

City of Markham 2016 Proposed Water/Wastewater Rates



Agenda

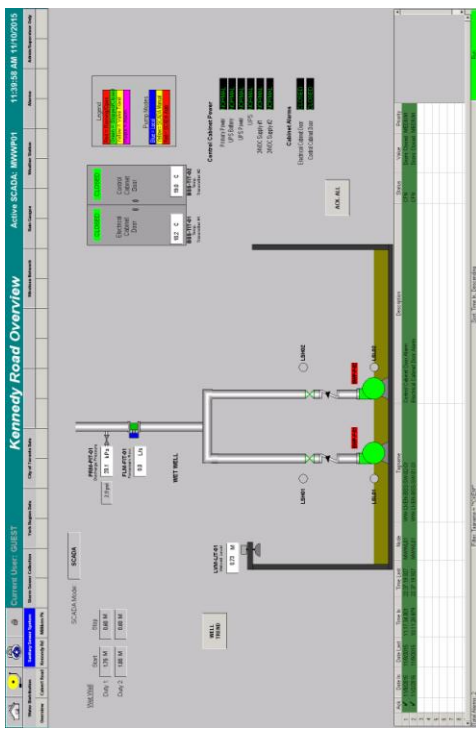
1. About Markham's Waterworks Department
2. 2015 Comparative Municipal Water/Wastewater Rates (\$/m³)
3. Components of the 2016 Water/Wastewater Rate
4. Summary of 2016 City's Water/Wastewater Rates
5. Impact to Residents and Top 10 Institutional, Commercial and Industrial Customers
6. Next Steps

1. About Markham's Waterworks Department

- Maintaining 1,060 km of watermain, 914 km sanitary sewers and with more than 79,900 residential and ICI customers; Markham Waterworks operates one of the largest water distribution and wastewater collection systems in Canada
- Markham Waterworks customers consume over 31M m³ of water annually or 220 gallons every second
- Drinking water in Ontario is required to meet strict water quality standards. Markham's Drinking Water Quality Management System (DWQMS) is a risk management approach to operate the system, monitor and report on water quality and prepare and respond to emergencies.
- The Ministry of Environment regularly audits and inspects our DWQMS, our operations and any associated documentation. In 2014 the Ministry renewed Markham's Drinking Water License for another 5 years.

1. About Markham's Waterworks Department

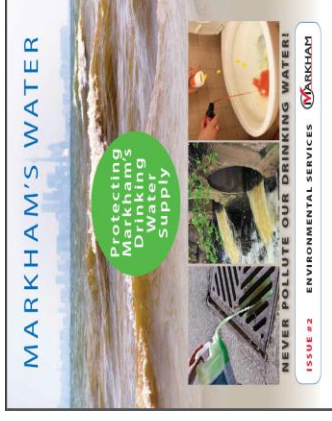
- Waterworks is leveraging technology to improve operations
- Installed on-line chlorine analyser to monitor water quality 24/7;
- Installed remote operation and monitoring equipment (SCADA) in 3 of our 5 sanitary pumping stations;
- Developed portal application for business owners and their contractors to submit and manage their Backflow Certificates



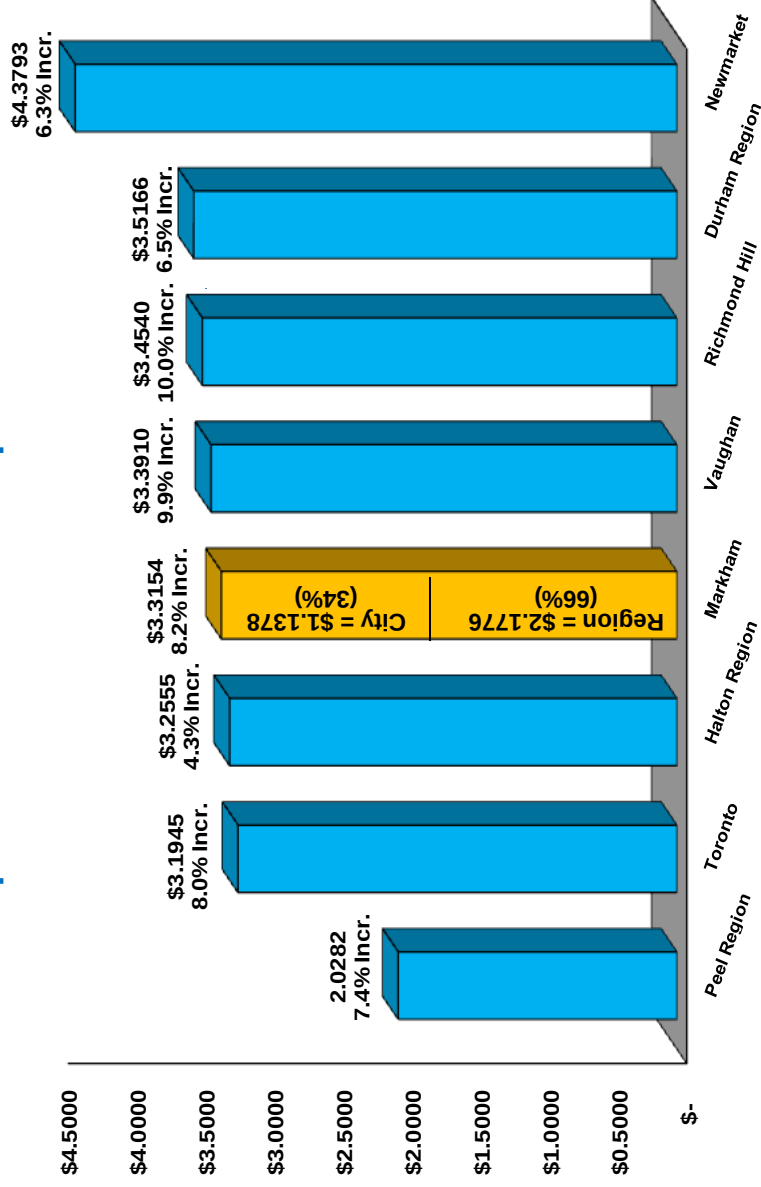
1. About Markham's Waterworks Department

Engaging the Public

- WOW Trailer promotes tap water use and water conservation
- Attended 38 days of Community Events and Festivals in 2015
- Engaged over 6,000 residents with education and give away's
- Markham's Water Publication Issue #2 – *Protecting Markham's Drinking Water*



2. 2015 Comparative Municipal Water/Wastewater Rates (\$/m³)



% increase refers
to 2015 vs. 2014
rate increase

3. Components of the Water/Wastewater Rate

Markham customers pay a per cubic metre rate (1,000 litres) for their water use. Included in this charge is;

- A. Regional Wholesale Rate** – The actual cost Markham pays to buy water from York Region
- B. Non-Revenue Water** – Cost of water that is used or ‘lost’ before reaching the customer
- C. Operational Expenditure** – Funding needed to operate, upkeep and maintain the water and wastewater systems
- D. Reserve Contribution** – Funding used for long term infrastructure rehabilitation/replacement

3. Components of the Water/Wastewater Rate

The City's proposed 2016 Water/Wastewater rate is:

	2015 Rate \$/m ³	Increase \$/m ³	% Increase	2016 Proposed Rate \$/m ³
A. Region's Wholesale Rate	2.1776	0.1960	9.0%	2.3736
B. Non-Revenue Water	0.2692	0.0242	9.0%	0.2934
C. Operational Expenditure	0.4034	0.0059	1.5%	0.4093
D. Reserve Contribution	0.4652	0.0336	7.2%	0.4988
City's Retail Rate	3.3154	0.2597	7.8%	3.5751

Increase of \$0.2597/m³ or 7.8% compared to the 2015 rate

2016 Proposed Water/Wastewater Rates

A. York Regional Wholesale Rate

- Markham does not own or operate a water filtration plant or a wastewater treatment plant (water distribution and wastewater collection only system)
- Markham purchases water through York Region and York Region provides Markham with wastewater treatment services. The purchase price for the water includes the Region's cost for water filtration and wastewater treatment services.
- York Region:
 - ✓ Purchases water from the City of Toronto and from the Region of Peel. The source is Lake Ontario.
 - ✓ Pumps water into reservoirs to provide adequate supply and maintain system pressure.
 - ✓ Conveys wastewater to their jointly owned treatment facility (in Durham) that treats and releases the water back to Lake Ontario.

2016 Proposed Water/Wastewater Rates

A. York Regional Wholesale Rate

In October 2015, Regional Council adopted a strategy to move towards financial sustainability and recommended rate increases to support the following requirements:

- ✓ Build adequate reserves for future asset rehabilitation and replacement
- ✓ Maintain existing assets
- ✓ Cover day to day operations
- ✓ Eliminate the need to issue rate-supported debt
- ✓ Achieve full cost recovery pricing in 2021

2016 Proposed Water/Wastewater Rates

A. York Regional Wholesale Rate

- On October 15, 2015 the Region approved annual rate increases for water and wastewater user rates effective April 1, 2016 through April 1, 2021 as shown below:

Year Starting	Wholesale Rate (\$/m ³)	Increase	
		from Prior	Year
April 1, 2016	2.3736	9.0%	
April 1, 2017	2.5872	9.0%	
April 1, 2018	2.8201	9.0%	
April 1, 2019	3.0739	9.0%	
April 1, 2020	3.3505	9.0%	
April 1, 2021	3.4477	2.9%	

2016 Proposed Water/Wastewater Rates

A. York Regional Wholesale Rate

- Region's approved water and wastewater blended rate increase of 9.0%, includes the wholesale water rate increases from the City of Toronto and Region of Peel. These increases are passed on to the City.

Region's 2015 Wholesale \$/m3	% Increase	\$ Increase/m ³	Region's 2016 Wholesale \$/m3	
Water and Wastewater Rate	2.1776	9.0%	0.1960	2.3736

A. Increase 2016 rate by \$0.1960/m³

3. Components of the Water/Wastewater Rate

- ✓ **A. Regional Wholesale Rate** – The actual cost Markham pays to buy water from York Region
- B. Non-Revenue Water** – Cost of water that is used or ‘lost’ before reaching the customer
- C. Operational Expenditure** – Funding needed to operate, upkeep and maintain the water and wastewater systems
- D. Reserve Contribution** – Funding used for long term infrastructure rehabilitation/replacement

2016 Proposed Water/Wastewater Rates

B. Non-Revenue Water

For every 1,000 litres of water that we buy from YR, we budget to sell only 890 litres. The additional 110 litres or 11% of the purchased water is for:

1. System leakage and watermain breaks (90 l)
2. Meter inaccuracies – on YR supply meters and customer meters (12.5 l)
3. Operational Water - System flushing to maintain water quality and other uses such as fire fighting (5 l)
4. Unauthorised Use - Water theft or illegal connections (2.5 l)

This unsold water is known as **Non Revenue Water (NRW)**.

2016 Proposed Water/Wastewater Rates

B. Non-Revenue Water

Best Practices

- Markham's budget of 11% NRW is considered a well managed system
- The International Water Association established a global benchmark for water agencies known as the Infrastructure Leakage Index (ILI) where;
 - $ILI = \text{Actual System Leakage} / \text{Allowable System Leakage}$;
 - Allowable System Leakage represents the minimum expected leakage of the system based on best management practices. An ILI close to 1 is considered 'World Class'.
- **Markham's budgeted NRW represents an ILI of 1.8**

2016 Proposed Water/Wastewater Rates

B. Non-Revenue Water

Based on the Region’s approved increase of 9.0%, the NRW component of the 2016 Water Rate will be \$0.2934/m³ compared to

City's 2015 NRW Component		% Increase	City's 2016 NRW Component	
\$/m3			\$ Increase/m ³	\$/m3
Water and Wastewater Rate		9.0%	0.0242	0.2934

B. Increase 2016 rate by \$0.0242/m³

3. Components of the Water/Wastewater Rate

- ✓ **A. Regional Wholesale Rate** – The actual cost Markham pays to buy water from York Region
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2016 Proposed Water/Wastewater Rates

C. Operational Expenditure

The Operational Expenditure component is required to pay for operations and maintenance of the water and wastewater systems. Rate increase associated with operational increases such as cost of living adjustments, collective agreements and contract escalations.

Water and Wastewater Rate	City's 2015	City's 2016	
	Operating Component	Operating Component	Operating Component
	\$/m3	% Increase	Increase/m ³
	\$		\$/m3
	0.4034	1.5%	0.0059
			0.4093

C. Increase 2016 rate by \$0.0058/m³

3. Components of the Water/Wastewater Rate

- ✓ **A. Regional Wholesale Rate** – The actual cost Markham pays to buy water from York Region
- ✓ **B. Non-Revenue Water** – Cost of water that is used or ‘lost’ before reaching the customer
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2015 Water & Wastewater Reserve Study Update

D. Reserve Contribution

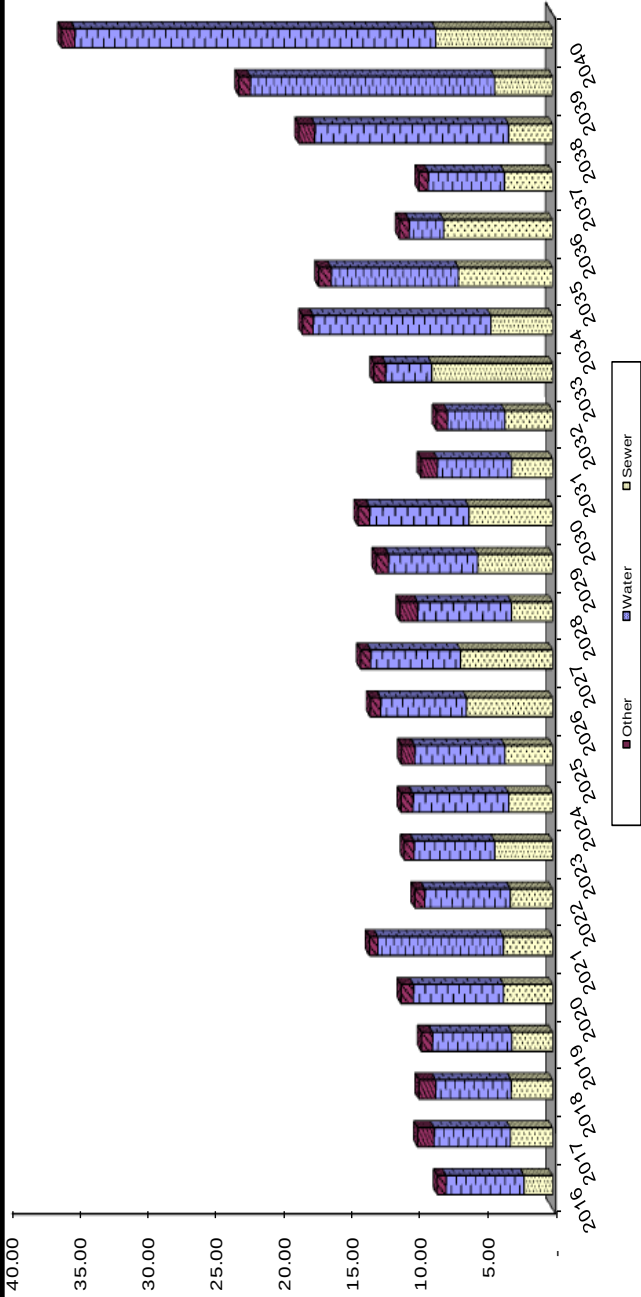
- The City implemented the Water & Wastewater Reserve Study with the purpose of addressing the ongoing replacement and rehabilitation requirements for Waterworks infrastructure and other Waterworks related capital assets, such as Fleet, Facilities and ITS infrastructure, over their useful lives.
- The Reserve Study is updated annually to:
 - establish the water and wastewater rate
 - ensure that there is adequate funding in the Waterworks Reserve to sustain future replacement and rehabilitation requirements of the City's water and wastewater infrastructure for the next 25 years

2015 Water & Wastewater Reserve Study Update

25-Year Projected Life Cycle Expenditures – By Component

2016-2040 (in 2015 \$ - in Millions)

Total projected expenditures of \$338M for the next 25 years (Average \$13.5M/year)



2016 Proposed Water/Wastewater Rates

D. Reserve Contribution

- Transfer to Reserves = Sales – Purchases – Operations
- The Reserve Contribution component ensures there are adequate funding in the Waterworks Reserve to sustain replacement and rehabilitation requirements for the next 25 years and consists of 2 parts:
 1. Base Capital Contribution
 2. Council Approved Infrastructure Surcharge

2016 Proposed Water/Wastewater Rates

D. Reserve Contribution

Council Approved Infrastructure Surcharge

On November 26, 2007, Council approved a Water & Wastewater Infrastructure Surcharge of \$0.4137/m³ to be phased-in over 10 years effective January 1, 2008. 2016 is the 9th year of the 10 year phase-in.

Year #	1	2	3	4	5	6	7	8	9	10
Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Annual Phase-in (\$/m ³)	0.0827	0.0621	0.0336	0.0336	0.0336	0.0336	0.0336	0.0336	0.0336	0.0336
Cummulative Phase-in (\$/m ³)	0.0827	0.1448	0.1784	0.2120	0.2456	0.2793	0.3129	0.3465	0.3801	0.4137

2016 Proposed Water/Wastewater Rates

D. Reserve Contribution

	City's 2015 Transfer to Reserve \$/m3	\$ Increase/m ³	City's 2016 Transfer to Reserve \$/m3
1. Capital Contributions	0.1187	0.0000	0.1187
2. Council Approved Infrastructure Surcharge	0.3465	0.0336	0.3801
Water and Wastewater Rate	0.4652	0.0336	0.4988

D. Increase 2016 rate by \$0.0336/m³

3. Components of the Water/Wastewater Rate

- ✓ **A. Regional Wholesale Rate** – The actual cost Markham pays to buy water from York Region
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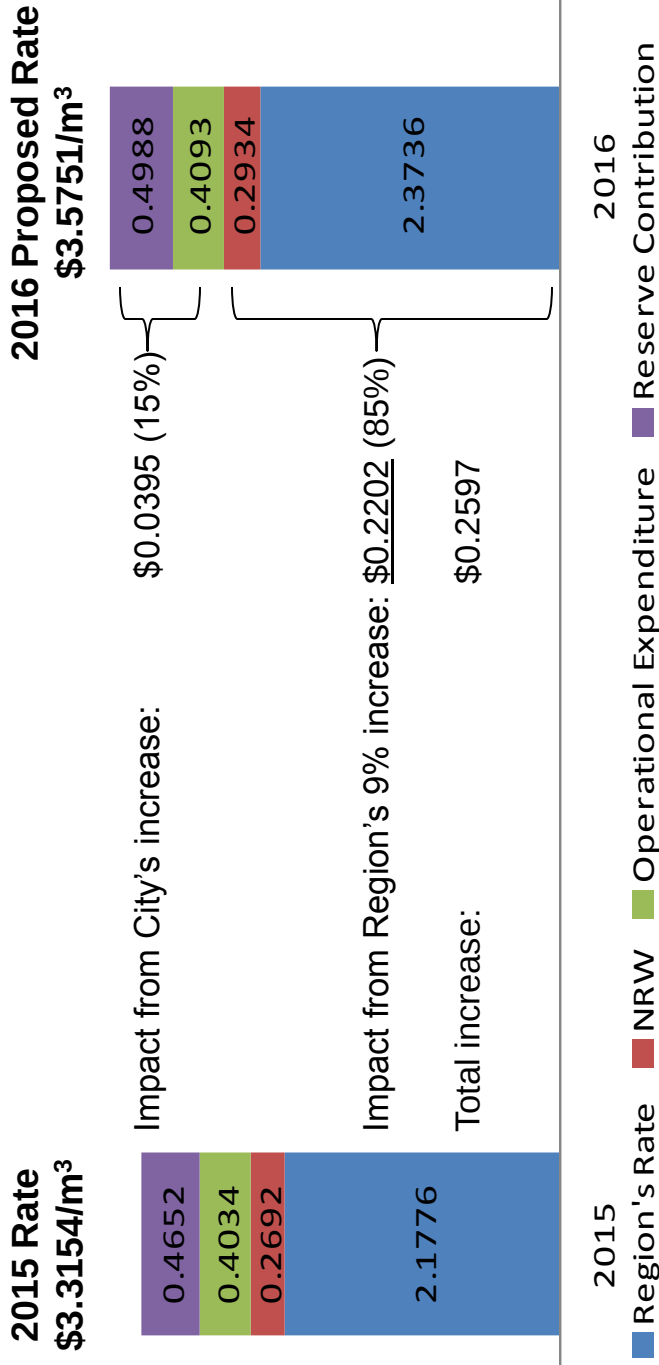
4. Summary of 2016 Proposed Water/Wastewater Rates

- The City's proposed 2016 Water/Wastewater rate is:

	\$/m³
2015 Approved Rate	3.3154
A. Regional Wholesale Rate	0.1960
B. Non-Revenue Water	0.0242
C. Operational Expenditure	0.0059
D. Reserve Contribution	0.0336
City's 2016 Proposed Retail Rate	3.5751

**Increase of \$0.2597/m³ or 7.8% compared to the 2015 rate
(2016 proposed rate includes Region's increase of 9.0%)**

4. Summary of 2016 Proposed Water/Wastewater Rates



Proposed Increase of \$0.2597/m³ or 7.8% compared to the 2015 rate

5. Impact to Residents and Top 10 Institutional, Commercial, Industrial Customers (ICI)

Rate increase of \$0.2597/m³ (Region's rate increase of \$0.2202/m³, City's increase \$0.0395/m³)

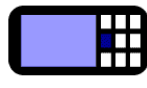
Impact to Residents:

- **Increase of \$56 per year or \$4.69 per month**
- **Annual cost of \$676**
(based on average household consumption of 217m³ per year)

Impact to the top 10 ICI customers:

- **Increase ranges from \$18k to \$36k per year**
(Region's increase \$15k to \$31k, Markham's increase \$3k to \$6k)
- (Top 10 list includes manufacturers, a health care provider, and hospitality providers)

5. Average Household Spending



Cellular Phone with Data Plan

ANNUAL
\$900

MONTHLY
\$75



High Speed Internet

ANNUAL
\$720

MONTHLY
\$60



WATER & WASTEWATER

Based on 217
m3/year

ANNUAL
\$676

MONTHLY
\$56



Cable

ANNUAL
\$600

MONTHLY
\$50



Landline

ANNUAL
\$480

MONTHLY
\$40

6. Next Steps

- Public Meeting – Monday, December 7, 2015 (7:00pm – Council Chamber)
- Special General Committee – Tuesday, December 15, 2015 (6:00pm to 6:30pm – Canada Room)
- Council – Tuesday, December 15, 2015 (7:00pm – Council Chamber)
- Implementation of 2016 Water/Wastewater Rate - April 1, 2016