

Water and Wastewater & Treatment 2015 Budgets



Strategic Priorities & Policy Committee

January 15, 2015

Budget 2015

Agenda



- 1. Supporting London's Strategic Priorities**
- 2. Core Business Objectives**
- 3. Current Operating Environment & Recent Accomplishments**
- 4. Future Direction & Priorities**
- 5. Financing**
- 6. Summary**

Water & WWT – Key contributors to the City's draft strategic priorities



- **Strengthening our Community**
- **Building a Sustainable City**
- **Growing our Economy**
- **Leading in Public Service**

Core Business Objectives



Water & Wastewater priorities focus on 4 primary objectives:



Accomplishments

Future Direction

Financing

- "Must Do"
- "Should Do"
- "Want to Do"

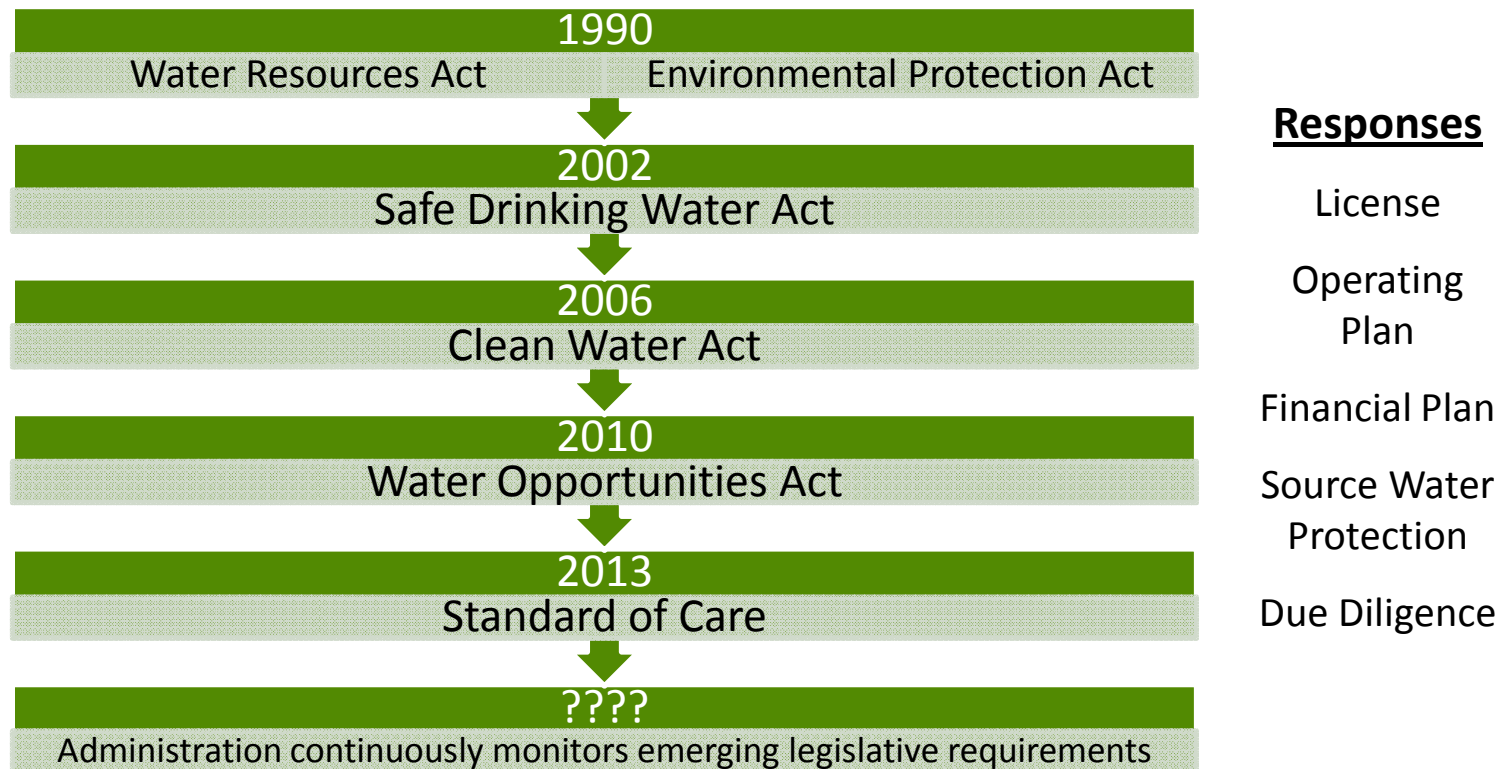
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Water Legislation



Compliance
(Health and
Environment)

Various legislation dictates what we do and how we do it:



Standard of Care



Compliance
(Health and
Environment)

*“Water is unique as a local service ... the consequences of a failure in the water system (are) most seriously felt by those who depend on it locally. **Municipal ownership**, and the ensuing responsibilities, should provide a high degree of **public accountability** in relation to the local water system.”*
- Justice Dennis O’Connor, 2002 Walkerton Inquiry

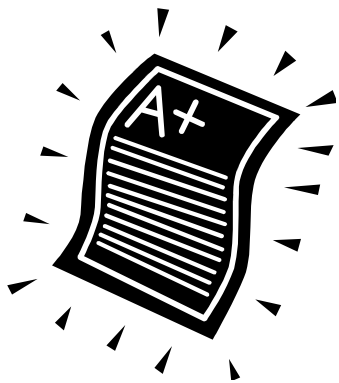
- ➔ Effective January 1, 2013
- ➔ **Legal obligation** to exercise a level of care, diligence and skill with regard to a municipal drinking water system that a reasonably prudent person would be expected to exercise in a similar situation

Recent Accomplishments



Compliance
(Health and
Environment)

- Full accreditation as Licensed Operating Authority in 2013. Received 100% score on Ministry of Environment 2013 audit.
- Began implementation of contamination risk reduction program – MOE inspection requirement
- Continued lead reduction – free testing, education, ph adjustment, service replacement
- Continued to advance Pollution Prevention & Control Plan to mitigate combined sewer overflows (CSO's) and bypasses to Thames River



Recent Accomplishments



Growth

- 2014 Development Charges Background Study and related Master Plans completed – growth pays for growth
- Council adopted the Industrial Land Development Strategy (ILDS) in March 2014



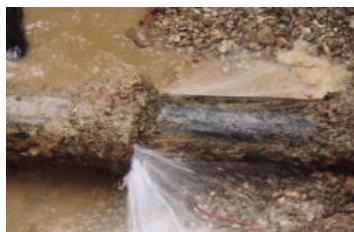
- Started Greenway Pollution Control Plant expansion project detailed design – service growth from central London intensification and southwest area development

Recent Accomplishments



Efficiency

- Initiated District Meter Program – optimization (non-revenue water) of water system & provide mechanism to charge for construction water
 - Consistent with PwC audit recommendation



- Develop a strategy & multi-year roadmap to optimize wastewater treatment plants – capacity, wet weather flows, asset management, floodproofing



- Installed new turbo blowers at Adelaide, Vauxhall and Oxford WWTP's – electricity savings of \$170,000/year

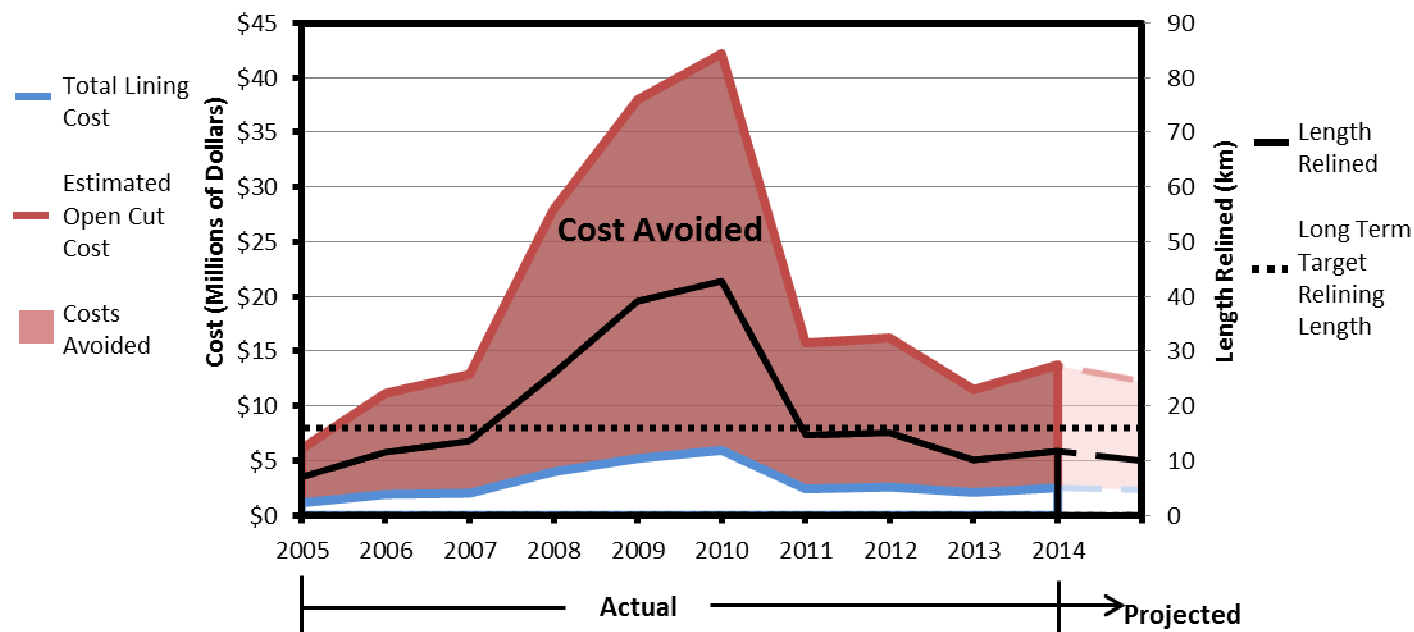
Recent Accomplishments



Efficiency

TRENCHLESS TECHNOLOGIES

\$165M cost avoidance by Lining Sewers vs. Open Cut in last 10yrs



Notes: Data produced by Construction Administration. Theoretical costs are indexed to 2009 average costs. Lining costs are for the actual year.

Recent Accomplishments



Best Management Practices



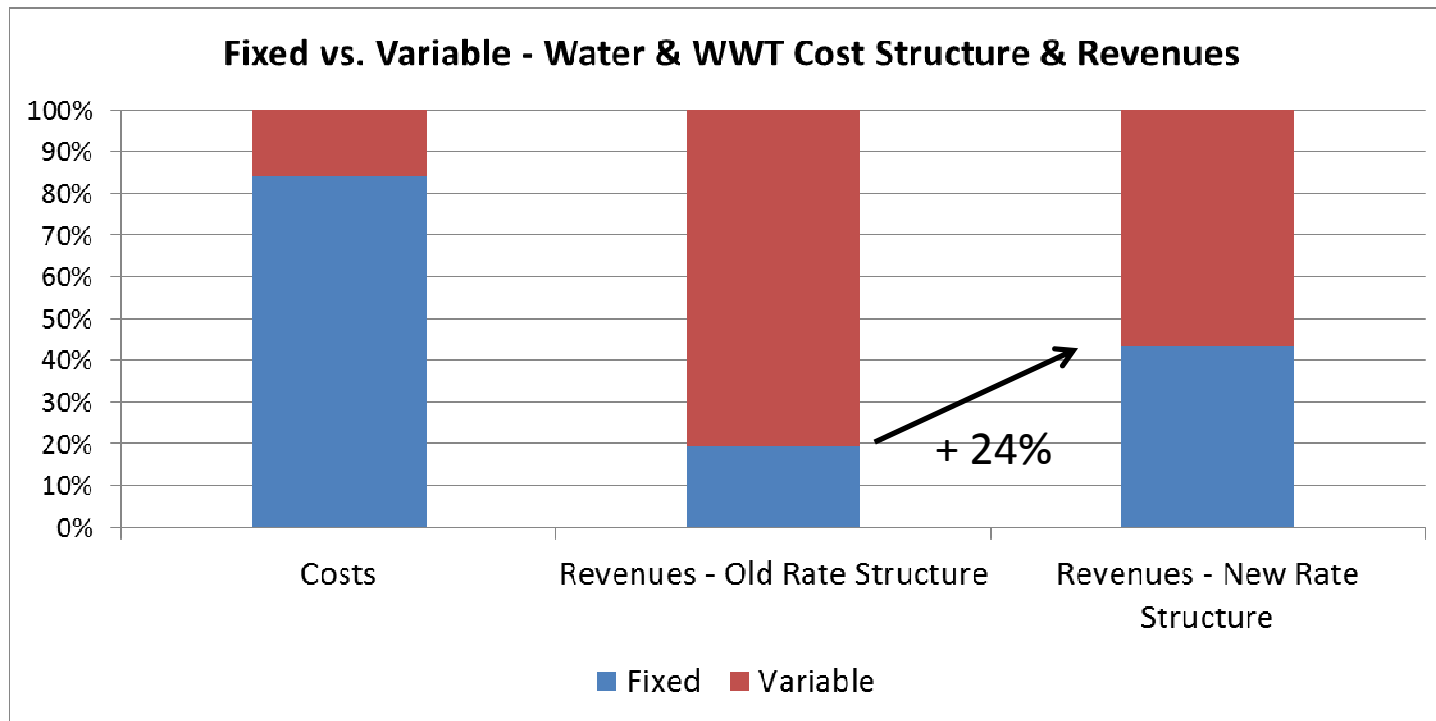
- Completed construction of the Wastewater Research Centre at Greenway PCP – wastewater treatment technological innovation
- City-wide campaign on how customers can save on their water bill
- Partnered with Thames Valley District School Board to create “Teaching Toolkit” for educating students about water & wastewater treatment and water distribution & conservation
- Awards: OPWA Innovation for Greenway Dewatering; OWWA for Rate Structure Implementation

Water & Wastewater Rate Structure



Best Management Practices

The new Water and Wastewater rate structure (implemented in March 2013) aims to strike a more appropriate balance between our cost structure (largely fixed) and our previous rate structure (primarily variable):



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Costs Avoided by Conservation



- Decline in water consumption of 32% since 2001 – rate increases to cover fixed costs
- Conservation a powerful tool to accommodate growth
- Postpone works that would otherwise be required and would have required higher rates, including:

Project	Timeframe	Estimated Cost
Elgin Area Water Treatment Plant Expansion	Deferred from 2013 to at least 2023 based on current volume forecasts	\$60 million
Southside Wastewater Treatment Plant	Deferred >20 years	\$95 million

Future Direction/Priorities



Compliance
(Health and
Environment)



WATER

- Maintain 100% MOE report card score
- Continue lead replacement program
- Finish colour coding of fire hydrants – Fire Code
- Complete contamination risk reduction program
- Drinking Water Quality Management System – continuous improvement



The cost of these initiatives is contained within the proposed Water budget.

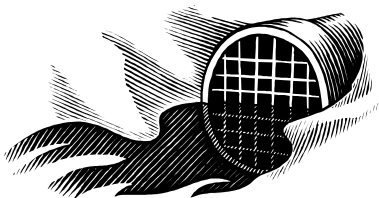
Future Direction/Priorities



Compliance
(Health and
Environment)

WASTEWATER

- Wastewater treatment legislation – expected to be like water system regulations
- Combined Sewer Overflows (CSO's)
 - Pollution Prevention & Control Plan - “road map” for further mitigating CSO's – to be completed in 2-3 years
 - Annual capital program currently in place



Any outputs from the Pollution Prevention & Control Plan may require incremental additions to future Wastewater budgets – prepare financially.

Future Direction/Priorities



Growth

GROWTH SERVICING

- Water and Wastewater servicing capital projects included in 2015 Budgets – ILDS and community
 - ILDS: \$79.5M from 2015-2024
- Service southwest London



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Future Direction/Priorities



Efficiency

TRENCHLESS TECHNOLOGIES

- ➔ Lining pipe a priority where feasible – to manage the infrastructure gap
- ➔ Environmentally friendly, less socially disruptive, less costly and extends the service life of the asset:



Method (Water Example)	Cost/m	Estimated Lifespan
Replacement	\$1,000-\$1,200	75-80 years
Anodes	\$70	15-20 years
Cement Mortar Relining	\$250	15-20 years
Structural Relining	\$600	50 years

Future Direction/Priorities



Efficiency

WASTEWATER TREATMENT OPTIMIZATION

- Objectives: combine latent capacity, lifecycle needs, future effluent criteria, overflows & climate change impacts
- Desired outcomes: Operational efficiencies & reduced energy costs; reduction/deferral of capital costs; meet compliance targets while under construction



While some flood proofing works at Greenway PCP & Vauxhall PCP are included in the 2015 Budget, further investments may be required to operationalize the optimization strategy – prepare financially.

Future Direction/Priorities



Efficiency

ENERGY EFFICIENCY INITIATIVES

- Biosolids – electricity generation from incinerator heat (up to \$675,000/year)
- Energy conservation & cost savings – plants and pumping stations -- proactive



Investments may be required to operationalize efficiencies. These investments are currently unknown and will be added to future budgets if required – prepare financially.



Future Direction/Priorities



Best Management Practices



- Computerized Maintenance Management System (CMMS):
 - Improving responses: customers, legal/regulatory
 - Enhancing the efficiency of available resources
 - Comprehensive tracking of maintenance activities
 - More robust reporting capabilities
 - Optimizing costs
- Rate Structure phase in: drainage charge vacant land – credits for large sites -- fairness



The cost of this initiative is contained within the proposed Water and Wastewater budgets.

Future Direction/Priorities



Best
Management
Practices

EFFICIENCY, NEW TECHNOLOGIES, INNOVATION & OPERATING PHILOSOPHIES

- CMMS, trenchless technology, energy efficiency, district metering, plant optimization, Wastewater Research Centre, etc.
- Target future inflationary-level rate increase target
- Opportunistic to proactive
- Risk based maintenance

Operating Budget Overview



	Water (\$000's)	Wastewater (\$000's)
2014 Approved Budget (A)	\$69,705	\$84,529
Additional resources necessary to manage the increase in stormwater management facilities to be constructed in the next 10 years in accordance with the 2014 DC Study.		\$180
Increased purchase of water costs	\$837	
Misc. increases/(decreases) in operating expenditures	\$136	\$202
Change in operating expenditures (B)	\$973	\$382
% change in operating expenditures	2.4%	1.1%
Increase in capital financing (C)	\$2,890	\$4,273
2015 Proposed Budget (A+B+C)	\$73,568	\$89,184

Capital Budget Overview



WATER (\$000's)	
Lifecycle Renewal	22,766
Growth	5,885
Service Improvement	1,270
TOTAL	29,921

Highlights	
Main Rehabilitation	5,143
Main Replacement	9,824
Replace Water Services	2,000
ILDS Water Servicing	1,200
District Metered Areas	500

WASTEWATER (\$000's)	
Lifecycle Renewal	25,627
Growth	42,130
Service Improvement	9,805
TOTAL	77,562

Highlights	
Specialized Sewer Repairs	3,700
Sewer Replacement Program	11,422
Wonderland/Wharncliffe Trunk Sewer	4,057
Lambeth Servicing Solution	6,741
Sanitary/Storm/SWM ILDS Servicing	8,102

Funding in accordance with Financing Principles

Revenue Overview



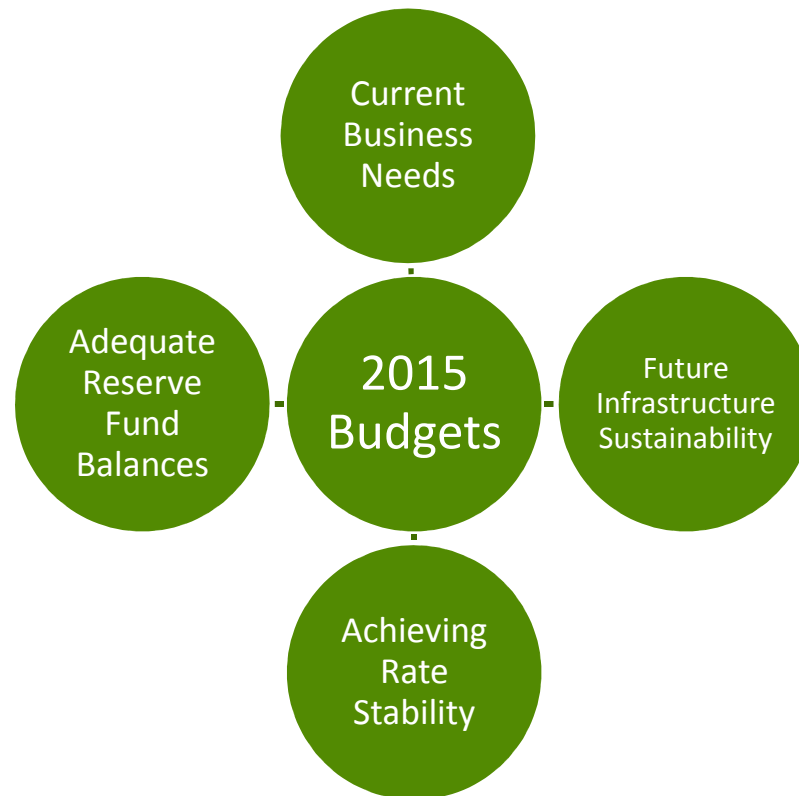
	Water (\$000's)	Wastewater (\$000's)
2014 Approved Budget	\$69,705	\$84,529
Impact of reduced water consumption*	(\$918)	(\$900)
Year 3 of the phase-in of the Storm Drainage charges, partially offset by revised categorization of customer accounts		\$15
Change in other revenues	\$58	\$25
Additional revenue from 7% rate increase for 2015	\$4,723	\$5,515
2015 Proposed Budget	\$73,568	\$89,184

* Consumption forecasts have been reduced from 41.0 million m³ in 2014 to 40.1 million m³ for 2015 (2% reduction).

Striking the Balance



2015 Budgets Balance Current & Future Priorities



Financing Principles



Best
Management
Practices

- 1) Financing options should accommodate required capital investment needs
- 2) Capital plans submitted reflect the investment required to maintain safe Water & Wastewater systems
- 3) Financing strategy should provide flexibility to accommodate future needs such as:
 - Pollution Prevention & Control Plan
 - Wastewater Treatment Optimization Strategy
 - Energy Efficiency Projects
 - Other Emerging Strategic Initiatives

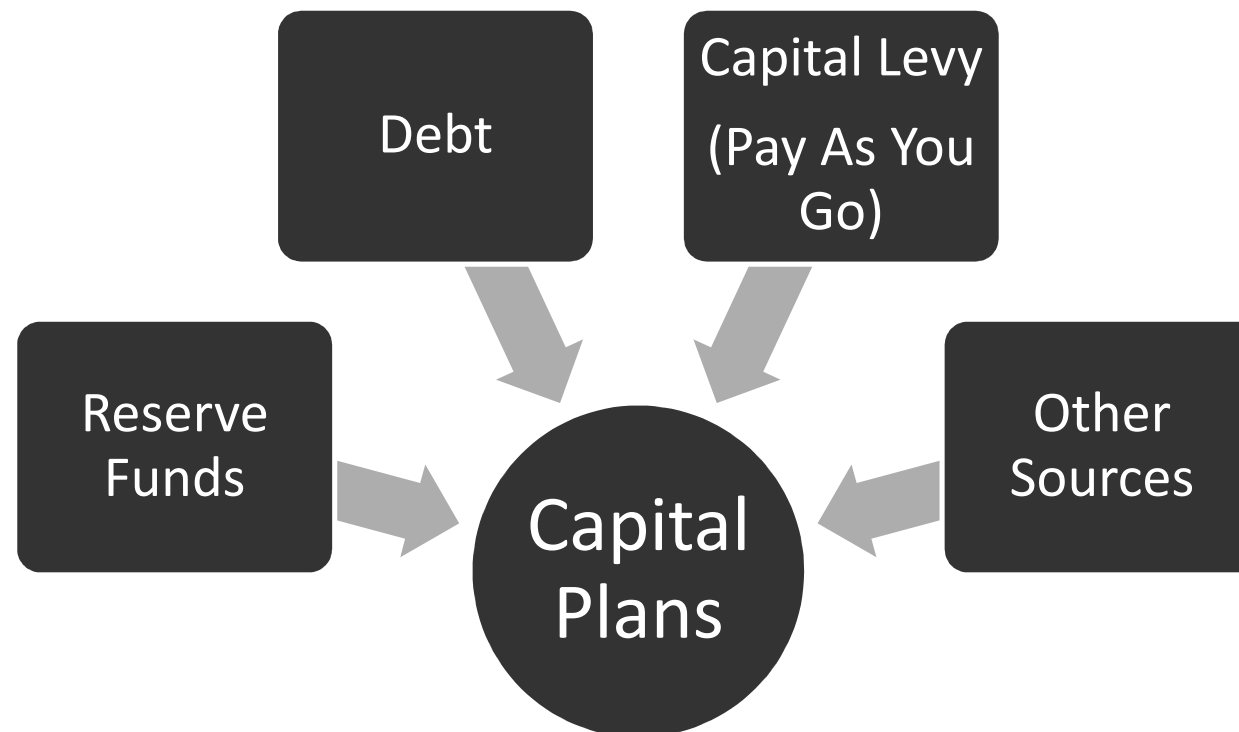


Financial Levers



Best
Management
Practices

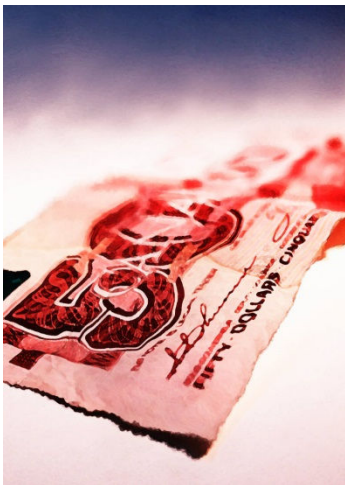
4 financing alternatives are available to support the capital plans:



Reserve Fund Principles



Best Management Practices

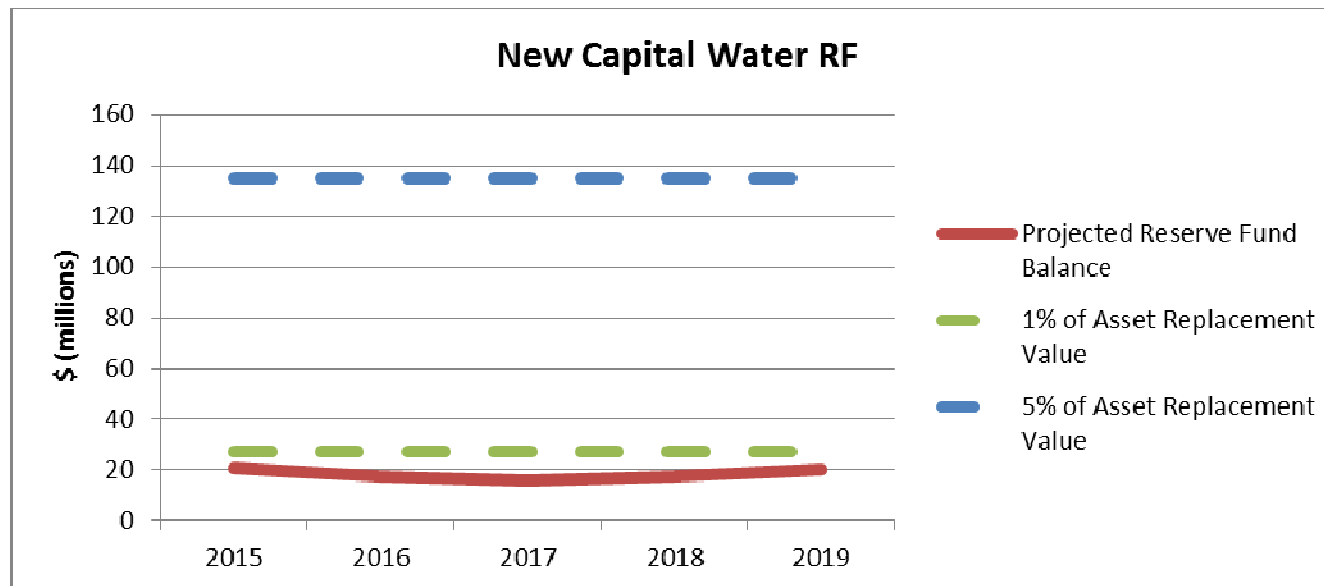


- Target reserve fund balances should be based on these key principles, consistent with the corporate reserve funds principles:
 - State of infrastructure that the balances support (the older the asset the sooner the money is needed to replace it)
 - Financial strategy under strategic financial plan (shift to more pay as you go financing)
 - Corporate asset management plan (the level of service and risk that is acceptable for the assets)
- Based on these principles, reserve fund balances in the range of 1% to 5% of the asset replacement values are targeted for Water & Wastewater reserve funds

Water Reserve Fund



Best Management Practices



New Capital Water RF (\$M)	2015	2016	2017	2018	2019
Ending Balance – Proposed 2015 Budget	\$20.8	\$17.4	\$16.0	\$17.4	\$20.1
Low End of Target Range (1% of Asset Replacement Value)	\$27.0				
High End of Target Range (5% of Asset Replacement Value)	\$135.0				

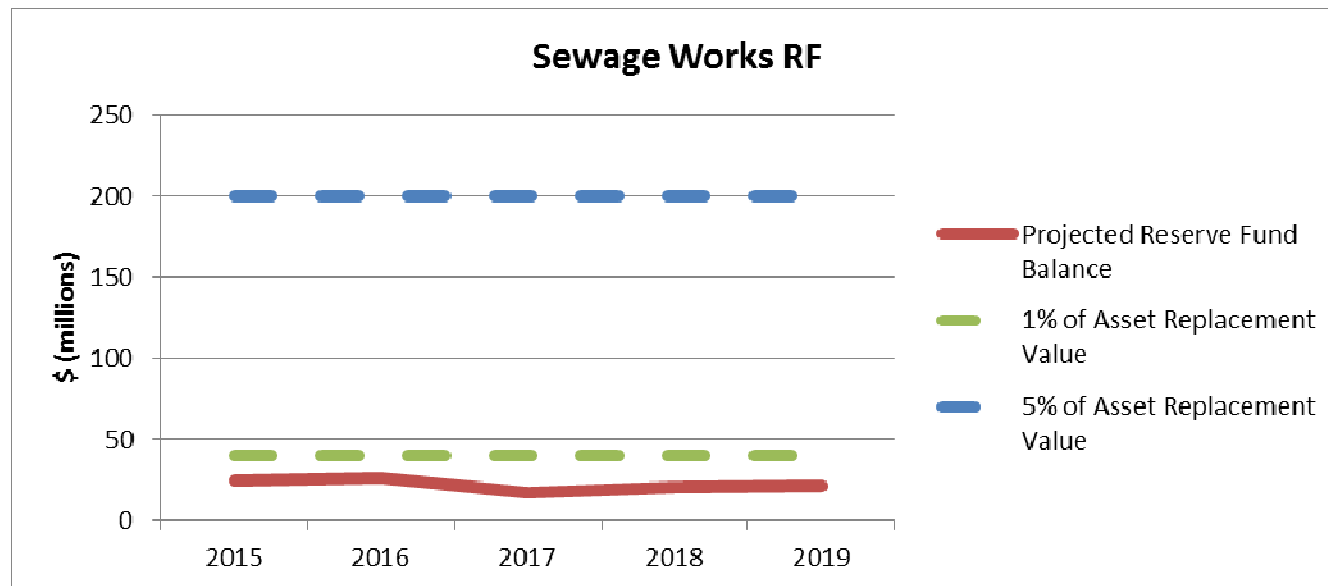
Estimated Replacement Value of Water Assets = \$2.7 billion

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Wastewater Reserve Fund



Best Management Practices



Sewage Works RF (\$M)	2015	2016	2017	2018	2019
Ending Balance – Proposed 2015 Budget	\$24.4	\$26.7	\$17.5	\$20.9	\$21.5
Low End of Target Range (1% of Asset Replacement Value)	\$40.0				
High End of Target Range (5% of Asset Replacement Value)	\$200.0				

Estimated Replacement Value of Wastewater Assets = \$4 billion

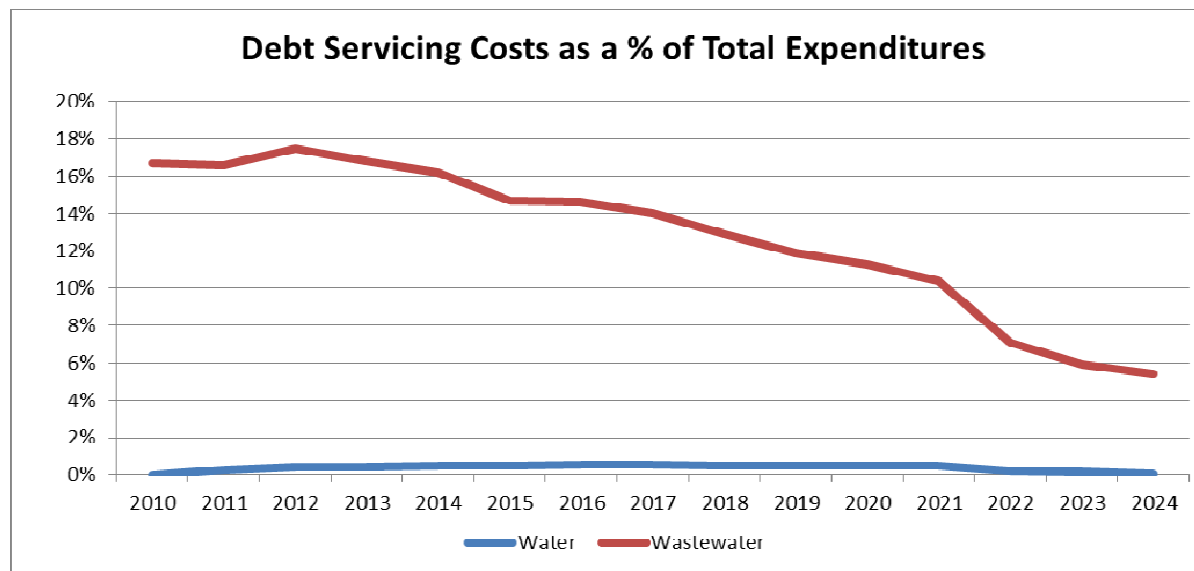
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Debt Profile



Best
Management
Practices

- **No new future rate supported debt is forecasted for Wastewater; only limited use of future debt for Water**
 - Provides capacity to fund initiatives (e.g. PPCP, Wastewater Optimization Strategy, etc.) that are currently not included in the capital plans – “preparing financially”
- Debt servicing burden (for previously issued debt) continues to decrease:



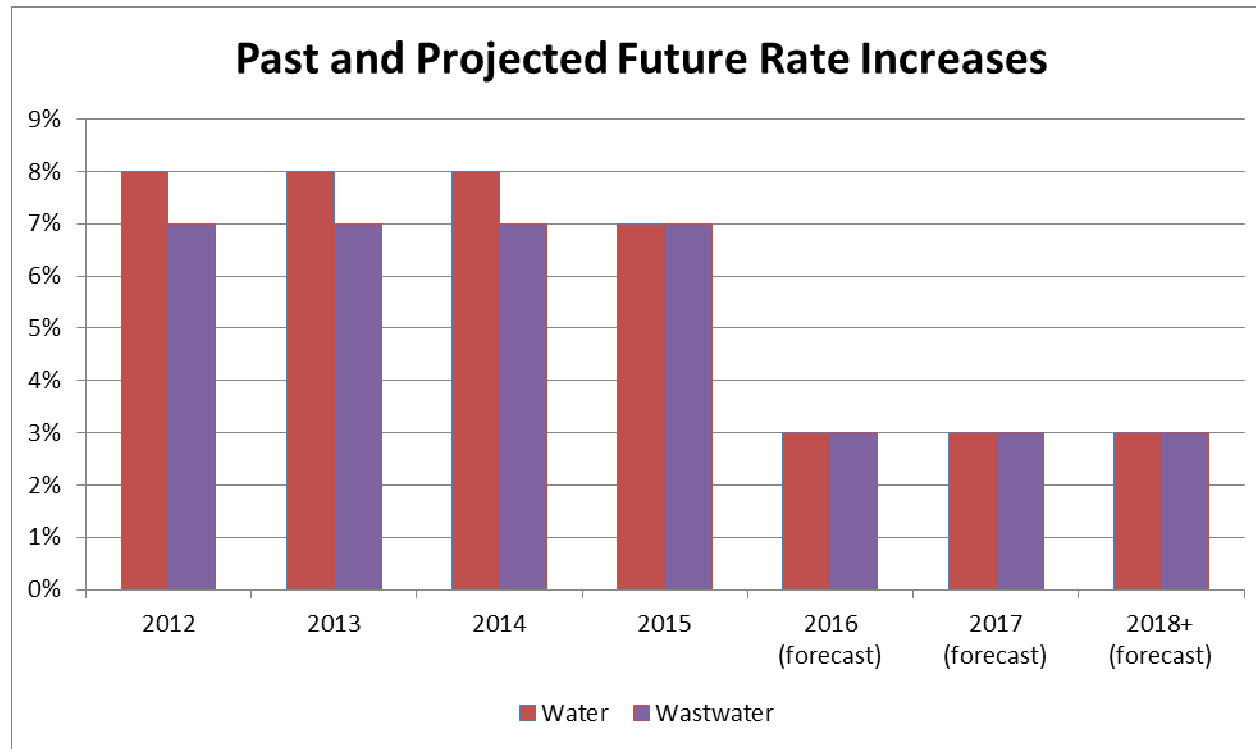
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Forecasted Future Rate Increases



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Management
Practices

Positioned to achieve inflationary-level rate increases starting in 2016:



Summary

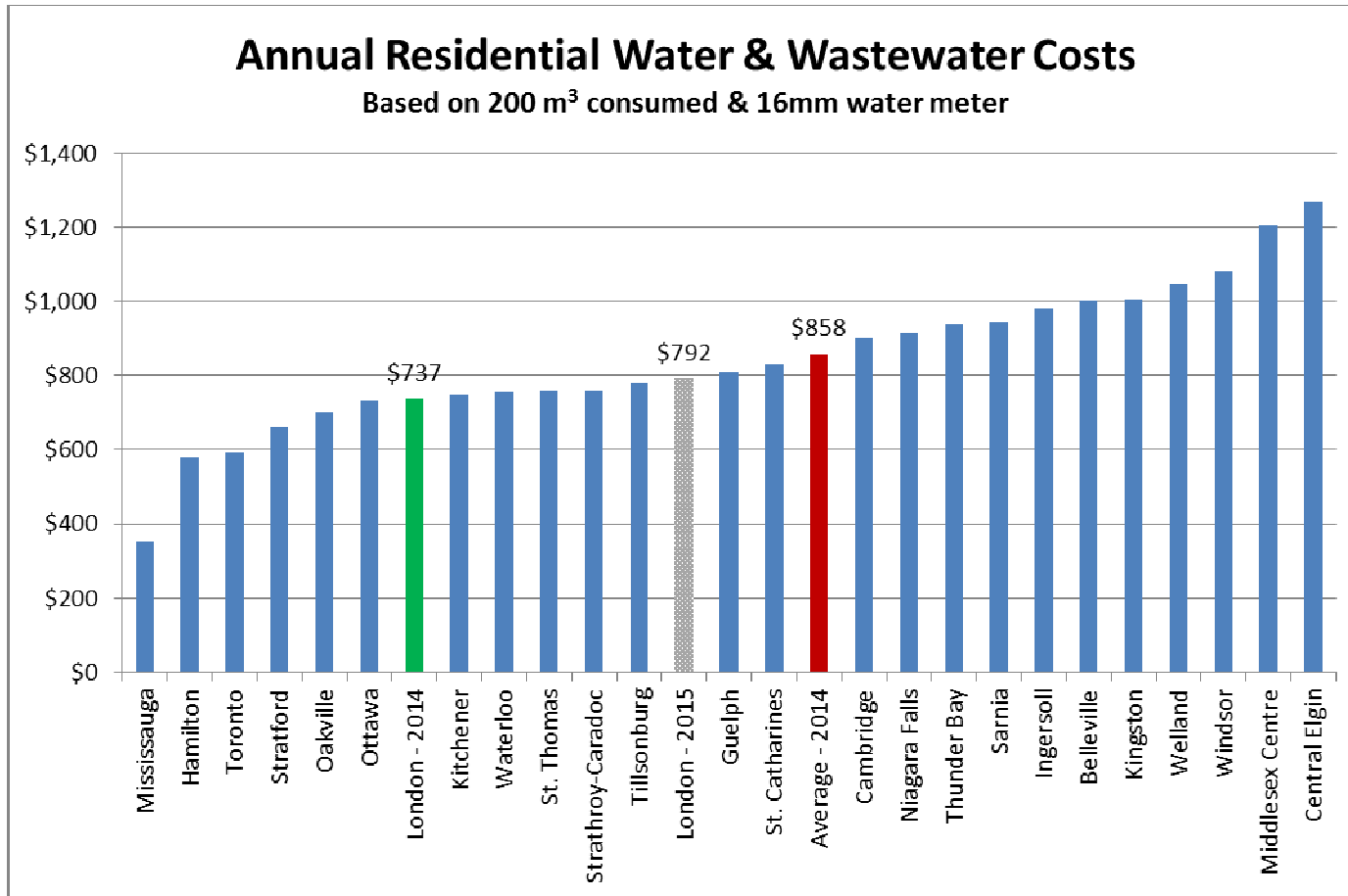
Impact to the Average Residential Customer



	2014 Budgeted Cost (181.2 m ³)	2014 Revised Cost (171.9 m ³)	2015 Increase	2015 Annual Cost (171.9 m ³)
Water	\$363	\$343	\$24 (7%)	\$367
Wastewater	\$464	\$446	\$29 (6.5%*)	\$475
Combined	\$827	\$789	\$53	\$842
Monthly Cost	\$68.92	\$65.75	\$4.42	\$70.17
Daily Cost	\$2.27	\$2.16	\$0.15	\$2.31

*** The increase in Wastewater charges is 7%, but the increase to the average residential customer is only 6.5% due to the phase-in of the new Storm Drainage charges.**

How Does London Compare?



NOTE:
All amounts exclude stormwater charges. Amounts shown for other municipalities are 2014 amounts.

Source:
2014 BMA Management Consulting Municipal Study



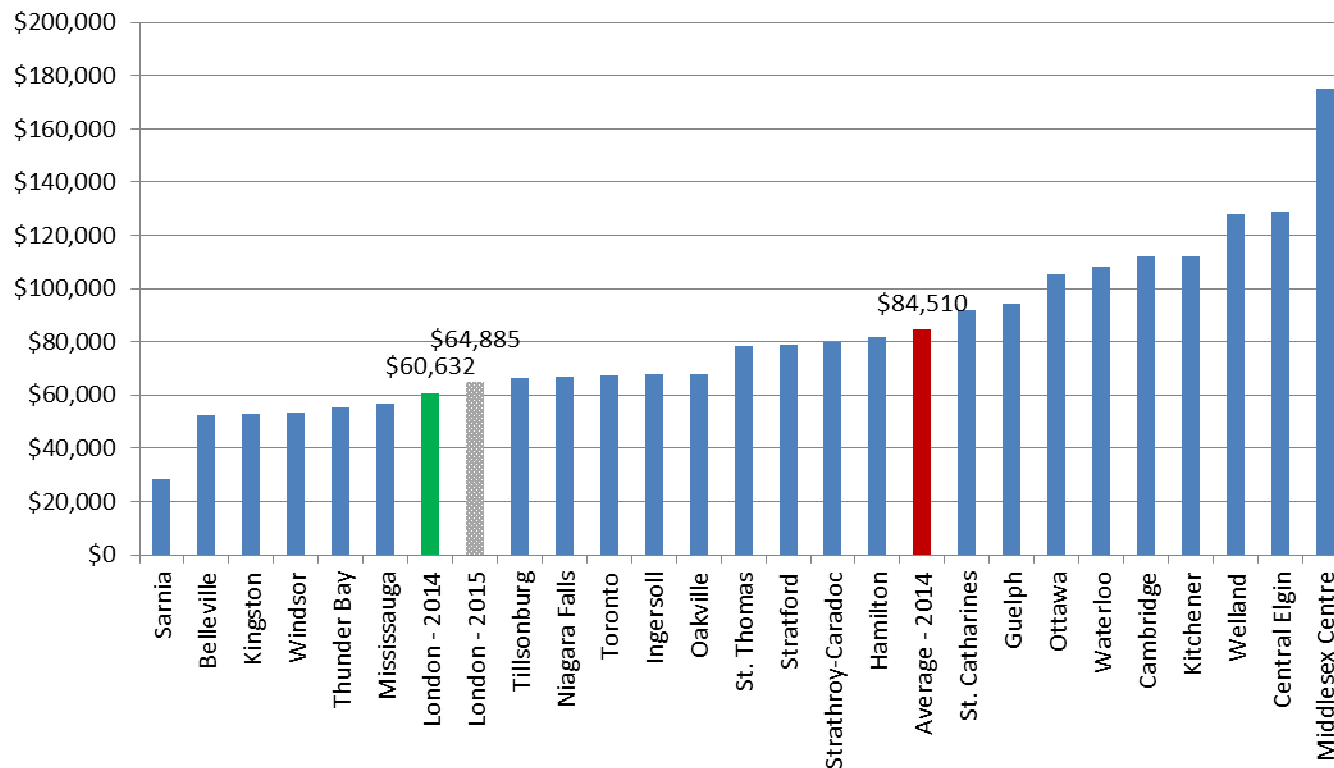
London was ranked 27th of the 94 municipalities surveyed in 2014 for lowest residential Water & Wastewater costs. (2013: London ranked 25th of 97 municipalities surveyed)

How Does London Compare?



Average Industrial Water & Wastewater Costs

Based on 30,000 m³ consumed & 76mm water meter



NOTE:

All amounts exclude stormwater charges. Amounts shown for other municipalities are 2014 amounts.

Source:

2014 BMA Management Consulting Municipal Study



London was ranked 19th of the 92 municipalities surveyed in 2014 for lowest industrial Water & Wastewater costs. (2013: London ranked 14th of 95 municipalities surveyed)

How Does London Compare?



ACHIEVING FINANCIAL SUSTAINABILITY¹

Municipality	Financial Sustainability Forecasted
Toronto	2015
Ottawa, Peel, Thunder Bay	Next 2-3 years

NOTE 1: In the utilities context, Financial Sustainability is defined as the achievement of annual rate increases that can be maintained at or near the annual rate of inflation based on a combination of CPI and the Construction Price Index with appropriate use of debt financing, adequate reserve funds and the appropriate investment in capital.

Summary



At an additional cost of \$0.15/day for the average residence, the 2015 Budgets ensure:

- **Compliance** with regulatory requirements
- Capital investments in existing and future **Growth** needs
- **Efficiency** initiatives, now and future
- Sound **Financial Management**
 - **Financial sustainability**
 - Meet license requirements / Sustainable Infrastructure Plan
 - Building toward more adequate reserve fund levels
 - Financial flexibility to accommodate future needs

