Analyst Briefing Notes

Budget Committee

October 19, 2009

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PART I: CAPITAL PROGRAM

Executive Summary

- Funding for the 10-Year Recommended Capital Plan balances infrastructure renewal needs for state of good repair and Council's priorities for 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 following summarizes the allocation of recommended funding by project category:

  - The 10-Year Recommended Capital Plan allocates significant financial resources to *State of Good Repair projects* to address the renewal needs of aging and deteriorating infrastructure. Projects that maintain assets in a state of good repair represent 50.3% or $4.366 billion of the total new planned cash flow of $8.686 billion and include examples such as the Coxwell Sanitary Trunk Sewer; Avenue Road trunk watermain replacement; watermain and sewer replacement and rehabilitation; R.L. Clark Water Treatment Plant process equipment upgrades; and, Ashbridges Bay Wastewater Treatment Plant rehabilitation.

  - *Service Improvement projects* represent approximately 26.3% or $2.288 billion of the 10-Year Recommended Capital Plan. Key service improvement projects include odour control at wastewater treatment plants; Automated Meter Reading (AMR) System; Wet Weather Flow Master Plan; Basement Flooding Relief Work Plan; and, plant optimization.

  - *Growth projects* account for 17.1% or $1.489 billion of the 10-Year Recommended Capital Plan. Additional capacity will be required to service a projected population of 3 million people by 2031. To address future demand, projects include initiatives for improving water efficiency; reducing water loss; and, expansion projects required for future water supply needs.

  - *Legislative projects* account for 6.3% or $543.951 million of funding in the 10-Year Recommended Capital Plan. These projects address existing and emerging provincial legislation, which includes Bill 195, Safe Drinking Water Act and Bill 81, Nutrient Management Act. Legislative projects also include compliance with the federal government's Environmental Protection Act.

- The 2009 Approved Capital Budget of $504.238 million was 37.7% or $189.979 million spent, as at June 30th, 2009. Actual expenditures by year-end are anticipated to be $385.083 million or 76.4% of the 2009 Approved Capital Budget. This represents a projected increase of 20.9% or $66.654 million in capital spending over the 2008 spending rate of $318.429 million.

- The projection of 2009 funding to be carried forward into the 2010 Recommended Capital Budget is $50.767 million. Large multi-year projects requiring 2009 carry forward funding include the Lead Water Service Connection Replacement Program ($5.000 million); Ashbridges Bay Wastewater Treatment Plan Odour Control ($6.500 million); Wet Weather Flow Master Plan Class Environmental Assessment ($2.000 million); and, Automated Meter Reading (AMR) System ($2.500 million).

- The10-Year Recommended Capital Plan totals $8.737 billion, including 2009 carry forward funding into 2010 of $50.767 million, of which $4.048 billion is projected for the first 5 years, with the final 5 years requiring funding of $4.688 billion or 53.7%.

  - 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 10-Year Recommended Capital Plan is funded primarily from the Program's reserves, which account for approximately 89.7% or $7.789 billion. Development charges provide funding for approximately 2.9% or $248.014 million. Funding from the federal government's Infrastructure Stimulus Fund amounts to 0.6% or $53.501 million. Capital cost sharing with York Region and other sources of revenue, such as user fees for construction of new water and sewer connections, represent the remaining 6.9% or $595.502 million.

  - Changes to the 2009-2018 Approved Capital Plan account to $421.575 million or 5.8% compared to the 2010 Recommended Capital Budget and 2011-2018 Recommended Capital Plan. These include key changes to the following program areas within Toronto Water: Trunk Sewers and Sewage PS ($136,617 million); Sewer Rehabilitation ($99.500 million); Sewer Replacement ($67.561 million); Water Service Replacement $44.855 million; Humber Treatment Plant $62.817 million; Ashbridges Bay Treatment Plant $63.217 million; Stormwater Management $88.682 million; Clark Water Treatment Plant $98.733 million; Trunk Transmission $164.337 million; and, Basement Flooding $255.218 million.

  - Toronto Water has approved funding in the 10-Year Recommended Capital Plan from the Federal government's ISF program totalling $53.501 million, with $44.510 million in 2010 and $9.000 million in 2011, allowing these projects to proceed with 1/3 federal stimulus funding. Funding has been approved for the Coxwell Sanitary Trunk Emergency Repair; Watermain Replacement; Water Services Repair; Basement Flooding Relief Work Plan; Lead Water Service Connection Replacement Program; and, a number of stormwater management projects aimed at improving water quality in Lake Ontario and the rivers through the City.

  - The 10-Year Recommended Capital Plan includes operating impacts from previously approved and new/change in scope capital projects for 2010 of ($0.415) million; 2011 of ($11.467) million; 2012 of ($10.884) million; 2013 of ($2.057) million; 2014 of ($2.512) million; 2015 of ($3.247) million; 2016 of $0.257 million; 2017 of $0.159 million; 2018 of $0.111 million; and 2019 of $0.171 million. The operating impacts primarily reflect additional revenue that will be realized from implementation of the Automated Meter Reading (AMR) System.

- Toronto Water currently has a significant infrastructure rehabilitation backlog, estimated at $1.797 billion by 2009 year-end, reflecting 7% of the total asset base of $26.600 billion. The 10-Year Recommended Capital Plan reflects an increase in the replacement rate to achieve the optimal level in approximately 10 years and will mitigate most of the accumulated backlog, leaving a backlog of $43.092 million, accounting for 0.2% of the total asset base, by 2019.

- Facility and needs assessment studies have been finalized for major capital works included in the 10-Year Recommended Capital Plan. Construction is underway for many of the larger projects, which include the Horgan Water Treatment Plant expansion; Dufferin Reservoir expansion and Milliken Reservoir and Pumping Station expansion and the first phase of Ashbridges Bay Wastewater Treatment Plant odour control. The remaining phases of odour control and several trunk watermain projects are ready to tender with construction anticipated to commence in early 2010.

- The 10-Year Recommended Capital Plan provides funding to advance the following priority actions outlined in the Mayor's and Council's policy agenda:

  - **Climate Change Adaptation, Clean Air and Sustainable Energy Action Plan:** Approximately $1.143 billion in funding is recommended for a broad range of projects that will form part of the Action Plan for Climate Change Adaptation. This includes the Water Efficiency Plan ($25.707 million); Basement Flooding Relief Work Plan ($680.218 million); Downspout Disconnection Program ($42.670 million); Energy Efficiency Measures ($165.525 million); and, the Automated Meter Reading (AMR) System ($228.496 million).

  - **Help to Clean Up Lake Ontario to Make Toronto's Beaches More Swimmable:** Funding of $675.657 million is recommended for projects to continue the Wet Weather Flow Master Plan to manage the discharge of pollutants into waterways and Lake Ontario. The goal of the Plan is 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.

  - **Lead Water Service Connection Replacement Program:** The10-Year Recommended Capital Plan provides $258.422 million in funding to accelerate replacement of lead water service connections over a 9 year period.

- The 2010 Recommended Capital Budget for previously approved and new/change in scope projects (excluding 2009 carry forward funding into 2010) of $669.905 million is 51% allocated to state of good repair projects at $336.483 million; 27% to growth projects at $181.083 million; 17% to service improvement projects at $116.386 million; and, 5% or $35.953 million to legislated projects.

- Approval of the 2010 Recommended Capital Budget will result in a commitment to future year funding for new/change in scope projects of $220.295 million in 2011; $238.098 million in 2012; $157.527 million in 2013; $322.225 million in 2014; $120.454 million in 2015; $105.022 million in 2016; $87.163 million in 2017; $67.065 million in 2018; and, $58.837 million in 2019. The high rate of future year funding reflects the nature of Toronto Water's capital program which includes many multi-year, multi-million dollar projects such as the Automated Meter Reading (AMR) System; Horgan Water Treatment Plant Expansion; Basement Flooding Relief Work Plan and Watermain Replacement. The use of multi-year contracts has allowed Toronto Water to increase its capital delivery rate.

- The 2009 summer labour disruption will not significantly impact Toronto Water's program delivery for the 2010 Recommended Capital Budget and 2011-2019 Recommended Capital Plan.

- Mounting evidence from climate change adaptation experts suggests that the trend in climate change and subsequent extreme localized weather events will continue in the future, putting stress on Toronto Water's aging infrastructure and added pressure on Toronto Water's multi-year capital program. The financial cost resulting from extreme weather events in Toronto in the past decade (since 1999) have been greater than for all previous years combined.

- 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.

- This report should be considered concurrently with the 2010 Water and Wastewater Service Rate Report (October 2009), from the Deputy City Manager and Chief Financial Officer and General Manager for Toronto Water.

Recommendations

The City Manager and Chief Financial Officer recommend that:

1. Council approve the 2010 Recommended Capital Budget for Toronto Water with a total project cost of $1.491 billion, and 2010 cash flow of $720.672 million and future year commitments of $2.894 billion comprised of the following:

   a) New Cash Flow Funding for:

      i) 239 new/change in scope sub-projects with a 2010 total project cost of $1.491 billion that requires cash flow of $114.417 million in 2010 and a future year commitment of $220.295 million in 2011; $238.098 million in 2012; $157.527 million in 2013; $322.225 million in 2014; $120.454 million in 2015; $105.022 million in 2016; $87.163 million in 2017; $67.065 million in 2018; and, $58.837 million in 2019;

      ii) 201 previously approved sub-projects with a 2010 cash flow of $555.488 million and a future year commitment of $513.422 million in 2011; $452.962 million in 2012; $355.610 million in 2013; $104.954 million in 2014; $76.534 million in 2015; $13.552 million in 2016; and, $0.620 million in 2017;

   b) 2009 approved cash flow for 36 previously approved sub-projects with carry forward funding from 2009 into 2010 totalling $50.767 million;

2. Council approve that no new debt be issued to finance the 2010 cash flow requirement for the capital program and that the 2010 Recommended Toronto Water Capital Budget be fully funded from service charges; available reserve funds; Infrastructure Stimulus Fund (IFS); development charges; and, other revenues;

3. Council approve the 2011-2019 Recommended Capital Plan for Toronto Water totalling $8.016 billion in project estimates, comprised of $791.863 million in 2011; $827.695 million in 2012; $835.068 million in 2013; $873.154 million in 2014; $907.109 million in 2015; $918.496 million in 2016; $913.508 million in 2017; $959.178 million in 2018; and, $989.930 million in 2019;

4. Council approve operating impacts of ($29.884) million from 2010 to 2019 emanating from the approval of the 2010 Recommended Capital Budget, be approved for inclusion in the 2010 and future year operating budgets; and,

5. this report be considered concurrently with the 2010 Water and Wastewater Service Rate Report (October 2009), from the Deputy City Manager and Chief Financial Officer and General Manager for Toronto Water.

PART I: CAPITAL PROGRAM

2009 Capital Variance Review

2009 Budget to Actuals Comparison - Total Gross Expenditures ($000s)					
2009 Approved	Actuals as of June 30th (2nd Qtr Variance)		Projected Actuals at Year End		Balance
$	$	% Spent	$	% Spent	$ Unspent
504,238	189,979	37.7%	385,083	76.4%	119,155

The Toronto Water 2009 Approved Capital Budget of $504.238 million was 37.7% or $189.979 million spent, as at June 30th, 2009. Actual expenditures by year-end are anticipated to be $385.083 million or 76.4% of the 2009 Approved Capital Budget. This represents a projected increase of 20.9% or $66.654 million in capital spending over the 2008 spending rate of $318.429 million. The high year-end forecasted spending for 2009 is the result of construction proceeding on several large projects; expenditures forecast for the large number of contracts awarded early in the year; and, the multi-year contracts initiated in 2008 which are now fully underway and expected to meet cash flow projections for 2009.

State of Good Repair projects represent 54% or $272.059 million of the 2009 Approved Capital Budget. The projected year-end spending will be approximately 83% or $231.888 million which represents a slight increase over the 2008 expenditure of $226.351 million. The key State of Good Repair projects include:

- Approximately 54 kilometers of water main replacement throughout the City.
- Emergency repairs to the Coxwell Sanitary Trunk Sewer.
- Digester Rehabilitation and Upgrades at the Humber and Ashbridges Bay Wastewater Treatment Plants.

The funding from 2009 carried forward into 2010 included in the 2010 Recommended Capital Budget is $50.767 million and is lower than the projected unspent actual expenditures of $119.115 million, reflecting construction delays from adverse weather conditions and time lags in obtaining environmental assessment approvals from the Ministry of the Environment.

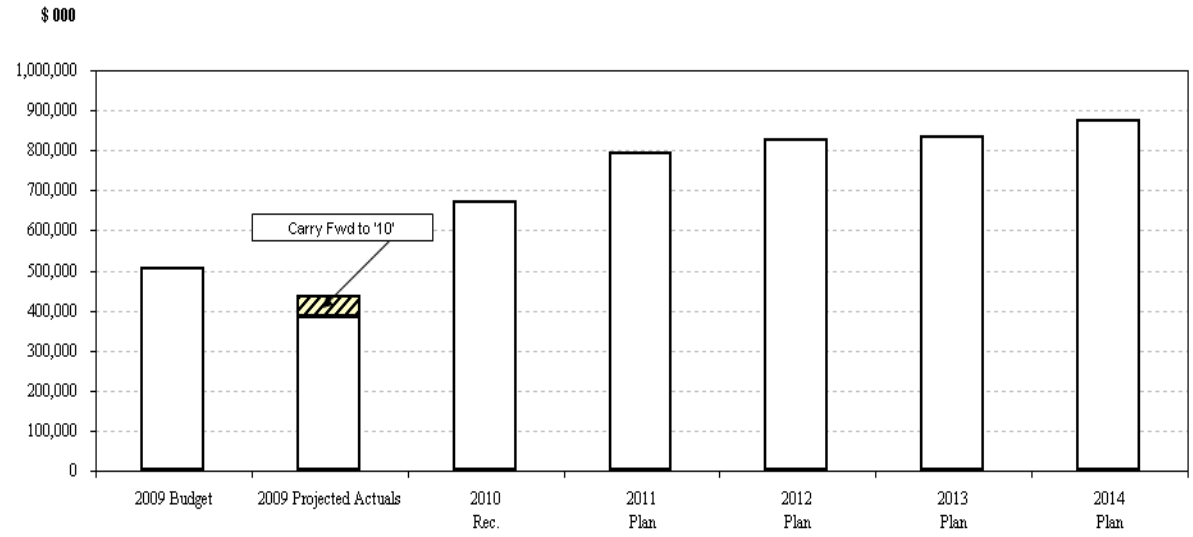
Large multi-year projects requiring 2009 carry forward funding in the 2010 Recommended Capital Budget include the:

- Lead Water Service Connection Replacement Program ($5.000 million).
- Ashbridges Bay Wastewater Treatment Plant Odour Control ($6.500 million).
- Wet Weather Flow Master Plan Class Environmental Assessments ($2.000 million).
- Automated Meter Reading (AMR) System ($2.500 million).

Although delays have been encountered for some projects at the wastewater treatment plants, it is not expected that the 2009 summer labour disruption will significantly impact Toronto Water's capital program delivery.

10-Year Capital Plan

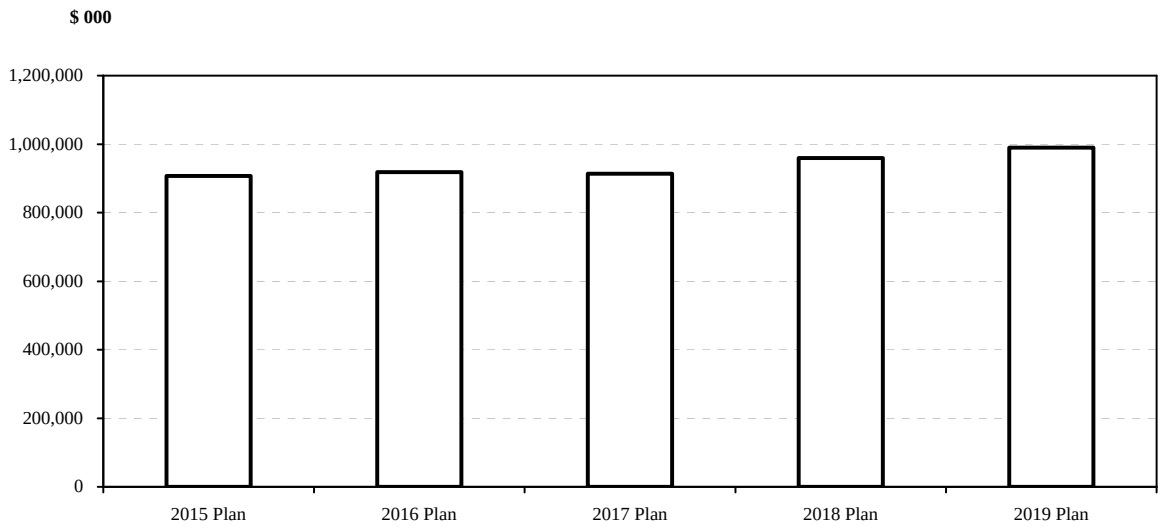
2010 Recommended Capital Budget, 2011-2014 Recommended Capital Plan



	2009		2010 Rec. Budget and 2011-2014 Plan						
	Budget	Projected Actual	2010	2011	2012	2013	2014	Total 2010-2014	5-Year Total Percent
Gross Expenditures:									
2009 Capital Budget & Approved FY Commitments	504,238	385,083	494,632	516,899	485,256	398,101	139,849	2,034,737	
Recommended Changes to Approved FY Commitments			60,856	(3,476)	(32,294)	(42,490)	(34,895)	(52,299)	
2010 New/Change in Scope and FY Commitments			114,417	220,295	238,098	157,527	322,225	1,052,562	
2011 - 2014 Capital Plan Estimates				58,145	136,635	321,930	445,975	962,685	
1-Year Carry Forward to 2010		50,767	→						
Total Gross Annual Expenditures & Plan	**504,238**	**435,850**	**669,905**	**791,863**	**827,695**	**835,068**	**873,154**	**3,997,685**	
Financing Sources:									
Reserves	449,085		512,321	664,374	724,416	741,771	791,607	3,434,489	85.9%
ISF			44,501	9,000				53,501	1.3%
Development Charges	11,635		32,681	26,792	27,595	22,364	23,926	133,358	3.3%
Other Revenue	43,518		80,402	91,697	75,684	70,933	57,621	376,337	9.4%
Total Financing	**504,238**		**669,905**	**791,863**	**827,695**	**835,068**	**873,154**	**3,997,685**	100.0%
By Category:									
Health & Safety									
Legislated	41,860		35,953	33,466	37,325	36,310	57,201	200,255	5.0%
SOGR	279,737		336,483	407,192	436,704	439,658	424,267	2,044,304	51.1%
Service Improvement	89,218		116,386	142,391	167,726	209,175	244,856	880,534	22.0%
Growth Related	93,423		181,083	208,814	185,940	149,925	146,830	872,592	21.8%
Total By Category	**504,238**		**669,905**	**791,863**	**827,695**	**835,068**	**873,154**	**3,997,685**	100.0%
Yearly SOGR Backlog Estimate (not addressed by current plan)			(77,000)	(136,425)	(166,591)	(148,278)	(138,223)	(666,517)	
Accumulated Backlog Estimate (end of year)		1,797,304	1,720,303	1,583,879	1,417,288	1,269,010	1,130,787	1,130,787	
Operating Impact On Program Costs			(415)	(11,467)	(10,884)	(2,057)	(2,512)	(27,335)	

10-Year Capital Plan

2015-2019 Recommended Capital Plan



	2015-2019 Capital Plan						
	2015	2016	2017	2018	2019	2010-2019 Total	Total Plan Percent
Gross Expenditures:							
2009 Capital Budget & Approved FY Commitments	126,534	48,552	14,120			2,223,943	
Recommended Changes to Approved FY Commitments	(50,000)	(35,000)	(13,500)			(150,799)	
2010 New/Change in Scope and FY Commitments	120,454	105,022	87,163	67,065	58,837	1,491,103	
2015 - 2019 Capital Plan Estimates	710,121	799,922	825,725	892,113	931,093	5,121,659	
Total Gross Annual Expenditures & Plan	**907,109**	**918,496**	**913,508**	**959,178**	**989,930**	**8,685,906**	
Financing Sources:							
Reserves	825,043	842,365	851,461	896,644	938,887	7,788,889	89.7%
ISF						53,501	0.6%
Development Charges	33,865	31,318	27,400	12,065	10,008	248,014	2.9%
Other	48,201	44,813	34,647	50,469	41,035	595,502	6.9%
Total Financing	**907,109**	**918,496**	**913,508**	**959,178**	**989,930**	**8,685,906**	**100.0%**
By Category:							
Health & Safety							
Legislated	64,396	81,200	82,700	55,200	60,200	543,951	6.3%
SOGR	370,030	416,561	441,450	523,015	570,485	4,365,845	50.3%
Service Improvement	297,559	264,285	269,358	291,680	284,090	2,287,506	26.3%
Growth Related	175,124	156,450	120,000	89,283	75,155	1,488,604	17.1%
Total By Category	**907,109**	**918,496**	**913,508**	**959,178**	**989,930**	**8,685,906**	**100.0%**
Yearly SOGR Backlog Estimate (not addressed by current plan)	(131,845)	(165,973)	(190,750)	(275,813)	(323,313)	(1,754,212)	
Accumulated Backlog Estimate (end of year)	1,130,787	832,969	642,218	366,405	43,092	43,092	
Operating Impact On Program Costs	(3,247)	257	159	111	171	(29,884)	

10-Year Capital Plan Overview

- Funding for the 2010 Recommended Capital Budget and 2011-2019 Recommended Capital Plan balances infrastructure renewal needs for state of good repair and Council's priorities for 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.

- 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 2010 Recommended Capital Budget and 2011-2019 Recommended Capital Plan is funded primarily from the Program's reserves, which account for approximately 89.7% or $7.789 billion. Development charges provide funding for approximately 2.9% or $248.014 million. Funding from the federal government's Infrastructure Stimulus Fund amounts to 0.6% or $53.501 million. Capital cost sharing with York Region and other sources of revenue, such as user fees for construction of new water and sewer connections, represent the remaining 6.9% or $595.502 million.

- The 2009 summer labour disruption will not significantly impact Toronto Water's program delivery for the 2010 Recommended Capital Budget and 2011-2019 Recommended Capital Plan.

- The following summarizes the allocation of recommended funding by project category:

  - The 10-Year Recommended Capital Plan allocates significant financial resources to *State of Good Repair projects* to address the renewal needs of aging and deteriorating infrastructure. Projects that maintain assets in a state of good repair represent 50.3% or $4.366 billion of the total planned cash flow of $8.686 billion and include examples such as the Coxwell Sanitary Trunk Sewer; Avenue Road trunk watermain replacement; watermain and sewer replacement and rehabilitation; R.L. Clark Water Treatment Plant process equipment upgrades; and, Ashbridges Bay Wastewater Treatment Plant rehabilitation.

  - *Service Improvement projects* represent approximately 26.3% or $2.288 billion of the 10-Year Recommended Capital Plan. Key service improvement projects include odour control at wastewater treatment plants; Automated Meter Reading (AMR) System; Wet Weather Flow Master Plan; Basement Flooding Relief Work Plan; and, plant optimization.

  - *Growth projects* account for 17.1% or $1.489 billion of the 10-Year Recommended Capital Plan. Additional capacity will be required to service a projected population of 3 million people by 2031. To address future demand, projects include initiatives for improving water efficiency; reducing water loss; and, expansion projects required for future water supply needs. Of significance, the Horgan Water Treatment Plant Expansion is well underway and is expected to be completed in 2011.

  - *Legislative projects* account for 6.3% or $543.951 million of funding in the 10-Year Recommended Capital Plan. These projects address existing and emerging provincial legislation, which includes Bill 195, Safe Drinking Water Act and Bill 81, Nutrient Management Act. Legislative projects also include compliance with the federal government's Environmental Protection Act. Funding for legislative projects is expected to increase in future

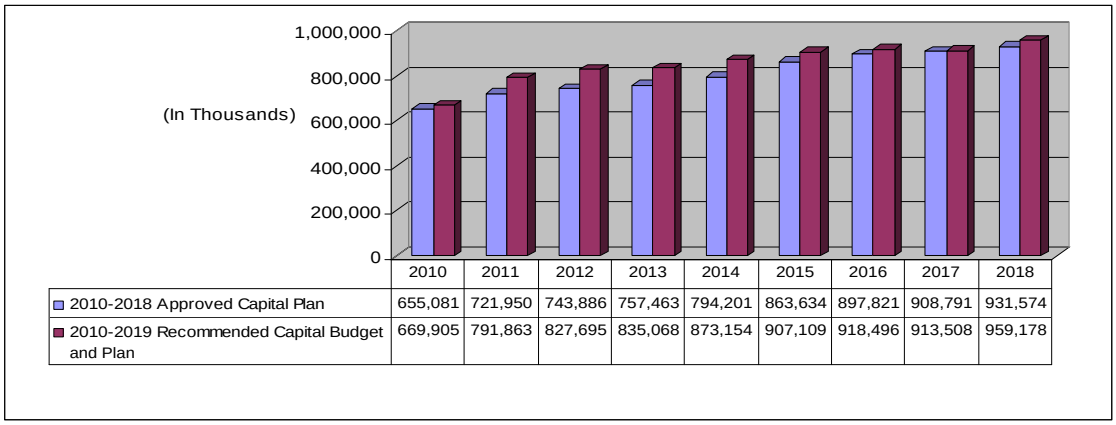
years as regulations governing water supply and wastewater treatment continue to become more stringent in the post-Walkerton period.

- Toronto Water currently has a significant infrastructure rehabilitation backlog, estimated at $1.797 billion by year-end. This backlog is more than any other major Canadian urban centre. The 2010 Recommended Budget and 2011-2019 Recommended Capital Plan reflects an increase in the infrastructure renewal rate to achieve a state of good repair condition in approximately 10 years, mitigating most of the accumulated backlog, leaving a backlog of $43.092 million by 2019.

Key Changes to the 2009-2018 Approved Capital Plan

The following highlights the changes from the 2009-2018 Approved Capital Plan with the 2010-2018 Recommended Capital Budget and Plan. As outlined in the table below, the 2010 Recommended Capital Budget of $669.905 million in cash flow represents an increase of 2.3% or $14.824 million compared to 2010 Approved Capital Plan of $655.081 million. There is a $421.575 million or 5.8 % increase in the 2010 Recommended Capital Budget and 2011-2018 Recommended Capital Plan over the 9 year period.

Changes to the 2009-2018 Approved Capital Plan



	2010	2011	2012	2013	2014	2015	2016	2017	2018
2010-2018 Approved Capital Plan	655,081	721,950	743,886	757,463	794,201	863,634	897,821	908,791	931,574
2010-2019 Recommended Capital Budget and Plan	669,905	791,863	827,695	835,068	873,154	907,109	918,496	913,508	959,178

The majority of the increase is due to updating the capital program areas as outlined below:

- There has been a realignment of funding and timing for sewer system related work, increasing the basement flooding program and the stormwater management program (which includes improvements to the Coxwell Trunk Sewer and combined sewer overflow system) and rescheduling some sewer rehabilitation, replacement and future trunk sewer program line items with a net impact of increasing funding to sewer system related work ($40.222 million).
- Additional funding has been allocated to the water service replacement program to address lead mitigation ($44.855 million).
- Costs for trunk watermain transmission projects have increased due to more expensive tunnelling construction ($164.337 million).
- Increases to the Humber and Ashbridges Treatment Plants are due to the odour control projects and increased state of good repair work ($126.034 million).
- Increased costs at the R.L. Clark Water Treatment Plant are for process upgrades and improvements ($98.733 million).

Summary of Program Area Changes

PROGRAM AREA	2010	2011	2012	2013	2014	2015	2016	2017	2018	2010-2018
Basement Flooding	19,500	32,000	28,500	37,500	33,500	20,218	24,000	30,000	30,000	255,218
Trunk Transmission	5,873	17,771	47,673	26,436	26,711	12,957	(9,243)	(440)	36,599	164,337
Clark Water Treatment Plant	1,410	611	10,684	14,000	12,000	20,132	15,776	12,120	12,000	98,733
Stormwater Management	11,275	(618)	(3,815)	(4,115)	(540)	13,405	14,905	26,035	32,150	88,682
Ashbridges Bay Treatment Plant	11,600	12,902	(9,617)	(13,105)	12,146	28,191	230	2,305	18,565	63,217
Humber Treatment Plant	(9,721)	(6,958)	11,140	3,028	2,228	500	16,100	19,500	27,000	62,817
Water Service Replacement	19,022	11,200	9,700	10,500	7,760	6,523	5,500	4,150	(29,500)	44,855
Sewer Replacement	(5,061)	(1,500)	(8,500)	(12,000)	(15,000)	(5,500)	(3,500)	(5,500)	(11,000)	(67,561)
Sewer Rehabilitation	2,000	-	(6,500)	(8,500)	(17,500)	(20,500)	(17,500)	(14,500)	(16,500)	(99,500)
Trunk Sewers & Sewage PS	14,309	334	(5,441)	(9,987)	(18,193)	(32,766)	(36,617)	(25,256)	(23,000)	(136,617)

Project Financing

Toronto Water is self-sustaining and does not impact the municipal property tax levy. Operating and capital investments are funded through water and sewage rates established each year by Council and included in the City's By-law (Municipal Code, Chapter 849: Water and Sewage Services). Other sources of funding include user fees; capital cost sharing with York Region; and, development charges.

Toronto Water's capital program continues to be 100% self-sustaining with no debenture financing and with no impact on the municipal property tax levy. The 2010 Recommended Capital Budget and 2011-2019 Recommended Capital Plan is funded primarily from the Program's reserves, which accounts for approximately 89.7% or $7.789 billion. Development charges provide funding for approximately 2.9% or $248.014 million. Funding from the federal government's Infrastructure Stimulus Fund amounts to 0.6% or $53.501 million. Capital cost sharing with York Region and other sources of revenue, such as user fees for construction of new water and sewer connections, represent the remaining 6.9% or $595.502 million.

Infrastructure Stimulus Fund (ISF)

Through Canada's Economic Action Plan, the federal government has recently established a new $4.000 billion Infrastructure Stimulus Fund (ISF). The Infrastructure Stimulus Fund complements existing federal and provincial infrastructure funding by focusing on short-term objectives for economic stimulus. The full $4.000 billion will be distributed across Canada in fiscal years 2009-2010 and 2010-2011. Projects will focus largely on the rehabilitation of existing assets such as water; wastewater; public transit; highways; roads; culture; parks; and, trails.

Toronto Water has approved funding in the 10-Year Recommended Capital Plan from the federal government's ISF program totalling $53.501 million, with $44.510 million in 2010 and $9.000 million in 2011, enabling these projects to proceed with 1/3 federal stimulus funding. As outlined in the table below, funding has been provided for the Coxwell Sanitary Trunk Emergency Repair; Watermain Replacement; Water Services Repair; Basement Flooding Relief Work Plan; Lead Water Service Connection Replacement Program; and, a number of stormwater management projects aimed at improving water quality in Lake Ontario and the rivers through the City. Funding from the ISF program will reduce pressure on the Water and Wastewater Capital Reserves. It is important to note, that ISF funding will predominately be used to accelerate Service Improvement Projects with no substantial contribution to reducing Toronto Water's state of good repair backlog.

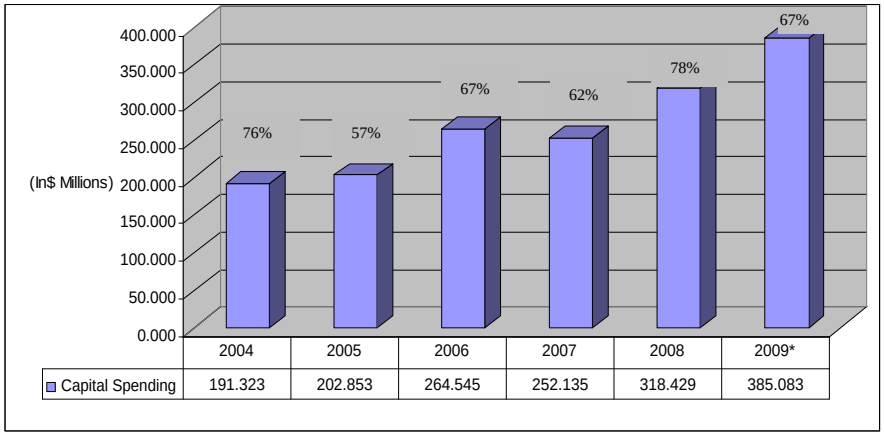
Infrastructure Stimulus Funding 2010-2011

In $Thousands	2010	2011	Total
Water Treatment and Distribution			
Trunk Watermain Improvements	2,000.0		2,000.0
Replacement of Vintage Cast Iron Pipes	11,667.0	1,667.0	13,334.0
Lead Water Service Connection Replacement Program	6,667.0	3,333.0	10,000.0
Sub-Total Water	20,334.0	5,000.0	25,334.0
Wastewater Collection and Treatment			
End of Pipe Facilities Including Earl Balies and the Eastern Beaches	4,167.0	1,666.0	5,833.0
Basement Flooding Relief Work Plan	8,333.0	1,667.0	10,000.0
Coatsworth Sewer Replacement	1,667.0	667.0	2,334.0
Emergency Repair of Coxwell Sanitary Sewer	10,000.0		
Sub-Total Wastewater	24,167.0	4,000.0	28,167.0
Total	44,501.0	9,000.0	53,501.0

Program Capacity and Readiness to Proceed

The Toronto Water 2009 Approved Capital Budget of $504.238 million was 37.7% or $189.979 million spent, at of June 30th, 2009. Actual expenditures by year-end are anticipated to be $385.083 million or 76.4% of the 2009 Approved Capital Budget. The 2009 projected rate by year-end represents a continued improvement over the Program's historic spending capacity. The last several years, with the exception of a minor decline in 2007, have shown a consistent ramping up of capital spending, with 2004 expenditures of $191.323 million (76%); 2005 expenditures of $202.853 million (57%); 2006 expenditures of $264.545 million (67%); 2007 expenditures of $252.135 million (62%); and, $318.429 million in 2008 (78%), as outlined in the graph below.

Toronto Water Capital Budget Spending (2004-2009)



Notes: *2009 Year-End Capital Budget Spending Rate Projection as of June 30th, 2009.

Facility and needs assessment studies have been finalized for major capital works included in the 2010 Recommended Capital Budget and 2011-2019 Recommended Capital Plan. Construction is underway for many of the larger projects, which include the Horgan Water Treatment Plant expansion; Dufferin Reservoir expansion and Milliken Reservoir and Pumping Station expansion and the first phase of Ashbridges Bay Wastewater Treatment Plant odour control. The remaining phases of odour control and several trunk watermain projects are ready to tender with construction anticipated to commence in early 2010.

Cost projections are based on engineering estimates using historical unit rates from City tenders and data from other municipalities for similar projects. Future year costs have been adjusted based on industry recognized inflationary indices. Inflationary growth in commodity markets, such as chemicals; concrete; steel; and, fuel, are forecasting strong growth for 2010 and beyond.

The 2010 Recommended Capital Budget and 2011-2019 Recommended Capital Plan also includes increased utilization of trenchless technology, such as cured-in-place pipe lining; pipe bursting; cleaning; internal chemical grouting; external grouting; mechanical sealing; and, structural spot repair, for the renewal needs of aging and deteriorating underground infrastructure. Trenchless technology minimizes the impact on local communities and is generally more cost-effective than traditional open-cut construction.

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 $26.600 billion, where some infrastructure dates back to the late 1800's, much of this infrastructure is reaching the end of its expected service life. 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 rate of watermain breaks in Toronto is currently the highest of Ontario municipalities and has recently levelled off. However, a significant and sustained increase of renewal will be required to reduce the break rate to acceptable levels. The 10-Year Recommended Capital Plan has the following funding dedicated for reducing the break rate: 2010 - $125 million; 2011 - $128 million; 2012 – $137 million; 2013 - $152 million; 2014 – $177 million; 2015 - $187 million; 2016 - $204 million; 2017 - $219 million; 2018 - $264 million; and, 2019 - $274 million. The need to reduce pipe breaks and subsequent leaks is essential, not only to restore revenues from lost water sales and sewer surcharges 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.
- Loss of fire protection to high-rise buildings as it becomes more difficult to sustain needed water pressure and volumes.
- Risks to human health through the contamination of surface water and drinking water.
- Increased energy consumption and related CO_2 emissions as pumps and motors must work harder to deliver service.

The 2009 year-end value of the infrastructure renewal backlog is estimated at $1.797 billion, reflecting 7% of Toronto Water's total asset value of $26.600 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. The 10-Year Recommended Capital Plan includes a significant amount of funding to address the state of good repair backlog from $1.720 billion in 2010 to $43.092 million in 2019, reflecting 0.2% of Toronto Water's total asset value of $26.000 billion. This represents a decrease of $1.677 billion or 97.6% over the 10-year planning horizon.

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.

Capital Projects Highlights

The 2010 Recommended Capital Budget and 2011-2019 Recommended Capital Plan reflects the strategic direction of the Toronto Water Multi-Year Business Plan and supports several key priority actions outlined in the Mayor's and Council's policy agenda. The following highlights key capital projects.

Climate Change Adaptation, Clean Air and Sustainable Energy Action Plan

The 2010 Recommended Capital Budget and 2011-2019 Recommended Capital Plan provides $1.143 billion in funding for a broad range of projects that will form part of the Action Plan for Climate Change Adaptation. This includes the following:

Water Efficiency Plan: At its meeting of February 4, 5 and 6, 2003, Council adopted the Water Efficiency Plan. The 2010 Recommended Capital Budget and 2011-2019 Recommended Capital Plan provides $25.707 million in funding to advance municipal system leak detection; toilet and clothes washer replacement rebates; computer controlled irrigation for City facilities; industrial, commercial and institutional indoor and residential outdoor water audits; and, public education and promotions. To illustrate the success of the Water Efficiency Plan, from 2004 to 2008, 216,749 rebates were provided for low-flow toilets and 28,021 for high efficiency washing machines.

While the Plan was directed at deferring the expansion of water and wastewater infrastructure by creating "in-system" capacity through the implementation of water efficiency measures, many direct environmental benefits have also accrued, including reduced chemical and energy use. The electricity used in treating and pumping drinking water and treatment of wastewater is produced partially by gas and oil fired generating stations, resulting in smog and CO_2 emissions. It is estimated that during the implementation period of the Water Efficiency Plan, 90,000 tonnes of CO_2 emissions will have been avoided. When fully implemented, the Plan will avoid approximately 14,000 tonnes per year of CO_2 emissions. Reductions in energy consumption will also reduce SO_2 and, No_x emissions.

Toronto Water is currently updating the Water Efficiency Plan to assess the water consumption reductions achieved to date; including sector-specific reductions and a review of the success of individual initiatives and will report to Council in early 2010.

Basement Flooding Relief Work Plan: Council, at its meeting of September 24 and 25, 2008, adopted a multi-pronged (lot level; storm drainage; and, sewer infrastructure) adaptive management approach to reduce the risk of basement flooding. This approach will be applied in all of the previously identified 31 chronic basement flooding areas. The 2010 Recommended Capital Budget and 2011-2019 Recommended Capital Plan provides service improvement funding of $680.218 million for the Plan. The first contracts for remediation in the most critical areas have been awarded with construction to commence by year-end. Environmental Assessments are currently being completed for the remainder of the Study Areas and total implementation cost estimates of the Work Plan will be refined and included in Toronto Water's 2011-2020 Capital Program submission.

Energy Efficiency Measures: The 2010 Recommended Capital Budget and 2011-2019 Recommended Capital Plan provides $165.525 million in funding for energy efficiency measures to achieve optimal savings and reduce CO_2 emissions, such as the Deep Lake Water Cooling project; energy audits; facility lighting and electrical upgrades; replacement of pumps and motors with high efficiency units; and, implementation of real-time power monitoring and the Transmission Operations Optimizer (TOO), an automated control strategy to optimize treated water pumping and associated reservoir levels based on a number of variables, including water demand; production cost; hydro rates; and, weather data.

Toronto Water has begun implementing measures, such as the Energy Management Work Plan, for both water and wastewater treatment plants. With 2007 as the base year, the target reduction in consumption is 5% over 5 years (25,000 MWh). This Work Plan will include energy audits and baseline analysis. In 2007, the actual cost of electricity for water treatment and supply was $29.100 million and for wastewater treatment $16.300 million, providing a total savings of $0.892 million over the 2006 fiscal year.

Automated Meter Reading (AMR) System: Council, at its meeting of June 23 and 24, 2008, approved the Automated Meter Reading (AMR) System. The AMR System includes a systematic, City-wide water meter replacement program coupled with the concurrent installation of automated meter reading technology (i.e. a radio frequency based fixed area network) over a 6 year period. Based on 2006 total water consumption and 2007 water rates, the City is losing approximately $28.000 million per year in revenue due to aging and inaccurate water meter infrastructure.

The 2010 Recommended Capital Budget and 2011-2019 Recommended Capital Plan provides $228.496 million in funding for implementation of the AMR System. It has been estimated that approximately $33.000 million per year will be realized once the AMR System is fully implemented through a combination of additional revenues and operating efficiencies. This project will pay for itself in approximately 7 years. The City is continuing contractual negotiations with the preferred vendor for implementation of the AMR Project. It is envisioned that the final agreement will be signed by end of October 2009.

Help to Clean Up Lake Ontario to Make Toronto's Beaches More Swimmable

The 2010 Recommended Capital Budget and 2011-2019 Recommended Capital Plan provides $675.657 million in funding for projects to continue the implementation of the Wet Weather Flow Master Plan to manage the discharge of pollutants into waterways and Lake Ontario. The goal of the Plan is 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.

The 2010 Recommended Capital Budget and 2011-2019 Recommended Capital Plan provides funding to complete environmental assessments followed by the design and construction for projects identified in the Master Plan. Projects which directly affect improvements to water quality along the waterfront include the: Don and Waterfront Trunk Sanitary Sewer and Combined Sewer Overflow Control Strategy; Etobicoke Waterfront Storm Sewer Discharges; Bonar Creek Stormwater Wetland (Etobicoke Waterfront); Coatsworth Cut Storm Sewer and Combined Sewer Overflow Control Project; Eastern Beaches Storm Sewer Discharges; and, the Scarborough Waterfront Combined Sewer Overflow Discharges. Once implemented, these projects will address most of the storm sewer discharges to the waterfront and all but 9 of the 69 combined sewer overflow discharges in the City.

Lead Water Service Connection Replacement Program

Council, at its meeting of July 16, 17, 18 and 19, 2007, adopted the Lead Water Service Connection Replacement Program in support of new Provincial regulations. On July 26, 2007, amendments to Ontario Regulation 170/03 under the Safe Drinking Water Act, 2002 to reduce the potential for elevated levels of lead in drinking water at the tap, came into effect. Under the new regulations, municipalities are required to conduct a community lead testing program and take corrective actions for adverse results. The 2010 Recommended Capital Budget and 2011-2019 Recommended Capital Plan provides $258.422 million in funding to accelerate replacement of lead water service connections over a 9 year period.

Summary of Major Capital Initiatives

(In $Thousands)	2010 Rec. Budget	2011 Plan	2012 Plan	2013 Plan	2014 Plan	2015 Plan	2016 Plan	2017 Plan	2018 Plan	2019 Plan	2010-2019 Total
New & Expanded Facility Projects											
Horgan Water Treatment Plant Expansion	71,500	70,000	47,500	200							189,200
Humber Administration Building Expansion	50	4,000	4,000	2,000							10,050
New Laboratory Facilities	-	-	1,000	10,300	10,300	2,100	-	-	-	-	23,700
IT Projects	1,500	750	1,856	3,440	5,000	5,000	1,500				19,046
Sub-total	73,050	74,750	54,356	15,940	15,300	7,100	1,500	-	-	-	241,996
Other Major City Initiatives											
Action Plan for Climate Change											
Water Efficiency Plan	7,170	6,264	6,162	6,111							25,707
Automated Meter Reading System	11,200	20,060	45,350	44,230	49,175	43,281	15,200				228,496
Basement Flooding Relief Work Plan	34,500	57,000	58,500	72,500	73,500	70,218	74,000	80,000	80,000	80,000	680,218
Energy Efficiency Measures	22,966	34,096	25,008	17,685	16,970	11,500	9,350	9,350	9,300	9,300	165,525
Downspout Disconnection Program	4,630	5,760	6,130	5,630	5,130	5,130	5,130	5,130			42,670
Lead Water Service Connection Replacement Program	37,022	29,200	29,700	32,500	32,500	32,500	32,500	32,500			258,422
Help to Clean up Lake Ontario	14,380	15,422	19,750	33,980	49,625	80,900	85,900	100,900	130,400	144,400	675,657
Sub-total	131,868	167,802	190,600	212,636	226,900	243,529	222,080	227,880	219,700	233,700	2,076,695
Total	204,918	242,552	244,956	228,576	242,200	250,629	223,580	227,880	219,700	233,700	2,318,691

The 10-Year Recommended Capital Plan provides new/expanded facilities funding of $222.950 million, examples include new laboratory facilities; Horgan Water Treatment Plant expansion; and, new administration facilities at the Humber Wastewater Treatment Plant.

Recommended funding for information technology projects amounts to $19.046 million over the 2010 to 2019 timeframe. These projects include implementation of the Toronto Water Technology Blueprint. The Blueprint commenced in 2007 with the identification of long-term business and technology improvements. The Plan identified 19 major initiatives; including business review; culture and process change; and, technology enablement which encompasses selection; acquisition; and, management of technology required to support the recommended business improvements.

10-Year Capital Plan: Incremental Operating Impact Summary

(In $Thousands)	2010 Rec. Budget	2011 Plan	2012 Plan	2013 Plan	2014 Plan	2015 Plan	2016 Plan	2017 Plan	2018 Plan	2019 Plan	2010-2019 Total
2010 Recommended Capital Budget											
Gross Expenditures	135										135
Revenue	(550)										(550)
Net	(415)										(415)
Approved Positions											
2011-2019 Recommended Capital Plan											
Gross Expenditures				288	588	453	257	159	111	171	2,027
Revenue		(11,467)	(10,884)	(2,345)	(3,100)	(3,700)					(31,496)
Net		(11,467)	(10,884)	(2,057)	(2,512)	(3,247)	257	159	111	171	(29,469)
Approved Positions				6.0	6.0	3.0	2.0	1.0	1.0	1.0	20.0
Total											
Program Costs (Net)	(415)	(11,467)	(10,884)	(2,057)	(2,512)	(3,247)	257	159	111	171	(29,884)
Approved Positions	0	0	0	6	6	3	2	1	1	1	20

The 2010 Recommended Capital Budget and 2011-2019 Recommended Capital Plan includes operating impacts from previously approved and new/change in scope capital projects for 2010 of ($0.415) million; 2011 of ($11.467) million; 2012 of ($10.884) million; 2013 of ($2.057) million; 2014 of ($2.512) million; 2015 of ($3.247) million; 2016 of $0.257 million; 2017 of $0.159 million; 2018 of $0.111 million; and 2019 of $0.171 million.

The operating impacts primarily reflect additional revenue that will be realized from implementation of the Automated Meter Reading (AMR) System. The financial benefits of approximately $33.000 million per year will be realized once the AMR System is fully implemented through a combination of additional revenues and operating efficiencies.

Toronto Water has identified 20 new positions arising from approval of the 2011-2019 Recommended Capital Plan. Capital Projects with complement additions include:

- Sludge Thickening Building Upgrade (2103 - 1 position).
- Basement Flooding Relief Work Plan (2013 - 2 positions, 2014 - 2 positions, 2015 - 1 position, 2016 - 1 position).
- End of Pipe Facilities (2013 - 1 position, 2014, - 2 positions, 2016 - 1 position, 2017 - 1 position, 2018 - 1 position).
- Wet Weather Flow Master Plan (2015 - 1 position, 2019 - 1 position).
- Ashbridges Bay Wastewater Treatment Plant Odour Control (2013 - 2 positions, 2014 - 2 positions, 2015 - 1 position).

Total 2010 Recommended Cash Flow & Future Year Commitments

(In $ Thousands)	2008 & Prior Year Carry Forwards	2010 Previously Approved Cash Flow Commitments	2010 New Cash Flow Rec'd	2010 Total Cash Flow Rec'd	2009 Debt Target	2009 Carry Forwards	Total 2010 Cash Flow (Incl 2008 C/Fwd)	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total Cost
Expenditures																	
Previously Approved		555,488		555,488		50,767	606,255	513,422	452,962	355,610	104,954	76,534	13,552	620			2,123,909
Change in Scope			33,686	33,686			33,686	18,798	15,188	(3,457)	166,056	66,554	50,089	41,660	34,665	33,135	456,374
New			6,000	6,000			6,000										6,000
New w/Future Year			74,731	74,731			74,731	201,497	222,910	160,984	156,169	53,900	54,933	45,503	32,400	25,702	1,028,729
Total Expenditure	0	555,488	114,417	669,905		50,767	720,672	733,717	691,060	513,137	427,179	196,988	118,574	87,783	67,065	58,837	3,615,012
Financing																	
Development Charges		30,172	2,508	32,681		1,544	34,225	25,523	21,479	11,944	5,197	1,806	1,143	1,042	250	152	102,761
Reserves/Res Funds		411,887	100,435	512,321		46,278	558,599	607,883	597,616	453,385	392,316	195,028	117,284	86,741	66,815	58,685	3,134,352
Other		70,928	9,474	80,402		2,945	83,347	91,311	71,965	47,808	29,666	154	147				324,398
ISF		42,501	2,000	44,501			44,501	9,000									53,501
Total Financing	0	555,488	114,417	669,905		50,767	720,672	733,717	691,060	513,137	427,179	196,988	118,574	87,783	67,065	58,837	3,615,012

Comments / Issues:

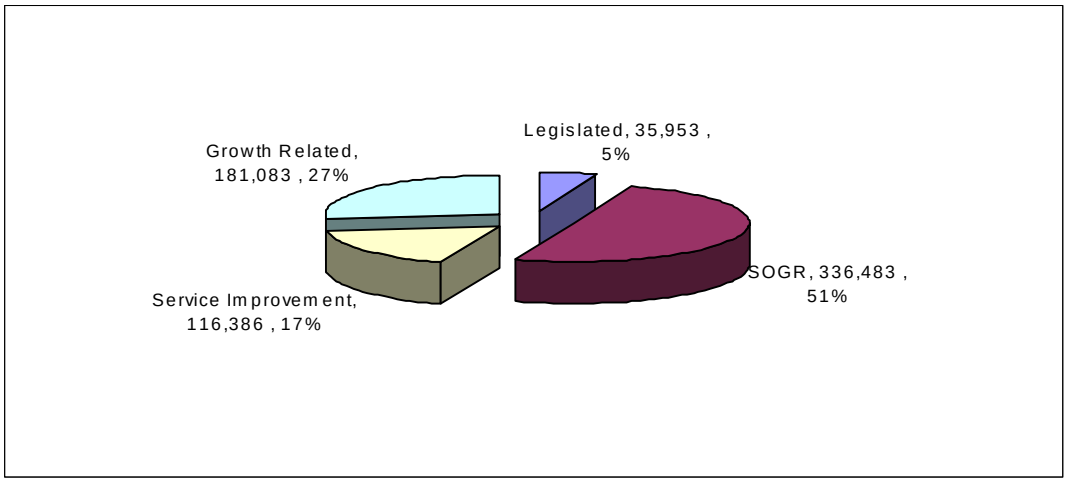
- Toronto Water's 2010 Recommended Capital Budget is $720.672 million and provides funding for 2009 projects carried forward into 2010 of $50.767 million; previously approved 2010 commitment funding of $555.488 million; and, $114.417 million for new/change in scope projects.

- Large multi-year projects requiring 2009 carry forward funding include the Lead Water Service Connection Replacement Program; Ashbridges Bay Wastewater Treatment Plant Odour Control; Wet Weather Flow Master Plan Class Environmental Assessments; and, Automated Meter Reading (AMR) System.

- Approval of the 2010 Recommended Capital Budget will result in a commitment to future year funding for new/change in scope projects of $220.295 million in 2011; $238.098 million in 2012; $157.527 million in 2013; $322.225 million in 2014; $120.454 million in 2015; $105.022 million in 2016; $87.163 million in 2017; $67.065 million in 2018; and, $58.837 million in 2019. The high rate of future year funding reflects the nature of Toronto Water's capital program which includes many multi-year, multi-million dollar projects such as the Automated Meter Reading (AMR) System; Horgan Water Treatment Plant Expansion; Basement Flooding Relief Work Plan and Watermain Replacement. The use of multi-year contracts has allowed Toronto Water to increase its capital delivery rate.

2010 Recommended Capital Budget: Overview

Capital Budget by Project Category



The following summarizes the allocation of recommended funding by project category:

- The 2010 Recommended Capital Budget reflects the allocation of significant funding for *State of Good Repair projects*. These projects account for approximately $336.483 million or 51% of the total new cash flow of $669.905 million being recommended for 2010. State of good repair projects are driven by renewal needs for the watermain and sewer network and treatment facilities.

- *Service Improvement projects* represent 17% or $116.386 million of the total new recommended cash flow for 2010. Examples of service improvement projects include biosolids treatment and disposal; wastewater treatment plant odour control; Automated Meter Reading (AMR) System; Basement Flooding Relief Work Plan; Wet Weather Flow Master Plan; and, wastewater treatment plant optimization.

- *Growth projects* account for 27% or $181.083 million of the 2010 Recommended Capital Budget and include initiatives for improving water efficiency; reducing water loss; and, expansion projects required for future water supply and wastewater treatment demand.

- Approximately 5% or $35.953 million of the 2010 Recommended Capital Budget is allocated to *Legislated projects*. These projects address existing and emerging provincial legislation, which includes Bill 195, Safe Drinking Water Act, Bill 81, Nutrient Management Act and the recent Bill 43, Clean Water Act. Legislative projects also include compliance with the federal government's Environmental Protection Act.

Capacity and Readiness to Proceed

The 2010 Recommended Capital Budget is ready to proceed. Facility and needs assessment studies have now been finalized for major capital works. Construction is now proceeding on many large projects and final designs have been completed for others. These projects are currently being tendered or awaiting final approval from the Ministry of Environment. It is anticipated construction will start in early 2010. Toronto Water has also implemented a new delivery strategy for several projects where

design assignments have been issued for a large volume of work (i.e., watermain replacement), rather than through individual contracts. Further, a program delivery approach is being used for large multi-year programs such as the Basement Flooding Relief Program and Watermain Replacement Program. The efficiencies to be realized through having a single design firm managing a large volume of similar and straight-forward work will allow Toronto Water to increase its capital delivery rate and accelerate the clearing of the infrastructure backlog.

Capital Project Highlights

The 2010 Recommended Capital Budget provides funding for a broad range of projects that advance priority actions in the Mayor's and Council's policy agenda.

Climate Change Adaptation, Clean Air and Sustainable Energy Action Plan: The 2010 Recommended Capital Budget provides funding of $80.466 million to continue various initiatives in the Action Plan:

- Water Efficiency Plan - $7.170 million.
- Automated Meter Reading (AMR) System - $11.200 million.
- Basement Flooding Relief Work Plan - $34.500 million.
- Energy Efficiency Measures - $22.966 million.
- Downspout Disconnection Program - $4.630 million.

Help to Clean Up Lake Ontario to Make Toronto's Beaches More Swimmable: Funding of $14.380 million is provided in the 2010 Recommended Capital Budget for various capital programs to help clean up Lake Ontario and make Toronto's beaches more swimmable.

Lead Water Service Connection Replacement Program: Funding of $37.022 million is provided in the 2010 Recommended Capital Budget for continued implementation of the program.

PART II: ISSUES FOR DISCUSSION

2011-2019 Recommended Capital Plan Issues

Capacity – Ability to Spend

The 2010 Recommended Capital Budget and 2011-2019 Recommended Capital Plan is an aggressive undertaking with funding increasing from $720.672 million in 2010 to $989.930 million in 2019, representing a growth of 37.4% or $269.258 million. In delivering the 10-Year Recommended Capital Plan planned expenditure levels, Toronto Water will continue to work with other City Programs to ensure that the procurement of services proceeds efficiently. In addition, Toronto Water continues to strengthen consultation and detailed coordination with external consulting engineers and the construction industry to ensure that contract suppliers are able to meet the higher level of demand. Toronto Water is in regular contact with Greater Toronto Area municipalities in an attempt to coordinate the scheduling of tenders, where possible.

There are 4 initiatives which are anticipated to aid Toronto Water's capital budget spending capacity and completion rates, as outlined below.

1. Multi-Year Joint Transportation Services and Toronto Water Capital Program

To strengthen the coordination between Transportation Services and Toronto Water, Council at its meeting of July 16, 17, 18 and 19, 2007, approved the development and implementation of a coordinated multi-year joint Transportation Services and Toronto Water capital program. This cross-program initiative outlines a new planning process to address a more efficient renewal strategy for rehabilitating the City's aging infrastructure. Once fully implemented, the Plan will enable staff to secure a coordinated fixed 5 year capital program well in advance of construction activity. In addition, the initiative will permit Technical Services staff to proceed in an unimpeded manner with the scoping and design of capital works several years prior to their scheduled construction dates.

2. Capital Program Delivery Working Group

Toronto Water will continue to participate with other Cluster B Program staff in a working group to discuss a variety of capital delivery issues, such as strategies for increasing spending/completion rates; impact of inflationary pressures; resource staffing; scheduling; etc. Priority will be given to completing ISF projects.

3. Multi-Year Engineering Design Assignments

In order to expedite the design and tendering of linear infrastructure renewal, Toronto Water, in cooperation with Technical Services, will continue to seek proposals for multi-year engineering assignments. Five year plans have been developed for watermain replacement; basement flooding; and, sewer inspection programs. Packaging these programs into multi-year engineering contracts will increase the City's ability to advance design work and tender the construction of a larger volume of projects.

4. Bid Committee Authority

Council at its meeting of March 5, 6, 7 and 8, 2007, approved revising the delegated authority for procurement awards. Bid Committee now has the authority to award contracts to an upset limit of $20.0 million, replacing the previous $5.0 million limit. This new threshold had a positive impact on the Program's capital budget spending and project completion rates, as Bid Committee meets weekly as compared to monthly for Standing Committee and Council.

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 areas of 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, City Council approved a Basement Flooding Protection Work Plan requiring a comprehensive engineering review to address chronic basement flooding problems in 31 separate Basement Flooding Study Areas, across the City. 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 level of protection against basement flooding from sanitary sewer backup for a storm equivalent to a return frequency of between one in 25 to one in 50 years; and from surface flooding for the one in 100 year return frequency, where feasible, in areas where a proper overland flow drainage system does not exist.

These studies are following 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. The first four studies, in the hardest hit areas, have been completed, and the construction for the first set of remedial works is scheduled to begin late 2009. These studies have shown the implementation of the above-noted elements presents many challenges, and retrofitting an overland flow design in existing fully developed areas presents the most significant challenge in terms of cost, scheduling and disruption to the local communities. Further, in September 2008, City Council in reviewing the staff report "Update on the Engineering Review Addressing Basement Flooding", approved a prioritization for the implementation of works, across all study areas, based on the total number of benefiting properties and the estimated cost of the work to the City apportioned to each benefiting property. Works exceeding the $0.025 million per benefiting property threshold, approved by Council, are to be implemented only as appropriate funding opportunities are available, through other City infrastructure renewal programs, or should third party funding which reduces the City's cost per benefiting property. The priority projects for the first four study areas alone represent an expenditure of almost $200 million. The cost to implement priority projects across all 31 study areas will be updated, on an annual basis with subsequent Capital Budget submissions, as Class Environmental Assessment Studies are completed.

Toronto Transit City Light Rail Plan

At its March 21, 2007 meeting, the Toronto Transit Commission approved the Toronto Transit City Light Rail Plan. The Transit City Plan involves the construction of 7 new light rail lines which will operate in their own dedicated rights-of-way plus the renovation and extension of the Scarborough Rapid Transit line. This Plan will bring fast; reliable; and, environmentally-friendly light rail transit to the City, resulting in the creation of an interconnected network of rapid transit across the City. In

2009, the Province of Ontario announced funding for the implementation of the Finch West LRT, Eglinton Crosstown LRT and the Scarborough RT and the Province and Federal Government announced funding for the Sheppard East LRT. In total, $8.15 billion in Provincial and Federal funding commitments have been made for these 4 projects. The Province's new transit project delivery framework designates these 4 projects as "Regional Transit" projects under the *Metrolinx Act*, 2006 and provides Metrolinx with the responsibility to deliver these projects in cooperation with the City of Toronto and the Toronto Transit Commission.

Based on discussions with the Toronto Transit Commission, Toronto Water has assumed, for the 2010 Recommended Capital Budget and 2011-2019 Recommended Capital Plan, that if Toronto Water infrastructure is currently located within the limits of the proposed light rail transit route, the costs of its relocation will be funded by Transit City. For infrastructure adjacent to the limits, Toronto Water will review the condition of the asset and will budget for its replacement in coordination with the track work to minimize disruption to the local community.

Service Improvement Projects

Toronto Water experiences challenges in balancing the range of emerging service improvement projects, such as the Downspout Disconnection Program; Automated Meter Reading (AMR) System; Lead Water Service Connection Replacement Program; and, the Basement Flooding Relief Work Plan. The recent increase in service improvement demands, has at times, redirected funding away from addressing the significant state of good repair backlog. The 10-Year Recommended Capital Plan includes a significant amount of funding to address the state of good repair backlog from $1.720 billion in 2010 to $43.092 million in 2019, reflecting 0.2% of Toronto Water's total asset value of $26.000 billion. This represents a decrease of $1.677 billion or 97.6% over the 10-year planning horizon.

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.

In addition, recent amendments to Ontario Regulation 170/03 for large municipal residential systems includes a new requirement from the regulated lead testing program, that if any 2 of the 3 most recent rounds do not meet Ministry of Environment standards (more than 10% of test results exceed 10 parts per billion) then the City will be required to develop a Corrosion Control Plan. The Corrosion Control Plan would include: a) analyzing the potential for lead leaching into drinking water as a result

of corrosion; b) characterizing and assessing conditions in the drinking water system to determine which corrosion control measures may be viable; c) proposing the specific measures and timing of implementation; and, d) proposing monitoring to assess effectiveness of corrosion control measures. The new requirement will have an impact to Toronto Water's future year Operating and Capital Budgets. Details of the impact will be assessed in 2010 and included as part of the 2011 Toronto Water budgeting process.

Council approved the Lead Water Service Connection Replacement Program (July 2007) and the Water Lead Content Mitigation Rebate Program (April 2009) in response to amendments to the Act designed to reduce the potential for evaluated levels of lead in drinking water.

Bill 81, Nutrient Management Act: The Nutrient Management Act and its Regulation 267/03 address land-applied materials containing nutrients. This includes provisions for the development of strong new standards for all land-applied materials containing nutrients, a proposal to ban the land application of untreated septage over a 5 year period, and proposed strong new requirements such as: the review and approval of nutrient management plans; certification of land applicators; and, a new registry system for all land applications.

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. Bill 43 has recently been approved and regulations under the Act may have an impact on the implementation schedule of the Wet Weather Flow Master Plan. Further, the financial impact associated with the development of Source Water Protection Plans across the City's 6 watersheds and Lake Ontario is not known at this time.

Bill 175, Sustainable Water and Sewage Systems Act: This Act will make it mandatory for municipalities to assess and cost-recover the full amount of water and sewer services, as recommended in the Walkerton Report. The implementation schedule for Bill 175 and regulatory framework has not been determined; 7 years after the Province passed the Act in 2002. However, it is currently anticipated that the municipal reporting requirements of Bill 175 may include a full cost of service report and cost recovery plan report. It is expected that Bill 175 will not have a significant impact on the 2010 Recommended Capital Budget and 2011-2019 Recommended Capital Plan; however, the regulations could affect the structure and balance requirements for capital reserves.

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, many of which are currently in need of repair and upgrading. It provides an agreed-upon path forward for achieving regulatory clarity for owners of municipal wastewater facilities. Performance standards will increase protection for human health and the environment on a national basis. Bilateral agreements between the federal government and provinces and territories will ensure one-window regulatory delivery of the strategy. The strategy will be used by the Ontario Ministry of the Environment to establish new regulations and guidelines.

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 2010 Recommended Capital Budget and 2011-2019 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.

Reserves/Reserve Funds

Please refer to the 2010 Water and Wastewater Service Rate Report (October 2009), from the Deputy City Manager and Chief Financial Officer and the General Manager for Toronto Water, regarding the adequacy and strategies for managing Toronto Water's reserves/reserve funds.

Issues Referred to the 2010 Budget Process

There were no issues referred to the 2010 Capital Budget process for Toronto Water.

Appendix 1

2010-2019 Summary of the Recommended Capital Budget and Capital Plan

Appendix 2

2010 Recommended Capital Budget; 2011 to 2019 Capital Plan

Appendix 3

2010 Recommended Cash Flow And Future Year Commitments

Appendix 4

2010 Recommended Capital Projects With Financing Details

Appendix 5

Reserve / Reserve Fund Review

Please refer to the 2010 Water and Wastewater Service Rate Report (October 2009), from the Deputy City Manager and Chief Financial Officer and General Manager for Toronto Water

Appendix 6

2010 to 2019 New Facilities and Expansion Projects

(In $Thousands)	2010 Rec. Budget	2011 Plan	2012 Plan	2013 Plan	2014 Plan	2015 Plan	2016 Plan	2017 Plan	2018 Plan	2019 Plan	2010-2019 Total
Horgan Water Treatment Plant Expansion	71,500	70,000	47,500	200							189,200
Humber Administration Building Expansion	50	4,000	4,000	2,000							10,050
New Laboratory Facilities			1,000	10,300	10,300	2,100					23,700
Total	71,550	74,000	52,500	12,500	10,300	2,100					222,950