

# **TORONTO** STAFF REPORT

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October 27, 2005

To: Works Committee

From: Joseph Pennachetti, Deputy City Manager and Chief Financial Officer  
Fareed Amin, Deputy City Manager

Subject: The 2006 Capital and Operating Budgets for Toronto Water

Purpose:

The purpose of this report is to provide an executive summary of the 2006 Proposed Operating and Capital Budgets for Toronto Water. This report is to be considered in conjunction both with the staff report on the 2006 Water and Wastewater Rate and the Budget Analyst Notes on the 2006 Operating and Capital Budgets which will also be before the Works Committee. These materials and reports support the Toronto Water Multi-year Business Plan which aligns with Council's Priorities.

Financial Implications and Impact Statement:

The 2006 Proposed Operating Budget includes gross operating expenditures of \$610.5 million. The contribution to fund the capital program has increased by \$11.8 million from the current contribution of \$238.8 million. The gross operating expenditures have increased by \$12.6 million from 2005 Budget mainly due to inflationary pressures, economic factors and operating impacts related to capital expenditures. The table below details these shifts from 2005 to 2006.

Comparison of 2005 Operating Budget to 2006 Operating Budget  
(\$Millions)

|                      | <b>2005 Budget</b> | <b>2006 Budget</b> | <b>\$ Change<br/>2005 Budget vs.<br/>2006 Budget</b> |
|----------------------|--------------------|--------------------|--|
| Operations           | 347.3              | 359.9              | 12.6   |
| Capital from Current | 238.8              | 250.6              | 11.8   |
| Total Expenditure    | 586.1              | 610.5              | 24.4   |

The 2006 Proposed Capital Budget of \$394.5 million includes \$76.9 million of cash flow carried forward from 2005 and \$317.6 million of 2006 new cash flow requirements. Approval of the 2006 Capital Budget will result in future year commitments of \$549.9 million.

The estimated 2006 annual average bill for a metered household in Toronto would increase by \$33.00 or 9.0% from the current annual cost of \$373.00 in 2005 to \$406.00 in 2006.

Recommendation:

That this report be received for information.

Background:

Approval for the 2006 Capital and Operating Budgets is being requested in conjunction with the consideration and approval of the 2006 Water and Wastewater Rate increase. With the joint review of these requests, Council will have greater context in which to consider the approval of the rate increase and to finance the budget requirements detailed in the Toronto Water Business Plan and annual budget submissions. The Budget Analyst Notes, which are under separate cover, include all recommendations to give effect to the approval of the Toronto Water 2006 Operating and Capital Budgets.

2006 Strategic Direction and Service Priorities

Toronto Water is responsible for the distribution and supply of potable water, the collection and treatment of wastewater and stormwater management. The strategic directions for 2006 and beyond are summarized as follows:

- Deliver excellence in environmental stewardship
- Achieve ongoing financial vitality and sustainability
- Enhance service delivery to meet and exceed client expectations
- Address renewal needs of aging and deteriorating infrastructure
- Increase total system capacity to keep pace with population growth
- To be recognized as an employer of choice in the global water services industry

2005 Accomplishments

The Toronto Water Division successes are often of a cumulative nature and accomplished over a number of years. The following highlights the divisional achievements for 2005.

Stewardship of the Environment

- In 2005, staff are expected to conduct in excess of 85,000 tests on wastewater samples collected from the four wastewater treatment plants and industrial sectors around the City thus ensuring compliance with applicable legislation

- Completion of a Divisional Spills Response Plan that outlines staff responsibilities when dealing with a spill in order to minimize the impact of a spill on the public, properties and the environment. The Division responded to 285 spill events in 2004 which represents a decline from prior years due to our environment first philosophy and enforcement activities
- 2005 represents the first full year of the first five year block of the Wet Weather Flow Management Master Plan and has seen the completion of the Class Environment Assessment study to address chronic flooding problems in the Hoggs Hollow area permitting design and construction to proceed in the coming years. The Class EA study is expected to be completed for the stormwater management facility at Earl Bales Park which will see the use of treated stormwater to be used for irrigation of the Don Valley Golf Course in the summer and for snow making at the Earle Bales Park Ski Hill in the winter. A geomorphological study has been initiated for the Highland Creek watershed, directed at developing a long term restoration plan to reduce stream erosion (and the risk to infrastructure) and improve fish habitat
- Construction has commenced on Residue Management Facilities at the R.C. Harris Water Treatment Plant and the R.L. Clark Water Treatment Plant to effectively deal with wastes generated through the water treatment processes
- Toronto Water's Sewer Use By-law has won awards and is recognized as one of the most restrictive of its type in Canada
- Provided assistance to approximately 3,500 homeowners to disconnect their downspouts from the sewer system

#### Increase Capacity for Growth

- Winner of the American Water Works Association Public Achievement Award for educating the public, promoting awareness of water issues and engaging residents and businesses in model behaviour regarding water usage and source protection (Water Efficiency Program and Downspout Disconnection Program)
- Awarded a silver award in the Public Service Quality Fair for our promotion and delivery of the City of Toronto's Toilet Replacement Program in the Multi-Residential and Single Family sectors as part of the Water Efficiency Program
- Continuing in 2005 to exceed some of the targeted water savings (particularly the Multi-residential Sector) anticipated from the Water Efficiency Program

#### Water Quality

- Managed the largest drinking water treatment system in Canada and at the same time, have consistently had a record for water quality with standards above those required by

provincial regulations. Toronto Water was in compliance with provincial standards 100% of the time.

- Completed licensing of staff that test drinking water as Water Quality Analysts and increased the scope of the City's laboratory accreditation

#### Customer Service Delivery

- Effectively managed the realignment of our staffing resources to improve system performance and enhance customer service
- Responded to an estimated 10,000 water meter complaints
- Trenchless rehabilitation techniques were enhanced to extend the useful life of the City's Sewer Infrastructure and minimize the impact on adjacent homes and businesses
- Anticipated to repair and respond to the levels experienced during 2004 which included a total of: 1,562 broken water mains repaired; 3,026 low pressure complaints investigated; 1,024 responses to rusty water complaints; and 147 km of relined watermains.

#### Optimizing Our Work Process and Workforce

- Continued the implementation of continuous improvement projects
- Silver award of recognition from the Public Sector Quality Fair for the following initiatives:
  - Succession Planning in a Unionized Environment
  - Water Services Repair Program
- Continued improvement of plant Process Control Systems including substantial completion at the Ashbridges Bay Treatment Plant by the end of 2005
- Provided Toronto Water staff with numerous training and development opportunities to retain staff and ensure that Provincial mandated training and certification regulations are met or exceeded
- Reviewed and standardized work practices to optimize efficiency in our field operations

#### Technology Efficiencies & Improvements

- Enhanced our Laboratory Information Management System (LIMS) to improve lab staff efficiency in managing day-to-day work

- New technology was put to work and efficiencies improved by installing combination sewer cleaners, vacuum excavation equipment, and closed circuit camera equipment for sewer inspections to lower our costs
- Continued the focus on strategic planning and long-term management of all Toronto Water physical assets
- Began odour control and heating system improvements at the Ashbridges Bay Treatment Plant.

### 2005 Projected Year-End Results

The projected year-end operating expenditures are anticipated to be \$1.6 million over budget. This is mainly the result of increased utility costs to process and distribute water during 2005. The anticipated water sales revenue will not be achieved and is forecasted to be approximately \$25.0 million under budget. This will be partially mitigated by sundry revenues, mainly from connection fees, which will be over achieved. The total revenue shortfall is forecasted at \$22.1 million. Toronto Water is planning to offset this revenue shortfall by reducing the planned contributions to capital. This will not adversely affect the Capital Budget given that the projected capital completion rate is lower than expected.

### 2006 Proposed Operating Budget

The 2006 Proposed Budget reflects the continued implementation of the Multi-Year Business Plan. The theme of the submission is “Building a Better Tomorrow” and reflects the level of investment that is required to meet the needs of the community. The guiding principles in the preparation of this budget may be summarized as follows:

- Align with and support Council’s Priorities
- Support and advance the Toronto Water Multi-Year Business Plan
- Address the renewal needs of aging and deteriorating infrastructure
- Continuous improvements in service delivery

The 2006 Proposed Operating Budget of \$610.5 million is comprised of two major components. The operating component funds the requirements to run the plants and distribution/collection systems. The 2006 requirement for this component totals \$359.9 million which represents a \$12.6 million or 3.6 percent increase over the 2005 budget. Toronto Water prepares its operating budget based on water consumption and wastewater flow assumptions, which take into account numerous factors, including but not limited to population, consumption trends, industry specific cost and general inflation. Hence, the annual projection for water consumption embedded in the 2006 Operating Budget is based on the projection model, which is not related to the previous year’s financial results.

The second component of 2006 Operating Budget provides the necessary funding to support the capital program. The 2006 capital contribution request is for \$250.6 million which represents a

\$11.8 million or 4.9 percent increase over the 2005 level. This level of increase is required to support the capital program, which is discussed in the section below.

The major expenditure pressures (excluding economic factors) are detailed below, without these pressures the operations component of the budget would be in line with the rate of inflation.

- The Ashbridges Bay Treatment Plant pelletizer has not been operational since a fire in August of 2003. Repairs are underway and it is anticipated that the equipment will be operational in 2006. Operation of the pelletizer in 2006 will reduce the amount of biosolids that are currently disposed at the Michigan landfill site. This investment to enhance our environmental stewardship will result in increased operational costs of approximately \$3.2 million in 2006 (represents an estimated six-months of operation)
- Co-Generation of Waste Gas at the Humber Wastewater Treatment Plant demonstrates our commitment to green energy. Co-Generation burns methane gas produced during the actual wastewater processing cycle to generate heat and electricity. The long-term environmental and financial benefits of Co-Generation are significant. During 2005 the plant commenced rehabilitation of its digesters; this work will not be completed until late 2008. In the interim the level of waste gas which can be Co-Generated will be reduced and the heating requirements of the plant will have to utilize increased conventional heating (natural gas). This results in an additional pressure of \$1.8 million for the purchase of natural gas and electricity.

The Proposed Budget includes a net increase of 3 positions over the 2005 approved complement. This is the net result of the deletion of 24 funded positions and the addition of 27 to enhance operational efficiency, service delivery and effectiveness.

All operating revenues received by Toronto Water are derived from user fees charged for water consumption and sewage treatment. There is no reliance on the general tax base to support the program. To fund the operating requirements and capital contribution a water rate increase of 9 percent has been incorporated into the 2006 budget. This 9.0% will generate approximately \$19.4 million of additional revenues compared to the 2005 budget. The 2006 budget submission has adjusted the revenue for water sales to reflect the following: trending of actual water sales, the Water Efficiency Program, the declining persons per unit forecasted for households in Toronto and the anticipated loss of customers.

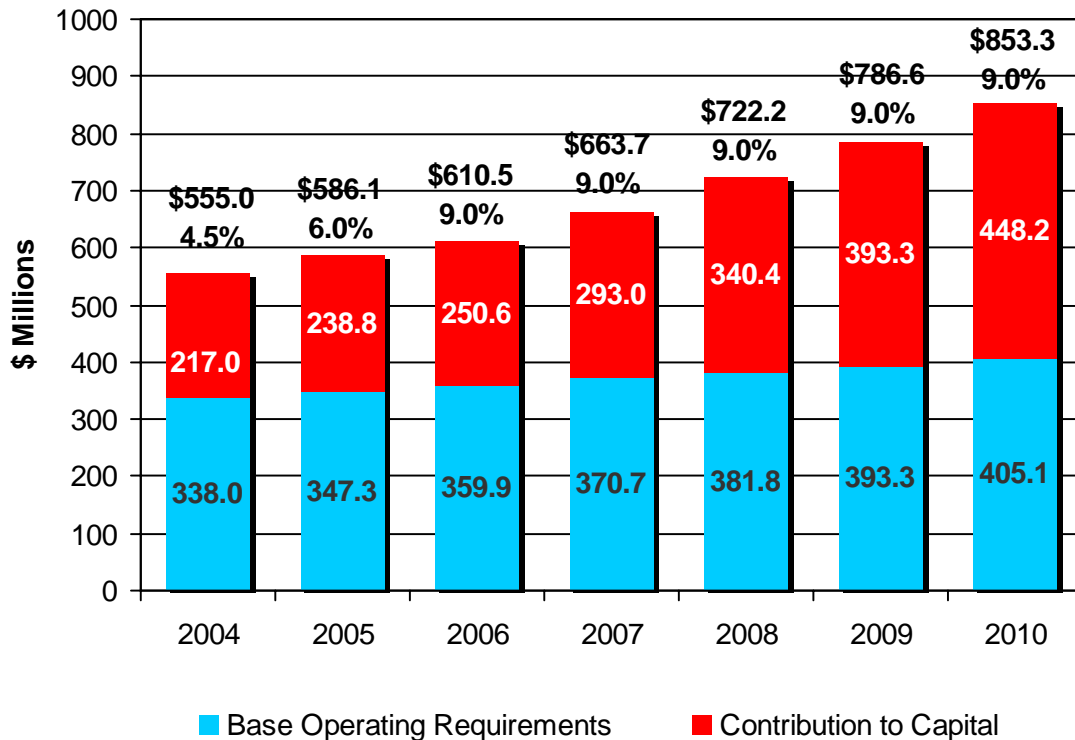
Other revenue increases (non water sales) totaling \$5.0 million are included in the budget as follows: an increase in the rate and water sales to York Region \$3.2 million, an additional \$1.0 million recovery from Enwave related to full year operation of the Island Water Treatment Plant, additional fees of \$1.6 million mainly related to additional service connections to be undertaken in 2006 and a reduction of Industrial Waste Agreement revenues of \$0.8 million. The total 2006 revenues of \$610.5 million balance the operating expenditure and capital contribution requirements for 2006.

## 2007 & 2008 Operating Budget Outlook

The program will continue to actively plan and manage our existing resources and service delivery. To achieve the strategic directions noted above significant capital investments are required, which in turn will increase our operating costs due to the new or enhanced infrastructure or processes. The chart below details the required increases in the Operating Budget forecasted for the 2006-2010 time frame to fund operations and the increases needed to support additional investments in our infrastructure. The capital budget submission will detail the investments required to enhance our Environmental Stewardship and address the renewal needs of our aging and deteriorating infrastructure. These initiatives support Council Priorities and our theme of Building a Better Tomorrow. The major consumable supplies of our operation have and are forecasted to continue to see price increases well in excess of inflation (natural gas, electricity and chemicals).

The Operating Budget is comprised of two major components. The first component funds the requirements to run the plants and distribution system. The second component provides the necessary funding to support the capital program. The chart below details how each of these components will impact future year's budget requests. Overall the operating component is forecasted to increase, on average, approximately 3.0% annually. The contribution to capital is required to increase significantly in order to fund the required investment detailed in the 2006 Capital Budget and Forecast. The annualized rate increases for 2004 and 2005 and forecasted rate increases for the years 2006 to 2010 are detailed in the chart below.

Forecasted Operating Expenditure Components 2004-2010  
Major Drivers in Forecast



Note: The 2004 rate increase of 6.0% was effective April 1, which translates into a 4.5% annualized increase.

Toronto Water continues to proactively respond to the increased regulatory environment the Provincial Government has mandated since the Walkerton tragedy. There is likely to be further regulatory changes as the result of report entitled “Watertight – The Case for Change in Ontario’s Water and Wastewater Sector” which was released in May 2005 by the expert panel on Ontario’s Water and Wastewater Strategy. The Minister of Infrastructure Renewal is expected to respond to the report in the upcoming months. Once the regulations are released the necessary impacts will be incorporated into future years operating and capital budget submissions.

#### 2006 Proposed Capital Budget

The Strategic Goals for 2006 and beyond have been identified in the Toronto Water Multi-year Business Plan submitted in 2005. The Business Plan identifies long-term themes for the Toronto Water Division that specifically meets the identified Council priorities. The key priorities are:



### *Addressing Renewal needs of Aging and Deteriorating Infrastructure – (State of Good Repair)*

- Water and sewer infrastructure is aging. Projects falling into the state of good repair represent a more than 50% of the 2006 Capital Budget request. These projects are intended to extend the useful life of assets, ensure service reliability and postpone replacement.
- Rehabilitation – we continue with several programs designed to rehabilitate aging watermains. Examples include installing cathodic protection, cleaning and lining watermains and replacing deficient hydrants and valves to improve system performance.
- Replacement - where pipes are structurally deficient or where increased water demand or sewer flow warrants larger pipe sizes, replacement projects have been identified and included in the capital program. In many areas sewer relining and trenchless technology methods will be used to minimize the impact on local communities.
- Treatment Facilities – we continue to replace aging or obsolete process and electrical and mechanical equipment. In addition we continue to refurbish buildings throughout the system many of which are older than 50 years. These projects are intended to maintain a state of good repair and ensure on-going service delivery and compliance with the Safe Drinking Water Act and related Ministry of the Environment regulations.
- Many areas of the City, experienced significance surface and basement flooding during the extreme storm of August 19, 2005. The system (at source, drainage and sewer) is being assessed to identify and implement the necessary improvement works

### *Increasing Total Capacity to keep pace with population growth*

- Additional capacity is required to accommodate the projected population increase of 3 million people by 2031. To address this need, the budget request includes funding for the following:
- Water Efficiency - continuation of the City's water efficiency and water loss reduction initiatives. The aim of the program is to reduce water demand by 15% by 2011, freeing up capacity to accommodate some of the growth and offsetting or delaying costly infrastructure expansions. Examples of water efficiency programs are; low flow toilet replacement program for multi-residential properties, undertaking water audits directed at reducing potable water usage in the industrial/commercial/institutional sectors, public education/awareness and water efficiency kit programs for homeowners.
- Reducing Watermain Loss - this year's Capital Budget request includes projects aimed at reducing watermain leakage. Programs will be developed to identify areas of the distribution system that are experiencing undetected water loss. These deficient pipe sections will be rehabilitated, repaired or replaced depending on the severity of damage.
- Servicing Customer Water Needs - additional capacity will be required at some point in the future and a partnership with York Region includes expansion projects to meet maximum flow demand in the City.

### *Stewardship of the Environment*

- Wet Weather Flow Management Master Plan - funding for projects that advance the Wet Weather Flow Management Master Plan have been included in this capital budget submission. These projects are all in accordance with Council priorities of progressing on the waterfront and making Toronto a clean and beautiful city. Several stormwater management projects and watercourse improvement projects have been included in the

budget request; all intended to either improve the quality of stormwater and/or reduce the quantity of stormwater entering the combined and separated storm sewer systems. These projects include a broad range of initiatives including channel naturalization, erosion control, constructed wetlands, infiltration systems and source control programs. One notable project is the Emery Creek Storm Water Pond, which will begin in 2006, following negotiations for securing necessary easements.

- Biosolids and Residual Master Plan – the final plan still remains to be completed for Biosolids. As such the cost impact of the plan have not been included in this submission. Construction of residual management facilities is proceeding at the R.L. Clark Water Treatment & R.C. Harris Water Treatment Plants.
- Odour Control Projects - multi-phased odour control projects will be initiated in 2006 at three wastewater treatment facilities. The Ashbridges Bay Wastewater Treatment plant has started the testing and design of new odour control systems while the Humber and Highland Creek Wastewater Treatment plants are just completing odour assessment studies. Detailed capital plans will be prepared during 2006 and incorporated into our long term capital plans.

#### *Continuous Improvements in Service Delivery*

- Numerous continuous improvement programs are underway or planned to review best practices, technological upgrades and management and operation of the City's linear water and wastewater infrastructure. Funds have been included to complete the implementation of these programs in the 2006-2010 capital budget requests.
- Watermain and sewer replacement programs are co-ordinated with the Transportation Road Reconstruction Program to save costs and minimize construction disruption to the public. Where appropriate, trenchless construction techniques are used to renew sewer and watermain infrastructure to minimize impact on adjacent homes and businesses while extending the useful life of infrastructure and postponing replacement.

The 5 Year Capital Plan represents an increase in capital works to achieve the goals identified previously. Delivering this program requires consultation and detailed coordination with the consulting engineering and construction industry to ensure that they are prepared to meet this higher level of activity. This coordination will help to control cost increases that could result from overloading the industry from accelerated programs within the City and neighbouring municipalities facing the same challenges.

We also need to continually review the availability of internal resources and the processes used to plan, procure, prioritize and deliver a coordinated capital program to ensure timely delivery of the identified infrastructure. Key issues to be managed in 2006 and beyond are:

- Updating the capital forecast based on new information (plant assessments, studies, Provincial Regulations, etc.);
- Ramping up the renewal program to reduce the renewal backlog for the City's aging sewer and watermain infrastructure, recognizing that 20% of the watermain and 8% of the sewer infrastructure is over 80 years old;
- Timing related to major water and wastewater plant initiatives; and

- Ongoing financing for the Wet Weather Flow Master Plan estimated at \$1.1 billion over 25 years.

The Proposed 2006 Capital Budget for Toronto Water includes a 2006 cash flow of \$394.5 million, including a carry forward of \$76.9 million and future year commitments of \$549.9 million for a total cash flow approval of \$944.4 million.

The future year commitments arising from the 2006 Capital Budget for Toronto Water are outlined in the table below. These projects will be fully funded from user fee revenues, Water and Wastewater reserve funds including development charge reserve funds and other revenues.

2006 Proposed Capital Budget and Future Year Commitments  
(\$ Millions)

| <b>2006</b> | <b>2007</b> | <b>2008</b> | <b>2009</b> | <b>2010</b> | <b>Total Cash Flow</b> |
|-------------|-------------|-------------|-------------|-------------|------------------------|
| 394.5       | 248.2       | 161.9       | 97.0        | 42.8        | 944.4                  |

The capital plan beyond 2010 will see the completion of many capital projects underway at the facilities. However, we continue to identify projects required to maintain a state of good repair and ensure achievement of acceptable renewal rates. Challenges beyond the 5-year plan include our ability to optimize existing infrastructure to meet future growth needs while postponing system expansions, and the ability to meet increasingly more stringent regulations without requiring significant investment in plant upgrades or new treatment processes.

The 10-year capital plan totaling \$6,413.1 million forecasts spending as follows:

10 Year Capital Plan  
(\$ Millions)

| <b>2006</b> | <b>2007</b> | <b>2008</b> | <b>2009</b> | <b>2010</b> | <b>2011-2015</b> | <b>Total Cash Flow</b> |
|-------------|-------------|-------------|-------------|-------------|------------------|------------------------|
| 394.5       | 441.6       | 574.8       | 589.2       | 610.0       | 3,803.0          | 6,413.1                |

Conclusions:

The 2006 Proposed Operating Budget of \$610.5 million ensures the residents and users of our water and wastewater systems continue to receive the service standards delivered in 2005.

The 2006 Proposed Capital Budget of \$394.5 million with future commitments of \$549.9 million for Toronto Water reflects the level of investment required to ensure the ongoing rehabilitation of the City's aging infrastructure while responding to Council priorities and service initiatives.

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List of Attachments:

Attachment 1 – Analyst Notes – 2005 Operating Budget – Toronto Water

Attachment 2 – Analyst Notes – 2005-2014 Capital Program – Toronto Water

(Copies of Attachment 1 and 2 referred to in the foregoing report reflect the Budget Analyst Notes which will be forwarded all Members of Council under separate cover, copies will be on file in the office of the City Clerk, City Hall.)