TORONTO

STAFF REPORT
ACTION REQUIRED

Toronto Water Capital Program Funding Pressures and Financing Options

Date:	September 10, 2012
To:	Budget Committee
From:	Deputy City Manager and Chief Financial Officer General Manager, Toronto Water
Wards:	All Wards
Reference Number:	P:\2012\ClusterB\TW\pw12007

SUMMARY

Revenues are the lifeblood of all water utilities and without a long term plan for adequate revenue generation the quality of service will deteriorate over time from the lack of proper maintenance and system improvements. It is important for the City of Toronto to develop a new financing strategy that generates enough revenue to ensure the water utility is financially and operationally sustainable.

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 and a number of competing priorities has placed significant pressure on the long term capital program.

In November 2011, City Council approved a decrease of $1.132 billion or 14% of the 2011-2020 Approved Toronto Water Capital Plan. This was due primarily to decreased revenue forecasts arising from a continued decreasing trend in water consumption. There was also a realignment of capital spending rates to reflect a higher spending capacity and the addition of capital projects through recent Council decisions.

Concurrently, with deferring over one billion dollars worth of projects, there is an estimated $540 million in project funding required to address unbudgeted projects being discussed at this time, while at the same time, public pressure is increasing to reinstate funding that was deferred for programs such as basement flooding protection and combined sewer overflow control projects.

In response to these capital funding pressures, City Council requested staff to consult with the City's major water stakeholders on funding options to address the capital funding

deficiencies within Toronto Water, including potential changes to the water rate pricing structure and report back on these options. The feedback received from a number of recent stakeholder targeted public consultation sessions has been taken into consideration in the development of funding strategies recommended in this report.

RECOMMENDATIONS

The Deputy City Manager and Chief Financial Officer, and General Manager, Toronto Water recommends that:

1. The Deputy City Manager and Chief Financial Officer, and General Manager, Toronto Water, report back to Executive Committee, in advance of Toronto Water's 2014 Capital Budget submission, with a new financing strategy to support Toronto Water's long term Capital Plan, which includes a blend of the following financing options:
    a) Water Rate increases, beyond the existing plan of 3%, beginning in 2015;
    b) Debenture financing for large scale, long service period projects beginning in 2014, with all debt service costs to be paid from water rate revenue;
    c) Introducing a fixed charge to provide a dedicated reserve for wet weather flow control projects including basement flooding protection, beginning in 2015;
    d) Increasing development charge recoveries which may be realized through the forthcoming update to the 2013 Development Charges Background Study; and
    e) Opportunities to secure funding from the Federal and Provincial Governments for Lake Ontario water quality improvement projects.

Financial Impact

While a number of capital program financing strategies are presented, there are no immediate financial impacts arising from this report. The report recommends that a new financing strategy to fund Toronto Water's long term Capital Plan be prepared and submitted in advance of Toronto Water's 2014 Capital Budget submission with no impact on the property tax levy.

DECISION HISTORY

At its meeting of November 29, 30 and December 1, 2011, City Council in consideration of:

a) Toronto Water's 2012 Water and Wastewater Rates and Service Fees Report, directed that:
"staff to consult with the City's major water stakeholders on funding options to address the capital funding deficiencies of the Program, including potential changes to the water rate pricing structure, and report back through the appropriate Committee in June 2012 so that any approved changes can be incorporated into the 2013 Toronto Water Budget and Rate Setting Process"; and

b) Toronto Water's 2012-2021 Capital Plan, directed that:

"General Manager of Toronto Water in consultation with the Deputy City Manager and Chief Financial Officer to report to the Budget Committee in June 2012 on strategies to maximize funding capacity and/or provide reductions in current project costs to address existing and emerging unfunded capital priorities for consideration prior to the 2013 Capital Budget process"

A copy of the above-noted Council Decision Document can be found at:
http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2011.EX13.1

During its meeting on September 21, 22, 2011 City Council adopted the recommendations contained within the "Wet Weather Flow Master Plan and Basement Flooding Protection Program Update Report ". The report can be viewed at:
http://www.toronto.ca/water/cleanwaterways/pdf/wwfmp_n_basement_flooding_protection_program_update.pdf

The staff report notes, that the costs of implementing works identified in Environmental Assessments completed among the 32 Chronic Basement Flooding Study Areas within the Basement Flooding Protection Program far exceed the availability of funding, notwithstanding the year over year increases provided to the Program through Toronto Water's annual Capital Budget submissions.

While these works represent service improvements which benefit only those affected areas, they compete for funding with other pressing issues facing Toronto Water, namely the state of good repair projects, across the City. The report noted, therefore, that it may become necessary to examine alternate funding models for these types of works. One such model is a stormwater utility charge, which is property or lot specific and is associated with the amount of stormwater generated by the property, rather than water consumed.

At its meeting on February 23 and 24, 2011 City Council adopted the recommendations contained within the Water Efficiency Plan Update – 2011. The report can be viewed at:
http://www.toronto.ca/legdocs/mmis/2011/bu/bgrd/backgroundfile-34918.pdf

The report noted that the original objective of the Plan was to create "in-system capacity" by reducing water consumption across the City to service the projected population and employment growth, thereby deferring costly water and wastewater infrastructure expansions. The report showed that, notwithstanding the population and employment growth that has occurred, actual consumption reduction targets were surpassed and a 14 percent reduction in water consumption was realized for the period 2001 to 2011.

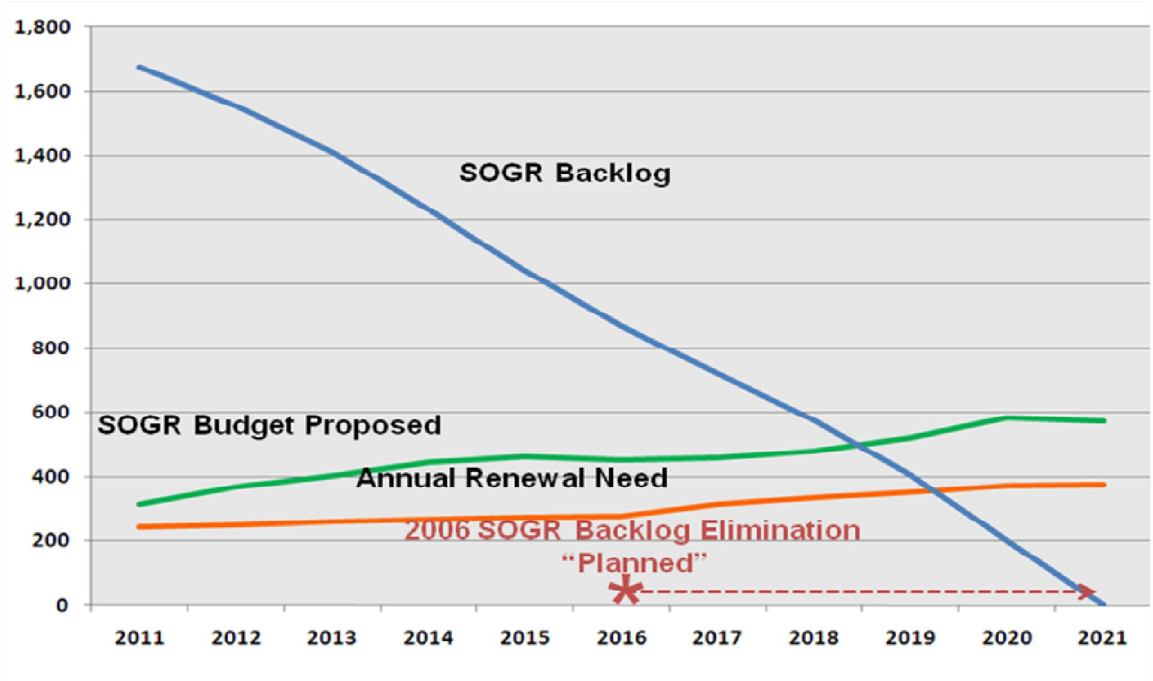
ISSUE BACKGROUND

In 2005 City Council adopted a long-term infrastructure renewal plan for Toronto Water concurrently with a funding strategy of increasing water rates 9% per year. Over time, the strategy ('9-for-9') provided for a series of 9% per year rate increases, beginning in 2006 ending in 2014. The principle objective, at that time, was to generate enough revenue, through the sale of water, to support a long term capital program, with a focus

on infrastructure renewal, leading to the elimination of Toronto Water's infrastructure renewal backlog by 2016, a shown in Figure 1.

Unfortunately, over time, as competing priorities emerged, and actual revenues fell short of original forecasts, changes were unavoidable to the program, and the elimination of the state of good repair backlog was extended. By the end of 2011, the backlog stood at an estimated $1.7 billion, and based on current forecasts and expenditure rates, and with no additional unfunded capital projects introduced to Toronto Water's 2012-2021 Capital Plan, the backlog is expected to be cleared by 2021.

Figure 1 - State of Good Repair Funding & Backlog (2006 versus 2012 – millions $)



The required changes to the 2012 Capital Budget and 2013-2021 Capital Plan balances the needs for state of good repair, growth related and service improvement projects while ensuring the safe, reliable treatment and delivery of drinking water; the collection and treatment of wastewater; and the management of stormwater runoff and combined sewer overflows. The Capital Program is 100% self sustaining, largely through water revenues, with no debenture financing and no impact on the municipal property tax levy.

Toronto Water's 2012-2021 Capital Plan, approved by City Council, represented a decrease of $1.132 billion (14%) of the 2011-2020 Approved Capital Plan due to a decrease in available capital financing arising from:

a) A forecasted decrease in water consumption from the 2011 water rate model resulted in a decrease in water rate revenues of $686.8 million over the 10 year planning period;

b) A reduction of $240 million in available capital financing over the 10 year planning period to reflect the Program's increased spending capacity, which has been aligned to actual spend rates realized since 2009;

c) A reduction in available capital financing of $110 million to re-establish a sufficient Water Capital Financing Reserve balance, depleted as a result of accelerated capital spending from 2009 to 2011 beyond Toronto Water's spending rate targets (established for rate and budget setting purposes); and

d) Accommodating the financial impact of Council's decision on the Biosolids Master Plan for the Highland Creek Wastewater Treatment Plan; and directing the implementation of an ultraviolet effluent disinfection strategy at the Ashbridges Bay Wastewater Treatment Plant, further decreased the available funding by $98.7 million.

In balancing the reduction of capital financing across all Program areas the following net reductions in the approved 2012-2021 Capital Plan, over the approved 2011-2020 Capital Plan were required:

i) Watermain Renewal (Replacement & Rehabilitation) projects to address state of good repair issues were reduced by $46.995 million from $100.973 million in 2012 and by a total of $185.493 million from $1.303 billion from 2012 to 2020;

ii) Wet Weather Flow Master Plan projects were reduced by $6.321 million from $28.790 million in 2012 and by a total of $436.578 million from $991.958 million from 2012 to 2020;

iii) Storage and Pumping Facilities projects were reduced by $1.136 million from $30.765 million in 2012 and by a total of $370.768 million from $442.552 million from 2012 to 2020;

iv) Transmission Watermain projects were reduced by $34.842 million from $75.348 million in 2012 and by a total of $308.474 million from $673.399 million from 2012 to 2020; and

v) Basement flooding program projects were reduced by $15.704 million from $75.800 million in 2012 and by a total of $127.306 million from $777.600 million from 2012 to 2020.

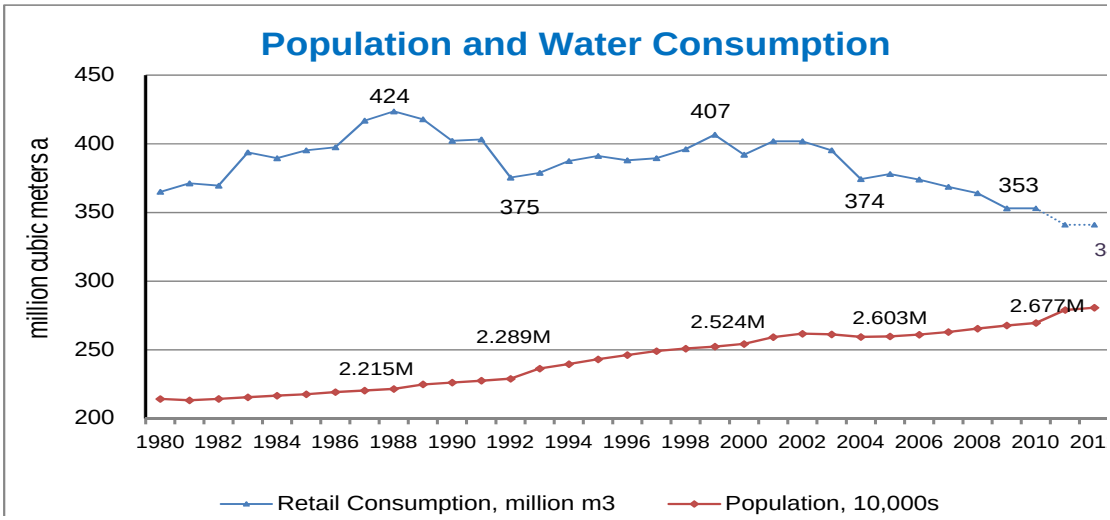
COMMENTS

The existing ten year financial plan relies primarily on successive water rate increases to fund infrastructure investment to conform to the "pay-as-you-go" financing strategy. Although declining water consumption was anticipated and factored into ten year revenue forecasts, the actual decline in water consumption was greater and occurred more quickly than projected. The greater decline in water consumption has led to a decrease in anticipated water rate revenue over the ten-year planning period.

Declining Water Consumption and Revenues

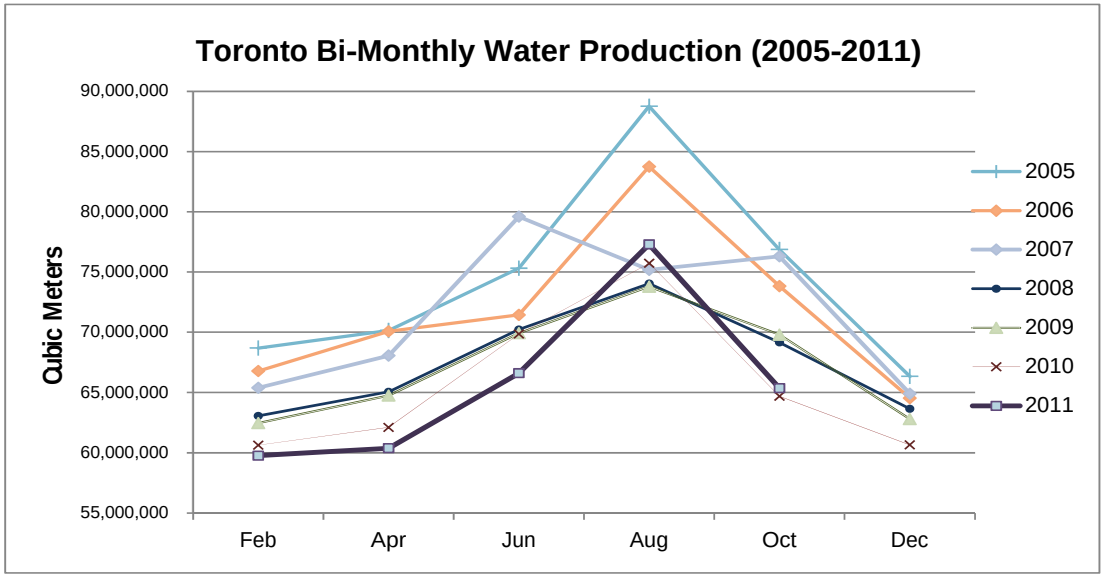
Toronto Water, as is the case in many other municipalities, continues to experience a loss in revenue from a decline in water consumption of about 15 percent that has occurred over the last 10 years, as shown in Figure 2, even though the City has experienced a population growth of 7 percent during this same period.

Figure 2 - Population Growth and Water Consumption (1980-2012)



While much of the decline can be attributed to the implementation of the City's Water Efficiency Plan, there has been a noticeable reduction in summer water consumption, associated with lawn watering, which can be attributed to a shift in public behaviour and the impact of rising water rates. Figure 3 shows that, on average, water consumption during the four summer months (May to August) can represent about 36% of the overall annual consumption. However, summer consumption has fallen by about 12% since 2005 or by about 2% annually on average. There has also been a corresponding decrease in water consumption for the non-summer period (October to April).

Figure 3 - Toronto Bi-Monthly Water Production



The declining trend in water consumption is consistent across all water billing sectors, as demonstrated in Figures 4 and 5, where average annual residential, commercial and industrial water consumption is presented for the years 2006 to 2012. The most significant and continued decreasing trend in consumption is observed for all residential sectors.

Figure 4 - Average Residential Water Consumption (m^3 per year)

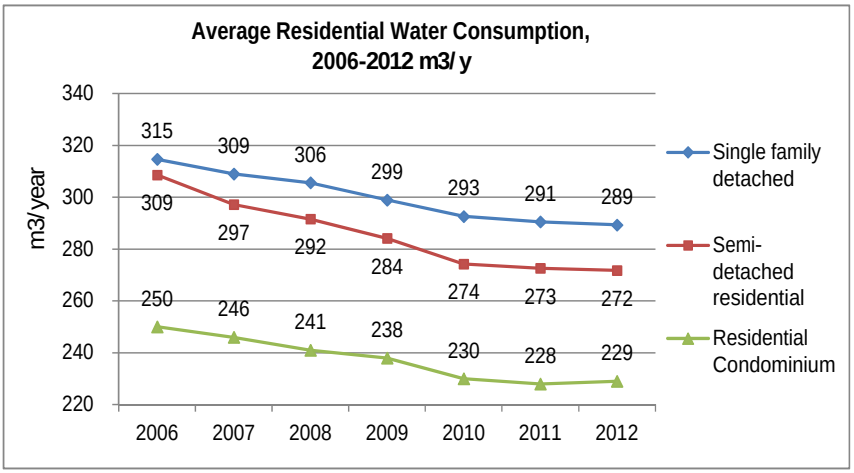
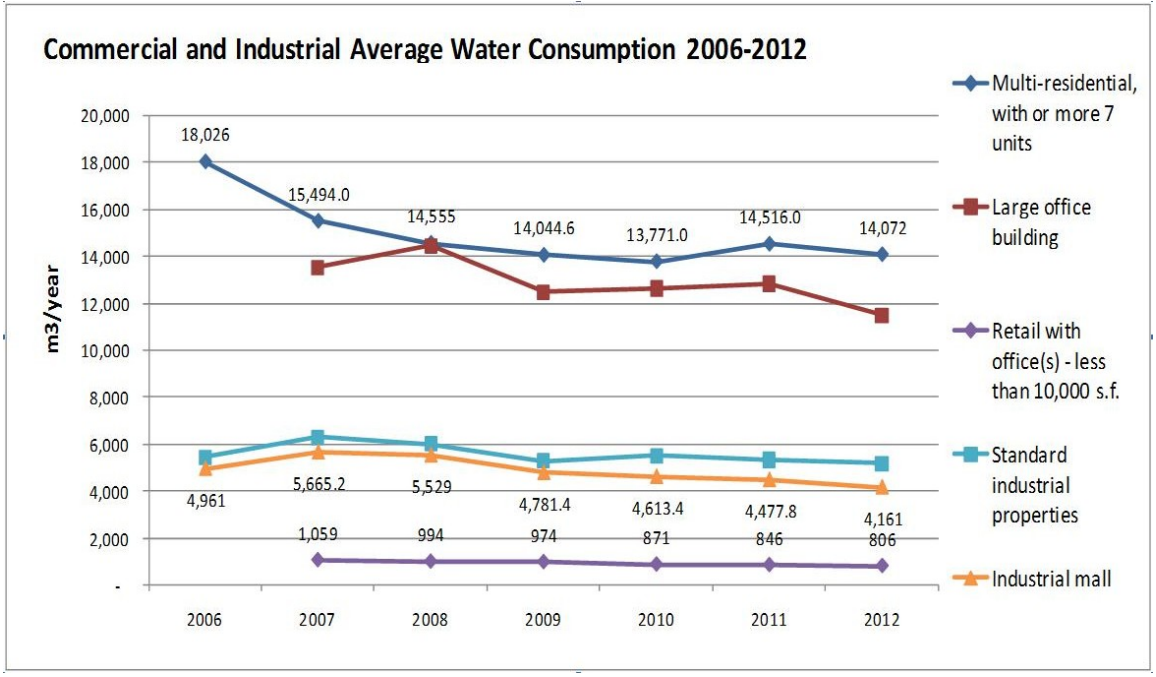


Figure 5 - Average Commercial and Industrial Water Consumption (m^3 per year)



The impact of a greater decline in water consumption was that future water revenue forecasts had to be significantly adjusted. As noted in the 2012 Water and Wastewater Rates and Services Fees Report (November 2011), the full revenue effect of the 9% rate increase in 2012 was not realized as 2% was necessary to offset the reduction in forecasted consumption. Based on declining water consumption trends shown above, Toronto Water revised its 10 year revenue forecast, projecting a further decrease of 1.5% per year until 2015, which effectively reduced an estimated $687 million in cumulative funding over the 10 year planning period.

Toronto Water Capital Program Funding Pressures

In light of the above-noted funding pressures, Toronto Water's 2012 to 2021 Capital Plan was adjusted in a balanced manner across many program areas. While state of good repair projects remain a priority, given the significant backlog in infrastructure renewal, (estimated at $1.7 billion at the end of 2011) considerable funding is still provided to support the implementation of the Wet Weather Flow Master Plan and growth related projects, some of which is recovered from Development Charges.

Notwithstanding the reductions incorporated into the Plan due to the reduced revenue forecasts, additional financial pressures from recent Council decisions were also accommodated in the Plan. Cost increases to what was originally proposed were associated with the Highland Creek Biosolids Disposal Truck Loading Facility and the Ashbridges Bay Wastewater Treatment Plant Effluent UV Disinfection System.

Significant pressure also exists to support projects not currently contained within Toronto Water's 2012 to 2021 Capital Plan. The projects are described below and a summary of the financial pressures these projects represent are presented in Table 1.

Table 1 - Summary of Toronto Water Capital Budget Pressures

Project/Program	2012-2021 ($ millions)	2022-2031 ($ millions)
Budgeted Pressures		
a) Highland Creek Wastewater Treatment Plant – Biosolids Handling Cost Increase	$ 8.6	--
b) Ashbridges Bay Wastewater Treatment Plant – Disinfection Cost Increase	$66.9	--
Total Budgeted Pressures:	**$75.5**	
Unbudgeted Pressures		
a) Ashbridges Bay Wastewater Treatment Plant		
i) Ashbridges Bay Treatment Plant (M&T) Pumping Station	$ 89.0	--
ii) Ashbridges Bay Treatment Plant Outfall	--	$322.4
b) Wastewater Treatment Plants - Digester Cleaning and Repairs	$80.0	TBD
c) Wet Weather Flow Master Plan		
i) Don River & Central Waterfront Project	$ 29.0	$691.5
ii) Basement Flooding Protection Program	$ 75.0	TBD
iii) Etobicoke Waterfront Stormwater Control	--	$ 67.5
iv) Waterfront Landforms	$ 53.2	TBD
d) Water Treatment and Supply – Standy Power	$ 22.0	$ 88.0
e) Growth related projects		
i) Waterfront Development – Sanitary Sewer Master Servicing Plan	$ 36.0	TBD
ii) Lawrence Heights	$ 31.3	$ 25.7
iii) Downsview Park	$ 8.0	--
f) Metrolinx/TTC Transit Project – Sewer & Watermain Infrastructure Upgrades	$ 62.0	TBD
g) TRCA Priority Lakefront Erosion Control Projects	$ 35.0	TBD
Total Unbudgeted Pressures:	**$540.5**	**$1,195.1**

Budgeted Pressures

Highland Creek Wastewater Treatment Plant - On May 17, 2011, Council amended a report from the General Manager of Toronto Water entitled, Biosolids Master Plan Update Environmental Assessment (September 2009), rejecting the recommended biosolids strategy for the Highland Creek Wastewater Treatment Plant, and approving instead the "Beneficial Use Option" as the primary biosolids management strategy and the "Landfill Disposal Option" as the contingency measure. However, Toronto Water's 2011 to 2020 Approved Capital Plan included funding of only $36 million for on-site thermal reduction of biosolids assuming only one incinerator unit would be replaced in the 2011 to 2020 period. The budget estimate was based on the assumption of a straight forward replacement of obsolete technology with no substantive upgrades to peripheral

equipment such as air emissions controls. The second unit was assumed to be replaced after 2020 and at that time more elaborate air emissions control would be included.

Reports to Council in 2011 updated the cost of this option, assumed both incinerators would be constructed before 2020 and included state-of-the-art air emissions controls exceeding current Ontario regulatory requirements. With these changes, the new total estimated capital cost, as reported to Council, escalated to $142.58 million. The capital cost of the Biosolids Haulage Option was at that time estimated at $109.42 million but has since been updated to over $151.2 million due to the need for added odour control measures and additional digester capacity to meet Ministry of Environment requirements for land application of biosolids.

Ashbridges Bay Wastewater Treatment Plant - On May 17, 2011, Council also amended a report from the General Manager of Toronto Water entitled, Peer Review Findings of the Ashbridges Bay Treatment Plant Effluent Disinfection Class Environmental Assessment Study, rejecting the recommended $134.1 million chlorination/dechlorination option, and approving instead, the $200.5 million UV disinfection for the secondary effluent streams and chlorination/dechlorination for the secondary by-pass effluent stream. Toronto Water's 2011 to 2020 Approved Capital Plan for this project included funding of only $248.125 million which was intended to fund both the disinfection project and a new outfall. The cost of the outfall originally estimated in the 1990's has escalated considerably and is discussed later in this report.

Increased Capital and Operating Costs - As a result of these two Council decisions, Toronto Water's wastewater treatment costs have increased by approximately $95.5 million over the 10-Year planning period (2012 – 2021), summarized as follows:

i) Increased Capital Costs for Highland Creek of $8.6 million;
ii) Increased incremental operating impacts from Highland Creek of $17.5 million;
iii) Increased Capital Costs for Ashbridges Bay of $66.9 million; and
iv) Increased incremental operating impacts for Ashbridges Bay of $0.44 million in the first year of operation to be escalated by annual inflation thereafter.

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.

Further complications are expected as the Ministry of the Environment has indicated that given the change in technology from that of the highest ranked option identified in the Biosolids Master Plan, an additional Class Environmental Assessment (EA) will be needed for Highland Creek after completion of the Biosolids Master Plan to re-assess the top ranked viable options and provide adequate opportunity for public input. This additional EA is estimated to cost approximately $0.5 – 1.0 million provided it can be completed within 12 months.

Preliminary design work has proceeded for the disinfection system at the Ashbridges Bay Wastewater Treatment Plant. 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.

While chlorination-dechlorination systems have been implemented at the three other wastewater facilities, with the delay caused by the Council decision noted above, only the preliminary design work for the UV disinfection system has been possible at the Ashbridges Bay Wastewater Treatment Plant. The preliminary design explores recent advances in UV effluent disinfection systems, which may present opportunities to advance implementation and reduce costs. While these systems have not been used for large applications such as the Ashbridges Bay site, the applicability of these systems is being further assessed. Finally, the preliminary design is exploring innovative design concepts that would allow the new disinfection facilities to be built even if the proposed outfall is deferred to beyond 2020.

Unbudgeted Pressures

The following summarizes capital project pressures which were either not included or only partially funded within Toronto Water's 2012 to 2021 Capital Plan.

a) Ashbridges Bay Wastewater Treatment Plant

M & T Building Pumping Stations - The M&T Wastewater Pumping Station complex located on the north side of Lakeshore Blvd. consists of two pumping stations: "M Building" constructed in 1911, and "T Building" constructed in 1972. These two pumping stations are the most critical downstream components of the wastewater collection system, tributary to the Ashbridges Bay Wastewater Treatment Plant. Combined these two pumping stations serve a population of 564,000 residents.

A 2008 condition assessment of these facilities revealed that most of the electrical and mechanical equipment is at or beyond end of useful life and requires extensive upgrade. Correspondingly, the 2012-2021 Toronto Water Capital Budget Plan included $175M for engineering and construction to upgrade these facilities. However, recent inspections and pre-design work in T Building uncovered added structural concerns and determined that the needed structural modifications would be difficult and very risky.

As a result, an Environmental Assessment Study was initiated to determine the cost and feasibility of a range of options with respect to M and T Buildings, including proceeding with the original planned upgrade work, while also reviewing other alternatives including the integration of a new future wet weather flow pumping station, planned in support of the Don River and Central Waterfront Class Environmental Assessment Project.

While the study is expected to be completed later this year, the recommended option at this early stage appears to be the construction of a new consolidated pumping station on the south side of Lakeshore at the Ashbridges Bay Wastewater Treatment Plant site, effectively replacing the existing antiquated pumping stations, and integrating the longer term wet weather flow needs of the Don River and Central Waterfront Project. This option represents the lowest life cycle cost of the alternatives identified to date. It also

provides ancillary benefits, such as the integration of the operation and maintenance in one facility, while minimizing design and construction risk and maintaining operation of the existing M and T Buildings during construction.

The estimated cost to implement the recommended alternative is $330 million which includes engineering and construction. Funding of $175 million was already identified in Toronto Water's 2012 to 2021 Plan based on the original estimate to refurbish the facilities; and $66 million is included in the implementation of Phase 1 (Coxwell Sanitary Trunk Sewer Twinning) of the Don River and Central Waterfront Project. This leaves an estimated $89 million to be funded.

New Outfall Pipe - The construction of a new outfall pipe at the Ashbridges Bay Treatment Plant is required as the existing outfall cannot handle the peak flows once the shore based "sea-wall gates" are eliminated; and to meet the Ontario Ministry of the Environment's design standards for effluent discharge initial dilution and dispersion.

The total cost for engineering services and construction to implement this project is currently estimated at $350.7 million (2011 dollars). Having assumed that the revised disinfection concept currently being assessed in Preliminary Design is viable, the project has been deferred to the end of the approved 2012-2021 Capital Budget Plan, where only $28.3 million in funding is included to allow for some engineering costs and the start of construction in 2021.

b) Wastewater Treatment Plants - Digester Cleaning and Repairs

All four of the City's wastewater treatment plants have digesters that treat the solids captured by the plant process. The digesters are a key component of the wastewater treatment process; they reduce the total net volume of biosolids, produce biogas for in-plant and process use and reduce e-coli levels in order to meet Nutrient Management Act requirements for beneficial use of biosolids.

Capital funding of $80 million is required over the next ten years to implement a systematic program of capital repairs to the digesters to extend the useful life of 34 digesters at three wastewater treatment plants and improve overall operational performance. The alternative is to run the digesters to failure which will result in considerably larger total capital costs, on-going decreased plant efficiency and increased risk of regulatory non-compliance. Ten (10) smaller digesters at the North Toronto Treatment Plant have been decommissioned and will not be upgraded under this program due to the prohibitive cost to bring these digesters up to current regulatory standards.

c) Wet Weather Flow Master Plan Implementation

Don River and Central Waterfront Project - The implementation of the Don River and Central Waterfront Project has been divided into five Phases. Toronto Water's 2012 to 2021 Capital Plan provides funding for only the first two Phases, which include the twinning of the Coxwell Sanitary Trunk Sewer and the first half of the Taylor-Massey Creek Combined Sewer Overflow Tunnel Project. Completion of this project, coupled with the construction of the necessary high-rate treatment facility and additional combined sewer overflow storage facilities is estimated at an additional $716 million.

Basement Flooding Protection Program - Within the approved 2012-2021 Toronto Water Capital Budget Plan, $733M has been allocated to implement basement flooding projects to address chronic flooding and $10 million has been allocated to provide financial incentives of up to $3,200 per property through the Basement Flooding Protection Subsidy Program. By the end of 2012, the Class Environmental Assessment Studies for 14 of the 32 chronic basement flooding areas will have been completed and another nine are expected to be completed by the end of 2013. The cost of all projects identified in only the first 14 Environmental Assessments is estimated at $450 million.

In providing direction to staff regarding the prioritization of projects for implementation, Council approved criteria based on the number of benefitting properties (i.e. those projects benefiting a higher number of properties are ranked higher in priority) and on a "cost per benefitting property" threshold of $32,000.

Given the extent of the upgrades which are required to provide enhanced level of storm drainage control for a 1 in 100 year storm (up from existing storm sewer design standards of a 1 in 2 to a 1 in 5 year storm) and the pent up expectations from homeowners, City Council may opt to increase the level of funding towards this program to accelerate construction. Alternatively, a lower cost option is to increase promotion of the Basement Flooding Protection Subsidy Program to allow more property owners to benefit from a reduced risk of basement flooding so as not to depend solely on the timing of the City's infrastructure upgrades. Ideally, these infrastructure upgrades should be integrated with the City's longer term renewal of aging infrastructure as state of good repair projects.

Etobicoke Waterfront Stormwater Control - As part of the Wet Weather Flow Master Plan, a Class Environmental Assessment to address the water quality impacts of 30 storm sewer discharges along the Etobicoke Waterfront is expected to be completed this year. The preferred strategy, at an estimated cost of $100 million, includes the construction of a shallow storm trunk sewer and deep tunnel, to intercept the storm flows, each connected to a centralized storage facility for final treatment. Given the noted funding constraints, and prioritization of water quality improvement projects through the Wet Weather Flow Master Plan, the implementation of this project was delayed to a construction start in 2021 with $67.5 million of the cost of the project pushed out into 2022-2031.

Waterfront Landforms - On April 10, 2012, Council adopted a report from the General Manager of Toronto Water entitled Waterfront Landforms Study to proceed with an Environmental Assessment for the construction of landforms at the outlet of the Humber River and at the Ashbridges Bay Treatment Plant. The cost of the Environmental Assessment and implementation of the two landforms is not included in Toronto Water's 2012 to 2021 Capital Plan. Cost estimates for construction will be defined through the environmental assessment process however the landform at Ashbridges Bay Treatment Plant will need to be constructed in advance of the outfall resulting in an unfunded pressure of $53.2 million to the 2012 to 2021 Capital Plan with costs to be potentially offset by tipping fees, or the construction of the outfall will need to be further delayed.

d) Water Treatment and Supply – Standby Power

As a result of the 2003 blackout affecting electrical supply to most of Ontario and Northeastern United States, Toronto Water, in collaboration with York Region,

undertook a system sustainability study to define backup power supply needs. The purpose was to ensure security of water treatment and supply while meeting minimum pressure requirements for fire flow protection in the event of a future loss of electricity, particularly given the limited storage capacity within the existing transmission system. The engineering review completed in 2008 identified a number of backup power supply needs across the system requiring an investment of $110 million over a ten year period. These needs were originally included in the Toronto Water ten-year Capital Plan but had to be deferred due to funding constraints.

e) Growth Related Projects

Toronto Water's 2012 to 2021 Capital Plan, includes funding for a number of growth related projects, with applicable recoveries from Development Charges and the Region of York on mutually benefiting water treatment and transmission projects. However, as a result of a number of recent City Planning and Economic Development initiatives, significant upgrades to sewer and watermain servicing is required in a number of priority development areas across the City. The upgrades, summarized below, have not been included in Toronto Water's 2012 to 2021 Capital Plan or existing Development Charges Background Study as they were not contemplated during the preparation of both plans.

Waterfront Development: Sanitary Sewer Master Servicing Plan - The Waterfront Sanitary Servicing Master Plan Environmental Assessment (EA) is expected to be finalized this fall and the preferred strategy contains a number of sewer system improvements necessary to service the development areas known as: the Port Lands, East Bayfront, West Don Lands and Lower Don Lands. The plan takes into consideration initiatives and studies including the Don River and Central Waterfront Class EA, the Mouth of Don Class EA, and the Port Lands Acceleration Initiative. The preferred solutions include local sewer improvements, new collector sewers in the Port Lands, an interim upgrade to the Scott Street Pumping Station and an eventual decommissioning of the Scott Street Pumping Station in future. A phased implementation is proposed with an initial investment of $40 million.

Lawrence Heights Redevelopment **-** The Toronto Community Housing Corporation (TCHC) recently presented a Financial Strategy to Council for the implementation of the Lawrence – Allen Secondary Plan to revitalize TCHC's social housing stock in the Lawrence Allen neighbourhood. The phased implementation of the plan requires significant Toronto Water infrastructure investment to support the proposed increased density with the cashflow requirements, in accordance to the current build-out plan as follows: $37 million from 2014 to 2024; and $20 million from 2025 to 2035.

Downsview Park Development **-** With the completion of the Downsview Secondary Plan, $10 million of sewer and watermain infrastructure have been identified to support the more immediate development planned for the Downsview Aerospace Campus.

f) Metrolinx/TTC Transit Projects – Sewer and Watermain Upgrades

Council recently amended the Transit Plan for the City of Toronto with planned lines along Eglinton Avenue, Sheppard Avenue and Finch Avenue. The implementation of this integrated transit network will likely require extensive underground infrastructure relocation to resolve conflicts between existing infrastructure and the proposed transit

lines. Most of these infrastructure relocation costs are assumed to borne by Metrolinx/TTC, however, there may be opportunities to integrate upgrades to infrastructure necessary to support future planned growth expected along these key corridors, replace aging infrastructure, and address known flooding issues.

g) TRCA Critical Erosion Sites

Toronto Water is funding critical erosion sites across the City with $7.5M directed to projects during 2012-2015 for work undertaken by the Toronto Region Conservation Authority (TRCA). Projects include bluff erosion protection at Meadowcliffe Drive, Guildwood Parkway and Fishleigh Drive; Mud Creek erosion protection; repairs to the Black Creek channel; and the Guild Inn Shoreline regeneration project.

TRCA has identified additional critical erosion and flood protection projects across the City to protect against on-going land erosion and is seeking an additional $5 million annually, where $4 million and $1 million would be used for waterfront erosion and watercourse channel repairs, respectively. The following priority projects have been identified:

- Erosion protection at Gibraltar Point - $13.4 million
- Repair of six weirs along the Humber River - $ 5.6 million
- Dredging at Bluffers Park to restore depth - $ 2.5 million
- Grey Abbey Trail erosion protection - $ 2.0 million

h) Federal Wastewater Systems Effluent Regulation (WSER)

New regulations developed under the Federal Fisheries Act were released in July 2012. The regulations set national baseline effluent quality standards for secondary treatment plants as well as specify the conditions to be met in order to discharge plant effluent to the environment. These include limits on certain deleterious substances, toxicity, effluent monitoring, and record keeping and reporting. In addition, the regulations also introduce new monitoring requirements related to Combined Sewer Overflows (CSO's).

Toronto facilities are already regulated by the Ontario Ministry of Environment for three of the five deleterious substances stipulated in the new regulation. The fourth substance, chlorine, has already been removed from the effluent of three of Toronto's wastewater treatment plants and the fifth substance, un-ionized ammonia requires further research to assess if plant upgrades are necessary. The City has been monitoring effluent toxicity levels from its wastewater plants for the past year and an assessment to determine if any operational adjustments or capital upgrades are necessary is underway.

Although the regulations come into force through a phased approach, of immediate concern is the total residual chlorine limits which come into effect on January 1, 2015 and their impact on the Ashbridges Bay Treatment Plant. The associated cost of these requirements is addressed earlier in this report.

In summary, the new WSER will introduce new operational and capital costs that cannot be fully quantified at this time. Estimated long term financial impact should be known by the end of 2012.

Toronto Water Capital Program Financing Options

A number of financing options have been considered which could be introduced to support Toronto Water's long term Capital Plan and help address the unbudgeted pressures noted above. They include:

a) Water Rate increases beyond the existing plan of 3%, beginning in 2015;
b) Debenture financing for large scale, long service projects beginning in 2014, with all debt service costs to be paid from water rate revenue;
c) Introducing a stormwater utility charge, based on lot area and/or hard surface area coverage, to provide a dedicated reserve for wet weather flow control projects including basement flooding protection, beginning in 2015;
d) Increasing development charge recoveries which may be realized through the forthcoming update to the 2013 Development Charges Background Study;
e) Opportunities to secure funding from the Federal and Provincial Governments for Lake Ontario water quality improvement projects; and
f) Council could direct a reprioritization of non-core programs and deferral of service improvement projects.

A summary of these options is presented as follows:

a) Water Rate Increases Higher than the Rate of Inflation after 2014

Toronto Water's Capital Program has traditionally relied on water rate increases to address Capital Budget pressures and, as noted earlier, dating back to 2006, a series of 9% rate increases, ending in 2014, were planned to support an aggressive infrastructure renewal program. Beyond 2014, rate increases of 3% per year had been planned to keep pace with expected inflationary pressures over time.

For the reasons noted previously, Toronto Water's 2012-2021 Capital Plan as approved by City Council represented a decrease of $1.132 billion to what had been planned through the 2011 Capital Budget submission. Various rate increase scenarios for the period 2015 to 2021, beyond the 3% inflationary rate increases, could generate the $1.1 billion removed from the program. Table 2 summarizes two scenarios, wherein Option 1 includes a series of 6% per year increases beginning in 2015 to 2021; and Option 2 includes rate increases of 8% per year for the years 2015 to 2017 inclusive, followed by inflationary rate increase of 3% per year to 2021 inclusive. The Options would reinstate funding of an estimated $952 million and $990 million, respectively.

Table 2 – Summary of Rate Increase Options Beyond 2015

	2005-2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2012-2021
Approved Rate Increase	9%	9%	9%	9%	3%	3%	3%	3%	3%	3%	3%	
Revenue $M's		893.3	961.8	1,038.9	1,050.6	1,085.8	1,117.1	1,149.3	1,177.0	1,216.5	1,251.6	10,941.9
Rate Increase Option 1		9%	9%	9%	6%	6%	6%	6%	6%	6%	6%	
Revenue $M's		893.3	961.8	1,038.9	1,074.6	1,146.0	1,211.4	1,280.6	1,341.8	1,431.6	1,513.9	11,893.8
Difference		-	-	-	*24.0*	*60.2*	*94.3*	*131.4*	*164.8*	*215.1*	*262.3*	*952.0*
Rate Increase Option 2		9%	9%	9%	8%	8%	8%	3%	3%	3%	3%	
Revenue $M's		893.3	961.8	1,038.9	1,090.5	1,187.1	1,277.3	1,314.2	1,346.0	1,391.4	1,431.7	11,932.1
Difference					*39.9*	*101.2*	*160.2*	*164.9*	*169.0*	*174.9*	*180.1*	*990.3*

b) Debenture Financing for Large Scale-Long Service Projects

Toronto Water's Capital Program contains many large scale projects with long service periods benefiting multiple generations. It can be argued that the "pay as you go" model used to finance large capital infrastructure expansion projects supporting future growth have contributed to the crowding out of core program areas providing service to existing residents, such as state of good repair projects. An argument can made that the larger infrastructure expansion and upgrade projects, which benefit not only current but future residents should be financed over the useful life of the asset.

For practical reasons, debenture financing typically spans from 10 years to 30 years, and the cost would be recovered through an annual debt charge. However, for long-lived asset investments required by Toronto Water, 30-year debentures would more closely spread the cost over future benefiting generations. While it is recognized that debt charges add to the cost of the infrastructure, in this model, the debt charges are more appropriately assigned to the residents that benefit. The water rate revenues generated today by existing residents are then more appropriately directed towards maintaining the system and renewing aging infrastructure.

It has been estimated that $1.3 billion in projects over the next 10 years meet the noted criteria and could be debenture financed. Examples of projects include the twinning of the Coxwell Sanitary Trunk Sewer ($226M), construction of new sewage pumping stations at the Ashbridges Bay Treatment Plant ($335M) and construction of new Transmission Watermains at various locations throughout the City ($277M). The cost of borrowing on 30 year debt at the current 4% interest rate would be about $25 million a year in carrying costs over 30 years. To the extent that Toronto Water is fully self-financing through water rates, the City's credit rating is not likely to be affected from the viewpoint of the credit rating agencies.

c) Dedicated Stormwater Utility Charge

Toronto Water's approved 2012 Capital Budget includes funding for wet weather flow control projects. The various projects are related to both improving water quality of stormwater runoff and combined sewer overflow discharges, and controlling water

quantity associated with the Basement Flooding Protection Program. In total, these projects represent about 14% of the 2012 Capital Budget. While the funding to implement these projects is largely provided through water revenues, there is no direct relationship between the amount of drinking water consumed at a given property, and the amount of stormwater runoff generated. A more direct relationship exists with lot size and hard surface (impervious) area. In this "user pay" model, the revenue generated by the stormwater utility charge would be directed to wet weather flow projects exclusively. If there were a desire to accelerate implementation of certain projects, there would be direct and corresponding increase in the stormwater utility charge.

Many municipalities across North America have pursued the application of a separate stormwater charge to their water bill to generate funding necessary to deal with the impacts of stormwater runoff. A summary of stormwater utility models adopted by large municipalities across Canada is shown in Table 3. Of note, is that there is no common or standardized approach, and they vary in complexity of calculation. Generally, however, they are based on the property land area.

Table 3 - Summary of Stormwater Utility Charge Models Adopted Across Canada

City	Start Date	Charge Base	Billing
Edmonton	January 2003	Model uses property area (A); intensity of development (I) and runoff factor R. Fee = A x I x R	Monthly land drainage utility
Kitchener	January 2011	Transferred from property taxes to a user-fee program. Based upon stormwater runoff, as amount of impervious surface area on the property. Average single dwelling homeowner charge - $10.50/per month	Monthly water utility bill
Calgary	January 2004	Flat Drainage Charge, 2012 - $8.36 per 30 days	Monthly Drainage Service Charge on utility bill
Saskatoon	January 2012	Based upon the number of *Equivalent Runoff Unit* (ERUs) a property has, i.e. - $4.40/month per ERU of 265.3 square metres	On Utility bill
Regina	January 2008	Tiered property area based rate structure. Up to1000 m2 (most residential roofs) are charged 38 cents per day in 2012 ($11/month)	Storm Drainage charge monthly on water bill

Another argument supporting a stormwater utility charge is one of equity. As it stands, customers with higher than normal water consumption, are paying a disproportionate share of stormwater related project costs, while property owners with large hard surface areas and relatively low water consumption are not paying their fair share towards stormwater management.

To highlight the inequity, a cost per unit impervious area was calculated by taking the total impervious area across the City and dividing by the 2012 Wet Weather Flow Master Plan Budget of $82.5 million. This equates to $0.61 per square metre of impervious area.

Two examples are provided below, where Example 1 is for a large lot and moderate water consumption, and Example 2 represents high water consumption and small lot size. A Stormwater Cost Index was calculated as the ratio of the Stormwater Component Cost based on the property owner's water bill to the Actual Stormwater Cost, based on the amount of hard surface area. A Stormwater Cost Index less than 1 indicates that the property owner is underpaying their fare share of stormwater costs.

Example 1 – Large Impervious Lot Area and Moderate Water Consumption

Impervious Area:	300,000 m^2
Consumption:	250,000 m^3
2012 Water Bill:	$622,425
Stormwater Component Cost:	$ 87,140
Actual Stormwater Cost:	$174,280
Stormwater Cost Index:	**0.5**

Example 2 – Smaller Impervious Lot Area and High Water Consumption

Impervious Area:	90,000 m^2
Consumption:	2,100,000 m^3
2012 Water Bill:	$3,700,000
Stormwater Component Cost:	$512,000
Actual Stormwater Cost:	$ 56,890
Stormwater Cost Index:	**9.0**

As shown in Example 2, the high volume user is paying 9 times their fair share of the stormwater costs, through their water bill, and by contrast, in Example 1, the owner of the large impervious lot area is paying only 1/2 of their fare share.

A similar calculation for a typical single family residential property produces a Stormwater Cost Index of 0.9, indicating that the water bill derives about 90% of the stormwater associated costs for this type of property.

Based on the above, it is clear that there are serious inequities in generating stormwater project funding based on water revenues exclusively. While a user pay principle is advocated, incentives to property owners of large impervious areas should also be considered to help advance the implementation of on-site stormwater management control measures reducing the impact and the need to address further downstream.

d) Increasing Development Charge Recoveries

Development charges are a municipal funding source used to pay for the cost of providing infrastructure to service growth. Many of the major growth-related projects

delivered by Toronto Water, such as water and wastewater treatment plant expansions, watermains and trunk sewers, have been partially funded by the City's development charges reserve funds.

However, as discussed below, development charges only fund a portion of the project costs due to statutory deductions in the development charge calculation as well as Council adopted policies, such as exemptions and transition provisions. For example, while a project may be needed to support growth, such as the upsizing of an existing sewer or watermain pipe, development charges only provide funding for a percentage of the total capital cost. The recovery is based on the percentage of the infrastructure upgrade supporting growth (as per the Development Charges Act); and further discounted to apply to the percentage of the upgrade benefitting the residential sector exclusively, as per existing Council policy.

By way of example, out of the approximately $3 billion in gross capital costs for Toronto Water projects supporting growth included in the City's 2008 Development Charges Background Study, only 7%, or approximately $180 million, was planned to be recovered from development charges over the 10 year planning period, compared to $358 million eligible for DC funding over the same period. Funding for the balance is provided through other sources which, for Toronto Water are primarily the water rates. Toronto Water's 2012 to 2021 Capital Plan includes DC recoverable projects with a gross cost of $2.24 billion, and based on the policies contained within the existing Development Charges By-Law, shows a DC recoverable cost of only 4.25%. One of the options to increase development charges funding for growth related projects is if Council reduces the level of exemptions and discounts.

The Development Charges Act requires a municipality to adopt a development charges bylaw every five years, if not sooner. The City has commenced the process of updating the City's Development Charges By-Law and retained the services of an expert development charges consultant to assist with preparing a background study. The process will also involve various stakeholder consultations. It is anticipated that the background study, along with a draft bylaw, will be presented to Council in 2013 for consideration at a statutory public meeting.

Keeping into consideration that the Toronto Water Capital Program changes every year while the Development Charges By-Law is updated usually every 5 years, to optimize DC funding, the updated By-Law needs to include all potential growth related projects even if they are not part of the 2013 Capital Plan Budget.

e) Securing funding from the Provincial and Federal Governments for Lake Ontario Water Quality Improvement Projects

The City of Toronto was identified as one of 43 polluted “Areas of Concern” in the Great Lakes Basin, by the International Joint Commission in 1987. The Great Lakes Water Quality Agreement between Canada and the United States was subsequently amended in 1987 by including specific commitments, through Annex 2 of the Agreement, to restoring and protecting the environmentally degraded areas of the Great Lakes.

Further, following the 1987 revisions to the Great Lakes Water Quality Agreement, the Canada-Ontario Agreement Respecting Great Lakes Water Quality was revised to provide guidelines and a commitment by the two governments for controlling pollution and restoring the ecosystem health within the identified Areas of Concern.

Recognizing that Toronto's distinction as an Area of Concern (AOC) was largely attributed to water quality impacts associated with its combined sewer overflows and stormwater discharges, and consistent with funding provided by the Federal and Provincial governments to other municipalities, it would be appropriate to approach these governments for funding to implement water quality improvement projects in the City. Of particular note is the Don River and Central Waterfront Project, with an estimated implementation cost of $1.4 billion, the project addresses most of the remaining combined sewer overflow discharges in the City, but its implementation has been stretched over a 25 year time horizon due to funding constraints within the Program. The project is expected to be approved by the Ontario Ministry of the Environment later this year with implementation planned to begin in 2013.

f) Deferral of Capital Projects

The deferral of capital projects is another option that could provide additional cashflow to provide some funding for unbudgeted pressures. As noted earlier, this has essentially occurred in the past, particularly at the expense of state of good repair projects, wherein the elimination of the infrastructure renewal backlog is continually extended.

Given the age of Toronto Water's asset base, and the mounting infrastructure renewal needs, a deferral of state of good repair projects is not recommended. Council could consider a deferral or extending the implementation time lines of enhancement projects. These projects include stormwater treatment specific projects within the Wet Weather Flow Master Plan and the Basement Flooding Protection Program. In regards to the latter, and as noted previously, a lower cost option is to increase promotion of the Basement Flooding Protection Subsidy Program to allow more property owners to benefit from a reduced the risk of basement flooding so as not to depend solely on the timing of the City's infrastructure upgrades.

Consultation Process & Feedback Received

As per the Council Directive, Toronto Water and Corporate Finance staff embarked on a series of stakeholder consultation meetings to solicit feedback on the budget pressures facing Toronto Water's Capital Program, the revenue shortfall, and the alternate financing options noted above.

In May 2012, invitations were sent to 27 stakeholders groups and 150 industrial customers to participate in the consultation process, structured in six meetings taking place in June 2012 as noted in Table 4.

Subsequently, four public workshops were offered in July and August 2012. The public meetings were spread across the city and took place at East York Civic Centre, the Etobicoke Civic Centre, North York and Scarborough Civic Centres. These meetings were promoted by way of advertisement in the Mirror-Guardian community papers city-

wide; emails to Councillors and Mayor with copy for newsletters/websites; Corporate Finance website updates at http://city-dev.toronto.ca/finance/waterrates.htm; tweets a week before and on the day of consultation through main @torontocomms account, @toronto civic engagement account and @toronto consultations account. In addition, direct mailings were made to approximately 400 residential ratepayers and tenant groups.

A City staff team consisting of representatives from Toronto Water, Corporate Finance, Economic Development, Corporate Communications and Public Consultation was convened to facilitate the stakeholders and public meetings. The format of these meetings involved a presentation by the General Manager, Toronto Water, providing background information and highlighting the key issues, and some of the possible options under consideration. Participants were encouraged to ask questions, provide feedback and make written submissions by mail or email following the meeting.

As noted in Table 4, in June 2012, City staff met with the eight stakeholder groups who expressed interest in the consultation. Approximately 50 individuals attended the meetings exhibiting a wide cross section of commercial, industrial and institutional interests. The attendees included representatives of NAIOP, Toronto Board of Trade, Real Property Association of Canada, Toronto Industry Network, Toronto District School Board and Toronto Catholic District School Board, Citizens for a Safe Environment, Council of Canadians, and other industrial customers.

Following the stakeholders' meeting the City received written submissions regarding funding options for Toronto Water Capital Program from Toronto Industry Network, Canadian Federation of Independent Businesses, BOMA, NAIOP, RealPac, International Council of Shopping Centers and the Toronto Chapter of the Council of Canadians. Copies of the written submissions are available by request through the Clerk's Office.

The public consultations held in July and August were attended by approximately 18 individuals, representing mainly residential water customers. The City has also received written comments from seven residents.

Table 4 - Summary of Stakeholder Consultations Regarding Toronto Water's Capital Budget Pressures and Financing Options

1. Initial Stakeholders Consultations

Date	***Invited Stakeholder/s***
June 4	NAIOP (real estate developers, owners and investors of office, industrial, retail and mixed-use properties)
June 6	Toronto Board of Trade
June 11	9 Commercial Associations including BOMA, Toronto Association of BIAs, Greater Toronto Apartment Association, Toronto Office Coalition, etc
June 13	Toronto Industry Network and 150 large industrial surcharge customers
June 18	Hospital and School Boards
June 22	11 NGOs including Environment Probe, Citizens for Safe Environment, STORM Coalition, Toronto Environment Alliance, Lake Ontario Waterkeepers, Ecojustice Canada, etc

2. Public Consultations

Date	***Location***
July 14	East York Civic Centre
July 17	Etobicoke Civic Centre
August 14	Scarborough Civic Centre
August 16	North York Civic Centre

Stakeholders Written Submissions

Small Businesses
Some representative of small business expressed concern over potential water rate increase after 2014 with regards to the impact it might have on small business competitiveness in Toronto.

Large Commercial Stakeholders
The comments received from the large commercial stakeholders generally reflected:

a) Support of Water Rate increase above the inflation rate after 2014 to generate the necessary funds for the full implementation of the capital program; and
b) Strong opposition to Stormwater Utility charge based on the following concerns:
    - It will increase significantly the cost of horizontal properties with large parking areas
    - It will allocate disproportionately high cost of the common municipal roads and facilities to non-residential owners
    - Land use practises which were permitted many years ago based on zoning requirements at the time, which if now required upgrading hard surface parking areas to include permeable surfaces and/or collection systems would be prohibitively expensive for property owners;
    - Businesses that require large impervious areas for their operations will be highly impacted;
    - The overall fixed cost for businesses including property tax will be less competitive on regional level; and
    - It will involve very complicated administration.

Large Industrial Stakeholders
Most of the representatives of the large industrial water consumers:

- Objected to rate increases above the inflation since it will negatively affect large industry competitiveness;
- Recommended that capital cost above inflation is debentured as a more fair way of allocating the cost of long lived assets to the benefiting parties and not overburden current ratepayers;
- Supported the implementation of stormwater utility charge based on the runoff area as a fair approach to stormwater management funding; and

- Encouraged the implementation of fixed cost component reflecting metering administration to enhance transparency and fairness.

Non-Governmental Organizations (NGOs)

Generally, the participating NGOs advocated the implementation of green solutions including a comprehensive plan for stormwater regulation, parcel based billing and green infrastructure showing local implementation opportunities.

Public Consultations

During the Public Consultations there wasn't a prevailing strong position expressed on any funding option. The following summarizes the comments received:

- Most of the participants did not support Capital Program cuts and deferrals and acknowledged the need for raising enough revenue to implement the full extent of the Capital Program.
- Some expressed the opinion that water bills need to incorporate a fixed cost component that would reflect the base infrastructure cost required to provide the core services, without correlation to the volume of water consumed, and thus guaranteeing a base revenue stream.
- Some participants expressed interest in having a detailed breakdown of the water bill, i.e. water consumption component; wastewater collection and treatment and stormwater management cost. Many also supported a separate stormwater charge if it were equitably assigned.
- Another option proposed was the separation of the wastewater rate in the water bill, with the corresponding charge based on the level of pollution discharged from the property i.e. under this model, restaurant owners, with higher organic content in their wastewater, would pay a higher amount than a small business such as a retail store with lower strength of wastewater effluent.
- Requested that the Basement Flooding Program is implemented with priority.

Residents' Written Submissions

In addition to the comments received during public meetings, the seven written submissions received from residents had the following comments:

- A combination of the three proposed financing option will best serve Toronto Water.
- Reduce water rates to less than inflation for 2013 and future years.
- End fluoridation of Toronto drinking water.
- Reduce operating cost and follow Toronto Hydro business model.
- Objection to stormwater utility charge due to high administrative cost and possibility for many appeals; difficulty to objectively reflect residential properties' hard surfaces in back yards, etc.
- Favouring moderate rate increase with no debenture financing.

- Recommend stormwater charge to follow user fee model that does not involve subsidising properties with large hard surface areas, accompanied with education campaign on the possible ways to reduce the rain runoff of each property and reduce the cost through rebates and credits.
- Moderate water rate increase taking into consideration the overall 'tax' burden on property owners in the city.
- Debenture financing for long term assets to ensure fair spread of the cost to the beneficiaries.
- Water rates to reflect the true cost without any reduced rates.
- Significant increase of water rates with provisions of lower rate for low income low consumption users.
- Apply user fee principle to all water related costs when everybody pays their fair share for stormwater management with incentives for reduced runoff.
- Concern over possible water rate increase for people with fixed budgets.

The above feedback provided from all stakeholders has been taken into consideration in the development of funding strategies recommended in this report.

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