve funding coincides with the planned annual water rate increases of 9% until 2014 to address infrastructure renewal spending which has more than doubled over the last 5 years.
- After 2014, capital funding from Toronto Water's reserves continue to increase but at a slower rate than previous years. This is reflective of the planned lower annual water rate increases of 3% beginning in 2015.
- Development charges provide approximately 2% or $186.227 million of financing included the 10-Year Recommended Capital Plan. The 2013-2022 Recommended Capital Budget and Plan maximized use of Development Charge funding by increasing available funding by approximately $91.0 million over the 10 year period (from $95.163 million in the 2012-2021 Capital Plan). This will assist Toronto Water in maintaining a relatively healthy reserve balance, without further reducing its capital program.
- Other revenues, such as capital cost sharing with York Region represent 3% or $204.207 million of total capital financing.

Major Capital Initiatives by Category

Summary of Major Capital Initiatives by Category (In $000s)

	Total Project Cost	2013 Rec. Budget	2014 Plan	2015 Plan	2016 Plan	2017 Plan	2018 Plan	2019 Plan	2020 Plan	2021 Plan	2022 Plan	2013-2022 Total
State of Good Repair (SOGR)												
Ashbridges Bay WWTP (Various SOGR Projects)	802,283	42,542	81,409	79,250	78,163	95,775	76,080	84,014	88,230	88,220	88,600	802,283
District Watermain Replacement	820,056	44,983	45,573	58,500	70,000	80,000	90,000	98,000	107,000	112,000	114,000	820,056
Linear Infrastructure Engineering	467,587	18,847	41,010	47,121	47,265	48,442	49,896	51,392	52,934	54,522	56,158	467,587
District Watermain Rehabilitation	484,540	31,629	32,444	34,571	39,702	44,837	49,976	55,119	60,267	65,419	70,576	484,540
Sewer System Rehabilitation	418,689	25,663	27,274	31,346	36,713	41,812	46,700	50,000	51,500	53,045	54,636	418,689
Sewer Replacement Program	405,792	23,401	29,850	28,541	32,000	37,000	42,000	47,000	52,000	57,000	57,000	405,792
Humber WWTP - Liquid Treatment & Handling	318,424	6,739	11,025	23,245	28,245	43,225	43,225	42,000	35,600	25,120	60,000	318,424
Ashbridges Bay WWTP - Effluent	242,835	1,210	4,475	15,260	33,000	61,050	63,370	41,520	4,450	7,500	11,000	242,835
District Water Service Repair	180,626	12,641	17,622	18,675	17,186	17,702	18,233	18,780	19,343	19,923	20,521	180,626
Highland Creek & Humber WWTP Odour Control Projects	165,715	5,350	35,100	35,510	35,250	19,650	500	6,005	11,500	11,300	5,550	165,715
RL Clarck WTP R&R	139,197	9,995	10,855	11,050	12,965	12,884	12,849	12,599	16,000	20,000	20,000	139,197
Highland Creek WWTP Upgrades	128,121	11,969	31,543	29,873	36,255	15,561	1,720	1,200				128,121
Downtown Watermain Enhancement	65,889	25,251	25,318	15,298	15	7						65,889
Other SOGR (Including Health and Safety and Legislated) Projects	730,390	98,281	115,101	117,320	85,165	60,748	62,603	54,880	56,552	45,387	34,353	730,390
Sub-Total	5,370,144	358,501	508,599	545,560	551,924	578,693	557,152	562,509	555,376	559,436	592,394	5,370,144
Service Improvements												
Basement Flooding Relief	912,663	71,615	85,068	85,353	85,624	86,296	92,262	97,494	102,734	102,981	103,236	912,663
Don & Waterfront Trunk CSO	339,550	1,250	2,800	3,000	33,000	39,300	40,300	60,300	70,300	67,300	22,000	339,550
Water Metering Program	175,771	43,165	49,925	44,531	38,150							175,771
Highland Creek WWTP - Solids & Gas Handling	161,586	10,220	6,350	5,000	5,216	10,000	20,000	29,000	31,200	31,000	13,600	161,586
Storm Water Management End of Pipe Facilities	124,960	500	8,450	3,500	3,500	5,150	9,340	13,860	19,980	40,680	20,000	124,960
Implementation of the Wet Weather master Plan	65,260	7,023	8,049	7,244	4,702	3,367	5,875	6,500	6,500	6,500	9,500	65,260
Othere Service Improvement Projects	286,136	11,907	34,507	35,579	24,795	23,819	31,574	23,433	24,059	31,613	44,850	286,136
												-
Sub-Total	2,065,926	145,680	195,149	184,207	194,987	167,932	199,351	230,587	254,773	280,074	213,186	2,065,926
Growth Related												
Trunk Watermain Expansion and Upgrades	27,041	(1,399)	1,490	6,400	6,650	6,500	5,600	600	600	600		27,041
New Sewer Connections and Construction	268,484	12,984	18,500	24,500	29,500	29,500	29,500	29,500	31,500	31,500	31,500	268,484
Horgan WTP Expansion	18,100	1,050	2,550	5,965	4,810	1,225	500	500	500	500	500	18,100
Lawrence Allan Revitalization Plan	33,694	133		6,471	3,354	18,078	2,127	3,531				33,694
Other Growth Projects	401,839	8,927	16,292	10,214	12,315	24,827	32,905	51,407	75,155	84,890	84,907	401,839
Sub-Total	749,158	21,695	38,832	53,550	56,629	80,130	70,632	85,538	107,755	117,490	116,907	749,158
Total	8,185,228	525,876	742,580	783,317	803,540	826,755	827,135	878,634	917,904	957,000	922,487	8,185,228

The 10-Year Recommended Capital Plan supports Toronto Water's objectives and balances infrastructure renewal needs for State of Good Repair, new Service Improvement projects, and capacity to keep pace with population growth, while ensuring the delivery of water supply and wastewater treatment within an increasingly stringent regulatory framework.

While state of good repair projects remain a priority, given the significant backlog in infrastructure renewal, (estimated at $1.636 billion at the end of 2012) considerable funding is still provided to support the implementation of the Wet Weather Flow Master Plan, Basement Flooding and growth related projects, some of which is recovered from Development Charges. Additional financial pressures arising from cost increases associated with the Highland Creek Biosolids Disposal Truck Loading Facility and the Ashbridges Bay Wastewater Treatment Plant

Effluent UV Disinfection System, approved by Council in 2011, are also accommodated within the Plan, however, reducing SOGR project funding.

State of Good Repair (SOGR), Health & Safety, & Legislated

- A primary focus of the 2013-2022 Recommended Capital Plan is to undertake on-going state of good repair projects for linear infrastructure renewal ensuring the replacement or rehabilitation of aging watermains and sewers and investment in the City's aging wastewater treatment facilities. Approximately $5.370 billion or 66% of the total funding of $8.185 billion will be allocated to address the SOGR, health and safety and legislated projects over the next 10 years.
- State of Good Repair funding included in the 10-Year Recommended Capital Plan will address Toronto Water's SOGR backlog, currently estimated $1.636 billion by year end 2012 and projected to be reduced to $197.712 million by year-end 2022, if current funding allocated to State of Good Repair projects is not reduced over the next 10 years.
- The 2013 Recommended Capital Budget and 2014-2022 Recommended Capital Plan includes funding of $114.995 million to meet legislated requirements governing the Ashbridges Bay Wastewater Treatment Effluent System. Another $128.150 million is allocated to the legislated odour control projects at Highland Creek and Humber Wastewater treatment plants.

Service Improvements

- The updated Basement Flooding Relief Work Plan adopted in 2011, provided a multi-pronged (lot level, storm drainage, and sewer infrastructure improvements) adaptive management approach to reduce the risk of basement flooding experienced from more frequent extreme storms, capping cost to benefitting property at $32,000.
- Using this approach in all of the identified 34 chronic basement flooding areas, the 2013 Recommended Capital Budget and 2014-2022 Recommended Capital Plan will provide funding of $912.663 million or 44% to implement the Basement Flooding Relief Work Plan.
- The 2013 Recommended Capital Budget and 2014-2022 Recommended Capital Plan provides additional funding of $1.153 billion for other service improvement projects such as:
  - The Water Metering Program, approved by Council in 2008, which includes a systematic metering of the flat rate customers, the City-wide water meter replacement program coupled with the concurrent installation of automated meter reading technology to be completed by 2017 ($175.604 million). Based on the assumption that approximately $33.000 million per year will be realized once the Program is fully implemented through a combination of additional revenues and operating efficiencies, it is anticipated that this project will pay for itself in approximately 7 years
  - Stormwater Management End of Pipe Facilities projects to address most of the storm sewer discharges to the waterfront and all but 9 of the 69 combined sewer overflow discharges in the City ($124.960 million).

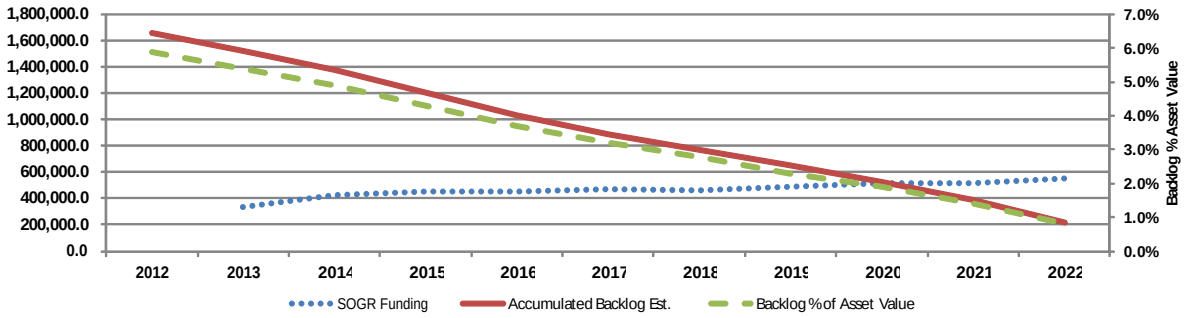
- The implementation of the Wet Weather Flow Master Plan to reduce and ultimately eliminate the adverse impacts of wet weather flow on the built and natural environments to achieve a measurable improvement in ecosystem health of the City's watersheds and waterfront, with emphasis on improving water quality along the City's waterfront beaches ($65.260 million).

Growth Related

- Funding of $138.919 million is included in 10-Year Recommended Capital Plan for the trunk watermain expansion and upgrade projects to increase the hydraulic capacity in the Toronto Water supply system. Many of these projects are cost shared with the Region of York.
- The 2013-2022 Recommended Capital Plan allocates $273.284 million in funding for the New Sewer Construction, New Water Main Construction and New Connection projects to provide the necessary servicing capacity for the projected population growth and for the installation of service connections for new homes and developments.
- The 10-Year Recommended Capital Plan provides funding of $61.924 million for design and installation of facilities to increase the production capacity of the F.J. Horgan Filtration Plant from 455 ML/d to 795 ML/d as the most cost efficient method of meeting forecasted increases in demand in the City of Toronto, as well as water supply to York Region as prescribed in the Toronto-York Region Agreement.

State of Good Repair (SOGR) Backlog

SOGR Funding & Backlog
(In $000s)



- The replacement value of Toronto Water's assets is estimated at $28.044 billion incorporating both linear (watermains, sewers) and facility/plant (water treatment plants, wastewater treatment plants, pumping stations) assets. Linear infrastructure assets represent approximately 75% of the total asset value at $20.948 billion, while facility/plant assets account for the remaining 25% or $7.095 billion.
- By year-end 2012, Toronto Water will have a backlog of a state of good repair work for linear and plant infrastructure renewal estimated at $1.636 billion, representing 5.8% of the asset replacement value. Approximately 64% or $1.053 million of the backlog relates to linear infrastructure, with the remaining 36% or $0.582 million representing facilities.
- The backlog estimate for the various facilities is based on detailed assessment/surveys undertaken in 2005 and 2008. Through these assessments, the facility backlog in 2008 was established as $520 million. In addition, an annual renewal need of $140 million was defined based on the forecasted life expectancy of various components of the facilities and their appraised replacement costs.
- The backlog estimate for linear infrastructure was established based on a probability model forecasting failure rates based on defined life expectancy ranges for a categorized list of pipes. This backlog was estimated to be $1.25 billion with an additional annual renewal rate of $111 million.
- The above linear infrastructure and facilities State of Good Repair backlog and annual renewal need estimates continue to be periodically updated to reflect changes in unit rates for replacement and changing condition of the asset.
- The 10-Year Recommended Capital Plan dedicates $4.685 billion ($2.141 billion during the first five years) or $468 million on average annually, to address state of good repair.
- Significant investments in water and wastewater infrastructure renewal projects will reduce the backlog of SOGR work to $869.339 million by year-end 2017, representing 3.0% of the asset replacement value. By year-end 2022, Toronto Water will have nearly addressed the

Program's SOGR backlog, estimated at $197.712 million or 0.7% of the asset replacement value, if SOGR capital funding is not reduced over the next ten years.

- State of good repair work is planned across all Toronto Water assets and is prioritized based on the criticality of the asset, the extent of redundancy built into the system in case of failure, the impact of a failure and the coordination of projects to avoid conflicts and reduce construction impact to the public. Method of construction is also factored in to reduce the backlog and trenchless technologies are used where feasible to reduce construction impact and overall cost of the project. All asset categories are currently being funded for SOGR purposes.
- The state of good repair backlog by asset category is presented in the table below:

SOGR Backlog by Asset Category

(In $000s)

Total	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
State of Good Repair Funding	295,909	406,695	426,301	457,268	454,009	470,071	465,544	488,270	513,417	519,073	557,311
Accumulated Backlog Est. (yr end)	1,635,837	1,499,464	1,351,441	1,179,046	1,014,827	869,339	750,253	627,180	499,584	367,286	197,712
Backlog % of Asset Value	5.83%	5.32%	4.77%	4.15%	3.56%	3.03%	2.60%	2.16%	1.71%	1.24%	0.66%
Asset Value	28,044,200	28,206,700	28,336,200	28,391,200	28,523,700	28,648,700	28,802,700	29,063,200	29,143,200	29,682,200	29,737,200
Facilities/ Plants											
State of Good Repair Funding	149,322	175,235	184,794	194,420	197,012	189,697	158,998	157,263	159,365	150,665	179,363
Accumulated Backlog Est. (yr end)	582,401	548,700	505,440	452,554	397,076	348,914	331,450	315,721	297,890	288,760	197,712
Backlog % of Asset Value	8.21%	7.56%	6.91%	6.18%	5.39%	4.69%	4.42%	4.11%	3.88%	3.59%	2.46%
Asset Value	7,095,303	7,257,803	7,319,803	7,319,803	7,373,303	7,443,303	7,494,303	7,674,803	7,674,803	8,036,803	8,036,803
Linear Infrastructure											
State of Good Repair Funding	146,587	231,460	241,506	262,848	256,997	280,374	306,546	331,007	354,052	368,408	377,948
Accumulated Backlog Est. (yr end)	1,053,436	950,764	846,001	726,492	617,750	520,425	418,803	311,459	201,694	78,526	0
Backlog % of Asset Value	5.03%	4.54%	4.03%	3.45%	2.92%	2.45%	1.97%	1.46%	0.94%	0.36%	0.00%
Asset Value	20,948,897	20,948,897	21,016,397	21,071,397	21,150,397	21,205,397	21,308,397	21,388,397	21,468,397	21,645,397	21,700,397

- By year-end 2012, accumulated state of good repair backlog for linear infrastructure will be $1.053 billion or 5% of its replacement value; and facility/plant assets accumulated state of good repair backlog will be valued at $0.582 billion, or 8% of their replacement value.
- While both categories of assets have historically received funding for state of good repair projects, accumulated backlog of projects for linear infrastructure has been addressed at a higher rate, resulting in a proportionally lower backlog representing 5% of its replacement value at the end of 2012, compared to 8% for facilities.
- Toronto Water is projecting significant a investment in the linear renewal program over the next 10 years. Approximately $301 million annually will be dedicated to linear infrastructure renewal needs for a total of $3.011 billion ($1.274 billion over the first five years), completely eliminating the state of good repair backlog for this category of assets by year 2022.
- The state of good repair of facilities/plants will be addressed by an annual funding of $175 million. Over the 10 year period approximately $1.747 billion ($0.941 billion during the first 5 year period) in funding will be invested in accumulated backlog of projects. By the end of 2022, accumulated state of good repair projects for this category of assets is estimated at $197.712 million or 2.5% of their replacement value (0.7% of the total asset replacement value).

- To address higher accumulated state of good repair backlog for facilities/plant assets, the 10 Year Recommended Capital Plan allocates a larger portion of funding to this category of assets during the first five years ($188 million) compared to the second five year period ($161 million).
- At the same time, funding for linear infrastructure state of good repair projects will have the opposite trend; an annual funding of $255 million will be invested during the first five year period, increasing to $348 million over the second five year period. This reflects previous levels of SOGR funding to accommodate emerging priorities with Toronto Water Capital Program.
- The above backlog reduction forecast can be detrimentally impacted if water consumption/revenues decline beyond the current forecasted declines, if replacement cost increase beyond the current rate of inflation or if other projects take priority over the sustained state of good repair backlog program.
- Refer to PART IV: ISSUES FOR DISCUSSION in this document for a more detailed discussion on the cause of Toronto Water's current SOGR backlog, the impact that this backlog has on residents, businesses and visitors of the City and infrastructure renewal projects that will address the backlog over the 2013 – 2022 Capital Plan period**.**

10-Year Capital Plan Impact on the Operating Budget

Operating Impact Summary

(In $000s)

Program Costs, Revenues and Net ($000s)	2013 Rec. Budget	2014 Plan	2015 Plan	2016 Plan	2017 Plan	2018 Plan	2019 Plan	2020 Plan	20201 Plan	2022 Plan	2013-2022 Total
2013 Recommended Capital Budget											
Program Gross Expenditure	5,562.0	2,432.0	247.0	147.0	5,220.0	5,530.0					19,138.0
Program Revenue	(113.0)										(113.0)
Program Costs (Net)	5,675.0	2,432.0	247.0	147.0	5,220.0	5,530.0					19,251.0
Approved Positions	2.0		3.0								5.0
Recommended 10-Year Capital Plan											
Program Gross Expenditure			100.0	100.0	100.0		53.0				353.0
Program Revenue											
Program Costs (Net)			100.0	100.0	100.0		53.0				353.0
Approved Positions			1.0	1.0	1.0						3.0
Total											
Program Gross Expenditure	5,562.0	2,432.0	347.0	247.0	5,320.0	5,530.0	53.0				19,491.0
Program Revenue	(113.0)										(113.0)
Program Cost (Net)	5,675.0	2,432.0	347.0	247.0	5,320.0	5,530.0	53.0				19,604.0
Approved Positions	2.0		4.0	1.0	1.0						8.0

The 10-Year Recommended Capital Plan will increase future year Operating Budgets by a total of $19.604 million net over the 2013 – 2022 period, as shown in the table above. Approved permanent positions will increase by 8 over the 10-year time frame.

- As a result of previously approved projects, new buildings and processes are coming on line in 2012, 2013 and 2014. Toronto Water requires additional chemicals, energy and utilities, as well as contracted services in the amount of $5.675 million in 2013, $2.432 million in

2014, $0.247 million in 2015, $0.147 million in 2016, $5.220 million in 2017 and $5.530 million in 2018.

- 2 additional staff positions are required in 2013 to ensure that expanded facilities at FJ Horgan Treatment Plant are properly maintained. Further increase of 3 positions is anticipated for the Ashbridges Bay Treatment Plant in 2015.
- In addition to the above, there will be operating cost increases in the total amount of $0.353 million ($0.100 million in each 2015, 2016 and 2017), emanating from the future Basement Relief Flooding projects, requiring one new position in each of those years.

Net operating impacts by capital projects are identified in the following table.

Net Operating Impact by Project
(In $000s)

	2013 Rec. Budget		2014 Plan		2015 Plan		2016 Plan		2017 Plan		2013 - 2017 Capital Budget		2018 - 2022 Capital Plan	
Project	$000s	Positions	$000s	Positions	$000s	Positions	$000s	Positions	$000s	Positions	$000s	Positions	$000s	Positions
Previously Approved Projects														
FJ Horgan WTP Expansion	1,552	2	1,249								2,801	2		
Engineering Studies - Corosion Control	2,157		1,083								3,240			
Ashbridges Bay WWTP Process Upgrades and Odor	1,707										1,707			
Humber Treatment Plant	100										100			
Highland Creek WWTP Process and Facility Upgrades	129										129			
Equipment Replacement and Rehabilitation	30										30			
Highland Creek WWTP Biosolids Treatment Upgrades									5,220		5,220		5,530	
Ashbridges Bay WWTP Building and Biofilter			100		247	3	147				494	3		
New Projects - Future Year														
Basement Flooding Relief					50	1	100	1	100	1	250	3	53	
SWM End of Pipe Facilities - North Toronto					50						50	-		
Total Recommended (Net)	**5,675**	**2**	**2,432**	**-**	**347**	**4**	**247**	**1**	**5,320**	**1**	**14,021**	**8**	**5,583**	**-**

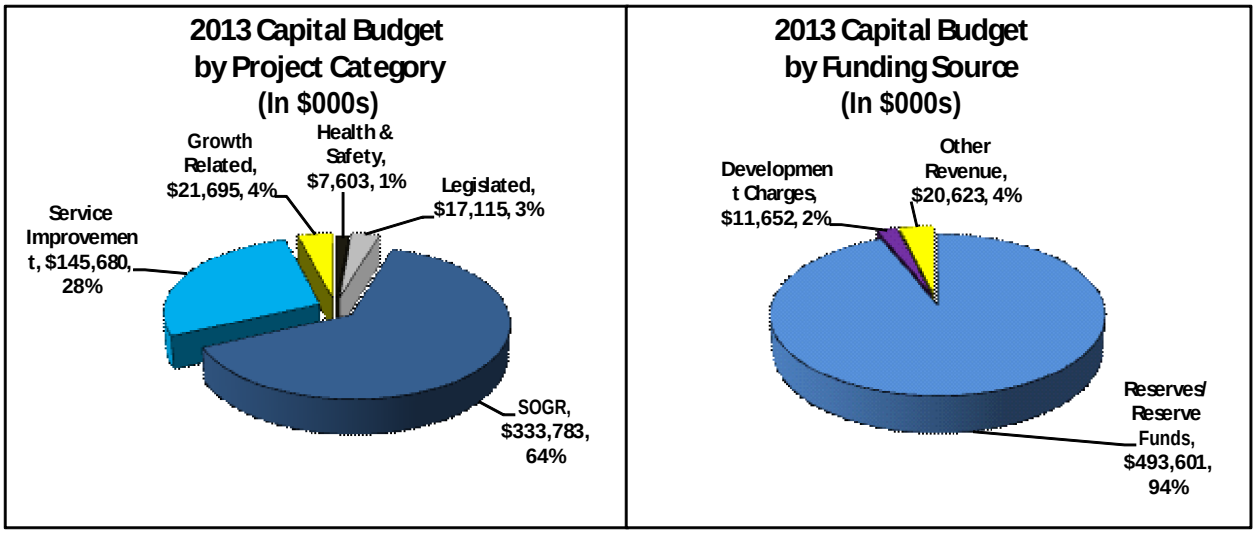
Toronto Water has identified 8 new positions arising from approval of the 2013-2022 Capital Plan. Capital projects with complement additions include:

- FJ Horgan Water Treatment Plant Expansion (2013 – 2 positions). These positions will be responsible for the mechanical maintenance of the additional equipment and service the electrical, instrumentation and electronic equipment installed to remotely operate; monitor and control the new treatment systems. .
- Ashbridges Bay Wastewater Treatment Plan Odour Control Engineering (2014 - 3 positions). This project will result in additional state of the art facilities which include significant new mechanical, electrical and instrumentation equipment reuiring 3 positions to ensure efficiency and reliability of the new assets.
- Basement Flooding Relief Work Plan (2015, 2016 and 2017 – one new position each year). The positions are required to ensure the ongoing operational and maintenance program to

reduce inflow and infiltration into the sanitary system, which includes sealing of manhole covers, manhole rehabilitation, sanitary sewer relining and cross connection elimination.

PART III - 2013 RECOMMENDED CAPITAL BUDGET

2013 Capital Budget by Project Category and Funding Source



* Excludes funds carried forward from 2012 to 2013

The 2013 Recommended Capital Budget requires 2013 cash flow funding of $525.876 million.

- Health and Safety projects represent $7.603 million or 1% of the 2013 Recommended Capital Budget and include building and electrical upgrades at wastewater treatment plants.
- Funding of $17.115 million or 3% of the 2013 Recommended Capital Budget is allocated to Legislated projects. The most significant project in 2013 is the District Water Service Repair project which includes Lead Water Service Replacement, accounting for approximately 50% of the funding for this category of projects in 2013.
- State of Good Repair projects account for $333.783 million or 64% of the 2013 Recommended Capital Budget providing funding to address emerging SOGR requirements as well as $136.373 million to address 8.3% of the current SOGR backlog of $1.636 billion. Approximately $125.676 million or 38% of the total SOGR funding will be dedicated to the watermain and sewer replacement and rehabilitation projects.
- Service Improvement projects represent 28% or $145.680 million of the total new cash flow for 2013. Examples of service improvement projects include biosolids treatment and disposal, wastewater treatment plant odour control, Water Metering Program, Basement Flooding Relief Work Plan, elements of the Wet Weather Flow Master Plan and, wastewater treatment plant optimization.
- Growth projects account for 4% or $21.695 million of total funding for 2013 and include initiatives for improving water efficiency, reducing water loss and expansion projects required for future water supply and wastewater treatment demand.

- Toronto Water's 2013 Recommended Capital Budget continues to be 100% self-sustaining from water rate revenues and does not require debenture financing. It does not impact the municipal property tax levy.
- The 2013 Recommended Capital Budget is funded primarily from the Program's reserves, which accounts for approximately 94% or $493.601 million of total financing.
- Development charges provide funding of $11.652 million or 2% of the 2013 Recommended Capital Budget.
- Capital cost sharing with York Region for construction of new water and sewer connections, represent 4% or $20.623 million of 2013 funding.

2013 Recommended Cash Flow & Future Year Commitments
(In $000s)

	2013 New Cash Flow Rec'd	2013 Total Cash Flow Rec'd	2012 Carry Forwards	Total 2013 Cash Flow (Incl 2012 C/Fwd)	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total Cost
Expenditures														
Previously Approved	527,842	527,842	131,390	659,232	386,809	334,712	206,080	115,026	123,831	102,395	45,303	33,932		2,007,320
Change in Scope	(102,450)	(102,450)		(102,450)	127,462	79,085	60,673	61,002	(26,834)	(5,190)	55,192	42,208	70,880	362,028
New	13,541	13,541		13,541										13,541
New w/Future Year	86,943	86,943		86,943	115,157	52,883	35,024	32,548	6,777	3,681	100	100		333,213
Total Expenditure	525,876	525,876	131,390	657,266	629,428	466,680	301,777	208,576	103,774	100,886	100,595	76,240	70,880	2,716,102
Financing														
Debt														
Reserves/Res Funds	493,601	493,601	123,607	617,208	594,728	440,151	293,858	197,550	96,346	80,045	69,911	55,627	50,793	2,496,217
Development Charges	11,652	11,652	3,323	14,975	13,217	10,974	5,666	7,710	3,082	2,813	2,809	744	529	62,519
Other	20,623	20,623	4,460	25,083	21,483	15,555	2,253	3,316	4,346	18,028	27,875	19,869	19,558	157,366
Total Financing	525,876	525,876	131,390	657,266	629,428	466,680	301,777	208,576	103,774	100,886	100,595	76,240	70,880	2,716,102

Toronto Water's 2013 Recommended Capital Budget is $657.266 million, including funding carried forward from 2012 into 2013 of $131.390 million. It includes previously approved 2013 commitment funding of $659.232 million, and ($1.966 million) for new/change in scope projects.

- In addition to previously approved future year commitments of $1.348 billion from 2014 to 2021, approval of the 2013 Recommended Capital Budget will result in adjustments to future year funding commitments for new/change in scope projects of $127.462 million in 2014; $79.085 million in 2015; $60.673 million in 2016; $61.002 million in 2017, ($26.834 million) in 2018, ($5.190 million) in 2019; $55.192 million in 2020, $42.208 million in 2021, and $70.880 million in 2022.
- The high rate of future year commitment funding reflects the nature of Toronto Water's capital program which includes many multi-year, multi-million dollar projects such as the Water Metering Program; Horgan Water Treatment Plant Expansion; Transmission Watermains; Wastewater Treatment Plant Upgrade Projects; Basement Flooding Relief Work Plan and Watermain Replacement. The use of multi-year contracts has allowed Toronto Water to increase its capital delivery rate.

2013 Recommended Capital Project Highlights

(In $000s)

Project	Total Project Cost	2013	2014	2015	2016	2017	2013 - 2017	2018	2019	2020	2021	2022	2013 - 2022 Total
ASHBRIDGES BAY T.P. - III YR2004	5,855	4,495	170	360	30		5,055			400	400		5,855
ASHBRIDGES BAY T.P. YR2006	7,528	4,825	2,525	168	10		7,528						7,528
ASHBRIDGES BAY TREATMENT PLANT - III	440	275	165				440						440
ASHBRIDGES BAY WWTP - BUILDING SERVICES & SITE DEV	14,155	420	1,170	1,300	3,200	3,960	10,050	2,950	1,145	10			14,155
ASHBRIDGES BAY WWTP - EFFLUENT SYSTEM	21,175	1,700	4,475	5,260	4,000	4,000	19,435	1,720	20				21,175
ASHBRIDGES BAY WWTP - LIQUID TREATMENT & HANDLING	205,670	23,208	48,264	49,175	34,205	32,200	187,052	3,000	3,000	3,000	3,000	6,618	205,670
ASHBRIDGES BAY WWTP - O&M UPGRADES	16,198	4,887	7,311	4,000			16,198						16,198
ASHBRIDGES BAY WWTP - ODOUR CONTROL	25,965	9,102	7,550	7,091	2,100	122	25,965						25,965
ASHBRIDGES BAY WWTP - SOLIDS & GAS HANDLING	51,340	2,950	9,000	16,710	14,510	2,040	45,210	2,030	2,000	2,000	100		51,340
ASHBRIDGES BAY WWTP REHAB	81,053	21,990	24,045	26,332	6,642	1,685	80,694	310	49				81,053
ASHRIDGES BAY TP YR2005	16,051	8,060	5,070	1,375	716	830	16,051						16,051
AVENUE ROAD TRUNK MAIN REPLACEMENT	8,935	5,217	1,518	1,500	700	0	8,935						8,935
BASEMENT FLOODING RELIEF	196,895	74,348	81,172	12,675	8,625	7,575	184,395	2,500	2,500	2,500	2,500	2,500	196,895
BAYVIEW TRUNK WATERMAIN - PH2	81,000						-	1,000	15,000	25,000	20,000	20,000	81,000
BUSINESS SYSTEM INFRASTRUCTURE - PW	26,465	11,747	6,640	6,023	1,305	250	25,965	150	150	100	100		26,465
CLARK RESIDUE MGMT. FACILITIES	750	450	200	100	0	0	750						750
CONVEYANCE CONTROLS - REPLC & REHAB	380	50		110	110	110	380						380
D2/D4 TRUNK WATERMAIN UPGRADES	2,470	650	650				1,300	100	200	320	550		2,470
DIST SEWER REHAB OPS YR2005	2,135	1,635	500				2,135						2,135
DIST W/M REHABILITATION	63,629	35,429	28,200				63,629						63,629
DIST W/M REPLACEMENT	65,179	51,106	14,073				65,179						65,179
DIST WATER SERVICE REPAIR	33,861	17,750	14,122	1,989			33,861						33,861
DISTRICT WATERMAINS - NEW	1,225	725	500				1,225						1,225
DON & WATERFRONT TRUNK CSO	20,450	1,450	2,800	3,000	3,000	3,000	13,250	1,800	1,800	1,800	1,800		20,450
DOWNTOWN W/M ENHANCEMENT	65,962	25,324	25,318	15,298	15	7	65,962						65,962
EMERY CREEK POND	4,810	60	1,650	2,550	550		4,810						4,810
ENGINEERING	36,685	23,685	4,000	9,000			36,685						36,685
ENGINEERING STUDIES	8,753	3,438	4,985	330			8,753						8,753
ENGINEERING YR2006	21,375	17,375	2,000	2,000			21,375						21,375
EQUIPMENT REPLACEMENT & REHABILITATION	9,890	2,052	3,058	3,500	830	450	9,890						9,890
F.J. HORGAN WTP R&R	5	5					5						5
FJ HORGAN W.T.P. R&R	18,300	1,250	2,550	5,965	4,810	1,225	15,800	500	500	500	500	500	18,300
HARRIS W.T.P. R&R	20,269	6,541	4,698	4,060	3,520	500	19,319	650		150		150	20,269
HIGHLAND CREEK T.P. - IV YR2004	554	260	81	213			554						554
HIGHLAND CREEK TP YR2005	561	370	160	17	10		557	4					561
HIGHLAND CREEK WWTP - BUILDING SERV & SITE DEV	14,000	2,500	500	4,000	4,000	3,000	14,000						14,000
HIGHLAND CREEK WWTP - ODOUR CONTROL	72,815	1,650	20,650	20,510	20,250	9,650	72,710	100	5				72,815
HIGHLAND CREEK WWTP - SOLIDS & GAS HANDLING	36,676	10,810	6,350	5,000	4,216	3,000	29,376	3,000	2,000	1,200	1,000	100	36,676
HIGHLAND CREEK WWTP UPGRADES	137,362	21,210	31,543	29,873	36,255	15,561	134,442	1,720	1,200				137,362
HORGAN TRUNK MAIN EXPANSION	49,210	210	200	3,200	5,200	10,200	19,010	10,200	10,000	10,000			49,210
HORGAN W.T.P. EXPANSION	16,390	8,790	6,600	1,000			16,390						16,390

2013 Recommended Capital Project Highlights - Continued

(In $000s)

Project	Total Project Cost	2013	2014	2015	2016	2017	2013 - 2017	2018	2019	2020	2021	2022	2013 - 2022 Total
HUMBER T.P.	10	10					10						10
HUMBER T.P. - II YR2004	500	348	97	55			500						500
HUMBER TP YR2005	4,571	3,134	731	605	101		4,571						4,571
HUMBER WWTP - LIQUID TREATMENT & HANDLING	278,790	7,105	11,025	23,245	28,245	43,225	112,845	43,225	42,000	35,600	25,120	20,000	278,790
HUMBER WWTP - O&M UPGRADES	24,620	11,870	7,750	4,000	1,000		24,620						24,620
HUMBER WWTP - ODOUR CONTROL	59,900	5,450	14,450	15,000	15,000	10,000	59,900						59,900
HUMBER WWTP UPGRADES	54,047	20,957	13,718	4,622	4,750	2,000	46,047	2,700	2,200	1,700	700	700	54,047
ISLAND PLANT WINTERIZATION	595	260	335				595						595
ISLAND W.T.P. R&R	2,500	200	1,050	200	200	200	1,850	200	200	200	50		2,500
ISLAND W.T.P. R&R	7,010	3,315	2,345	525	375	150	6,710		150			150	7,010
Land Acquisition for Source Water Protect	5,500	1,500	2,000	2,000			5,500						5,500
LAWRENCE ALLAN REVITALIZATION PLAN	33,694	133		6,471	3,354	18,078	28,036	2,127	3,531				33,694
METERING & METER READING SYS	175,771	43,165	49,925	44,531	38,150		175,771						175,771
NEW SERVICE CONNECTIONS	38,000	16,500	17,500	4,000			38,000						38,000
NEW SEWER CONSTRUCTION	1,701	701	1,000				1,701						1,701
NORTH TORONTO WTP UPGRADES	3,412	612	1,300	1,500			3,412						3,412
OPERATIONAL SUPPORT	24,415	2,015	3,900	4,000	5,000	5,000	19,915	4,500					24,415
PW ENGINEERING	12,222	2,422	1,775	1,675	1,500	2,000	9,372	2,500	350				12,222
REGENT PARK CAPITAL CONTRIBUTION	3,305	255		859	330	132	1,576	745	287	115	420	162	3,305
RL CLARK W.T.P. R&R	140,077	10,875	10,855	11,050	12,965	12,884	58,629	12,849	12,599	16,000	20,000	20,000	140,077
SEWAGE PUMPING STATION UPGRADES	27,144	6,475	6,755	4,800	5,030	2,990	26,050	1,094					27,144
SEWER ASSET PLANNING	43,057	7,860	8,197	9,000	9,000	9,000	43,057						43,057
SEWER REPLACEMENT PROGRAM	48,988	34,097	13,350	1,541			48,988						48,988
SEWER SYSTEM REHABILITATION	92,140	28,295	27,274	31,346	1,713	1,812	90,440	1,700					92,140
STREAM RESTORATION & EROSION CONTROL	22,000	6,500	8,000	7,500			22,000						22,000
SWITCH GEAR TRANSFORMER	15,487	1,152	5,000	6,900	2,435		15,487						15,487
SWM TRCA YR2006	3,830	3,830					3,830						3,830
SWM END OF PIPE FACILITIES	11,500	1,250	8,250	1,500	500		11,500						11,500
SWM SOURCE CONTROL PROG	1,100	250	150	150	250	150	950	150					1,100
TRANSMISSION OPERATIONS OPTIMIZER	600	600					600						600
TRANSMISSION R&R	16,310	4,120	3,750	5,395	2,725	320	16,310						16,310
TRUNK SEWER SYSTEM	47,348	7,448	23,275	13,125	3,000	500	47,348						47,348
TRUNK WATERMAIN EXPANSION	1,831	541	490	400	400		1,831						1,831
W&WW LABORATORIES	300	100	100	100			300						300
WATER EFFICIENCY PROGRAM	2,550	470	520	520	520	520	2,550						2,550
WATER STORAGE EXPANSION	11,343	6,279	339	4,725			11,343						11,343
WATER SUSTAINABILITY PROGRAM	14,800	500	4,000	5,300	5,000		14,800						14,800
WESTERN BEACHES RETROFIT	5,700	500	1,000	4,000	200		5,700						5,700
WET WEATHER FLOW MP	16,533	7,793	4,659	2,356	1,225	250	16,283	250					16,533
WM MARKHAM/SHEPPARD TO BAYVIEW/FINCH	100	100					100						100
YARD & BUILDING RENOVATION	380	280	100				380						380
Total (induding carry forward funding)	**2,716,102**	**657,266**	**629,428**	**466,680**	**301,777**	**208,576**	**2,263,727**	**103,774**	**100,886**	**100,595**	**76,240**	**70,880**	**2,716,102**

The 2013 Recommended Capital Budget provides funding of $525.876 million to:

- Continue state of good repair projects to address infrastructure renewal such as District Watermain Replacement and Rehabilitation ($118.885 million) and Sewer System Replacement and Rehabilitation ($127.800 million);
- Continue the implementation of the Wet Weather Flow Master Plan ($15.763 million);
- Continue the Basement Flooding Relief project ($194.162 million);
- Continue implementation of the Water Metering Program ($175.771 million);
- Complete Horgan Water Treatment Plant Expansion ($18.100 million);

- Complete the basement pipe rehabilitation at the Harris Water Treatment Plant and the lower building roof replacement at the Island Water Treatment Plant ($1.000 million);
- Complete Class EA studies for nine basement flooding area by the end of 2013.
- Begin the Transmission Operations Optimizer project ($0.600 million).

PART IV: ISSUES FOR DISCUSSION

2013 Issues

State of Good Repair (SOGR) Backlog

The water and wastewater infrastructure renewal backlog is a recognized problem within older municipalities across North America. The construction of water and wastewater infrastructure has generally aligned with urban growth cycles; and much of this older infrastructure is currently at or reaching the end of its expected service life.

- Toronto Water currently has a significant infrastructure renewal backlog, higher than any other major Canadian urban centre. With the largest asset base in the country, estimated at $28.044 billion and where some infrastructure dates back to the 1800s, much of this infrastructure is reaching the end of its expected service life resulting in an average of 1400 watermain breaks per year, currently the highest break rate in Ontario.
- For example, 14% of the City's 5,500 kilometers of watermain was installed before the 1920s, and the thinner-walled watermains installed in North York and parts of Scarborough during high growth periods in the 1950s, representing 16% of the watermain network, are also reaching the end of their lifecycle, resulting in a significant renewal backlog.
- The 10-Year Recommended Capital Plan provides State of Good Repair funding of $4.685 billion with annual cash flow funding of: 2013- $333.783 million; 2014 – $426.300 million; 2015 - $457.269 million; 2016 – $454.009 million; 2017 - $470.070 million; 2018 - $465.543 million; 2019 - $488.269 million; 2020 - $513.417 million; 2021 - $519.073 million; and, 2022 - $557.311 million that will contribute towards reducing the watermain break rate. The need to reduce pipe breaks and subsequent leaks is essential, not only to restore revenues from lost water sales but also to minimize the following:
  - Disruption to local residential; traffic; and, business activities.
  - Significant repair and rehabilitation costs for affected roads and underground utilities.
  - Risk to providing inadequate fire protection to high-rise buildings
  - Increased energy consumption and related CO2 emissions as pumps and motors must work harder to deliver service.
- The 2012 year-end value of the infrastructure renewal backlog is estimated at $1.636 billion, reflecting 6% of Toronto Water's total asset value of $28.044 billion. This is based on a detailed analysis of current condition assessments and assumptions of service life by asset class, coupled with recently completed assessments of water and wastewater treatment facilities.
- Toronto Water's State of Good Repair Backlog is currently forecasted to be nearly addressed within 10 years with sustained funding increases. The 10-Year Recommended Capital Plan includes annual funding of $468 million to address the state of good repair backlog, which will be reduced from $1.673 billion in 2012 to $197.712 million by 2022.

- Linear infrastructure renewal projects over the next 10 years will result in extensive construction across the City within the roadways. To minimize disruption to the public, extensive coordination with all stakeholders will be required although scheduling may be impacted as an outcome of the coordination process.
- The above backlog reduction forecast however, can be detrimentally impacted if water consumption/revenues decline beyond the current forecasted declines, if replacement cost increase beyond the current rate of inflation or if other key projects take priority over the state of good repair backlog program.
- For the purposes of the State of Good Repair Backlog analysis, the City's stormwater management facilities, including stormwater ponds and underground storage tanks have not been included as they are relatively new infrastructure. Further, stream restoration needs to address existing erosion scars across the City; and mitigate future steam erosion are also not included in the analysis.

Extreme Weather Events

- The City of Toronto has experienced wide spread surface and basement flooding as a result of extreme storm events. On August 19, 2005, for example, over 4,200 basement flooding complaints were received by Toronto Water, as a result of an extreme storm which exceeded a 1 in 100 year return frequency.
- The most impacted areas were those the City developed during the 1950s and 1960s, with separated storm and sanitary sewer systems, and which have also had a history of basement flooding complaints during extreme storm events.
- In April 2006, Council approved a Basement Flooding Protection Work Plan requiring a comprehensive engineering review to address chronic basement flooding problems. 32 Chronic Basement Flooding Study Areas have been identified, across the City. The engineering reviews have noted that the existing sewer systems perform as designed, but are unable to accommodate the storm runoff volumes from these extreme storms, which have been occurring more frequently, and may be attributed to the impacts of climate change.
- In approving the Work Plan, Council adopted enhancements to the design of the sanitary sewer and storm drainage systems, in chronic basement flooding prone areas. These enhancements provide a higher level of protection against basement flooding than currently provided by the existing storm and sanitary sewer systems. As directed by Council, storm drainage improvement works to provide protection from a 1 in 100 year return frequency storm event, up from the current 1 in 2 to 1 in 5 year return frequency storm, are being implemented where feasible, as part of the City's Climate Change Adaptation Strategy.
- In 2012, subsequent to the approval of the Basement Flooding Protection Work Plan, another 2 Chronic Basement Flooding Study Areas were added to the Plan, thus bringing the total amount of study areas to 34.

- These Basement Flooding area studies follow the Municipal Class Environmental Assessment process, wherein a wide range of options including lot level controls, storm sewer inlet controls, sewer system improvements and storm drainage system improvements, are considered, with input from the local community. As of the end of 2011, seven studies have been completed. Construction for the first set of remedial works (from the first four of the completed studies) began in earnest in late 2009. All 34 of the Basement Flooding Protection Program studies are to be completed by the end of 2014.
- Many challenges exist with the implementation of works recommended by the EA studies, and retrofitting an area to accommodate the higher level of storm drainage and overland flow controls in existing fully developed areas present the most significant challenge in terms of cost, scheduling and disruption to the local communities.
- In September 2011, Council in reviewing the staff report *PW7.6 Wet Weather Flow Master Plan and Basement Flooding Protection Program Update*, approved a prioritization for the implementation of works, across all study areas, based on the estimated cost of the work to the City apportioned to each benefiting property.
  - Works exceeding the $0.032 million per benefiting property threshold are to be implemented only as appropriate funding opportunities are available, through other City infrastructure renewal programs, or third party funding which will reduce the City's cost per benefiting property.
- The 2013 Recommended Capital Budget and 2014 – 2022 Recommended Capital Plan includes $912.663 million in funding for Basement Flooding Relief projects. The cost to implement priority projects across all 34 study areas will be updated, on an annual basis with subsequent Capital Budget submissions, as Class Environmental Assessment Studies are completed.

Recent and Emerging Provincial Regulations

- The provision of water and wastewater services in Ontario continues to experience increased legislative and regulatory reform. In the post-Walkerton period, greater attention has been paid to drinking water quality and there is increased acceptance of the importance of a multi-barrier approach. Changes which occurred through the Safe Drinking Water Act and the Drinking Water Protection Regulations have resulted in capital budget pressures for Toronto Water over the past several years.
- The following provides a summary of the key provincial regulation changes in recent years. There remain a number of very significant changes in the regulatory framework of the industry about which little information is presently known. For example, the Province is still developing the requirements beyond the conceptual framework for the Sustainable Water and Sewage Systems Act.
- ***Bill 195, Safe Drinking Water Act:*** The Act expands on existing policy and practice for water testing for the protection of human health and the prevention of drinking water health hazards. Regulations passed under the Act require municipalities to publish annual reports describing the operation of the water system and the results of testing required to ensure that residents are provided with safe drinking water.

- Amendments to Ontario Regulation 170/03 for large municipal residential systems included a new requirement where, as a result of having the 2 of 3 rounds of regulated testing, exceeding the Ontario Ministry of the Environment (MOE) water quality standard for lead of 10 parts per billion, in more than 10% of drinking water samples, a Corrosion Control Plan for the City of Toronto, was developed and submitted to MOE for their approval in 2010.
- Subject to approval from MOE, it is anticipated that the Corrosion Control Plan will be fully implemented by 2013. The estimated capital cost to implement corrosion control (new infrastructure) at all four water treatment plants were $7.275 million with an annual estimated operating impact of $1.250 million per year. In order to reduce the risk of lead in drinking water, it is likely that corrosion control will be a permanent measure as small amounts of lead may continue to leach from private side lead pipes that have not been replaced, internal plumbing containing lead solder joints and brass fixtures.
- In February, 2011, Council approved a multi-faceted Lead in Drinking Water Mitigation Strategy which includes the implementation of the Corrosion Control Plan, once approved, and the continued replacement of the City owned sections of lead water service connections, in conjunction with the City's planned infrastructure renewal projects, and priority replacements of individual connections meeting prescribed criteria. This is complemented with a Faucet Filter Program, which provides free faucet mounted lead removal filters to high risk and low income households; and a onetime only free faucet filter to households, following the replacement of the City owned section of the water service, to address the potential temporary increase in drinking water lead levels following the replacement.

- ***Bill 43, Clean Water Act:*** This Act provides protection for municipal drinking water supplies through developing collaborative; locally driven; science-based protection plans by municipalities; conservation authorities; and, the public. Source Water Protection Plans are to be submitted to the Ontario Ministry of the Environment in 2012 for final approval. The City of Toronto has senior staff representation from Toronto Water and Toronto Public Health on the CTC Source Protection Committee. This Committee, led through the Toronto and Region Conservation Authority, is overseeing the development of a Source Protection Plan for the Toronto area, including a focus on the near shore area of Lake Ontario: Toronto's source water. The Plan, once developed, may have implications for the implementation schedule of the City of Toronto's Wet Weather Flow Master Plan, considered a foundation for the Plan.
- ***Canada-Wide Strategy for the Management of Municipal Wastewater***: This Strategy, which was endorsed by the Council of Ministers of the Environment (CCME) on February 17, 2009, sets out a harmonized framework to manage discharges from more than 3,500 wastewater facilities in Canada. The proposed Regulations developed under the Fisheries Act were to set national effluent quality standards for specified deleterious substances in effluent discharged from wastewater systems

- Federal Wastewater Systems Effluent Regulations were enacted on July 18, 2012 and they include new regulations that could result in increases to both operating and capital costs for Toronto Water. They also mandate enforcement activities with potential penalties for non-compliance. At this time the total magnitude of the financial impact is still unknown. Some of the regulations involve:
  - Eliminating chlorinated effluent from Ashbridges Bay Wastewater Treatment Plant by January 1, 2015.
  - Measuring and reporting all combined sewer overflows within the City.

- As noted above, the full financial implications arising from the new and emerging provincial government legislation is not known at this time. Toronto Water has included project costs in the 2013 Recommended Capital Budget and 2014-2022 Recommended Capital Plan based on current information, where possible. Funding for legislative projects is expected to increase significantly in future years as regulations governing water and wastewater services continue to evolve.

Future Year Issues

Water Consumption Forecast

- As noted in the accompanying 2013 Water and Wastewater Rates report, there has been a trend towards reduced water consumption over the last decade, despite population growth. Toronto's water consumption projected to 2012 year-end is estimated at 335 million cubic metres, which represents a substantial drop from 374 million cubic meters consumed in 2005. Besides weather conditions, the decline in water consumption is attributed to water efficiency measures and economic factors.
- 2012 water consumption is expected to be about 0.7% lower than 2011 actual consumption. The base forecasted consumption utilized in water rate modeling for the following years is estimated to decrease by 1.5% in each year until 2015.
- Adjusting the water consumption forecast from the 2012 rate model results in a decrease in anticipated water rate revenues of $27.667 million in 2013 and approximately $350.1 million over the 10-year planning period.

Capital Funding Pressures and Unfunded Emerging Capital Priorities

- While Toronto Water's Capital Program continues to be 100% self sustaining, largely through water revenues (with no debenture financing and no impact on the municipal property tax levy), declining water consumption trends accelerated capital spending and emerging priorities have placed significant pressure on the long term capital program.
- Accelerated capital spending and lower water consumption in 2009 and 2010, resulted in a depleted balance in Water Capital Financing Reserves in 2011. Therefore, in 2012, Toronto Water's portfolio of capital project had to be reduced by $1.132 billion or 14% compared to the 2011 – 2020 Approved Capital Plan, in order to replenish the Water Stabilization

Reserve and to re-establish a sufficient Water Capital Financing Reserve balances by 2014 ($60 million from 2012-2014), affecting the following projects:

- Watermain Renewal (Replacement & Rehabilitation) projects to address state of good repair issues were reduced by a total of $185.493 million from 2012 to 2020.
- Wet Weather Flow Master Plan projects were reduced by a total of $436.578 million from 2012 to 2020;
- Storage and Pumping Facilities projects were reduced by a total of $370.768 million from 2012 to 2020;
- Transmission Watermain projects were reduced by a total of $308.474 million from 2012 to 2020; and
- Basement flooding program projects were reduced by a total of $127.306 million from 2012 to 2020.

- Concurrently with deferring $1.132 billion worth of projects in 2012, there is an estimated $540 million in funding required to address unbudgeted projects, bringing the total capital funding pressures to close to $1.7 billion. At the same time, demand is increasing to reinstate funding that was deferred for programs such as basement flooding protection and combined sewer overflow control projects, resulting in a number of competing priorities and significant funding pressures for Toronto Water.
- A report titled *"Toronto Water Capital Program Funding Pressures and Financing Options*" from the General Manager, Toronto Water, prepared in response to Council's directive during the 2012 Budget Process to report to Budget Committee on strategies to maximize funding capacity and/or provide reductions in current project costs to address existing and emerging unfunded capital priorities prior to the 2013 Capital Process, was considered and approved by Council at its meeting on October 30, 31 and November 1, 2012.
- The report outlines the following unbudgeted capital pressures:

Project/ Program	2012-2021 $ millions	2022-2031 $ millions
Ashbridges Bay Wastewater Treatment Plant (Pumping Station & Outfall)	89.0	322.4
Wastewater Treatment Plants - Digester Cleaning and Repairs	80.0	TBD
Wet Weather Flow Master Plan		
Don River & Central Waterfront Project	29.0	691.5
Basement Flooding Protection Program	75.0	TBD
Etobicoke Waterfront Stormwater Control		67.5
Waterfront Landforms	53.2	TBD
Water Treatment and Supply – Standy Power	22.0	88.0
Growth Related Projects		
Waterfront Development – Sanitary Sewer Master Servicing Plan	36.0	TBD
Lawrence Heights	31.3	25.7
Downsview Park	8.0	
Metrolinx/TTC Transit Project – Sewer & Watermain Infrastructure Upgrades	62.0	TBD
TRCA Priority Lakefront Erosion Control Projects	35.0	TBD
Total Unbudgeted Pressures	**540.5**	**1,195.1**

- In order to mitigate capital funding pressures the following financing options were considered:
  - Water Rate increases, beyond the existing plan of 3%, beginning in 2015;
  - Debenture financing for large scale, long service period projects beginning in 2014, with all debt service costs to be paid from water rate revenue;
  - Introducing a fixed charge to provide a dedicated reserve for wet weather flow control projects including basement flooding protection, beginning in 2015;
  - Increasing development charge recoveries which may be realized through the forthcoming update to the 2013 Development Charges Background Study; and
  - Opportunities to secure funding from the Federal and Provincial Governments for Lake Ontario water quality improvement projects.
- At its meeting of November 29, 30 and December 1, 2011, Council directed the Deputy City Manager and Chief Financial Officer, and General Manager, Toronto Water to report to Executive Committee on the above financing options in June 2013, in advance of Toronto Water's long term Capital Plan. Council also requested that as part of the same report, consideration be given to a property owner's ability to pay in establishing the water rate and/or water rate increases, and with respect of the introduction of any fixed charge for the Wet Weather Program.
- Although funding from water and wastewater surcharges provides sufficient financing for the capital program set out in the 2013 Recommended Capital Budget and 2014-2022 Recommended Capital Plan, while maintaining relatively healthy Water and Wastewater

Capital Reserve balances, it is important to note that this funding, apart from the Phase 1 of the Lawrence Heights Project ($33.694 million), does not address any other capital pressures outlined above.

- Although the Water Capital Financing Reserve balance which was significantly reduced by the end of 2011, will be reinstated by the end of 2013, generated revenues will not provide sufficient funding to accommodate any pressures beyond the capital program already included in the 2013-2022 Recommended Capital Budget and Plan.

Additional Capital and Operating Costs for Budgeted Projects

- As a result of Council decisions related to biosolids strategy for the Highland Creek Wastewater Treatment Plant and Ultraviolet disinfection for the secondary effluent streams and the use of liquid sodium bisulphite for disinfection in primary effluent streams at the Ashbridges Bay Wastewater Treatment Plant, Toronto Water's wastewater treatment capital costs increased by approximately $95.5 million over the 10-Year planning period (2012-2021).
- At this stage, additional upgrades, particularly for digesters, at the Highland Creek Wastewater Treatment Plant have been identified in order to meet the Ministry of Environment's strict biosolids land application regulatory requirements. Also, the placement and construction of the truck loading facility at the site has proven to be more challenging than anticipated. An additional Class Environmental Assessment (EA) will be needed as indicated by the Ministry of the Environment given the change in technology. This additional EA is estimated to cost approximately $0.500 – $1.0 million provided it can be completed within 12 months.
- Given the release of new Federal Wastewater Systems Effluent Regulations in July 2012, the City of Toronto is under tight timelines to comply with new requirements for the discharge of effluent from Ashbridges Bay Treatment Plant, in particular the strict discharge limits for total residual chlorine by 2015.

Appendix 1

2012 Performance

2012 Key Accomplishments

In 2012, Toronto Water accomplished the following:

- ✓ Maintained a 100% full compliance rating for all water and wastewater treatment facilities with respect to Ministry of Environment inspections.
- ✓ Completed basement flooding Class EA studies to investigate the causes of basement and surface flooding and make recommendations to reduce the risk of future flooding in 7 basement flooding areas.
  - ➢ By the end of 2012, studies for 15 basement flooding areas will be completed. Wards include: 1, 3, 4, 7, 8, 9, 10, 12, 15, 17, 23, 24, 29, 30, 31, 32, 33, 36, 37, 39, and 40.
  - ➢ In 2013/2014, studies for 19 basement flooding areas will be ongoing and are expected to be completed by the end of 2014. Wards include: 7, 8, 9, 10, 11, 13, 15, 16, 23, 24, 25, 26, 31, and 34.
- ✓ Selected as the 2012 Recipient of the Living City Award for Healthy Rivers and Shorelines for design and construction of the Earl Bales Stormwater Management Facility.
- ✓ Anticipating completion of the following Wet Weather Flow Master Plan Environmental Assessment (EA) studies by the end of 2012: Don River and Central Water Front Class EA; Etobicoke Waterfront Stormwater Management Facilities Class EA; Duncan Creek Erosion Control and Creek Restoration Master Plan Class EA; and Mud Creek Geomorphic Systems Master Plan Class EA.
- ✓ Anticipating completion of the Waterfront Sanitary Service Master Plan Class Environmental Assessment for Portlands Acceleration Initiative by the end of 2012, to support the sanitary sewer servicing needs for the redevelopment of this waterfront area.
- ✓ By the end of 2012 or early 2013 the following major capital projects will be completed: Coxwell Sanitary Trunk Sewer Bypass; Avenue Road Trunk Watermain; F.J. Horgan Water Treatment Expansion; Ashbridges Bay WWTP Primary Treatment and Odour Control (D-Building); Milliken Pumping Station and Reservoir; and Dufferin Reservoir.

2012 Capital Variance Review

2012 Budget to Actual Comparison
(In $000s)

2012 Approved	Actuals as of Sept. 30, 2012 (3rd Quarter Variance)		Projected Actuals at Year End		Unspent Balance	
$	$	% Spent	$	% Spent	$ Unspent	% Unspent
642,716	234,500	36.5%	**486,337**	**75.7%**	156,379	**24.3%**

Capital expenditure for the period ending September 30, 2012, total $234.500 million or 36.5% of the 2012 Approved Capital Budget of $642.716 million.

- This level of capital budget spending is lower than expected as the tendering of contracts across the program was delayed as a result of labour disruption planning. In addition, favourable contract pricing resulted in lower than forecasted expenditures. The following projects were mostly affected:
  - Multiple contracts nearing completion with unspent contingency (approximately $50.0 million).
  - 4 sewer contracts including one basement flooding project delayed due to poor site/ground conditions impacting design (approximately $15.0 million).
  - 4 basement flooding contracts and 2 process control system (PCS) contracts with favourable pricing (approximately $20 million).
- Toronto Water is projecting spending of $486.337 million or 75.7% of the 2012 Approved Capital Budget by year-end, as impacts of the above will continue throughout the year. Additionally, it is unlikely that approximately $6 million the approved project budgets allocated towards contract contingency will be spent.The projected year-end under-spending is largely attributable to the following projects:
  - Basement flooding.
  - Avenue Road accelerated construction in 2011 with completion in 2012.
  - Ashbridges Bay Treatment Plant D Building Odour Control project – unspent contingency.
  - Storage and Pumping Station projects nearing completion.
  - Watermain and Sewer replacement tendering delays.
- In 2012, significant progress will continue to be made on state of good projects to address infrastructure renewal; the Ashbridges Bay Treatment Plant; RL Clark Treatment Plant, implementation of the Wet Weather Flow Master Plan; the Basement Flooding Relief project; and implementation of the Water Metering Program.
- Capital projects projected for completion in 2012 include:

- Avenue Road Watermain Replacement.
- Expansion of Miliken Pumping Station and Reservoar.
- Expansion of Dufferin Reservoir.
- F.J. Horgan Water Treatment Plant.
- Ashbridges Bay Wastewater Primary Treatment and Odour Control (D-Building).
- Coxwell Trunk Sewer By-Pass.

2012 Carryforward Funding into 2013

- The funding from 2012 carried forward into 2013 included in the 2013 Capital Budget is $131.390 million. Significant projects requiring carry forward funding include the following:
- State of Good Repair (including Legislated and Health and Safety) projects such as water service repairs, water main and sewer rehabilitation and replacement, Highland Creek and Ashbridges Wastewater Treatment Plant upgrades and rehabilitation projects totaling $90.060 million.
- Service Improvement projects such as Basement Flooding Relief, Storm Water Management End of Pipe Facilities and Wet Weather Flow Master Plan for a total of $22.541 million.
- Growth Related projects such as water storage expansion projects and new sewer construction projects of $18.789 million.

Appendix 2
10-Year Recommended Capital Plan Project Summary
(In $000s)

Project	2013	2014	2015	2016	2017	2013 - 2017	2018	2019	2020	2021	2022	2013 - 2022
ASHBRIDGES BAY T.P. - III YR2004	4,495	170	360	30		5,055			400	400		**5,855**
ASHBRIDGES BAY T.P. YR2006	4,825	2,525	168	10		7,528						**7,528**
ASHBRIDGES BAY TREATMENT PLANT - III	275	165				440						**440**
ASHBRIDGES BAY WWTP - BUILDING SERVICES & SITE DEV	420	1,170	1,300	3,200	3,960	10,050	2,950	1,145	10		2,000	**16,155**
ASHBRIDGES BAY WWTP - EFFLUENT SYSTEM	1,700	4,475	15,260	33,000	61,050	115,485	63,370	41,520	4,450	7,500	11,000	**243,325**
ASHBRIDGES BAY WWTP - LIQUID TREATMENT & HANDLING	23,208	48,264	49,175	59,205	69,200	249,052	58,000	68,000	73,000	73,000	71,780	**592,832**
ASHBRIDGES BAY WWTP - O&M UPGRADES	4,887	7,311	4,000		100	16,298	1,300	20	20		5,000	**22,638**
ASHBRIDGES BAY WWTP - ODOUR CONTROL	9,102	7,550	7,091	2,100	122	25,965						**25,965**
ASHBRIDGES BAY WWTP - SOLIDS & GAS HANDLING	2,950	9,000	16,710	19,510	17,040	65,210	22,030	17,000	17,000	15,100		**136,340**
ASHBRIDGES BAY WWTP REHAB	21,990	24,045	26,872	15,002	21,785	109,694	15,130	14,869	14,820	14,820	14,820	**184,153**
ASHRIDGES BAY TP YR2005	8,060	5,070	1,375	716	830	16,051						**16,051**
AVENUE ROAD TRUNKMAIN REPLACEMENT	5,217	1,518	1,500	700		8,935						**8,935**
BASEMENT FLOODING RELIEF	74,348	85,068	85,353	85,624	86,296	416,689	92,262	97,494	102,734	102,981	103,236	**915,396**
BAYVIEW TRUNK WATERMAIN - PH2		400	100	400	4,000	4,900	5,000	15,000	25,000	20,000	20,000	**89,900**
BUSINESS SYSTEM INFRASTRUCTURE - PW	11,747	9,875	6,023	2,098	1,807	31,550	3,044	1,660	1,650	1,260	720	**39,884**
CLARK RESIDUE MGMT. FACILITIES	450	200	100			750						**750**
CONVEYANCE CONTROLS - REPLC & REHAB	50		110	110	110	380						**380**
D2/ D4 TRUNK WATERMAIN UPGRADES	650	650		450	650	2,400	2,050	9,400	22,520	45,950	28,225	**110,545**
DIST SEWER REHAB OPS YR2005	1,635	500				2,135						**2,135**
DIST W/M REHABILITATION	35,429	32,444	34,571	39,702	44,837	186,983	49,976	55,119	60,267	65,419	70,576	**488,340**
DIST W/M REPLACEMENT	51,106	45,573	58,500	70,000	80,000	305,179	90,000	98,000	107,000	112,000	114,000	**826,179**
DIST WATER SERVICE REPAIR	17,750	17,622	18,675	17,186	17,702	88,935	18,233	18,780	19,343	19,923	20,521	**185,735**
DISTRICT WATERMAINS - NEW	725	500	500	500	500	2,725	500	500	500	500	500	**5,225**
DON & WATERFRONT TRUNK CSO	1,450	2,800	3,000	33,000	39,300	79,550	40,300	60,300	70,300	67,300	22,000	**339,750**
DOWNTOWN W/M ENHANCEMENT	25,324	25,318	15,298	15	7	65,962						**65,962**
EMERY CREEK POND	60	1,650	2,550	550		4,810						**4,810**
ENGINEERING	23,685	41,010	47,121	47,265	48,442	207,523	49,896	51,392	52,934	54,522	56,158	**472,425**
ENGINEERING STUDIES	3,438	4,985	330	0	1,175	9,928	1,325	1,175	1,325	1,175	1,175	**16,103**
ENGINEERING YR2006	17,375	4,652	4,732	2,814	2,898	32,471	2,985	3,075	3,167	3,262	3,360	**48,320**
EQUIPMENT REPLACEMENT & REHABILITATION	2,052	3,058	3,500	830	450	9,890						**9,890**
F.J. HORGAN WTP R&R	5	0	0	0	0	5						**5**
FJ HORGAN W.T.P. R&R	1,250	2,550	5,965	4,810	1,225	15,800	500	500	500	500	500	**18,300**
HARRIS W.T.P. R&R	6,541	5,148	5,060	8,020	7,000	31,769	15,150	8,000	8,150	8,000	8,150	**79,219**
HIGHLAND CREEK T.P. - IV YR2004	260	81	213			554						**554**
HIGHLAND CREEK TP YR2005	370	160	17	10		557	4					**561**
HIGHLAND CREEK WWTP - BUILDING SERV & SITE DEV	2,500	500	4,000	4,000	3,000	14,000						**14,000**
HIGHLAND CREEK WWTP - O&M UPGRADES		250	250			500					8,000	**8,500**
HIGHLAND CREEK WWTP - ODOUR CONTROL	1,650	20,650	20,510	20,250	9,650	72,710	500	6,005	11,500	11,300	5,550	**107,565**
HIGHLAND CREEK WWTP - SOLIDS & GAS HANDLING	10,810	6,350	5,000	5,216	10,000	37,376	20,000	29,000	31,200	31,000	13,600	**162,176**
HIGHLAND CREEK WWTP UPGRADES	21,210	31,543	29,873	36,255	15,561	134,442	1,720	1,200				**137,362**

Appendix 2 - Continued
10-Year Recommended Capital Plan Project Summary
(In $000s)

Project	2013	2014	2015	2016	2017	2013 - 2017	2018	2019	2020	2021	2022	2013 - 2022
HORGAN TRUNK MAIN EXPANSION	210	200	3,200	5,200	10,200	19,010	10,200	10,000	10,000			**49,210**
HORGAN W.T.P. EXPANSION	8,790	6,600	1,000			16,390						**16,390**
HUMBER T.P.	10					10						**10**
HUMBER T.P. - II YR2004	348	97	55			500						**500**
HUMBER TP YR2005	3,134	731	605	101		4,571						**4,571**
HUMBER WWTP - LIQUID TREATMENT & HANDLING	7,105	11,025	23,245	28,245	43,225	112,845	43,225	42,000	35,600	25,120	60,000	**318,790**
HUMBER WWTP - O&M UPGRADES	11,870	7,750	4,000	1,000		24,620						**24,620**
HUMBER WWTP - ODOUR CONTROL	5,450	14,450	15,000	15,000	10,000	59,900						**59,900**
HUMBER WWTP UPGRADES	20,957	13,718	4,622	4,750	2,000	46,047	3,450	5,635	5,700	2,340	700	**63,872**
ISLAND PLANT WINTERIZATION	260	335				595						**595**
ISLAND W.T.P. R&R	200	1,050	5,200	5,200	8,200	19,850	8,200	8,200	7,700	3,550		**47,500**
ISLAND W.T.P. R&R	3,315	2,345	3,825	720	155	10,360	5	150			150	**10,665**
Land Acquisition for Source Water Protect	1,500	2,000	2,000			5,500						**5,500**
METERING & METER READING SYS	43,165	49,925	44,531	38,150		175,771						**175,771**
NEW SERVICE CONNECTIONS	16,500	17,500	17,500	17,500	17,500	86,500	17,500	17,500	17,500	17,500	17,500	**174,000**
NEW SEWER CONSTRUCTION	701	1,000	7,000	12,000	12,000	32,701	12,000	12,000	14,000	14,000	14,000	**98,701**
NORTH TORONTO WTP UPGRADES	612	1,300	1,500			3,412						**3,412**
OPERATIONAL SUPPORT	2,015	4,600	5,350	6,200	6,200	24,365	5,700	1,200	1,200	1,700	4,600	**38,765**
PW ENGINEERING	2,422	1,775	2,175	2,900	3,400	12,672	3,900	1,750	1,400	1,400	900	**22,022**
REGENT PARK CAPITAL CONTRIBUTION	255		859	330	132	1,576	745	287	115	420		**3,143**
LAWRENCE ALLAN REVITALIZATION PLAN	133		6,471	3,354	18,078	28,036	2,127	3,531				**33,694**
RL CLARK W.T.P. R&R	10,875	10,855	11,050	12,965	12,884	58,629	12,849	12,599	16,000	20,000	20,000	**140,077**
SEWAGE PUMPING STATION UPGRADES	6,475	6,755	4,800	5,030	2,990	26,050	1,094					**27,144**
SEWER ASSET PLANNING	7,860	8,197	9,000	9,400	9,750	44,207	10,850	10,850	10,850	10,850	10,850	**98,457**
SEWER REPLACEMENT PROGRAM	34,097	29,850	28,541	32,000	37,000	161,488	42,000	47,000	52,000	57,000	57,000	**416,488**
SEWER SYSTEM REHABILITATION	28,295	27,274	31,346	36,713	41,812	165,440	46,700	50,000	51,500	53,045	54,636	**421,321**
STREAM RESTORATION & EROSION CONTROL	6,500	8,000	9,000	9,000	9,000	41,500	9,000	9,000	9,500	9,500	9,500	**88,000**
SWITCH GEAR TRANSFORMER	1,152	5,000	6,900	2,435		15,487						**15,487**
SWM TRCA YR2006	3,830	3,925	4,021	4,122	4,225	20,123	4,330	4,438	4,549	4,663	4,780	**42,883**
SWM END OF PIPE FACILITIES	1,250	8,450	3,500	3,500	5,150	21,850	9,340	13,860	19,980	40,680	20,000	**125,710**
SWM SOURCE CONTROL PROG	250	150	150	250	150	950	150					**1,100**
TASTE AND ODOUR MANAGEMENT										2,500	10,000	**12,500**
TRANSMISSION OPERATIONS OPTIMIZER	600					600						**600**
TRANSMISSION R&R	4,120	4,050	7,295	8,825	6,620	30,910	5,050	7,860	7,400	5,300	4,280	**60,800**
TRUNK SEWER SYSTEM	7,448	23,275	16,125	9,000	7,000	62,848	10,500	13,500	16,500	15,500	30,500	**149,348**
TRUNK WATERMAIN EXPANSION	541	1,490	6,400	6,650	6,500	21,581	5,600	600	600	600		**28,981**
W&WW LABORATORIES	100	100	100			300		500	1,000	8,400	12,200	**22,400**
WATER EFFICIENCY PROGRAM	470	520	520	520	520	2,550	520	520	520	520	520	**5,150**
WATER STORAGE EXPANSION	6,279	339	4,725			11,343						**11,343**
WATER SUSTAINABILITY PROGRAM	500	4,000	5,300	5,000		14,800						**14,800**
WESTERN BEACHES RETROFIT	500	1,000	4,000	200		5,700						**5,700**
WET WEATHER FLOW MP	7,793	8,049	7,244	4,702	3,367	31,155	5,875	6,500	6,500	6,500	9,500	**66,030**
WM MARKHAM/SHEPPARD TO BAYVIEW/FINCH	100					100	0	0	0	0	0	**100**
YARD & BUILDING RENOVATION	280	100	0	0	0	380	0	0	0	0	0	**380**
Total (including carry forwards)	**657,266**	**742,580**	**783,317**	**803,540**	**826,755**	**3,813,458**	**827,135**	**878,634**	**917,904**	**957,000**	**922,487**	**8,316,618**

Appendix 3

2013 Recommended Capital Budget; 2014 to 2022 Capital Plan

Appendix 4

2013 Recommended Cash Flow and Future Year Commitments

Appendix 5

2013 Recommended Capital Project with Financing Details

Appendix 6

2013 Reserve / Reserve Fund Review
(In $000s)

Reserve/Reserve Fund Review - Program Specific

Table 1		Projected	Proposed Withdrawals										
Reserve / Reserve Fund Name	**Project / SubProject Name and Number**	Balance as at Dec. 31, 2012*	2013 Rec. Budget	2014 Plan	2015 Plan	2016 Plan	2017 Plan	2018 Plan	2019 Plan	2020 Plan	2021 Plan	2022 Plan	2013 - 2022 Total
	Beginning Balance	$32,441	32,441	36,205	40,058	43,510	49,785	51,905	56,608	62,336	66,025	66,775	
	HORGAN W.T.P. EXPANSION - Design		(63)	(21)									**(84)**
Water DC Reserve Fund	HORGAN W.T.P. EXPANSION - Construction		(1,790)	(1,370)	(211)								**(3,371)**
	WATER STORAGE EXPANSION - Dufferin		(981)	(35)	(341)								**(1,357)**
XR2111 DC - Water (2009)	WATER STORAGE EXPANSION - Milliken		(439)	(26)	(503)								**(968)**
	WM MARKHAM/ SHEPPARD TO BAYVIEW/ FINCH												
	TASTE AND ODOUR MANAGEMENT										(50)	(200)	**(250)**
	AVENUE ROAD TRUNKMAIN REPLACEMENT		(66)	(19)	(19)	(9)							**(113)**
	HORGAN TRUNK MAIN EXPANSION		(9)	(38)	(605)	(984)	(1,929)	(1,929)	(1,891)	(1,891)			**(9,276)**
	ISLAND W.T.P. R&R - Engineering		(24)	(4)	(4)	(4)	(4)	(4)	(4)	(4)			**(52)**
	ISLAND W.T.P. R&R - Construction		14	(49)	(256)	(256)	(406)	(406)	(406)	(381)	(178)		**(2,324)**
	DISTRICT WATERMAINS - NEW		(429)	(296)									**(725)**
	DOWNTOWN W/M ENHANCEMENT		(2,512)	(2,515)	(1,517)	(1)	(1)						**(6,546)**
	PUMPING EQUIPMENT - PARKDALE, WM JOHNSON												
	ELLESMERE PUMPING STATION UPGRADE				(3)	(60)							**(63)**
	TRUNK WATERMAIN EXPANSION		(119)	(346)	(1,527)	(1,529)	(1,435)	(1,198)	(4)	(4)	(4)		**(6,166)**
	TRUNK WATERMAIN UPGRADES		(1,929)	(3,661)	(2,961)	(3,616)	(3,664)	(3,877)	(5,516)	(7,809)	(13,120)	(10,401)	**(56,554)**
	BAYVIEW TRUNK WATERMAIN			(124)	(31)	(124)	(1,240)	(1,246)	(93)	(155)	(124)	(124)	**(3,261)**
	WATER EFFICIENCY PROGRAM (Partial)		(195)	(220)	(220)	(220)	(260)	(260)	(260)	(260)	(260)	(260)	**(2,415)**
	CLARK RESIDUE MGMT. FACILITIES		(23)	(10)	(5)								**(38)**
	LAWRENCE ALLAN REVITALIZATION PLAN		(26)		(1,177)		(2,284)						**(3,487)**
	Total Proposed Withdrawals		(8,591)	(8,734)	(9,380)	(6,803)	(11,223)	(8,920)	(8,174)	(10,504)	(13,736)	(10,985)	**(97,050)**
	Projected Contributions		12,355	12,587	12,832	13,078	13,343	13,623	13,902	14,193	14,486	14,778	**135,177**
TOTAL RESERVE FUND BALANCE AT YEAR-END		**$32,441**	**36,205**	**40,058**	**43,510**	**49,785**	**51,905**	**56,608**	**62,336**	**66,025**	**66,775**	**70,568**	

* Based on 3rd Quarter Variance Report

Reserve/Reserve Fund Review - Program Specific

Table 2		Projected	Proposed Withdrawals										
Reserve / Reserve Fund Name	**Project / SubProject Name and Number**	Balance as at Dec. 31, 2012 *	2013 Rec. Budget	2014 Plan	2015 Plan	2016 Plan	2017 Plan	2018 Plan	2019 Plan	2020 Plan	2021 Plan	2022 Plan	2013 - 2022 Total
	Beginning Balance	$48,949	48,949	45,877	41,823	37,555	32,747	27,275	22,515	18,239	14,875	11,628	
Sanitary Sewer DC Reserve Fund	ASHBRIDGES BAY WWTP REHAB		(340)	(344)	(415)	(88)	(27)	(8)	(1)				**(1,223)**
	ASHBRIDGES BAY WWTP BIOSOLIDS IMPRVS & STUDIES		(8)	(5)									**(13)**
XR2112 DC - Sewer (2009)	HIGHLAND CREEK WWTP - O&M UPGRADES			(53)	(53)							(666)	**(772)**
XR2026 DC - Sewer (2004)	HIGHLAND CREEK WWTP - ODOUR CONTROL		(33)	(413)	(410)	(405)	(193)	(10)	(120)	(230)	(226)	(111)	**(2,151)**
	PCS PLANT SERVICES		(143)	(8)	(16)	(1)							**(168)**
	NEW SEWER CONSTRUCTION		(631)	(900)	(900)	(900)	(900)	(900)	(900)	(900)	(900)	(900)	**(8,731)**
	HCTP THICKENING AND DEWATERING		77	62	(61)	(27)	(2)	(21)	(17)	(20)	(18)	(2)	**(29)**
	HUMBER HEADHOUSE UPGRADES		(21)										**(21)**
	ABTP Process & Equip Upgrades		(15)	(9)	(5)	(16)	(25)						**(70)**
	ABTP DEWATERING EQUIPMENT UPGRADES		(145)	(76)	(5)								**(226)**
	HIGHLAND CREEK WWTP - SOLIDS & GAS HANDLING		(455)	(612)	(459)	(491)	(478)	(380)	(563)	(604)	(602)	(270)	**(4,914)**
	ABTP - EFFLUENT SYSTEM		(51)	(134)	(458)	(990)	(1,832)	(1,902)	(1,246)	(134)	(225)	(330)	**(7,302)**
	ABTP - LIQUID TREATMENT & HANDLING		(648)	(1,435)	(1,475)	(1,776)	(2,076)	(1,740)	(2,040)	(2,190)	(2,190)	(2,153)	**(17,723)**
	ABTP - SOLIDS & GAS HANDLING		(57)	(228)	(489)	(585)	(511)	(661)	(510)	(510)	(453)		**(4,004)**
	ABTP - ODOUR CONTROL		(273)	(227)	(213)	(63)	(4)						**(780)**
	HUMBER - LIQUID TREATMENT & HANDLING		(69)	(113)	(232)	(282)	(432)	(432)	(420)	(356)	(251)	(200)	**(2,787)**
	HUMBER - O&M UPGRADES		(5)										**(5)**
	HUMBER - ODOUR CONTROL		(64)	(152)	(156)	(151)	(100)						**(623)**
	SEWAGE PUMPING STATION UPGRADES		(843)	(797)	(362)	(505)	(359)	(210)					**(3,076)**
	WATER EFFICIENCY PROGRAM (Partial)		(195)	(220)	(220)	(220)	(260)	(260)	(260)	(260)	(260)	(260)	**(2,415)**
	SEWER REPLACEMENT		(754)	(20)									**(774)**
	Total Proposed Withdrawals		**(4,673)**	**(5,684)**	**(5,929)**	**(6,500)**	**(7,199)**	**(6,524)**	**(6,077)**	**(5,204)**	**(5,125)**	**(4,892)**	**(57,807)**
	Projected Contributions		1,601	1,630	1,661	1,692	1,727	1,764	1,801	1,840	1,878	1,917	**17,511**
TOTAL RESERVE FUND BALANCE AT YEAR-END		**$48,949**	**45,877**	**41,823**	**37,555**	**32,747**	**27,275**	**22,515**	**18,239**	**14,875**	**11,628**	**8,653**	

* Based on 3rd Quarter Variance Report

Reserve/Reserve Fund Review - Program Specific

Table 3		Projected	Proposed Withdrawals										
Reserve / Reserve Fund Name	**Project / SubProject Name and Number**	Balance as at Dec. 31, 2012 *	2013 Rec. Budget	2014 Plan	2015 Plan	2016 Plan	2017 Plan	2018 Plan	2019 Plan	2020 Plan	2021 Plan	2022 Plan	2013 - 2022 Total
	Beginning Balance	$12,076	12,076	12,510	12,180	12,201	10,146	7,606	6,311	4,710	2,348	0	
Storm Water Management DC Reserve Fund	SWM END OF PIPE FACILITIES		(125)	(475)	(50)		(115)	(434)	(562)	(892)	(1,206)		**(3,859)**
	DOWNSPOUT DISCONNECTION PROGRAM		(25)	(15)	(15)	(25)	(15)	(15)					**(110)**
	WET WEATHER FLOW MP		(755)	(780)	(700)	(434)	(285)	(536)	(287)	(287)	(287)	(437)	**(4,788)**
XR2113 DC - SWM (2009)	STREAM RESTORATION & EROSION CONTROL		(652)	(800)	(875)	(500)	(500)	(500)	(235)	(247)	(247)	(247)	**(4,803)**
XR2404 DC - SWM (2004)	DON & WATERFRONT TRUNK CSO		(148)	(280)	(311)	(3,311)	(3,941)	(2,175)	(2,930)	(3,400)	(3,122)	(1,034)	**(20,652)**
	EMERY CREEK POND		(6)	(165)	(255)	(55)							**(481)**
	Total Proposed Withdrawals		(1,711)	(2,515)	(2,206)	(4,325)	(4,856)	(3,660)	(4,014)	(4,826)	(4,862)	(1,718)	**(34,693)**
	Projected Contributions		2,145	2,185	2,227	2,270	2,316	2,365	2,413	2,464	2,514	2,565	23,464
TOTAL RESERVE FUND BALANCE AT YEAR-END		**$12,076**	**12,510**	**12,180**	**12,201**	**10,146**	**7,606**	**6,311**	**4,710**	**2,348**	**0**	**847**	