Town of Georgina
Water and Sewer Rate Study
Draft Results for Discussion

Wednesday March 2nd, 2015

HEMSON
Consulting Ltd.

GEORGINA

Presentation Content

- Background and Study Objectives
- Rate Setting Approach and Key Assumptions
- Water & Sewer Funding Requirements
- Future Demand
- Rate Structure Analysis and Scenarios
- Preliminary Calculated Rates
- Concluding Comments

Purpose of Meeting

- Provide Council with study update and provide an opportunity for discussion
- Review long-term expenditure outlook
- Evaluate rate structure scenarios
- Present calculated utility rates
  - New water and sewer rates starting April 1 2016
  - 2016 rates consistent with utility fees presented to Council in November 2015

Study Objectives
Part 1 – Utility Rate Analysis

- To calculate water and wastewater rates that will provide for the full recovery of the operating and capital costs associated with providing the services
  - Model examines the period from 2016 to 2025
  - Rates have been calculated under two scenarios (status quo vs. alternative)
- To set aside monies in reserves to fund the "full lifecycle costs" of the long-term repair and replacement of infrastructure:
  - Consistent with the Requirements of the *SDWA*
- Examine the impacts of implementing the newly calculated rates on the residents and businesses of the Town

Study Objectives
Part 2 – Financial Plans

- Prepare Financial Plans consistent with the *SDWA and Ontario Regulation 453/07*
  - one of the requirements necessary to obtain/renew a drinking water licence

- Water Financial Plan must be approved by Council resolution that the drinking water system is financially viable

Rate Setting Approach

- Rates calculated based on the following:

1. Full recovery of operating costs
   - Based on the Town's 2016 budget
   - Costs have been adjusted to account for inflationary measures
   - Regional water purchasing and treatment costs have been incorporated into the analysis

2. Full recovery of annual capital needs
   - In-year capital requirements identified by Town and GM BluePlan are included
   - High Level of Service option has been adjusted for inflation

3. Provision for future asset replacement

Asset Replacement Reserve

- Province is moving towards requiring municipalities to achieve full water and sewer rate cost recovery
- Historically, the Town has taken measures in an effort to establish reserves for the long-term repair and replacement of assets.
- Analysis assumes the Town continues to contribute to reserves on an ongoing basis moving forward
  - Phase-in approach to full-cost recovery
  - Used to "smooth" utility rate increases

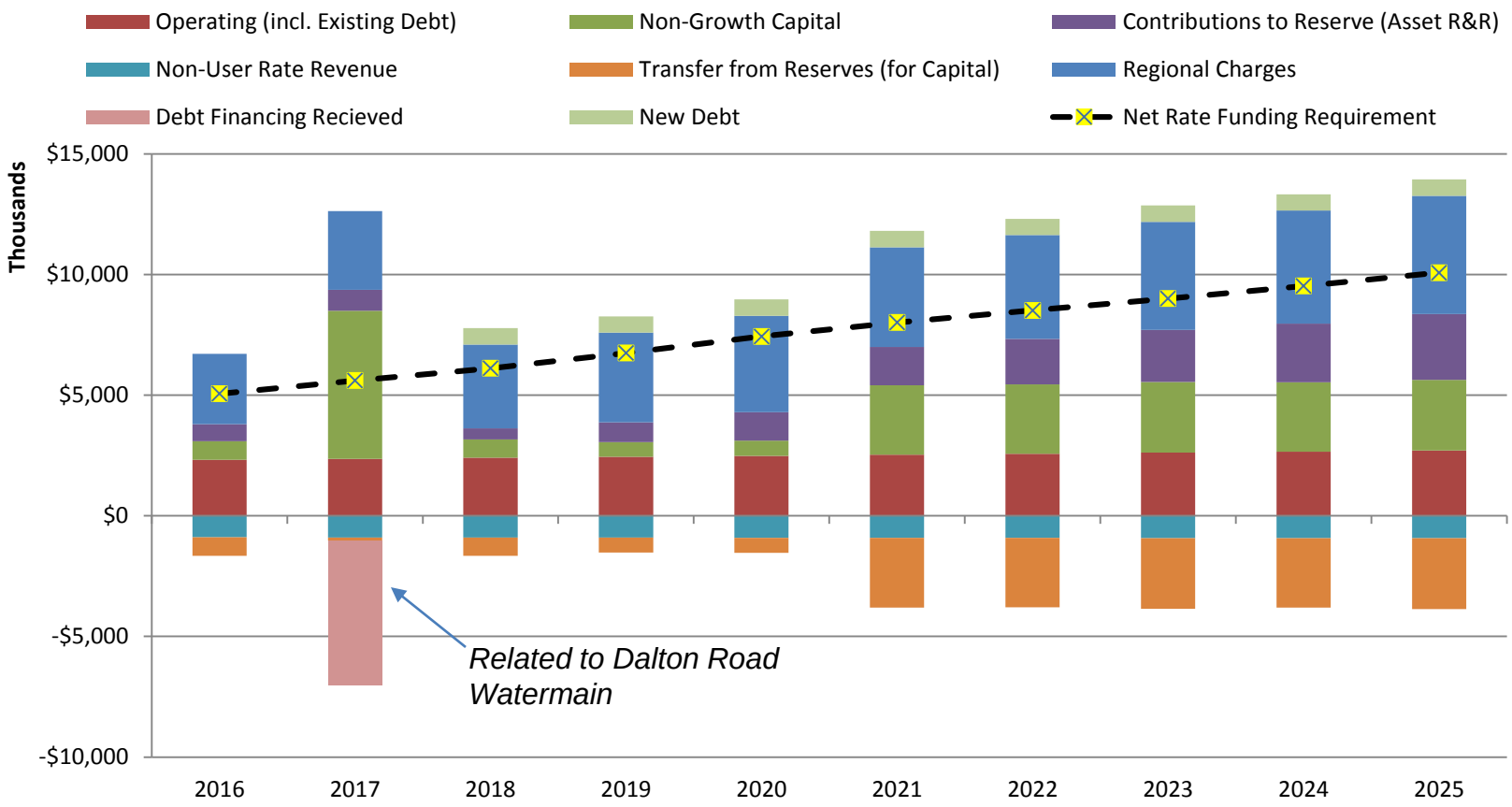
Asset Replacement Reserve

- Annual Contribution: calculated to support in-year capital requirements *plus* a provision for the future repair and replacement of infrastructure

- Calculation is based on the cost of replacing each asset in the year it is scheduled for replacement
  - Example: watermain replacement in 2030 = cost in $2030

Service	Year	Calculated Annual Capital Contribution	Capital Contribution Included in Analysis	*Difference ($)*	*% of total calculated contribution*
Water	2025	$3.4 million	$2.7 million	$700k	80%
Sewer	2025	$2.5 million	$1.9 million	$600k	75%

How much Revenue Needs to be Collected from Water Rates?



Note 1: The net rate funding requirement represents the amount of funds the must be funded through the water rates
Note 2: Non-user rate revenues are budget items which decrease the net operating budget but are not recovered through the user rates (local improvement charges, new services, etc.)

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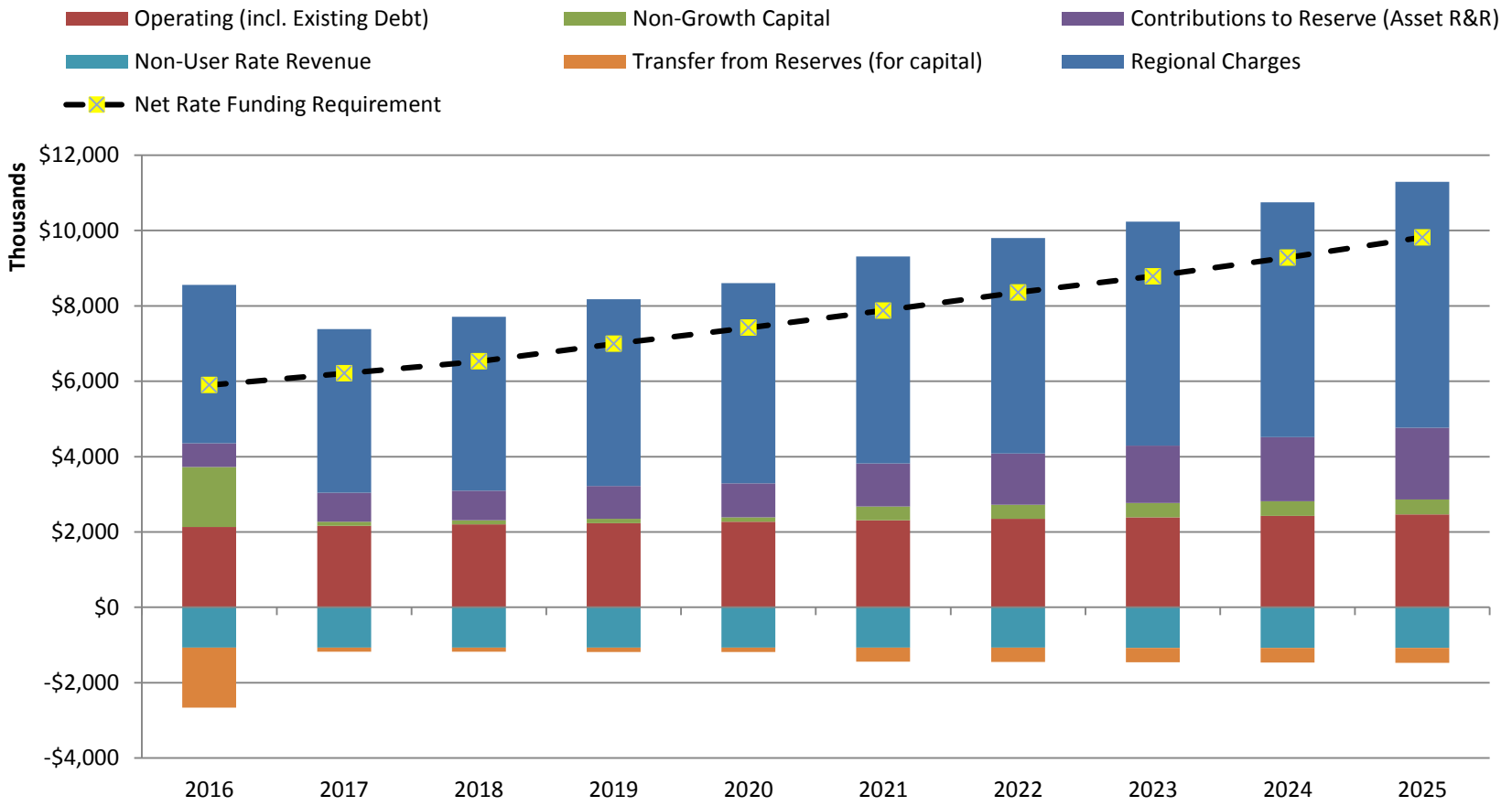
How much Revenue Needs to be Collected from Sewer Rates?



Note 1 : The net rate funding requirement represents the amount of funds the must be funded through the sewer rates
Note 2: Non-user rate revenues are budget items which decrease the net operating budget but are not recovered through the user rates (local improvement charges, new services, etc.)

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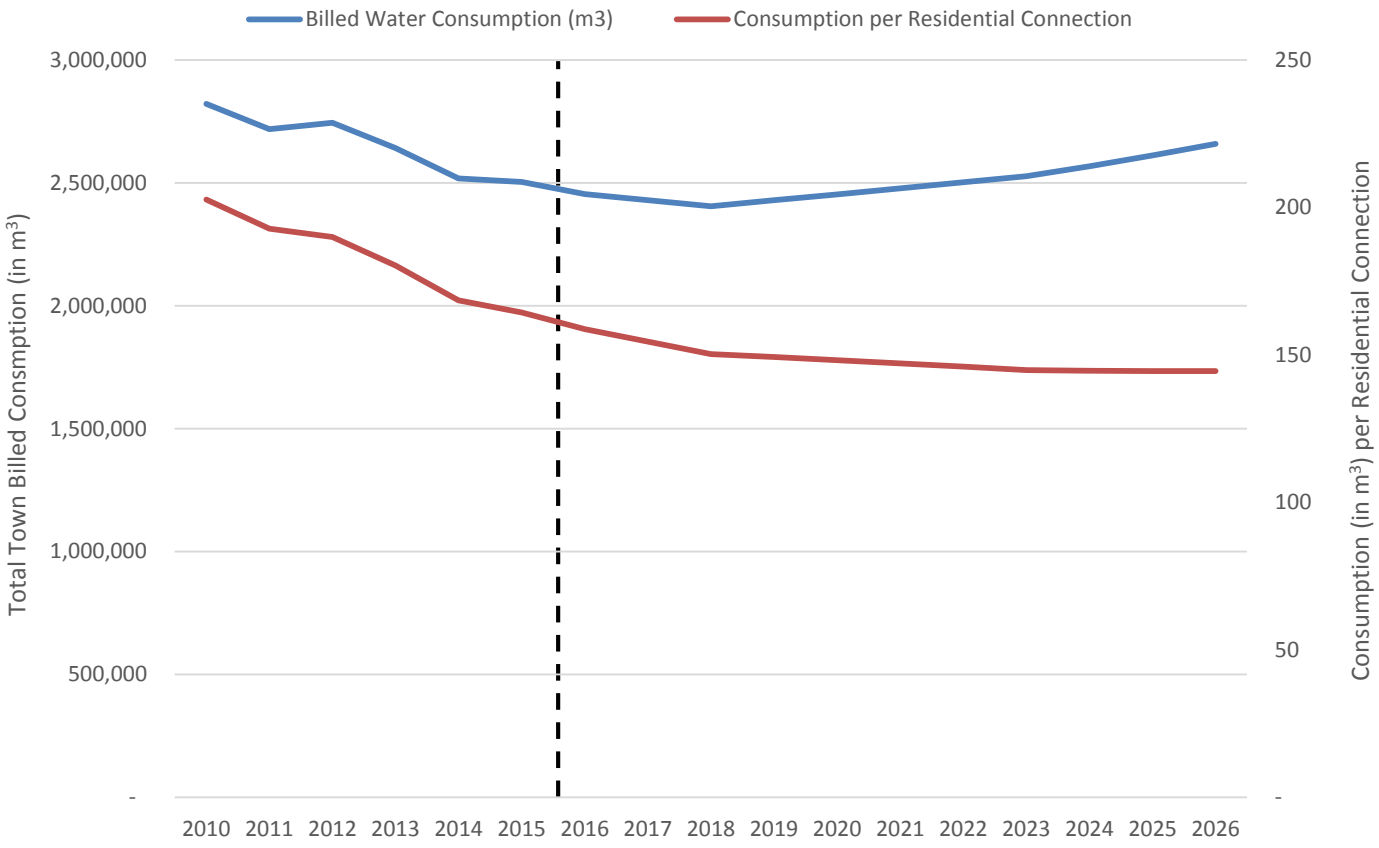
Future Demand

- Hemson and Town staff have used data collected from recent water and sewer meter readings to establish the consumption and connection forecast

	2015 Year-end	2016 Projected	2025 Projected(1)
Total # of Water Connections	13,449	13,652	15,953
Total # of Sewer Connections (2)	13,247	13,451	15,751

Note 1: Forecast of new connections reflects an average of 250 new connections each year.
Note 2: There are few customers (less than 2%) connected to the water system that do not receive sewer services.

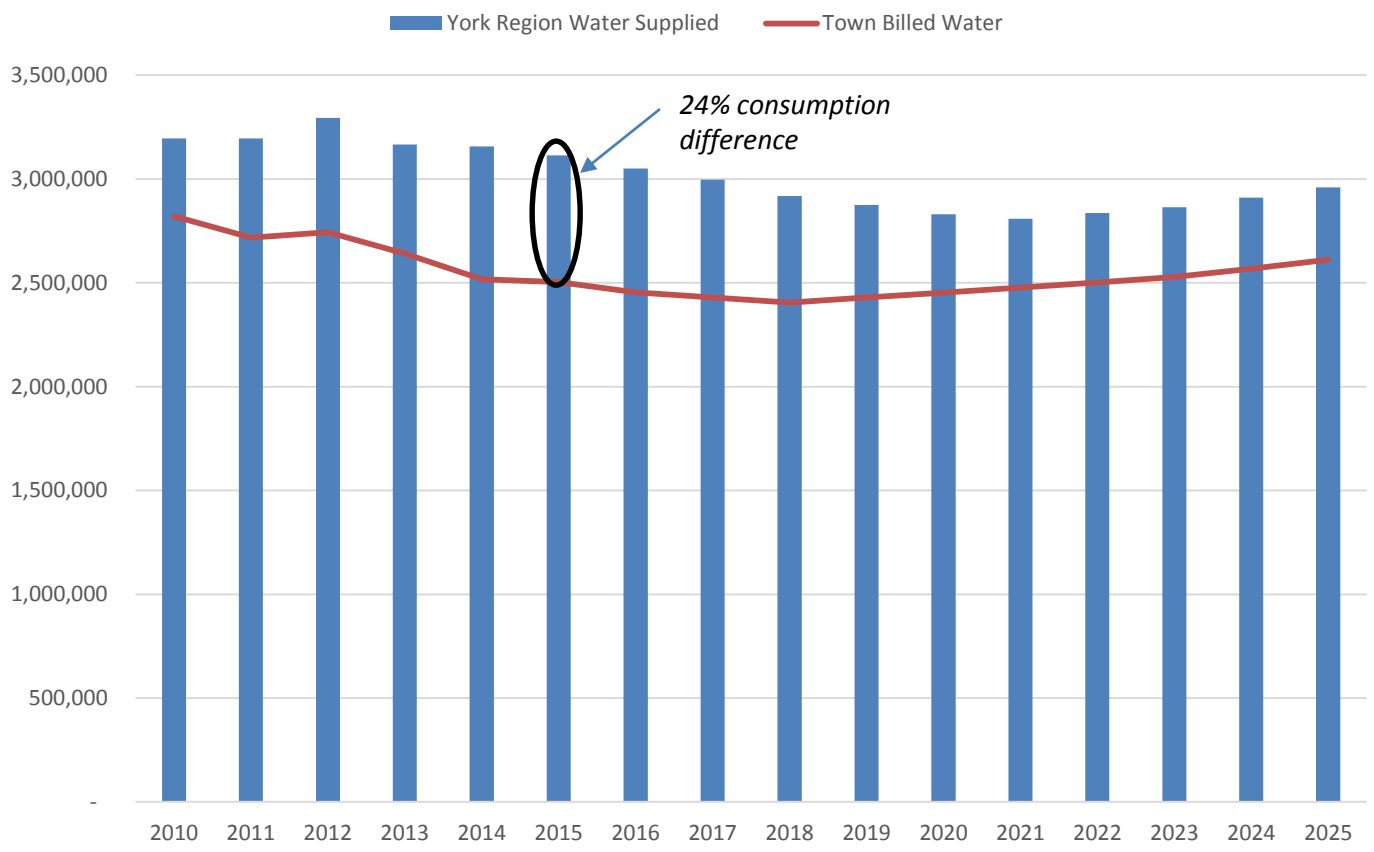
Projected Consumption (1)



- Overall consumption is projected to moderately increase over the long-term
- Consumption per residential connection continues to decline despite growth
- Non-billed water is excluded from forecast

Note 1: For the purposes of setting a utility rate, only the water that is distributed to the end-user is used to determine the rate. This is referred to as "billable" water.
Note 2: Sewer generation is based on water consumption billed by sewer users connected to the water system. For the purpose of this study, sewer generation is based on water consumption and is nearly equal

Water Supplied vs. Billed



- 2015 consumption difference (supplied vs. billed) was 24%
- Goal to reduce difference to 13% by 2021
- Funding required to employ reduction initiative has been included in the capital forecast

Note 1: For the purposes of setting a utility rate, only the water that is distributed to the end-user is used to determine the rate. This is referred to as "billable" water.

Water & Sewer Rate Structure Analysis

Accounts Water/Sewer	Charge	Basis of Fee
Fixed Fee:	$/per Month	Fee levied regardless of the amount of water consumed Uniform fixed charge applied to all Town connections
Variable Rate:	$/per m^3	Fee levied on the amount of water consumed Levied as a cost per cubic metre consumed

Note: Sewer charges based on water consumption

Water & Sewer Rate Structure Analysis

Accounts Water/Sewer	Status Quo: Cost Recovery	Alternative Scenario: Cost Recovery
Fixed Fee: $/per Month	Approximately 7%	Gradually increase fixed fee cost recovery to 25%
Variable Rate: $/per m^3	Approximately 93%	Gradually decrease consumption fee cost recovery to 75%

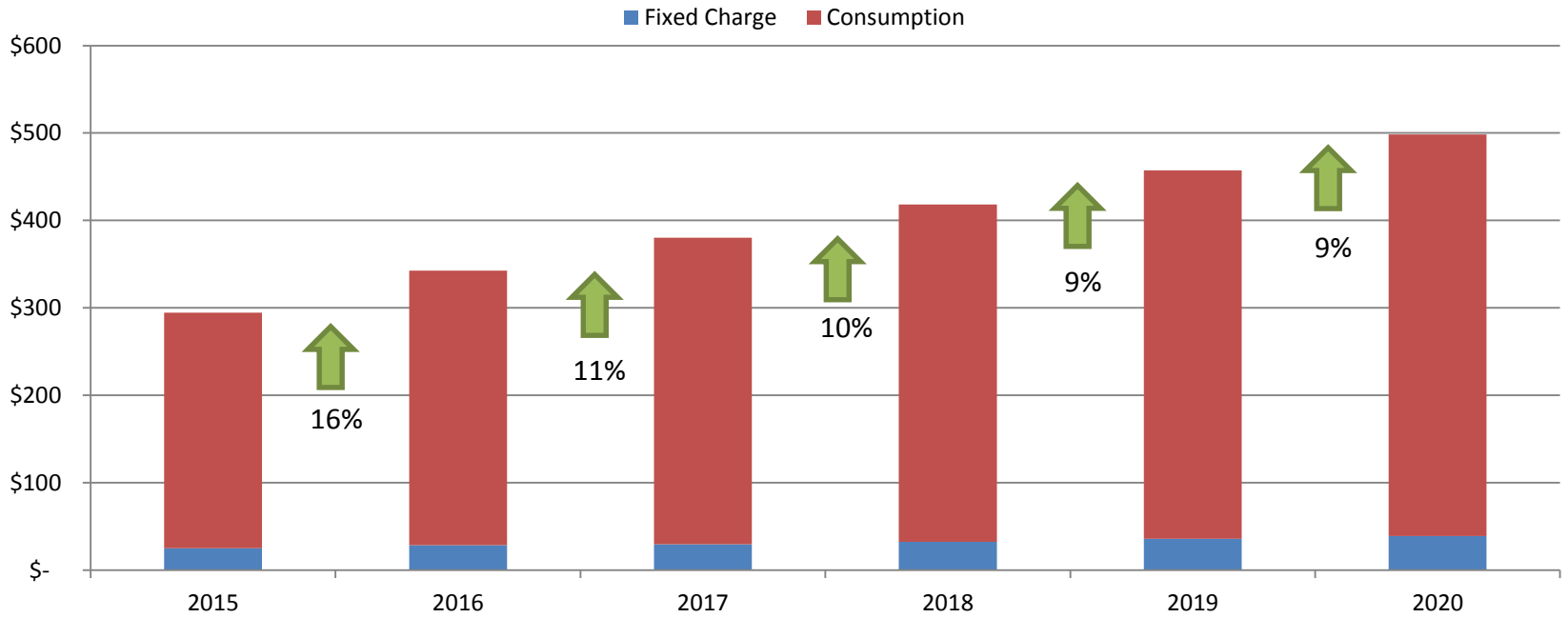
- Total net rate funding requirement remains unchanged under either scenario
- Alternative scenario provides additional revenue stability

Benefits of Alternative Scenario

- Increased revenue security
  - Mitigates water conversation practices on revenues
- More proportionate allocation of true costs
- Increased rate predictability from a customer standpoint

Status Quo: Calculated Water Rates and Impact per Typical HH[1]

	2015 Current	2016 Calculated	2017 Calculated	2018 Calculated	2019 Calculated	2020 Calculated
Fixed Charge: ($/month)	$2.13	$2.47	$2.71	$2.98	$3.25	$3.55
Consumption Charge ($/m^3)	$1.66	$1.97	$2.17	$2.39	$2.60	$2.83



Note 1: A typical occupied household is assumed to consume 165m^3 per annum. Also the calculated rates and typical household charges are based on a April 1st implementation to coincide with Regional rate changes which are projected to increase at a rate of 9%/annum to 2020.

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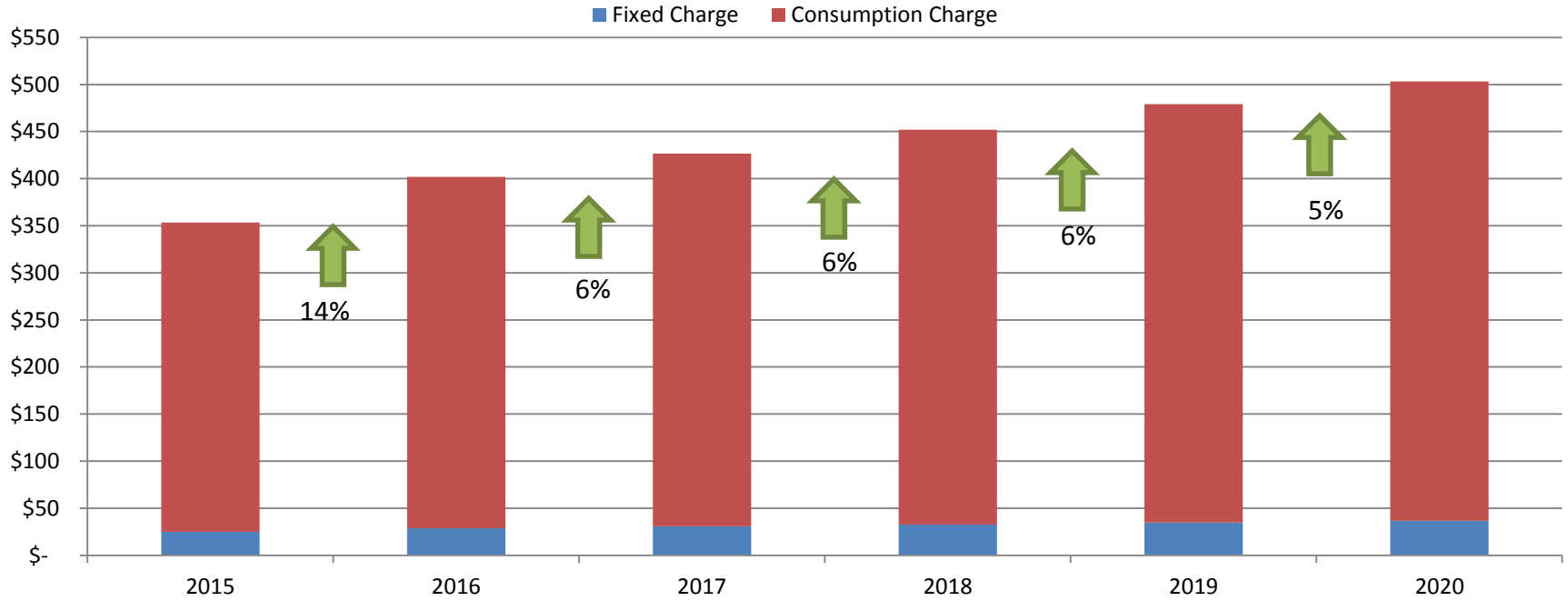
Status Quo: Calculated Sewer Rates and Impact per Typical HH[1]

	2015 Current	2016 Calculated	2017 Calculated	2018 Calculated	2019 Calculated	2020 Calculated
Fixed Charge: ($/month)	$2.13	$2.47	$2.61	$2.77	$2.94	$3.08
Consumption Charge ($/m^3)	$2.06	$2.32	$2.46	$2.61	$2.76	$2.90



Note 1: A typical occupied household is assumed to consume 165m^3 per annum. Also the calculated rates and typical household charges are based on a April 1st implementation to coincide with Regional rate changes which are projected to increase at a rate of 9%/annum to 2020

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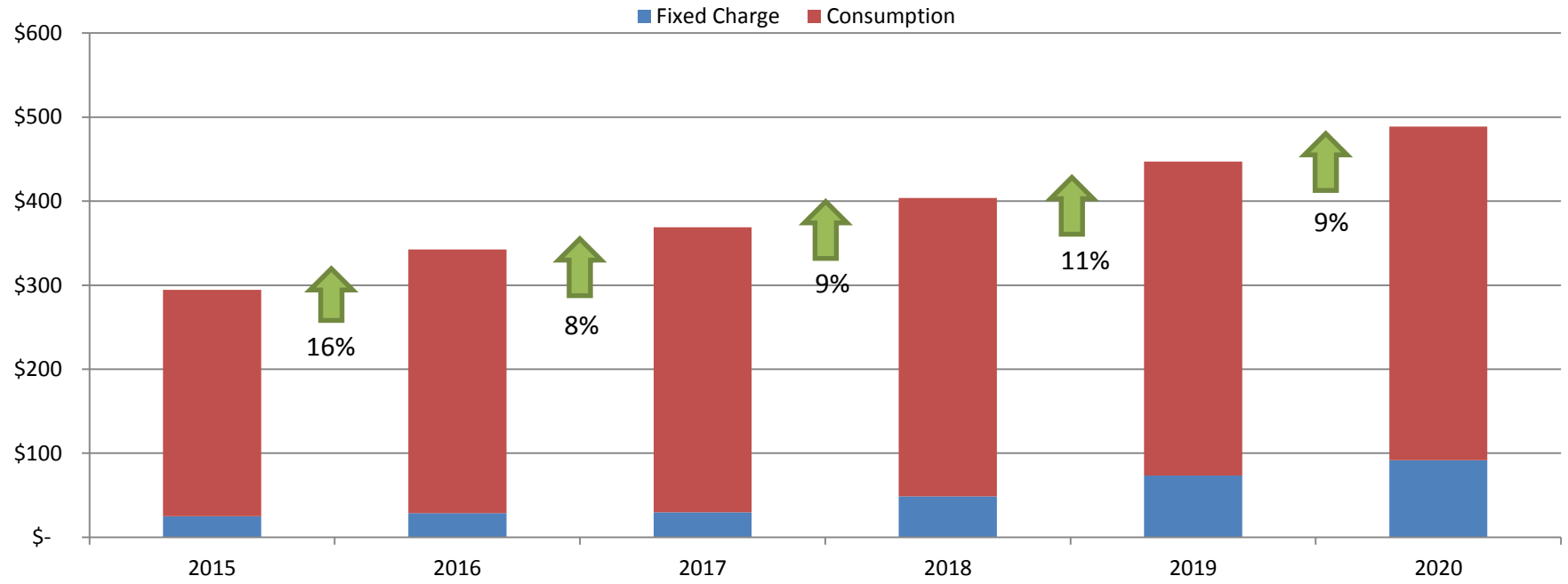
Alternative: Calculated Water Rates and Impact per Typical HH[1]

	2015 Current	2016 Calculated	2017 Calculated	2018 Calculated	2019 Calculated	2020 Calculated
Fixed Charge: ($/month)	$2.13	$2.47	$4.07	$6.10	$7.63	$9.16
Consumption Charge ($/m^3)	$1.66	$1.97	$2.08	$2.17	$2.29	$2.44



Note 1: A typical occupied household is assumed to consume 165m^3 per annum. Also the calculated rates and typical household charges are based on a April 1st implementation to coincide with Regional rate changes which are projected to increase at a rate of 9%/annum to 2020

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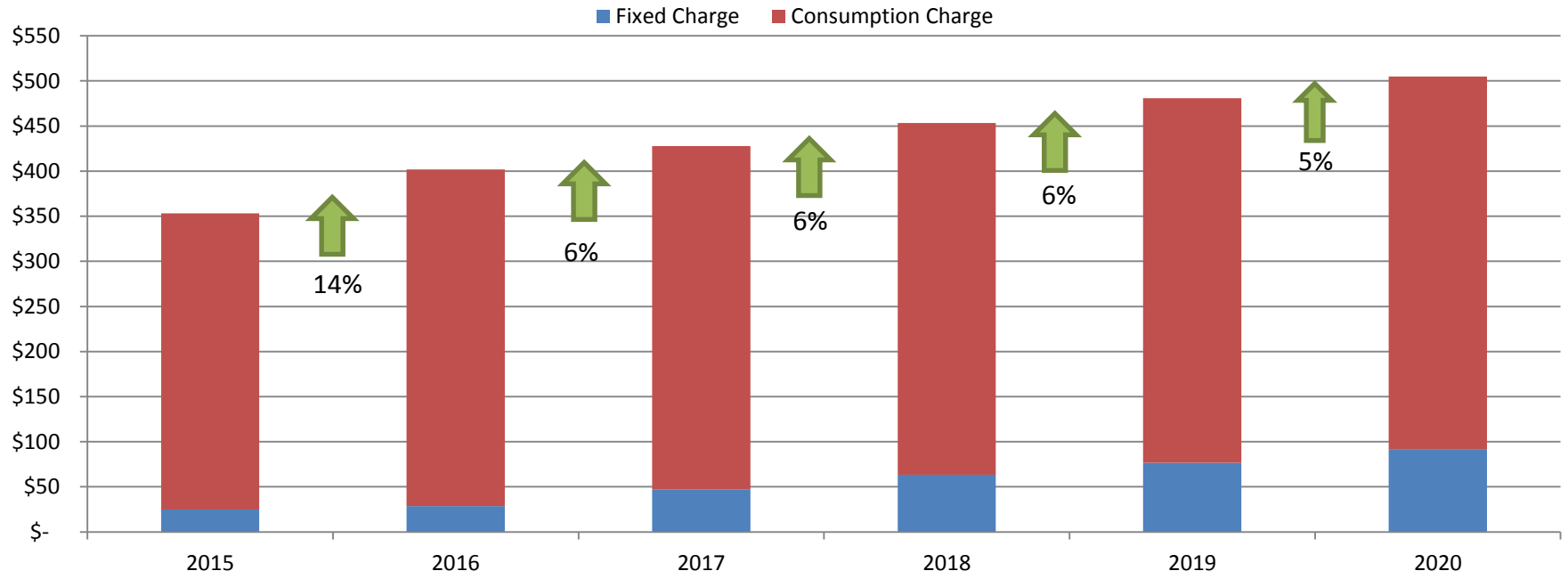
Alternative: Calculated Sewer Rates and Impact per Typical HH[1]

	2015 Current	2016 Calculated	2017 Calculated	2018 Calculated	2019 Calculated	2020 Calculated
Fixed Charge: ($/month)	$2.13	$2.47	$4.44	$5.55	$6.66	$7.99
Consumption Charge ($/m^3)	$2.06	$2.32	$2.36	$2.42	$2.51	$2.57



Note 1: A typical occupied household is assumed to consume 165m^3 per annum. Also the calculated rates and typical household charges are based on a April 1st implementation to coincide with Regional rate changes which are projected to increase at a rate of 9%/annum to 2020

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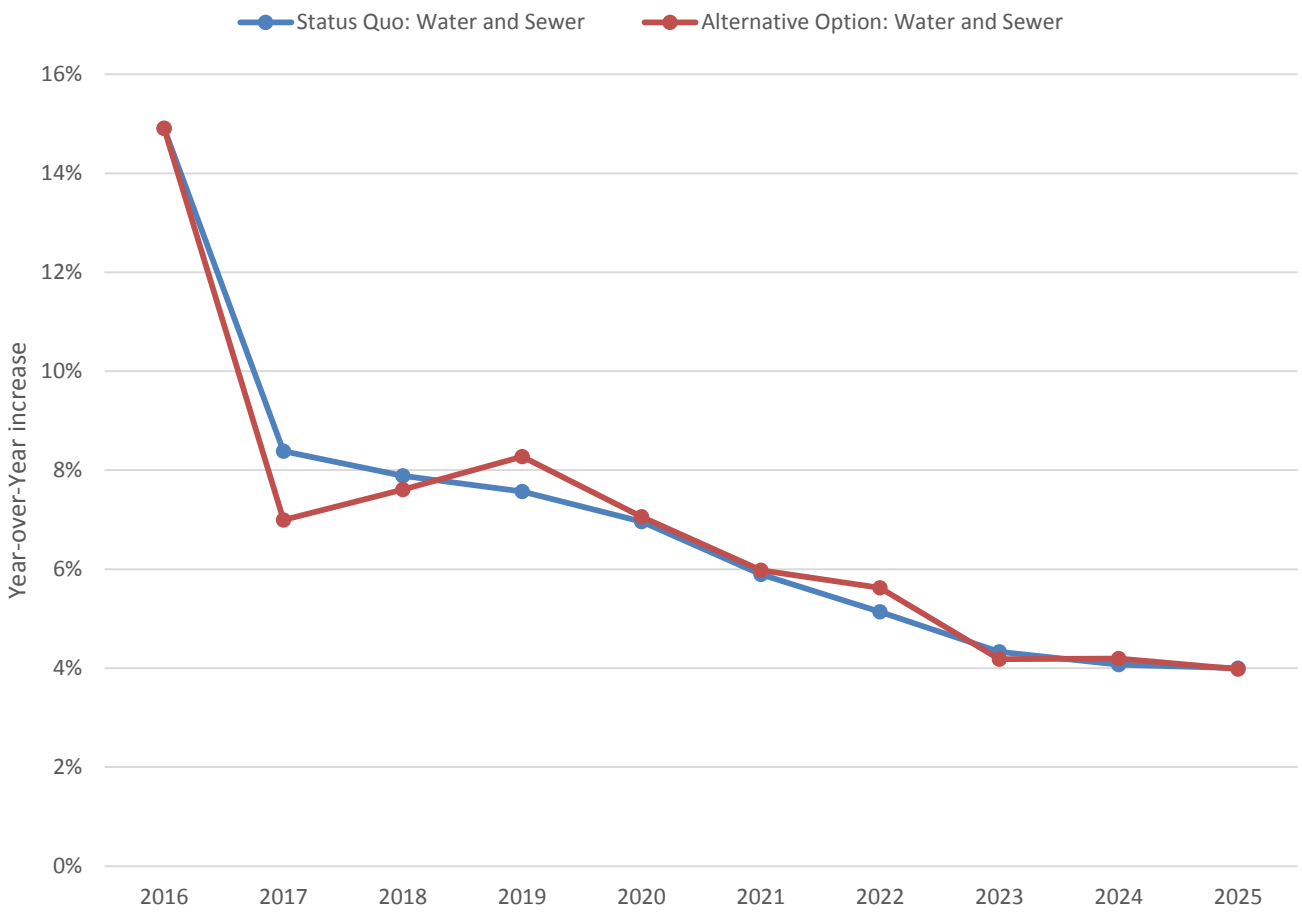
Status Quo: Total Charge Per Typical Household [1]

	2015 Actual	2016 Calculated[2]	$ Difference	% Difference
Total Water Charge / Unit	$295	$343	$48	16%
Total Sewer Charge / Unit	$353	$402	$49	14%
Total Charge / Unit	$648	$744	$97	15%

Note 1: A typical occupied household is assumed to consume 165m^3 per annum. Also the calculated rates and typical household charges are based on a April 1st implementation to coincide with Regional rate changes

Note 2: The total charge per typical household shown reflects the status quo scenario. The difference between status quo and the alternative option (post 2016) are considered minor and within a few dollars each year as the utility rate funded portion remains the same for each scenario.

Projected Utility Rate Increases: Year-over-Year per Typical HH



- Overall, annual rate change (status quo vs. alternative) is similar
- Higher rate increases at the front-end but stabilize over the long-term
- Annual increases required to keep pace with Regional charges and to fund capital R&R needs

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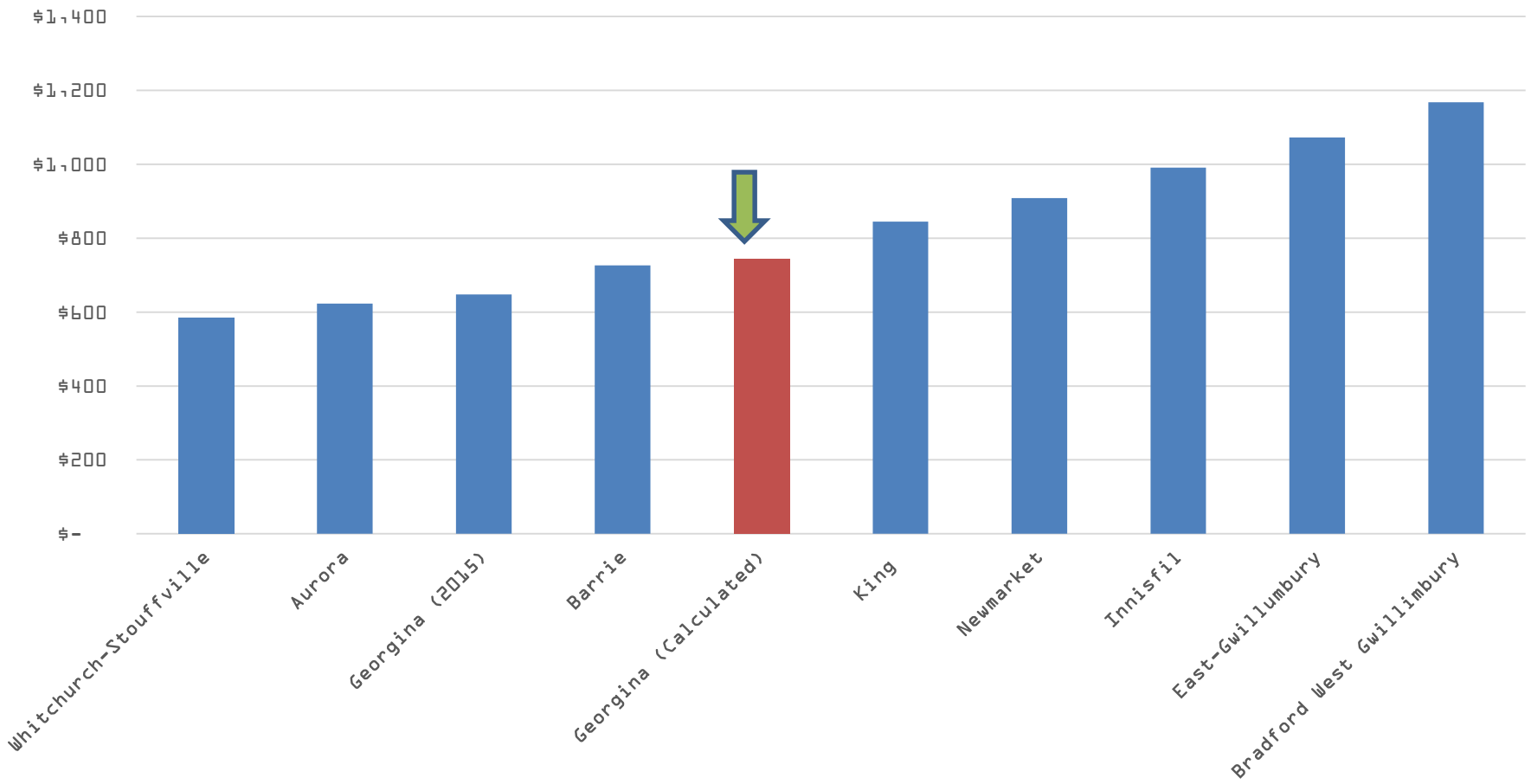
Comparison to Other Jurisdictions 2016 Typical Household Charge[1]



Note 1: Typical Household Consuming 165 m^3 per annum. Includes both water and sewer service
Note 2: Utility Rates for other jurisdictions show 2015 rates + 3% inflation (where applicable) to compare with Georgina calculated charge

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Concluding Comments

- Utility rates calculated to fund all operating and in-year capital requirements.
  - Town continues to contribute to reserves for the future repair and replacement of existing infrastructure
- Changes in service delivery costs, capital requirements or consumption patterns may yield different utility rates at next review
- Town should regularly monitor consumption patterns and growth trends
- Next comprehensive review be undertaken in 5-year time or earlier

Items for Council Consideration

1. Rate Structure: Status Quo vs. Alternative

2. Town goal to reduce consumption difference to 13% by 2021 (currently at 24%)

3. Full-Cost Calculated Annual Capital Contribution
   - Phased-In Approach vs. more aggressive contribution schedule

Next Steps

- Finalize utility rates
- Prepare Financial Plan for water and wastewater system
- Public consultation

Supplementary Information

Water Purchasing Costs

	22.0%	78.0%	Total Region	Rate per cubic metre		Rate Increase Assumption
	Jan-March	April-Dec	Payment	Jan-March	April-Dec	
2015	*$ 595,704*	*$ 2,269,407*	*$ 2,865,112*	*$ 0.8697*	*$ 0.9345*	*9.0%*
2016	$ 627,287	$ 2,424,181	$ 3,051,468	$ 0.9345	$ 1.0186	*9.0%*
2017	$ 671,462	$ 2,594,897	$ 3,266,359	$ 1.0186	$ 1.1103	*9.0%*
2018	$ 712,827	$ 2,754,752	$ 3,467,578	$ 1.1103	$ 1.2102	*9.0%*
2019	$ 765,351	$ 2,957,732	$ 3,723,083	$ 1.2102	$ 1.3191	*9.0%*
2020	$ 821,216	$ 3,173,628	$ 3,994,845	$ 1.3191	$ 1.4378	*9.0%*
2021	$ 888,402	$ 3,244,282	$ 4,132,684	$ 1.4378	$ 1.4810	*3.0%*
2022	$ 924,204	$ 3,375,027	$ 4,299,231	$ 1.4810	$ 1.5254	*3.0%*
2023	$ 961,450	$ 3,511,040	$ 4,472,490	$ 1.5254	$ 1.5712	*3.0%*
2024	$ 1,006,138	$ 3,674,233	$ 4,680,372	$ 1.5712	$ 1.6183	*3.0%*
2025	$ 1,053,940	$ 3,848,796	$ 4,902,736	$ 1.6183	$ 1.6669	*3.0%*
2026	$ 1,105,098	$ 4,035,617	$ 5,140,715	$ 1.6669	$ 1.7169	*3.0%*

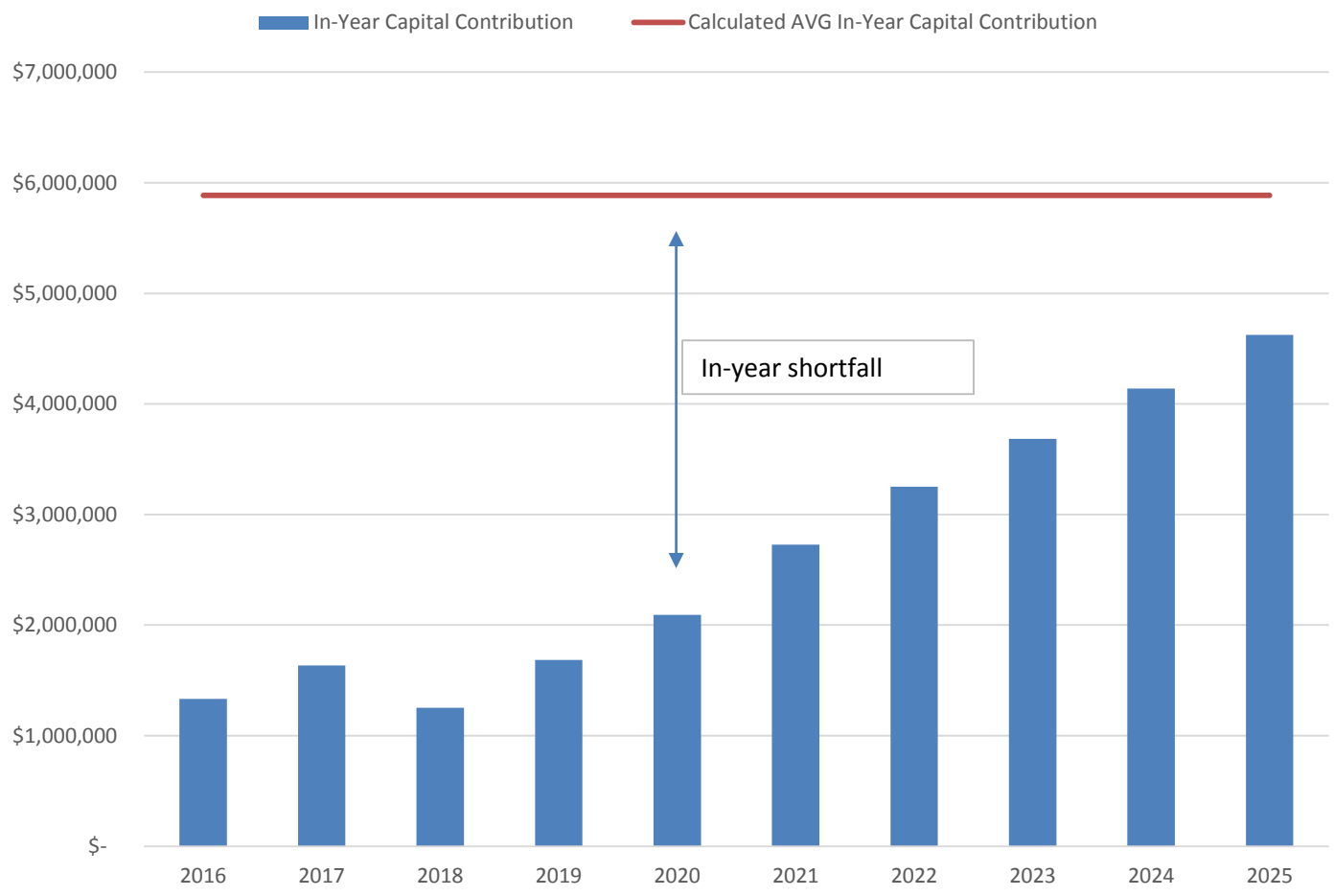
Note: Rate increase assumption consistent with Regional recommendations to 2021. Moving forward (post 2021), Hemson assumes annual rate increases of 3% per annum - equal to 2021.

Wastewater Treatment Costs

	22.0%	78.0%	Total Region	Rate per cubic metre		Rate Increase Assumption
	Jan-March	April-Dec	Payment	Jan-March	April-Dec	
2015	*$ 760,230*	*$ 3,018,834*	*$ 3,779,064*	*$ 1.1099*	*$ 1.2431*	*9.0%*
2016	$ 834,437	$ 3,224,718	$ 4,059,155	$ 1.2431	$ 1.3550	*9.0%*
2017	$ 893,199	$ 3,451,810	$ 4,345,009	$ 1.3550	$ 1.4769	*9.0%*
2018	$ 948,224	$ 3,664,453	$ 4,612,677	$ 1.4769	$ 1.6099	*9.0%*
2019	$ 1,018,092	$ 3,934,464	$ 4,952,556	$ 1.6099	$ 1.7547	*9.0%*
2020	$ 1,092,407	$ 4,221,656	$ 5,314,063	$ 1.7547	$ 1.9127	*9.0%*
2021	$ 1,181,779	$ 4,315,642	$ 5,497,421	$ 1.9127	$ 1.9700	*3.0%*
2022	$ 1,229,405	$ 4,489,562	$ 5,718,967	$ 1.9700	$ 2.0291	*3.0%*
2023	$ 1,278,950	$ 4,670,491	$ 5,949,441	$ 2.0291	$ 2.0900	*3.0%*
2024	$ 1,338,395	$ 4,887,576	$ 6,225,971	$ 2.0900	$ 2.1527	*3.0%*
2025	$ 1,401,982	$ 5,119,785	$ 6,521,767	$ 2.1527	$ 2.2173	*3.0%*
2026	$ 1,470,035	$ 5,368,299	$ 6,838,333	$ 2.2173	$ 2.2838	*3.0%*

Note: Rate increase assumption consistent with Regional recommendations to 2021. Moving forward (post 2021), Hemson assumes annual rate increases of 3% per annum - equal to 2021.

Calculated Annual Capital Contribution vs. Phase-In Approach



- Phase-in to fully calculated annual contribution
- Cumulative shortfall amounts to $32 million
- Would reach full cost recovery by 2028

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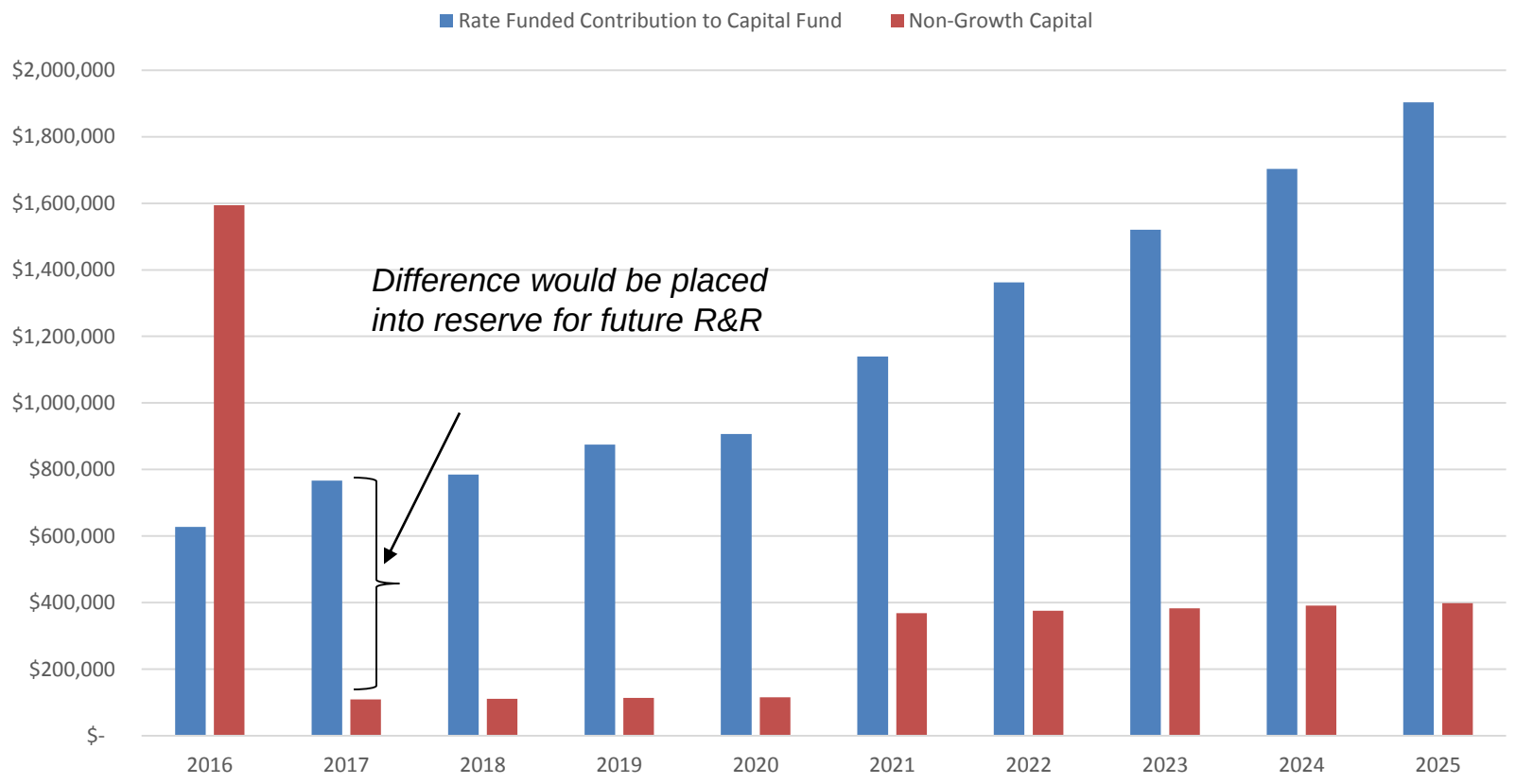
Sewer Services: Total Contribution vs. In-year Capital Expense



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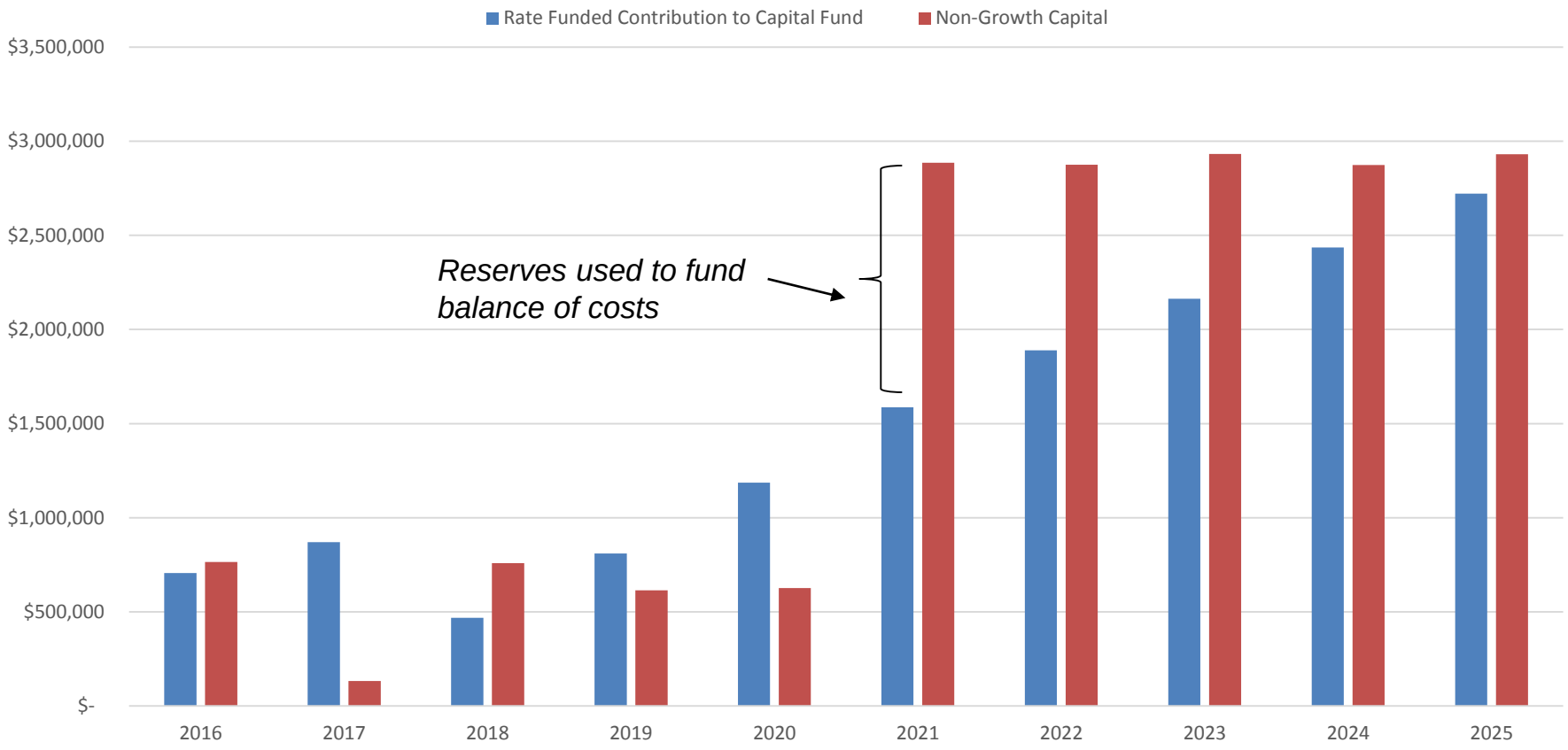
Water Services:
Total Contribution vs. In-year Capital Expense



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Year-end Reserve Fund Projections[1]

- Town saves for significant sewer works required post 2025
- Water reserves used to manage considerable water repair and replacement requirements in 2021-2025
- Water reserves will be built back up as 2026-2035 capital requirements are less significant

Note 1: This projection accounts for the net transaction to reserve

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