



Planning, Environmental & Engineering Services Department

Water and Wastewater & Treatment

2012 Budgets

November 8, 2011



Water and Wastewater Services

- **“Critical” fundamental public services**
 - Health care and Environmental Business
 - Protection and maintenance of health
 - Fire Protection
 - Saves lives
 - Quality of Life Services
 - Water supply and Wastewater treatment





Water and Wastewater Services

- Renewal, operation and maintenance of water supply and wastewater and treatment systems
 - Reservoirs, Pump Stations, Pipes, Water Meters, Storm Water Management Facilities, Treatment Plants
- Drinking water quality management compliance
- Long-term system planning and modeling
- Customer billing contract management
- Replacement value
 - Water \$1.8 billion (including Joint Water Boards plant & pipelines)
 - Sewer \$3.6 billion

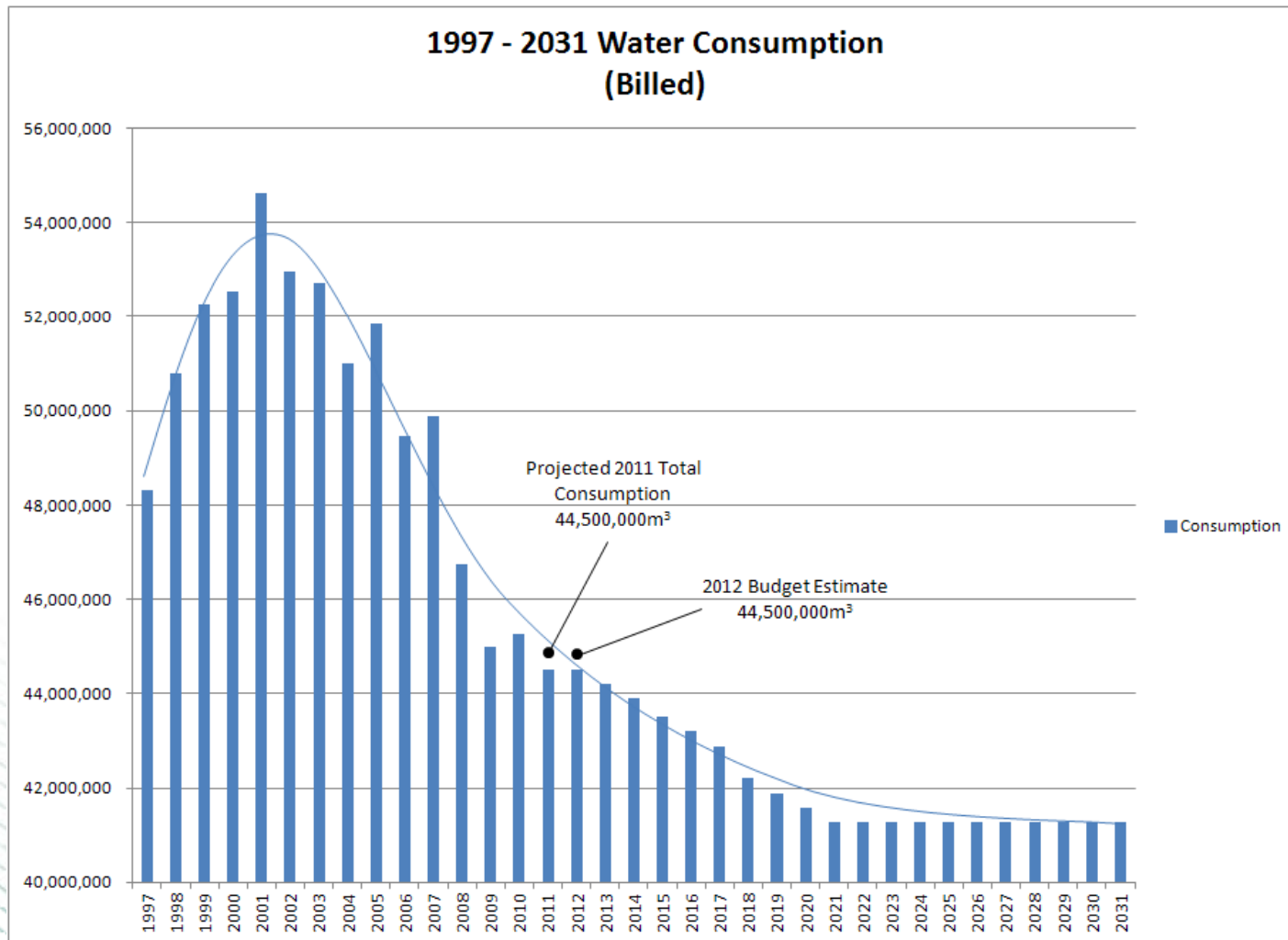


Why We Need To Invest

- Proper operation of the system for the health of Londoners
- Support economic development and growth
- Enable us to live and grow as a community
- Address the infrastructure gap
 - Renew aging and deteriorating infrastructure
- Compliance with regulatory/environmental requirements
- Consumption reductions
- Ensure intergenerational equity
 - While deferring future expansions
 - Avoiding future debt



Water Consumption / Efficiency Trend





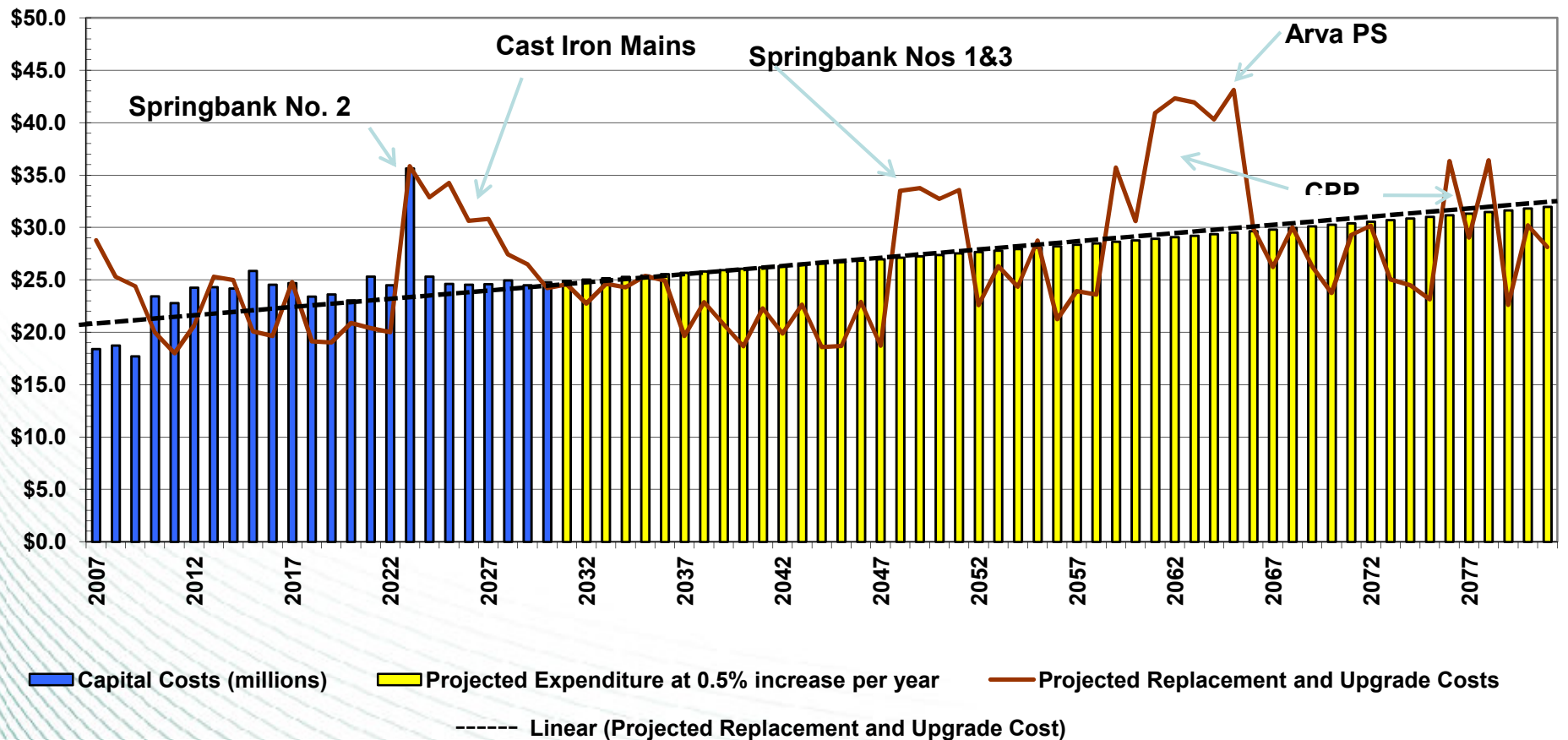
Addressing Revenue Reductions Due to Declining Water Consumption?

- Rate Structure Review analysis underway
 - Cost of servicing rate review (Deferred)
 - Fixed component vs. variable component
 - Anticipated reporting back to Council by year-end
- Exploring opportunities to generate other revenue sources
- Utilize Senior Government funding opportunities
- Future rate increases to be adjusted if other funding sources become available



75 Year Water Infrastructure Renewal Plan

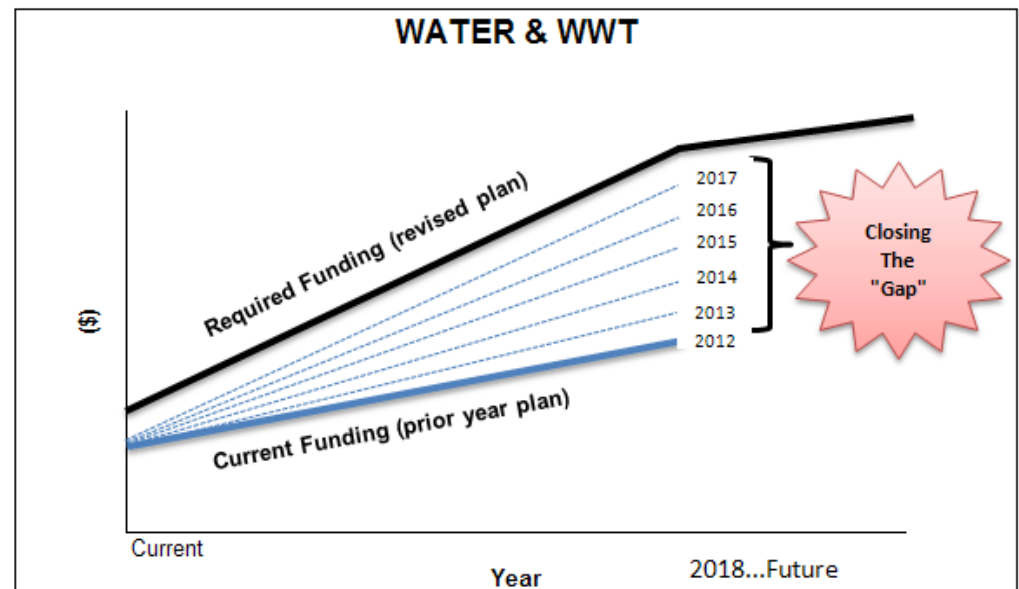
(2007 Dollars)





Water & WWT Financial Infrastructure Gap

- **Financial Infrastructure Gap**
 - Combined Water/WWT infrastructure gap = \$450 M+
 - Objective to manage gap to acceptable levels (cannot eliminate)
- **“Gap” showing up as**
 - frequent equipment failures, main breaks, etc.
 - more extensive/too frequent maintenance
- **Closing the “gap”**
 - Addressing consumption decline
 - Increasing capital funding
 - Leveraging new technology / innovation to minimize operating costs



2012 Utility Budgets

NEED TO INVEST

WATER

- 8% rate increase
 - Expenditure increase of 5.2%
- Capital contributions
 - 10.5% increase over 2011 (\$1.9M)
- Operating cost increase of 0%
(after uncontrollable costs are removed)

WWT

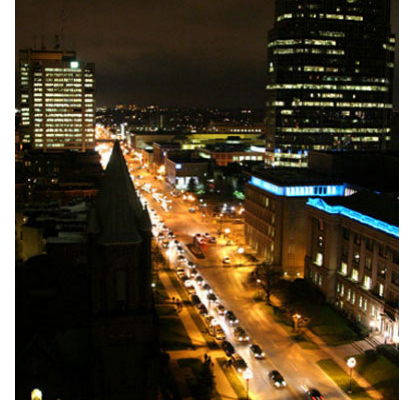
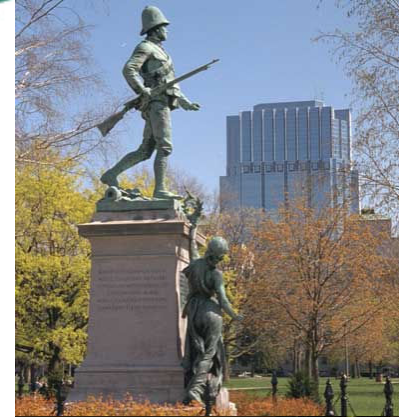
- 7% rate increase
 - Expenditure increase of 5.8%
- Capital contributions
 - 8.0% increase over 2011 (\$3.1 M)
- Operating cost increase of 0%
(after uncontrollable costs are removed)

Like this photo?

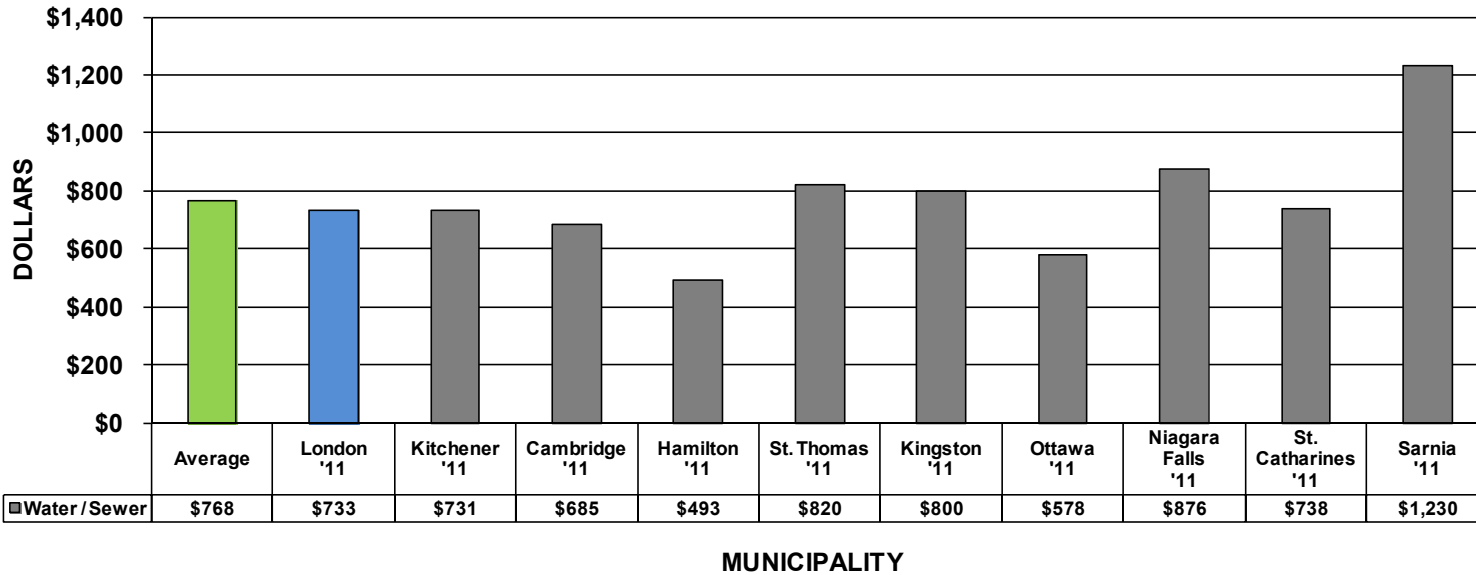


Sustaining Our Future

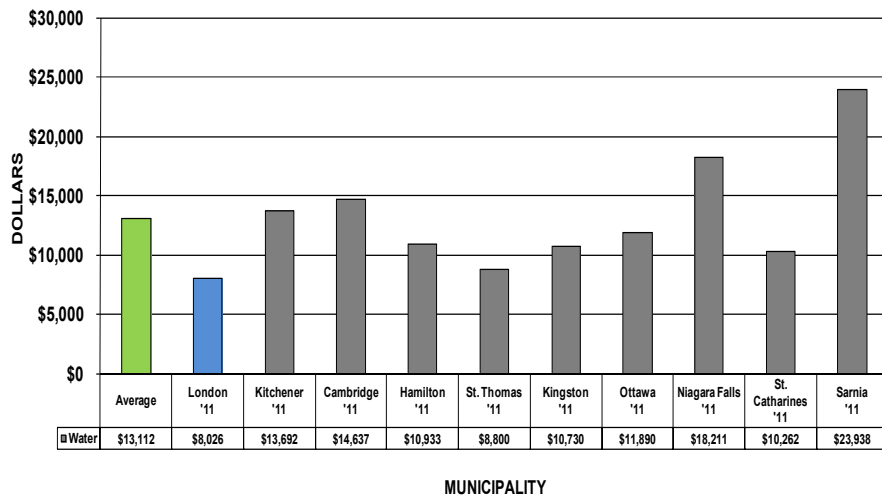
- Utility strategy:
 - Continued protection of health and environment
 - Support economic development
 - Generate jobs
 - Industrial strategy
 - Investing in service improvement
 - Fire protection
 - Quality management and quantity management



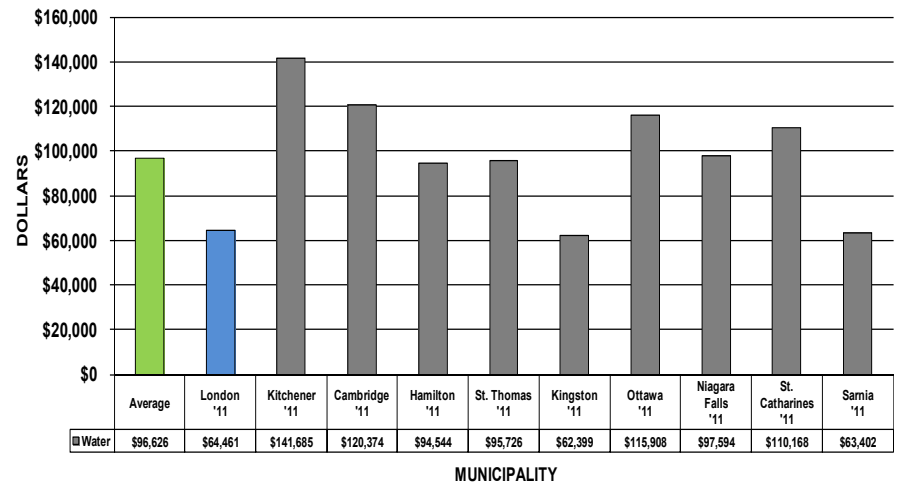
Residential Charges - Water / WWT



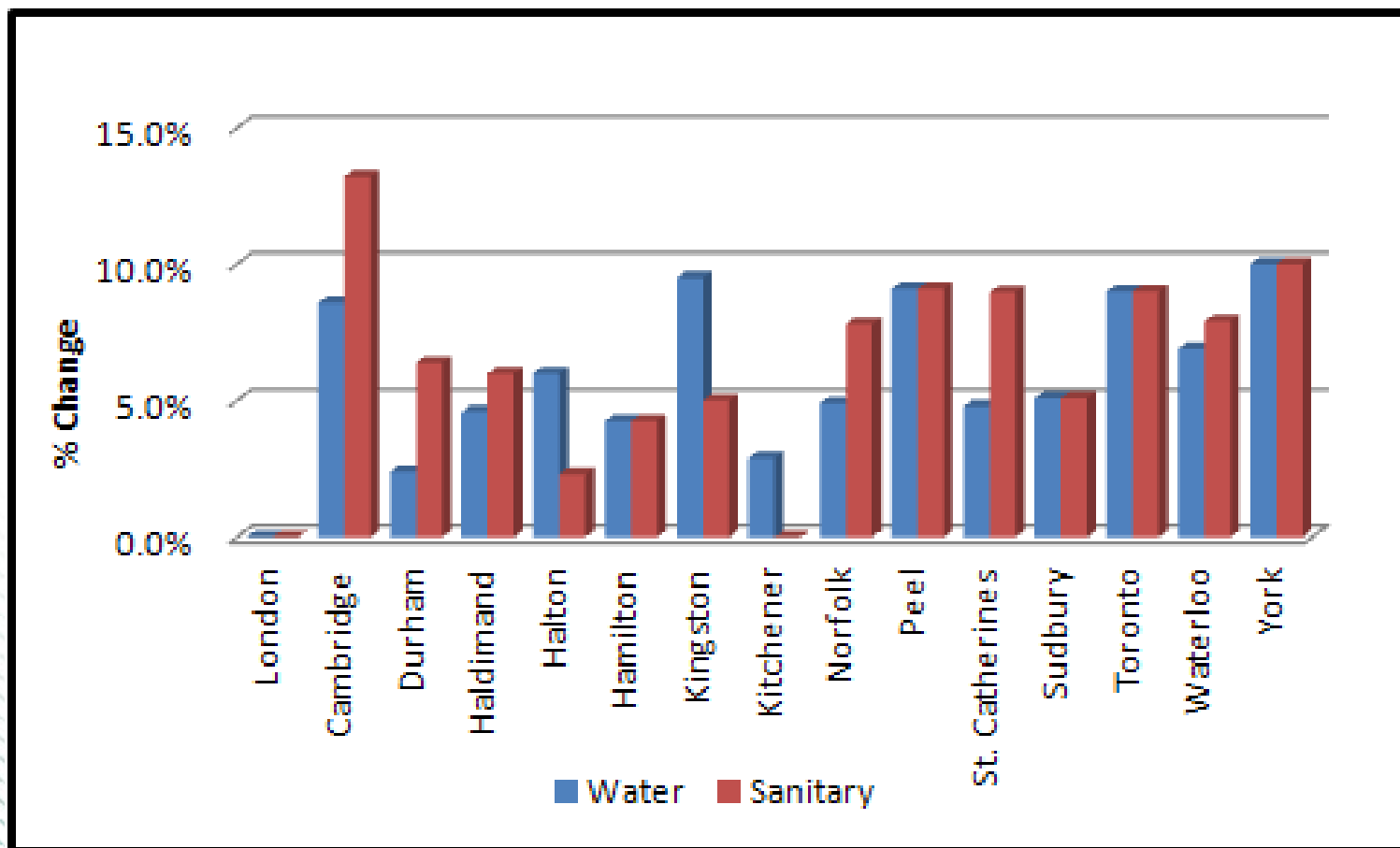
Commercial Charges - Water / WWT



Industrial Charges - Water / WWT



Residential Rate Change Comparison 2010 - 2011





Long-Term Financial Sustainability Impacts

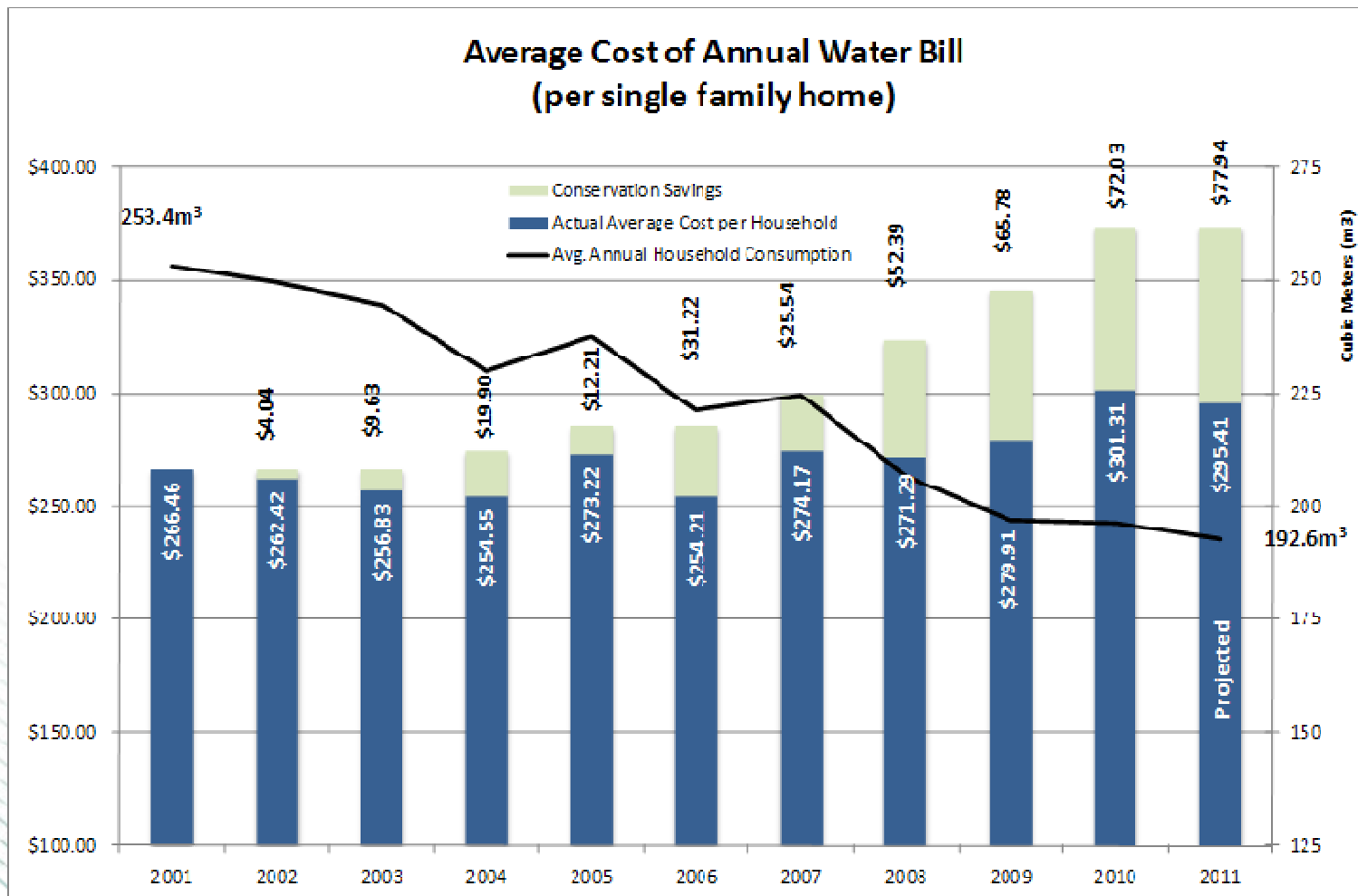
WATER

	Rate Scenarios	2011	2012	2013	2014	2015	2016	2017	2018 & Beyond
1	Rate Forecast (Council Endorsed - December 20, 2010)	0.0%	8.0%	8.0%	8.0%	8.0%	4.5%	3.0%	3.0%
2	Revised Rate Forecast (Adjusted to reflect revised water consumption forecast)	0.0%	8.0%	8.0%	8.0%	8.0%	7.0%	6.75%	3.0%

WWT

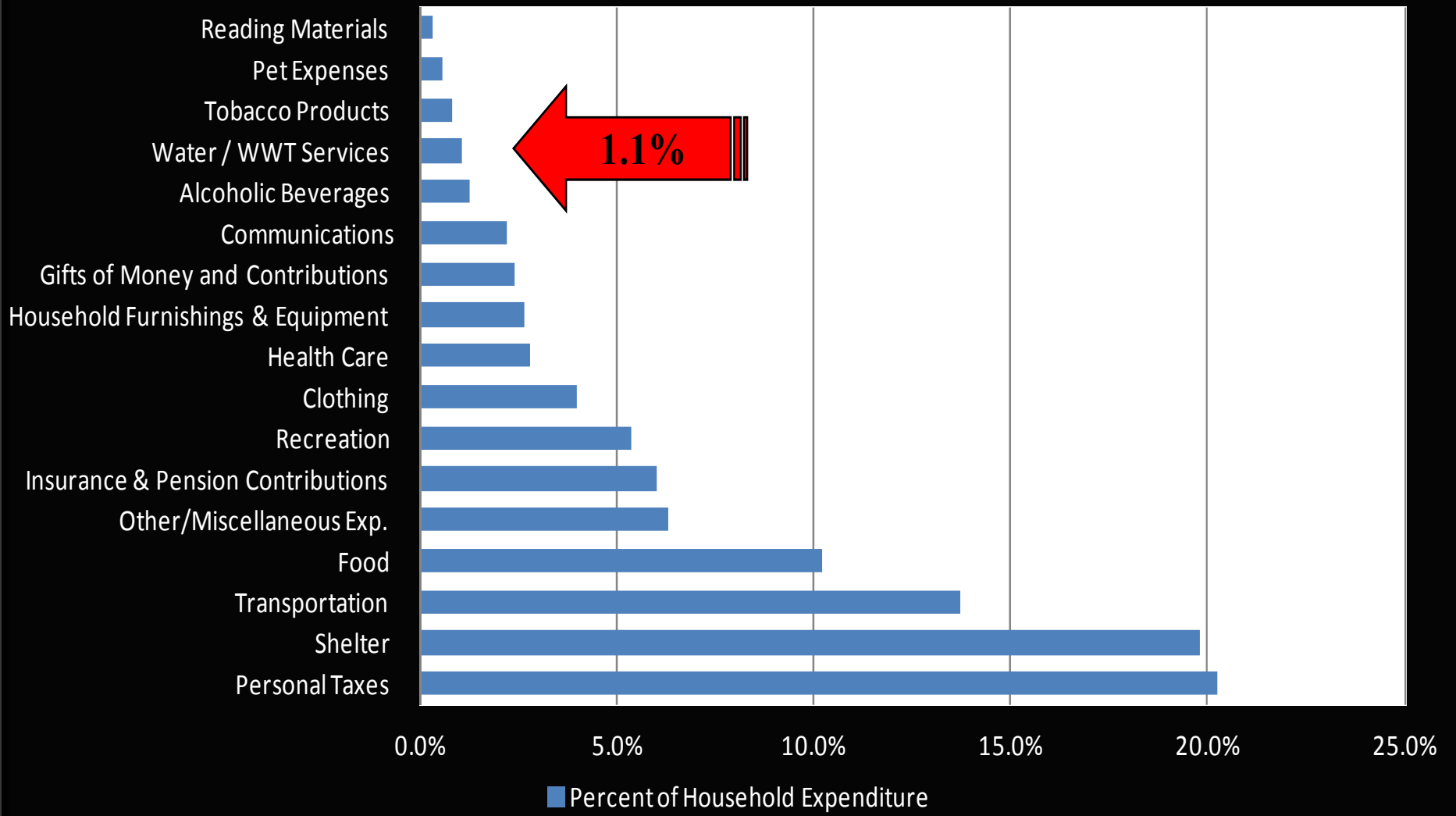
	Rate Scenarios	2011	2012	2013	2014	2015	2016	2017	2018 & Beyond
1	Rate Forecast (Council Endorsed - December 20, 2010)	0.0%	7.0%	7.0%	7.0%	5.4%	3.0%	3.0%	3.0%
2	Rate Forecast (Adjusted to reflect revised water consumption forecast)	0.0%	7.0%	7.0%	7.0%	7.0%	7.0%	4.0%	3.0%

Residential Water Savings



Percent of Household Expenditure

Source: Statistics Canada – Spending Patterns In Canada 2009



Strategies For Reducing Consumption And Ultimately Costs

ITEM	EFFICIENCY
Low flow toilets	13%
High-efficiency washing machine	9%
Low flow showerheads	8%
Shower time: 5-8 minutes	6%
Leaky toilets	???
Leaky faucets	6%
Turning the water off while you're brushing your teeth or rinsing the dishes	3.5%
Install aerators on your kitchen and bathroom faucets	2%
In your garden, plant native species and drought resistant plants	
Only run your dishwasher and or washing machine when they're full	
Only water your lawn an inch a week	

High Value at Low Cost

Water



\$1 – refill your reusable
bottle 1,238 times

Average cost per day = 87 cents

Sewer

A flush costs less than 2¢



Average cost per day = \$1.28



It Is Therefore Recommended....

To increase Water rates by 8%
and
Wastewater and Treatment rates by 7%



QUESTIONS?



Water Background

- Asset Value of \$1.8 billion
(including Joint Water Boards plant & pipelines)
- High water quality & service reliability (incl. fire protection)
- Infrastructure risk mitigation
 - Failure cost, property damage, lost water and social disruption
- Increasing regulatory standards
- Revised Financial Plan received by the MMAH in 2011
- Sustainability in 2018

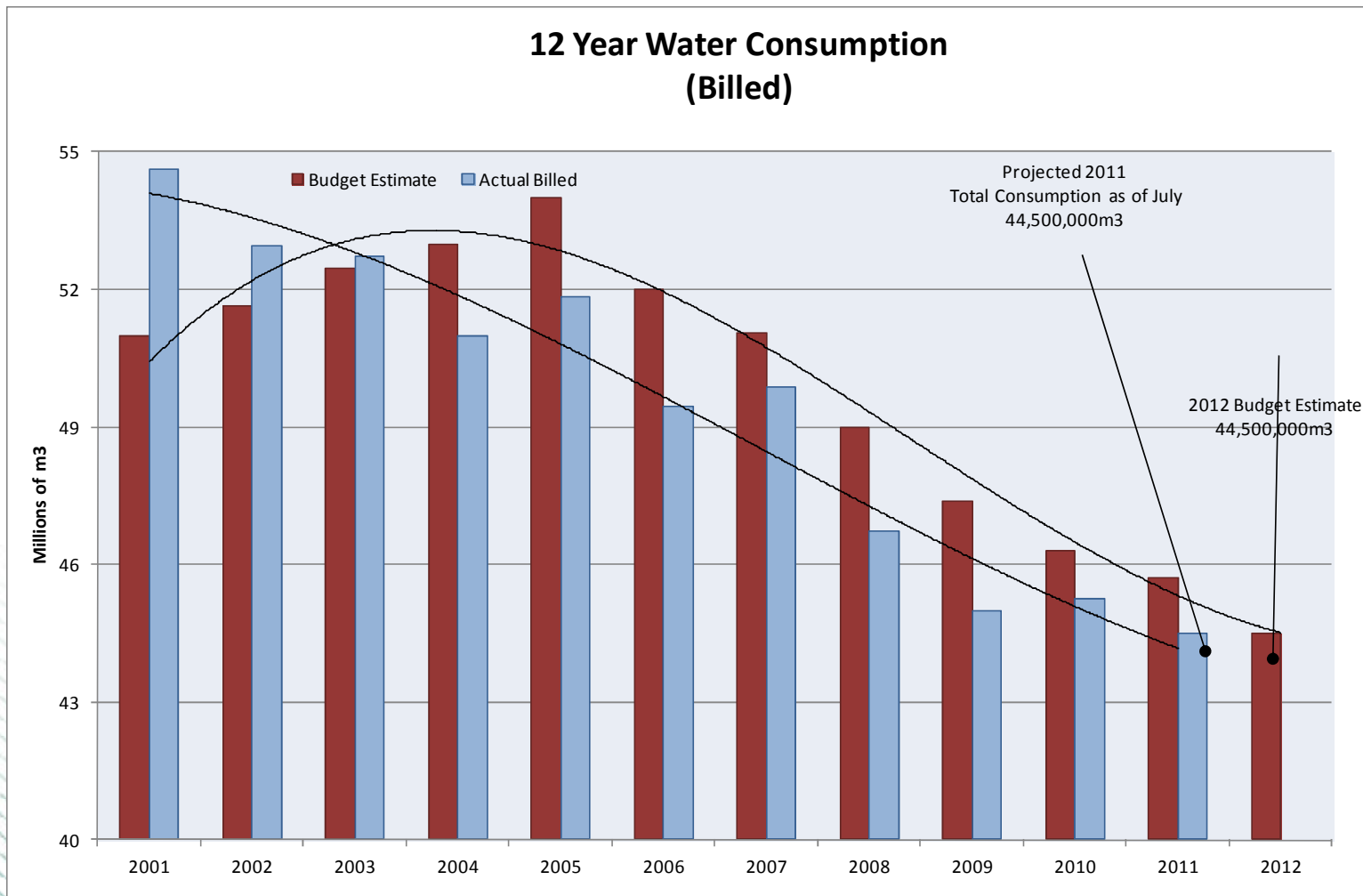


Wastewater & Treatment Background

- Asset Value of \$3.6 billion
- Many system deficiencies developed over decades
- Significant investment required
- High debt servicing costs
 - ▶ 2011 – debt servicing of 13.2M and total potential debt of \$130M
- Value ▶ huge benefit to community
- Sustainability in 2018



Water Consumption / Efficiency Trend



Lifecycle Renewal Expenditures



Trenchless installation of a new replacement main utilizing a directional drill unit



Trenchless Rehabilitation Techniques



Cement mortar lining providing water quality and hydraulic reconditioning of an existing main



Structural lining providing water quality, hydraulic and structural reconditioning of an existing main



Approach to New Technology



**Reduced excavation
and reinstatement**



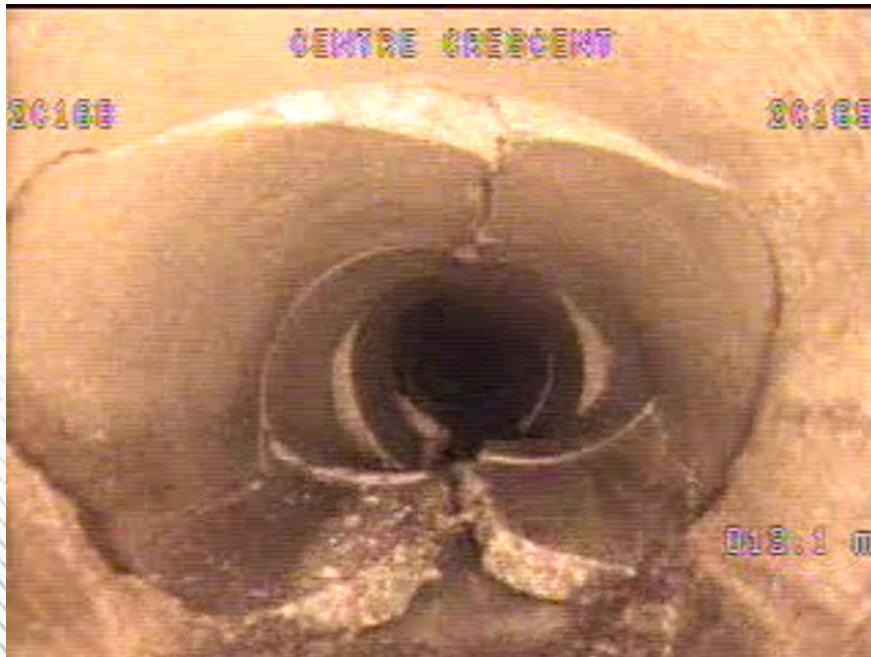
**Proactive inspection
and monitoring**



2012 Sewer Works

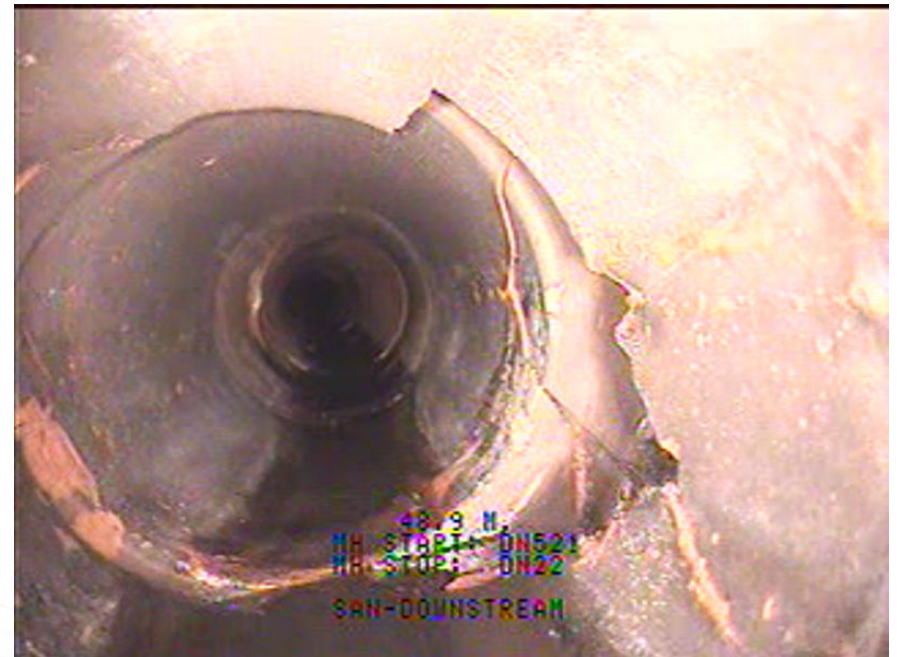
Centre Cres

Start of a collapse in the storm sewer



Dufferin Ave

Hole in the pipe along with cracks and fractures in sanitary sewer



2012 Sewer Works

Horton St E

Improperly capped/abandoned PDCs allowing bedding granular material to enter pipe (Sanitary sewer)



Burnside Dr

Heavy encrustation caused by infiltration, along with cracks and possibly fractures (Sanitary sewer)



Gordon Avenue Emergency Work

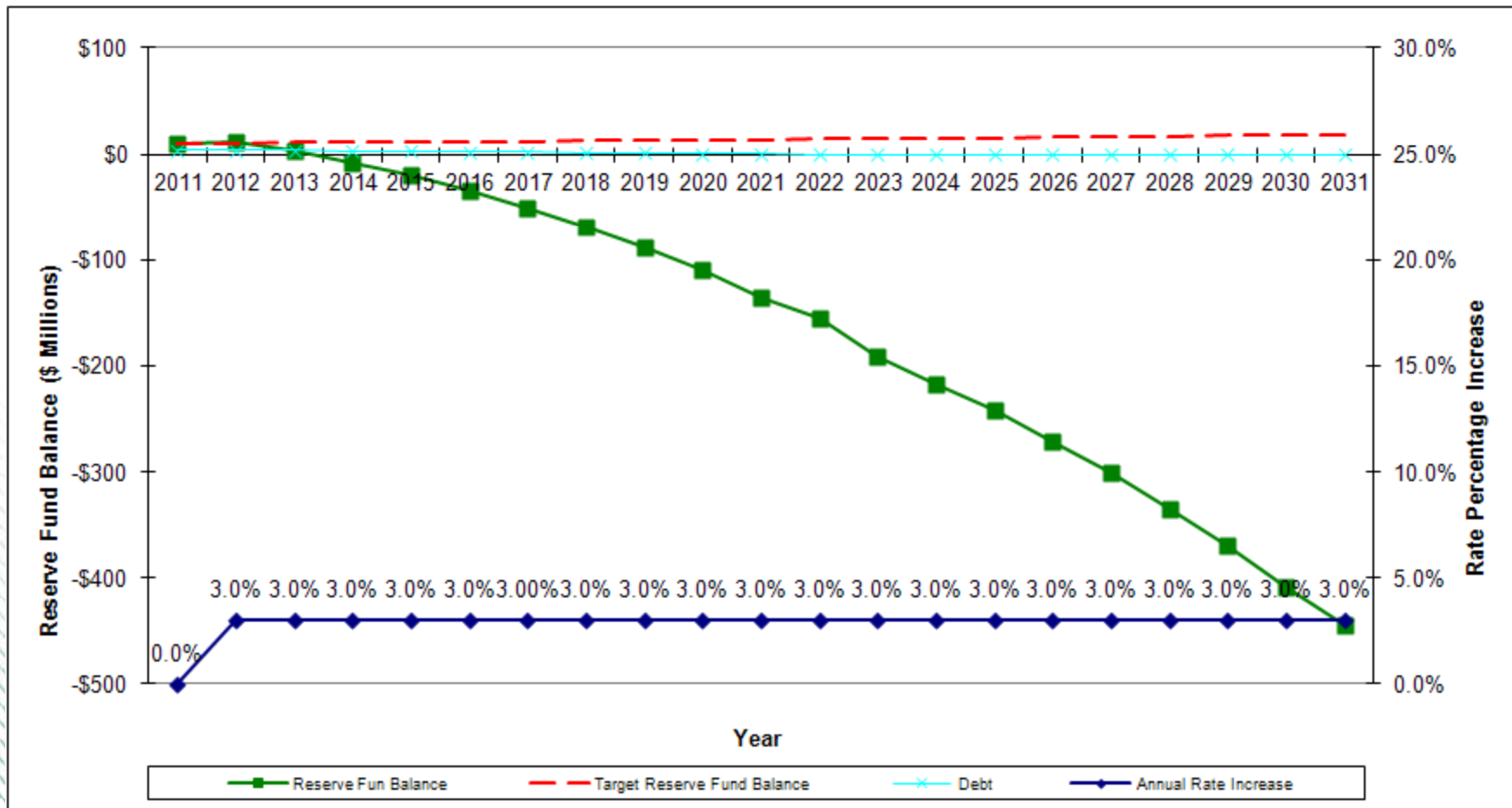


- **Major trunk sewer - >27 MLD dry weather flows up to 200 MLD peak wet weather flows**
- **Successful relining - quick turn around - more to come in next 4 years**



Water Scenario

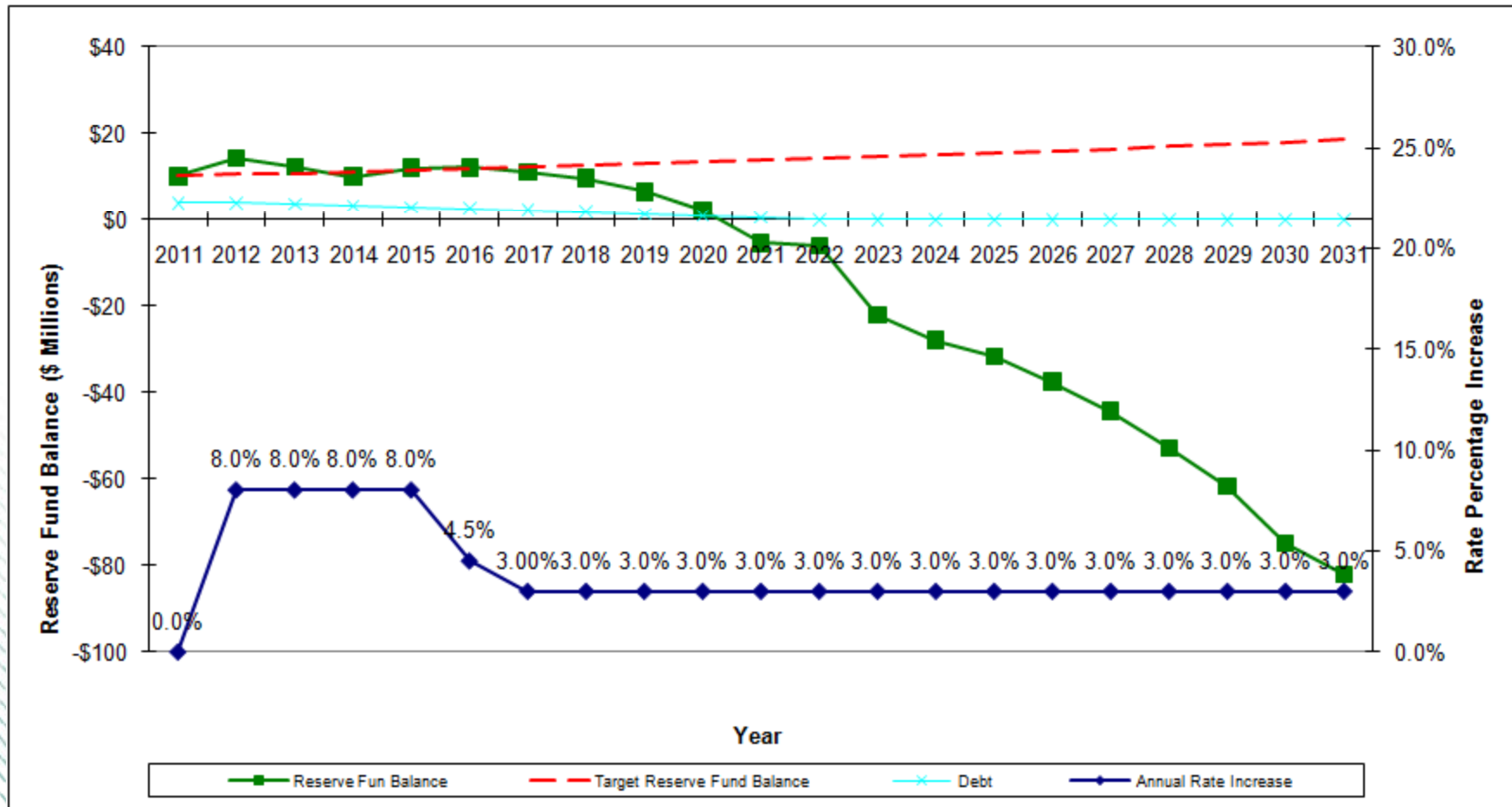
3% In 2012 And Beyond





Water Scenario

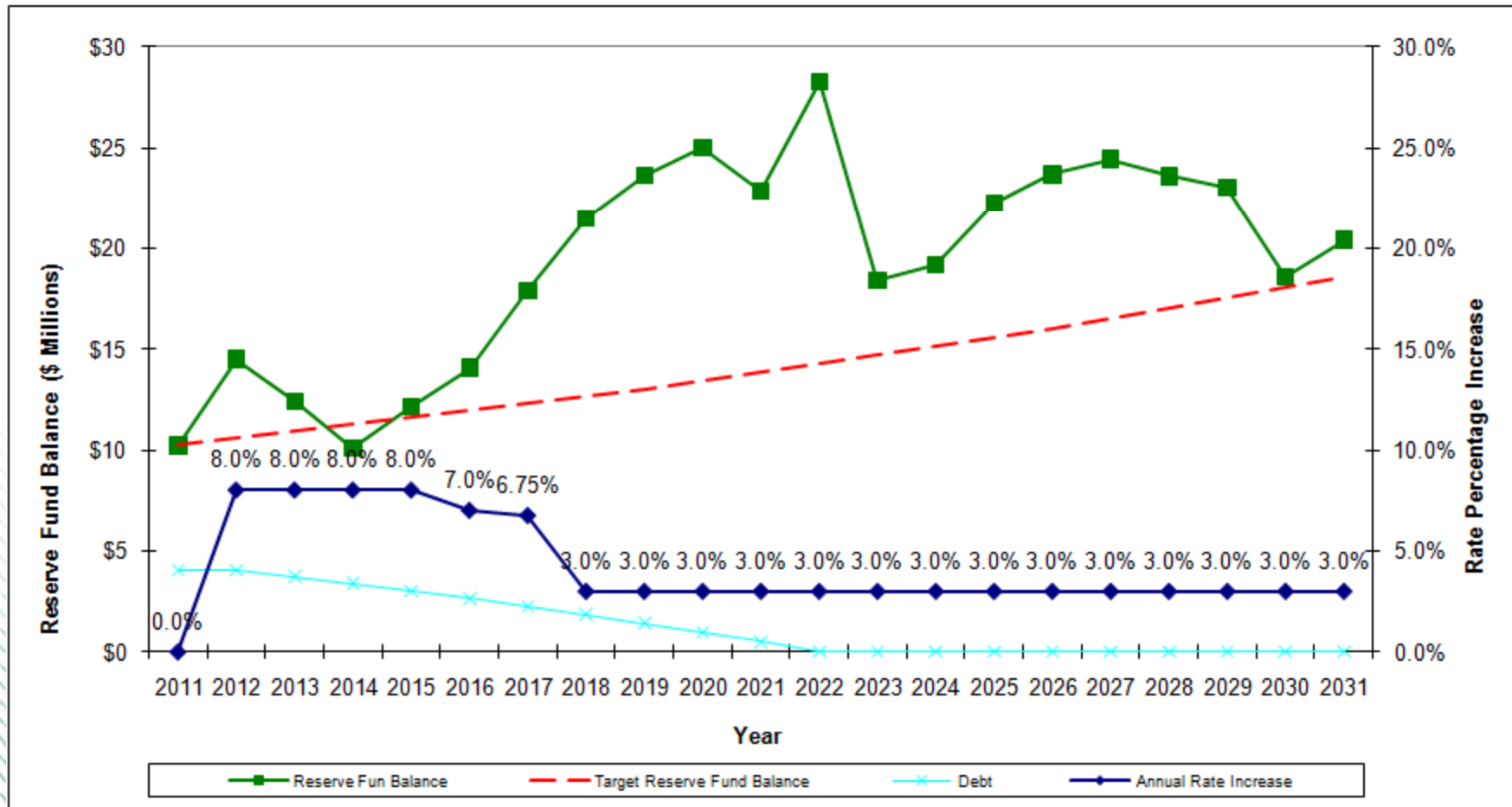
Prior Year Financial Plan





Water Scenario

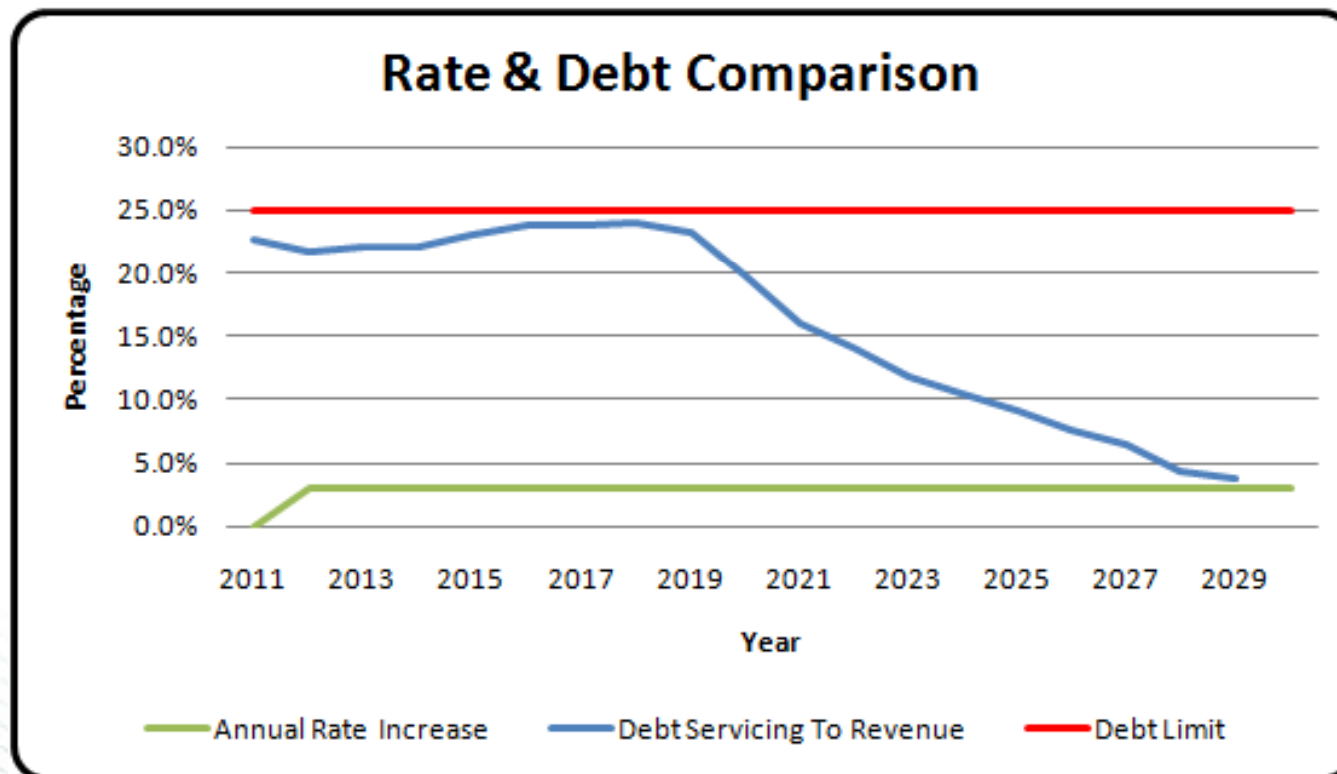
Recommended Financial Plan





WWT Scenario

3% In 2012 And Beyond

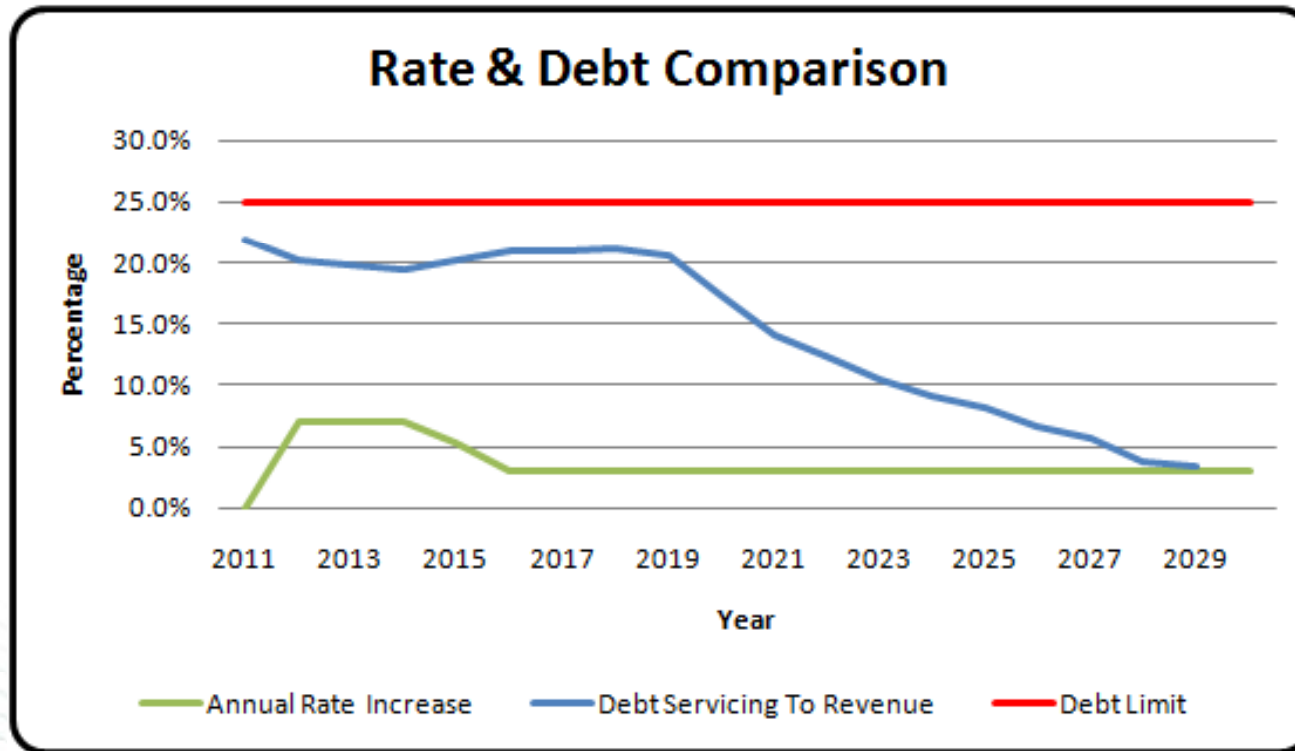


5 Year Capital Plan Impact – (\$41 M)
20 Year Capital Plan Impact – (\$263 M)



WWT Scenario

Prior Year Financial Plan

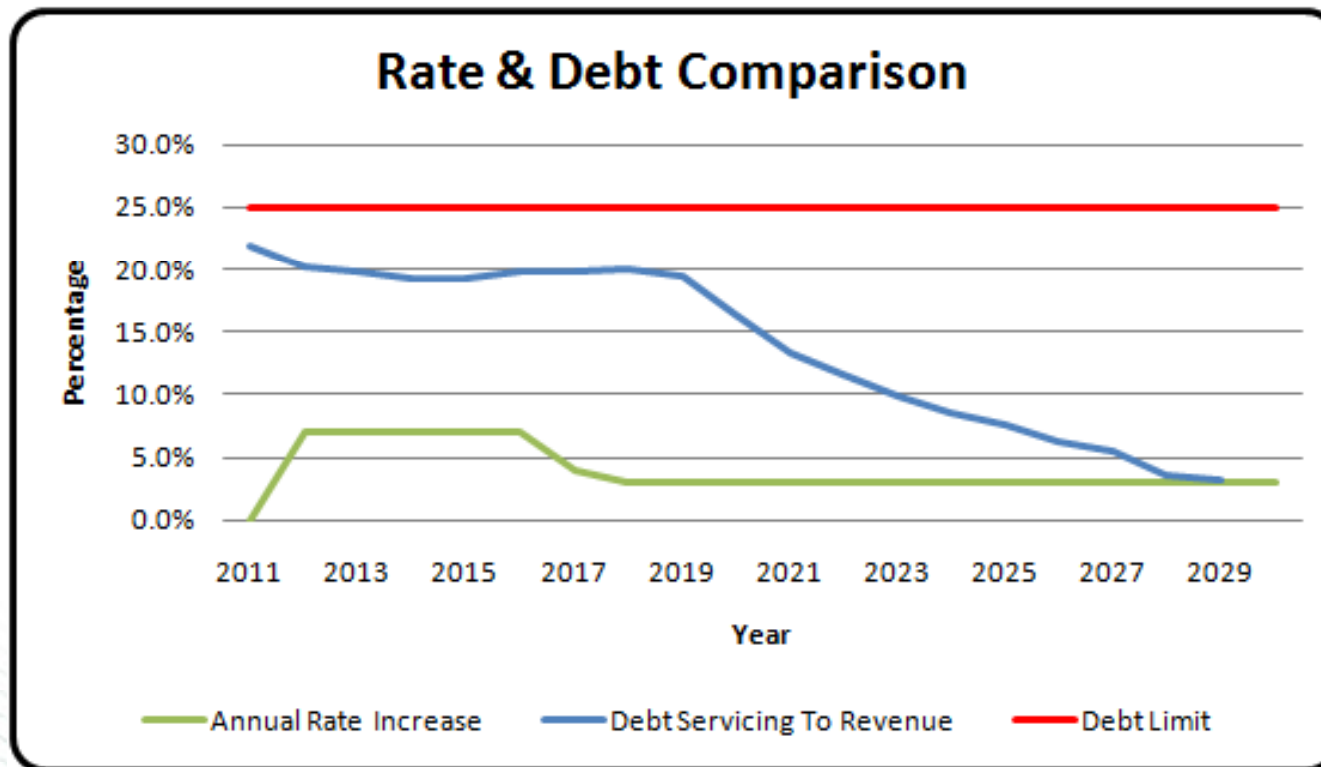


5 Year Capital Plan Impact – (\$5 M)
20 Year Capital Plan Impact – (\$80 M)



WWT Scenario

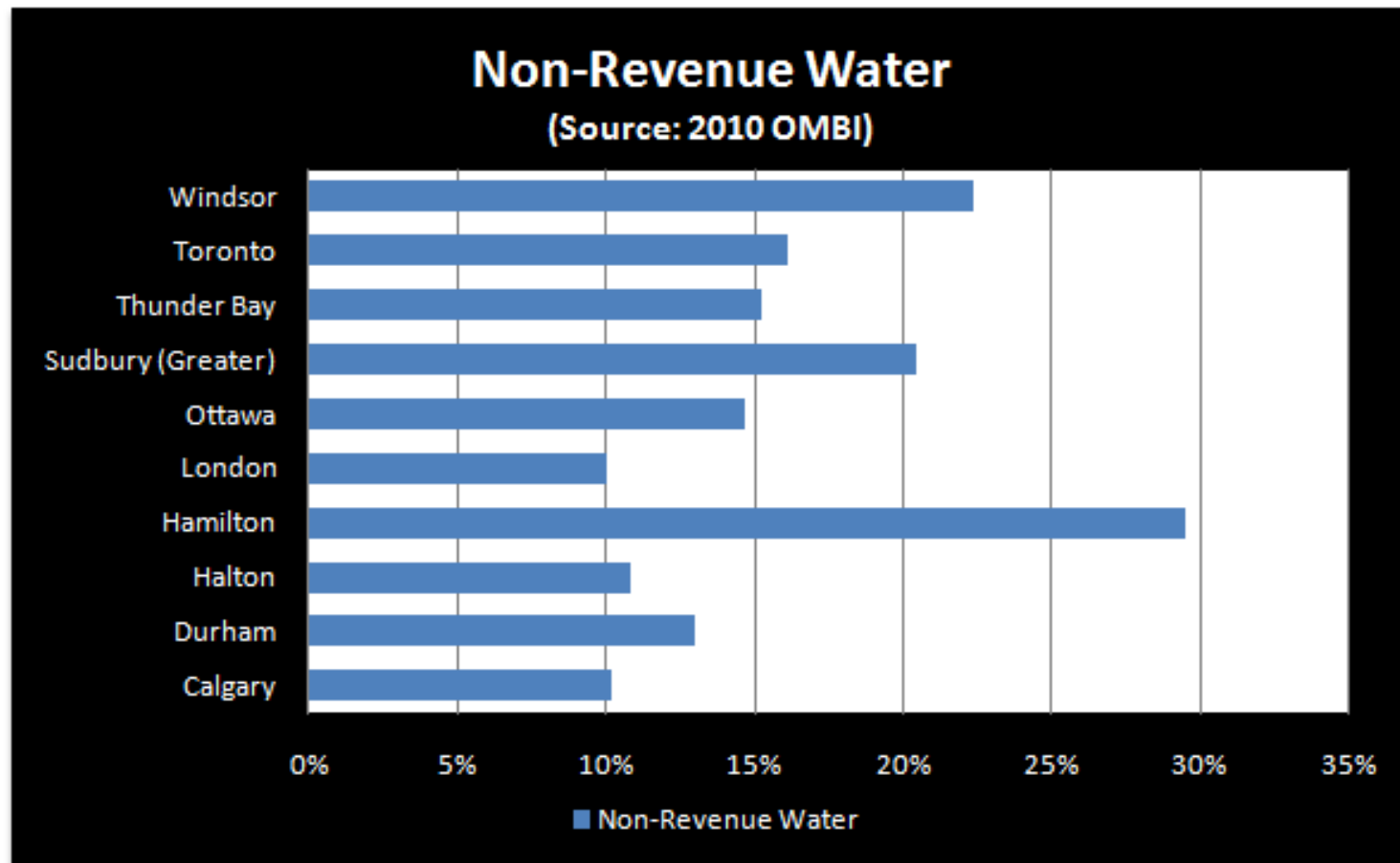
Recommended Financial Plan



5 Year Capital Plan Impact – \$0
20 Year Capital Plan Impact - \$0



London Is A Top Performer Non-Revenue Water





Goals of Strategic Financial Plan

WATER

Primary Goals

- Addressing infrastructure gap
- Emergency reserve funds
- Financially sustainable rates

Secondary Goals

- Appropriate Debt
- Intra-Generational Equity
- Pay as you go lifecycle funding
- Growth pays for growth

WWT

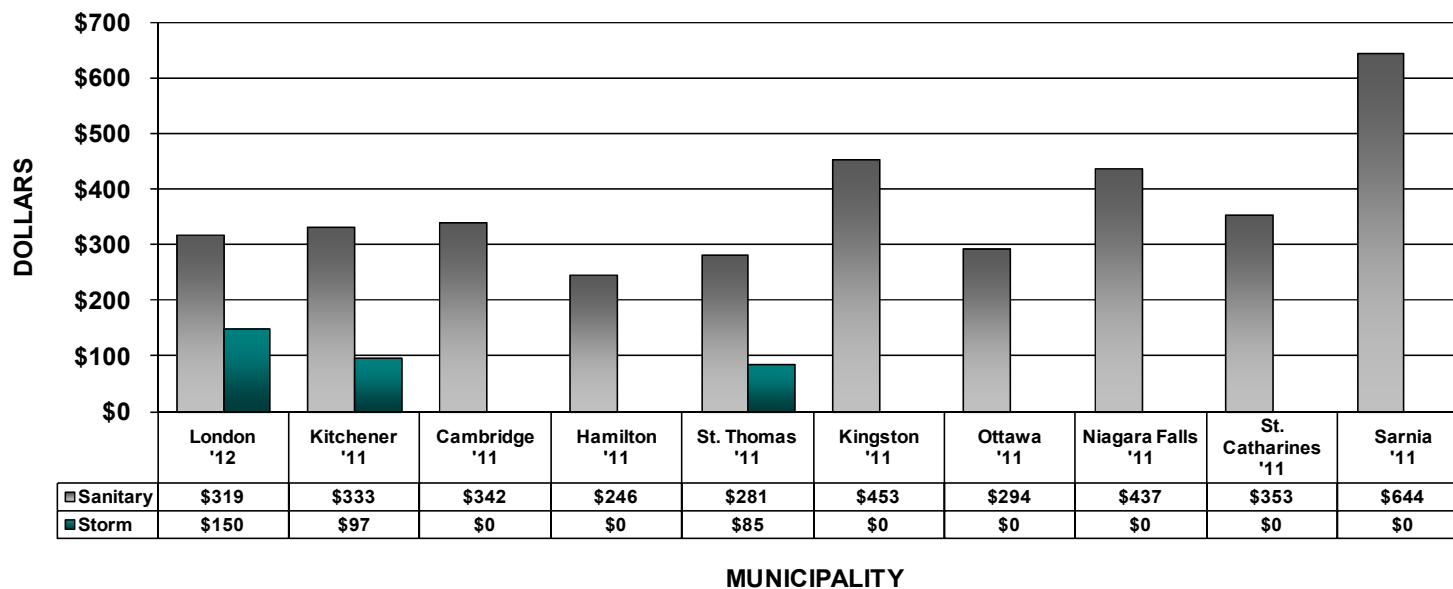
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- Addressing infrastructure gap
- Financially sustainable rates
- Appropriate Debt

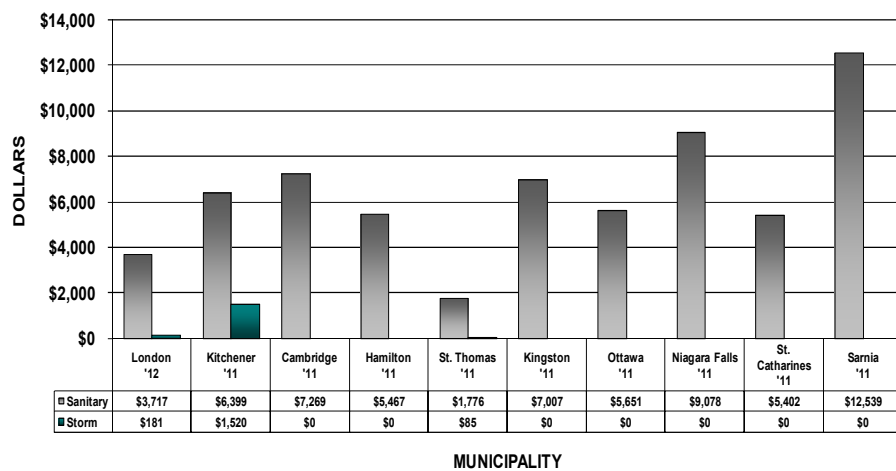
Secondary Goals

- Emergency reserve funds
- Intra-Generational Equity
- Pay as you go lifecycle funding
- Growth pays for growth

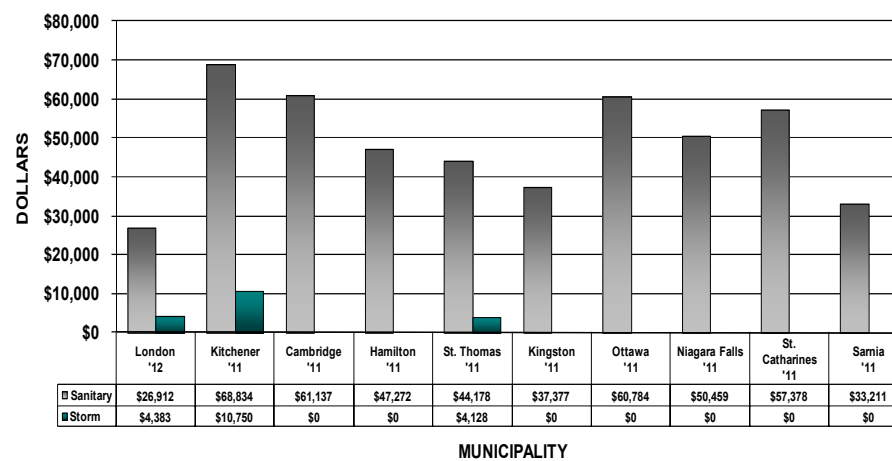
Sewer - Residential



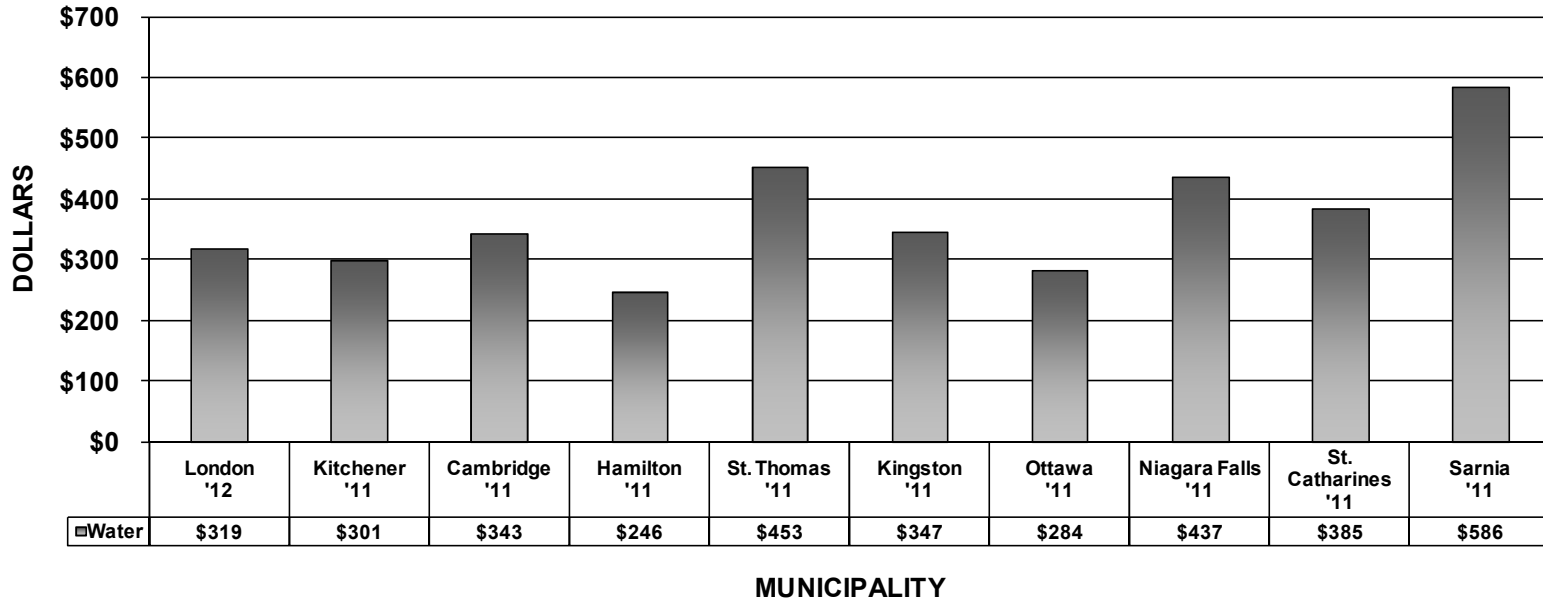
Sewer - Commercial



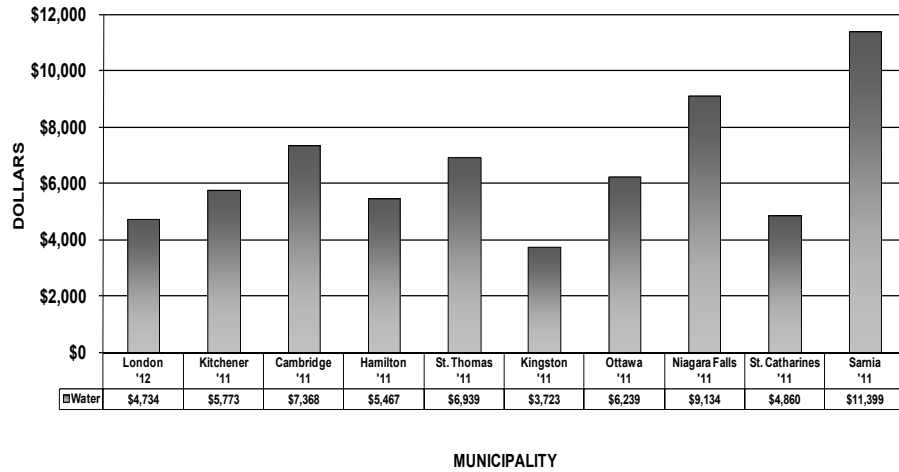
Sewer - Industrial



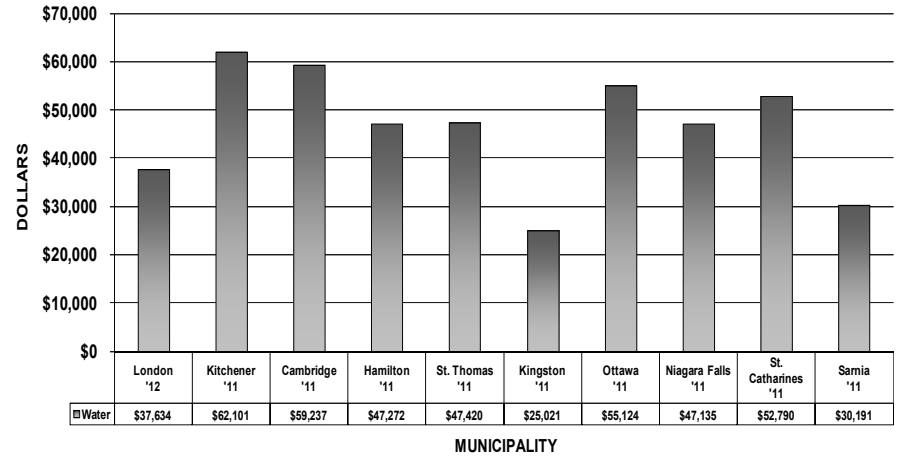
Water - Residential



Water - Commercial

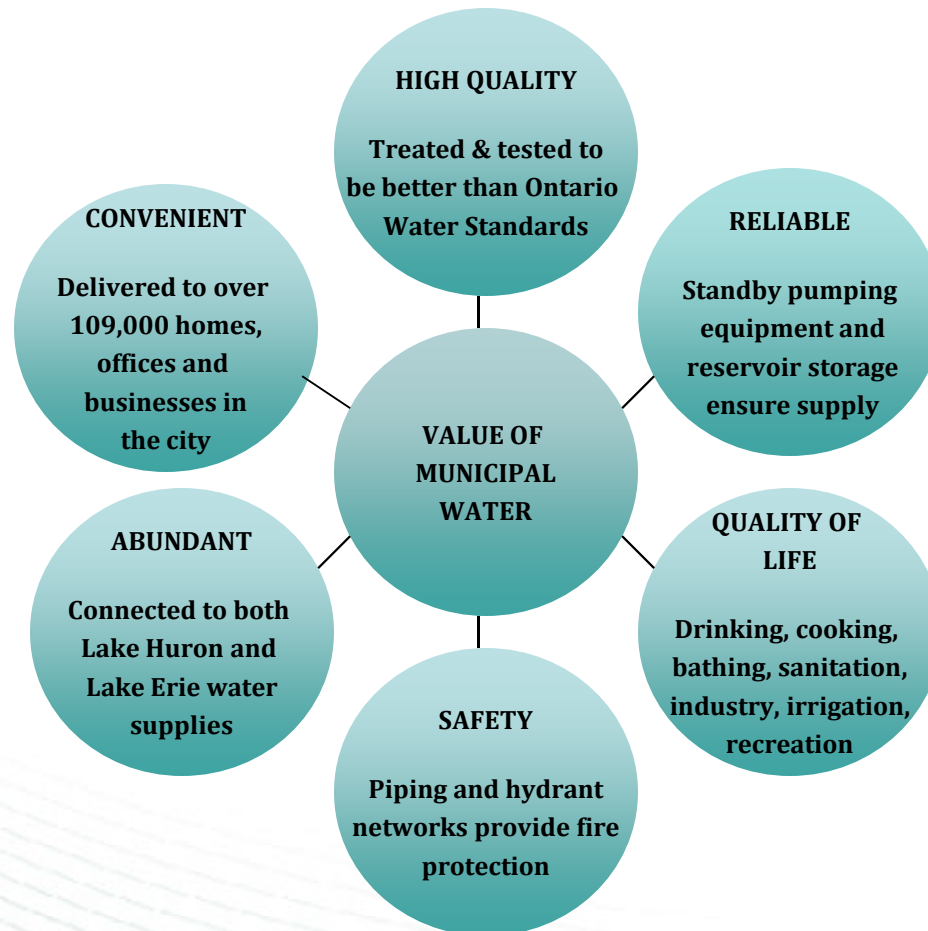


Water - Industrial





Value to the Customer



Long-Term Financial Sustainability Impacts

WATER

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1	Rate Forecast (Council Endorsed - December 20, 2010)	0.0%	8.0%	8.0%	8.0%	8.0%	4.5%	3.0%	3.0%
	Average Cost To Ratepayer	\$ 303	\$ 322	\$ 343	\$ 366	\$ 391	\$ 400	\$ 410	\$ 417
2	Revised Rate Forecast (Adjusted to reflect revised water consumption forecast)	0.0%	8.0%	8.0%	8.0%	8.0%	7.0%	6.75%	3.0%
	Average Cost To Ratepayer	\$ 295	\$ 319	\$ 337	\$ 360	\$ 385	\$ 405	\$ 430	\$ 437

WWT

Rate Scenarios		2011	2012	2013	2014	2015	2016	2017	2018 & Beyond
1	Rate Forecast (Council Endorsed - December 20, 2010)	0.0%	7.0%	7.0%	7.0%	5.4%	3.0%	3.0%	3.0%
	Average Cost To Ratepayer	\$ 445	\$ 473	\$ 502	\$ 533	\$ 557	\$ 569	\$ 581	\$ 593
2	Rate Forecast (Adjusted to reflect revised water consumption forecast)	0.0%	7.0%	7.0%	7.0%	7.0%	7.0%	4.0%	3.0%
	Average Cost To Ratepayer	\$ 438	\$ 469	\$ 494	\$ 525	\$ 557	\$ 592	\$ 611	\$ 624