



Town of Erin

Water Rates Presentation to Council

December 3, 2019

Study Purpose



- Identify all current and future water system capital needs;
- Identify cost recovery options for capital;
- Estimate future operating costs over the next 10 years; and
- Recommend new rates to recover the cost of the water system.

Legislation for Water and Wastewater



Since Walkerton, new legislation has been passed by the Province to enhance the provision of services. These include the following:

- Safe Drinking Water Act;
- Sustainable Water and Sewage Systems Act;
- O.Reg. 453/07 - Safe Drinking Water Act;
- Clean Water Act; and
- Water Opportunities Act.

Further Requirements:

- Municipal Infrastructure Strategy
- Infrastructure for Jobs and Prosperity Act, 2015

Water Opportunities Act, 2010



- The Act provides for the following elements:
 - Foster innovative water, wastewater and stormwater technologies, services and practices in the private and public sectors;
 - Prepare Water Conservation Plans to attain water conservation targets to be established by regulations; and
 - Prepare Sustainability Plans for Water, Wastewater and Stormwater Services.

Water Opportunities Act, 2010



- On November 29, 2010, Bill 72, The *Water Opportunities Act*, 2010 received Royal Assent (note: only Regulation 40/11 - Water Technology Acceleration Project has been passed).
- Part 3 of the Act provides for the preparation of sustainability plans:
 - The Act extends from the water financial plans and requires a more detailed review of the water financial plan and requires a full plan for wastewater and storm water services; and
 - Regulations will provide performance targets for each service – these targets may vary based on the jurisdiction of the regulated entity or the class of entity.

Water Opportunities Act, 2010



- The Financial Plan shall include:
 - An asset management plan for the physical infrastructure;
 - A financial plan;
 - For water, a conservation plan;
 - An assessment of risks that may interfere with the future delivery of the municipal service, including, if required by the regulations, the risks posed by climate change and a plan to deal with those risks; and
 - Strategies for maintaining and improving the municipal service to ensure future demand can be satisfied, consider technologies to improve the service and potential increased co-operation with other municipal service providers.
- The rate study would provide inputs required to complete the Financial Plan required for licensing approval

Current Rates



Town of Erin	
2019 - Water Billing Rates	
Base Charge	
¾"	15.39
1"	15.39
1 ½"	15.39
2"	30.77
4"	55.45
Volume Charge	
\$ 3.99	per m ³
Flate Rate/Month	
\$ 48.951	per month

*Note base charge for all multi-resident premises shall be charged as per the number of units on the premises.

Customer Profile



Town of Erin Customer Profile

Metered	Water
¾" & 1" & 1 ½"	1302
2"	11
4"	2
Total	1315

Metered Multi-Residential	Water
Per Unit	165
Total	165

Non-Metered	Water
Flat Rate	1
Total	1

Growth Forecast Scenarios and Rate Options



- The analysis presented herein provides for three (3) rate options, each with three (3) varying growth forecasts scenarios that the Town could potentially experience over the study period (2019-2029).
- The options/scenarios considered are for the Town to assess the financial impacts of replacing existing infrastructure (e.g. watermains) given the varying levels of revenue and growth.

User Forecast Growth Scenarios



- With respect to the growth scenarios for the varying water rates, the growth forecasts are as follows:
 - Low growth (based on 5 units per year);
 - Medium growth (based on the D.C. Study);
 - 15 units per year from 2020 – 2024
 - 48 units per year from 2025 – 2026
 - 95 units per year from 2027 – 2029
 - High growth (based on the D.C. Study from 2020 – 2022 and increased by 300 units per year starting in 2023).

Water Forecast (Users and Billable Volumes)

Low Growth Scenario



Assumed an average annual future flow of 190 m³ per customer

Water Users Forecast

Year	Total Users	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
2019	3	2	3	3	3	3	3	3	3	3	3	3
2020	5		3	5	5	5	5	5	5	5	5	5
2021	5			3	5	5	5	5	5	5	5	5
2022	5				3	5	5	5	5	5	5	5
2023	5					3	5	5	5	5	5	5
2024	5						3	5	5	5	5	5
2025	5							3	5	5	5	5
2026	5								3	5	5	5
2027	5									3	5	5
2028	5										3	5
2029	5											3
Total	50	2	6	11	16	21	26	31	36	41	46	51
m ³ /user	190	190	190	190	190	190	190	190	190	190	190	190
Annual Flow		380	1,140	2,090	3,040	3,990	4,940	5,890	6,840	7,790	8,740	9,690

Water Customer Forecast	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Existing	1,481	1,481	1,481	1,481	1,481	1,481	1,481	1,481	1,481	1,481	1,481
New - Growth	2	6	11	16	21	26	31	36	41	46	51
Total	1,483	1,487	1,492	1,497	1,502	1,507	1,512	1,517	1,522	1,527	1,532

Water Volume Forecast (m ³)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Existing	281,889	281,889	281,889	281,889	281,889	281,889	281,889	281,889	281,889	281,889	281,889
New	380	1,140	2,090	3,040	3,990	4,940	5,890	6,840	7,790	8,740	9,690
Total	282,269	283,029	283,979	284,929	285,879	286,829	287,779	288,729	289,679	290,629	291,579

Water Forecast (Users and Billable Volumes)

Medium Growth Scenario



Assumed an average annual future flow of 190 m³ per customer

Water Users Forecast

Year	Total Users	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
2019	3	2	3	3	3	3	3	3	3	3	3	3
2020	15		8	15	15	15	15	15	15	15	15	15
2021	15			8	15	15	15	15	15	15	15	15
2022	15				8	15	15	15	15	15	15	15
2023	15					8	15	15	15	15	15	15
2024	15						8	15	15	15	15	15
2025	48							24	48	48	48	48
2026	48								24	48	48	48
2027	95									48	95	95
2028	95										48	95
2029	95											48
Total	456	2	11	26	41	56	71	102	150	222	317	412
m ³ /user	190	190	190	190	190	190	190	190	190	190	190	190
Annual Flow		380	2,090	4,940	7,790	10,640	13,490	19,380	28,500	42,180	60,230	78,280

Water Customer Forecast	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Existing	1,481	1,481	1,481	1,481	1,481	1,481	1,481	1,481	1,481	1,481	1,481
New - Growth	2	11	26	41	56	71	102	150	222	317	412
Total	1,483	1,492	1,507	1,522	1,537	1,552	1,583	1,631	1,703	1,798	1,893

Water Volume Forecast (m ³)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Existing	281,889	281,889	281,889	281,889	281,889	281,889	281,889	281,889	281,889	281,889	281,889
New	380	2,090	4,940	7,790	10,640	13,490	19,380	28,500	42,180	60,230	78,280
Total	282,269	283,979	286,829	289,679	292,529	295,379	301,269	310,389	324,069	342,119	360,169

Water Forecast (Users and Billable Volumes)

High Growth Scenario



Assumed an average annual future flow of 190 m³ per customer

Water Users Forecast

Year	Total Users	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
2019	3	2	3	3	3	3	3	3	3	3	3	3
2020	15		8	15	15	15	15	15	15	15	15	15
2021	15			8	15	15	15	15	15	15	15	15
2022	15				8	15	15	15	15	15	15	15
2023	300					150	300	300	300	300	300	300
2024	300						150	300	300	300	300	300
2025	304							152	304	304	304	304
2026	304								152	304	304	304
2027	313									157	313	313
2028	313										157	313
2029	313											157
Total	2,192	2	11	26	41	198	498	800	1,104	1,413	1,726	2,039
m ³ /user	190	190	190	190	190	190	190	190	190	190	190	190
Annual Flow		380	2,090	4,940	7,790	37,620	94,620	152,000	209,760	268,470	327,940	387,410

Water Customer Forecast	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Existing	1,481	1,481	1,481	1,481	1,481	1,481	1,481	1,481	1,481	1,481	1,481
New - Growth	2	11	26	41	198	498	800	1,104	1,413	1,726	2,039
Total	1,483	1,492	1,507	1,522	1,679	1,979	2,281	2,585	2,894	3,207	3,520

Water Volume Forecast (m ³)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Existing	281,889	281,889	281,889	281,889	281,889	281,889	281,889	281,889	281,889	281,889	281,889
New	380	2,090	4,940	7,790	37,620	94,620	152,000	209,760	268,470	327,940	387,410
Total	282,269	283,979	286,829	289,679	319,509	376,509	433,889	491,649	550,359	609,829	669,299

Capital Infrastructure



- Works were identified based on the 2019 budget, the capital forecast, and review of capital infrastructure replacement by OCWA
- Capital works were identified by
 - Need;
 - Timing; and
 - Costs.

Water Capital System Needs 2019 – 2029

Low Growth Scenario



(Inflated \$)

Description	Budget 2019-2029	Years Undertaken
Capital Expenditures		
Building and grounds minor repairs	15,000	2019
Energy Efficiency Upgrades	126,000	2020-2023
Other Capital Replacement	4,167,000	2023, 2026, 2029
Erin Well # 7		
Clear well Video inspection & Cleaning	31,000	2020-2028
upgraded chlorine gas scale	3,000	2020
new spare gas chlorinator	17,000	2022, 2025, 2028
gas chlorinator rebuilds	35,500	2019, 2021, 2023
DWQMS external 3rd Party Audit for Erin and Hillsburgh. - third party	3,000	2022
well inspection / video well casing	12,000	2020, 2024, 2028
Gas alarm system tested . Portable meter tested - third party	20,000	2020-2029
upgrade SCBA, have operators fit tested	5,000	2020
Pull pump and check foot valve	5,000	2020
remove old booster pump and relabel MCC panel	2,000	2020
Erin Well # 8		
Clear well Video inspection & Cleaning	31,000	2020-2028
well inspection / video well casing	12,000	2020, 2022
gas chlorinator rebuilds	35,500	2019, 2021, 2023
new spare gas chlorinator	17,000	2022, 2024, 2025
upgrade SCBA, have operators fit tested	5,000	2020
install new Cl2 analyzer with logger data back-up	5,000	2020
Gas alarm system tested .	10,000	2020-2029
install ladder on outside of reservoir	8,000	2020
Items from recommendations	3,000	2020-2022
Trolley/Crane - lifting device inspection - third party	10,000	2020-2029
Water Tower		
inspection of all lifting devices - third party	20,000	2020-2029
video tower internal inspection	24,000	2021, 2024, 2025
Altitude valve inspection - third party	10,000	2020-2029
Booster Station		
PRV rebuilds and replacements	30,000	2020-2029

Description	Budget 2019-2029	Years Undertaken
Capital Expenditures		
Hillsburgh and Erin Distribution		
Meter replacement program	346,000	2019-2029
Fire Hydrant rehabilitation/replacement program	207,000	2019-2029
Distribution Valve exercising program/ hydrant fire flow testing	71,000	2020-2029
Barbour St. Blow Off	2,000	2020
Hillsburgh Height's		
Clear well Video inspection & Cleaning	31,000	2020-2028
well inspection / video well casing	12,000	2020, 2022
install new Cl2 analyzer with logger data back-up	5,000	2020-2028
new chemical Hypo metering pump	11,000	2021, 2024, 2027
new chemical Ferric metering pump	11,000	2021, 2024, 2027
rebuilds of chemical pumps/ injectors/lines	10,000	2020-2029
VFD's for high lift pumps	12,000	2020
inspection of pressure relief valve	3,000	2022, 2025, 2028
Lead Filter Replacement	84,000	2020-2029
Items from recommendations	12,000	2020-2022
Glendevon		
Clear well Video inspection & Cleaning	31,000	2020-2028
well inspection / video well casing	12,000	2020, 2022
install new Cl2 analyzer with logger data back-up	5,000	2020
rebuilds of chemical pumps/ injectors/lines	10,000	2020-2029
VFD's for high lift pumps	12,000	2020
Milltonics level sensor for Reservoir/ SCADA hook up	10,000	2020
Items from recommendations	12,000	2020-2022
Studies:		
Water Rate Study	44,900	2019, 2023, 2027
Growth Related:		
New Water Supply (Erin and Hillsburgh)	686,000	2024-2029
Water Equipment	43,800	2019
Water Environmental Assessment	1,125,000	2019
Total Capital Expenditures	7,470,700	

Water Capital System Needs 2019 – 2029

Medium Growth Scenario



(Inflated \$)

Description	Budget 2019-2029	Years Undertaken
Capital Expenditures		
Building and grounds minor repairs	15,000	2019
Energy Efficiency Upgrades	126,000	2020-2023
Other Capital Replacement	4,167,000	2023, 2026, 2029
Erin Well # 7		
Clear well Video inspection & Cleaning	31,000	2020-2028
upgraded chlorine gas scale	3,000	2020
new spare gas chlorinator	17,000	2022, 2025, 2028
gas chlorinator rebuilds	35,500	2019, 2021, 2023
DWQMS external 3rd Party Audit for Erin and Hillsburgh. - third party	3,000	2022
well inspection / video well casing	12,000	2020, 2024, 2028
Gas alarm system tested . Portable meter tested - third party	20,000	2020-2029
upgrade SCBA, have operators fit tested	5,000	2020
Pull pump and check foot valve	5,000	2020
remove old booster pump and relabel MCC panel	2,000	2020
Erin Well # 8		
Clear well Video inspection & Cleaning	31,000	2020-2028
well inspection / video well casing	12,000	2020, 2022
gas chlorinator rebuilds	35,500	2019, 2021, 2023
new spare gas chlorinator	17,000	2022, 2024, 2025
upgrade SCBA, have operators fit tested	5,000	2020
install new Cl2 analyzer with logger data back-up	5,000	2020
Gas alarm system tested .	10,000	2020-2029
install ladder on outside of reservoir	8,000	2020
Items from recommendations	3,000	2020-2022
Trolley/Crane - lifting device inspection - third party	10,000	2020-2029
Water Tower		
inspection of all lifting devices - third party	20,000	2020-2029
video tower internal inspection	24,000	2021, 2024, 2025
Altitude valve inspection - third party	10,000	2020-2029
Booster Station		
PRV rebuilds and replacements	30,000	2020-2029

Description	Budget 2019-2029	Years Undertaken
Capital Expenditures		
Hillsburgh and Erin Distribution		
Meter replacement program	346,000	2019-2029
Fire Hydrant rehabilitation/replacement program	207,000	2019-2029
Distribution Valve exercising program/ hydrant fire flow testing	71,000	2020-2029
Barbour St. Blow Off	2,000	2020
Hillsburgh Height's		
Clear well Video inspection & Cleaning	31,000	2020-2028
well inspection / video well casing	12,000	2020, 2022
install new Cl2 analyzer with logger data back-up	5,000	2020-2028
new chemical Hypo metering pump	11,000	2021, 2024, 2027
new chemical Ferric metering pump	11,000	2021, 2024, 2027
rebuilds of chemical pumps/ injectors/lines	10,000	2020-2029
VFD's for high lift pumps	12,000	2020
inspection of pressure relief valve	3,000	2022, 2025, 2028
Lead Filter Replacement	84,000	2020-2029
Items from recommendations	12,000	2020-2022
Glendevon		
Clear well Video inspection & Cleaning	31,000	2020-2028
well inspection / video well casing	12,000	2020, 2022
install new Cl2 analyzer with logger data back-up	5,000	2020
rebuilds of chemical pumps/ injectors/lines	10,000	2020-2029
VFD's for high lift pumps	12,000	2020
Milltonics level sensor for Reservoir/ SCADA hook up	10,000	2020
Items from recommendations	12,000	2020-2022
Studies:		
Water Rate Study	44,900	2019, 2023, 2027
Growth Related:		
New Water Supply (Erin and Hillsburgh)	5,479,000	2020-2023
Water Equipment	43,800	2019
Water Environmental Assessment	1,125,000	2019
Total Capital Expenditures	12,263,700	

Water Capital System Needs 2019 – 2029

High Growth Scenario



(Inflated \$)

Description	Budget 2019-2029	Years Undertaken
Capital Expenditures		
Building and grounds minor repairs	15,000	2019
Energy Efficiency Upgrades	126,000	2020-2023
Other Capital Replacement	4,167,000	2023, 2026, 2029
Erin Well # 7		
Clear well Video inspection & Cleaning	31,000	2020-2028
upgraded chlorine gas scale	3,000	2020
new spare gas chlorinator	17,000	2022, 2025, 2028
gas chlorinator rebuilds	35,500	2019, 2021, 2023
DWQMS external 3rd Party Audit for Erin and Hillsburgh. - third party	3,000	2022
well inspection / video well casing	12,000	2020, 2024, 2028
Gas alarm system tested . Portable meter tested - third party	20,000	2020-2029
upgrade SCBA, have operators fit tested	5,000	2020
Pull pump and check foot valve	5,000	2020
remove old booster pump and relabel MCC panel	2,000	2020
Erin Well # 8		
Clear well Video inspection & Cleaning	31,000	2020-2028
well inspection / video well casing	12,000	2020, 2022
gas chlorinator rebuilds	35,500	2019, 2021, 2023
new spare gas chlorinator	17,000	2022, 2024, 2025
upgrade SCBA, have operators fit tested	5,000	2020
install new Cl2 analyzer with logger data back-up	5,000	2020
Gas alarm system tested .	10,000	2020-2029
install ladder on outside of reservoir	8,000	2020
Items from recommendations	3,000	2020-2022
Trolley/Crane - lifting device inspection - third party	10,000	2020-2029
Water Tower		
inspection of all lifting devices - third party	20,000	2020-2029
video tower internal inspection	24,000	2021, 2024, 2025
Altitude valve inspection - third party	10,000	2020-2029
Booster Station		
PRV rebuilds and replacements	30,000	2020-2029

Description	Budget 2019-2029	Years Undertaken
Capital Expenditures		
Hillsburgh and Erin Distribution		
Meter replacement program	346,000	2019-2029
Fire Hydrant rehabilitation/replacement program	207,000	2019-2029
Distribution Valve exercising program/ hydrant fire flow testing	71,000	2020-2029
Barbour St. Blow Off	2,000	2020
Hillsburgh Height's		
Clear well Video inspection & Cleaning	31,000	2020-2028
well inspection / video well casing	12,000	2020, 2022
install new Cl2 analyzer with logger data back-up	5,000	2020-2028
new chemical Hypo metering pump	11,000	2021, 2024, 2027
new chemical Ferric metering pump	11,000	2021, 2024, 2027
rebuilds of chemical pumps/ injectors/lines	10,000	2020-2029
VFD's for high lift pumps	12,000	2020
inspection of pressure relief valve	3,000	2022, 2025, 2028
Lead Filter Replacement	84,000	2020-2029
Items from recommendations	12,000	2020-2022
Glendevon		
Clear well Video inspection & Cleaning	31,000	2020-2028
well inspection / video well casing	12,000	2020, 2022
install new Cl2 analyzer with logger data back-up	5,000	2020
rebuilds of chemical pumps/ injectors/lines	10,000	2020-2029
VFD's for high lift pumps	12,000	2020
Milltonics level sensor for Reservoir/ SCADA hook up	10,000	2020
Items from recommendations	12,000	2020-2022
Studies:		
Water Rate Study	44,900	2019, 2023, 2027
Growth Related:		
New Water Supply (Erin and Hillsburgh)	25,699,000	2020-2023
Water Equipment	43,800	2019
Water Environmental Assessment	1,125,000	2019
Total Capital Expenditures	32,483,700	

Capital Financing Options



- ✓ Reserves
- ✓ Development Charges
- ✓ Debt
- ✓ Operating Budget Transfers (Funding Reserves)
- Grants
- Municipal Act (Part 12)

Reserve Balances



Town of Erin Reserve Summary

Reserves and Reserve Funds	Dec. 31 2018
Water	
Capital Reserve Fund	125,746
Development Charges Reserve Fund	215,992
Lifecycle Reserve	2,482,927

Proposed Capital Financing Programs 2019-2029



Inflated \$

Description	Low Scenario 2019-2029	Medium Scenario 2019-2029	High Scenario 2019-2029
Capital Financing			
Provincial/Federal Grants	-	-	-
Development Charges Reserve Fund	784,900	784,900	784,900
Non-Growth Related Debenture Requirements	-	-	-
Growth Related Debenture Requirements	631,120	5,040,680	23,643,080
Operating Contributions	-	-	-
Lifecycle Reserve Fund	5,928,934	6,312,374	7,929,974
Water Reserve	125,746	125,746	125,746
Total Capital Expenditures	7,470,700	12,263,700	32,483,700

Lifecycle Infrastructure Costs



- The age of the water system dates back to the mid 1950's;
- Total value of existing water infrastructure is \$38.01 million;
- This provides for a “per customer” investment by the Town of \$26,664 for water.

Summary of Water Asset Inventory



Area	Total Replacement Value	Suggested amount to be included in 10-year forecast based on estimated life	Amount included in 10-year forecast (Excluding Studies)	Net Replacement for Future Lifecycle	Annual Lifecycle Replacement
Water					
Water Facilities	10,949,650	5,005,890		5,943,760	508,860
Watermains	26,233,410	9,309,740	4,872,500	16,923,670	547,608
Water Vehicles	194,670	194,670		-	-
Water Machinery & Equipment	631,110	20,530		610,580	42,604
Total Water	38,008,840	14,530,830	4,872,500	23,478,010	1,099,073

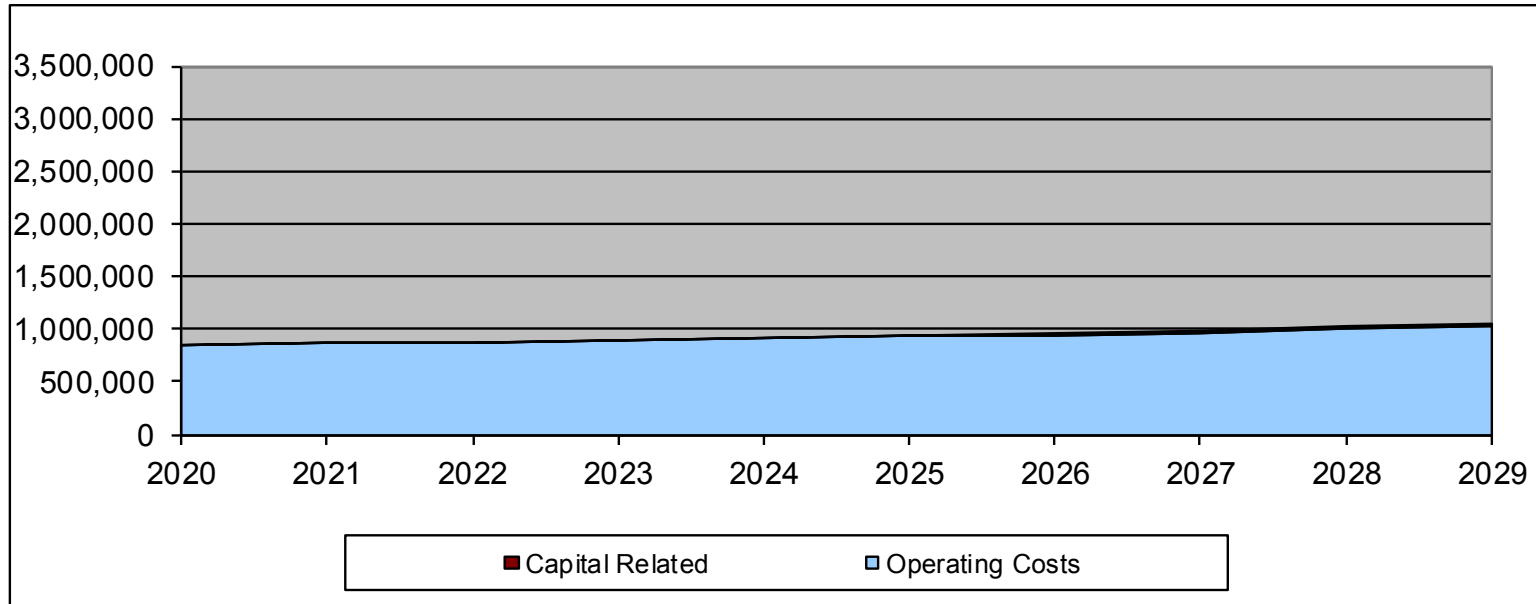
Investment per customer is \$25,664 for water

Operating Budgets



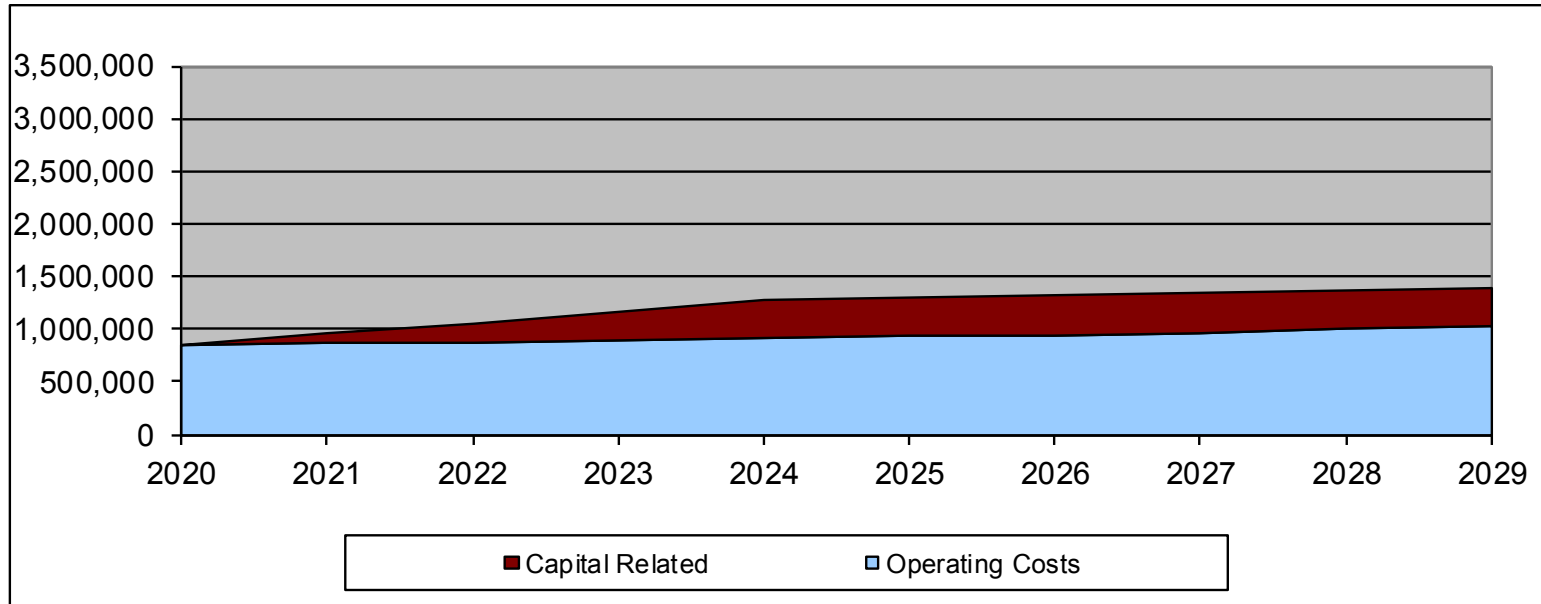
- Operating expenditures are increasing over the forecast to recognize:
 - Inflationary Impacts:
 - 2% for most operating expenditures
 - 5% for supplies and utilities
 - High Scenario Only:
 - Increased the operating costs by 20% in 2024 to recognize the added requirements to service the large increase in customers, with inflationary increases in subsequent years

Water Operating Budget – Low Scenario



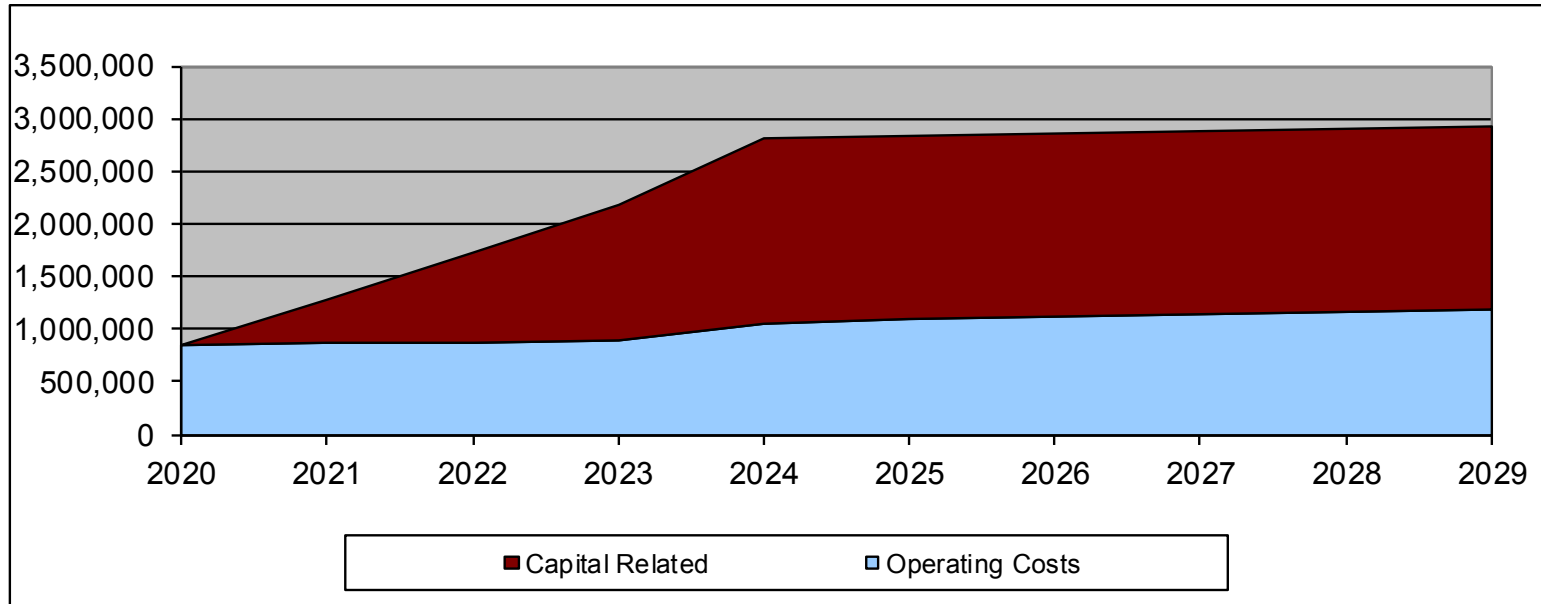
Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Operating Costs	851,900	863,200	873,000	883,900	904,600	926,000	948,000	970,600	993,800	1,017,800
Capital Related	0	0	0	0	0	7,379	14,893	22,543	30,327	38,315
Total	851,900	863,200	873,000	883,900	904,600	933,379	962,893	993,143	1,024,127	1,056,115

Water Operating Budget – Medium Scenario



Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Operating Costs	851,900	863,200	873,000	883,900	904,600	926,000	948,000	970,600	993,800	1,017,800
Capital Related	0	89,967	181,762	275,384	370,902	370,902	370,902	370,902	370,902	370,902
Total	851,900	953,167	1,054,762	1,159,284	1,275,502	1,296,902	1,318,902	1,341,502	1,364,702	1,388,702

Water Operating Budget – High Scenario



Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Operating Costs	851,900	863,200	873,000	883,900	1,060,600	1,085,500	1,111,100	1,137,300	1,164,300	1,192,100
Capital Related	0	422,080	852,621	1,291,760	1,739,699	1,739,699	1,739,699	1,739,699	1,739,699	1,739,699
Total	851,900	1,285,280	1,725,621	2,175,660	2,800,299	2,825,199	2,850,799	2,876,999	2,903,999	2,931,799

Water Rate Options



- The current rate structure of a monthly base charge with a variable charge based on the volume used by each customer was continued for this study
- As mentioned earlier, in addition to the varying growth scenarios presented in the analysis, the following rate options have been calculated:
 - 1) Option 1 - No change in 2020;
 - 3% increases to the base charges and volume rates annually in subsequent years (2021-2029)
 - 2) Option 2 - Decrease the average annual bill by 7% in 2020:
 - 3% annual increases to the base charges
 - 10% decrease to the volume rate in 2020, and increase by 3% in subsequent years (2021-2029)
 - 3) Option 3 Decrease the average annual bill by 14% in 2020:
 - 3% annual increase to the base charges
 - 19% decrease to the volume rate in 2020, and increase by 3% in subsequent years (2021-2029)

Average Annual Water Residential Bill (Based on 190 m³ Annual Volumes)



Rate Option 1

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Monthly Base Rate	\$15.39	\$15.39	\$15.85	\$16.33	\$16.82	\$17.32	\$17.84	\$18.38	\$18.93	\$19.50
Constant Rate	\$3.99	\$3.99	\$4.11	\$4.23	\$4.36	\$4.49	\$4.62	\$4.76	\$4.90	\$5.05
Total Annual Bill	\$942.78	\$942.78	\$971.12	\$999.63	\$1,030.20	\$1,060.96	\$1,091.89	\$1,124.92	\$1,158.13	\$1,193.45
% Increase - Total Annual Bill		0%	3%	3%	3%	3%	3%	3%	3%	3%

Rate Option 2

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Monthly Base Rate	\$15.39	\$15.85	\$16.33	\$16.82	\$17.32	\$17.84	\$18.38	\$18.93	\$19.50	\$20.08
Constant Rate	\$3.99	\$3.60	\$3.71	\$3.82	\$3.93	\$4.05	\$4.17	\$4.30	\$4.43	\$4.56
Total Annual Bill	\$942.78	\$874.22	\$900.83	\$927.60	\$954.56	\$983.59	\$1,012.82	\$1,044.13	\$1,075.65	\$1,107.37
% Increase - Total Annual Bill		-7%	3%	3%	3%	3%	3%	3%	3%	3%

Rate Option 3

Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Monthly Base Rate	\$15.39	\$15.85	\$16.33	\$16.82	\$17.32	\$17.84	\$18.38	\$18.93	\$19.50	\$20.08
Constant Rate	\$3.99	\$3.25	\$3.35	\$3.45	\$3.55	\$3.66	\$3.77	\$3.88	\$4.00	\$4.12
Total Annual Bill	\$942.78	\$807.72	\$832.43	\$857.30	\$882.36	\$909.49	\$936.82	\$964.33	\$993.95	\$1,023.77
% Increase - Total Annual Bill		-14%	3%	3%	3%	3%	3%	3%	3%	3%



Existing Infrastructure Funding Based on Growth Scenarios and Rate Options

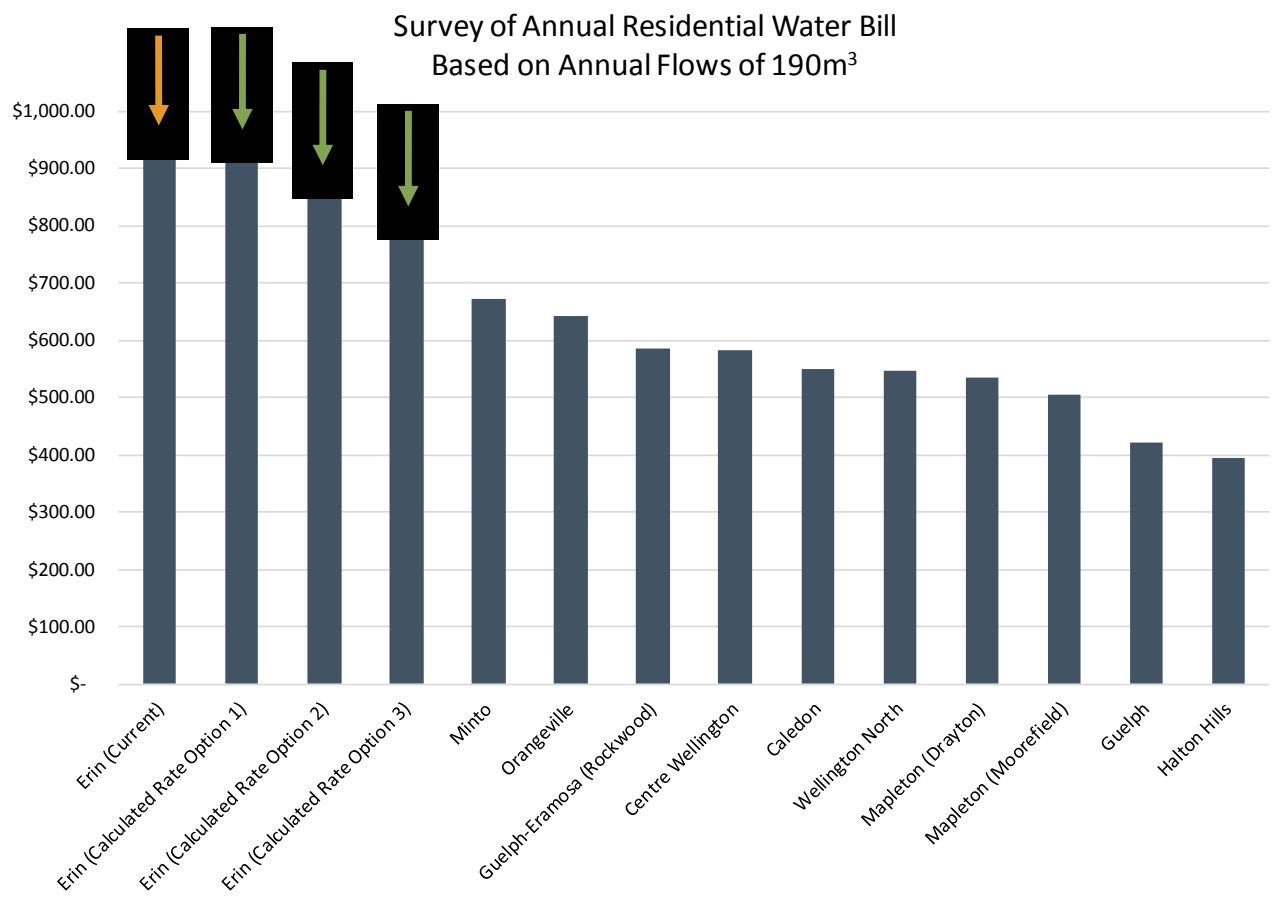
- Depending on the amount of growth experienced and rate options selected, the analysis provides for varying levels of funding towards the existing infrastructure.
- In all three growth scenarios and three rate options, the capital amount included in the forecast is constant at \$3.6 million (uninflated) towards existing capital replacement. Therefore, the 2029 ending reserve balances presented below represent the additional amount that can be used to fund existing capital:

Low Growth Scenario	Rate Option 1	Rate Option 2	Rate Option 3
2029 Water Lifecycle Reserve Ending Balance	\$ 4,117,333	\$ 2,927,383	\$ 1,777,227

Medium Growth Scenario	Rate Option 1	Rate Option 2	Rate Option 3
2029 Water Lifecycle Reserve Ending Balance	\$ 5,044,432	\$ 3,760,389	\$ 2,517,767

High Growth Scenario	Rate Option 1	Rate Option 2	Rate Option 3
2029 Water Lifecycle Reserve Ending Balance	\$ 9,931,795	\$ 8,109,378	\$ 6,338,389

Comparison of Residential Annual Water Bill (based on 190 m³)



Municipality	Total # of Water Customers	Year of Data
Mapleton	957	2019
Erin (Current)	1,481	2019
Guelph-Eramosa (Rockwood)	1,635	2015
Minto	2,204	2015
Wellington North	3,247	2014
Centre Wellington	6,192	2015
Orangeville	9,849	2019
Guelph	42,300	2017
Halton Hills	Not Specified	
Caledon	Not Specified	

Matters for Council's Consideration



1. Consider the Capital Program;
2. Consider the Operating Program; and
3. Consider the Proposed Water Rates.