



2023 Water & Wastewater Rate Study

Presentation to Town Council
April 25, 2023



Purpose

- Table Rate Study with Council & Public
- Highlight Key Factors
- Discussion
- Consider Approval May 9th, 2023



Background

- 2021 rate study delayed due to COVID
 - 2021-2023 rate increases consistent with 2015 study and 2018 adjustment
- First Rate Study completed in-house was in 2015
 - Develop staff skills/experience
 - Quality control
 - Reduced cost
- 2010 study by Watson & Associates Economists Ltd
 - Updated in 2011



Guiding Principles

- Financial Sustainability
- Stabilization of Revenue
- Affordability
- Fairness
- Economic Development/Retention
- Conservation



2023 Study Considerations

- Rate Structure
- Types of Users
- Bulk Water Purchase Agreement
- Wastewater Treatment Agreement
- Updated Five-Year Capital Plans



2023 Water & Wastewater Rate Study



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Proposed Rates

Variable rates (volume charges)

- Water

	2023 Approved	2024	2025	2026	2027	2028	2029	2030	2031	2032
Under 10,200 m ³ /month	1.2747	1.3131	1.3524	1.3930	1.4348	1.4779	1.5222	1.5679	1.6149	1.6633
Over 10,200 m ³ /month	0.9214	0.9491	0.9776	1.0069	1.0371	1.0682	1.1003	1.1333	1.1673	1.2023
Annual % Change		3%	3%	3%	3%	3%	3%	3%	3%	3%

- Wastewater

	Approved 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Charge per m ³	1.3355	1.3756	1.4168	1.4593	1.5031	1.5482	1.5947	1.6425	1.6918	1.7425
'Large Consumer' per m ³	0.8902	0.9169	0.9444	0.9727	1.0019	1.0320	1.0629	1.0948	1.1277	1.1615
Annual % Change		3%	3%	3%	3%	3%	3%	3%	3%	3%



Proposed Rates

Fixed Monthly Charges

- Water/Wastewater

	2023 Approved	2024	2025	2026	2027	2028	2029	2030	2031	2032
5/8" and 3/4"	18.98	19.55	20.14	20.74	21.36	22.00	22.66	23.34	24.04	24.76
1"	32.93	33.92	34.94	35.98	37.06	38.17	39.32	40.50	41.71	42.97
1 1/2"	64.65	66.59	68.59	70.64	72.76	74.95	77.20	79.51	81.90	84.35
2"	96.32	99.21	102.19	105.25	108.41	111.66	115.01	118.46	122.02	125.68
3"	161.71	166.56	171.56	176.70	182.01	187.47	193.09	198.88	204.85	210.99
4"	261.02	268.85	276.92	285.22	293.78	302.59	311.67	321.02	330.65	340.57
6"	464.18	478.11	492.45	507.22	522.44	538.11	554.26	570.88	588.01	605.65
Annual % Change		3%	3%	3%	3%	3%	3%	3%	3%	3%



Proposed Rates

Overall % increase by customer type

	2024	2025	2026	2027	2028	2029	2030	2031	2032
Average Household	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Typical Non-Residential	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Large Consumer	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%

Overall \$ increase by customer type

	2024	2025	2026	2027	2028	2029	2030	2031	2032
Average Household	\$ 32.46	\$ 33.43	\$ 34.44	\$ 35.47	\$ 36.53	\$ 37.63	\$ 38.76	\$ 39.92	\$ 41.12
Typical Non-Residential	\$ 108.28	\$ 111.53	\$ 114.87	\$ 118.32	\$ 121.87	\$ 125.53	\$ 129.29	\$ 133.17	\$ 137.17
Large Consumer	\$ 27,962	\$ 28,801	\$ 29,665	\$ 30,555	\$ 31,471	\$ 32,416	\$ 33,388	\$ 34,390	\$ 35,421

Total Annual Bill (2023 \$1,081.97)

Typical Household	\$1,114.43	\$ 1,147.86	\$ 1,182.30	\$ 1,217.76	\$ 1,254.30	\$ 1,291.93	\$ 1,330.68	\$ 1,370.60	\$ 1,411.72
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Goals

- Full cost recovery
 - Operating and capital cost
 - Provide for asset replacement
- Target ALR \$2.5M - \$3.0M each for Water and Wastewater respectively
- Target annual overall increase 3%-4%
- Target fixed charges at 40% of total revenue



Rate Sensitivity Analysis

Scenario	Fixed		Variable		2024 Impact			2032 Impact		
	Water	Wastewater	Water	Wastewater	Avg Home	Non-Res.	Lrg. User	Avg Home	Non-Res.	Lrg. User
A	+ 3%	+ 3%	+ 3%	+ 3%	\$ 32	\$ 108	\$ 27,962	\$ 41	\$ 137	\$ 35,421
B	+ 4%	+ 4%	+ 4%	+ 4%	\$ 43	\$ 144	\$ 37,283	\$ 59	\$ 198	\$ 51,024
C	+ 3%	+ 2.5%	+ 3%	+ 2.5%	\$ 29	\$ 94	\$ 23,450	\$ 36	\$ 116	\$ 28,615
D	+ 3% yr 1-3; + 2% yr 4 ->	+ 3% yr 1-3; + 2% yr 4 ->	+ 3% yr 1-3; + 2% yr 4 ->	+ 3% yr 1-3; + 2% yr 4 ->	\$ 32	\$ 108	\$ 27,962	\$ 26	\$ 86	\$ 22,272

Scenario A is the recommended approach.



Operating Budget Forecast

Operating Budget 10 Year Summary

Description	Water	Wastewater	Total
<u>Expenditures</u>			
Operating			
Payroll & Benefits	\$ 16,666,106	\$ 3,812,434	\$ 20,478,540
Office	\$ 354,904	\$ 67,162	\$ 422,066
Maintenance	\$ 4,162,605	\$ 1,641,754	\$ 5,804,360
Water Purchases	\$ 17,120,104	\$ -	\$ 17,120,104
Contracts	\$ 1,114,742	\$ 19,907,092	\$ 21,021,834
Other	\$ 1,614,063	\$ 2,380,238	\$ 3,994,302
Administration Charge	\$ 4,925,080	\$ 4,790,652	\$ 9,715,732
	<u>\$ 45,957,605</u>	<u>\$ 32,599,332</u>	<u>\$ 78,556,937</u>
Capital Related			
Debt Payments - Non-Growth	\$ -	\$ -	\$ -
Debt Payments - Landowners	\$ -	\$ 595,500	\$ 595,500
Debt Payments - Growth	\$ -	\$ -	\$ -
Debt Payments - Internal	\$ -	\$ -	\$ -
Transfer to Reserve Funds	\$ 24,880,742	\$ 31,148,294	\$ 56,029,036
	<u>\$ 24,880,742</u>	<u>\$ 31,743,794</u>	<u>\$ 56,624,536</u>
Total Expenditures	<u>\$ 70,838,346</u>	<u>\$ 64,343,126</u>	<u>\$ 135,181,473</u>
<u>Financing</u>			
Fixed Rate Recovery	\$ 26,758,726	\$ 24,095,341	\$ 50,854,068
Variable Rate Recovery	\$ 43,009,375	\$ 39,597,823	\$ 82,607,198
Property Owner Recovery	\$ -	\$ 595,500	\$ 595,500
Transfer from Reserve Funds	\$ -	\$ -	\$ -
Other	\$ 1,070,246	\$ 54,462	\$ 1,124,707
Total Financing	<u>\$ 70,838,346</u>	<u>\$ 64,343,126</u>	<u>\$ 135,181,473</u>



Capital Budget Forecast

Capital Budget 10 Year Summary

Description	Water	Wastewater	Total
<u>Expenditures</u>			
Lifecycle			
Facilities	\$ 3,240,000	\$ 7,165,000	\$ 10,405,000
Vehicles	\$ 515,750	\$ 515,750	\$ 1,031,500
Mains/Sewers	\$ 8,423,000	\$ 2,994,000	\$ 11,417,000
	\$ 12,178,750	\$ 10,674,750	\$ 22,853,500
Capital	\$ 630,250	\$ 1,030,000	\$ 1,660,250
Oldcastle Hamlet Servicing	\$ 1,656,550	\$ 6,587,800	\$ 8,244,350
Sylvestre Industrial	\$ -	\$ 1,167,600	\$ 1,167,600
Growth (DC Study)	\$ 13,595,400	\$ 25,937,900	\$ 39,533,300
Total Expenditures	\$ 28,060,950	\$ 45,398,050	\$ 73,459,000
<u>Financing</u>			
Part XII Charges	\$ -	\$ 6,587,800	\$ 6,587,800
Development Charges	\$ 10,691,875	\$ 20,376,147	\$ 31,068,022
Debentures Issued	\$ -	\$ -	\$ -
Reserve Fund Transfers	\$ 17,369,075	\$ 18,434,103	\$ 35,803,178
	\$ 28,060,950	\$ 45,398,050	\$ 73,459,000



Reserve Funds

Development Charge Reserve Funds

Reserve Fund	Ending Balance 2021 Actual*	Ending Balance 2032 Forecast
Water Development Charges	\$ (487,984)	\$ (5,523,909)
Wastewater Development Charges	\$ (11,097,886)	\$ (14,869,020)

*2022 Actual balance not available at time of report

- Water & Wastewater DC unfunded balance
 - Investment prior to growth
 - Extended funding horizon
 - Legislative impacts (Bill 23)
 - Temporary funding from watermain & wastewater sewers RF



Reserve Funds

Reserve Fund	Ending Balance 2022 Actual	Ending Balance 2033 Forecast
Water:		
Watermains	\$ 6,877,853	\$ 17,702,879
Water Facilities	\$ 7,977,622	\$ 7,295,032
Water Vehicle	\$ -	\$ 104,688
Water Rate Stabilization	\$ 1,019,251	\$ 1,570,953
	<u>\$ 15,874,726</u>	<u>\$ 26,673,553</u>
Wastewater:		
Wastewater Sewers	\$ 2,419,886	\$ 22,692,313
Wastewater Facilities	\$ 3,080,898	\$ 569,326
Wastewater Vehicle	\$ -	\$ 135,750
Wastewater Rate Stabilization	\$ 407,813	\$ 798,616
	<u>\$ 5,908,597</u>	<u>\$ 24,196,005</u>

- Current reserve funds inadequate



Asset Lifecycle

- Best Practice
- Annual contributions to fund asset replacement
- Inflation impact
- Infrastructure Funding Gap (RF S/B versus RF IS)
 - Water \$51M
 - Wastewater \$90M
 - Total \$141M
- Expected useful life



Asset Lifecycle

Summary of Water and Wastewater Infrastructure

Asset Category	Value of Assets			Inflated EUL ²	
	Total Replacement Value	Replaced During Forecast Period ¹	Annual Lifecycle Requirement	EUL ² Lifecycle Requirement	Lifecycle Requirement
Water					
Facilities	9,257,750	3,240,000	213,480	501,620	606,922
Vehicles	565,300	515,750	55,096	98,663	104,488
Watermains	152,757,200	8,423,000	1,917,780	4,136,760	5,895,466
Total Water	162,580,250	12,178,750	2,186,356	4,737,043	6,606,876
Wastewater					
Facilities	7,701,750	7,165,000	294,965	466,786	555,695
Vehicles	565,300	515,750	55,096	98,663	104,488
Sanitary Sewers	160,616,100	2,994,000	2,471,017	6,969,899	8,794,162
Total Wastewater	168,883,150	10,674,750	2,821,077	7,535,348	9,454,345
Total	331,463,400	22,853,500	5,007,433	12,272,391	16,061,221

¹ Lifecycle replacements only, does not factor in assets added due to growth

² EUL = End of useful life



Asset Replacement

- Asset Replacement in inflated dollars

	Watermains	Sanitary Sewer	Total
1-5 Years	\$ 22,000,000	\$ -	\$ 22,000,000
6-10 Years	\$ 2,000,000	\$ -	\$ 2,000,000
11-20 Years	\$ 17,000,000	\$ 102,000,000	\$ 119,000,000
21-30 Years	\$ 16,000,000	\$ 42,000,000	\$ 58,000,000
31-40 Years	\$ 56,000,000	\$ 70,000,000	\$ 126,000,000
41-50 Years	\$ 66,000,000	\$ 19,000,000	\$ 85,000,000
51-60 Years	\$ 117,000,000	\$ 54,000,000	\$ 171,000,000
> 60 Years	\$ 120,000,000	\$ 6,000,000	\$ 126,000,000
Total	\$ 416,000,000	\$ 293,000,000	\$ 709,000,000



Volume Forecast m³

	<u>2023</u>	<u>2032</u>	<u>Inc.</u>
• Water	2,825K	3,126K	11%
• Wastewater	2,424K	2,773K	14%
• Average usage for residential property			
➤ From 242m ³ in 2015 to 220 m ³ in 2022 (9.1% decrease)			



Customer Forecast

Water Customer Forecast

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Existing	9,058	9,058	9,058	9,058	9,058	9,058	9,058	9,058	9,058	9,058
Growth ¹	50	100	150	200	320	420	620	820	1,020	1,420
Total	9,108	9,158	9,208	9,258	9,378	9,478	9,678	9,878	10,078	10,478

¹ Cumulative over forecast period

Wastewater System Customer Forecast

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Existing	8,132	8,132	8,132	8,132	8,132	8,132	8,132	8,132	8,132	8,132
Growth for existing ¹	50	100	150	200	320	420	620	820	1,020	1,420
North Talbot Road Outlet Sewer Area ¹	-	-	-	-	-	-	-	-	-	-
8th Concession Rd Outlet Sewer Area ¹	-	109	180	180	180	180	200	200	200	217
Total	8,182	8,341	8,462	8,512	8,632	8,732	8,952	9,152	9,352	9,769

¹ Cumulative over forecast period

- Projections based on PWES Capital Priorities presentation (May 5, 2022)



Next Steps

- Receive feedback
- May 9th RCM
 - Opportunity to adopt the study
- Prepare DWQMS Financial Plan for 2023 Q4



Discussion

