

Oxford County Water & Wastewater Rate Study



Wednesday October 26th, 2016

HEMSON
Consulting Ltd.

Oxford County
growing stronger...together

Study Overview

- Hemson Consulting Ltd. was retained to assist County staff in setting water and wastewater user rates for the next 4 years (2017-2020)
 - Study also driven by new metered users coming online
- The user rates are intended to fully fund projected County water and wastewater expenditures
- Our role also involved creating an excel based calculation model
 - Rate model can be used for future rate setting exercises
 - monitor success
- Source Water Protection Fee

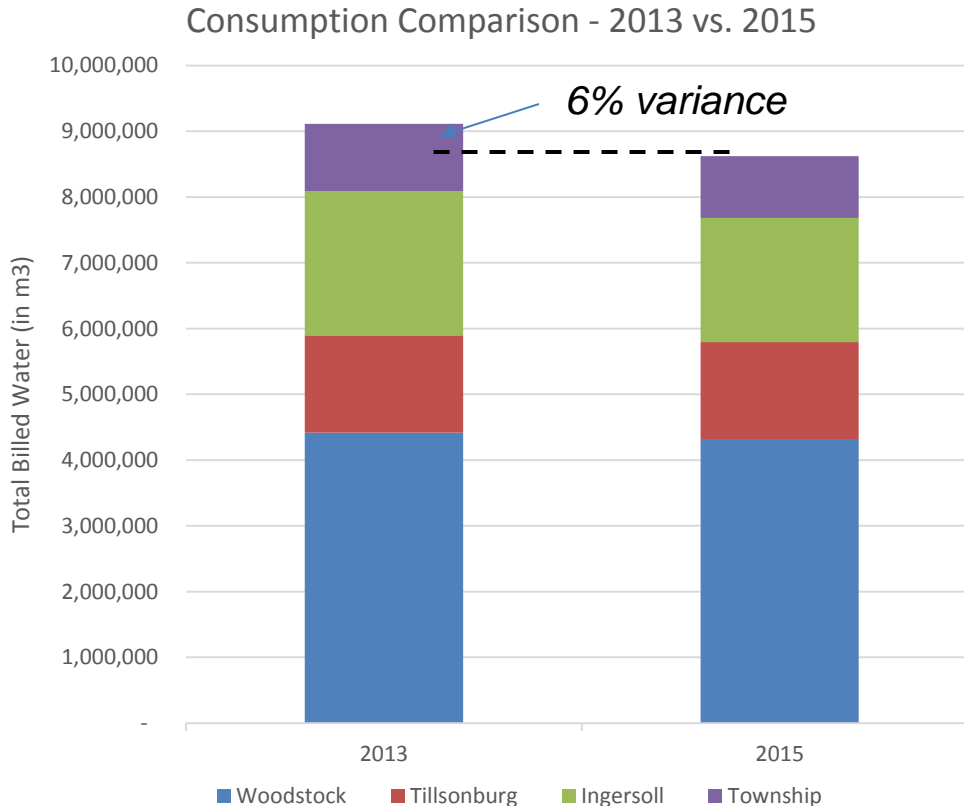
Key Assumptions

- Water and Wastewater operating expenditures are based on the County's most current projections
- The analysis takes into account infrastructure renewal (e.g. non-growth related) capital projects only
- Asset replacement reserve contributions are incorporated into the user rate calculation in accordance with County policy and the Asset Management Plan

Key Assumptions

- Customer growth is based on actual permits issued for each community
- Approx. 5,000 meters are being installed to existing properties
 - These properties have been charged on a flat rate basis historically
- For transitioned users (Flat to Metered):
 - Consumption per Connection assumed to be 170m³ per annum

Projected Consumption



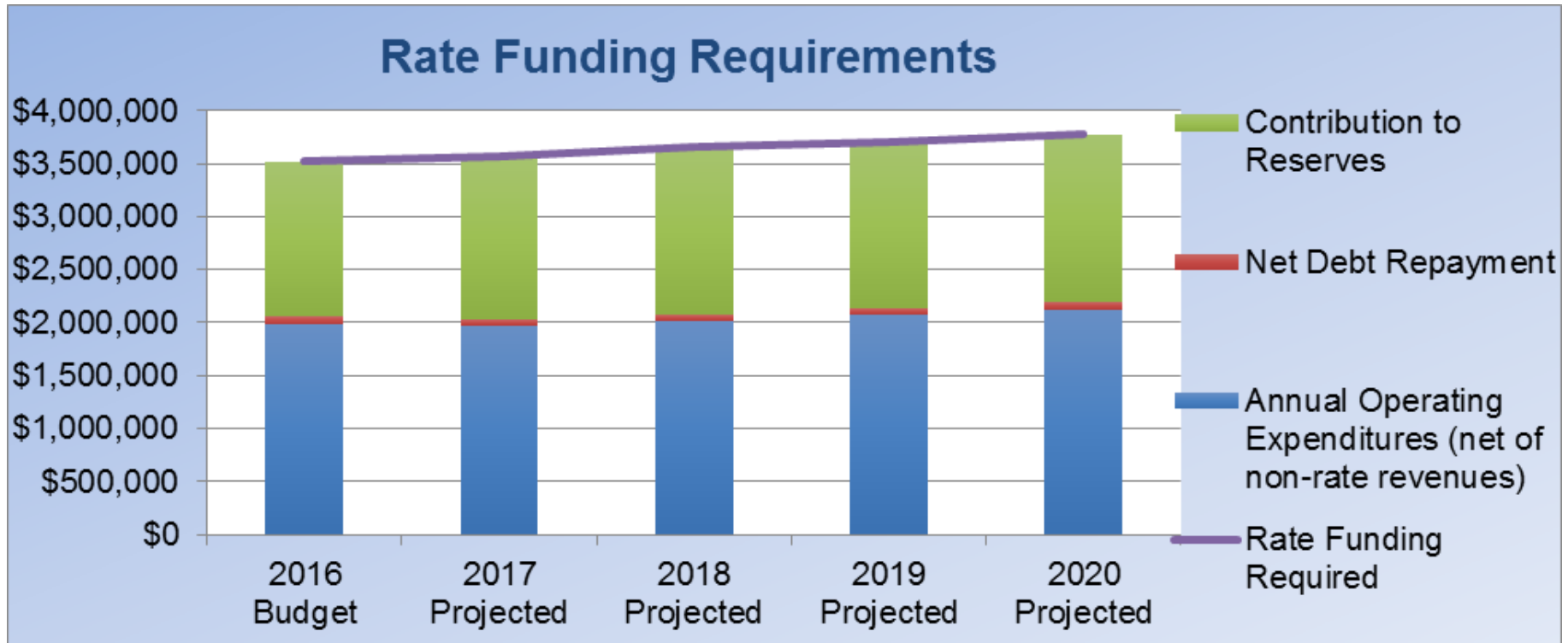
- Billed water has been declining County-wide
 - Trend similar in other jurisdictions across the Country
- Fiscally prudent to reflect overall declining consumption trends into forecast

Example: Ingersoll Water Expenditures

Expenditures					
	2016 Budget	2017 Projected	2018 Projected	2019 Projected	2020 Projected
Operating Expenditures¹					
Annual Operating Expenditures (net of non-rate revenues)	\$1,988,661	\$1,968,006	\$2,013,681	\$2,067,735	\$2,124,773
Net Debt Repayment	75,936	66,851	65,821	64,789	63,770
Total	2,064,597	2,034,857	2,079,502	2,132,524	2,188,543
Asset Replacement Reserve Contribution					
Capital Replacement Requirements (AMP)	686,872	700,609	714,621	728,913	743,491
Contribution to Reserves	1,552,991	1,641,696	1,673,914	1,679,451	1,685,268
DC Past Projects	(100,000)	(100,000)	(100,000)	(100,000)	(100,000)
Rate Funding Required	\$3,517,588	\$3,576,553	\$3,653,416	\$3,711,975	\$3,773,811
		2%	2%	2%	2%

¹ Based on 2016 budget; Existing and proposed debenture requirements as related to 2016 capital budget; Net debt repayment includes gross debt repayment less recoveries from resident and related development charges.

Example: Ingersoll Water Expenditures



Example: Ingersoll Water Revenues

User Rates				
	2017 Projected¹	2018 Projected	2019 Projected	2020 Projected
Flat Rate Structure				
Total Annual Revenue from Flat Rate	6,711	6,946	7,154	7,369
Metered Rate Structure				
Total Annual Fixed Revenue	1,806,423	1,896,023	1,972,928	2,052,908
Total Annual Consumption Based Revenue	1,763,419	1,750,447	1,731,893	1,713,535
<i>Fixed as % of Total Revenues</i>	<i>50.7%</i>	<i>52.1%</i>	<i>53.3%</i>	<i>54.6%</i>
<i>Consumption as % of Total Revenues</i>	<i>49.3%</i>	<i>47.9%</i>	<i>46.7%</i>	<i>45.4%</i>

¹ 2017 Rates are anticipated to take effect March 1, 2017; 2016 are held over until then; Actual charges will vary.

Example: Ingersoll Water Calculated Rates

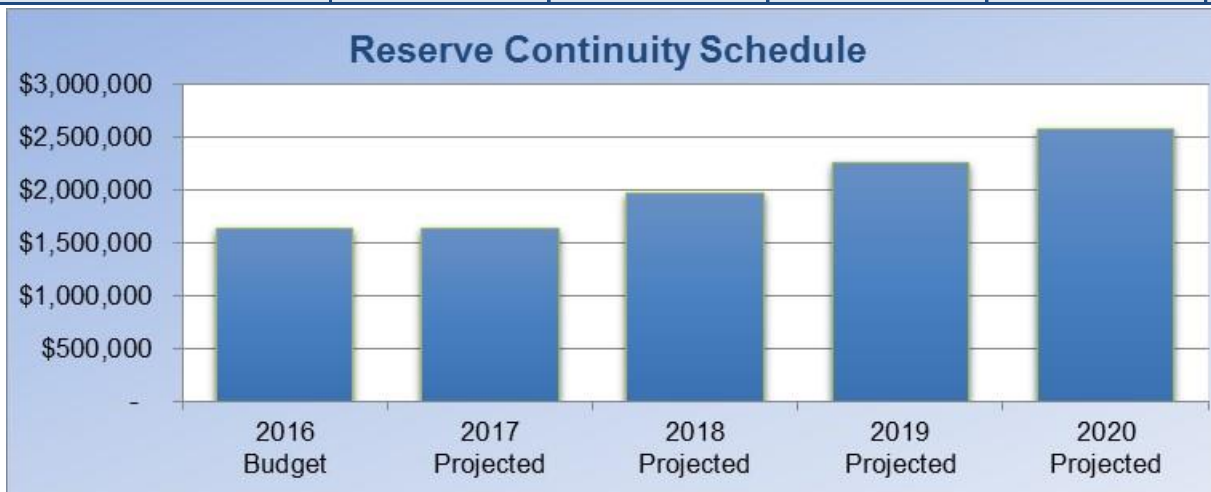
	2016 Rates	2017 Proposed Rates	2018 Proposed Rates	2019 Proposed Rates	2020 Proposed Rates
Metered Structure					
1) Consumption - Charge per cubic meter					
a) County					
0-15 cubic metres/month	\$0.81	\$0.83	\$0.84	\$0.86	\$0.88
16-45 cubic metres/month	\$1.06	\$1.08	\$1.10	\$1.12	\$1.15
46-850 cubic metres/month	\$1.13	\$1.15	\$1.18	\$1.20	\$1.22
851 + cubic metres/month	\$0.98	\$1.00	\$1.02	\$1.04	\$1.06
<i>Increase (%)</i>		2.0%	2.0%	2.0%	2.0%
2) Fixed Charge - Charge per Month					
Less than 1"	\$27.93	\$28.77	\$29.63	\$30.52	\$31.44
Less than 1" - ICI	-	-	-	-	-
1"	\$39.10	\$40.27	\$41.48	\$42.73	\$44.01
1 1/2"	\$50.26	\$51.77	\$53.32	\$54.92	\$56.57
2"	\$80.99	\$83.42	\$85.92	\$88.50	\$91.15
3"	\$307.18	\$316.40	\$325.89	\$335.66	\$345.73
4"	\$390.95	\$402.68	\$414.76	\$427.20	\$440.02
6"	\$586.44	\$604.03	\$622.15	\$640.82	\$660.04
8"	\$809.84	\$834.14	\$859.16	\$884.93	\$911.48
Greater than 10"	\$1,117.01	\$1,150.52	\$1,185.04	\$1,220.59	\$1,257.20
<i>Increase (%)</i>		3.0%	3.0%	3.0%	3.0%
Flat Structure					
Monthly Fee	\$54.56	\$100.00	\$102.00	\$104.04	\$106.12
<i>Increase (%)</i>		83.3%	2.0%	2.0%	2.0%
Special Circumstances Customer ¹	\$55.00	\$55.00	\$56.10	\$57.22	\$58.37
<i>Increase (%)</i>		0.0%	2.0%	2.0%	2.0%

Example: Ingersoll Water Key Indicators

	2016 Budget	2017 Projected ¹	2018 Projected	2019 Projected	2020 Projected
Charge Per Typical Metered House (170m3/year)					
Fixed Charge	335	345	356	366	377
Consumption Charge	138	140	143	146	149
Annual Charge	\$473	\$486	\$499	\$512	\$526
<i>Annual Increase (%)</i>		2.7%	2.7%	2.7%	2.7%
Charge Per Typical Commercial (618m3/month)					
Fixed Charge (2" meter)	972	1,001	1,031	1,062	1,094
Consumption Charge	8,297	8,463	8,632	8,805	8,981
Annual Charge	\$9,269	\$9,464	\$9,663	\$9,867	\$10,075
<i>Annual Increase (%)</i>		2.1%	2.1%	2.1%	2.1%
Charge Per Typical Industrial (2500m3/month)					
Fixed Charge (3" meter)	3,686	3,797	3,911	4,028	4,149
Consumption Charge	30,847	31,464	32,093	32,735	33,390
Annual Charge	\$34,533	\$35,261	\$36,004	\$36,763	\$37,539
<i>Annual Increase (%)</i>		2.1%	2.1%	2.1%	2.1%
Charge Per Typical Industrial (10000m3/month)					
Fixed Charge (6" meter)	7,037	7,248	7,466	7,690	7,921
Consumption Charge	119,047	121,428	123,857	126,334	128,861
Annual Charge	\$126,084	\$128,676	\$131,323	\$134,024	\$136,782
<i>Annual Increase (%)</i>		2.1%	2.1%	2.1%	2.1%

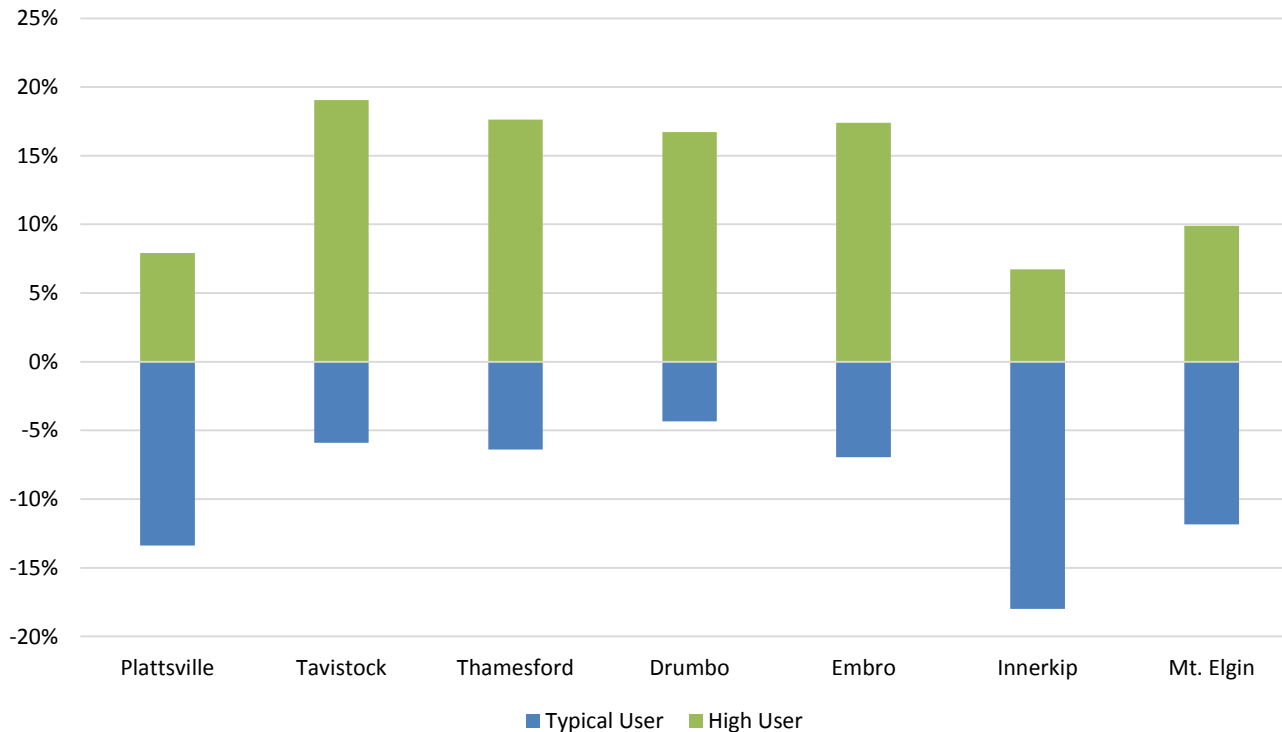
Example: Ingersoll Water Reserve Continuity

Reserve Continuity Schedule					
	2016 Budget	2017 Projected	2018 Projected	2019 Projected	2020 Projected
Opening Balance	\$3,393,752	\$1,634,240	\$1,631,073	\$1,970,007	\$2,253,053
Interest Allocation	45,816	22,062	22,019	26,595	30,416
Transfer to Reserves	1,552,991	1,641,696	1,673,914	1,679,451	1,685,268
Transfer from Reserves	(3,358,319)	(1,666,926)	(1,357,000)	(1,423,000)	(1,391,000)
Net Contribution to (from) Reserves	\$(1,759,512)	\$(3,167)	\$338,934	\$283,046	\$324,684
Closing Balance	\$1,634,240	\$1,631,073	\$1,970,007	\$2,253,053	\$2,577,737



Township Systems with New Metered Users (Transition: Flat to Metered)

Summary of Typical User Rate Changes from 2016 to 2017:
Water and WW Rates



Note: Monthly rate for typical metered user is based on 14.2 m³/month.

Note: Monthly rate for high metered user is based on 25 m³/month

- New water meters will ensure users pay for service delivered
- Rate effect will be different to all consumers across all systems

Calculated Monthly Typical Household Monthly Water Bill

	2016 Current	2017 Calculated	2018 Calculated	2019 Calculated	2020 Calculated
Ingersoll	\$39.41	\$40.47	\$41.57	\$42.70	\$43.86
		3%	3%	3%	3%
Tillsonburg	\$32.04	\$32.88	\$33.75	\$34.64	\$35.56
		3%	3%	3%	3%
Woodstock	\$27.28	\$27.82	\$28.38	\$28.94	\$29.52
		2%	2%	2%	2%
Townships (Metered)	\$39.34	\$39.56	\$39.80	\$40.04	\$40.28
		1%	1%	1%	1%

Note: Monthly rate for metered systems is based on 14.2 m³/month.

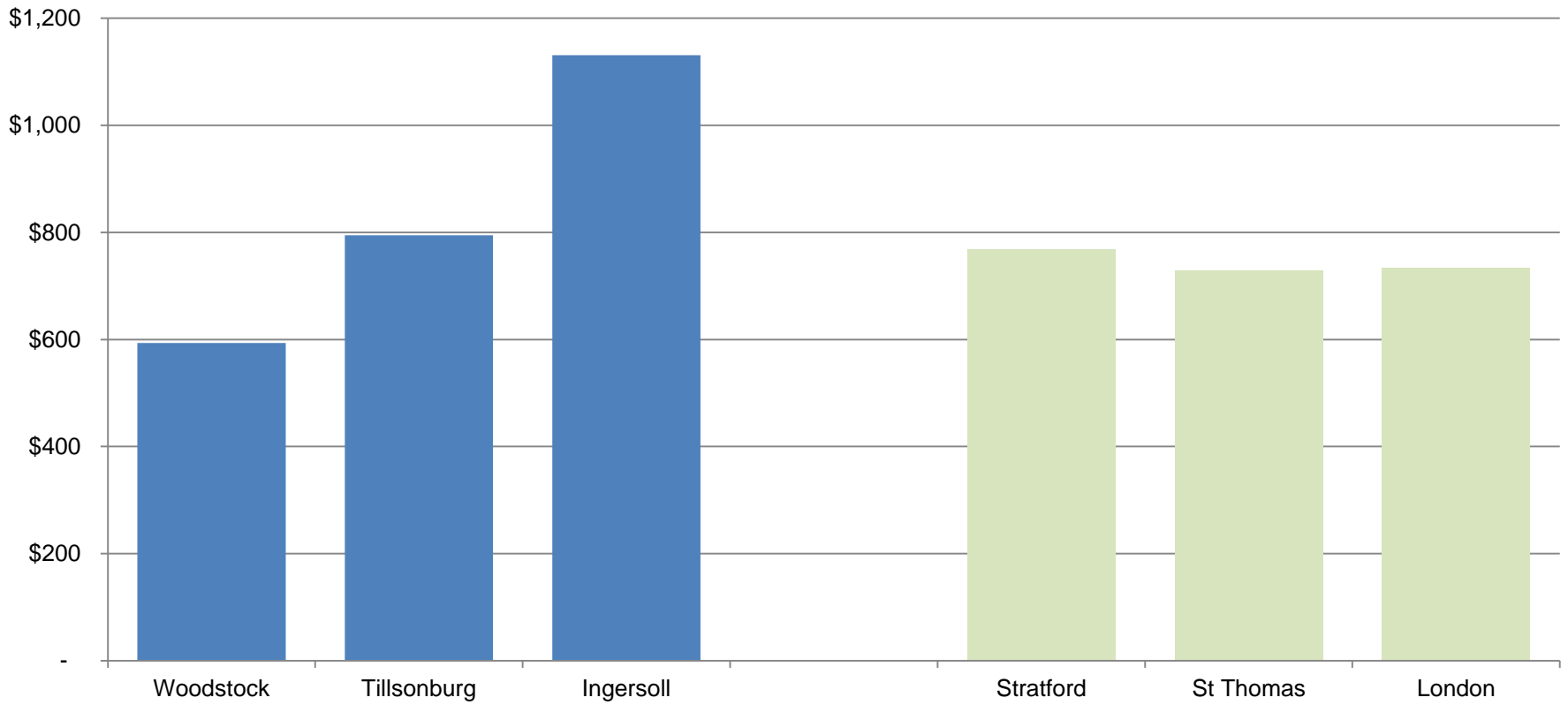
Calculated Monthly Typical Household Monthly WW Bill

	2016 Current	2017 Calculated	2018 Calculated	2019 Calculated	2020 Calculated
Ingersoll	\$53.44	\$53.76	\$54.07	\$54.40	\$54.73
		1%	1%	1%	1%
Tillsonburg	\$33.03	\$33.35	\$33.66	\$33.99	\$34.42
		1%	1%	1%	1%
Woodstock	\$20.58	\$21.65	\$22.83	\$24.14	\$25.61
		5%	5%	6%	6%
Norwich	\$48.10	\$48.42	\$48.73	\$49.06	\$49.39
		1%	1%	1%	1%

Note: Monthly rate for metered systems is based on 14.2 m³/month.

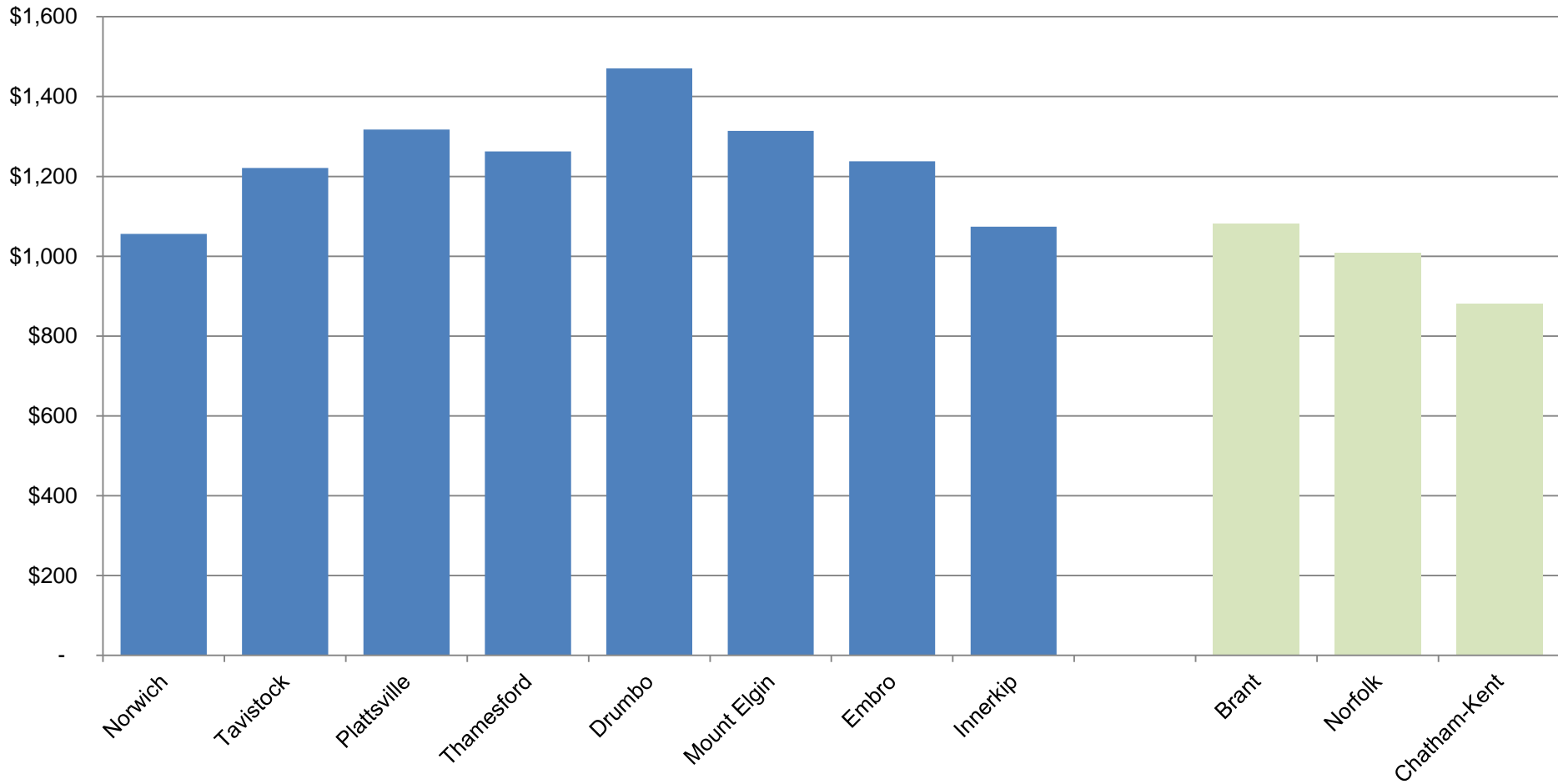
Municipal Comparison of Typical Household Annual W/WW Bill

Urban



Municipal Comparison of Typical Household Annual W/WW Bill

Rural



Snapshot of Fiscal Position: Reserve Balance at 2020

System	2016 Opening Reserve Balance	2020 Closing Reserve Balance
Water		
Woodstock	\$ 11,803,000	\$ 7,413,000
Tillsonburg	\$ 3,028,000	\$ 3,090,000
Ingersoll	\$ 3,394,000	\$ 2,578,000
Townships	\$ 8,101,000	\$ 7,472,000
Total Water	\$ 26,326,000	\$ 20,553,000
Wastewater		
Woodstock	\$ 10,451,000	\$ 2,337,000
Tillsonburg	\$ 11,853,000	\$ 16,707,000
Ingersoll	\$ 954,000	\$ 5,335,000
Norwich	\$ 1,649,000	\$ 2,786,000
Tavistock	\$ 415,000	\$ 858,000
Plattsville	\$ 541,000	\$ 1,018,000
Thamesford	\$ 1,864,000	\$ 1,029,000
Drumbo	\$ 875,000	\$ 338,000
Mount Elgin	\$ 127,000	\$ 326,000
Embro	\$ -	\$ 260,000
Innerkip	\$ 205,000	\$ 467,000
Total Wastewater	\$ 28,934,000	\$ 31,461,000

Note: Ending Balances do not include existing unfinanced capital for Embro and Innerkip systems

- Current fiscal position has allowed for manageable rate increases moving forward
- County reserves on hand are sufficient to meet in-year capital requirements
- All services are projected to be in a positive balance by 2020

Source Water Protection Fee

- Basis of Fee:
 - \$0.03/m³ of billed consumption
 - Minimum Monthly Charge per Connection of \$1.20
- Source Water Protection reserve fund created to mitigate year-over-year cost changes
- By year-end 2022, Source Water Protection reserve fund anticipated to be in a positive position

General Conclusions

- Past practice has left the County in a good fiscal position
 - Calculated rates build on good practice and leave the County in a position to move forward
- Calculated rates will remain competitive with similar and surrounding jurisdictions
- County needs to monitor consumption trends and revenues very closely